

EXHIBIT B
PROJECT SCOPE
NORTHEAST METROPOLITAN REGIONAL VOCATIONAL SCHOOL
DISTRICT
NORTHEAST METROPOLITAN REGIONAL VOCATION HIGH
SCHOOL

PROJECT FUNDING AGREEMENT

4.1.2 - 01 INTRODUCTION

This Schematic Design Submittal is being submitted to the Massachusetts School Building Authority (MSBA) to finalize the Schematic Design Phase. This submittal summarizes the process to date and presents the development of the scope, budget, and schedule for the proposed Northeast Metropolitan Regional Vocational High School.

This project was authorized to move into the Schematic Design phase after a vote by the MSBA's Board of Directors at their February 11, 2021 meeting.

The complete submittal for this project contains the materials required by the MSBA's Module 4, including the Department of Elementary and Secondary Education (DESE) Submittal, the Schematic Design Binder materials, Schematic Design Project Manual, and Schematic Design Drawings.

Summary of Preferred Solution

As presented and approved in the Preferred Schematic Report, the solution being developed for this Project calls for the replacement of the existing Northeast Metropolitan Regional Vocational High School with a new High School. The facility will consist of four structures:

- Main Building : approximately 380,000 SF
- Maintenance Building: approximately 2,000 SF
- Satellite Locker Building: approximately 6,000 SF
- Bleachers/Concessions/Toilets: approximately 1,800 SF

The C.3 option sites the new building on the undeveloped hillside area south of the existing school. This area is wooded with a significant amount of ledge outcroppings. The proposal calls for the creation of a flat building pad through a mass blasting operation in an early site enabling phase. The pad would be large enough to accommodate the footprint of the four-story building with related service area, car & bus drop-off areas, and related parking.

The proposed building is organized in clusters with academic areas in close proximity to career technical areas on each floor as called for in the Educational Program. Also, the large public assembly areas of the Auditorium and Gymnasium are clustered at the north end of the building adjacent to the events entrance and separated from the academic areas to the south.

The first floor houses the administration area adjacent to the main entrance, along with the Cafeteria, and the career technical shops of the Construction cluster and the Early Education program. There is also a secondary “customer entrance” providing direct, but limited access to the Culinary Arts restaurant and the Cosmetology salon.

At the south end of the building is the car drop-off area and visitor parking with direct access to the Main entrance. A separate bus drop-off loop is on the east side of the school.

The upper three floors are configured around an exterior courtyard constructed on top of the high-bay shops. Each floor houses a “small learning community” (SLC) as called for in the Education Program and consists of low-bay CTE shops on the west side and general academic areas on the other three sides of the courtyard. Each SLC has large and small classrooms, science labs, and breakout collaborative areas; and are supported by teacher planning, guidance, and administrative offices.

The north end of the building steps down following the natural topography of the site. This lower level houses the Transportation cluster, weight room, and support spaces.

Project Stats

- Career and Technical High School Serving Grades 9 through 12.
- Site Acreage: 2,572,109 SF / 59.04 Acres

- New Main Building Construction: approximately 380,000 SF
- The construction delivery method approved by District is Construction Management at Risk (CMR), Chapter 149A. Gilbane Building Co. selected as CM-R

Overview of Community Outreach *(since Preferred Schematic Report submission on December 23, 2020)*

Community Support is an important consideration of this project. The school is sensitive to the varying concerns of the 12 member communities in its regional district as well as their Wakefield abutters. To keep the neighbors, citizens, and local officials informed of the Project, the District has:

- Maintained a comprehensive project website linked to the Northeast Metro Tech home page. This site has a record of project meetings, key project documents, and a schedule of key milestones & upcoming activities.
- The Superintendent and District leadership has begun the process of visiting all 12 towns to update community leaders on the Project's status and to respond to their questions and concerns. To date, such meetings have been held with the leaders of the four largest sending communities: Revere, Chelsea, Saugus, and Woburn.
- The Project Team presented the project status to a meeting of the District's School Committee which has representatives from all twelve communities.
- Information on the project was made available to parents and families on the Project website during virtual open-house sessions this Fall.
- Two community forums (both live and virtual) have been held to share the Schematic Design status and to gather feedback.

Key project documents and presentations have been recorded on the project website for public viewing. This information can be found at:

<http://northeastbuildingproject.com/>

Social Media Facebook page:

<http://www.facebook.com/NewNEMT>

District's Total Project Budget

*Districts total project budget and the **steps necessary for the District to secure local funding.***

The Total Project Budget for the proposed new Northeast Metropolitan Regional Vocational High School is approximately \$317,000,000. The estimated Construction Cost is \$243,600,000.

Please refer Section 4.1.2-15, Total Project Budget, for further detail.

**Northeast
 Metropolitan
 Vocational High
 School**

Wakefield, MA 01880

TYPICAL PARTITION TYPES

GWB PARTITIONS: *GWB UNLESS NOTED OTHERWISE, STUD SPACING 16" O.C. MAX U.N.O.

- U1** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 1A1-0-0
- U2** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 4A1-0-0
- U3** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 4A1-0-0
- U4** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 4A1-0-0
- U5** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 4A1-0-0
- U6** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 4A1-0-0
- U7** UL DESIGN NA NON-BEARING PARTITION 1-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 2A1-0-0
- U8** UL DESIGN NA NON-BEARING PARTITION 2-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 2A1-0-0
- U9** UL DESIGN NA NON-BEARING PARTITION 2-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 3A1-0-0
- U10** UL DESIGN NA NON-BEARING PARTITION 2-HOUR RATED (2) LAYERS OF 5/8" GWB ON 6" METAL STUDS WITH 5" ACOUSTICAL BATT 5/8" GWB SEE DETAIL 3A1-0-0

FURRING PARTITIONS: *GWB UNLESS NOTED OTHERWISE, STUD SPACING 16" O.C. MAX U.N.O.

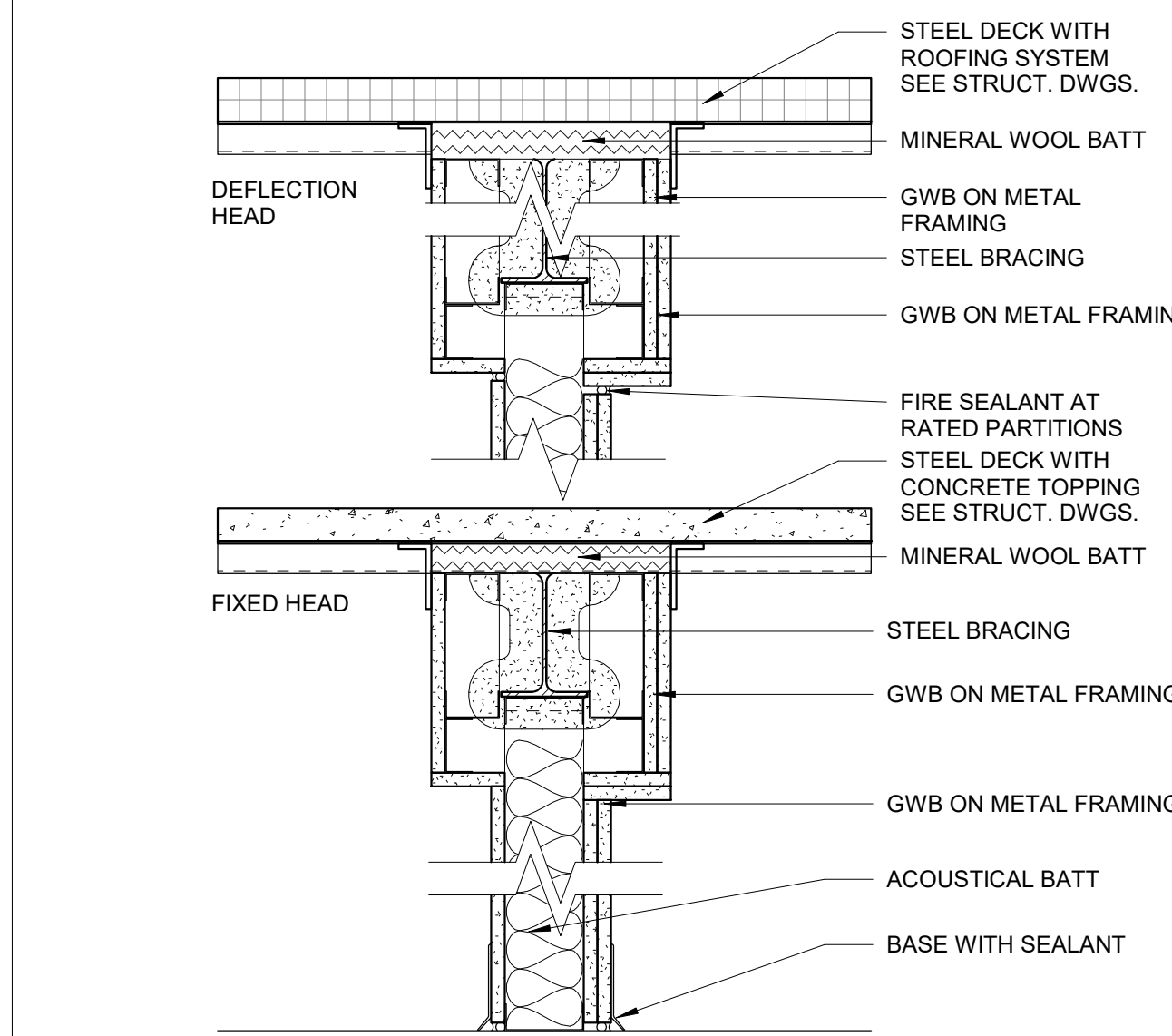
- F1** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 5/8" GWB ON 7/8" METAL FURRING CHANNELS SEE DETAIL 9A1-0-0
- F2** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 5/8" GWB ON 7/8" METAL FURRING CHANNELS SEE DETAIL 9A1-0-0
- F3** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0
- F4** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0
- F5** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0
- F6** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0
- F7** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0
- F8** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0
- F9** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0
- F10** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED (2) LAYERS OF 5/8" GWB ON 3/8" METAL STUDS SEE DETAIL 9A1-0-0

MASONRY PARTITIONS:

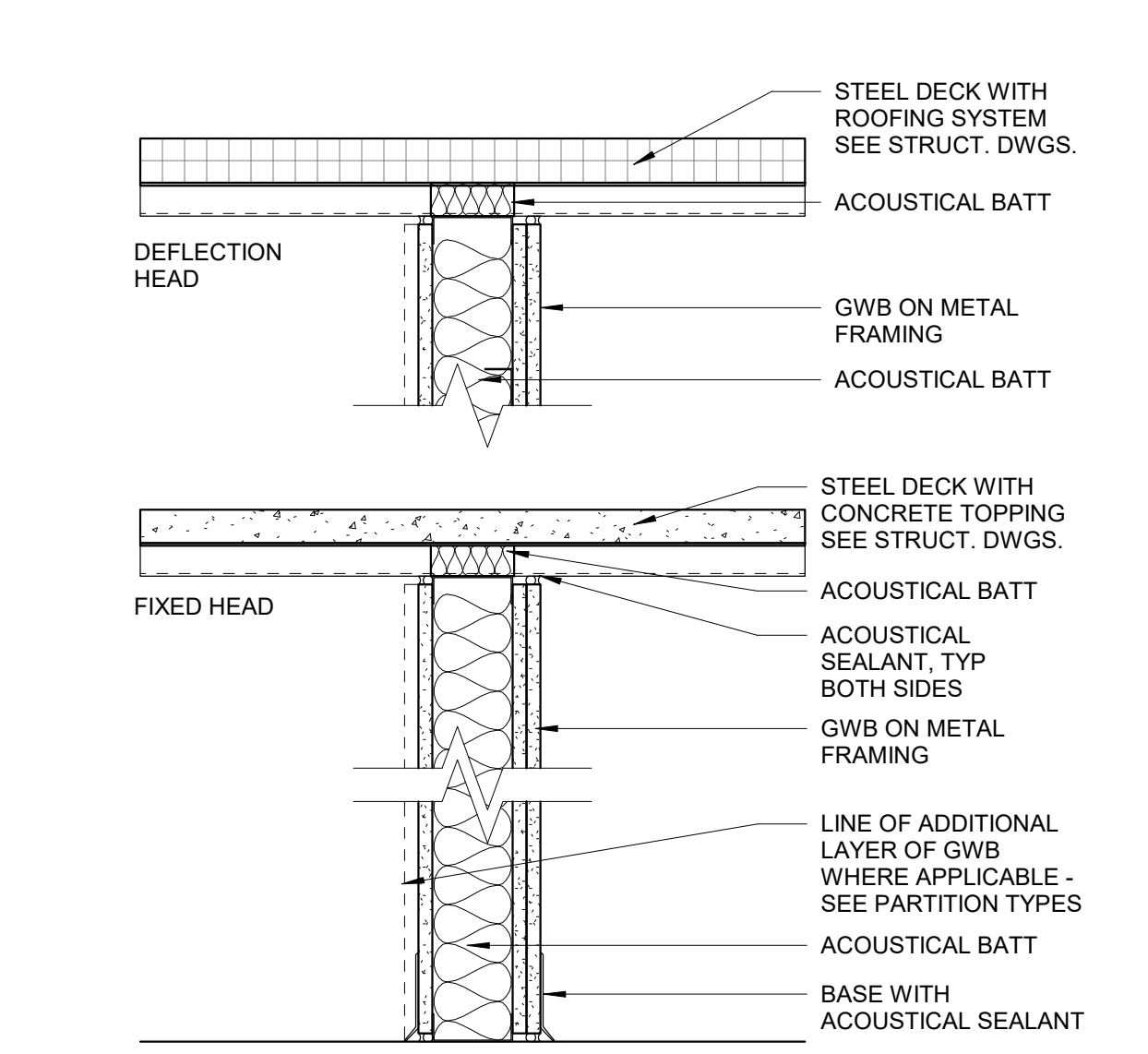
- M1** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M2** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M3** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M4** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M5** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M6** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M7** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M8** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M9** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0
- M10** UL DESIGN NA NON-BEARING PARTITION 0-HOUR RATED 1 5/8" UNRATED CMU SEE DETAIL 5A1-0-0

SHAFT WALL PARTITIONS:

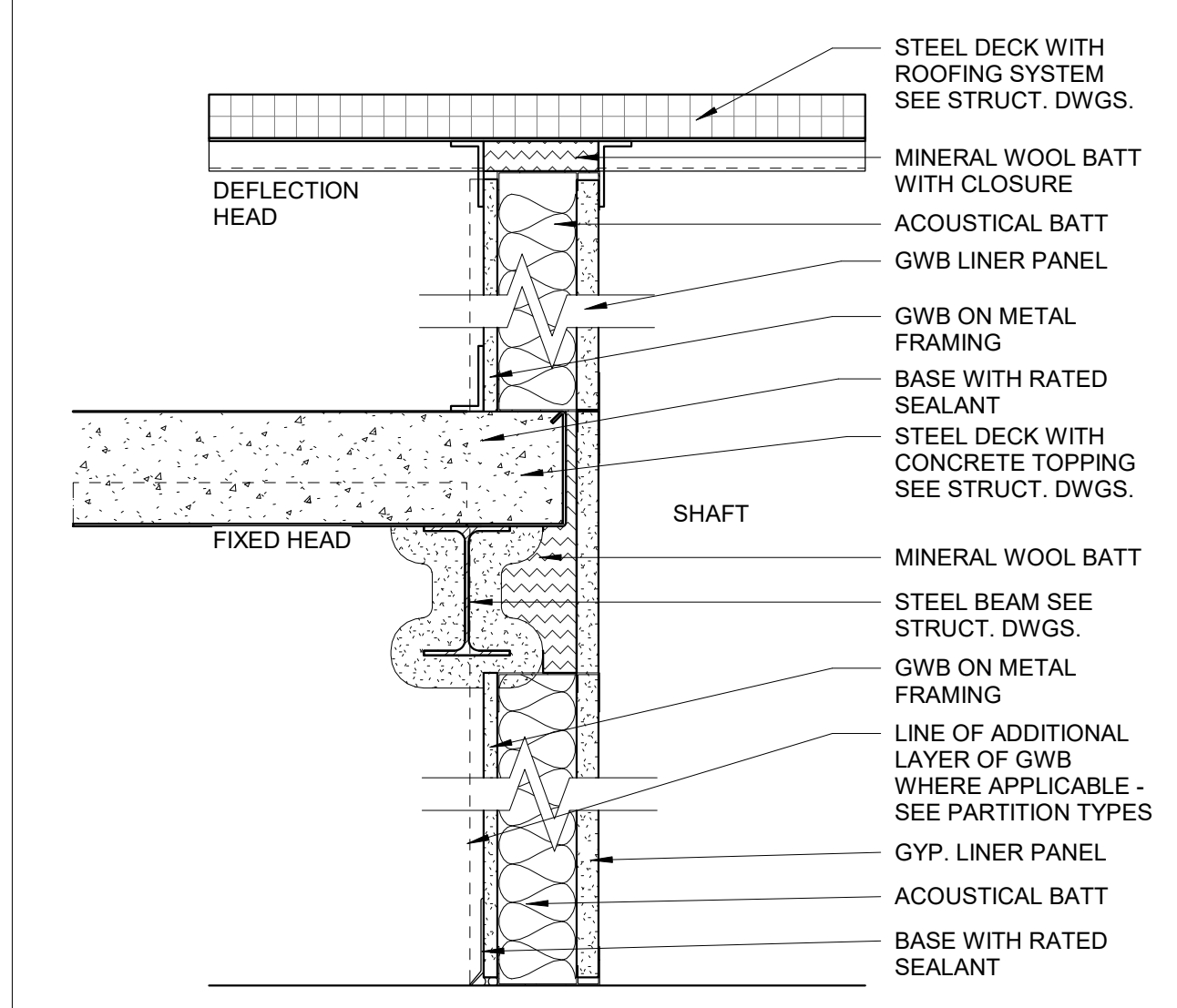
- S1** UL DESIGN U415 2-HOUR RATED 1" GYPSUM LINER PANEL 6" C-4 TYPE STUD 25 GA 4" ACOUSTICAL BATT 1 LAYER 5/8" GWB SEE DETAIL 7A1-0-0
- S2** UL DESIGN U415 2-HOUR RATED 1" GYPSUM LINER PANEL 6" C-4 TYPE STUD 25 GA 5 1/2" ACOUSTICAL BATT 2 LAYERS OF 5/8" GWB SEE DETAIL 7A1-0-0



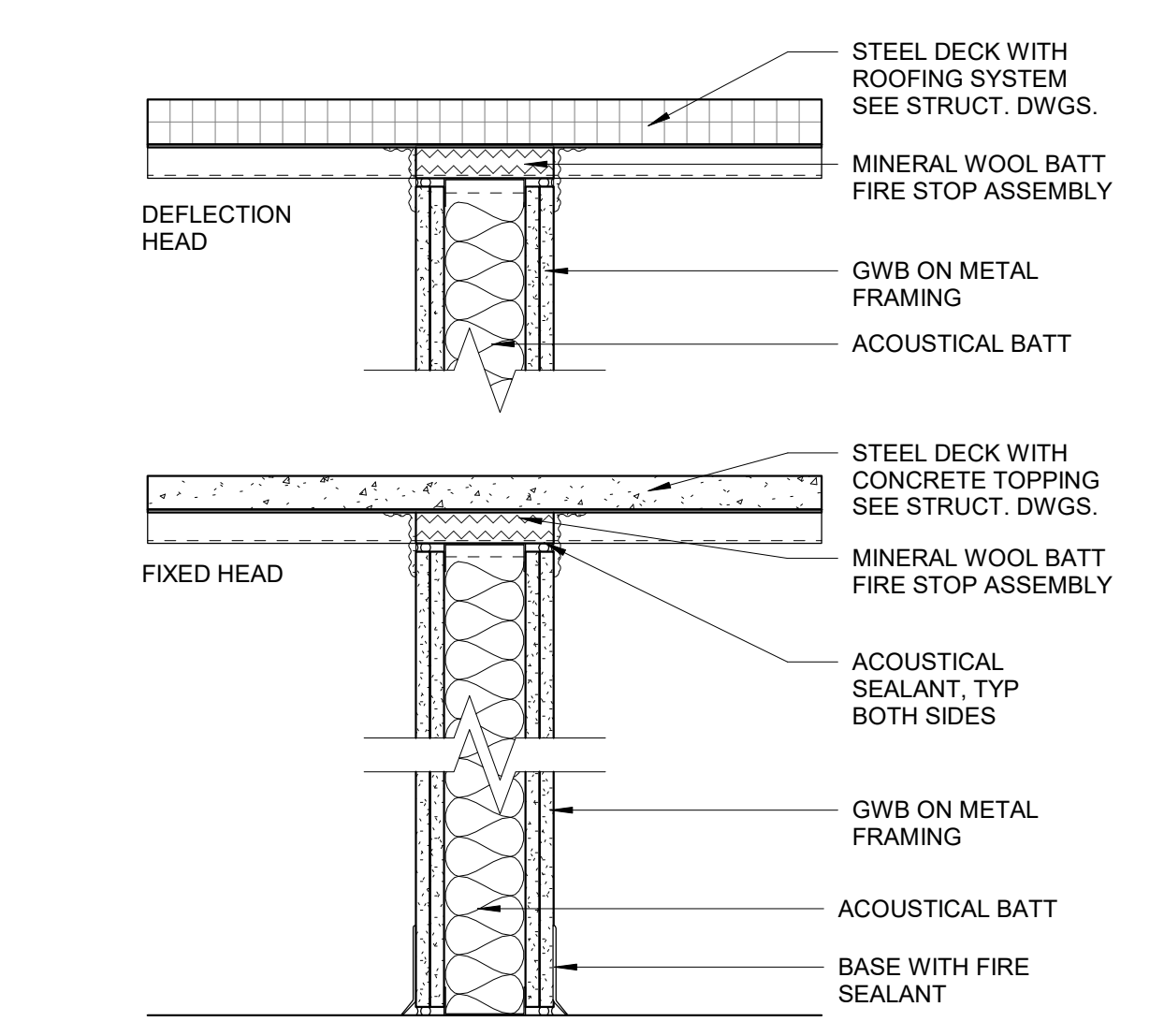
8 **GWB - 0,1 & 2-HOUR**
 1 1/2" = 1'-0"



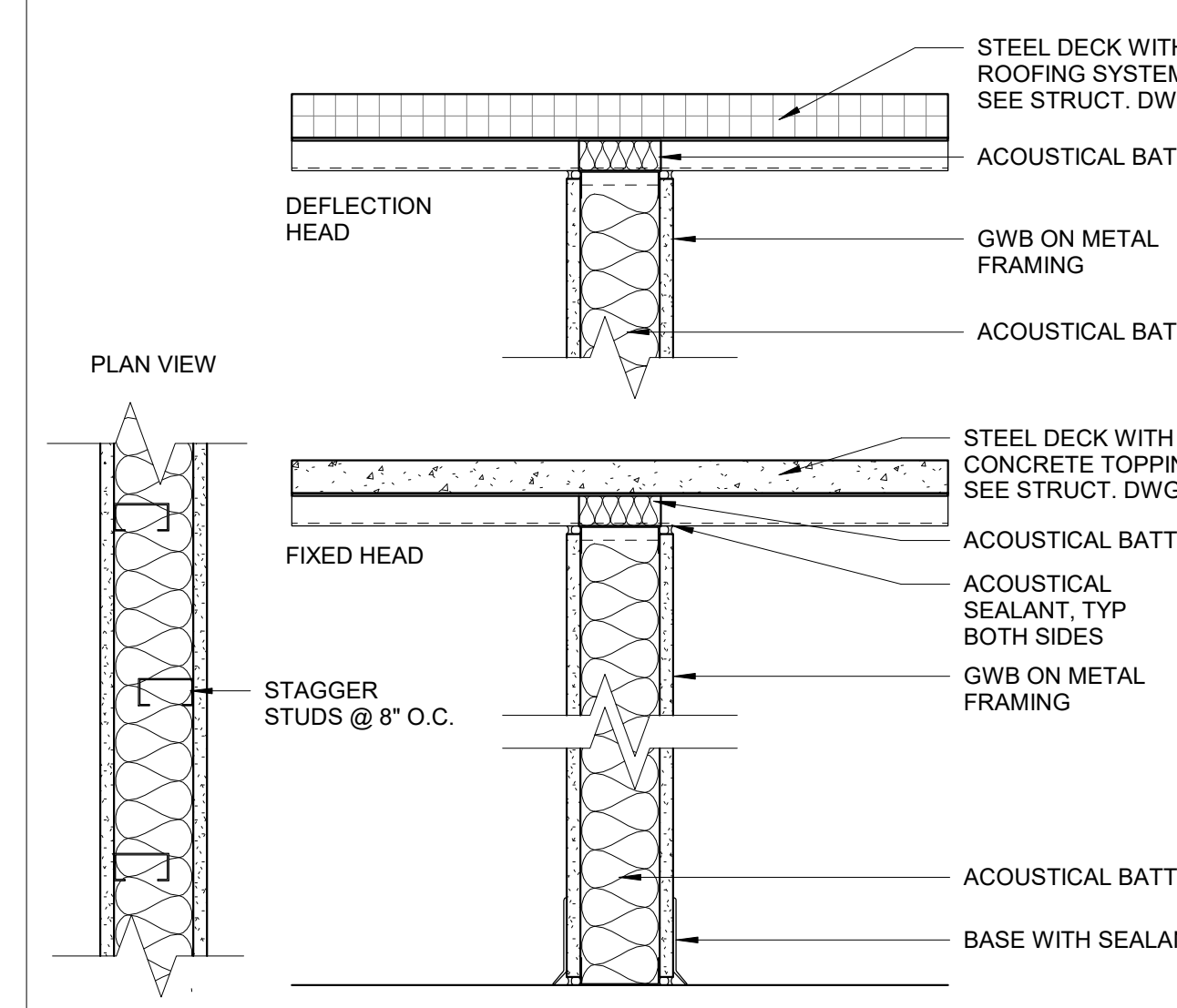
4 **GWB - 0-HOUR**
 1 1/2" = 1'-0"



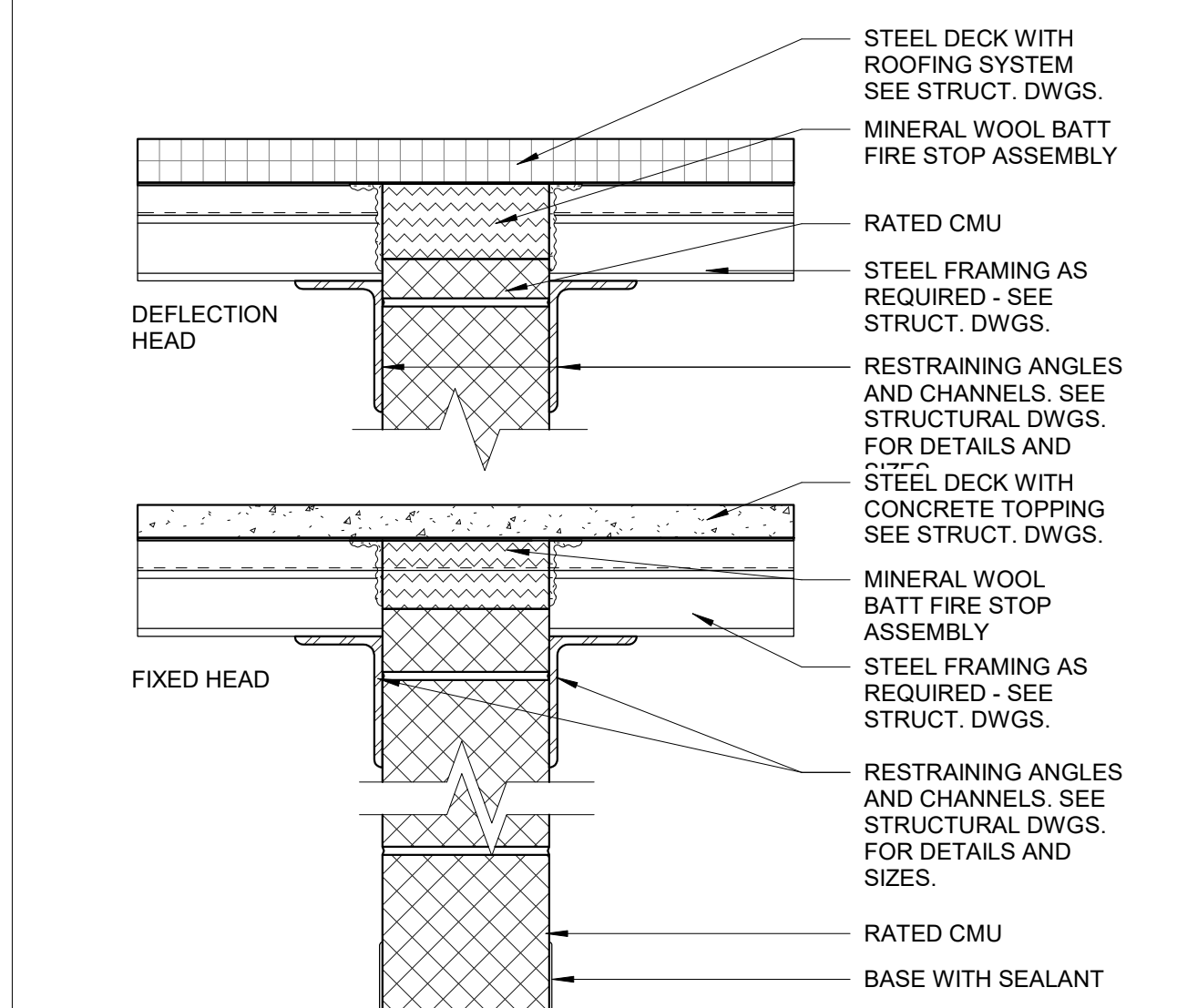
7 **SHAFTWALL - 1,2&3 HR**
 1 1/2" = 1'-0"



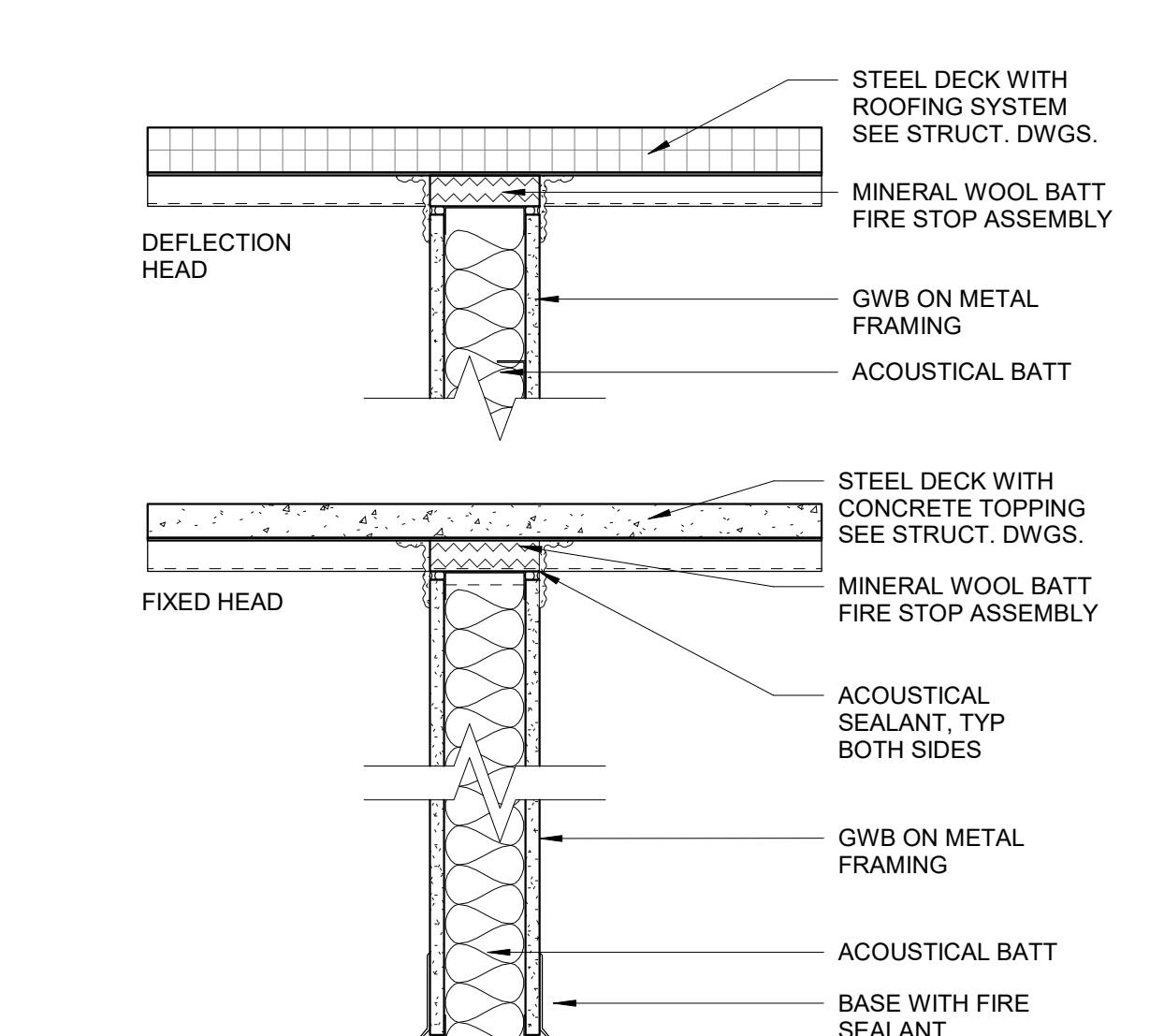
3 **GWB - 2-HOUR**
 1 1/2" = 1'-0"



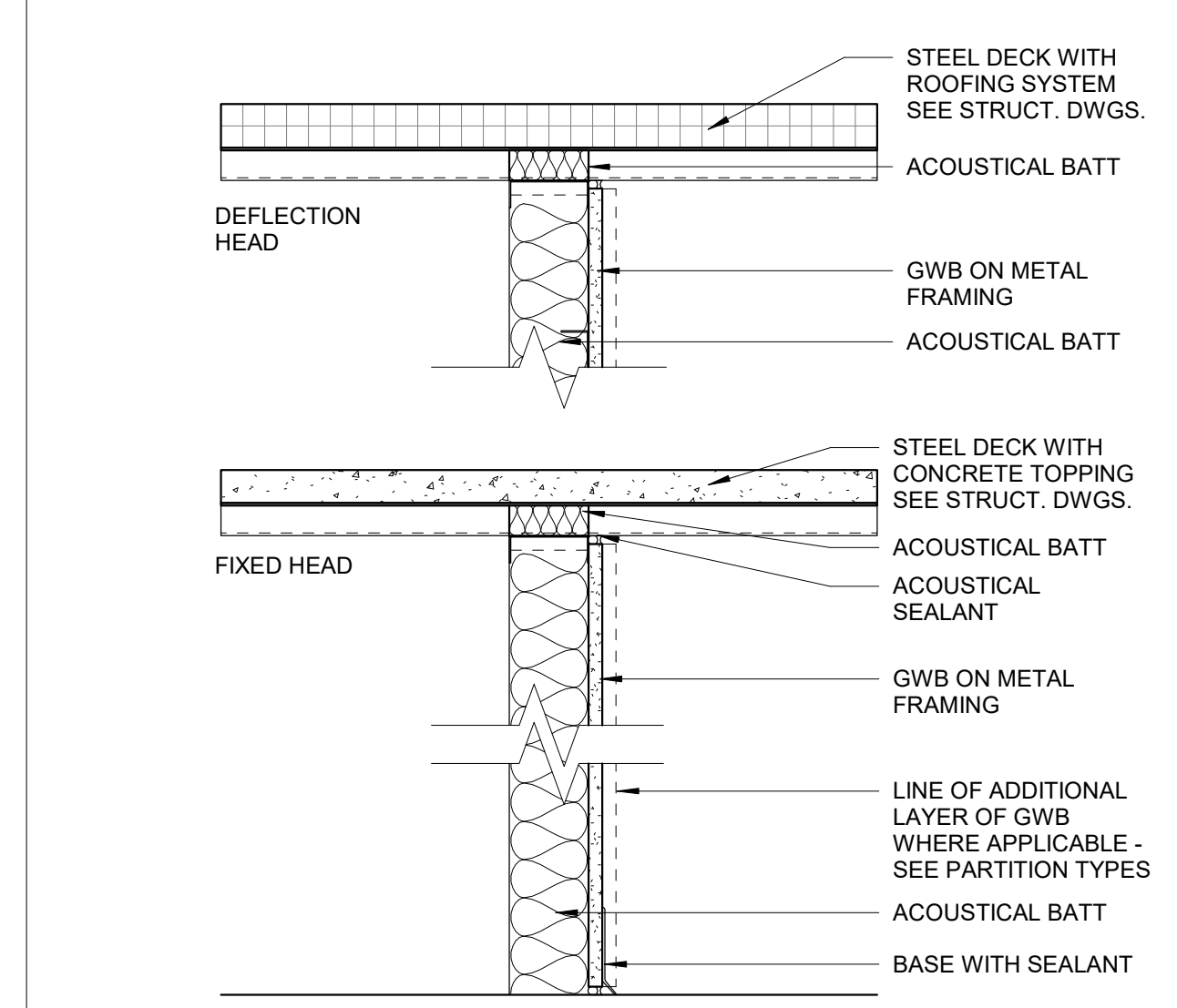
9 **GWB - 0-HOUR**
 1 1/2" = 1'-0"



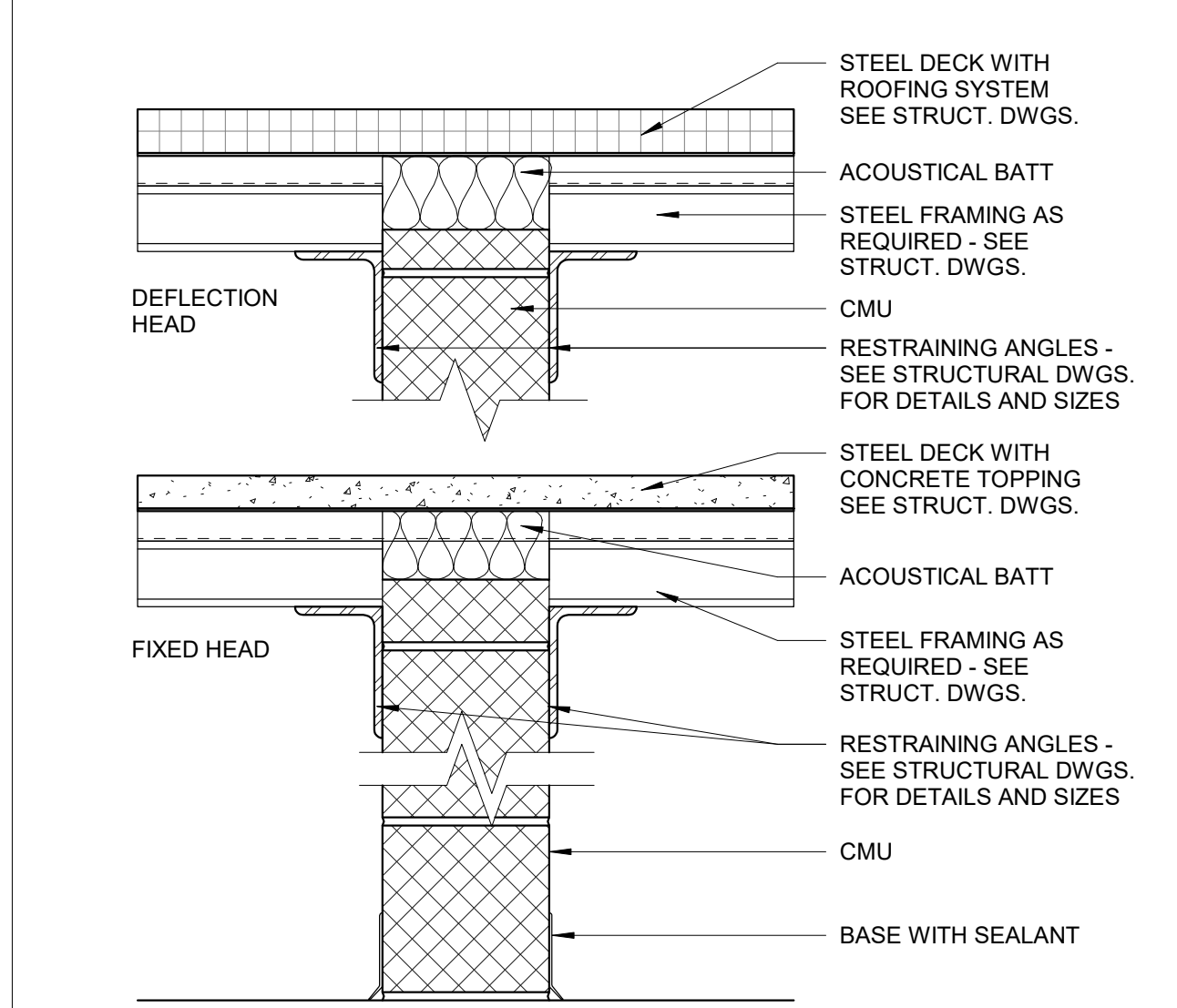
6 **CMU - 1,2&3 HR**
 1 1/2" = 1'-0"



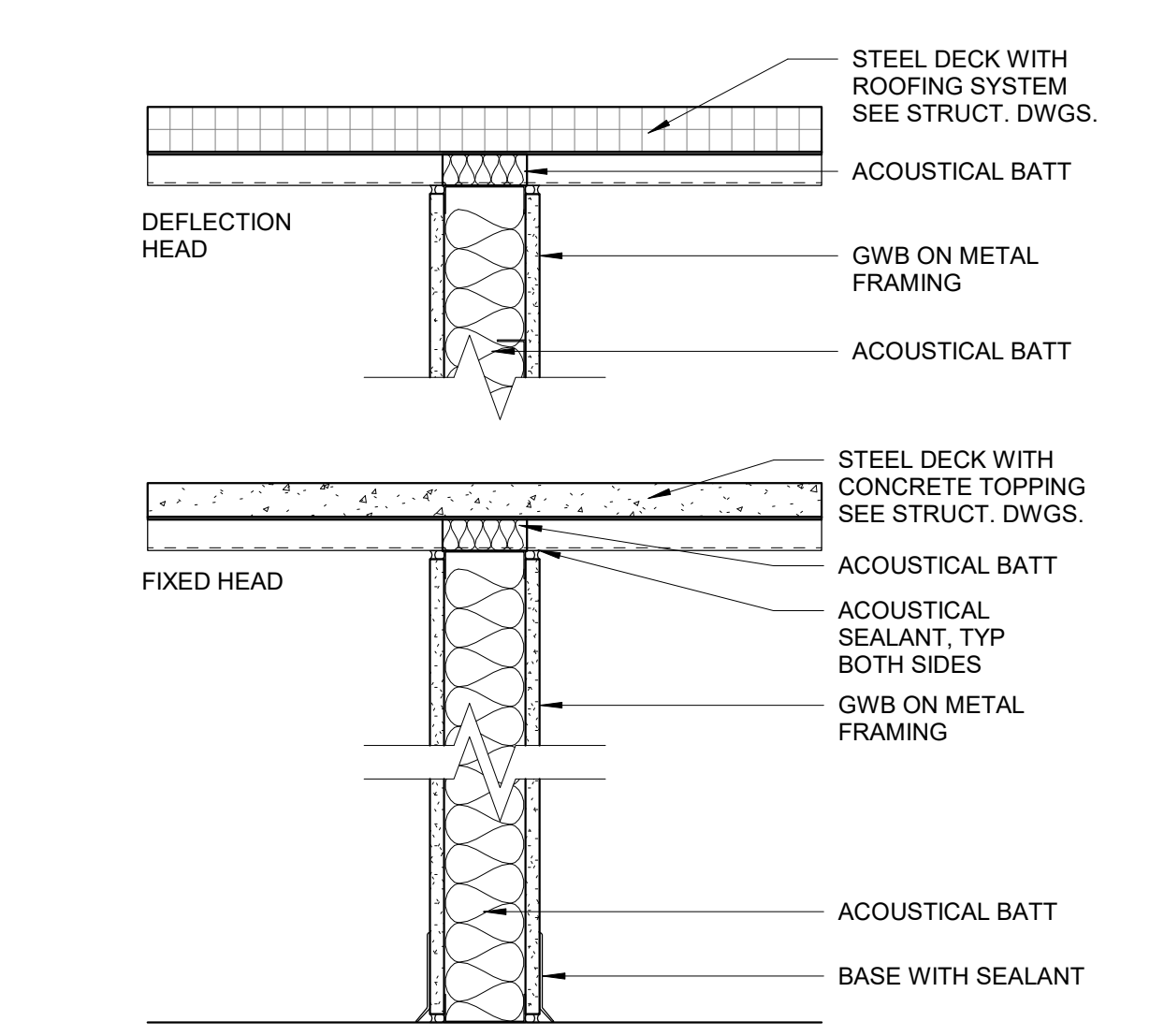
2 **GWB - 1-HOUR**
 1 1/2" = 1'-0"



10 **GWB - 0-HOUR**
 1 1/2" = 1'-0"



5 **CMU - 0 HR**
 1 1/2" = 1'-0"



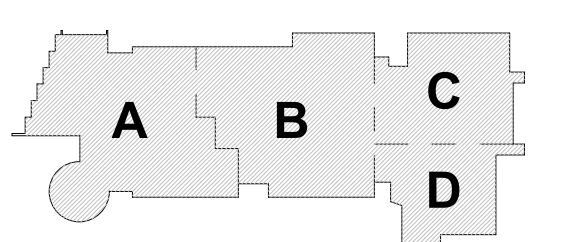
1 **GWB - 0-HOUR**
 1 1/2" = 1'-0"

GENERAL NOTES - PARTITION TYPES:

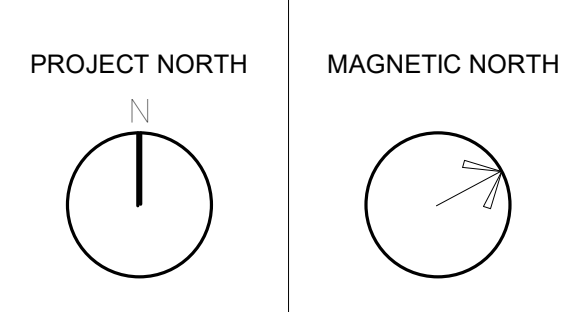
- ALL PARTITION TO BE TYPE 0-0 UNLESS NOTED OTHERWISE OR WHERE FIRE RATING CONSTRUCTION IS INDICATED.
- PROVIDE CEMENTITIOUS TILE BACKER BOARD AT ALL TILED WALLS UNLESS NOTED OTHERWISE.
- PROVIDE RUBBER WALL BASE TRIM AT ALL PARTITIONS UNLESS NOTED OTHERWISE.
- PROVIDE STEEL ANGLE RESTRAINTS AND ASSOCIATED STEEL CHANNELS AT TOP OF ALL INTERIOR CMU PARTITION AND WALLS. ALL ANGLES AND CHANNELS ARE TO BE FURNISHED AND INSTALLED BY METAL FABRICATORS (SUBMIT CONTRACTOR). SEE STRUCTURAL DRAWINGS FOR SIZE AND DETAILS.
- RATED PARTITIONS SHALL HAVE U.L. DESIGN NUMBERS INDICATED IN THE PROJECT MANUAL, WHICH MAY NOT BE REPRESENTED IN THE PARTITION TYPE DETAILS WHICH MAY SHOW ONLY PRINCIPLE COMPONENTS AND REQUIREMENTS.
- RATED PARTITIONS SHALL HAVE U.L. HEAD DESIGNS, SEALANT AND FILL MATERIAL OF THE SAME RATING.
- FINISHES APPLIED TO PARTITIONS ARE INDICATED IN THE ROOM FINISH SCHEDULE. INTERIOR ELEVATIONS, WALL FINISHES PLANS, AND ELSEWHERE.
- TERMINATE RATED AND UNRATED GWB PARTITIONS AT UNDERSIDE OF FLOOR DECKS AND ROOF DECKS.
- ALL MATERIALS AND COMPONENTS SHOWN IN PARTITION DETAILS OR INDICATED IN SCHEDULES OCCUR ON ALL SIDES OF PARTITIONS UNLESS INDICATED OTHERWISE.
- SEE STRUCTURAL DRAWINGS FOR LOCATIONS OF BEARING PARTITIONS, SHEAR WALLS, AND OTHER MASONRY PARTITIONS AND WALLS WITH REINFORCING AND OTHER SPECIAL REQUIREMENTS.
- SEE STRUCTURAL DRAWINGS AND PROJECT MANUAL FOR REINFORCING DETAILS AND REINFORCING REQUIREMENTS.
- AT ALL STEEL STUD AND LGMF PARTITIONS PROVIDE FRAMING MEMBERS AT 16" O.C. MAXIMUM.
- AT ALL STEEL STUD AND LGMF PARTITIONS PROVIDE DEFLECTION TRACK AS REQUIRED AT HEADS AND SILLS.
- AT ALL STEEL STUD AND LGMF PARTITIONS PROVIDE DEFLECTION TRACK AT EXTERIOR WALLS, ROOF TERMINATIONS AND AS INDICATED ON PARTITION TYPE DETAILS.
- AT ALL STEEL STUD AND LGMF PARTITIONS PROVIDE REQUIRED FASTENERS.
- AT ALL STEEL STUD AND LGMF PARTITIONS PROVIDE BRACING AND FILL MATERIAL OF THE SAME RATING.
- AT ALL STEEL STUD AND LGMF PARTITIONS PROVIDE ALL OTHER FRAMING ACCESSORIES AS SHOWN, AND AS REQUIRED.
- COORDINATE STUD SPACING WITH MODULAR WALL FINISH MATERIAL FASTENING REQUIREMENTS.
- GWB AND WALL FINISH TO BE OMITTED ON UNEXPOSED SIDE OF UNRATED GYPSUM WALLBOARD PARTITIONS USED FOR CHASES, DUCTWORK ENCLOSURES, ETC.
- PROVIDE BLOCKING AS REQUIRED. COORDINATE BLOCKING REQUIREMENTS WITH ALL TRADES PRIOR TO CLOSING WALLS.
- PROVIDE GWB FIRE PROTECTION AT STRUCTURAL STEEL AS INDICATED IN THE ARCHITECTURAL DRAWINGS.

**MSBA SCHEMATIC
 DESIGN SUBMISSION**

June 17, 2021



KEY PLAN



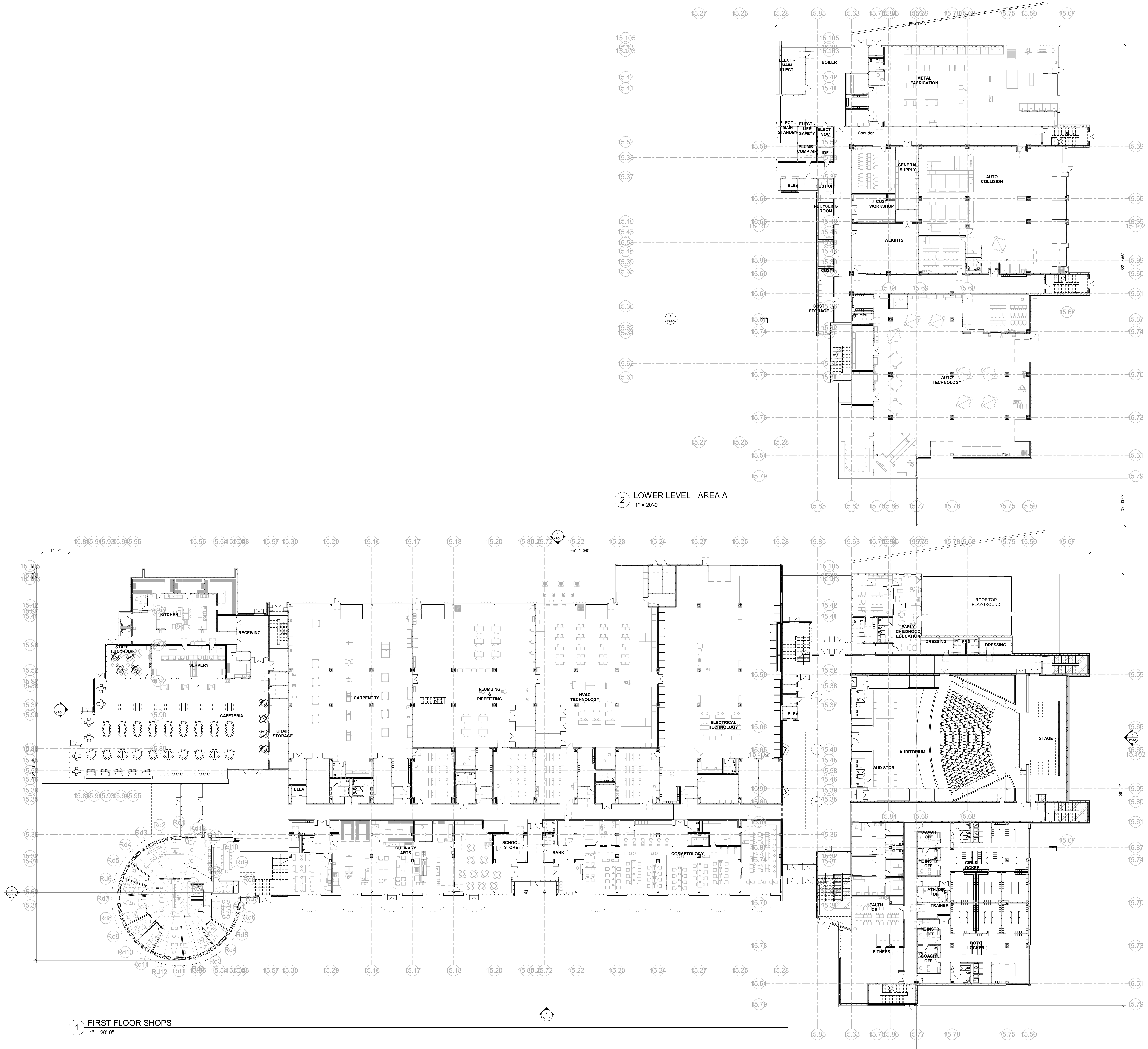
**PARTITION
 TYPES**

Scale: As Indicated
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021
A1-0-0

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2 LOWER LEVEL - AREA A
1" = 20'-0"

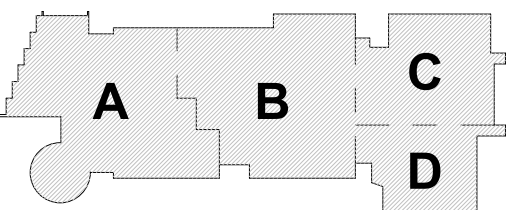
1 FIRST FLOOR SHOPS
1" = 20'-0"



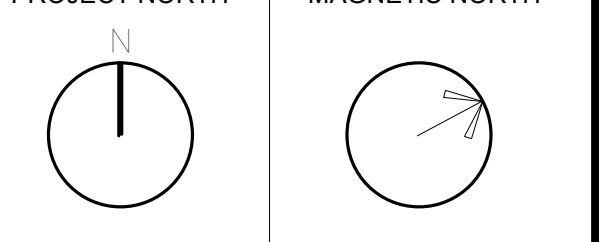
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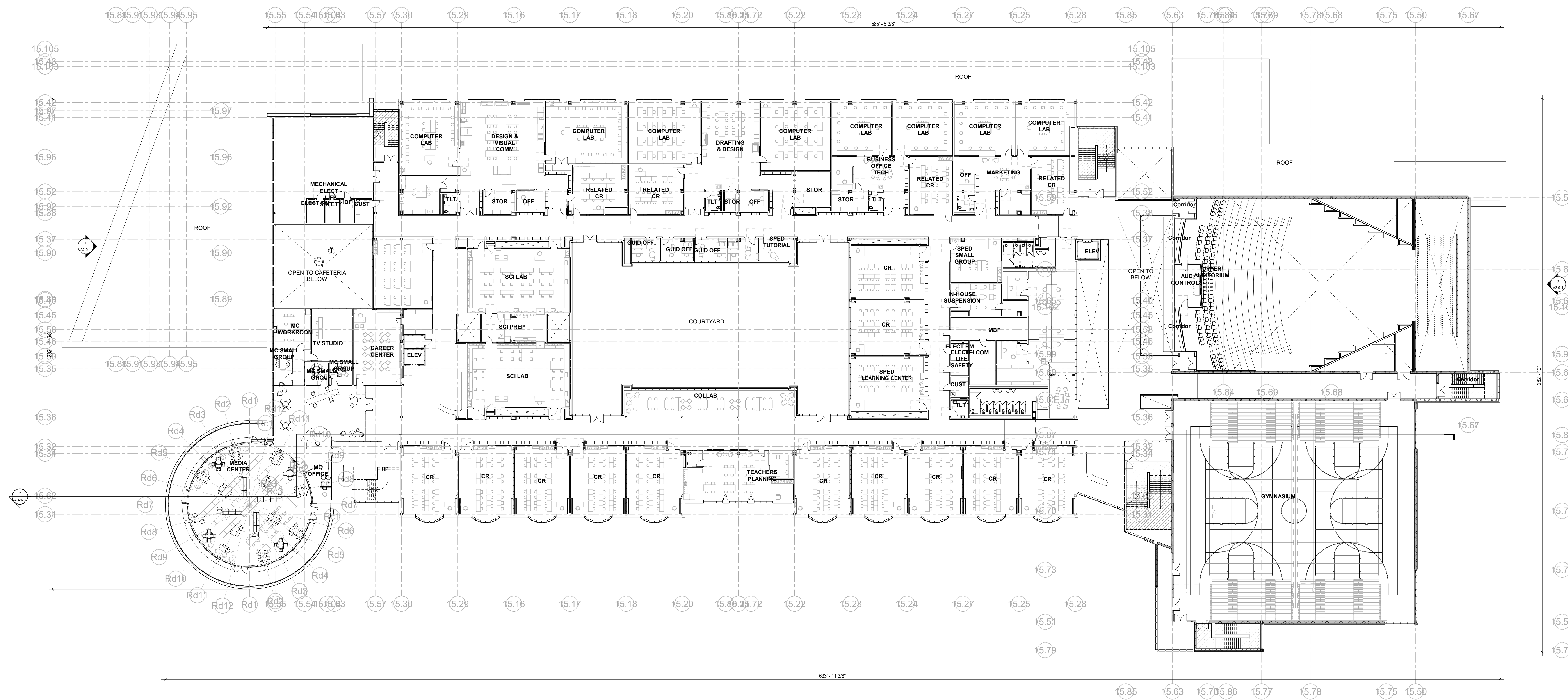
June 17, 2021



PROJECT NORTH
MAGNETIC NORTH



OVERALL
LOWER LEVEL &
FIRST FLOOR
PLANS

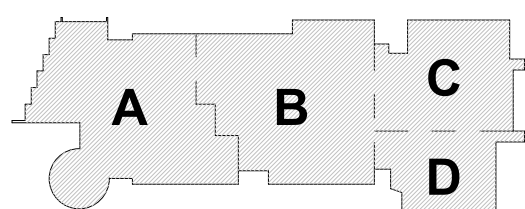


1 SECOND FLOOR PLAN
1" = 20'-0"

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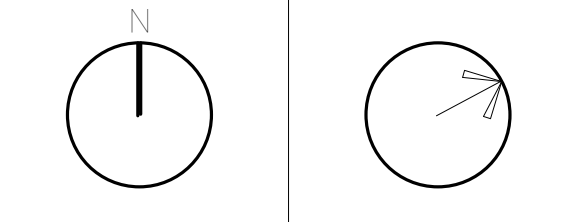
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June 17, 2021

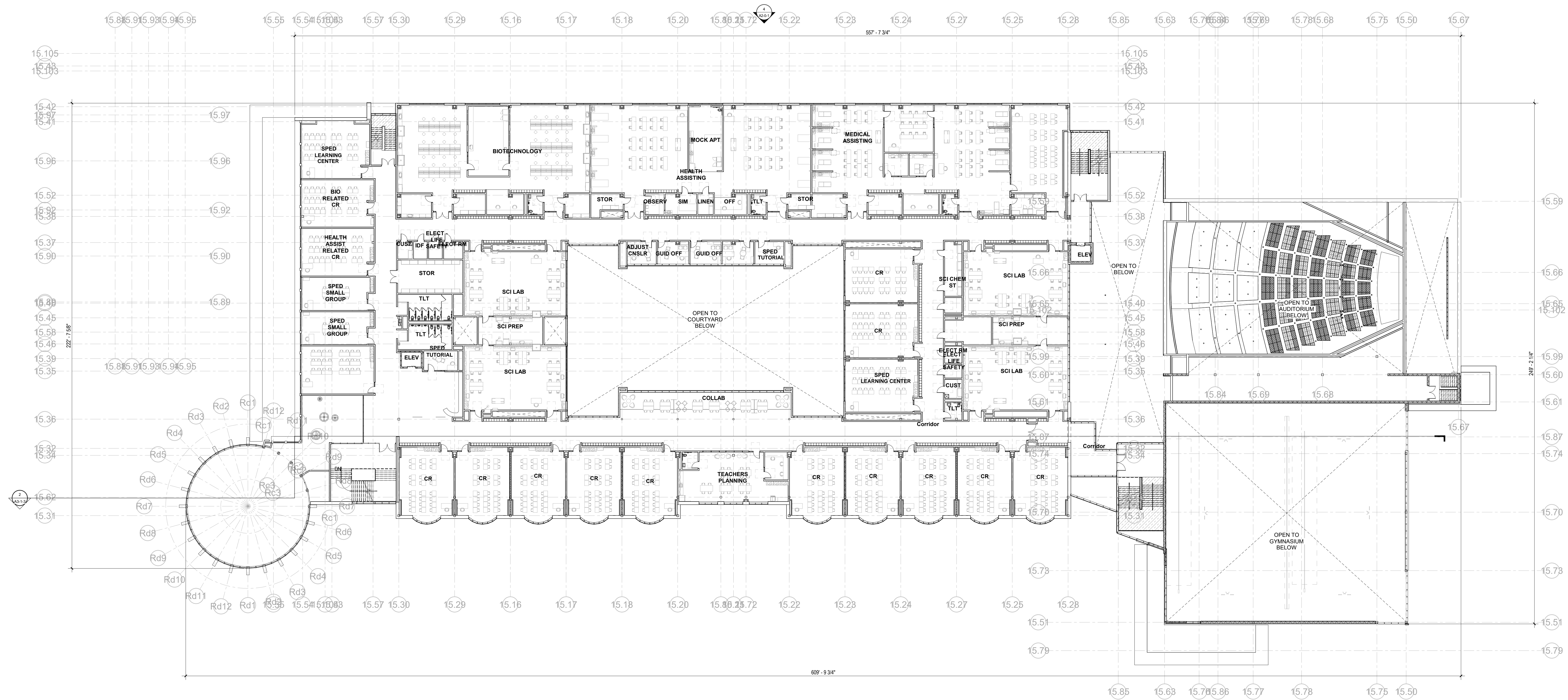


KEY PLAN

PROJECT NORTH MAGNETIC NORTH



OVERALL
SECOND FLOOR
PLAN

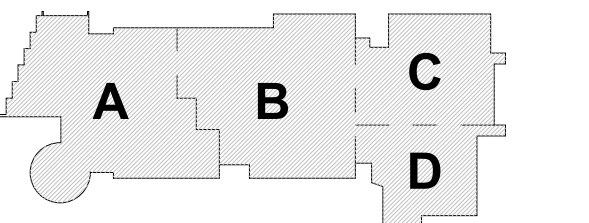


1 THIRD FLOOR PLAN
1" = 20'-0"

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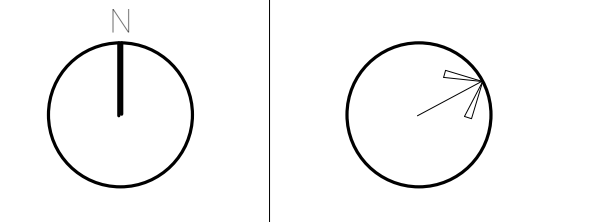
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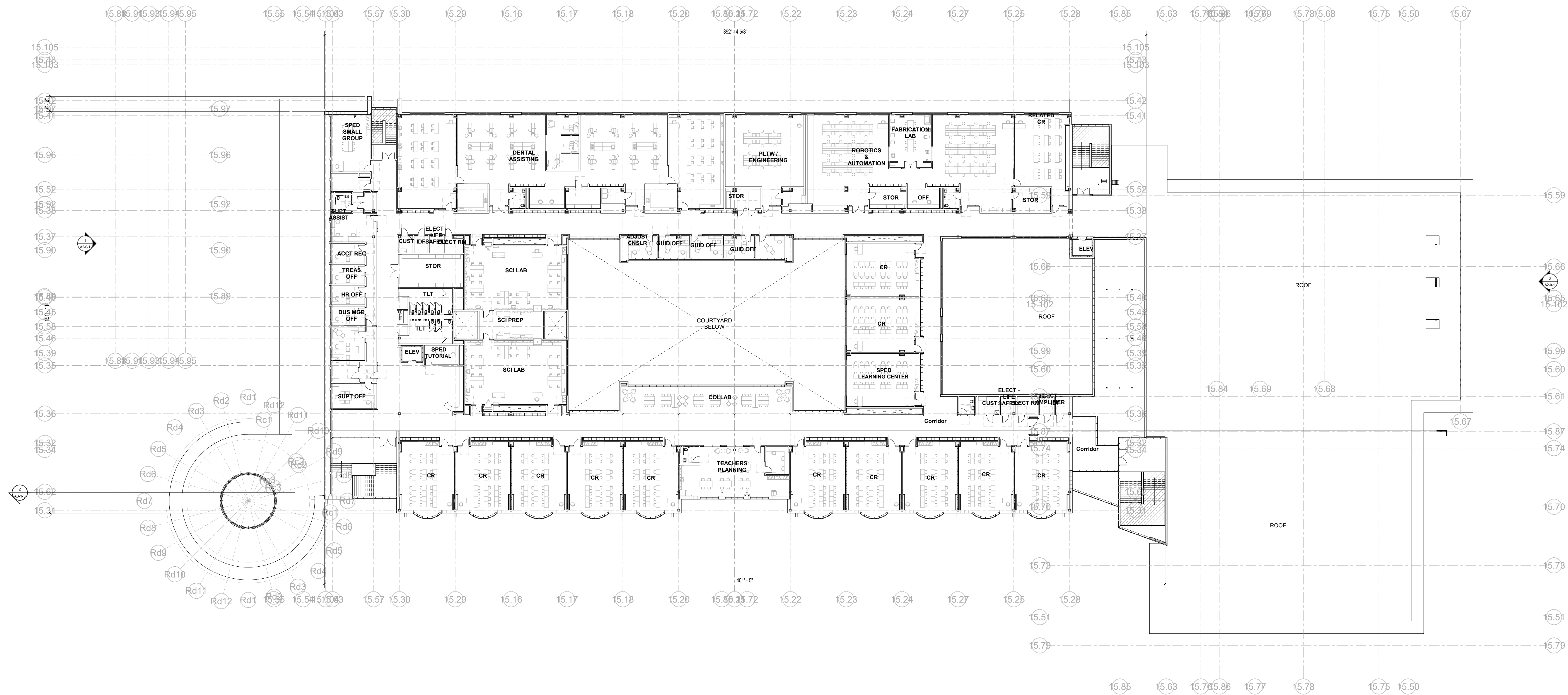


KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**OVERALL THIRD
FLOOR PLAN**

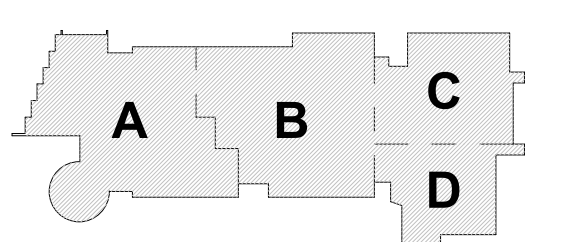


1 4-Overall Fourth Floor Plan
1" = 20'-0"

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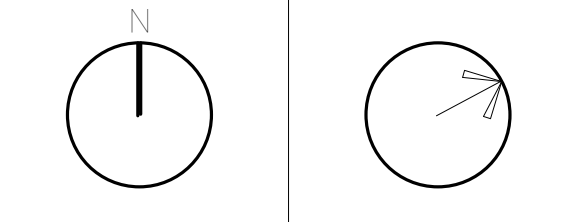
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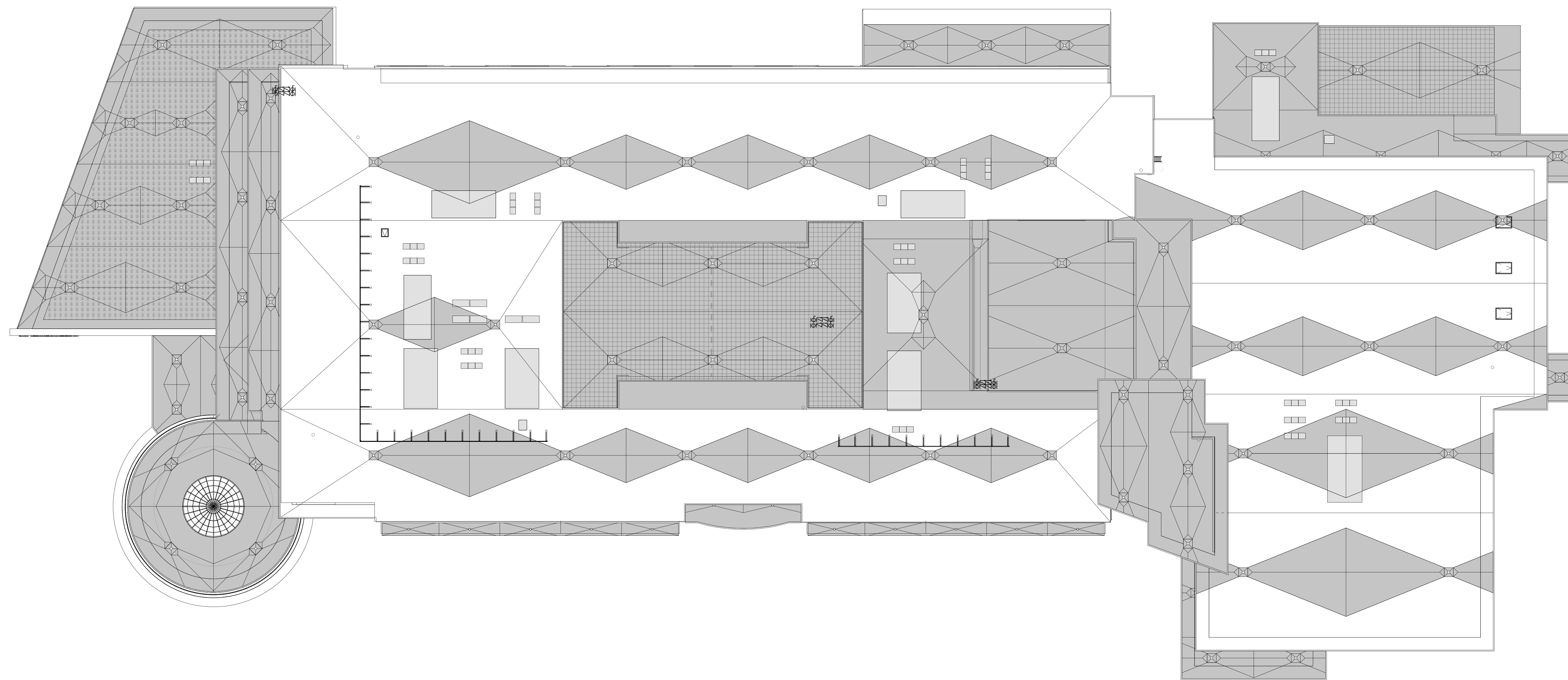


KEY PLAN

PROJECT NORTH MAGNETIC NORTH



OVERALL
FOURTH FLOOR
PLAN



1 OVERALL ROOF PLAN
 1" = 20'-0"

ROOF LEGEND

ROOF SYSTEM A
 SINGLE PLY MEMBRANE
 ROOF OVER COVER BOARD ON 1/2" MIN. ROOF INSULATION APPLIED IN MAX. 2" LAYERS WITH STAGGERED SEAMS OVER METAL DECKING

ROOF SYSTEM B
 SINGLE PLY MEMBRANE ROOF OVER COVER BOARD ON 1/2" MIN. TAPERED ROOF INSULATION OVER METAL DECKING

TAPERED INSULATION CRACKS
 SINGLE PLY MEMBRANE ROOF OVER COVER BOARD TAPERED ROOF INSULATION OVER ROOF SYSTEM A COVER BOARD (OMITTED) - MIN. 1/2" PER FOOT SLOPE

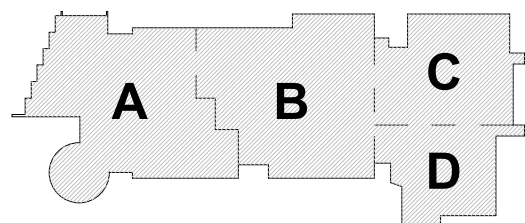
H.P.
 HIGH POINT OF PITCHED STEEL - SEE WALL SECTIONS FOR B.O. DECK ELEVATIONS

(-7' 14")
 ELEVATION OF PITCHED STEEL RELATIVE TO ADJACENT HIGH POINT

4"
 THICKNESS OF TAPERED INSULATION OVER ROOF DECK

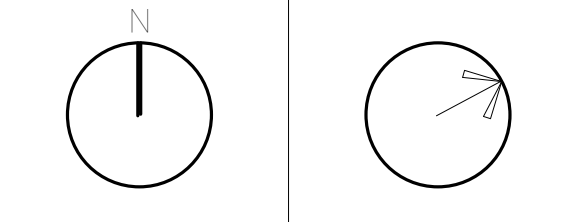
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH

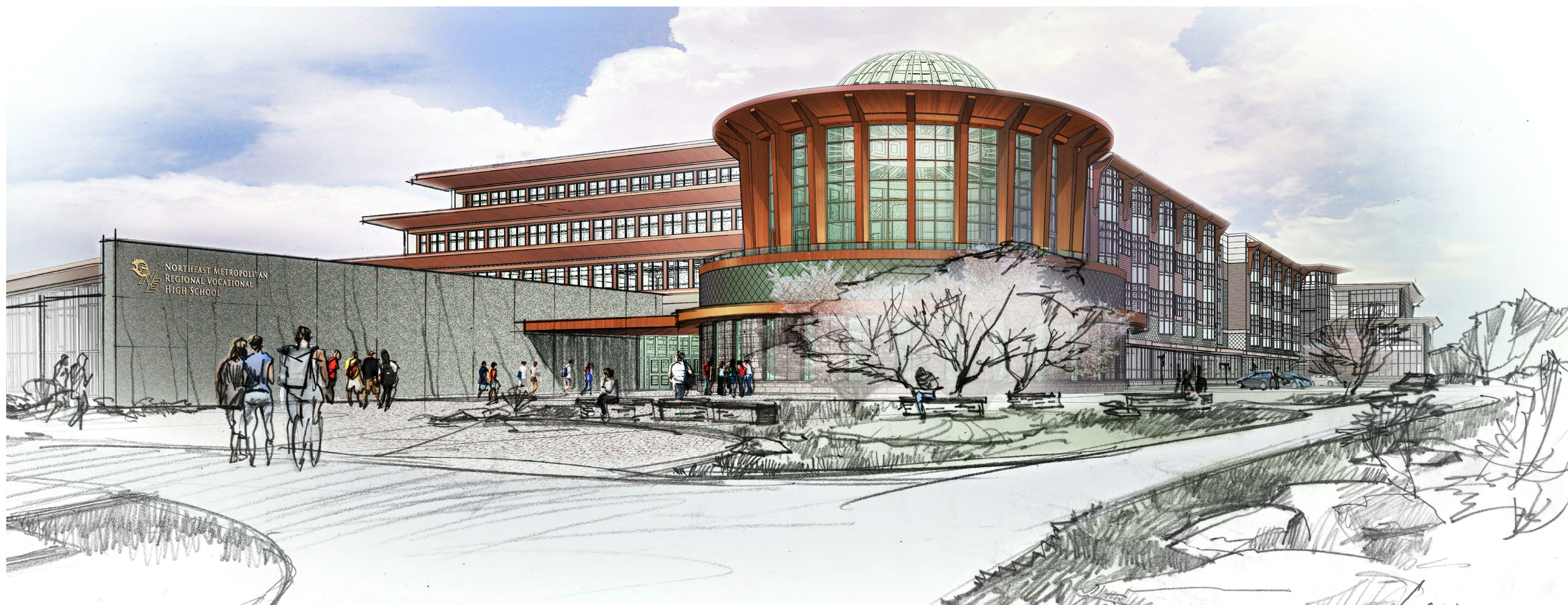


OVERALL ROOF PLAN

Scale: As indicated
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 Drawn By: DRA
 Date: June 17, 2021

A1-0-5

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FRONT ENTRY



CLASSROOMS AND EAST ELEVATION

DRA

Drummeys Rosane Anderson, Inc.
225 Oakland Road
Studio 205
South Windsor, CT
06074

260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design
Tel: 817.954.1700
www.dra.com

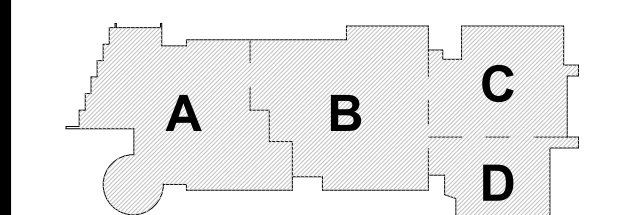
**Northeast
Metropolitan
Regional
Vocational High
School**

Wakefield, MA 01880

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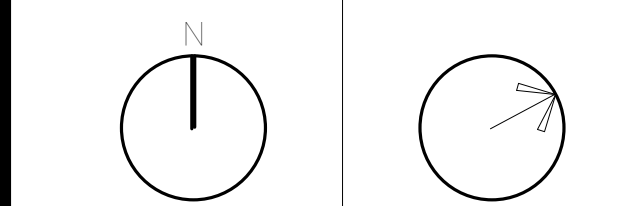
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**EXTERIOR
RENDERINGS**

Scale:
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-0-6



EVENTS LOBBY - FIRST & SECOND FLOOR



AUDITORIUM



MEDIA CENTER



CAFETERIA

DRA

Drumey Rosane Anderson, Inc.
 225 Oakland Road Studio 205
 South Windsor, CT 06074
 260 Charles Street Studio 300
 Waltham, MA 02453
 Planning | Architecture | Interior Design
 Tel: 817.964.1700
 www.dra.com

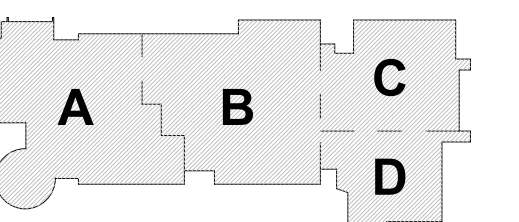
**Northeast
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 Regional
 Vocational High School**

Wakefield, MA 01880

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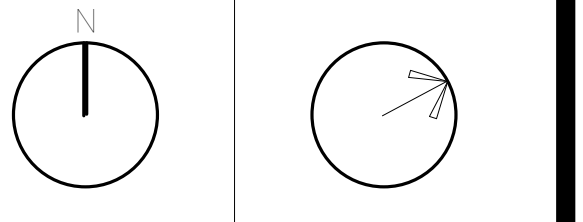
MSBA SCHEMATIC
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June 17, 2021



KEY PLAN

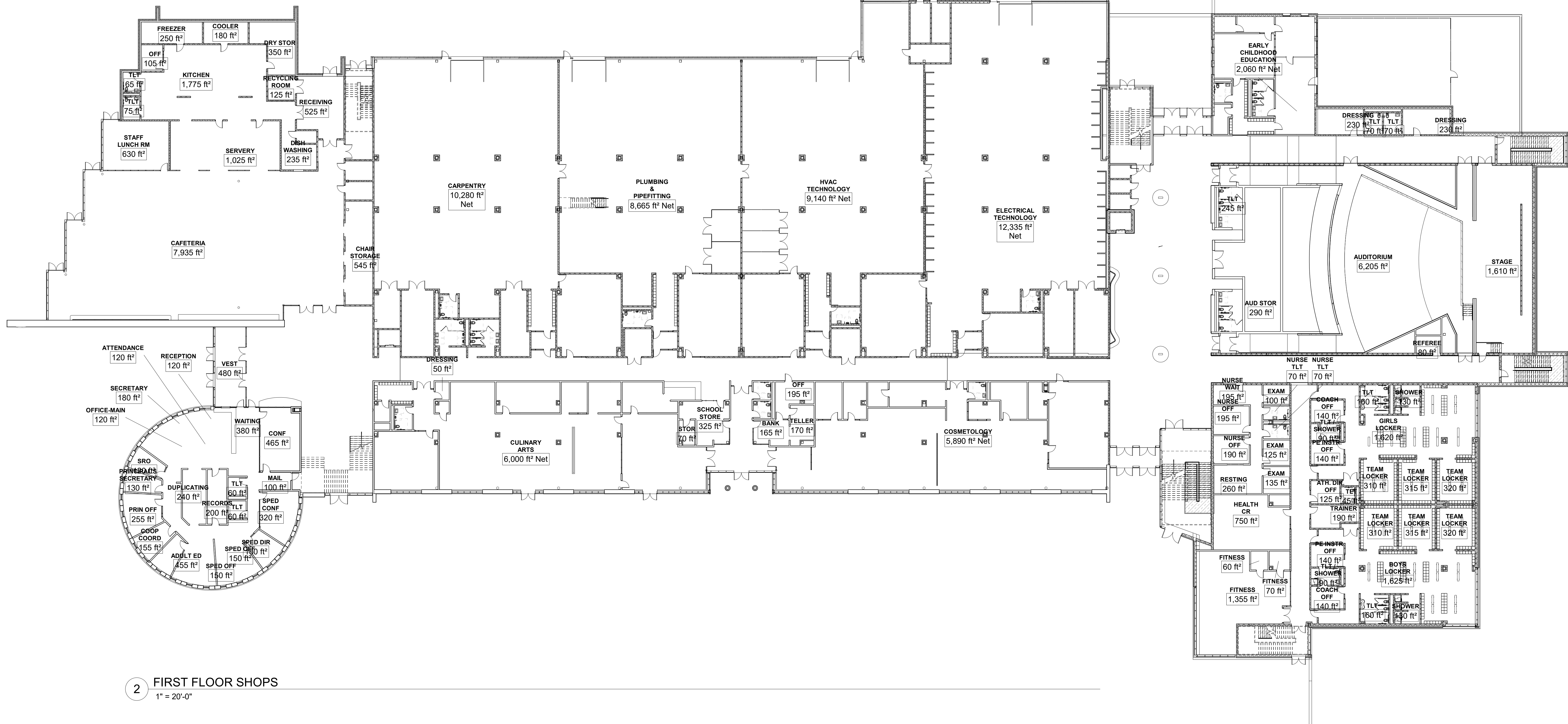
PROJECT NORTH MAGNETIC NORTH



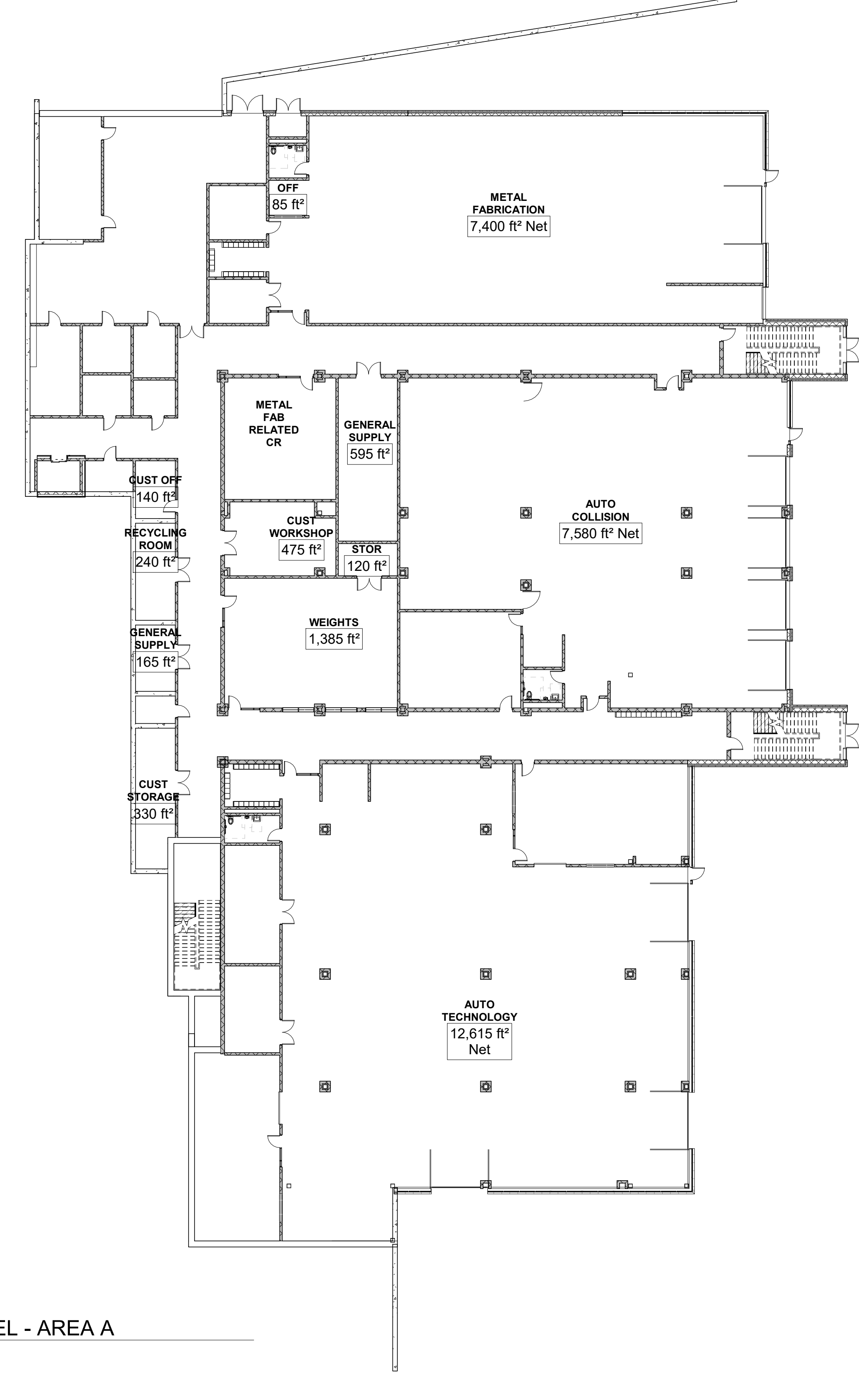
**INTERIOR
 RENDERINGS**

Scale:
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

A1-0-7



2 FIRST FLOOR SHOPS
1" = 20'-0"



1 LOWER LEVEL - AREA A
1" = 20'-0"

GROSS AREA SCHEDULE	
	Area
Main Building	
Lower Level	44,050 SF
First Floor	127,835 SF
Second Floor	89,235 SF
Third Floor	65,600 SF
Fourth Floor	53,650 SF
Main Building	380,570 SF
Satellite Concessions Buildings	
Concessions Building	1,170 SF
Concessions Building	565 SF
Satellite Concessions Buildings	1,730 SF
Satellite Locker Building	
Locker Building-1st Floor	3,155 SF
Locker Building-2nd Floor	2,900 SF
Satellite Locker Building	6,060 SF
Satellite Maintenance Building	
Garage	2,040 SF
Satellite Maintenance Building	2,040 SF
Grand total	390,400 SF

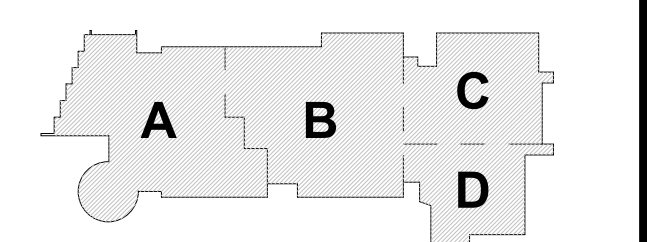
DRA
 Drummey Rosane Anderson, Inc.
 225 Oakland Road
 South Windsor, CT 06074
 260 Charles Street
 Studio 300
 Waltham, MA 02453
 Planning | Architecture | Interior Design
 Tel: 617.964.1100
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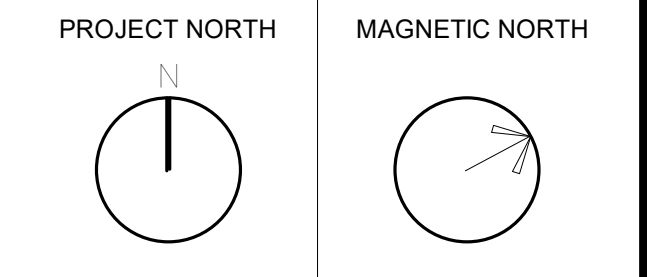
Wakefield, MA 01880

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June 17, 2021



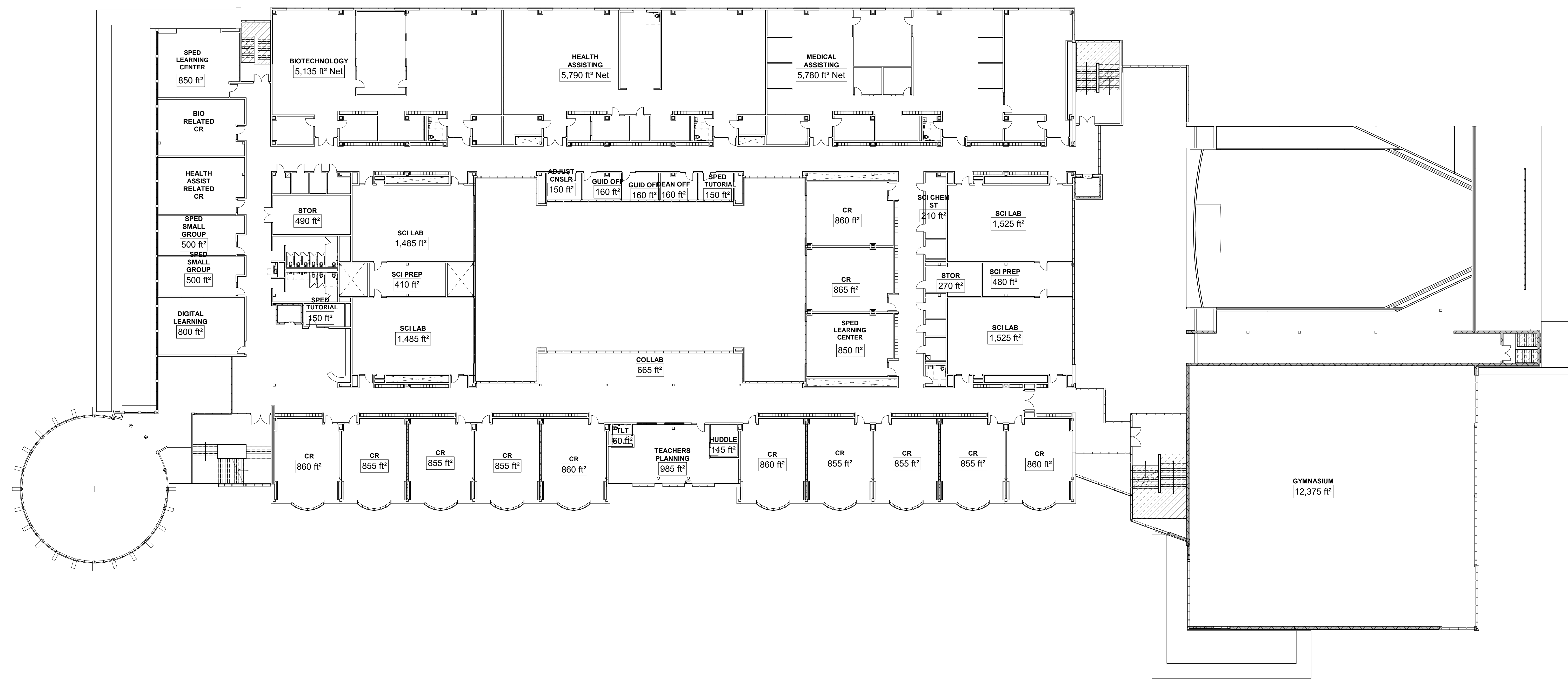
KEY PLAN
 PROJECT NORTH
 MAGNETIC NORTH



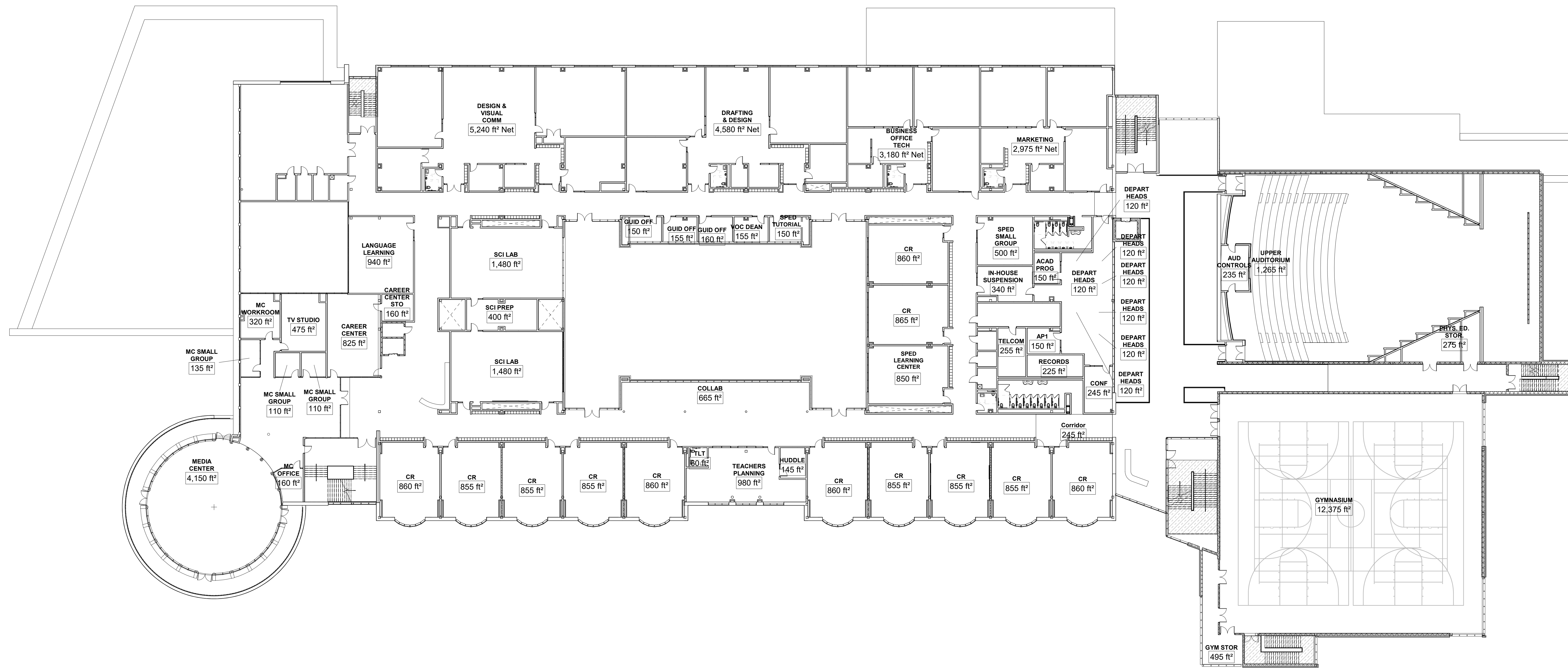
**LOWER & FIRST
 FLOOR NET
 AREA PLANS**

Scale: 1" = 20'-0"
 Job No.: 2002
 Drawn By: DRA
 Date: June 17, 2021
A1-0-8

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2 THIRD FLOOR PLAN
1" = 20'-0"



1 SECOND FLOOR PLAN
1" = 20'-0"

GROSS AREA SCHEDULE	
	Area
Main Building	
Lower Level	44,050 SF
First Floor	127,835 SF
Second Floor	89,235 SF
Third Floor	65,800 SF
Fourth Floor	53,650 SF
Main Building	380,570 SF
Satellite Concessions Buildings	
Concessions Building	1,170 SF
Concessions Building	565 SF
Satellite Concessions Buildings	1,730 SF
Satellite Locker Building	
Locker Building-1st Floor	3,155 SF
Locker Building-2nd Floor	2,900 SF
Satellite Locker Building	6,060 SF
Satellite Maintenance Building	
Garage	2,040 SF
Satellite Maintenance Building	2,040 SF
Grand total	390,400 SF

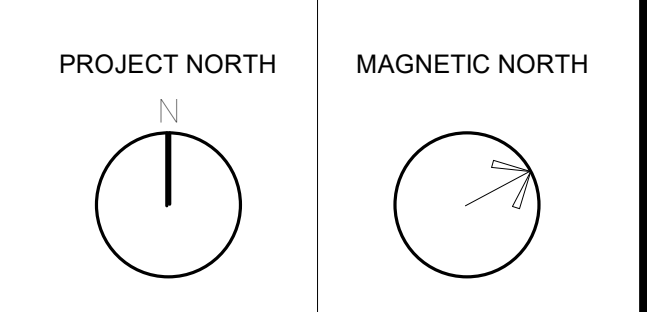
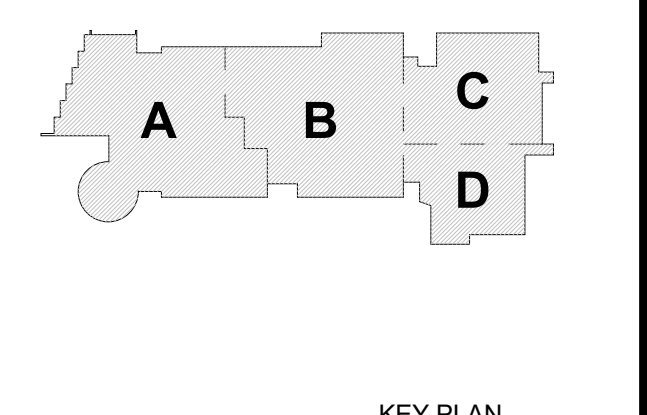
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 Studio 205
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 Waltham, MA 02453
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June 17, 2021

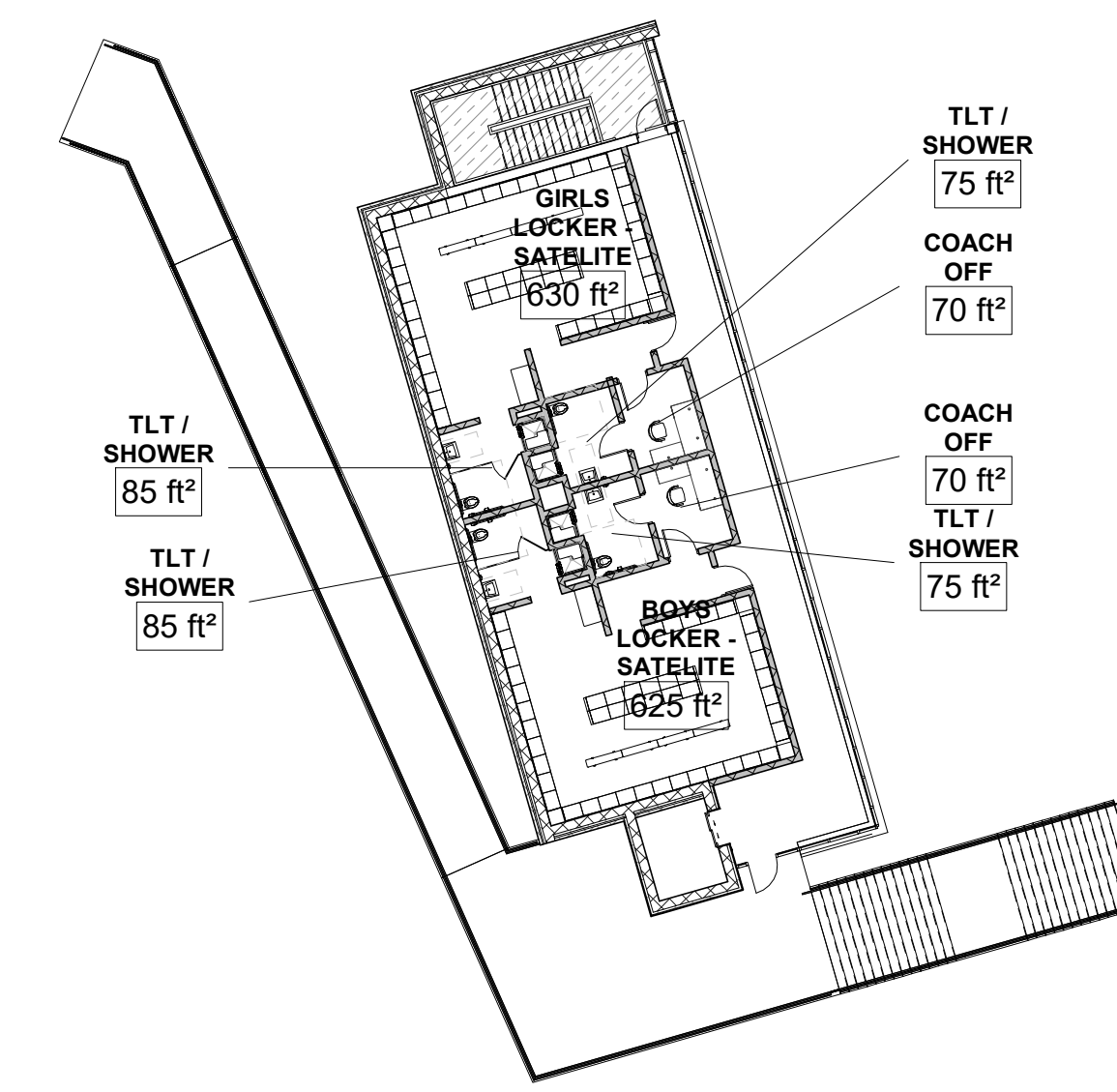


SECOND & THIRD FLOOR NET AREA PLANS

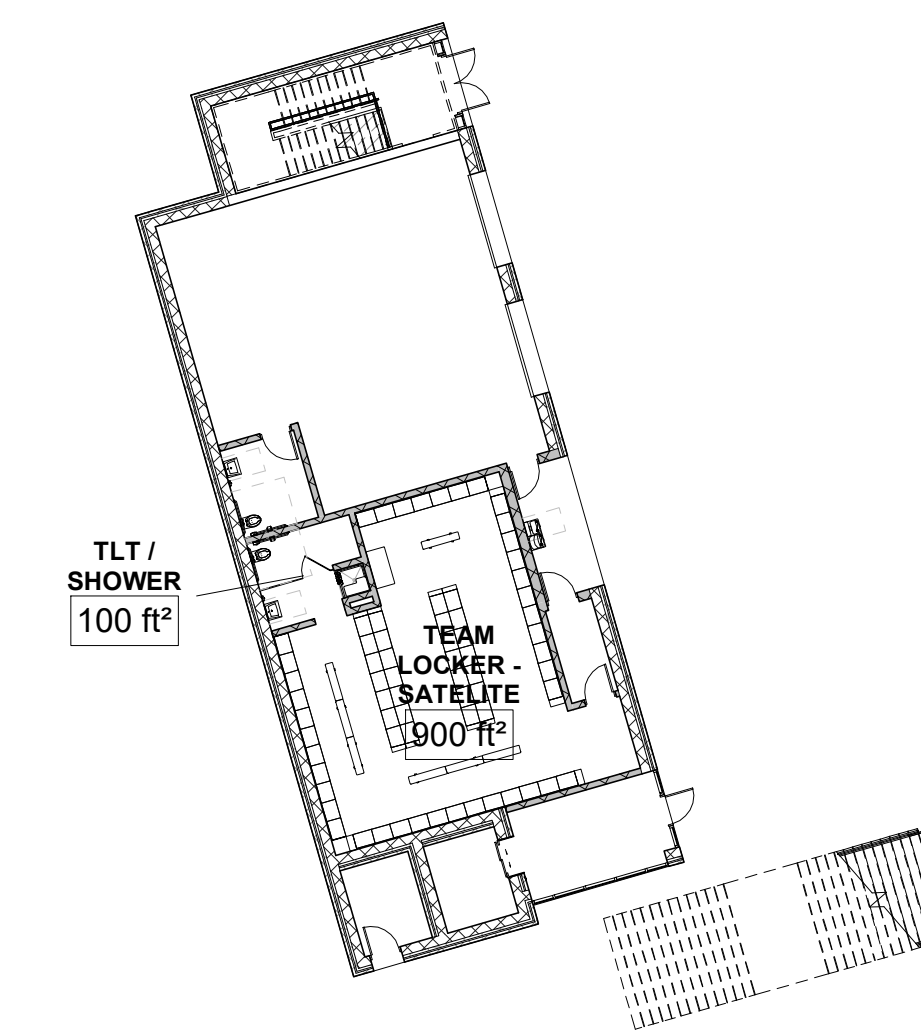
Scale: 1" = 20'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021
A1-0-9

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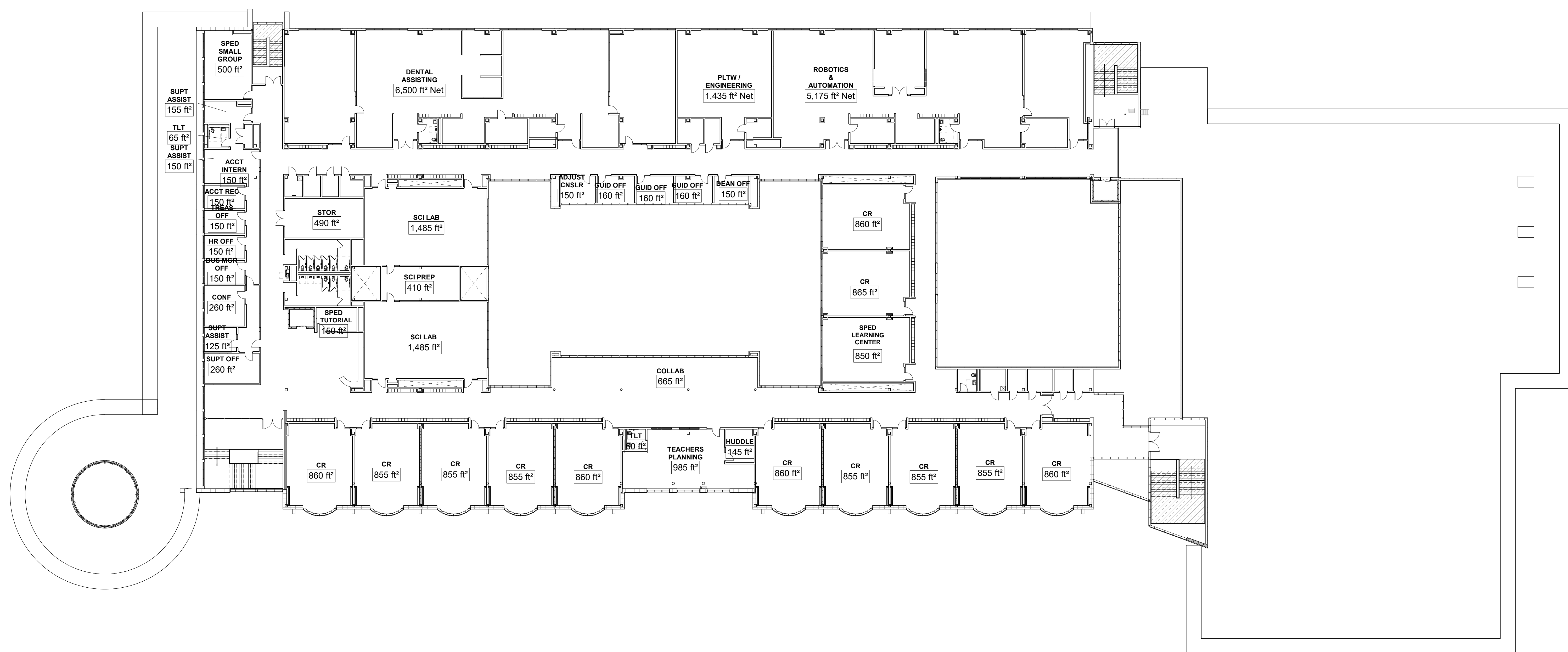
GROSS AREA SCHEDULE	
	Area
Main Building	
Lower Level	44,050 SF
First Floor	127,535 SF
Second Floor	89,235 SF
Third Floor	65,800 SF
Fourth Floor	53,650 SF
Main Building	380,570 SF
Satellite Concessions Buildings	
Concessions Building	1,170 SF
Concessions Building	565 SF
Satellite Concessions Buildings	1,730 SF
Satellite Locker Building	
Locker Building-1st Floor	3,155 SF
Locker Building-2nd Floor	2,900 SF
Satellite Locker Building	6,060 SF
Satellite Maintenance Building	
Garage	2,040 SF
Satellite Maintenance Building	2,040 SF
Grand total	390,400 SF



3 LOCKER BUILDING SECOND FLOOR PLAN
 1" = 20'-0"



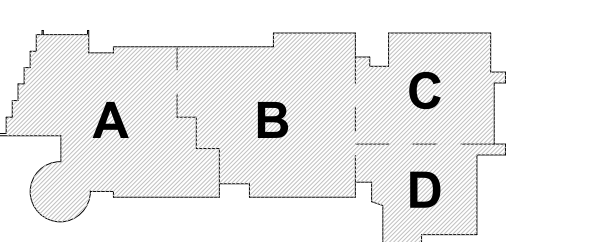
2 LOCKER BUILDING FIRST FLOOR PLAN
 1" = 20'-0"



1 4-Overall Fourth Floor Plan - Net Area
 1" = 20'-0"

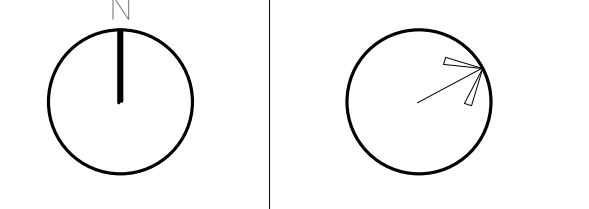
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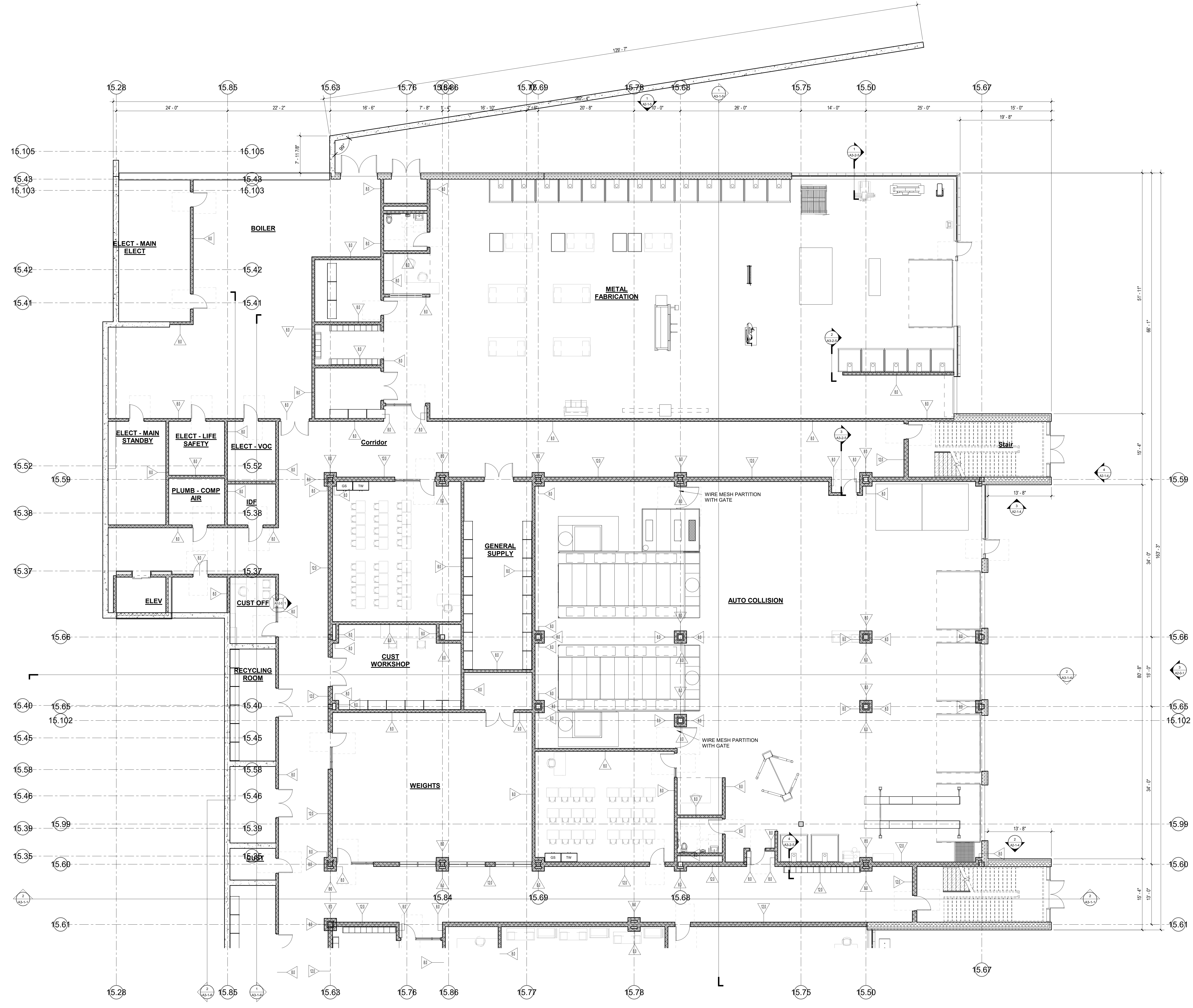
KEY PLAN

PROJECT NORTH MAGNETIC NORTH



FOURTH FLOOR & SATELITE LOCKERS NET AREA PLANS

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1 LOWER LEVEL - AREA A
1/8" = 1'-0"

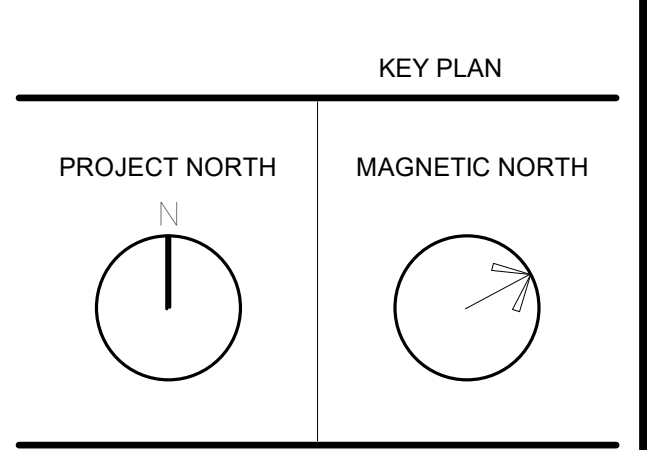
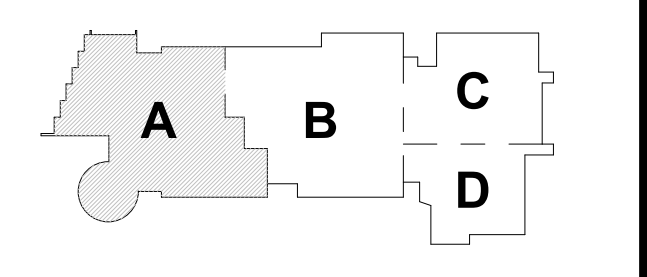
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**LOWER LEVEL
 FLOOR PLAN -
 AREA C**

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

A1-1-0C

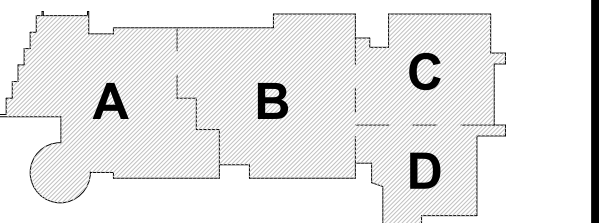


1 LOWER LEVEL - AREA A
1/8" = 1'-0"

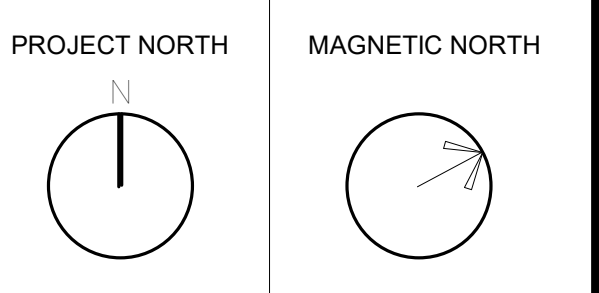
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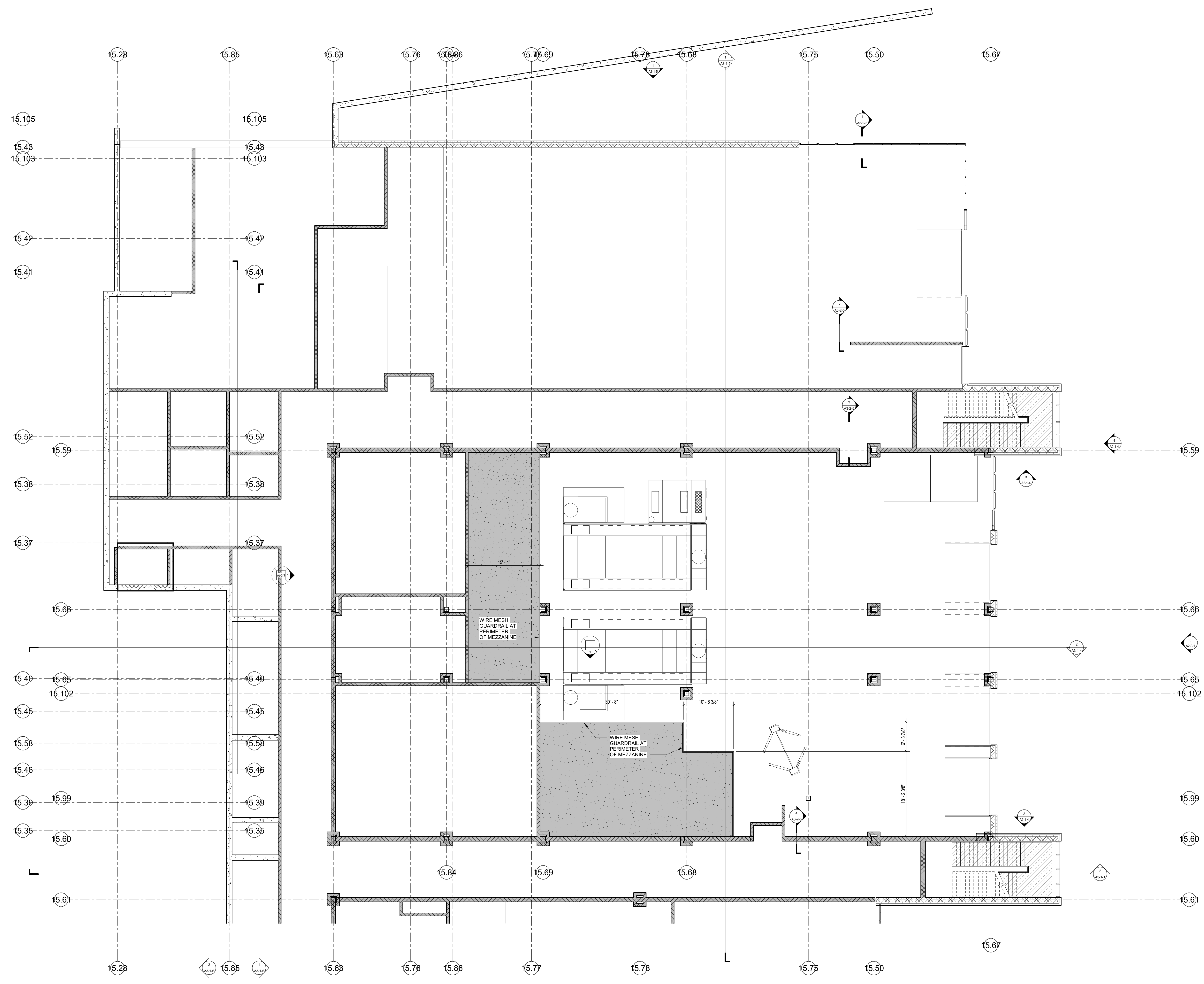
KEY PLAN



**LOWER LEVEL
FLOOR PLAN -
AREA D**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-1-0D



1 0.5-Lower Level Mezzanine - Area C
1/8" = 1'-0"



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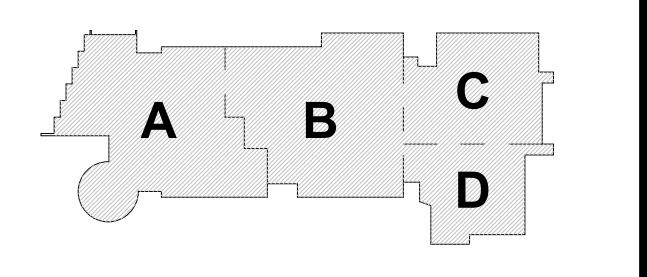
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Vocational High School**

Wakefield, MA 01880

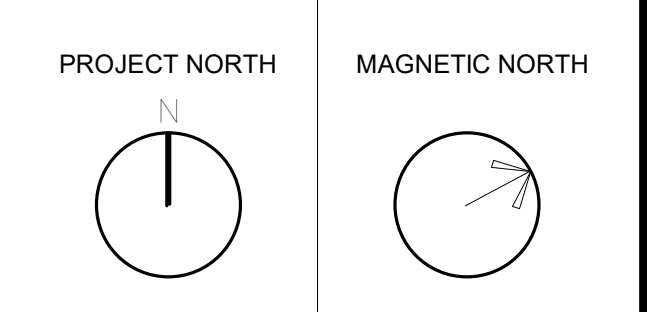
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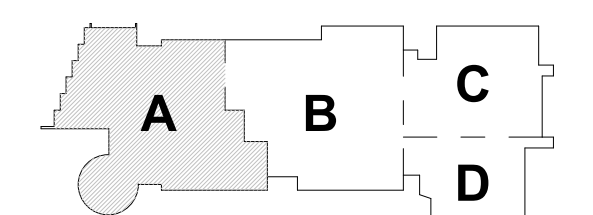
KEY PLAN



**LOWER LEVEL
MEZZANINE
PLAN - AREA C**

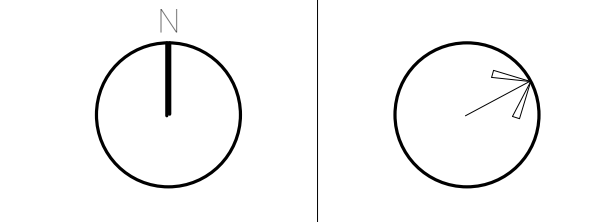
Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-1-0MC

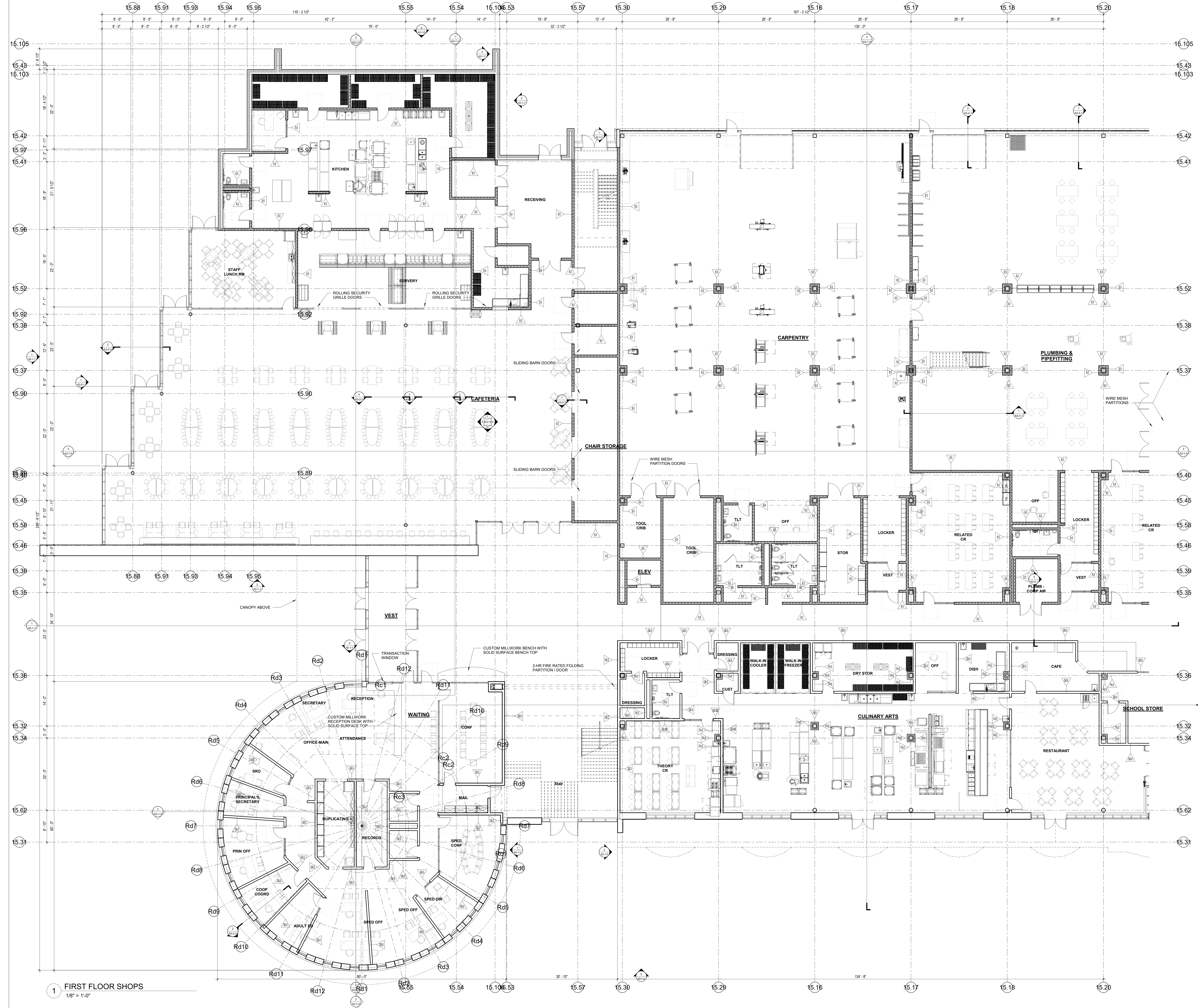


KEY PLAN

PROJECT NORTH MAGNETIC NORTH



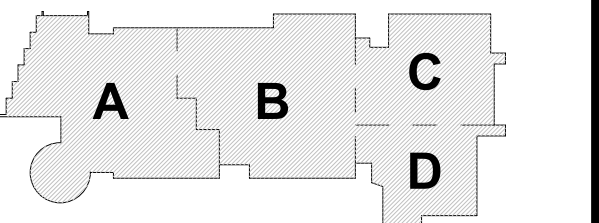
**FIRST FLOOR
PLAN - AREA A**



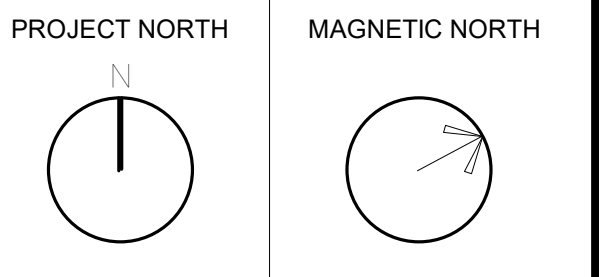
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PROJECT NORTH MAGNETIC NORTH

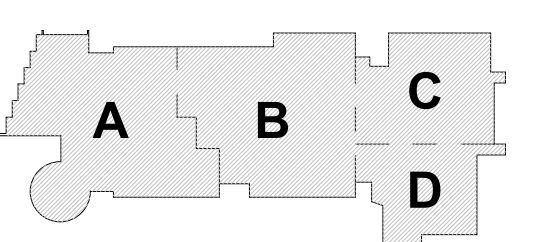


FIRST FLOOR
PLAN - AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021
A1-1-1B

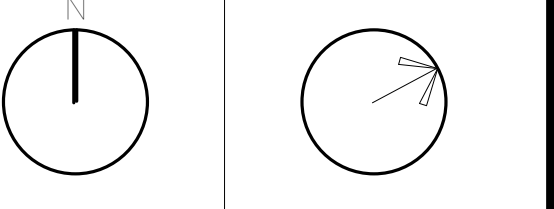


1 FIRST FLOOR SHOPS
1/8" = 1'-0"

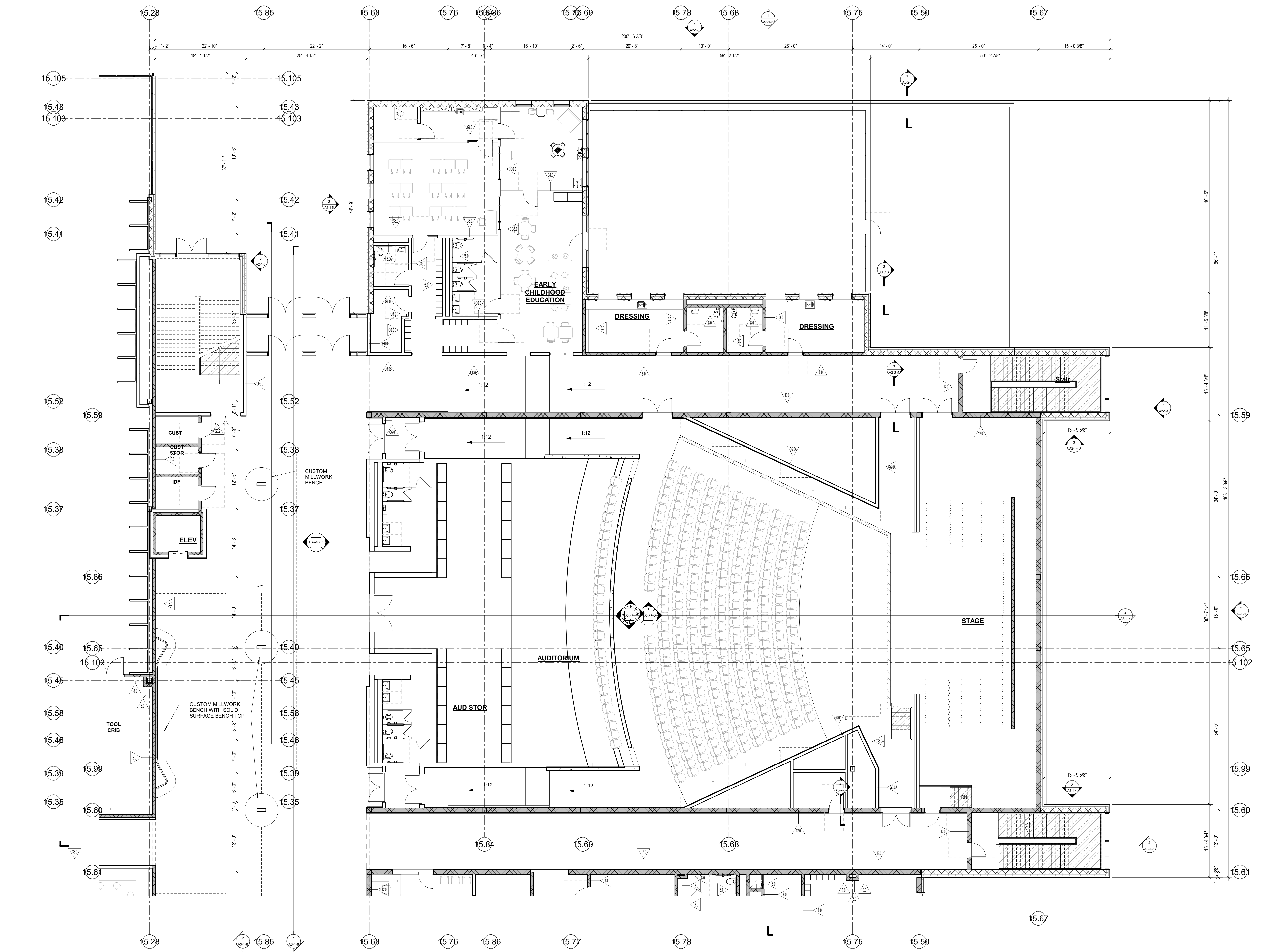


KEY PLAN

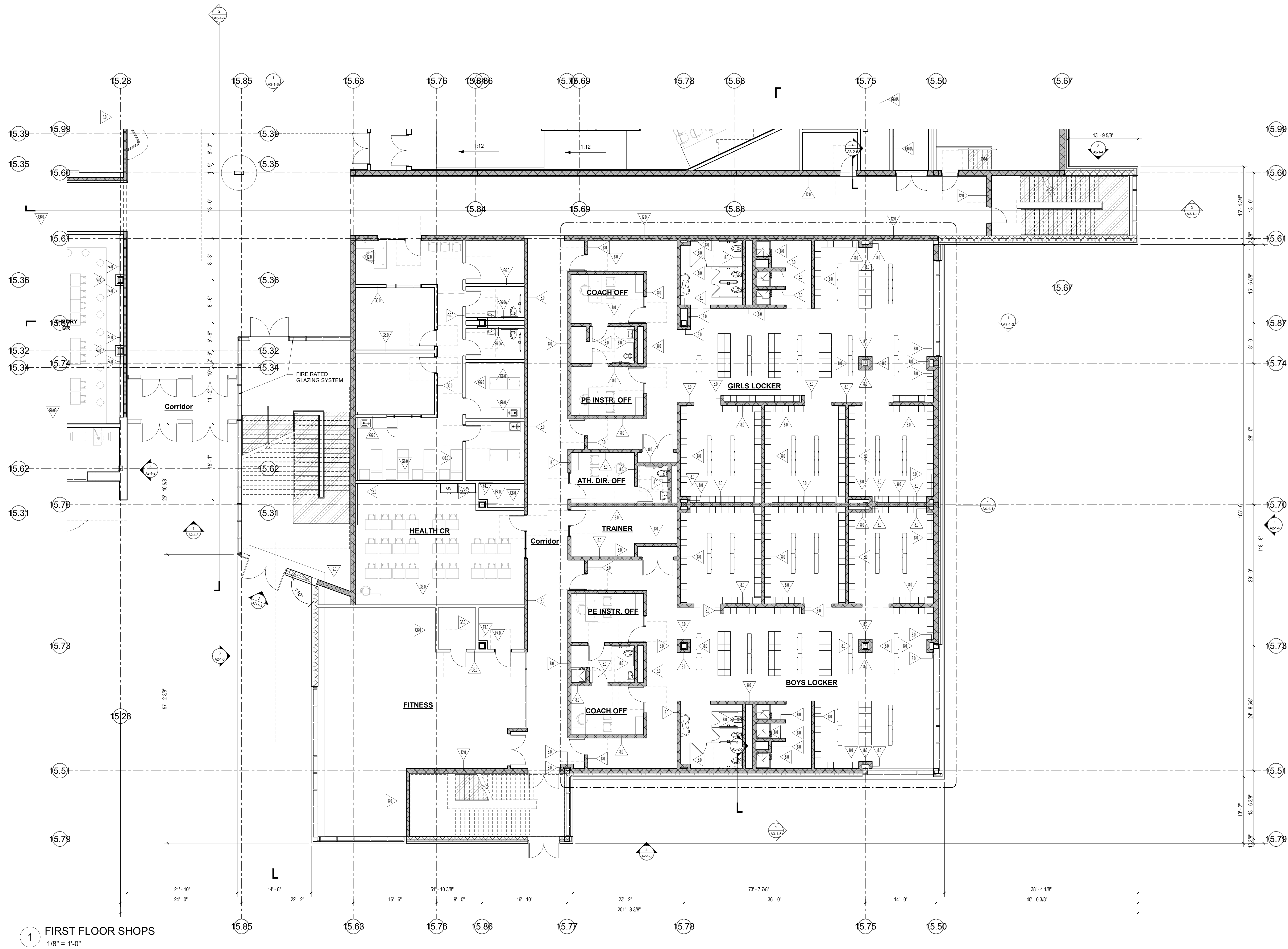
PROJECT NORTH MAGNETIC NORTH



FIRST FLOOR
PLAN - AREA C



1 FIRST FLOOR SHOPS
1/8" = 1'-0"

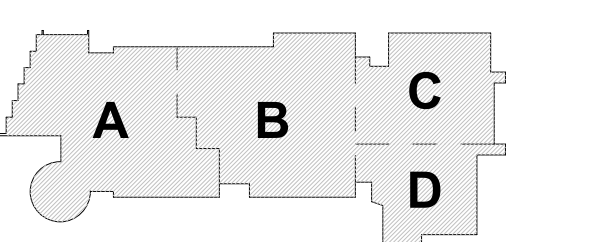


1 FIRST FLOOR SHOPS
1/8" = 1'-0"

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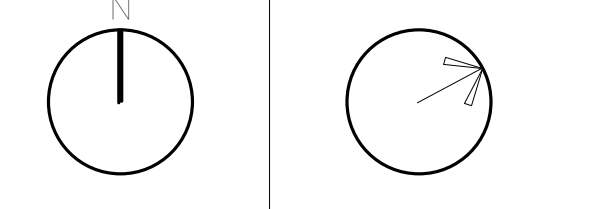
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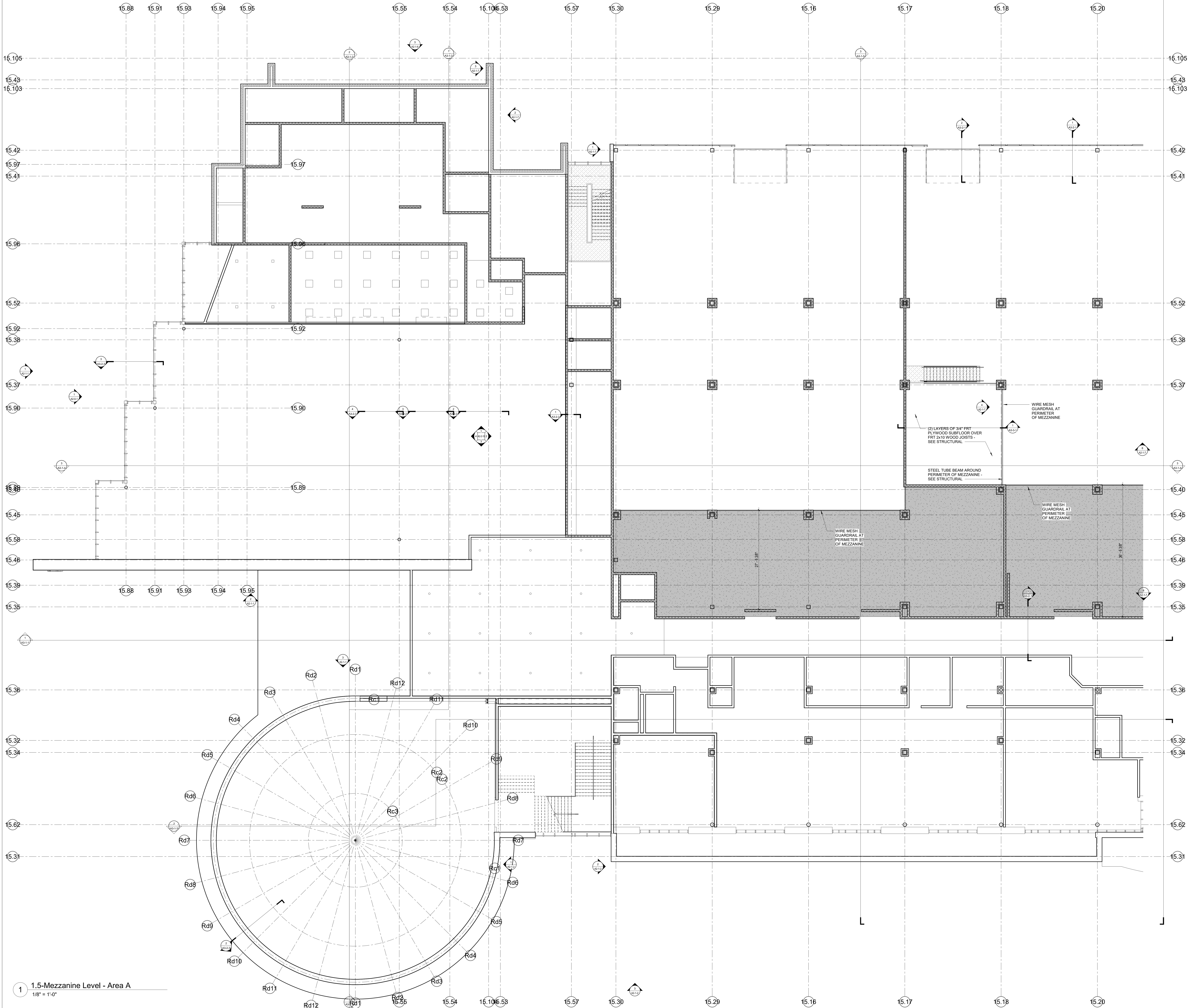


KEY PLAN

PROJECT NORTH MAGNETIC NORTH



FIRST FLOOR
PLAN - AREA D

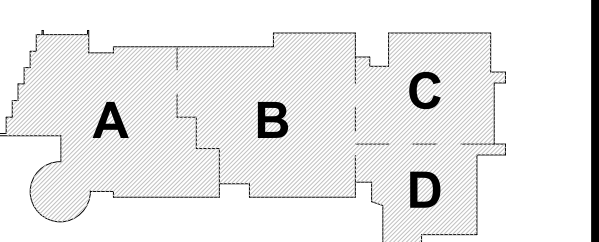


1 1.5-Mezzanine Level - Area A
1/8" = 1'-0"

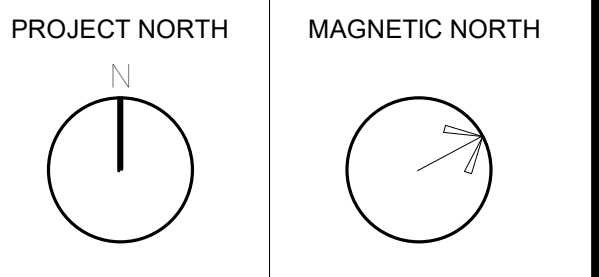
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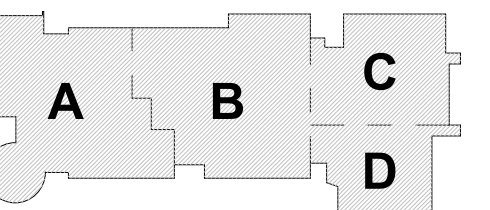
PROJECT NORTH MAGNETIC NORTH



**FIRST FLOOR
MEZZANINE
PLAN - AREA A**

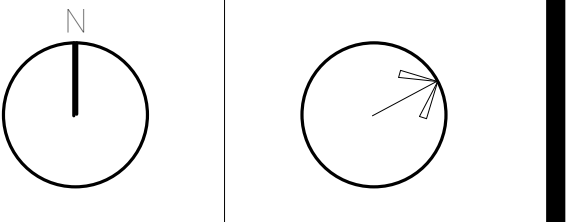
Scale: 1/8" = 1'-0"
Job No.: 2002
Drawn By: DRA
Date: June 17, 2021

A1-1-1MA



KEY PLAN

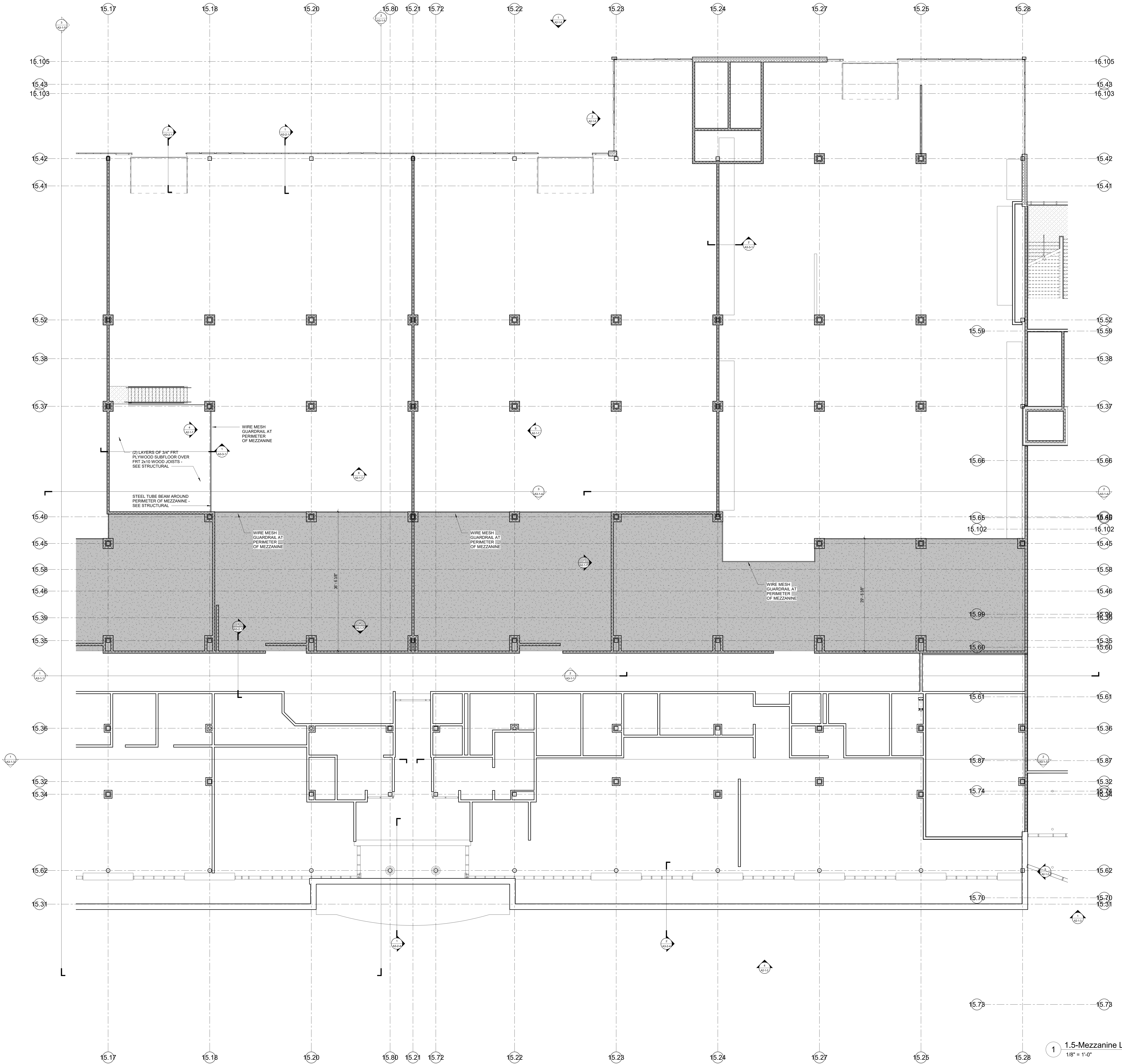
PROJECT NORTH MAGNETIC NORTH



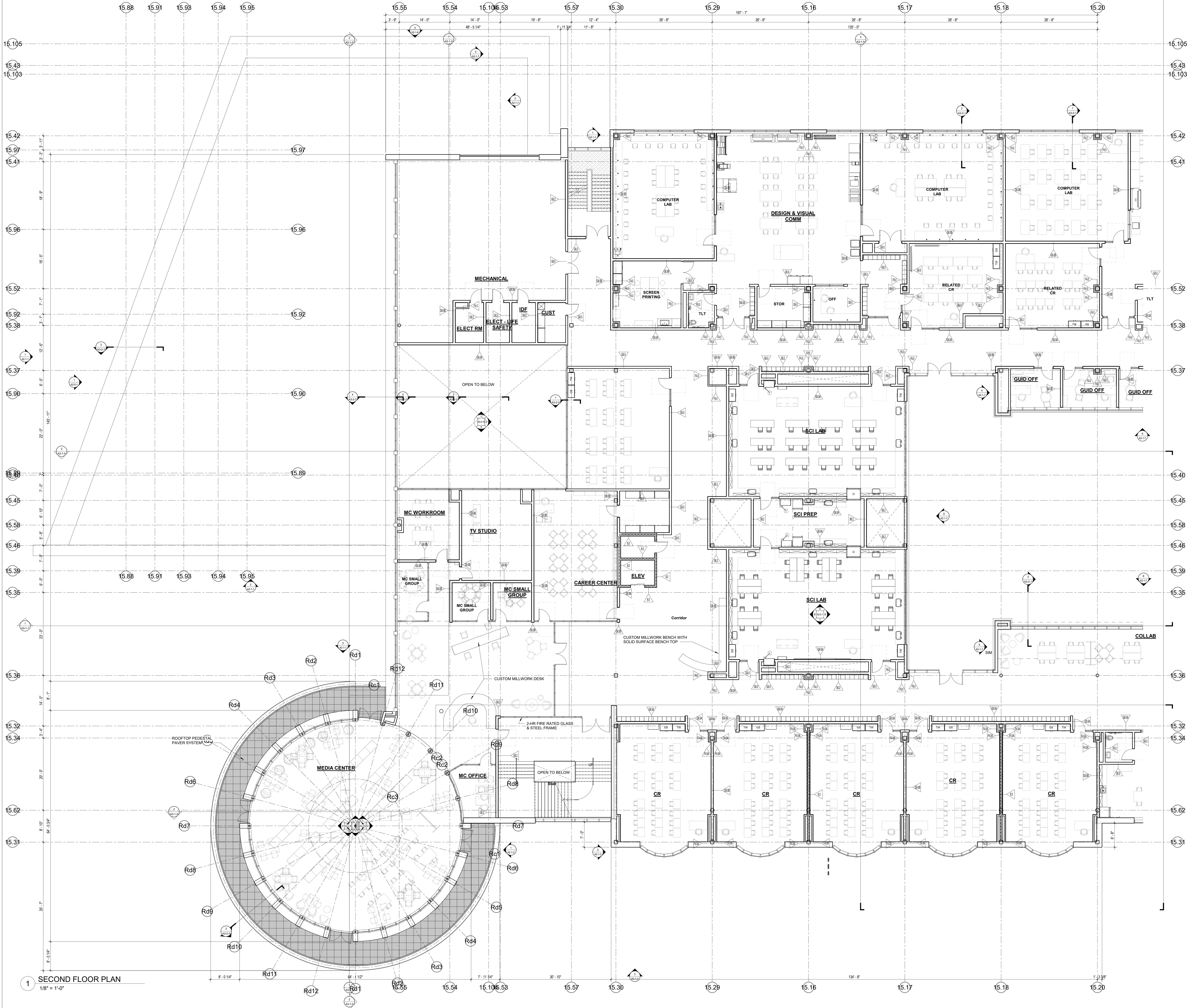
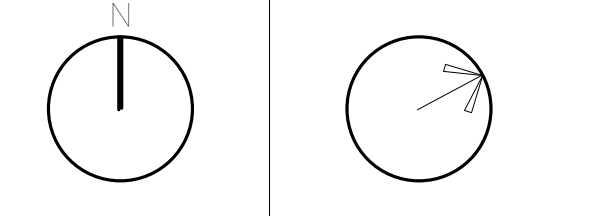
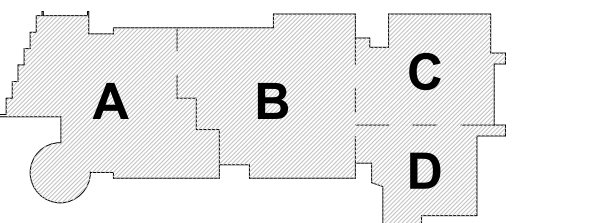
**FIRST FLOOR
MEZZANINE
PLAN - AREA B**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

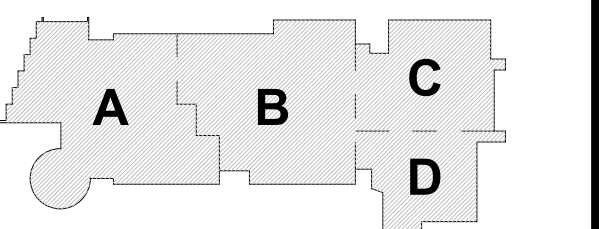
A1-1-1MB



1 1.5-Mezzanine Level - Area B
1/8" = 1'-0"

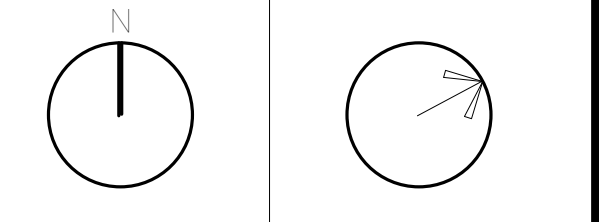


1 SECOND FLOOR PLAN
1/8" = 1'-0"

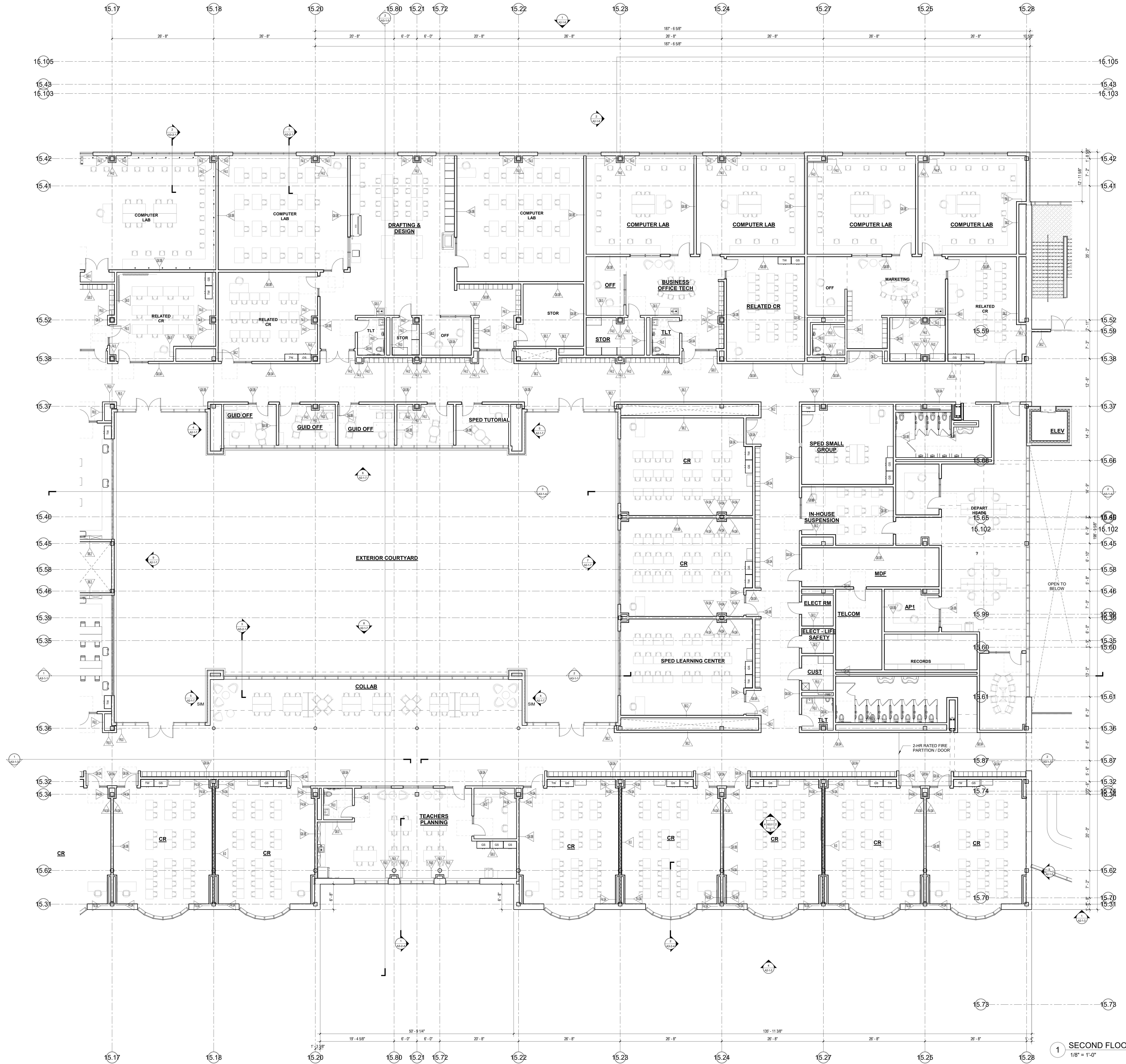


KEY PLAN

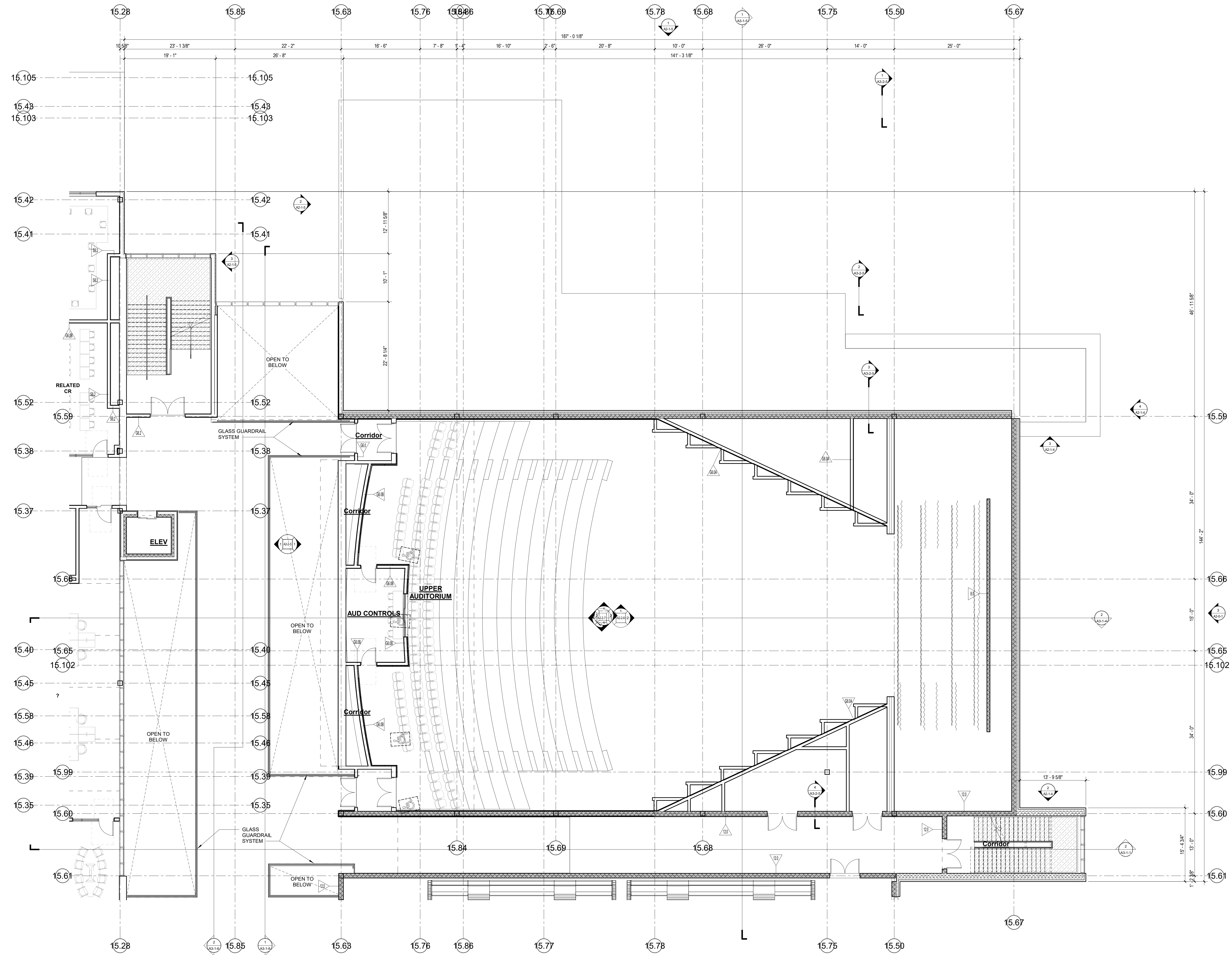
PROJECT NORTH
MAGNETIC NORTH



SECOND FLOOR
PLAN - AREA B



1 SECOND FLOOR PLAN
1/8" = 1'-0"

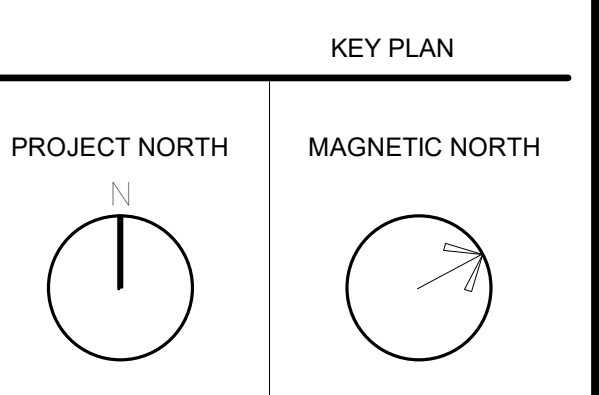
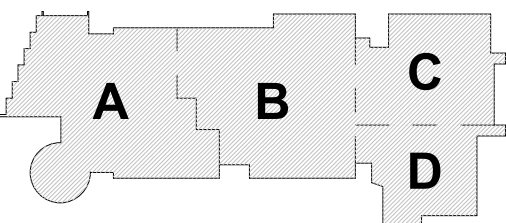


1 SECOND FLOOR PLAN
1/8" = 1'-0"

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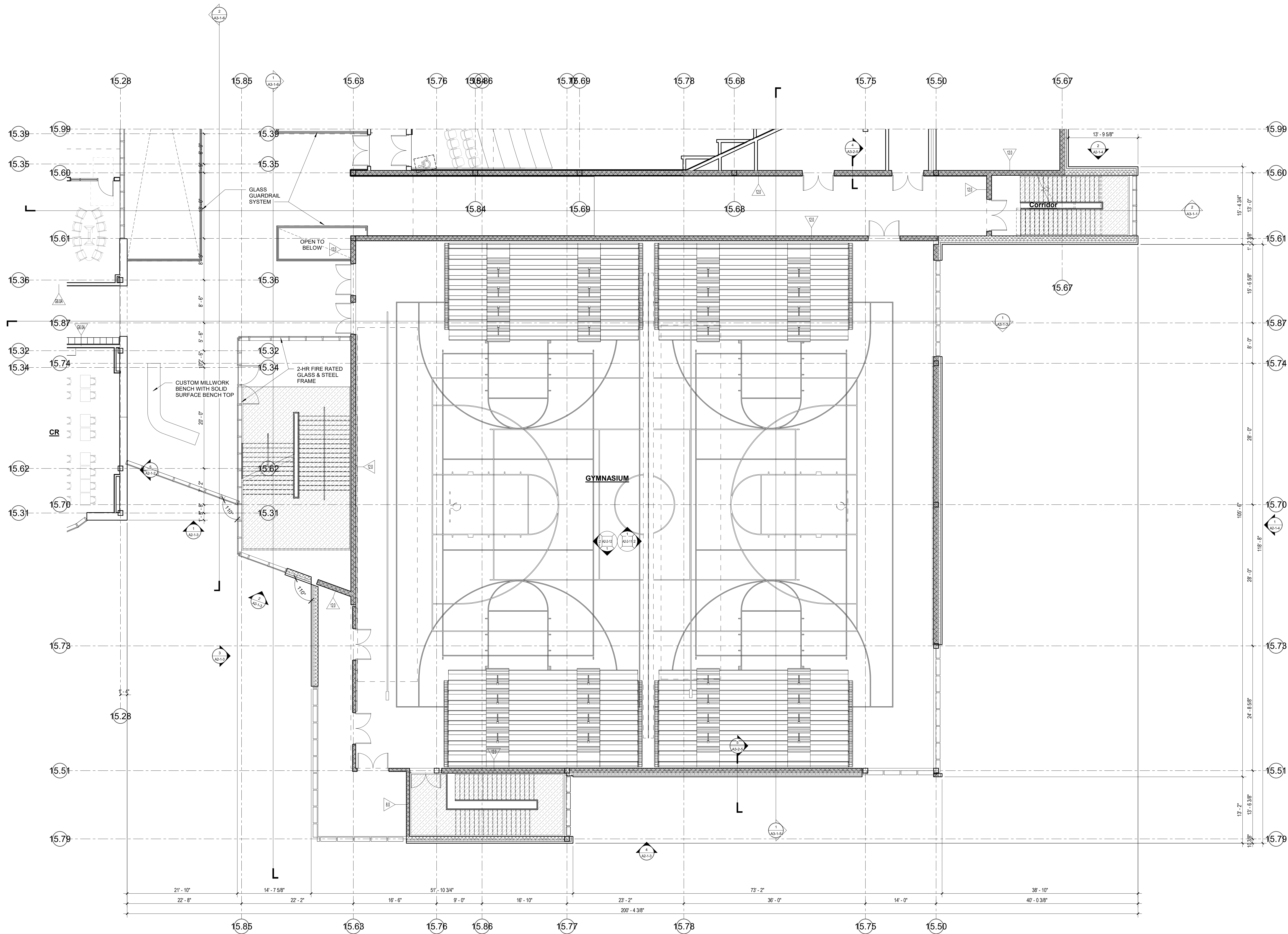
June 17, 2021



**SECOND FLOOR
PLAN - AREA C**

Scale: 1/8" = 1'-0"
Job No.: 2002
Drawn By: DRA
Date: June 17, 2021

A1-1-2C

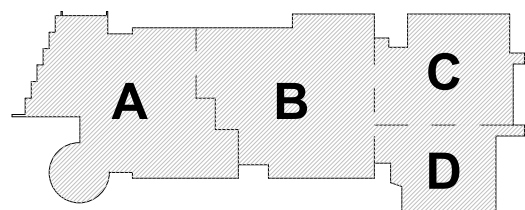


1 SECOND FLOOR PLAN
1/8" = 1'-0"

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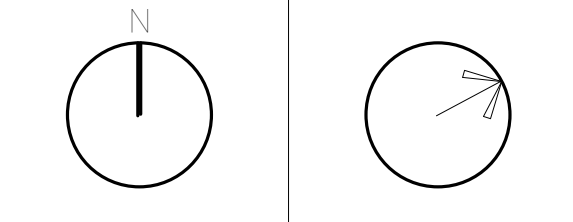
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KEY PLAN

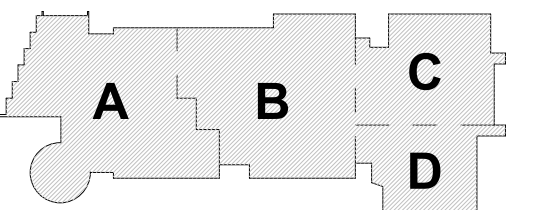
PROJECT NORTH MAGNETIC NORTH



SECOND FLOOR
PLAN - AREA D

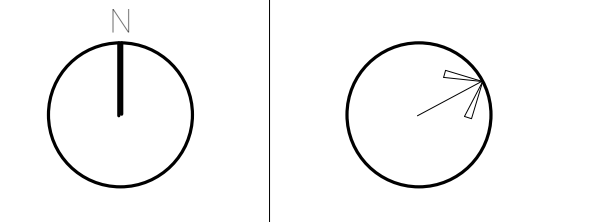
Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-1-2D

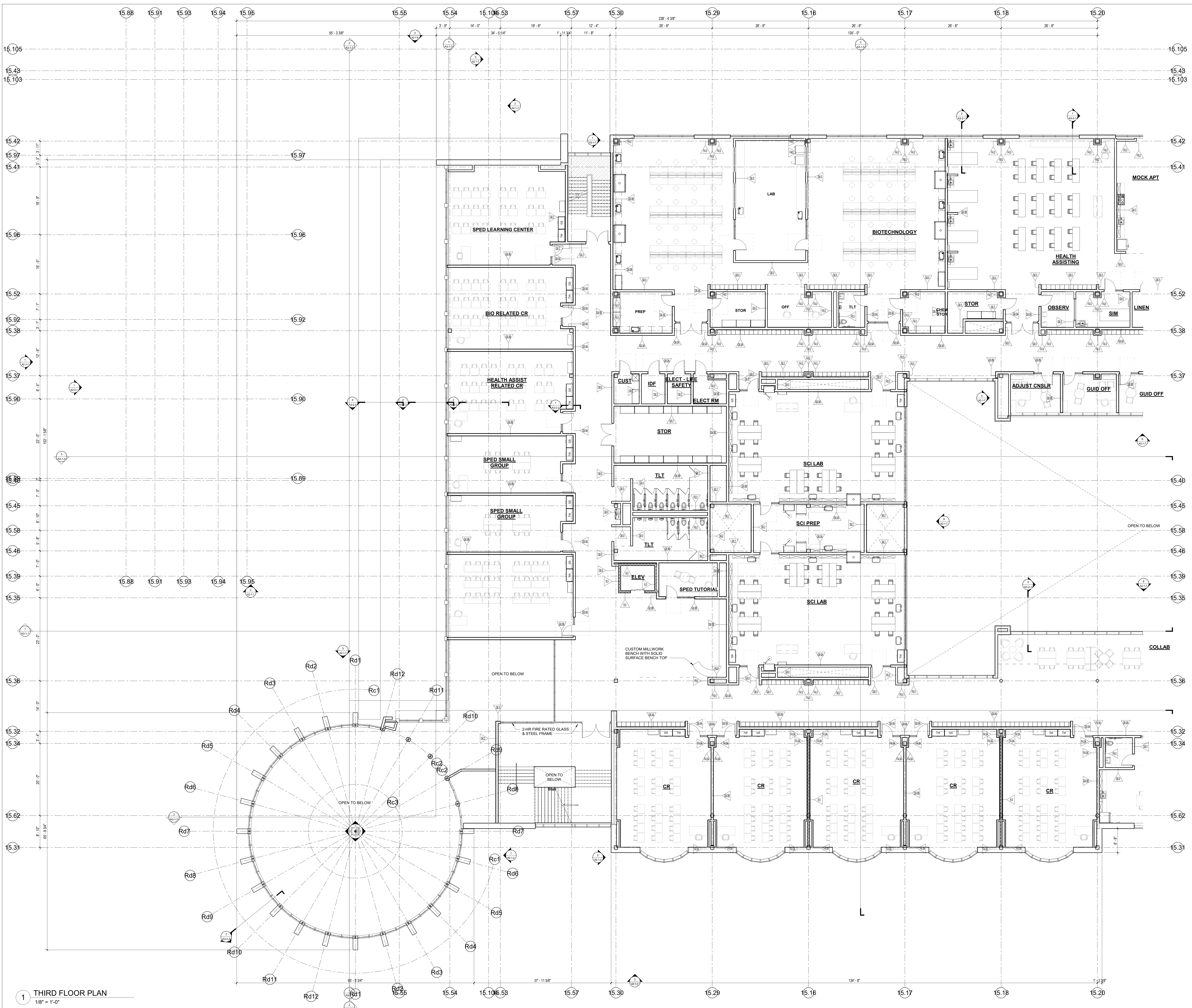


KEY PLAN

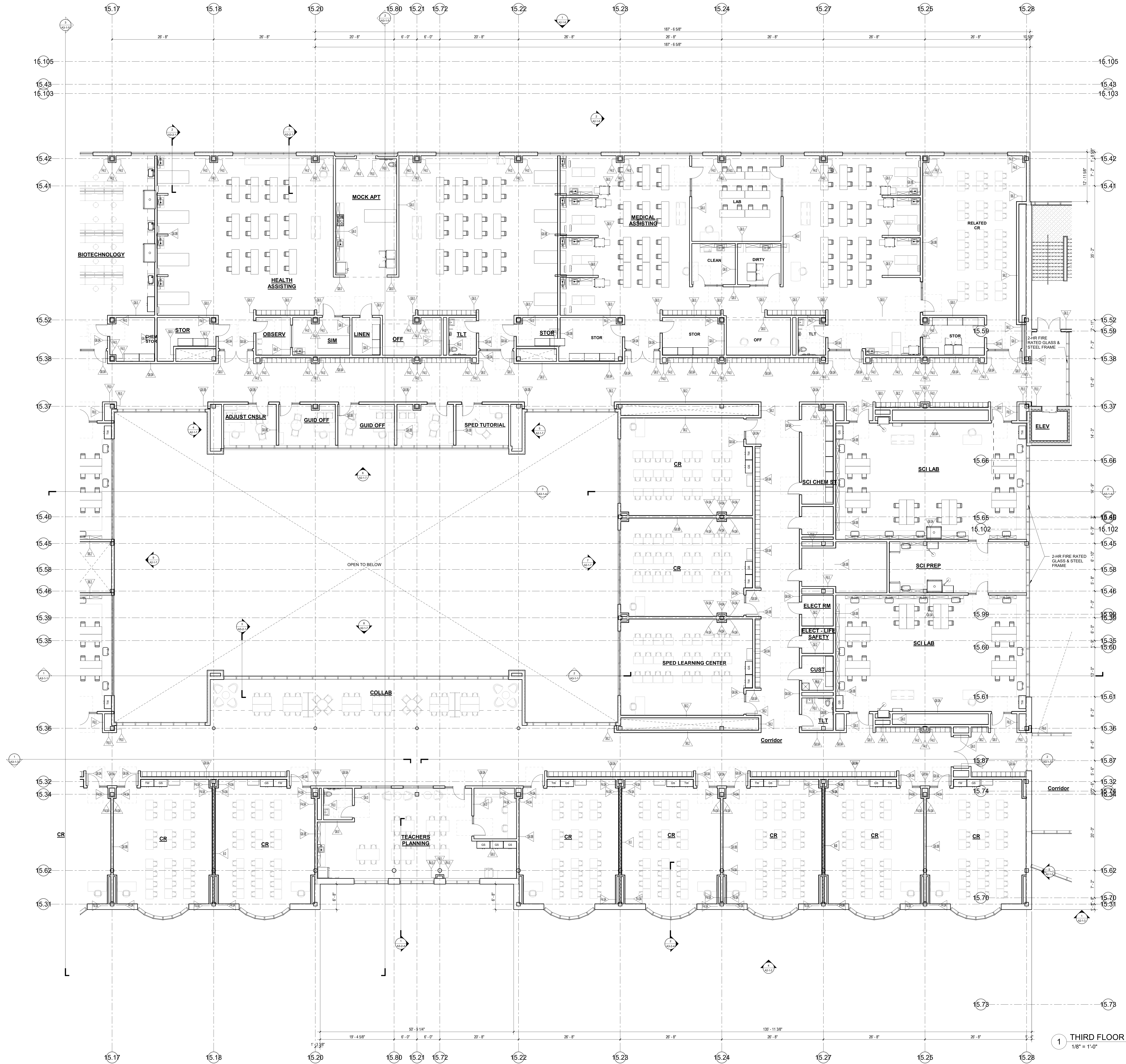
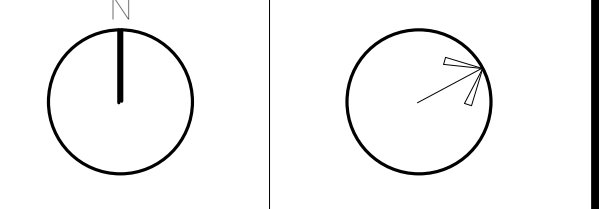
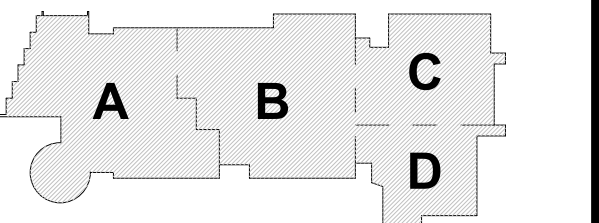
PROJECT NORTH MAGNETIC NORTH



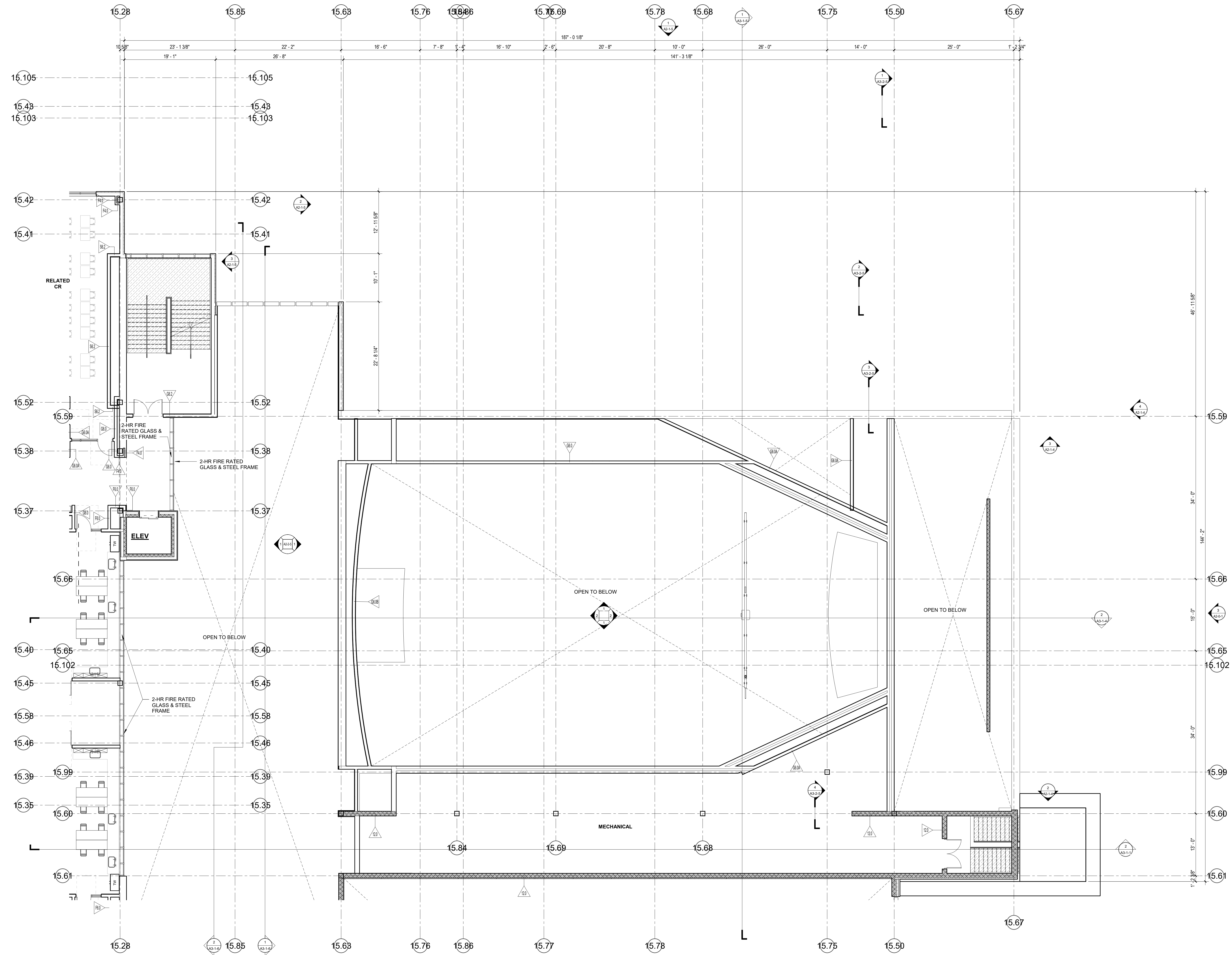
THIRD FLOOR
PLAN - AREA A



1 THIRD FLOOR PLAN
1/8" = 1'-0"



1 THIRD FLOOR PLAN
1/8" = 1'-0"

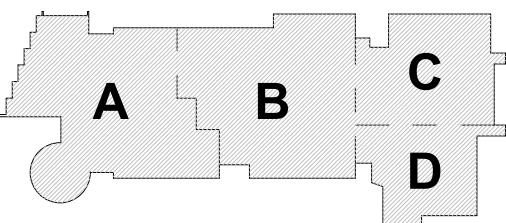


1 THIRD FLOOR PLAN
1/8" = 1'-0"

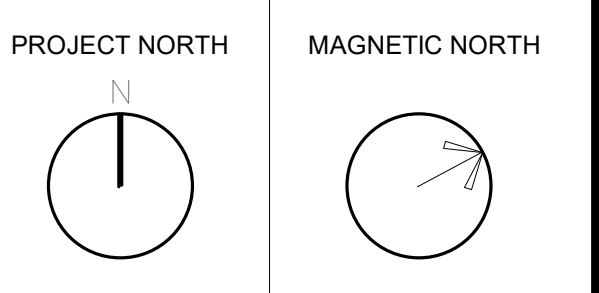
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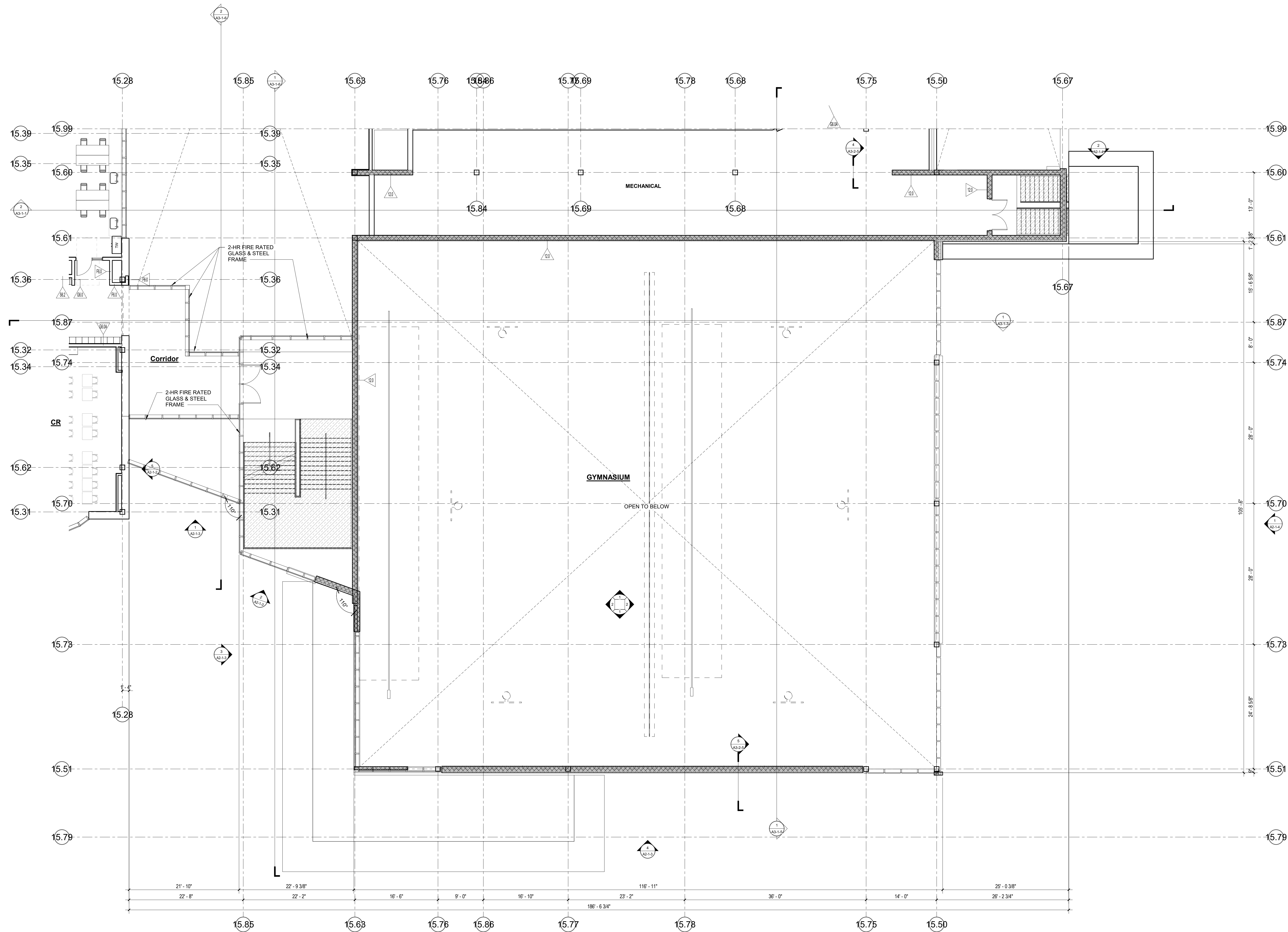
KEY PLAN



**THIRD FLOOR
PLAN - AREA C**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-1-3C

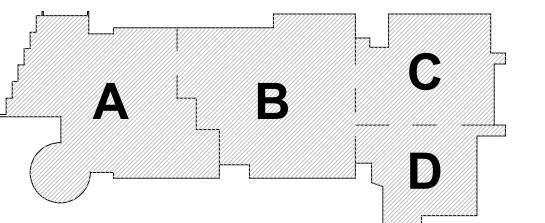


1 THIRD FLOOR PLAN
1/8" = 1'-0"

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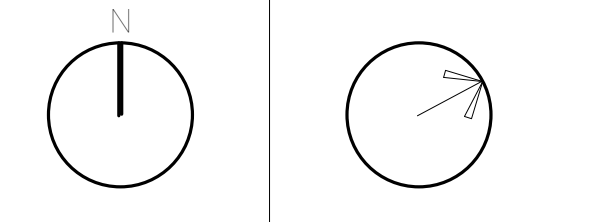
MSBA SCHEMATIC
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June 17, 2021



KEY PLAN

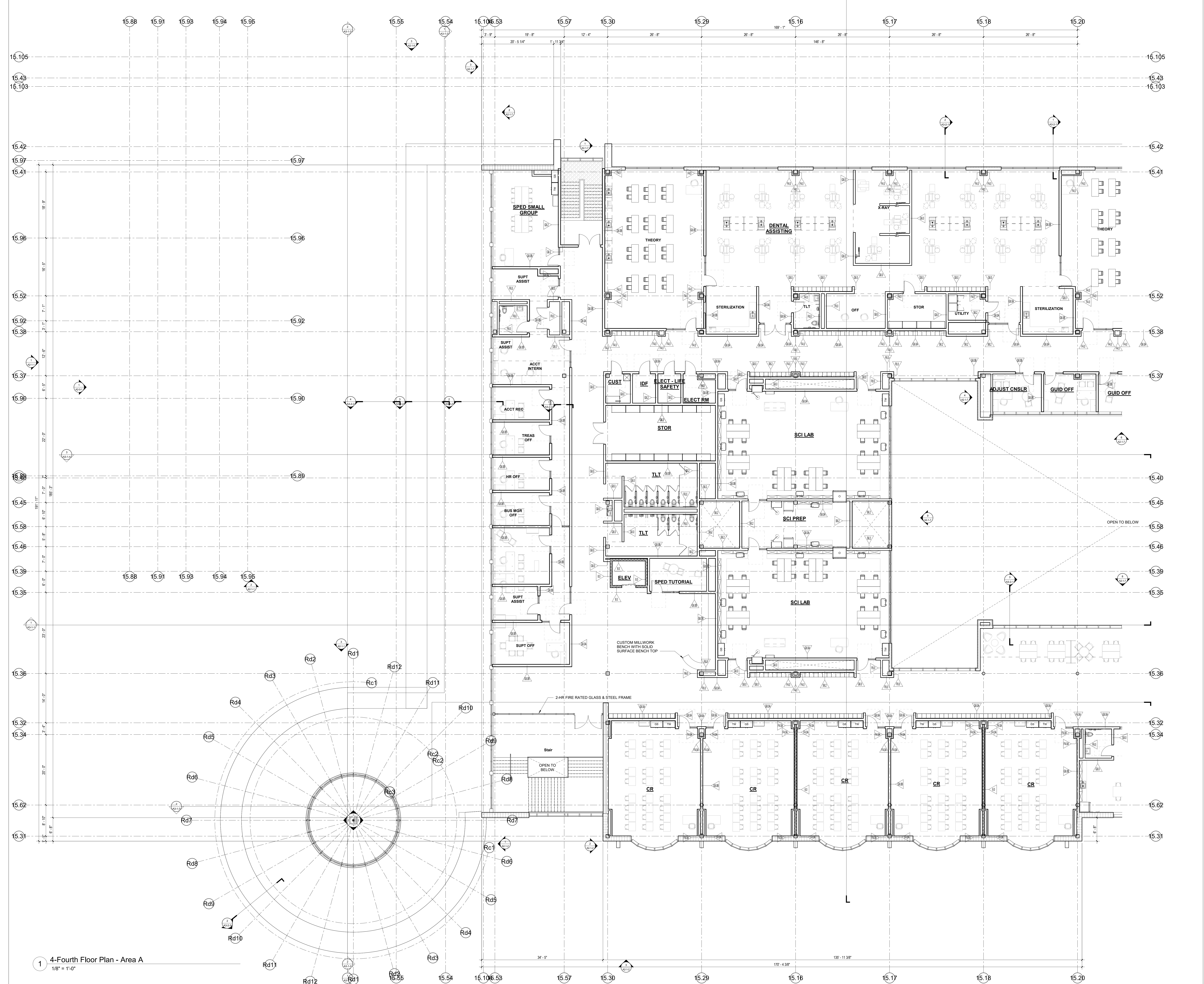
PROJECT NORTH MAGNETIC NORTH



THIRD FLOOR
PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-1-3D



1 4-Fourth Floor Plan - Area A
1/8" = 1'-0"

DRA
 Drumsey Rosane Anderson, Inc.
 225 Oakland Road
 Studio 205
 South Windsor, CT
 06074
 Tel: 817-984-1700
 www.dra.com

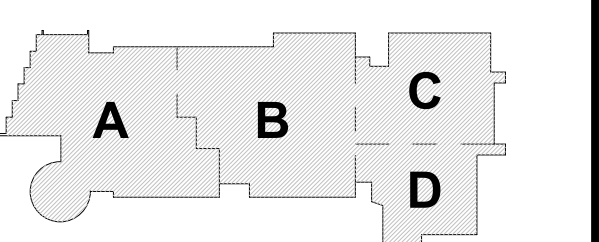
260 Charles Street
 Studio 300
 Waltham, MA
 02453
 Tel: 617-984-1700
 www.dra.com

**Northeast
 Metropolitan
 Regional
 Vocational High
 School**

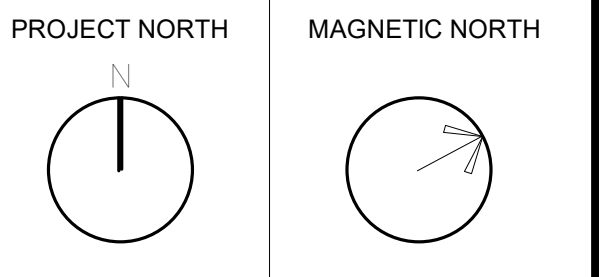
Wakefield, MA 01880

MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



PROJECT NORTH
 MAGNETIC NORTH



**FOURTH FLOOR
 PLAN - AREA A**

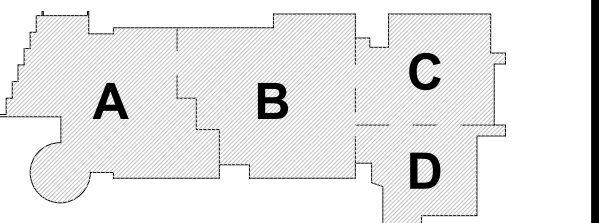
Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021
A1-1-4A

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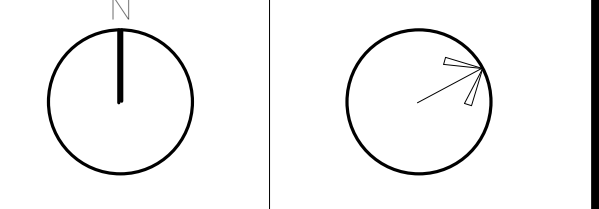
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

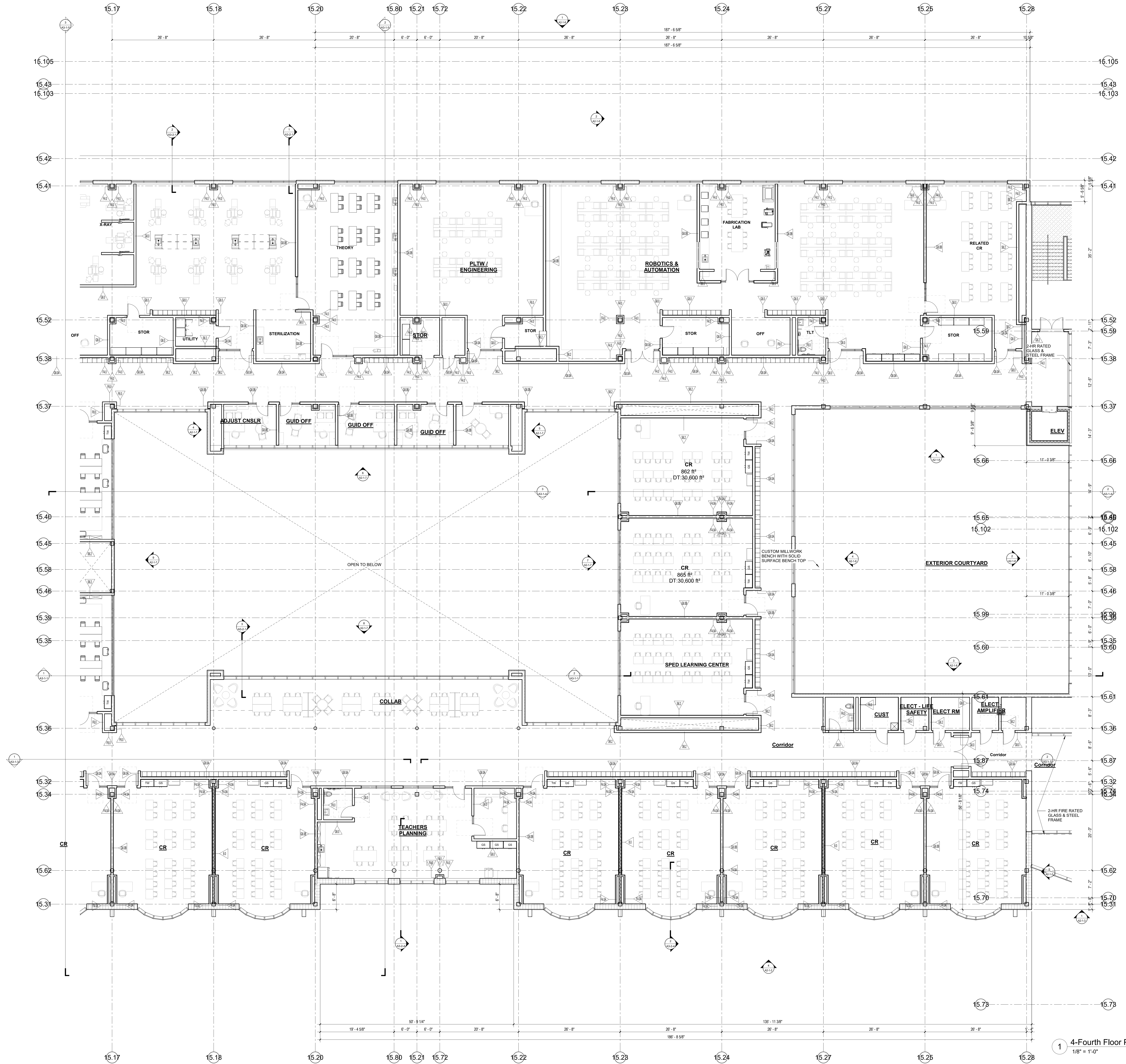
PROJECT NORTH MAGNETIC NORTH



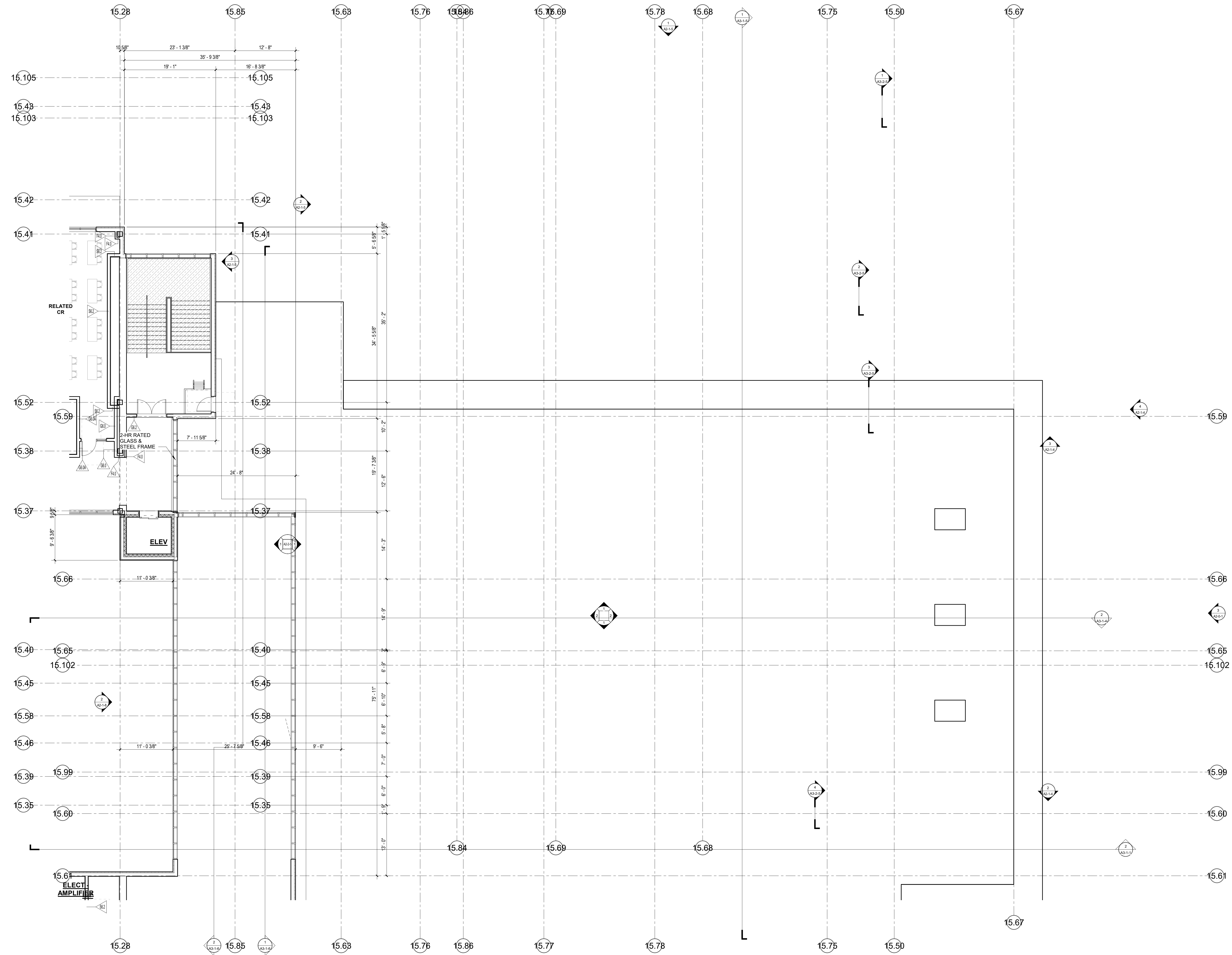
FOURTH FLOOR
PLAN - AREA B

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-1-4B



1 4-Fourth Floor Plan - Area B
1/8" = 1'-0"

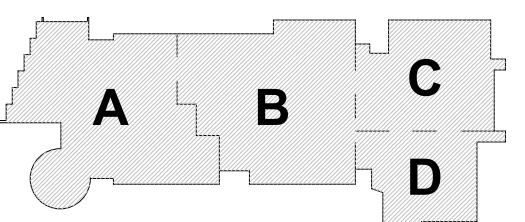


1 4-Fourth Floor Plan - Area C
1/8" = 1'-0"

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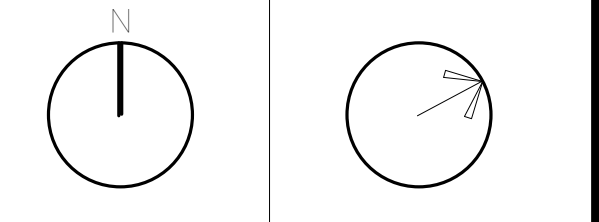
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

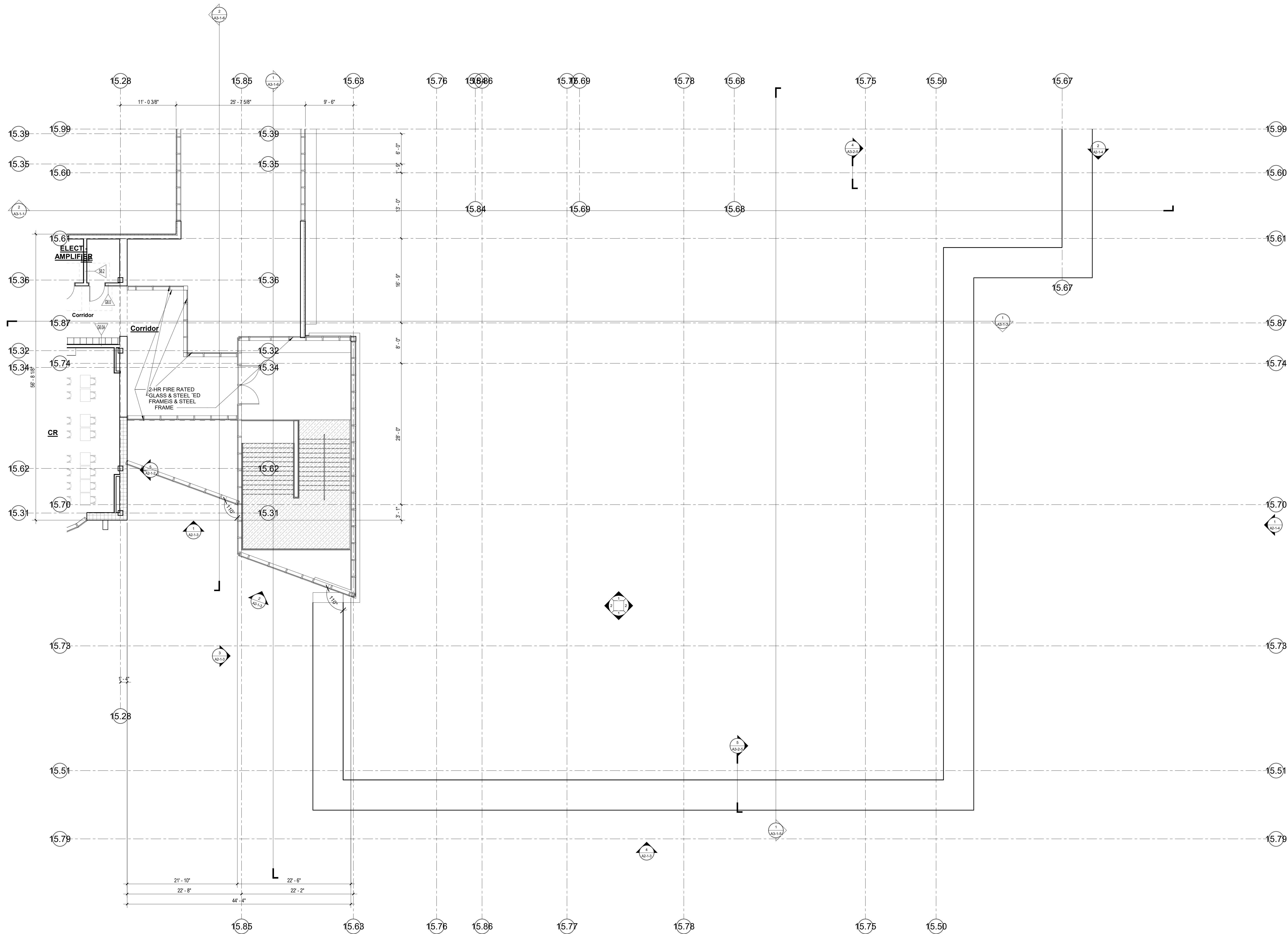
PROJECT NORTH MAGNETIC NORTH



**FOURTH FLOOR
PLAN - AREA C**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A1-1-4C

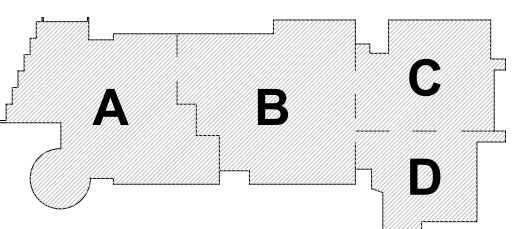


1 4-Fourth Floor Plan - Area D
1/8" = 1'-0"

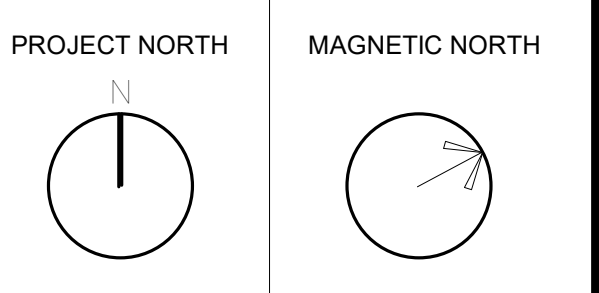
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MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



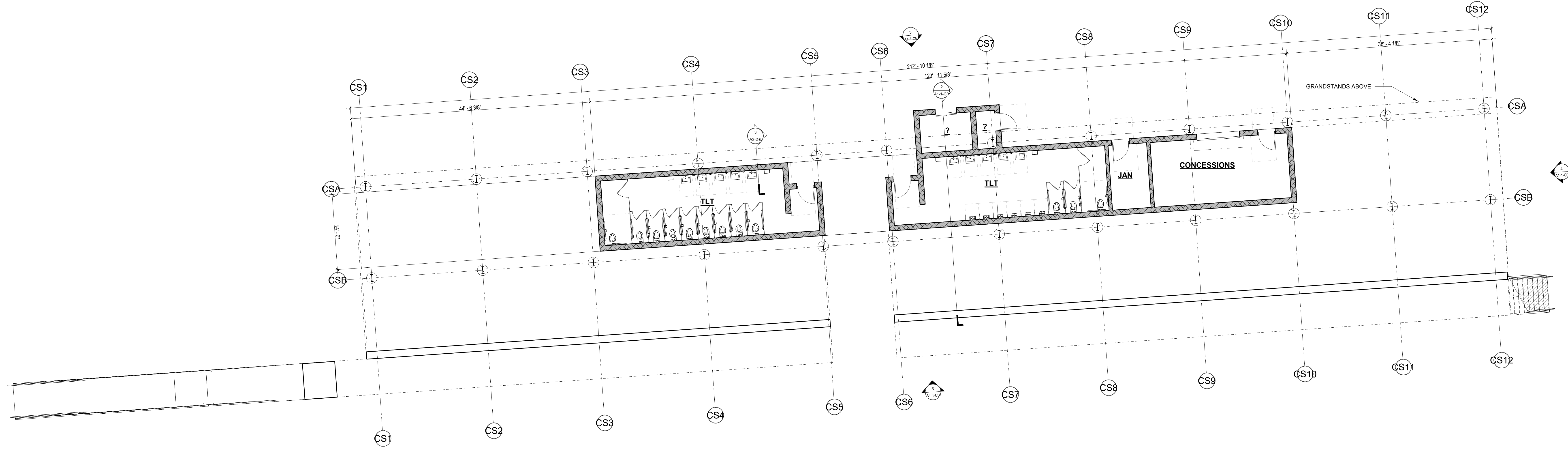
KEY PLAN



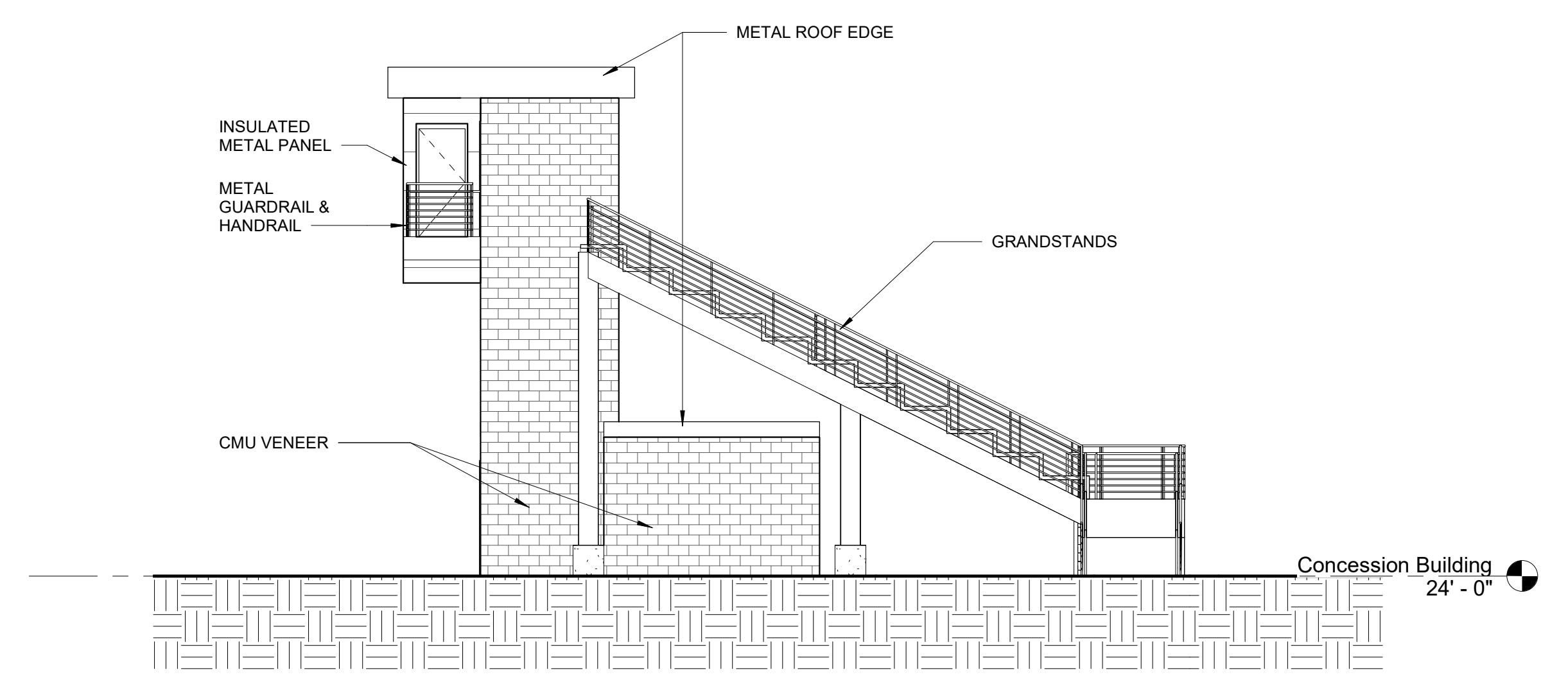
FOURTH FLOOR
PLAN - AREA D

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

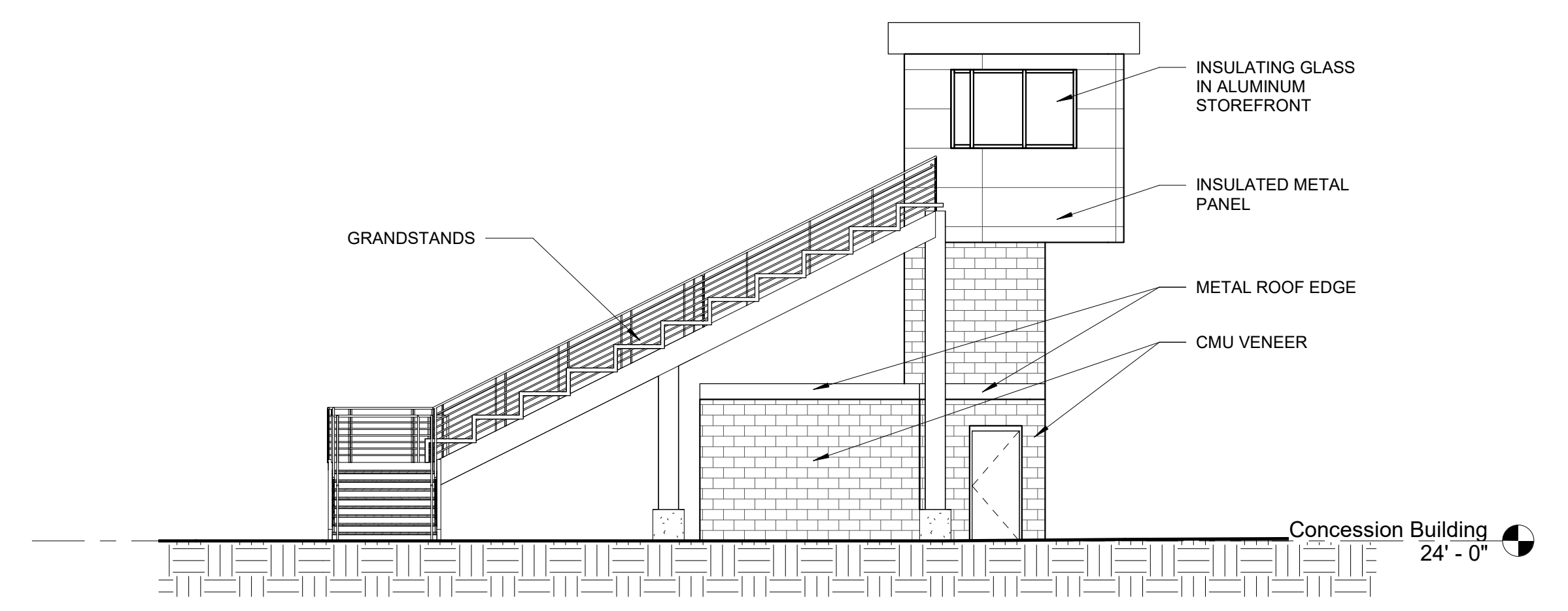
A1-1-4D



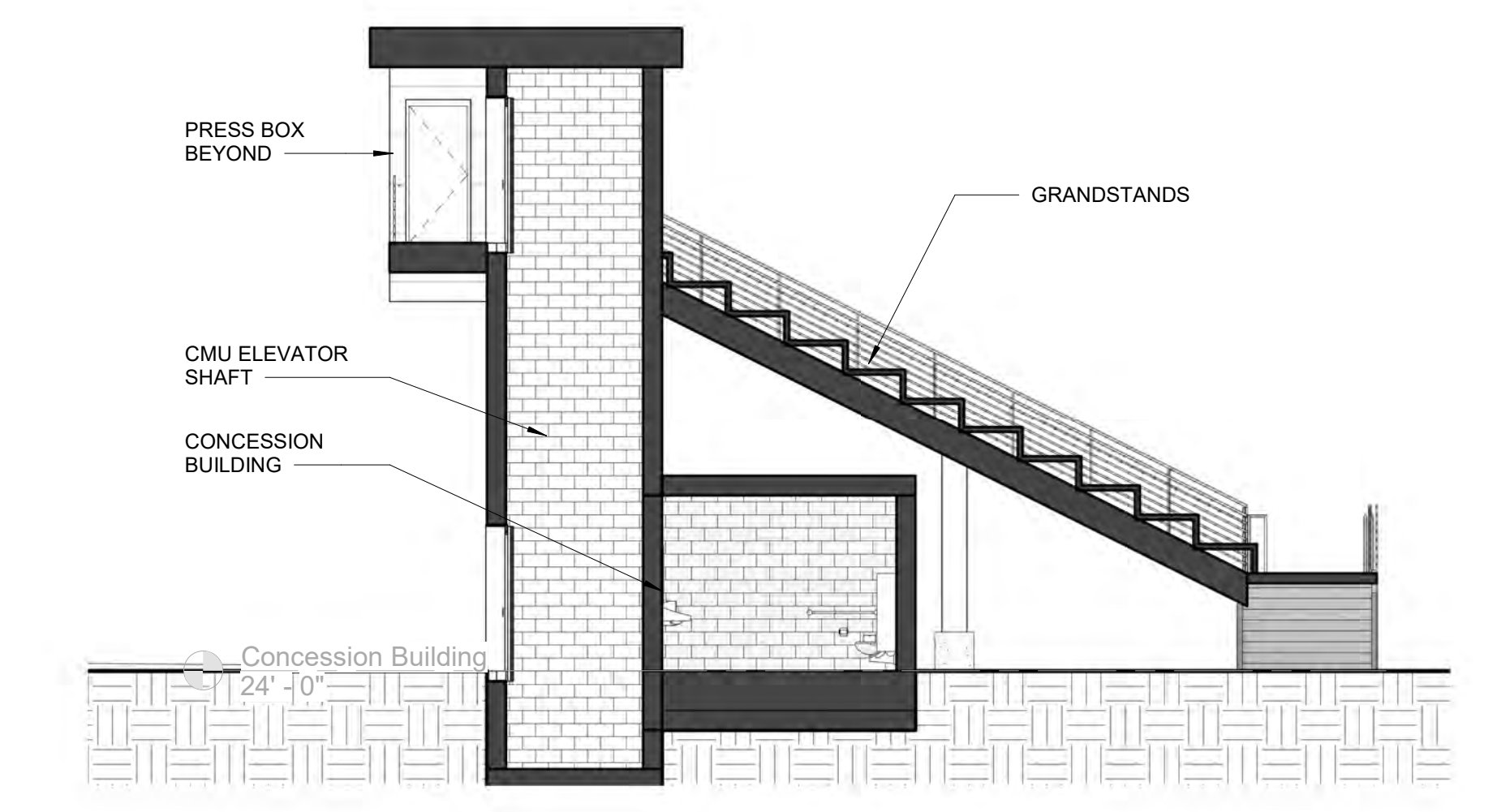
1 CONCESSION BUILDING FLOOR PLAN
1/8" = 1'-0"



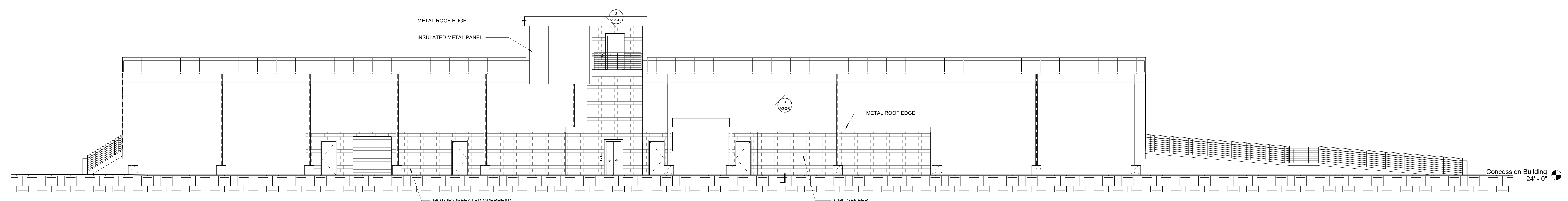
6 CONCESSION BUILDING ELEVATION - SOUTH
1/8" = 1'-0"



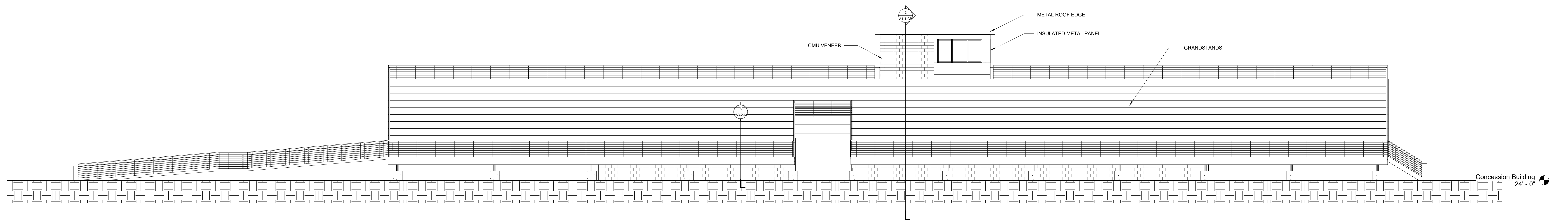
4 CONCESSION BUILDING ELEVATION - NORTH
1/8" = 1'-0"



2 CONCESSION BUILDING SECTION
1/8" = 1'-0"



3 CONCESSION BUILDING ELEVATION - WEST
1/8" = 1'-0"

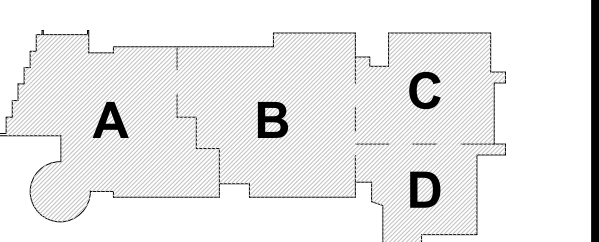


5 CONCESSION BUILDING ELEVATION - EAST
1/8" = 1'-0"

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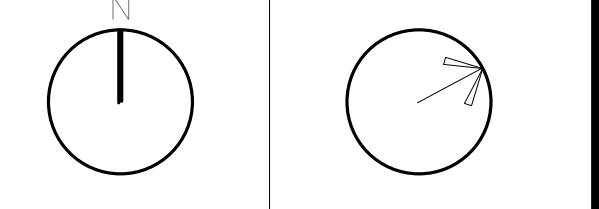
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

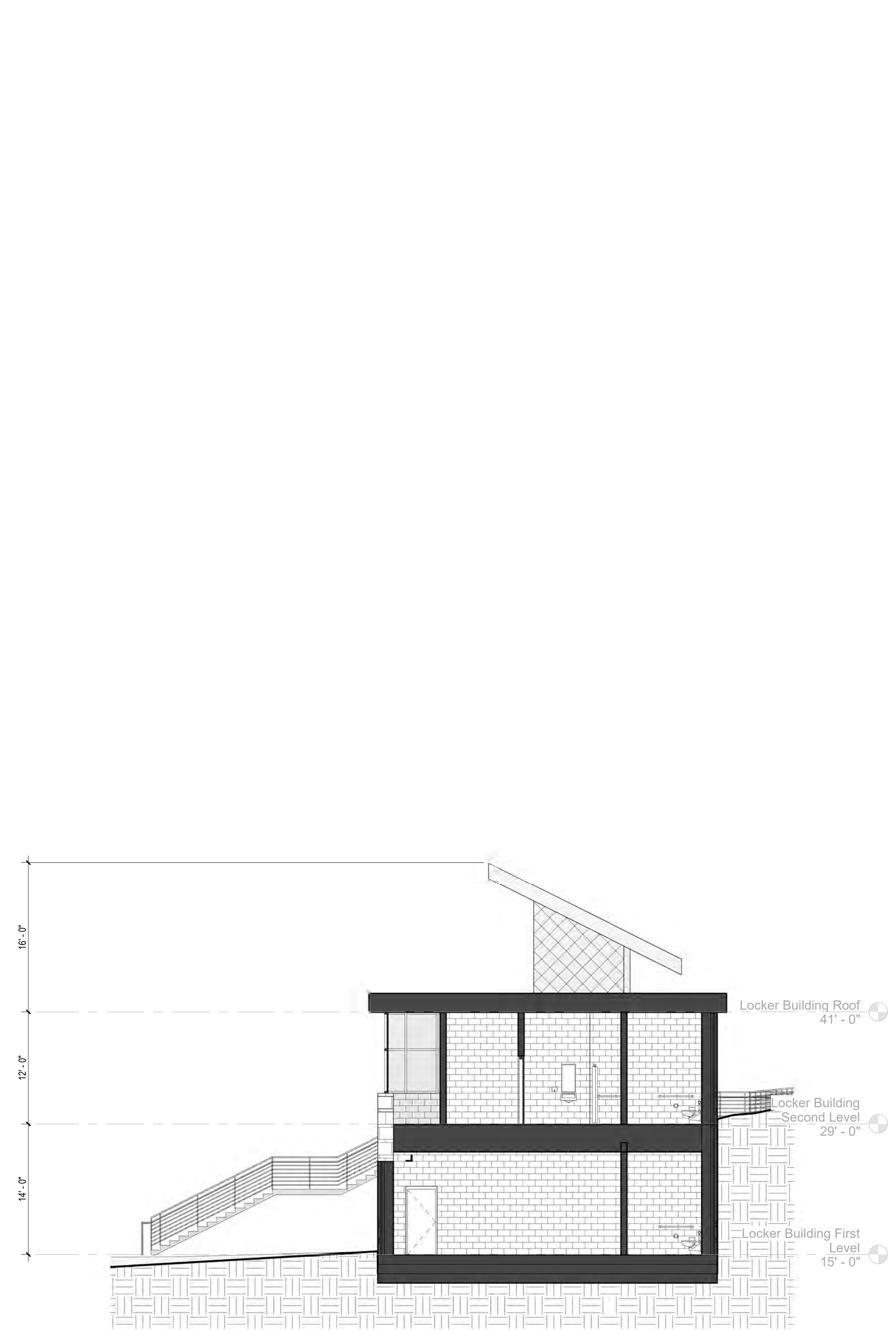
PROJECT NORTH MAGNETIC NORTH



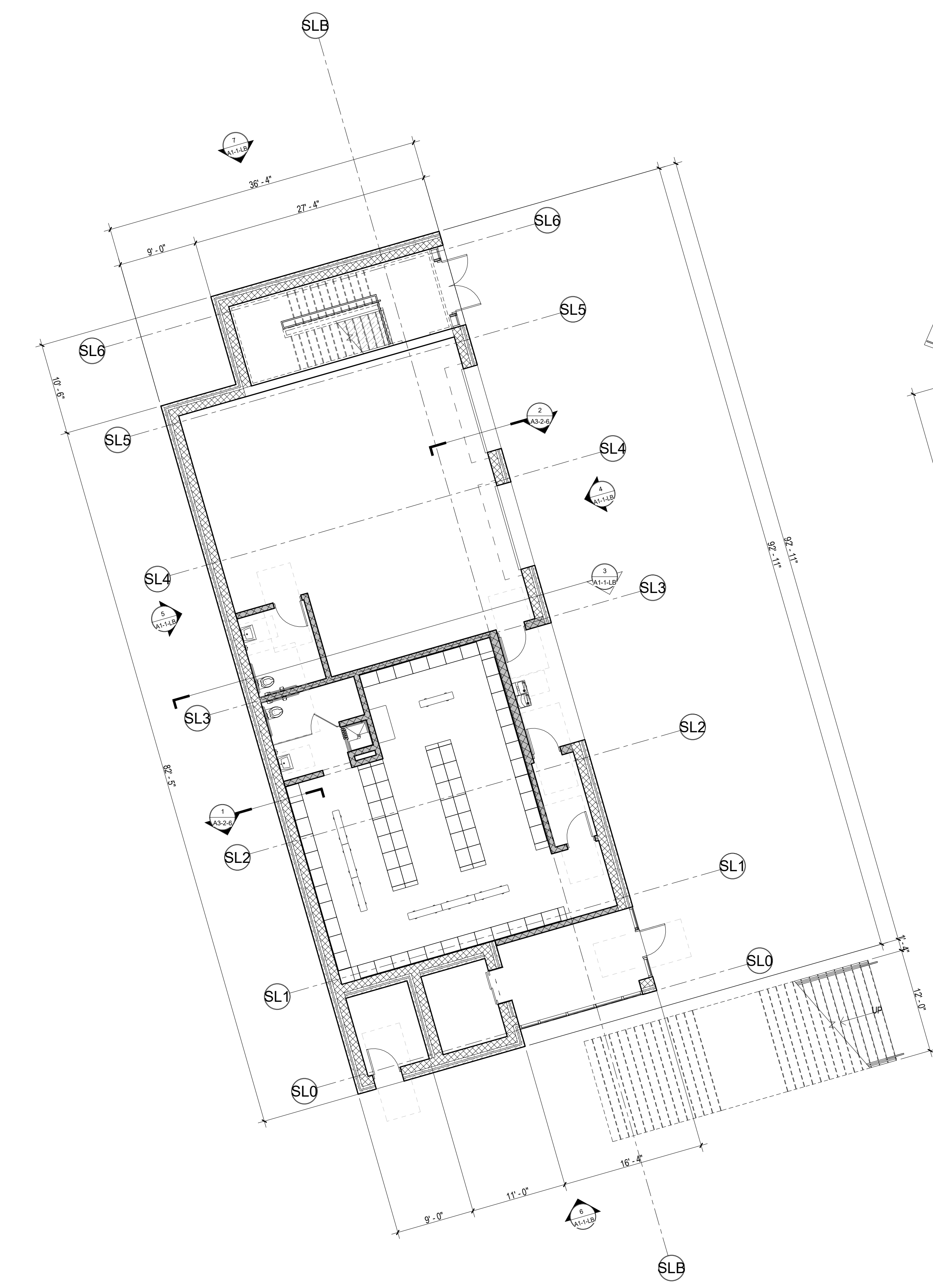
CONCESSION
BUILDING
DRAWINGS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

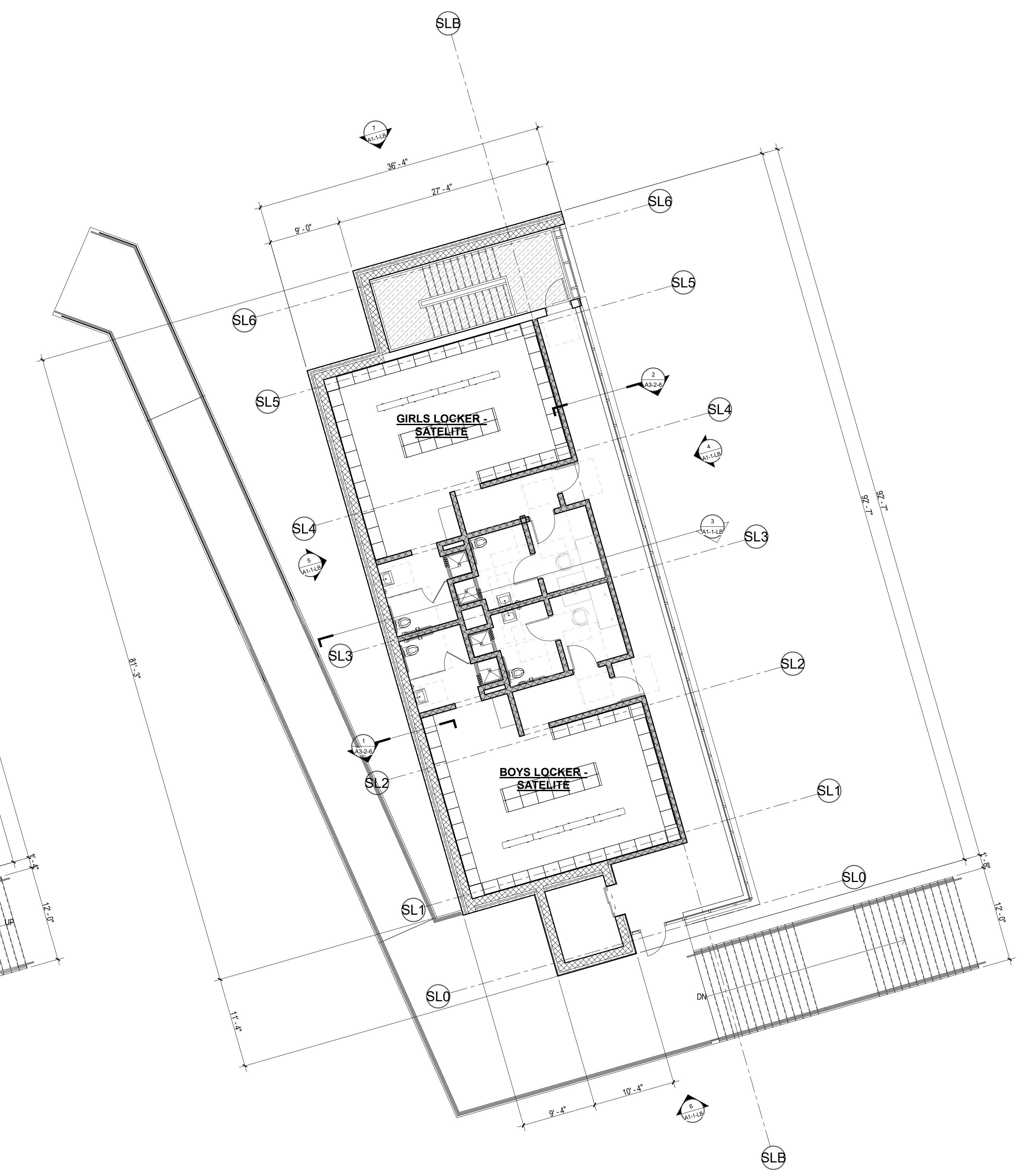
A1-1-CB



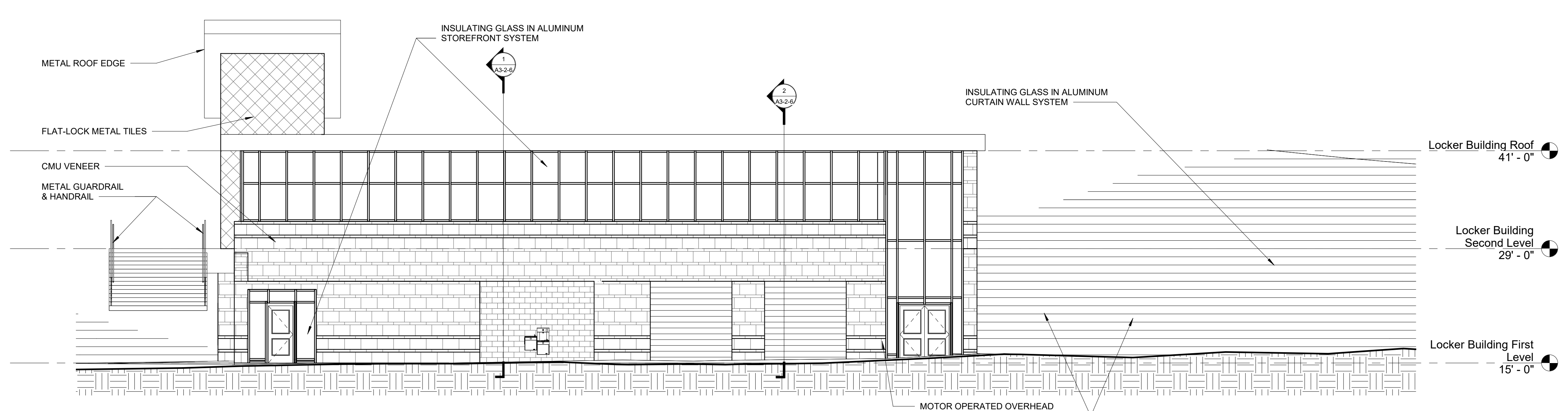
3 LOCKER BUILDING SECTION
1/8" = 1'-0"



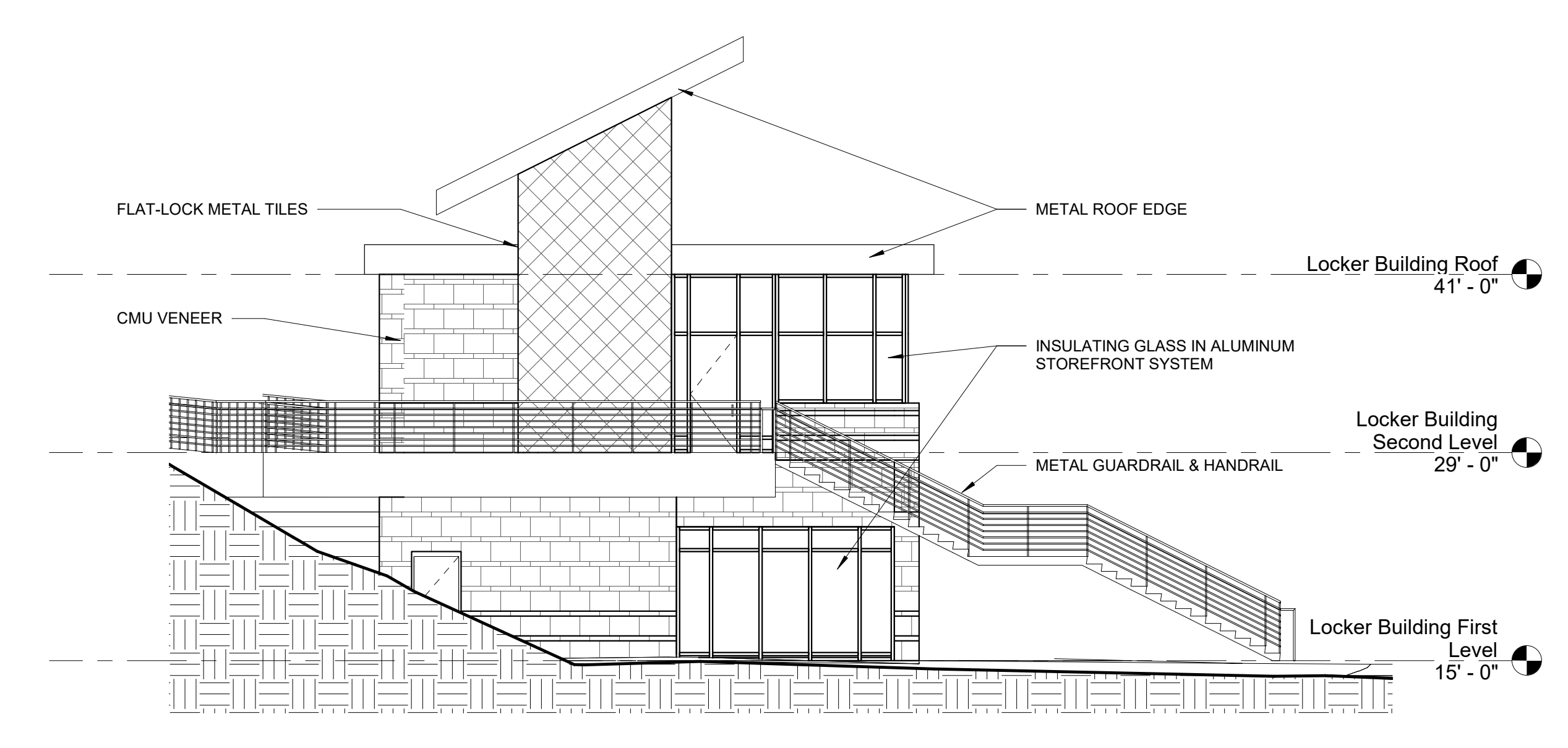
1 LOCKER BUILDING FIRST FLOOR PLAN
1/8" = 1'-0"



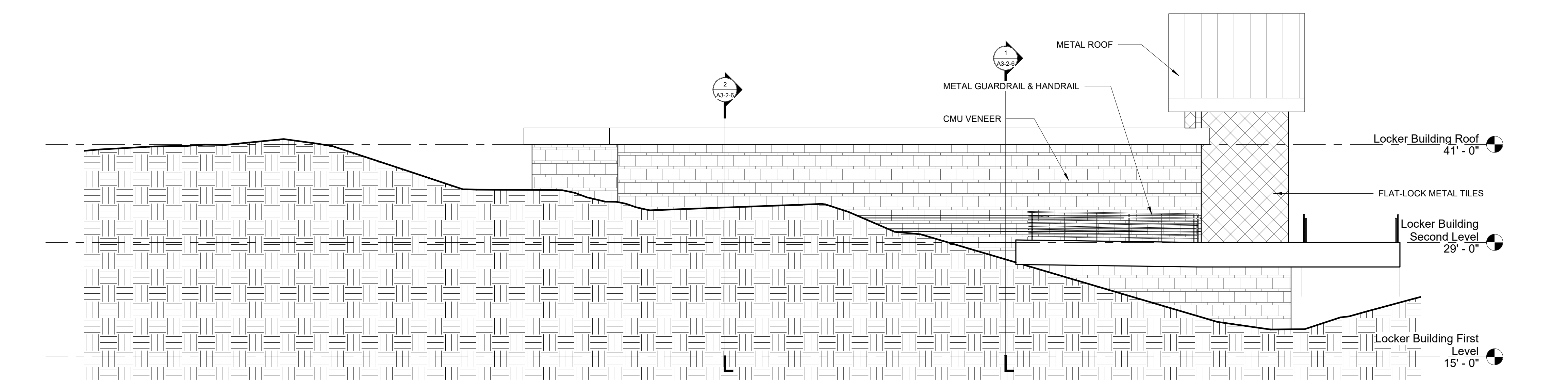
2 LOCKER BUILDING SECOND FLOOR PLAN
1/8" = 1'-0"



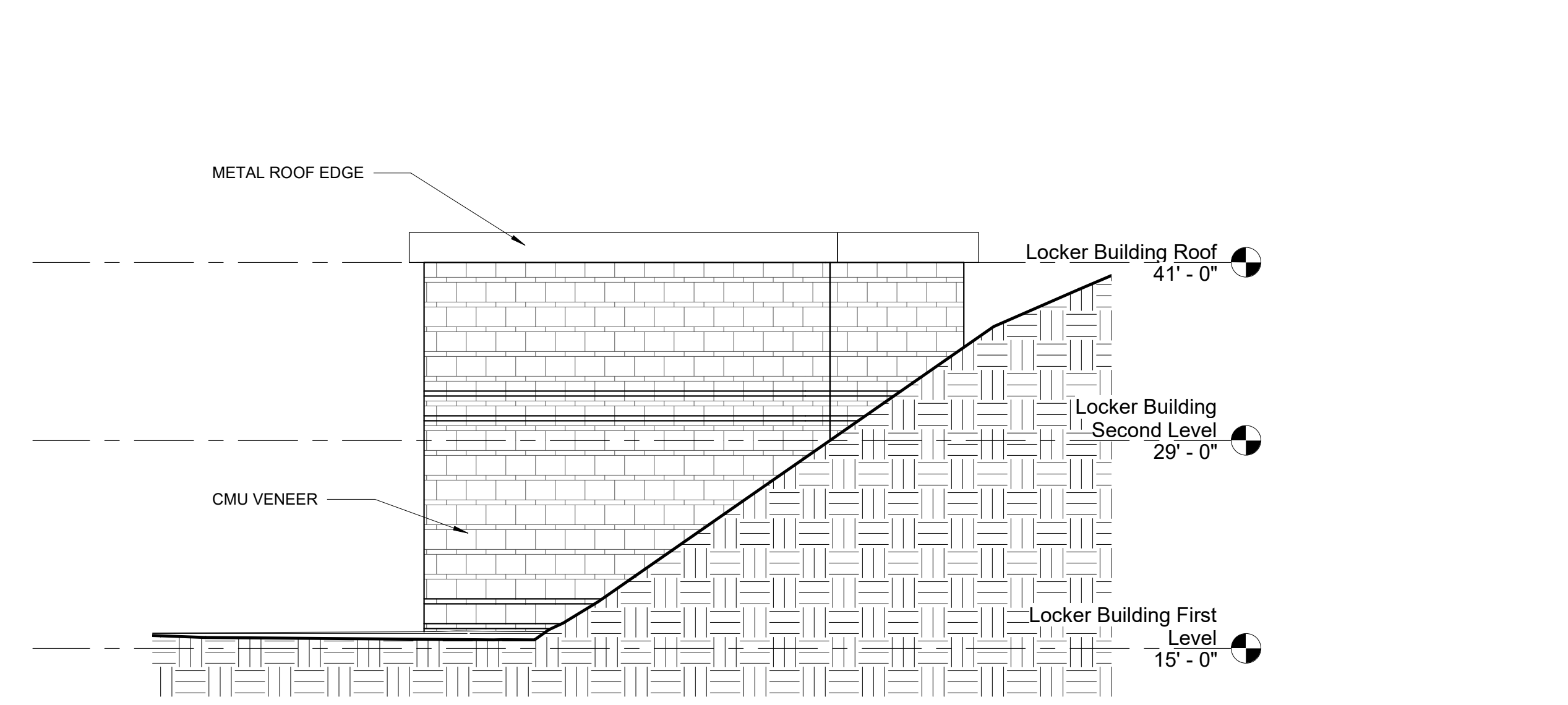
4 LOCKER BUILDING ELEVATION - NORTH
1/8" = 1'-0"



6 LOCKER BUILDING ELEVATION - EAST
1/8" = 1'-0"



5 LOCKER BUILDING ELEVATION - SOUTH
1/8" = 1'-0"

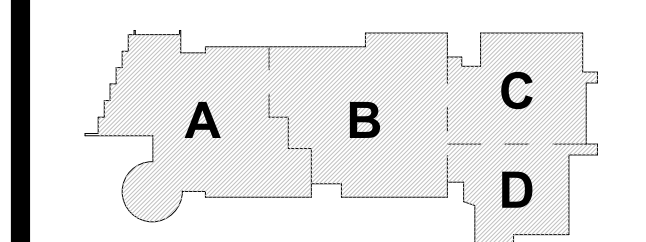


7 LOCKER BUILDING ELEVATION - WEST
1/8" = 1'-0"

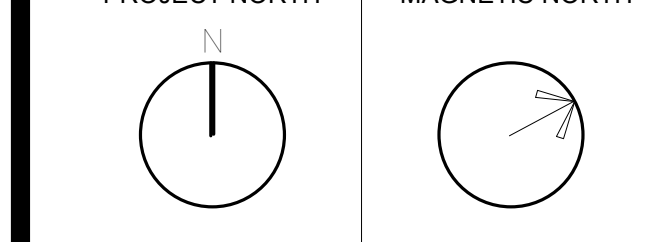
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MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



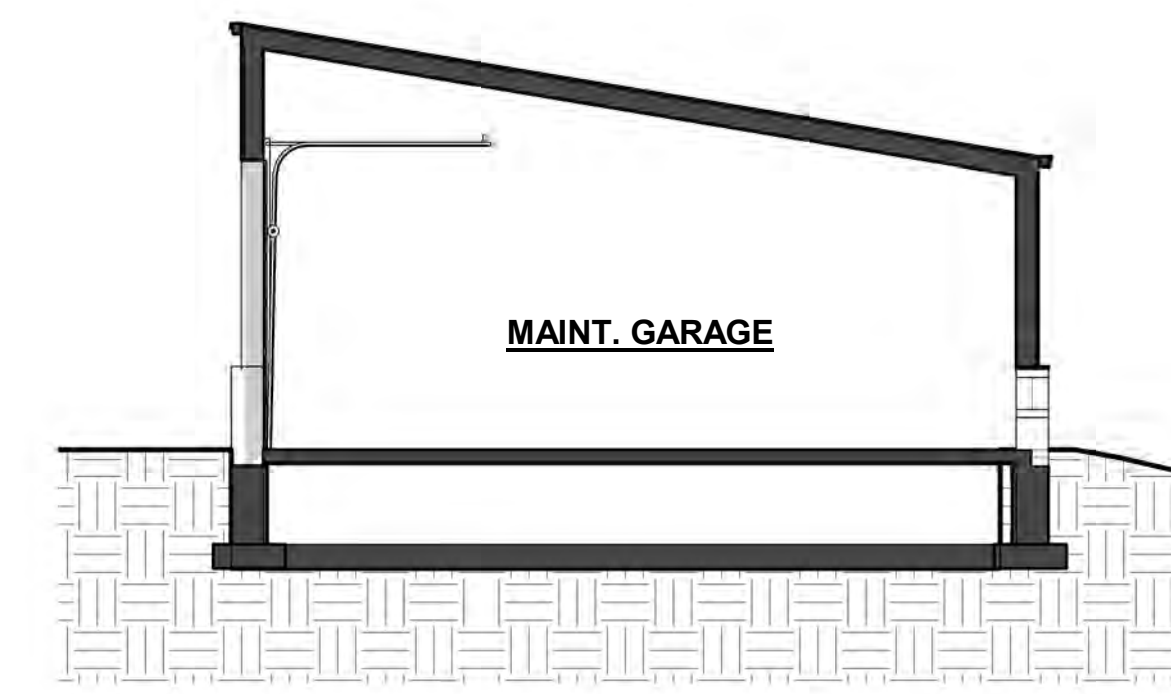
PROJECT NORTH MAGNETIC NORTH



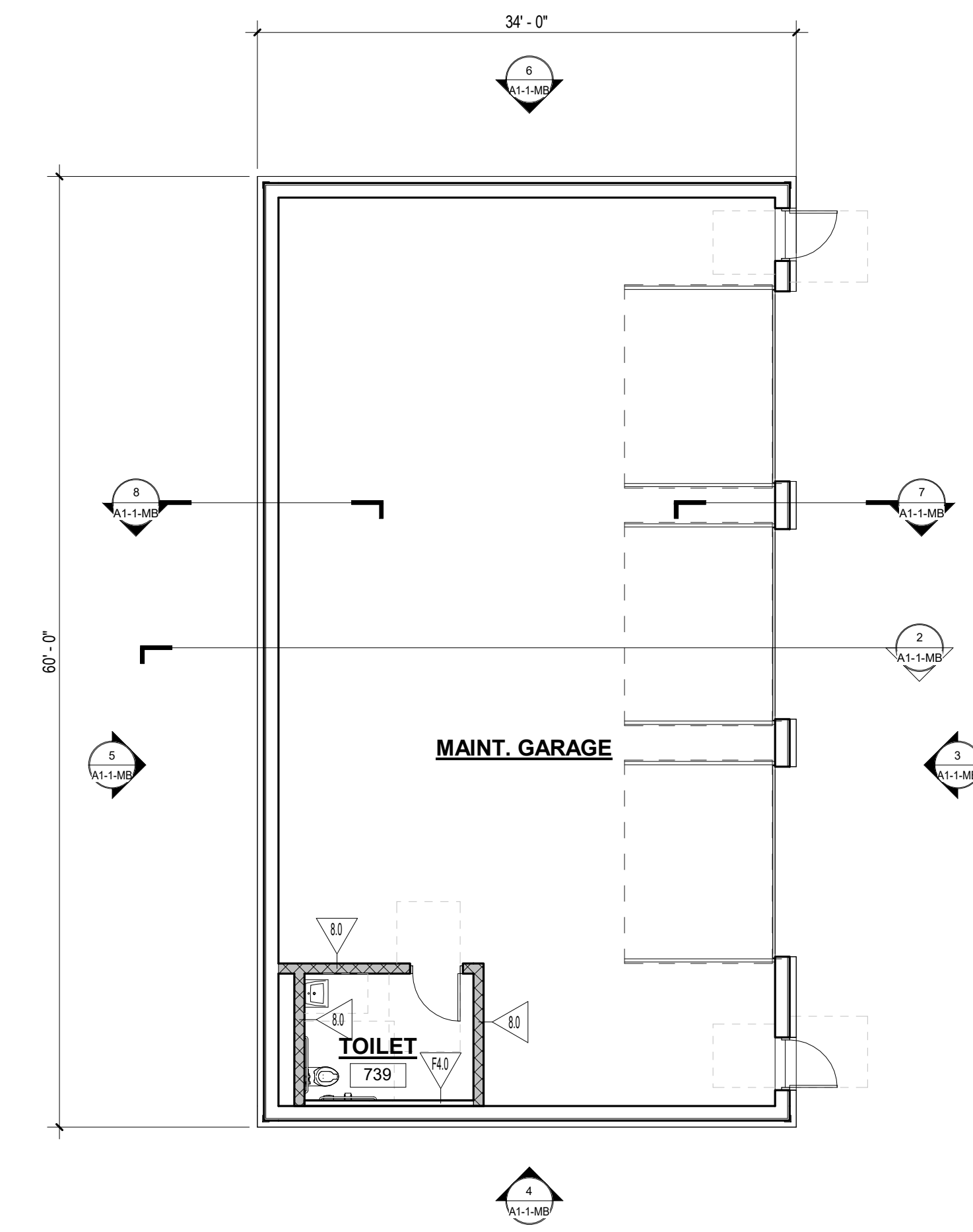
LOCKER
BUILDING
DRAWINGS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

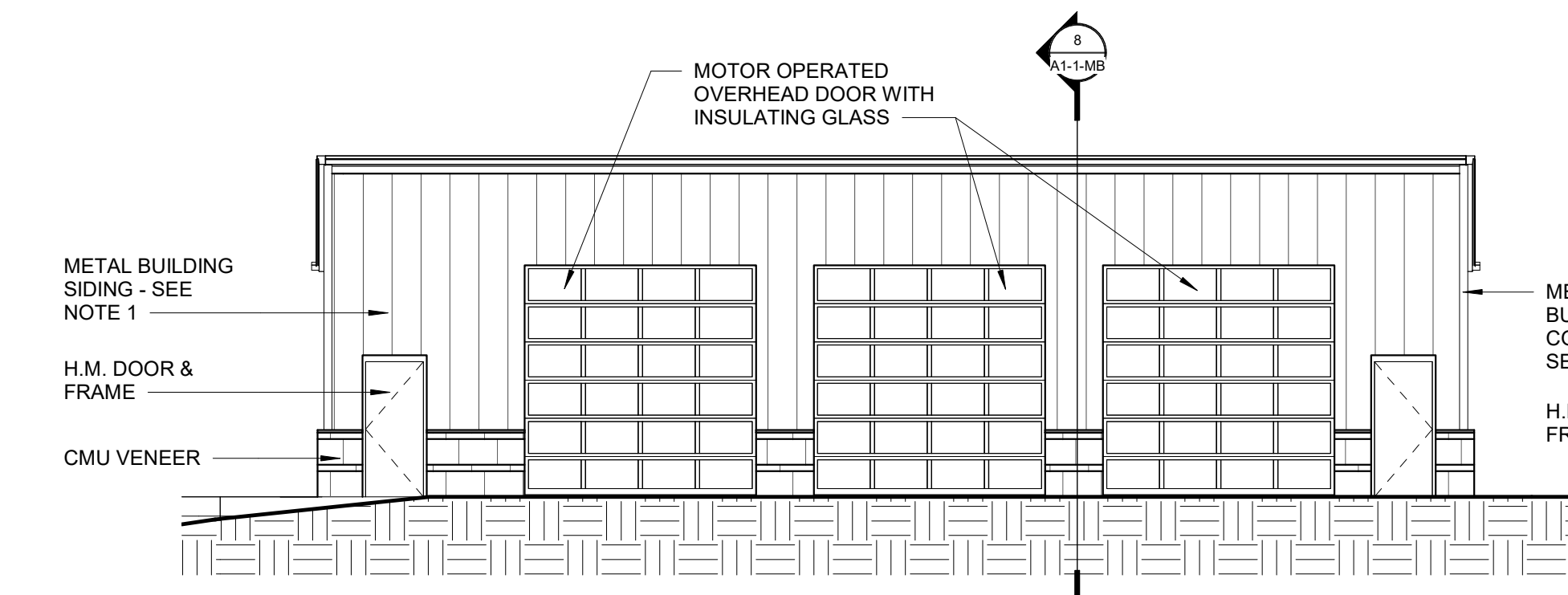
A1-1-LB



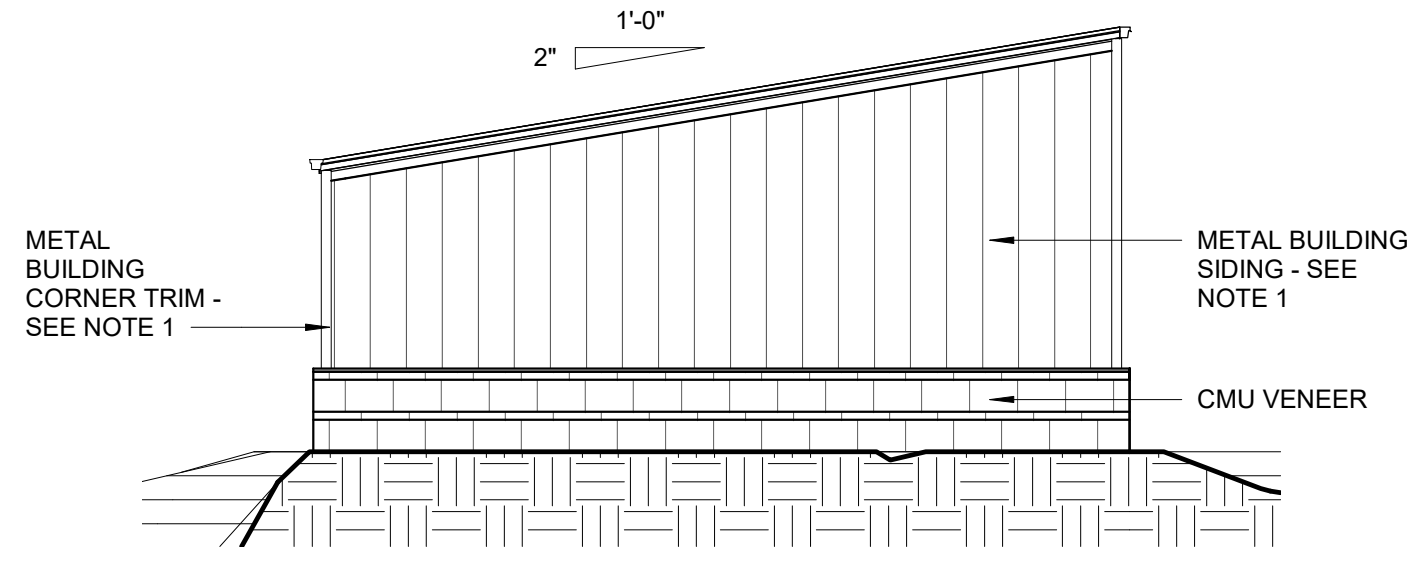
2 MAINTENANCE BUILDING SECTION
 1/8" = 1'-0"



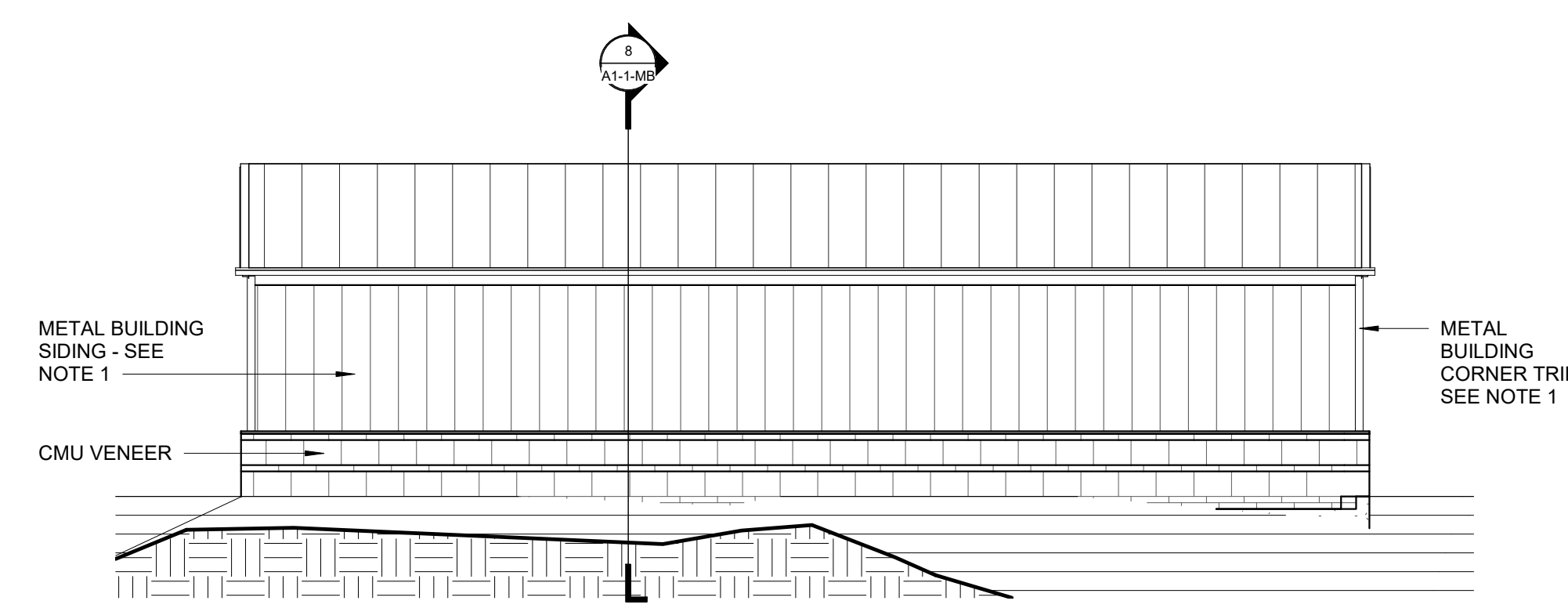
1 MAINTENANCE BUILDING PLAN
 1/8" = 1'-0"



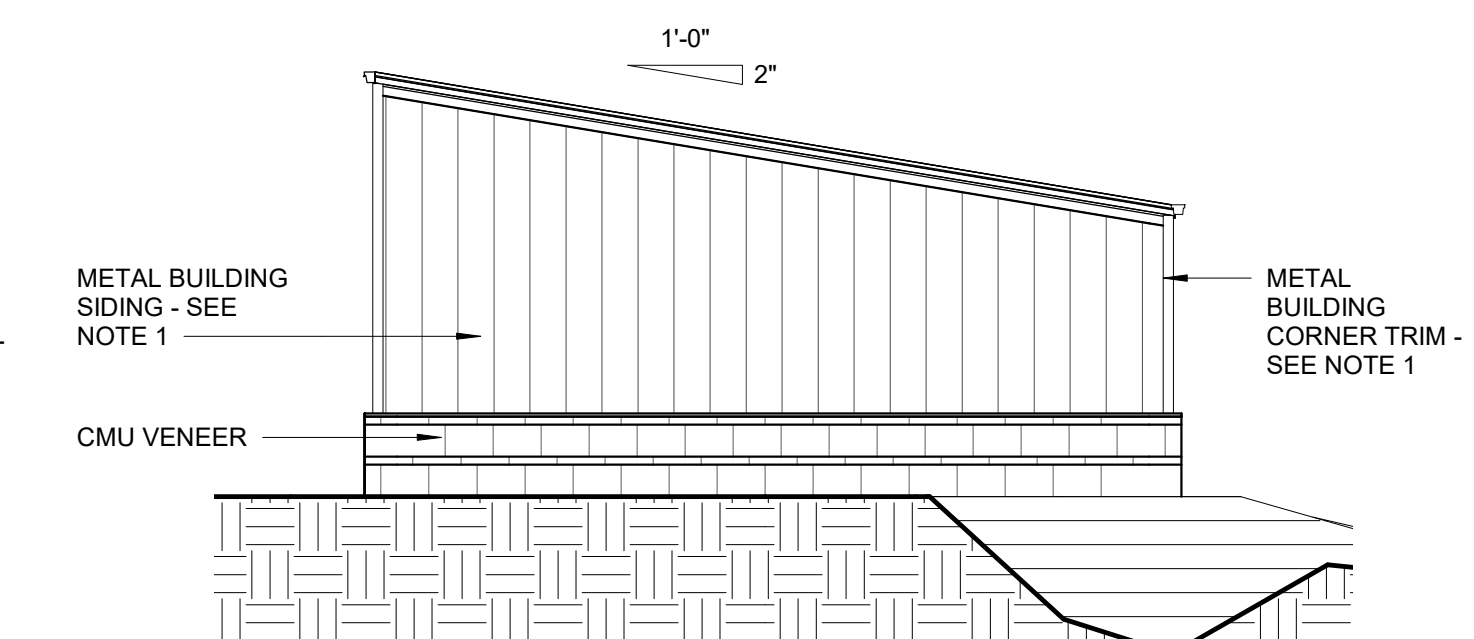
3 MAINTENANCE BUILDING ELEVATION - NORTH
 1/8" = 1'-0"



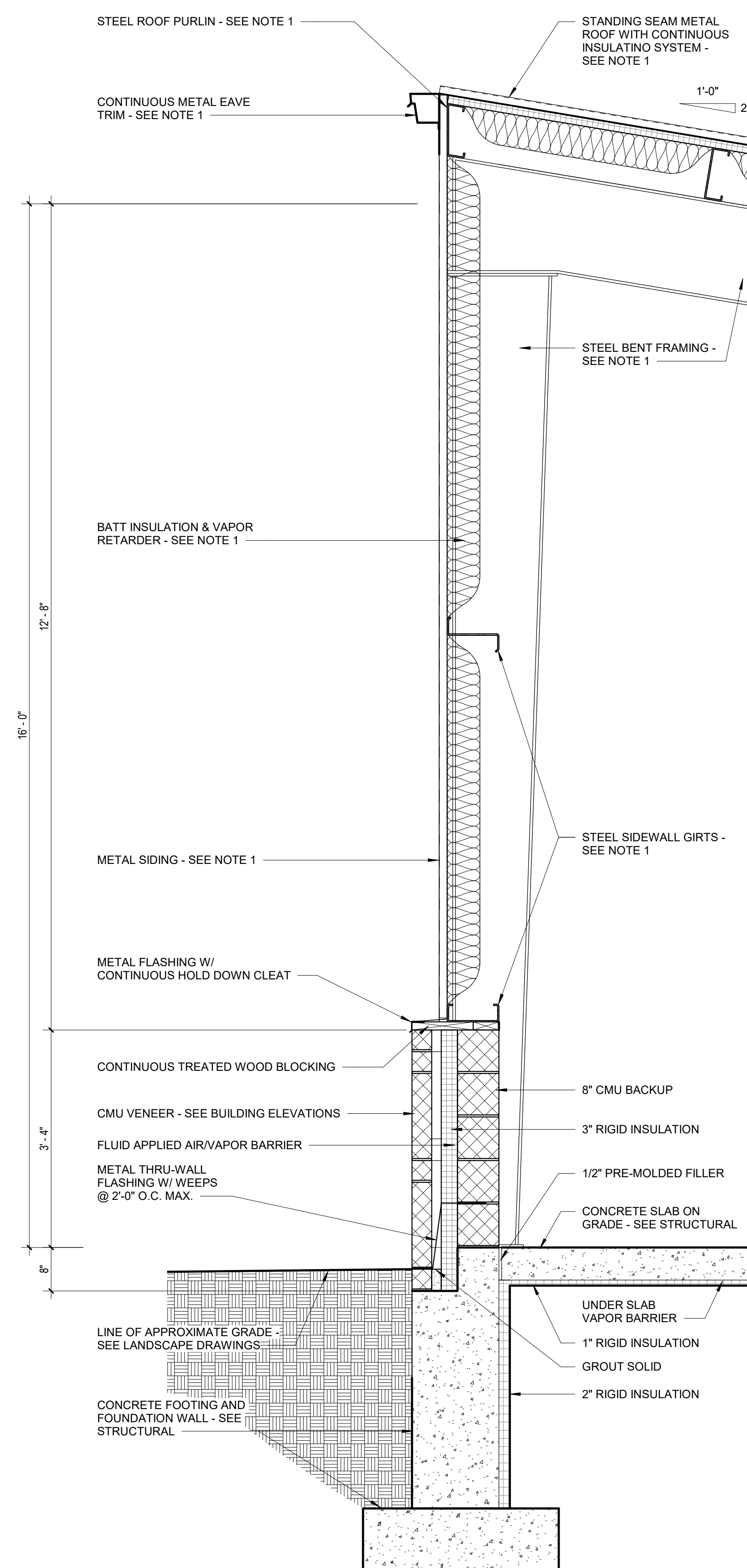
4 MAINTENANCE BUILDING ELEVATION - EAST
 1/8" = 1'-0"



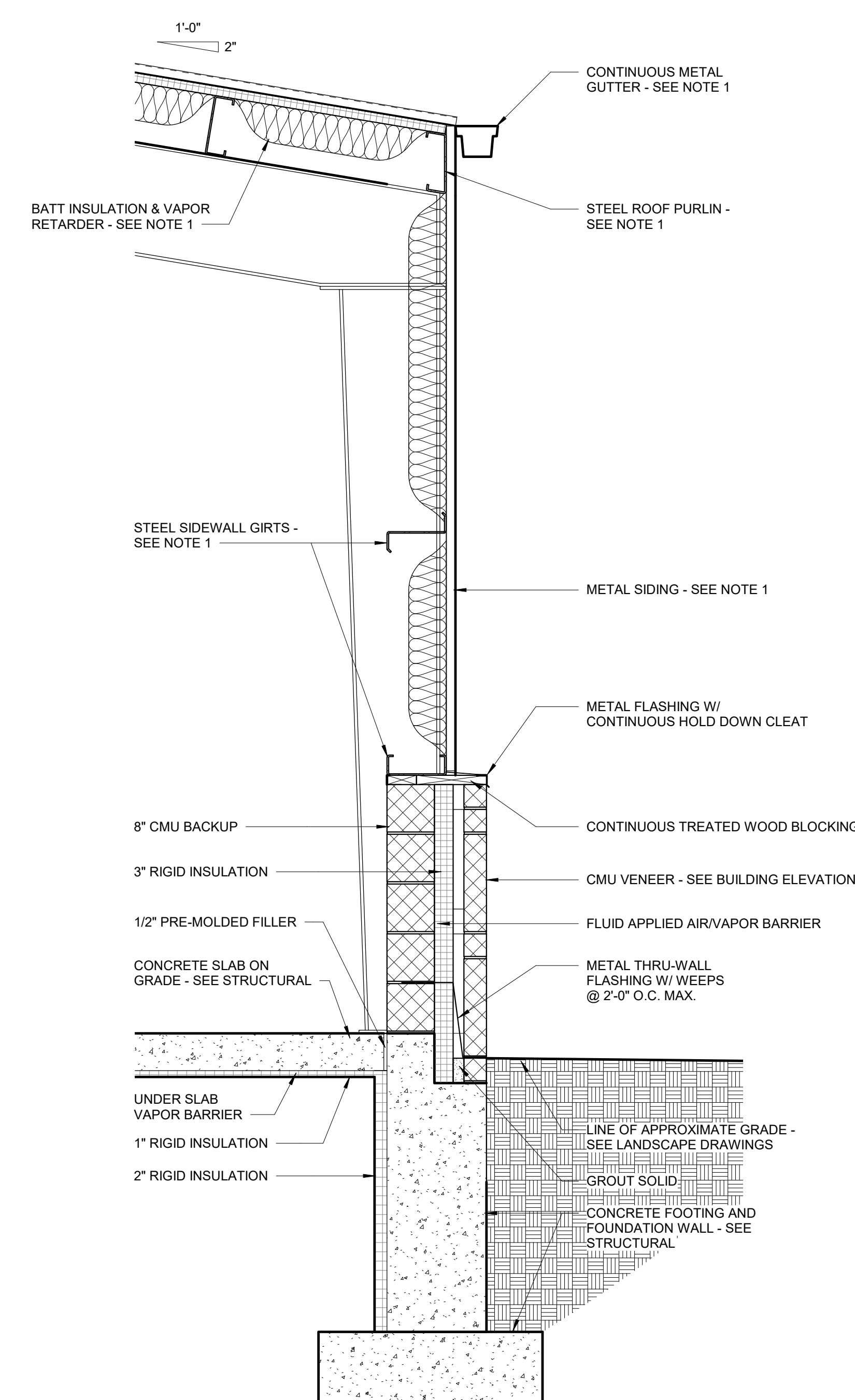
5 MAINTENANCE BUILDING ELEVATION - SOUTH
 1/8" = 1'-0"



6 MAINTENANCE BUILDING ELEVATION - WEST
 1/8" = 1'-0"



7 WALL SECTION
 3/4" = 1'-0"

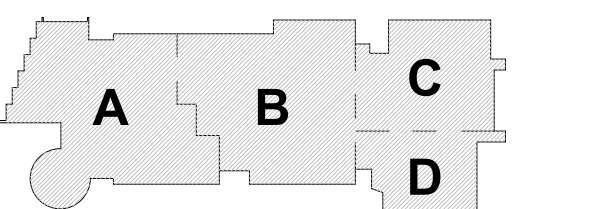


8 WALL SECTION
 3/4" = 1'-0"

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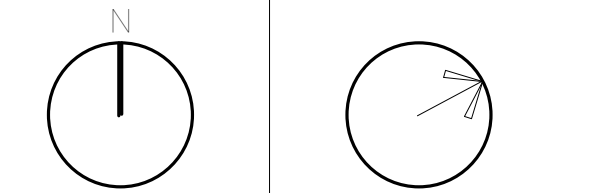
MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



KEY PLAN

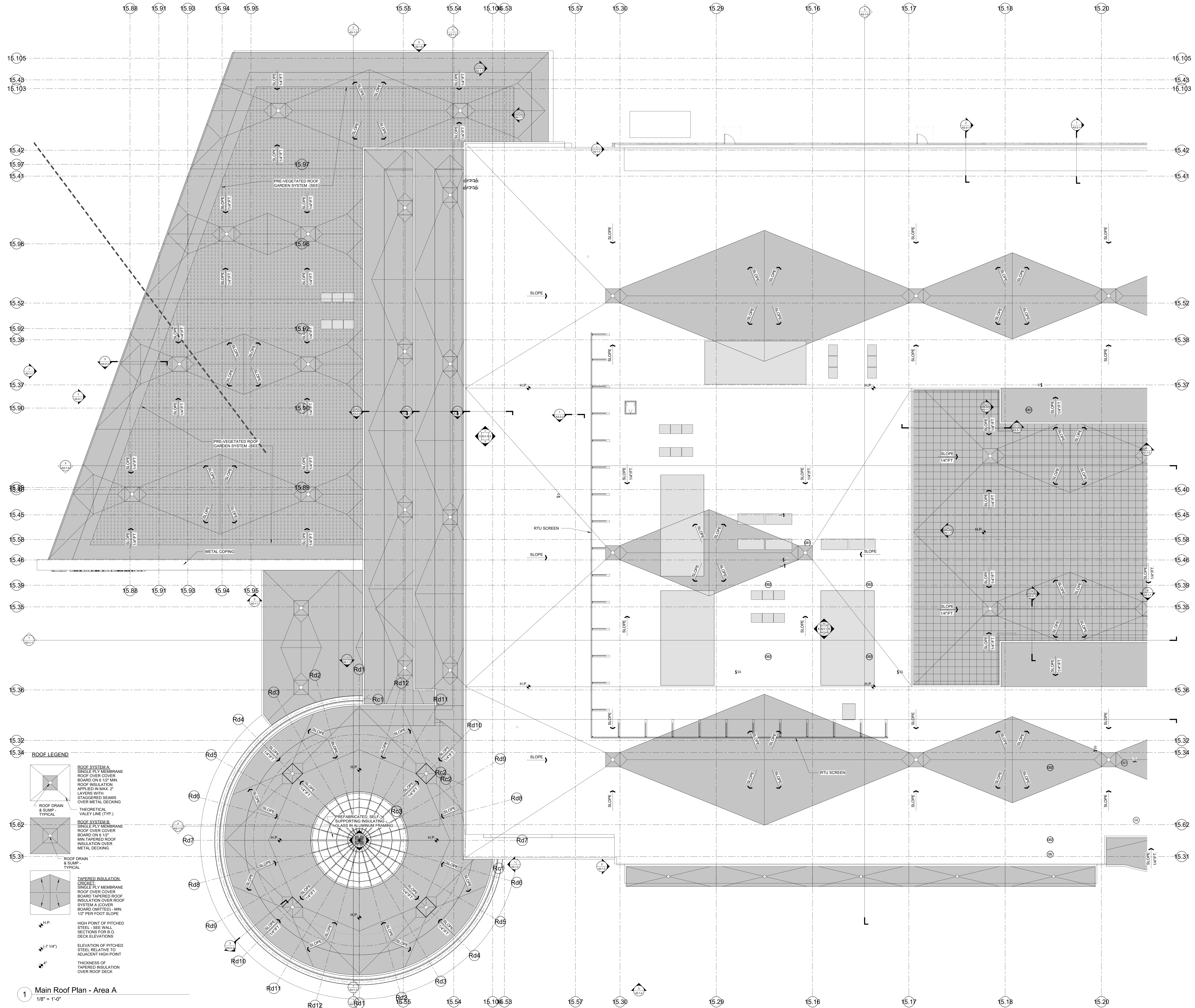
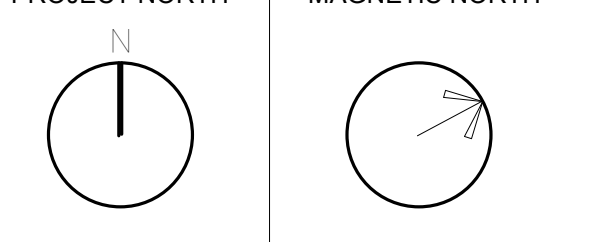
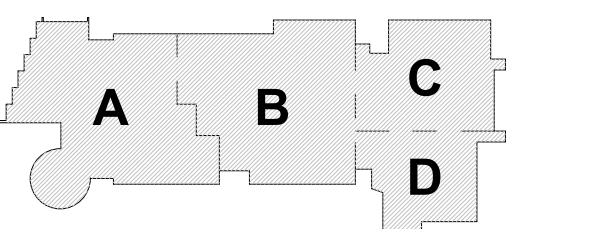
PROJECT NORTH MAGNETIC NORTH



**MAINTENANCE
 BUILDING
 DRAWINGS**

Scale: As indicated
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

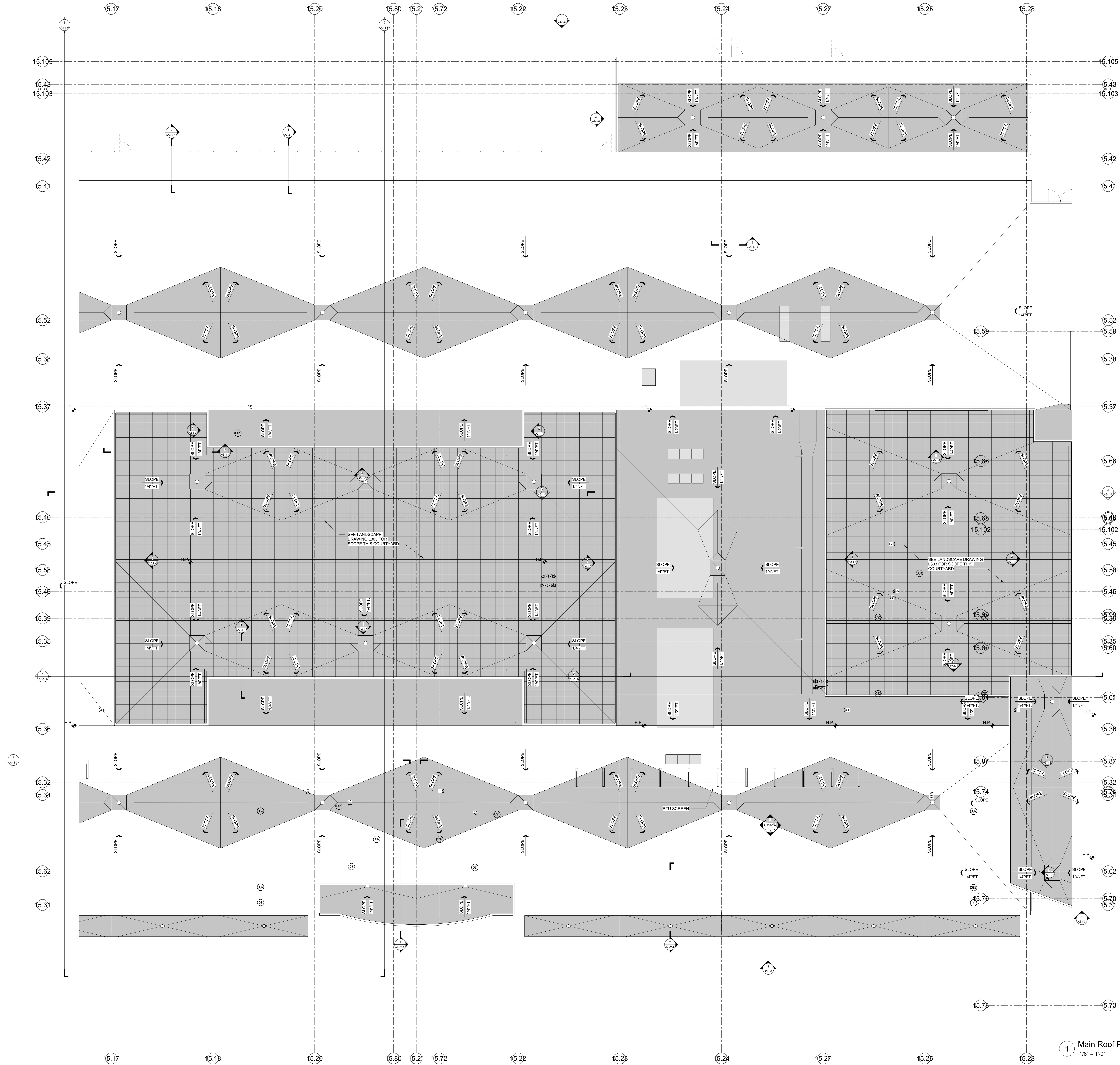
A1-1-MB



ROOF LEGEND

- ROOF SYSTEM A:** SINGLE PLY MEMBRANE ROOF OVER COVER BOARD ON 1/2" MIN. ROOF INSULATION APPLIED IN MAX. 2" LAYERS WITH STAGGERED SEAMS OVER METAL DECKING
- ROOF SYSTEM B:** SINGLE PLY MEMBRANE ROOF OVER COVER BOARD ON 1/2" MIN. TAPERED ROOF INSULATION OVER ROOF SYSTEM A (COVER BOARD OMITTED) - MIN. 1/2" PER FOOT SLOPE
- TAPERED INSULATION:** SINGLE PLY MEMBRANE ROOF OVER COVER BOARD TAPERED ROOF INSULATION OVER ROOF SYSTEM A (COVER BOARD OMITTED) - MIN. 1/2" PER FOOT SLOPE
- ROOF DRAIN & SUMP - TYPICAL**
- THEORETICAL VALLEY LINE (T.V.L.)**
- H.P.:** HIGH POINT OF PITCHED STEEL - SEE WALL SECTIONS FOR B.O. DECK ELEVATIONS
- (7' 11/4"):** ELEVATION OF PITCHED STEEL RELATIVE TO ADJACENT HIGH POINT
- 4":** THICKNESS OF TAPERED INSULATION OVER ROOF DECK

1 Main Roof Plan - Area A
 1/8" = 1'-0"

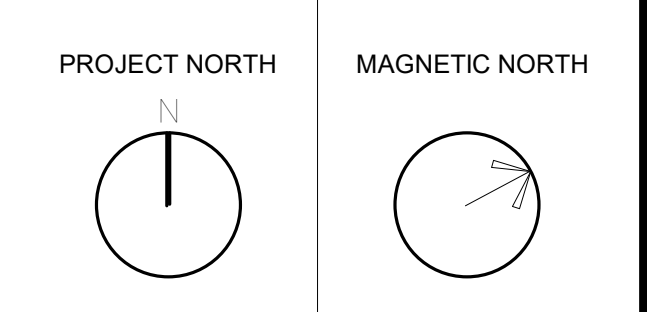
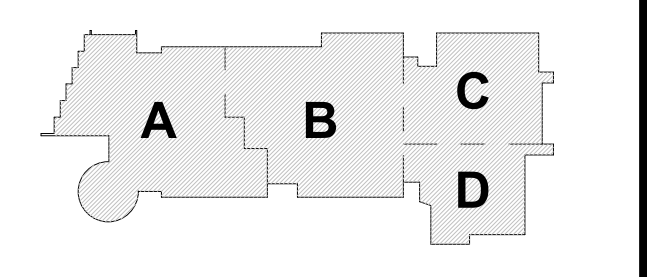


ROOF LEGEND

- ROOF SYSTEM A**
SINGLE PLY MEMBRANE
ROOF OVER COVER
BOARD ON 1/2" MIN.
ROOF INSULATION
APPLIED IN MAX. 2'
LAYERS WITH
STAGGERED SEAMS
OVER METAL DECKING
- ROOF SYSTEM B**
SINGLE PLY MEMBRANE
ROOF OVER COVER
BOARD ON 1/2"
MIN. TAPERED ROOF
INSULATION OVER
METAL DECKING
- TAPERED INSULATION**
CRICKET
SINGLE PLY MEMBRANE
ROOF OVER COVER
BOARD TAPERED ROOF
INSULATION OVER ROOF
SYSTEM A (COVER
BOARD OMITTED) - MIN.
1/2" PER FOOT SLOPE
- H.P.**
HIGH POINT OF PITCHED
STEEL - SEE WALL
SECTIONS FOR B.O.
DECK ELEVATIONS
- (7' 1/4")**
ELEVATION OF PITCHED
STEEL RELATIVE TO
ADJACENT HIGH POINT
- 4"**
THICKNESS OF
TAPERED INSULATION
OVER ROOF DECK

**MSBA SCHEMATIC
 DESIGN SUBMISSION**

June 17, 2021

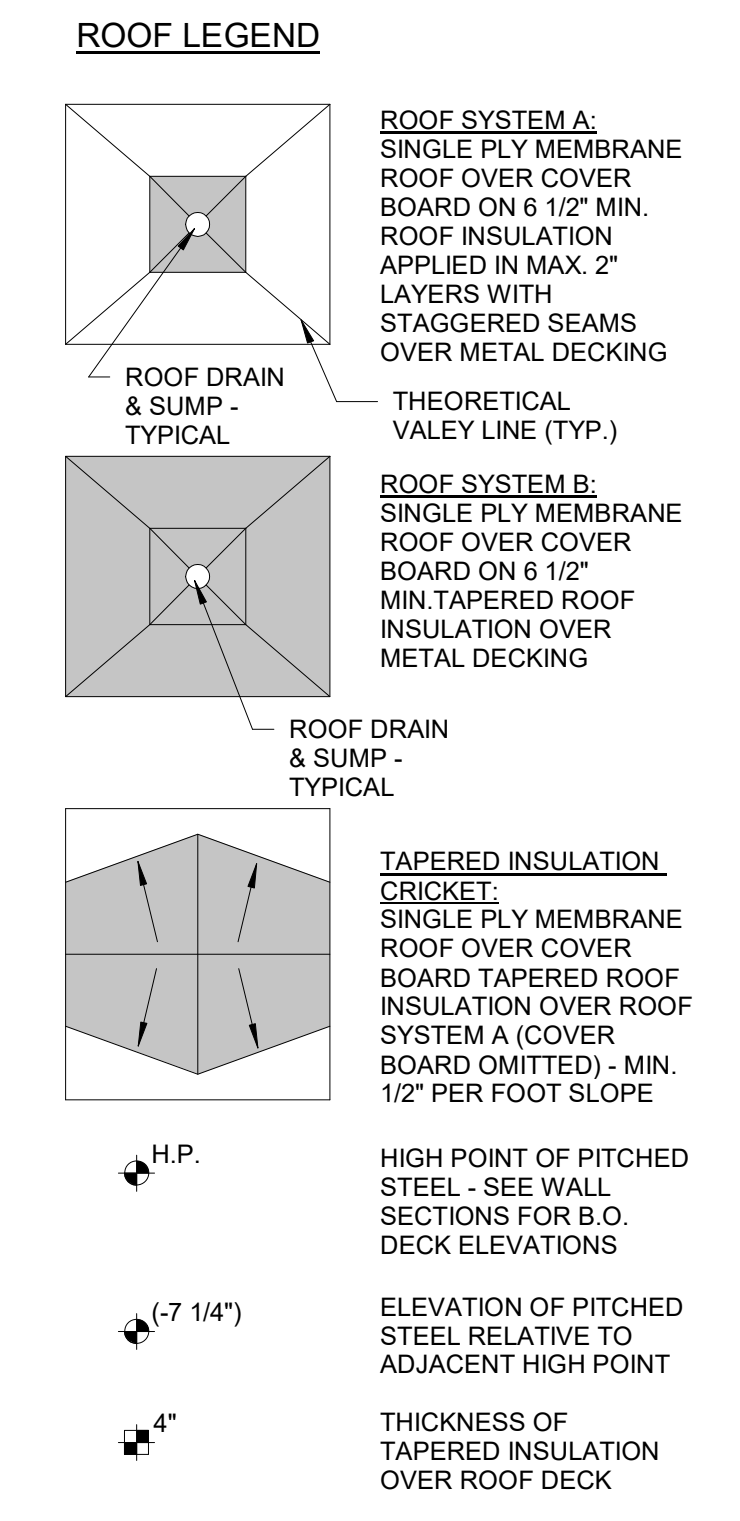
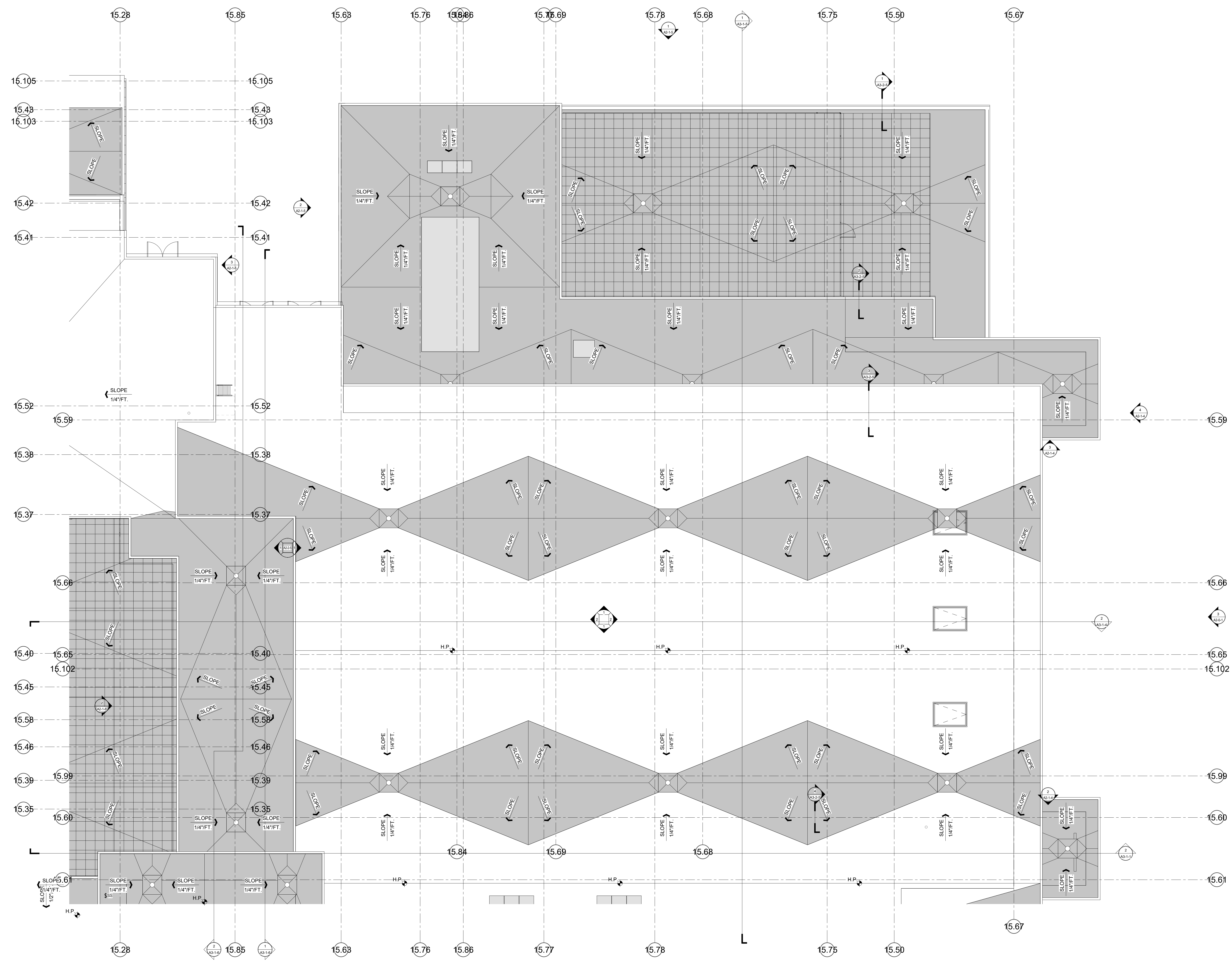


**ROOF PLAN -
 AREA B**

Scale: 1/8" = 1'-0"
 Job No.: 2002
 Drawn By: DRA
 Date: June 17, 2021

1 Main Roof Plan - Area B
 1/8" = 1'-0"

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1 Main Roof Plan - Area C
 1/8" = 1'-0"

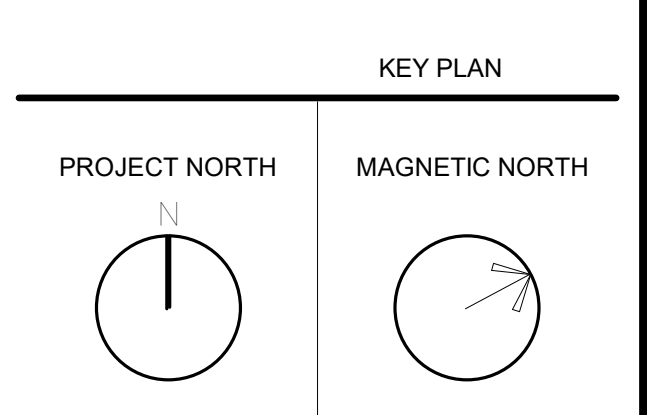
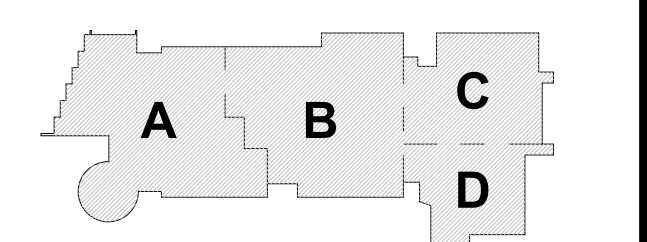
**Northeast
 Metropolitan
 Regional
 Vocational High
 School**

Wakefield, MA 01880

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MSBA SCHEMATIC
 DESIGN SUBMISSION

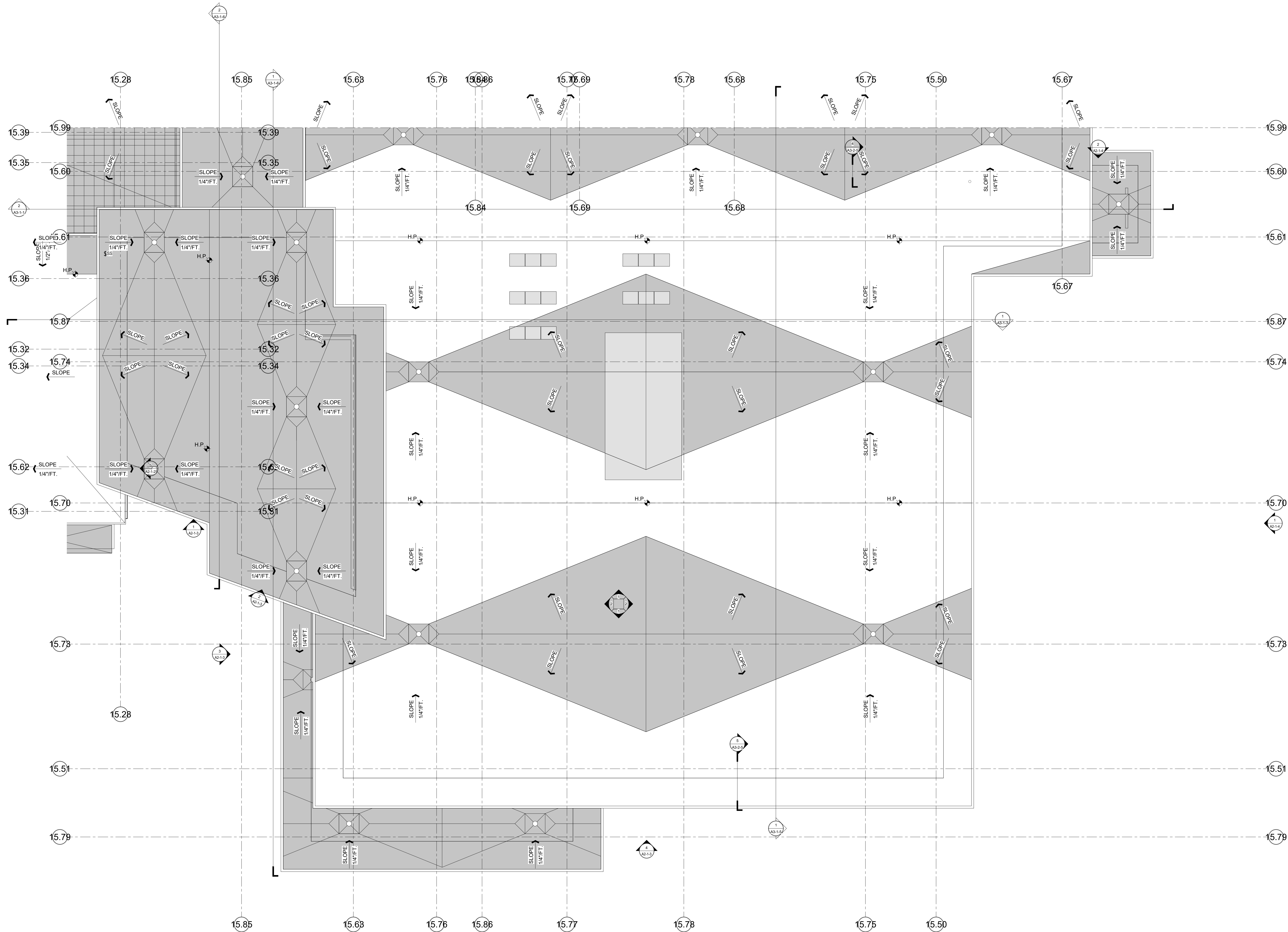
June 17, 2021



**ROOF PLAN -
 AREA C**

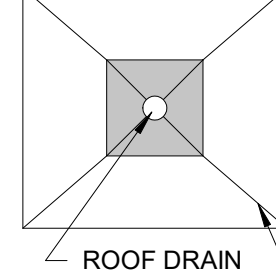
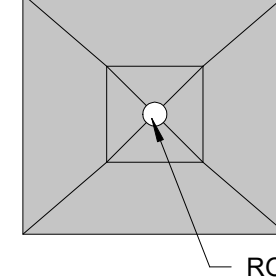
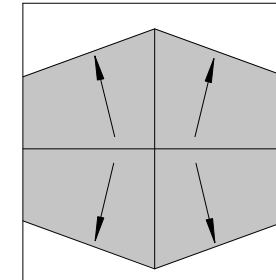

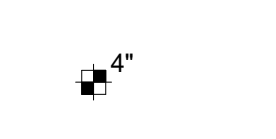

Scale: 1/8" = 1'-0"
 Job No.: 2002
 Drawn By: DRA
 Date: June 17, 2021

A1-2-1C



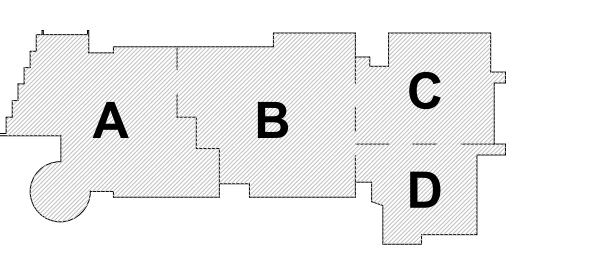
1 Main Roof Plan - Area D
 1/8" = 1'-0"

ROOF LEGEND

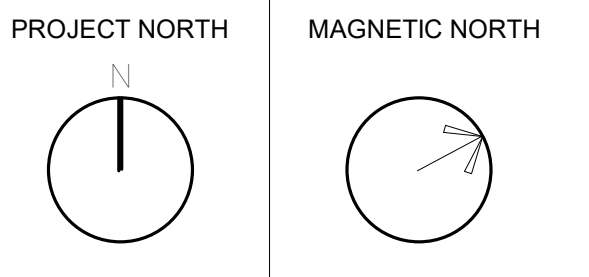
-  **ROOF SYSTEM A:**
 SINGLE PLY MEMBRANE
 ROOF OVER COVER
 BOARD ON 6 1/2" MIN.
 ROOF INSULATION
 APPLIED IN MAX. 2"
 LAYERS WITH
 STAGGERED SEAMS
 OVER METAL DECKING
-  **ROOF SYSTEM B:**
 SINGLE PLY MEMBRANE
 ROOF OVER COVER
 BOARD ON 6 1/2"
 MIN. TAPERED ROOF
 INSULATION OVER
 METAL DECKING
-  **TAPERED INSULATION
 CRACKS:**
 SINGLE PLY MEMBRANE
 ROOF OVER COVER
 BOARD TAPERED ROOF
 INSULATION OVER ROOF
 SYSTEM A (COVER
 BOARD OMITTED) - MIN.
 1/2" PER FOOT SLOPE
-  **H.P.:**
 HIGH POINT OF PITCHED
 STEEL - SEE WALL
 SECTIONS FOR B.O.
 DECK ELEVATIONS
-  **(7' 14")**
 ELEVATION OF PITCHED
 STEEL RELATIVE TO
 ADJACENT HIGH POINT
-  **4"**
 THICKNESS OF
 TAPERED INSULATION
 OVER ROOF DECK

MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



PROJECT NORTH
 MAGNETIC NORTH

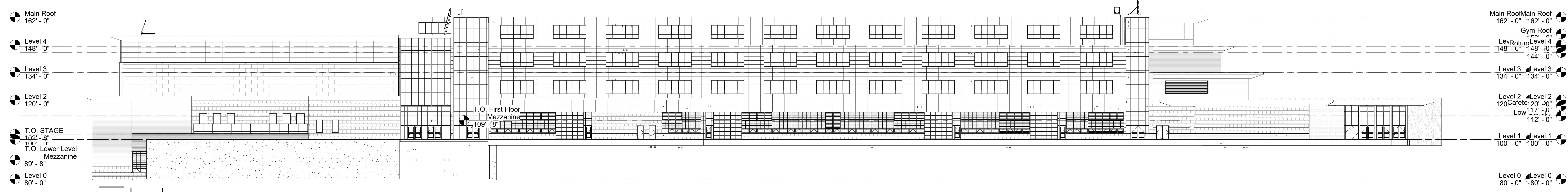


**ROOF PLAN -
 AREA D**

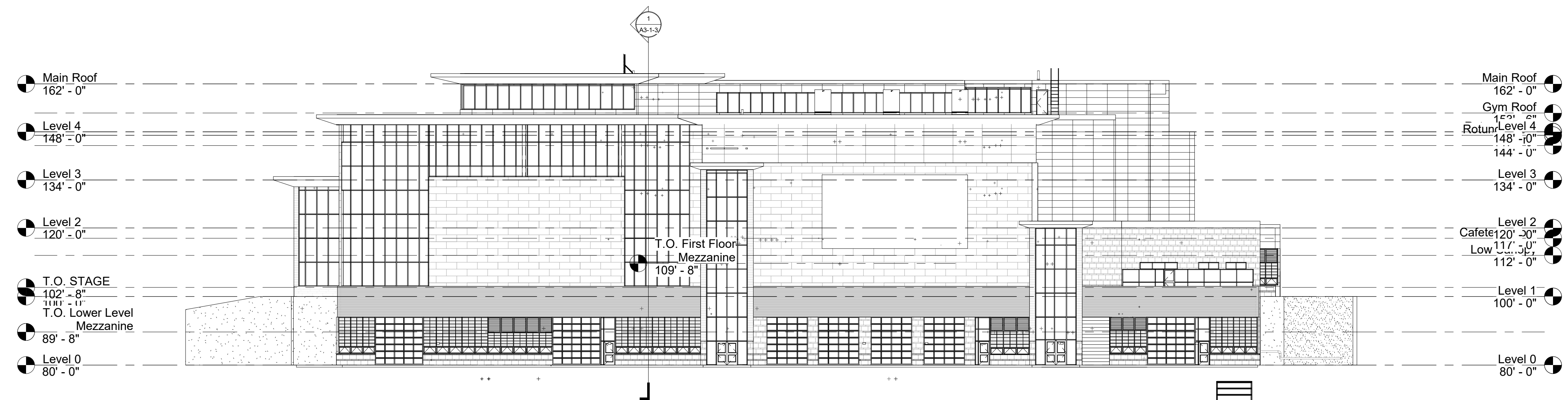
Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

A1-2-1D

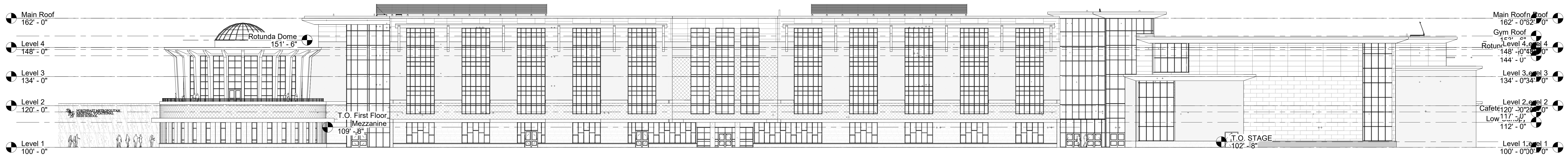
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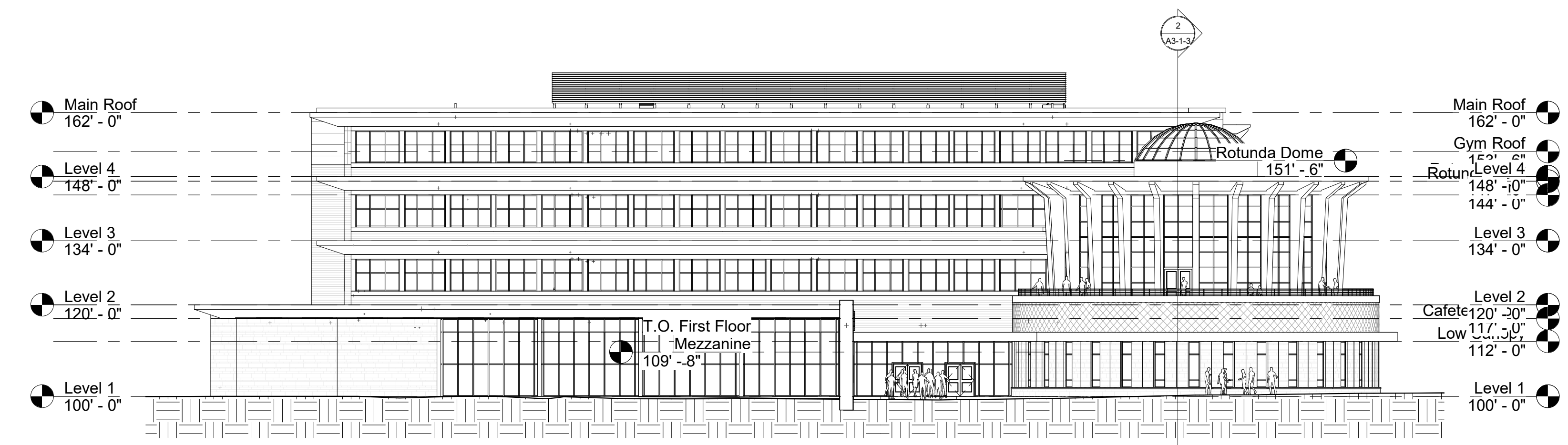
4 OVERALL NORTH ELEVATION
 1" = 20'-0"



3 OVERALL EAST ELEVATION
 1" = 20'-0"



2 OVERALL SOUTH ELEVATION
 1" = 20'-0"

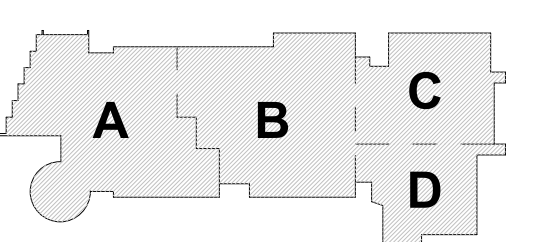


1 OVERALL WEST ELEVATION
 1" = 20'-0"

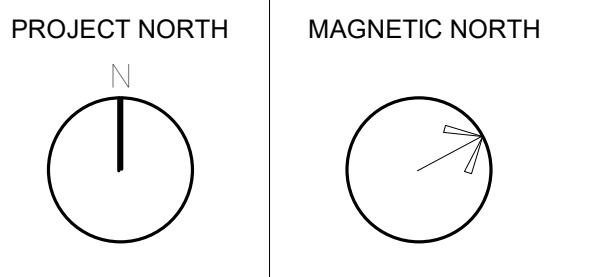
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MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



PROJECT NORTH MAGNETIC NORTH



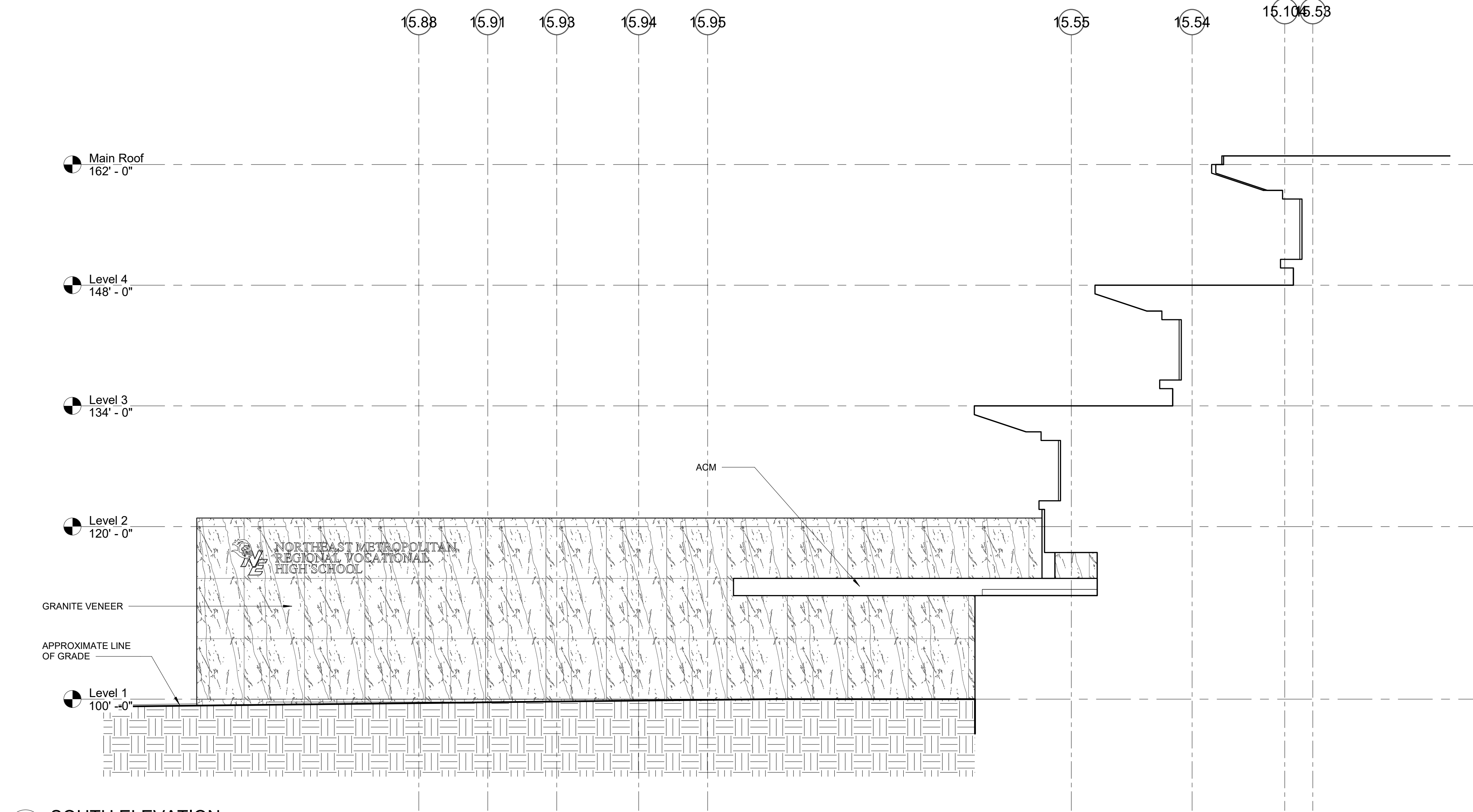
**OVERALL
 BUILDING
 ELEVATIONS**

Scale: 1" = 20'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

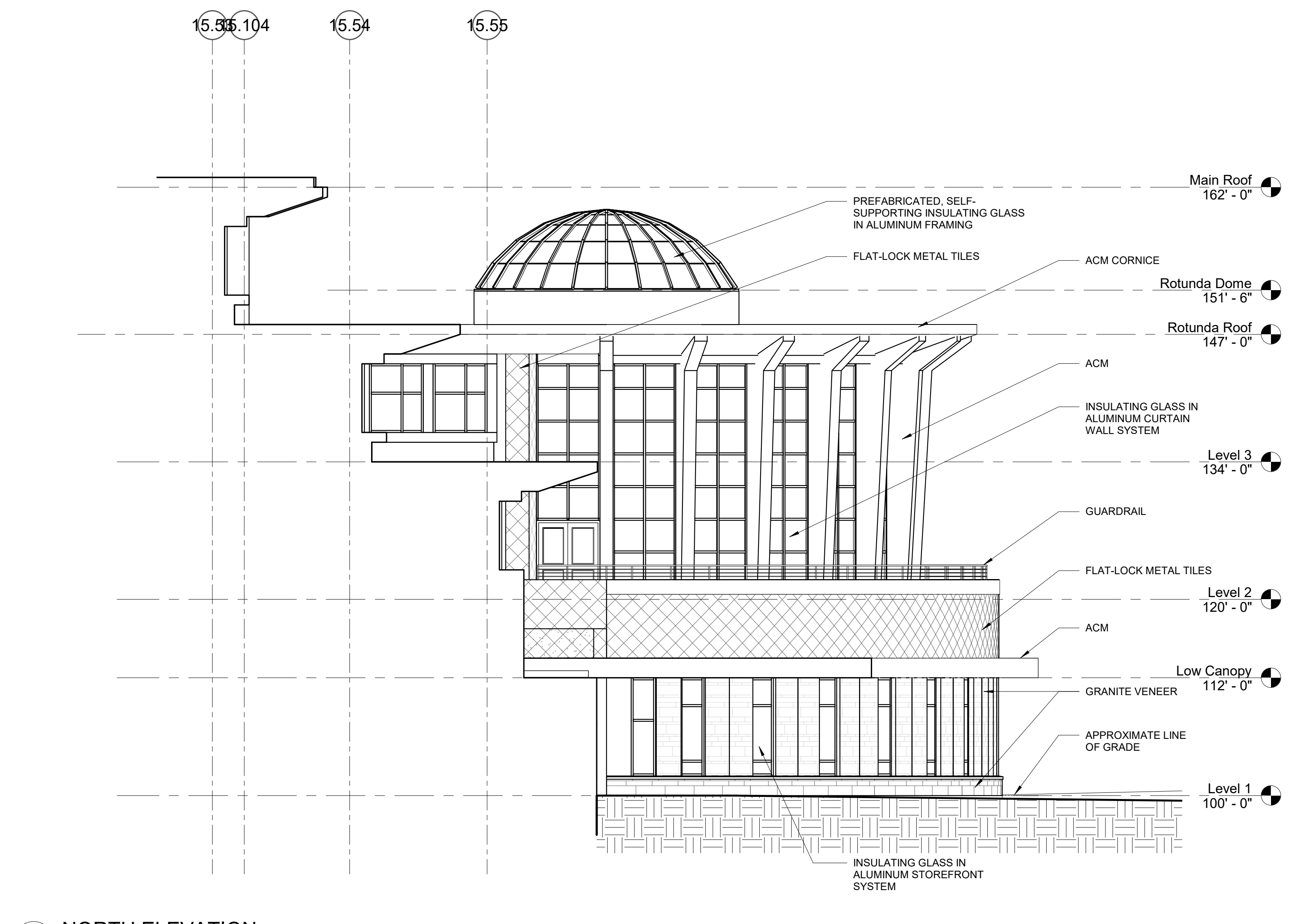
A2-0-1

**Northeast
Metropolitan
Regional
Vocational High School**

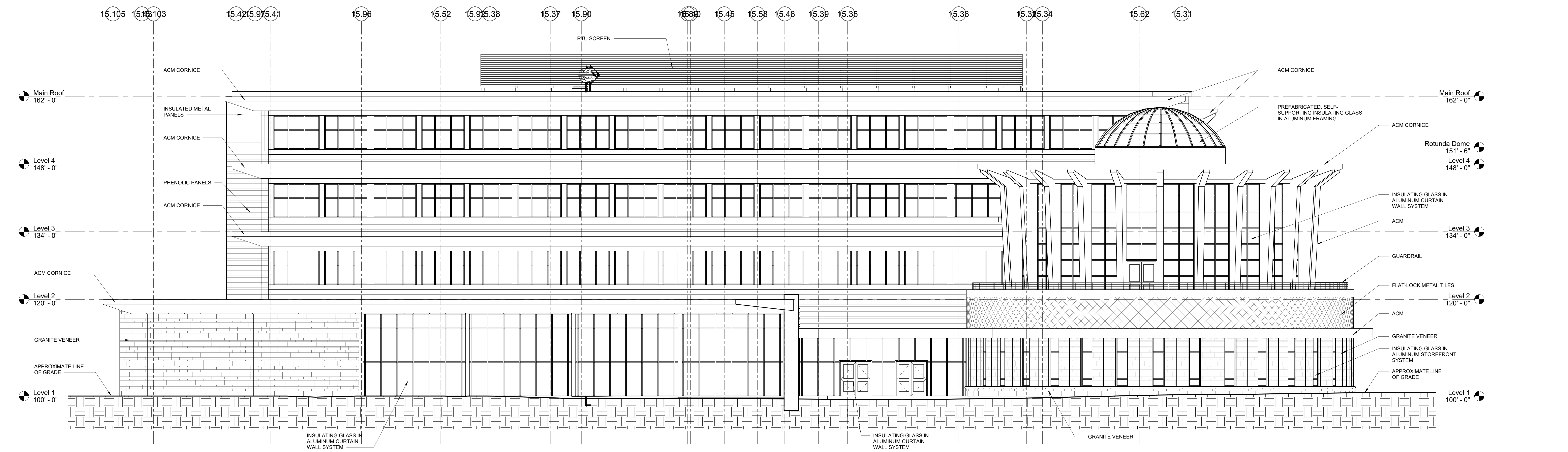
Wakefield, MA 01880



2 SOUTH ELEVATION
1/8" = 1'-0"



3 NORTH ELEVATION
1/8" = 1'-0"

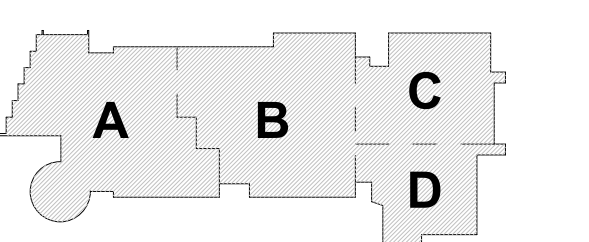


1 WEST ELEVATION
1/8" = 1'-0"

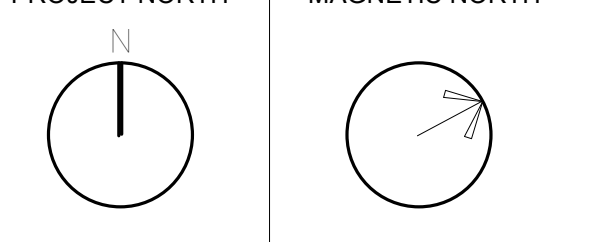
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MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021

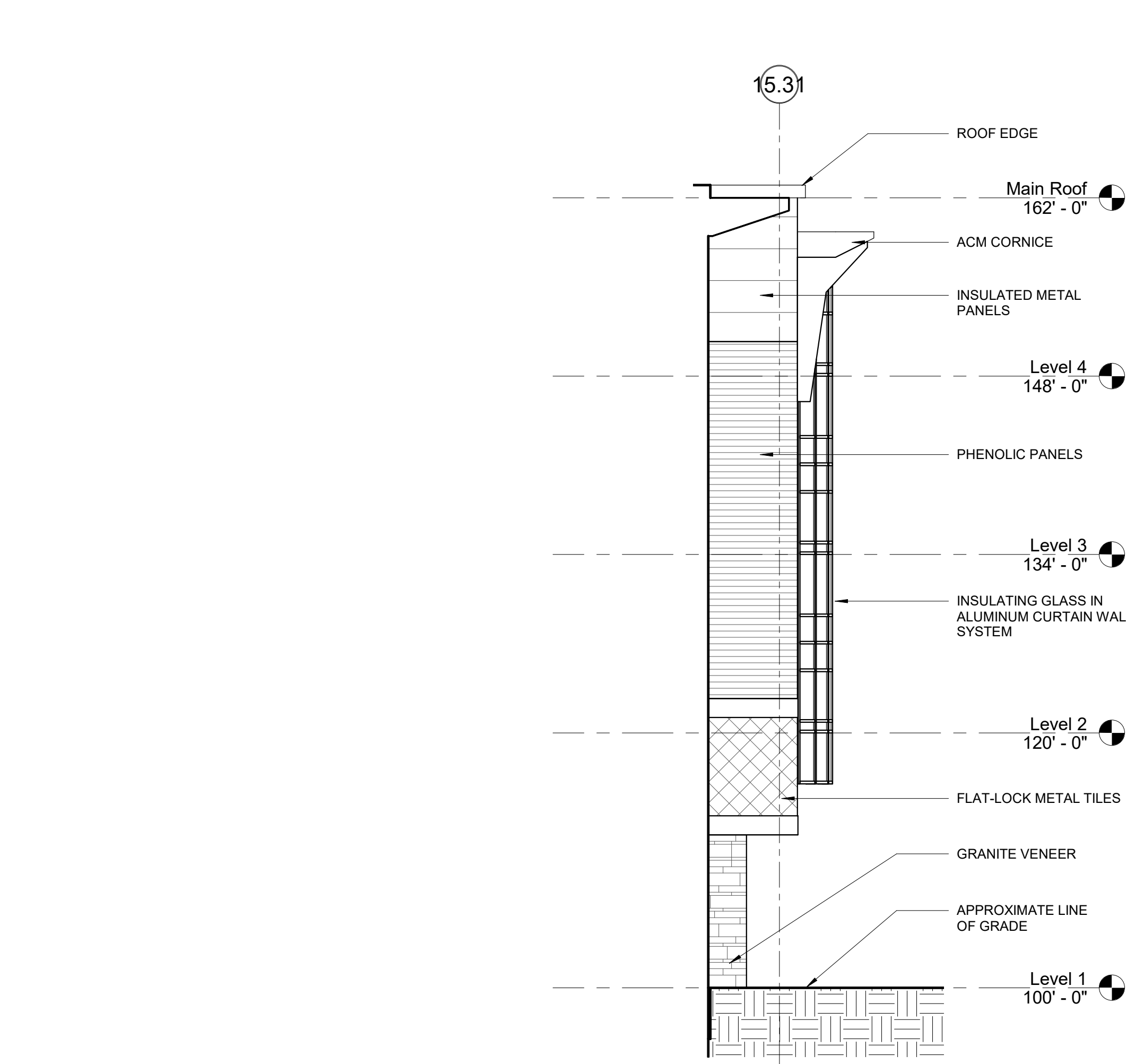
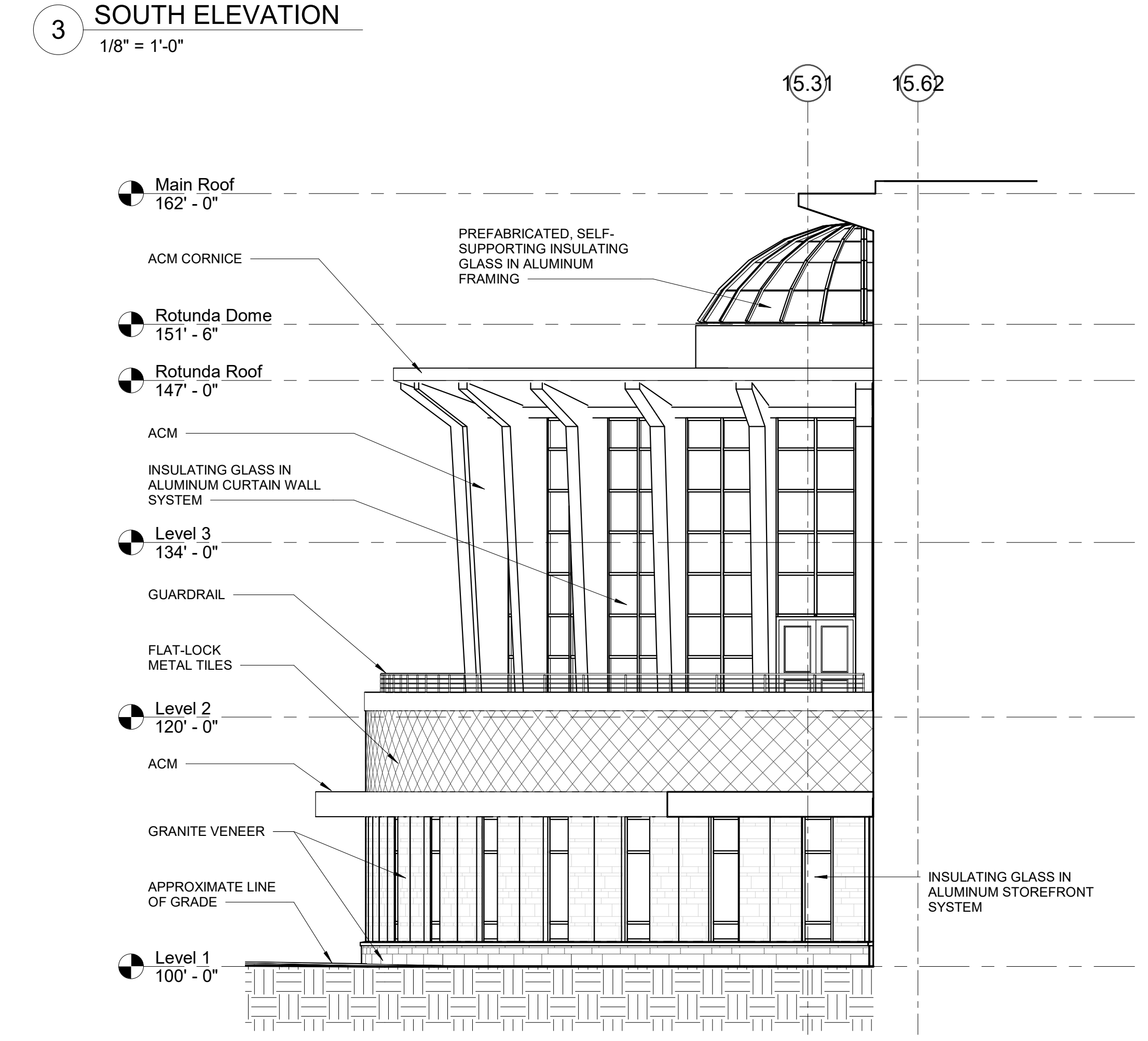
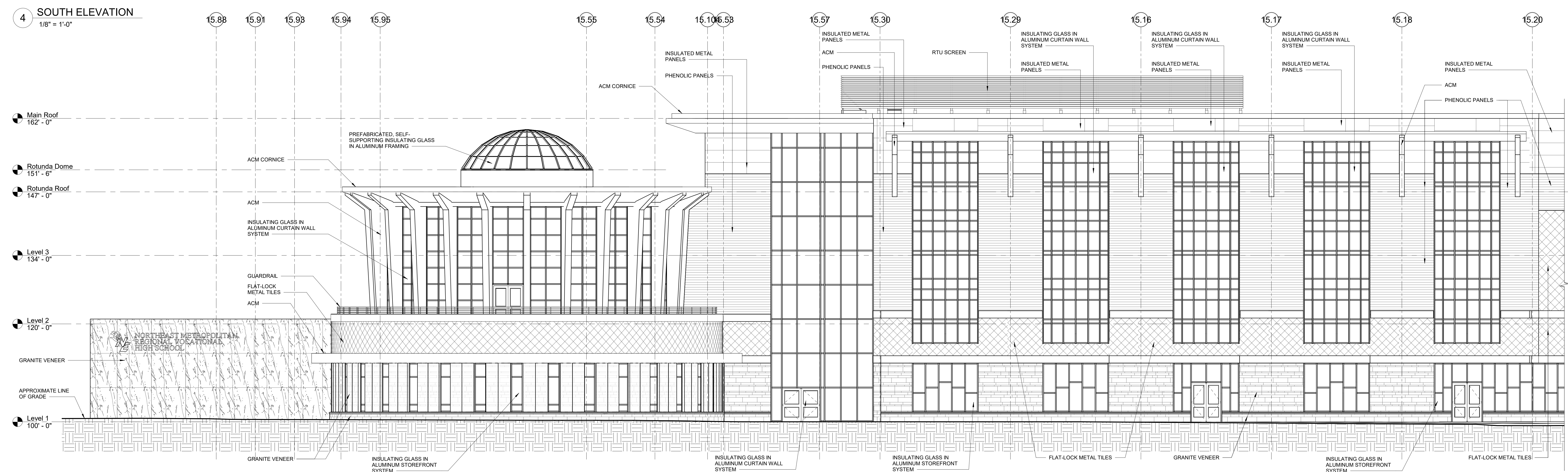
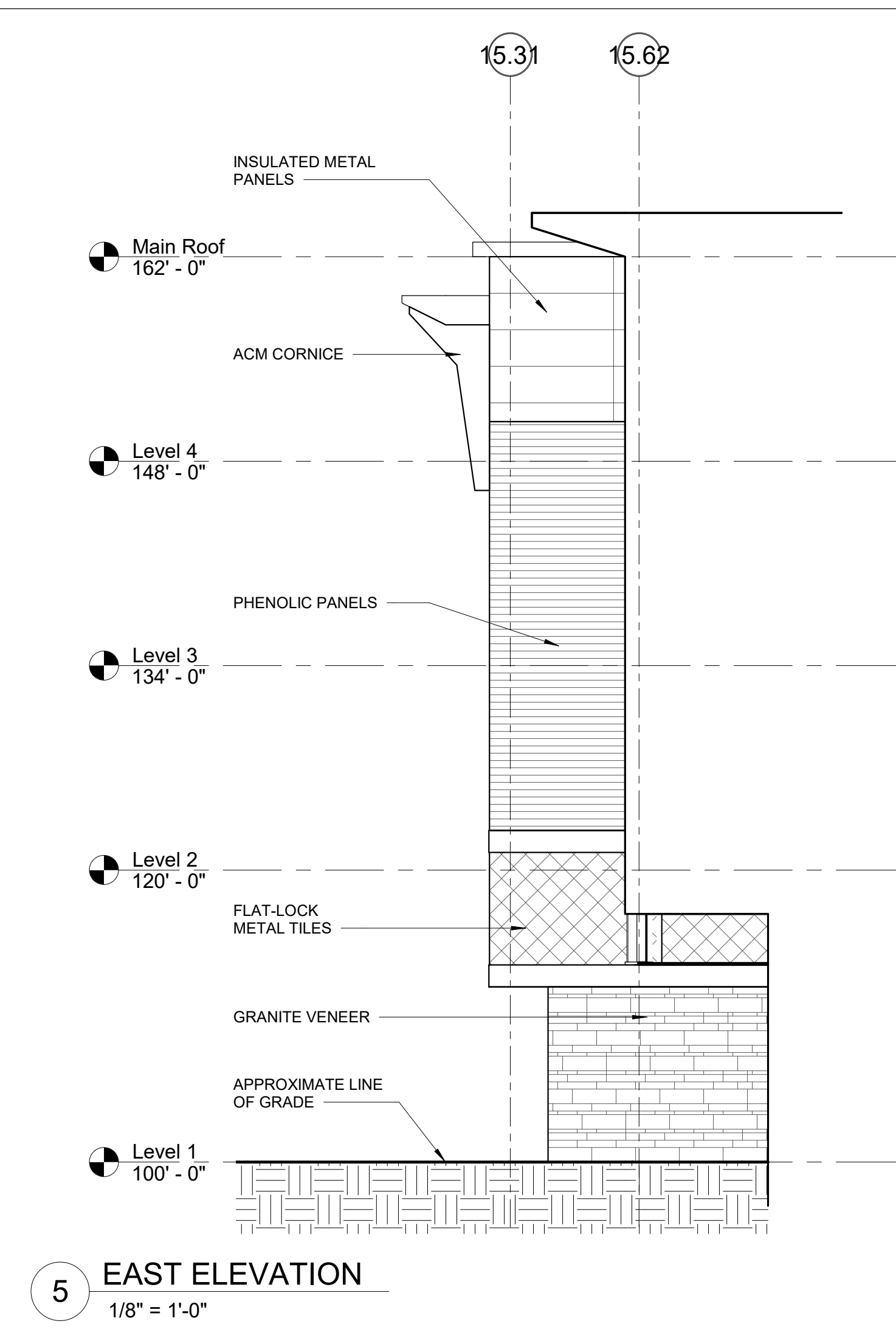
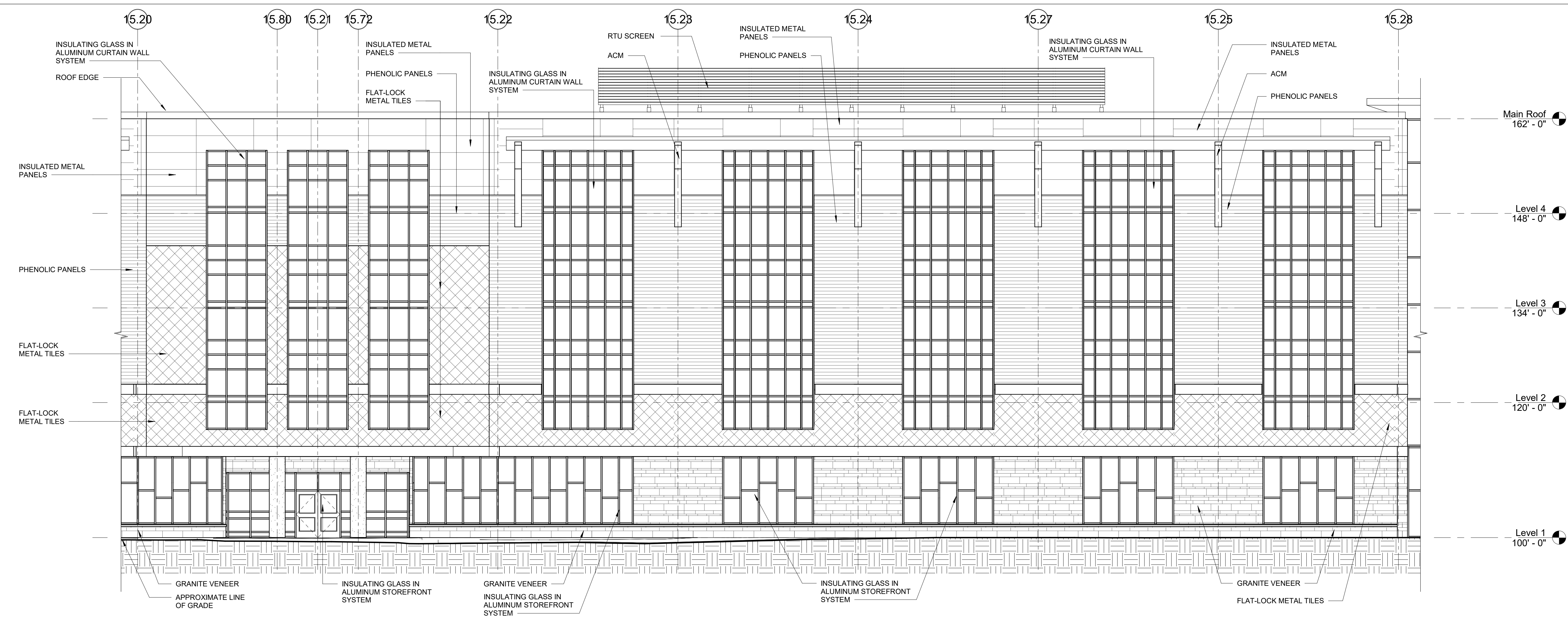


PROJECT NORTH MAGNETIC NORTH



**BUILDING
ELEVATIONS**

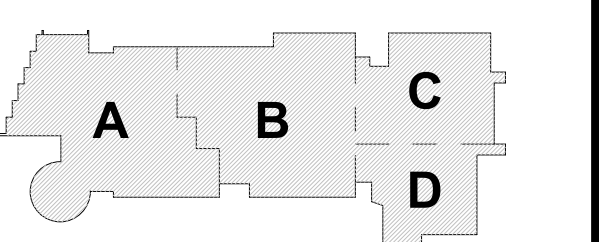
Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021



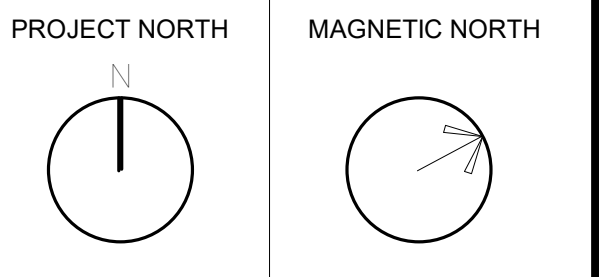
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MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021

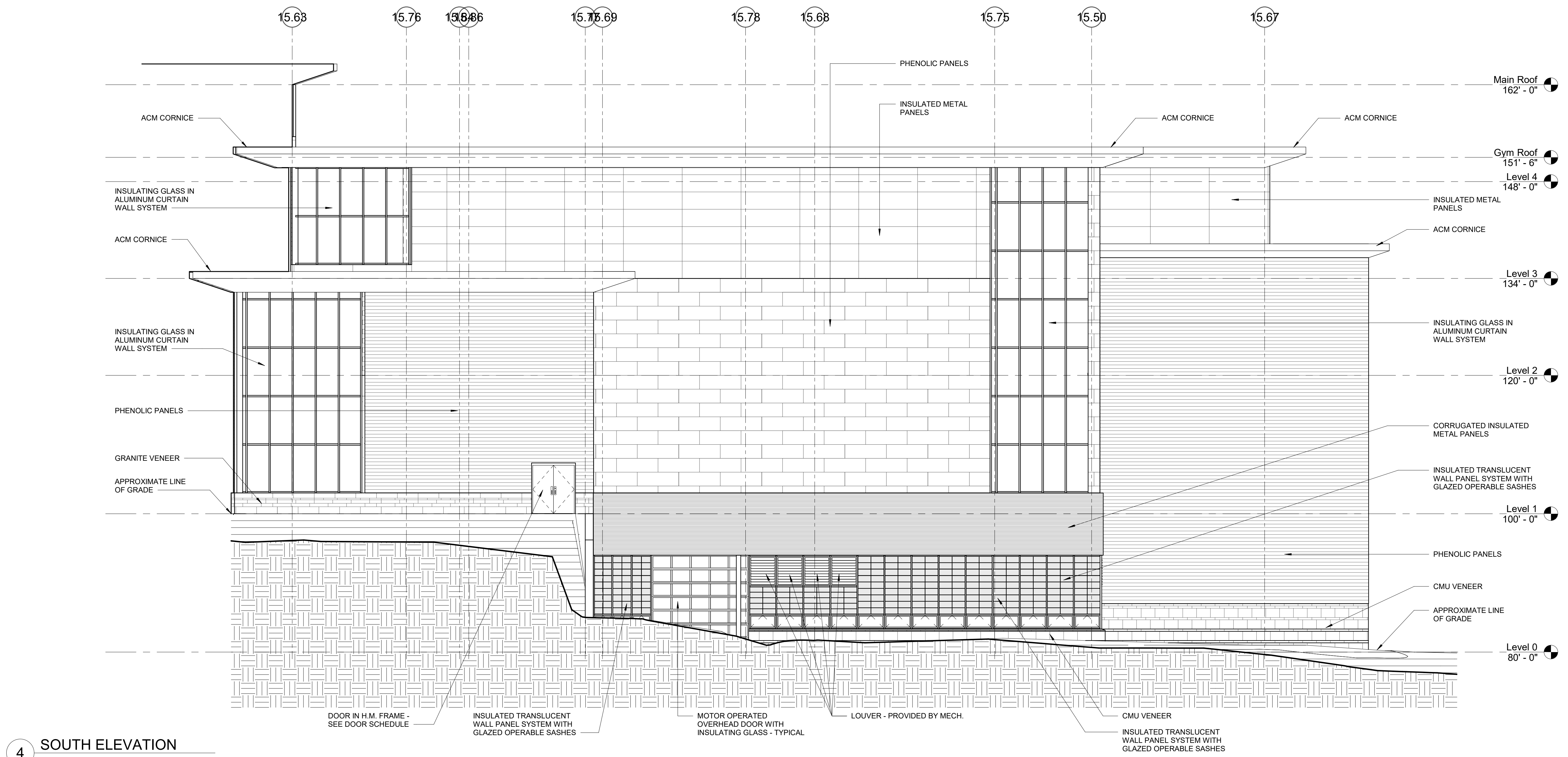


PROJECT NORTH MAGNETIC NORTH

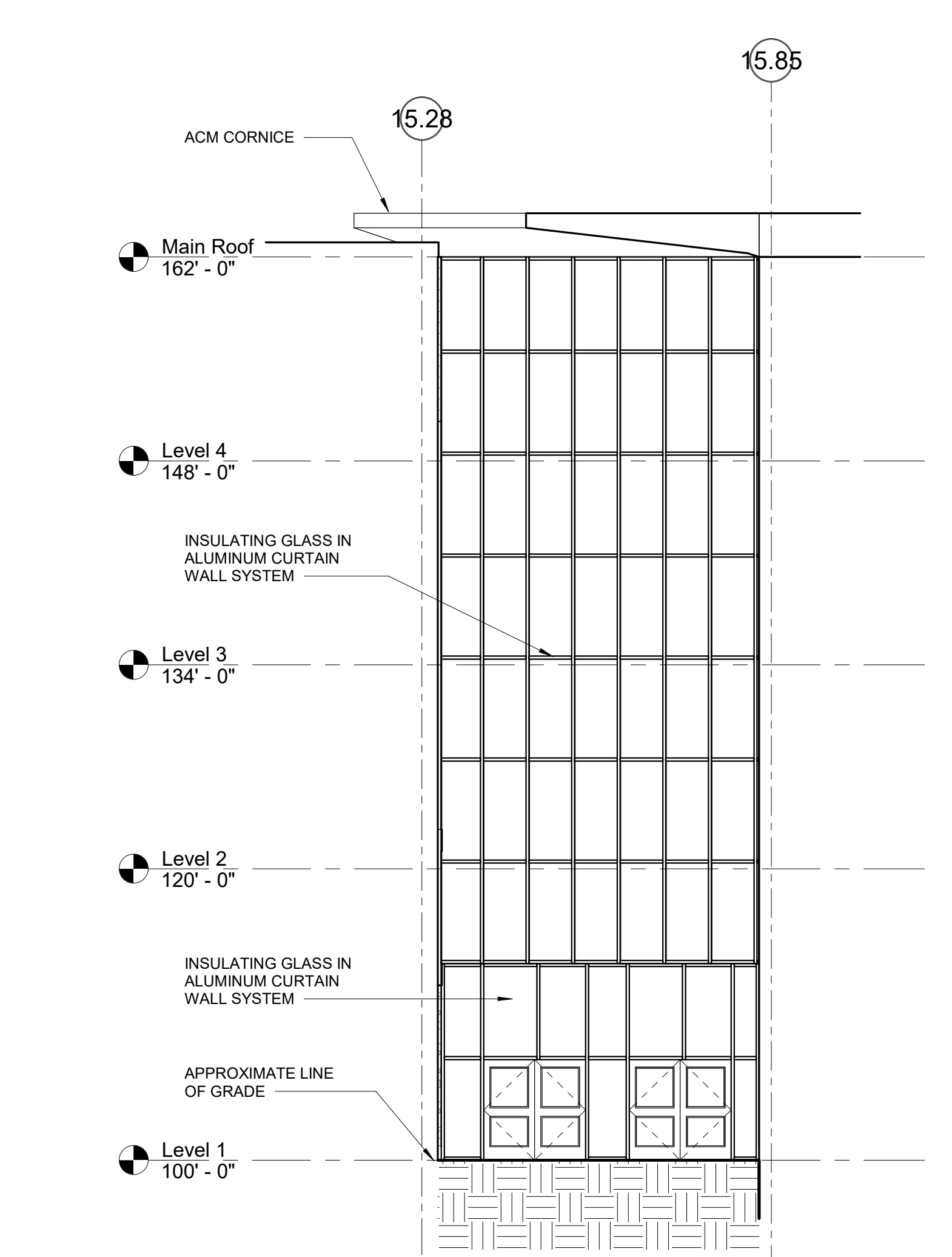


BUILDING ELEVATIONS

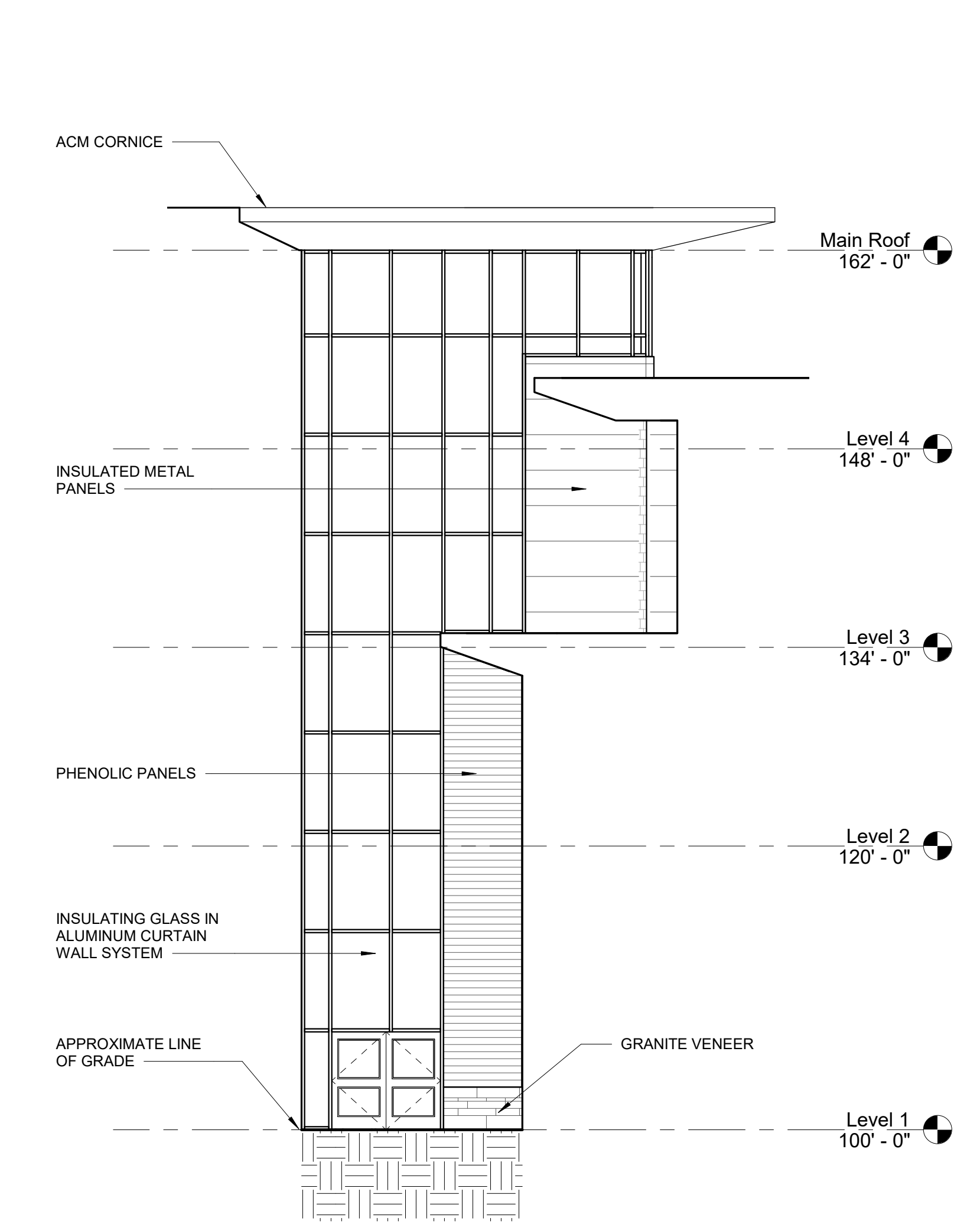
Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021
A2-1-2



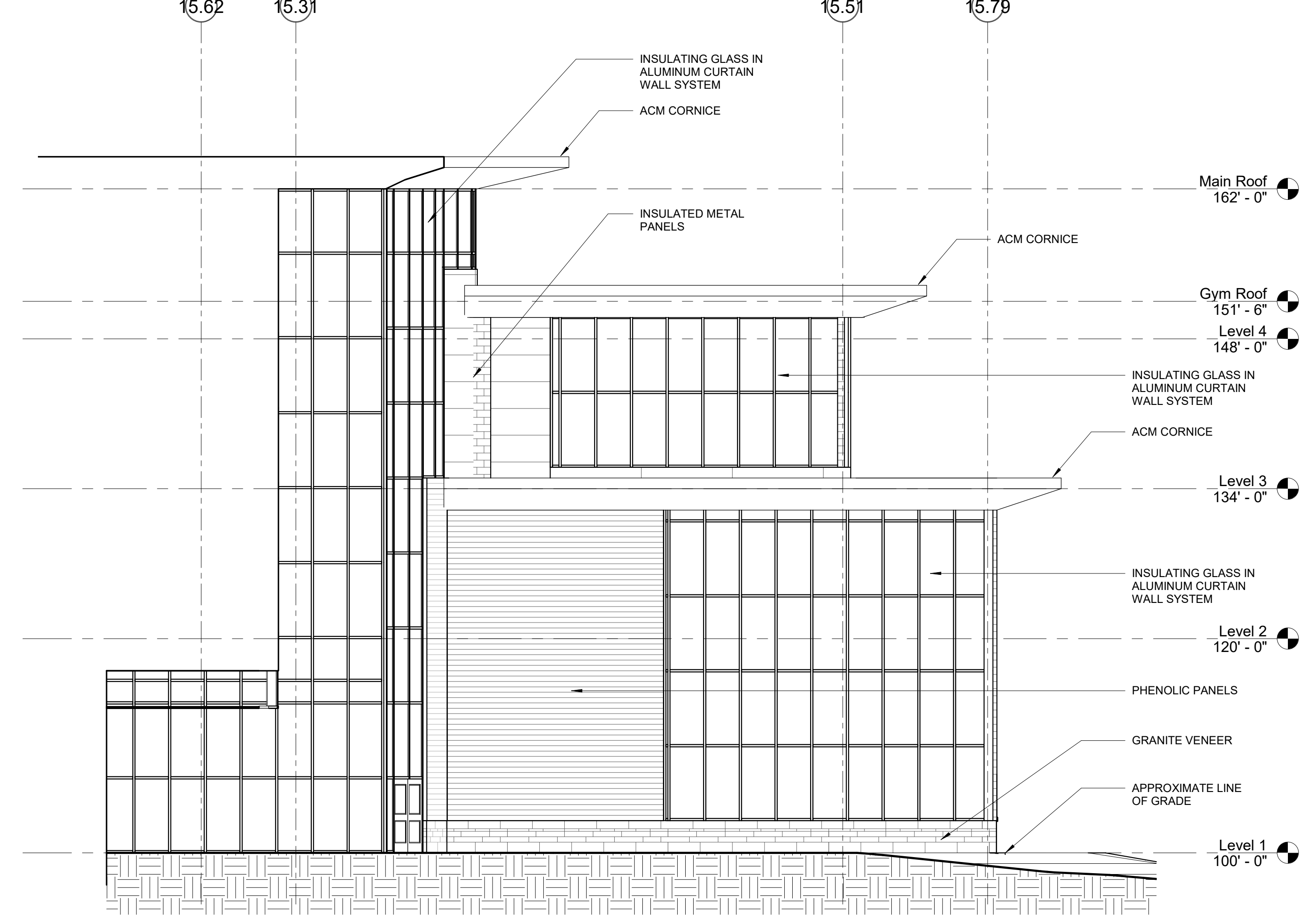
4 SOUTH ELEVATION
 1/8" = 1'-0"



1 SOUTH ELEVATION
 1/8" = 1'-0"



2 WEST ELEVATION
 1/8" = 1'-0"

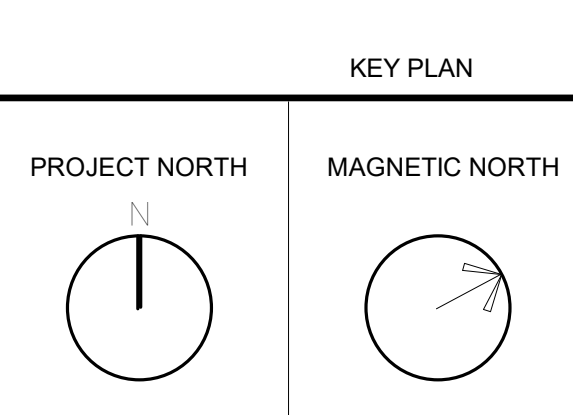
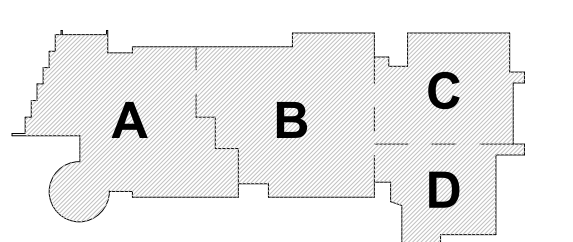


3 WEST ELEVATION
 1/8" = 1'-0"

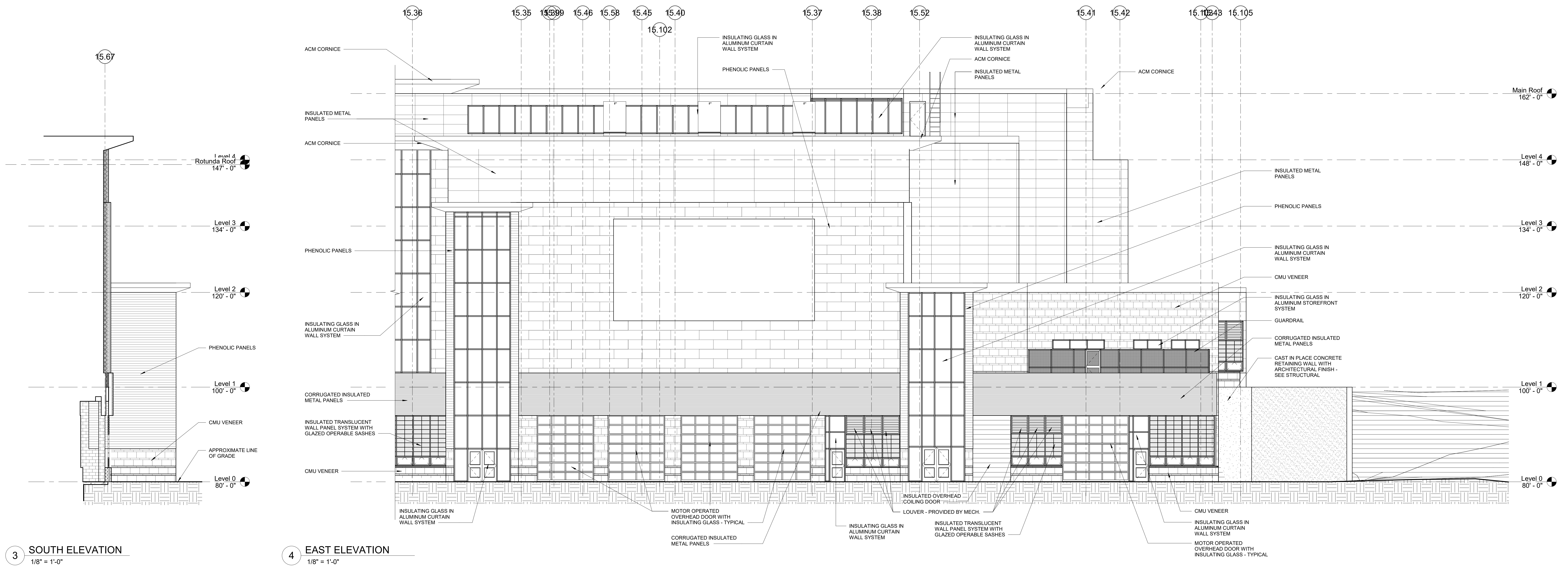
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MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021

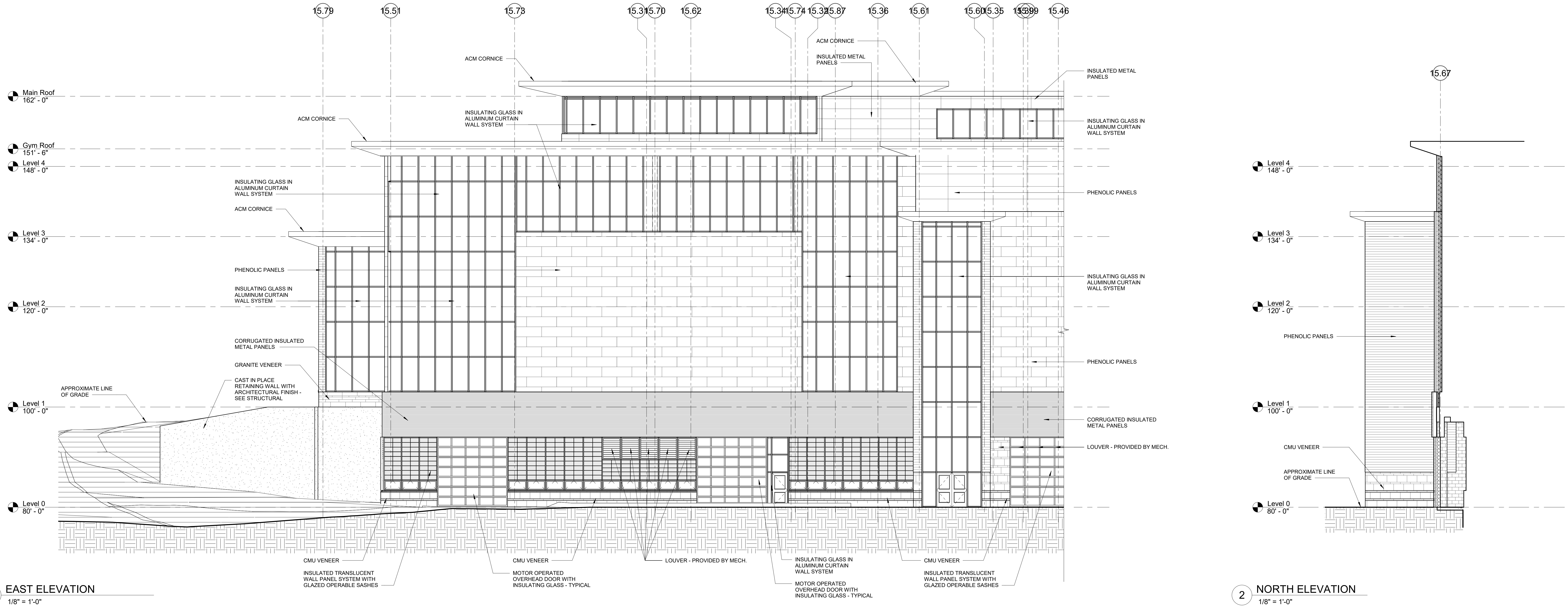


**BUILDING
 ELEVATIONS**



3 SOUTH ELEVATION
 1/8" = 1'-0"

4 EAST ELEVATION
 1/8" = 1'-0"



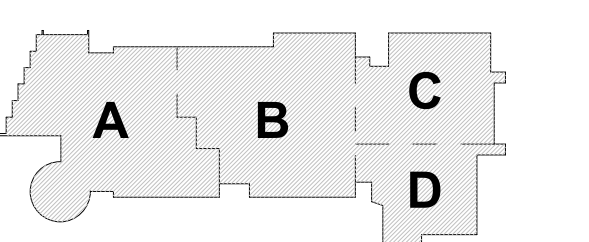
1 EAST ELEVATION
 1/8" = 1'-0"

2 NORTH ELEVATION
 1/8" = 1'-0"

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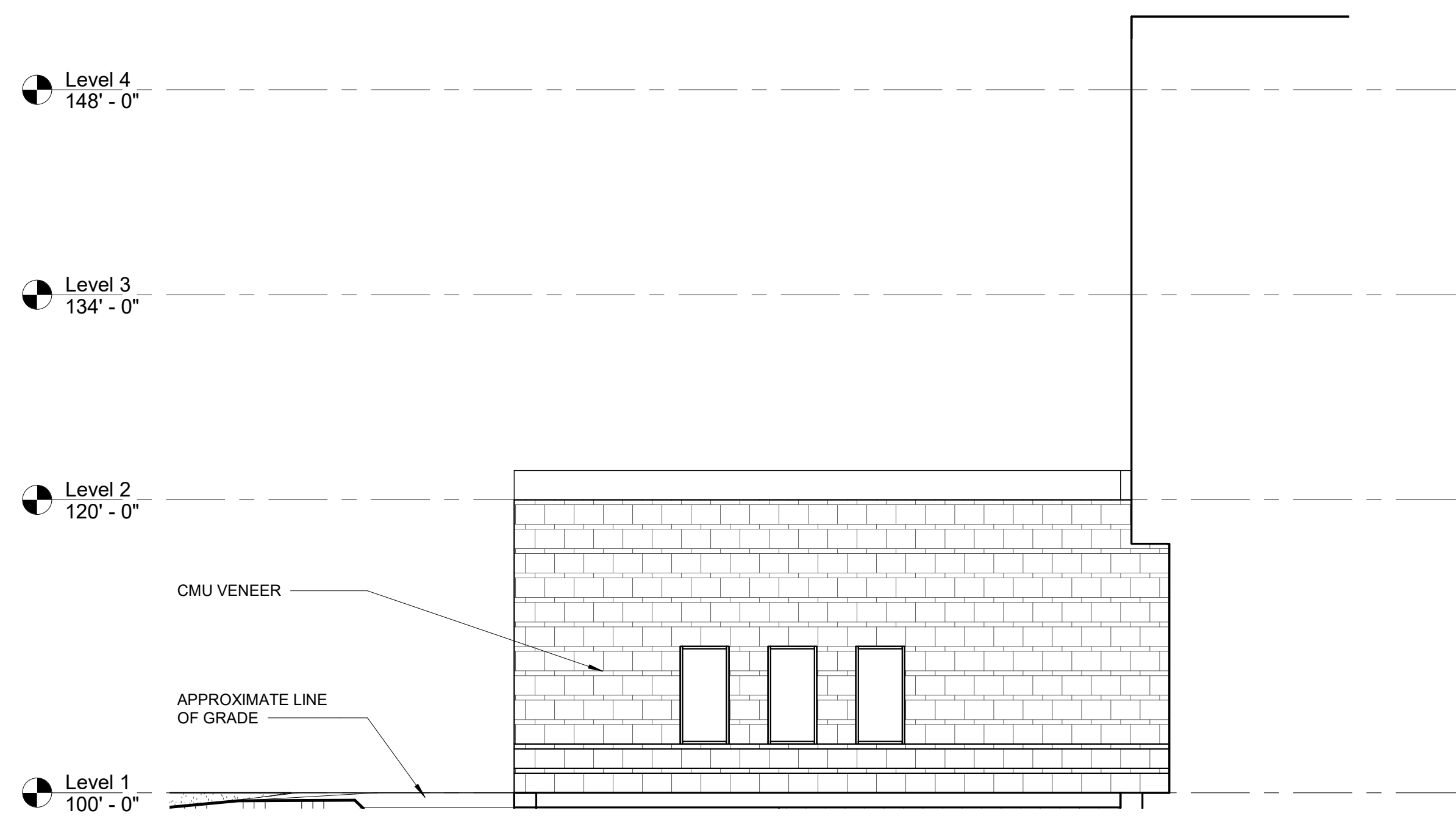
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021

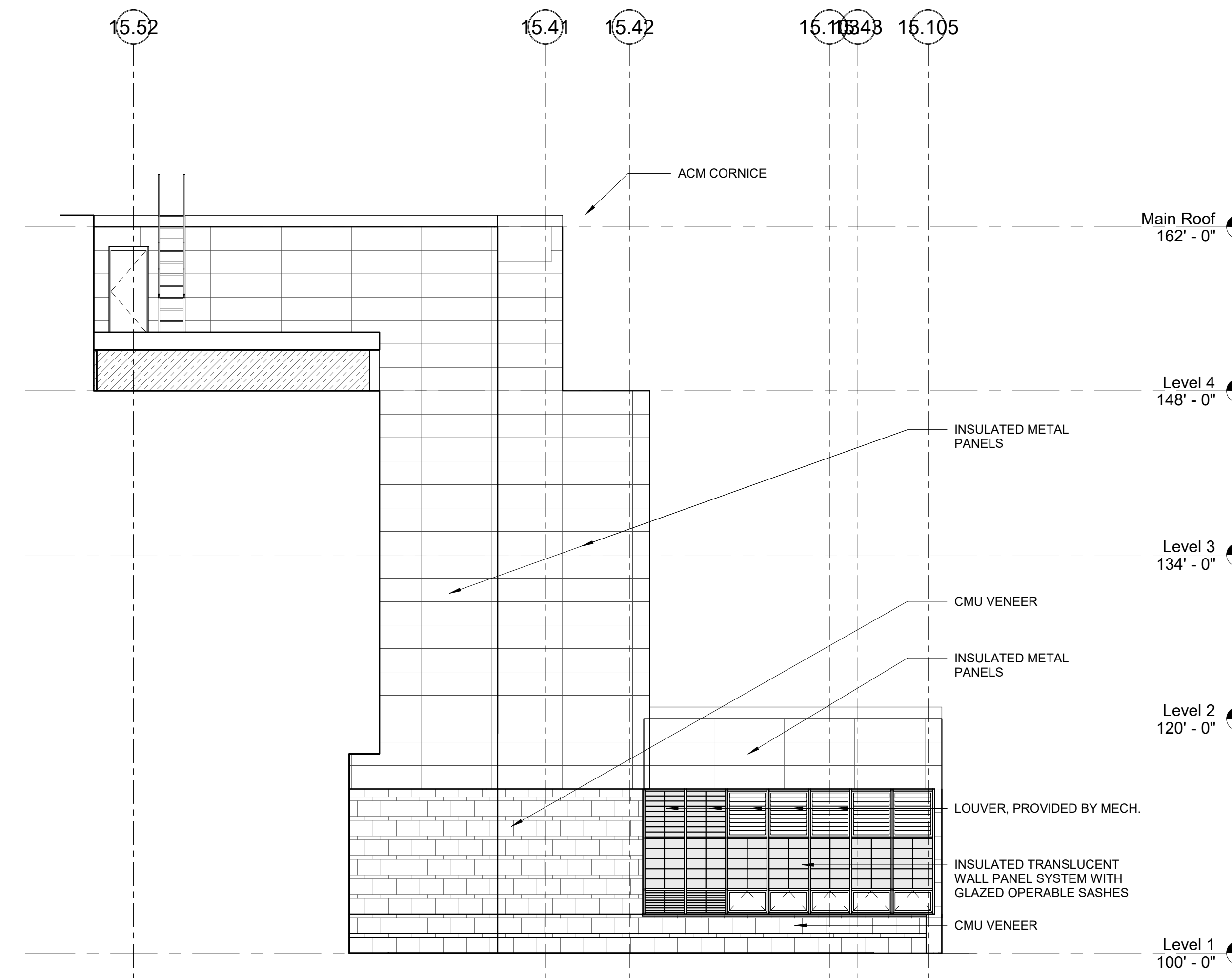


PROJECT NORTH
 MAGNETIC NORTH

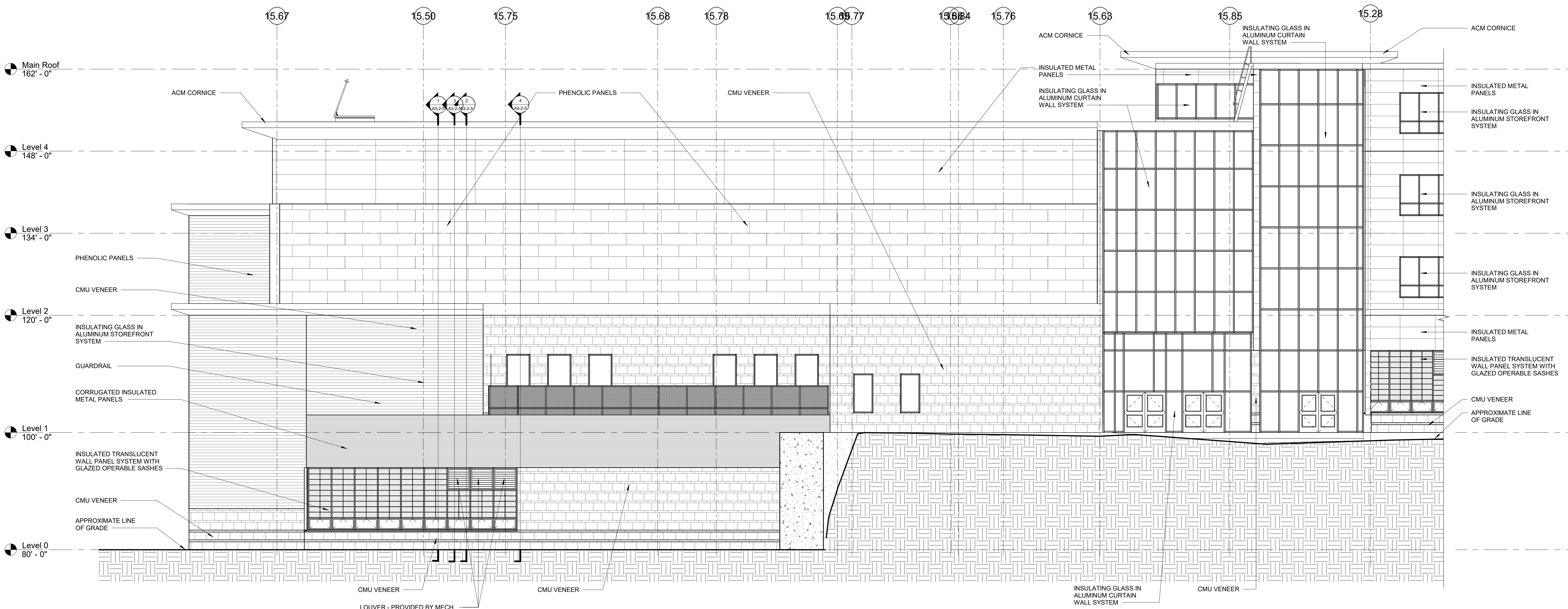
BUILDING ELEVATIONS



2 WEST ELEVATION
 1/8" = 1'-0"



3 EAST ELEVATION
 1/8" = 1'-0"

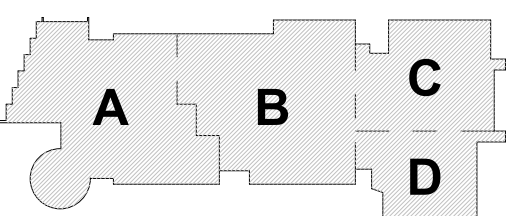


1 NORTH ELEVATION
 1/8" = 1'-0"

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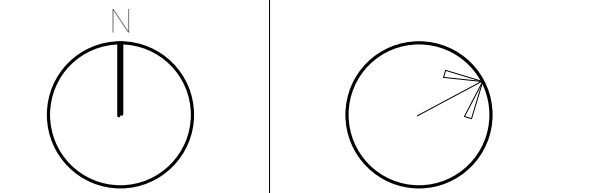
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



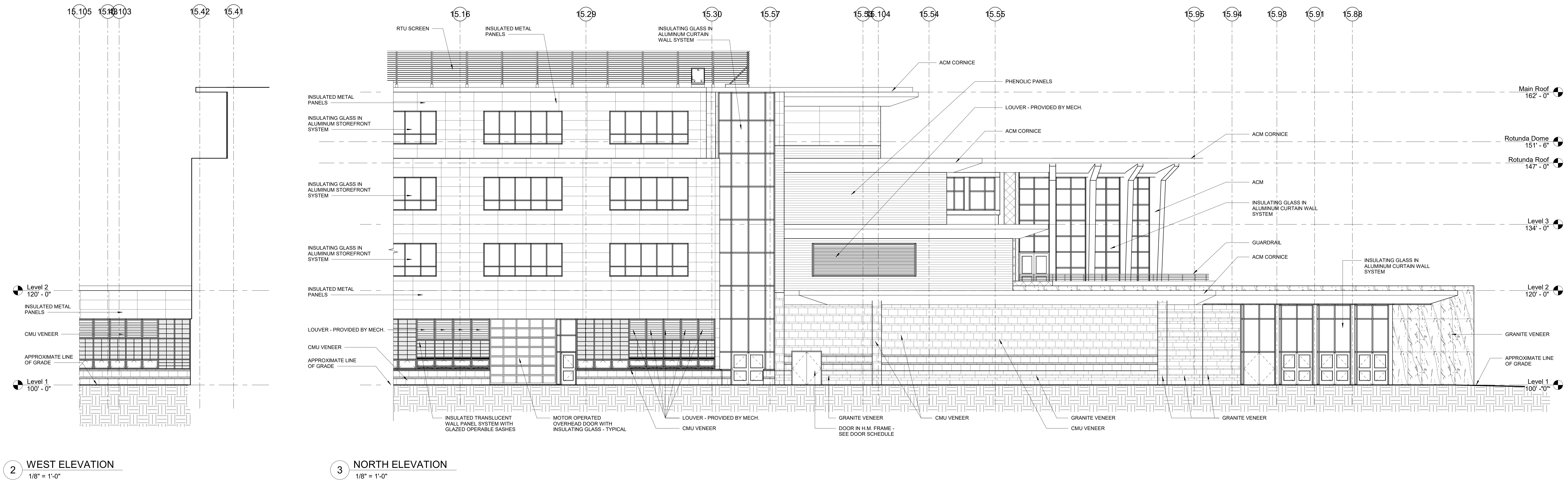
BUILDING ELEVATIONS

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

A2-1-5

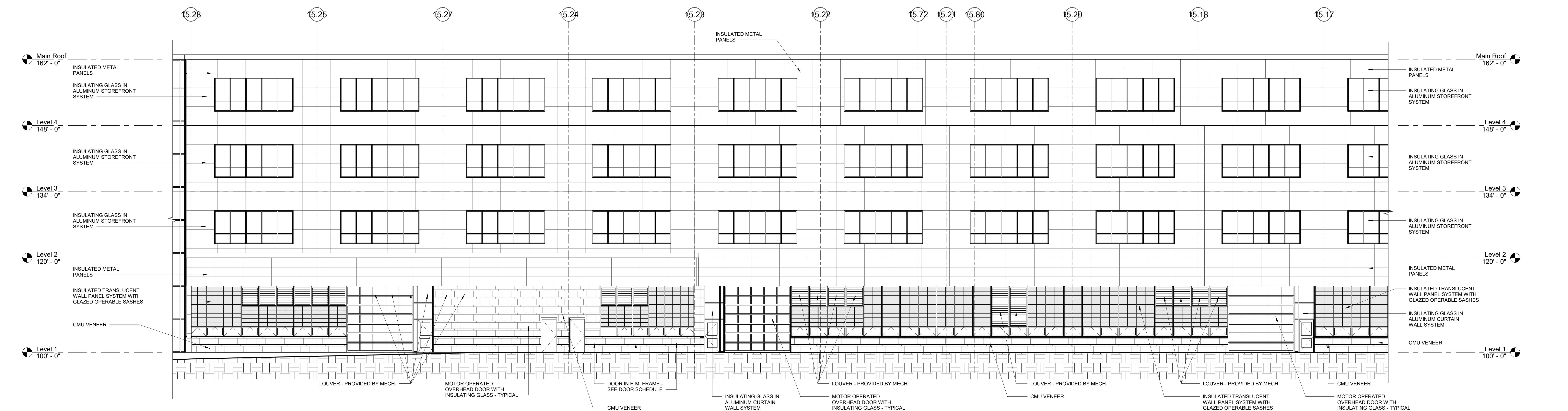
**Northeast
Metropolitan
Regional
Vocational High School**

Wakefield, MA 01880



2 WEST ELEVATION
1/8" = 1'-0"

3 NORTH ELEVATION
1/8" = 1'-0"

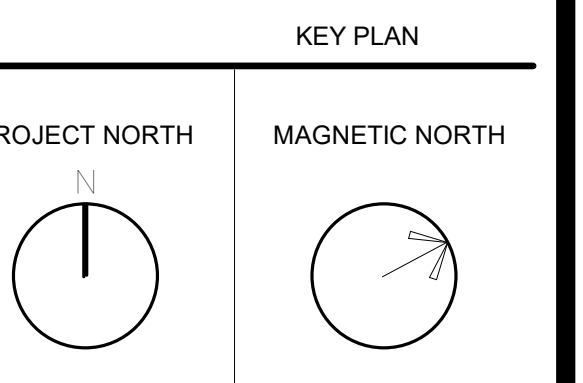
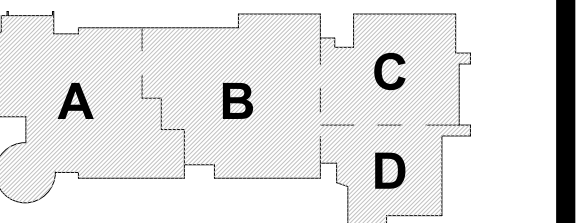


1 NORTH ELEVATION
1/8" = 1'-0"

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MSBA SCHEMATIC
DESIGN SUBMISSION

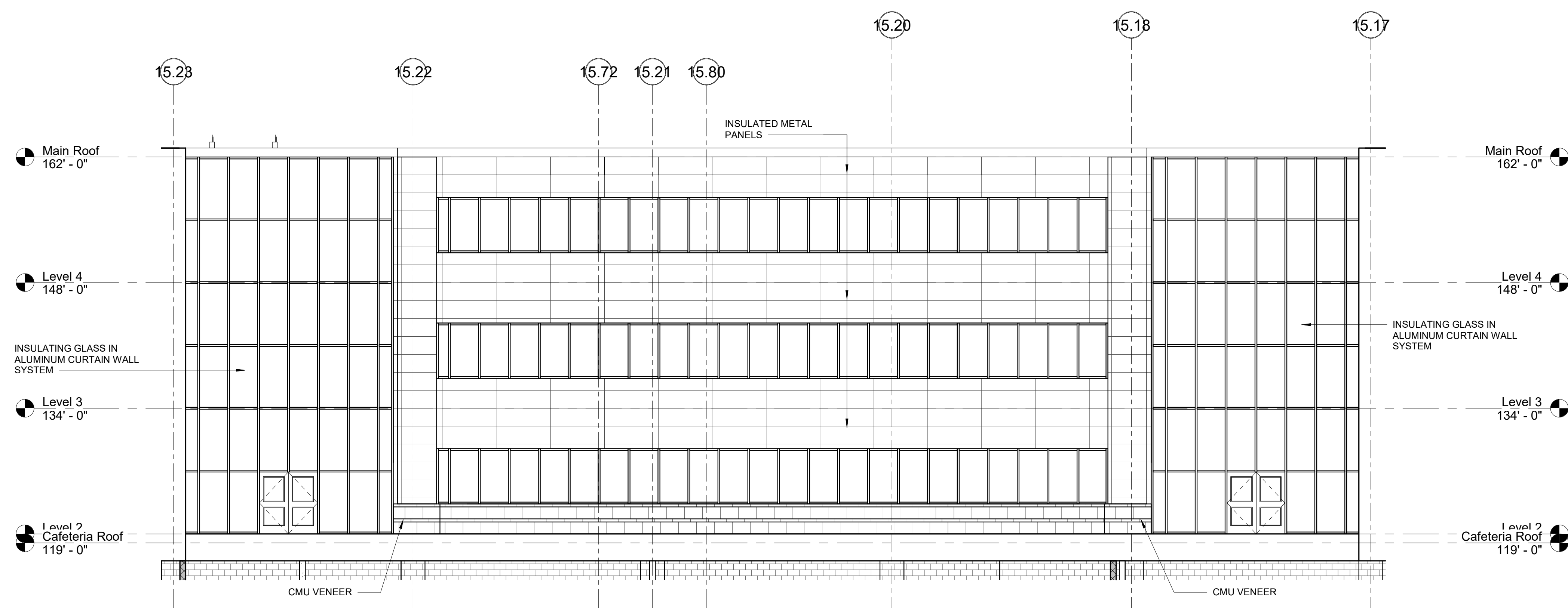
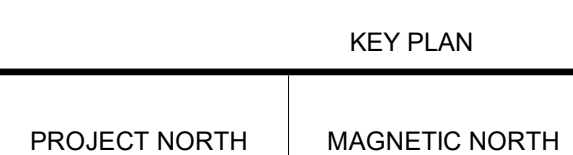
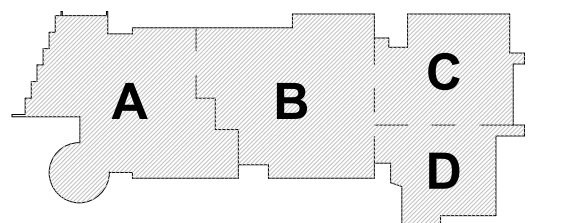
June 17, 2021



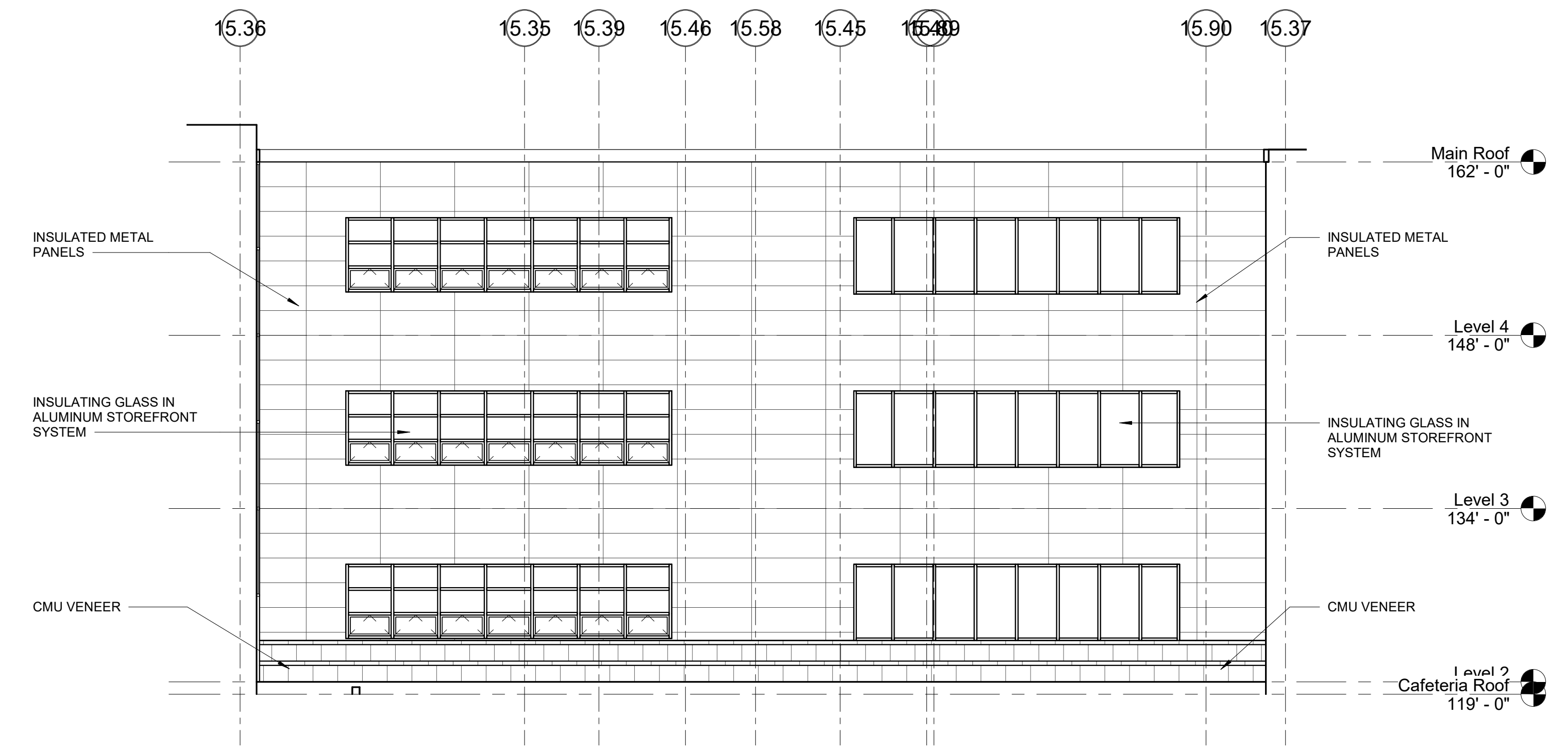
**BUILDING
ELEVATIONS**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

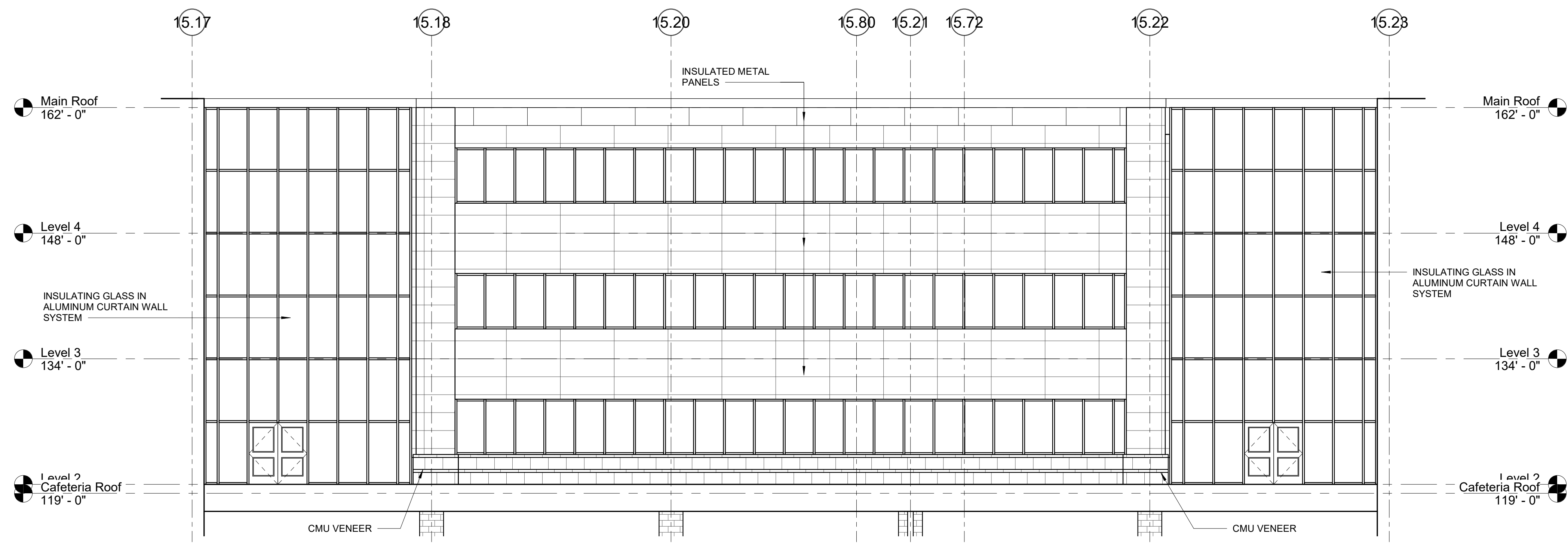
A2-1-6



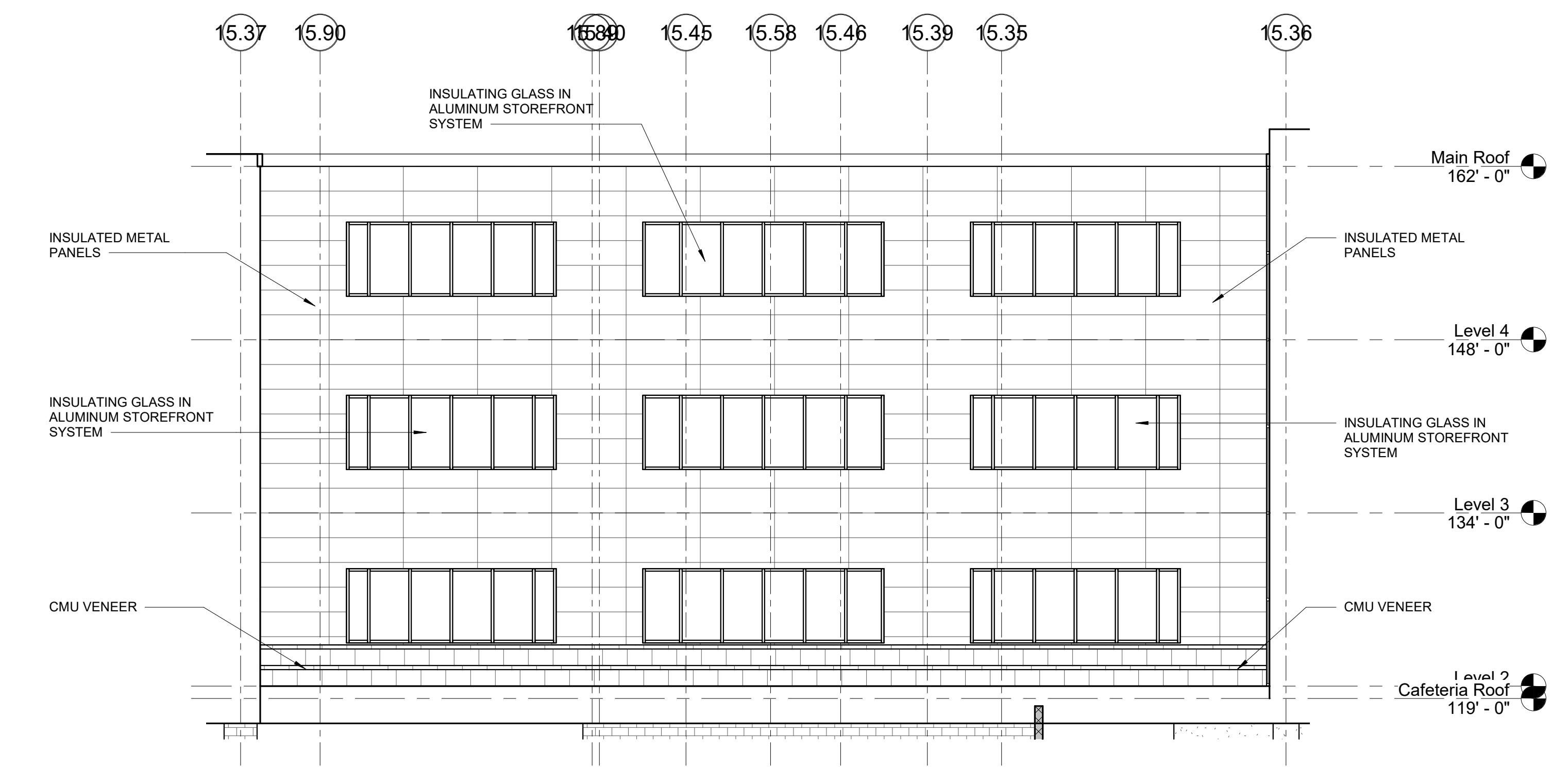
8 NORTH ELEVATION
1/8" = 1'-0"



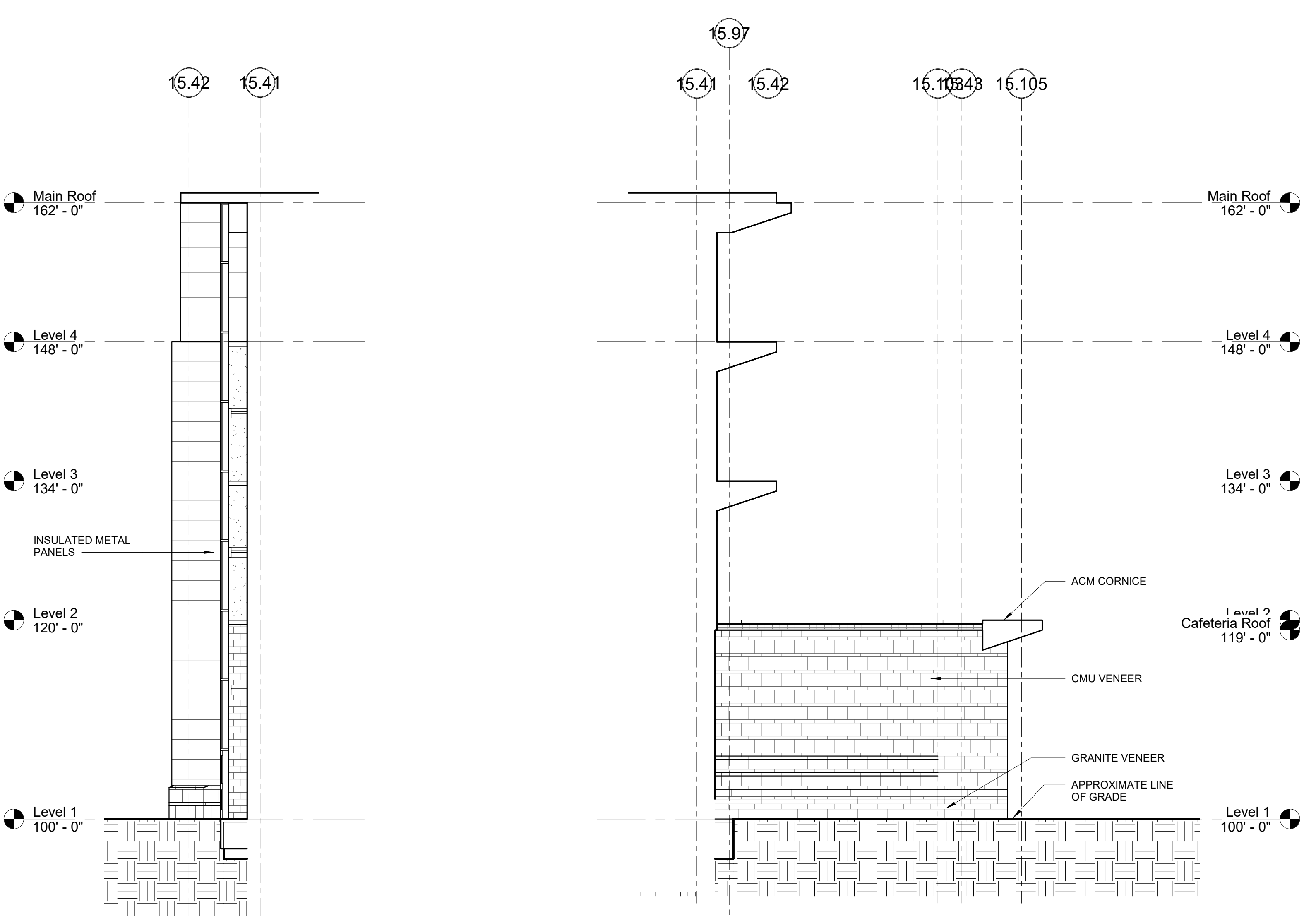
9 EAST ELEVATION
1/8" = 1'-0"



6 SOUTH ELEVATION
1/8" = 1'-0"

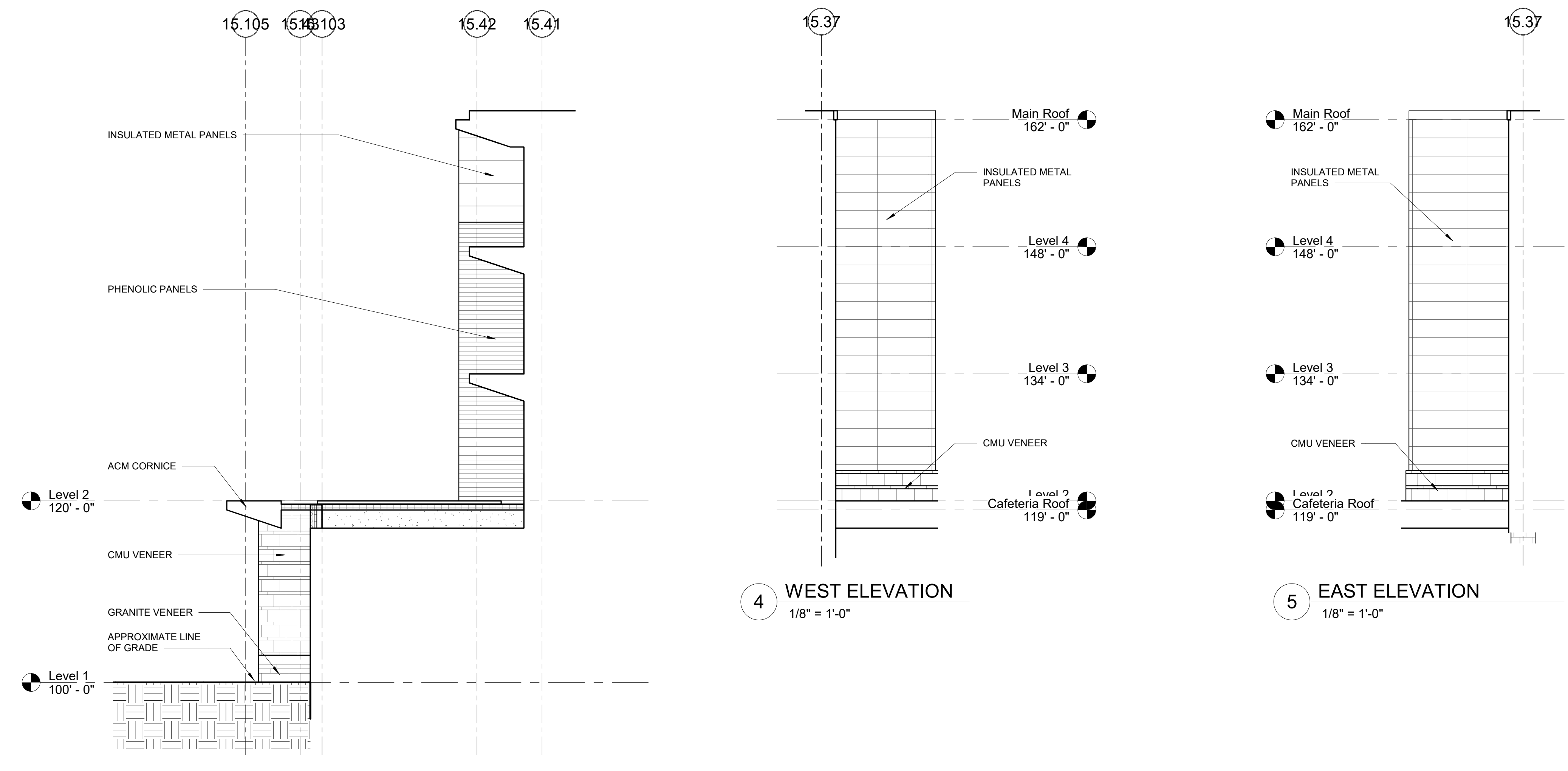


7 WEST ELEVATION
1/8" = 1'-0"



1 WEST ELEVATION
1/8" = 1'-0"

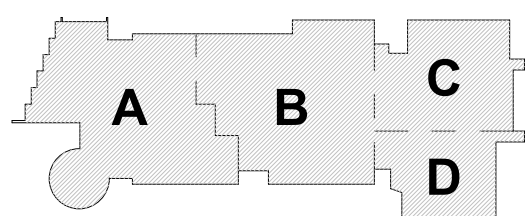
2 EAST ELEVATION
1/8" = 1'-0"



3 EAST ELEVATION
1/8" = 1'-0"

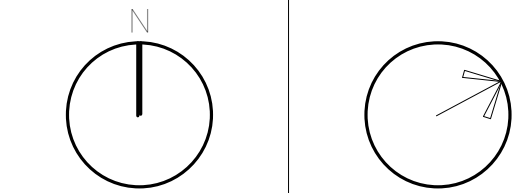
4 WEST ELEVATION
1/8" = 1'-0"

5 EAST ELEVATION
1/8" = 1'-0"

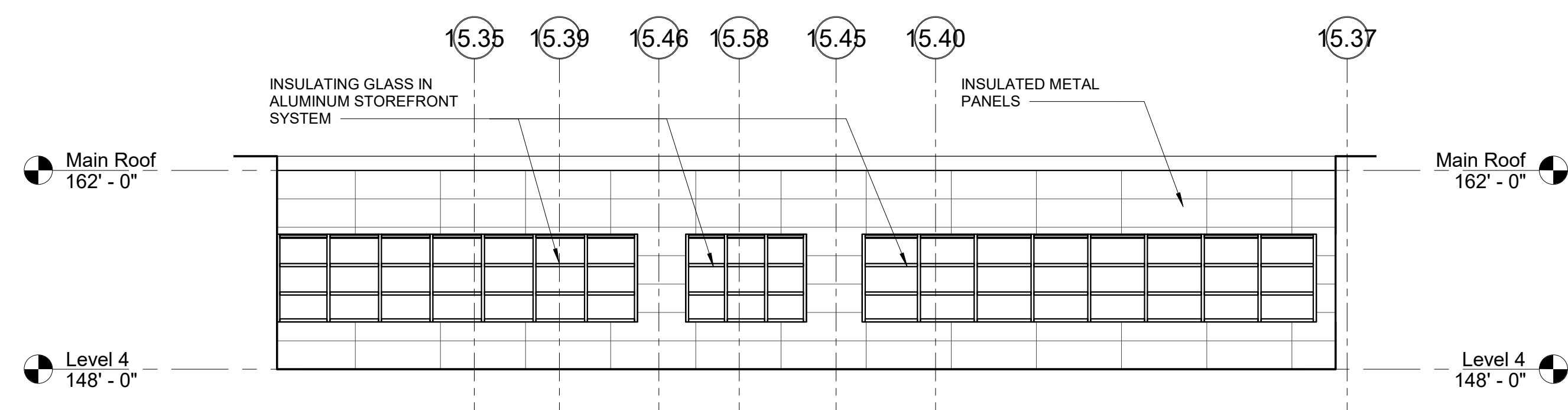


KEY PLAN

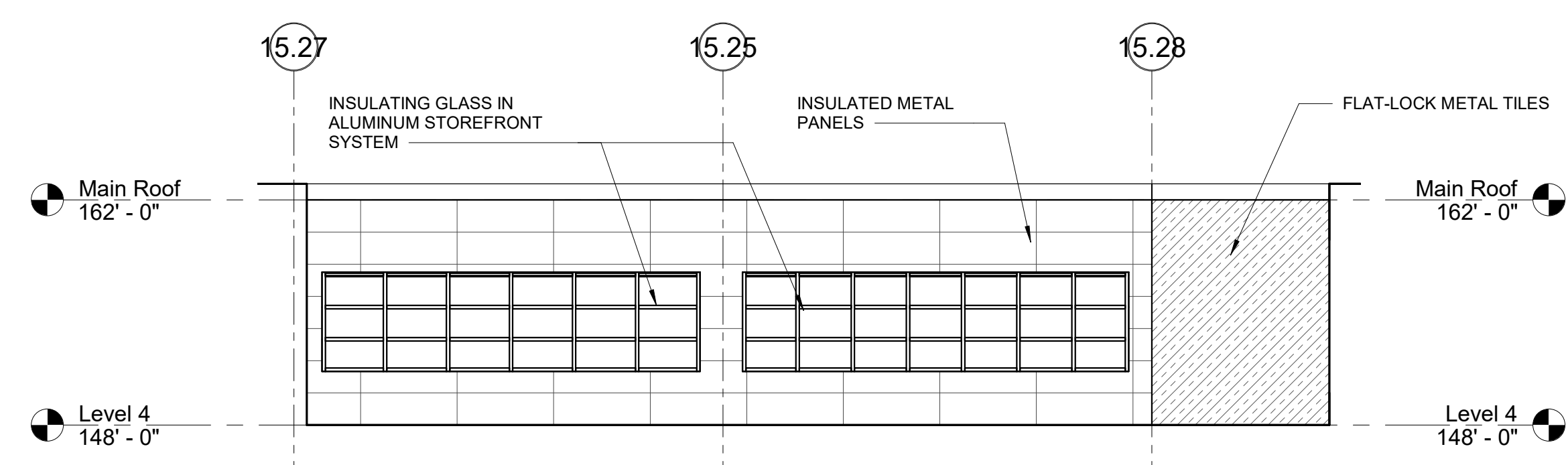
PROJECT NORTH MAGNETIC NORTH



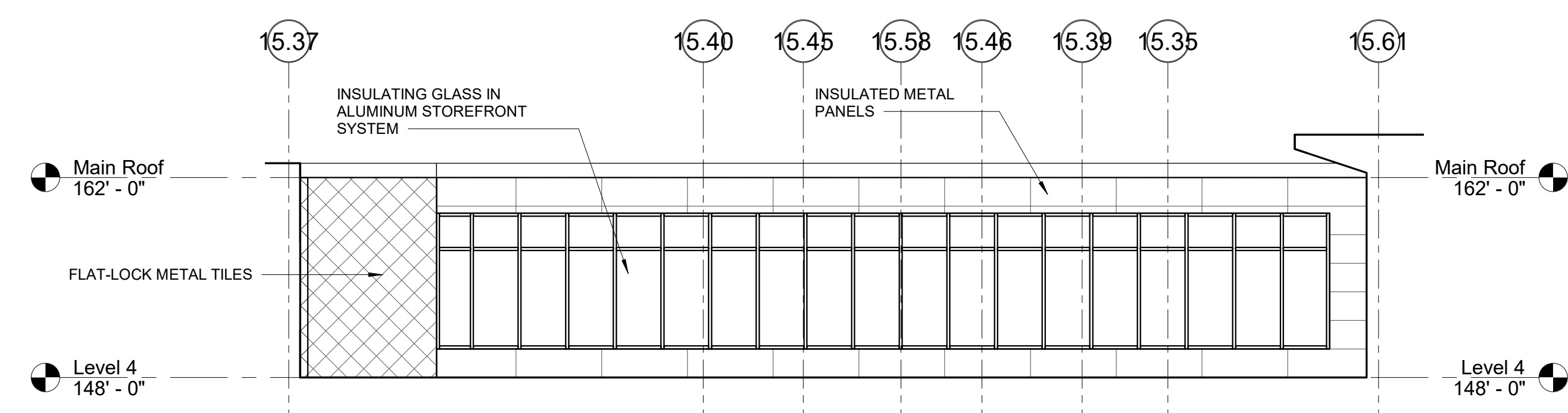
**BUILDING
ELEVATIONS**



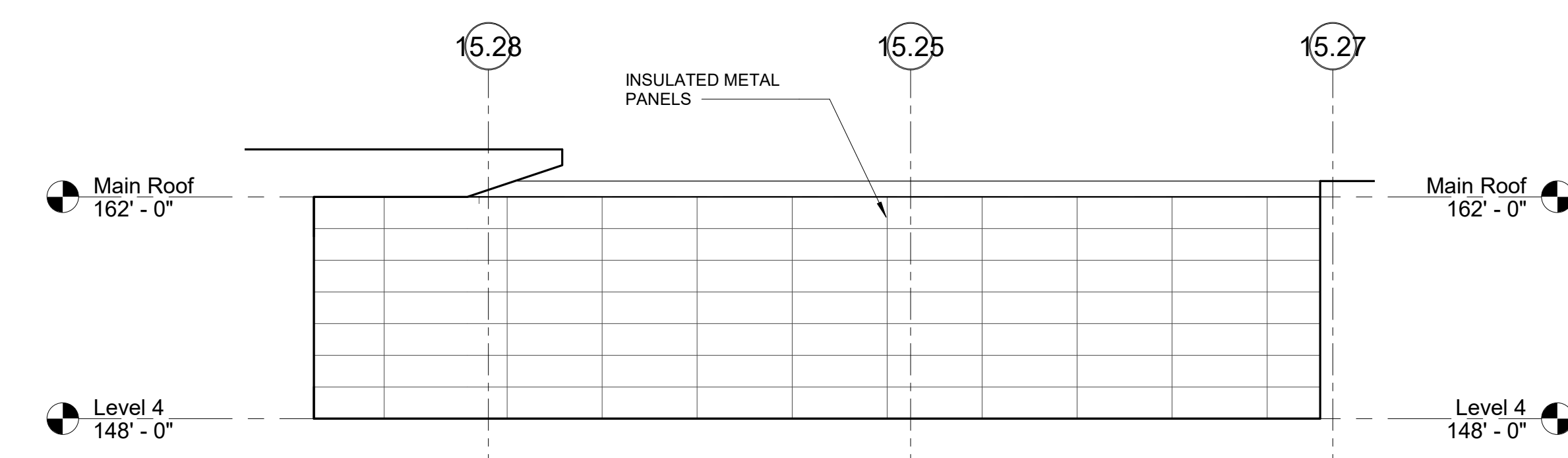
4 EAST ELEVATION
1/8" = 1'-0"



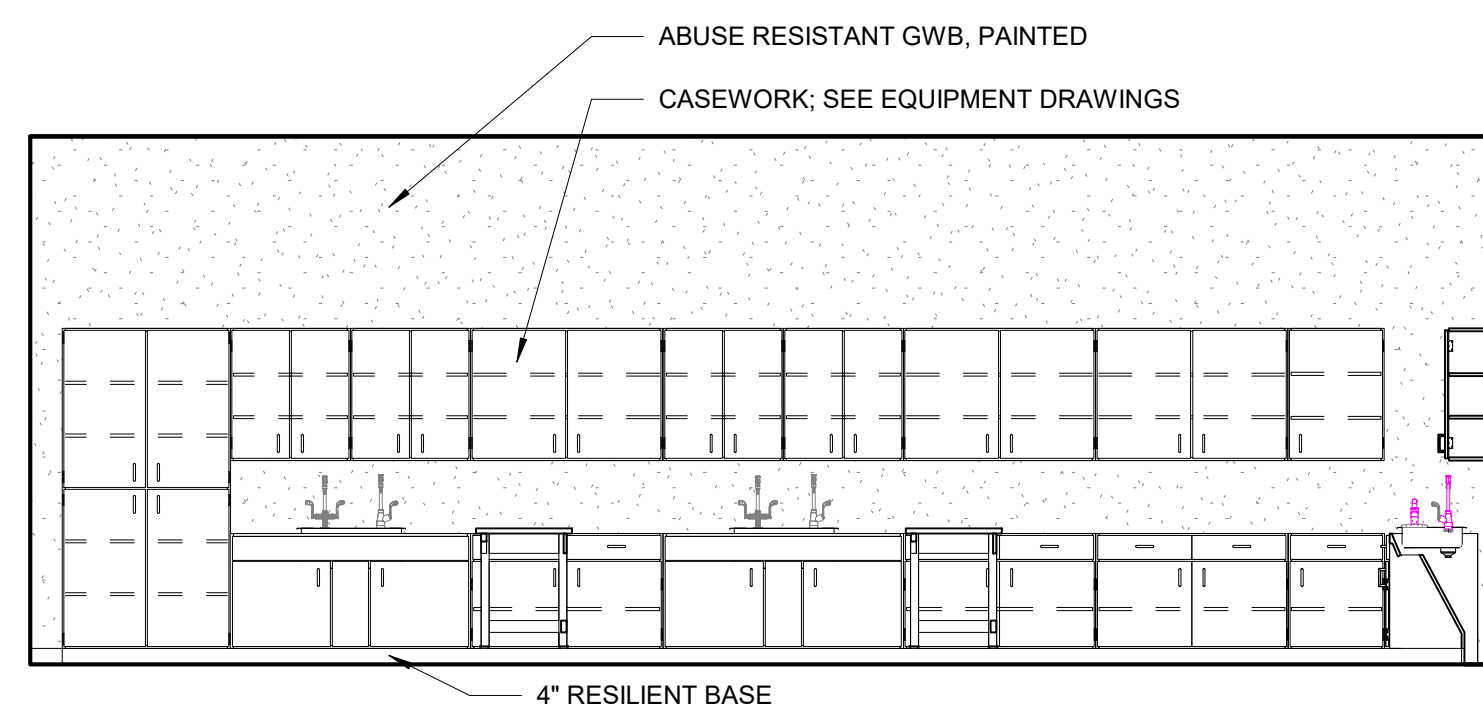
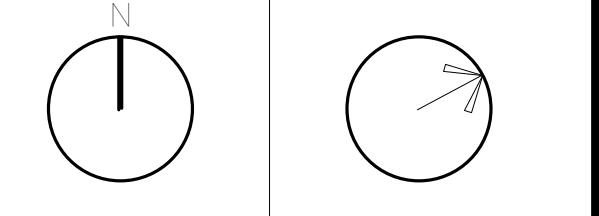
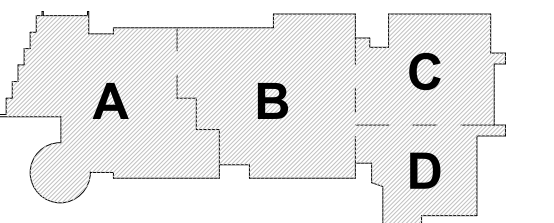
1 SOUTH ELEVATION
1/8" = 1'-0"



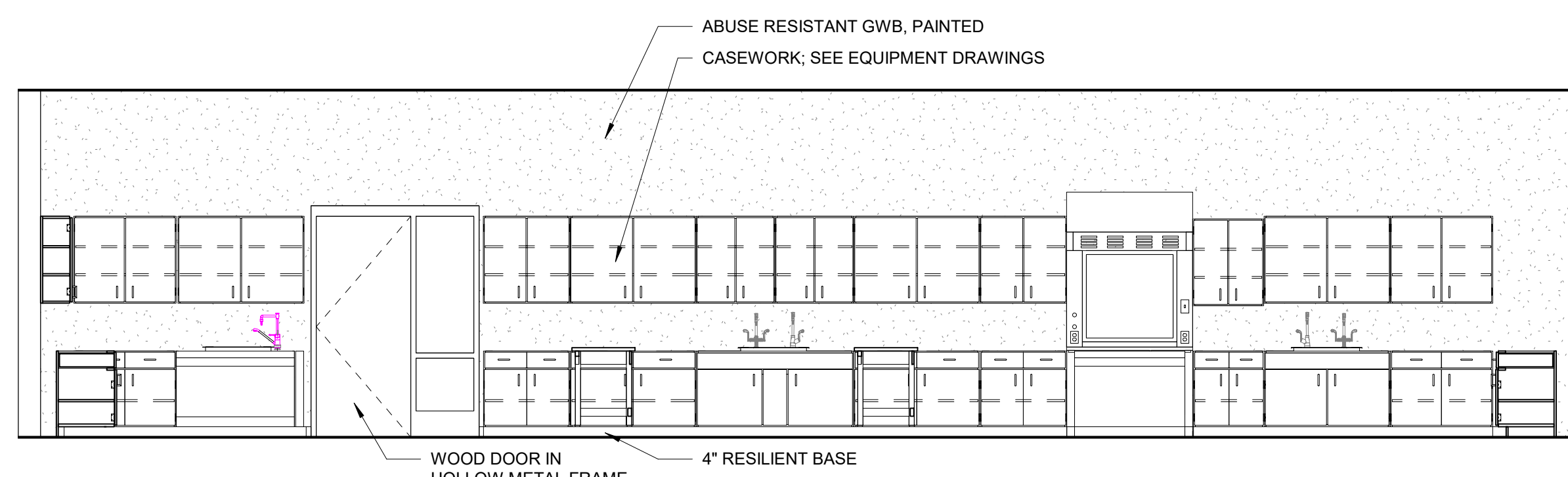
2 WEST ELEVATION
1/8" = 1'-0"



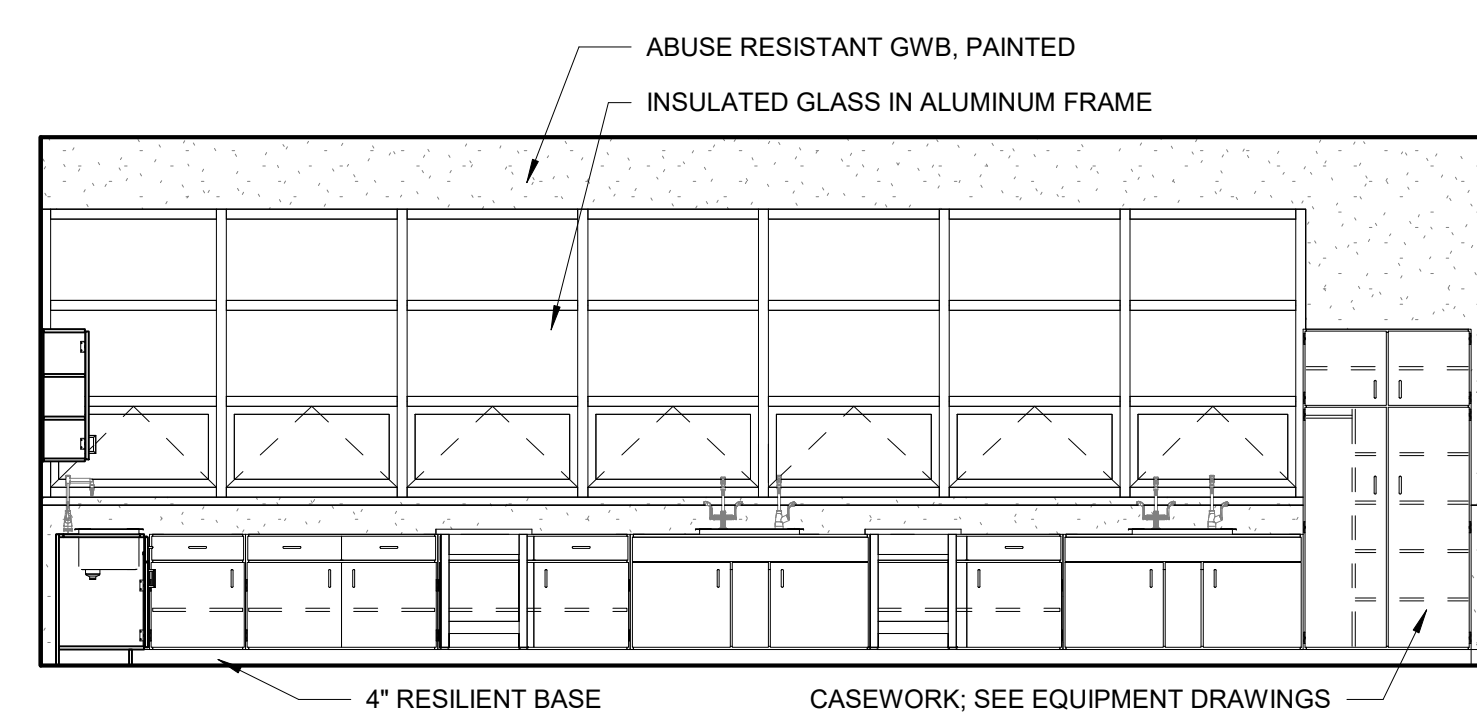
3 NORTH ELEVATION
1/8" = 1'-0"



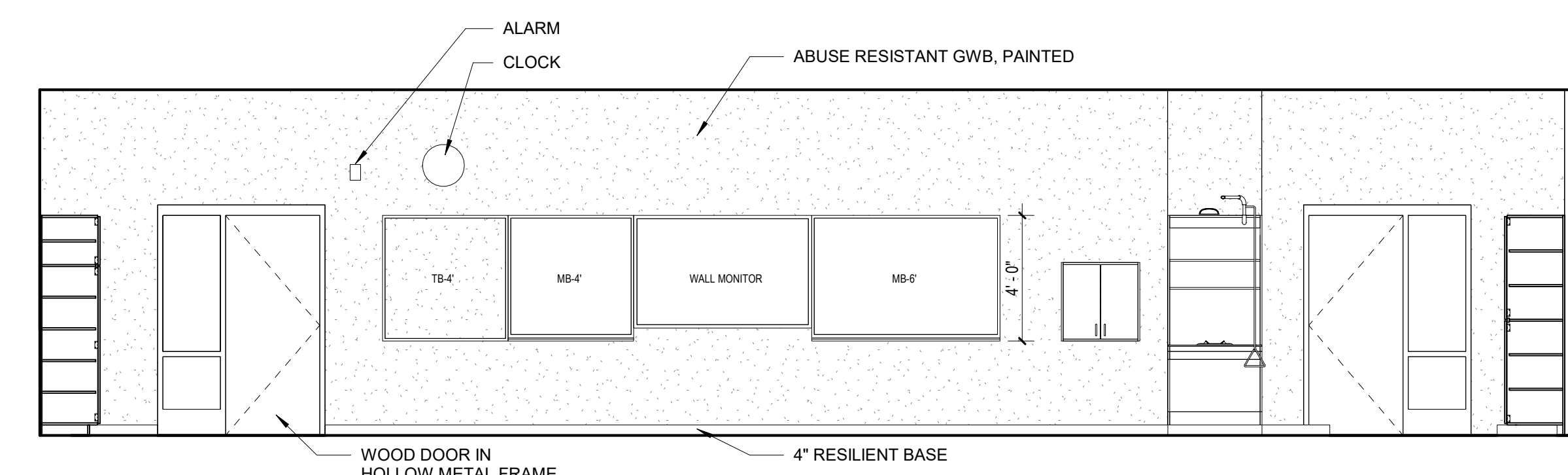
8 TYPICAL SCIENCE LAB ELEVATION
1/4" = 1'-0"



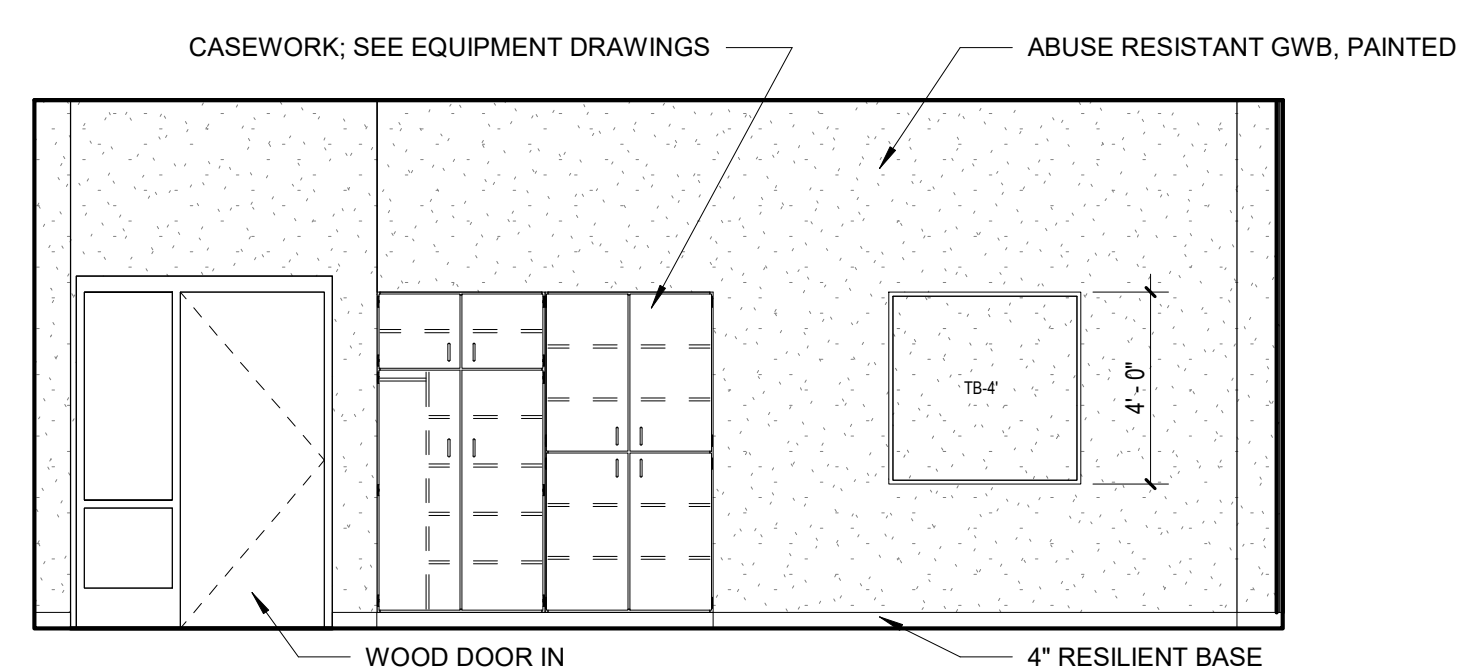
5 TYPICAL SCIENCE LAB ELEVATION
1/4" = 1'-0"



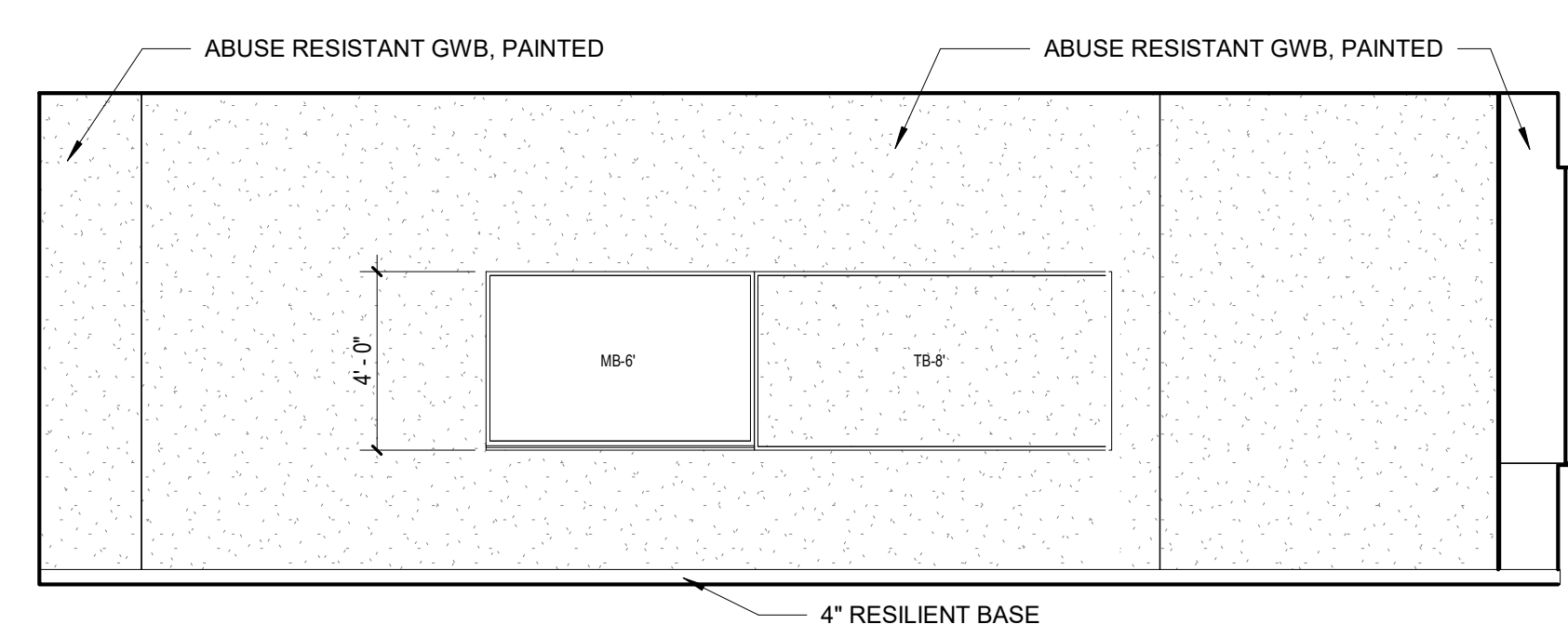
6 TYPICAL SCIENCE LAB ELEVATION
1/4" = 1'-0"



7 TYPICAL SCIENCE LAB ELEVATION
1/4" = 1'-0"



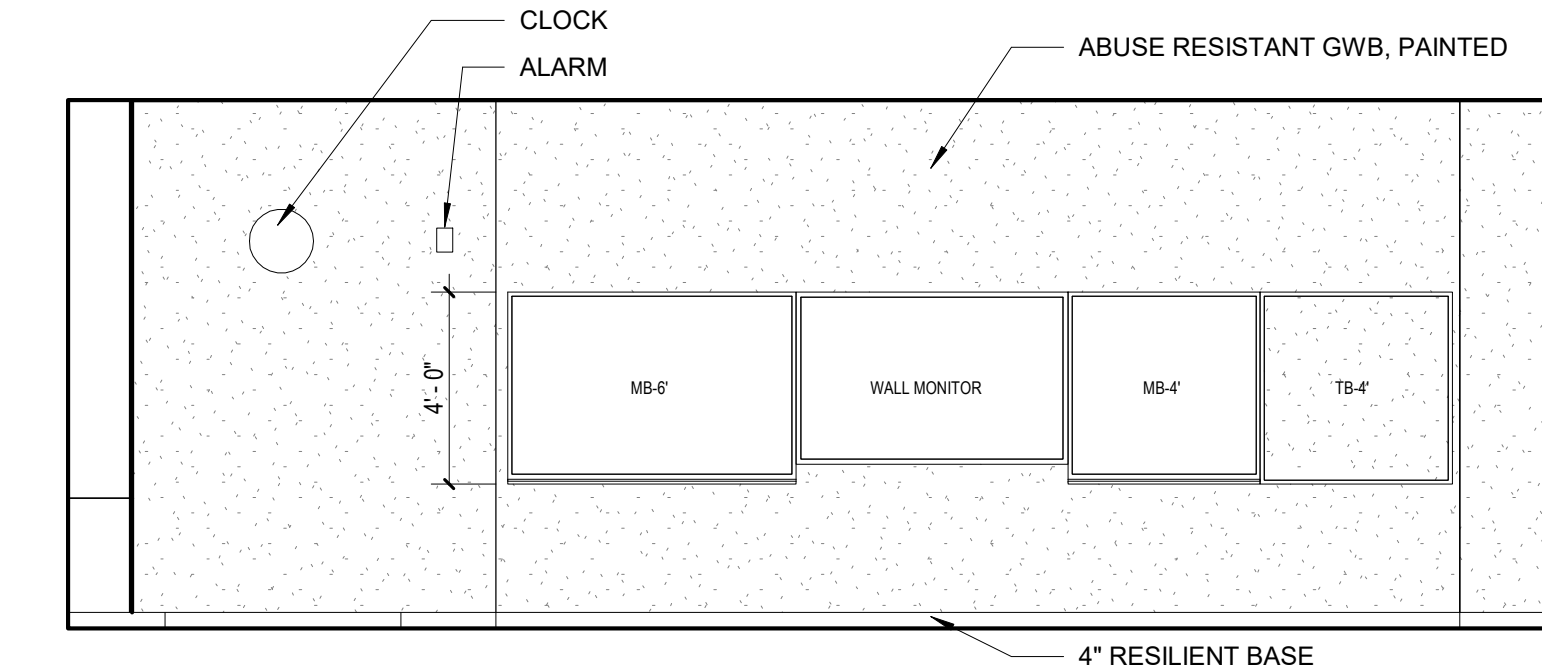
1 TYPICAL CLASSROOM ELEVATION
1/4" = 1'-0"



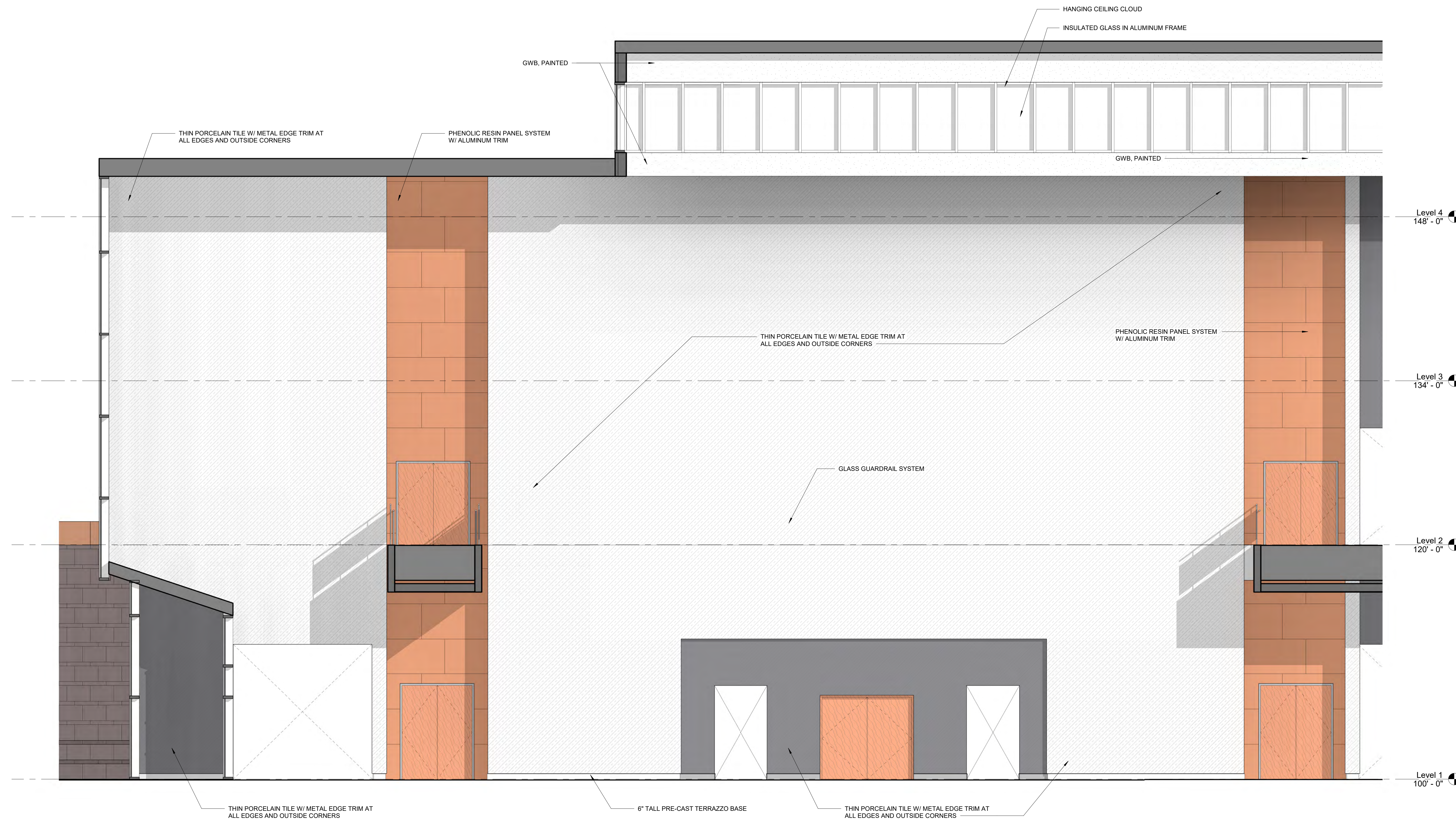
2 TYPICAL CLASSROOM ELEVATION
1/4" = 1'-0"



3 TYPICAL CLASSROOM ELEVATION
1/4" = 1'-0"



4 TYPICAL CLASSROOM ELEVATION
1/4" = 1'-0"

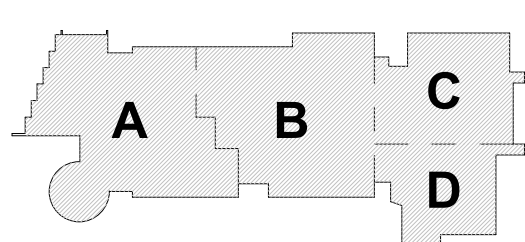


1 GYM/AUDITORIUM LOBBY ELEVATION
1/4" = 1'-0"

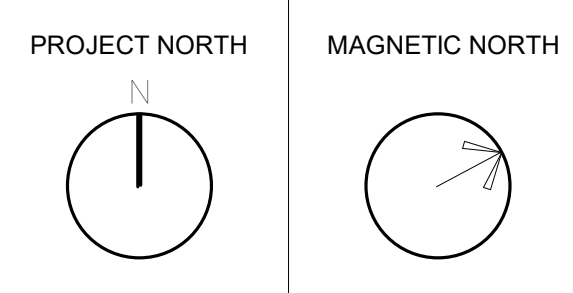
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MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021

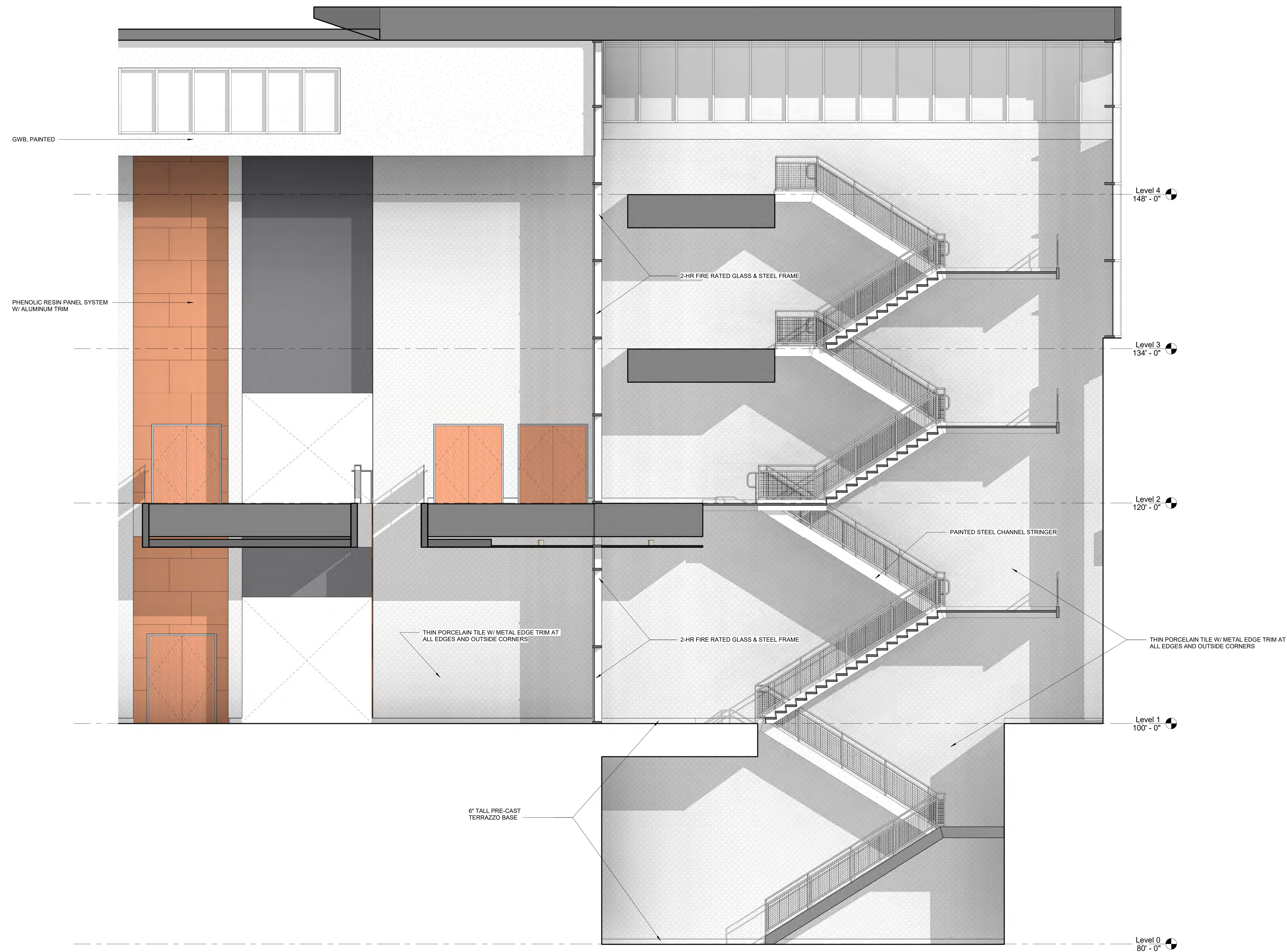


KEY PLAN



**INTERIOR
ELEVATIONS**

Scale: 1/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021
A2-2-2

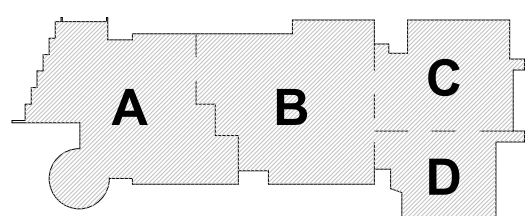


1 GYM/AUDITORIUM LOBBY ELEVATION
1/4" = 1'-0"

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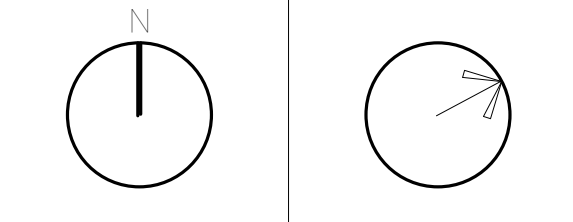
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

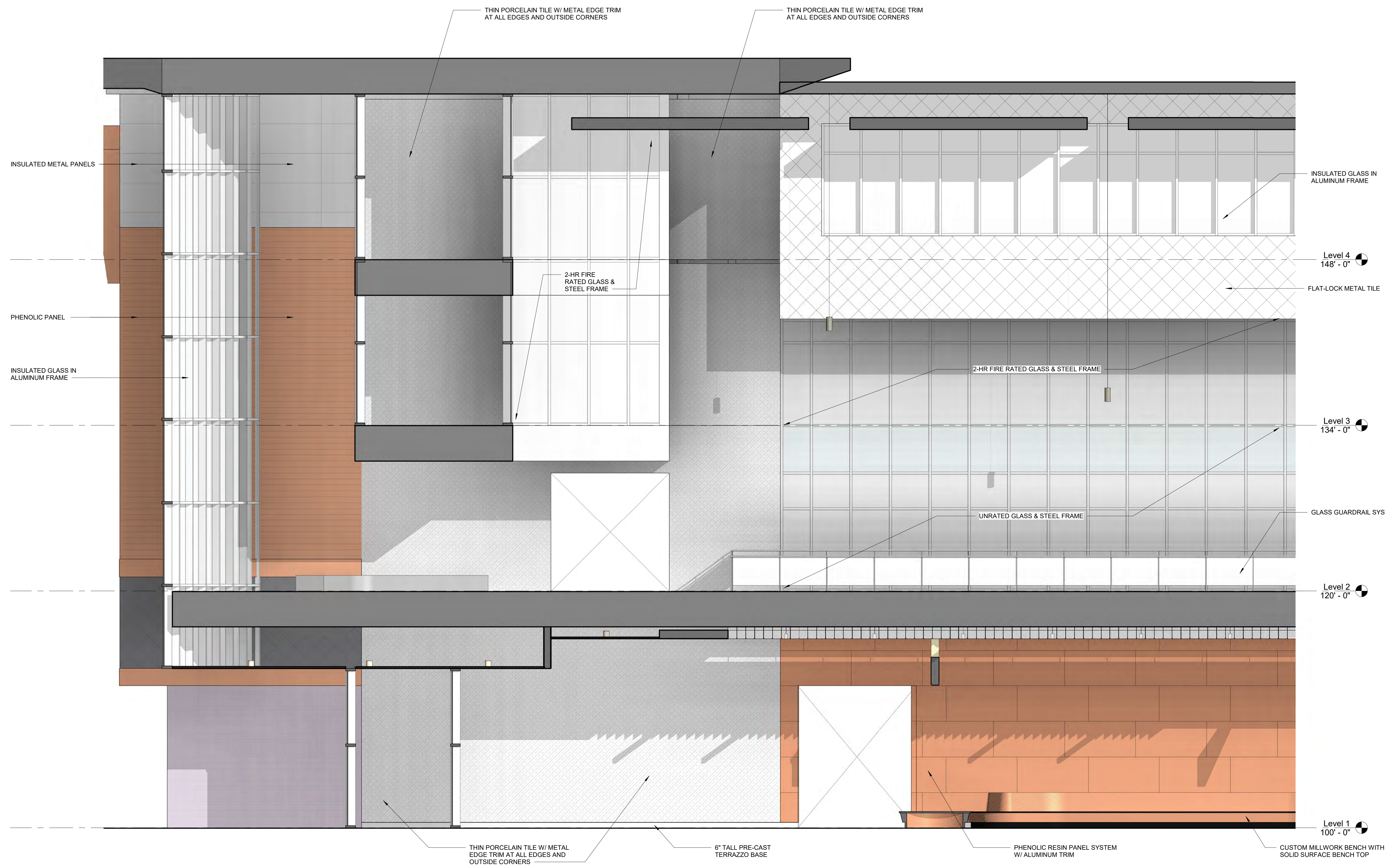
PROJECT NORTH MAGNETIC NORTH



**INTERIOR
ELEVATIONS**

Scale: 1/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A2-2-3

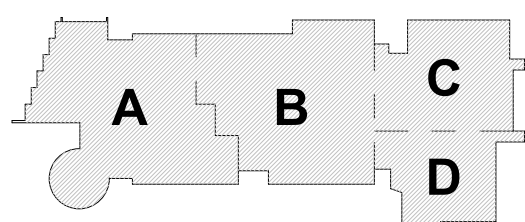


1 GYM/AUDITORIUM LOBBY ELEVATION
1/4" = 1'-0"

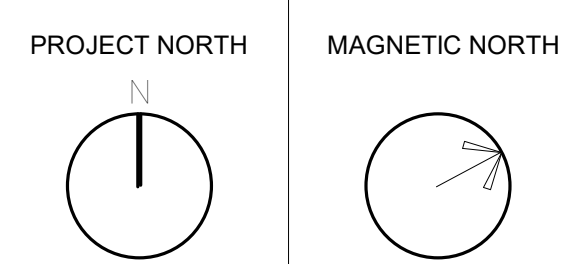
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DESIGN SUBMISSION

June 17, 2021



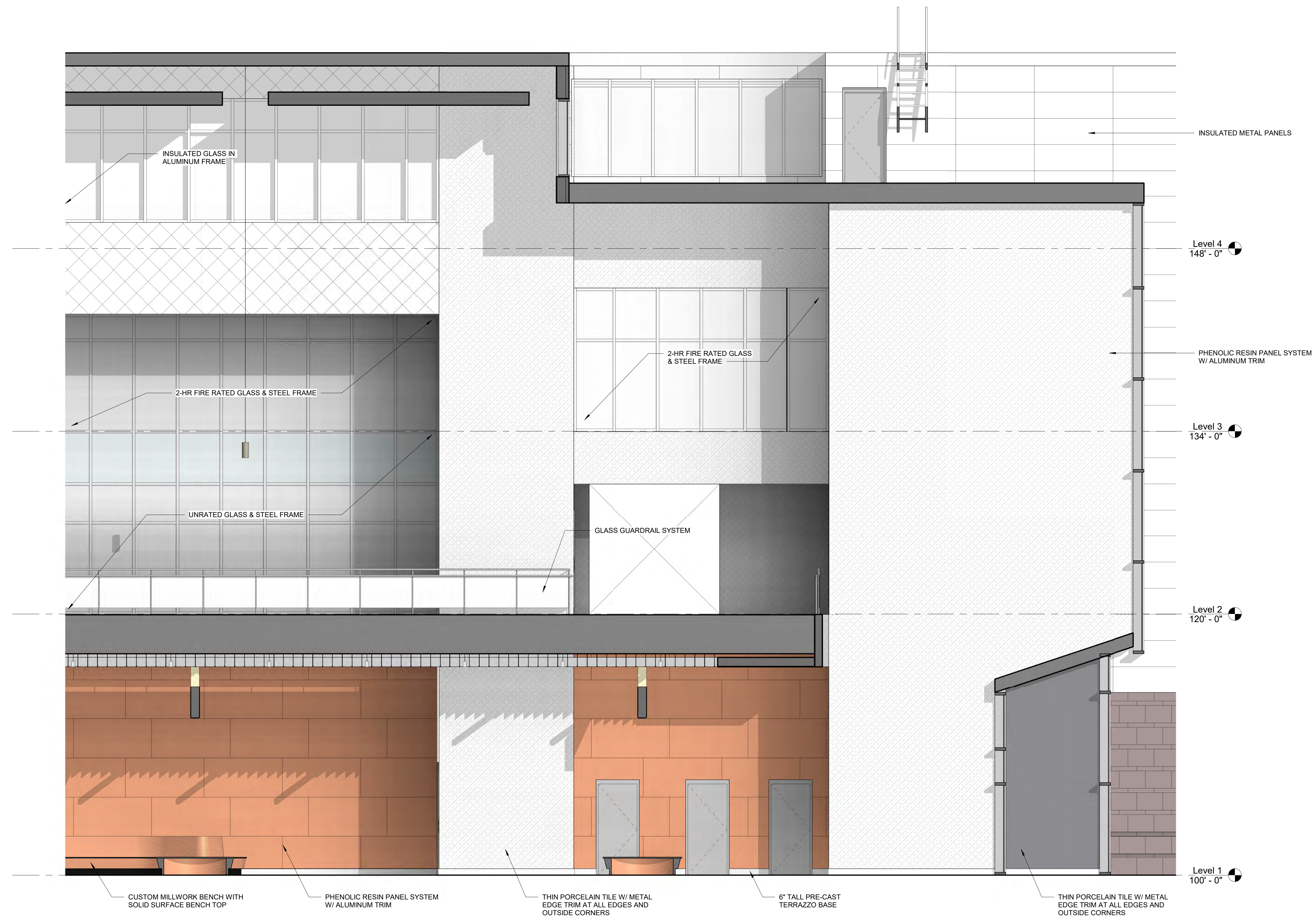
KEY PLAN



**INTERIOR
ELEVATIONS**

Scale: 1/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A2-2-4

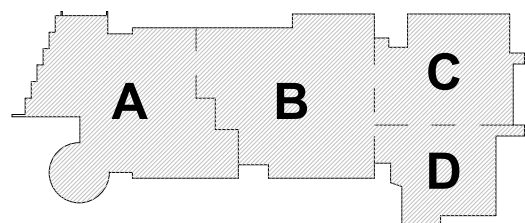


1 GYM/AUDITORIUM LOBBY ELEVATION
1/4" = 1'-0"

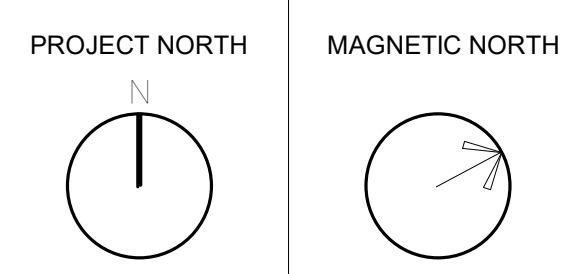
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MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



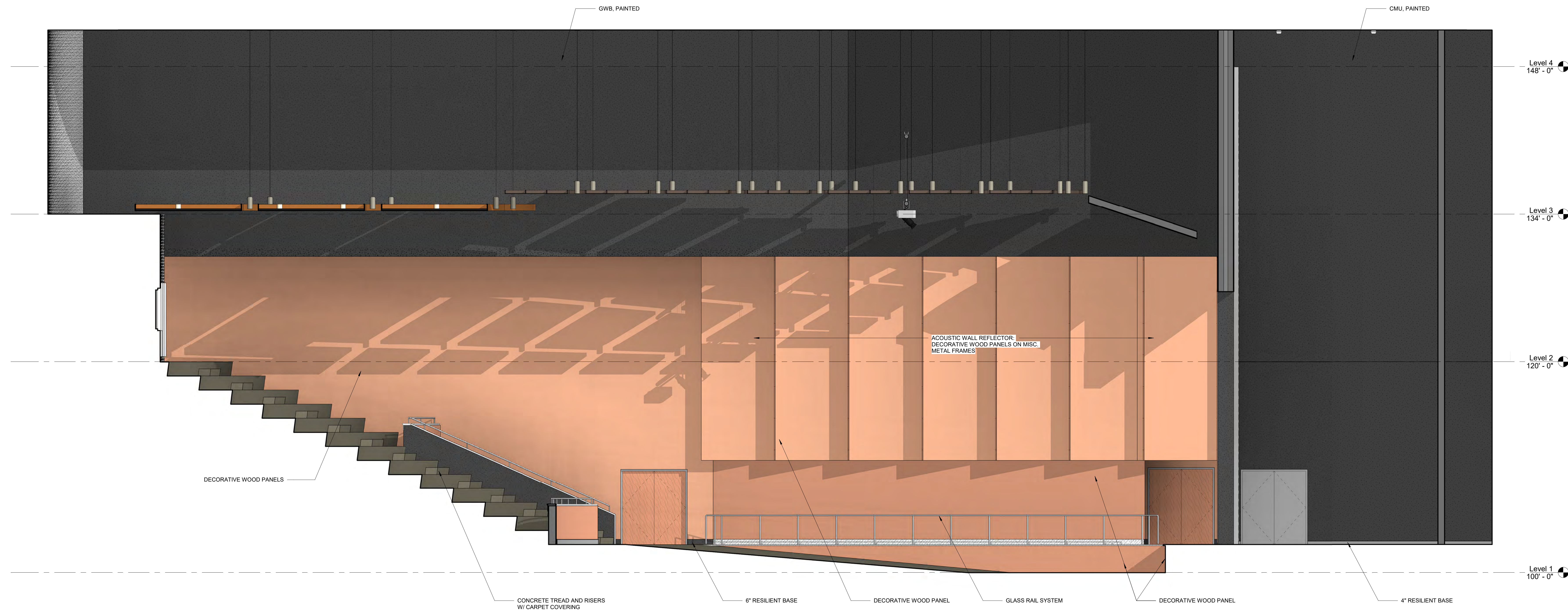
KEY PLAN



**INTERIOR
ELEVATIONS**

Scale: 1/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A2-2-5



1 AUDITORIUM INTERIOR ELEVATION
1/4" = 1'-0"

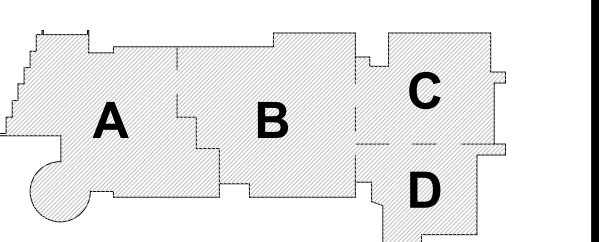


2 AUDITORIUM INTERIOR ELEVATION
1/4" = 1'-0"

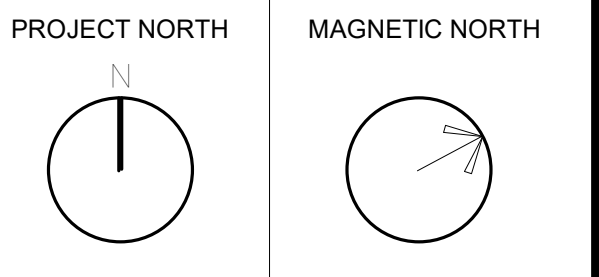
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MSBA SCHEMATIC
DESIGN SUBMISSION

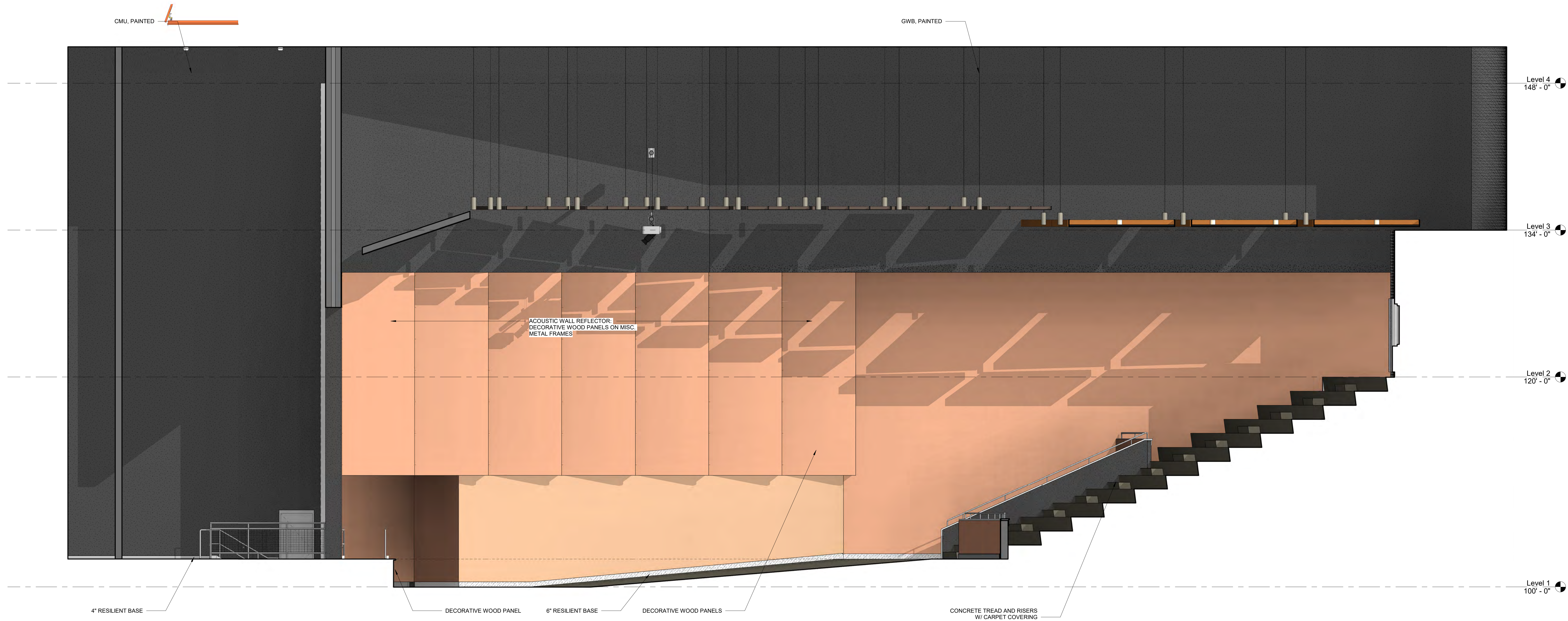
June 17, 2021



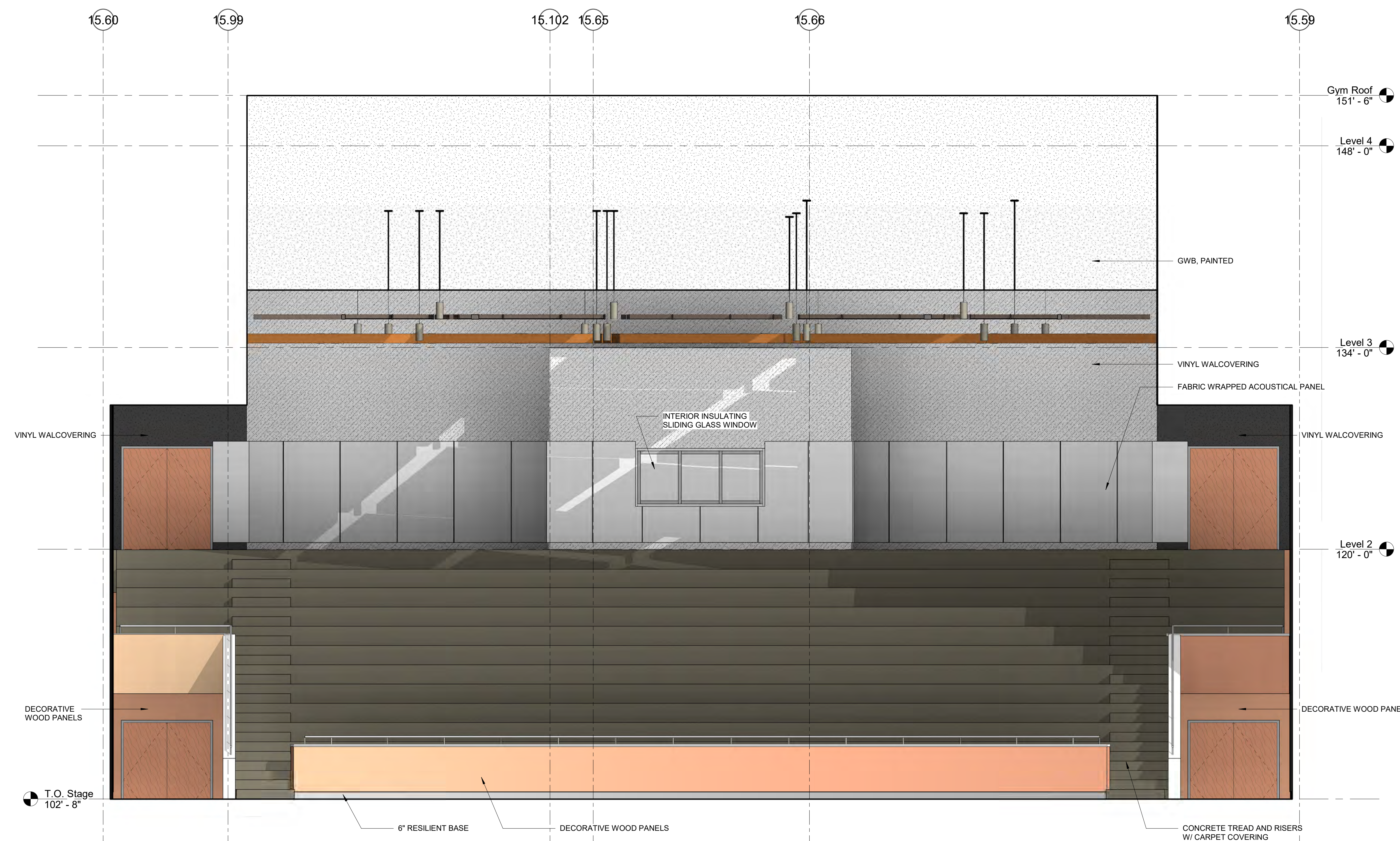
KEY PLAN



INTERIOR
ELEVATIONS



1 AUDITORIUM INTERIOR ELEVATION
 1/4" = 1'-0"

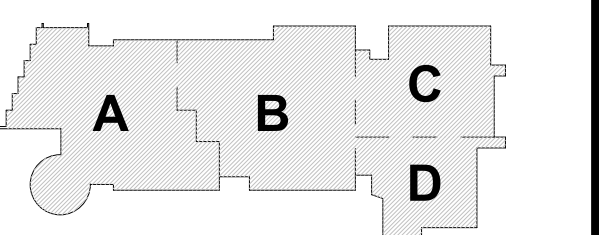


2 AUDITORIUM INTERIOR ELEVATION
 1/4" = 1'-0"

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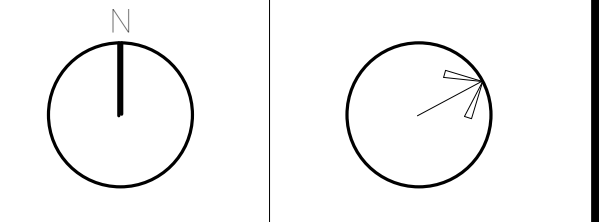
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021

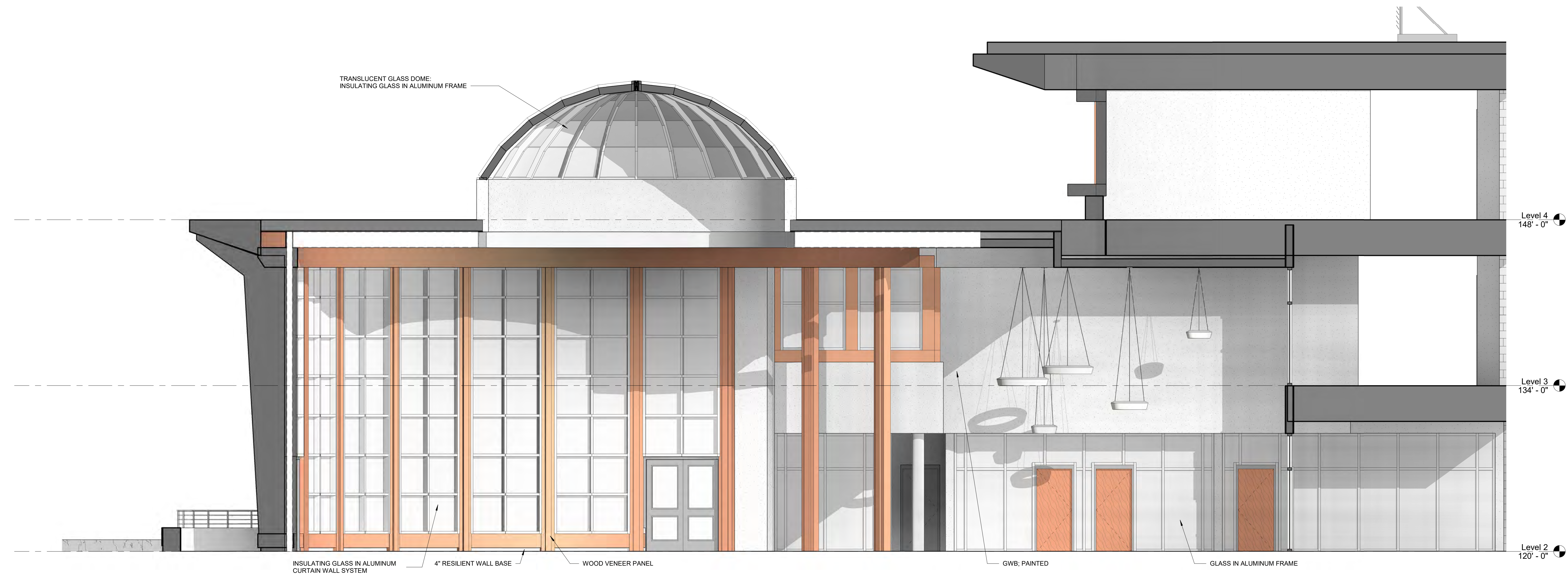


KEY PLAN

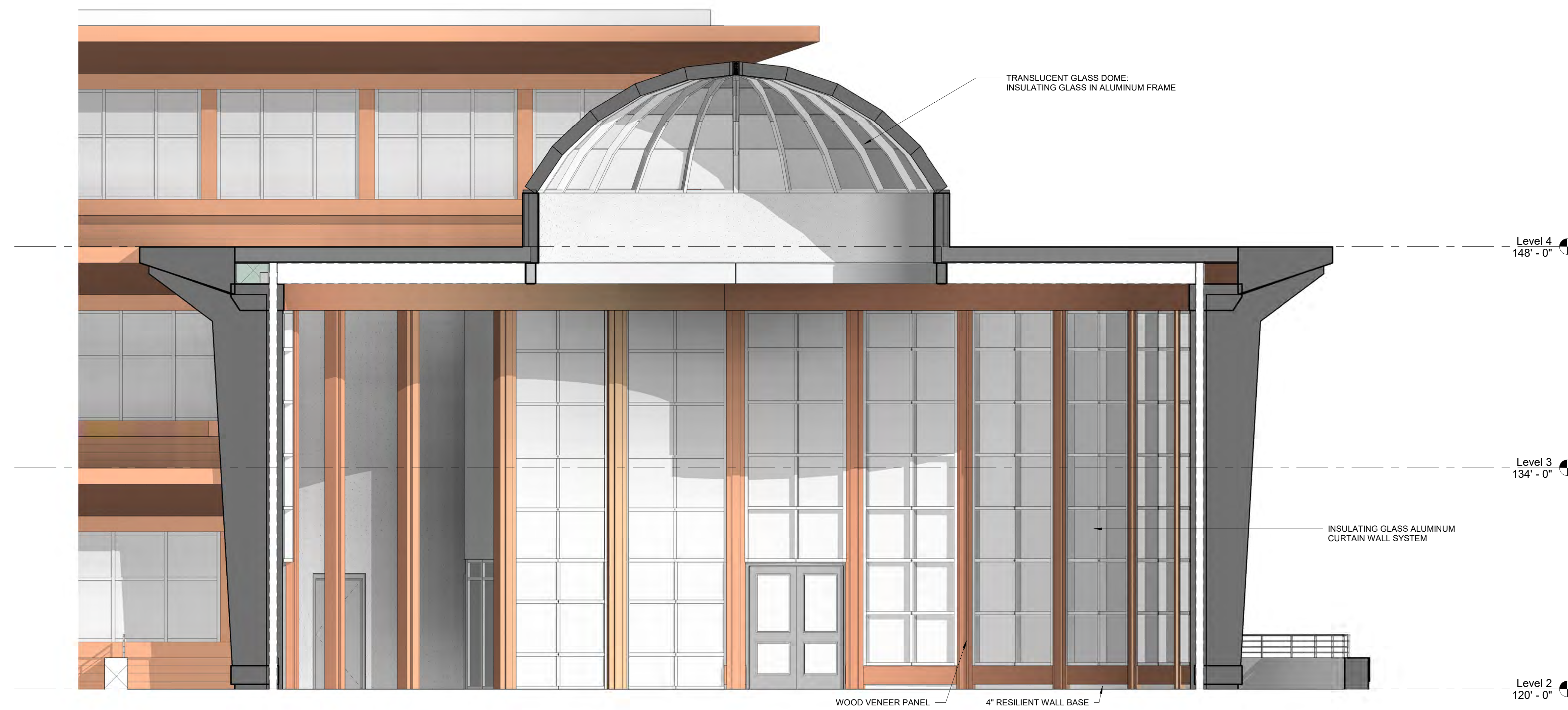
PROJECT NORTH MAGNETIC NORTH



INTERIOR ELEVATIONS



1 MEDIA CENTER ELEVATION
 1/4" = 1'-0"

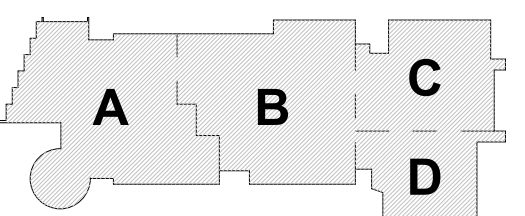


2 MEDIA CENTER ELEVATION
 1/4" = 1'-0"

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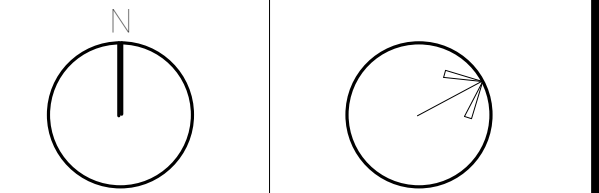
MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



KEY PLAN

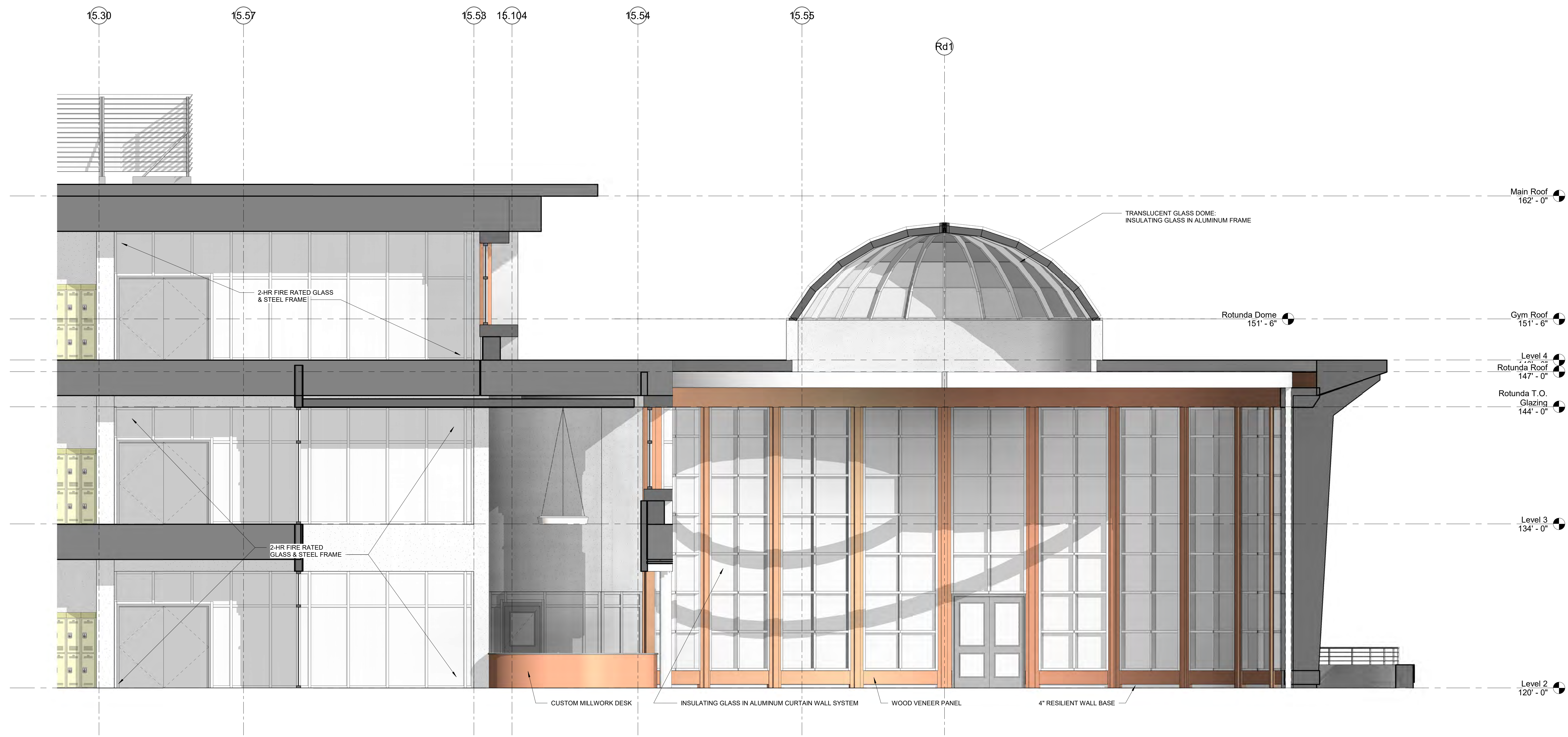
PROJECT NORTH MAGNETIC NORTH



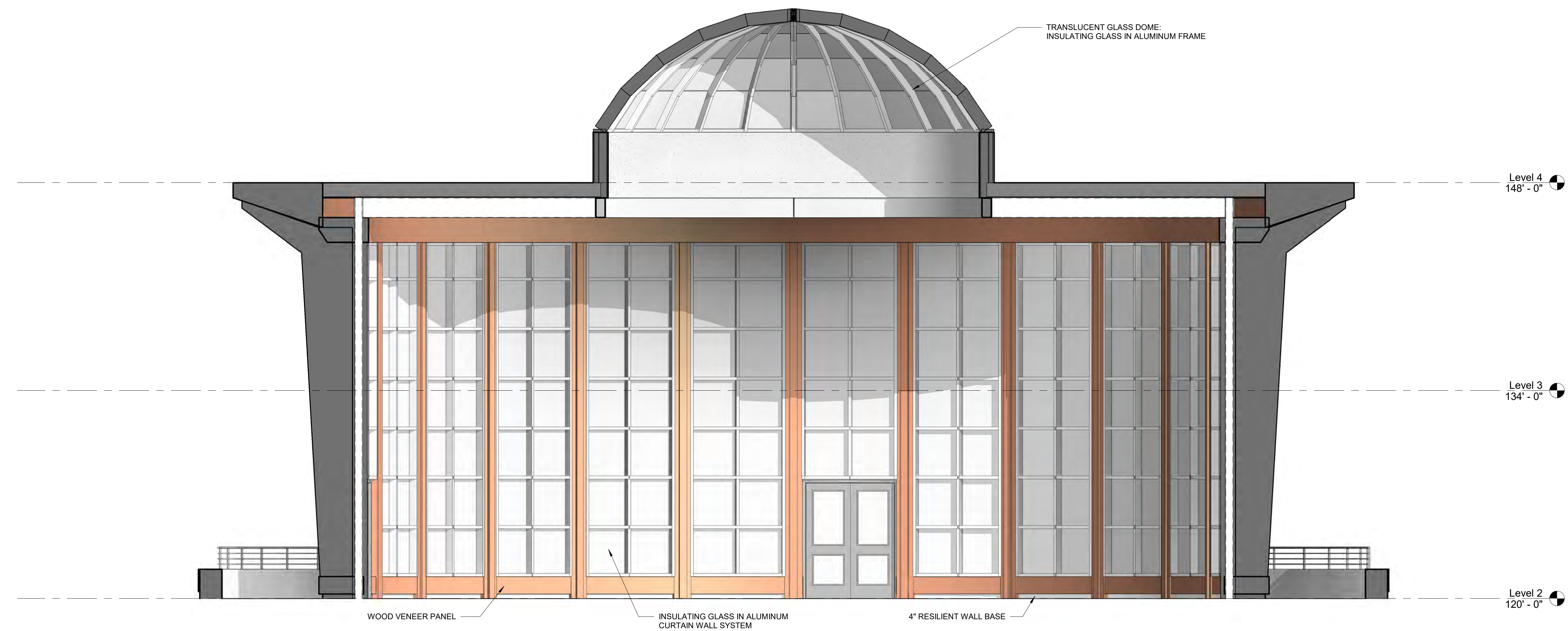
**INTERIOR
 ELEVATIONS**

Scale: 1/4" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

A2-2-8



1 MEDIA CENTER ELEVATION
1/4" = 1'-0"

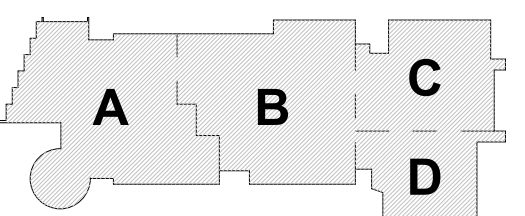


2 MEDIA CENTER ELEVATION
1/4" = 1'-0"

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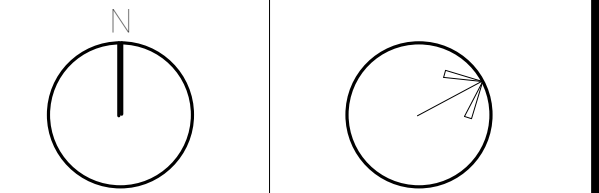
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

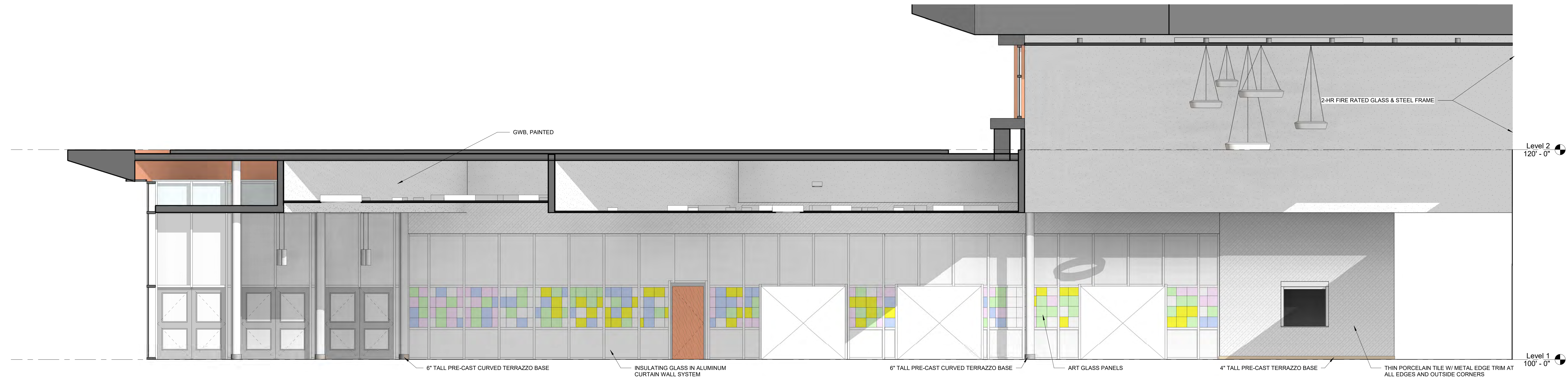
PROJECT NORTH MAGNETIC NORTH



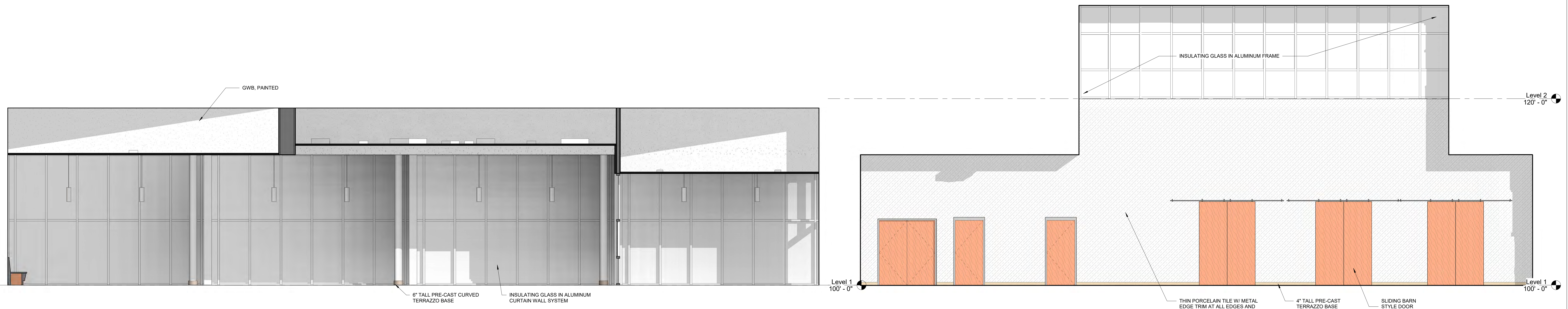
INTERIOR
ELEVATIONS

Scale: 1/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A2-2-9

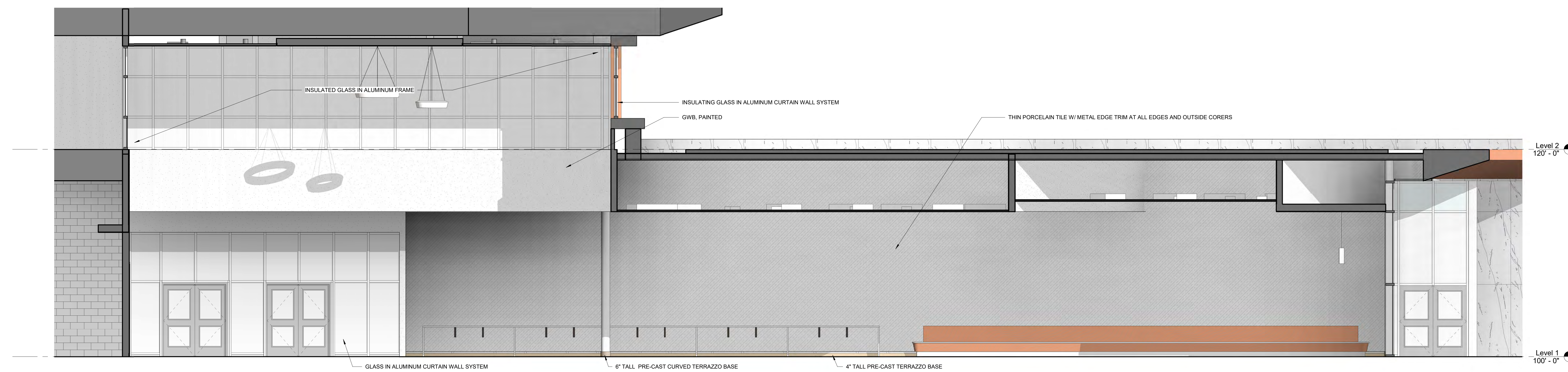


1 CAFETERIA ELEVATION - NORTH
 1/4" = 1'-0"



4 CAFETERIA ELEVATION - WEST
 1/4" = 1'-0"

2 CAFETERIA ELEVATION - EAST
 1/4" = 1'-0"

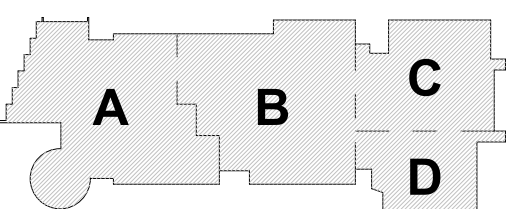


3 CAFETERIA ELEVATION - SOUTH
 1/4" = 1'-0"

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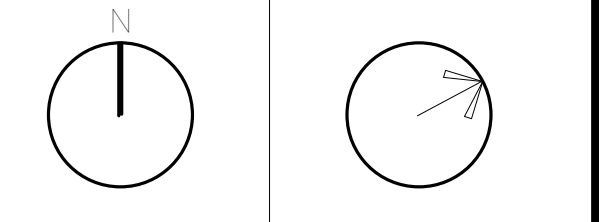
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021

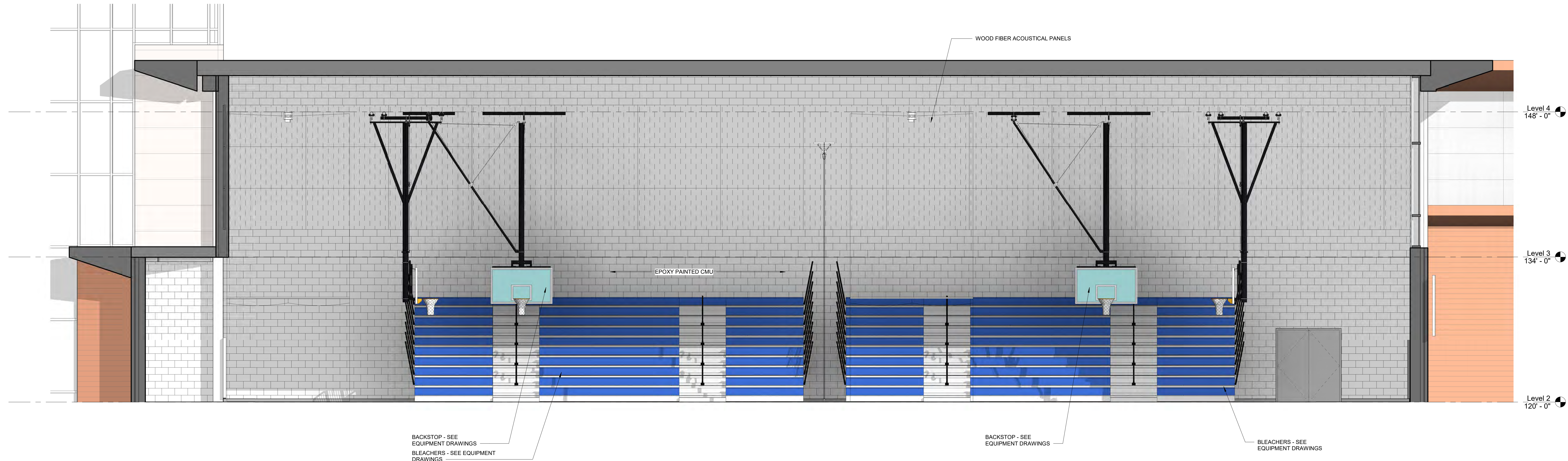


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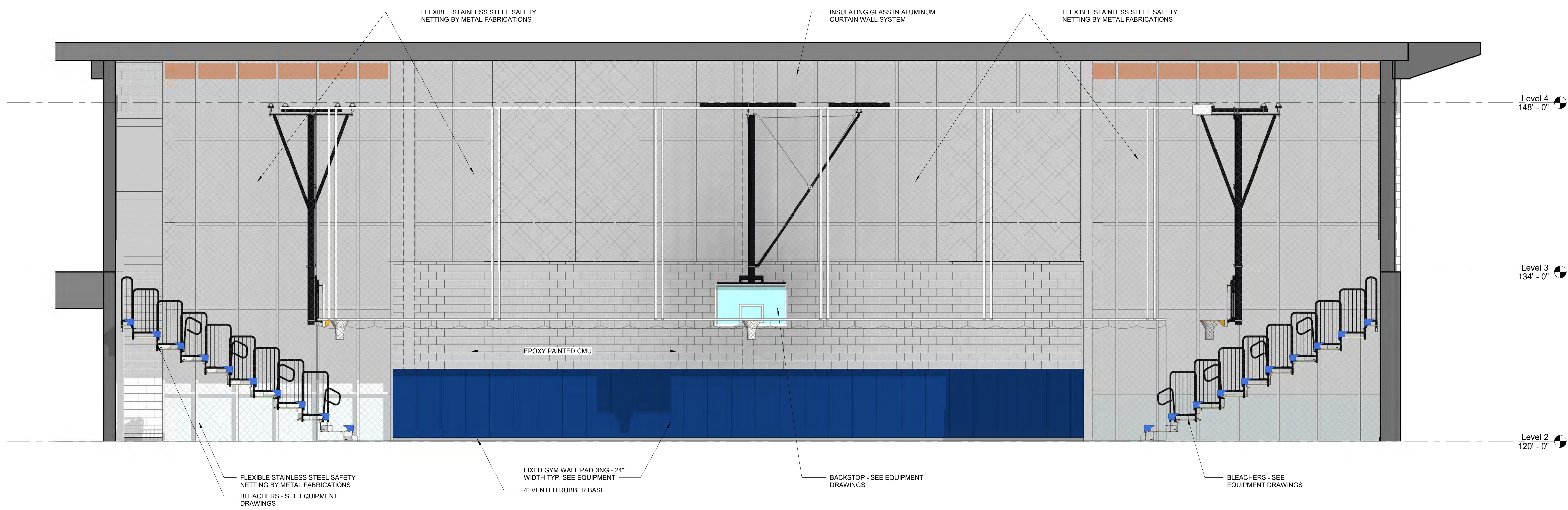
PROJECT NORTH MAGNETIC NORTH



INTERIOR ELEVATIONS



1 GYMNASIUM ELEVATION - NORTH
 1/4" = 1'-0"

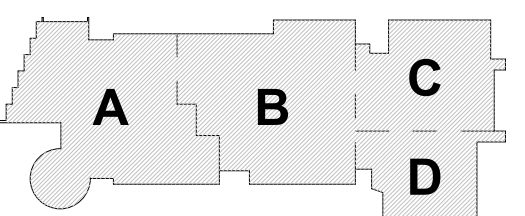


2 GYMNASIUM ELEVATION - EAST
 1/4" = 1'-0"

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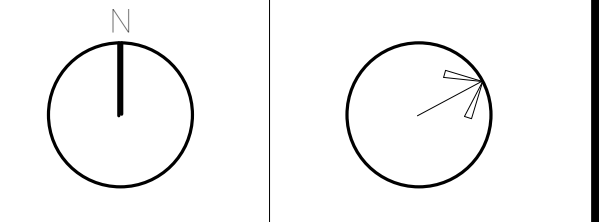
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021

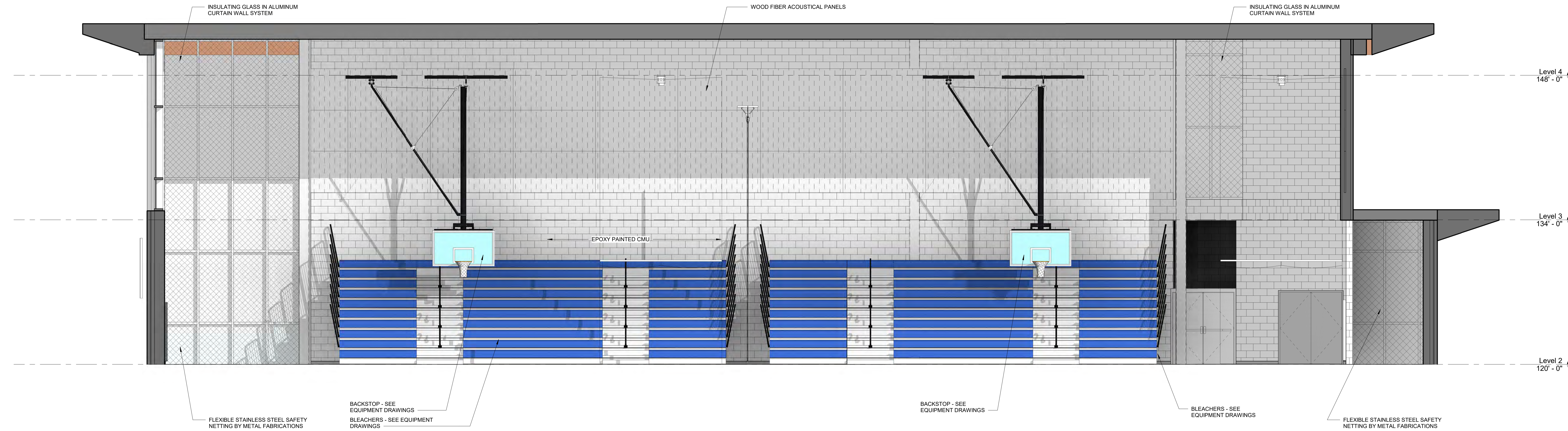


KEY PLAN

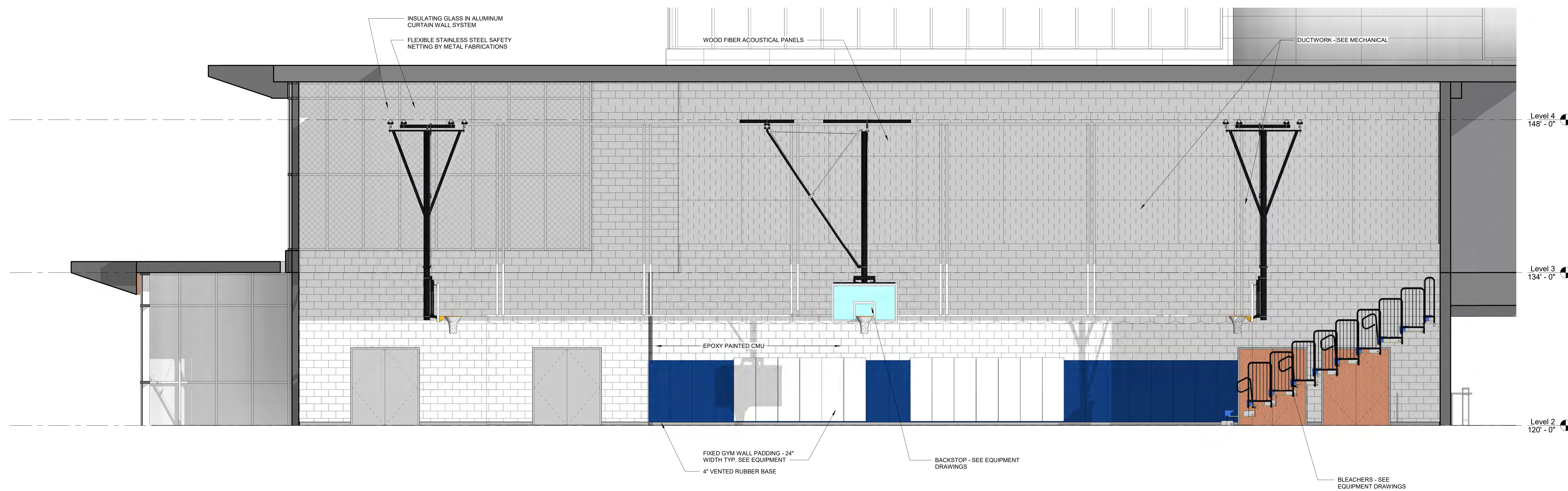
PROJECT NORTH MAGNETIC NORTH



INTERIOR ELEVATIONS



1 GYMNASIUM ELEVATION - SOUTH
1/4" = 1'-0"

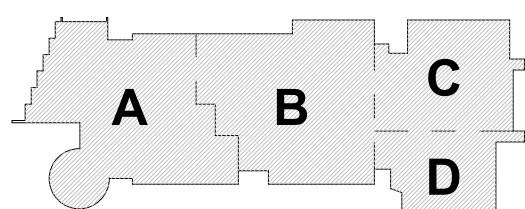


2 GYMNASIUM ELEVATION - WEST
1/4" = 1'-0"

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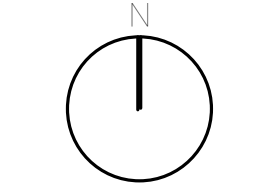
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021

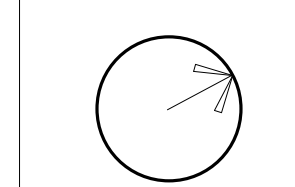


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



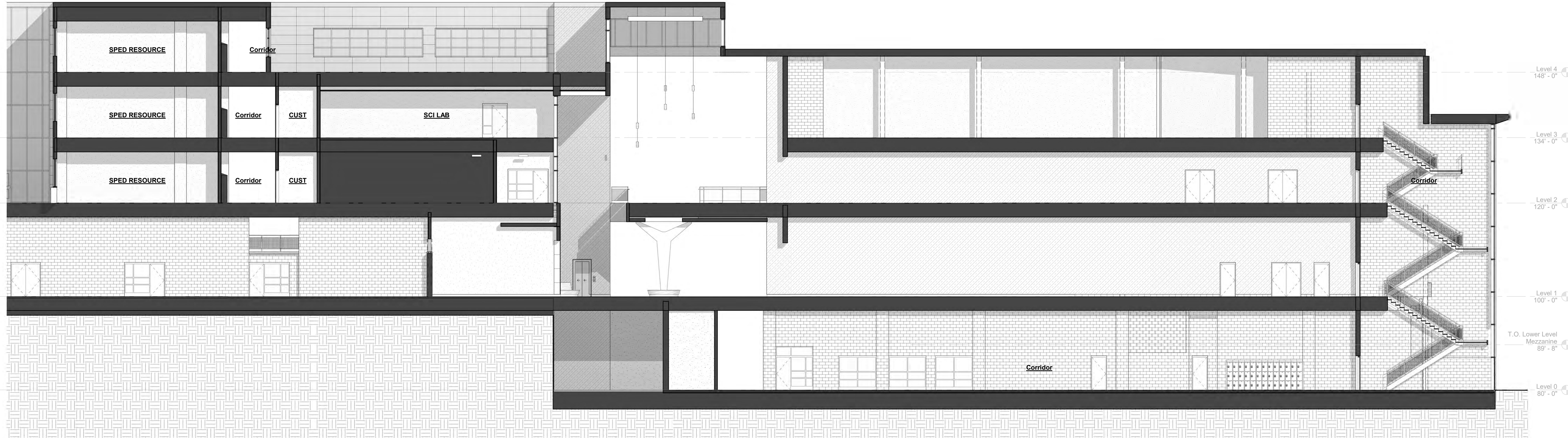
INTERIOR
ELEVATIONS

Scale: 1/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A2-2-12



1 BUILDING SECTION - MAIN ENTRANCE
1/8" = 1'-0"

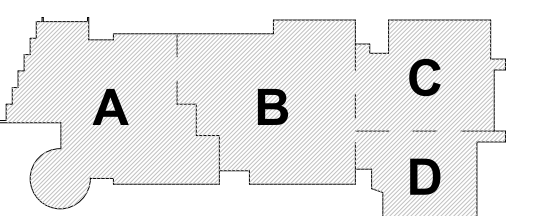


2 BUILDING SECTION - ATRIUM NEAR GYM/AUDITORIUM
1/8" = 1'-0"

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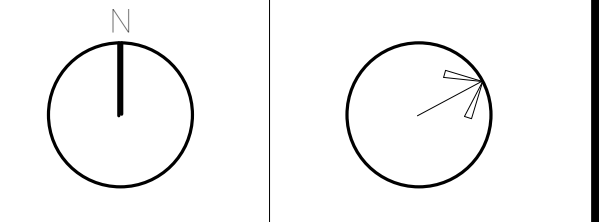
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

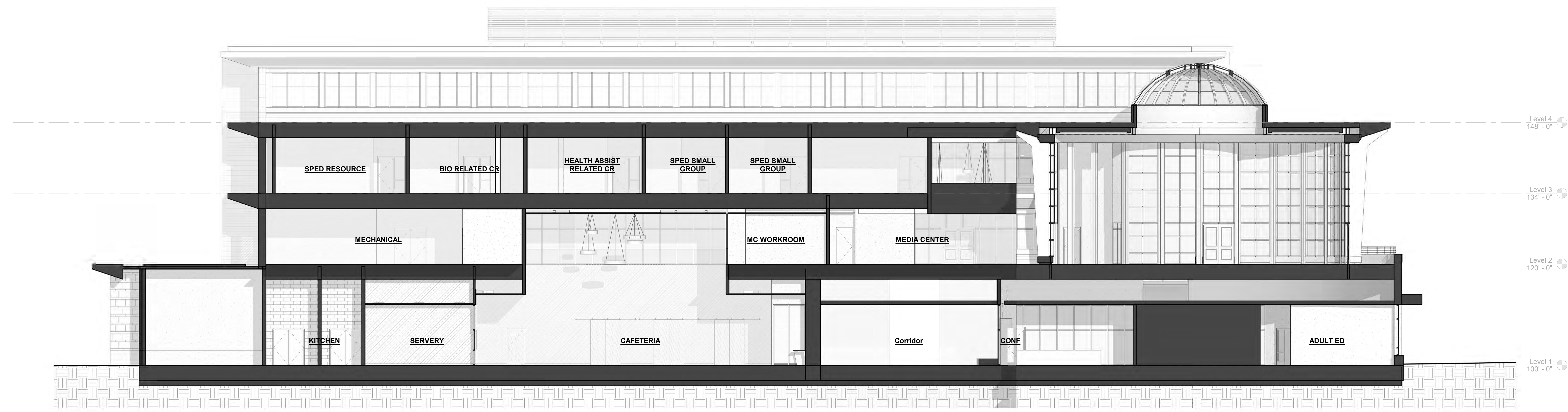
PROJECT NORTH MAGNETIC NORTH



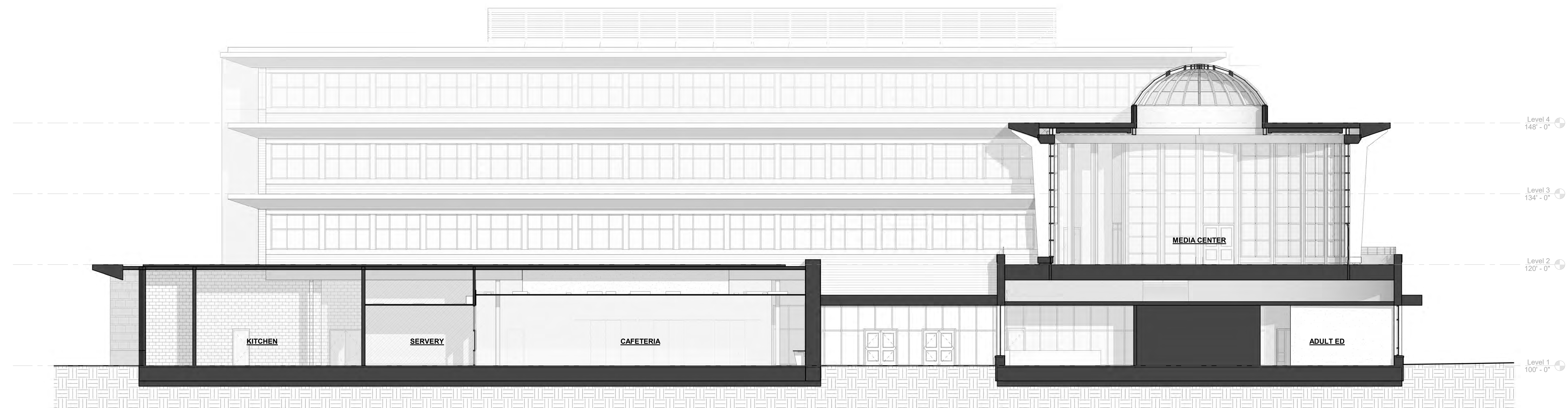
**BUILDING
SECTIONS**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A3-1-1



1 BUILDING SECTION - CAFETERIA ROTUNDA
 1/8" = 1'-0"

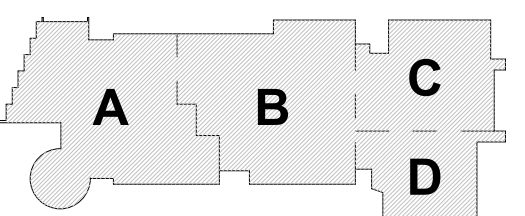


2 BUILDING SECTION - CAFETERIA ROTUNDA
 1/8" = 1'-0"

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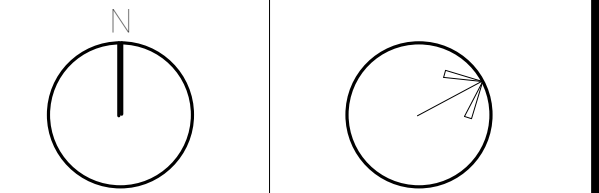
MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



KEY PLAN

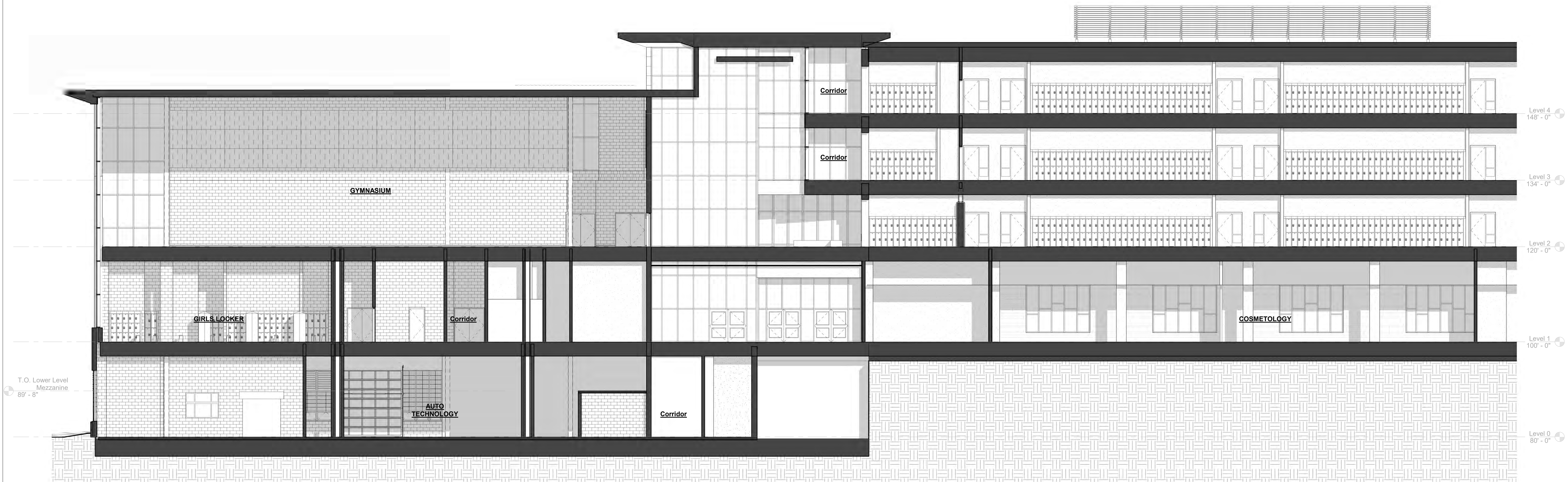
PROJECT NORTH MAGNETIC NORTH



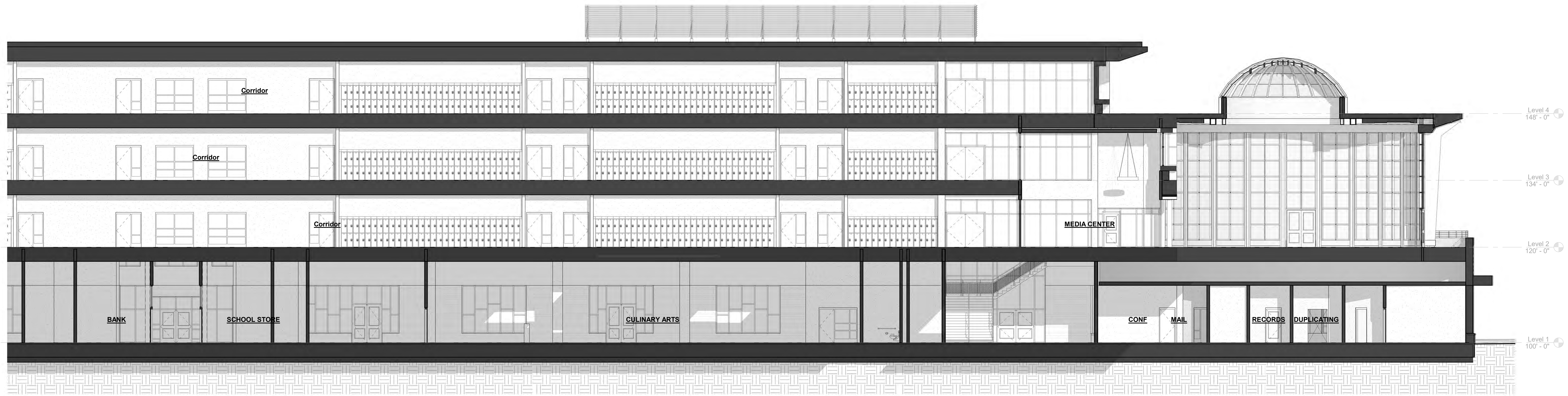
**BUILDING
 SECTIONS**

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

A3-1-2



1 BUILDING SECTION - GYM
 1/8" = 1'-0"

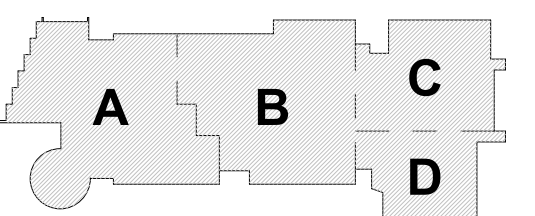


2 BUILDING SECTION - ROTUNDA
 1/8" = 1'-0"

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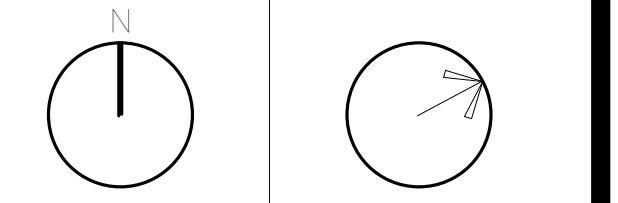
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



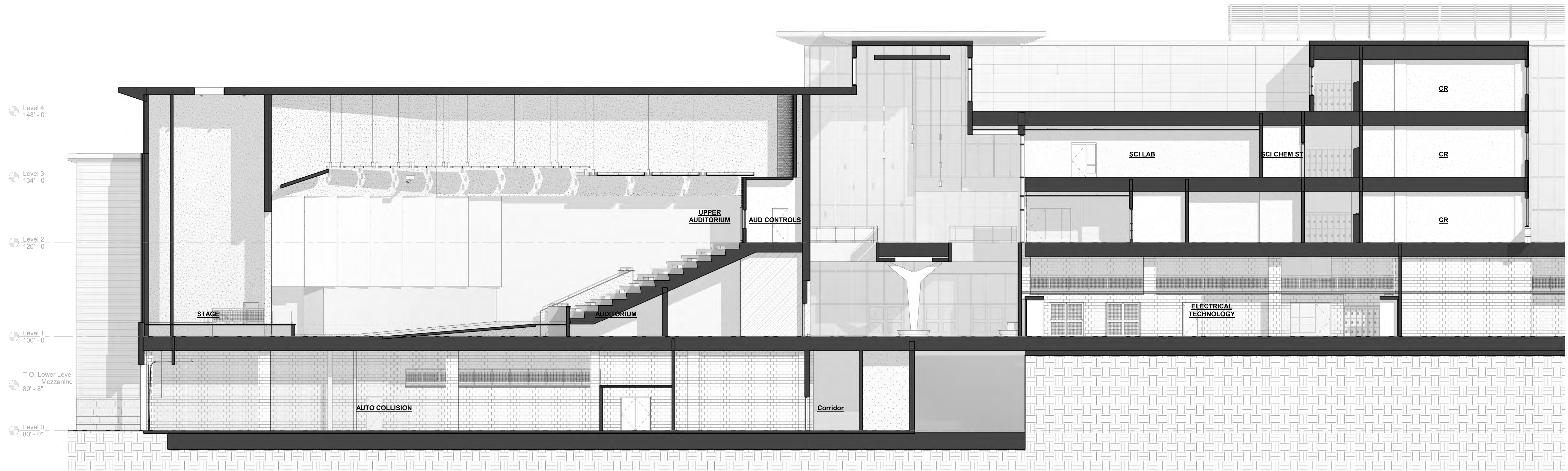
BUILDING SECTIONS

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

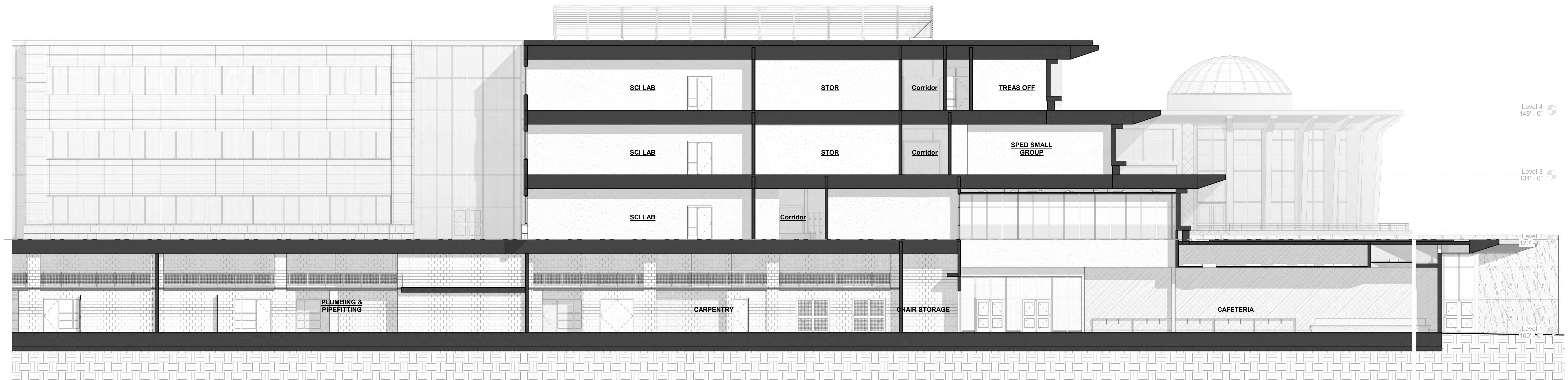
A3-1-3

**Northeast
Metropolitan
Regional
Vocational High School**

Wakefield, MA 01880



2 BUILDING SECTION - AUDITORIUM
1/8" = 1'-0"

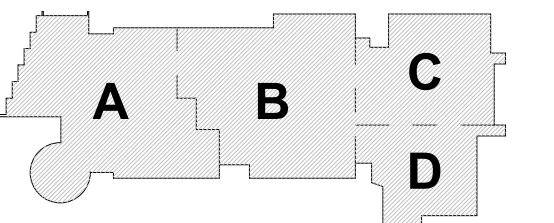


3 BUILDING SECTION - CAFETERIA
1/8" = 1'-0"

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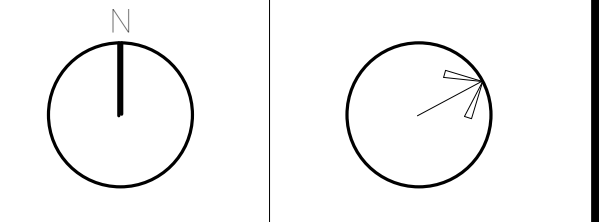
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



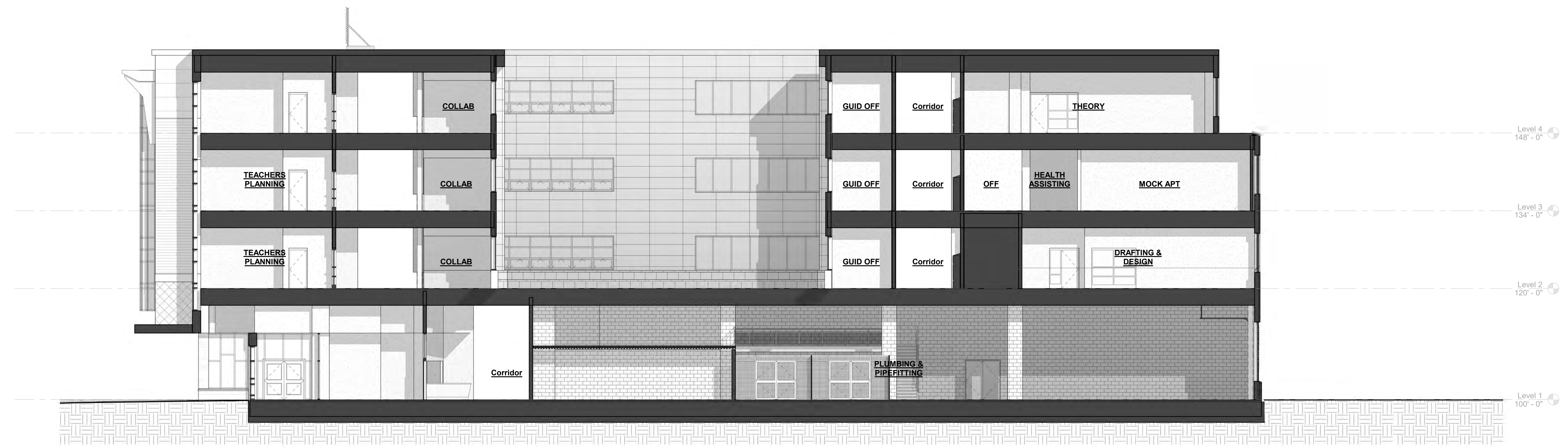
**BUILDING
SECTIONS**

Scale: 1/8" = 1'-0"
Job No.: 2002
Drawn By: DRA
Date: June 17, 2021

A3-1-4



1 BUILDING SECTION - AUDITORIUM TO GYM
1/8" = 1'-0"



2 BUILDING SECTION - PUBLIC ENTRANCE
1/8" = 1'-0"

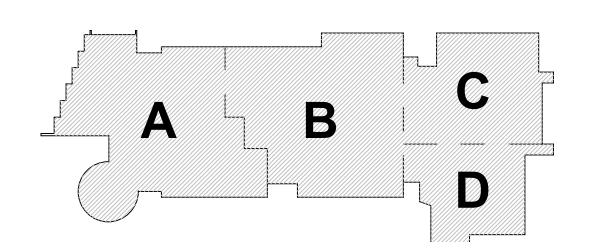


3 BUILDING SECTION - CLASSROOMS AND SHOPS
1/8" = 1'-0"

© COPYRIGHT 2021 DRUMSEY ROSANE ANDERSON, INC.

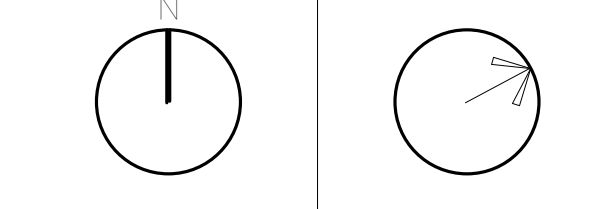
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021

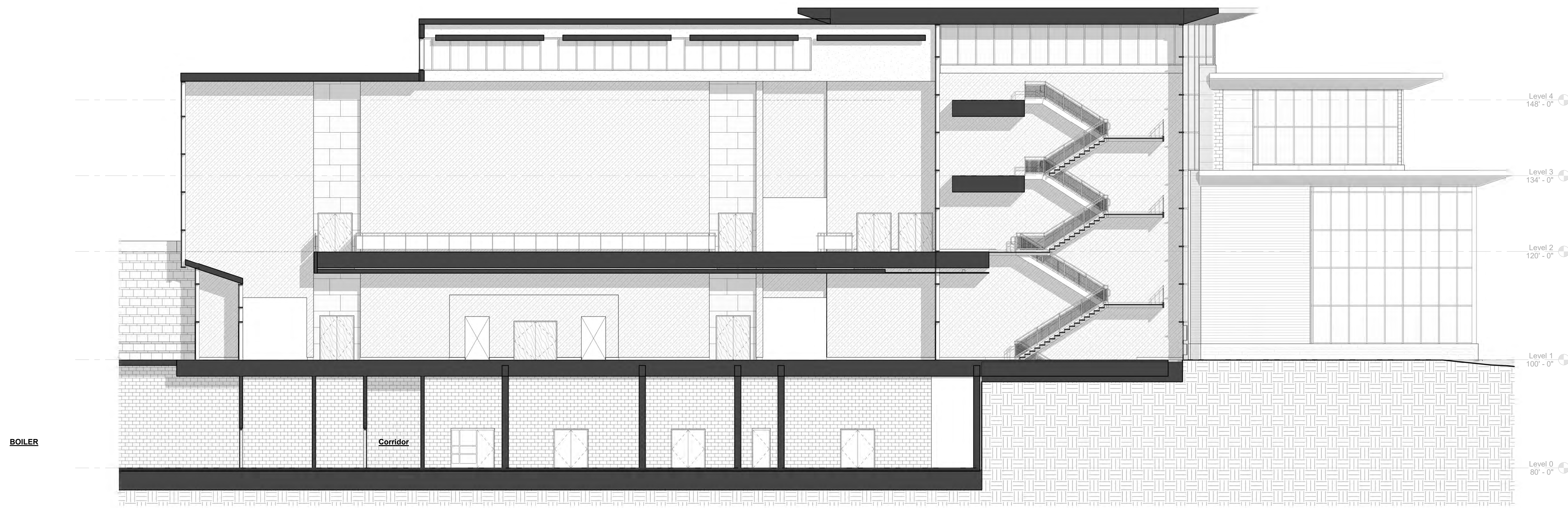


KEY PLAN

PROJECT NORTH MAGNETIC NORTH



BUILDING SECTIONS



1 BUILDING SECTION - MAIN STREET
1/8" = 1'-0"

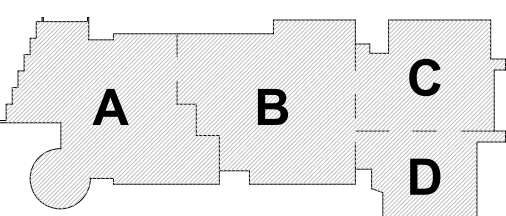


2 BUILDING SECTION - GYM/AUDITORIUM ENTRANCE
1/8" = 1'-0"

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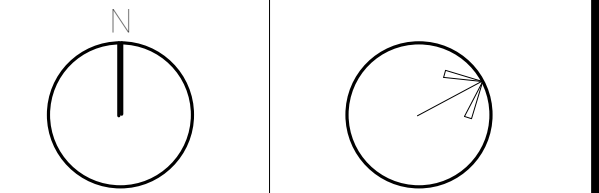
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

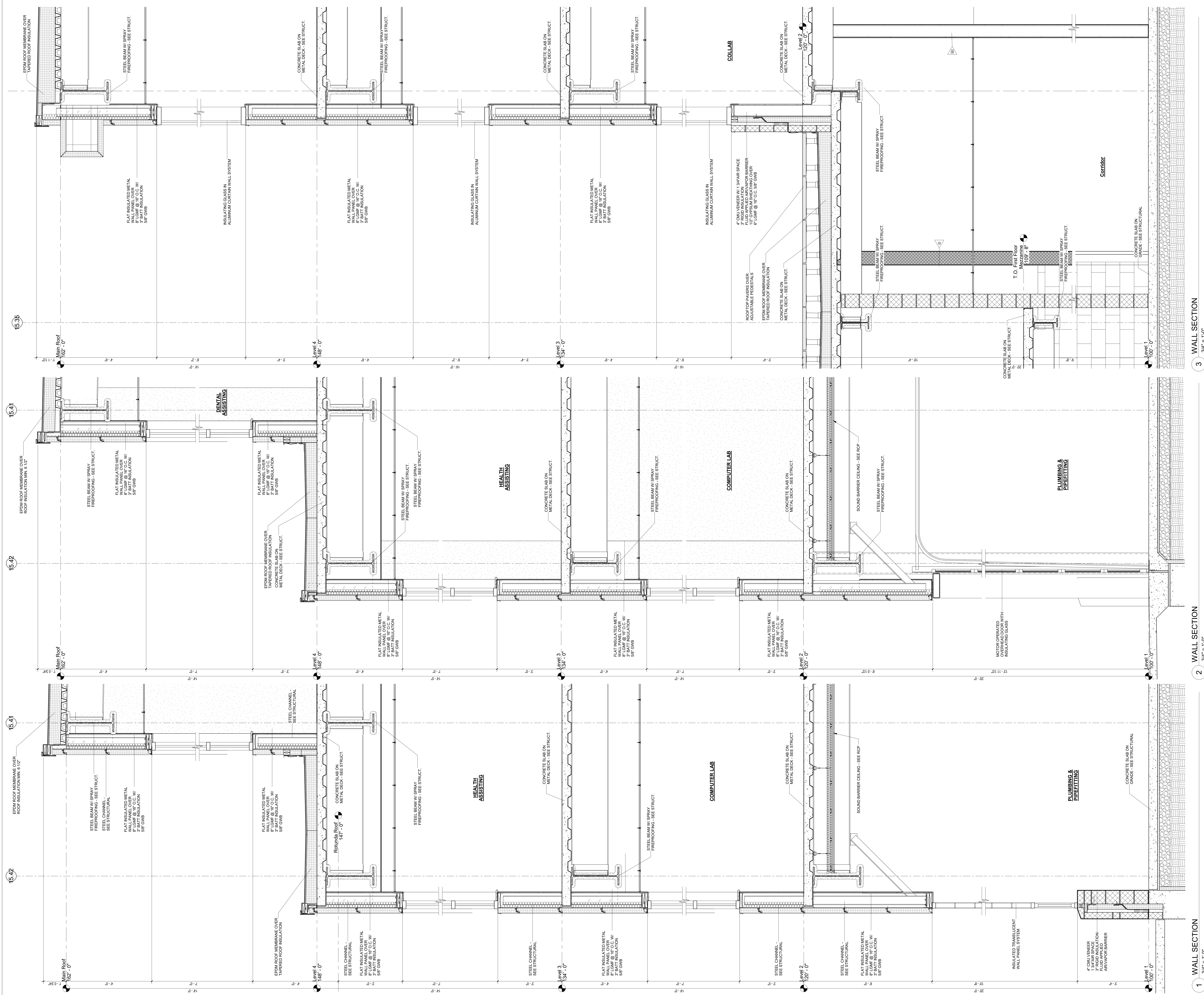
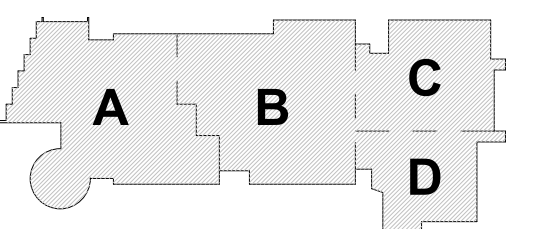
PROJECT NORTH MAGNETIC NORTH



BUILDING
SECTIONS

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

A3-1-6

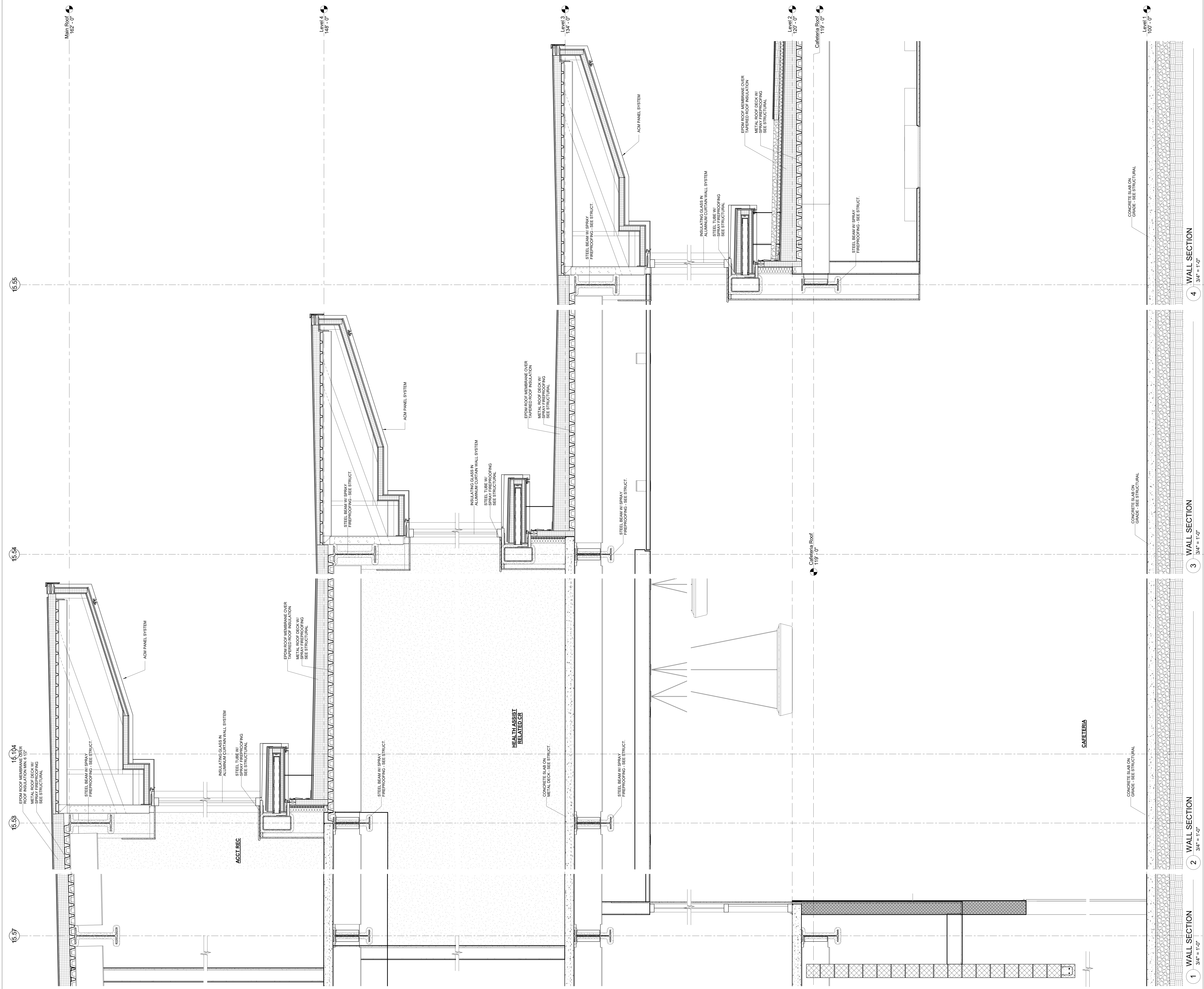


3 WALL SECTION
3/4" = 1'-0"

2 WALL SECTION
3/4" = 1'-0"

1 WALL SECTION
3/4" = 1'-0"

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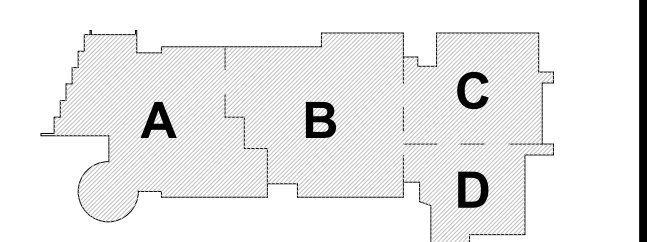


Northeast Metropolitan Regional Vocational High School

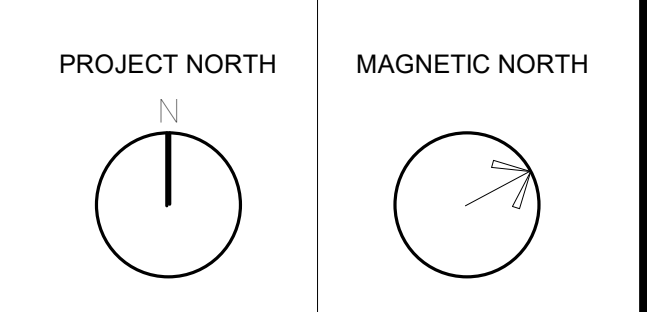
Wakefield, MA 01880

MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN



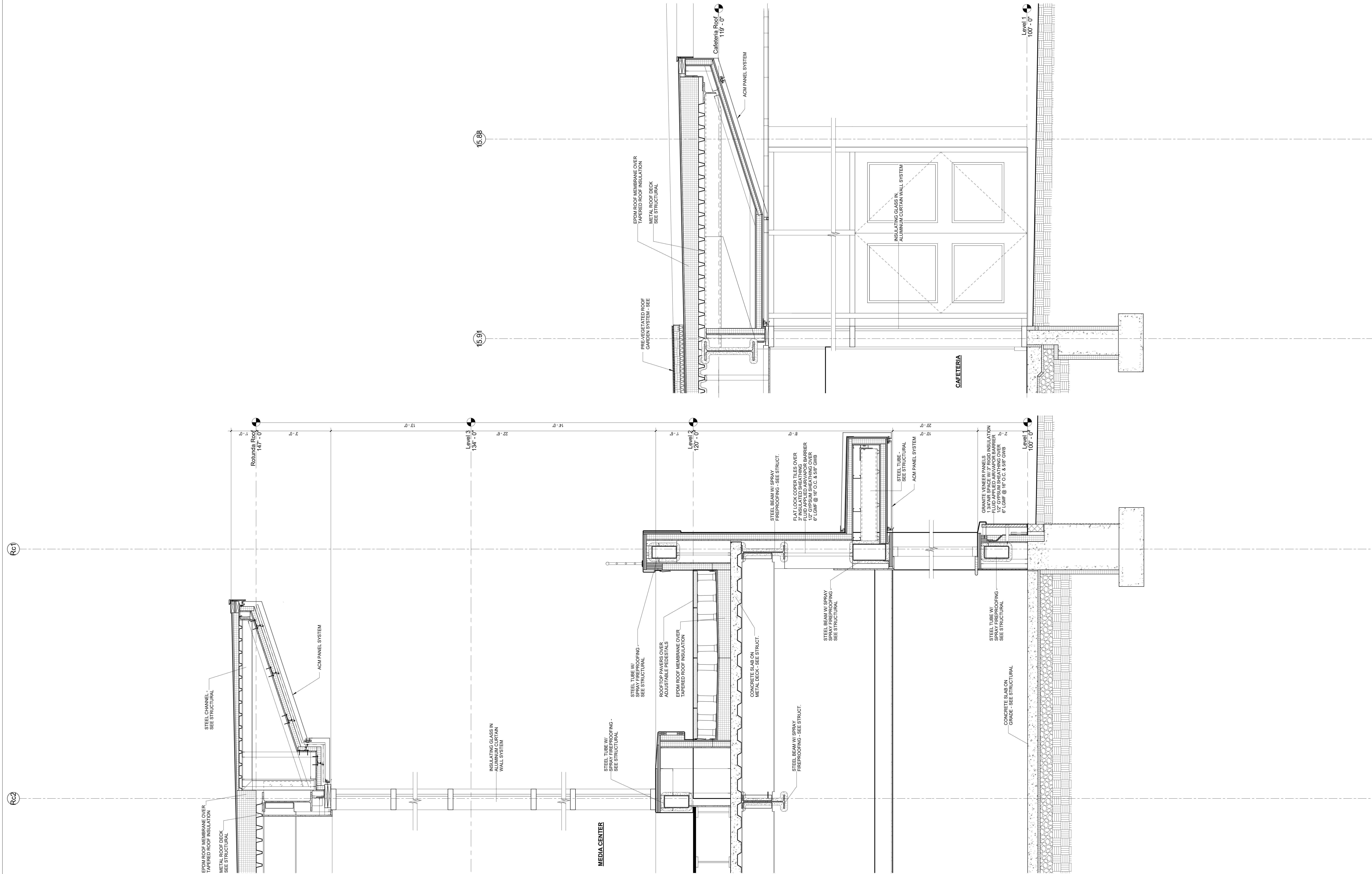
PROJECT NORTH MAGNETIC NORTH

WALL SECTIONS

Scale: 3/4" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

A3-2-2

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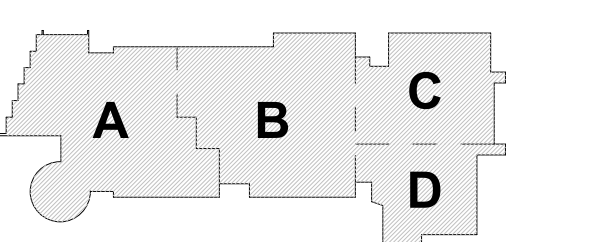
3 WALL SECTION
 3/4" = 1'-0"

2 WALL SECTION
 3/4" = 1'-0"

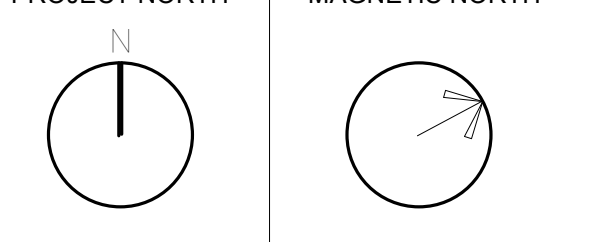
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MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021

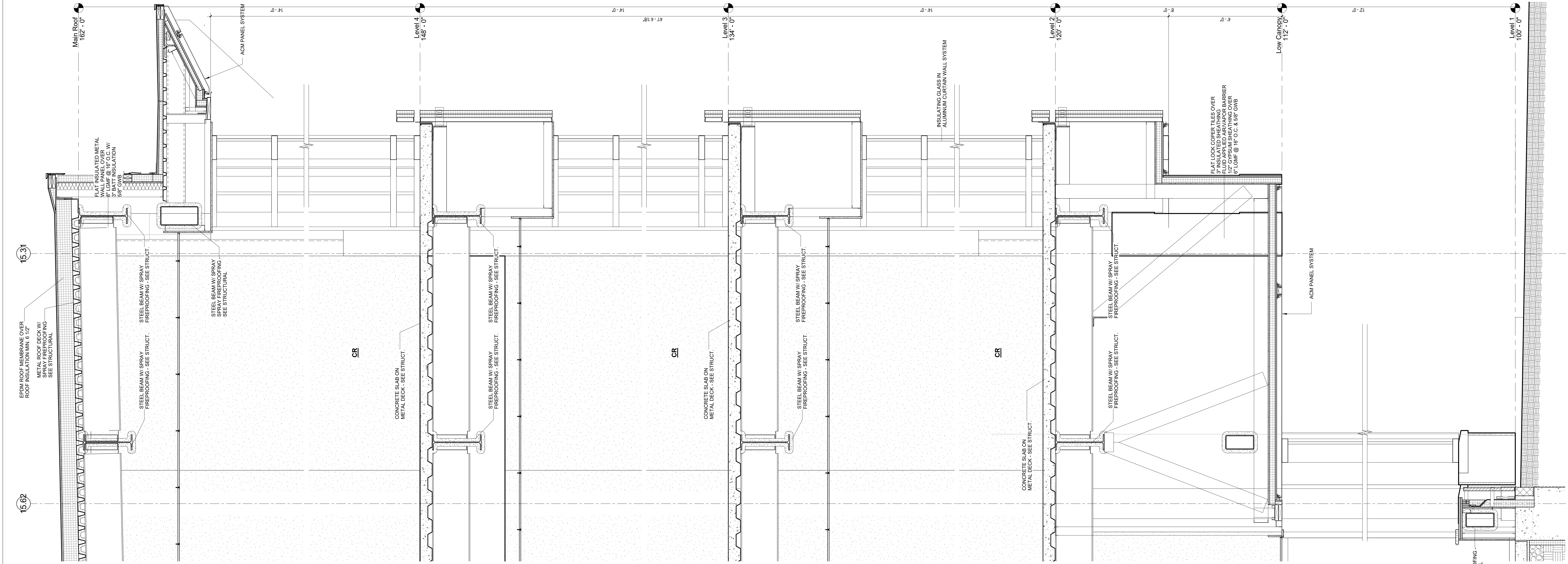
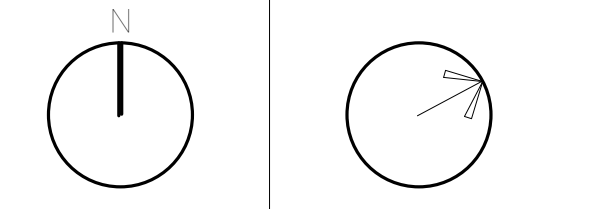
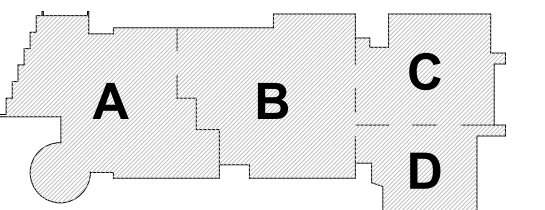


PROJECT NORTH
 MAGNETIC NORTH

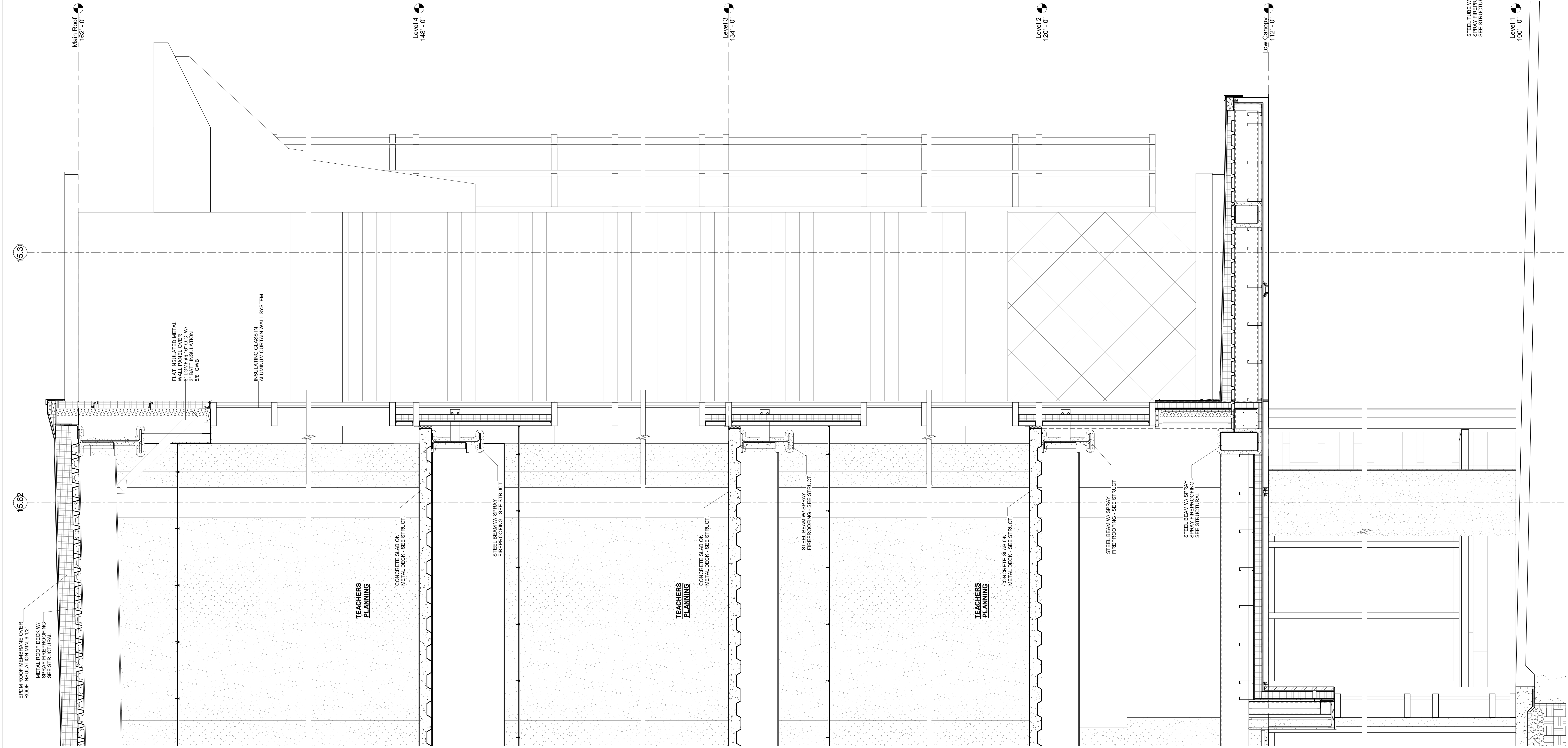


WALL SECTIONS

Scale: 3/4" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021
A3-2-3

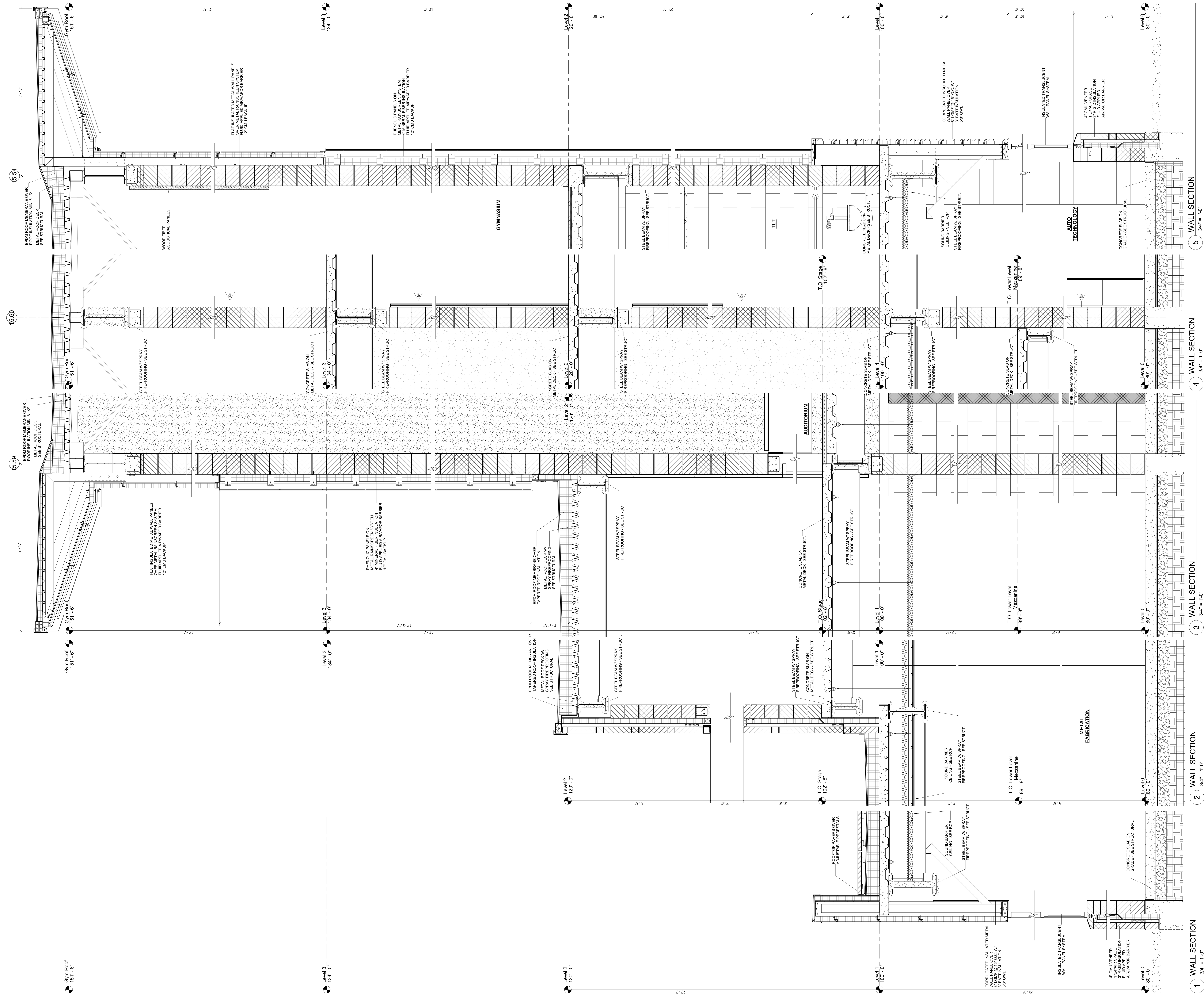


2 WALL SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"

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5 WALL SECTION
3/4" = 1'-0"

4 WALL SECTION
3/4" = 1'-0"

3 WALL SECTION
3/4" = 1'-0"

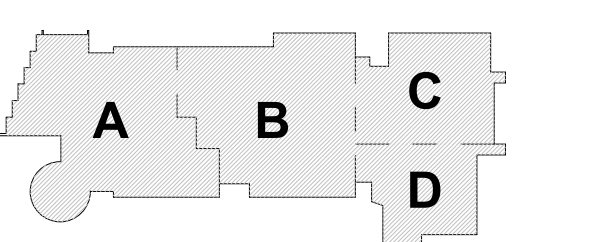
2 WALL SECTION
3/4" = 1'-0"

1 WALL SECTION
3/4" = 1'-0"

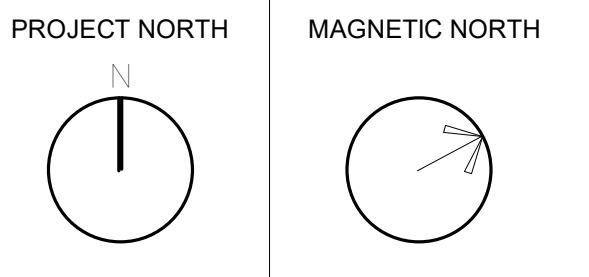
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MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021

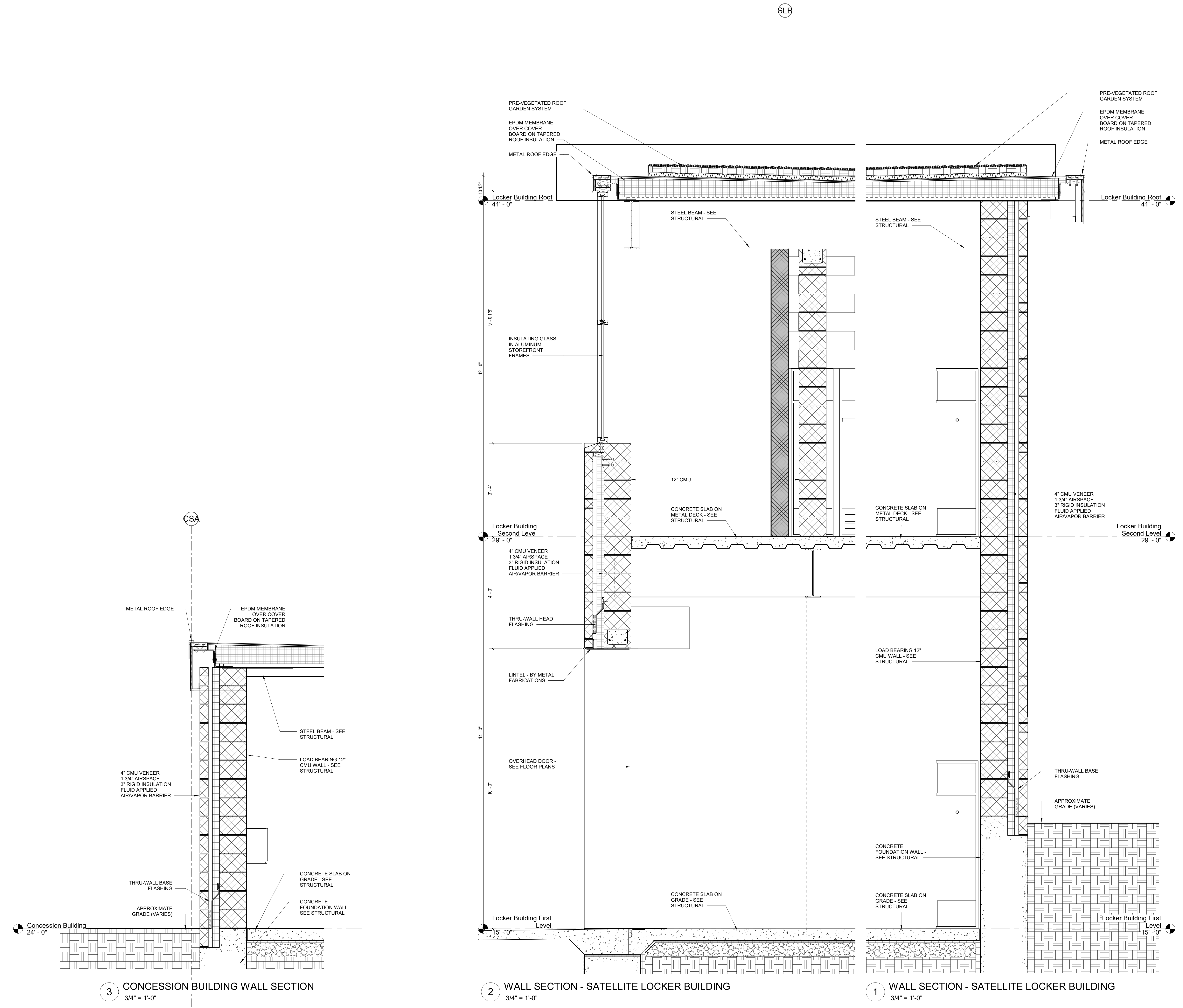


PROJECT NORTH
MAGNETIC NORTH



WALL SECTIONS

Scale: 3/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021
A3-2-5



3 CONCESSION BUILDING WALL SECTION
 3/4" = 1'-0"

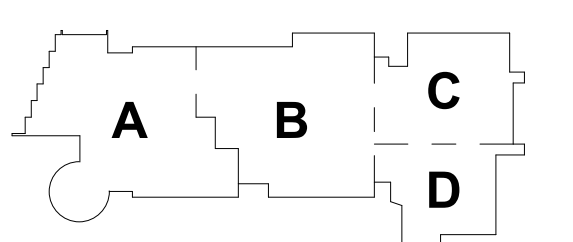
2 WALL SECTION - SATELLITE LOCKER BUILDING
 3/4" = 1'-0"

1 WALL SECTION - SATELLITE LOCKER BUILDING
 3/4" = 1'-0"

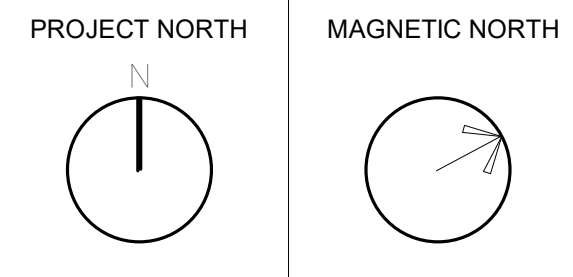
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MSBA SCHEMATIC DESIGN SUBMISSION

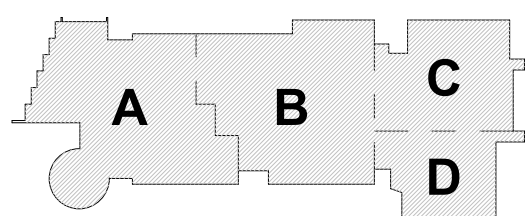
June 17, 2021



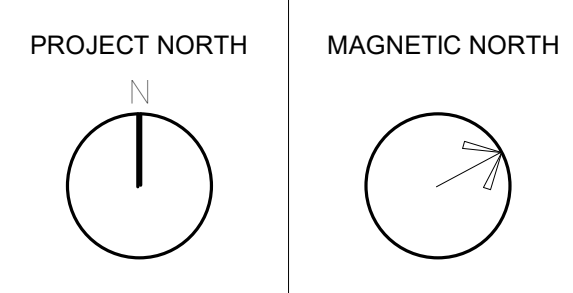
PROJECT NORTH MAGNETIC NORTH



WALL SECTIONS



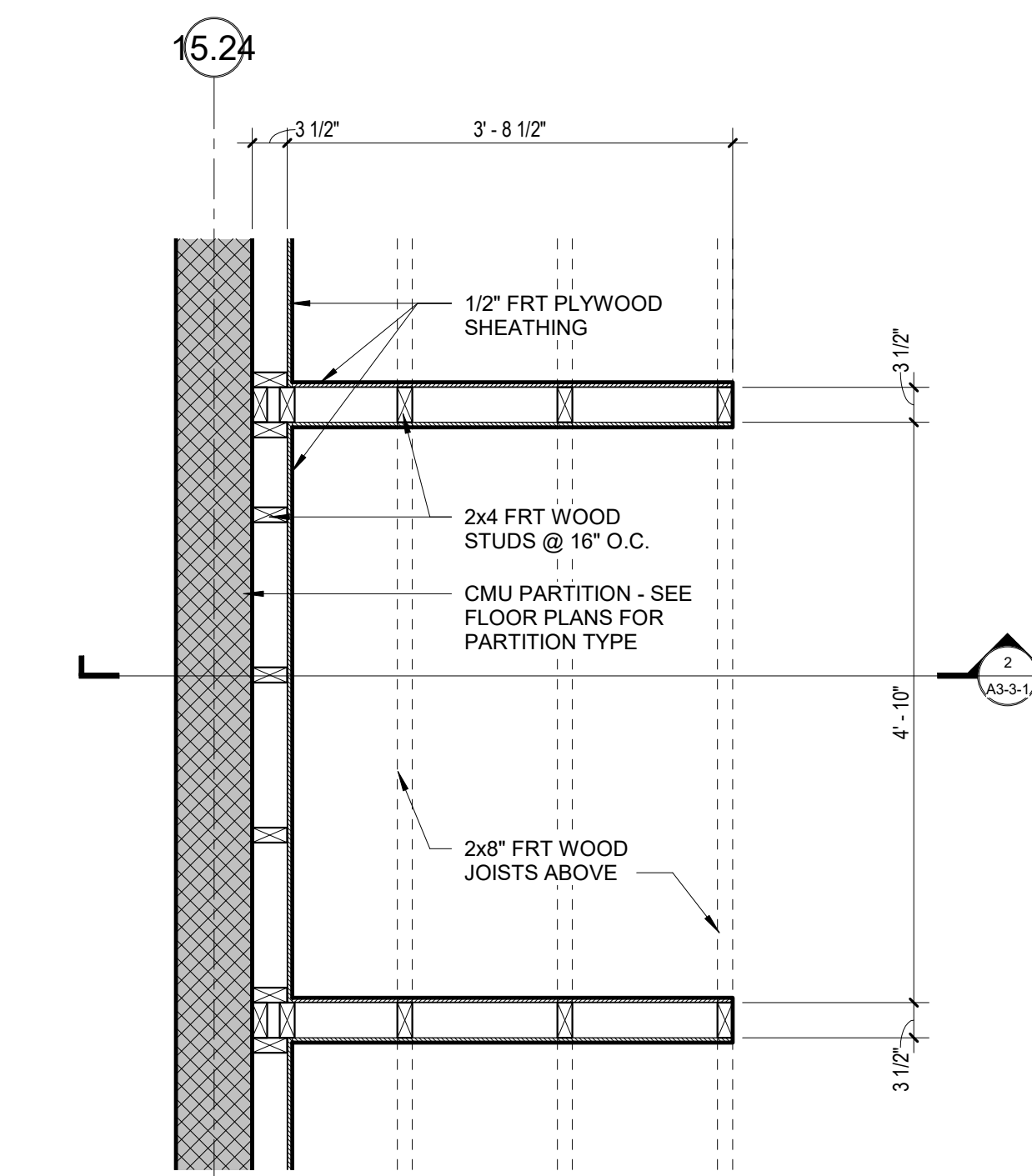
KEY PLAN



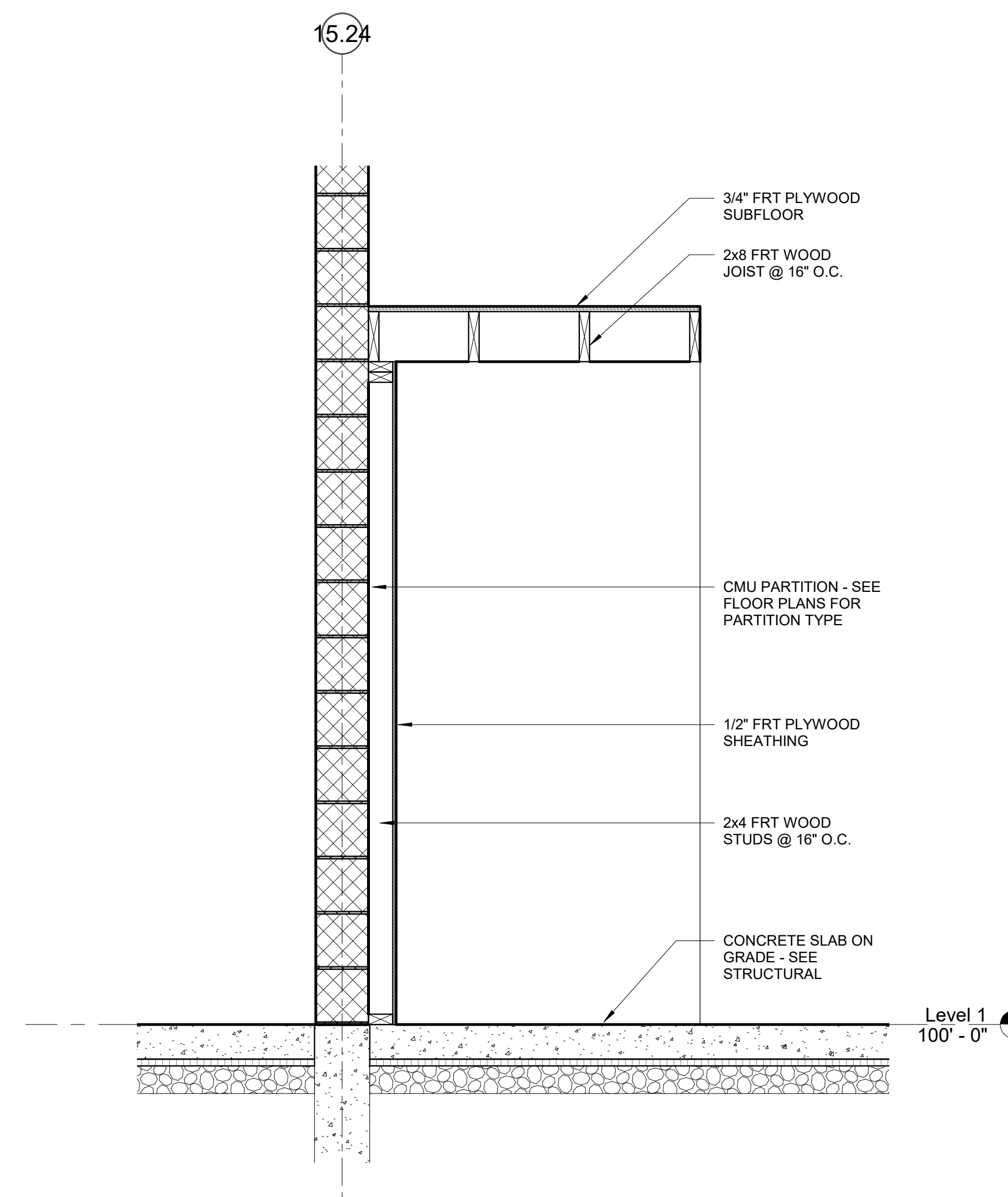
PROJECT NORTH

MAGNETIC NORTH

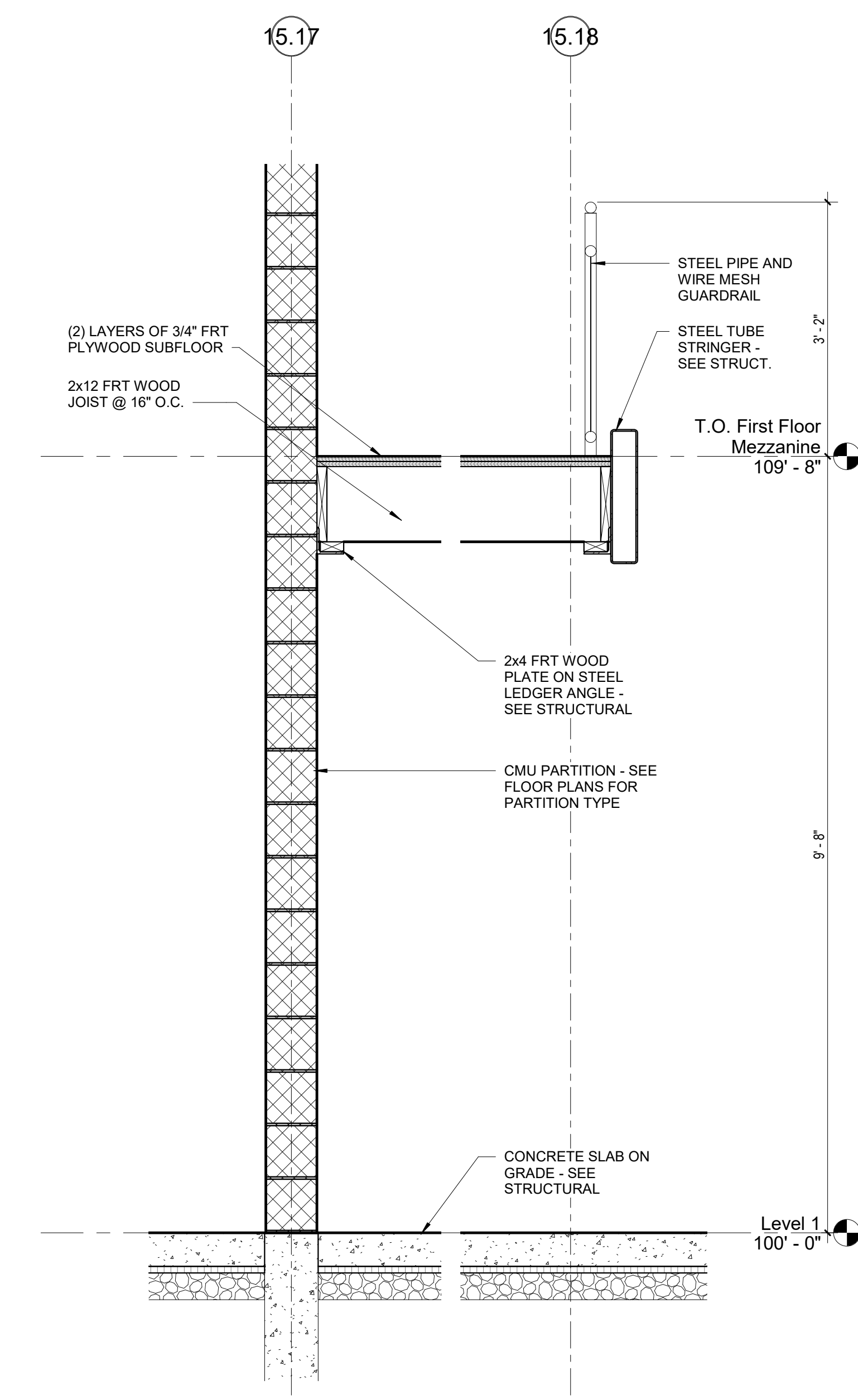
**VERTICAL
 DETAILS**



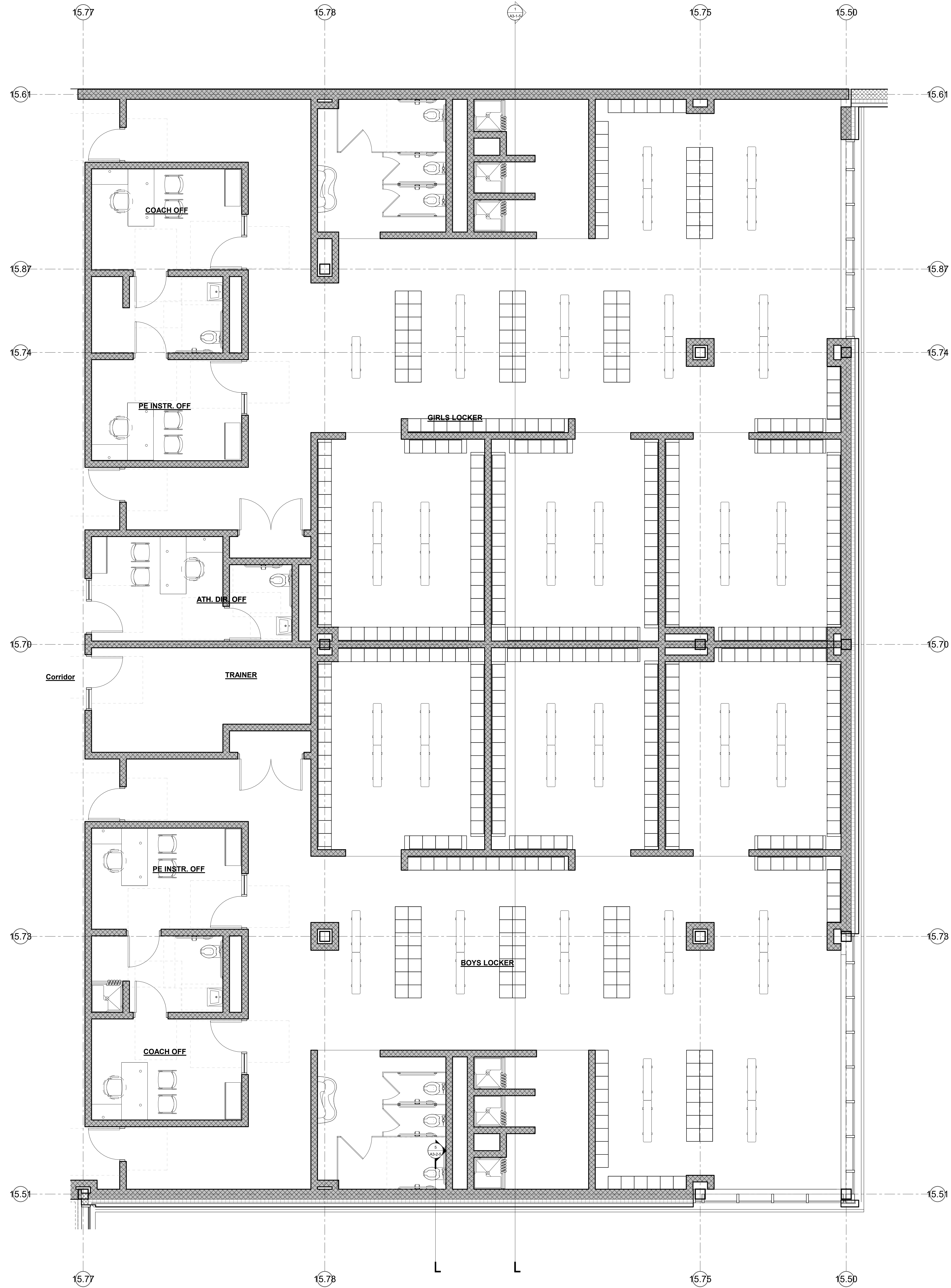
3 WIRING BOOTH PLAN
 3/4" = 1'-0"



2 WIRING BOOTH SECTION
 3/4" = 1'-0"



1 WOOD MEZZANINE SECTION
 3/4" = 1'-0"

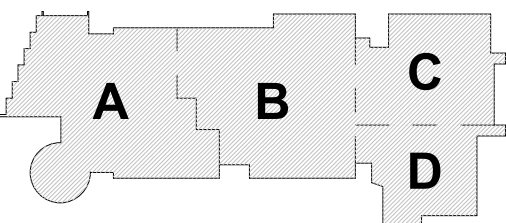


1 Enlarged Locker Room Plan
1/4" = 1'-0"

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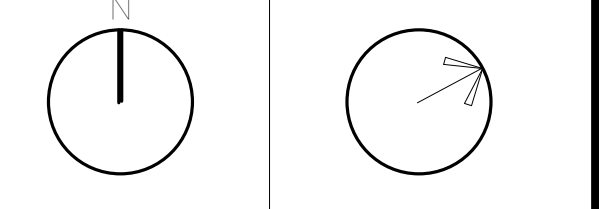
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

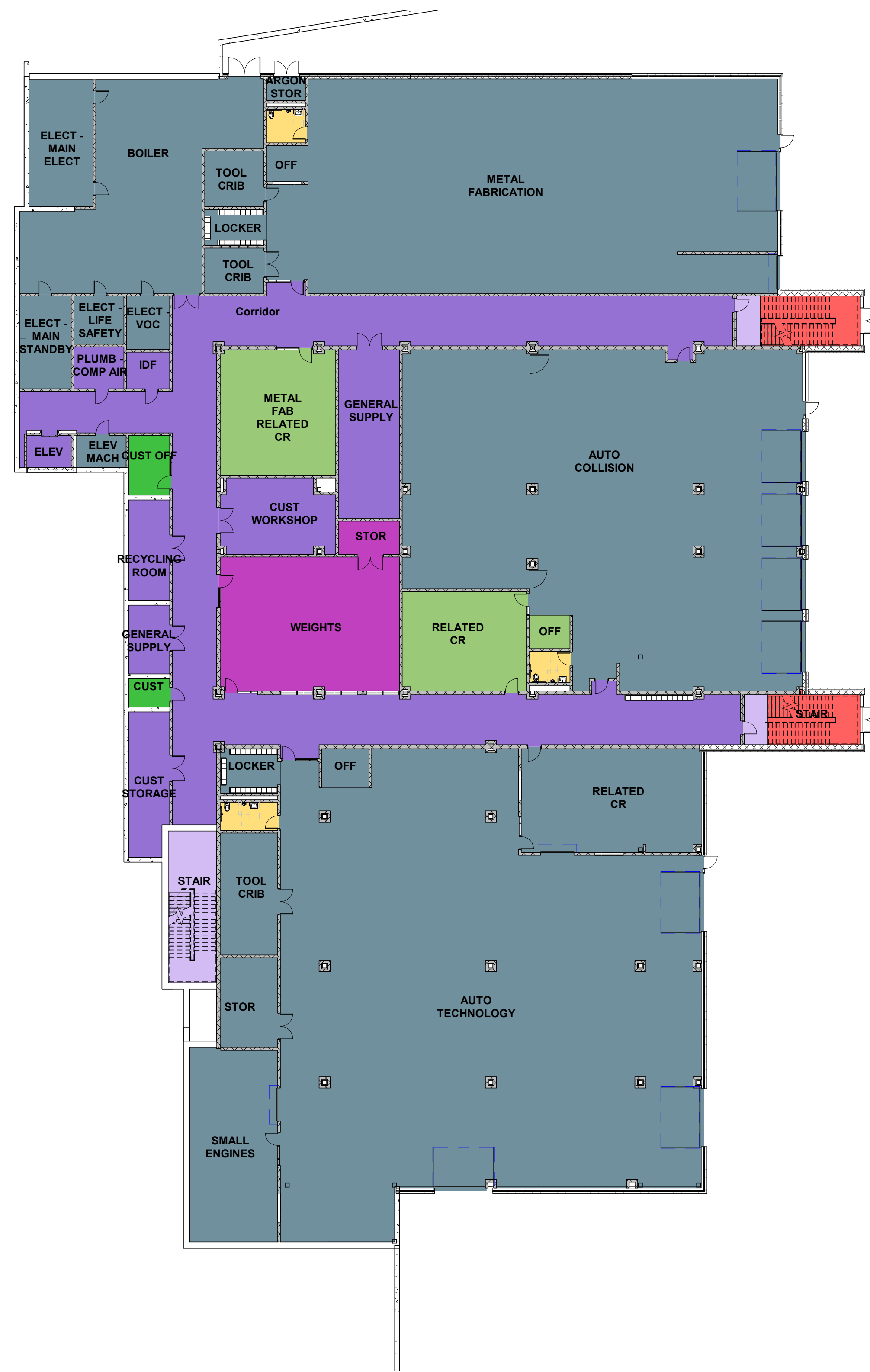
PROJECT NORTH MAGNETIC NORTH



**LOCKER ROOM
PLANS**

Scale: 1/4" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

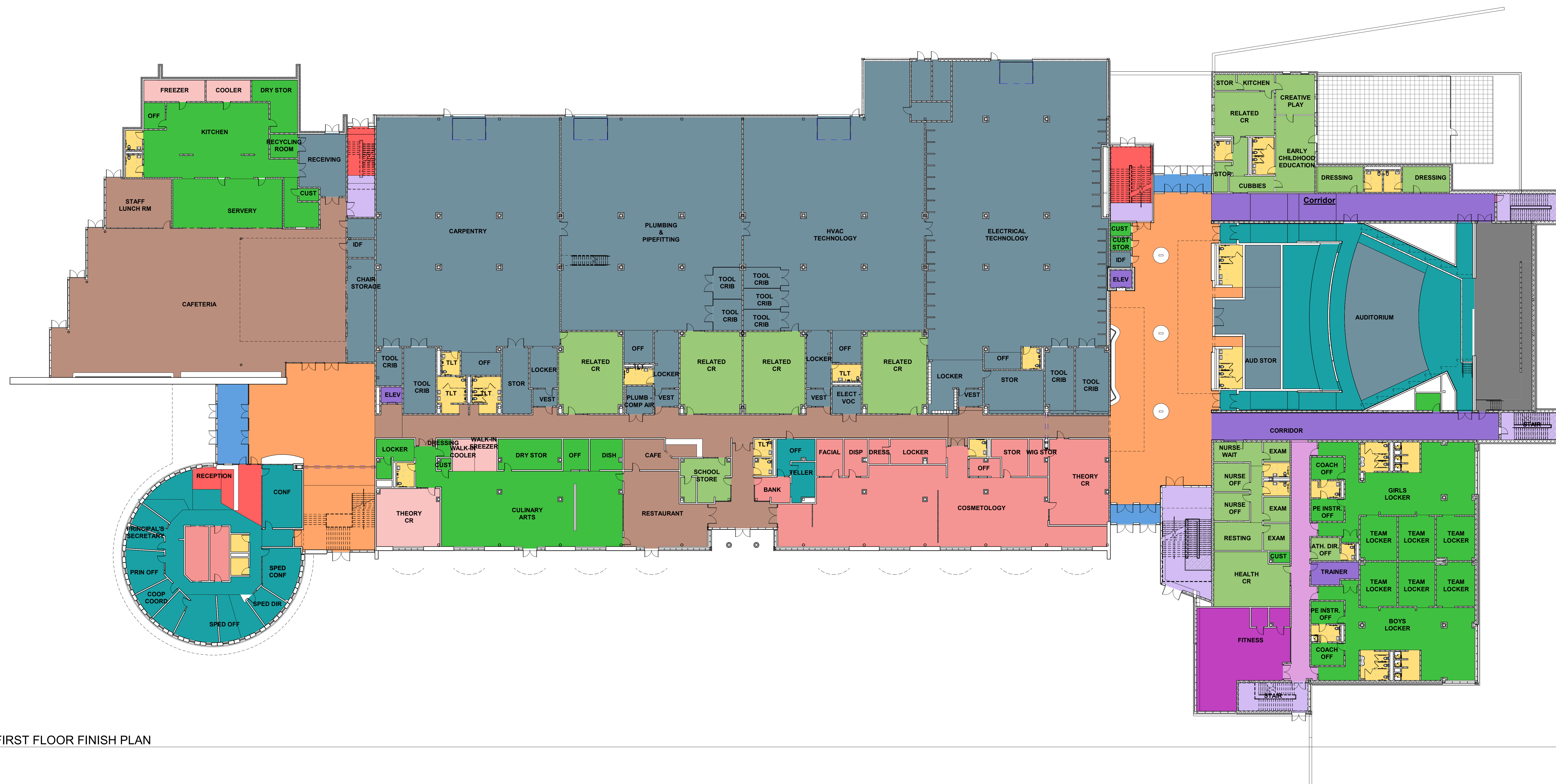
A4-1-1



Floor Finishes Legend

- ATHLETIC SPORTS FLOORING
- CARPET
- Carpet
- CERAMIC MOSAIC TILE
- Concrete
- EPOXY FLOORING
- EPOXY TERRAZZO
- FOOT GRILLE CARPET - ATHLETIC CLEAT RESISTANT
- LINOLEUM
- LUXURY VINYL TILE
- MULTIPURPOSE FLOORING
- PORCELAIN PAVER
- RESILIENT CARPET
- ROOF PAVER SYSTEM
- RUBBER STAIR TREADS & RISERS
- RUBBER TILE
- RUBBER TILE - ATHLETIC CLEAT RESISTANT
- SEALED CONCRETE
- SHEET VINYL
- SHEET VINYL - SLIP RESISTANT
- WALK OFF CARPET
- WOOD ATHLETIC FLOORING
- WOOD SPRUNG STAGE FLOORING
- PEDESTAL MOUNTED PAVER SYSTEM

2 OVERALL LOWER LEVEL FLOOR FINISH PLAN
1" = 20'-0"



1 OVERALL FIRST FLOOR FINISH PLAN
1" = 20'-0"

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Floor Finishes Legend

- CARPET
- CERAMIC MOSAIC TILE
- EPOXY FLOORING
- EPOXY TERRAZZO
- LINOLEUM
- RESILIENT CARPET
- RUBBER TILE
- SEALED CONCRETE
- SHEET VINYL
- WOOD ATHLETIC FLOORING

ROOFTOP PAVERS OVER ADJUSTABLE PEDESTALS

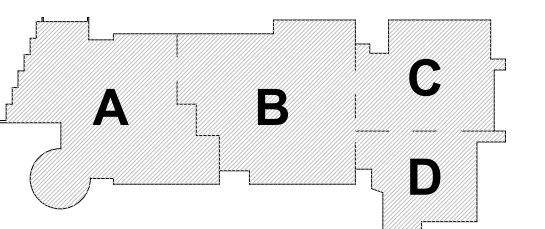


1 SECOND FLOOR PLAN
 1" = 20'-0"

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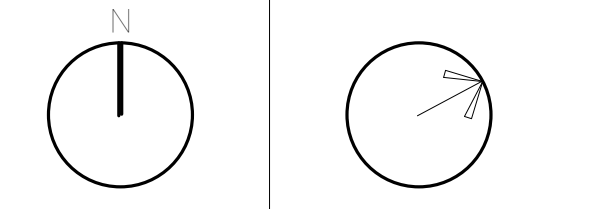
MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**FLOOR FINISH
 MATERIAL PLAN
 - SECOND
 FLOOR LEVEL**

Scale: 1" = 20'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021
AF1-0-2

Floor Finishes Legend

- CARPET
- CERAMIC MOSAIC TILE
- EPOXY FLOORING
- LINOLEUM
- RESILIENT CARPET
- RUBBER STAIR TREADS & RISERS
- RUBBER TILE
- SEALED CONCRETE
- SHEET VINYL

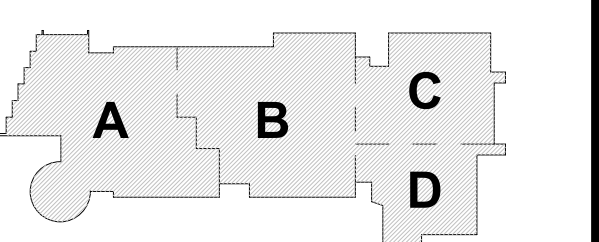


1 THIRD FLOOR PLAN
 1" = 20'-0"

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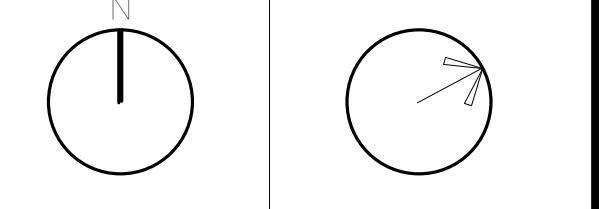
MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**FLOOR FINISH
 MATERIAL PLAN
 - THIRD FLOOR
 LEVEL**

Scale: 1" = 20'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

AF1-0-3

Floor Finishes Legend

- CARPET
- CERAMIC MOSAIC TILE
- EPOXY FLOORING
- LINOLEUM
- RESILIENT CARPET
- RUBBER STAIR TREADS & RISERS
- RUBBER TILE
- SEALED CONCRETE
- SHEET VINYL

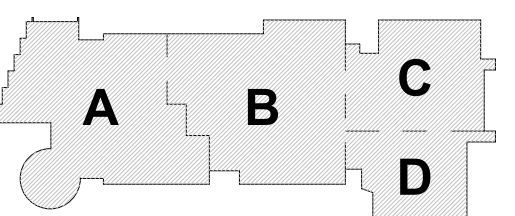


1 4-Floor Finish Material Plan - Fourth Floor
1" = 20'-0"

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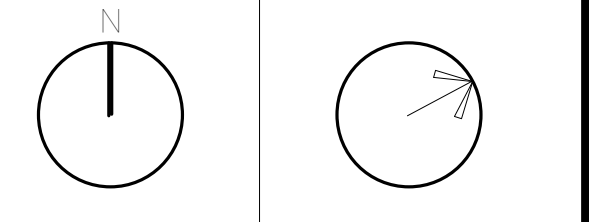
MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN

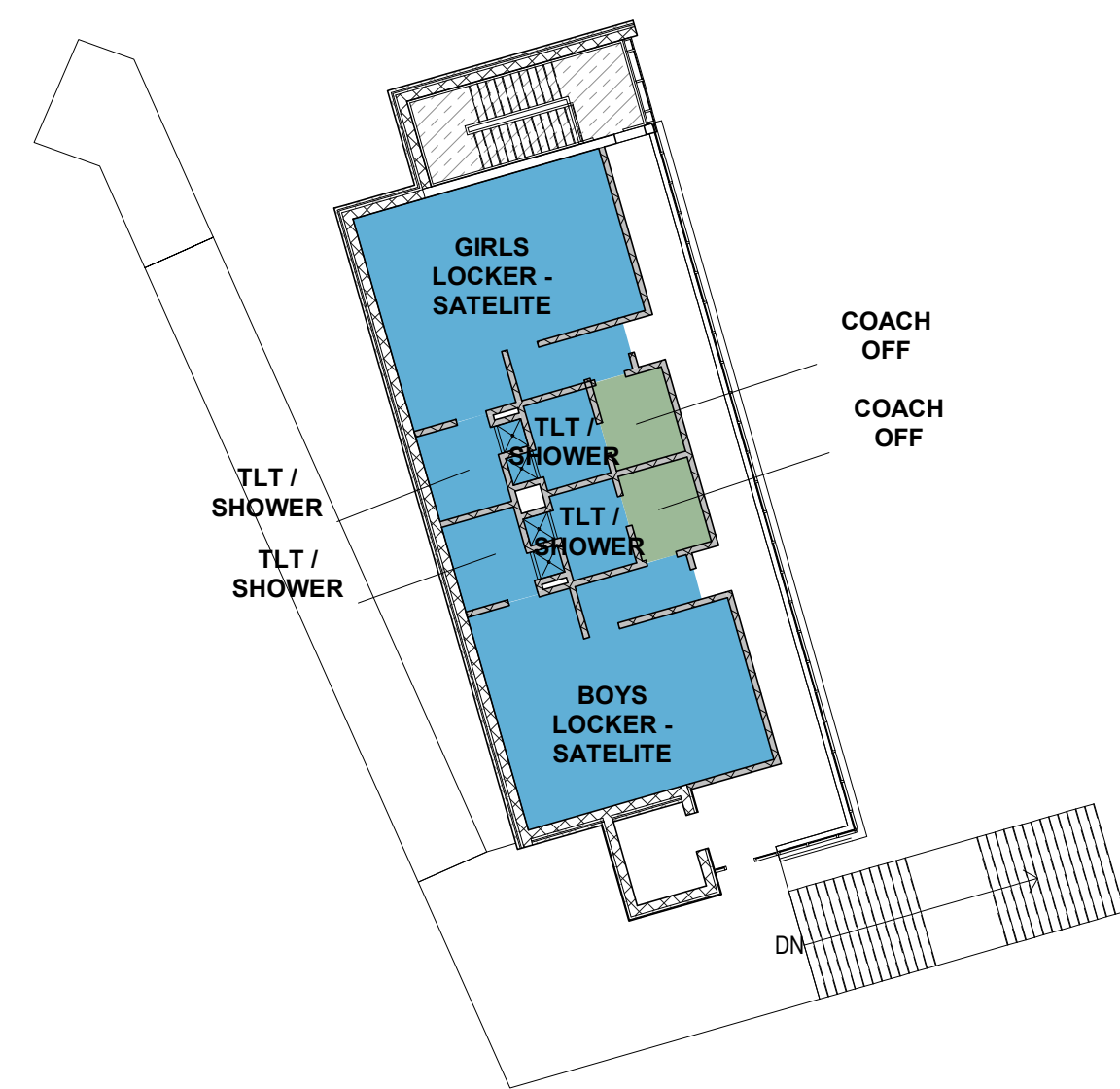
PROJECT NORTH MAGNETIC NORTH



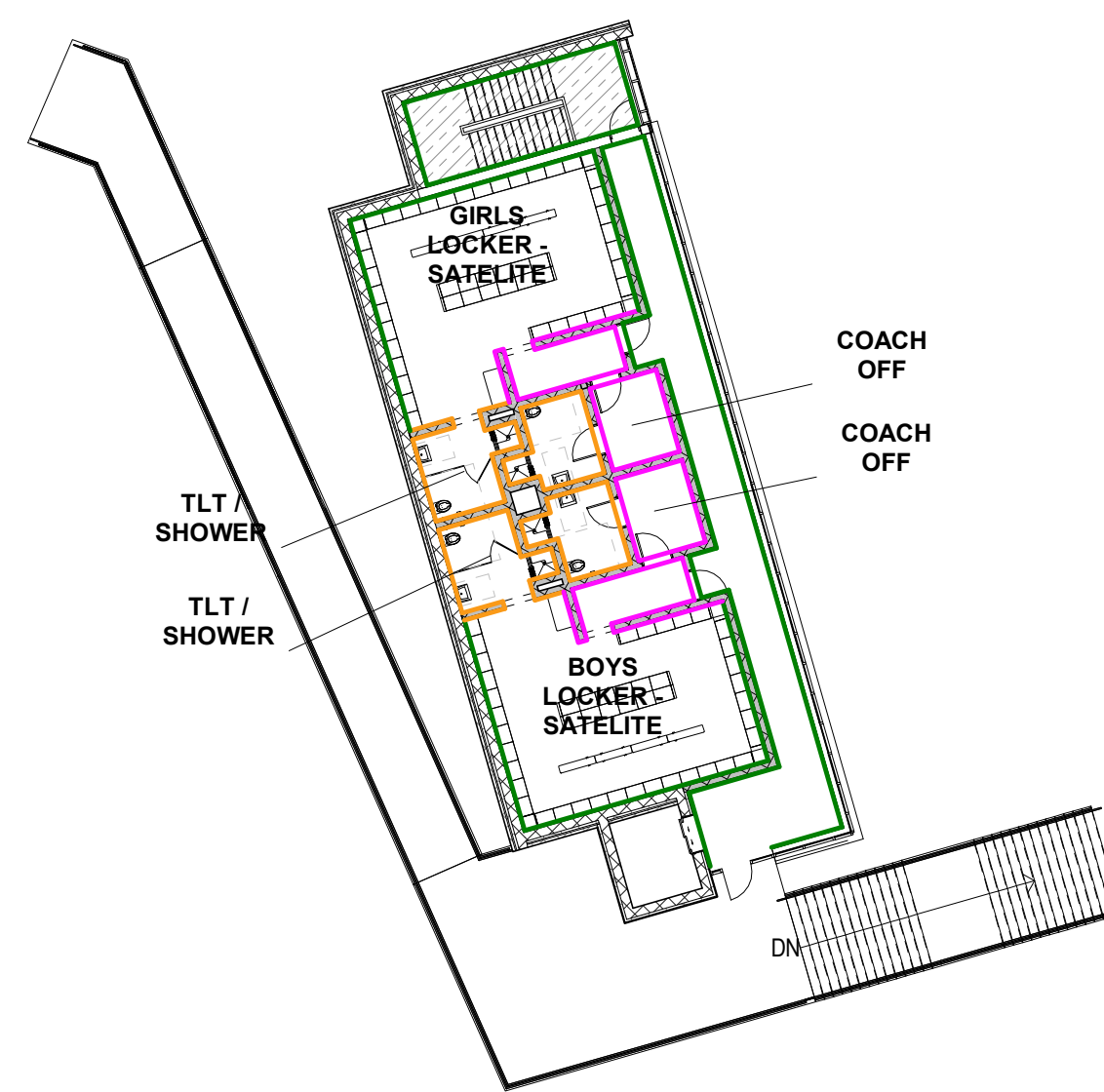
**FLOOR FINISH
MATERIAL PLAN
- FOURTH
FLOOR LEVEL**

Scale: 1" = 20'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

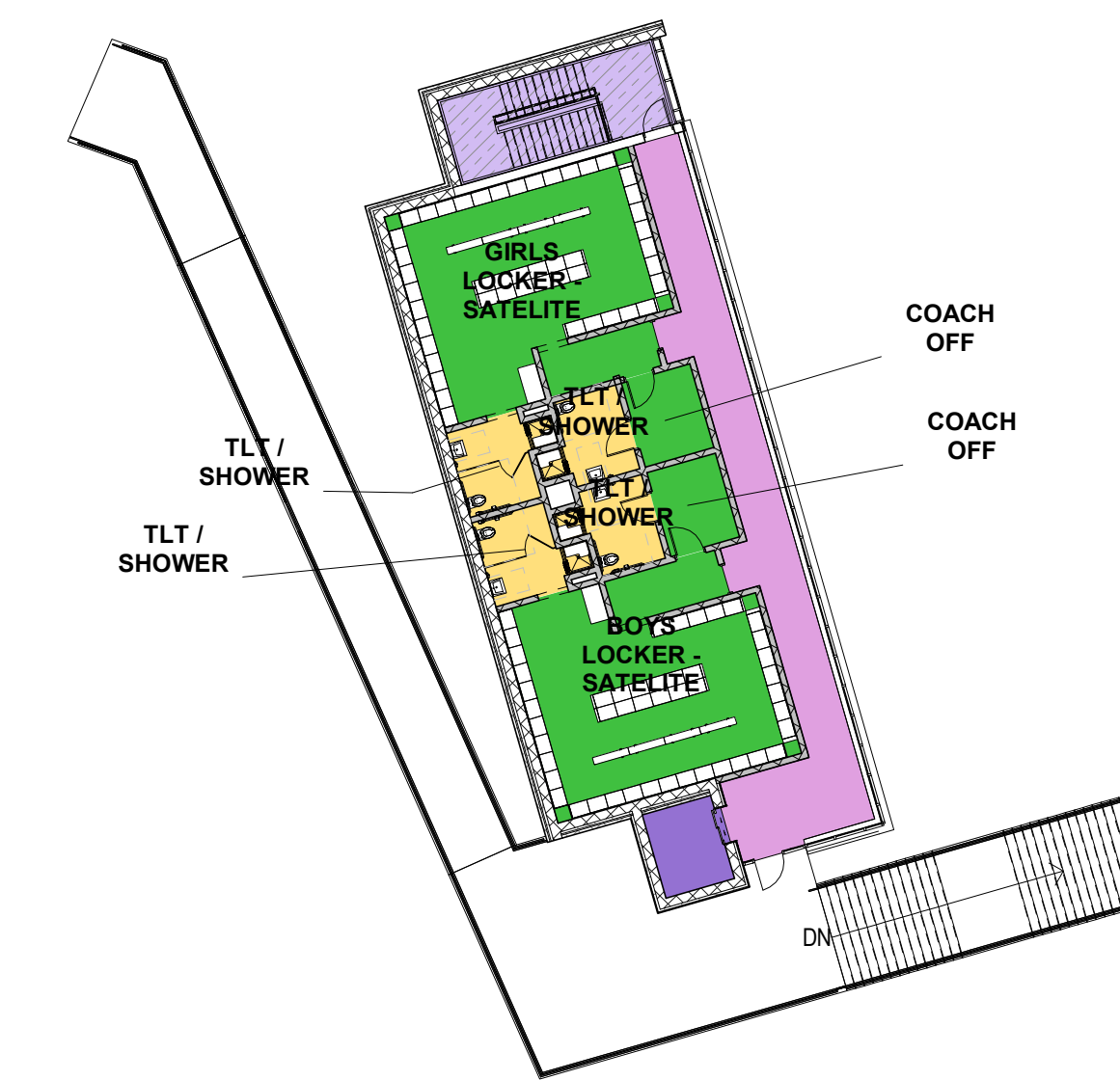
AF1-0-4



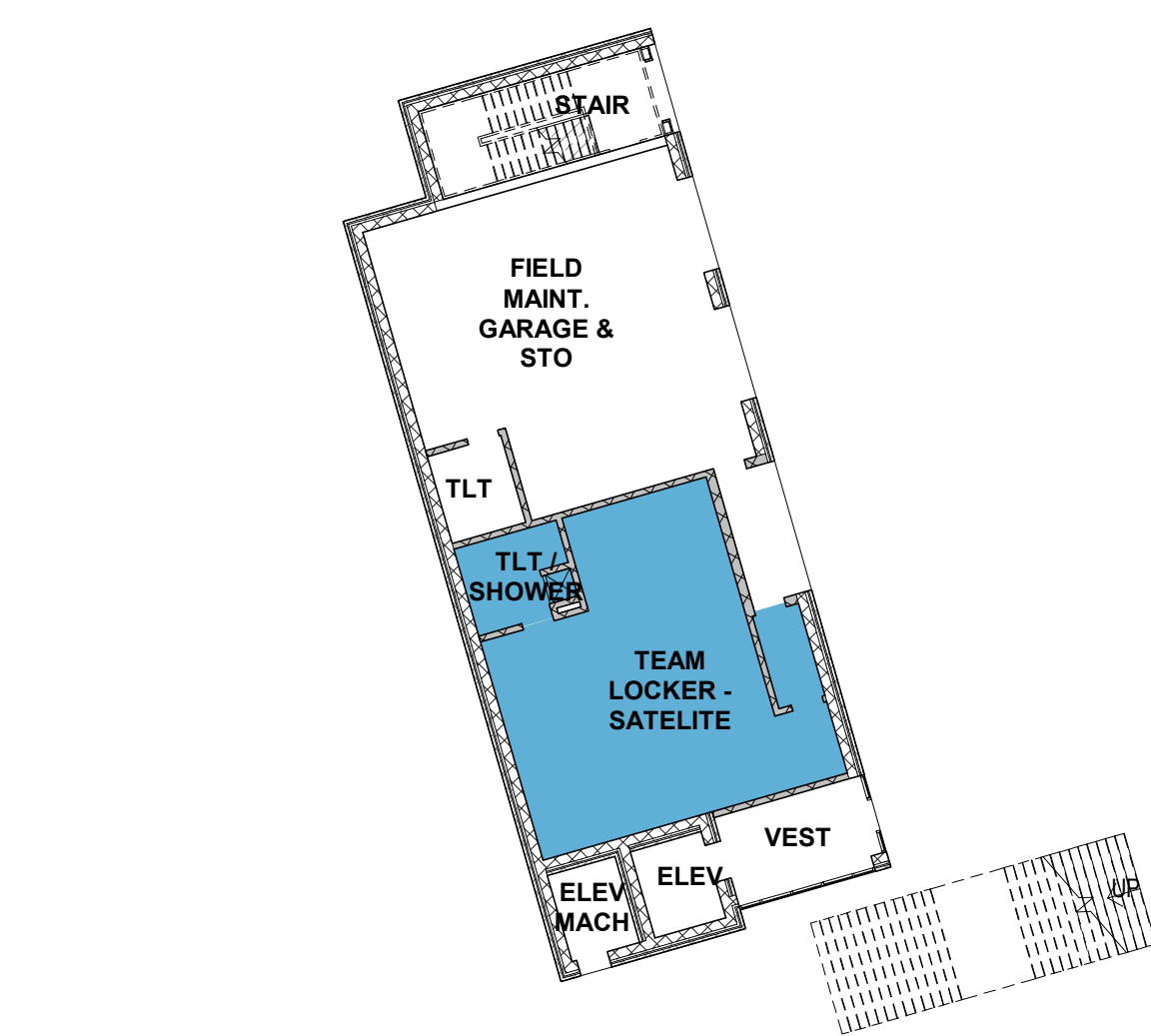
6 LOCKER BUILDING SECOND FLOOR CEILING FINISH PLAN
 1" = 20'-0"



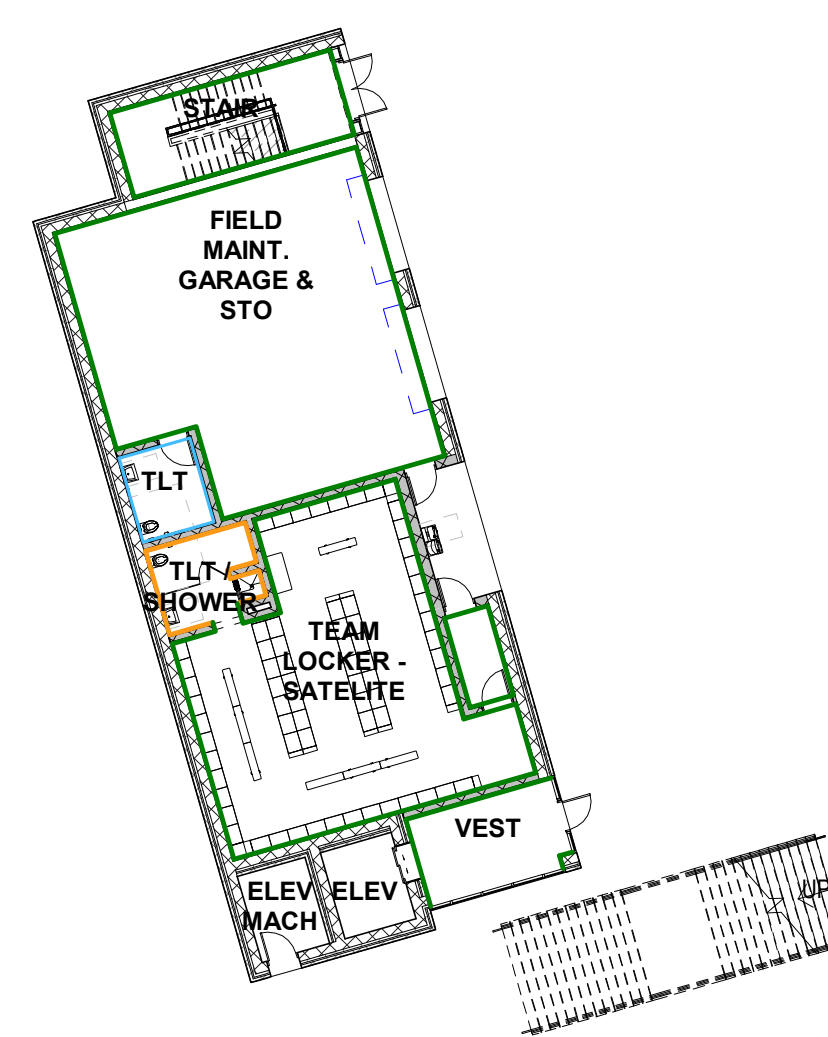
5 LOCKER BUILDING SECOND FLOOR WALL FINISH PLAN
 1" = 20'-0"



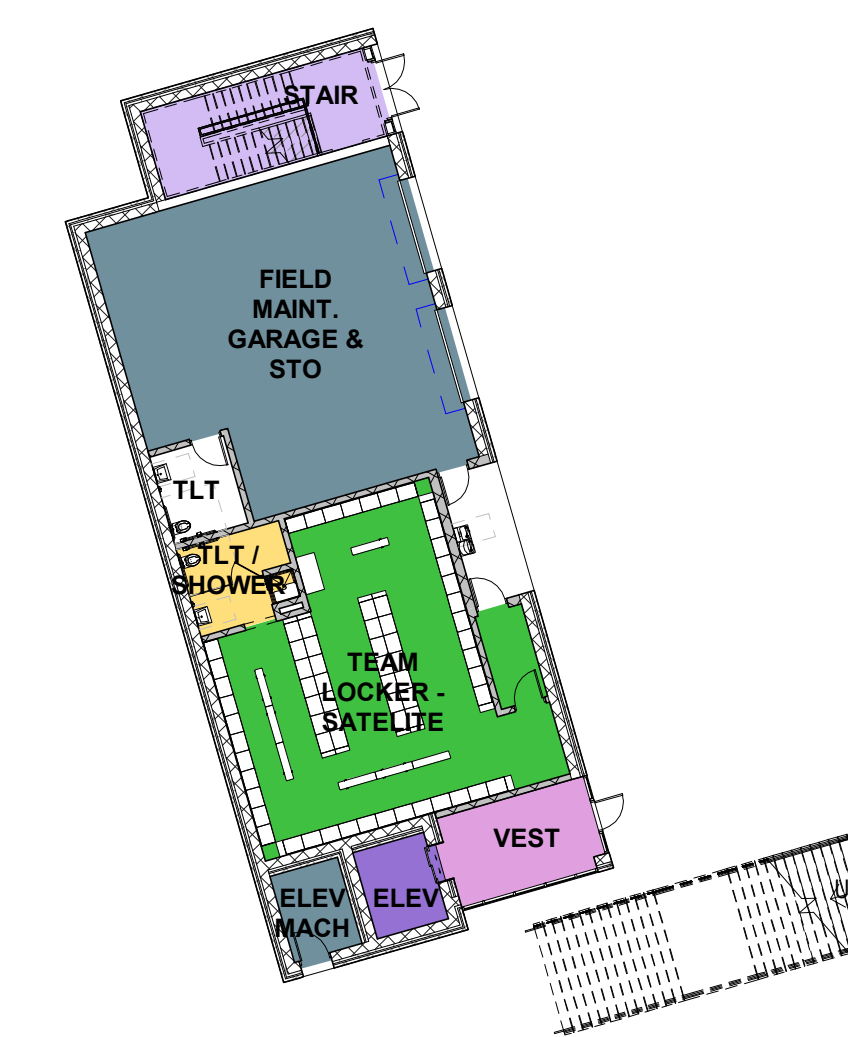
4 LOCKER BUILDING SECOND FLOOR FINISH PLAN
 1" = 20'-0"



3 LOCKER BUILDING FIRST FLOOR CEILING FINISH PLAN
 1" = 20'-0"



2 LOCKER BUILDING FIRST FLOOR WALL FINISH PLAN
 1" = 20'-0"



1 LOCKER BUILDING FIRST FLOOR FINISH PLAN
 1" = 20'-0"

Ceiling Finishes Legend

- ACM (ALUM COMPOSITE MATERIAL)
- ACPCP (ACOUSTICAL PREFORMED CEILING PANELS)
- ACT-1 (2 X 2 HIGH NRC ACOUSTICAL CEILING TILE)
- ACT-2 (2 X 2 WASHABLE ACOUSTICAL CEILING TILE FOR KITCHEN LOCATIONS)
- ACT-3 (2 X 2 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE AT ADMIN AREAS)
- ACT-4 (2 X 6 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE)
- EAVB (ALUM VERTICAL BLADE CEILING SYSTEM)
- EXPOSED PAINTED STRUCTURAL STEEL & METAL DECK
- GWB (PAINTED)
- LINEAR METAL CEILING W/ WOOD APPEARANCE, 4" WIDE PLANK
- MESH METAL CEILING
- MESH METAL CEILING WITH ACRYLIC PANEL BACKING
- MOISTURE RESISTANT GWB CEILING (PAINTED)

WALL FINISH LEGEND

- CERAMIC TILE FULL HEIGHT EQUAL TO DALTILE SEMIGLOSS 4 1/4" X 4 1/4"
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 5'-0" A.F.F. EQUAL TO DALTILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 4' - 3" A.F.F. EQUAL TO DALTILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- EPOXY PAINT
- PAINTED CMU
- PAINTED IMPACT RESISTANT GWB
- PAINTED PRE-CAST CONCRETE
- PAINTED GWB
- FRP PANELS FULL HEIGHT
- FRP PANELS TO 4' - 4" A.F.F. W/ EPOXY PAINT ABOVE
- FULL HEIGHT THIN PORCELAIN TILE
- FULL HEIGHT PHENOLIC PANELS
- WOOD VENEER PANELS
- FULL HEIGHT TRAVERTINE
- DECORATIVE WOOD PANELS
- DECORATIVE FABRIC METL PANEL
- PAINTED PERFORATED METALPANELS
- VINYL WAL COVERING

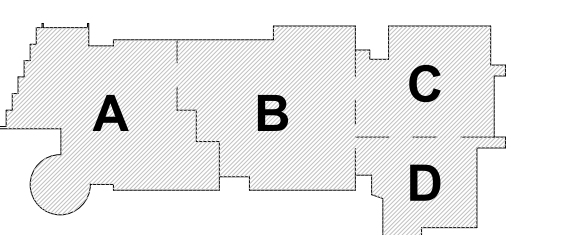
Floor Finishes Legend

- ATHLETIC SPORTS FLOORING
- CARPET
- Carpet
- CERAMIC MOSAIC TILE
- Concrete
- EPOXY FLOORING
- EPOXY TERRAZZO
- FOOT GRILLE CARPET - ATHLETIC CLEAT RESISTANT
- LINOLEUM
- LUXURY VINYL TILE
- MULTIPURPOSE FLOORING
- PORCELAIN PAVER
- RESILIENT CARPET
- ROOF PAVER SYSTEM
- RUBBER STAIR TREADS & RISERS
- RUBBER TILE
- RUBBER TILE - ATHLETIC CLEAT RESISTANT
- SEALED CONCRETE
- SHEET VINYL
- SHEET VINYL - SLIP RESISTANT
- WALK OFF CARPET
- WOOD ATHLETIC FLOORING
- WOOD SPRUNG STAGE FLOORING

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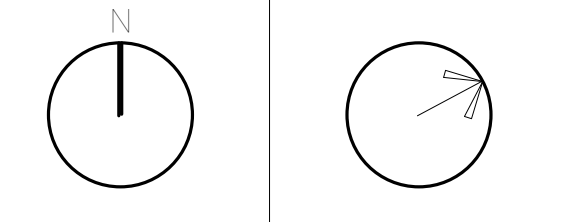
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN

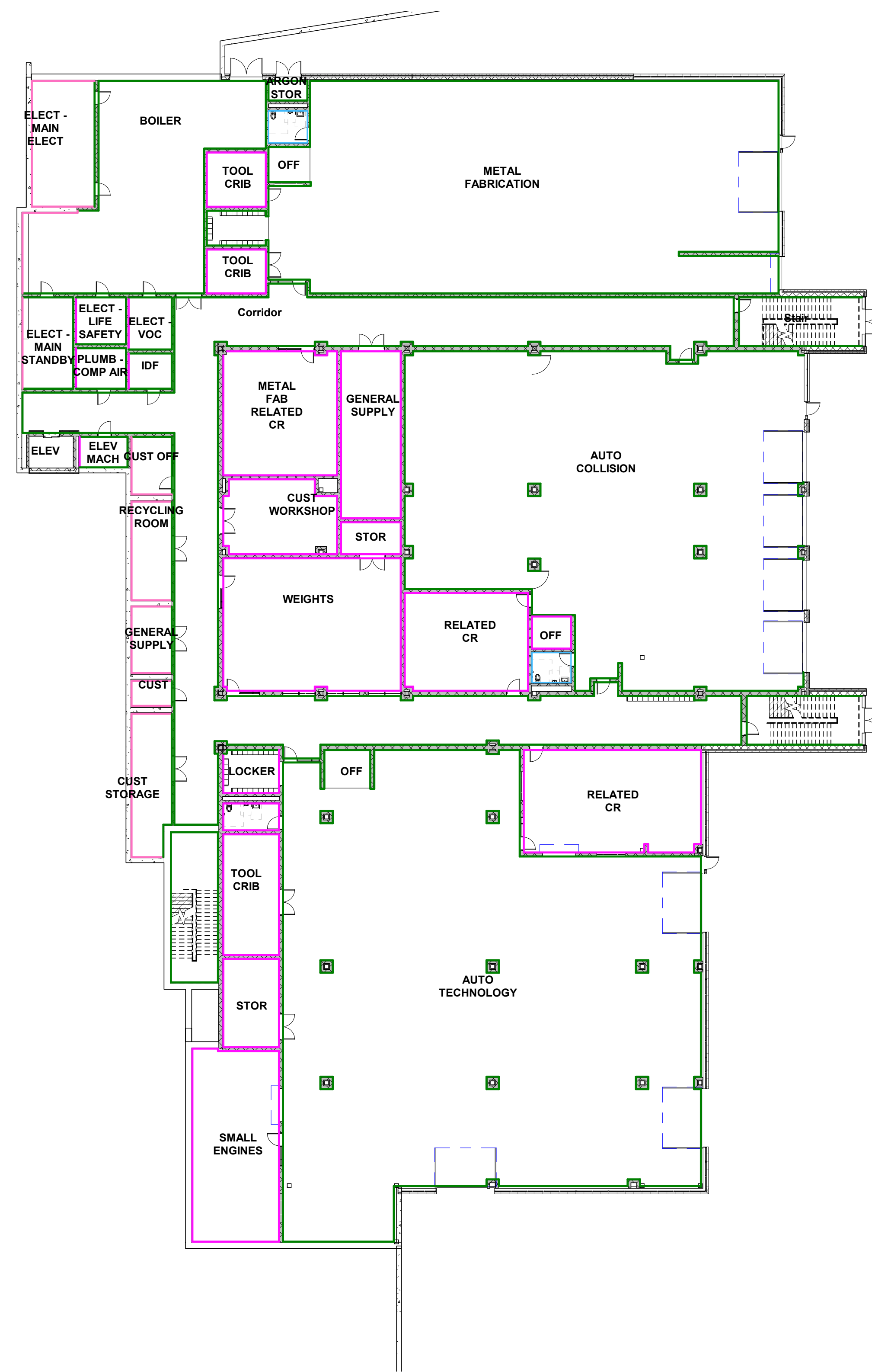
PROJECT NORTH MAGNETIC NORTH



LOCKER BUILDING FINISH PLANS

Scale: As indicated
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

AF1-1-LB



2 OVERALL LOWER LEVEL FLOOR FINISH PLAN
 1" = 20'-0"



1 OVERALL FIRST FLOOR FINISH PLAN
 1" = 20'-0"

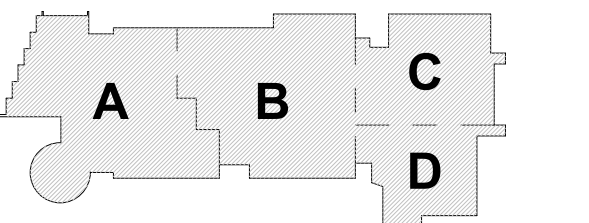
WALL FINISH LEGEND

- CERAMIC TILE FULL HEIGHT EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4"
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 5'-0" A.F.F. EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 4'-3" A.F.F. EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- EPOXY PAINT
- PAINTED CMU
- PAINTED IMPACT RESISTANT GWB
- PAINTED PRE-CAST CONCRETE
- PAINTED GWB
- FRP PANELS FULL HEIGHT
- FRP PANELS TO 4'-4" A.F.F. W/ EPOXY PAINT ABOVE
- FULL HEIGHT THIN PORCELAIN TILE
- FULL HEIGHT PHENOLIC PANELS
- WOOD VENEER PANELS
- FULL HEIGHT TRAVERTINE
- DECORATIVE WOOD PANELS
- DECORATIVE FABRIC METL PANEL
- PAINTED PERFORATED METALPANELS
- VINYL WAL COVERING

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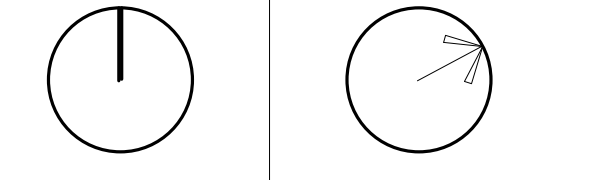
**MSBA SCHEMATIC
 DESIGN SUBMISSION**

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**WALL FINISH
 MATERIAL PLAN
 - LOWER & MAIN
 LEVEL**

WALL FINISH LEGEND

- CERAMIC TILE FULL HEIGHT EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4"
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 4'-3" A.F.F. EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 4'-3" A.F.F. EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- EPOXY PAINT
- PAINTED CMU
- PAINTED IMPACT RESISTANT GWB
- PAINTED PRE-CAST CONCRETE
- PAINTED GWB
- FRP PANELS FULL HEIGHT
- FRP PANELS TO 4'-4" A.F.F. W/ EPOXY PAINT ABOVE
- FULL HEIGHT THIN PORCELAIN TILE
- FULL HEIGHT PHENOLIC PANELS
- WOOD VENEER PANELS
- FULL HEIGHT TRAVERTINE
- DECORATIVE WOOD PANELS
- DECORATIVE FABRIC METL PANEL
- PAINTED PERFORATED METALPANELS
- VINYL WAL COVERING

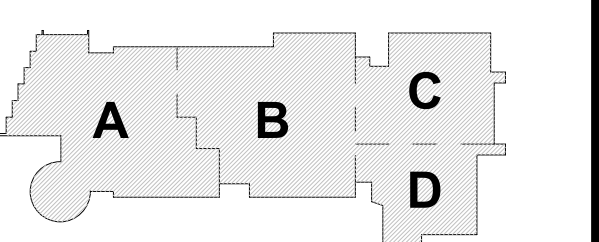


1 SECOND FLOOR PLAN
 1" = 20'-0"

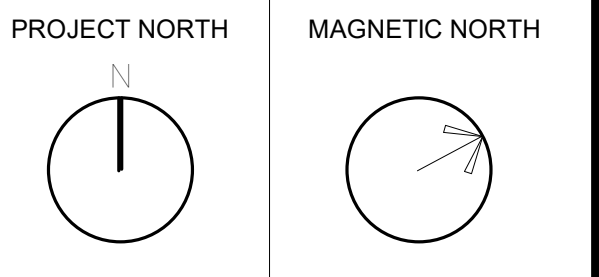
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June 17, 2021



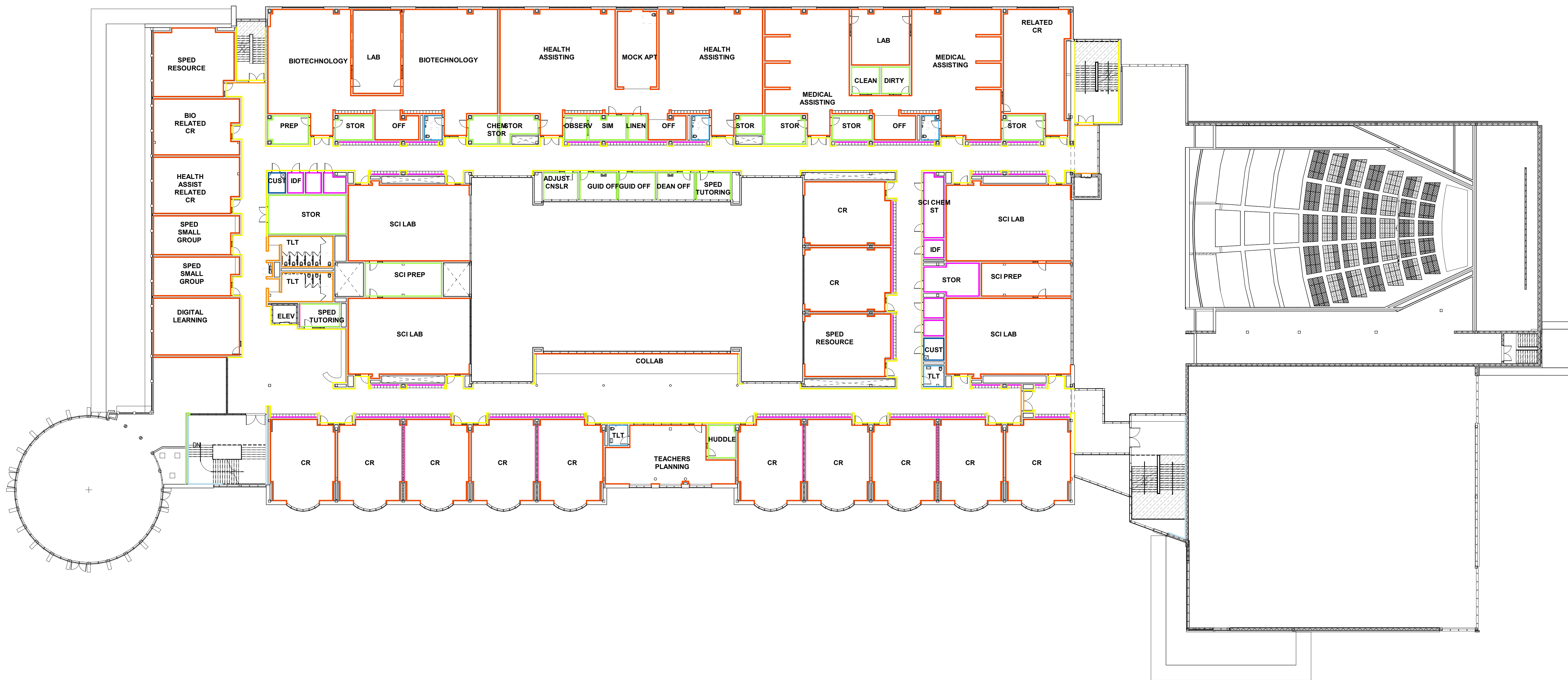
KEY PLAN



WALL FINISH MATERIAL PLAN - SECOND LEVEL

Scale: As indicated
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

AF2-0-2



WALL FINISH LEGEND

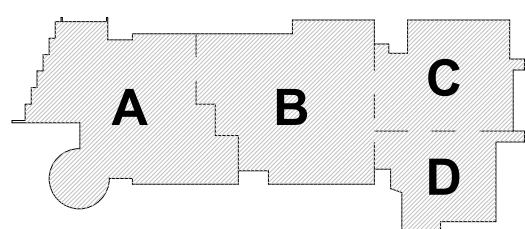
- CERAMIC TILE FULL HEIGHT EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4"
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 5'-0" A.F.F. EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 4' - 3" A.F.F. EQUAL TO DAL TILE SEMIGLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- EPOXY PAINT
- PAINTED CMU
- PAINTED IMPACT RESISTANT GWB
- PAINTED PRE-CAST CONCRETE
- PAINTED GWB
- FRP PANELS FULL HEIGHT
- FRP PANELS TO 4' - 4" A.F.F. W/ EPOXY PAINT ABOVE
- FULL HEIGHT THIN PORCELAIN TILE
- FULL HEIGHT PHENOLIC PANELS
- WOOD VENEER PANELS
- FULL HEIGHT TRAVERTINE
- DECORATIVE WOOD PANELS
- DECORATIVE FABRIC METL PANEL
- PAINTED PERFORATED METAL PANELS
- VINYL WAL COVERING

1 THIRD FLOOR PLAN
 1" = 20'-0"

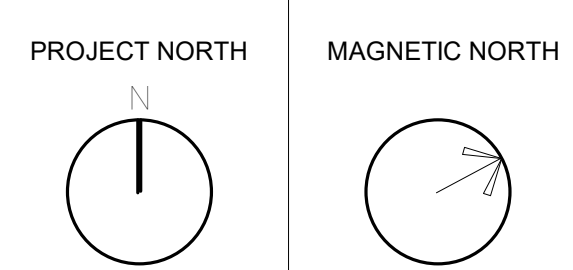
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MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN



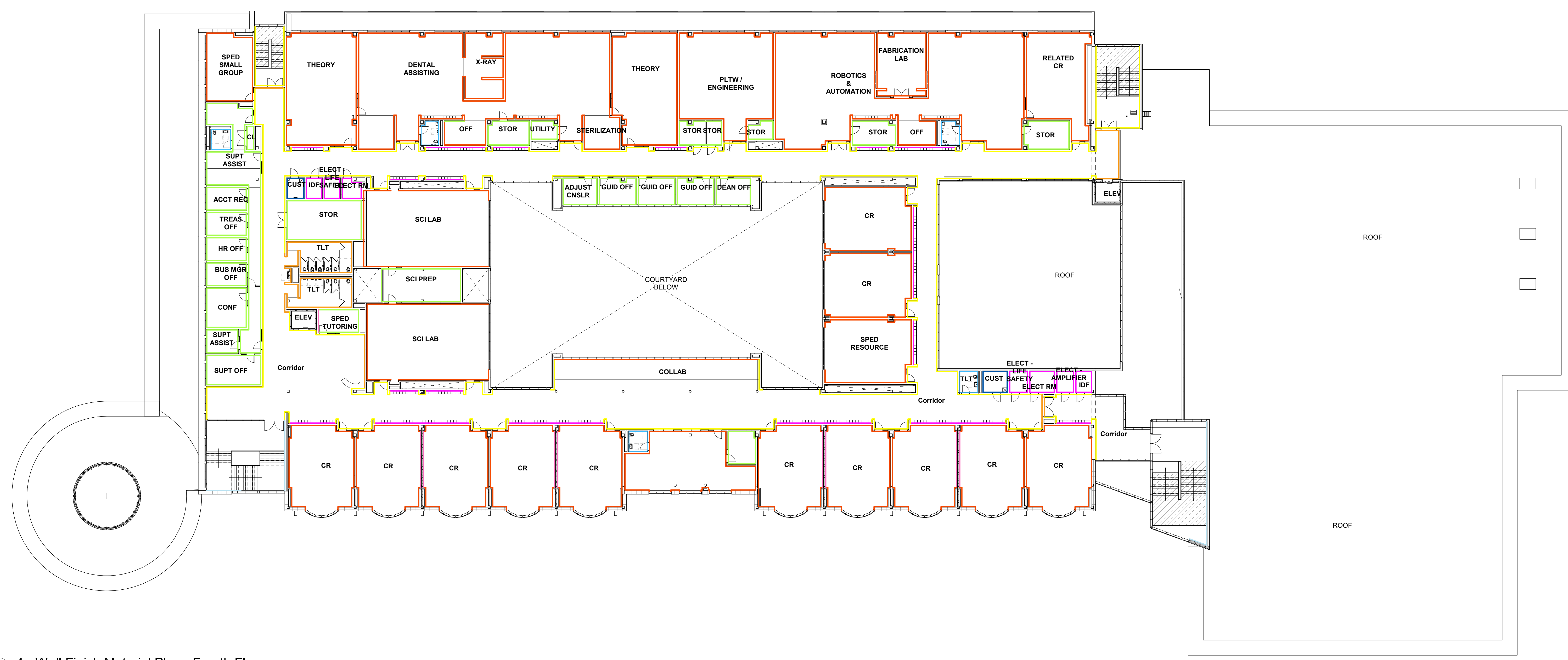
WALL FINISH MATERIAL PLAN - THIRD LEVEL

Scale: As indicated
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

AF2-0-3

WALL FINISH LEGEND

- CERAMIC TILE FULL HEIGHT EQUAL TO DAL TILE SEMI GLOSS 4 1/4" X 4 1/4"
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 5'-0" A.F.F. EQUAL TO DAL TILE SEMI GLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- CERAMIC TILE BASE W/ CERAMIC TILE WAINSCOT TO 4'-3" A.F.F. EQUAL TO DAL TILE SEMI GLOSS 4 1/4" X 4 1/4" AND EPOXY PAINT ABOVE
- EPOXY PAINT
- PAINTED CMU
- PAINTED IMPACT RESISTANT GWB
- PAINTED PRE-CAST CONCRETE
- PAINTED GWB
- FRP PANELS FULL HEIGHT
- FRP PANELS TO 4' - 4" A.F.F. W/ EPOXY PAINT ABOVE
- FULL HEIGHT THIN PORCELAIN TILE
- FULL HEIGHT PHENOLIC PANELS
- WOOD VENEER PANELS
- FULL HEIGHT TRAVERTINE
- DECORATIVE WOOD PANELS
- DECORATIVE FABRIC METL PANEL
- PAINTED PERFORATED METAL PANELS
- VINYL WAL COVERING

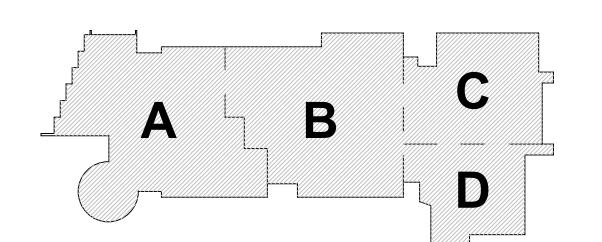


1 4 - Wall Finish Material Plan - Fourth Floor
 1" = 20'-0"

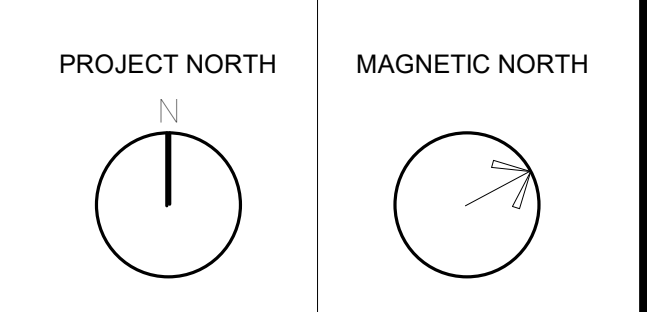
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MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN



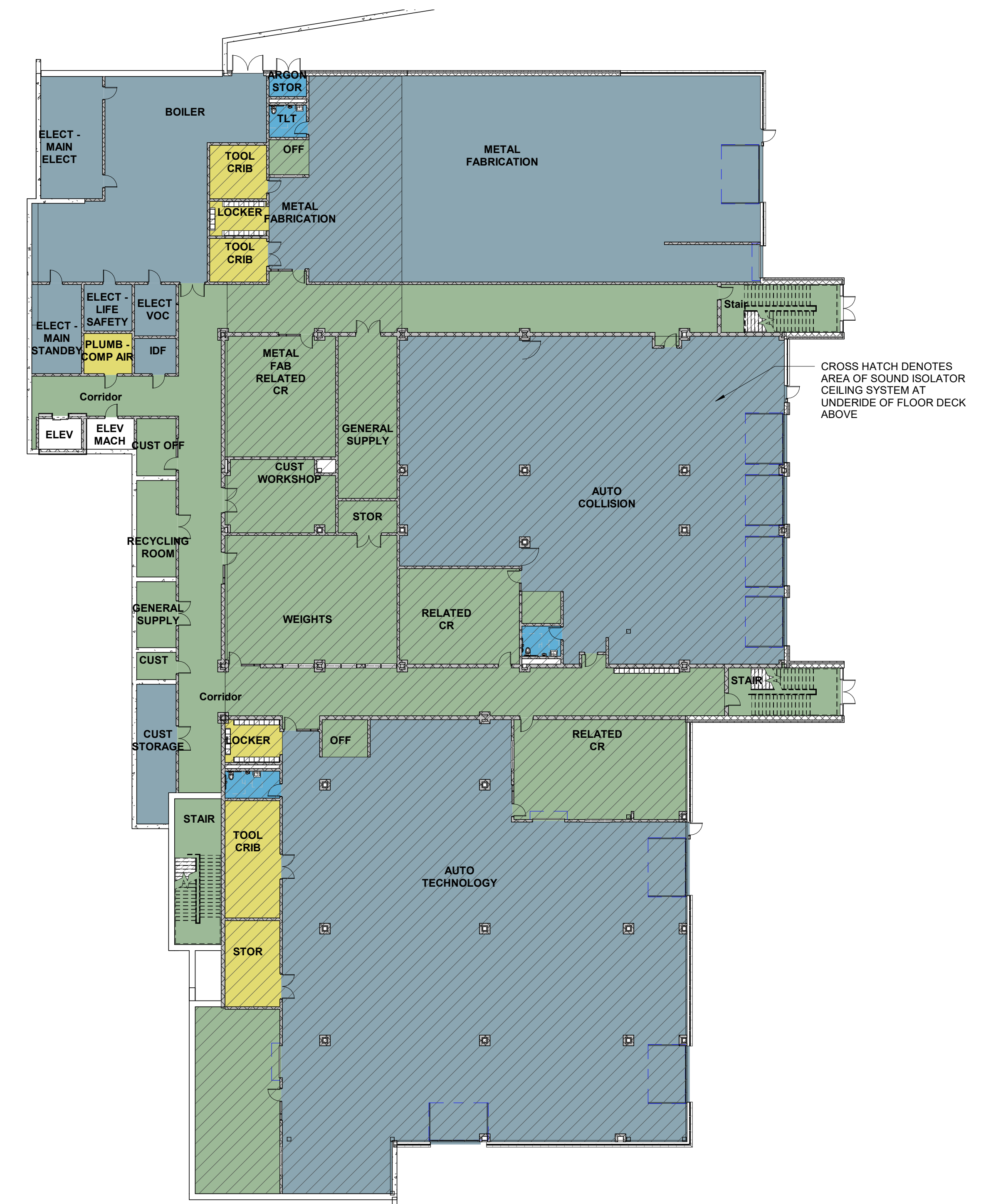
WALL FINISH MATERIAL PLAN - FOURTH LEVEL

Scale: As indicated
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

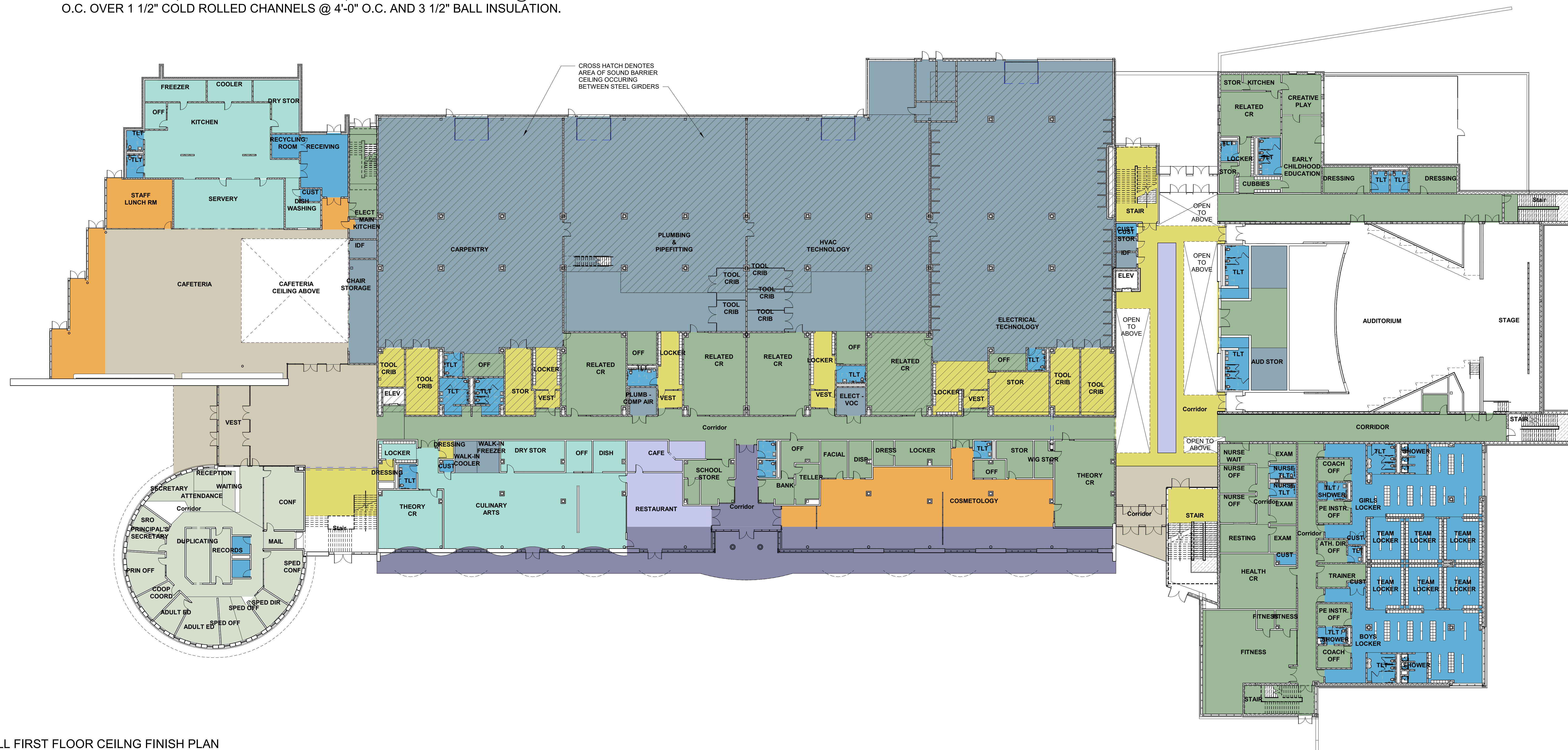
AF2-0-4

Ceiling Finishes Legend

- ACM (ALUM COMPOSITE MATERIAL)
- ACPCP (ACOUSTICAL PREFORMED CEILING PANELS)
- ACT-1 (2 X 2 HIGH NRC ACOUSTICAL CEILING TILE)
- ACT-2 (2 X 2 WASHABLE ACOUSTICAL CEILING TILE FOR KITCHEN LOCATIONS)
- ACT-3 (2 X 2 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE AT ADMIN AREAS)
- ACT-4 (2 X 6 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE)
- EAVB (ALUM VERTICAL BLADE CEILING SYSTEM)
- EXPOSED PAINTED STRUCTURAL STEEL & METAL DECK
- GWB (PAINTED)
- LINEAR METAL CEILING W/ WOOD APPEARANCE, 4" WIDE PLANK
- MESH METAL CEILING
- MESH METAL CEILING WITH ACRYLIC PANEL BACKING
- MOISTURE RESISTANT GWB CEILING (PAINTED)
- SOUND BARRIER CEILING OCCURRING BETWEEN STEEL GIRDERS:
 2 LAYERS 5/8" GWB, PAINTED WHERE EXPOSED, OVER 7/8" METAL FURRING @ 16" O.C. OVER 1 1/2" COLD ROLLED CHANNELS @ 4'-0" O.C. AND 3 1/2" BALL INSULATION.



2 OVERALL LOWER LEVEL CEILING FINISH PLAN
 1" = 20'-0"

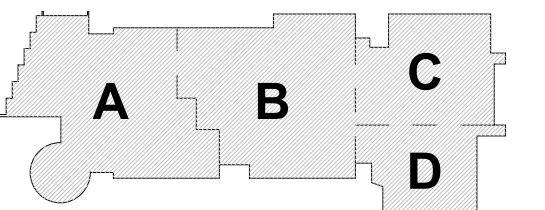


1 OVERALL FIRST FLOOR CEILING FINISH PLAN
 1" = 20'-0"

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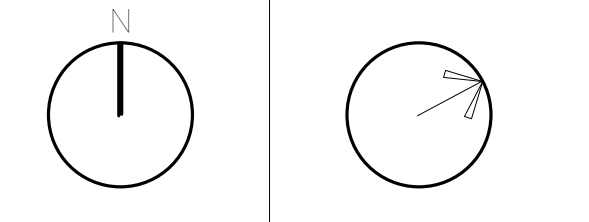
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



CEILING FINISH MATERIAL PLAN - LOWER & MAIN LEVEL

Scale: 1" = 20'-0"
 Job No.: 2002
 Drawn By: DRA
 Date: June 17, 2021

AF8-0-1

Ceiling Finishes Legend

- ACM (ALUM COMPOSITE MATERIAL)
- ACPCP (ACOUSTICAL PREFORMED CEILING PANELS)
- ACT-1 (2 X 2 HIGH NRC ACOUSTICAL CEILING TILE)
- ACT-2 (2 X 2 WASHABLE ACOUSTICAL CEILING TILE FOR KITCHEN LOCATIONS)
- ACT-3 (2 X 2 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE AT ADMIN AREAS)
- ACT-4 (2 X 6 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE)
- EAVB (ALUM VERTICAL BLADE CEILING SYSTEM)
- EXPOSED PAINTED STRUCTURAL STEEL & METAL DECK
- GWB (PAINTED)
- LINEAR METAL CEILING W/ WOOD APPEARANCE, 4" WIDE PLANK
- MESH METAL CEILING
- MESH METAL CEILING WITH ACRYLIC PANEL BACKING
- MOISTURE RESISTANT GWB CEILING (PAINTED)



1 OVERALL SECOND FLOOR CEILING FINISH PLAN
1" = 20'-0"

DRA

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225 Oakland Road
South Windsor, CT 06074
260 Charles Street
Studio 300
Waltham, MA 02453
Planning | Architecture | Interior Design
Tel: 617.954.1700
www.dra.com

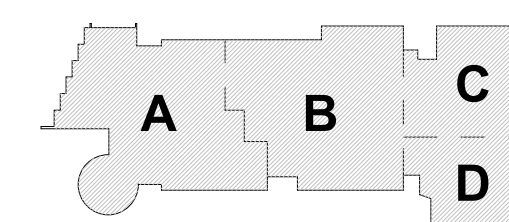
**Northeast
Metropolitan
Regional
Vocational High
School**

Wakefield, MA 01880

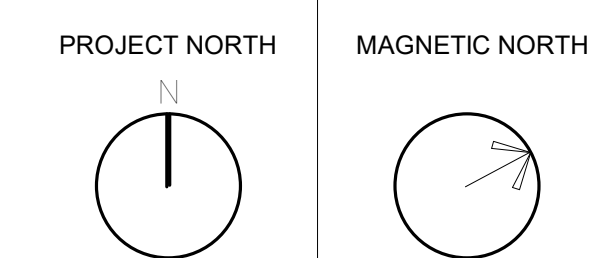
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MSBA SCHEMATIC
DESIGN SUBMISSION

June 17, 2021



KEY PLAN



**CEILING FINISH
MATERIAL PLAN
- SECOND
FLOOR**

Scale: 1" = 20'-0"
Job No.: 20202
Drawn By: DRA
Date: June 17, 2021

AF8-0-2

Ceiling Finishes Legend

- ACM (ALUM COMPOSITE MATERIAL)
- ACPCP (ACOUSTICAL PREFORMED CEILING PANELS)
- ACT-1 (2 X 2 HIGH NRC ACOUSTICAL CEILING TILE)
- ACT-2 (2 X 2 WASHABLE ACOUSTICAL CEILING TILE FOR KITCHEN LOCATIONS)
- ACT-3 (2 X 2 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE AT ADMIN AREAS)
- ACT-4 (2 X 6 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE)
- EAVB (ALUM VERTICAL BLADE CEILING SYSTEM)
- EXPOSED PAINTED STRUCTURAL STEEL & METAL DECK
- GWB (PAINTED)
- LINEAR METAL CEILING W/ WOOD APPEARANCE, 4" WIDE PLANK
- MESH METAL CEILING
- MESH METAL CEILING WITH ACRYLIC PANEL BACKING
- MOISTURE RESISTANT GWB CEILING (PAINTED)

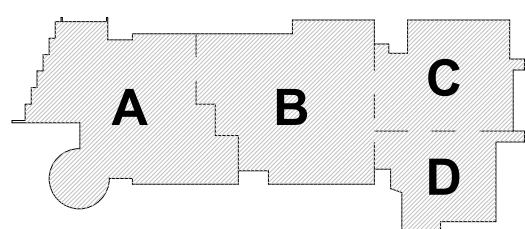


1 OVERALL THIRD FLOOR CEILING FINISH PLAN
 1" = 20'-0"

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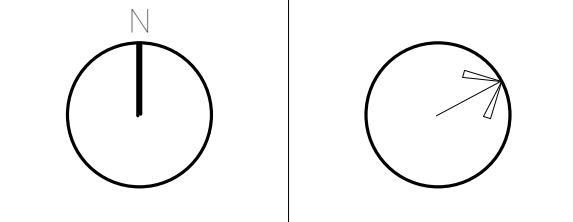
MSBA SCHEMATIC DESIGN SUBMISSION

June 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



CEILING FINISH MATERIAL PLAN - THIRD FLOOR

Scale: 1" = 20'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021

AF8-0-3

Ceiling Finishes Legend

- ACM (ALUM COMPOSITE MATERIAL)
- ACPCP (ACOUSTICAL PREFORMED CEILING PANELS)
- ACT-1 (2 X 2 HIGH NRC ACOUSTICAL CEILING TILE)
- ACT-2 (2 X 2 WASHABLE ACOUSTICAL CEILING TILE FOR KITCHEN LOCATIONS)
- ACT-3 (2 X 2 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE AT ADMIN AREAS)
- ACT-4 (2 X 6 HIGH NRC TEGULAR ACOUSTICAL CEILING TILE)
- EAVB (ALUM VERTICAL BLADE CEILING SYSTEM)
- EXPOSED PAINTED STRUCTURAL STEEL & METAL DECK
- GWB (PAINTED)
- LINEAR METAL CEILING W/ WOOD APPEARANCE, 4" WIDE PLANK
- MESH METAL CEILING
- MESH METAL CEILING WITH ACRYLIC PANEL BACKING
- MOISTURE RESISTANT GWB CEILING (PAINTED)

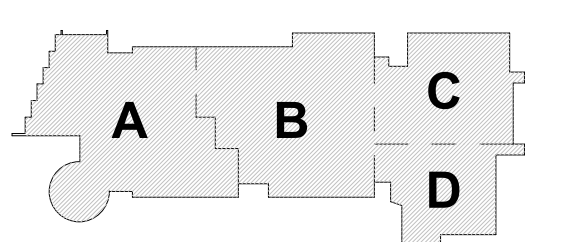


1 OVERALL FOURTH FLOOR CEILING FINISH PLAN
 1" = 20'-0"

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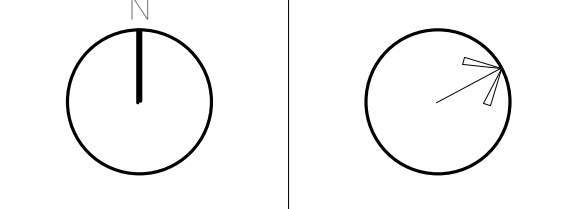
MSBA SCHEMATIC
 DESIGN SUBMISSION

June 17, 2021



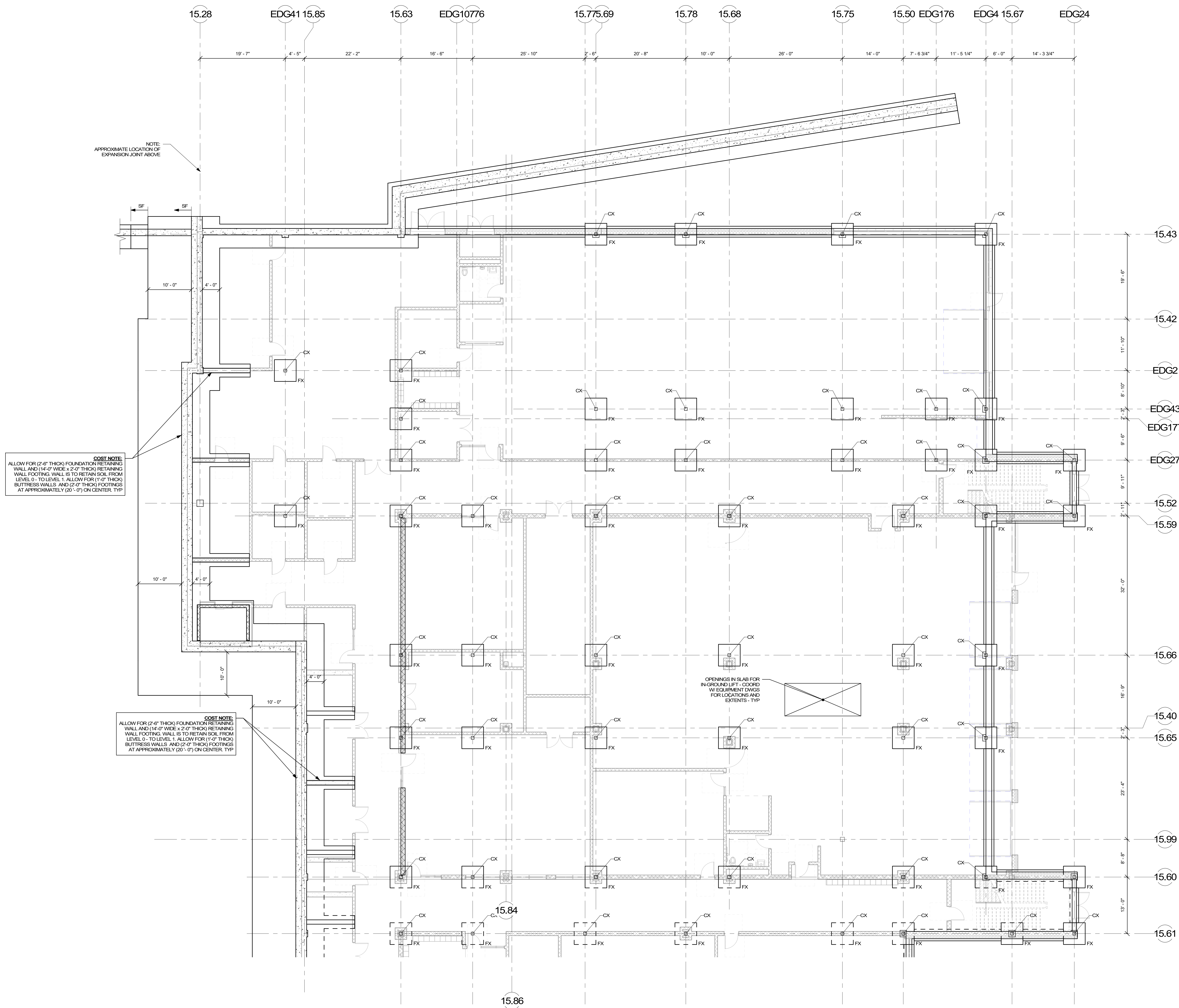
KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**CEILING FINISH
 MATERIAL PLAN
 - FLOOR
 - FOURTH
 FLOOR**

Scale: 1" = 20'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: June 17, 2021
AF8-0-4



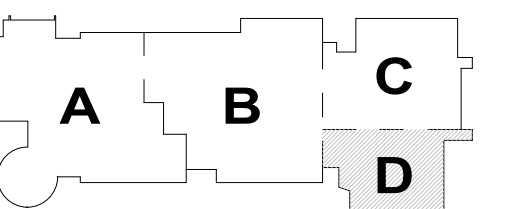
COST NOTE:
 ALLOW FOR (11'-0" x 11'-0" x 2'-0" DEEP) TYPICAL COLUMN FOOTINGS. INTERIOR FOOTINGS WILL BE (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION, AND EXTERIOR FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (14" - TO - 18" THICK) TYPICAL CONTINUOUS EXTERIOR FOUNDATION WALLS AND (3'-0" WIDE x 2'-0" DEEP) TYPICAL CONTINUOUS EXTERIOR FOUNDATION WALL FOOTINGS. EXTERIOR WALL FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (8" - TO - 12" THICK) CONTINUOUS CONCRETE FOUNDATION WALLS AND (3'-0" WIDE x 2'-0" DEEP) CONTINUOUS FOOTINGS BELOW MASONRY WALLS. INTERIOR SHEAR WALL FOOTINGS WILL BEAR (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION.
 ALLOW FOR VERTICAL AND HORIZONTAL REINFORCING WITHIN GROUTED CELLS OF ALL MASONRY WALLS SPACED AT (4'-0" ON CENTER MAX.).

COST NOTE:
 ALLOW FOR (4" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (1/2") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL.
 ALLOW FOR (6" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (1/2") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL IN ALL SHOP AREAS.
 ALLOW FOR (10" THICK) CONTINUOUS THICKENED SLAB-ON-GRADE BELOW ALL INTERIOR NON-STRUCTURAL MASONRY WALLS.

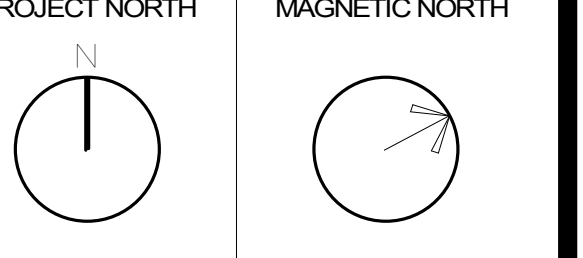
FOOTING SCHEDULE		
MARK	SIZE	REINFORCEMENT
F8	8'-0" x 8'-0" x 2'-0"	9 - #8 BOT EA WAY
F9	9'-0" x 9'-0" x 2'-0"	10 - #8 BOT EA WAY
F10	10'-0" x 10'-0" x 2'-0"	11 - #8 BOT EA WAY
F11	11'-0" x 11'-0" x 2'-0"	12 - #8 BOT EA WAY
F12	12'-0" x 12'-0" x 2'-0"	13 - #8 BOT EA WAY
F13	13'-0" x 13'-0" x 2'-0"	14 - #8 BOT EA WAY
FA	SEE PLAN x 2'-0"	#8 @ 12"OC TOP AND BOT EA WAY

T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

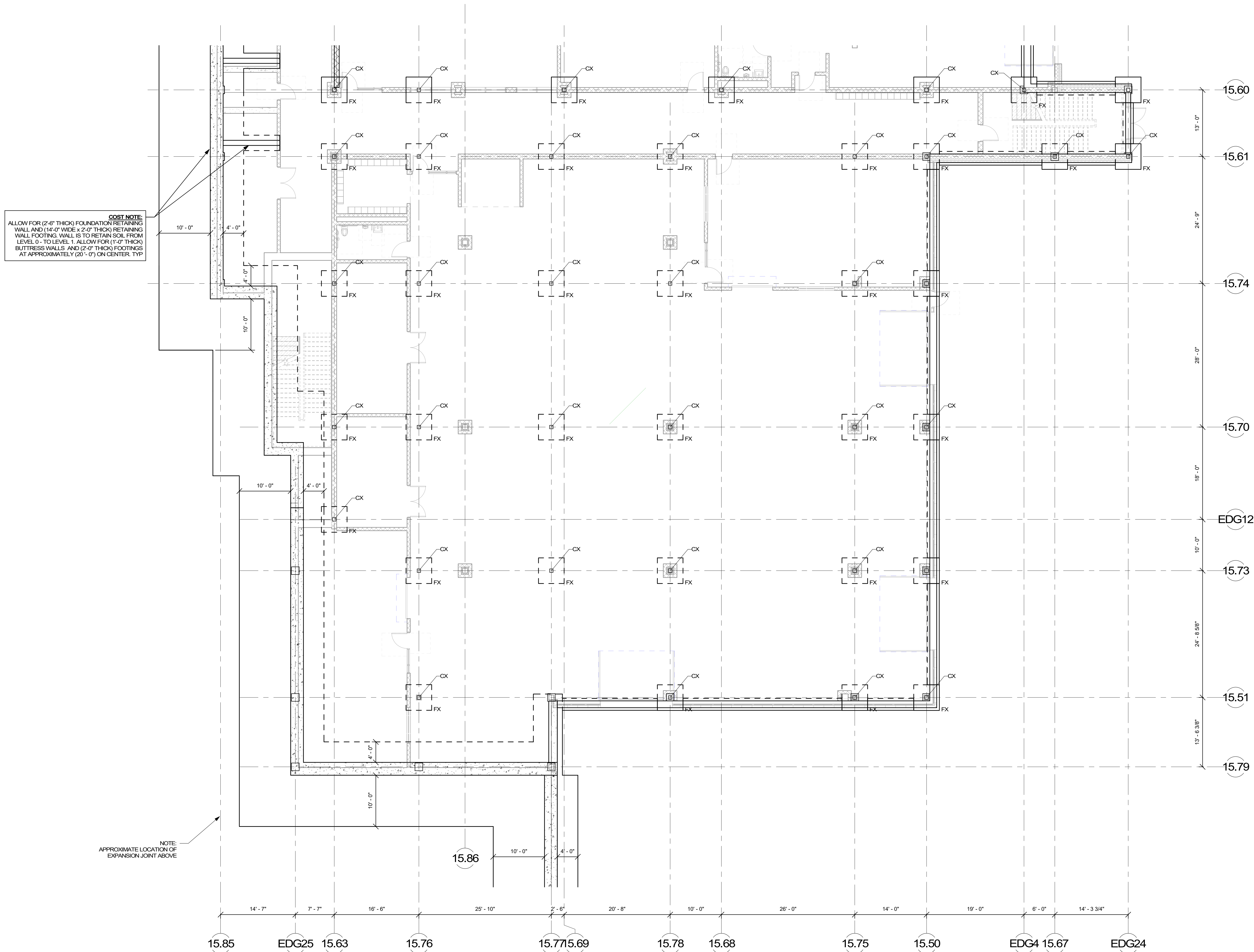
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PROJECT NORTH MAGNETIC NORTH



**LOWER LEVEL
 FOUNDATION
 PLAN - AREA D**



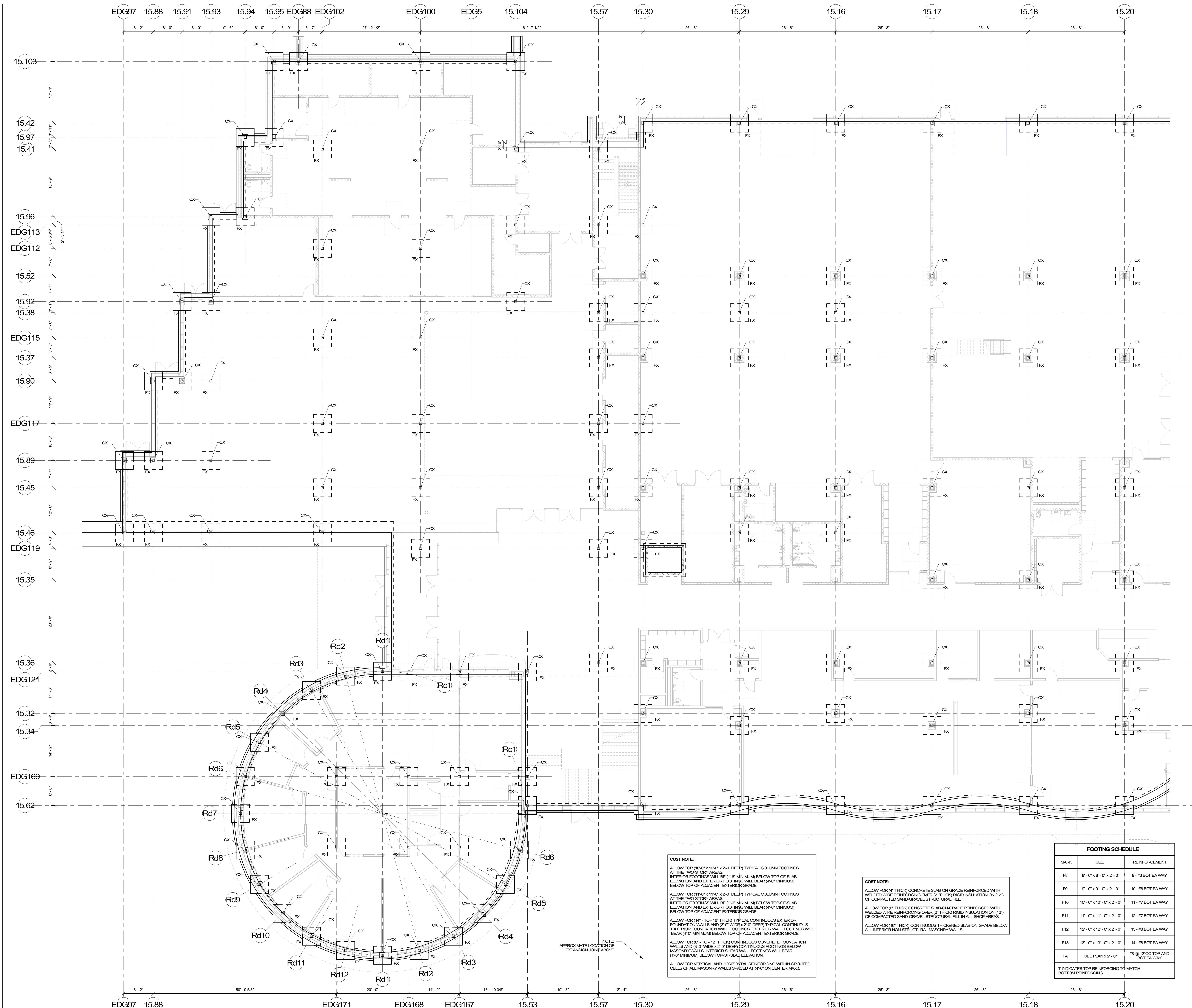
COST NOTE:
 ALLOW FOR (2'-6" THICK) FOUNDATION RETAINING WALL AND (14'-0" WIDE x 2'-0" THICK) RETAINING WALL FOOTING. WALL IS TO RETAIN SOIL FROM LEVEL 0 - TO LEVEL 1. ALLOW FOR (1'-0" THICK) BUTTRESS WALLS AND (2'-0" THICK) FOOTINGS AT APPROXIMATELY (20'-0") ON CENTER. TYP

NOTE:
 APPROXIMATE LOCATION OF EXPANSION JOINT ABOVE

COST NOTE:
 ALLOW FOR (11'-0" x 11'-0" x 2'-0" DEEP) TYPICAL COLUMN FOOTINGS. INTERIOR FOOTINGS WILL BE (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION, AND EXTERIOR FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (14" - TO - 16" THICK) TYPICAL CONTINUOUS EXTERIOR FOUNDATION WALLS AND (3'-0" WIDE x 2'-0" DEEP) TYPICAL CONTINUOUS EXTERIOR WALL FOOTINGS. EXTERIOR WALL FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (8" - TO - 12" THICK) CONTINUOUS CONCRETE FOUNDATION WALLS AND (2'-0" WIDE x 2'-0" DEEP) CONTINUOUS FOOTINGS BELOW MASONRY WALLS. INTERIOR SHEAR WALL FOOTINGS WILL BEAR (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION.
 ALLOW FOR VERTICAL AND HORIZONTAL REINFORCING WITHIN GROUTED CELLS OF ALL MASONRY WALLS SPACED AT (4'-0" ON CENTER MAX.).

COST NOTE:
 ALLOW FOR (4" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL.
 ALLOW FOR (6" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL IN ALL SHOP AREAS.
 ALLOW FOR (16" THICK) CONTINUOUS THICKENED SLAB-ON-GRADE BELOW ALL INTERIOR NON-STRUCTURAL MASONRY WALLS.

FOOTING SCHEDULE		
MARK	SIZE	REINFORCEMENT
F8	8' - 0" x 8' - 0" x 2' - 0"	9 - #6 BOT EA WAY
F9	9' - 0" x 9' - 0" x 2' - 0"	10 - #6 BOT EA WAY
F10	10' - 0" x 10' - 0" x 2' - 0"	11 - #7 BOT EA WAY
F11	11' - 0" x 11' - 0" x 2' - 0"	12 - #7 BOT EA WAY
F12	12' - 0" x 12' - 0" x 2' - 0"	13 - #8 BOT EA WAY
F13	13' - 0" x 13' - 0" x 2' - 0"	14 - #8 BOT EA WAY
FA	SEE PLAN x 2' - 0"	#8 @ 12" OC TOP AND BOT EA WAY
T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING		



COST NOTE:
 ALLOW FOR (10'-0" x 10'-0" x 2'-0" DEEP) TYPICAL COLUMN FOOTINGS AT THE TWO-STORY AREAS. INTERIOR FOOTINGS WILL BE (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION AND EXTERIOR FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (11'-0" x 11'-0" x 2'-0" DEEP) TYPICAL COLUMN FOOTINGS AT THE TWO-STORY AREAS. INTERIOR FOOTINGS WILL BE (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION AND EXTERIOR FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (14" - TO - 16" THICK) TYPICAL CONTINUOUS EXTERIOR FOUNDATION WALLS AND (3'-0" WIDE x 2'-0" DEEP) TYPICAL CONTINUOUS EXTERIOR FOUNDATION WALL FOOTINGS. EXTERIOR WALL FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (8" - TO - 12" THICK) CONTINUOUS CONCRETE FOUNDATION WALLS AND (3'-0" WIDE x 2'-0" DEEP) CONTINUOUS FOOTINGS BELOW MASONRY WALLS. INTERIOR SHEAR WALL FOOTINGS WILL BEAR (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION.
 ALLOW FOR VERTICAL AND HORIZONTAL REINFORCING WITH GROUTED CELLS OF ALL MASONRY WALLS SPACED AT (4'-0" ON CENTER MAX.).

COST NOTE:
 ALLOW FOR (4" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL.
 ALLOW FOR (6" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL IN ALL SHOP AREAS.
 ALLOW FOR (16" THICK) CONTINUOUS THICKENED SLAB-ON-GRADE BELOW ALL INTERIOR NON-STRUCTURAL MASONRY WALLS.

NOTE:
 APPROXIMATE LOCATION OF EXPANSION JOINT ABOVE

FOOTING SCHEDULE		
MARK	SIZE	REINFORCEMENT
FB	8'-0" x 8'-0" x 2'-0"	9 - #6 BOT EA WAY
FB	9'-0" x 9'-0" x 2'-0"	10 - #6 BOT EA WAY
F10	10'-0" x 10'-0" x 2'-0"	11 - #7 BOT EA WAY
F11	11'-0" x 11'-0" x 2'-0"	12 - #7 BOT EA WAY
F12	12'-0" x 12'-0" x 2'-0"	13 - #8 BOT EA WAY
F13	13'-0" x 13'-0" x 2'-0"	14 - #8 BOT EA WAY
FA	SEE PLAN x 2'-0"	#8 @ 12" OC TOP AND BOT EA WAY

* INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

DRA
 Drummey Rosane Anderson, Inc.
 225 Oakland Road, Studio 205, South Windsor, CT 06074
 260 Charles Street, Studio 300, Waltham, MA 02453
 Tel: 817.964.1500, Fax: 817.964.1501, www.draa.com

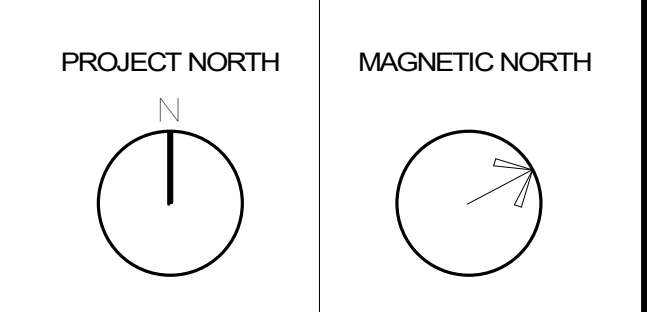
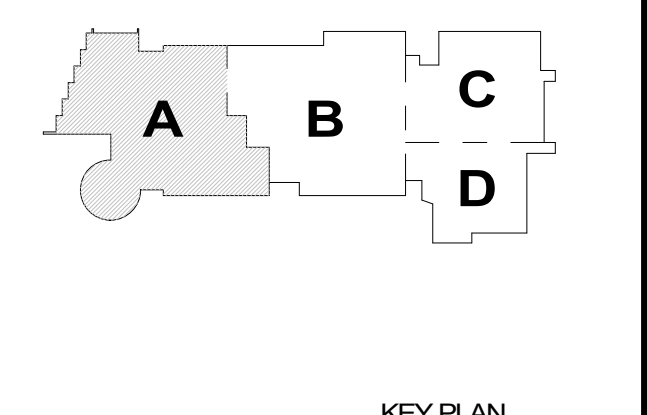
NORTHEAST METRO TECH

100 Hemlock Rd, Wakefield, MA 01880

EDG
 Engineers Design Group, Inc.
 Structural Engineers
 350 Main St, 2nd Flr, Malden, MA 02148
 (781) 398-9007, (781) 398-9008 (FAX), EDG@EDGINC.COM

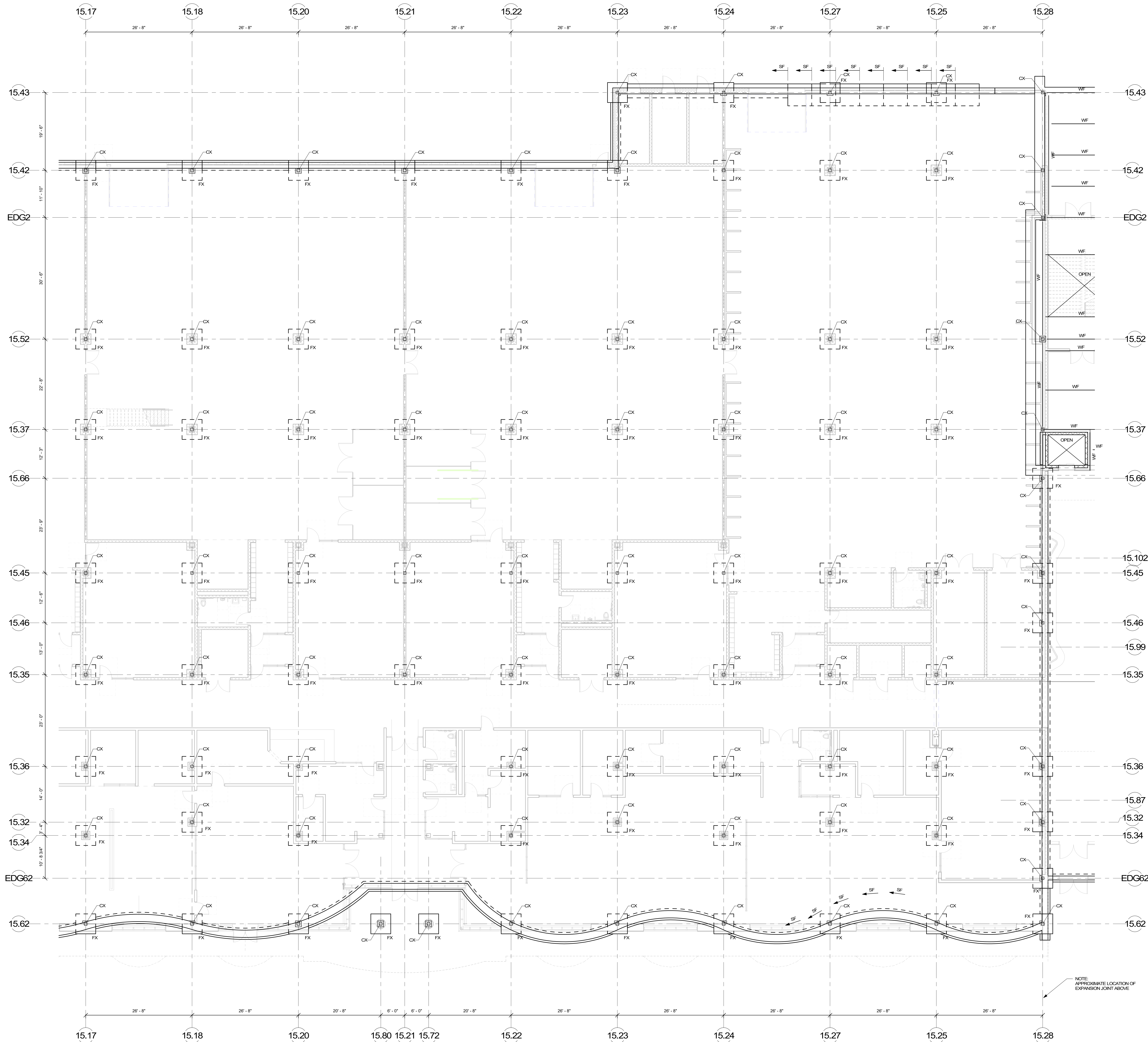
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 JUNE 17, 2021



FIRST FLOOR FOUNDATION PLAN - AREA A

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: JUNE 17, 2021
S1-1-1A



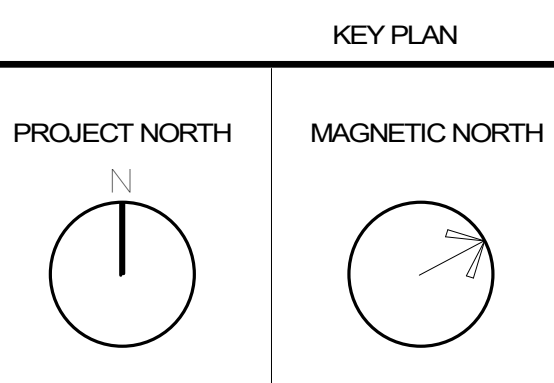
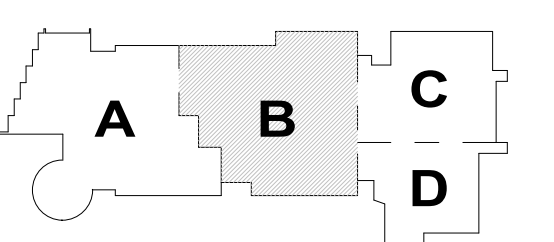
COST NOTE:
 ALLOW FOR (11'-0" x 11'-0" x 2'-0") TYPICAL COLUMN FOOTINGS. INTERIOR FOOTINGS WILL BE (1'-0" MINIMUM BELOW TOP-OF-SLAB ELEVATION AND EXTERIOR FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (14" - TO - 18" THICK) TYPICAL CONTINUOUS EXTERIOR FOUNDATION WALLS AND (5'-0" WIDE x 2'-0" DEEP) TYPICAL CONTINUOUS EXTERIOR FOUNDATION WALL FOOTINGS. EXTERIOR WALL FOOTINGS WILL BEAR (4'-0" MINIMUM) BELOW TOP-OF-ADJACENT EXTERIOR GRADE.
 ALLOW FOR (8" - TO - 12" THICK) CONTINUOUS CONCRETE FOUNDATION WALLS AND (2'-0" WIDE x 2'-0" DEEP) CONTINUOUS FOOTINGS BELOW MASONRY WALLS. INTERIOR SHEAR WALL FOOTINGS WILL BEAR (1'-0" MINIMUM) BELOW TOP-OF-SLAB ELEVATION.
 ALLOW FOR VERTICAL AND HORIZONTAL REINFORCING WITH IN GROUTED CELLS OF ALL MASONRY WALLS SPACED AT (4'-0" ON CENTER MAX.)

COST NOTE:
 ALLOW FOR (4" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL.
 ALLOW FOR (6" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL IN ALL SHOP AREAS.
 ALLOW FOR (16" THICK) CONTINUOUS THICKENED SLAB-ON-GRADE BELOW ALL INTERIOR NON-STRUCTURAL MASONRY WALLS.

FOOTING SCHEDULE		
MARK	SIZE	REINFORCEMENT
F8	8'-0" x 8'-0" x 2'-0"	9-#6 BOT EA WAY
F9	9'-0" x 9'-0" x 2'-0"	10-#6 BOT EA WAY
F10	10'-0" x 10'-0" x 2'-0"	11-#7 BOT EA WAY
F11	11'-0" x 11'-0" x 2'-0"	12-#7 BOT EA WAY
F12	12'-0" x 12'-0" x 2'-0"	13-#8 BOT EA WAY
F13	13'-0" x 13'-0" x 2'-0"	14-#8 BOT EA WAY
FA	SEE PLAN x 2'-0"	#8 @ 12"OC TOP AND BOT EA WAY

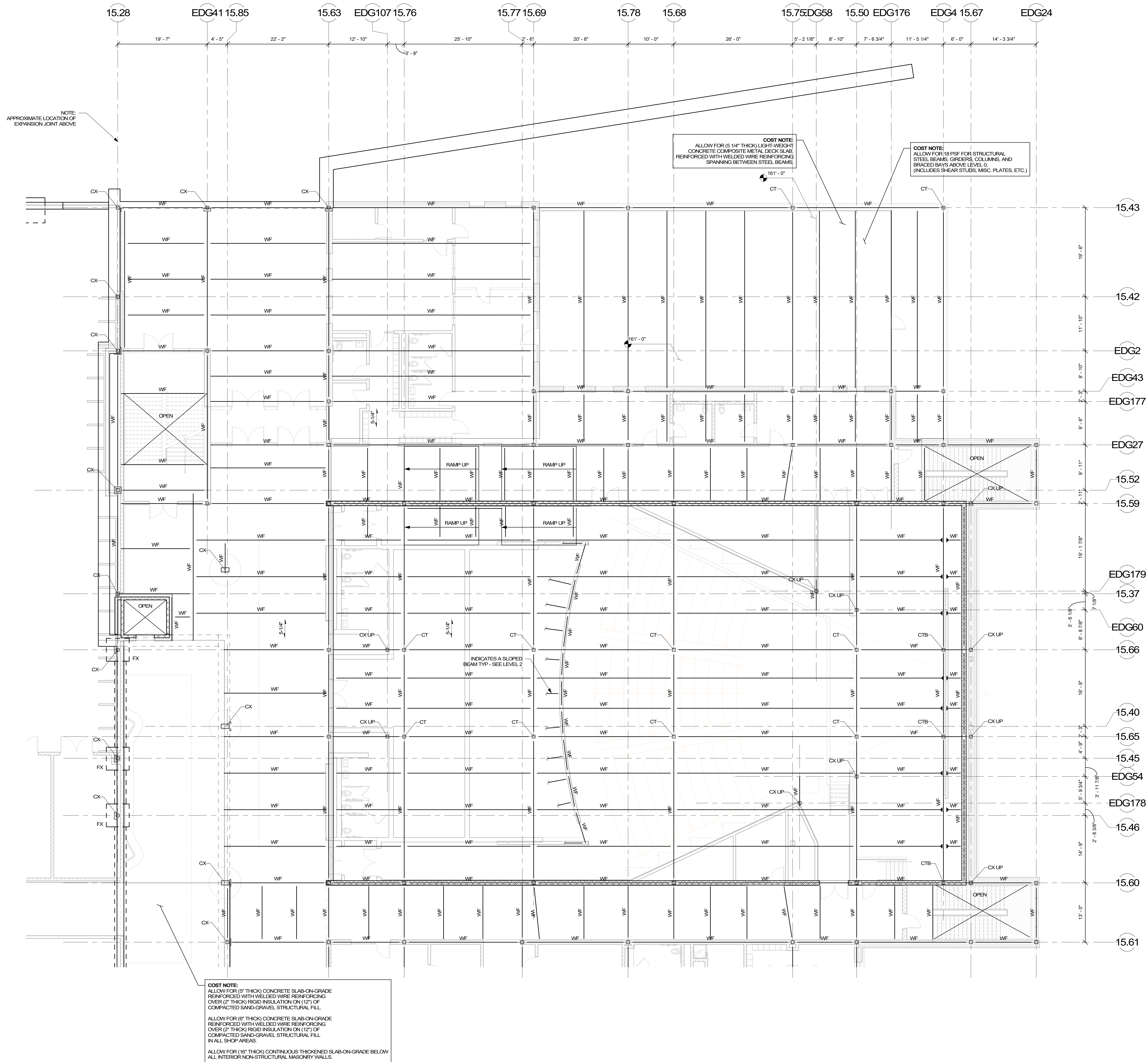
T INDICATES TOP REINFORCING TO MATCH BOTTOM REINFORCING

MSBA SCHEMATIC DESIGN SUBMITTAL
 JUNE 17, 2021



FIRST FLOOR FOUNDATION PLAN - AREA B

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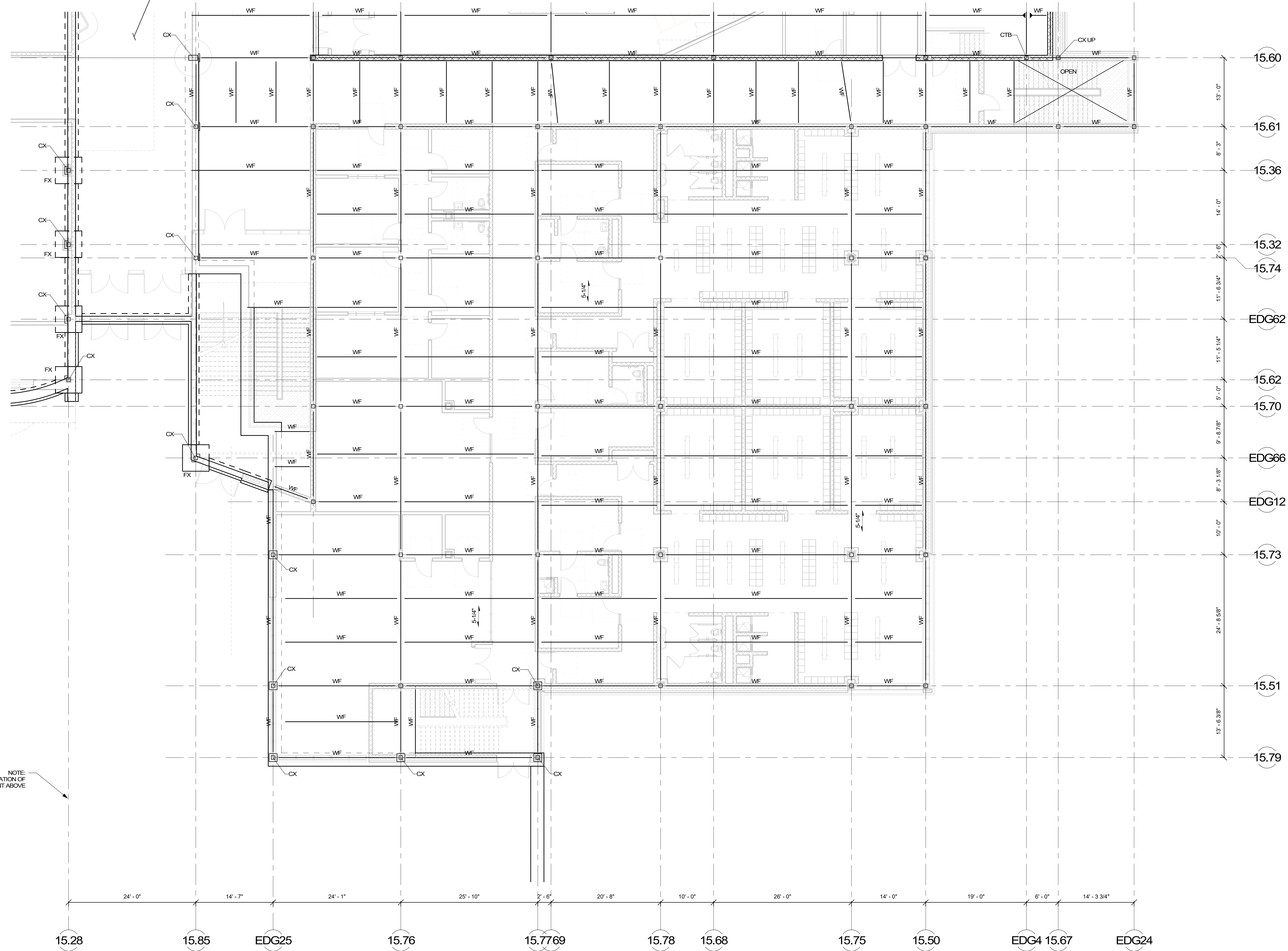


COST NOTE:
ALLOW FOR (8" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL.
ALLOW FOR (8" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL IN ALL SHOP AREAS.
ALLOW FOR (16" THICK) CONTINUOUS THICKENED SLAB-ON-GRADE BELOW ALL INTERIOR NON-STRUCTURAL MASONRY WALLS.

COST NOTE:
ALLOW FOR 20 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 0. (INCLUDES SHEAR STUDS, MSC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (5 1/4" THICK) LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.

COST NOTE:
 ALLOW FOR (5" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL.
 ALLOW FOR (6" THICK) CONCRETE SLAB-ON-GRADE REINFORCED WITH WELDED WIRE REINFORCING OVER (2" THICK) RIGID INSULATION ON (12") OF COMPACTED SAND-GRAVEL STRUCTURAL FILL IN ALL SHOP AREAS.
 ALLOW FOR (16" THICK) CONTINUOUS THICKENED SLAB-ON-GRADE BELOW ALL INTERIOR NON-STRUCTURAL MASONRY WALLS.

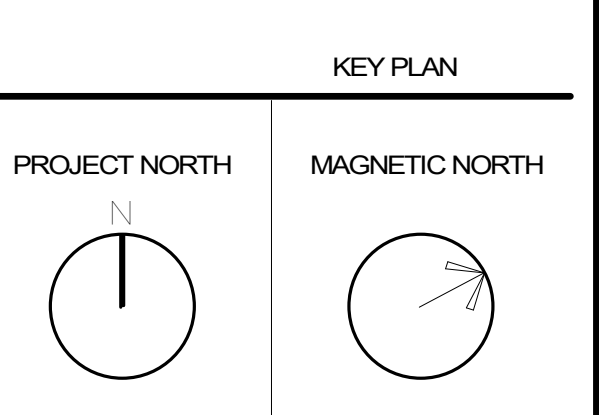
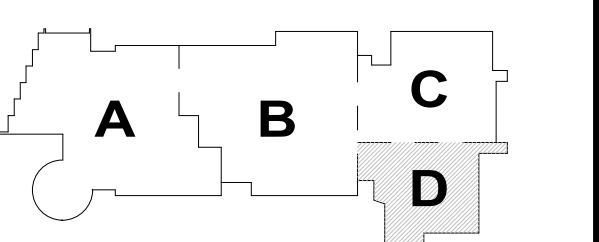


NOTE:
 APPROXIMATE LOCATION OF EXPANSION JOINT ABOVE

COST NOTE:
 ALLOW FOR 20 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 0. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR (5 1/4" THICK) LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.

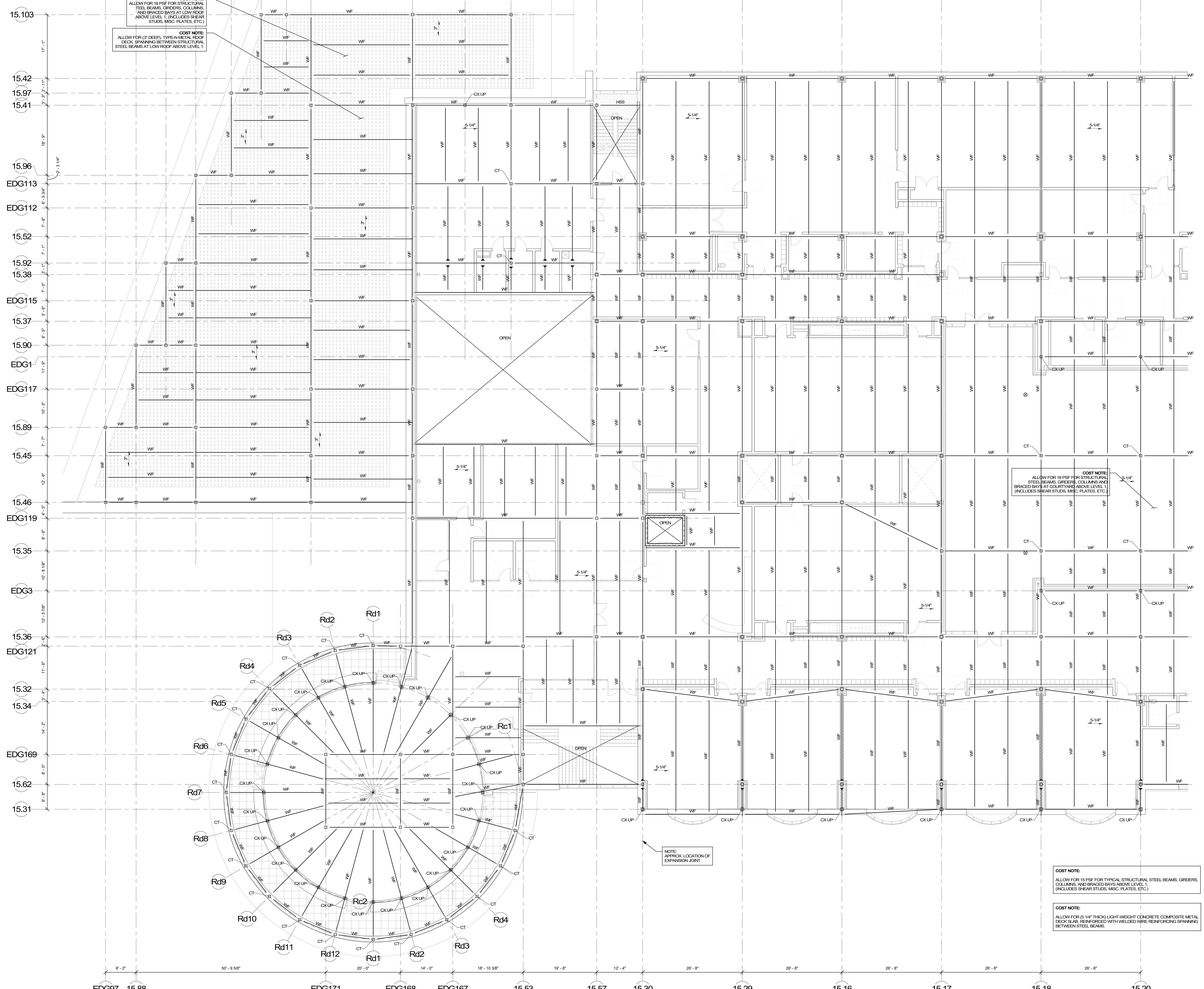
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 SCHEMATIC
 DESIGN
 SUBMITTAL
 JUNE 17, 2021



FIRST FLOOR FOUNDATION PLAN - AREA D

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EDG97 15.88 15.91 15.93 15.94 15.95 EDG88 EDG102 27'-2 1/2" EDG100 EDG5 15.104 15.57 15.30 15.29 15.16 15.17 15.18 15.20



COST NOTE:
ALLOW FOR 18 PSF FOR STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS AND BRACED BAYS AT LOW ROOF ABOVE LEVEL 1, (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (3" DEEP) TYPICAL METAL ROOF DECK SPANNING BETWEEN STRUCTURAL STEEL BEAMS AT LOW ROOF ABOVE LEVEL 1.

COST NOTE:
ALLOW FOR 18 PSF FOR STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS AND BRACED BAYS AT COURTYARD ABOVE LEVEL 1, (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 1, (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR 15 1/4" THICK LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.

NOTE: APPROX LOCATION OF EXPANSION JOINT

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260 Charles Street Studio 300 Waltham, MA 02453
Tel: 817.964.1100 www.dra.com

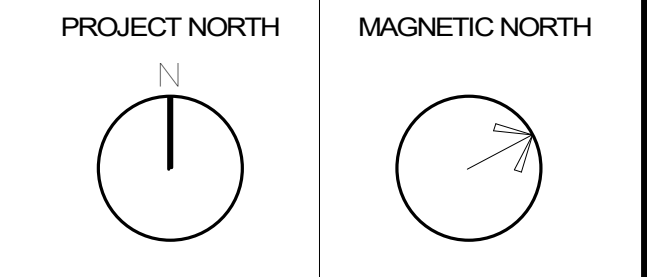
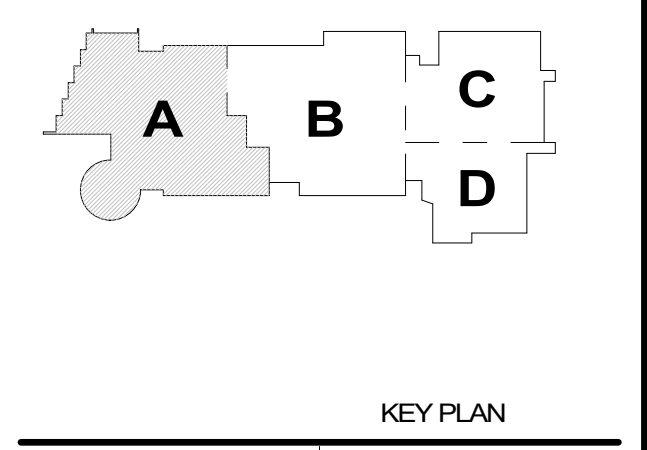
NORTHEAST METRO TECH

100 Hemlock Rd, Wakefield, MA 01880

EDG
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Structural Engineers
350 Main St, 2nd Flr
Malden, MA 02148
(781) 398-9007
(781) 398-9008 (FAX)
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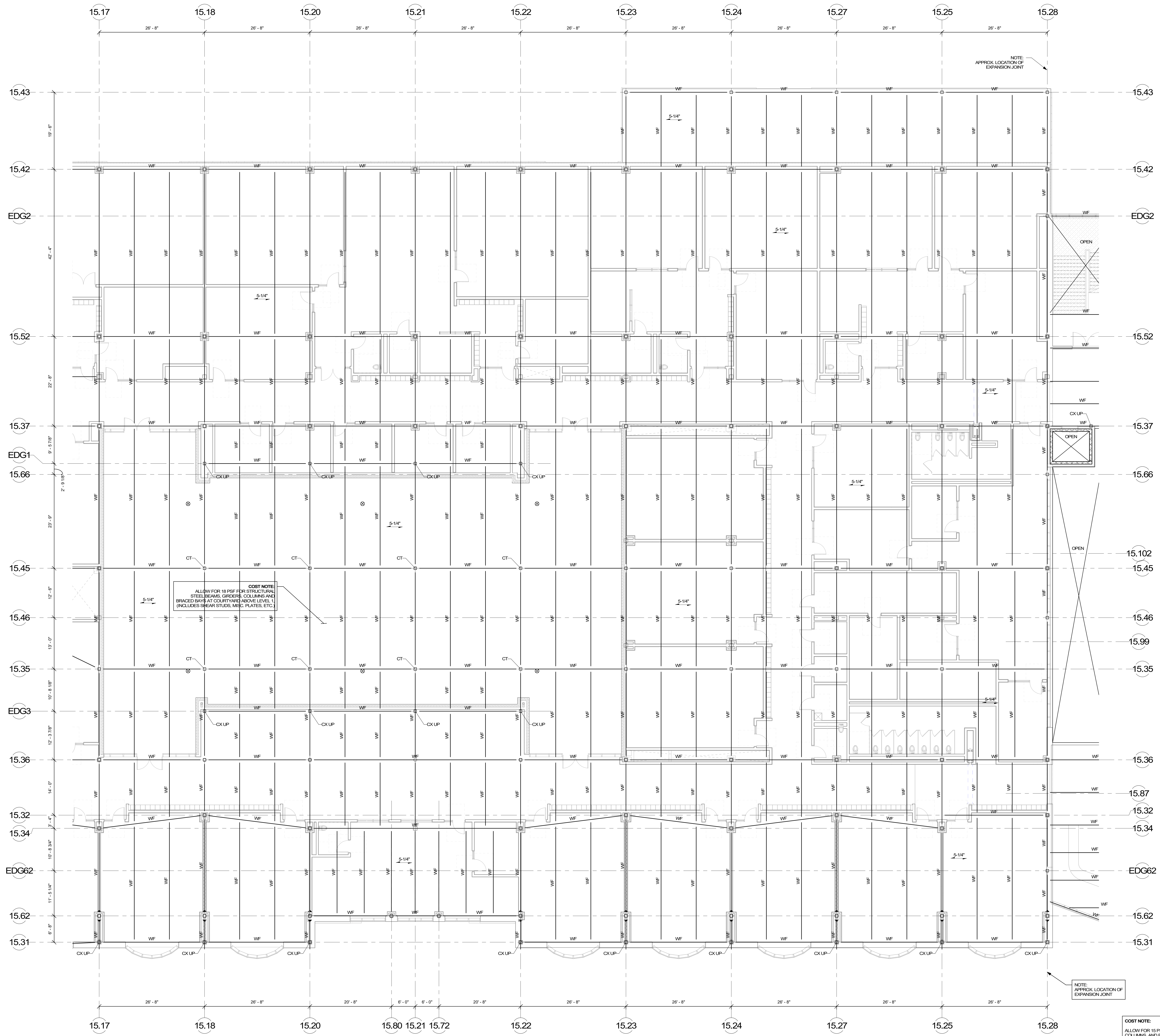
MSBA SCHEMATIC DESIGN SUBMITTAL
JUNE 17, 2021



SECOND FLOOR FRAMING PLAN - AREA A

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: DRA
Date: JUNE 17, 2021

S1-1-2A



COST NOTE:
 ALLOW FOR 18 PSF FOR STRUCTURAL
 STEEL BEAMS, GIRDERS, COLUMNS AND
 BRACED BAYS AT COURTYARD ABOVE LEVEL 1
 (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS,
 COLUMNS, AND BRACED BAYS ABOVE LEVEL 1
 (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR 15-14" THICK LIGHT-WEIGHT CONCRETE COMPOSITE METAL
 DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING
 BETWEEN STEEL BEAMS.

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 Planning | Architecture | Interior Design
 Tel: 817.964.1100, www.draa.com

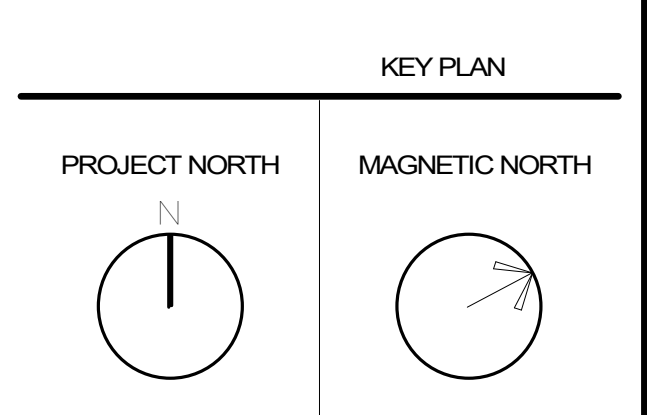
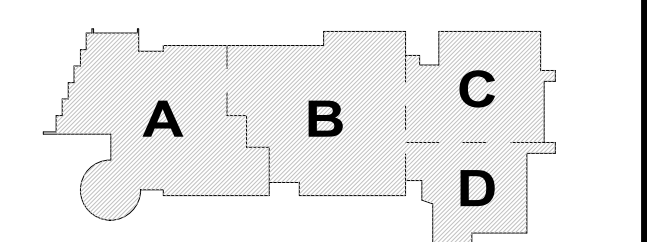
NORTHEAST METRO TECH

100 Hemlock Rd, Wakefield, MA 01880

EDG
 Engineers Design Group, Inc.
 Structural Engineers
 350 Main St, 2nd Flr, Malden, MA 02148
 (781) 398-9007, (781) 398-9008 (fax), EDG@EDGINC.COM

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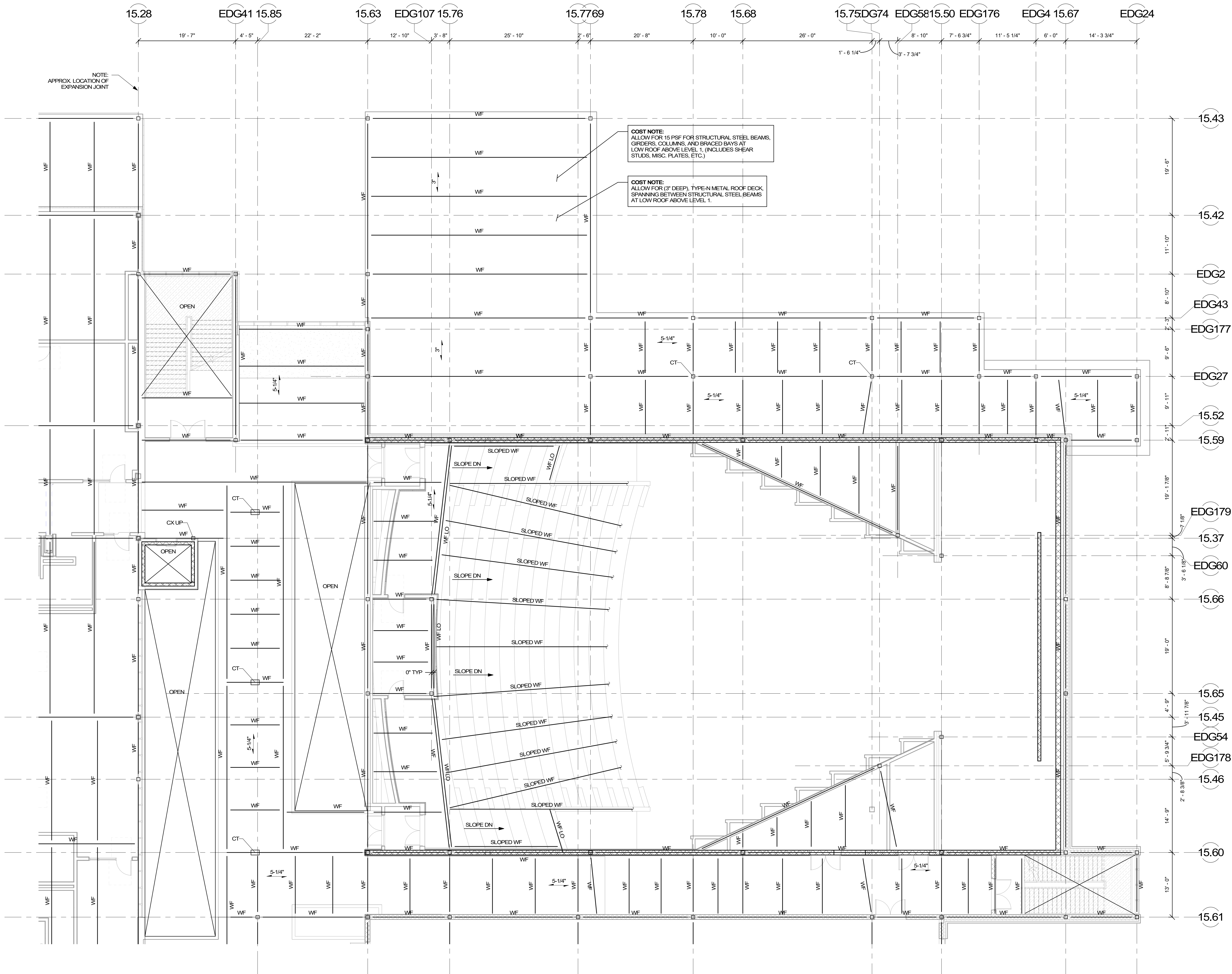
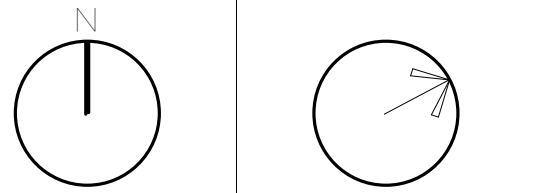
MSBA SCHEMATIC DESIGN SUBMITTAL
 JUNE 17, 2021



SECOND FLOOR FRAMING PLAN - AREA B

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: JUNE 17, 2021
S1-1-2B

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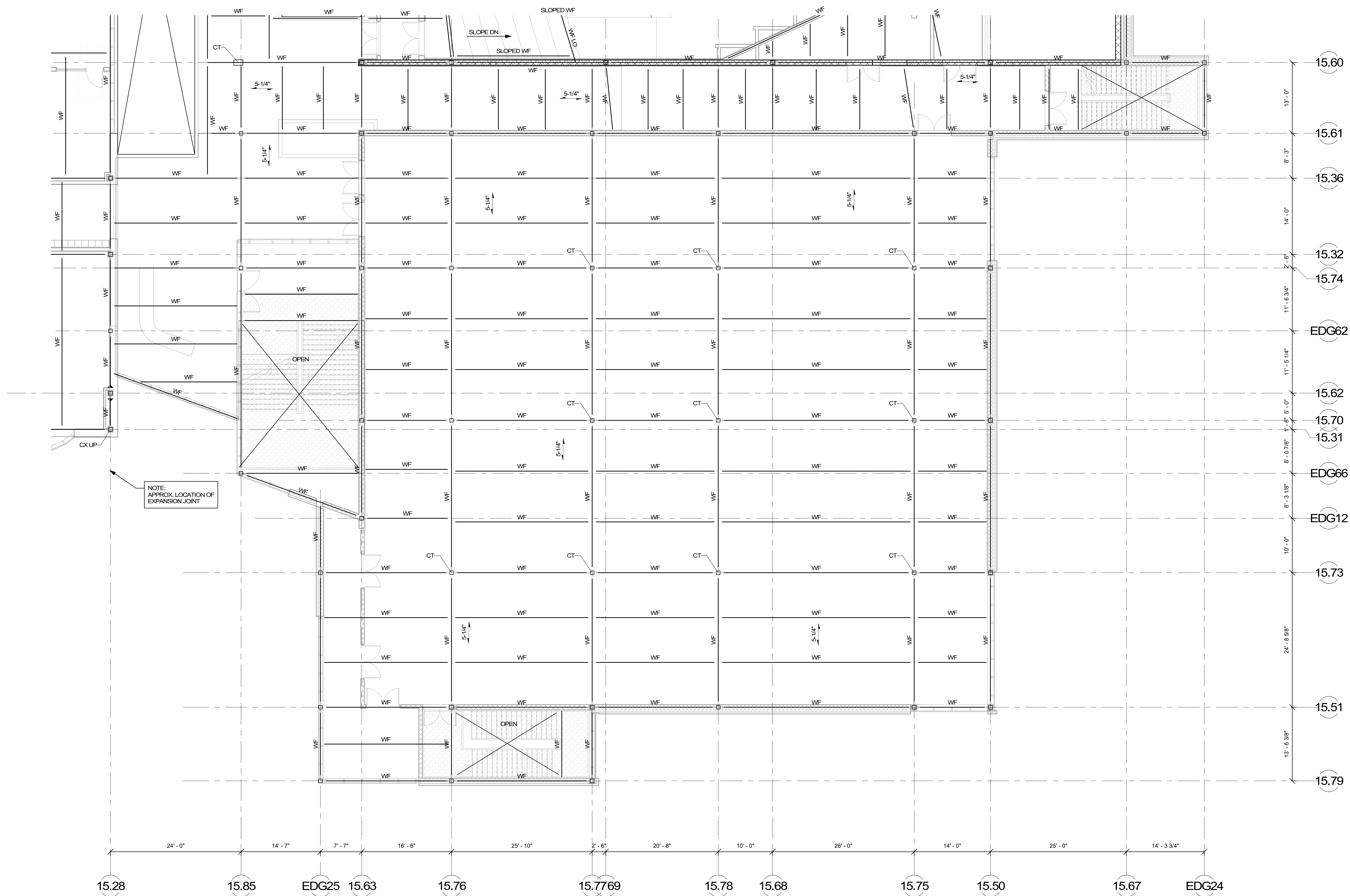
NOTE: APPROX. LOCATION OF EXPANSION JOINT

COST NOTE:
ALLOW FOR 15 PSF FOR STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS AT LOW ROOF ABOVE LEVEL 1. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (3" DEEP), TYPE-N METAL ROOF DECK, SPANNING BETWEEN STRUCTURAL STEEL BEAMS AT LOW ROOF ABOVE LEVEL 1.

COST NOTE:
ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 1. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (5 1/4" THICK) LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.



NOTE:
 APPROX. LOCATION OF
 EXPANSION JOINT

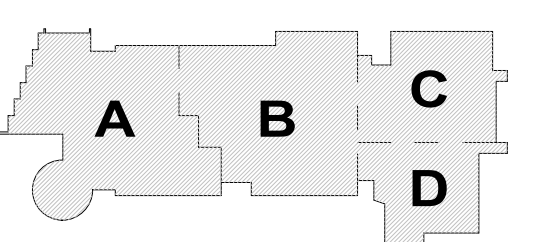
COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GRIDDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 1. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR (5 1/4" THICK) LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.

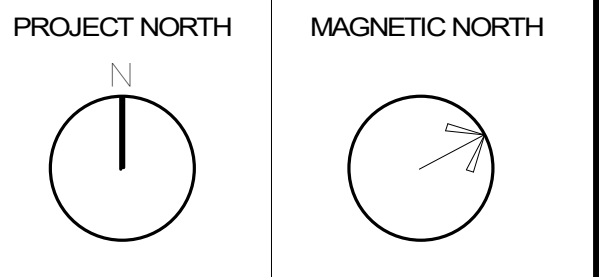
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JUNE 17, 2021



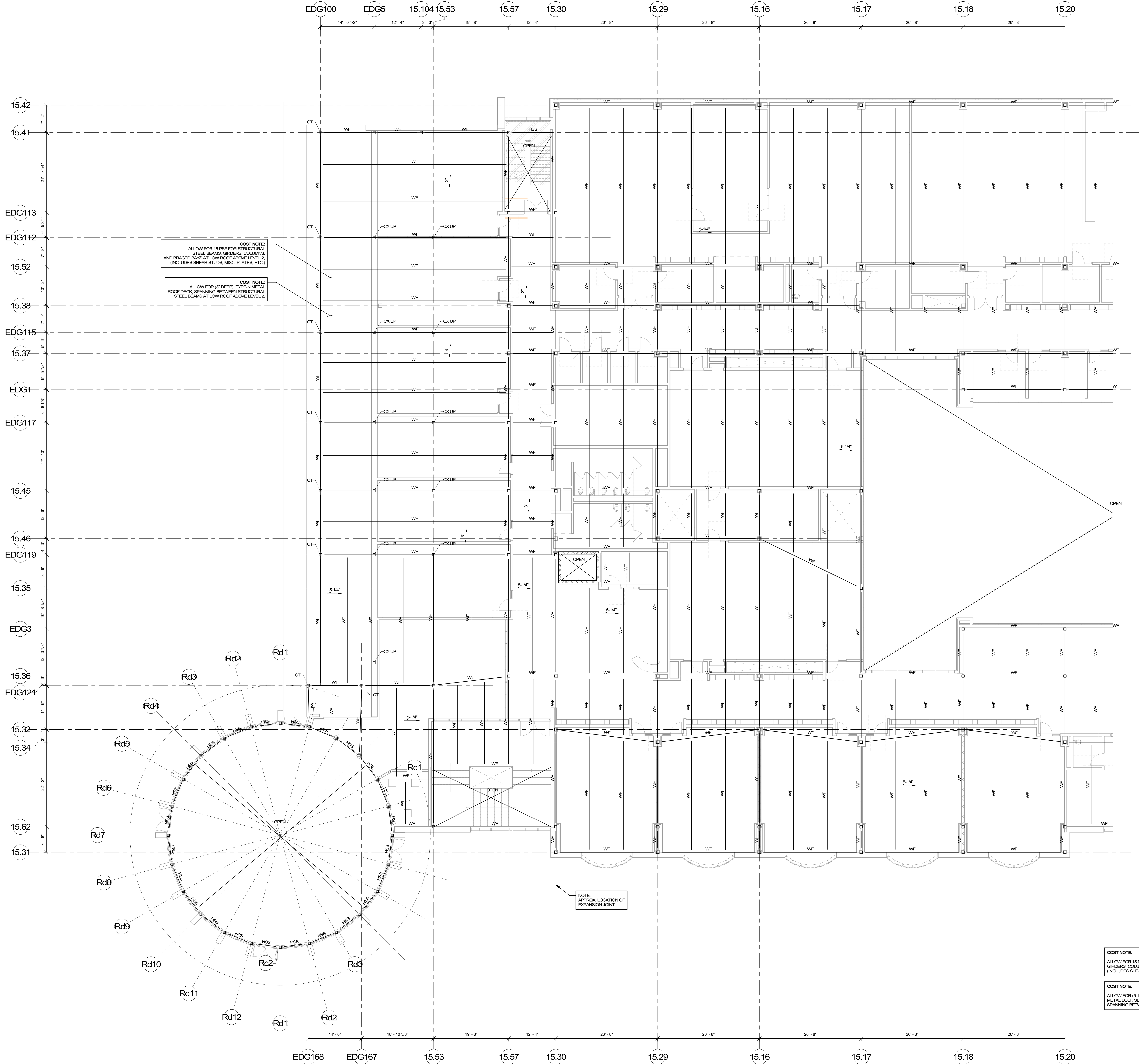
KEY PLAN



SECOND FLOOR FRAMING PLAN - AREA D

Scale: 1/8" = 1'-0"
 Job No.: 2022
 Drawn By: DRA
 Date: JUNE 17, 2021

S1-1-2D



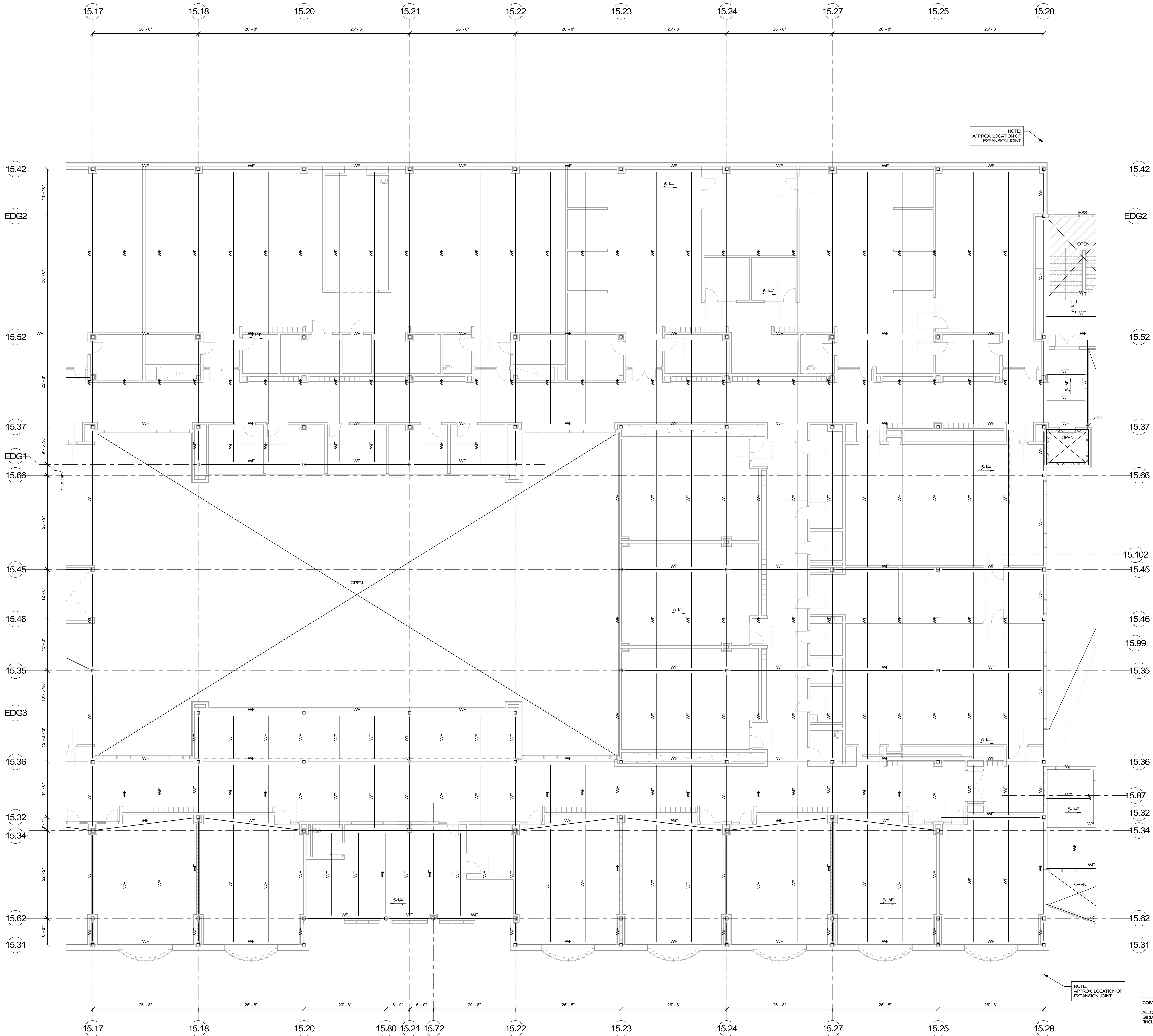
COST NOTE:
ALLOW FOR 15 PSF FOR STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS AND BRACED BAYS AT LOW ROOF ABOVE LEVEL 2. (INCLUDES SHEAR STUDS, MSC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (2\"/>

NOTE:
APPROX LOCATION OF EXPANSION JOINT

COST NOTE:
ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 2. (INCLUDES SHEAR STUDS, MSC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (5 1/4\"/>



NOTE:
APPROX. LOCATION OF
EXPANSION JOINT

NOTE:
APPROX. LOCATION OF
EXPANSION JOINT

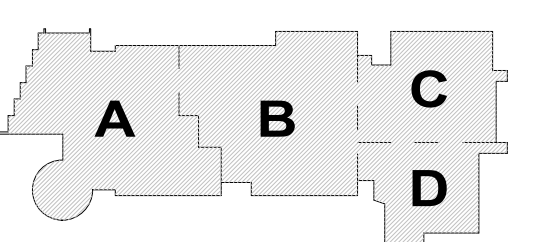
COST NOTE:
ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS,
GRIDDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 2.
(INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (5 1/4" THICK) LIGHT-WEIGHT CONCRETE COMPOSITE
METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING
SPANNING BETWEEN STEEL BEAMS.

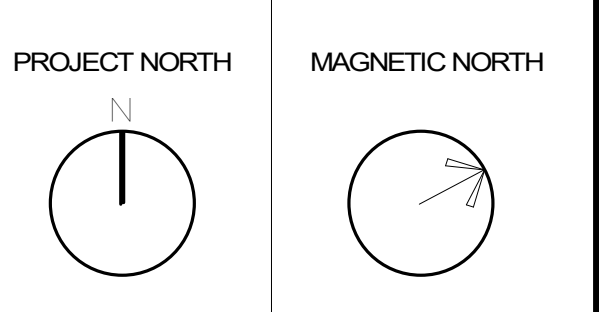
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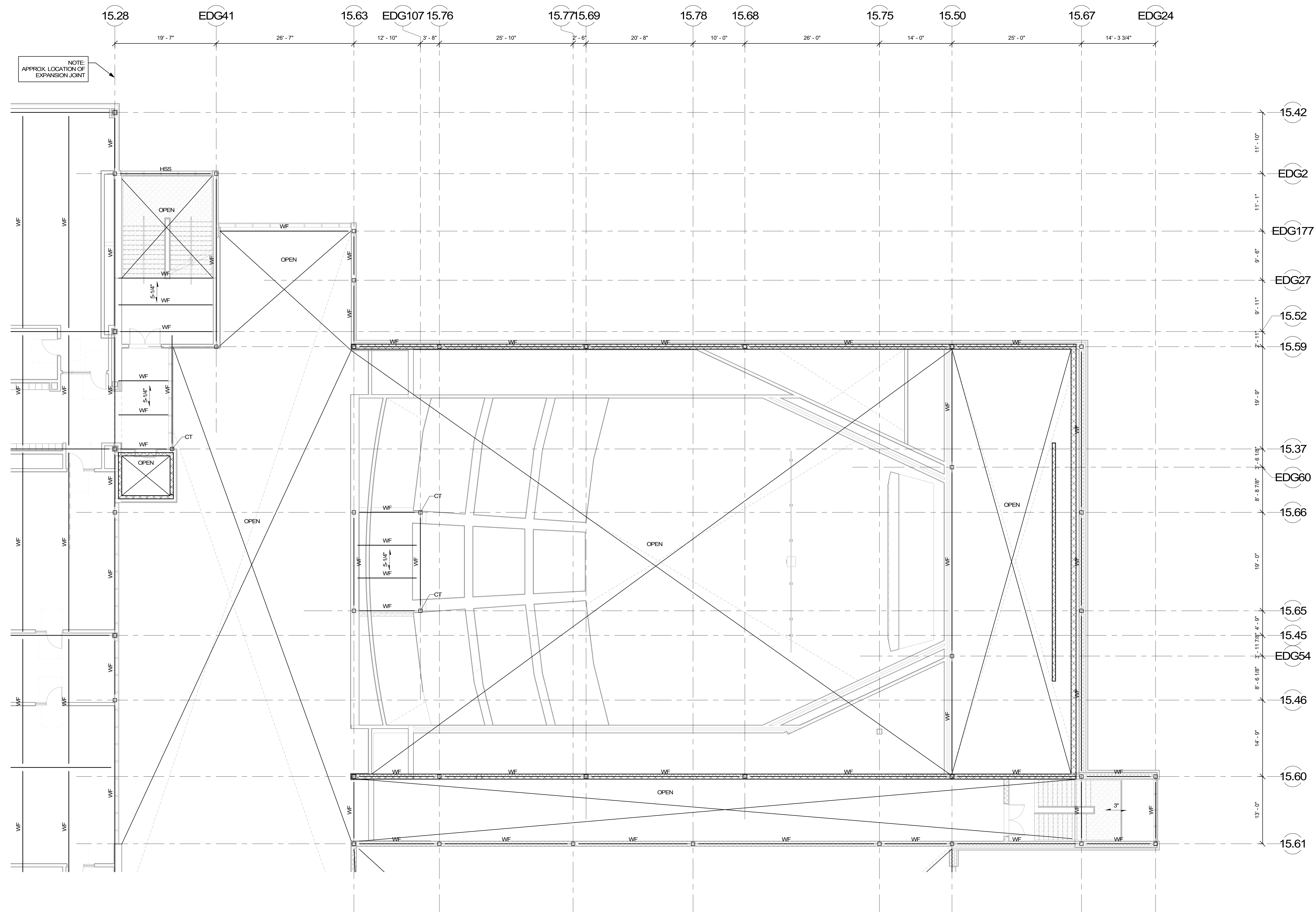


KEY PLAN



THIRD FLOOR
FRAMING PLAN -
AREA B

Scale: 1/8" = 1'-0"
Job No.: 2022
Drawn By: DRA
Date: JUNE 17, 2021
S1-1-3B



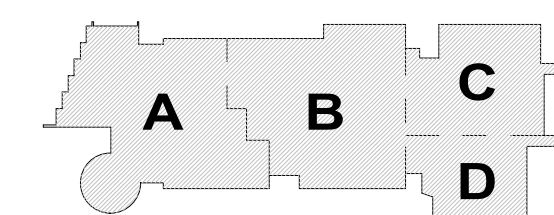
COST NOTE:
ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 2. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR 15 1/4" THICK LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.

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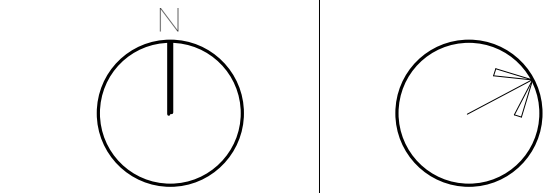
MSBA
SCHEMATIC
DESIGN
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JUNE 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



THIRD FLOOR
FRAMING PLAN -
AREA C

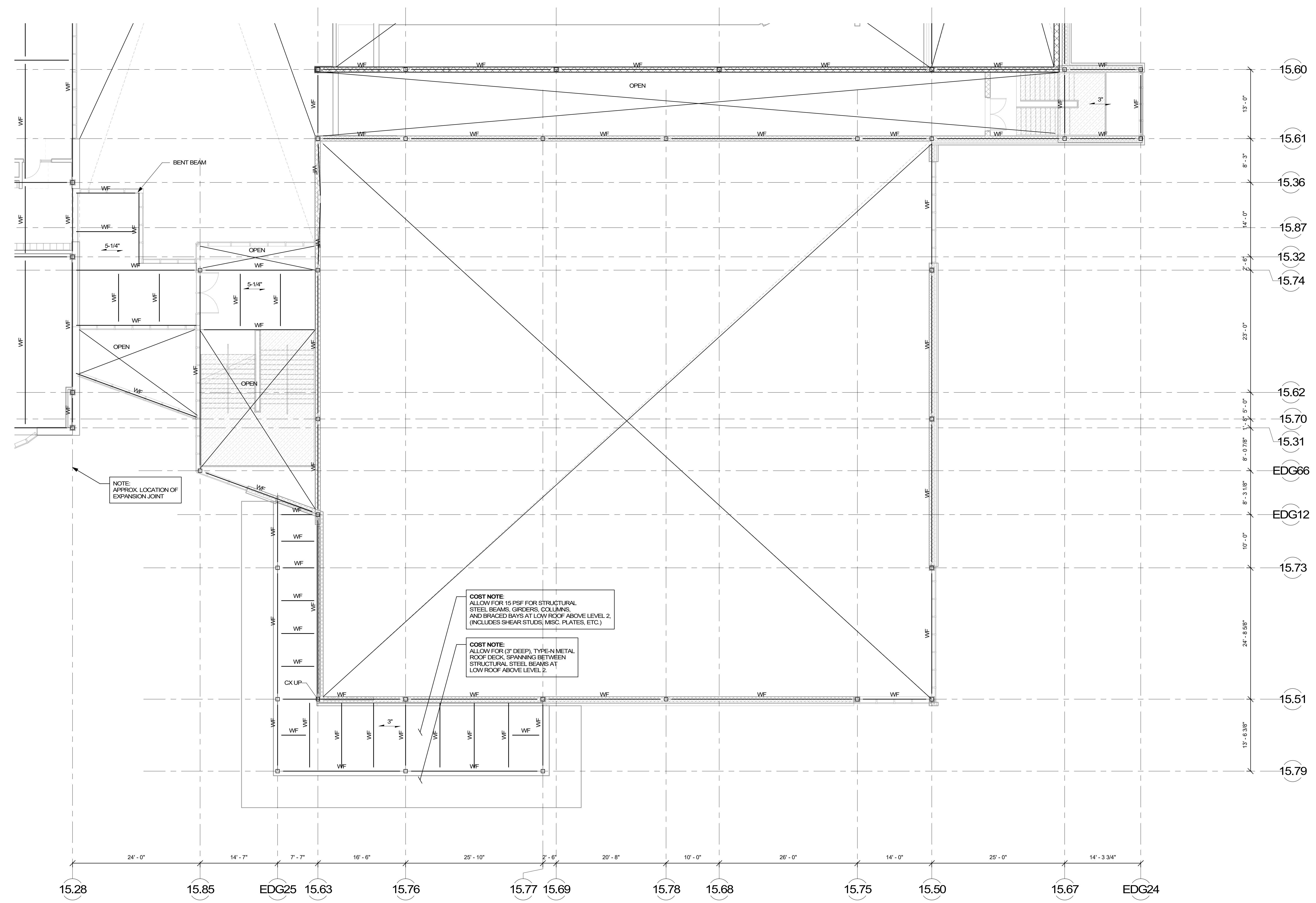
Scale: 1/8" = 1'-0"

Job No.: 2022

Drawn By: DRA

Date: JUNE 17, 2021

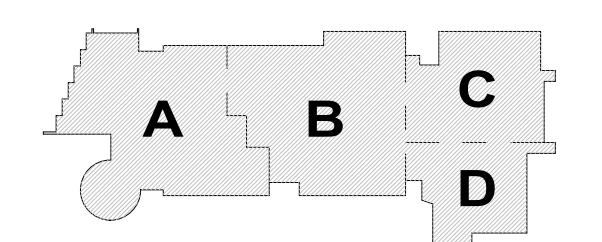
S1-1-3C



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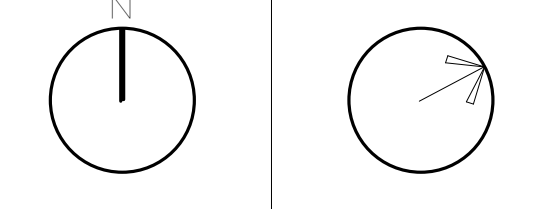
MSBA SCHEMATIC DESIGN SUBMITTAL

JUNE 17, 2021



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



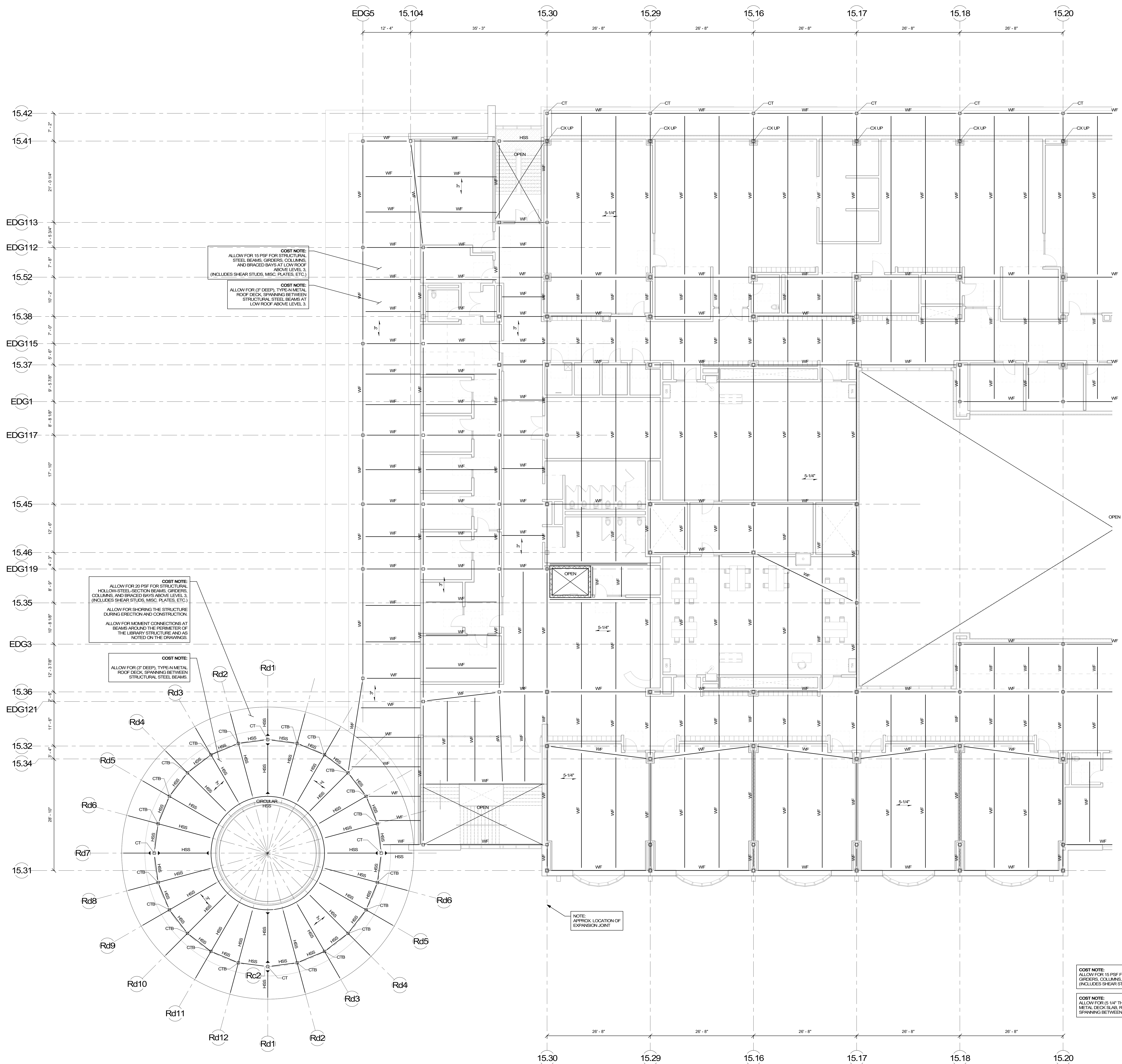
THIRD FLOOR FRAMING PLAN - AREA D

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: JUNE 17, 2021

S1-1-3D

COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 2. (INCLUDES SHEAR STUDS, MSC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR 5/16" THICK LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.



COST NOTE:
ALLOW FOR 15 PSF FOR STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS AT LOW ROOF ABOVE LEVEL 3. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (3" DEEP), TYPE-N METAL ROOF DECK, SPANNING BETWEEN STRUCTURAL STEEL BEAMS AT LOW ROOF ABOVE LEVEL 3.

COST NOTE:
ALLOW FOR 20 PSF FOR STRUCTURAL HOLLOW-STEEL-SECTION BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 3. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

ALLOW FOR SHORING THE STRUCTURE DURING ERECTION AND CONSTRUCTION.

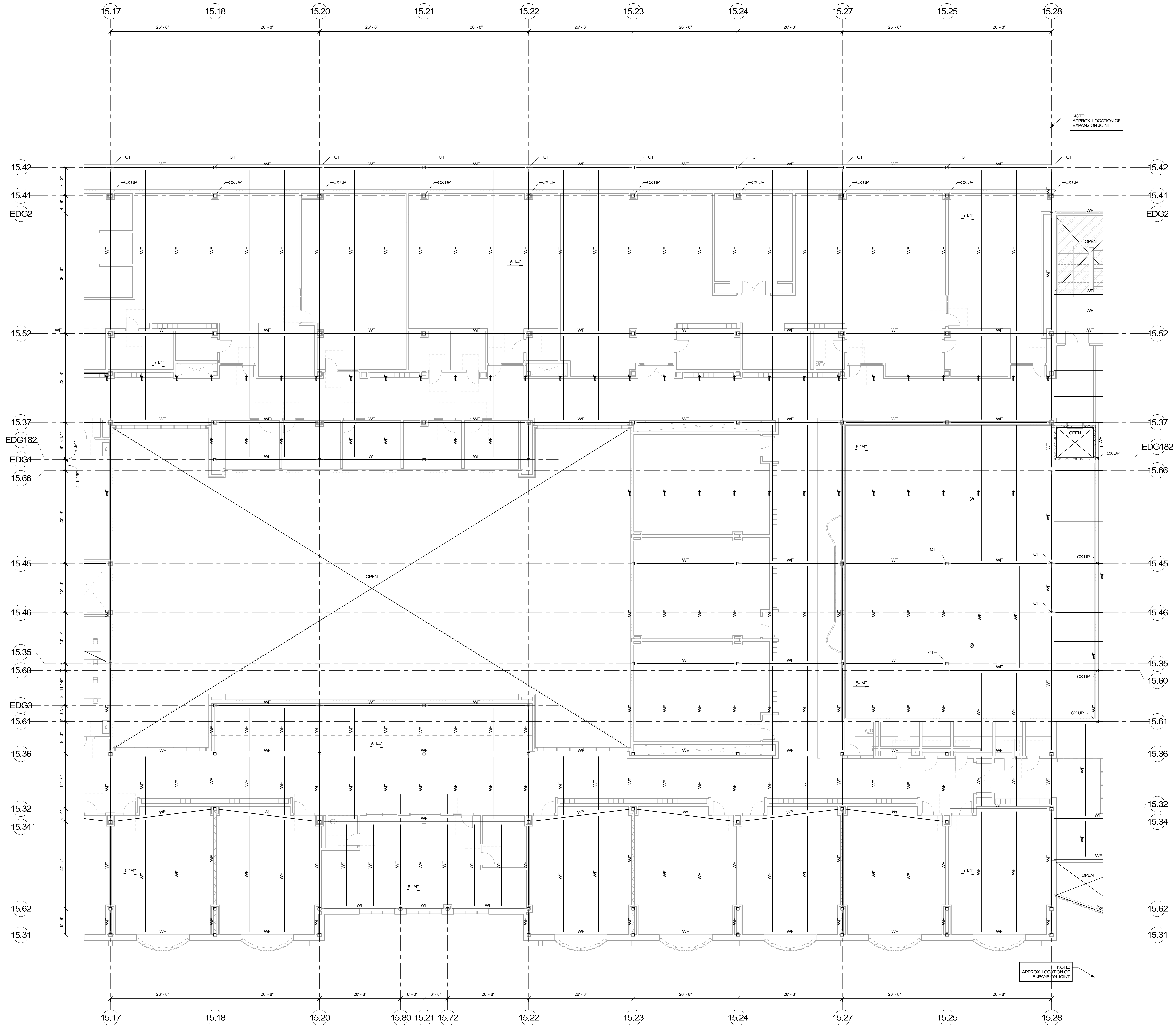
ALLOW FOR MOMENT CONNECTIONS AT BEAMS AROUND THE PERIMETER OF THE LIBRARY STRUCTURE AND AS NOTED ON THE DRAWINGS.

COST NOTE:
ALLOW FOR (3" DEEP), TYPE-N METAL ROOF DECK, SPANNING BETWEEN STRUCTURAL STEEL BEAMS.

NOTE:
APPROX. LOCATION OF EXPANSION JOINT

COST NOTE:
ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 3. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (5/16" THICK) LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.



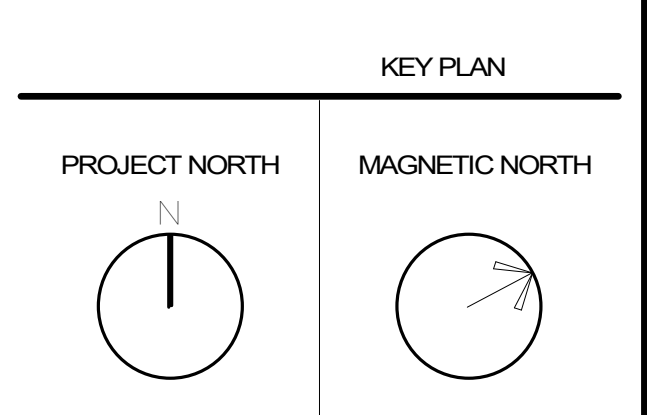
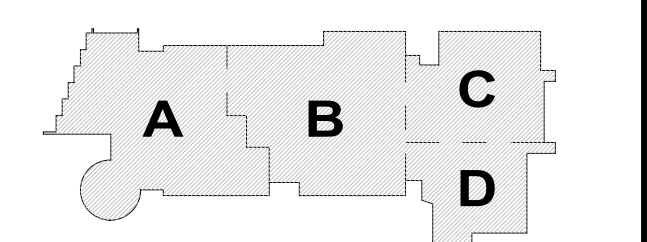
NORTHEAST METRO TECH

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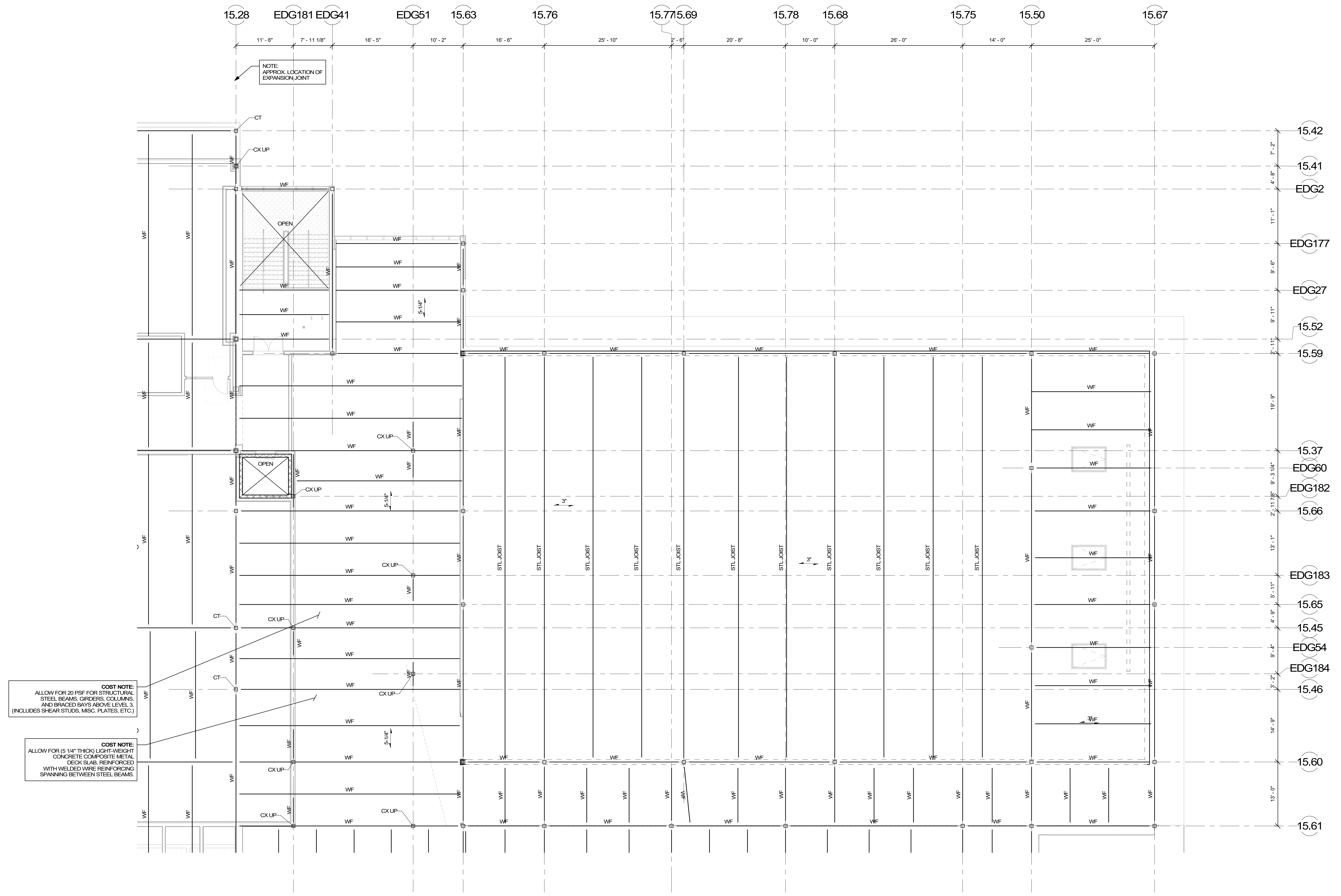


FOURTH FLOOR FRAMING PLAN - AREA B

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: JUNE 17, 2021
S1-1-4B

COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 3. (INCLUDES SHEAR STUDS, MSC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR (5 1/4" THICK) LIGHT-WEIGHT CONCRETE COMPOSITE METAL DECK SLAB, REINFORCED WITH WELDED WIRE REINFORCING SPANNING BETWEEN STEEL BEAMS.



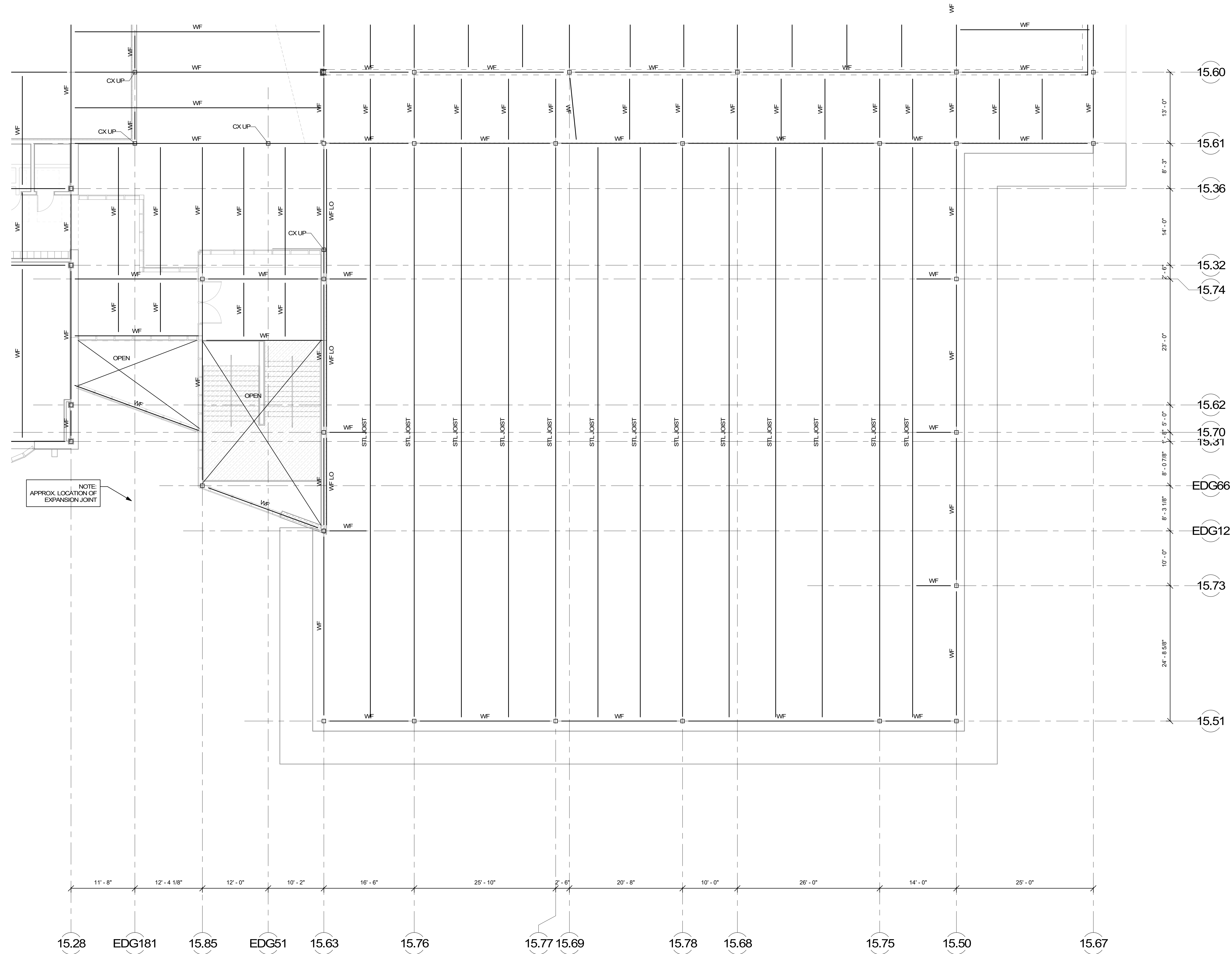
NOTE:
APPROX. LOCATION OF
EXPANSION JOINT

COST NOTE:
ALLOW FOR 20 PSF FOR STRUCTURAL
STEEL BEAMS, GIRDERS, COLUMNS,
AND BRACED BAYS ABOVE LEVEL 3.
(INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (5 1/4" THICK) LIGHT WEIGHT
CONCRETE COMPOSITE METAL
DECK SLAB, REINFORCED
WITH WELDED WIRE REINFORCING
SPANNING BETWEEN STEEL BEAMS.

COST NOTE:
ALLOW FOR 13 PSF FOR TYPICAL STEEL JOISTS AND
STRUCTURAL STEEL BEAMS AT THE AUDITORIUM ROOF LEVEL.
(INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
ALLOW FOR (3" DEEP) TYPE-NA METAL ROOF DECK, SPANNING
BETWEEN STEEL JOISTS AT THE AUDITORIUM ROOF LEVEL.



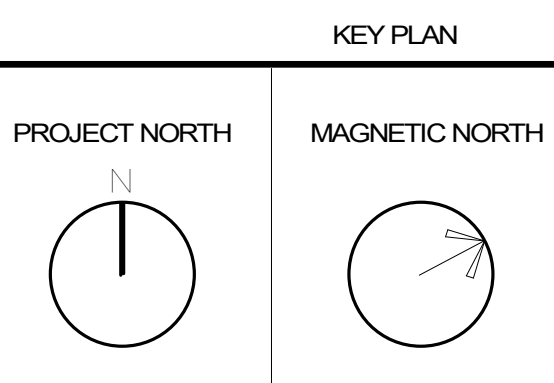
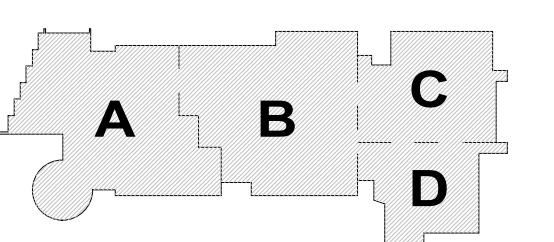
NOTE:
 APPROX. LOCATION OF
 EXPANSION JOINT

COST NOTE:
 ALLOW FOR 13 PSF FOR TYPICAL STEEL JOISTS
 AND STRUCTURAL STEEL BEAMS AT THE GYM ROOF LEVEL.
 (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR 0.5 DEEP, TYPE-A METAL ROOF DECK, SPANNING
 BETWEEN STEEL JOISTS AT THE GYM ROOF LEVEL.

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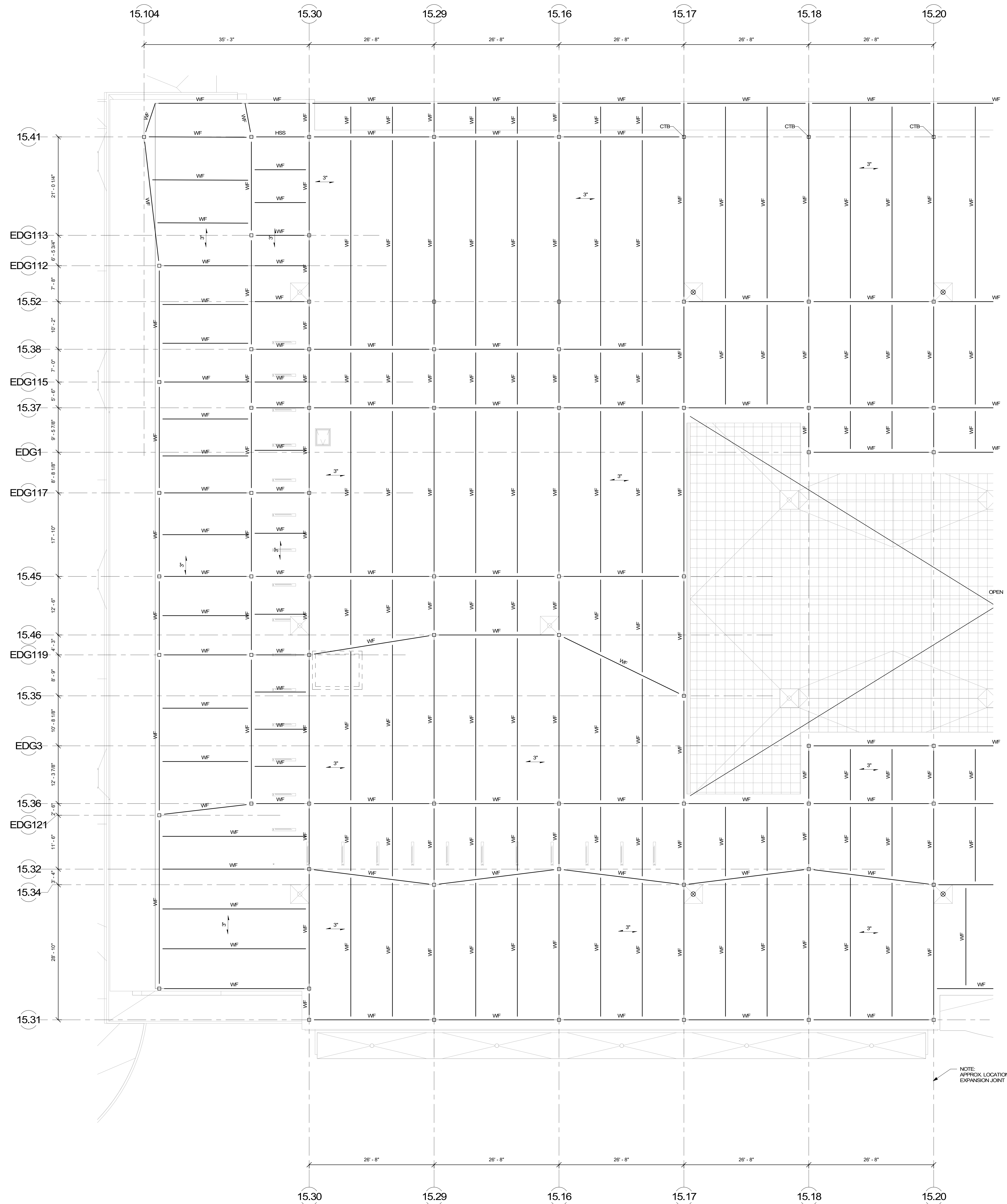
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 DESIGN
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 JUNE 17, 2021



**FOURTH FLOOR
 FRAMING PLAN -
 AREA D**

Scale: 1/8" = 1'-0"
 Job No.: 2022
 Drawn By: DRA
 Date: JUNE 17, 2021

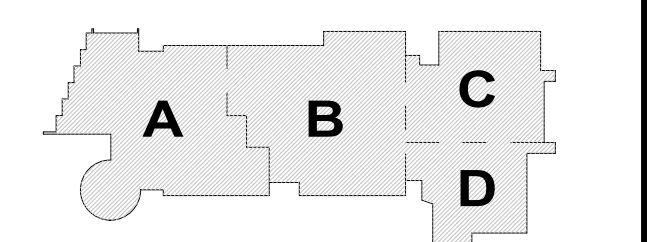
S1-1-4D



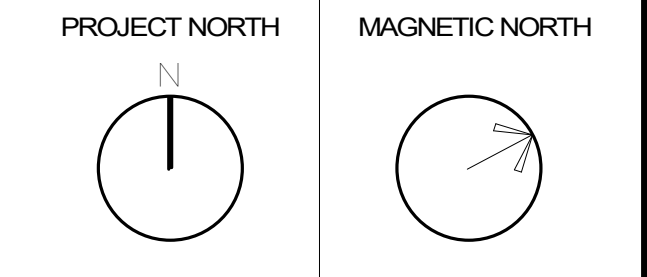
COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 4. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR 0.7 DEEP, TYPE-N METAL ROOF DECK, SPANNING BETWEEN STRUCTURAL STEEL BEAMS.

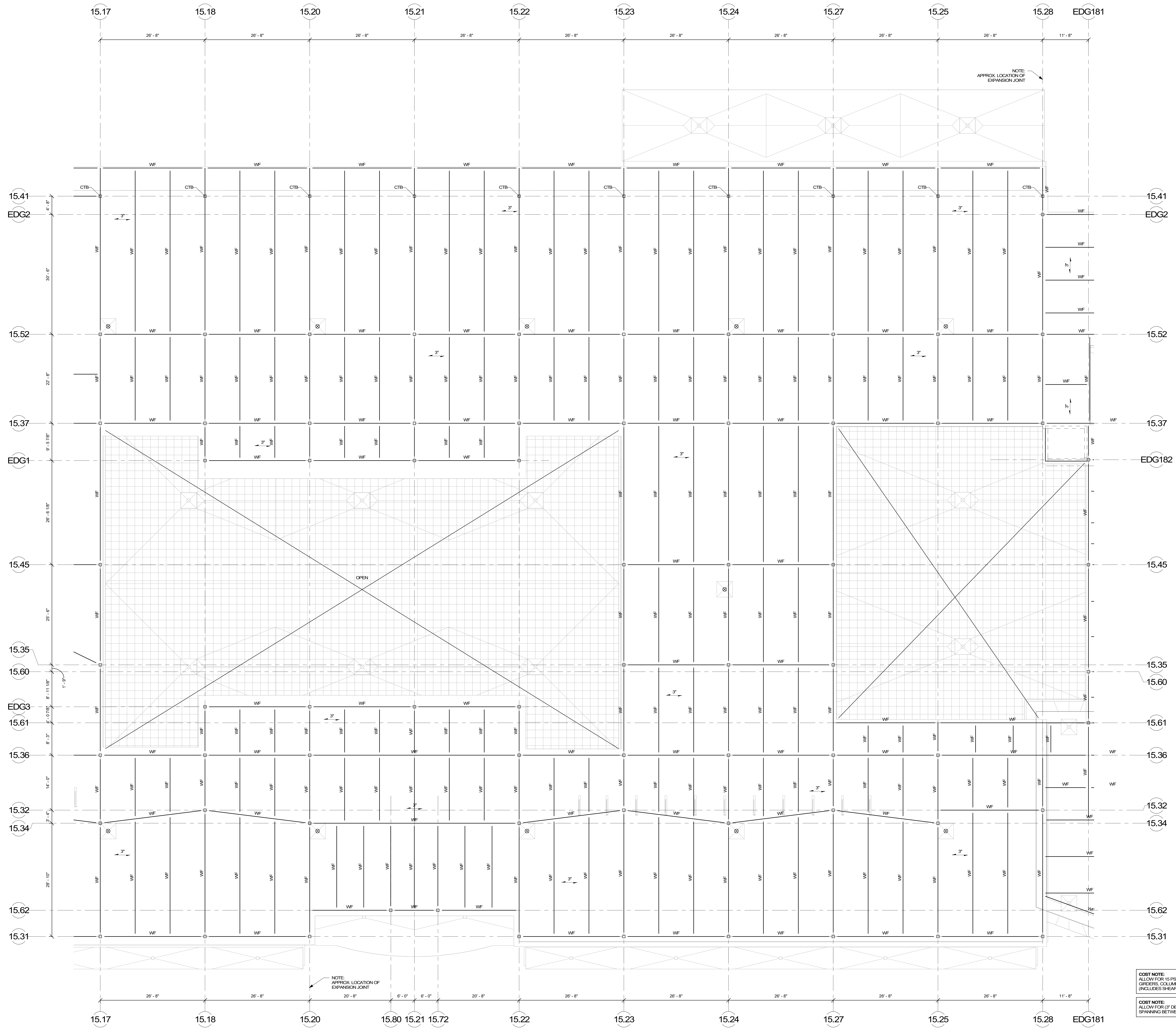
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KEY PLAN



ROOF FRAMING PLAN - AREA A



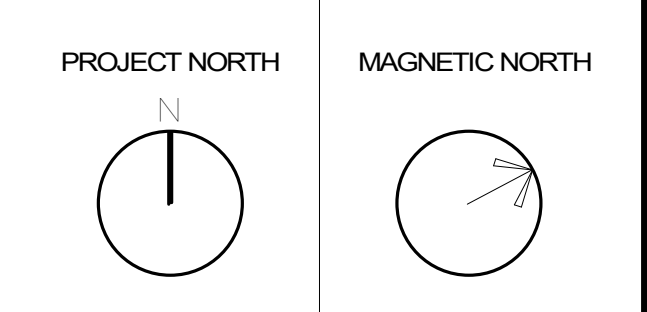
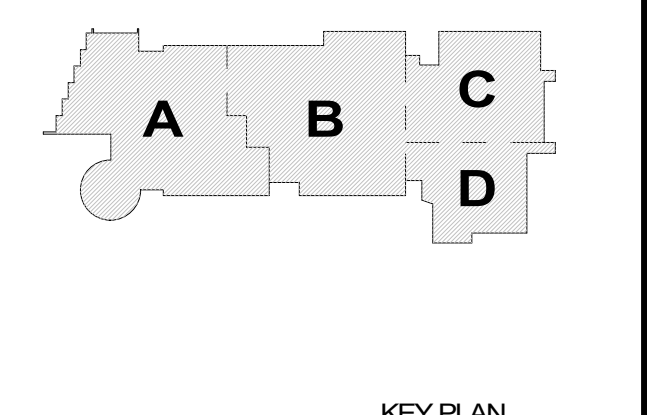
NORTHEAST METRO TECH

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 (781) 398-9007, (781) 398-9008 (FAX), EDG@EDGINC.COM

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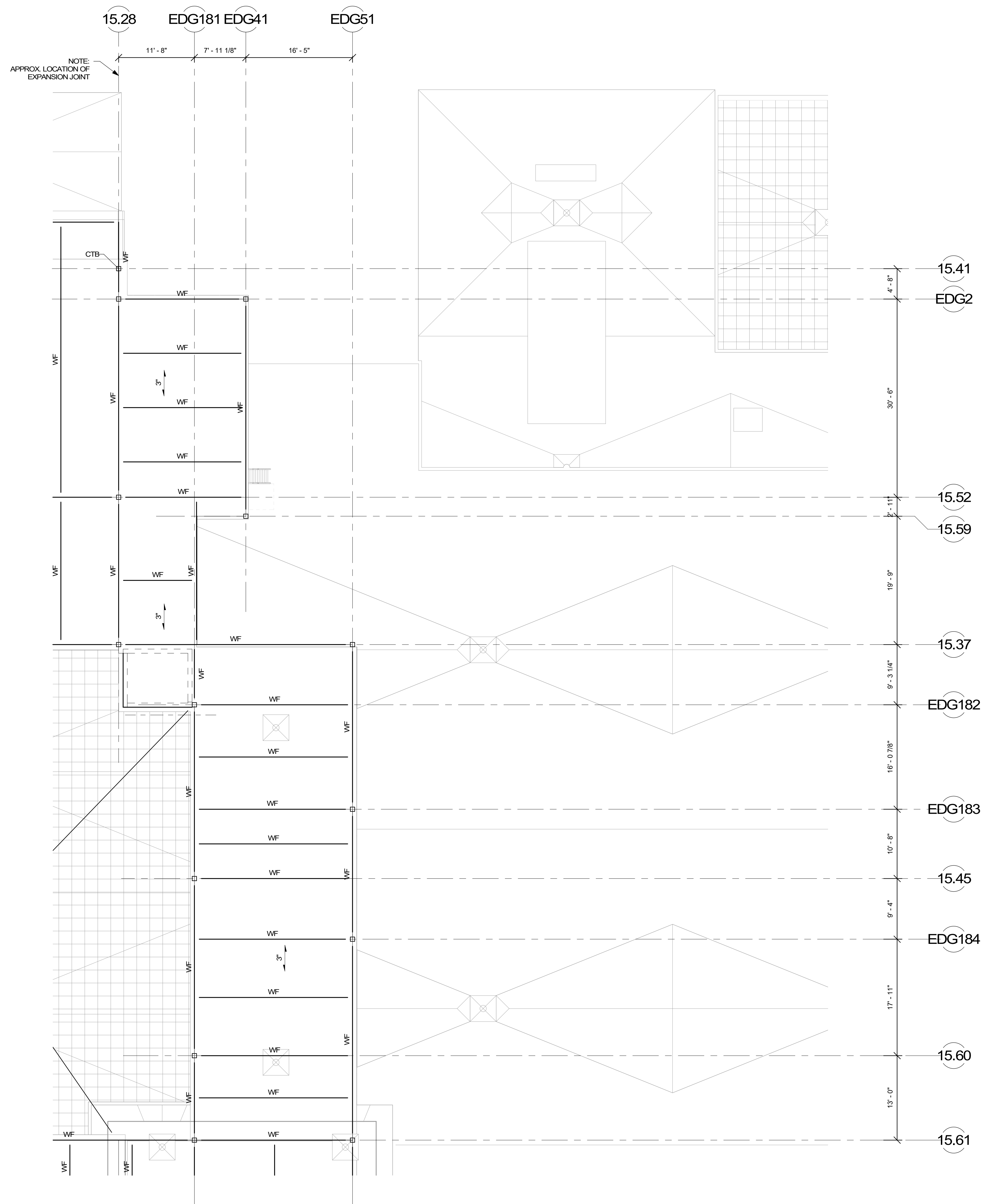
ROOF FRAMING PLAN - AREA B

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: DRA
 Date: JUNE 17, 2021
S1-1-5B

COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLUMNS, AND BRACED BAYS ABOVE LEVEL 4. (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

COST NOTE:
 ALLOW FOR (3" DEEP), TYPICAL METAL ROOF DECK, SPANNING BETWEEN STRUCTURAL STEEL BEAMS.

NOTE: APPROX. LOCATION OF EXPANSION JOINT

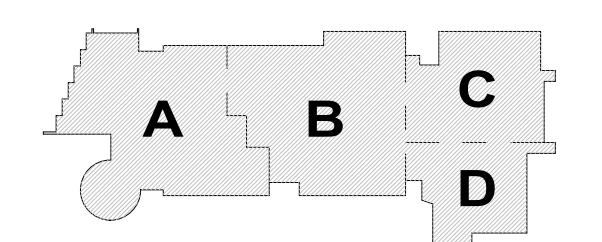


COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS, GIRDERS, COLLUMS, AND BRACED BAYS ABOVE LEVEL 4 (INCLUDES SHEAR STUDS, MISC. PLATES, ETC.)

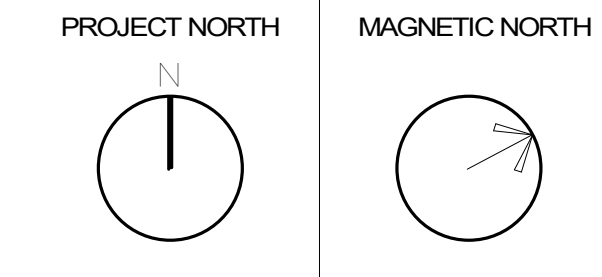
COST NOTE:
 ALLOW FOR 1/2" DEEP, TYPE-N METAL ROOF DECK SPANNING BETWEEN STRUCTURAL STEEL BEAMS.

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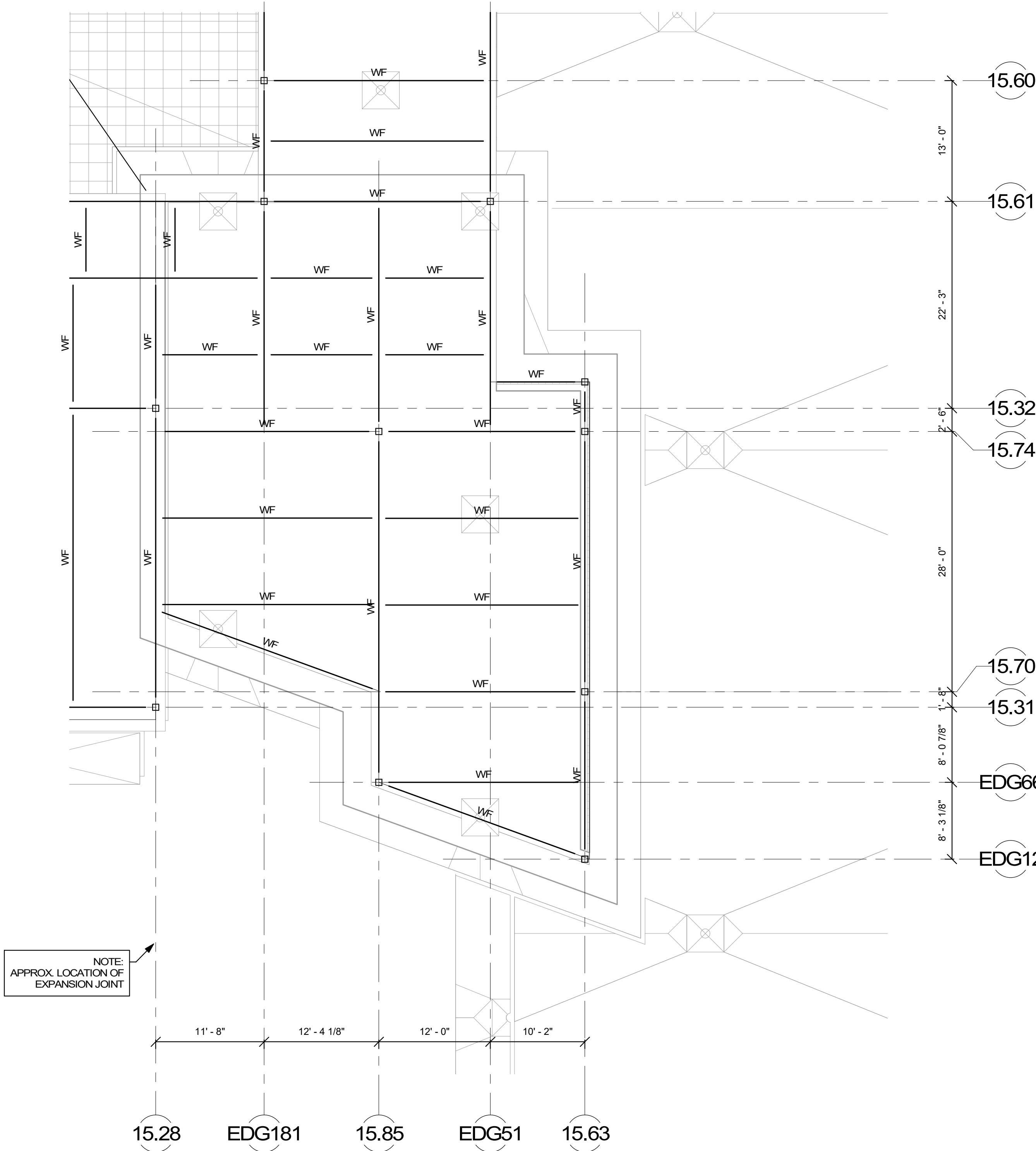
KEY PLAN



ROOF FRAMING PLAN - AREA C

Scale: 1/8" = 1'-0"
 Job No.: 2022
 Drawn By: DRA
 Date: JUNE 17, 2021

S1-1-5C



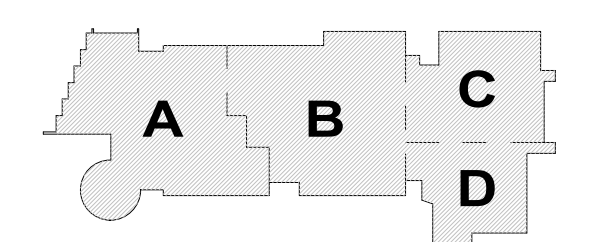
NOTE:
 APPROX. LOCATION OF
 EXPANSION JOINT

COST NOTE:
 ALLOW FOR 15 PSF FOR TYPICAL STRUCTURAL STEEL BEAMS,
 GIRDERS, COLUMNS AND BRACED BAYS ABOVE LEVEL 4.
 (INCLUDES SHEAR STUDS, MSC PLATES, ETC.)

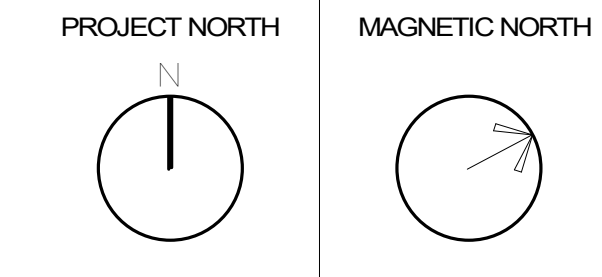
COST NOTE:
 ALLOW FOR (3" DEEP), TYPE-N METAL ROOF DECK,
 SPANNING BETWEEN STRUCTURAL STEEL BEAMS.

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KEY PLAN



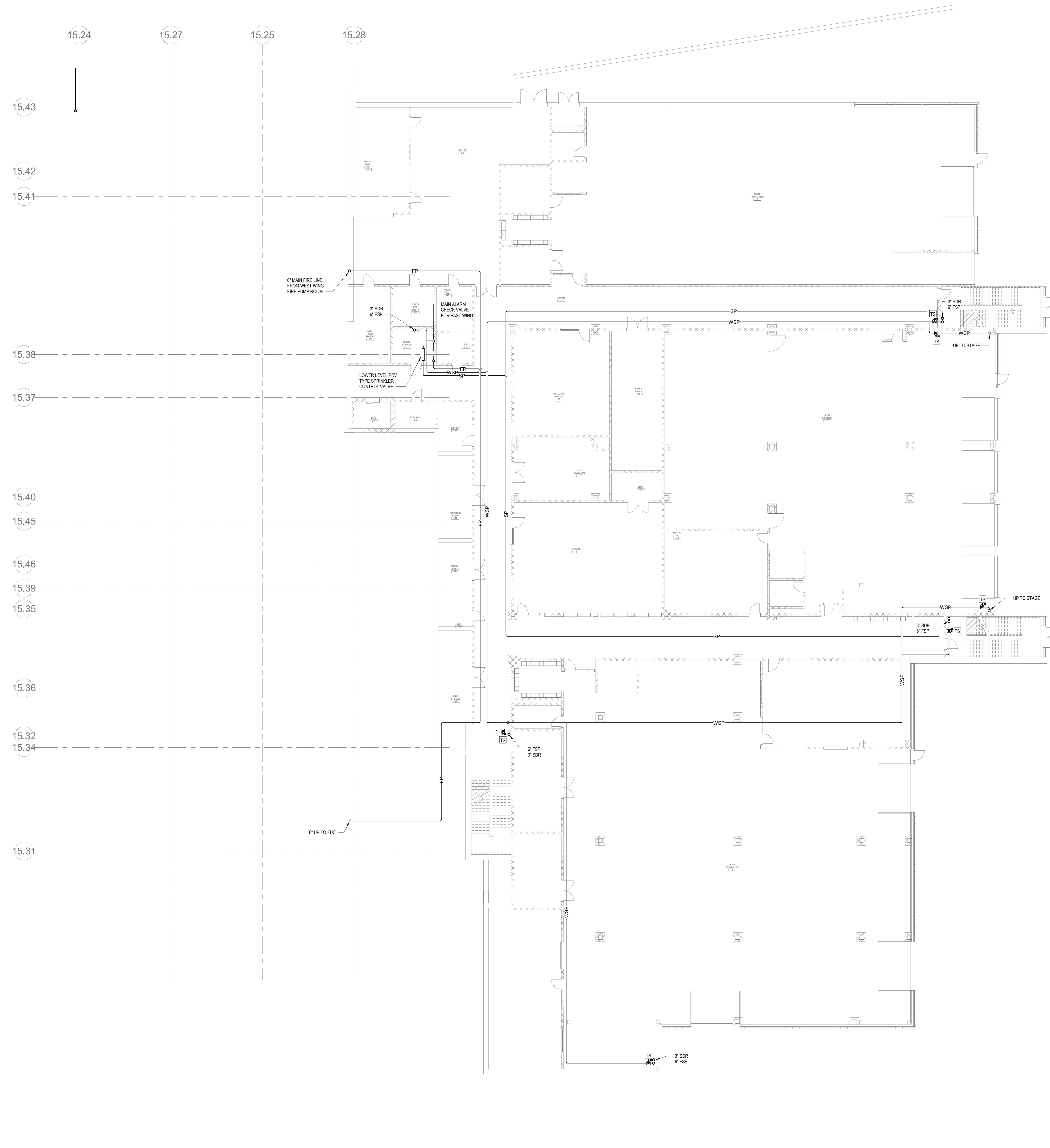
**ROOF FRAMING
 PLAN - AREA D**

Scale: 1/8" = 1'-0"
 Job No.: 2022
 Drawn By: DRA
 Date: JUNE 17, 2021

S1-1-5D

ABBREVIATIONS	
(E)	EXISTING ITEM
(ED)	EXISTING ITEM TO BE DEMOLISHED
(ER)	EXISTING ITEM TO BE RELOCATED
(N)	NEW ITEM
(PL)	EXISTING ITEM TO BE RELOCATED
A	COMPRESSED AIR
AC	ABOVE CEILING
AF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	ABOVE PIPE
BP	BELOW RAISED FLOOR
BPF	BELOW FINISHED FLOOR
BDR	BELOW REINVENTER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
CA	CLEAN AGENT
CBV	CUBB BOX VALVE
CP	CAST IRON PIPE
CLG	CEILING
CONN	CONNECT
CONT	CONTINUATION
D	DETECTION DEVICE (SHOWN IN SYMBOL)
DP	DUCTILE IRON PIPE
DN	DOWN
DR	DRY PIPE
DR	DRINKER
DSP	DRY STANDPIPE
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EUP	ELEVATION
EQUIP	EQUIPMENT
FCV	FLOOR CONTROL VALVE
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE REACK
FHV	FIRE HOSE VALVE
FPC	FIRE PROTECTION CONTRACTOR
FPH	FIRE PUMP TEST HEADER
FS	FLOW SWITCH
FT	FOOT FEET
GEN	GENERAL CONTRACTOR
GP	GALVANIZED PIPE
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HALON
IE	INVERT ELEVATION
LZ	LOW ZONE
NC	NORMALLY CLOSED
NC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
PA	PRECAUTION
PC	PLUMBING CONTRACTOR
PG	PRESSURE GAUGE
PIV	POST INDICATOR VALVE
PRESS	PRESSURE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PSG	POUNDS PER SQUARE INCH GAUGE
SF	SQUARE FOOT
SPR	SPRINKLER PIPING
SPR	SPRINKLER
STOP	STAND PIPE
TB	THRUST BLOCK
TDM	TOTAL DYNAMIC HEAD
TOP	TOP OF PIPE
TYP	TYPICAL
TS	TAMPER SWITCH
VF	VERIFY IN FIELD
W	WITH
W/O	WITHOUT
WSP	WET STAND PIPE

FIRE PROTECTION LEGEND	
	FIRE MAN
	EXISTING FIRE MAN
	DRAIN PIPING
	EXISTING DRAIN PIPING
	SPRINKLER PIPING
	EXISTING SPRINKLER PIPING
	PREACTION SPRINKLER PIPING
	EXISTING PREACTION SPRINKLER PIPING
	DRY SPRINKLER PIPING
	EXISTING DRY SPRINKLER PIPING
	CLEAN AGENT SYSTEM PIPING
	EXISTING CLEAN AGENT SYSTEM PIPING
	DRY STAND PIPE
	EXISTING DRY STAND PIPE
	CHECK VALVE
	BUTTERFLY VALVE
	BALL VALVE
	GATE VALVE - OUTSIDE SCREW & YOKE
	ANGLE VALVE
	PIPE CAP - FLANGED, SCREWED OR GROOVED TYPE
	FLANGED PIPE CONNECTION
	GROOVED PIPE MECHANICAL CONNECTION
	UNION
	FIRE DEPARTMENT CONNECTION (Y-PROJECTING)
	FIRE DEPARTMENT CONNECTION (FLUSH)
	FIRE DEPARTMENT CONNECTION (SIDEWALK)
	FIRE HYDRANT
	FIRE HYDRANT
	FIRE HOSE REEL
	FIRE HOSE VALVE
	FIRE PROTECTION CONTRACTOR
	FIRE PUMP TEST HEADER
	FLOW SWITCH
	FOOT FEET
	GENERAL CONTRACTOR
	GALVANIZED PIPE
	GALLONS PER DAY
	GALLONS PER HOUR
	GALLONS PER MINUTE
	HALON
	INVERT ELEVATION
	LOW ZONE
	NORMALLY CLOSED
	NOT IN CONTRACT
	NORMALLY OPEN
	NOT TO SCALE
	PRECAUTION
	PLUMBING CONTRACTOR
	PRESSURE GAUGE
	POST INDICATOR VALVE
	PRESSURE
	PRESSURE SWITCH
	POUNDS PER SQUARE INCH
	POUNDS PER SQUARE INCH GAUGE
	SQUARE FOOT
	SPRINKLER PIPING
	SPRINKLER
	STAND PIPE
	THRUST BLOCK
	TOTAL DYNAMIC HEAD
	TOP OF PIPE
	TAMPER SWITCH
	TYPICAL
	VERIFY IN FIELD
	WITH
	WITHOUT
	WET STAND PIPE
	UNION
	FIRE DEPARTMENT CONNECTION (Y-PROJECTING)
	FIRE DEPARTMENT CONNECTION (FLUSH)
	FIRE DEPARTMENT CONNECTION (SIDEWALK)
	FIRE HYDRANT
	FIRE HYDRANT
	FIRE HOSE REEL
	FIRE HOSE VALVE
	FIRE PROTECTION CONTRACTOR
	FIRE PUMP TEST HEADER
	FLOW SWITCH
	FOOT FEET
	GENERAL CONTRACTOR
	GALVANIZED PIPE
	GALLONS PER DAY
	GALLONS PER HOUR
	GALLONS PER MINUTE
	HALON
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	POST INDICATOR VALVE
	PRESSURE
	PRESSURE SWITCH
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	POUNDS PER SQUARE INCH GAUGE
	SQUARE FOOT
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	SPRINKLER
	STAND PIPE
	THRUST BLOCK
	TOTAL DYNAMIC HEAD
	TOP OF PIPE
	TAMPER SWITCH
	TYPICAL
	VERIFY IN FIELD
	WITH
	WITHOUT
	WET STAND PIPE
	UNION
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	FIRE DEPARTMENT CONNECTION (FLUSH)
	FIRE DEPARTMENT CONNECTION (SIDEWALK)
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	FIRE HYDRANT
	FIRE HOSE REEL
	FIRE HOSE VALVE
	FIRE PROTECTION CONTRACTOR
	FIRE PUMP TEST HEADER
	FLOW SWITCH
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	GALVANIZED PIPE
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	GALLONS PER MINUTE
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	FOOT FEET
	GENERAL CONTRACTOR
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	POST INDICATOR VALVE
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	PRESSURE SWITCH
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	SPRINKLER
	STAND PIPE
	THRUST BLOCK
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	TOP OF PIPE
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	VERIFY IN FIELD
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	WITHOUT
	WET STAND PIPE
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	FIRE DEPARTMENT CONNECTION (SIDEWALK)
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	FIRE HYDRANT
	FIRE HOSE REEL
	FIRE HOSE VALVE
	FIRE PROTECTION CONTRACTOR
	FIRE PUMP TEST HEADER
	FLOW SWITCH
	FOOT FEET
	GENERAL CONTRACTOR
	GALVANIZED PIPE
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	GALLONS PER HOUR
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	SPRINKLER
	STAND PIPE
	THRUST BLOCK
	TOTAL DYNAMIC HEAD
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	FIRE HOSE VALVE
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	TYPICAL
	VERIFY IN FIELD
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	WITHOUT
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	FIRE HYDRANT
	FIRE HYDRANT
	FIRE HOSE REEL
	FIRE HOSE VALVE
	FIRE PROTECTION CONTRACTOR
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	WITHOUT
	WET STAND PIPE
	UNION
	FIRE DEPARTMENT CONNECTION (Y-PROJECTING)
	FIRE DEPARTMENT CONNECTION (FLUSH)
	FIRE DEPARTMENT CONNECTION (SIDEWALK)
	FIRE HYDRANT
	FIRE HYDRANT
	FIRE HOSE REEL
	FIRE HOSE VALVE



2 FIRE PROTECTION LEVEL 0 EAST
3/2" = 1'-0"

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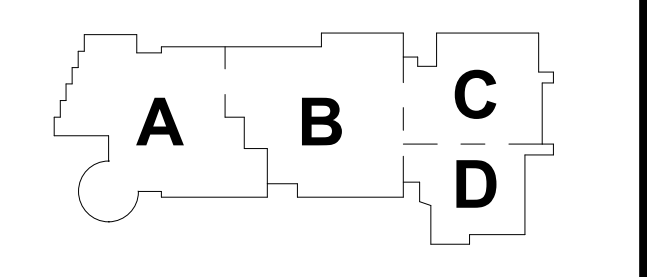
NORTHEAST METRO TECH

100 Hemlock Rd.
Wakefield, MA 01880

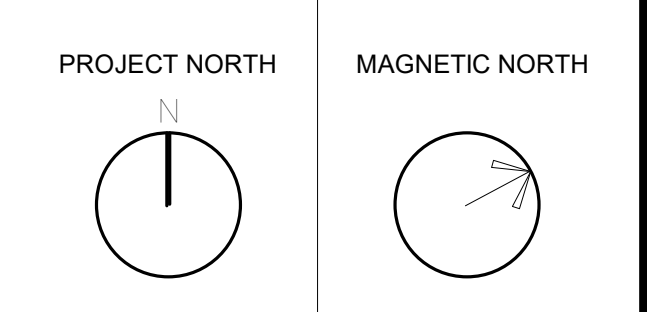
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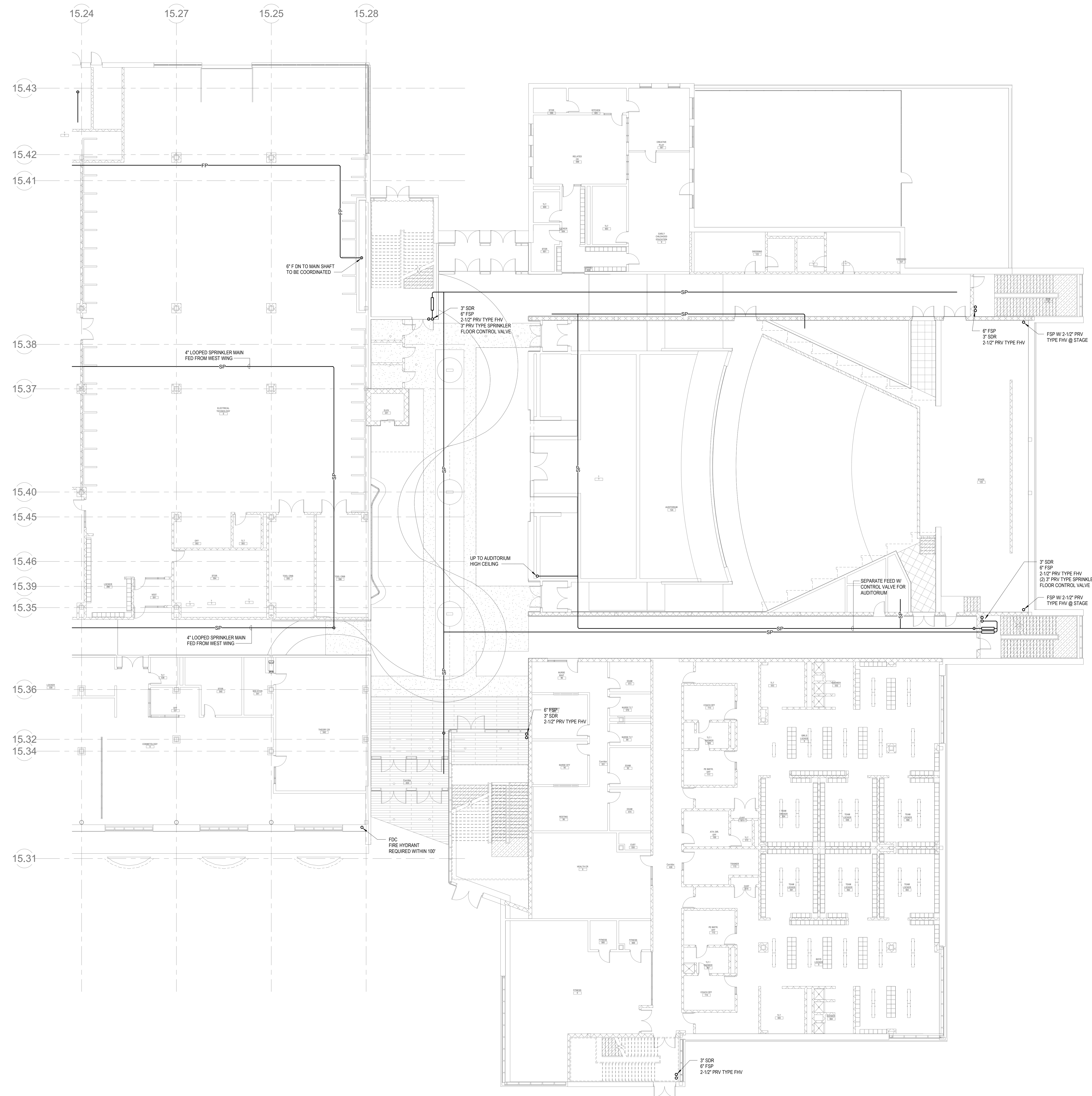
KEY PLAN



FIRE PROTECTION LOWER LEVEL FLOOR PLAN - PLAN EAST

Scale: 3/32" = 1'-0"
Job No.: 0520409
Drawn By: DRA
Date: JUNE 17, 2021

FP1-1-0E



2 FIRE PROTECTION LEVEL 1 EAST
 3/32" = 1'-0"

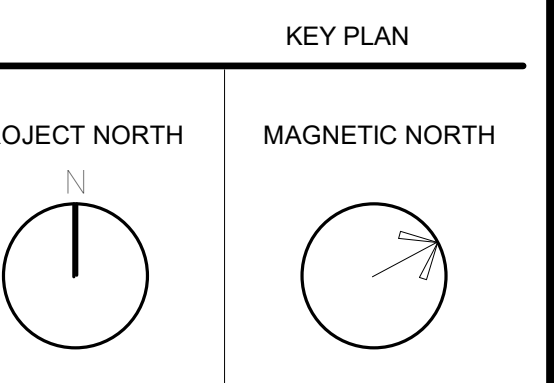
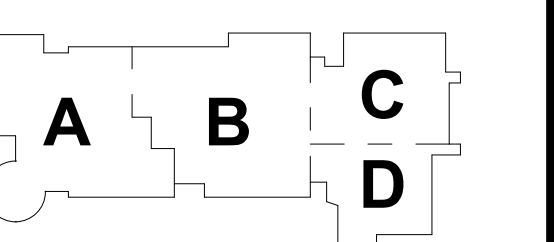
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FIRE PROTECTION FIRST FLOOR PLAN - PLAN EAST

Scale: 3/32" = 1'-0"
 Job No.: 0520409
 Drawn By: DRA
 Date: JUNE 17, 2021

FP1-1-E

FIRE PROTECTION DRAWING NOTES

1. FIRE PUMP WILL NEED TO TAKE SUCTION FROM EXTERIOR UNDERGROUND WATER TANK IF IT IS DETERMINED THAT TOWN WATER SUPPLY CANNOT ADEQUATELY FEED THE PUMP SUCTION. UNDER THIS SCENARIO THE PUMP WILL NEED TO BE LOCATED IN AN EXTERIOR BUILDING STRUCTURE WITH TANK.

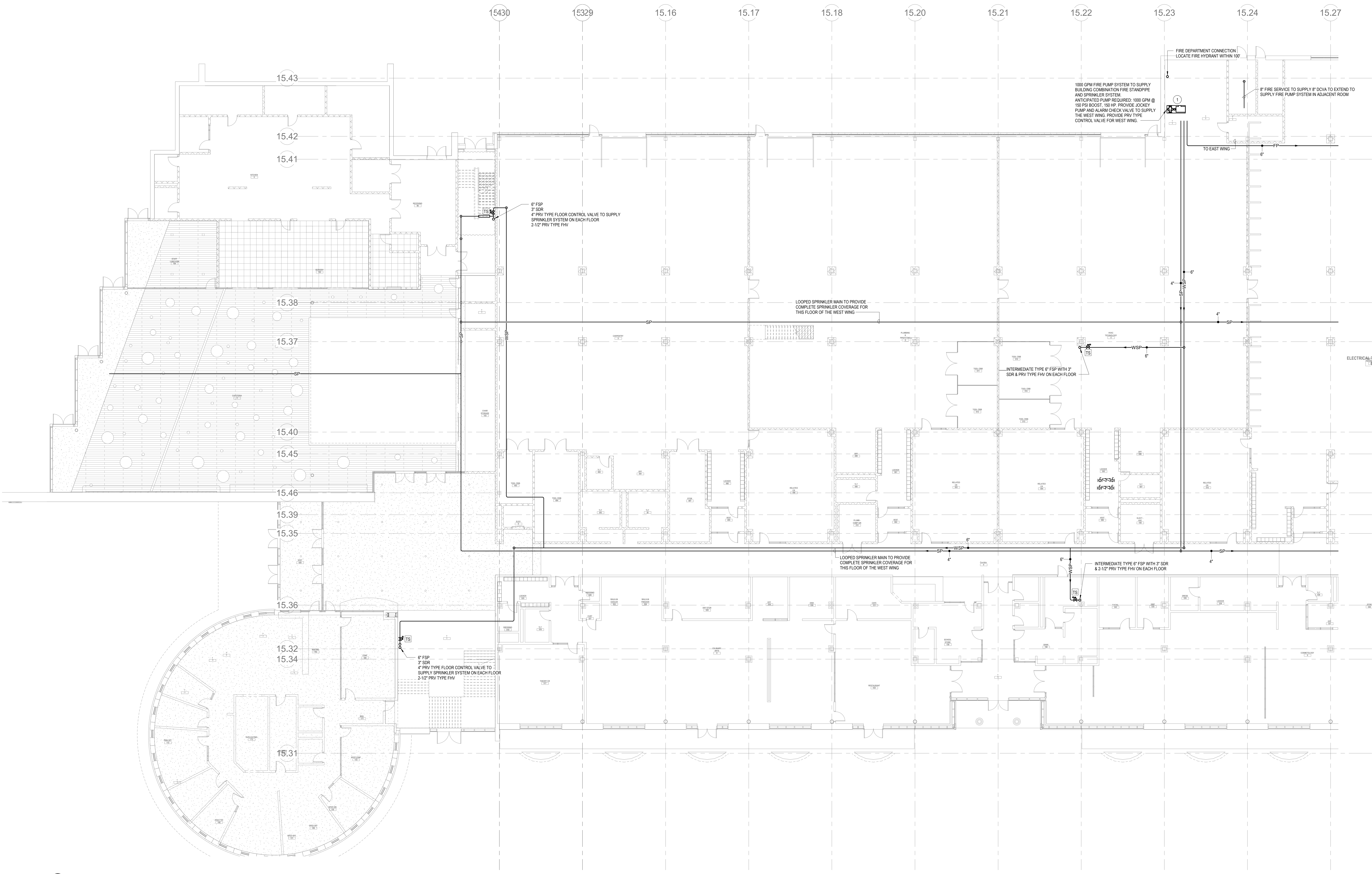
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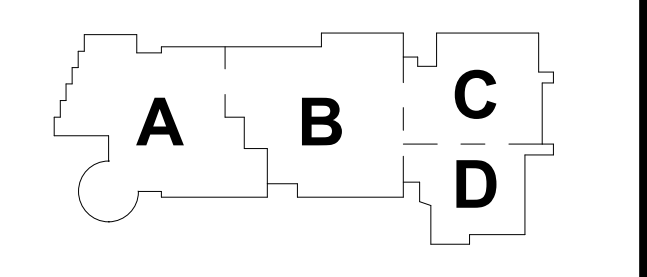
FIRE PROTECTION LEVEL 1 WEST
 3/2\"/>

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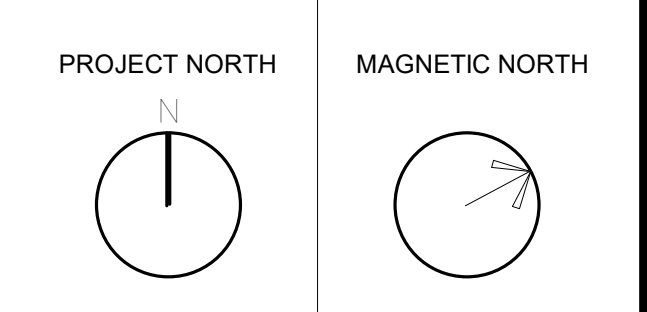
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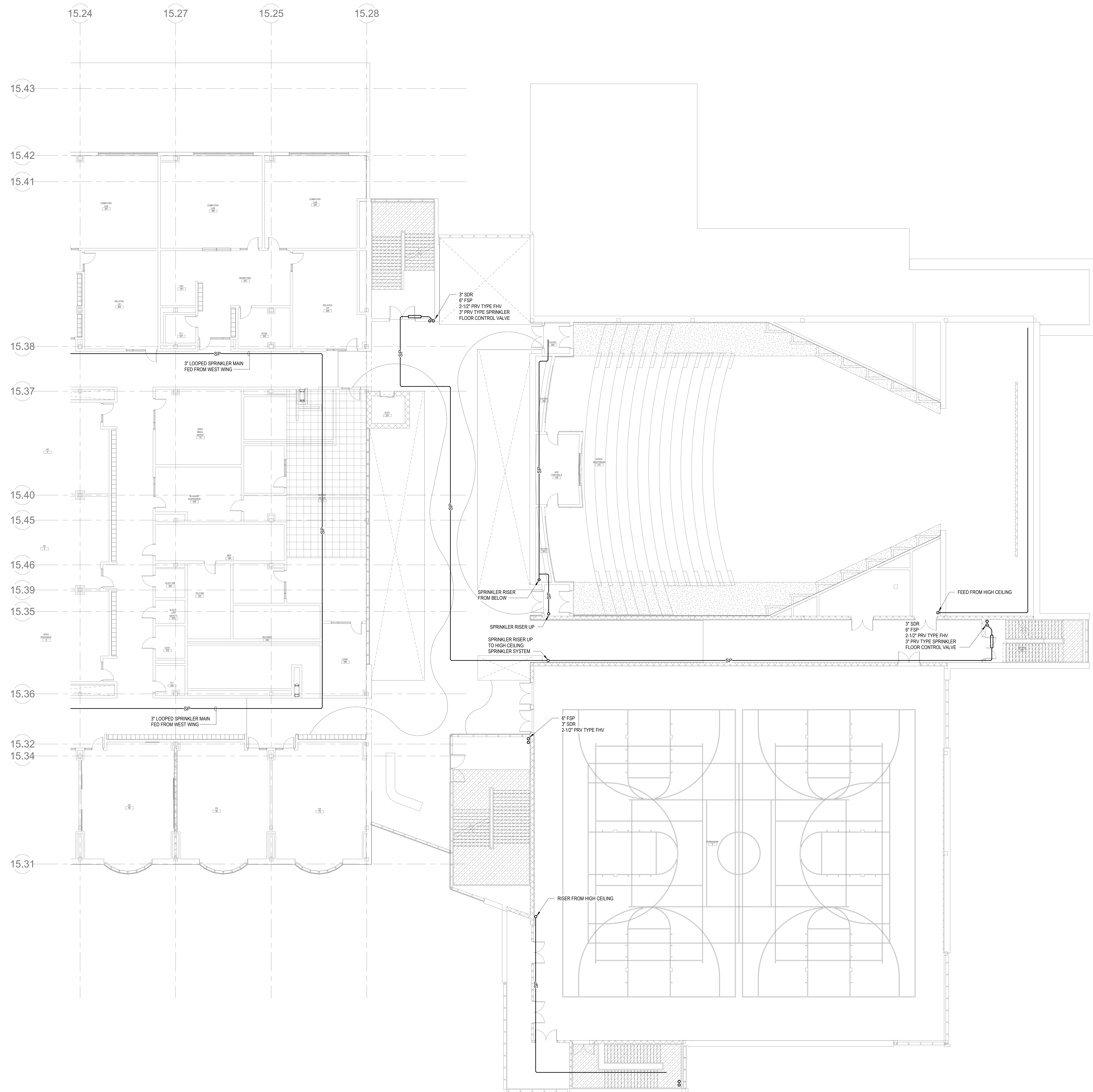
KEY PLAN



FIRE PROTECTION FIRST FLOOR PLAN - PLAN WEST

Scale: As indicated
 Job No.: 6520409
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FP1-1-W



2 FIRE PROTECTION LEVEL 2 EAST
 15.1-15.2 3/32" = 1'-0"

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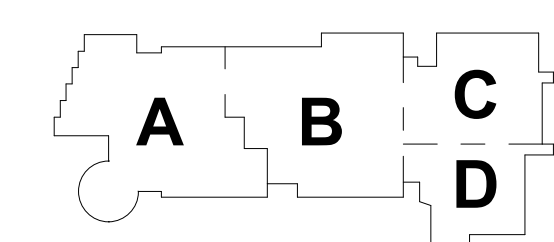
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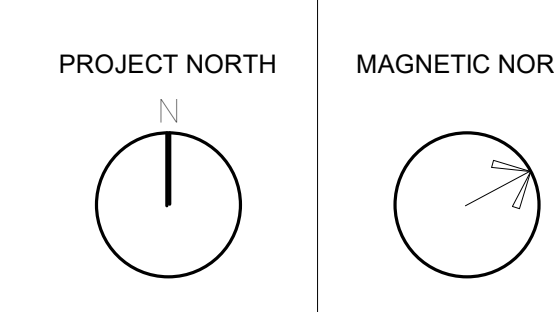
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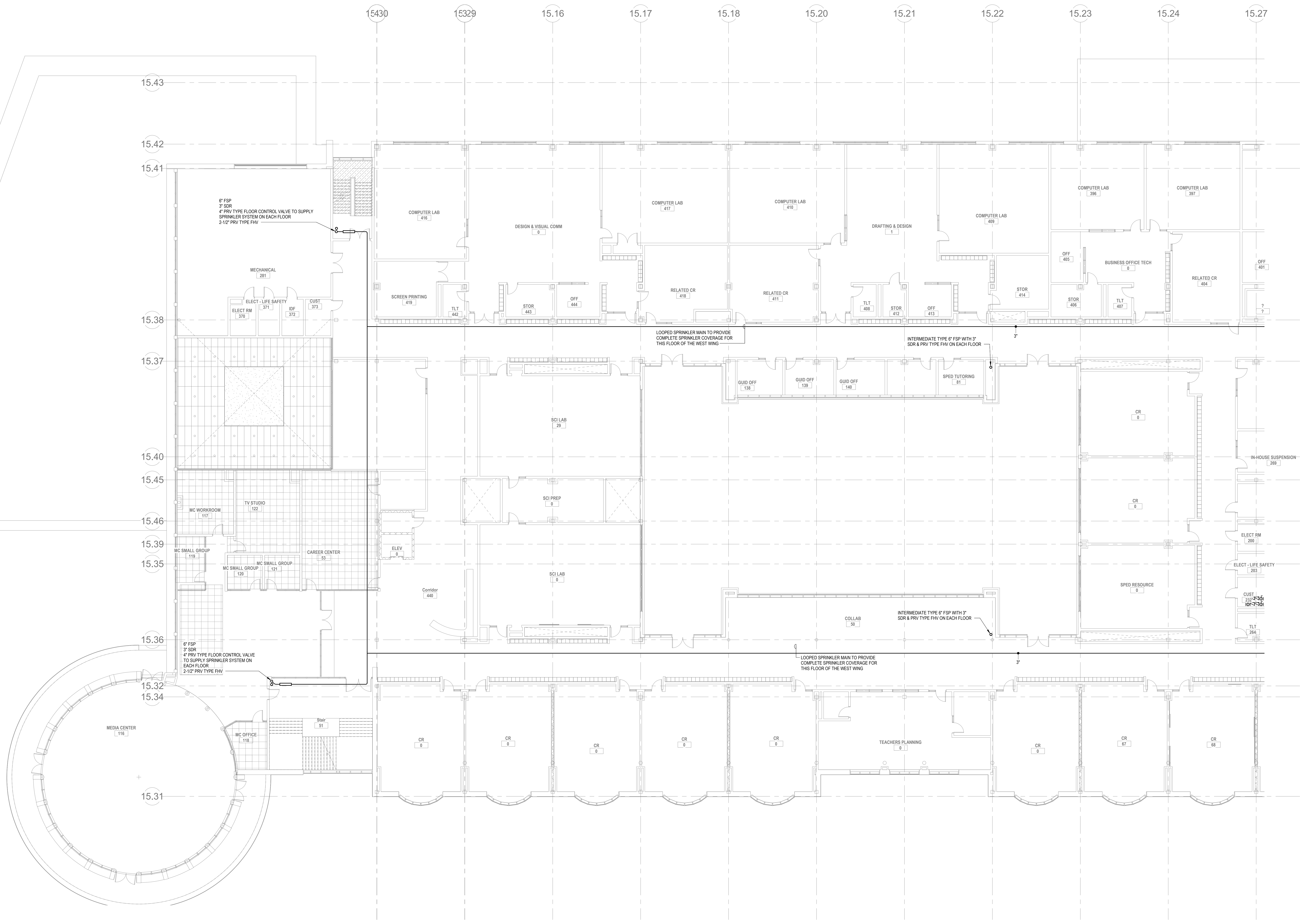
KEY PLAN



**FIRE
 PROTECTION
 SECOND FLOOR
 PLAN - PLAN
 EAST**

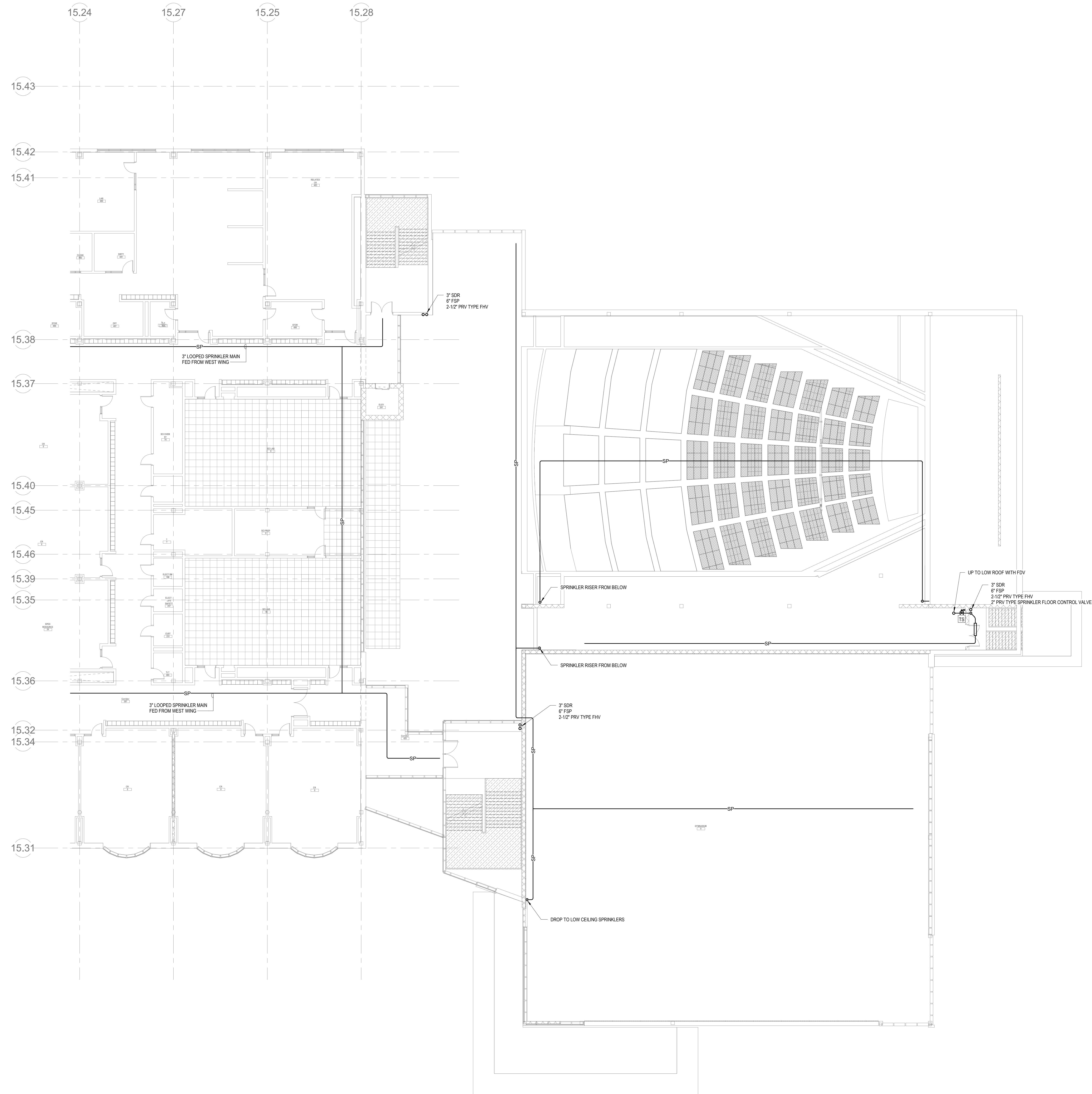
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FP1-1-2E



FIRE PROTECTION LEVEL 2 WEST
3/32" = 1'-0"

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2 FIRE PROTECTION LEVEL 3 EAST
FP1-3E 3/32" = 1'-0"

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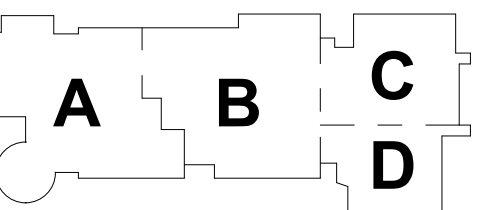
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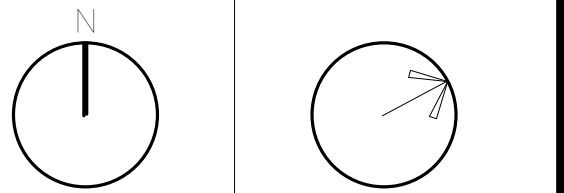
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KEY PLAN

PROJECT NORTH MAGNETIC NORTH



FIRE
PROTECTION
THIRD FLOOR
PLAN - PLAN
EAST

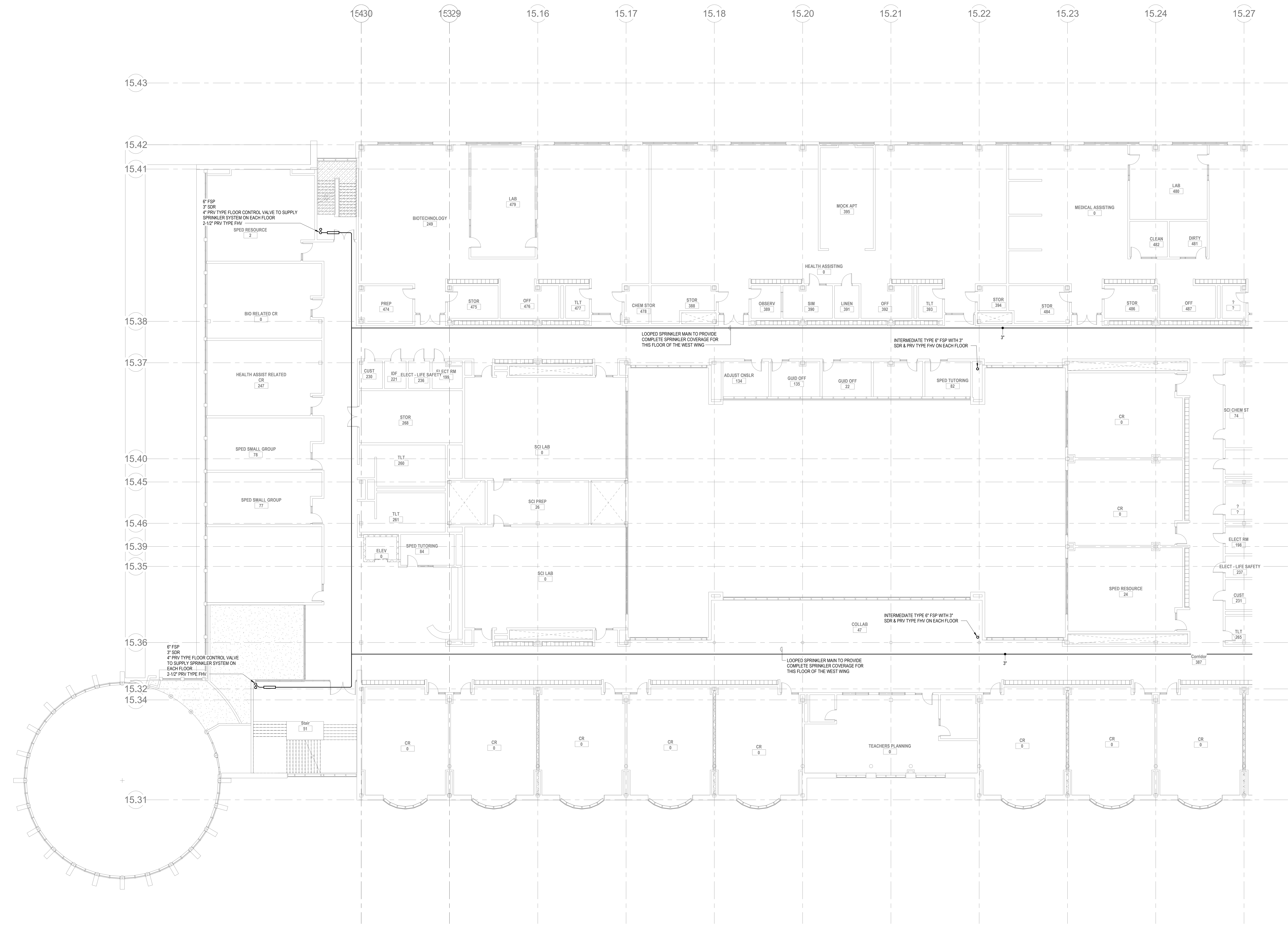
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Job No.: 6520409

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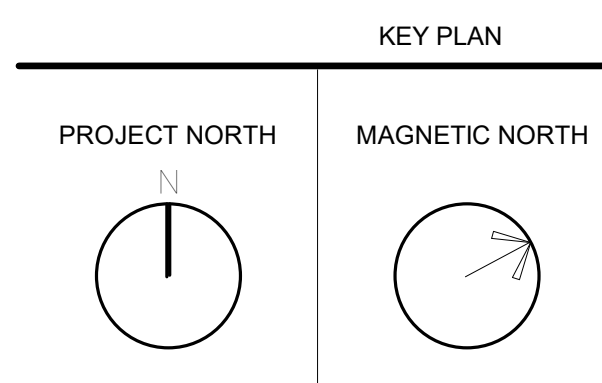
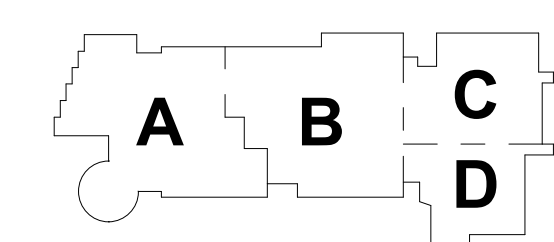
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FP1-1-3E

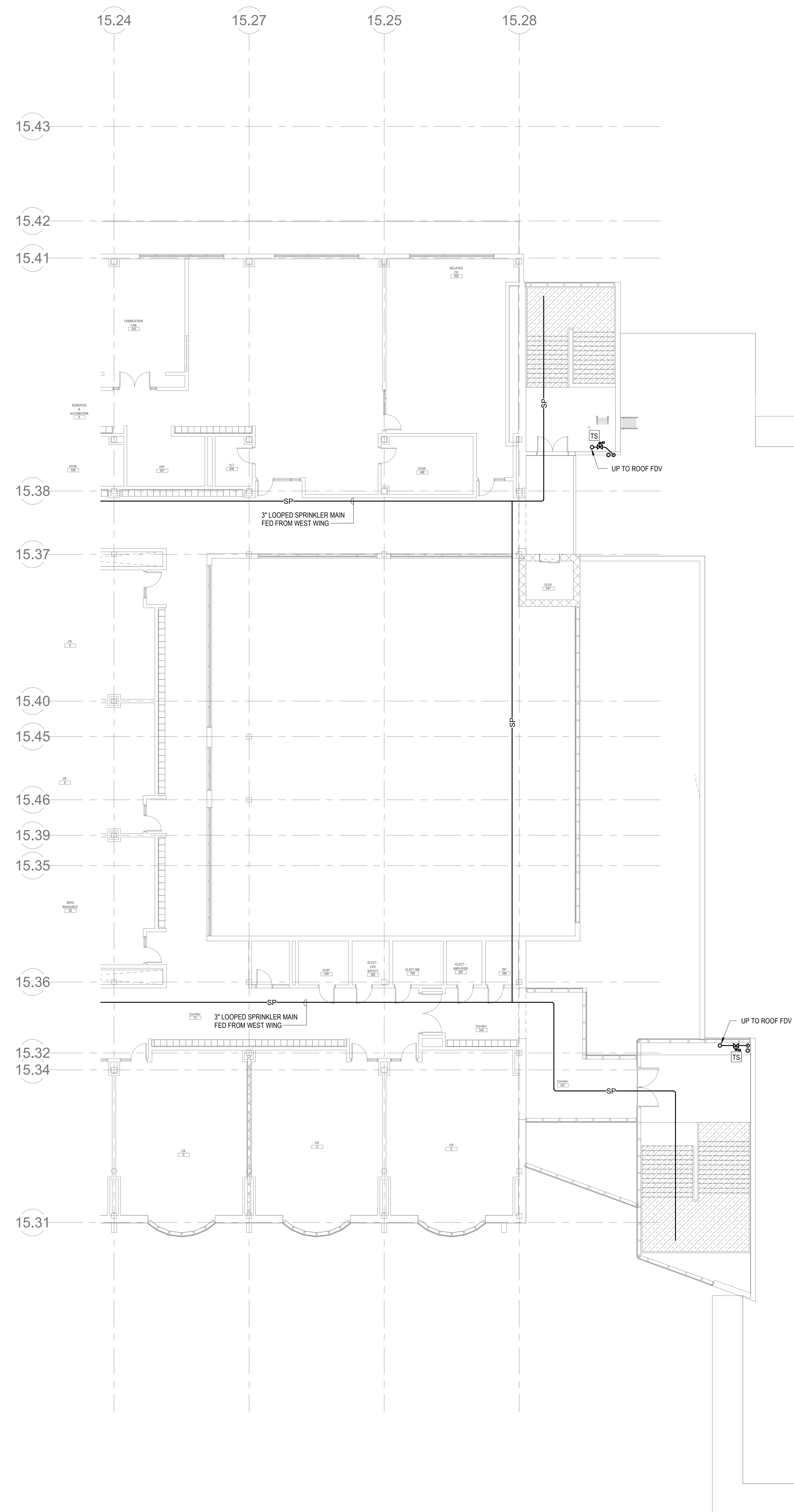


2 FIRE PROTECTION LEVEL 3 WEST
FP1-1-3W 3/32" = 1'-0"

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FIRE
PROTECTION
THIRD FLOOR
PLAN - PLAN
WEST



FIRE STANDPIPE OUTLET AT ROOF LEVEL & CONTROL FROM POST INDICATING VALVE

4 FIRE PROTECTION LEVEL 4 EAST
FP1-1-4E 3/32" = 1'-0"

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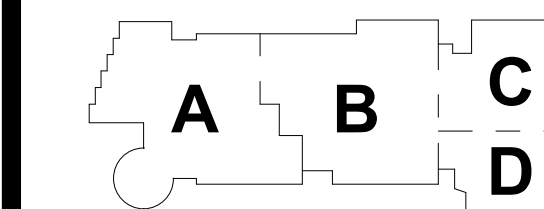
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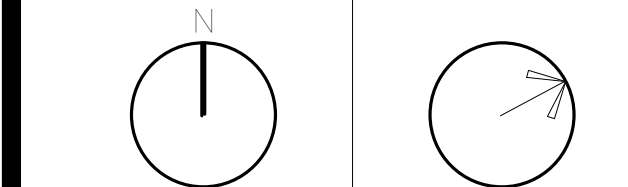
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KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**FIRE
PROTECTION
FOURTH FLOOR
PLAN - PLAN
EAST**

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

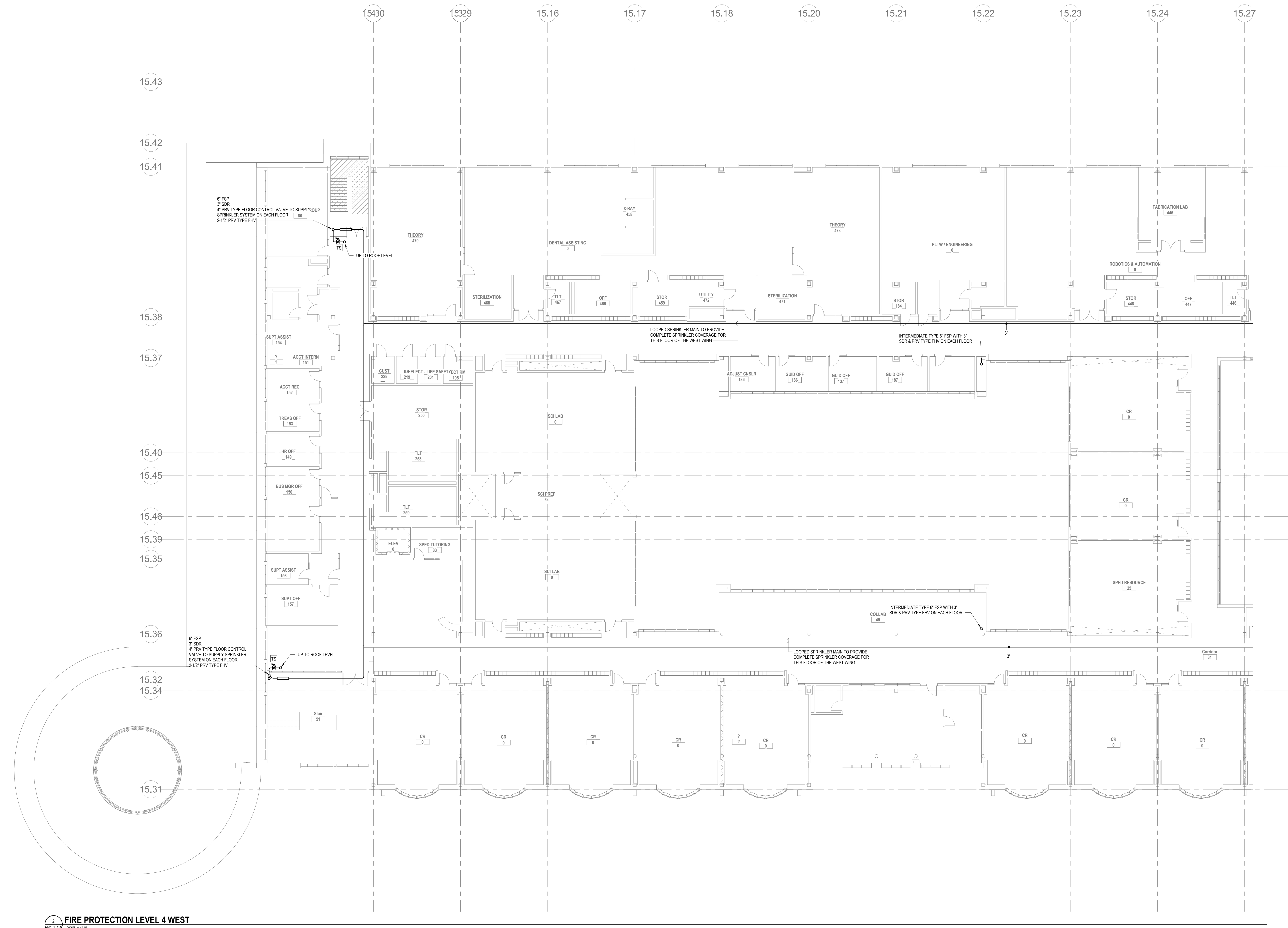
Job No.: 6520409

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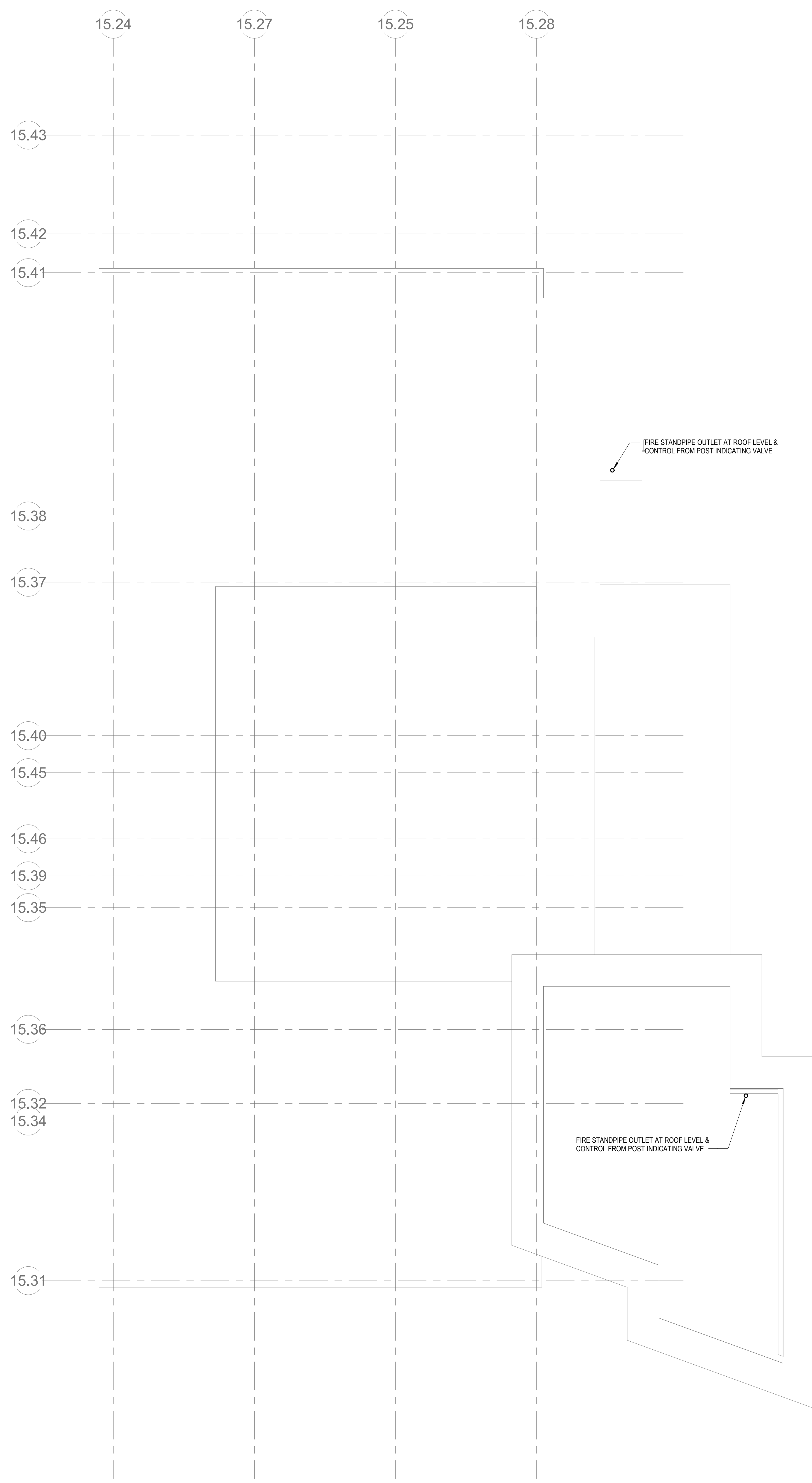
FP1-1-4E

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2
FP1-1-4W
FIRE PROTECTION LEVEL 4 WEST
3/32" = 1'-0"

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1 FIRE PROTECTION MAIN ROOF EAST
FP1-2-1E 3/32" = 1'-0"



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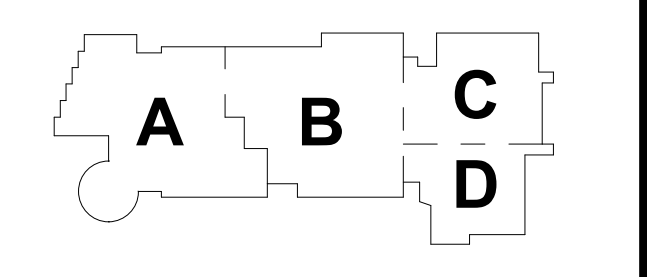
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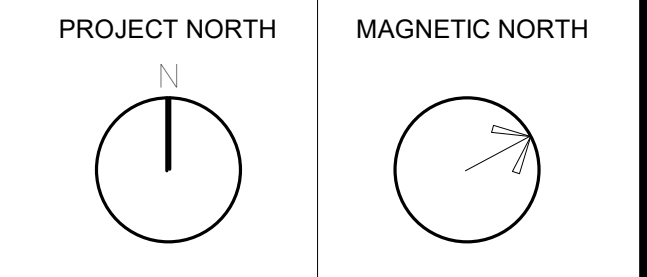
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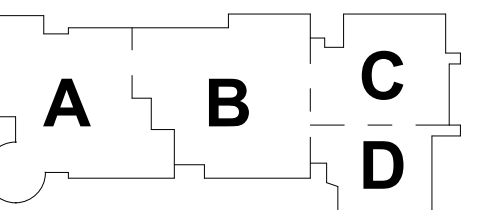


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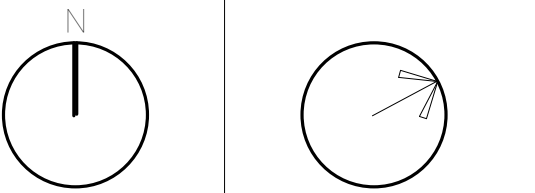
FIRE PROTECTION ROOF PLAN - PLAN EAST

Scale: 3/32" = 1'-0"
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021
FP1-2-1E



KEY PLAN

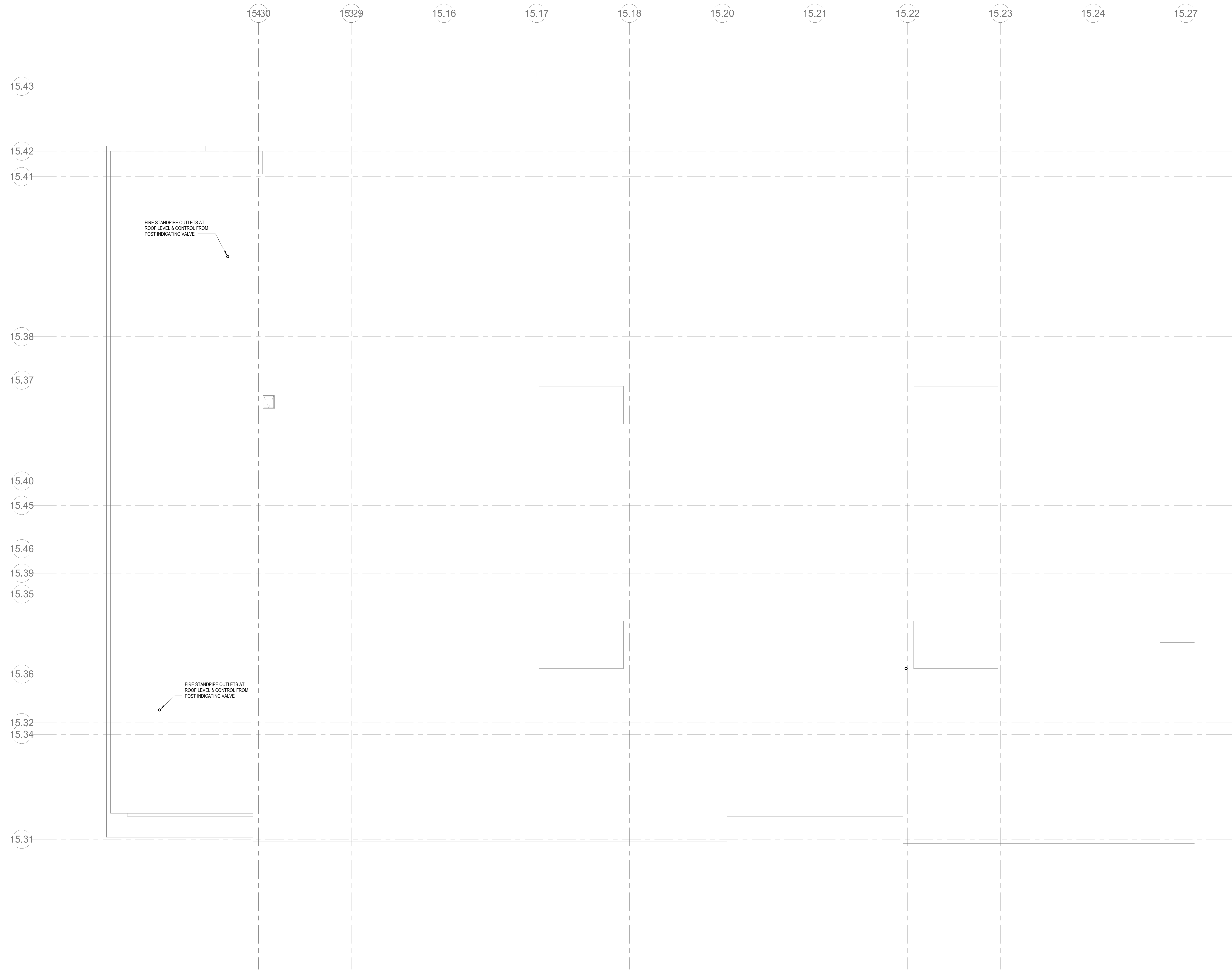
PROJECT NORTH MAGNETIC NORTH



FIRE
PROTECTION
ROOF PLAN -
PLAN WEST

Scale: 3/32" = 1'-0"
Job No.: 0520409
Drawn By: DRA
Date: JUNE 17, 2021

FP1-2-1W



1 FIRE PROTECTION MAIN ROOF WEST
17.5.17 3/32" = 1'-0"

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MISC TAGS AND SYMBOLS

	KEYED NOTE
	DEMOLITION NOTE
	KITCHEN EQUIPMENT TAG
	REVISION NUMBER X
	DISTANCE TO FINISH FLOOR (FEET & INCHES) FROM BOTTOM OF PIPE
	INDICATES CONNECT NEW TO EXISTING
	INDICATES LIMIT OF REMOVAL
	COLD WATER RISER TAG
	DRAIN RISER TAG
	DRY STAND PIPE RISER TAG
	HOT WATER RETURN RISER TAG
	HOT WATER RISER TAG
	NATURAL GAS RISER TAG
	RAIN WATER CONDUCTOR TAG
	SANITARY STACK TAG
	SPRINKLER RISER TAG
	VENT STACK TAG
	WET STANDPIPE RISER TAG
	EQUIPMENT TAG
	SECTION SYMBOL
	SECTION DESIGNATION
	DRAWING NUMBER LOCATION
	DETAIL SYMBOL
	DETAIL NUMBER
	DRAWING NUMBER LOCATION

PIPE LOCATION NOTES

	CONCEALED IN CEILING SPACE ABOVE
	EXPOSED IN STRUCTURE ABOVE
	CONCEALED IN CEILING SPACE, BELOW FLOOR
	EXPOSED ON STRUCTURE, FLOOR BELOW
	BELOW GRADE
	RACK ON WALL, BELOW COUNTER TOP
	ABOVE FLOOR
	RUN THROUGH OR BETWEEN BAR JOIST
	CONCEALED BELOW RAISED FLOOR

VALVES AND ACCESSORIES

	GATE VALVE
	OSY VALVE
	FLOW CONTROL VALVE
	THERMOSTATIC MIXING VALVE
	SLEEVE VALVE
	PRESSURE REDUCING VALVE
	GAS COOK
	BALANCING VALVE
	PRESSURE / TEMPERATURE RELIEF VALVE
	BALL VALVE
	CHECK VALVE
	INLINE STRAINER
	UNION
	DRAIN VALVE
	FLANGED CONNECTION
	PRESSURE GAUGE
	PRESSURE GAUGE WITH COOK THERMOMETER
	CLEAN OUT
	FLOOR OR GROUND CLEAN OUT
	STACK CLEAN OUT
	LINE CLEAN OUT
	CLEAN OUT @ GRADE
	BACK WATER VALVE
	BACK WATER VALVE (NPT)
	CAPPED PIPE
	WASTE AND TRAP
	PIPE TURNING DOWN OR RISING
	PIPE RISING / OR RISING AND DROPPING
	PIPE DROP OR RISING 45°
	PIPE DROP OR RISING 90°
	MASTER GAS VALVE
	VALVE IN VERTICAL
	AQUATAT (A)
	VACUUM BREAKER (VB)
	WATER HAMMER ARRESTOR (WHA)
	WATER HAMMER ARRESTOR (WHAAP)
	KITCHEN FLOOR SINK (FS)
	AREA FLOOR DRAIN (AD)
	FLOOR DRAIN (FD)
	GARAGE FLOOR DRAIN (GD)
	HOSE BIB (HB) OPEN / CLOSED
	WALL HYDRANT (WH) OPEN / CLOSED
	ROOF / OVER/LOW DRAIN
	ROOF / OVER/LOW DRAIN ABOVE
	TRENCH DRAIN
	DOUBLE CHECK DETECTOR ASSEMBLY
	DOUBLE CHECK VALVE ASSEMBLY (DCVA)
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)
	REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA)
	PUMP

PLUMBING PIPING LEGEND

	(140° HW) 140° HOT WATER
	(140° HW/R) 140° HOT WATER RECIRC
	(AR) ARGON
	(ARV) ARGON VENT
	(CA) COMPRESSED AIR
	(CW) COLD WATER
	(FM) FORCE MAIN
	(G) GAS
	(GD) GARAGE DRAIN
	(H2) HYDROGEN
	(H2V) HYDROGEN VENT
	(HE) HELIUM
	(HEV) HELIUM VENT
	(HW) HOT WATER
	(HW/R) HOT WATER RECIRC
	(IA) INSTRUMENT AIR
	(IW) INDIRECT WASTE
	(LA) LAB AIR
	(LV) LAB VENT
	(LW) LAB WASTE
	(LN) LIQUID NITROGEN
	(N2) NITROGEN
	(N2V) NITROGEN VENT
	(NPW) NON POTABLE WATER
	(OFD) OVERFLOW DRAIN
	(O2) OXYGEN
	(SAN) SANITARY
	(ST) STORM
	(TP) TRAP PRIMER
	(VA) VACUUM
	(V) VENT
	(W) WASTE

GENERAL NOTES

- THE WORK TO BE DONE UNDER THESE SPECIFICATIONS AND THE DRAWINGS CONSISTS OF PROVIDING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES AND PERFORMING ALL OPERATIONS TO COMPLETE THE CONSTRUCTION WORK FOR THIS PROJECT. ANY WORK NOT SPECIFICALLY COVERED BY THESE SPECIFICATIONS OR INDICATED ON THE CONTRACT DRAWINGS, BUT NECESSARY TO COMPLETE OR PERFECT ANY PART OF THIS INSTALLATION IN A SUBSTANTIAL MANNER, SHALL BE PROVIDED WITHOUT EXTRA COST TO THE OWNER.
- THE WORK SHALL CONFORM TO THE MORE STRINGENT OF ALL APPLICABLE CODES & REGULATIONS, UL AND FMJ GUIDELINES, (LEED REQUIREMENTS), MANUFACTURERS LITERATURE AND RECOMMENDATIONS, BUILDING OPERATORS REQUIREMENTS, AND TO THE REQUIREMENTS OF FEDERAL, STATE AND LOCAL REGULATORY AGENCIES AND AUTHORITIES HAVING JURISDICTION.
- THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE EXTENT, GENERAL CHARACTER, LOCATION AND ARRANGEMENT OF THE WORK UNDER THIS CONTRACT. EXACT LOCATIONS OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. WHERE JOB CONDITIONS REQUIRE MINOR CHANGES OR ADJUSTMENTS IN THE INDICATED LOCATIONS OR ARRANGEMENT OF THE WORK, SUCH CHANGES SHALL BE PROVIDED WITHOUT EXTRA COST. THE CONTRACTOR SHALL RE-INSTALL EQUIPMENT THAT HAS INADEQUATE OR UNSAFE ACCESSIBILITY.
- INSTALLATION OF WORK SHALL PROVIDE REASONABLE ACCESSIBILITY FOR OPERATION, INSPECTION AND MAINTENANCE OF EQUIPMENT AND ACCESSORIES. PROVIDE CLEARANCES REQUIRED BY MANUFACTURERS AND APPLICABLE CODES. ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO EQUIPMENT AND RELATED ACCESSORIES.
- THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "MECHANICAL WORK," "ELECTRICAL WORK," "PLUMBING WORK," ETC. SHALL MEAN ALL LABOR, MATERIAL, EQUIPMENT, SCAFFOLDING, RIGGING, TOOLS, SUPERVISION, SERVICES AND OTHER INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
- THE CM/DC SHALL MAKE SETS OF THE BID DOCUMENTS CONSISTING OF COMPLETE SETS OF DRAWINGS AND SPECIFICATIONS, AND ISSUE THEM TO EACH OF THE PRIME AND SUB-CONTRACTORS. EVERY PRIME AND SUB-CONTRACTOR ON EACH BIDDING TEAM SHALL RECEIVE COMPLETE SETS OF DRAWINGS AND SPECIFICATIONS. THERE ARE NOTES AND CROSS REFERENCES FOR VARIOUS TRADE CONTRACTORS IN MULTIPLE TRADE OR DISCIPLINE DRAWINGS AND SPECIFICATIONS. TRUST EACH CONTRACTOR IS TO RECEIVE COMPLETE SETS OF THE BID DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THESE DRAWINGS FROM CM/DC. EACH CONTRACTOR IS RESPONSIBLE FOR THEIR WORK AS NOTED ON THE OTHER DISCIPLINE DOCUMENTS. BIDDERS ARE RESPONSIBLE FOR ALL COSTS FOR EACH SET OF BID DOCUMENTS REQUESTED.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING A FULL COORDINATION EFFORT IN ORDER TO CREATE A FINALIZED COORDINATED LAYOUT OF ALL EQUIPMENT, SYSTEMS, DUCTWORK, PIPING AND ALL OTHER ITEMS WITHIN THEIR RESPECTIVE SCOPE. THE CONTRACTOR'S COORDINATION EFFORT SHALL INCLUDE COORDINATION INFORMATION FROM ALL OTHER TRADE CONTRACTORS INVOLVED IN THE PROJECT SCOPE IN ORDER TO PROVIDE COORDINATION BETWEEN TRADES AND ALL EXISTING CONDITIONS. ALL ERRORS MADE AS A RESULT OF A LACK OF COORDINATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CORRECTED AT NO ADDITIONAL COST TO THE PROJECT. MINOR RELOCATIONS AND SHIFTS OF EQUIPMENT, DUCTWORK, AND PIPING WHICH DO NOT CHANGE THE DESIGN INTENT INDICATED ON THE CONTRACT DOCUMENTS, REQUIRED TO ACCOMMODATE FIELD CONDITIONS ARE AT THE CONTRACTORS DISCRETION AND DO NOT REQUIRE ENGINEER APPROVAL.
- CONTRACTOR SHALL ARRANGE AND OBTAIN ALL PERMITS, INSPECTIONS AND APPROVALS, AND PAY ALL RELATED FEES.
- THE DRAWINGS INDICATE APPROXIMATE LOCATIONS BASED UPON INFORMATION OBTAINED WITHOUT REMOVING CEILING OR WALLS. THEREFORE, THE CONTRACTOR SHALL INCLUDE IN THEIR BID CONTINGENCY COSTS TO ADDRESS CONFLICTS BETWEEN DESIGN AND EXISTING CONDITIONS. ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND/OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
- FOR ANY DISCREPANCY BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BASE THEIR BID UPON THE MOST STRINGENT REQUIREMENT (QUALITY, QUANTITY, SIZE, ETC.). THE CONTRACTOR SHALL IDENTIFY DISCREPANCIES AS PART OF THEIR BID.
- PRIOR TO DEMOLITION, THE CONTRACTOR SHALL LOG ALL EXISTING EQUIPMENT AND TRACE ELECTRICAL, FIRE ALARM, AND CONTROL CIRCUITS THAT SERVE SUCH EQUIPMENT.
- ALL SERVICES TO EXISTING BUILDINGS SHALL BE MAINTAINED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL COORDINATE ALL SYSTEM SHUT DOWNS AND TIMING WITH OWNER.
- THE CONTRACTOR SHALL EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED.
- EXISTING EQUIPMENT THAT INTERFERES WITH NEW ARRANGEMENT SHALL BE REMOVED, REINSTALLED, RELOCATED, REROUTED, EXTENDED OR ABANDONED AS REQUIRED, TO SUIT THE NEW ARRANGEMENT.
- WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK AND/OR PIPING, CAREFULLY COORDINATE SIZES AND LOCATIONS OF THE ELEMENTS BEFORE FABRICATION. COORDINATE WITH FINAL LOCATION OF BEAM PENETRATIONS AND SHEAR WALL PENETRATIONS.
- CONTRACTOR SHALL COORDINATE LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS WITH STRUCTURAL AND OTHER TRADES.
- PROVIDE CUTTING AND PATCHING AS REQUIRED AND WHERE NECESSARY TO ACCOMMODATE NEW WORK AND THE REPAIR OF EXISTING WORK.
- WHEN WORK INVOLVES CONTACT WITH MATERIALS CONTAINING ASBESTOS, PCB, OR OTHER TOXIC MATERIALS, NOTIFY OWNER, WHO WILL ESTABLISH PROCEDURES FOR REMEDIATION AND REMOVAL.
- CONTRACTOR SHALL SCHEDULE THE WORK UNDER THIS CONTRACT WITH WORK OF OTHER TRADES AS NOT TO DELAY THE OVERALL PROGRESS OF THE PROJECT.
- CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO PURCHASING EQUIPMENT AND PRIOR TO CUTTING OPENINGS.
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PER SPECIFICATIONS PRIOR TO PURCHASING OR INSTALLING EQUIPMENT AND SYSTEMS INDICATED ON CONTRACT DOCUMENTS. PRIOR TO SUBMITTAL, CONTRACTOR SHALL VERIFY THAT ADEQUATE SPACE EXISTS FOR THE SUBMITTED EQUIPMENT. SHOP DRAWINGS MUST BE REVIEWED BY ARCHITECT/ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY OTHER TRADES DUE TO SUBSTITUTION OF OTHER THAN SCHEDULED EQUIPMENT. WHEN EQUIPMENT FURNISHED IS DIFFERENT THAN INDICATED, THE COST OF ADDITIONAL ELECTRICAL SERVICE, STRUCTURAL AND RELATED WORK SHALL BE PAID BY THIS CONTRACTOR.
- ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE DONE IN ACCORDANCE WITH GOOD TRADE PRACTICE AND IN CONFORMANCE WITH APPLICABLE MANUFACTURERS' RECOMMENDATIONS.
- CONTRACTOR SHALL REMOVE ALL TRASH, DEBRIS AND DEMOLITION MATERIAL FROM PREMISES AT THE END OF EACH DAY.
- RESTORE ALL SURFACES (WALLS, CEILINGS, FLOORS AND ROOFS) THAT ARE DAMAGED BY THE WORK OF THIS CONTRACT TO THEIR ORIGINAL CONDITION AT NO EXTRA COST TO THE OWNER.
- PRIOR TO EQUIPMENT STARTUP, CONTRACTOR SHALL PERFORM THE SPECIFIED STARTUP AND COMMISSIONING PROCEDURES.
- IN THE ABSENCE OF OTHER SPECIFIC INSTRUCTIONS, ALL WORK AND MATERIALS SUPPLIED SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THEIR ACCEPTANCE BY THE OWNER.
- BALA CONSULTING ENGINEERS, INC. (BALA) WILL PROVIDE CONTRACTOR WITH ELECTRONIC CAD FILES OF THE ENGINEERING DESIGNS FOR THE SOLE USE IN EXPEDITING SHOP DRAWINGS. BALA'S FILES SHALL NOT BE DIRECTLY COPIED AND ISSUED AS SHOP DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS. SHOULD THE SHOP DRAWINGS SUBMITTED PROVE TO BE A DIRECT COPY OF OUR FILES WITHOUT THE NECESSARY FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS, THESE SHOP DRAWINGS WILL BE RETURNED AS REJECTED. BALA'S ELECTRONIC FILES ARE SAVED IN PERSON/REVIT AUTOCAD (2016, 2017, 2018) AND ARE COMPATIBLE WITH ALL VERSIONS AFTER THAT. BALA MAKES NO REPRESENTATION AS TO THE COMPATIBILITY OF THESE FILES WITH THE CONTRACTOR'S HARDWARE OR THEIR SOFTWARE. DATA CONTAINED ON THESE ELECTRONIC FILES ARE PART OF BALA'S "INSTRUMENTS OF SERVICE" AND ARE COPYRIGHTED. CONTRACTORS USE OF FILES IS FOR THE SOLE PURPOSE AS A CONVENIENCE IN THE PREPARATION OF DRAWINGS FOR THE REFERENCED PROJECT. ANY OTHER USE OR REUSE BY CONTRACTOR IS UNLAWFUL.

PLUMBING GENERAL NOTES

- DRAWINGS INDICATE GENERAL LOCATION OF WORK INCLUDED. PLUMBING CONTRACTOR SHALL COORDINATE LOCATION OF WORK WITH ALL OTHER TRADES. COORDINATE THE FINAL LOCATION OF THE PLUMBING FIXTURES WITH THE ARCHITECTURAL DIMENSIONED DRAWINGS.
- INSTALL ALL FIXTURES AND EQUIPMENT IN CONFORMANCE WITH ARCHITECTURAL DRAWINGS, MANUFACTURERS RECOMMENDATIONS AND AUTHORITY HAVING JURISDICTION. COORDINATE ALL ROOM-IN-ROOM INFORMATION WITH FIXTURE AND EQUIPMENT SUPPLIERS.
- PROVIDE HANDICAPPED FIXTURES IN CONFORMANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA). INSULATE ALL PIPING BELOW ADA FIXTURES. COORDINATE COLORS WITH ARCHITECT WHERE INDICATED.
- CONTRACTOR SHALL PROVIDE DOMESTIC WATER SERVICE RESTRAINTS AND THRUST BLOCKS AS REQUIRED.
- INSTALL ISOLATION VALVES ON ALL BRANCH PIPING UNLESS OTHERWISE NOTED. PROVIDE SHUT OFF VALVES TO ALL FIXTURES AND EQUIPMENT.
- PROVIDE WATER HAMMER ARRESTERS ON DOMESTIC WATER PIPING IN CONFORMANCE WITH THE PLUMBING AND DRAINAGE INSTITUTE.
- CONNECT ALL SERVICE BRANCHES TO TOP OF SERVICE MAINS WHERE POSSIBLE. PROVIDE DRAIN VALVES AT ALL LOW POINTS IN SERVICE PIPING SYSTEMS.
- SLOPE ALL WASTE PIPING IN CONFORMANCE WITH APPLICABLE CODES AND THE AUTHORITY HAVING JURISDICTION.
- PROVIDE THE REQUIRED FITTINGS AT EACH INDIRECT WASTE PIPE DISCHARGE TO ALLOW REMOVAL OF THE LAST 12" OF INDIRECT WASTE PIPING IN ORDER TO GAIN ACCESS AND PERMIT REMOVAL OF THE SEDIMENT BASKET AS REQUIRED.
- SUPPORT ALL PIPING IN CONFORMANCE WITH ANSISMS-58 AND 61 AND THE AUTHORITY HAVING JURISDICTION.
- ALL PIPING PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED WITH UL LISTED FIREPROOFING SYSTEM TO MATCH THE RATING OF THE WALL OR FLOOR.
- DO NOT INSTALL PIPING IN DEDICATED ELECTRICAL SPACES OR ABOVE ANY ELECTRICAL EQUIPMENT, PANELS, ETC AS NOTED IN THE NATIONAL ELECTRIC CODE.
- PRESSURE TEST AND STERILIZE THE ENTIRE DOMESTIC WATER PIPING SYSTEM FROM POINT OF NEW CONNECTION IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE.
- PRIOR TO OPENING NATURAL GAS PIPING SYSTEM, THE ENTIRE SECTION OF NATURAL GAS PIPING SYSTEM AFFECTED BY SCOPE SHALL BE ISOLATED AND PURGED IN ACCORDANCE WITH THE APPLICABLE GAS CODE UPON COMPLETION OF NATURAL GAS PIPING SYSTEM SCOPE WORK. PLACE SYSTEM INTO OPERATION IN ACCORDANCE WITH THE APPLICABLE GAS CODE.
- WHERE CONNECTING TO EXISTING PIPING SYSTEMS, INSPECT PIPING FOR DEFECTS. NOTIFY OWNERS REPRESENTATIVE IF EXISTING PIPING IS FOUND TO BE AN UNSATISFACTORY CONDITION TO DETERMINE IF REPLACEMENT IS NECESSARY.
- PLUMBING WORK SHALL BE DONE AT SUCH TIME AND IN SUCH MANNER THAT WILL LEAST INTERFERE WITH OTHER TRADES, MAINTENANCE OPERATIONS AND OTHER BUILDING ACTIVITIES.
- THE PLUMBING CONTRACTOR SHALL PROVIDE ALL ANCILLARY DEVICES NOT LIMITED TO BACKFLOW PREVENTERS, ISOLATION VALVES, UNIONS, PRESSURE REDUCING VALVES AND STRAINERS AT EACH PIECE OF KITCHEN EQUIPMENT AS REQUIRED BY THE KITCHEN DESIGN, APPLICABLE CODES AND STANDARDS, INCLUDING MANUFACTURER'S RECOMMENDED INSTALLATION REQUIREMENTS, IN ORDER TO PROVIDE A FULLY FUNCTIONAL AND OPERATING KITCHEN.

DRA

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 South Windsor, CT 06074

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 Waltham, MA 02453

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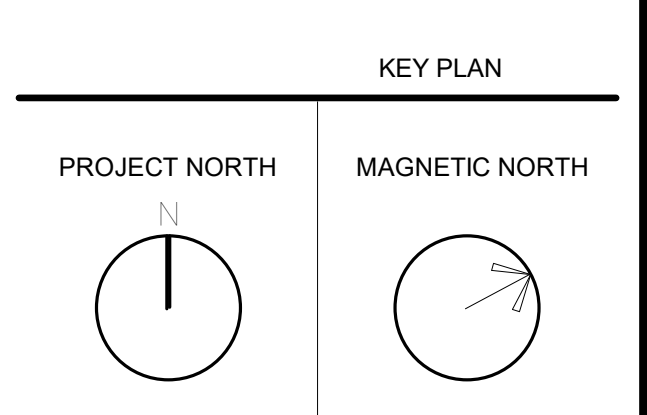
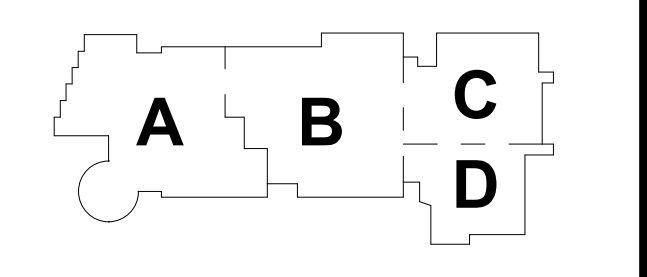
100 Hemlock Rd.
 Wakefield, MA 01880

BALA ENGINEERS

REGISTERED PROFESSIONAL ENGINEERS
 IN THE STATE OF CONNECTICUT
 LICENSE NO. 10000
 REGISTERED PROFESSIONAL ENGINEERS
 IN THE STATE OF MASSACHUSETTS
 LICENSE NO. 10000

MSBA SCHEMATIC DESIGN SUBMITTAL

JUNE 17, 2021

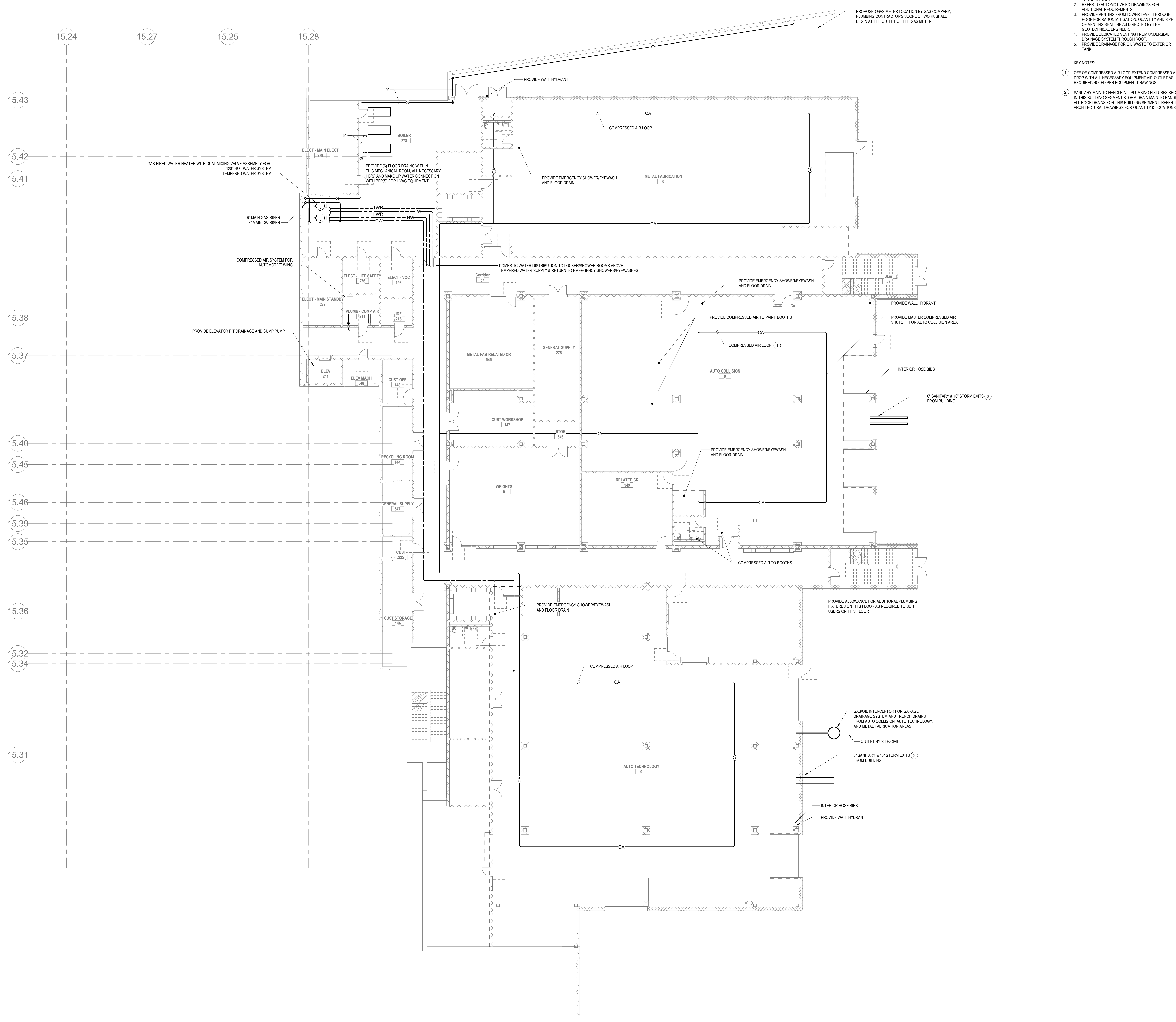


PLUMBING LEGENDS, ABBREVIATIONS, AND GENERAL NOTES

Scale: 1/2" = 1'-0"
 Job No.: 6520409
 Drawn By: DRA
 Date: JUNE 17, 2021

DRAWING LIST - PLUMBING_BOS			
DRAWING NUMBER	DRAWING TITLE	SHEET NUMBER	
		INDEX	TOTAL
P0-0-1	PLUMBING LEGENDS, ABBREVIATIONS, AND GENERAL NOTES		
P1-1-0E	PLUMBING LOWER LEVEL FLOOR PLAN - PLAN EAST		
P1-1-1E	PLUMBING FIRST FLOOR PLAN - PLAN EAST		
P1-1-1W	PLUMBING FIRST FLOOR PLAN - PLAN WEST		
P1-1-2E	PLUMBING SECOND FLOOR PLAN - PLAN EAST		
P1-1-2W	PLUMBING SECOND FLOOR PLAN - PLAN WEST		
P1-1-3E	PLUMBING THIRD FLOOR PLAN - PLAN EAST		
P1-1-3W	PLUMBING THIRD FLOOR PLAN - PLAN WEST		
P1-1-4E	PLUMBING FOURTH FLOOR PLAN - PLAN EAST		
P1-1-4W	PLUMBING FOURTH FLOOR PLAN - PLAN WEST		
P1-2-1E	PLUMBING ROOF PLAN - PLAN EAST		
P1-2-1W	PLUMBING ROOF PLAN - PLAN WEST		

P0-0-1



- SCOPE NOTES:**
- VENTING FOR GARAGE DRAINAGE SHALL BE INDEPENDENT OF THE SANITARY VENT SYSTEM THROUGH ROOF.
 - REFER TO AUTOMOTIVE EQ DRAWINGS FOR ADDITIONAL REQUIREMENTS.
 - PROVIDE VENTING FROM LOWER LEVEL THROUGH ROOF FOR RADON MITIGATION. QUANTITY AND SIZE OF VENTING SHALL BE AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
 - PROVIDE DEDICATED VENTING FROM UNDERSLAB DRAINAGE SYSTEM THROUGH ROOF.
 - PROVIDE DRAINAGE FOR OIL WASTE TO EXTERIOR TANK.
- KEY NOTES:**
- OFF OF COMPRESSED AIR LOOP EXTEND COMPRESSED AIR DROP WITH ALL NECESSARY EQUIPMENT AIR OUTLET AS REQUIRED/NOTED PER EQUIPMENT DRAWINGS.
 - SANITARY MAIN TO HANDLE ALL PLUMBING FIXTURES SHOWN IN THIS BUILDING SEGMENT. STORM SPAN MAIN TO HANDLE ALL ROOF DRAINS FOR THIS BUILDING SEGMENT. REFER TO ARCHITECTURAL DRAWINGS FOR QUANTITY & LOCATIONS.

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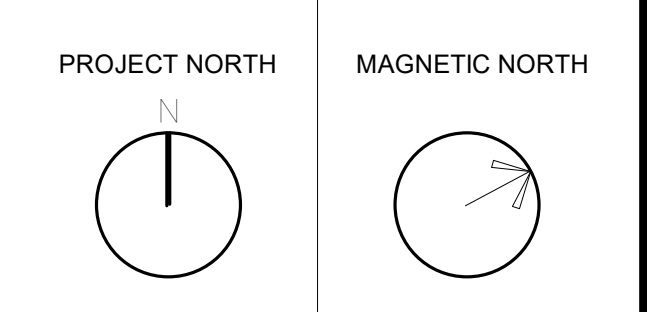
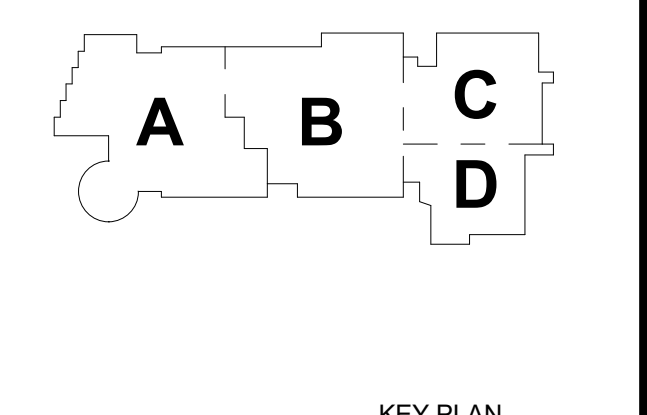
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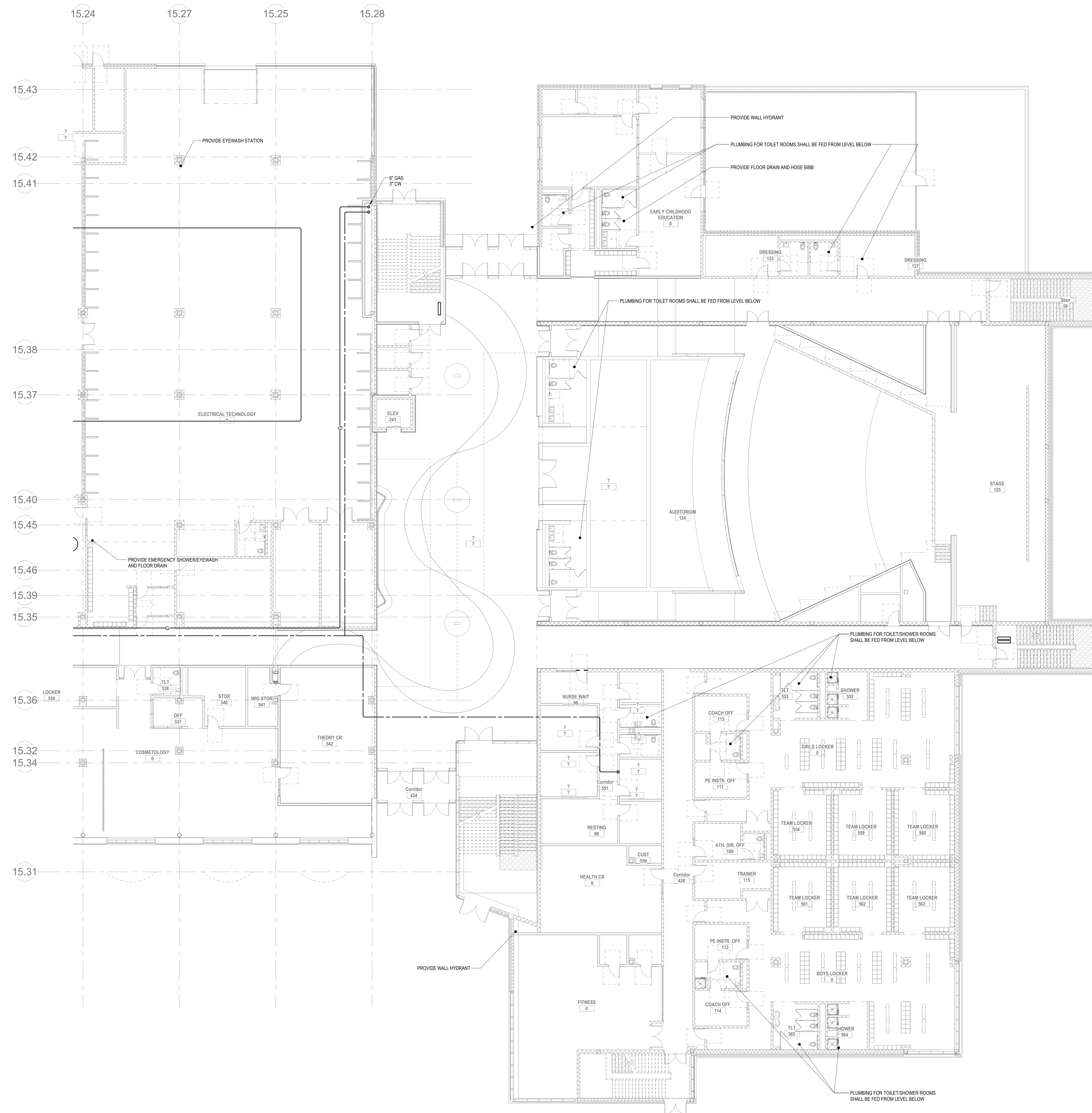


PLUMBING LOWER LEVEL FLOOR PLAN - PLAN EAST

Scale: 3/32" = 1'-0"
 Job No.: 6520409
 Drawn By: DRA
 Date: JUNE 17, 2021

P1-1-0E

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2 PLUMBING Level 1 East
 P1-1-E 3/2" = 1'-0"

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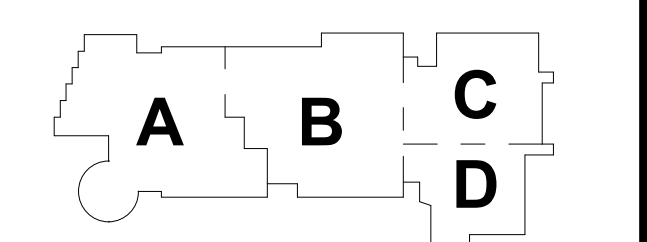
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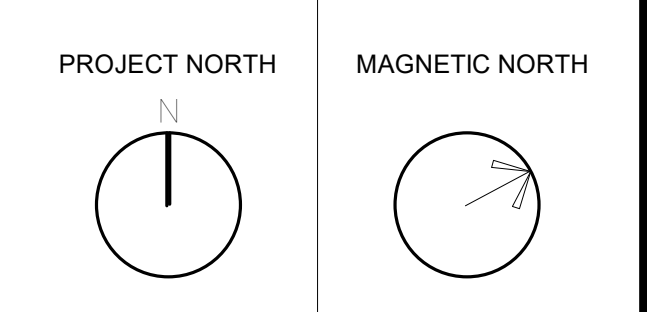
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KEY PLAN



PLUMBING FIRST FLOOR PLAN - PLAN EAST

Scale: 3/32" = 1'-0"
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P1-1-E

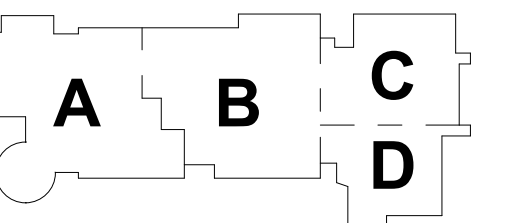
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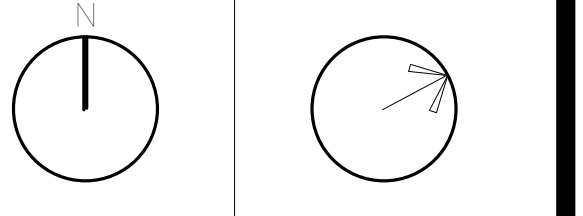
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KEY PLAN

PROJECT NORTH MAGNETIC NORTH



PLUMBING FIRST
FLOOR PLAN -
PLAN WEST

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

Job No.: 0520409

Drawn By: DRA

Date: JUNE 17, 2021

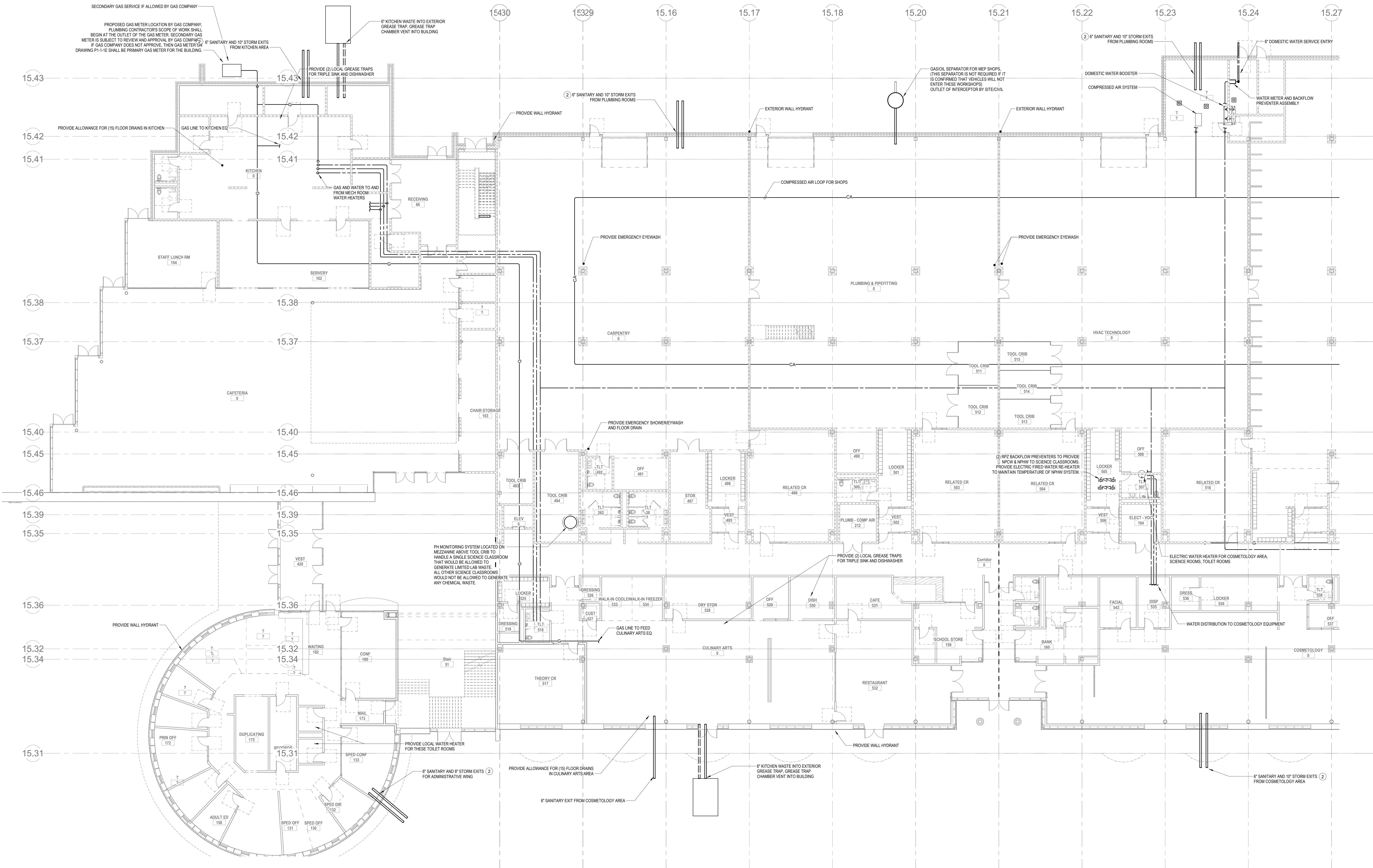
P1-1-W

SCOPE NOTE:

1. PROVIDE ALLOWANCE FOR (4) OVERFLOW DRAIN TERMINATION POINTS FOR OVERFLOW DRAINAGE FROM COURTYARD ON LEVEL ABOVE.
2. PROVIDE VENTING FROM LOWER LEVEL THROUGH ROOF FOR FRESH MITIGATOR. QUANTITY AND SIZE OF VENTING SHALL BE AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
3. PROVIDE DEDICATED VENTING FROM UNDERSLAB DRAINAGE SYSTEM THROUGH ROOF.

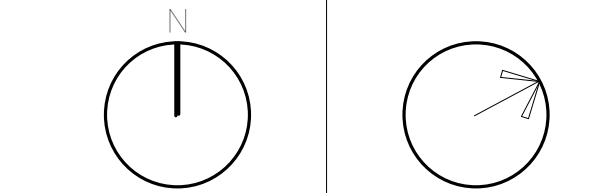
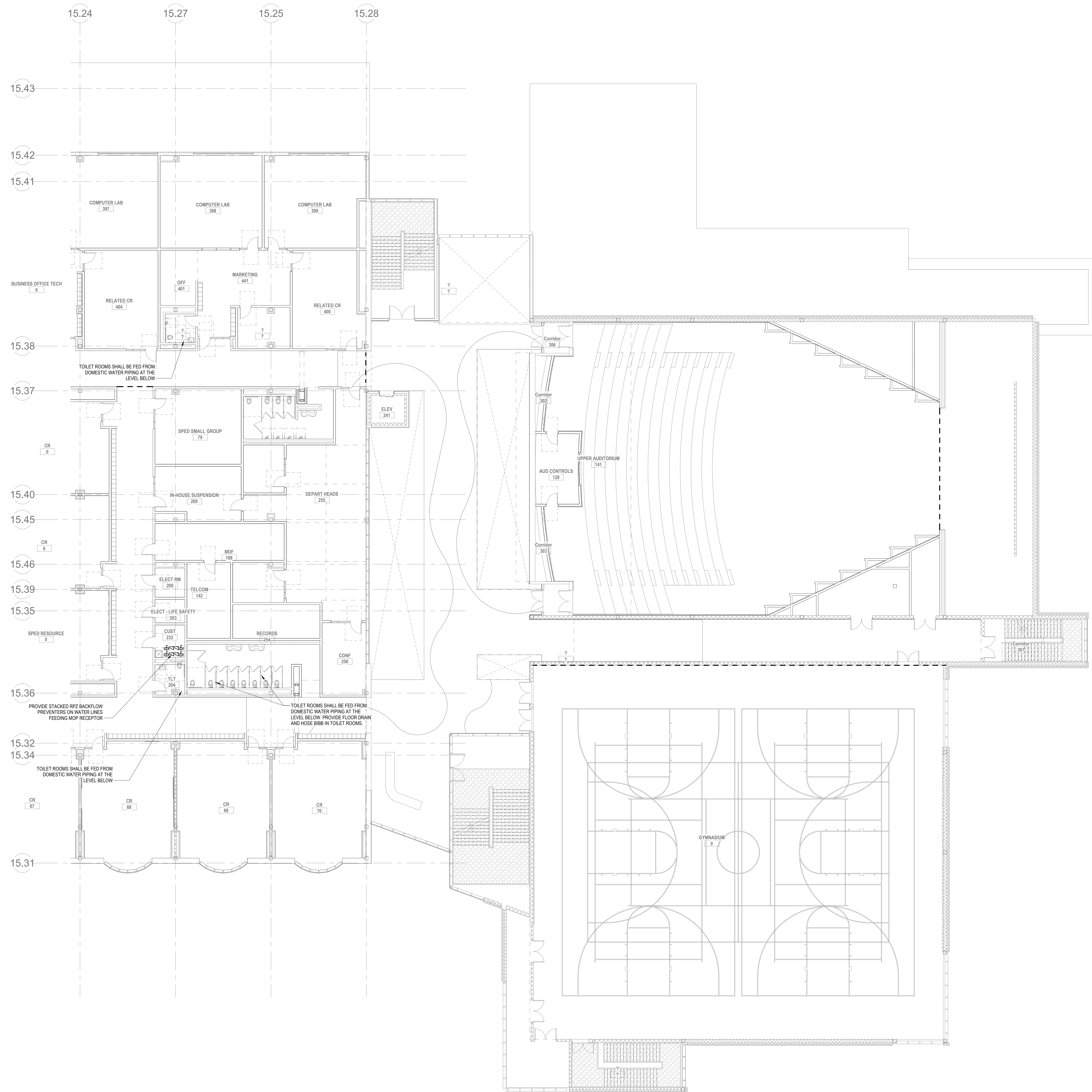
KEY NOTES:

1. OFF OF COMPRESSED AIR LOOP EXTEND COMPRESSED AIR DROP WITH ALL NECESSARY EQUIPMENT AND OUTLET AS REQUIRED NOTED PER EQUIPMENT DRAWINGS.
2. SANITARY MAN TO HANDLE ALL PLUMBING FIXTURES SHOWN IN THIS BUILDING. SEGMENT STORM DRAIN MAIN TO HANDLE ALL ROOF DRAINS FOR THIS BUILDING SEGMENT. REFER TO ARCHITECTURAL DRAWINGS FOR QUANTITY & LOCATIONS.



2 PLUMBING Level 1 West
P1-1-W 3/32" = 1'-0"

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KEY NOTES:
 1 OFF OF COMPRESSED AIR LOOP EXTEND COMPRESSED AIR DROP WITH ALL NECESSARY EQUIPMENT AIR OUTLET AS REQUIRED/NOTED PER EQUIPMENT DRAWINGS.

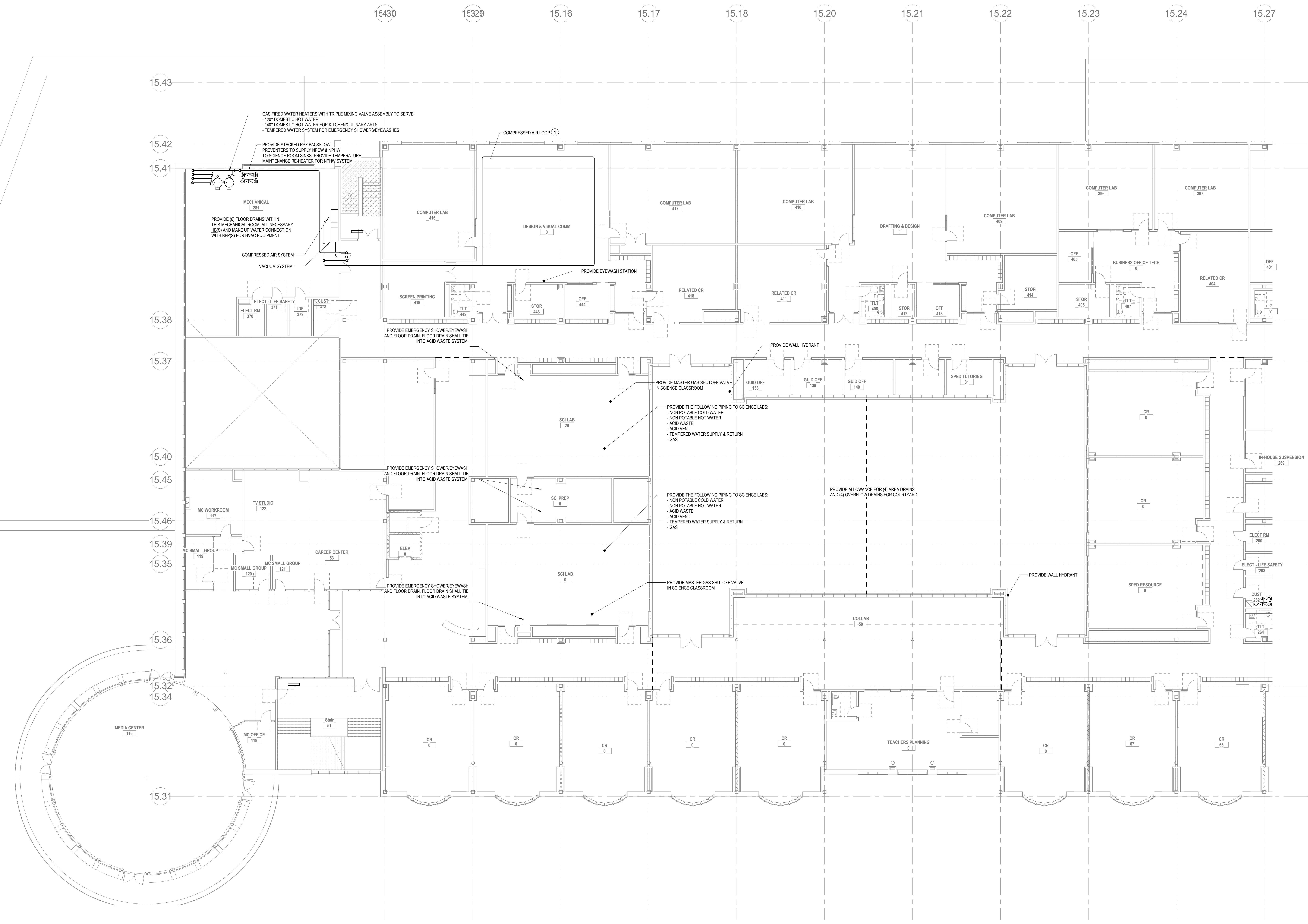
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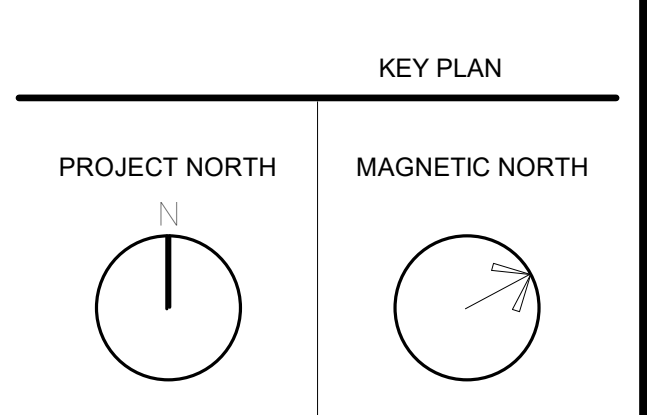
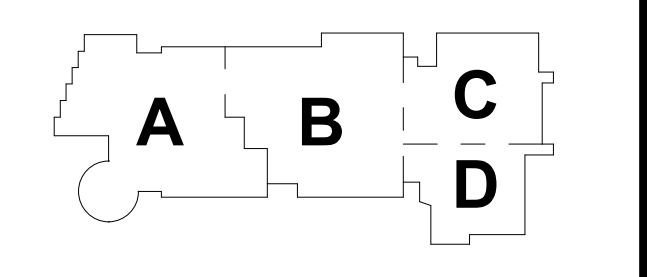


PLUMBING Level 2 West
 P1-12W 3/27-1/7

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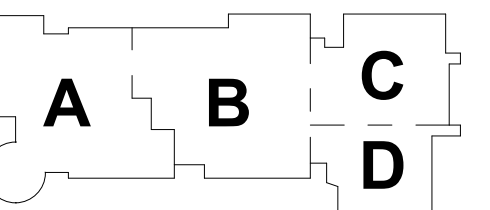
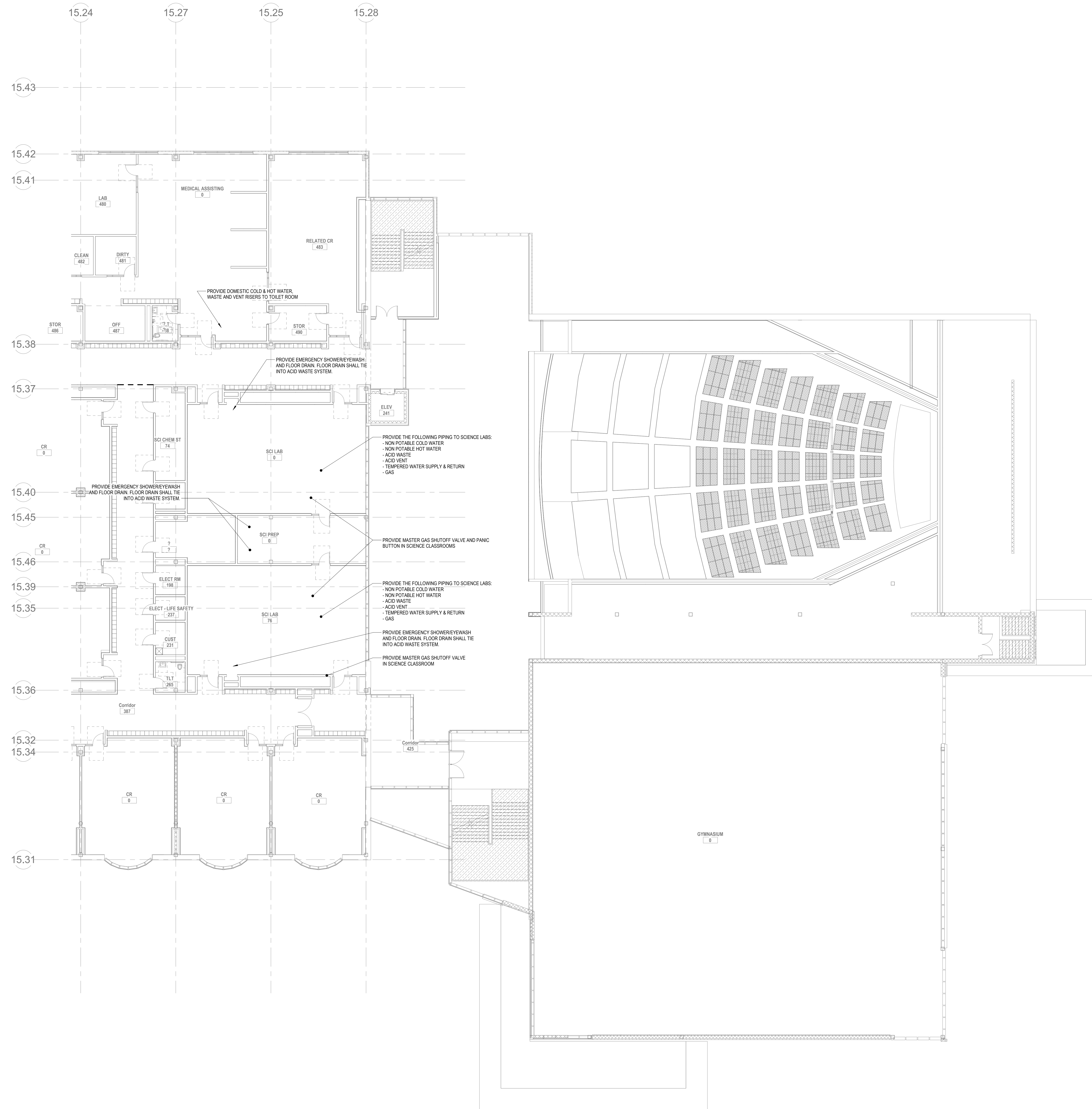
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**PLUMBING
 SECOND FLOOR
 PLAN - PLAN
 WEST**

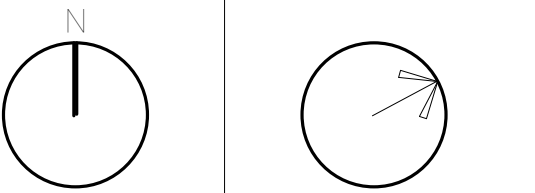
Scale: 3/32" = 1'-0"
 Job No.: 0520409
 Drawn By: DRA
 Date: JUNE 17, 2021

P1-1-2W



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**PLUMBING
THIRD FLOOR
PLAN - PLAN
EAST**

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

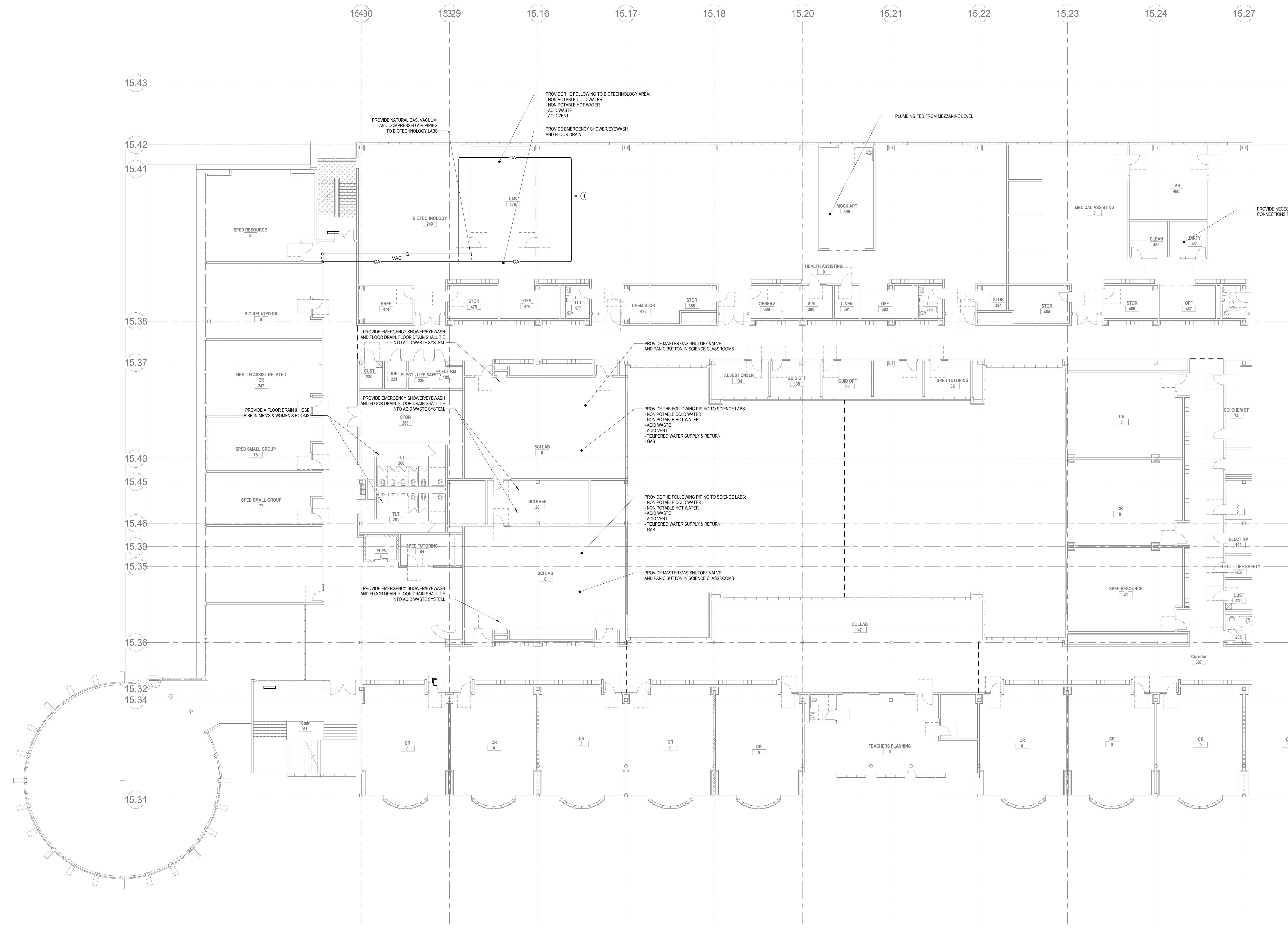
Job No.: 6520409

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Date: JUNE 17, 2021

P1-1-3E

KEY NOTES:
 1 OFF OF COMPRESSED AIR LOOP EXTEND COMPRESSED AIR DROP WITH ALL NECESSARY EQUIPMENT AIR OUTLET AS REQUIRED/NOTED PER EQUIPMENT DRAWINGS.



PLUMBING Level 3 West
 P1-1-3W 3/2" = 1'-0"

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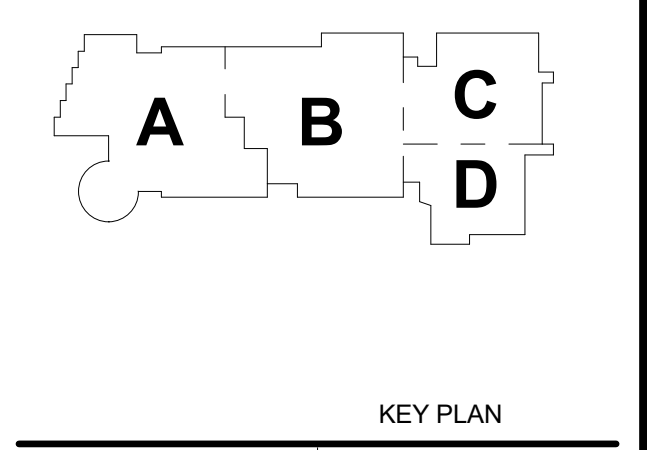
NORTHEAST METRO TECH

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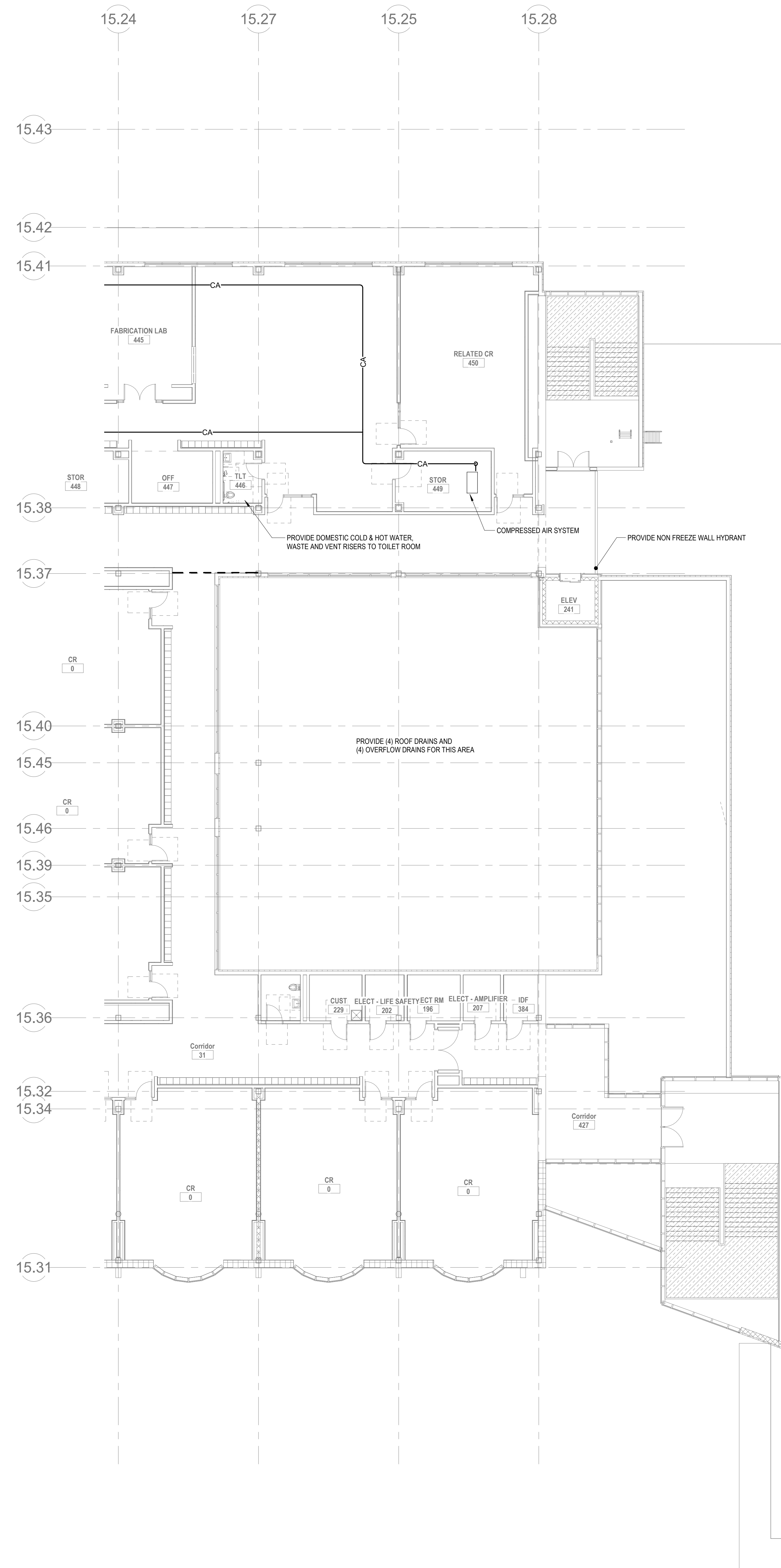
MSBA SCHEMATIC DESIGN SUBMITTAL
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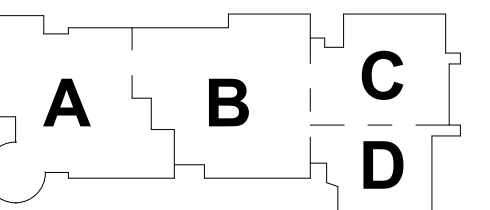
PLUMBING THIRD FLOOR PLAN - PLAN WEST

Scale: 3/32" = 1'-0"
 Job No.: 6520409
 Drawn By: DRA
 Date: JUNE 17, 2021

P1-1-3W

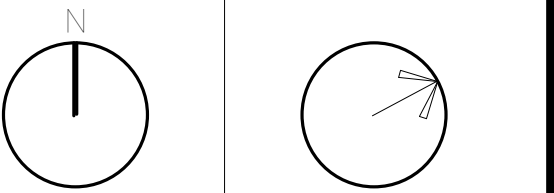


REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND/OR PROVIDE AN ALLOWANCE FOR A MINIMUM OF (10) FLOOR DRAINS AND ALL ASSOCIATED PIPING



KEY PLAN

PROJECT NORTH MAGNETIC NORTH



**PLUMBING
FOURTH FLOOR
PLAN - PLAN
EAST**

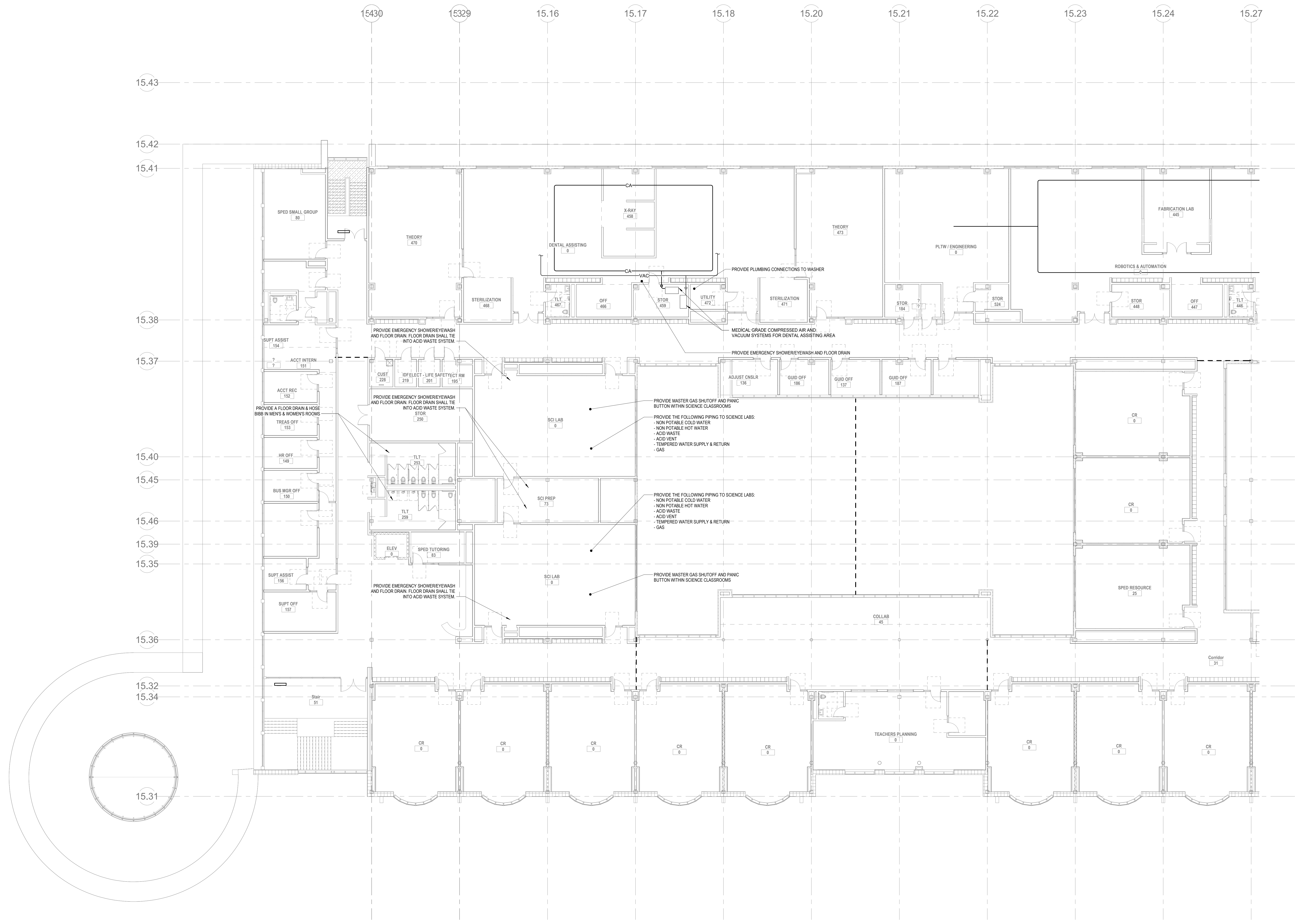
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Job No.: 0520409

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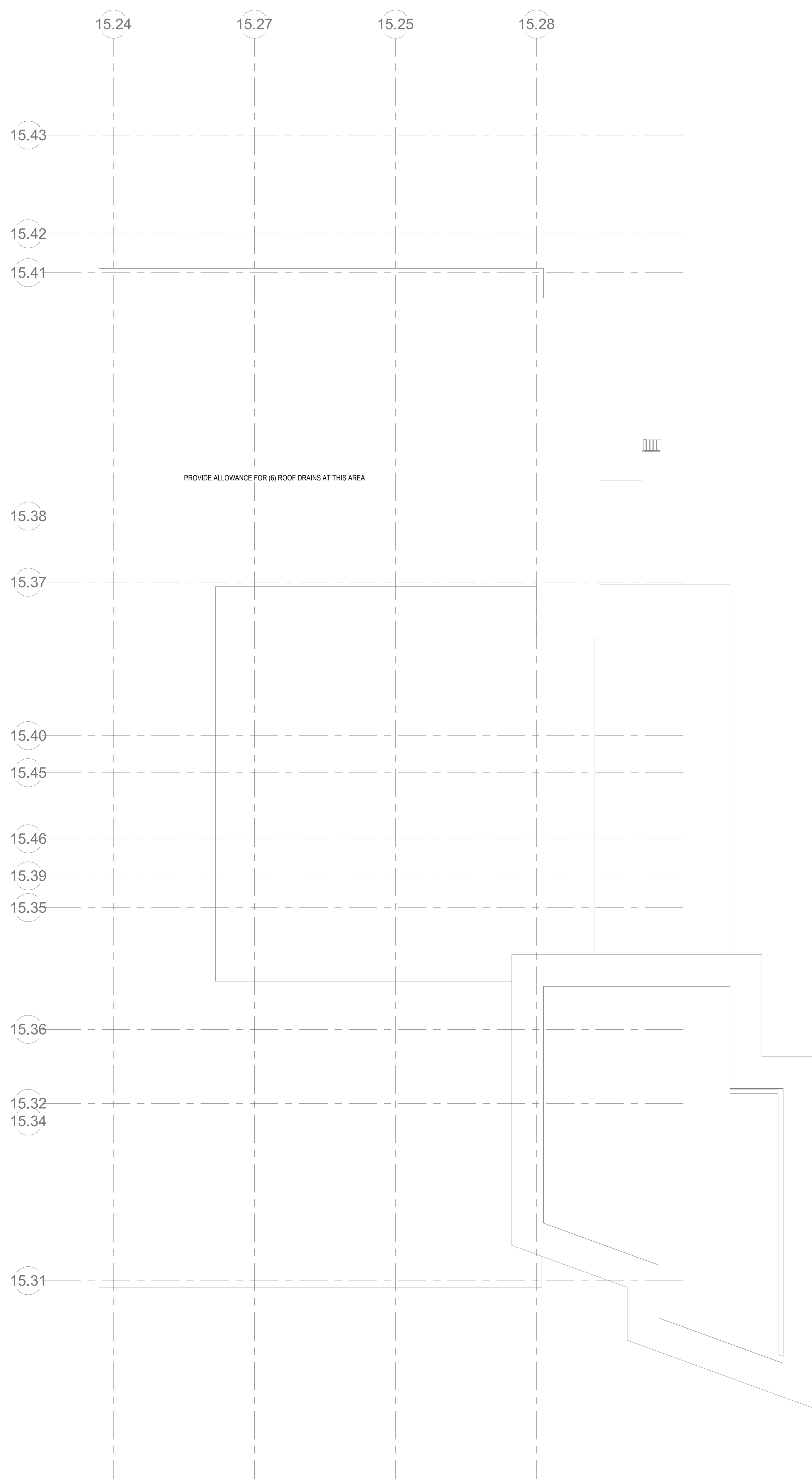
Date: JUNE 17, 2021

P1-1-4E



PLUMBING Level 4 West
P1-1-4W 3/32" = 1'-0"

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NOTE: IF AND WHERE REQUIRED, SECONDARY ROOF DRAINAGE SYSTEM TO BE HANDLED VIA SCUPPERS



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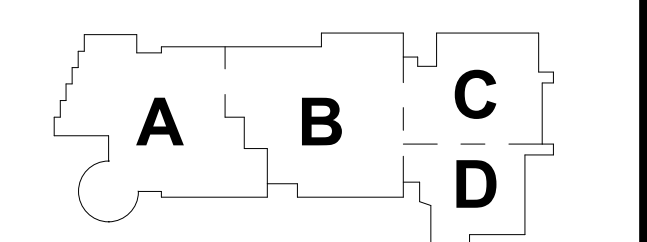
**NORTHEAST
 METRO TECH**

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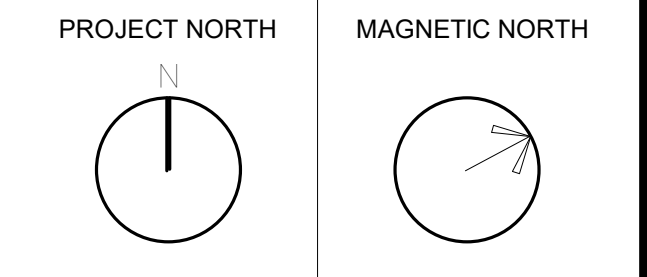
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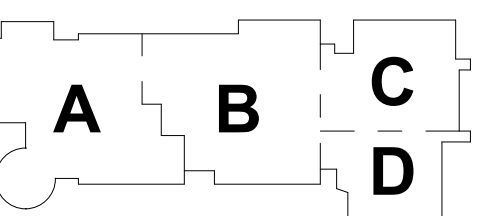


KEY PLAN



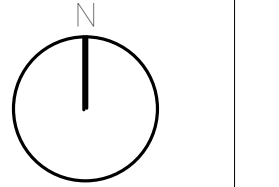
**PLUMBING ROOF
 PLAN - PLAN
 EAST**

Scale: 3/32" = 1'-0"
 Job No.: 6520409
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P1-2-1E

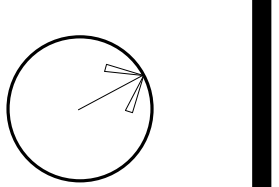


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



**PLUMBING ROOF
PLAN - PLAN
WEST**

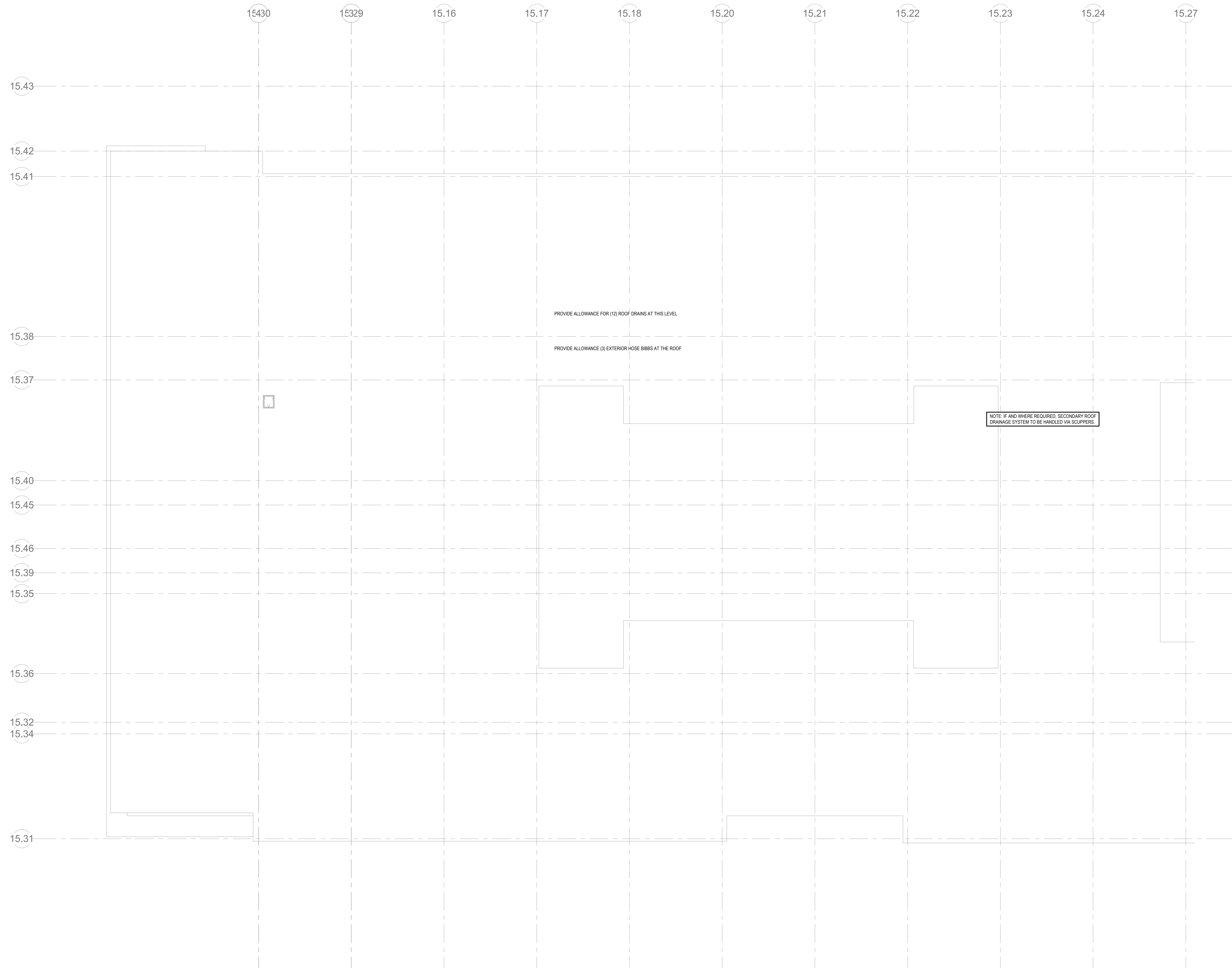
Scale: 3/32" = 1'-0"

Job No.: 0520409

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P1-2-1W



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**NORTHEAST
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① HVAC Level 0 Zoning Plan
 3/64" = 1'-0"

② HVAC Level 1 Zoning Plan
 3/64" = 1'-0"



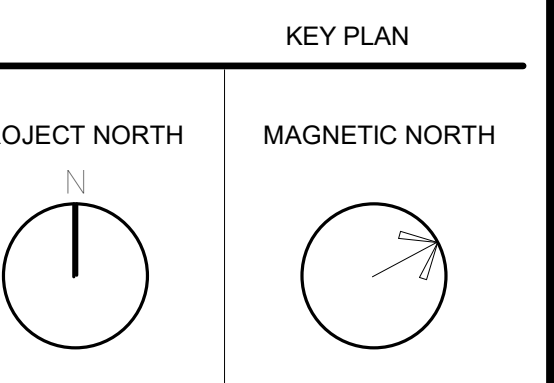
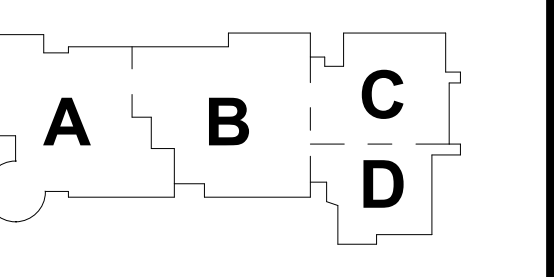
③ HVAC Level 2 Zoning Plan
 3/64" = 1'-0"

Zoning Plan Key

- VRF HEAT PUMP
- SPLIT AC
- HEATING AND VENTILATING ONLY
- EXHAUST ONLY
- ERV-1
- ERV-2
- ERV-3
- HRU-1
- HRU-2
- HRU-3
- HRU-4
- HV-1
- HV-2
- HV-3
- HV-4
- HV-5
- HV-7
- HV-8
- HVAC-1
- HVAC-2
- HVAC-3
- HVAC-4
- HVAC-5
- HVAC-6
- HVAC-7
- HVAC-8
- MAU-1

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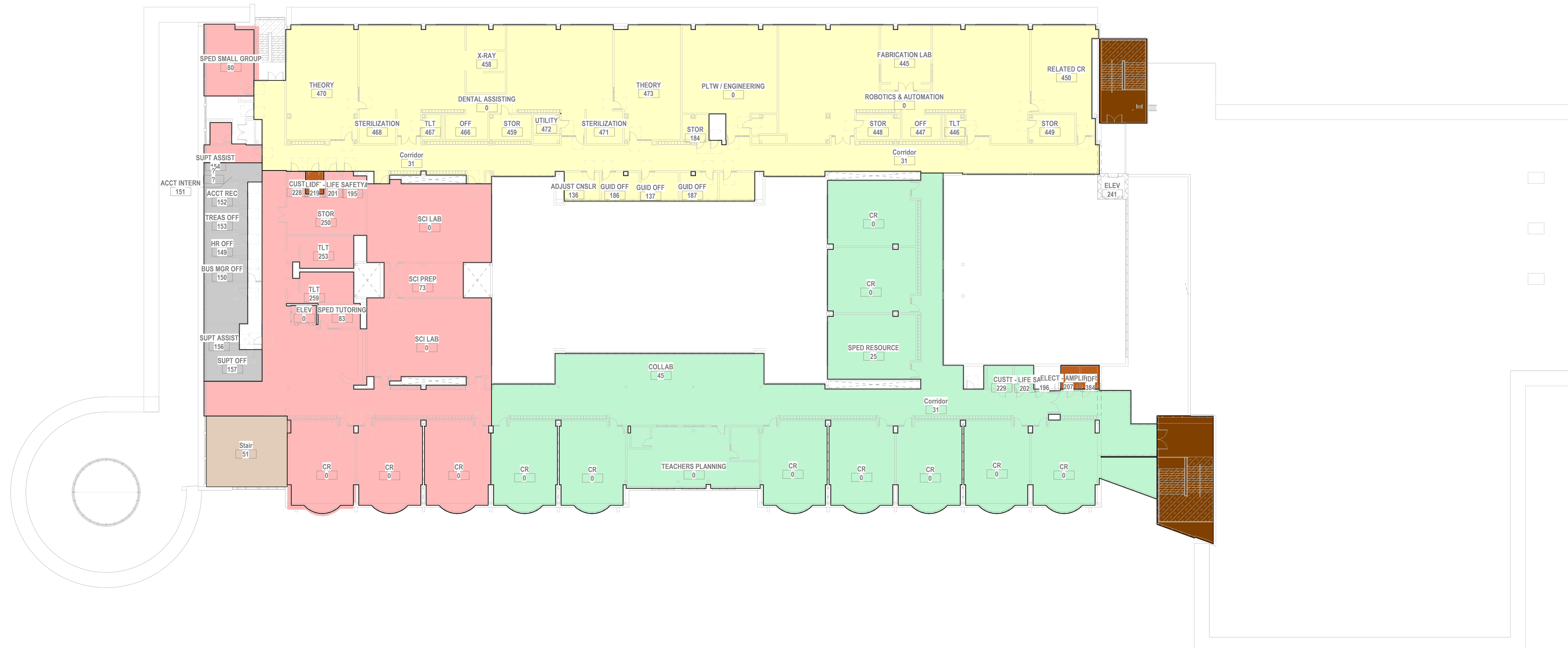
**HVAC ZONING
 PLAN**

Zoning Plan Key

- VRF HEAT PUMP
- SPLIT AC
- HEATING AND VENTILATING ONLY
- EXHAUST ONLY
- ERV-1
- ERV-2
- ERV-3
- HRU-1
- HRU-2
- HRU-3
- HRU-4
- HV-1
- HV-2
- HV-3
- HV-4
- HV-5
- HV-7
- HV-8
- HVAC-1
- HVAC-2
- HVAC-3
- HVAC-4
- HVAC-5
- HVAC-6
- HVAC-7
- HVAC-8
- MAU-1

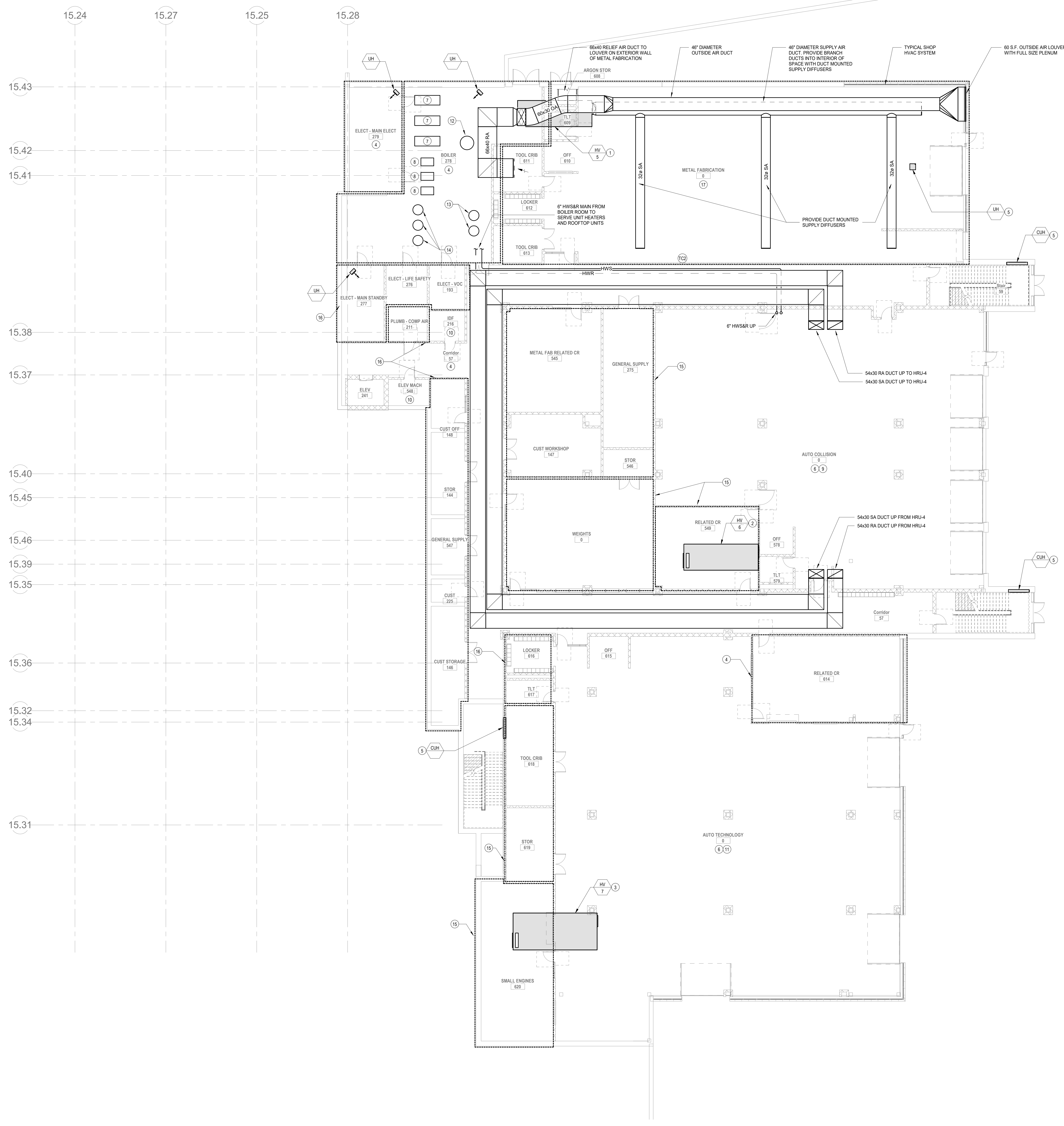


1 HVAC Level 3 Zoning Plan
 3/64" = 1'-0"



2 HVAC Level 4 Zoning Plan
 3/64" = 1'-0"

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HVAC DRAWING NOTES

1. HV-5: 11,700 CFM HEATING AND VENTILATING UNIT. PROVIDE MERV-8 PRE FILTER, MERV-13 FINAL FILTER, TOTAL ENERGY RECOVERY WHEEL WITH ECONOMIZER BYPASS, 100% ECONOMIZER, SUPPLY FAN, EXHAUST FAN, AND HOT WATER HEATING COIL. PROVIDE HW/SR BRANCH PIPING TO NEAREST HW/SR MAIN.
2. HV-6: 12,100 CFM HEATING AND VENTILATING UNIT. PROVIDE MERV-8 PRE FILTER, MERV-13 FINAL FILTER, TOTAL ENERGY RECOVERY WHEEL WITH ECONOMIZER BYPASS, 100% ECONOMIZER, SUPPLY FAN, EXHAUST FAN, AND HOT WATER HEATING COIL. PROVIDE HW/SR BRANCH PIPING TO NEAREST HW/SR MAIN.
3. HV-7: 10,000 CFM HEATING AND VENTILATING UNIT. PROVIDE MERV-8 PRE FILTER, MERV-13 FINAL FILTER, TOTAL ENERGY RECOVERY WHEEL WITH ECONOMIZER BYPASS, 100% ECONOMIZER, SUPPLY FAN, EXHAUST FAN, AND HOT WATER HEATING COIL. PROVIDE HW/SR BRANCH PIPING TO NEAREST HW/SR MAIN.
4. HRU-4 ZONE. PROVIDE ONE SUPPLY VAV TERMINAL UNIT DUCTED FROM HRU-4 MAIN SUPPLY DUCT TO SUPPLY EXHAUST MAIN DUCT TO EXHAUST GRILLES IN EACH SPACE. PROVIDE ONE EXHAUST VAV TERMINAL UNIT DUCTED FROM HRU-4 EXHAUST MAIN DUCT TO EXHAUST GRILLES IN EACH SPACE.
5. PROVIDE HW/SR BRANCH PIPING FROM CUH, UH, OR CONVECTOR TO NEAREST HW/SR MAIN (TYPICAL FOR ALL HYDRONIC HEATING EQUIPMENT).
6. REFER TO METAL FABRICATION SHOP FOR TYPICAL HEATING AND VENTILATION UNIT LAYOUT IN THIS AREA. REFER TO EQUIPMENT PLANS FOR EXHAUST REQUIREMENTS.
7. 3,000 MBH GAS FIRED CONDENSING BOILER. PROVIDE EXHAUST VENT UP TO ROOM AND COMBUSTION AIR INTAKE DUCT TO AREA WAY ADJACENT TO METAL FABRICATION. PROVIDE CONDENSATE NEUTRALIZATION KIT AND PIPE CONDENSATE TO NEAREST FLOOR DRAIN. PROVIDE A 2" GPM VERTICAL INLINE BOILER PUMP. PROVIDE CONCRETE HOUSEKEEPING PAD FOR BOILERS.
8. 270 GPM, 10 H.P. SECONDARY HOT WATER PUMP.
9. PROVIDE ONE 36" DIAMETER EXHAUST DUCT FROM SPRAY BOOTH EXHAUST CONNECTION UP TO A 10,000 CFM EXHAUST FAN ON THE ROOF. PROVIDE A 36" DIAMETER MAKE-UP AIR DUCT FROM SPRAY BOOTH MAKE-UP AIR CONNECTION TO A ROOF VENT ON THE ROOF. PROVIDE A 12" DIAMETER EXHAUST DUCT FROM THE PAINT MIXING ROOM TO A 600 CFM EXHAUST FAN ON THE ROOF. PROVIDE A 36" DIAMETER EXHAUST DUCT FROM PREP BOOTH TO A 10,000 CFM EXHAUST FAN ON THE ROOF AND A 36" DIAMETER MAKE-UP AIR DUCT TO A ROOF VENT ON THE ROOF. PROVIDE A 28" DIAMETER EXHAUST DUCT FROM THE POWDER COATING BOOTH TO A 10,000 CFM EXHAUST FAN ON THE ROOF AND A 28" DIAMETER EXHAUST DUCT TO A ROOF VENT ON THE ROOF.
10. PROVIDE A 2 TON SPLIT AC TO CONDITION THIS ROOM. PROVIDE A WALL MOUNTED EVAPORATOR WITH CONDENSATE PUMP ABOVE THE DOOR AND A CONDENSING UNIT ON THE ROOF. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM EVAPORATOR TO CONDENSING UNIT ON ROOF. PROVIDE CONDENSATE PIPING TO NEAREST CONDENSATE RECEPTOR (TYPICAL FOR SPLIT AC SPACES IDENTIFIED ON THE ZONING PLANS).
11. PROVIDE A 14" DIAMETER EXHAUST DUCT FROM WELDING BOOTHS TO A 600 CFM EXHAUST FAN ON THE ROOF. PROVIDE AN AUTOMOTIVE EXHAUST SYSTEM IN THE SMALL ENGINE ROOM AND THEORY ROOM. AUTOMOTIVE EXHAUST SYSTEM TO BE A CAR MON SYSTEM OR EQUAL WITH 12 EXHAUST CONNECTIONS.
12. HOT WATER SYSTEM PRIMARY/SECONDARY LOOP HYDRAULIC DECOUPLER AND AIR SEPARATOR.
13. GLYCOL MIXING STATION AND 55 GALLON DRUM.
14. HOT WATER SYSTEM EXPANSION TANKS.
15. HRU-4 ZONE. PROVIDE ONE SUPPLY VAV TERMINAL UNIT DUCTED FROM HRU-4 MAIN SUPPLY DUCT TO VRF FOU RETURN DUCT AND ONE EXHAUST VAV TERMINAL DUCTED FROM HRU-4 EXHAUST MAIN DUCT TO EXHAUST GRILLES IN EACH SPACE. PROVIDE A NOMINAL 2 TON VRF FAN COIL UNIT WITH SUPPLY DUCT DISTRIBUTION TO CEILING MOUNTED SUPPLY DIFFUSERS IN EACH SPACE AND RETURN DUCT DISTRIBUTION TO FILTER RETURN GRILLES IN EACH SPACE. PROVIDE LIQUID AND SUCTION LINES FROM FAN COIL UNIT TO CONDENSING UNIT ON ROOF AND A CONDENSATE DRAIN TO NEAREST CONDENSATE RECEPTOR.
16. PROVIDE ONE EXHAUST VAV TERMINAL UNIT DUCTED FROM HRU-4 EXHAUST MAIN DUCT TO EXHAUST GRILLES IN EACH SPACE. PROVIDE A TRANSFER DUCT FROM THE CORRIDOR TO EACH SPACE.
17. PROVIDE A 6000 CFM METAL DUST COLLECTOR WITH EXHAUST DUCT DISTRIBUTION TO EQUIPMENT IN ROOM. PROVIDE A 3,000 CFM EXHAUST FAN ON THE ROOF WITH EXHAUST DUCT DISTRIBUTION TO BENCHES AND OVERHEAD EXHAUST ARMS IN ROOM.

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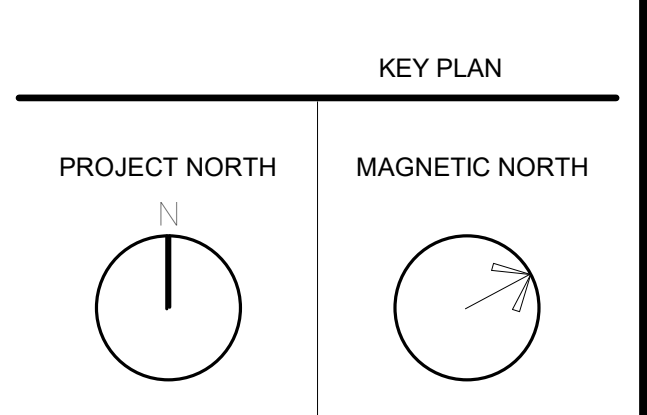
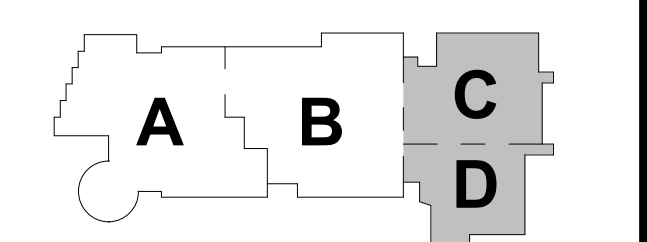
NORTHEAST METRO TECH

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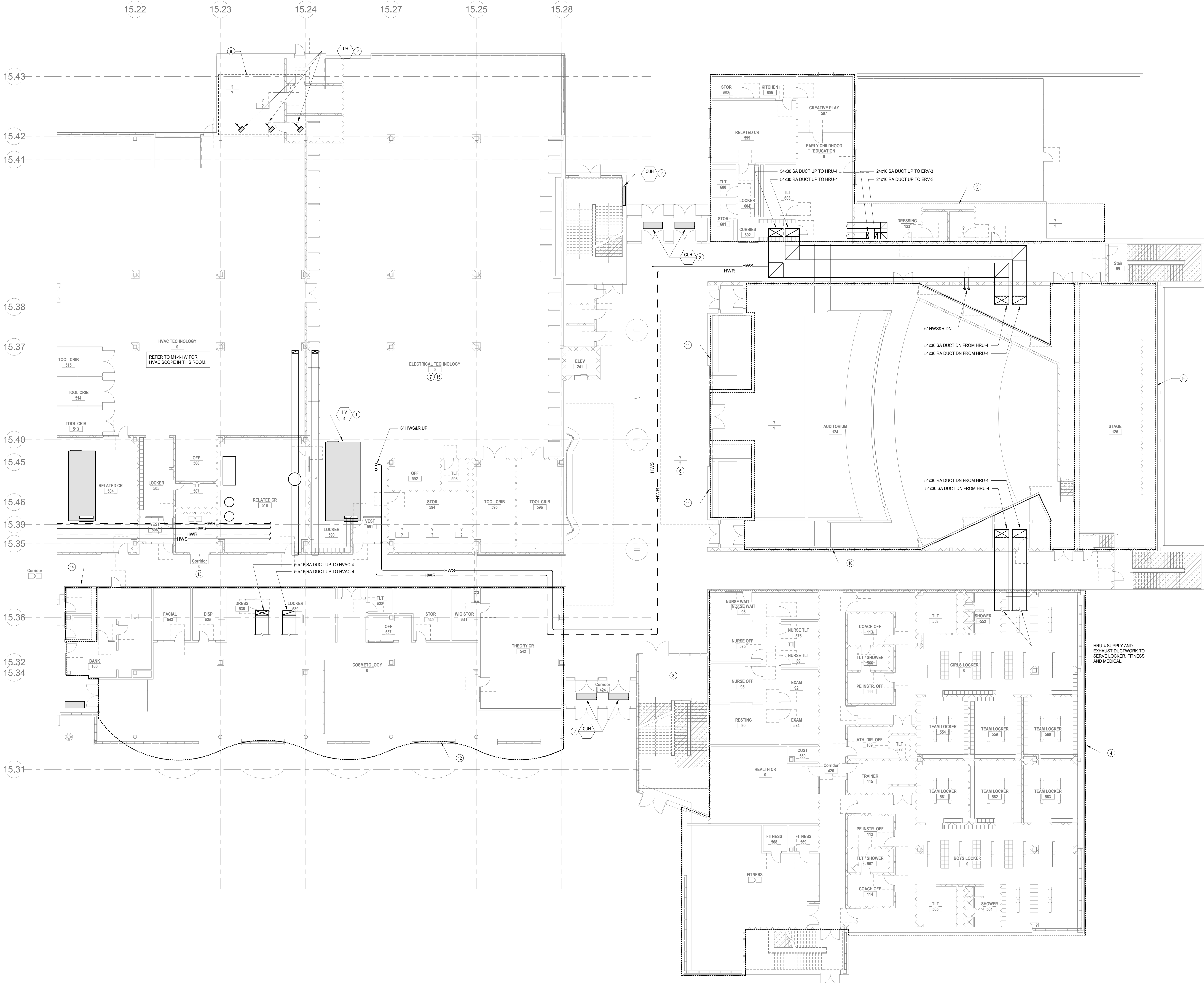
HVAC LOWER LEVEL FLOOR PLAN

Scale: As indicated
 Job No.: 0520409
 Drawn By: DRA
 Date: JUNE 17, 2021

M1-1-0

HVAC DRAWING NOTES

- 20,000 CFM HEATING AND VENTILATING UNIT. PROVIDE MERV-8 PRE FILTER, MERV-13 FINAL FILTER, TOTAL ENERGY RECOVERY WHEEL WITH ECONOMIZER, BYPASS, 100% ECONOMIZER, SUPPLY FAN, EXHAUST FAN, AND HOT WATER HEATING COIL. PROVIDE HW/SR BRANCH PIPING TO NEAREST HW/SR MAIN.
- PROVIDE HW/SR BRANCH PIPING FROM CUH, UH, OR CONVECTOR TO NEAREST HW/SR MAIN (TYPICAL FOR ALL HYDRONIC HEATING EQUIPMENT).
- PROVIDE A 2 TON SPLIT HEAT PUMP SYSTEM TO CONDITION THIS ROOM. PROVIDE A WALL MOUNTED COOP GRATOR WITH CONDENSATE PUMP AND A CONDENSING UNIT ON THE ROOF. PROVIDE CONDENSATE PIPING TO NEAREST CONDENSATE RECEPTOR.
- AREA SERVED BY HRU-4. PROVIDE SUPPLY AND EXHAUST MAIN DUCTWORK FROM HRU-4 TO THIS AREA. PROVIDE A TOTAL OF 12 ZONES IN THIS AREA. EACH ZONE WILL BE PROVIDED WITH A RFF FCU DUCTED TO CEILING MOUNTED SUPPLY DIFFUSERS AND A FILTER RETURN GRILLE. SUPPLY VAV TERMINAL UNIT DUCTED FROM HRU-4 SUPPLY MAIN TO THE FCU RETURN DUCT AND AN EXHAUST VAV TERMINAL UNIT DUCTED FROM HRU-4 EXHAUST MAIN TO A CEILING RETURN GRILLE. PROVIDE THREE 2.5 NOMINAL VRF FCUs AND NINE 1.5 NOMINAL TON VRF FCUs. PROVIDE CONDENSATE DRAIN PIPING TO NEAREST CONDENSATE RECEPTOR. LEAD SUPPLY AND RETURN DUCTWORK, HEAT RECOVERY BRANCH SELECTOR BOX, AND REFRIGERANT LINES SET FROM ROOF MOUNTED CONDENSING UNIT TO FCU.
- AREA SERVED BY ERV-3. PROVIDE SUPPLY AND EXHAUST MAIN DUCTWORK FROM ERV-3 TO THIS AREA. PROVIDE A TOTAL OF 12 ZONES IN THIS AREA. EACH ZONE WILL BE PROVIDED WITH A RFF FCU DUCTED TO CEILING MOUNTED SUPPLY DIFFUSERS AND A FILTER RETURN GRILLE. SUPPLY BRANCH DUCTWORK FROM ERV-3 MAIN DUCT TO THE FCU RETURN DUCT, AND AN EXHAUST BRANCH DUCT FROM ERV-3 EXHAUST MAIN TO A CEILING RETURN GRILLE. PROVIDE SIX 1.5 NOMINAL TON VRF FCUs. EACH FCU SHALL BE PROVIDED WITH CONDENSATE DRAIN PIPING TO THE NEAREST CONDENSATE RECEPTOR. LEAD SUPPLY AND RETURN DUCTWORK, HEAT RECOVERY BRANCH SELECTOR BOX, AND REFRIGERANT LINES SET FROM ROOF MOUNTED CONDENSING UNIT TO FCU.
- AREA SERVED BY HVAC-6. PROVIDE 6 ZONES ON THIS LEVEL. EACH ZONE WILL HAVE A SUPPLY VAV TERMINAL DUCTED FROM HVAC-6 MAIN SUPPLY DUCTWORK TO CEILING MOUNTED SUPPLY DIFFUSERS. PROVIDE HW/SR BRANCH PIPING FROM THE NEAREST HW/SR MAIN TO EACH VAV TERMINAL UNIT. PROVIDE RETURN DUCTWORK TO CEILING MOUNTED GRILLES.
- REFER TO METAL FABRICATION SHOP FOR TYPICAL HVAC LAYOUT IN THIS AREA. REFER TO EQUIPMENT PLANS FOR EXHAUST REQUIREMENTS. PROVIDE DEDICATED EXHAUST DUCTWORK FROM SHOP EQUIPMENT UP TO ROOF MOUNTED EXHAUST FANS.
- PROVIDE A 450 CFM INLINE EXHAUST FAN DUCTED TO A 3 S.F. OUTSIDE AIR LOUVER WITH PLENUM DUCTED TO SUPPLY DIFFUSERS IN EACH SPACE.
- PROVIDE SUPPLY DUCTWORK DISTRIBUTION FROM HVAC-7 TO SUPPLY DIFFUSERS ON EACH SIDE OF STAGE AND RETURN DUCTWORK DISTRIBUTION TO GRILLES LOCATED HIGH IN SPACE.
- PROVIDE SUPPLY DUCTWORK DISTRIBUTION FROM HVAC-8 TO SUPPLY DIFFUSERS IN CEILING OF EACH SPACE AND RETURN DUCTWORK DISTRIBUTION TO CEILING GRILLES IN THE CEILING OF EACH SPACE.
- PROVIDE EXHAUST DUCTWORK FROM CEILING GRILLES IN SPACE TO EXHAUST FAN LOCATED ON ROOF.
- AREA SERVED BY HVAC-4. PROVIDE 5 ZONES. EACH ZONE WILL HAVE A SUPPLY VAV TERMINAL DUCTED FROM HVAC-4 MAIN SUPPLY DUCTWORK TO CEILING MOUNTED SUPPLY DIFFUSER AND RETURN DUCTWORK TO CEILING DIFFUSERS IN EACH SPACE. PROVIDE HW/SR BRANCH PIPING FROM THE NEAREST HW/SR MAIN TO EACH VAV TERMINAL UNIT. PROVIDE A TEMPERATURE, HUMIDITY, AND CO2 SENSOR FOR EACH ZONE. REFER TO EQUIPMENT PLANS FOR EQUIPMENT REQUIREMENTS AND PROVIDE EXHAUST DUCTWORK FROM EQUIPMENT AND CEILING MOUNTED EXHAUST GRILLES UP TO A 4,000 CFM EXHAUST FAN ON THE ROOF.
- PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED TO HRU-3 SUPPLY MAIN TO SERVE CORRIDOR. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING DIFFUSERS IN CORRIDOR.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT DUCTED FROM HRU-3 EXHAUST MAIN DUCT TO EXHAUST GRILLES IN EACH SPACE. PROVIDE A TRANSFER DUCT FROM THE CORRIDOR TO EACH SPACE.
- PROVIDE A 5,000 CFM EXHAUST FAN ON THE ROOF WITH EXHAUST DUCT DISTRIBUTION FROM ROOF FAN TO DUCT MOUNTED EXHAUST GRILLES IN THE SPACE AND LOCAL EXHAUST GRILLES AT EACH BOOTH.



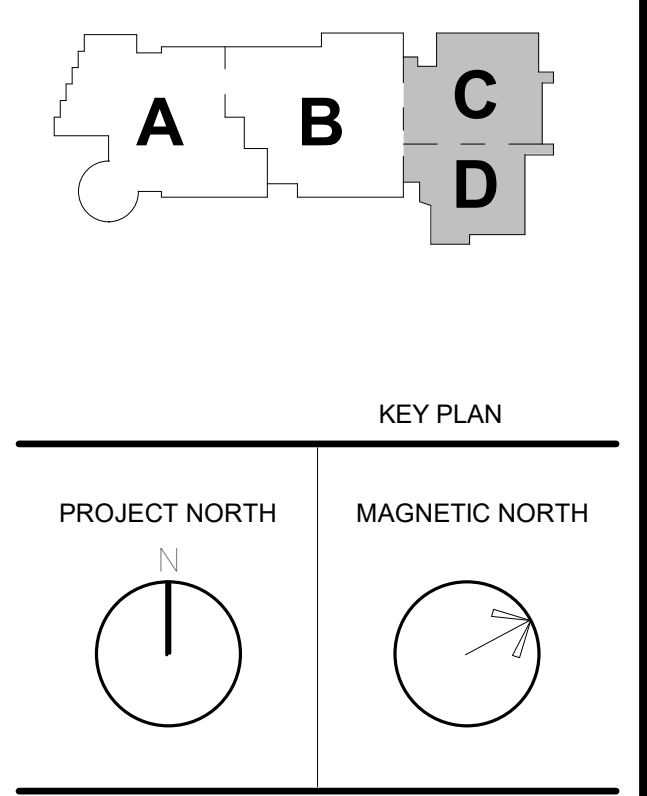
2 HVAC Level 1 East
M1-1-1E 332 x 110'

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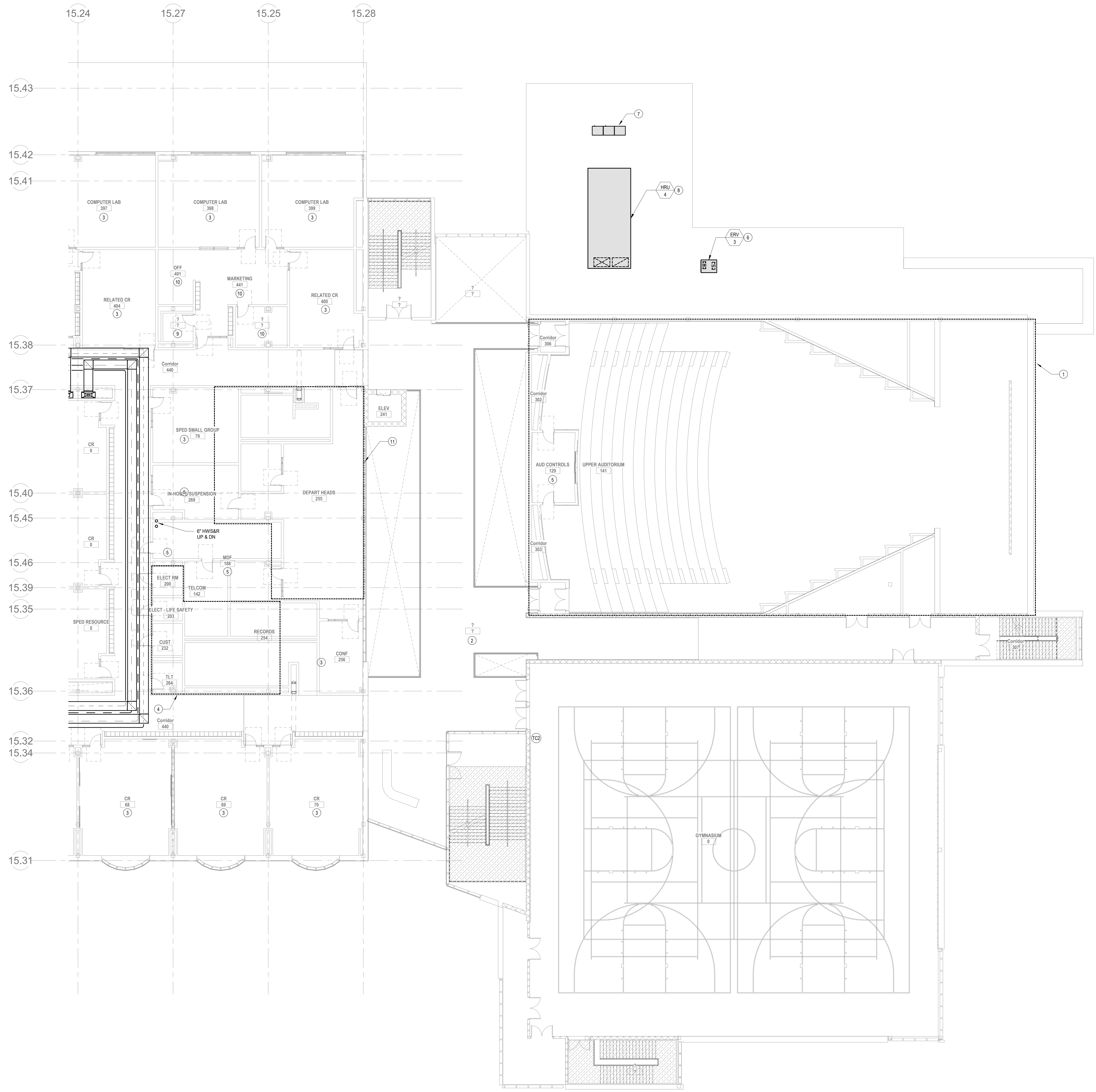
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 JUNE 17, 2021



HVAC FIRST FLOOR PLAN - PLAN EAST

Scale: As indicated
 Job No.: 6520409
 Drawn By: DRA
 Date: JUNE 17, 2021
M1-1-1E



HVAC DRAWING NOTES

- REFER TO LEVEL 1 FOR HVAC SCOPE IN THESE SPACES.
- AREA SERVED BY HVAC'S. PROVIDE 4 ZONES ON THIS LEVEL. EACH ZONE WILL HAVE A SUPPLY VAV TERMINAL DUCTED FROM HVAC'S MAIN SUPPLY DUCTWORK TO CEILING MOUNTED SUPPLY DIFFUSERS. PROVIDE HW/SR PIPING FROM THE NEAREST HW/SR MAIN TO EACH VAV TERMINAL UNIT. PROVIDE RETURN DUCTWORK TO CEILING MOUNTED GRILLES.
- REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-3 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
- PROVIDE A 3 NOMINAL TON SPLIT AC SYSTEM TO CONDITION THIS ROOM. PROVIDE A WALL MOUNTED EVAPORATOR WITH CONDENSATE PUMP ABOVE THE DOOR IN THE ROOM AND A CONDENSING UNIT ON THE ROOF. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM EVAPORATOR TO CONDENSING UNIT ON ROOF. PROVIDE CONDENSATE PIPING TO NEAREST CONDENSATE RECEIVER.
- ERV-3: 2000 CFM VARIABLE VOLUME ENERGY RECOVERY VENTILATOR SERVING THE 1ST FLOOR EARLY CHILDHOOD EDUCATION AREA. PROVIDE UNIT WITH A SUPPLY AND EXHAUST FAN, ENERGY RECOVERY WHEEL, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DR. COOL, HOT WATER PRE-HEAT COIL, AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM HRU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 25 TON VRF HEAT PUMP CONDENSING UNIT SYSTEM WITH LOW AMBIENT CONTROL KIT AND AHU EXPANSION VALVE CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FOR EACH CIRCUIT FROM THE CONDENSING UNIT TO HRU-4.
- HRU-4: 7,500 CFM VARIABLE AIR VOLUME DEDICATED OUTDOOR AIR UNIT SERVING ATHLETICS. PROVIDE UNIT WITH SUPPLY AND EXHAUST FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DR. COOL, HOT WATER PRE-HEAT COIL, AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM HRU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-2 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
- SPACE SERVED BY HRU-2. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HW/SR AND CHW/SR BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HW/SR AND CHW/SR MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-2 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE TO THE SENSIBLE FAN POWERED TERMINAL UNIT AND SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER.
- AREA SERVED BY ERV-3. PROVIDE 8 ZONES. PROVIDE EACH ZONE WITH AN OUTSIDE AIR VAV TERMINAL DUCTED TO A CEILING GRILLE, AND A 1.5 TON VRF FCU WITH SUPPLY DUCTWORK TO CEILING DIFFUSERS AND RETURN DUCTWORK TO FILTER RETURN GRILLES. PROVIDE A COMBINATION TEMPERATURE, HUMIDITY, AND CO2 SENSOR FOR EACH ZONE.

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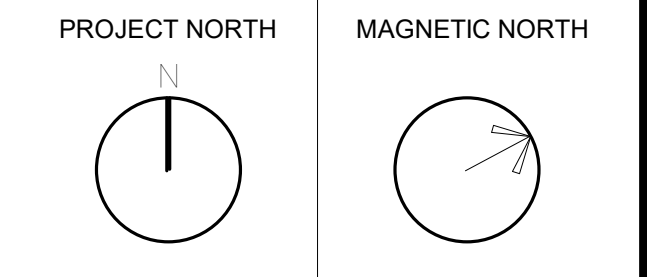
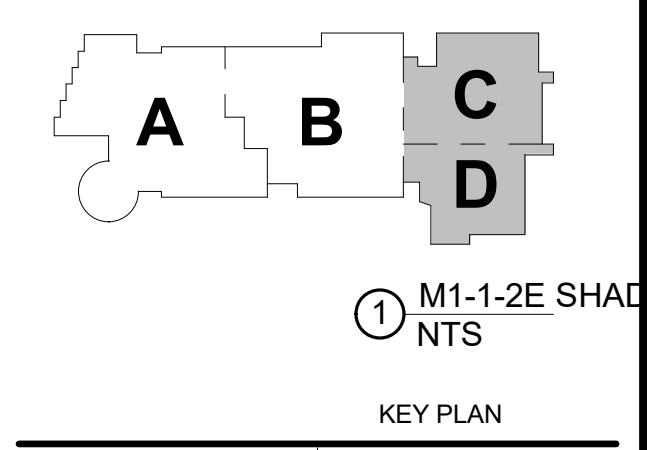
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MSBA SCHEMATIC DESIGN SUBMITTAL
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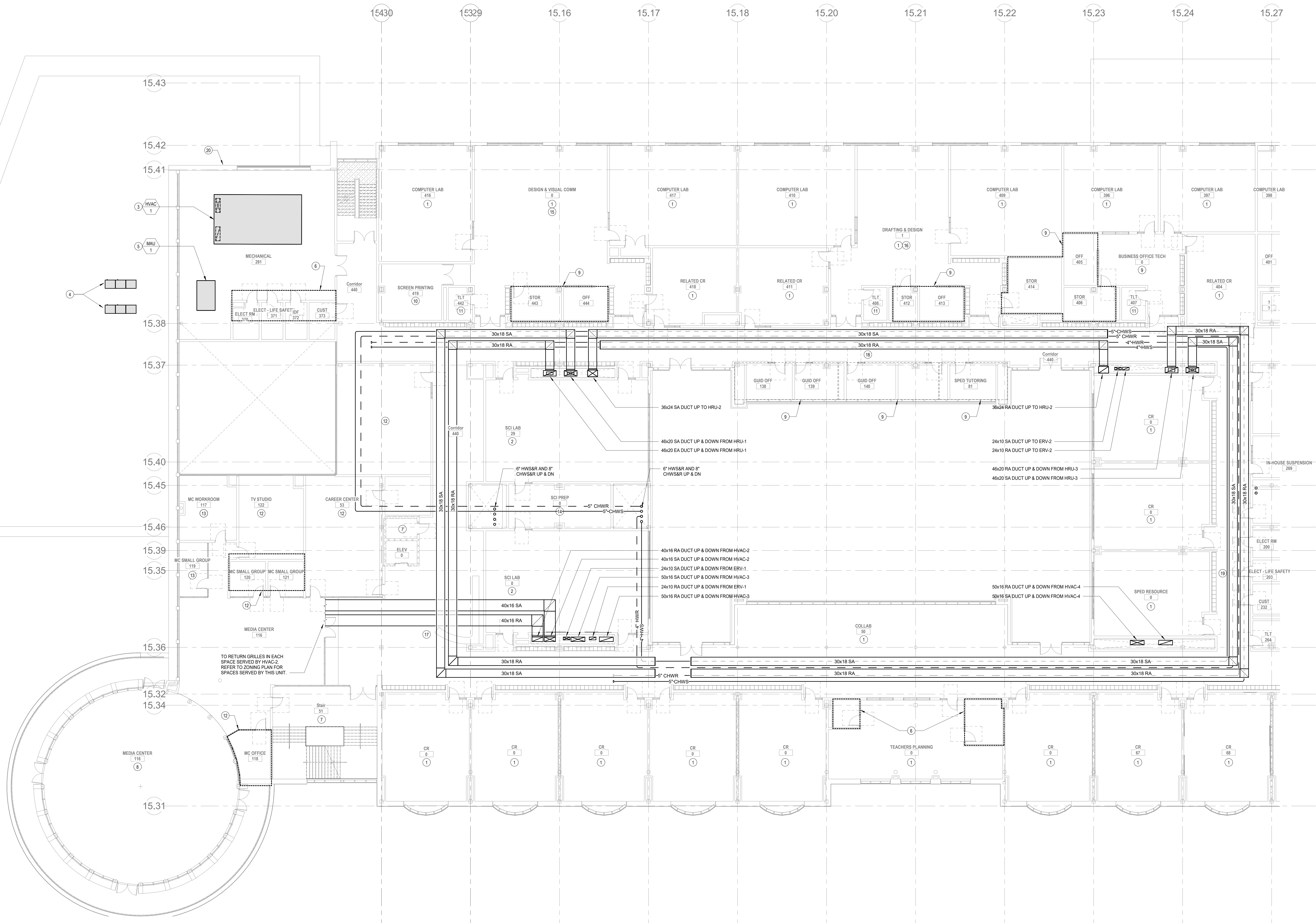
HVAC SECOND FLOOR PLAN - PLAN EAST

Scale: As indicated
 Job No.: 0520409
 Drawn By: DRA
 Date: JUNE 17, 2021

M1-1-2E

HVAC DRAWING NOTES

- REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT.
- REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT. PROVIDE TWO SENSIBLE FAN COIL UNITS FOR EACH SCIENCE ROOM. PROVIDE A STAINLESS STEEL EXHAUST DUCT FROM FUME HOOD UP TO A DEDICATED FUME HOOD EXHAUST FAN.
- HVAC-1: 3500 CFM MULTI-ZONE MIXED AIR VARIABLE VOLUME ROOFTOP UNIT TO SERVE CAFETERIA. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-4 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 30 TON VRF HEAT PUMP CONDENSING UNIT WITH LOW AMBIENT CONTROL KIT AND AHU CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM CONDENSING UNIT TO HVAC-1 DX COIL.
- MAU-1: 4.000 CFM 18 TON SINGLE ZONE 100% OUTSIDE AIR VARIABLE VOLUME MAKEUP AIR UNIT TO SERVE KITCHEN. PROVIDE WITH SUPPLY FAN, MERV-4 PRE-FILTER, MERV-13 FINAL FILTER, PACKAGED DX COOLING, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-3 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
- PROVIDE A 2 TON SPLIT AC TO CONDITION THIS ROOM. PROVIDE A WALL MOUNTED EVAPORATOR WITH CONDENSATE PUMP AND A CONDENSING UNIT ON THE ROOF. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM EVAPORATOR TO CONDENSING UNIT ON ROOF. PROVIDE CONDENSATE PIPING TO NEAREST CONDENSATE RECEPTOR. (TYPICAL FOR SPLIT AC SPACES IDENTIFIED ON THE ZONING PLANS).
- PROVIDE FLOOR MOUNTED SUPPLY DIFFUSERS IN THE MEDIA CENTER. PROVIDE SUPPLY DUCT DISTRIBUTION FROM 1ST FLOOR CEILING. PROVIDE SIDE WALL RETURN. PROVIDE RADANT CEILING PANELS IN CEILING WITH HWSS&R BRANCH PIPING FROM NEAREST HWSS&R MAIN.
- ZONE SERVED BY HRU-2: PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWSS&R AND CHWS&R BRANCH PIPING FROM NEAREST HWSS&R HEAT PUMP HWSS&R AND CHWS&R MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-2 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
- PROVIDE A VARIABLE VOLUME SUPPLY TERMINAL UNIT WITH DUCTWORK FROM THE NEAREST HRU-2 SUPPLY MAIN TO LAMINAR FLOW DIFFUSERS IN THE DARKROOM. PROVIDE EXHAUST DUCT DISTRIBUTION FROM DARKROOM SINK TO AN EXHAUST FAN ON THE ROOF.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-2 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
- SPACE SERVED BY HVAC-2: PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED FROM HVAC-2 MAIN TO CEILING DIFFUSERS IN THE SPACE. PROVIDE A CEILING RETURN GRILLE AND DUCT TO HVAC-2 MAIN RETURN DUCT.
- SPACE SERVED BY HVAC-2: PROVIDE A SERIES FAN POWERED TERMINAL UNIT DUCTED FROM HVAC-2 MAIN TO CEILING DIFFUSERS IN THE SPACE. PROVIDE A FILTER RETURN GRILLE DUCTED TO THE FAN POWERED TERMINAL UNITS RETURN CONNECTION. PROVIDE A CEILING RETURN GRILLE AND DUCT TO HVAC-2 MAIN RETURN DUCT.
- ZONE SERVED BY HRU-1: PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWSS&R AND CHWS&R BRANCH PIPING FROM NEAREST HWSS&R HEAT PUMP HWSS&R AND CHWS&R MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-1 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
- PROVIDE 12 LBHR HAMMER WITH DUCT MOUNTED DISPERSION TUBES IN SENSIBLE FAN COIL UNIT SUPPLY DUCTWORK TO SERVE THIS SPACE.
- PROVIDE DEDICATED EXHAUST DUCTWORK TO ROOF MOUNTED EXHAUST FAN FOR THE LASER CUTTER AND 3D PRINTER.
- PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED TO HRU-1 SUPPLY MAIN TO SERVE CORRIDOR. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING DIFFUSERS IN CORRIDOR.
- PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED TO HRU-2 SUPPLY MAIN TO SERVE CORRIDOR. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING DIFFUSERS IN CORRIDOR.
- PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED TO HRU-3 SUPPLY MAIN TO SERVE CORRIDOR. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING DIFFUSERS IN CORRIDOR.
- PROVIDE A 50 S.F. OUTDOOR AIR INTAKE LOUVER WITH PLENUM AND DUCT DISTRIBUTION TO HVAC-1 AND MAU-1 OUTDOOR AIR CONNECTIONS. PROVIDE A 32 S.F. RELIEF AIR LOUVER WITH PLENUM AND DUCT DISTRIBUTION TO HVAC-3 OUTDOOR AIR INTAKE AND RELIEF LOUVERS SHALL BE SEPARATED BY A MINIMUM OF 25'-0".



2 HVAC Level 2 West
M1-1-2W 3/32" = 1'-0"

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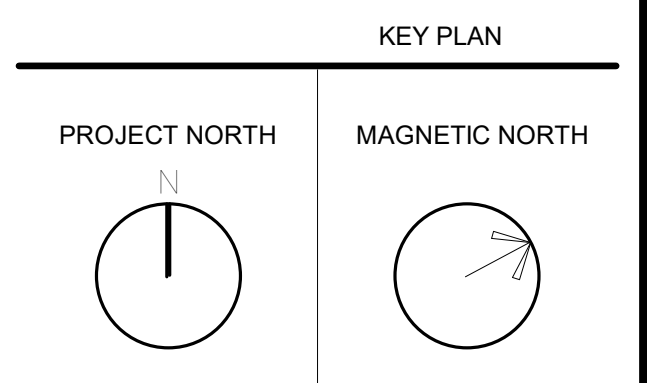
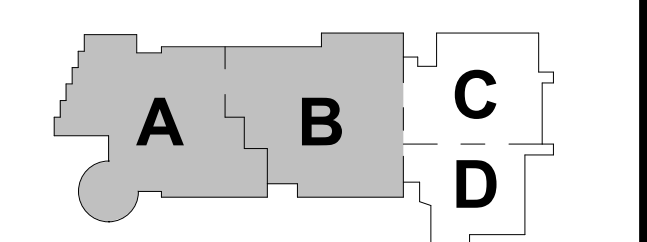
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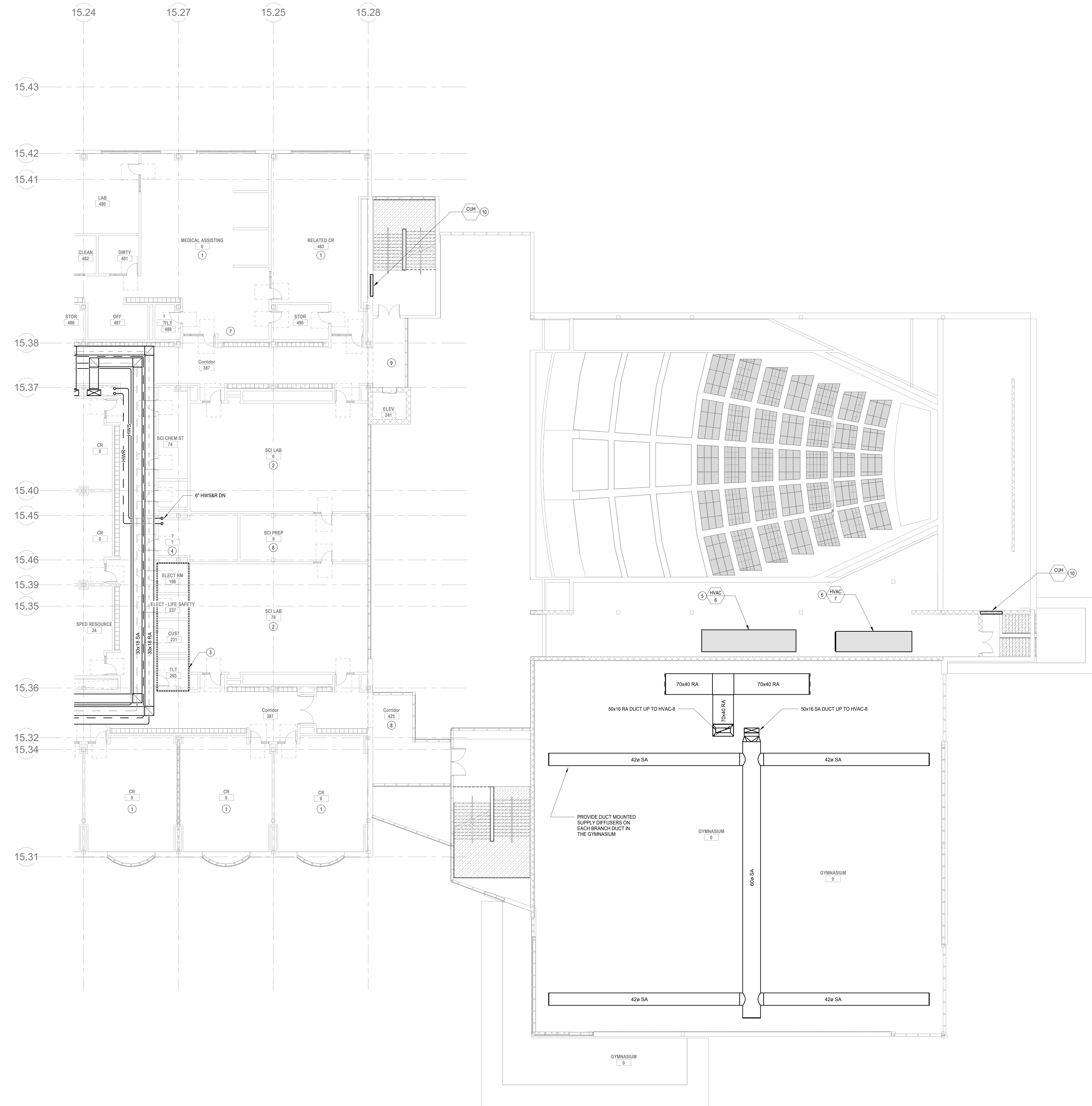
JUNE 17, 2021



HVAC SECOND FLOOR PLAN - PLAN WEST

Scale: As indicated
Job No.: 0520409
Drawn By: DRA
Date: JUNE 17, 2021

M1-1-2W



HVAC DRAWING NOTES

1. REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT.
2. REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT. PROVIDE TWO SENSIBLE FAN COIL UNITS FOR EACH SCIENCE ROOM. PROVIDE A STAINLESS STEEL EXHAUST DUCT FROM FUME HOOD UP TO A DEDICATED FUME HOOD EXHAUST FAN.
3. PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-3 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
4. PROVIDE A 2 NOMINAL TON SPLIT AC SYSTEM TO CONDITION THIS ROOM. PROVIDE A WALL MOUNTED EVAPORATOR OR WITH CONDENSATE PUMP ABOVE THE DOOR IN THE ROOM AND A CONDENSING UNIT ON THE ROOF. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM EVAPORATOR TO CONDENSING UNIT ON ROOF. PROVIDE CONDENSATE PIPING TO NEAREST CONDENSATE RECEIVER.
5. HVAC-6: 14,000 CFM SINGLE ZONE MIXED AIR VARIABLE VOLUME AIR HANDLING UNIT TO SERVE AUDITORIUM. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN. PROVIDE SUPPLY AND RETURN DUCTWORK DISTRIBUTION TO SUPPLY DIFFUSERS AND RETURN GRILLES IN AUDITORIUM.
6. HVAC-7: 4,800 CFM SINGLE ZONE MIXED AIR VARIABLE VOLUME AIR HANDLING UNIT TO SERVE STAGE. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN. PROVIDE SUPPLY AND RETURN DUCTWORK DISTRIBUTION TO SUPPLY DIFFUSERS AND RETURN GRILLES IN AUDITORIUM.
7. PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-2 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
8. ZONE SERVED BY HRU-3. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWSAR AND CHWSAR BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HWSAR AND CHWSAR MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-3 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
9. ZONE SERVED BY HRU-2. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWSAR AND CHWSAR BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HWSAR AND CHWSAR MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-2 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
10. PROVIDE HWSAR BRANCH PIPING FROM NEAREST HWSAR MAIN.

HVAC Level 3 East
3/32" = 1'-0"



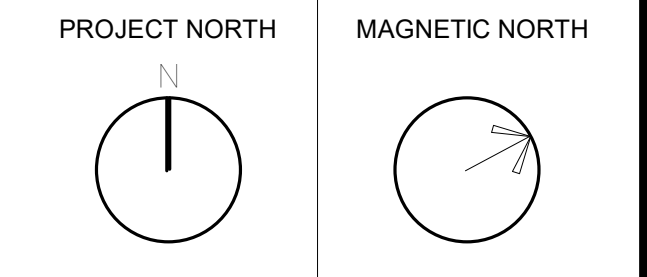
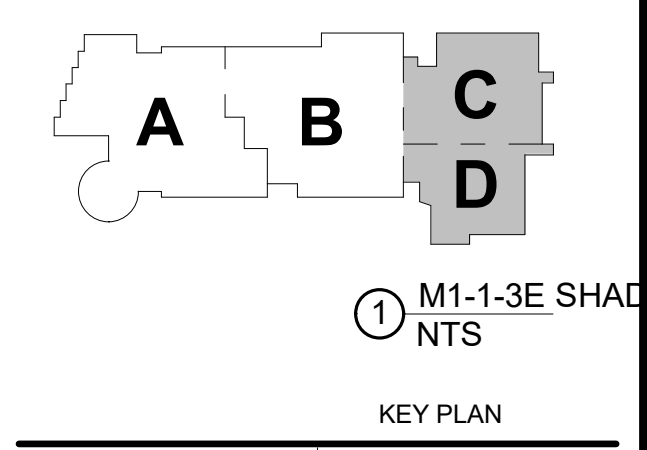
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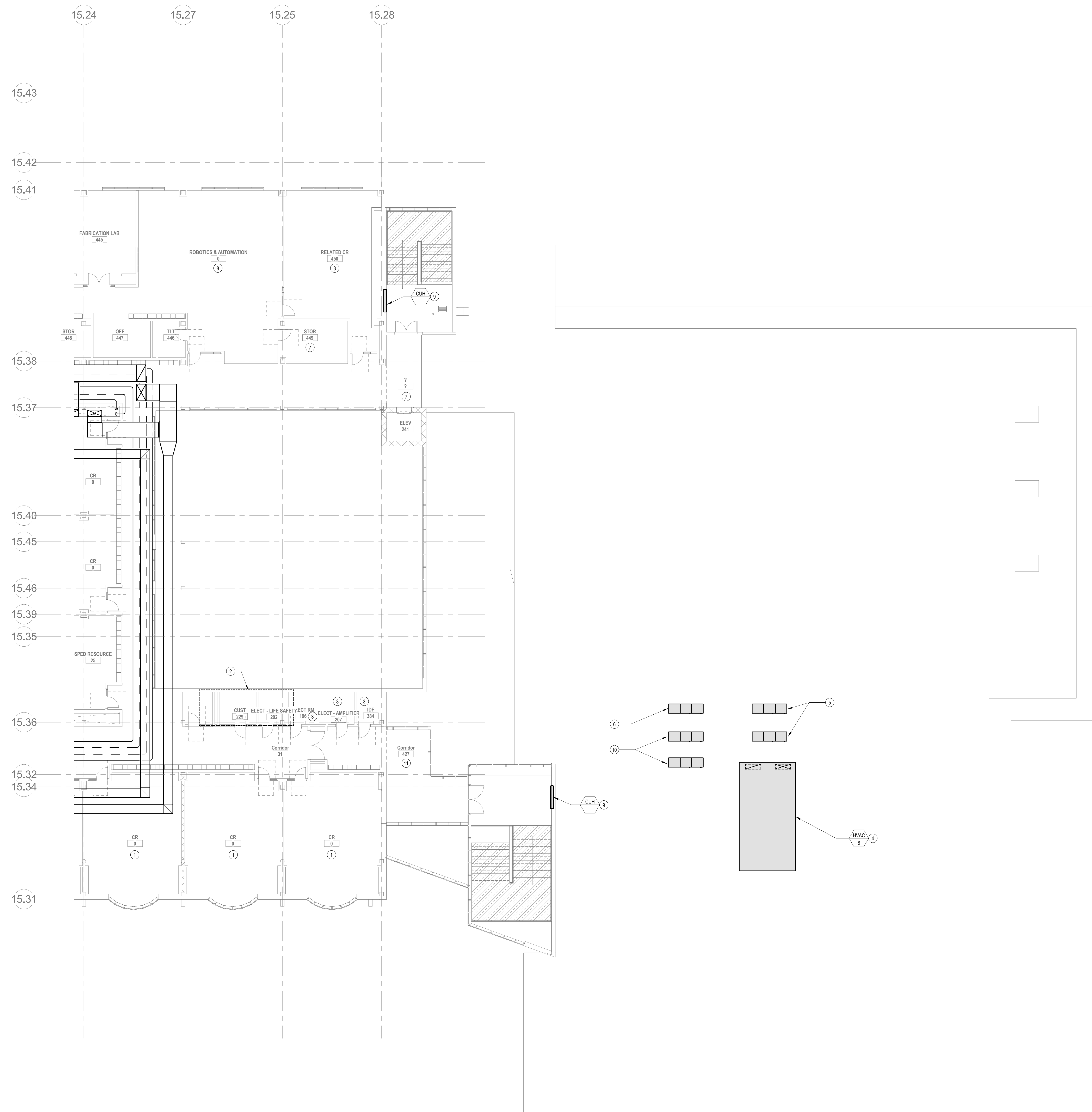
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DESIGN
SUBMITTAL
JUNE 17, 2021



HVAC THIRD FLOOR PLAN - PLAN EAST

Scale: As indicated
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021
M1-1-3E

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- ### HVAC DRAWING NOTES
- REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT.
 - PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU3 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
 - PROVIDE A 2 NOMINAL TON SPLIT AC SYSTEM TO CONDITION THIS ROOM. PROVIDE A WALL MOUNTED EVAPORATOR WITH CONDENSATE PUMP ABOVE THE DOOR IN THE ROOM AND A CONDENSING UNIT ON THE ROOF. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM EVAPORATOR TO CONDENSING UNIT ON ROOF. PROVIDE CONDENSATE PIPING TO NEAREST CONDENSATE RECEPTOR.
 - HVAC-8: 21 000 CFM SINGLE ZONE MIXED AIR VARIABLE VOLUME ROOFTOP UNIT TO SERVE CHASSIS. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
 - PROVIDE A 55 TON VRF HEAT PUMP CONDENSING UNIT WITH LOW AMBIENT CONTROL KIT AND AHU CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM CONDENSING UNIT TO HVAC-8 DX COIL.
 - PROVIDE A 15 TON VRF HEAT PUMP CONDENSING UNIT WITH LOW AMBIENT CONTROL KIT AND AHU CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM CONDENSING UNIT TO HVAC-7 DX COIL.
 - ZONE SERVED BY HRU2. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWS&R AND CHWS&R BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HWS&R AND CHWS&R MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU 2 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
 - REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT.
 - PROVIDE HWS&R BRANCH PIPING FROM CUH, LH, OR CONVECTOR TO NEAREST HWS&R MAIN (TYPICAL FOR ALL HYDRONIC HEATING EQUIPMENT).
 - PROVIDE A 40 TON VRF HEAT PUMP CONDENSING UNIT WITH LOW AMBIENT CONTROL KIT AND AHU CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM CONDENSING UNIT TO HVAC-6 DX COIL.
 - ZONE SERVED BY HRU3. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWS&R AND CHWS&R BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HWS&R AND CHWS&R MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU 3 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.

4 HVAC Level 4 East
M1-1-4E
3/2" = 1'-0"

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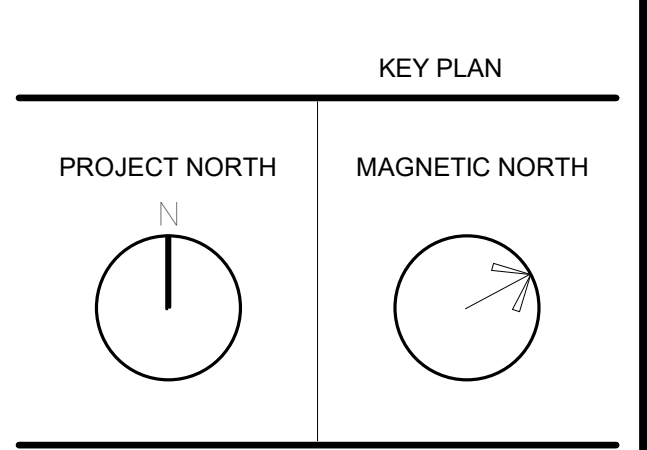
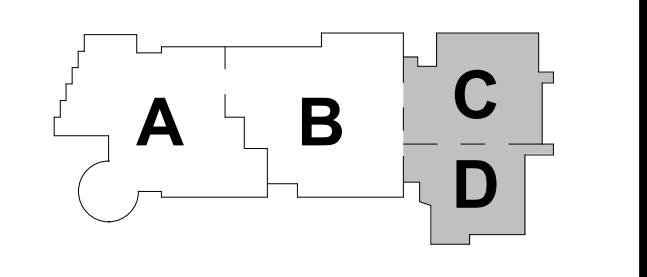
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JUNE 17, 2021



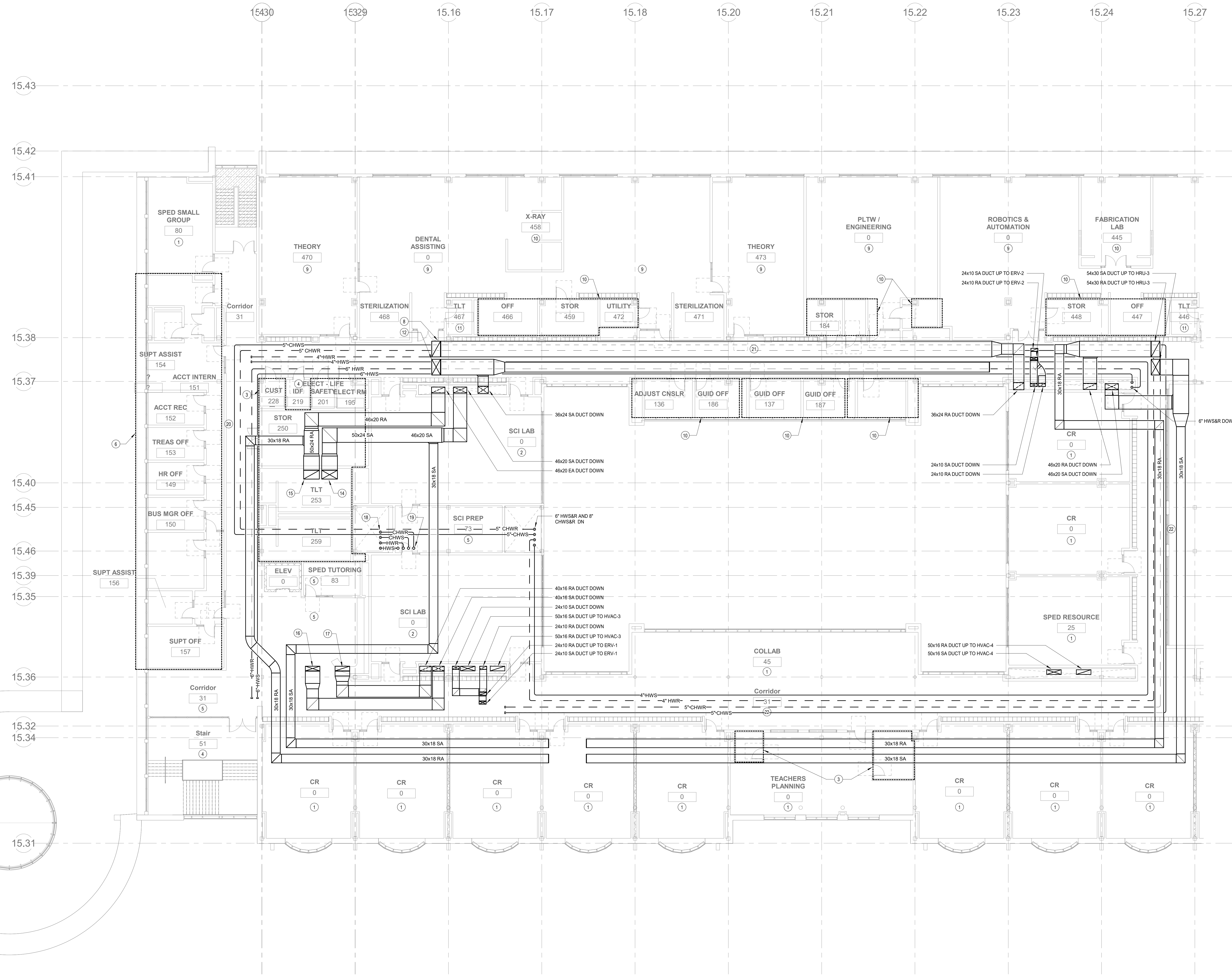
HVAC FOURTH FLOOR PLAN - PLAN EAST

Scale: As indicated
Job No.: 0520409
Drawn By: DRA
Date: JUNE 17, 2021

M1-1-4E

HVAC DRAWING NOTES

- REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT.
- REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT. PROVIDE TWO SENSIBLE FAN COIL UNITS FOR EACH SCIENCE ROOM. PROVIDE A STAINLESS STEEL EXHAUST DUCT FROM FUME HOOD UP TO A DEDICATED FUME HOOD EXHAUST FAN.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-3 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
- PROVIDE A 2 NOMINAL TON SPLIT AC SYSTEM TO CONDITION THIS ROOM. PROVIDE A WALL MOUNTED EVAPORATOR WITH CONDENSATE PUMP ABOVE THE DOOR IN THE ROOM AND A CONDENSING UNIT ON THE ROOF. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM EVAPORATOR TO CONDENSING UNIT ON ROOF. PROVIDE CONDENSATE PIPING TO NEAREST CONDENSATE RECEPTOR.
- ZONE SERVED BY HRU-1. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWSR AND CHWSR BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HWSR AND CHWSR MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-1 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
- VAV TERMINAL DUCTED FROM ERV-1 MAIN TO THE FOU RETURN DUCT. AN EXHAUST VAV TERMINAL DUCTED TO A CEILING GRILLE. AND A 1.5 TON VRF FCU WITH SUPPLY DUCTWORK TO CEILING DIFFUSERS AND RETURN DUCTWORK TO FILTER RETURN GRILLES. PROVIDE A COMBINATION TEMPERATURE, HUMIDITY, AND CO2 SENSOR FOR EACH ZONE.
- ZONE SERVED BY HRU-3. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWSR AND CHWSR BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HWSR AND CHWSR MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-3 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
- REFER TO 3RD FLOOR PLAN FOR TYPICAL CLASSROOM HVAC LAYOUT.
- ZONE SERVED BY HRU-2. PROVIDE A SENSIBLE FAN POWERED TERMINAL UNIT WITH HWSR AND CHWSR BRANCH PIPING FROM NEAREST HYDRONIC HEAT PUMP HWSR AND CHWSR MAIN. PROVIDE SUPPLY DUCTWORK FROM NEAREST HRU-2 SUPPLY MAIN AND RETURN DUCTWORK FROM A CEILING MOUNTED FILTER RETURN GRILLE IN EACH SPACE TO THE SENSIBLE FAN POWERED TERMINAL UNIT. PROVIDE SUPPLY DUCTWORK FROM THE SENSIBLE FAN POWERED TERMINAL UNIT TO A CEILING DIFFUSER IN EACH SPACE.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-2 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
- PROVIDE ONE EXHAUST VAV TERMINAL UNIT CONNECTED TO HRU-2 EXHAUST MAIN. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING GRILLES IN EACH SPACE.
- 54x30 SA DUCT UP TO HRU-2.
- 54x30 SA DUCT UP TO HRU-1.
- 54x30 RA DUCT UP TO HRU-1.
- 50x16 SA DUCT UP TO HVAC-2.
- 50x16 RA DUCT UP TO HVAC-2.
- 6" HWSR AND 8" CHWSR DN.
- 6" HWSR AND 8" CHWSR UP TO HYDRONIC HEAT PUMPS.
- PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED TO HRU-1 SUPPLY MAIN TO SERVE CORRIDOR. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING DIFFUSERS IN CORRIDOR.
- PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED TO HRU-2 SUPPLY MAIN TO SERVE CORRIDOR. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING DIFFUSERS IN CORRIDOR.
- PROVIDE A SUPPLY VAV TERMINAL UNIT CONNECTED TO HRU-3 SUPPLY MAIN TO SERVE CORRIDOR. PROVIDE DUCT DISTRIBUTION FROM VAV TERMINAL TO CEILING DIFFUSERS IN CORRIDOR.



HVAC Level 4 West
M1-1-4W
3/32" = 1/8"

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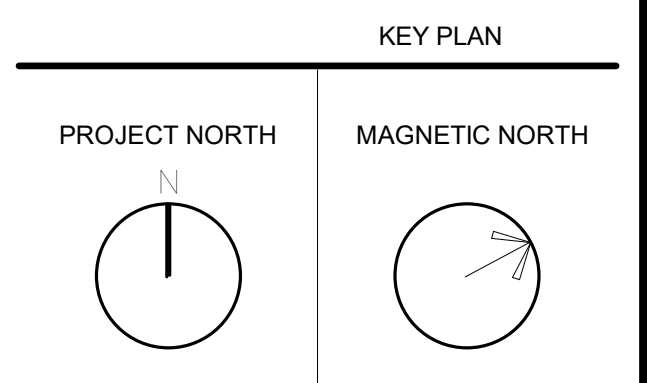
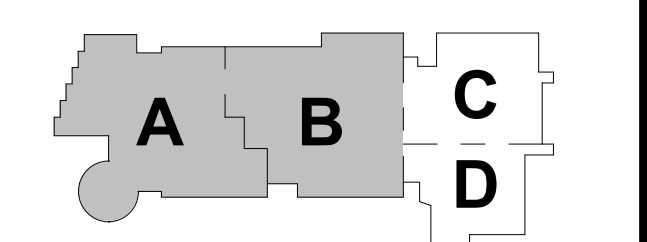
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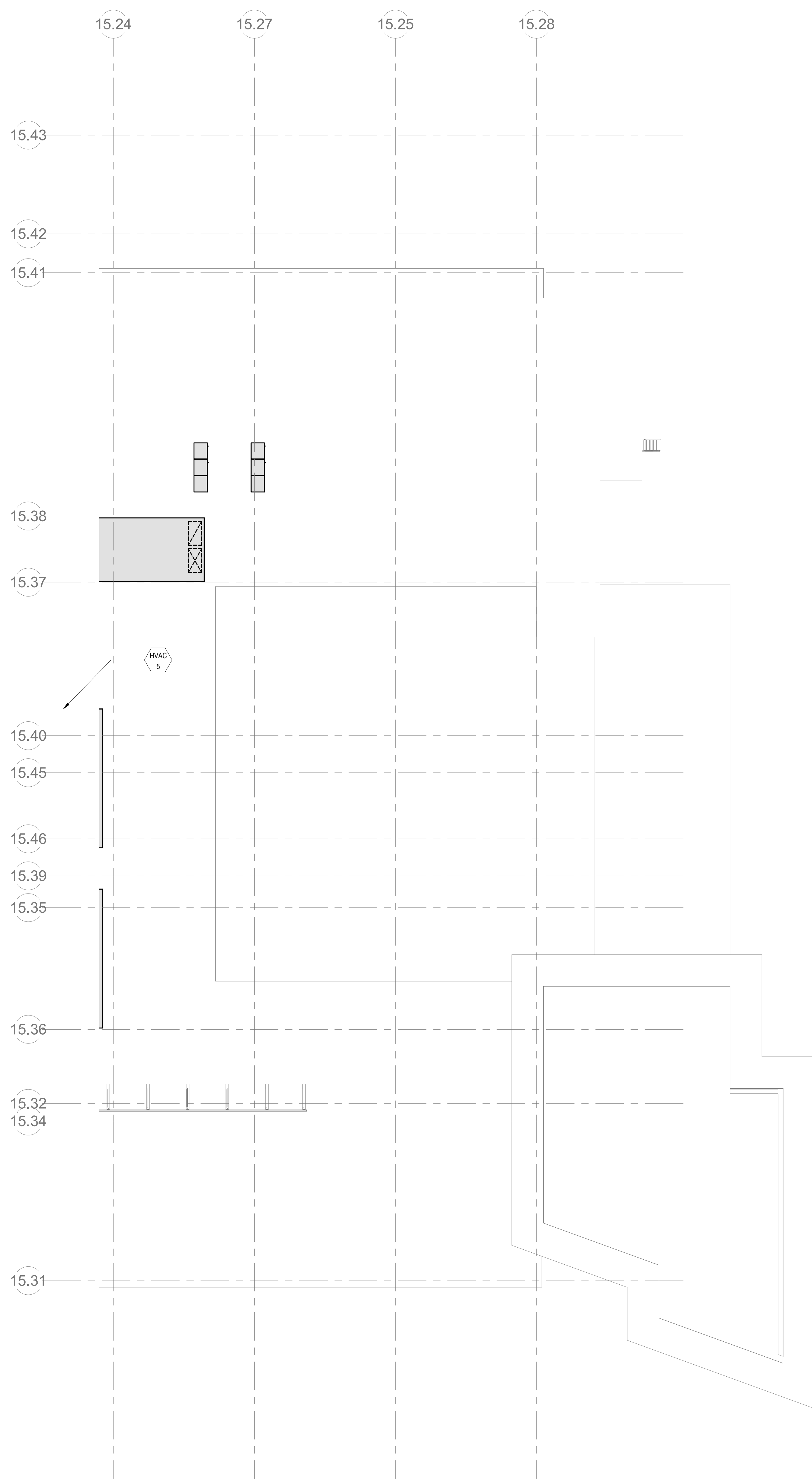


HVAC FOURTH FLOOR PLAN - PLAN WEST

Scale: As indicated
Job No.: 0520409
Drawn By: DRA
Date: JUNE 17, 2021

M1-1-4W

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① HVAC Main Roof East
3/32" = 1'-0"



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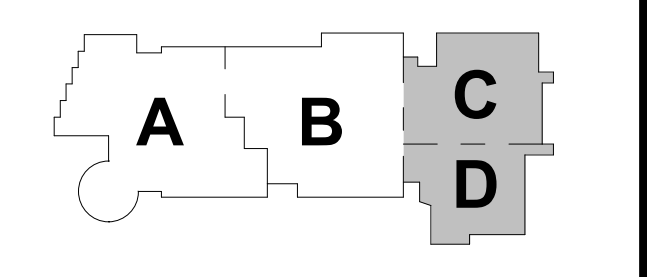
**NORTHEAST
METRO TECH**

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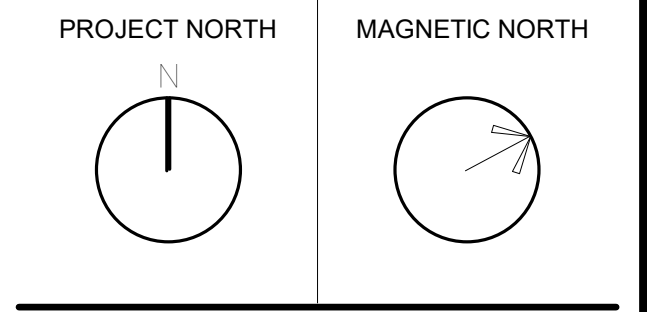
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MSBA
SCHEMATIC
DESIGN
SUBMITTAL
JUNE 17, 2021



KEY PLAN

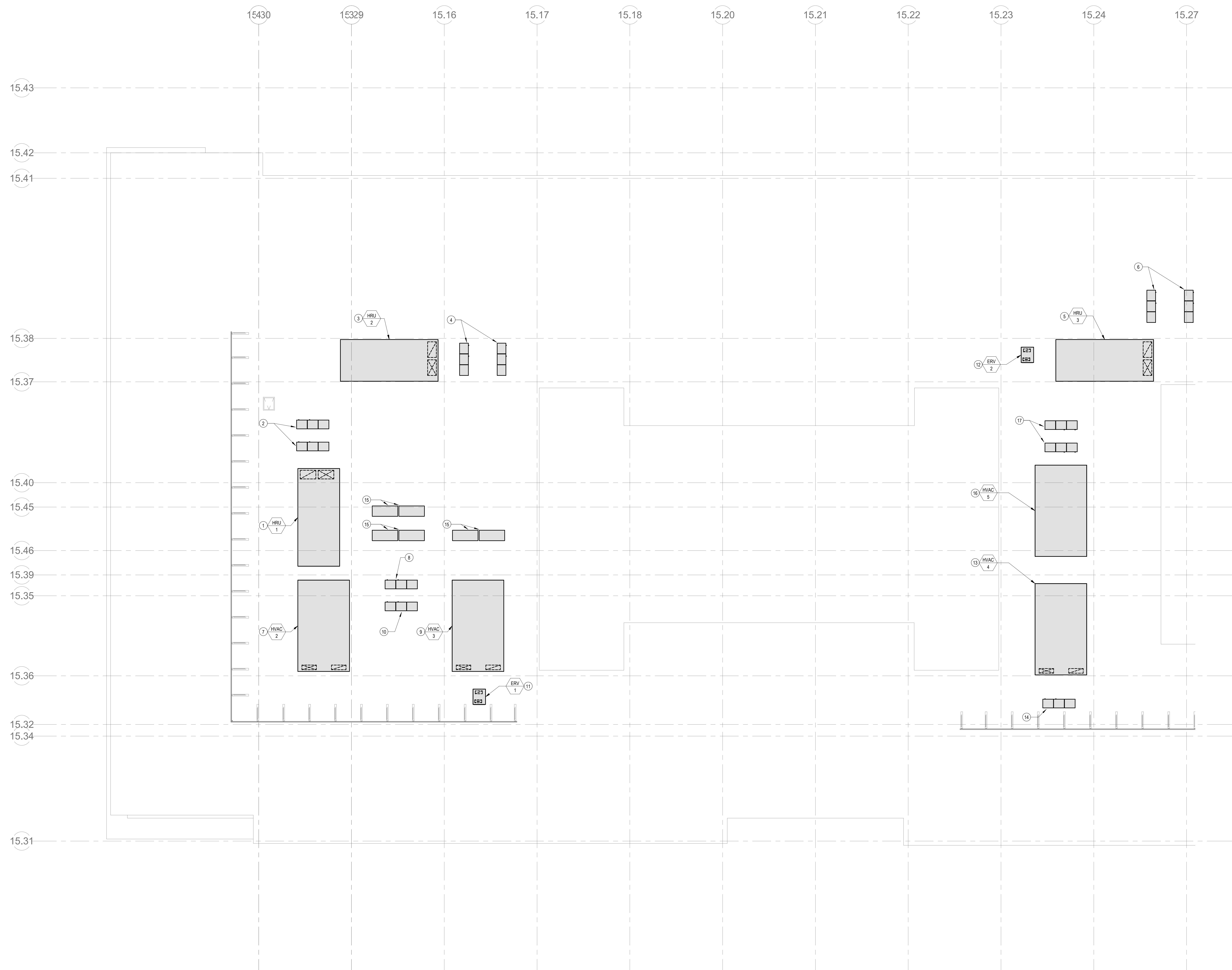


**HVAC ROOF
PLAN - PLAN
EAST**

Scale: As indicated
Job No.: 0520409
Drawn By: DRA
Date: JUNE 17, 2021
M1-2-1E

HVAC DRAWING NOTES

- HRU-1: 16,500 CFM VARIABLE AIR VOLUME DEDICATED OUTDOOR AIR UNIT SERVING SPACES ON SOUTH SIDE OF ACADEMIC WING. PROVIDE UNIT WITH SUPPLY AND EXHAUST FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER PRE-HEAT COIL, AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM HRU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 65 TON, 2 CIRCUIT, VRF HEAT PUMP CONDENSING UNIT SYSTEM WITH LOW AMBIENT CONTROL KIT AND AHU EXPANSION VALVE CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FOR EACH CIRCUIT FROM THE CONDENSING UNIT TO HRU-1.
- HRU-2: 16,500 CFM VARIABLE AIR VOLUME DEDICATED OUTDOOR AIR UNIT SERVING SPACES ON NORTH SIDE OF ACADEMIC WING. PROVIDE UNIT WITH SUPPLY AND EXHAUST FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER PRE-HEAT COIL, AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM HRU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 65 TON, 2 CIRCUIT, VRF HEAT PUMP CONDENSING UNIT SYSTEM WITH LOW AMBIENT CONTROL KIT AND AHU EXPANSION VALVE CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FOR EACH CIRCUIT FROM THE CONDENSING UNIT TO HRU-1.
- HRU-3: 16,500 CFM VARIABLE AIR VOLUME DEDICATED OUTDOOR AIR UNIT SERVING SPACES ON SOUTH SIDE OF ACADEMIC WING. PROVIDE UNIT WITH SUPPLY AND EXHAUST FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER PRE-HEAT COIL, AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM HRU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 65 TON, 2 CIRCUIT, VRF HEAT PUMP CONDENSING UNIT SYSTEM WITH LOW AMBIENT CONTROL KIT AND AHU EXPANSION VALVE CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FOR EACH CIRCUIT FROM THE CONDENSING UNIT TO HRU-1.
- HVAC-2: 7,000 CFM MULTI-ZONE MIXED AIR VARIABLE VOLUME ROOFTOP UNIT TO SERVE THE MEDIA CENTER. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 20 TON VRF HEAT PUMP CONDENSING UNIT WITH LOW AMBIENT CONTROL KIT AND AHU CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM CONDENSING UNIT TO HVAC-2 DX COIL.
- HVAC-3: 7,200 CFM MULTI-ZONE MIXED AIR VARIABLE VOLUME ROOFTOP UNIT TO SERVE CULINARY ARTS. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 20 TON VRF HEAT PUMP CONDENSING UNIT WITH LOW AMBIENT CONTROL KIT AND AHU CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM CONDENSING UNIT TO HVAC-3 DX COIL.
- ERV-1: 2000 CFM VARIABLE VOLUME ENERGY RECOVERY VENTILATOR SERVING THE 1ST FLOOR ADMIN AREA. PROVIDE WITH SUPPLY AND EXHAUST FAN, ENERGY RECOVERY WHEEL, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, AND HOT WATER HEATING COIL.
- ERV-2: 1000 CFM VARIABLE VOLUME ENERGY RECOVERY VENTILATOR SERVING THE 2ND FLOOR DISTRICT OFFICES. PROVIDE WITH SUPPLY AND EXHAUST FAN, ENERGY RECOVERY WHEEL, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, AND HOT WATER HEATING COIL.
- HVAC-4: 8,400 CFM MULTI-ZONE MIXED AIR VARIABLE VOLUME ROOFTOP UNIT TO SERVE COSMETOLOGY. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 20 TON VRF HEAT PUMP CONDENSING UNIT WITH LOW AMBIENT CONTROL KIT AND AHU CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FROM CONDENSING UNIT TO HVAC-3 DX COIL.
- TWELVE 30 NOMINAL TON VRF HEAT RECOVERY CONDENSING UNITS TO SERVE CLASSROOMS.
- HVAC-5: 13,000 CFM MULTI-ZONE MIXED AIR VARIABLE VOLUME ROOFTOP UNIT TO SERVE AUDITORIUM AND GYMNASIUM LOBBIES. PROVIDE UNIT WITH SUPPLY AND RETURN FANS, MERV-8 PRE-FILTER, MERV-13 FINAL FILTER, ENERGY RECOVERY WHEEL, DX COIL, HOT WATER HEATING COIL AND 100% ECONOMIZER. PROVIDE CONDENSATE DRAIN FROM RTU CONDENSATE DRAIN CONNECTION TO NEAREST ROOF DRAIN.
- PROVIDE A 40 TON, 2 CIRCUIT, VRF HEAT PUMP CONDENSING UNIT SYSTEM WITH LOW AMBIENT CONTROL KIT AND AHU EXPANSION VALVE CONTROL KIT. PROVIDE REFRIGERANT LIQUID AND SUCTION LINES FOR EACH CIRCUIT FROM THE CONDENSING UNIT TO HVAC-5.



① HVAC Main Roof West
3/32" = 1'-0"

DRA

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NORTHEAST METRO TECH

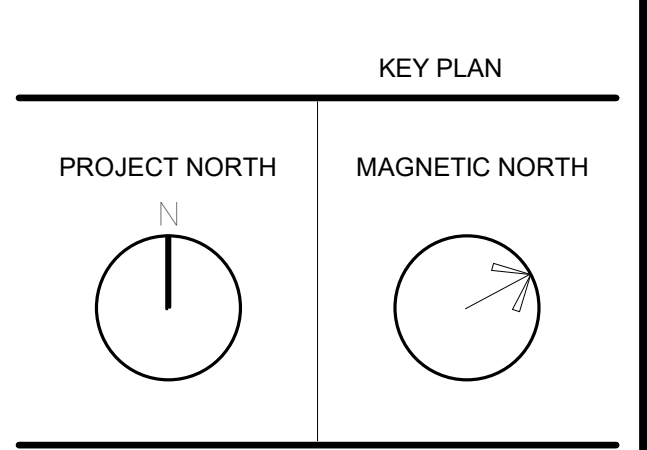
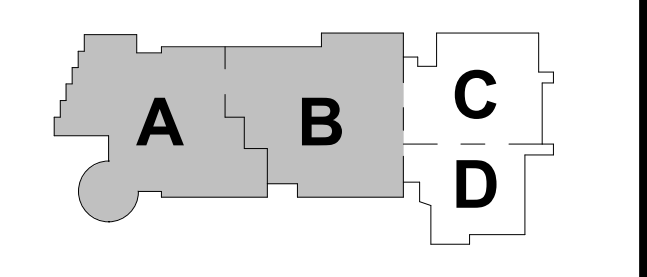
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BALA ENGINEERS

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MSBA SCHEMATIC DESIGN SUBMITTAL
JUNE 17, 2021



HVAC ROOF PLAN - PLAN WEST

Scale: As indicated
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021

M1-2-1W

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NORTHEAST METRO TECH

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Wakefield, MA 01880

GENERAL NOTES

- 1. THE WORK TO BE DONE UNDER THESE SPECIFICATIONS AND THE DRAWINGS CONSISTS OF PROVIDING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES AND PERFORMING ALL OPERATIONS TO COMPLETE THE CONSTRUCTION WORK FOR THIS PROJECT. ANY WORK NOT SPECIFICALLY COVERED BY THESE SPECIFICATIONS OR INDICATED ON THE CONTRACT DRAWINGS, BUT NECESSARY TO COMPLETE OR PERFECT ANY PART OF THIS INSTALLATION IN A SUBSTANTIAL MANNER, SHALL BE PROVIDED WITHOUT EXTRA COST TO THE OWNER.
2. THE WORK SHALL CONFORM TO THE MORE STRINGENT OF ALL APPLICABLE CODES & REGULATIONS, UL (AND FMJ) GUIDELINES, LEED REQUIREMENTS, MANUFACTURERS LITERATURE AND RECOMMENDATIONS, BUILDING OPERATOR'S REQUIREMENTS, AND TO THE REQUIREMENTS OF FEDERAL, STATE AND LOCAL REGULATORY AGENCIES AND AUTHORITIES HAVING JURISDICTION.
3. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE EXTENT, GENERAL CHARACTER, LOCATION AND ARRANGEMENT OF THE WORK UNDER THIS CONTRACT. EXACT LOCATIONS OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS (WHERE JOB CONDITIONS REQUIRE MINOR CHANGES OR ADJUSTMENTS IN THE INDICATED LOCATIONS OR ARRANGEMENTS OF THE WORK, SUCH CHANGES SHALL BE PROVIDED WITHOUT EXTRA COST. THE CONTRACTOR SHALL RE-INSTALL EQUIPMENT THAT HAS INADEQUATE OR UNSAFE ACCESSIBILITY.
4. INSTALLATION OF WORK SHALL PROVIDE REASONABLE ACCESSIBILITY FOR OPERATION, INSPECTION AND MAINTENANCE OF EQUIPMENT AND ACCESSORIES. PROVIDE CLEARANCES REQUIRED BY MANUFACTURERS AND APPLICABLE CODES. ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO EQUIPMENT AND RELATED ACCESSORIES.
5. THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "MECHANICAL WORK," "ELECTRICAL WORK," "PLUMBING WORK," ETC. SHALL MEAN ALL LABOR, MATERIAL, EQUIPMENT, SCAFFOLDING, RIGGING, TOOLS, SUPERVISION, SERVICES AND OTHER INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
6. THE CM/DC SHALL MAKE SETS OF THE BID DOCUMENTS CONSISTING OF COMPLETE SETS OF DRAWINGS AND SPECIFICATIONS, AND ISSUE THEM TO EACH OF THE PRIME AND SUB-CONTRACTORS. EVERY PRIME AND SUB-CONTRACTOR ON EACH BIDDING TEAM SHALL RECEIVE COMPLETE SETS OF DRAWINGS AND SPECIFICATIONS. THERE ARE NOTES AND CROSS REFERENCES FOR VARIOUS TRADE CONTRACTORS IN MULTIPLE TRADE OR DISCIPLINE DRAWINGS AND SPECIFICATIONS. IN ALL SUCH CONTRACTORS IS TO RECEIVE COMPLETE SETS OF THE BID DOCUMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN THESE DRAWINGS FROM CM/DC. EACH CONTRACTOR IS RESPONSIBLE FOR THEIR WORK AS NOTED ON THE OTHER TRADE CONTRACTORS' DRAWINGS. BIDDERS ARE RESPONSIBLE FOR ALL COSTS FOR EACH SET OF BID DOCUMENTS REQUESTED.
7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A FULL COORDINATION EFFORT IN ORDER TO CREATE A FINALIZED COORDINATED LAYOUT OF ALL EQUIPMENT, SYSTEMS, DUCTWORK, PIPING AND ALL OTHER ITEMS WITHIN THEIR RESPECTIVE SCOPE. THE CONTRACTORS COORDINATION EFFORT SHALL INCLUDE COORDINATION FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED.
8. CONTRACTOR SHALL COORDINATE LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS WITH STRUCTURAL AND OTHER TRADES.
9. THE DRAWINGS INDICATE APPROXIMATE LOCATIONS BASED UPON INFORMATION OBTAINED WITHOUT REMOVING CEILING TILES OR WALLS. THEREFORE, THE CONTRACTOR SHALL INCLUDE IN THEIR BID CONTINGENCY COSTS TO ADDRESS CONFLICTS BETWEEN DESIGN AND EXISTING CONDITIONS. ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND/OR OWNERS REPRESENTATIVE PRIOR TO CONSTRUCTION.
10. FOR ANY DISCREPANCY BETWEEN DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BASE THEIR BID UPON THE MOST STRINGENT REQUIREMENT (QUALITY, QUANTITY, SIZE, ETC.). THE CONTRACTOR SHALL IDENTIFY DISCREPANCIES AS PART OF THEIR BID.
11. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL LOG ALL EXISTING EQUIPMENT AND TRACE ELECTRICAL, FIRE ALARM, AND CONTROL CIRCUITS THAT SERVE SUCH EQUIPMENT.
12. ALL SERVICES TO EXISTING BUILDINGS SHALL BE MAINTAINED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL COORDINATE ALL SYSTEM SHUT DOWNS AND TIMING WITH OWNER.
13. THE CONTRACTOR SHALL EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED.
14. EXISTING EQUIPMENT THAT INTERFERES WITH NEW ARRANGEMENT SHALL BE REMOVED, REINSTALLED, RELOCATED, REROUTED, EXTENDED OR ABANDONED AS REQUIRED, TO SUIT THE NEW ARRANGEMENT.
15. WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK AND/OR PIPING, CAREFULLY COORDINATE SIZES AND LOCATIONS OF THE ELEMENTS BEFORE FABRICATION, COORDINATE WITH FINAL LOCATION OF BEAM PENETRATIONS AND SHEAR WALL PENETRATIONS.
16. CONTRACTOR SHALL COORDINATE LOCATION OF ALL WALL, FLOOR AND ROOF OPENINGS WITH STRUCTURAL AND OTHER TRADES.
17. PROVIDE CUTTING AND PATCHING AS REQUIRED AND WHERE NECESSARY TO ACCOMMODATE NEW WORK AND THE REPAIR OF EXISTING WORK.
18. WHEN WORK INVOLVES CONTACT WITH MATERIALS CONTAINING ASBESTOS, PCB, OR OTHER TOXIC MATERIALS, NOTIFY OWNER, WHO WILL ESTABLISH PROCEDURES FOR REMEDIATION AND REMOVAL.
19. CONTRACTOR SHALL SCHEDULE THE WORK UNDER THIS CONTRACT WITH WORK OF OTHER TRADES AS NOT TO DELAY THE OVERALL PROGRESS OF THE PROJECT.
20. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO PURCHASING EQUIPMENT AND PRIOR TO CUTTING DRAWINGS.
21. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PER SPECIFICATIONS PRIOR TO PURCHASING OR INSTALLING EQUIPMENT AND SYSTEMS INDICATED ON CONTRACT DOCUMENTS. PRIOR TO SUBMITTAL, CONTRACTOR SHALL VERIFY THAT ADEQUATE SPACE EXISTS FOR THE SUBMITTED EQUIPMENT. SHOP DRAWINGS MUST BE REVIEWED BY ARCHITECT/ENGINEER.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY OTHER TRADES DUE TO SUBSTITUTION OF OTHER THAN SCHEDULED EQUIPMENT. WHEN EQUIPMENT FURNISHED IS DIFFERENT THAN INDICATED, THE COST OF ADDITIONAL ELECTRICAL SERVICE, STRUCTURAL AND RELATED WORK SHALL BE PAID BY THIS CONTRACTOR.
23. ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE DONE IN ACCORDANCE WITH GOOD TRADE PRACTICES AND IN CONFORMANCE WITH APPLICABLE MANUFACTURERS' RECOMMENDATIONS.
24. CONTRACTOR SHALL REMOVE ALL TRASH, DEBRIS AND DEMOLITION MATERIAL FROM PREMISES AT THE END OF EACH DAY.
25. RESTORE ALL SURFACES (WALLS, CEILING, FLOORS AND ROOFS) THAT ARE DAMAGED BY THE WORK OF THIS CONTRACT TO THEIR ORIGINAL CONDITION AT NO EXTRA COST TO THE OWNER.
26. PRIOR TO EQUIPMENT STARTUP, CONTRACTOR SHALL PERFORM THE SPECIFIED STARTUP AND COMMISSIONING PROCEDURES.
27. IN THE ABSENCE OF OTHER SPECIFIC INSTRUCTIONS, ALL WORK AND MATERIALS SUPPLIED SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THEIR ACCEPTANCE BY THE OWNER.
28. BALA CONSULTING ENGINEERS, INC. (BALA) WILL PROVIDE CONTRACTOR WITH ELECTRONIC CAD FILES OF THE ENGINEERING DESIGNS FOR THE SOLE USE IN EXPEDITING SHOP DRAWINGS. BALA'S FILES SHALL NOT BE DIRECTLY COPIED AND ISSUED AS SHOP DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS. SHOULD THE SHOP DRAWINGS SUBMITTED PROVE TO BE A DIRECT COPY OF OUR FILES WITHOUT THE NECESSARY FIELD COORDINATION, DIMENSIONING AND ADHERENCE TO THE SHOP DRAWING REQUIREMENTS AS NOTED IN THE SPECIFICATIONS, THESE SHOP DRAWINGS WILL BE RETURNED AS REJECTED. BALA'S ELECTRONIC FILES ARE SAVED IN VERSIONS (REVIT, AUTOCAD) (2018, 2017, 2016) AND ARE COMPATIBLE WITH ALL VERSIONS AFTER THAT. BALA MAKES NO REPRESENTATION AS TO THE COMPATIBILITY OF THESE FILES WITH THE CONTRACTOR'S HARDWARE OR THEIR SOFTWARE. DATA CONTAINED ON THESE ELECTRONIC FILES ARE PART OF BALA'S INSTRUMENTS OF SERVICE AND ARE COPYRIGHTED. CONTRACTORS USE OF FILES IS FOR THE SOLE PURPOSE AS A CONVENIENCE IN THE PREPARATION OF DRAWINGS FOR THE REFERENCED PROJECT. ANY OTHER USE OR REUSE BY CONTRACTOR IS UNLAWFUL.

ELECTRICAL GENERAL NOTES

- 1. ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL CONFORM WITH THE CURRENTLY ADOPTED NATIONAL ELECTRICAL CODE, WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK.
2. EC SHALL PROVIDE FIRE STOPPING, WHERE EQUIPMENT AND CONDUITS PENETRATE FIRE AND SMOKE BARRIERS INCLUDING WALLS, PARTITIONS, FLOORS, AND CEILING. INSTALL FIRE STOPPING AT PENETRATIONS AFTER CABLES ARE INSTALLED.
3. WHERE CONDUITS ARE REMOVED FROM EXISTING WALLS, THE ELECTRICAL CONTRACTOR SHALL PATCH WALL AND/OR INSTALL PROPER UL FIRE STOPPING PER RATING OF THE EXISTING WALL. THE ELECTRICAL CONTRACTOR SHALL CONFORM THE LOCATIONS OF ALL UTILITIES. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING UTILITIES AND TO THE BUILDING, EXISTING EQUIPMENT, BUILDING AREA OR SURFACE DAMAGED SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR REPLACED.
4. UNLESS OTHERWISE NOTED ALL INDOOR ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH, AND HOUSED IN, A NEMA 1 ENCLOSURE.
5. UNLESS OTHERWISE NOTED ALL SINGLE PHASE BRANCH CIRCUIT WIRING SHALL BE A MINIMUM 2012-1812G, 34C FOR 20 AMP CIRCUITS FOR RUNS UP TO 100 FEET AT 120V AND 200 FEET AT 277V. FOR CIRCUIT RUNS EXCEEDING 100 FEET AT 120V AND 200 FEET AT 277V, BRANCH WIRING SHALL BE MINIMUM 2015-1815G, 34C. ALL THREE PHASE BRANCH CIRCUIT WIRING SHALL BE A MINIMUM 2012-1812G, 34C. FOR 20 AMP CIRCUITS FOR RUNS UP TO 200 FEET AT 480V, AND 3010-1810G, 34C. FOR RUNS OVER 200 FEET.
6. THE ELECTRICAL CONTRACTOR SHALL PROVIDE BACK BONES AND CONDUITS WITH PULL STRINGS TO 6" ABOVE CEILING FOR TELECOMMUNICATION, DATA, AUDIO/VIDEO (AV) AND SECURITY DEVICES. COORDINATE WITH RESPECTIVE TRADES FOR LOCATIONS AND CONDUIT REQUIREMENTS.
7. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL MOUNTING HEIGHTS, LOCATIONS AND ARCHITECTURAL/SPATIAL REQUIREMENTS PER THE ARCHITECTURAL DRAWINGS AND RELATED SPECIFICATIONS.
8. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL MOUNTING HEIGHTS, LOCATIONS AND ARCHITECTURAL/SPATIAL REQUIREMENTS PER THE ARCHITECTURAL DRAWINGS AND RELATED SPECIFICATIONS.
9. AFTER HOURS SHUTDOWN WORK SHALL BE AT SUCH TIME AND IN SUCH MANNER AS DIRECTED BY THE OWNER. PROVIDE A MINIMUM ONE (1) WEEK NOTICE, WHERE SHUTDOWN PERIODS CANNOT BE OF DURATION TO ACCOMMODATE THE NEW WORK. THE ELECTRICAL CONTRACTOR SHALL PERFORM THE WORK IN A SERIES OF PRE-PLANNED STAGES OF MINIMAL ALLOWABLE SHUTDOWN PERIODS. PROVIDE TEMPORARY FACILITIES TO ALLOW RE-ENERGIZING OF SERVICE BETWEEN WORKING STAGES.
10. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY POWER, LIGHTING, AND FIRE DETECTION FOR ALL WORK AREAS AND TRADES (AS REQUIRED FOR CONSTRUCTION OR AS REQUIRED TO MAINTAIN NORMAL OPERATIONS OF THE SITE AND/OR BUILDING'S ACTIVITIES). THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MAKING ALL ARRANGEMENTS WITH THE UTILITY CO. WHERE ADEQUATE, EXISTING SERVICES MAY BE USED.
11. EXISTING ELECTRICAL EQUIPMENT THAT INTERFERES WITH NEW ARRANGEMENT SHALL BE REMOVED, REINSTALLED, RELOCATED, REROUTED, EXTENDED OR ABANDONED AS REQUIRED, TO SUIT THE NEW ARRANGEMENT. EXISTING ELECTRICAL EQUIPMENT THAT INTERFERES WITH NEW ARRANGEMENT SHALL BE REMOVED, REINSTALLED, RELOCATED, REROUTED, EXTENDED OR ABANDONED AS REQUIRED, TO SUIT THE NEW ARRANGEMENT.
12. DIVISION 26, OR EC SHALL BE USED INTERCHANGEABLY AND SHALL INDICATE WORK INCLUDED UNDER THE ELECTRICAL CONTRACTORS SCOPE.

ELECTRICAL DEMOLITION NOTES

- 1. UNLESS OTHERWISE NOTED ALL ELECTRICAL EQUIPMENT IN THE AREAS TO BE DEMOLISHED SHALL BE DEMOLISHED TO CLEAR FOR NEW CONSTRUCTION. ELECTRICAL EQUIPMENT SHALL INCLUDE BUT NOT LIMITED TO: DEVICES, CONDUIT, WIRE, DISCONNECTS, PANEL, BOARDS, SUPPORT RACKS, ALL OPEN AREA LIGHTING, FIRE ALARM DEVICES, SECURITY, AND ALL APPURTENANCES TO THE ABOVE.
2. THE ELECTRICAL CONTRACTOR (E.C.) SHALL REVIEW THE DEMOLITION PLANS OF ALL TRADES FOR ADDITIONAL ELECTRICAL EQUIPMENT TO BE REMOVED THAT IS NOT SHOWN IN THIS DRAWING. THE E.C. SHALL DISCONNECT AND REMOVE ALL ELECTRICAL APPURTENANCES ASSOCIATED WITH THIS EQUIPMENT: ELECTRIC WATER HEATER, HEAT PUMPS AND CABINET HEATER. SEE MECHANICAL AND PLUMBING DEMOLITION DRAWINGS.
3. THE E.C. SHALL TRACE AND FIELD VERIFY ALL CONDUIT AND WIRING RUNS IN THE AREA DESIGNATED TO BE DEMOLISHED AND DETERMINE WHICH CIRCUITS EFFECT AREAS OUTSIDE THE DEMOLITION ZONE. WHERE CIRCUITS INCLUDING BUT NOT LIMITED TO FIRE ALARM, SECURITY, POWER, LIGHTING, ETC. ARE DETERMINED TO BE USED IN OTHER AREAS OF THE BASE BUILDING, THE E.C. SHALL REMOVE THE CONDUIT AND CABLE IN THE DEMOLITION ZONE AND REROUT A NEW RUN OF CONDUIT AND CABLE TO RE-ESTABLISH THE EXISTING CIRCUIT INTEGRITY, INCLUDING FIRE ALARM LOOPS. NEW CONDUIT AND CABLE RUNS SHALL BE RUN THROUGH THE EXISTING BUILDING, OUTSIDE THE ENVELOPE OF DEMOLITION AREA, WHERE EXISTING CIRCUITS TO REMAIN ARE FED BY A PANEL BEING DEMOLISHED. PROVIDE NEW CONDUIT AND CABLE FROM DEVICES TO NEAREST PANEL, OUTSIDE DEMOLITION AREA TO SPARE CIRCUIT BREAKER AND/OR NEW RELOCATED PANEL POSITION.
4. WHERE CONDUIT AND CABLES FEED DEVICES DESIGNATED TO BE REMOVED, AND SERVED BY EXISTING TO REMAIN SWITCHBOARD, PANEL BOARDS, AND MICCS, THE E.C. SHALL REMOVE ALL CONDUIT AND CABLE BACK TO THE EXISTING DESIGNATED SWITCHBOARD/PANEL/BOARDS AND DISCONNECT FROM THE CIRCUIT BREAKER. THE ENCLOSURES SCHEDULES SHALL BE RECONFIGURED INDICATING THE CIRCUIT BREAKERS AS "SPARE".
5. WHERE CONDUIT AND WIRE IS TO BE DEMOLISHED WHICH RUNS BELOW SLAB, THE E.C. SHALL CUT CONDUIT FLUSH TO FLOOR AND PATCH THE FLOOR.
6. BEFORE REMOVING ELECTRICAL EQUIPMENT, CONDUIT, OR CABLING WHICH MAY AFFECT OTHER AREAS OF THE BUILDING, THE E.C. SHALL COORDINATE THE OVER AND TRANSITION PERIODS WITH THE OWNER.
7. THE E.C. SHALL DISCONNECT AND REMOVE ALL JUNCTION BOXES, DISCONNECTS, CONDUIT, AND CABLE FOR REMOVED MECHANICAL EQUIPMENT BACK TO SOURCE PANEL. SEE MECHANICAL DEMOLITION PLANS FOR EXACT LOCATION AND QUANTITY OF EQUIPMENT TO BE REMOVED.
8. THE DEMOLITION WORK TO BE DONE UNDER THIS PROJECT INCLUDES REMOVING EQUIPMENT, MATERIALS AND PROVIDING LABOR AND SERVICES AND PERFORMING ALL OPERATIONS FOR DEMOLITION IN AREAS INDICATED ON DRAWINGS.
9. THE E.C. SHALL PROVIDE ALL SCAFFOLDING, LADDERS, RIGGING, HOISTING, ETC. FOR THIS WORK. KEEP PREMISES FREE FROM RUBBISH AND REMOVE ALL ELECTRICAL RUBBISH FROM SITE.
10. THE E.C. SHALL SUPPORT ALL EXISTING SMOKE DETECTORS SERVING BOTH AREAS IN AND OUT OF CONTRACT AREA TO MAINTAIN COVERAGE IN THE SPACE.
11. ANY FUNCTIONING EQUIPMENT TO BE REMOVED BY DEMOLITION SHALL BE REVIEWED WITH OWNER TO DETERMINE IF IT SHOULD BE SAVED AND STORED. OWNER SHALL BE RESPONSIBLE FOR HANDLING OF EQUIPMENT TO OFF-SITE STORAGE LOCATION.

REVISION LEGEND

Table with 4 columns: NEW ISSUE, REVISED ISSUE, REVISED, NOT ISSUED, REMOVED FROM DRAWING SET, ISSUED, NOT REVIEWED

DRAWING LIST - ELECTRICAL

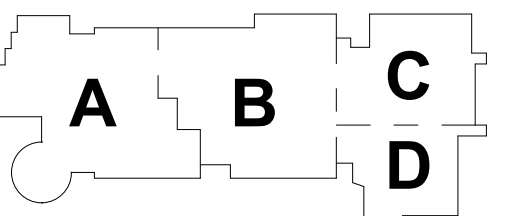
Table with 2 columns: DRAWING NUMBER, DRAWING TITLE. Lists drawings from E0-01 to E4-05 including titles like ELECTRICAL TITLE SHEET, ELECTRICAL LEGENDS, ELECTRICAL SITE PLAN, etc.

DRUMSEY ROSANE ANDERSON, INC.

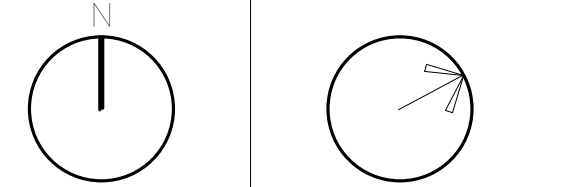
BALA ENGINEERS

MSBA SCHEMATIC DESIGN SUBMITTAL

JUNE 17, 2021



PROJECT NORTH, MAGNETIC NORTH



ELECTRICAL TITLE SHEET (NOTES & DWG LIST)

Scale: 1/2" = 1'-0"
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021
E0-0-1

NORTHEAST METRO TECH

100 Hemlock Rd,
 Wakefield, MA 01880

ABBREVIATIONS

(B) EXISTING TO BE BLANKED
 (E) EXISTING DEVICE OR EQUIPMENT
 (ED) EXISTING TO BE REMOVED
 (ER) EXISTING TO BE RELOCATED
 (F) FUTURE DEVICE OR EQUIPMENT
 (N) NEW DEVICE OR EQUIPMENT
 (NL) OUTLET BLANKED WITH PLATE ONLY
 (RL) EXISTING SHOWN RELOCATED

A AMP, AMPERE
 AC AIR CONDITIONING
 AF AF AMP FRAME / AMP TRIP
 AFF ABOVE FINISHED FLOOR
 AH AUTHORITY HAVING JURISDICTION
 AIS INTERRUPTING CURRENT
 AL ALUMINUM
 ARF ABOVE BASED FLOOR
 ASI AMP SWITCH / AMP FUSE
 AFU AUTOMATIC TRANSFER SWITCH

AV AUDIO VISUAL
 AVG AMERICAN WIRE GAUGE
 BLDG BUILDING
 C CONDUIT
 CAB CABINET
 CB CIRCUIT BREAKER
 CMT CIRCUIT
 CL CENTER LINE
 CLF CURRENT LIMITING FUSE
 CLD CEILING
 CONTR CONTRACTOR
 CONV CONVENIENCE
 CT CURRENT TRANSFORMER
 CU COPPER
 D.O. DRAW/OUT
 DC DOOR CONTACT
 DISC DISCONNECT
 DST DISTRIBUTION
 DW DISHWASHER
 DWG DRAWING
 EC ELECTRICAL CONTRACTOR
 EF EXHAUST FAN
 ELEC ELECTRICAL
 EM EMERGENCY
 EMLR EMERGENCY NIGHT LIGHT
 ENCL ENCLOSURE
 EPO EMERGENCY POWER OFF

EQ EQUIPMENT
 EWC ELECTRIC WATER COOLER
 EWH ELECTRIC WATER HEATER
 FA FIRE ALARM
 FR FEEDER
 FRT FUTURE
 FL FLOOR
 FP FIRE PROTECTION
 G CH GROUND
 GEN GENERATOR
 GF GROUND FAULT
 GFI GROUND FAULT INTERRUPTOR
 HOA HAND OFF AUTOMATIC SWITCH
 HP HORSE POWER
 HVAC HEATING VENTILATION AND AIR CONDITIONING
 HWH HOT WATER HEATER
 IE ISOLATED EARTH
 IG ISOLATED GROUND
 IAC KVA AMPERE INTERRUPTING CURRENT
 KMSL THOUSAND CIRCULAR MILS
 KVA KILOVOLTS
 KW KILOWATTS
 LCH LIGHTING CONTROLLER
 LNP LIGHTING CONTROL OR RELAY PANEL
 LSG LONG, SHORT, INSTANTANEOUS AND GROUND FAULT TRIP FUNCTION
 LTG LIGHTING
 MAX MAXIMUM
 MB MOTORIZED BACKBOARD
 MC METAL CLAD
 MCB MAIN CIRCUIT BREAKER
 MCC MOTOR CONTROL CENTER
 MFG MANUFACTURER
 MH MOUNTING HEIGHT
 MI MINERAL INSULATED
 MLO MAIN LUGS ONLY
 MOD MOTORIZED OVERHEAD DOOR
 MP MOTORIZED PARTITION
 MPS MOTORIZED PROJECTION SCREEN
 MS MOTORIZED SHADES
 MTD MOUNTED
 MW MICROWAVE
 N NEUTRAL
 NC NORMALLY CLOSED
 NC NOT IN CONTACT
 NL NIGHT LIGHT
 NO NORMALLY OPEN
 N# NUMBER
 NTS NOT TO SCALE
 OFE OWNER FURNISHED EQUIPMENT
 P POLES
 PB PULL BOX
 PC PLUMBING CONTRACTOR
 PH PHASE
 PNL PANEL
 PFE PRE-FURNISHED EQUIPMENT
 PR PRIMARY
 PRT PRINTER
 PT POTENTIAL TRANSFORMER
 PVC POLYVINYL CHLORIDE
 PWR POWER
 QUAD QUADRUPLUX RECEPTACLE
 REC RECESSED RECEPTACLE
 REF REFRIGERATOR
 RF RETURN FAN
 RSG RIGID GALVANIZED STEEL
 RM ROOM
 SB SCORE BOARD
 SEC SECONDARY
 SF SUPPLY FAN
 SRSU SLENDRO KEY RELEASE UNIT
 SPD SURGE PROTECTION DEVICE
 SSCAF SHORT CIRCUIT COORDINATION ARC FLASH
 ST SLUOT TRIP
 SW SWITCH
 SWBD SWITCH-BOARD
 SWGR SWITCHGEAR
 TC (TELECOM) TELECOMMUNICATIONS
 TOR TIME DELAY RELAY
 TEL TELEPHONE
 TF TRANSFER FAN
 TP TAMPER PROOF
 TPC TWISTED PAIR SHIELDED
 TYP TYPICAL
 UC UNDERCOUNTER
 UCR UNDER COUNTER REFRIGERATOR
 UF UNDER FLOOR
 UH UNIT HEATER
 UN# UNLESS OTHERWISE NOTED
 V VOLTS
 VA VOLT AMPS
 W WATTS
 WP WEATHER PROOF
 XFM TRANSFORMER

POWER DISTRIBUTION

MOTOR
 \$MS MANUAL MOTOR SWITCH WITH THERMAL OVERLOAD
 30A NON FUSED DISCONNECT SWITCH (AMPERE RATING SHOWN)
 30A FUSED DISCONNECT SWITCH (AMPERE RATING SHOWN)
 30A ENCLOSED CIRCUIT BREAKER (AMPERE RATING SHOWN)
 MAGNETIC MOTOR STARTER
 COMBINATION MAGNETIC MOTOR STARTER DISCONNECT
 VARIABLE FREQUENCY DRIVE (COORDINATE WITH MECHANICAL SCHEDULES)
 (REFER TO SPECIFICATIONS FOR VFD AND STARTER REQUIREMENTS)
 JUNCTION BOX OR DIRECT CONNECTION POINT
 EMERGENCY POWER OFF STATION
 INDICATES CONDUIT UP
 INDICATES CONDUIT DOWN
 CONCEALED CONDUIT (WIRING IN OR UNDER FLOOR SLAB OR RAISED FLOOR)
 FLEXIBLE METAL CONDUIT OR CABLE
 HOMERUN TO PANEL "LH", CIRCUITS 1 AND 3
 SURFACE MOUNTED 208 / 120V PANEL BOARD
 SURFACE MOUNTED 480 / 277V PANEL BOARD
 FLUSH MOUNTED 208 / 120V PANEL BOARD
 FLUSH MOUNTED 480 / 277V PANEL BOARD
 POWERED MECHANICAL EQUIPMENT TAG FOR ELECTRICAL CONNECTION, SEE POWERED MECHANICAL EQUIPMENT SCHEDULE AND DISTRIBUTION SCHEDULES.
 TRANSFORMER

ELECTRICAL OUTLETS

CENTERLINE 18" AFF EXCEPT AS NOTED. REFER TO SPECIFICATIONS FOR MANUFACTURER AND CATALOG NUMBER. MINIMAL INDICATES BRANCH CIRCUIT DESIGNATION.

OUTLET DESIGNATION
 RECEPTACLE MOUNTED HIGHER THAN STANDARD 18" AFF
 RECEPTACLE PROTECTED WITH GROUND FAULT CIRCUIT BREAKER
 RECEPTACLE, ISOLATED GROUND
 RECEPTACLE WITH SURGE PROTECTION
 RECEPTACLE, TAMPER RESISTANT
 RECEPTACLE, EXPLOSION PROOF
 RECEPTACLE, RISE-ABLE MOUNTED
 RECEPTACLE, WEATHER RESISTANT TYPE IN WEATHER PROOF IN-USE ENCLOSURE
 RECEPTACLE, UNDER FLOOR
 CEILING MOUNTED RECEPTACLE
 FLUSH FLOOR BOX WITH DUPLEX RECEPTACLE
 STANDARD DUPLEX RECEPTACLE
 STANDARD QUADRUPLUX RECEPTACLE
 GFCI DUPLEX RECEPTACLE
 GFCI QUADRUPLUX RECEPTACLE
 DUPLEX RECEPTACLE WITH INTEGRAL USB
 DUPLEX RECEPTACLE - ONE OUTLET SWITCHED
 DUPLEX RECEPTACLE - ALL OUTLETS SWITCHED
 QUAD RECEPTACLE - ONE DUPLEX SWITCHED
 QUAD RECEPTACLE - ALL OUTLETS SWITCHED
 SIMPLEX SINGLE RECEPTACLE
 USB ONLY RECEPTACLE
 RECESSED CLOCK RECEPTACLE
 HEAVY DUTY NEMA STRAIGHT BLADE RECEPTACLE, SEE SCHEDULE FOR TYPES
 HEAVY DUTY NEMA TWIST LOCK RECEPTACLE, SEE SCHEDULE FOR TYPES
 AV FLAT PANEL DISPLAY WALL BOX WITH POWER, TELECOM AND/OR AV CONNECTIVITY
 FLUSH WALL MOUNTED JUNCTION BOX WITH CONDUIT OPENINGS FOR FURNITURE FEEDS (POWER, TELECOM AND AV)
 SINGLE POINT OUTLET: "D" DATA OUTLET, "T" TELEPHONE OUTLET, "F" FIRE FIGHTERS CALL STATION, "CATV" CABLE TV OUTLET, "AV" AV OUTLET
 CONDUIT BACKBOX REQUIREMENTS (UNLESS OTHERWISE NOTED)
 "1" 1" CONDUIT, 1-GANG BACKBOX
 "2" 1" CONDUIT, 1-GANG BACKBOX
 "3" 1 1/4" CONDUIT, 2-GANG BACKBOX WITH 1-GANG REDUCER
 "4" COORDINATE WITH AV CONTRACTOR REQUIREMENTS
 COMBINATION TELEPHONE/DATA OUTLET
 CONDUIT BACKBOX REQUIREMENTS (UNLESS OTHERWISE NOTED)
 "1" 1 1/4" CONDUIT, 2-GANG BACKBOX WITH 1-GANG REDUCER

OVERHEAD POWER CONNECTION RECEPTACLE AND EXTENSION ARM, HUBBELL HS-4120 (200V EXTENSION CORD REL. 41 FEET 1/2 GAUGE NEMA 5-20 RECEPTACLE OR APPROVED EQUAL.
 CEILING MOUNTED OR ABOVE CEILING MOUNTED MONITOR DISPLAY OR PROJECTOR BOX WITH POWER, TELECOM AND/OR AV CONNECTIVITY
 FLUSH FLOOR BOX ASSEMBLY WITH CONDUIT OPENINGS FOR FURNITURE FEEDS (POWER, TELECOM AND AV) COORDINATE COLOR WITH ARCHITECT.
 FLUSH FLOOR BOX WITH QUAD RECEPTACLE, PROVISIONS FOR TELCOM OUTLETS COORDINATE COLOR WITH ARCHITECT.
 FLUSH FLOOR BOX WITH QUAD RECEPTACLE, PROVISIONS FOR VOICE / DATA AND AV OUTLETS COORDINATE COLOR WITH ARCHITECT.
 CONDUIT STUBUPS INTO TABLE LEG FOR POWER, VOICE/DATA AND AV, DATA AND AV CONDUIT SHALL RUN IN CEILING SPACE OF FLOOR BELOW TO BEHIND WALL MOUNTED DISPLAY. POWER SHALL RUN TO NEAREST WALL AND EXTEND TO JUNCTION BOX OR PANELBOARD NOTED. PROVIDE 3/4" CONDUIT FOR POWER, 1-1/2" CONDUIT FOR VOICE/DATA AND 1-1/2" CONDUIT FOR AV. SIZE OF HOLE SHALL BE BASED ON FIREPROOF MANUFACTURERS INSTRUCTIONS AND ALL GUIDELINES. PROVIDE PROTECTIVE BURNING AT EACH END OF CONDUIT AND INTERIOR FIREPROOFING MATERIAL AT THE TOP OF CONDUITS ABOVE PENETRATION

4" FLUSH POKE THRU ASSEMBLY WITH CONDUIT OPENINGS FOR FURNITURE FEEDS (POWER, TELECOM AND AV) COORDINATE COLOR WITH ARCHITECT.
 4" FLUSH POKE THRU ASSEMBLY WITH SURFACE MOUNTED QUAD RECEPTACLE AND PROVISIONS FOR TELCOM CONNECTIVITY (COORDINATE COLOR WITH ARCHITECT)
 4" FLUSH POKE THRU ASSEMBLY WITH RECESSED RECEPTACLE AND PROVISIONS FOR TELCOM CONNECTIVITY (COORDINATE COLOR WITH ARCHITECT)
 6" LARGE CAPACITY FLUSH POKE THRU ASSEMBLY WITH CONDUIT OPENINGS FOR FURNITURE FEEDS (POWER, TELECOM AND AV) COORDINATE COLOR WITH ARCHITECT.
 8" LARGE CAPACITY FLUSH POKE THRU ASSEMBLY WITH QUAD RECEPTACLE AND PROVISIONS FOR TELCOM CONNECTIVITY (COORDINATE COLOR WITH ARCHITECT).
 8" LARGE CAPACITY FLUSH POKE THRU ASSEMBLY WITH QUAD RECEPTACLE AND PROVISIONS FOR VOICE / DATA AND AV CONNECTIVITY. (COORDINATE COLOR WITH ARCHITECT).

MULTI-OUTLET ASSEMBLIES

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND MANUFACTURER DETAILS. VERIFY MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS.

MULTI-OUTLET ASSEMBLY AS SPECIFIED ON ELECTRICAL PLAN DRAWINGS
 MULTI-OUTLET ASSEMBLY WITH 20A-125V SINGLE OUTLETS MOUNTED 6" ON CENTER ALTERNATELY WIRED. (EQUIVALENT TO WIREMOLD 2000 SERIES)
 MULTI-OUTLET ASSEMBLY WITH DUPLEX RECEPTACLES MOUNTED 3" ON CENTER (MINIMUM). (EQUIVALENT TO WIREMOLD 3000 SERIES)
 MULTI-OUTLET ASSEMBLY BARRIERED WITH DUPLEX RECEPTACLES MOUNTED 3'-0" ON CENTER (MINIMUM). (EQUIVALENT TO WIREMOLD 4000 SERIES)
 MULTI-OUTLET ASSEMBLY BARRIERED WITH DUPLEX RECEPTACLES MOUNTED 3'-0" ON CENTER (MINIMUM). (EQUIVALENT TO WIREMOLD 6000 SERIES)

LUMINAIRES

1X4 RECESSED TROFFER
 2X4 RECESSED TROFFER
 2X2 RECESSED TROFFER
 1X4 INDUSTRIAL STRIP LIGHT LUMINAIRE
 RECESSED OR PENDANT DOWN LIGHT
 RECESSED WALL WASH LUMINAIRE
 WALL MOUNTED LUMINAIRE
 PENDANT LUMINAIRE
 TRACK LIGHTING
 ELU REMOTE BATTERY BACK UP
 BATTERY BACK UP ELU
 REMOTE BATTERY BACK UP ELU
 WALL MOUNTED EXIT SIGN
 ARROW DESIGNATES DIRECTION
 CEILING MOUNTED EXIT SIGN
 ARROW DESIGNATES DIRECTION

SINGLE LINE DIAGRAM

GENERATOR
 TRANSFORMER
 2000KVA
 480/277V
 AF - INDICATES AMPERE FRAME
 AT - INDICATES AMP TRIP
 DRAW/OUT CIRCUIT BREAKER
 CIRCUIT BREAKER
 1P SINGLE POLE
 2P TWO POLE
 3P THREE POLE
 CIRCUIT BREAKER WITH SHUNT TRIP
 ENCLOSED CIRCUIT BREAKER
 TRANSFER SWITCH
 DISCONNECT DEVICE FOR DRAW/OUT EQUIPMENT
 NON-FUSED SWITCH
 FUSE
 FUSED SWITCH OR FUSED DISCONNECT
 LIGHTNING ARRESTOR
 CURRENT TRANSFORMER
 POTENTIAL TRANSFORMER
 POTENTIAL TRANSFORMER WITH FUSE
 DELTA CONNECTION
 GROUNDED WYE CONNECTION
 OVERLOAD RELAY
 CONTACTOR
 RELAY
 ELECTRICALLY OPERATED
 SOLENOID KEY OPERATED RELEASE UNIT
 POWER FACTOR CORRECTION CAPACITOR
 SURGE PROTECTION DEVICE
 INDICATING LAMP
 CONDUIT FEEDER IDENTIFICATION
 DIGITAL MULTI-PURPOSE METER
 AMMETER
 AMMETER SWITCH
 KIRK KEY INTERLOCK
 WATTHOUR METER
 STOP BUTTON MOMENTARY CONTACT
 START BUTTON MOMENTARY CONTACT
 GROUND CONNECTION
 BATTERY
 NORMALLY OPEN CONTACT
 NORMALLY CLOSED CONTACT

LIGHTING CONTROLS

REFER TO SPECIFICATIONS FOR MANUFACTURER AND CATALOG NUMBERS.

\$1 SINGLE POLE SWITCH, LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
 \$2a TWO POLE SWITCH, LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
 \$3a THREE WAY SWITCH, LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
 \$4a FOUR WAY SWITCH, LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
 \$0a WALL MTD. DIMMER SWITCH CONTROLLER, LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
 \$0s KEY OPERATED SWITCH
 \$0R WALL MTD. LIGHTING CONTROL SWITCH FOR LIGHTING CONTROL ZONE OVERRIDE.
 \$0S WALL MTD. OCCUPANCY SENSOR WITH PASSIVE INFRARED MOTION SENSOR, 1-POLE, 277/120V
 \$0S2 WALL MTD. OCCUPANCY SENSOR WITH PASSIVE INFRARED MOTION SENSOR, 2-POLE, 277/120V
 \$0S3 WALL MTD. OCCUPANCY SENSOR WITH PASSIVE INFRARED MOTION SENSOR, 1-POLE, 277/120V, 0-10 DIMMING
 \$0S4 PHOTO CONTROL SWITCH, WEATHER PROOF, 277/120V.
 \$PL WALL SWITCH WITH PILOT LIGHT.
 \$SS WALL MTD. LOW VOLTAGE LIGHTING CONTROL SWITCH FOR SCENE SELECTION. PROVIDE WITH FIVE (5) SCENE SELECTIONS AND RAISE / LOWER TIME SWITCH (WITH DIGITAL COUNTDOWN AND VISUAL WARNING), 277/120V
 \$VS WALL MTD. VACANCY SENSOR WITH PASSIVE INFRARED MOTION SENSOR, 1-POLE, 277/120V
 \$VS2 WALL MTD. VACANCY SENSOR WITH PASSIVE INFRARED MOTION SENSOR, 2-POLE, 277/120V
 \$VSD WALL MTD. VACANCY SENSOR WITH PASSIVE INFRARED MOTION SENSOR, 1-POLE, 277/120V, 0-10 DIMMING

LIGHTING CONTROL SEQUENCE OF OPERATION TYPE
 MULTI-ZONE PRESET SCENE CONTROLLER / DIMMER WITH USER PROGRAMMABLE ZONE AND SCENE NAMES, TEMPORARY LOCAL OVERRIDES, INDIVIDUAL RAISE / LOWER BUTTONS TO ALLOW ZONES TO BE ADJUSTED WITHOUT ALTERING SCENE VALUES STORED IN MEMORY
 LIGHTING CONTROL PANEL WITH PROGRAMMABLE SWITCHING AND DIMMING FOR LIGHTING CIRCUITS, INTEGRAL TIME CLOCK, SYSTEM INPUTS FOR REMOTE ACTUATION AND SCHEDULE OVERRIDES, CAPABLE OF CONTROLLING RECEPTACLE LOADS, OPTIONAL BAS INTEGRATION, CAN BE PART OF A DISTRIBUTED CONTROL STRATEGY
 CEILING MTD. DAYLIGHT SENSOR
 CEILING MTD. OCCUPANCY SENSOR (OS) VACANCY SENSOR (VS) (MANUAL ON) WITH PASSIVE INFRARED (PIR) MOTION SENSOR TO COVER RANGE OF 480 SQ. FT., 277 / 120V POWER PACK
 CEILING MTD. OCCUPANCY SENSOR (OS) VACANCY SENSOR (VS) (MANUAL ON) WITH PASSIVE INFRARED (PIR) MOTION SENSOR TO COVER RANGE OF 1000 SQ. FT., 277 / 120V POWER PACK
 CEILING MTD. OCCUPANCY SENSOR (OS) VACANCY SENSOR (VS) (MANUAL ON) WITH DUAL TECHNOLOGY INFRARED (PIR AND ULTRASONIC) MOTION SENSOR TO COVER 180 DEGREE RANGE (SHADOW OUTER CIRCLE NOTES COVERAGE DIRECTION), UP TO 400 SQ. FT. WITH INTEGRAL CONTRACT CLOSURE FOR INTEGRATION WITH HVAC OR SECURITY SYSTEM, 277 / 120V POWER PACK
 CEILING MTD. OCCUPANCY SENSOR (OS) VACANCY SENSOR (VS) (MANUAL ON) WITH DUAL TECHNOLOGY INFRARED (PIR AND ULTRASONIC) MOTION SENSOR TO COVER 180 DEGREE RANGE (SHADOW OUTER CIRCLE NOTES COVERAGE DIRECTION), UP TO 400 SQ. FT. WITH INTEGRAL CONTRACT CLOSURE FOR INTEGRATION WITH HVAC OR SECURITY SYSTEM, 277 / 120V POWER PACK
 CEILING MTD. OCCUPANCY SENSOR (OS) VACANCY SENSOR (VS) (MANUAL ON) WITH DUAL TECHNOLOGY INFRARED (PIR AND ULTRASONIC) MOTION SENSOR TO COVER 360 DEGREE RANGE (SHADOW OUTER CIRCLE NOTES COVERAGE DIRECTION), UP TO 200 SQ. FT. WITH INTEGRAL CONTRACT CLOSURE FOR INTEGRATION WITH HVAC OR SECURITY SYSTEM, 277 / 120V POWER PACK
 WALL MTD. OCCUPANCY SENSOR (OS) VACANCY SENSOR (VS) (MANUAL ON) WITH PASSIVE INFRARED (PIR) MOTION SENSOR TO COVER RANGE UP TO 1000 SQ. FT. WITH INFRARED CONTRACT CLOSURE FOR INTEGRATION WITH HVAC OR SECURITY SYSTEM, 277 / 120V POWER PACK

SECURITY/PAGING

CARD READER, SHALL BE FAIL SAFE OPEN IN EMERGENCY
 DRESS BUTTON
 DOOR CONTACT
 DOUBLE MAGNETIC LOCK
 DOOR RELEASE BUTTON (REMOTE)
 EXIT BUTTON
 ELECTRIC HANDESET
 ELECTRIC LOCKSET
 OVERHEAD DOOR CONTACT
 MOTION DETECTOR
 REQUEST TO EXIT
 SOUNDER (DOOR ALARM)
 SINGLE MAGNETIC LOCK
 SECURITY CAMERA
 SPEAKER
 SPEAKER VOLUME CONTROL

POWER AND LIGHTING CIRCUIT DESIGNATIONS

TRP5A2 TYPICAL CIRCUIT DESIGNATION ADJACENT TO DEVICE NOTING PANELBOARD ID AND CIRCUIT NO.
 TRP5A2 TYPICAL CIRCUIT DESIGNATION NOTING PANELBOARD ID AND CIRCUIT NUMBER FOR ALL DEVICES IN A ROOM OR SPACE
 TRP5A TYPICAL CIRCUIT DESIGNATION NOTING PANELBOARD ID AND CIRCUIT NUMBER FOR ALL DEVICES IN A ROOM OR SPACE. CIRCUIT NUMBER IS SHOWN ONLY WITH DEVICE

LIGHTING ID AND CIRCUIT DESIGNATIONS

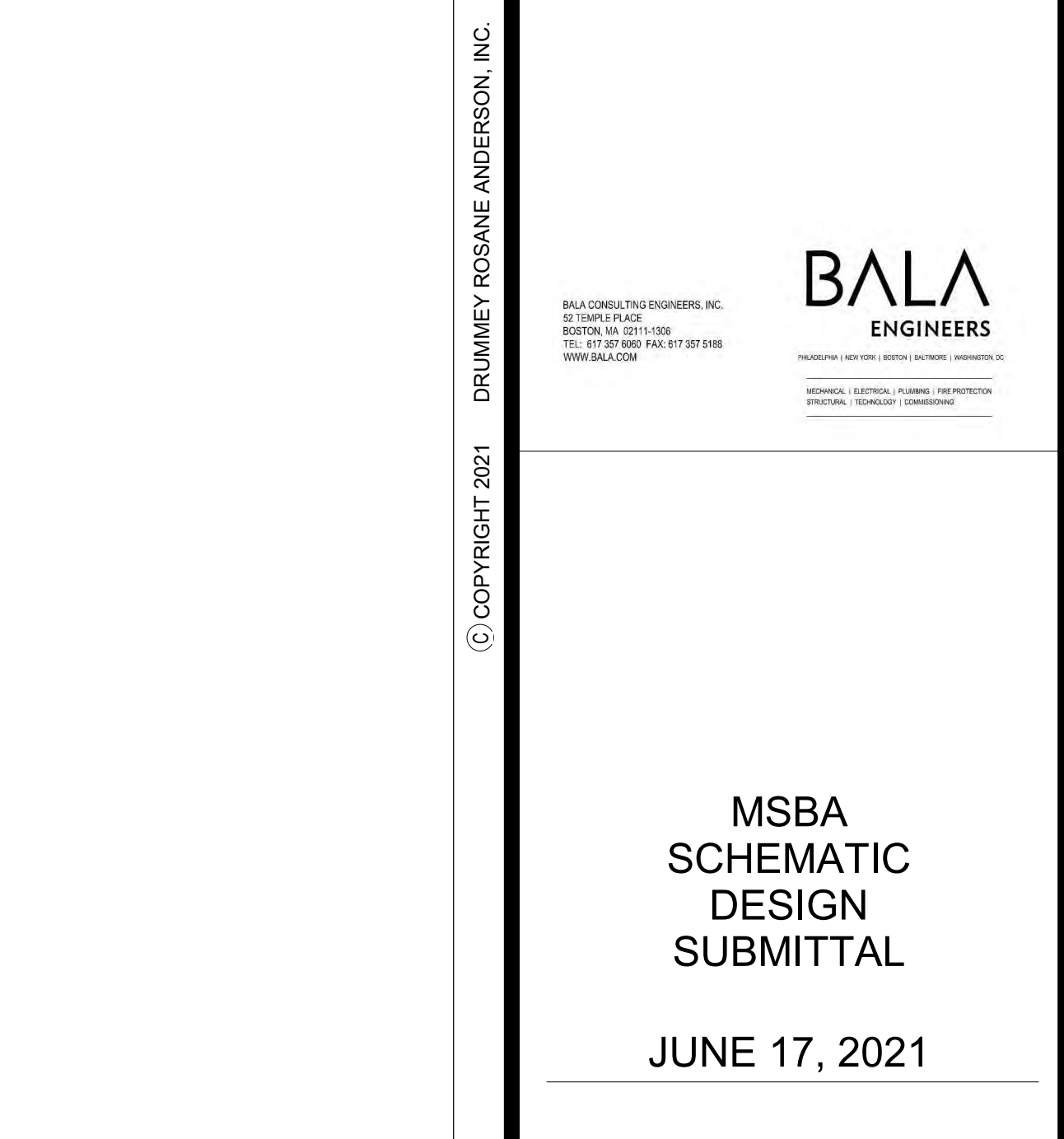
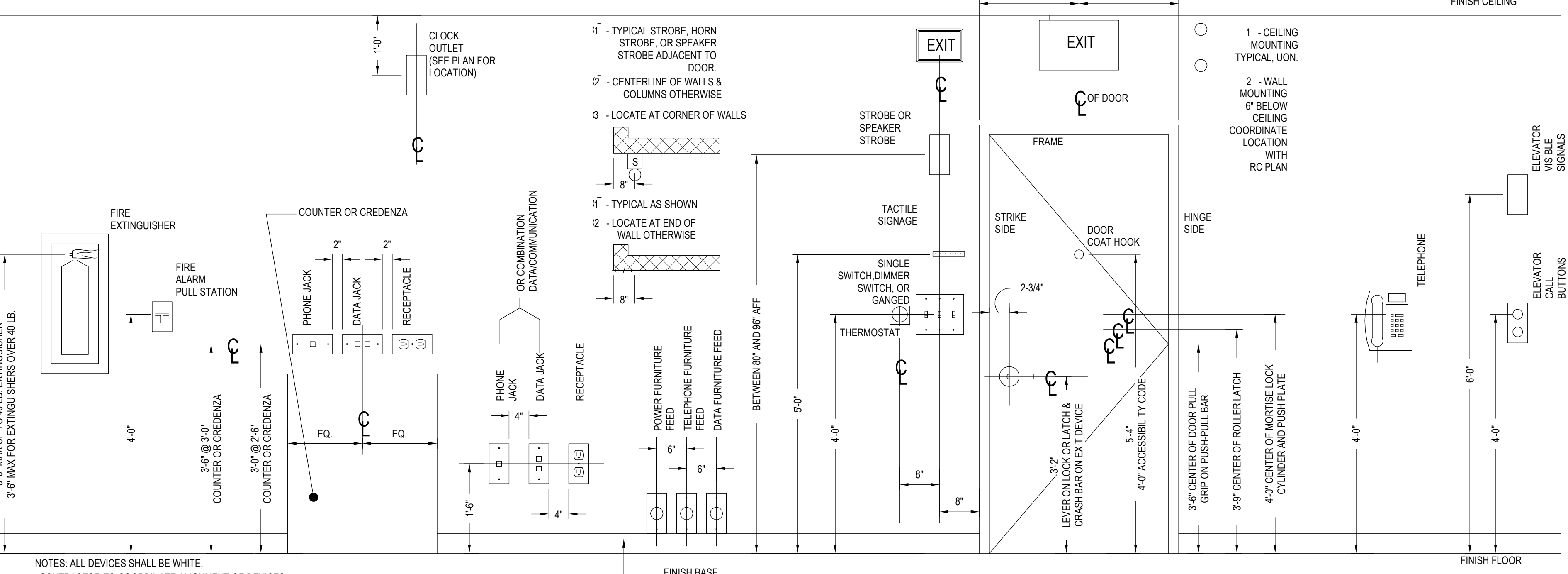
LR3 LUMINAIRE TYPE
 LR3.1 SWITCH CONTROL OR LIGHTING CONTROL ZONE
 LR3.2 BRANCH CIRCUIT DESIGNATION
 LR3.3 EMERGENCY FIXTURE DESIGNATION
 LR3 LUMINAIRE TYPE
 LR3.1 BRANCH CIRCUIT DESIGNATION
 LR3.2 SWITCH CONTROL OR LIGHTING CONTROL ZONE

MOUNTING HEIGHTS - ELECTRICAL EQUIPMENT

9' BELOW FINISH CEILING
 WALL MOUNTED BELLS AND FIRE ALARM SOUNDING DEVICE OR AS SHOWN ON ARCHITECTURAL DETAILS
 TV MONITOR OUTLET AND SERVICE RECEPTACLE FOR SHELF MOUNTED TV
 WARNING AND SIGNALING FIXTURES / SIGNS
 6'-8" FIRE ALARM STROBES OR COMBINATION DEVICES WITH STROBES SHALL BE MOUNTED SO THAT THE ENTIRE LENS IS NOT LESS THAN 8" AND NOT GREATER THAN 8" ABOVE FINISHED FLOOR. IF CEILING DOES NOT PERMIT A MOUNTING HEIGHT OF AT LEAST 8" ABOVE FINISHED FLOOR, THE LENS OF THE DEVICE SHALL BE 6" OFF THE FINISHED CEILING.
 6'-4" TOP OF FLUSH AND SURFACE MOUNTED ELECTRICAL LIGHTING OR POWER PANEL BOARDS AND TELEPHONE CABINETS
 6'-6" TOP OF BACK MOUNTED WALL EXIT FIXTURES (NOT MOUNTED ABOVE DOORS)
 6'-0" TOP OF HIGHEST ELECTRICAL SAFETY DISCONNECT SWITCHES/MAGNETIC STARTERS, COMBINATION STARTERS, VFD'S AND CONTACTORS
 4'-0" TOP OF WALL MOUNTED TELEPHONE AND PAY STATIONS, WALL MOUNTED INTERCOM, NURSE CALL STATIONS AND CLOCK CONTROL PANELS (IF AT ADA LOCATIONS)
 4'-0" WALL MOUNTED ELECTRICAL DEVICES SUCH AS LIGHTING SWITCHES, MANUAL MOTOR STARTERS, THERMOSTATS AND FIRE ALARM PULL STATIONS.
 GFI OUTLETS IN TOILET ROOMS.
 CONTRACT CLOSURE FOR INTEGRATION WITH HVAC OR SECURITY SYSTEM.
 INCLUDE ALL FLOOR EQUIPMENT IN LABS AND EQUIPMENT ROOMS.
 1'-6" ELECTRICAL RECEPTACLES INCLUDING THOSE USED WITHIN MECHANICAL SPACES AND ELEVATOR ROOMS
 CONTRACT CLOSURE FOR INTEGRATION WITH HVAC OR COMMUNICATION OUTLETS
 CATV AND AN JUNCTION BOXES

MOUNTING HEIGHT NOTES

1. MOUNTING HEIGHTS SHALL BE 18" TO CENTER OF OUTLETS UNLESS OTHERWISE NOTED. IF ELECTRICAL OUTLET HEIGHT OR ANGLE VARIES, COORDINATE WITH GC FOR INSTALLATION. IF IN MASONRY CONSTRUCTION, THE ABOVE HEIGHTS SHALL BE USED FOR REFERENCE TO NEAREST BLOCK OR BRICK COURSING.
 2. MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE ARCHITECTURAL DRAWING OR SPECIFICATIONS.
 3. A "*" BEHIND A DEVICE INDICATES THAT DEVICE IS MOUNTED ABOVE COUNTER OR CASEWORK. COORDINATE THE MOUNTING HEIGHT WITH ARCHITECTURAL DETAILS AND CASEWORK CONTRACTOR.
 4. ALL DEVICES SHOWN ON DRAWINGS ARE DIAGRAMMATIC IN LOCATION AND SHOWN FOR GENERAL WIRING PURPOSES ONLY. ALL DEVICES INDICATED TO BE INSTALLED IN THE SAME LOCATIONS WITH DIFFERENT ELEVATIONS SHALL BE ALSO NOTED VERTICALLY AND HORIZONTALLY. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS OF SWITCHES, OUTLETS, FIRE ALARM NOTIFICATION DEVICES, FIRE ALARM PULL STATIONS, CLOCKS, CARD READERS AND OTHER SECURITY DEVICES.
 5. COORDINATE ALL LOCATIONS AND MOUNTING HEIGHTS WITH AHJ, ADA REQUIREMENTS AND OTHER TRADES.



ELECTRICAL SITE UTILITIES NOTES

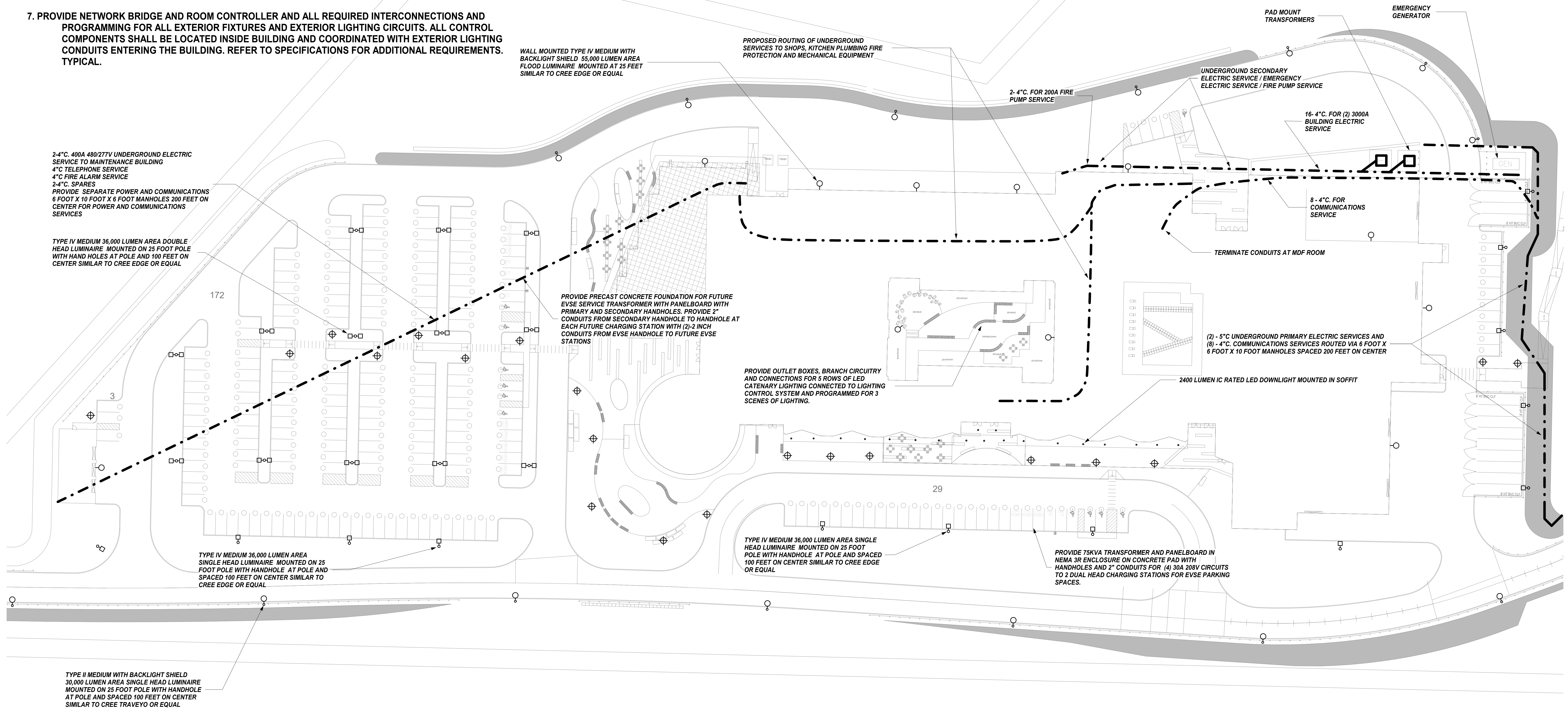
1. ALL SITE UTILITIES INSTALLED BY THE SITE CONTRACTOR SHALL BE COORDINATED WITH LANDSCAPE ARCHITECT AND SITE/CIVIL ENGINEERING DOCUMENTS PRIOR TO ALL WORK.
2. THE ELECTRICAL TRADE CONTRACTOR SHALL PROVIDE ALL CONDUITS, ELECTRICAL TRADE CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUITS WITH MANHOLE, HANDHOLE, DUCT BANK AND POLE BASE PLACEMENT BY SITE CONTRACTOR. COORDINATE ALL ELECTRICAL UTILITIES WITH THE SITE CONTRACTOR TO ENSURE EACH PIECE OF ELECTRICAL INFRASTRUCTURE, DUCT BANKS AND CONDUIT ARE CONNECTED TO EXISTING UTILITY MANHOLES, UTILITY RISER POLE AND UTILITY PROVIDED CONDUITS, FOR A COMPLETE SYSTEM.
3. WMGL WILL PROVIDE THE FOLLOWING SCOPE: 2500KVA PAD MOUNT TRANSFORMER, 2EA 15KV PULL BOXES, ALL PRIMARY CABLING FROM EXISTING WMGL POLE TO PADMOUNT TRANSFORMER, ALL SWITCH AND TRANSFORMER 15KV LOADBREAK ELBOWS, AND FINAL CONNECTIONS OF ALL 480V SECONDARY CABLES AT PADMOUNT TRANSFORMER.
4. SITE CONTRACTOR SHALL PROVIDE THE FOLLOWING: PRIMARY 15KV DUCT BANK FROM EXISTING WMGL POLE TO WMGL UTILITY TRANSFORMER (COORDINATE WITH WMGL PRIOR TO ALL WORK), CONDUIT BY ELECTRICAL TRADE CONTRACTOR, PRIMARY CONDUCTORS BY UTILITY, GENERATOR AND PAD, SECONDARY 480V DUCT BANK FROM PAD MOUNT TRANSFORMER TO SECONDARY 480V SERVICE ENTRANCE MAIN DISCONNECT - CONDUIT AND CONDUCTORS BY ELECTRICAL TRADE CONTRACTOR, GENERATOR 480V DUCT BANK FROM GENERATOR PAD TO EMERGENCY ELECTRIC CLOSET - CONDUIT AND CONDUCTORS BY ELECTRICAL TRADE CONTRACTOR, AND TELCOM DUCT BANKS (AXIA/MBI, VERIZON & TIME WARNER) FROM DESIGNATED DEMARICATIONS TO MAIN MDF ROOM - CONDUIT BY ELECTRICAL TRADE CONTRACTOR, TELCOM SERVICE CONDUCTORS BY UTILITY. ELECTRICAL TRADE CONTRACTOR SHALL PROVIDE LOW VOLTAGE CONDUIT AND CONDUCTORS FROM FIRE ALARM CONTROL PANEL TO MDF POTS LINE, DEMARICATION FOR ALL TELCOM UTILITIES SHALL BE INSIDE THE MDF ROOM, ALL SITE LIGHTING UG CONDUITS TO ALL POLE MOUNTED FIXTURES - COORDINATE CONDUIT INTERCONNECTION REQUIREMENTS AT EACH POLE BASE PER DETAILS AND ALL SITE LIGHTING CONDUITS TO HARDSCAPE (STAIRS, WALL, ETC) MOUNTED FIXTURE
5. ELECTRICAL TRADE CONTRACTOR SHALL PROVIDE THE FOLLOWING: ALL TELCOM UTILITY CABLING (FIBER OPTIC DATA, FIBER OPTIC TELEPHONE, CATV) WITH ALL WORK TO BE COORDINATED WITH EACH TELCOM UTILITY CO. ALL SECONDARY 480V CABLING FROM PAD MOUNT TRANSFORMER TO SECONDARY 480V SERVICE ENTRANCE MAIN DISCONNECT (USE COPPER 500KCMIL OR LESS FOR ALL SERVICE ENTRANCE CONDUCTORS), ALL 480V SERVICE ENTRANCE CONNECTIONS, CABLE TAGGING, GROUNDING SYSTEM AT THE WMGL EQUIPMENT PAD (PER WMGL STANDARDS AND DETAILS SHOWN ON DRAWINGS), GROUNDING ELECTRODE SYSTEM FOR THE BUILDING (PER CODE AND PER DETAILS SHOWN ON DRAWINGS), ALL COPPER POWER CONDUCTORS FROM THE STANDBY/EMERGENCY GENERATOR TO ATS SWITCHES, COPPER POWER CONDUCTORS FROM THE BUILDING TO THE GENERATOR FOR GENSET LOADCENTER, COPPER CONTROL CONDUCTORS FROM GENERATOR TO RESPECTIVE ELECTRIC ROOMS IN BUILDING FOR ATS START CIRCUITS AND REMOTE ANNUNCIATOR (COORDINATE ALL CONDUCTOR QUANTITIES, TYPE AND SIZE WITH GENSET MANUFACTURER), ALL 480V GENSET CABLE TAGGING, GROUNDING SYSTEM AT THE GENERATOR (PER GENSET MFR AND DETAILS SHOWN ON DRAWINGS), GROUNDING ELECTRODE SYSTEM FOR THE GENSET (PER CODE AND PER DETAILS SHOWN ON DRAWINGS), ALL COPPER CONDUCTORS FOR SITE LIGHTING.
6. COORDINATE CONDUIT ROUTE AND REQUIREMENTS FOR SITE LIGHTING BRANCH CIRCUIT TO SITE LIGHTS.
7. PROVIDE NETWORK BRIDGE AND ROOM CONTROLLER AND ALL REQUIRED INTERCONNECTIONS AND PROGRAMMING FOR ALL EXTERIOR FIXTURES AND EXTERIOR LIGHTING CIRCUITS. ALL CONTROL COMPONENTS SHALL BE LOCATED INSIDE BUILDING AND COORDINATED WITH EXTERIOR LIGHTING CONDUITS ENTERING THE BUILDING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. TYPICAL.

ELECTRICAL SITE UTILITY PHASING NOTES

1. VERIZON 300 PAIR COPPER AND FIBER OPTIC PHONE SERVICES: PRIOR TO BUILDING CONSTRUCTION, PROVIDE FIBER OPTIC CABLING AND 300 PAIR COPPER CABLE BYPASS OF EXISTING SERVICES N DUCTBANK AS SHOWN. INTERCEPT, EXTEND AND RECONNECT FIBER OPTIC AND COPPER PHONE CABLING IN A 36" X 36" POLYMER CONCRETE HANDHOLE. PROVIDE ALL SPLICING AND INTERCONNECTIONS TO EXISTING VERIZON HANDHOLE TO MAINTAIN EXISTING SERVICES TO EXISTING WAHCONAH HIGH SCHOOL DURING CONSTRUCTION. COORDINATE ALL WORK WITH TOWN OF DALTON TECHNOLOGY GROUP PRIOR TO ALL WORK. PERMANENT VERIZON PHONE SERVICES TO THE NEW SCHOOL SHALL EMANATE FROM 36" X 36" POLYMER CONCRETE HANDHOLE. COORDINATE HANDHOLE TYPE AND SIZE WITH VERIZON PRIOR TO ALL WORK.
2. FIBER OPTIC DATA SERVICES: MAINTAIN EXISTING SERVICES TO THE EXISTING SCHOOL. PROVIDE PROTECTION OF CONDUITS ALONG DRIVEWAY DURING CONSTRUCTION. PERMANENT MBI/AXIA FIBER OPTIC DATA SERVICE SHALL EMANATE FROM EXISTING UTILITY POLE ON OLD WINDSON ROAD. PROVIDE POLE RISER, CONNECTIONS TO AXIA UTILITY BACKBONE CABLING, EXTEND FIBER OPTIC CABLING TO NEW SCHOOL VIA DUCTBANK AND 36" X 36" POLYMER CONCRETE HANDHOLE.
3. CABLE TV FIBER OPTIC AND CATV CABLE SERVICES: MAINTAIN EXISTING FIBER OPTIC AND CATV CABLE SERVICES TO THE EXISTING SCHOOL DURING CONSTRUCTION. PROVIDE TEMPORARY SERVICES BY INTERCEPT, EXTEND AND RECONNECTING FIBER OPTIC AND CATV CABLE FROM EXISTING GRADE LEVEL PEDESTAL ADJACENT TO PLAYING FIELDS TO EXISTING BUILDING VIA OVERHEAD CONSTRUCTION THAT IS ROUTED OUTSIDE THE LINE OF WORK PLANNED FOR THE NEW BUILDING. COORDINATE ROUTING, POLE PLACEMENT, CABLING AND TEMPORARY CONNECTIONS AT THE BUILDING WITH CATV CO. PRIOR TO ALL WORK. PERMANENT CATV CO. FIBER OPTIC AND CATV CABLE SERVICES SHALL EMANATE FROM EXISTING UTILITY POLE ON HEMLOCK ROAD. PROVIDE OVERHEAD CONSTRUCTION ON UTILITY POLES ALONG HEMLOCK ROAD. AS INDICATED ON SITE PLAN, PROVIDE POLE RISER, CONNECTIONS TO CATV CO. CABLING, EXTEND FIBER OPTIC AND CATV CABLING TO NEW SCHOOL VIA DUCTBANK AND 36" X 36" POLYMER CONCRETE HANDHOLE.
4. ALL TELECOMMUNICATION SERVICES SERVING EXISTING HIGH SCHOOL SHALL REMAIN FULLY OPERATIONAL DURING CONSTRUCTION WITHOUT UNPLANNED OUTAGES OR INTERRUPTION TO SERVICE.
5. ALL TEMPORARY SERVICES FOR TELECOMMUNICATIONS SERVICES SHALL MEET EACH INDIVIDUAL UTILITY'S STANDARDS FOR CONSTRUCTION AND APPROVED MATERIALS AND WORKMANSHIP.
6. ELECTRICAL TRADE CONTRACTOR SHALL REMOVE ALL SERVICES SERVING THE EXISTING HIGH SCHOOL UPON CUTOVER TO NEW SCHOOL, PER DIRECTION OF ARCHITECT AND TOWN. COORDINATE ALL DEMOLITION PRIOR TO ALL WORK. REFER TO DEMOLITION SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

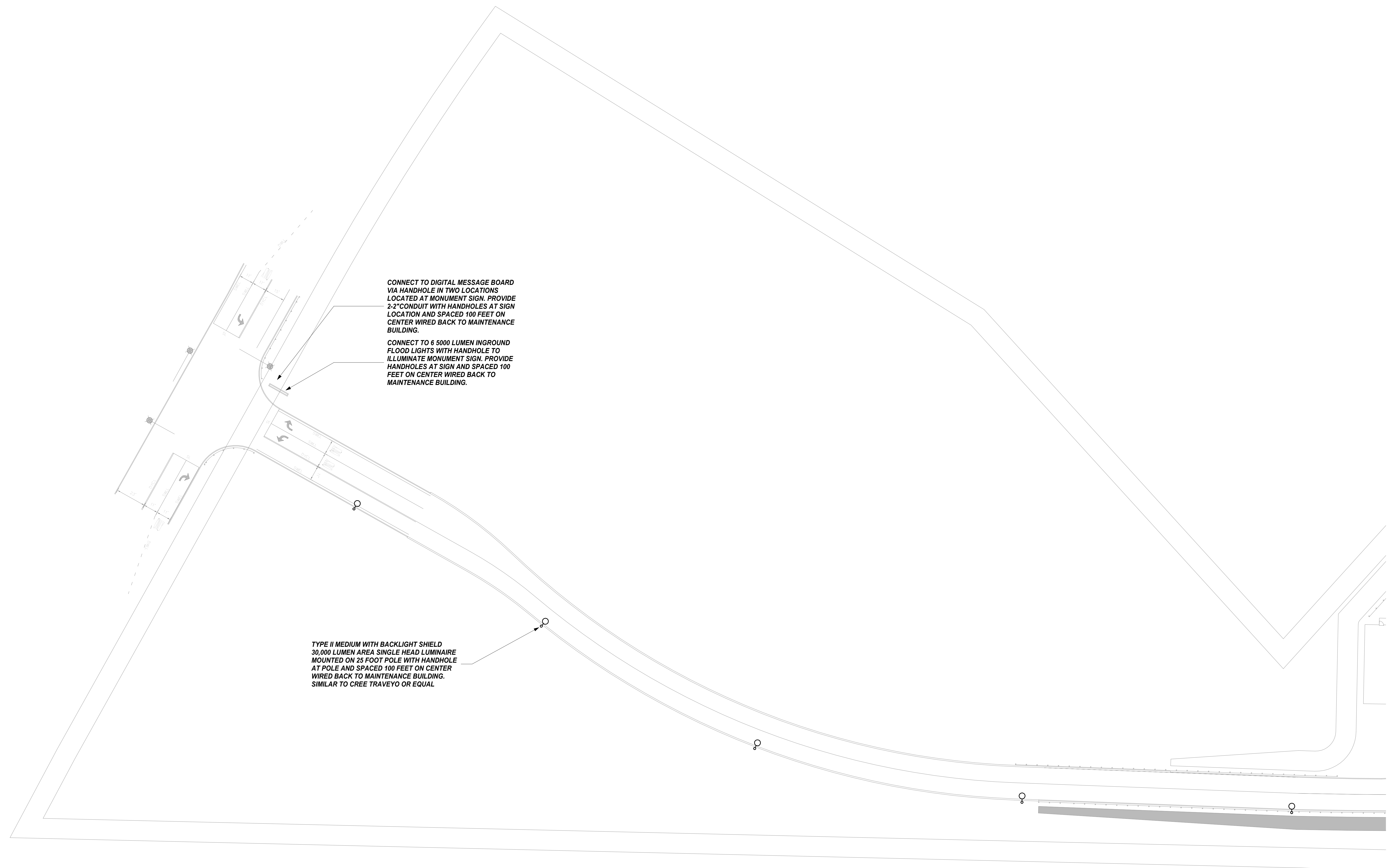
ELECTRICAL SITE PLAN NOTES

1. ALL QUANTITIES, LOCATIONS AND ARRANGEMENTS OF POLE MOUNTED SITE LIGHTING FIXTURES SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT AND THE CIVIL ENGINEERING SITE PLAN.
 2. THE ELECTRICAL TRADE CONTRACTOR SHALL FURNISH ALL MANHOLES, HANDHOLES AND POLE BASES (CAST IN PLACE AND/OR PRECAST) TO SITE CONTRACTOR FOR INSTALLATION. MANHOLES, HANDHOLES AND POLE BASES SHALL BE PROVIDED PER DETAILS SHOWN ON DRAWINGS. POLE BASES INSTALLED IN ROADWAYS AND PARKING AREAS SHALL UTILIZE TAPERED BASES THAT EXTEND 24" ABOVE FINISHED GRADE. BASES INSTALLED IN PEDESTRIAN ONLY AREAS SHALL BE FLUSH WITH GRADE. BASES SHALL BE SQUARE TO MATCH POLES.
 3. PROVIDE 10 FT COPPER GROUND ROD AT END OF EACH LIGHTING CIRCUIT INTERCONNECTED TO POLE BASE, STEEL AND BRANCH CIRCUIT. TYPICAL.
 4. PROVIDE ALL CONDUIT, CONDUCTORS AND CONNECTIONS TO TRASH COMPACTOR. COORDINATE WITH MANUFACTURER FOR ALL ELECTRICAL REQUIREMENTS.
 5. PROVIDE 2 EA 1" PVC SCHEDULE 40 CONDUIT (1 EA IT, 1 EA POWER) AND 30A RATED XHHW-1 CONDUCTORS AND 1 EA 1" PVC SCHEDULE 40 CONDUIT WITH PULL STRING FROM EV CHARGING STATION PEDESTAL. PROVIDE ALL CONNECTIONS PER MANUFACTURER.
 6. PROVIDE 1 EA 2" PVC SCHEDULE 40 CONDUIT WITH PULL STRING FROM BUILDING TO GAS STORAGE AREA.
 7. REFER TO DETAIL FOR ALL REQUIRED POLE TOP LIGHTING CONTROL (WIRELESS).
 8. PROVIDE (3) INGRADE LST11 FIXTURES AT THE PROPOSED FLAGPOLE LOCATION. FIXTURES SHALL BE APPROX. 18" FROM THE CENTER OF THE FLAGPOLE, AND SPACED EVENLY AROUND THE POLE (120 DEGREES APART) FOR EVEN ILLUMINATION. INTERCEPT, EXTEND, AND CONNECT 277V SITE LIGHTING BRANCH WIRING FROM NEAREST HANDHOLE, USING WATERPROOF CONNECTIONS AND 2" PVC CONDUIT. LST11 FIXTURE SHALL BE BK LIGHTING MODEL B-HP2-LED-TR-E65-SP-BZP-12-11-MT-GS OR APPROVED EQUAL. FIXTURES SHALL BE CONTROLLED BY LIG TECHNOLOGY NOTES
1. PROVIDE MINIMUM 1-1/4" CONDUIT SYSTEM FOR SECURITY CAMERAS ON POLE LUMINAIRES. COORDINATE 1-1/4" CONDUIT SYSTEM FOR CAMERA WITH DRAWING TO-1-1.
 - LUMINAIRE POLES ASSOCIATED WITH CAMERA LOCATIONS SHALL BE PROVIDED CODE COMPLIANT SEPARATION OF POWER BRANCH CIRCUITS AND CAMERA NETWORK CABLING. CAMERA NETWORK CABLING BY DIVISION 281600.
 - PROVIDE 120V CIRCUITING AND WEATHER-PROOF GFI DOUBLE-DUPLEX RECEPTACLES AT EACH CAMERA NETWORK ENCLOSURE MOUNTED ON EACH RESPECTIVE LUMINAIRE POLE. REFER TO DETAIL FOR ADDITIONAL INFORMATION.
- EXISTING UTILITY SERVICES
 DATA FIBER OPTIC CABLING (EXISTING).
 TIME WARNER FIBER OPTIC AND CATV RG CABLE (EXISTING).
 VERIZON FIBER OPTIC AND 300PAIR COPPER CABLING (EXISTING).



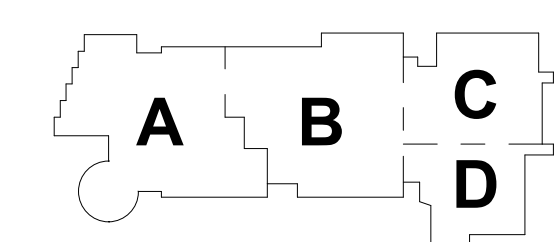
**NORTHEAST
METRO TECH**

100 Hemlock Rd.
Wakefield, MA 01880

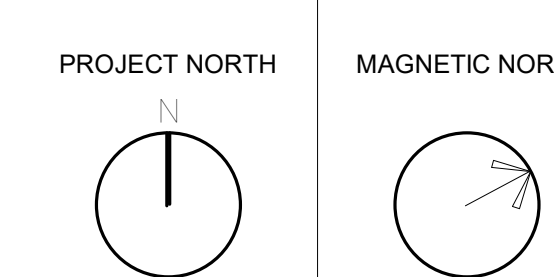


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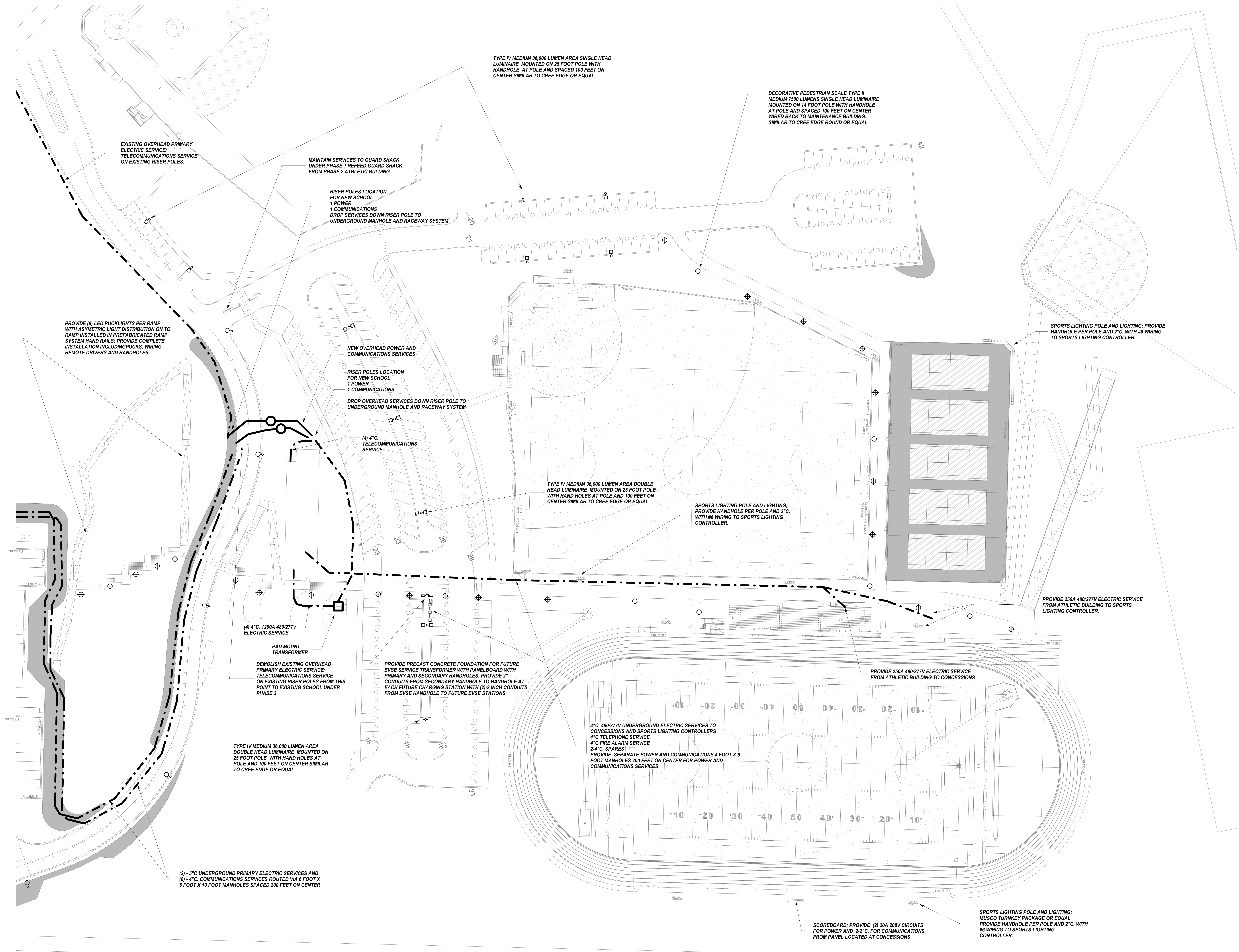


KEY PLAN

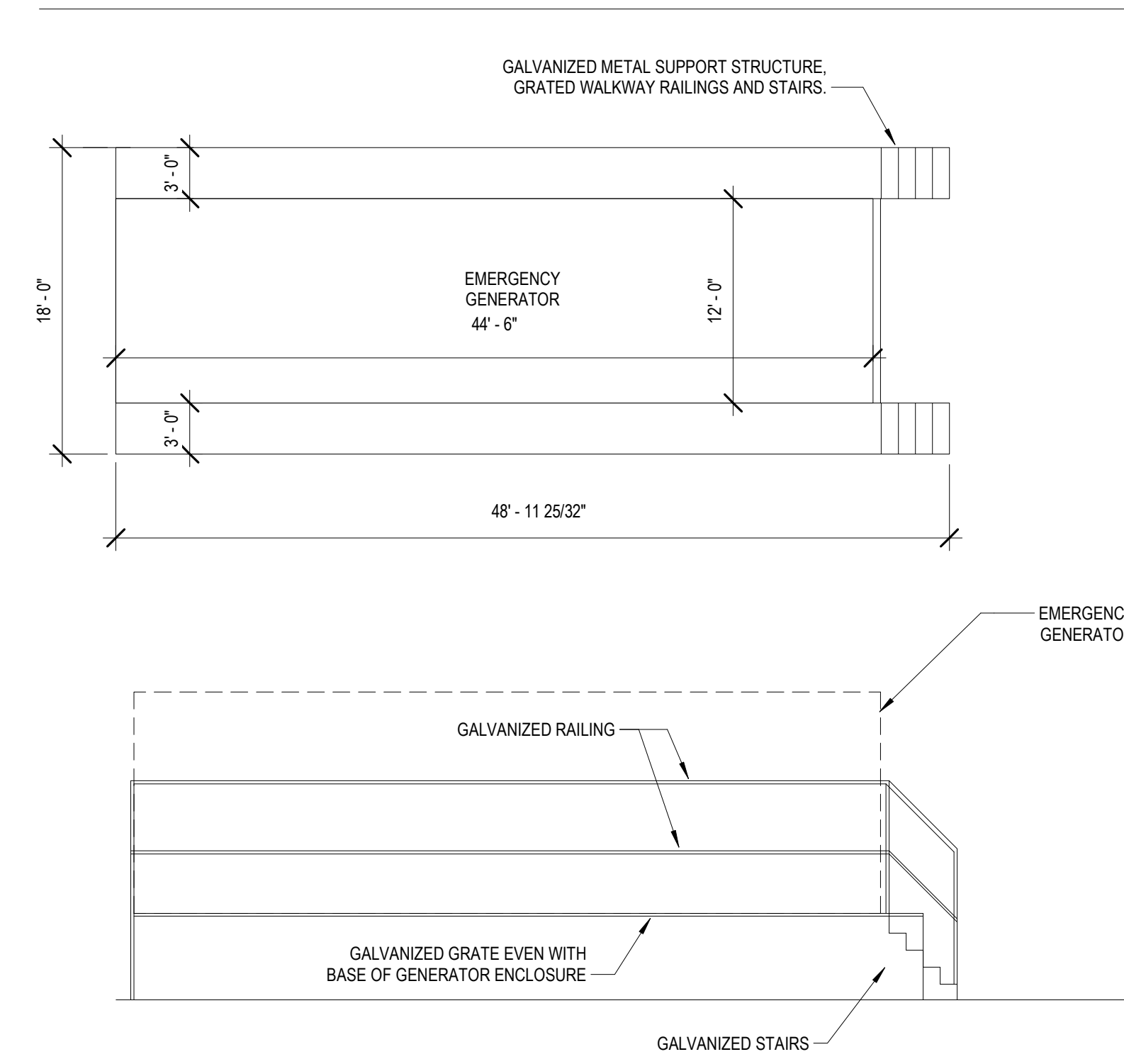


**ELECTRICAL
SITE PLAN**

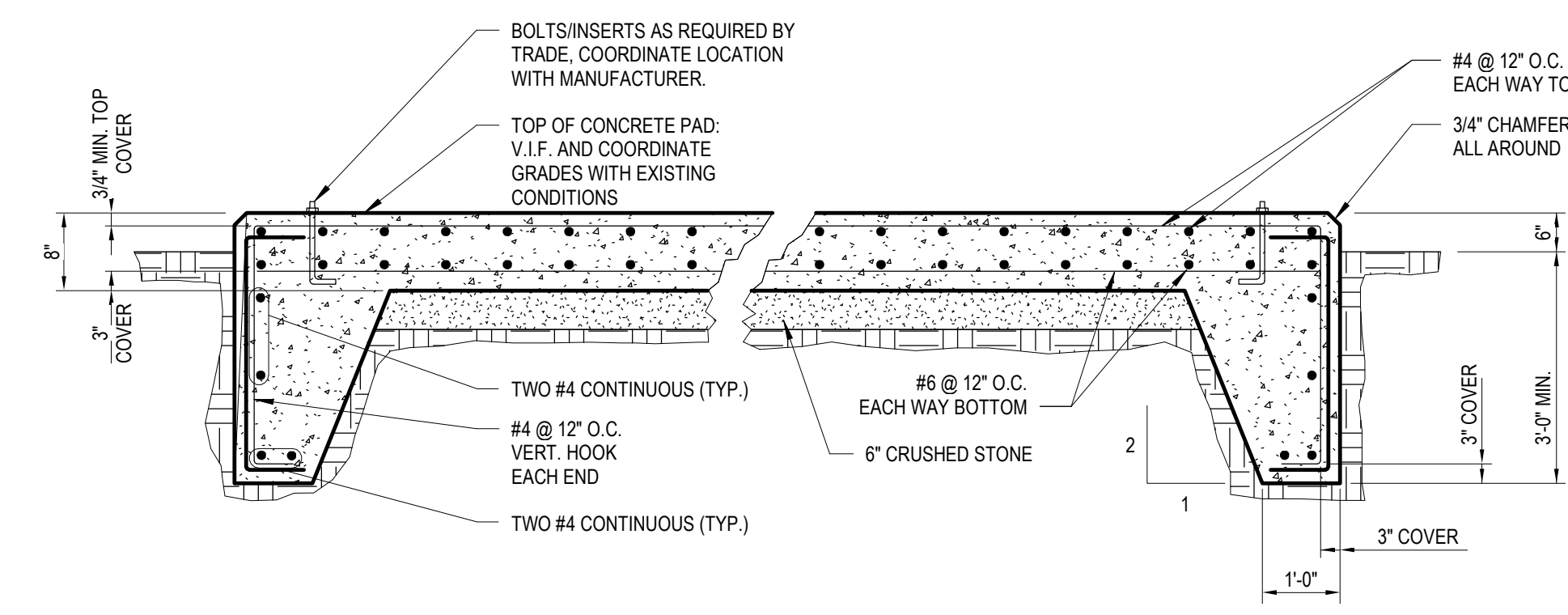
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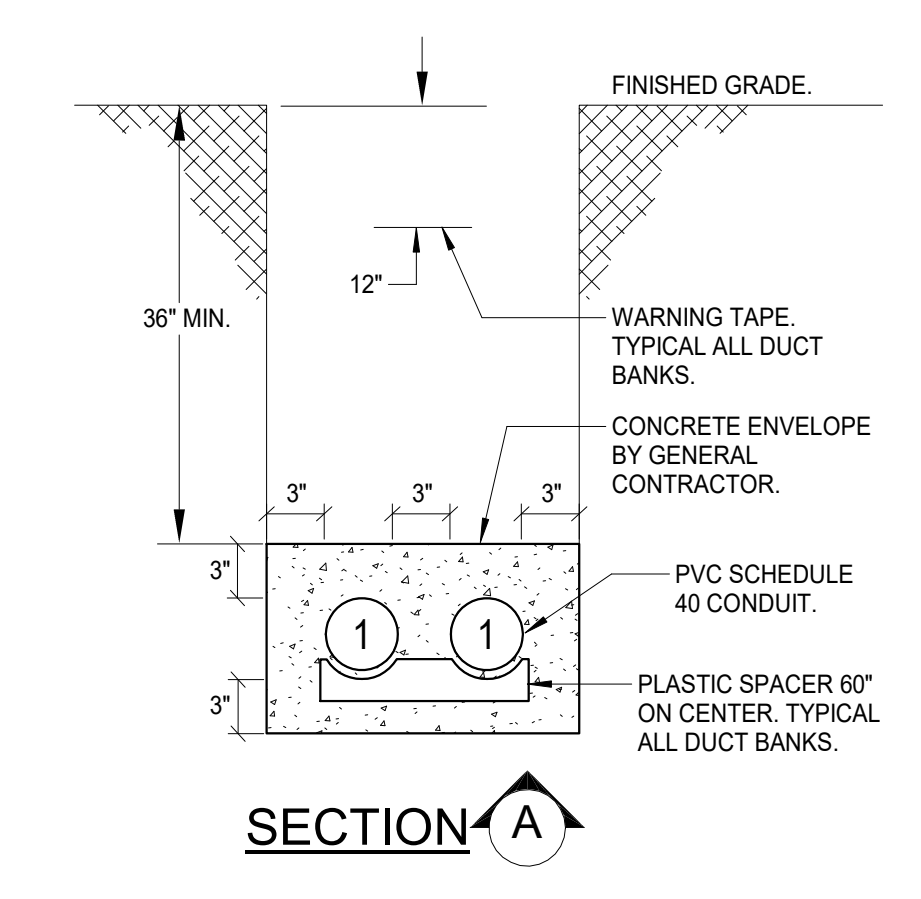


1 GENERATOR PLATFORM DETAIL
 1/8" = 1'-0"



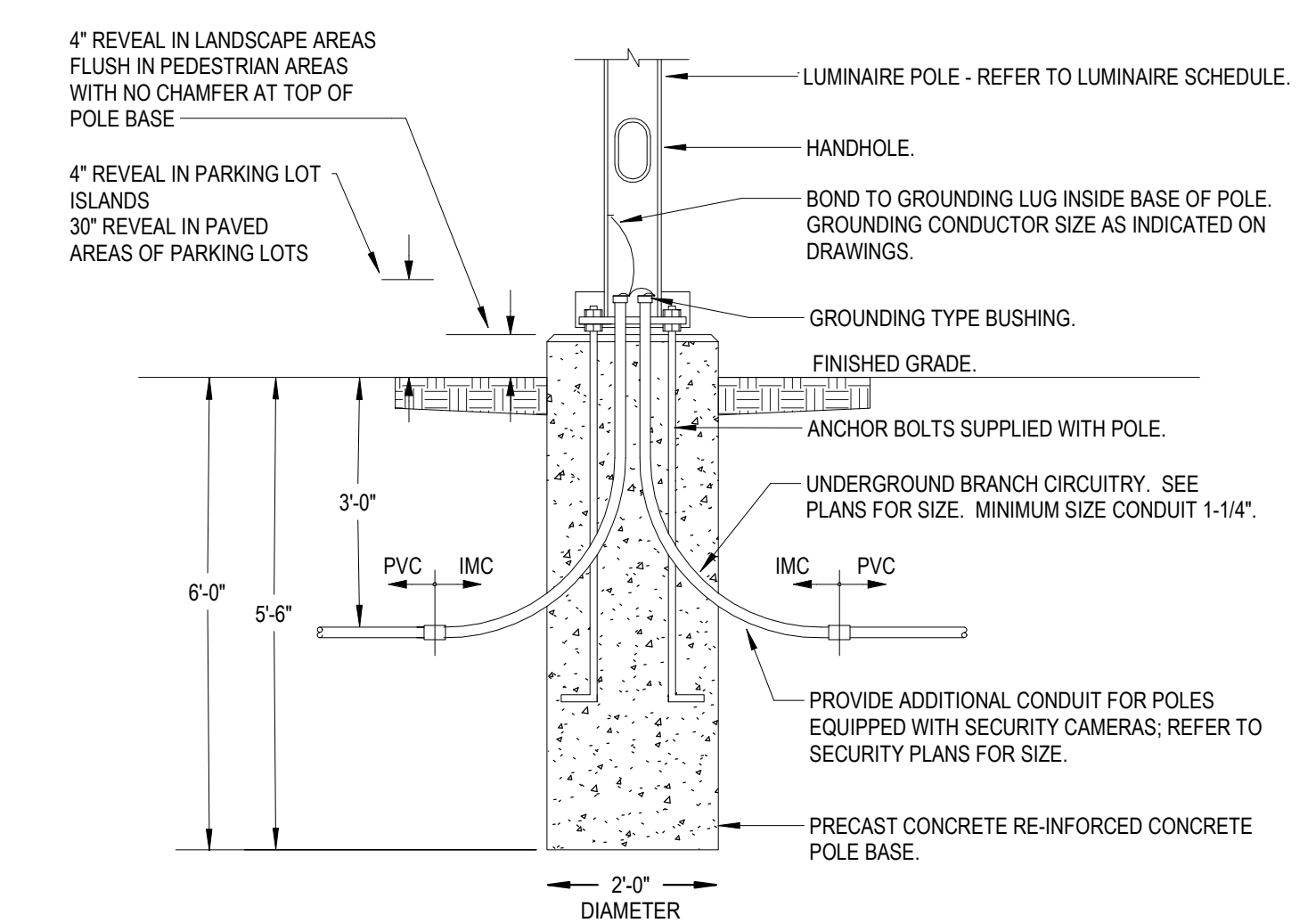
- NOTES:**
1. SECURE EQUIPMENT TO PAD USING EPOXY ANCHORS. SIZE, QUANTITY AND LOCATION OF ANCHORS TO SUIT EQUIPMENT PURCHASED.
 2. COORDINATE PAD FOOTPRINT SIZE WITH NEW EQUIPMENT AND EXISTING EQUIPMENT TO BE RELOCATED.
 3. COORDINATE CONDUIT OPENINGS WITH EQUIPMENT.
 4. CONCREM PAD CONFIGURATION WITH MANUFACTURER'S SHOP DRAWINGS. PAD TO BE 2\"/>

4 GENERATOR CONCRETE PAD DETAIL
 NOT TO SCALE

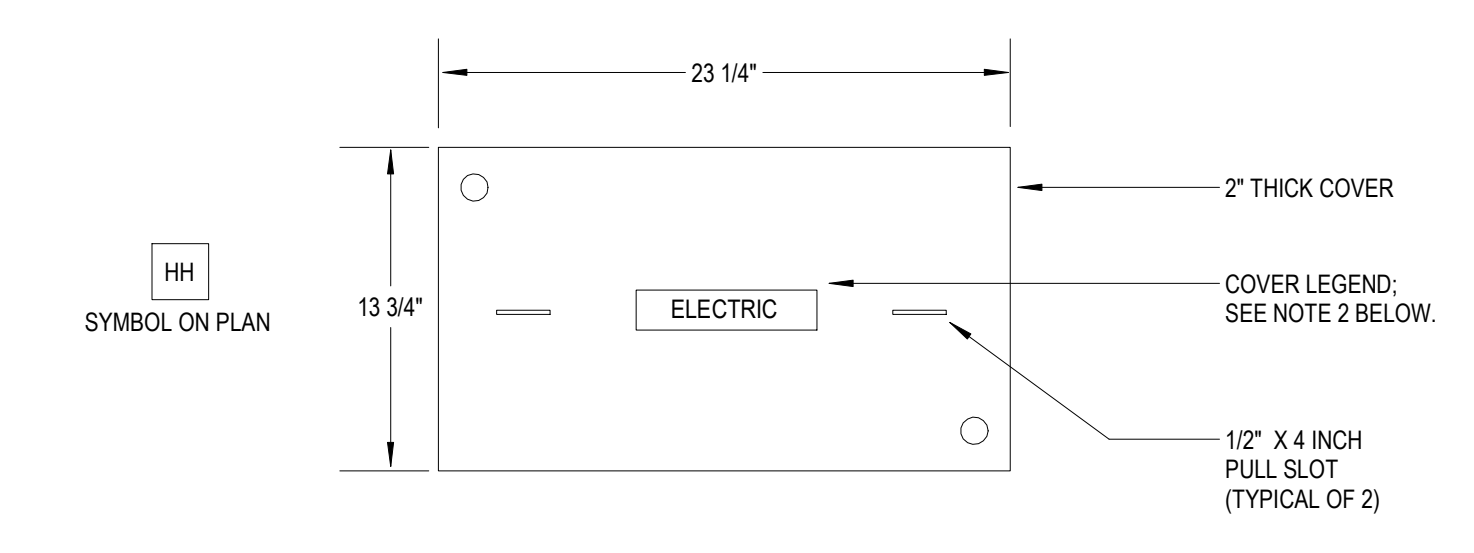


6 TYPICAL DUCTBANK SECTION DETAILS
 1/8" = 1'-0"

- DUCT BANK LEGEND:**
- (1) 5" C. PVC PRIMARY ELECTRIC SERVICE
 - (2) 4" PVC SECONDARY ELECTRIC SERVICE
 - (3) 4" PVC EMERGENCY SERVICE
 - (4) 4" C. LEGALLY REQUIRED STANDBY SERVICE
 - (5) 4" PVC OPTIONAL STANDBY SERVICE
 - (6) 3" PVC REMOTE GENERATOR ANNUNCIATOR WIRING
 - (7) 2" PVC START CIRCUITRY WIRING
 - (8) 2" PVC GENERATOR LOADCENTER SERVICE
 - (9) 4" PVC RCN SERVICE
 - (10) 4" PVC SPARE CONDUIT
 - (11) 4" PVC FIRE PUMP SERVICE
 - (12) 3" PVC EVSE SERVICE
 - (13) 4" C. PV SERVICE
 - (14) 4" C. COMCAST SERVICE
 - (15) 4" C. PVC SPORTS LIGHTING SERVICE
 - (16) 3" C. PV SERVICES
 - (17) 2" C. PV SERVICES
 - (18) 1" C. PV SERVICES
 - (19) 4" C. PV SERVICES

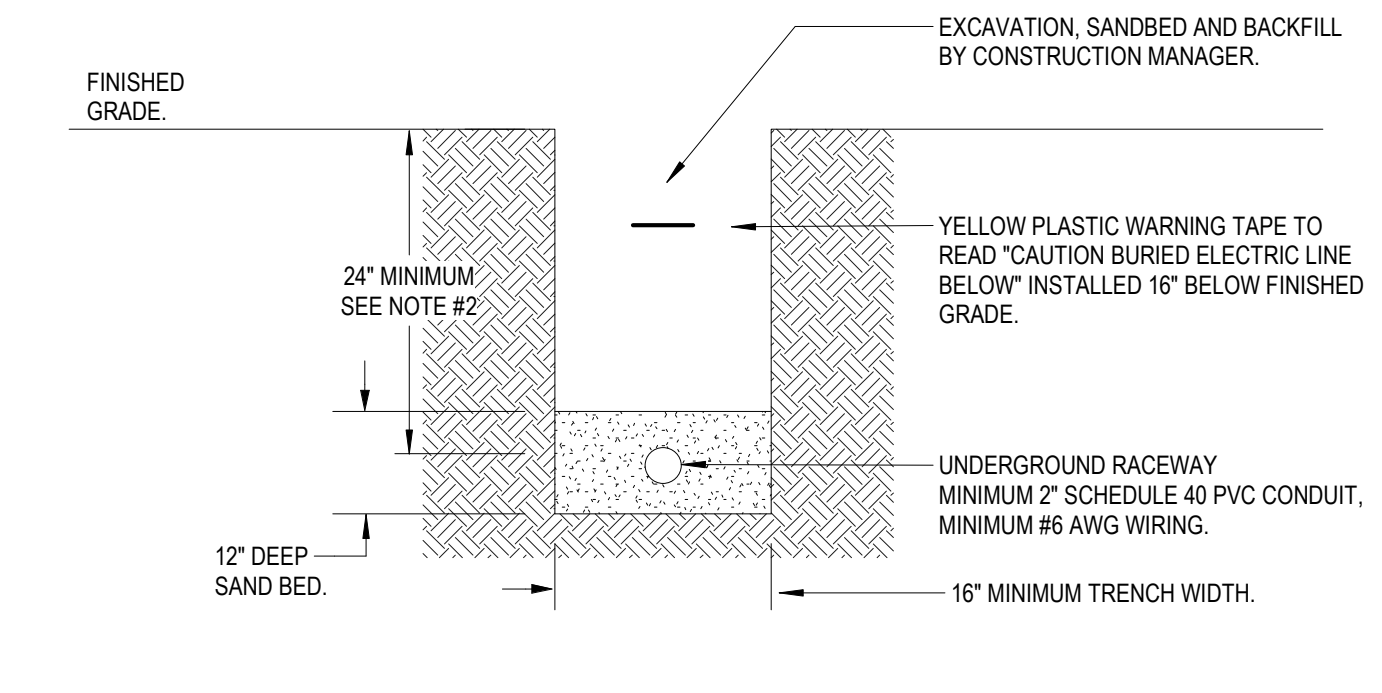


5 PRECAST CONCRETE POLE BASE DETAIL
 1/8" = 1'-0"



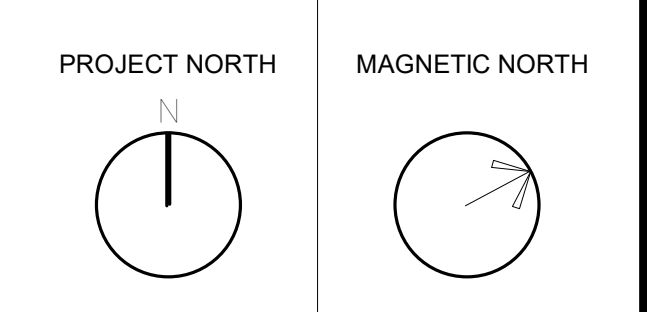
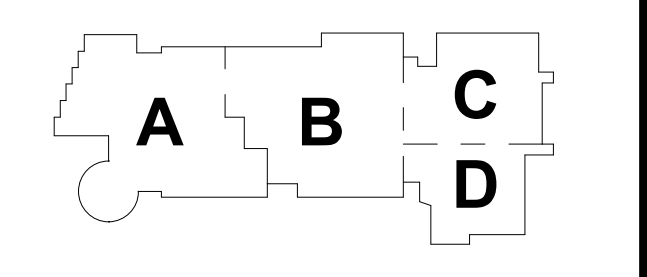
- NOTES:**
1. PROVIDE STACKABLE OPEN BOTTOM HANDHOLES WITH HEAVY DUTY GASKETED LOCKING COVER WITH CONDUIT SIZES PER SITE PLAN.
 2. GASKETED LOCKING COVER ID SHALL READ: "ELEC" FOR POWER DISTRIBUTION, "LIGHTING" FOR SITE LIGHTING, "EVSE" FOR ELECTRIC VEHICLE SERVICE EQUIPMENT, "CCTV" FOR SECURITY AND CCTV CAMERAS, "FIELD LIGHTING" FOR SPORTS LIGHTING, "COMM" FOR COMMUNICATIONS SYSTEMS, "PV" FOR PHOTOVOLTAIC SYSTEMS.
 3. HANDHOLE SIZES SHALL BE AS FOLLOWS: "ELECTRIC" FOR POWER DISTRIBUTION SITE LIGHTING. 12" X 12" FOR SITE LIGHTING. 12" X 24" (WIDE) FOR ELECTRIC VEHICLE SERVICE EQUIPMENT. 12" X 12" FOR SECURITY AND CCTV CAMERAS. 24" X 24" FOR SPORTS LIGHTING AND PHOTOVOLTAICS. 12" X 24" FOR COMMUNICATIONS SYSTEMS.

3 TYPICAL STACKABLE HANDHOLE DETAIL
 1/8" = 1'-0"

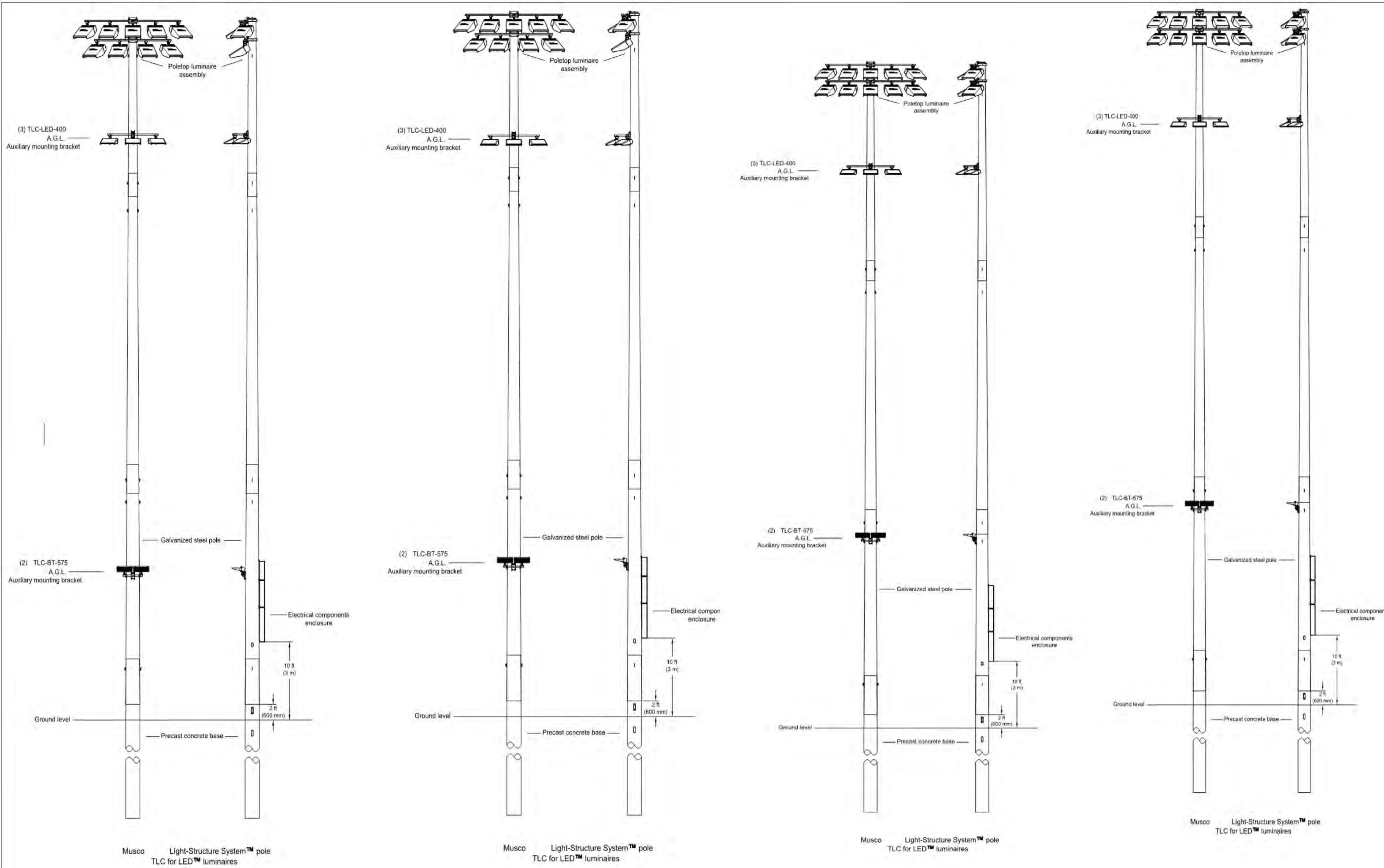


- NOTES:**
1. EXACT ROUTING OF SITE LIGHTING RACEWAY SHALL BE COORDINATED IN THE FIELD WITH ARCHITECT AND LANDSCAPE ARCHITECT IN ORDER TO AVOID TREE PLANTINGS AND OTHER UNDERGROUND UTILITIES.

7 SITE LIGHTING RACEWAY SYSTEM DETAIL
 1/8" = 1'-0"

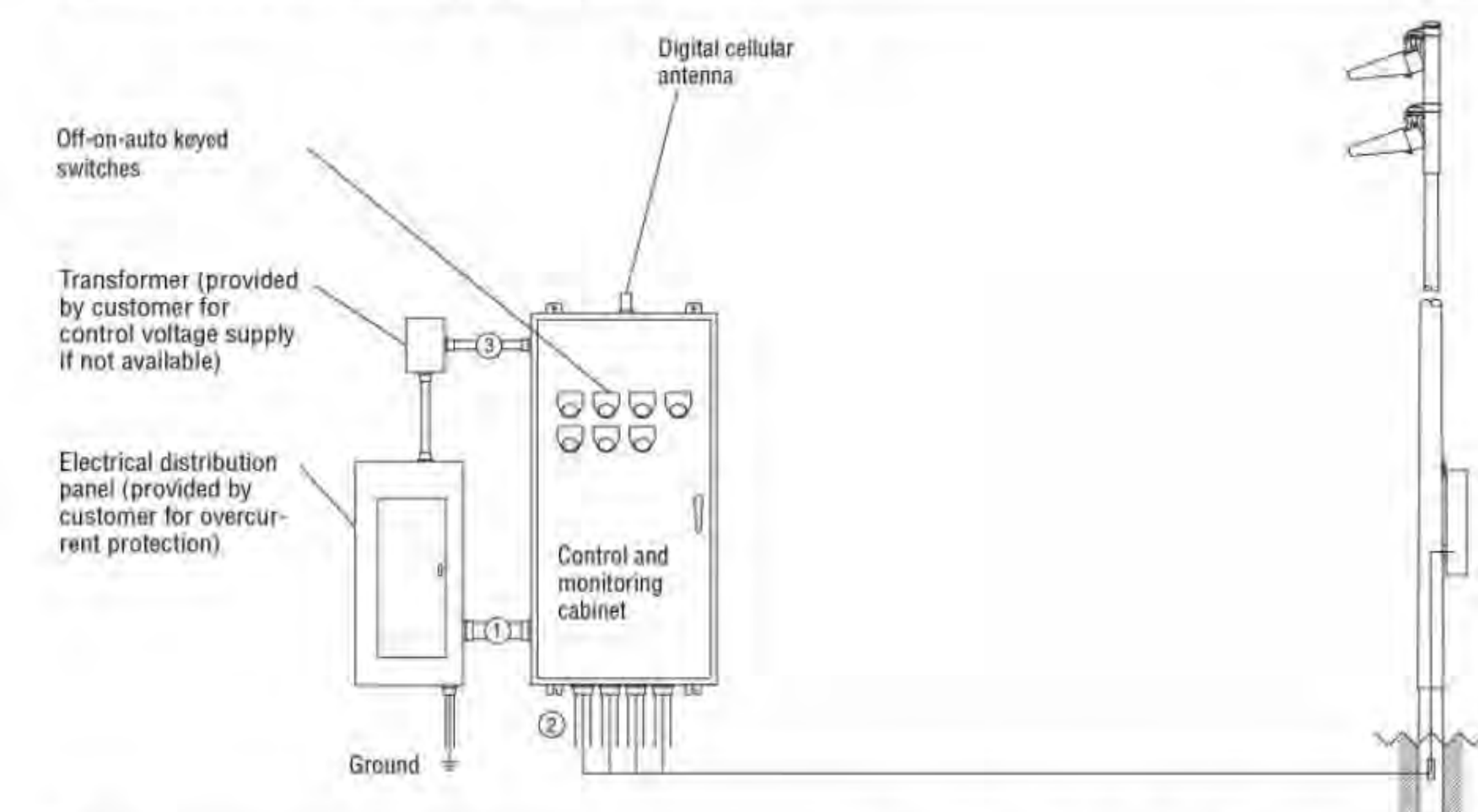


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LIGHTING SYSTEM DETAILS
 NOT TO SCALE

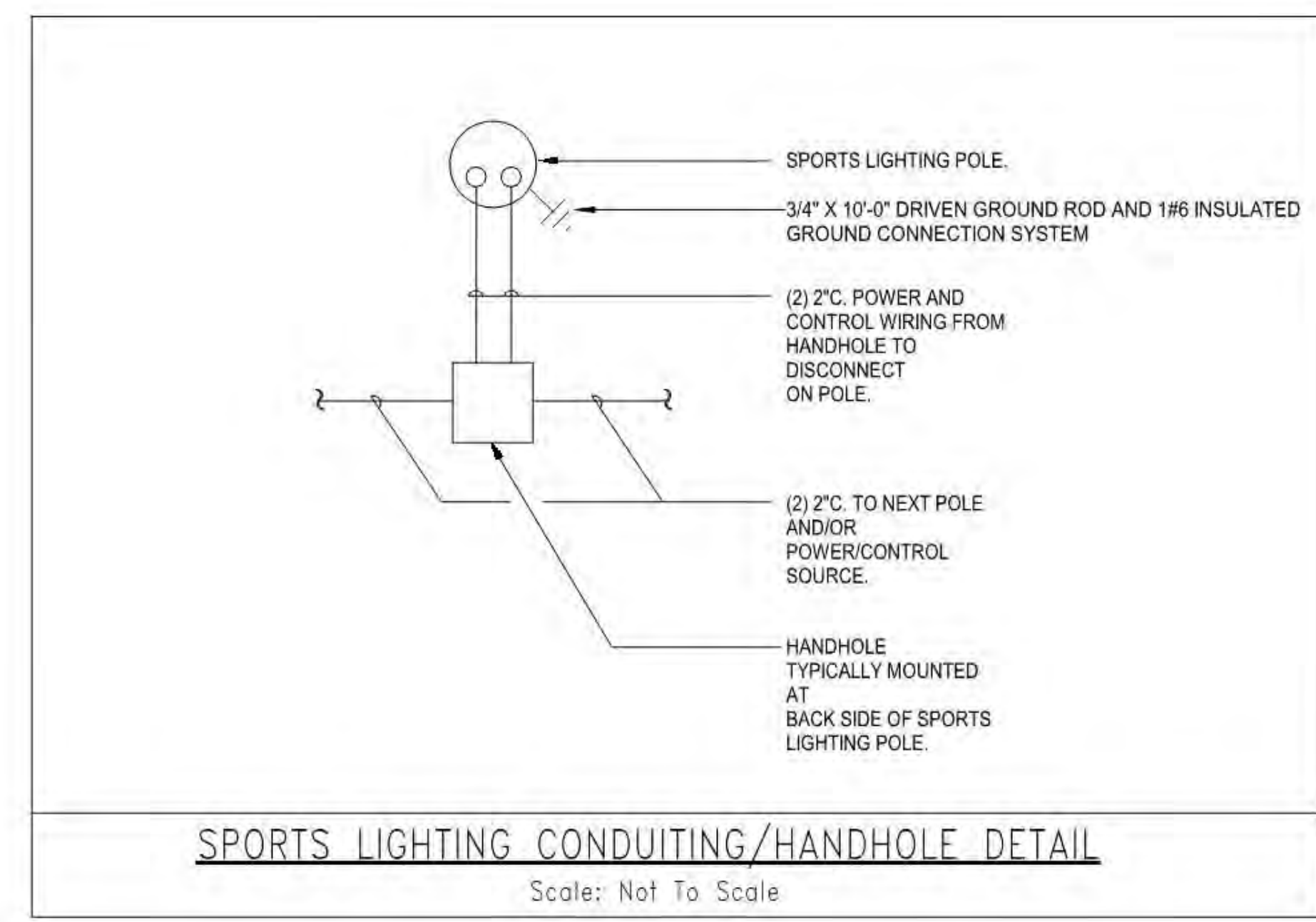
Control-Link
 Control and Monitoring System



Circuit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	IBBSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	3	12	1.5	N/A	No	A-E
2	Power-line Communication Connection (dedicated, 20A)	1	12	1.5	N/A	No	A-E
3	Load power to lighting circuits, and equipment grounding conductor	3	12	1.5	N/A	No	A-E
4	Control power (dedicated, 20A)	3	12	1.5	N/A	No	C-E

* Notes:
 A. See voltage and phasing per the notes on cover page.
 B. Calculate per load and voltage drop.
 C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
 D. Equipment grounding conductor and any splices must be insulated.
 E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.
 !IMPORTANT: Control wires (3) must be in separate conduit from line and load power wires (1, 2).

EQUIPMENT LOCATED IN CONCESSIONS
 CONTROL AND MONITORING SYSTEM DETAIL



SPORTS LIGHTING CONDUIT/HANDHOLE DETAIL
 Scale: Not To Scale

Panel: HSP
 Location: _____ Volts: 480/277 Wye A.I.C. Rating: _____
 Enclosure: Type 1 MCB Rating: 250 A

CKT	Circuit Description	Type	Trip	Poles	A	B	C	Poles	Trip	Type	Circuit Description	CKT
1					553...	0 VA						2
3	CONTACTOR		30 A	3			553...	0 VA			CONTACTOR	4
5					0 VA	0 VA						6
7					0 VA	0 VA						8
9	CONTACTOR		30 A	3		0 VA	0 VA				CONTACTOR	10
11					0 VA	0 VA						12
13					0 VA	0 VA						14
15	CONTACTOR		30 A	3		0 VA	0 VA				CONTACTOR	16
17					0 VA	0 VA						18
19					0 VA	0 VA						20
21	CONTACTOR		30 A	3		0 VA	0 VA				CONTACTOR	22
23					0 VA	0 VA						24
25					0 VA	0 VA						26
27	SPARE		30 A	3		0 VA	0 VA				SPARE	28
29					0 VA	0 VA						30
31	SPACE AND HARDWARE				0 VA	0 VA					SPACE AND HARDWARE	32
33	SPACE AND HARDWARE				0 VA	0 VA					SPACE AND HARDWARE	34
35	SPACE AND HARDWARE				0 VA	0 VA					SPACE AND HARDWARE	36
37	SPACE AND HARDWARE				0 VA	0 VA					SPACE AND HARDWARE	38
39	SPACE AND HARDWARE				0 VA	0 VA					SPACE AND HARDWARE	40
41	SPACE AND HARDWARE				0 VA	0 VA					SPACE AND HARDWARE	42

Panel Totals
 Total Conn. Current: 200 A

Legend:
 AF Arc Fault ST Shunt Trip
 GF Ground Fault Blank Standard

CONTROL SYSTEM SUMMARY
 NOT TO SCALE

PANEL SUMMARY

CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
1	1	C1	Pole S1	21.74		
1	1	C2	Pole S2	21.74		
1	1	C3	Pole S3	23.69		
1	1	C4	Pole S4	23.69		
1	1	C5	Pole S1	2.60		
1	1	C6	Pole S2	2.60		
1	1	C7	Pole S3	2.60		
1	1	C8	Pole S4	2.60		

ZONE SCHEDULE

ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION POLE ID	CONTACTOR ID
Zone 1	1	Soccer/Football	S1 S2 S3 S4	C1 C2 C3 C4
Zone 2	2	Track	S1 S2 S3 S4	C5 C6 C7 C8

SWITCHING SCHEDULE

Field/Zone Description	Zones
Soccer/Football	1
Track	2

CONTROL POWER CONSUMPTION

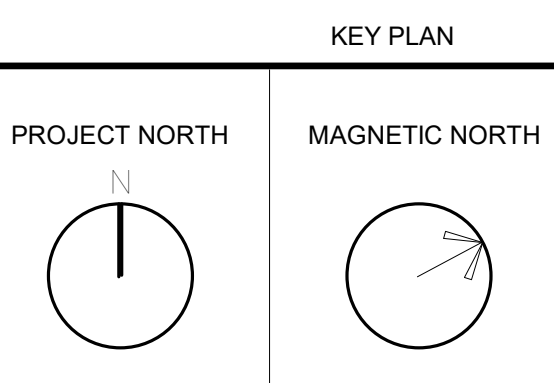
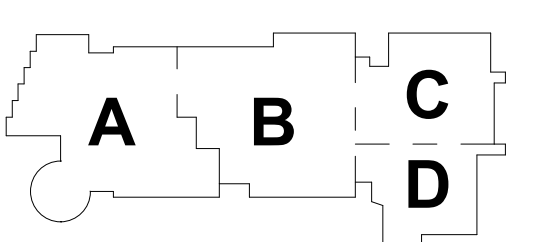
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 2533.0 SEALED: 283.8

CIRCUIT SUMMARY BY ZONE

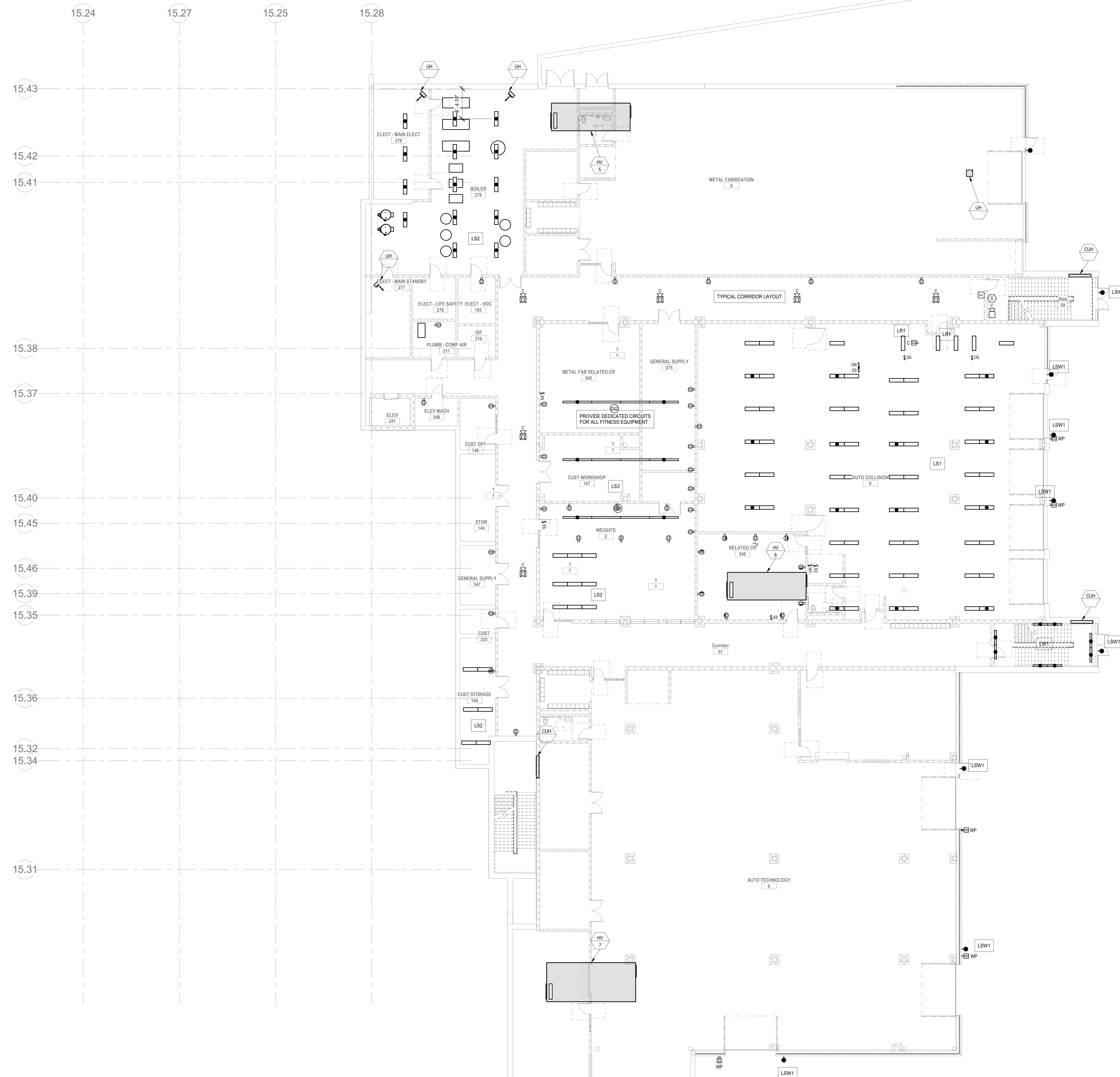
POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
S1	Soccer/Football	11	11	21.7	30	C1	1
S2	Soccer/Football	11	11	21.7	30	C2	1
S3	Soccer/Football	12	12	23.7	30	C3	1
S4	Soccer/Football	12	12	23.7	30	C4	1
S1	Track	3	2	2.6	30	C5	2
S2	Track	3	2	2.6	30	C6	2
S3	Track	3	2	2.6	30	C7	2
S4	Track	3	2	2.6	30	C8	2

*Full Load Amps based on amps per driver.

MSBA SCHEMATIC DESIGN SUBMITTAL
 JUNE 17, 2021



TYPICAL SPORTS LIGHTING DETAILS



- GENERAL POWER NOTES:**
1. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH MECHANICAL EQUIPMENT. REFER TO MECHANICAL DRAWINGS.
 2. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH PLUMBING EQUIPMENT. REFER TO PLUMBING DRAWINGS.
 3. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FIRE PROTECTION EQUIPMENT. REFER TO FIRE PROTECTION DRAWINGS.
 4. PROVIDE ALL POWER RACEWAYS AND CONNECTIONS ASSOCIATED WITH DIVISION 27 SECTIONS INCLUDING TELECOMMUNICATIONS, CCTV, ACCESS CONTROL, SECURITY CABLE TRAYS BACKS AND GROUNDING. REFER TO DIVISION 27 DRAWINGS.
 5. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FURNITURE, FIXTURES AND EQUIPMENT. REFER TO FURNITURE, FIXTURES AND EQUIPMENT DRAWINGS.

- GENERAL LIGHTING TYPES:**
1. LR1 RECESSED LENSED LED
 2. LS1 HIGH BAY LED STRIP
 3. LS2 LED STRIP
 4. LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 5. LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
 6. LSW LED EXTERIOR SCNCE
 7. LW1 LED LINEAR WITH OPAL DIFFUSER AND INTEGRAL OCCUPANCY SENSOR

- GENERAL NOTES:**
1. PROVIDE 2 SWITCH PACKS PER CLASSROOM FOR ALL CLASSROOM CONTROLLED RECEPTACLES.
 2. PROVIDE PAC BOX AT CLASSROOM DIGITAL DISPLAYS.
 3. PROVIDE CIRCUIT ABOVE CLASSROOM CEILING FOR FUTURE SOUND AMPLIFICATION SYSTEM.
 4. PROVIDE SWITCHPACK AND CIRCUIT FOR TABLE CHARGERS IN ALL CLASSROOMS.
 5. PROVIDE 4 SWITCH PACKS FOR 4 ZONES OF LIGHTING CONTROL FOR ALL CLASSROOMS.

METAL FABRICATION POWER CONNECTIONS NOTES

- PROVIDE 3ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 3Ø10, 1Ø100, 1" VC FLOOR TO A 2ØV 3ØA FUSED DISCONNECT SWITCH FUSED AT 3ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- FRAME ALIGNMENT LIFT
 - AUTOMOTIVE LIFT 18,000LB. CAPACITY
- PROVIDE 100A 480/277V 3PHASE 4WIRE POWER FEED WITH 4Ø20, 1Ø40, 2" VC VIA FLOOR TO A 6ØV 10ØA WEATHERPROOF FUSED DISCONNECT SWITCH FUSED AT 10ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR AIR COMPRESSOR.
- PROVIDE 3ØA 480/277V 3PHASE 4WIRE POWER FEED WITH 4Ø10, 1Ø100, 1" VC FLOOR TO A 6ØV 3ØA FUSED DISCONNECT SWITCH FUSED AT 2ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- AIR COMPRESSOR
 - OVERHEAD DOORS
- PROVIDE 6ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 3Ø6, 1Ø100, 1" VC FLOOR TO A 2ØV 6ØA FUSED DISCONNECT SWITCH FUSED AT 6ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- 4 WELDING STATIONS
- PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.
- PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 2ØA 12ØV CIRCUITS.
- PROVIDE 6 CORD REELS WITH GFCI TROUBLE LIGHTS WIRED TO DEDICATED 2ØA 12ØV CIRCUITS.
- PROVIDE 3 EMERGENCY POWER OFF (EPO) PUSHBUTTON STATIONS CONDUIT AND WIRING CONNECTED TO SHUNT TRIP CIRCUIT BREAKERS IN 480/277V AND 208/120V PANELS.

AUTOMOTIVE COLLISION POWER CONNECTIONS NOTES

- PROVIDE 100A 208/120V 1 PHASE 3WIRE POWER FEED WITH 4Ø3, 1" 1/2" VC VIA FLOOR TO A 2ØV 10ØA WEATHERPROOF FUSED DISCONNECT SWITCH FUSED AT 10ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR PAINT SPRAY BOOTH WITH HEATER. PROVIDE ALL INTERCONNECTING CONDUIT AND WIRING FROM BOOTH TO FANS, HEATER AND LIGHTING. ALL WIRING SHALL COMPLY WITH CLASS 1 DIVISION 1 EXPLOSION PROOF LOCATIONS.
- PROVIDE 2ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 4Ø13, 1" 1/2" VC VIA FLOOR TO A 2ØV 2ØA WEATHERPROOF FUSED DISCONNECT SWITCH FUSED AT 2ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- PAINT MIXING ROOM
 - DOWNDRAFT PREP BOOTH
- PROVIDE ALL INTERCONNECTING CONDUIT AND WIRING FROM PAINT MIXING ROOM TO FANS, HEATER AND LIGHTING. ALL WIRING SHALL COMPLY WITH CLASS 1 DIVISION 1 EXPLOSION PROOF LOCATIONS.
- PROVIDE 3ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 3Ø10, 1Ø100, 1" VC FLOOR TO A 2ØV 3ØA FUSED DISCONNECT SWITCH FUSED AT 3ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- FRAME ALIGNMENT LIFT
 - AUTOMOTIVE LIFT 18,000LB. CAPACITY
- PROVIDE 100A 480/277V 3PHASE 4WIRE POWER FEED WITH 4Ø20, 1Ø40, 2" VC VIA FLOOR TO A 6ØV 10ØA WEATHERPROOF FUSED DISCONNECT SWITCH FUSED AT 10ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR AIR COMPRESSOR.
- PROVIDE 3ØA 480/277V 3PHASE 4WIRE POWER FEED WITH 4Ø10, 1Ø100, 1" VC FLOOR TO A 6ØV 3ØA FUSED DISCONNECT SWITCH FUSED AT 2ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- AIR COMPRESSOR
 - OVERHEAD DOORS
- PROVIDE 6ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 3Ø6, 1Ø100, 1" VC FLOOR TO A 2ØV 6ØA FUSED DISCONNECT SWITCH FUSED AT 6ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- 4 WELDING STATIONS
- PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.
- PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 2ØA 12ØV CIRCUITS.
- PROVIDE 6 CORD REELS WITH GFCI TROUBLE LIGHTS WIRED TO DEDICATED 2ØA 12ØV CIRCUITS.
- PROVIDE 3 EMERGENCY POWER OFF (EPO) PUSHBUTTON STATIONS CONDUIT AND WIRING CONNECTED TO SHUNT TRIP CIRCUIT BREAKERS IN 480/277V AND 208/120V PANELS.

AUTOMOTIVE TECHNOLOGY POWER CONNECTIONS NOTES

- PROVIDE 3ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 3Ø10, 1Ø100, 1" VC FLOOR TO A 2ØV 3ØA FUSED DISCONNECT SWITCH FUSED AT 3ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- 4 POST ALIGNMENT LIFT
 - 7 2 POST LIFT 10,000LB. CAPACITY
 - 2 2 POST LIFT 18,000LB. CAPACITY
- PROVIDE 100A 480/277V 3PHASE 4WIRE POWER FEED WITH 4Ø20, 1Ø40, 2" VC VIA FLOOR TO A 6ØV 10ØA WEATHERPROOF FUSED DISCONNECT SWITCH FUSED AT 10ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR AIR COMPRESSOR.
- PROVIDE 3ØA 480/277V 3PHASE 4WIRE POWER FEED WITH 4Ø10, 1Ø100, 1" VC FLOOR TO A 6ØV 3ØA FUSED DISCONNECT SWITCH FUSED AT 2ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- AIR COMPRESSOR
 - OVERHEAD DOORS
- PROVIDE 6ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 3Ø6, 1Ø100, 1" VC FLOOR TO A 2ØV 6ØA FUSED DISCONNECT SWITCH FUSED AT 6ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- ALIGNMENT SYSTEM
 - TIRE CHANGER
 - WHEEL BALANCER
 - 4 WELDING STATIONS
- PROVIDE 2ØA 12ØV 1 PHASE 3WIRE POWER FEED WITH 2Ø10, 1Ø100, 1" VC FLOOR TO A 2ØV 2ØA FUSED DISCONNECT SWITCH FUSED AT 2ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- BRAKE LATHE
 - PARTS WASHER
 - PEDESTAL GRINDER
 - DRILL PRESS
- PROVIDE 6ØA 208/120V 1 PHASE 3WIRE POWER FEED WITH 3Ø6, 1Ø100, 1" VC FLOOR TO A 2ØV 6ØA FUSED DISCONNECT SWITCH FUSED AT 6ØA WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- 4 WELDING STATIONS
- PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.
- PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 2ØA 12ØV CIRCUITS.
- PROVIDE 6 CORD REELS WITH GFCI TROUBLE LIGHTS WIRED TO DEDICATED 2ØA 12ØV CIRCUITS.
- PROVIDE 3 EMERGENCY POWER OFF (EPO) PUSHBUTTON STATIONS CONDUIT AND WIRING CONNECTED TO SHUNT TRIP CIRCUIT BREAKERS IN 480/277V AND 208/120V PANELS.

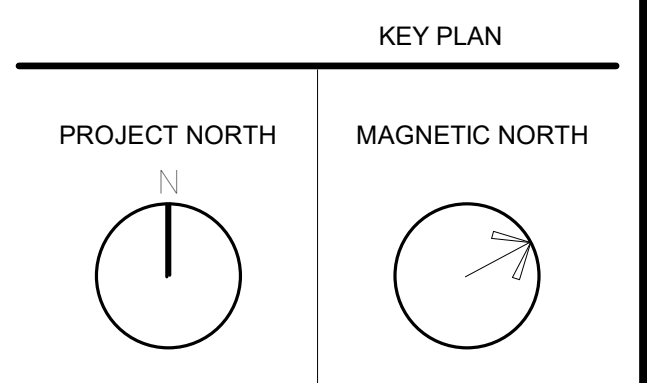
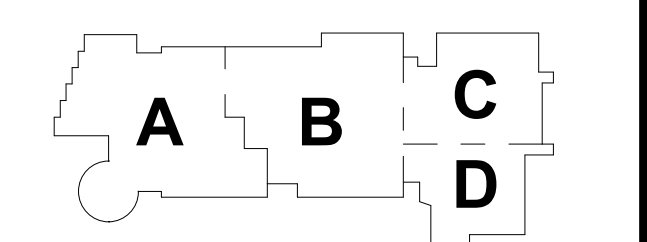
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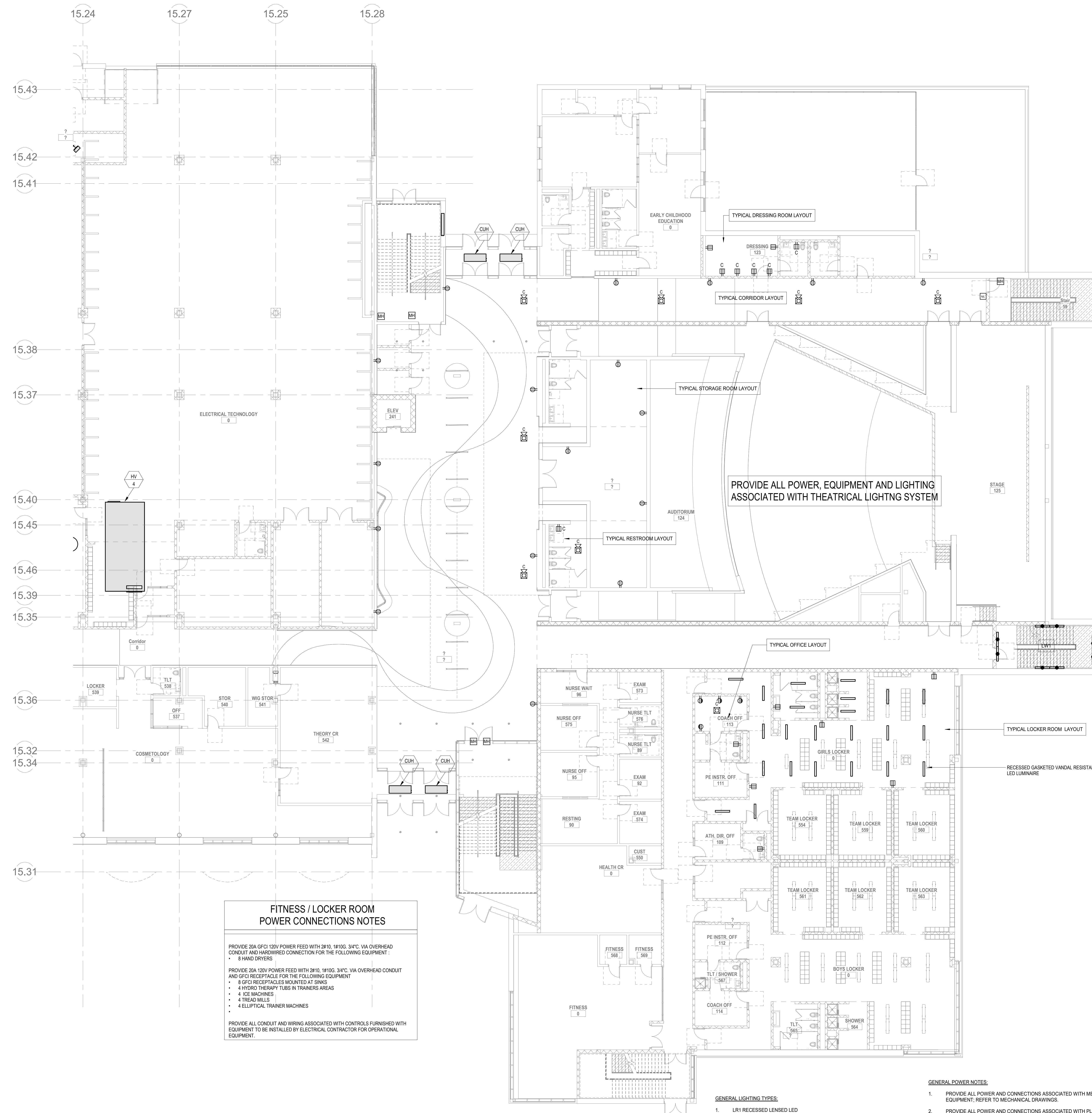
MSBA SCHEMATIC DESIGN SUBMITTAL
JUNE 17, 2021



ELECTRICAL LOWER LEVEL FLOOR PLAN - PLAN EAST

Scale: As indicated
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021
E1-1-0E

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**ELECTRICAL TECHNOLOGY
POWER CONNECTIONS NOTES**

PROVIDE 30A 480/277V 3PHASE 4WIRE POWER FEED WITH #10, 1810G, 1" VC, VIA FLOOR TO A 600V 30A FUSED DISCONNECT SWITCH FUSED AT 30A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 2 DRILL PRESSES
- WIRE BELT SANDER
- PLANERSURFACER
- LATHE

PROVIDE 40A 480/277V 3PHASE 4WIRE POWER FEED WITH #8, 1810G, 1 1/4" VC, VIA FLOOR TO A 600V 40A FUSED DISCONNECT SWITCH FUSED AT 30A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR CNC ROUTING TABLE.

PROVIDE 100A 480/277V 3PHASE 4WIRE POWER FEED WITH #4/0, 1814G, 2" VC, VIA FLOOR TO A 600V 100A WEAHERPROOF FUSED DISCONNECT SWITCH FUSED AT 100A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR DUST COLLECTOR.

PROVIDE 30A 208/120V 3PHASE 4WIRE POWER FEED WITH #10, 1810G, 1" VC, VIA FLOOR TO A 240V 30A FUSED DISCONNECT SWITCH FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 2 UPRIGHT VERTICAL BELT SANDER
- TABLE SAW ACCESSORY CLEING TABLE
- TABLE SAW
- STORAGE RACK FOR LUMBER
- SPINDLE SANDER
- SHAPER
- PANEL SAW
- 2 MITER SAW
- DRILL PRESS
- 2 BAND SAW
- DISC & BELT SANDER

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

PROVIDE 6 EMERGENCY POWER OFF (EPO) PUSH-BUTTON STATIONS CONDUIT AND WIRING CONNECTED TO SHUNT TRIP CIRCUIT BREAKERS IN 480/277V AND 208/120V PANELS.

PROVIDE ALL POWER, EQUIPMENT AND LIGHTING ASSOCIATED WITH THEATRICAL LIGHTING SYSTEM

**FITNESS / LOCKER ROOM
POWER CONNECTIONS NOTES**

PROVIDE 20A GFCI 120V POWER FEED WITH 2#10, 1810G, 3/4" VC, VIA OVERHEAD CONDUIT AND HARDWIRED CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 6 HAND DRYERS

PROVIDE 20A 120V POWER FEED WITH 2#10, 1810G, 3/4" VC, VIA OVERHEAD CONDUIT AND GFCI RECEPTACLE FOR THE FOLLOWING EQUIPMENT:

- 8 GFCI RECEPTACLES MOUNTED AT SINKS
- 4 HYDRO THERAPY TUBS IN TRAINERS AREAS
- 4 ICE MACHINES
- 4 TREAD MILLS
- 4 ELLIPTICAL TRAINER MACHINES

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

- GENERAL LIGHTING TYPES:**
1. LR1 RECESSED LENSED LED
 2. LS1 HIGH BAY LED STRIP
 3. LS2 LED STRIP
 4. LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 5. LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
 6. LSW1 LED EXTERIOR SCOCNE
 7. LW1 LED LINEAR WITH OPAL DIFFUSER AND INTEGRAL OCCUPANCY SENSOR

- GENERAL POWER NOTES:**
1. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH MECHANICAL EQUIPMENT. REFER TO MECHANICAL DRAWINGS.
 2. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH PLUMBING EQUIPMENT. REFER TO PLUMBING DRAWINGS.
 3. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FIRE PROTECTION EQUIPMENT. REFER TO FIRE PROTECTION DRAWINGS.
 4. PROVIDE ALL POWER RACEWAYS AND CONNECTIONS ASSOCIATED WITH DIVISION 27 SECTIONS INCLUDING TELECOMMUNICATIONS, CCTV, ACCESS CONTROL, SECURITY CABLE TRAYS RACKS AND GROUNDING. REFER TO DIVISION 27 DRAWINGS.
 5. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FURNITURE, FIXTURES AND EQUIPMENT. REFER TO FURNITURE, FIXTURES AND EQUIPMENT DRAWINGS.

- GENERAL NOTES:**
1. PROVIDE 2 SWITCH PACKS PER CLASSROOM FOR ALL CLASSROOM CONTROLLED RECEPTACLES.
 2. PROVIDE PAC BOX AT CLASSROOM DIGITAL DISPLAYS
 3. PROVIDE CIRCUIT ABOVE CLASSROOM CEILING FOR FUTURE SOUND AMPLIFICATION SYSTEM.
 4. PROVIDE SWITCHPACK AND CIRCUIT FOR TABLE CHARGERS IN ALL CLASSROOMS.
 5. PROVIDE 4 SWITCH PACKS FOR 4 ZONES OF LIGHTING CONTROL FOR ALL CLASSROOMS.

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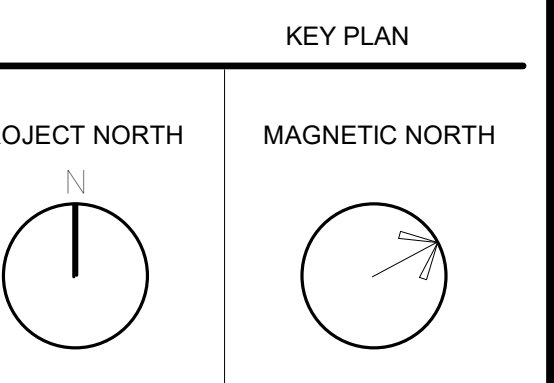
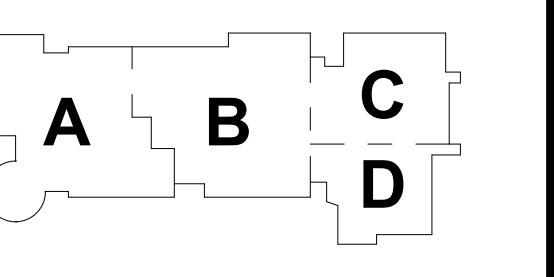
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MSBA
SCHEMATIC
DESIGN
SUBMITTAL

JUNE 17, 2021



**ELECTRICAL
FIRST FLOOR
PLAN - PLAN
EAST**

Scale: As indicated
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021

E1-1-1E

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KITCHEN / SERVERY CAFETERIA POWER CONNECTIONS NOTES

PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#1C, VIA FLOOR BOX TO A 120V 20A DUPLEX RECEPTACLE SPACED ON A 10 FOOT BY 10 FOOT GRID FOR THE FOLLOWING AREAS:

- DINING AREA

PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#1C, VIA FLOOR BOX TO A 120V 20A GFCI DUPLEX RECEPTACLE FOR THE FOLLOWING EQUIPMENT:

- DINING AREA

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH KITCHEN EQUIPMENT; REFER TO FOOD SERVICE EQUIPMENT DRAWINGS.

CARPENTRY POWER CONNECTIONS NOTES

PROVIDE 30A 480/277V 3PHASE 4WIRE POWER FEED WITH 4#10, 1#10G, 1#1C, VIA FLOOR TO A 600V 30A FUSED DISCONNECT SWITCH FUSED AT 30A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 2 DRILL PRESS
- 2 JOINER
- WIRE BELT SANDER
- PLANER/SURFACER
- LATHE

PROVIDE 40A 480/277V 3PHASE 4WIRE POWER FEED WITH 4#8, 1#10G, 1#1C, VIA FLOOR TO A 600V 40A FUSED DISCONNECT SWITCH FUSED AT 30A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR CNC ROUTING TABLE.

PROVIDE 100A 480/277V 3PHASE 4WIRE POWER FEED WITH 4#30, 1#4G, 2#1C, VIA FLOOR TO A 600V 100A WEATHERPROOF FUSED DISCONNECT SWITCH FUSED AT 100A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR DUST COLLECTOR.

PROVIDE 30A 208/120V 3PHASE 4WIRE POWER FEED WITH 4#10, 1#10G, 1#1C, VIA FLOOR TO A 240V 30A FUSED DISCONNECT SWITCH FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 2 UPRIGHT VERTICAL BELT SANDER
- TABLE SAW ACCESSORY SLIDING TABLE
- TABLE SAW
- STORAGE RACK FOR LUMBER
- SPINDLE SANDER
- SHAPER
- PANEL SAW
- 2 MITER SAW
- DRILL PRESS
- 2 BAND SAW
- DISC BELT SANDER

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

PROVIDE 6 EMERGENCY POWER OFF (EPO) PUSHBUTTON STATIONS CONDUIT AND WIRING CONNECTED TO SHUNT TRIP CIRCUIT BREAKERS IN 480/277V AND 208/120V PANELS.

PLUMBING AND PIPEFITTING POWER CONNECTIONS NOTES

PROVIDE 20A 208/120V 3PHASE 4WIRE POWER FEED WITH 4#10, 1#10G, 1#1C, VIA FLOOR TO A 240V 20A FUSED DISCONNECT SWITCH FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- SAND BLAST CABINET
- PIPE THREADING MACHINE
- PIPE TREADING SYSTEM
- 2 OIL FIRED BOILERS
- VEISSMAN GAS-FIRED WATER HEATER
- VEISSMAN COMB BOILER
- NEW YORKER BOILER
- 2 IRC BOILER
- 2 WATER HEATERS

PROVIDE 30A 480/277V 3PHASE 4WIRE POWER FEED WITH 4#10, 1#10G, 1#1C, VIA FLOOR TO A 600V 30A FUSED DISCONNECT SWITCH FUSED AT 30A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- OVERHEAD DOORS
- AIR COMPRESSOR

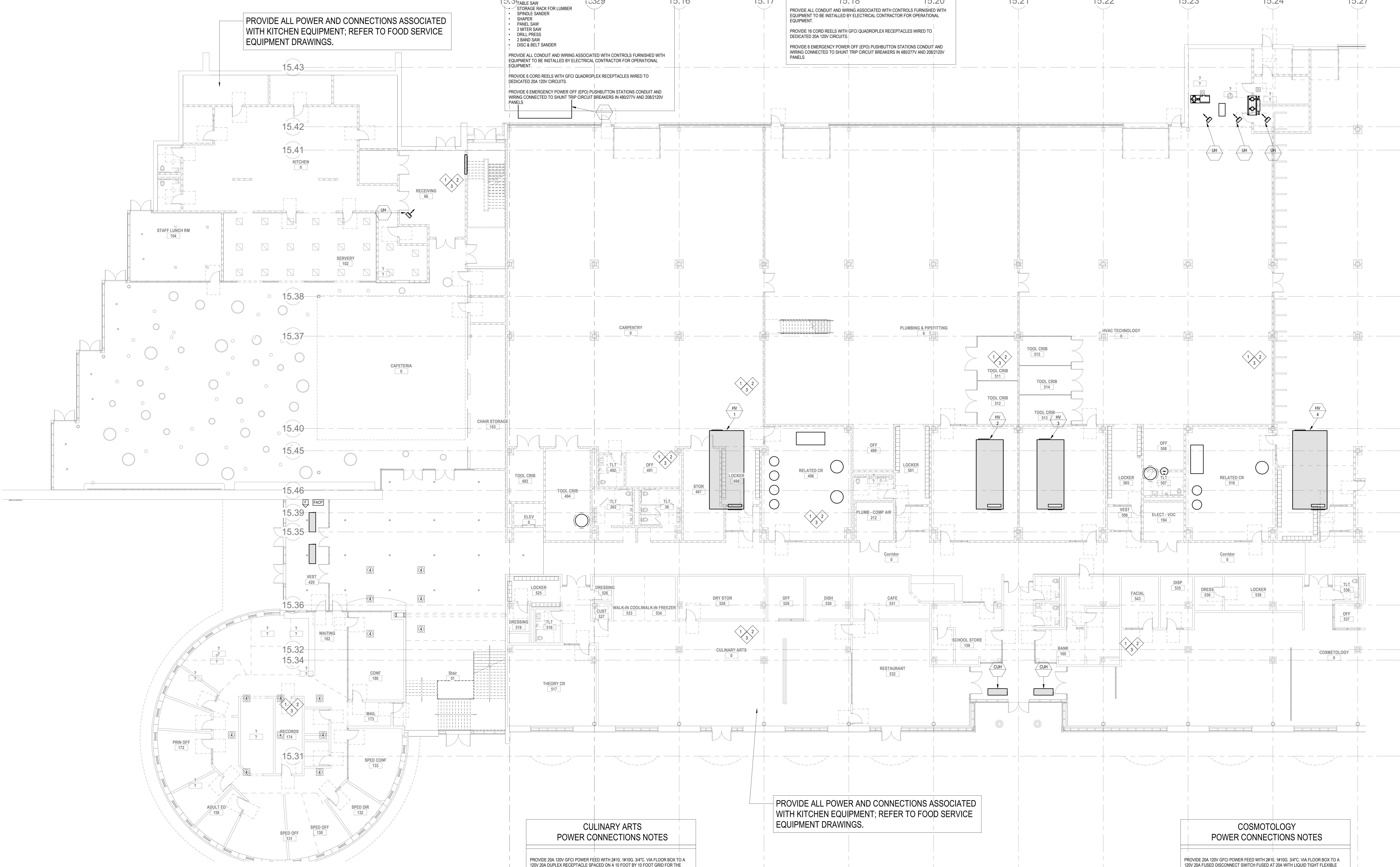
PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 16 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

PROVIDE 6 EMERGENCY POWER OFF (EPO) PUSHBUTTON STATIONS CONDUIT AND WIRING CONNECTED TO SHUNT TRIP CIRCUIT BREAKERS IN 480/277V AND 208/120V PANELS.

REFER TO FOURTH FLOOR PLANS FOR TYPICAL CORRIDOR LIGHTING LAYOUTS

- 1 480/277V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS
- 2 DRY TYPE TRANSFORMER LOCATION; REFER TO ONE-LINE DIAGRAMS
- 3 208/120V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS



- GENERAL LIGHTING TYPES:**
- LS1 RECESSED LENSED LED
 - LS1 HIGH BAY LED STRIP
 - LS2 LED STRIP
 - LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 - LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
 - LSW1 LED EXTERIOR SCENCE
 - LW1 LED LINEAR WITH OPAL DIFFUSER AND INTEGRAL OCCUPANCY SENSOR

CULINARY ARTS POWER CONNECTIONS NOTES

PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#1C, VIA FLOOR BOX TO A 120V 20A DUPLEX RECEPTACLE SPACED ON A 10 FOOT BY 10 FOOT GRID FOR THE FOLLOWING AREAS:

- DINING AREA

PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#1C, VIA FLOOR BOX TO A 120V 20A GFCI DUPLEX RECEPTACLE FOR THE FOLLOWING EQUIPMENT:

- DINING AREA

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

- GENERAL POWER NOTES:**
- PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH MECHANICAL EQUIPMENT; REFER TO MECHANICAL DRAWINGS.
 - PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH PLUMBING EQUIPMENT; REFER TO PLUMBING DRAWINGS.
 - PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FIRE PROTECTION EQUIPMENT; REFER TO FIRE PROTECTION DRAWINGS.
 - PROVIDE ALL POWER RACEWAYS AND CONNECTIONS ASSOCIATED WITH DIVISION 27 SECTIONS INCLUDING TELECOMMUNICATIONS, CCTV, ACCESS CONTROL, SECURITY CABLE TRAYS/RACKS AND GROUNDING; REFER TO DIVISION 27 DRAWINGS.
 - PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FURNITURE, FIXTURES AND EQUIPMENT; REFER TO FURNITURE, FIXTURES AND EQUIPMENT DRAWINGS.

COSMETOLOGY POWER CONNECTIONS NOTES

PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#1C, VIA FLOOR BOX TO A 120V 20A FUSED DISCONNECT SWITCH FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

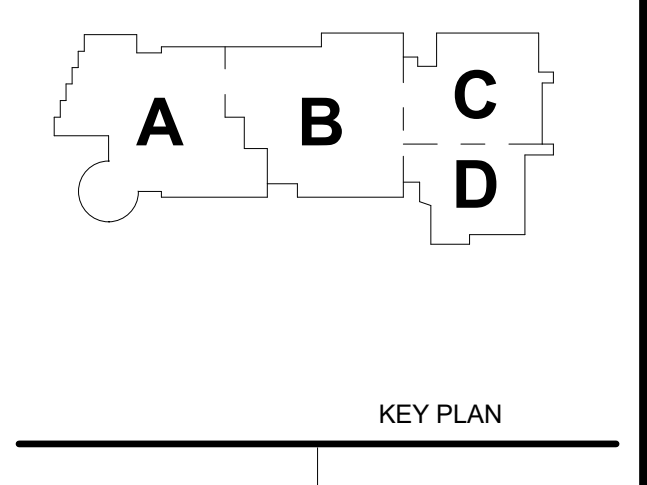
- 3 SINGLE SEATED STYLING STATIONS
- 6 PORTABLE DRYERS
- 6 ROLLER BALL HAIR PROCESSORS
- 6 FENDURE CHAIRS
- 8 VENTED MANICURE TABLE
- HOT TOWEL CABINET
- 2 DISPLAY CASES
- RECEPTION DESK

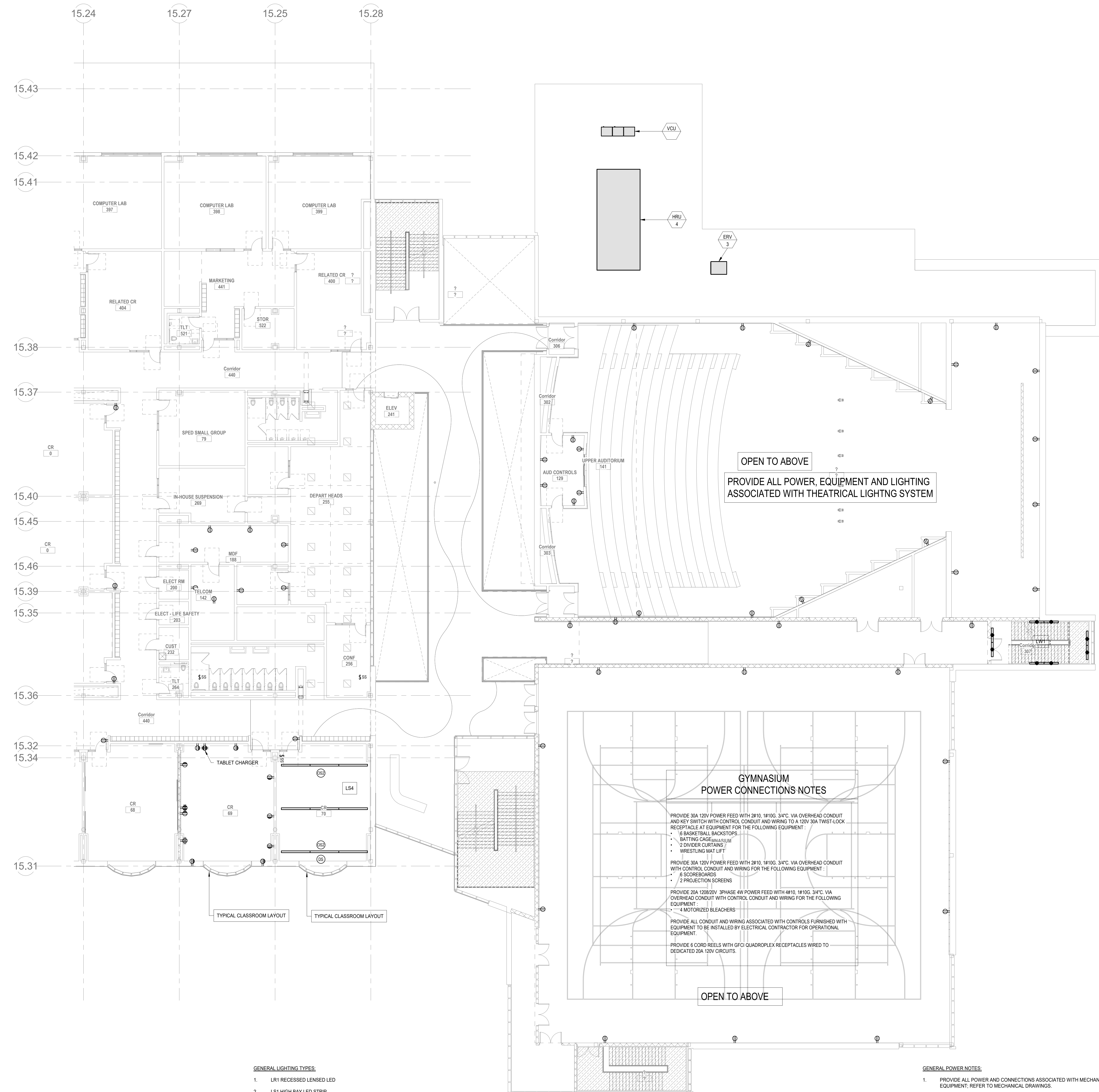
PROVIDE (2) 20A 120V GFCI POWER FEEDS WITH (2) 2#10, 1#10G, 3#1C, VIA FLOOR BOX TO (2) 20A FUSED DISCONNECT SWITCHES FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 23 DUAL SEATED STYLING STATIONS

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.





- GENERAL LIGHTING TYPES:**
1. LR1 RECESSED LENSED LED
 2. LS1 HIGH BAY LED STRIP
 3. LS2 LED STRIP
 4. LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 5. LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
 6. LSW1 LED EXTERIOR SCENCE
 7. LW1 LED LINEAR WITH OPAL DIFFUSER AND INTEGRAL OCCUPANCY SENSOR

GYMNASIUM POWER CONNECTIONS NOTES

PROVIDE 30A 120V POWER FEED WITH 2#10, 1#10G, 3#4C, VIA OVERHEAD CONDUIT AND KEY SWITCH WITH CONTROL CONDUIT AND WIRING TO A 120V 30A TWIST-LOCK RECEPTACLE AT EQUIPMENT FOR THE FOLLOWING EQUIPMENT:

- 16 BASKETBALL BACKTOPS
- 2 BATTING CAGE WALLS
- 2 DIVIDER CURTAINS
- WRESTLING MAT LIFT

PROVIDE 30A 120V POWER FEED WITH 2#10, 1#10G, 3#4C, VIA OVERHEAD CONDUIT WITH CONTROL CONDUIT AND WIRING FOR THE FOLLOWING EQUIPMENT:

- 6 SCOREBOARDS
- 2 PROJECTION SCREENS

PROVIDE 20A 120/208V, 3-PHASE 4W POWER FEED WITH 4#10, 1#10G, 3#4C, VIA OVERHEAD CONDUIT WITH CONTROL CONDUIT AND WIRING FOR THE FOLLOWING EQUIPMENT:

- 4 MOTORIZED BLEACHERS

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

- GENERAL POWER NOTES:**
1. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH MECHANICAL EQUIPMENT. REFER TO MECHANICAL DRAWINGS.
 2. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH PLUMBING EQUIPMENT. REFER TO PLUMBING DRAWINGS.
 3. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FIRE PROTECTION EQUIPMENT. REFER TO FIRE PROTECTION DRAWINGS.
 4. PROVIDE ALL POWER RACEWAYS AND CONNECTIONS ASSOCIATED WITH DIVISION 27 SECTIONS INCLUDING TELECOMMUNICATIONS, CCTV, ACCESS CONTROL, SECURITY CABLE TRAYS BACKS AND GROUNDING. REFER TO DIVISION 27 DRAWINGS.
 5. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FURNITURE, FIXTURES AND EQUIPMENT. REFER TO FURNITURE, FIXTURES AND EQUIPMENT DRAWINGS.

- GENERAL NOTES:**
1. PROVIDE 2 SWITCH PACKS PER CLASSROOM FOR ALL CLASSROOM CONTROLLED RECEPTACLES.
 2. PROVIDE PAC BOX AT CLASSROOM DIGITAL DISPLAYS.
 3. PROVIDE CIRCUIT ABOVE CLASSROOM CEILING FOR FUTURE SOUND AMPLIFICATION SYSTEM.
 4. PROVIDE SWITCH-PACK AND CIRCUIT FOR TABLE CHARGERS IN ALL CLASSROOMS.
 5. PROVIDE 4 SWITCH PACKS FOR 4 ZONES OF LIGHTING CONTROL FOR ALL CLASSROOMS.



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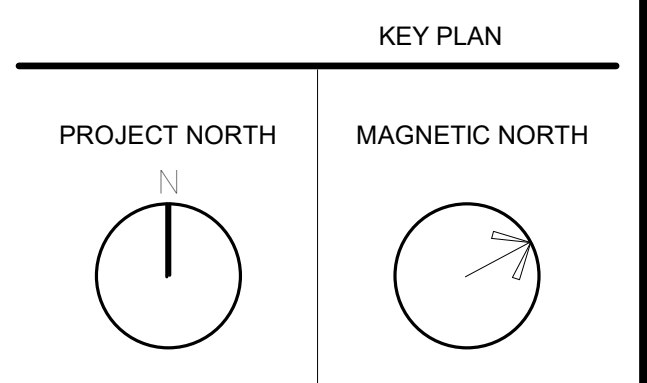
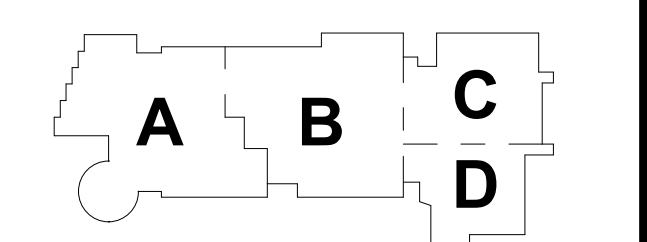
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MSBA SCHEMATIC DESIGN SUBMITTAL
JUNE 17, 2021



ELECTRICAL SECOND FLOOR PLAN - PLAN EAST

Scale: As indicated
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021
E1-1-2E

**DESIGN AND VISUAL COMMUNICATIONS
POWER CONNECTIONS NOTES**

PROVIDE DEDICATED CIRCT 20A 120V POWER FEED WITH 2#10, 1#10G, 3#14C, VIA FLOOR BOX TO A 120V 20A FIRE RATED POKE THROUGH DEVICE SPACED 10 FEET BY 10 FEET FOR THE FOLLOWING EQUIPMENT:

- COMPUTER TABLES
- PLOTTER
- LASER CUTTER

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

**COMPUTER LABORATORY
POWER CONNECTIONS NOTES**

PROVIDE DEDICATED CIRCT 20A 120V POWER FEED WITH 2#10, 1#10G, 3#14C, VIA FLOOR BOX TO A 120V 20A FIRE RATED POKE THROUGH DEVICE SPACED 10 FEET BY 10 FEET FOR THE FOLLOWING EQUIPMENT:

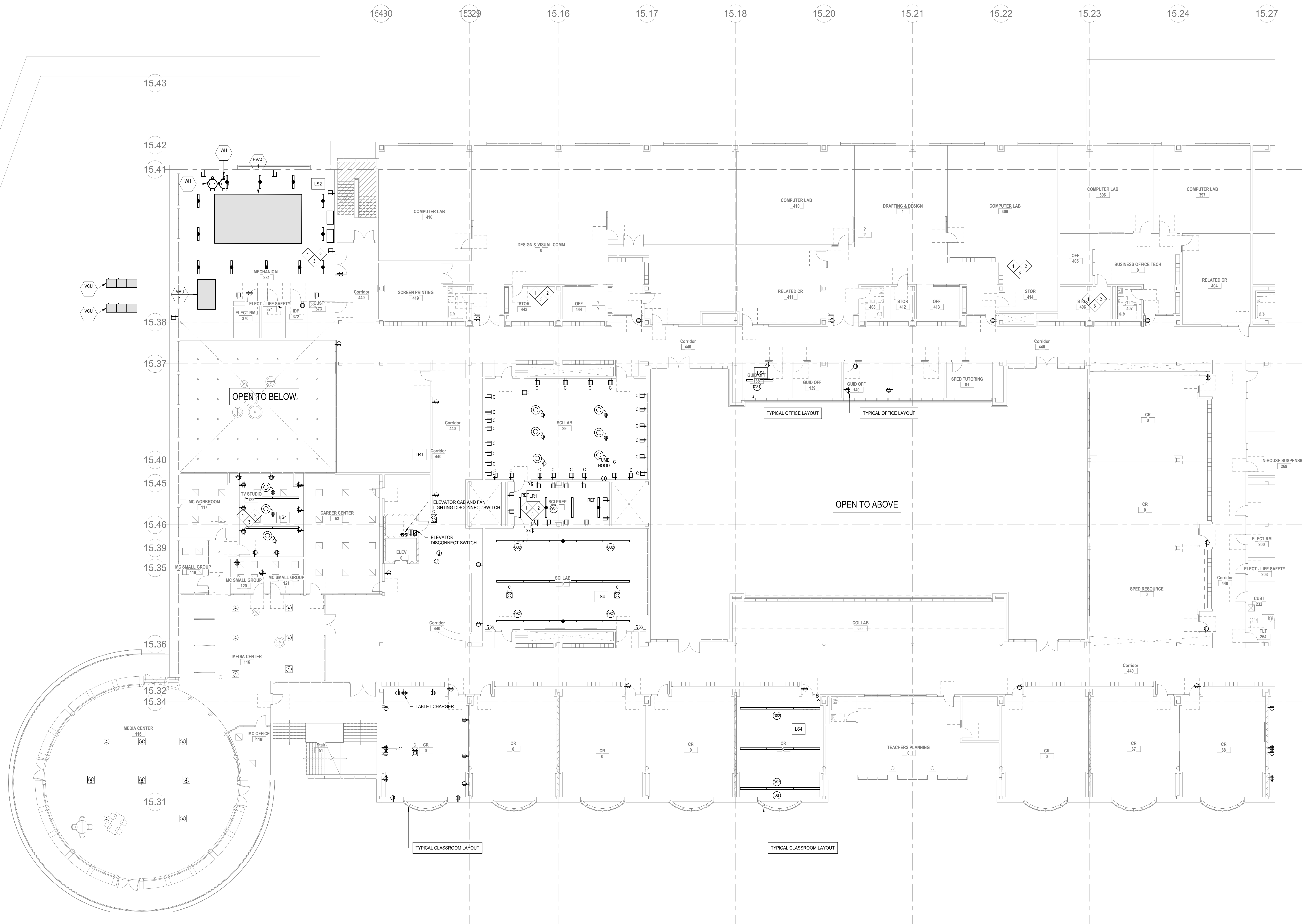
- COMPUTER TABLES
- PLOTTER
- LASER CUTTER

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

REFER TO FOURTH FLOOR PLANS FOR TYPICAL CORRIDOR LIGHTING LAYOUTS

- 1 480277V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS
- 2 DRY TYPE TRANSFORMER LOCATION; REFER TO ONE-LINE DIAGRAMS
- 3 208/120V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS



- GENERAL LIGHTING TYPES:**
1. LR1 RECESSED LENSED LED
 2. LS1 HIGH BAY LED STRIP
 3. LS2 LED STRIP
 4. LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 5. LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
 6. LSW1 LED EXTERIOR SCONCE
 7. LW1 LED LINEAR WITH OPAL DIFFUSER AND INTEGRAL OCCUPANCY SENSOR

- GENERAL POWER NOTES:**
1. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH MECHANICAL EQUIPMENT; REFER TO MECHANICAL DRAWINGS.
 2. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH PLUMBING EQUIPMENT; REFER TO PLUMBING DRAWINGS.
 3. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FIRE PROTECTION EQUIPMENT; REFER TO FIRE PROTECTION DRAWINGS.
 4. PROVIDE ALL POWER RACEWAYS AND CONNECTIONS ASSOCIATED WITH DIVISION 27 SECTIONS INCLUDING TELECOMMUNICATIONS, CCTV, ACCESS CONTROL, SECURITY CABLE TRAYS/RACKS AND GROUNDING; REFER TO DIVISION 27 DRAWINGS.
 5. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FURNITURE, FIXTURES AND EQUIPMENT; REFER TO FURNITURE, FIXTURES AND EQUIPMENT DRAWINGS.

- GENERAL NOTES:**
1. PROVIDE 2 SWITCH PACKS PER CLASSROOM FOR ALL CLASSROOM CONTROLLED RECEPTACLES.
 2. PROVIDE PAC BOX AT CLASSROOM DIGITAL DISPLAYS.
 3. PROVIDE CIRCUIT ABOVE CLASSROOM CEILING FOR FUTURE SOUND AMPLIFICATION SYSTEM.
 4. PROVIDE SWITCHPACK AND CIRCUIT FOR TABLE CHARGERS IN ALL CLASSROOMS.
 5. PROVIDE 4 SWITCH PACKS FOR 4 ZONES OF LIGHTING CONTROL FOR ALL CLASSROOMS.

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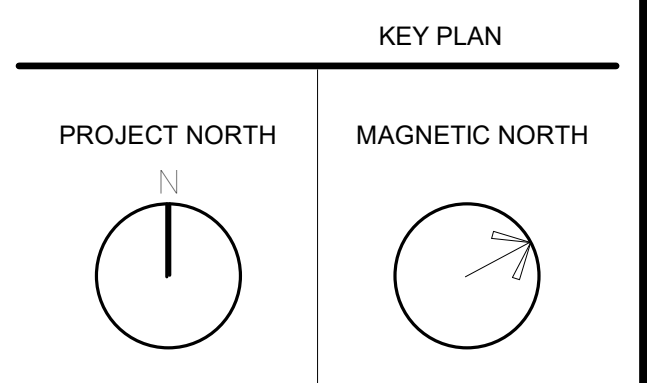
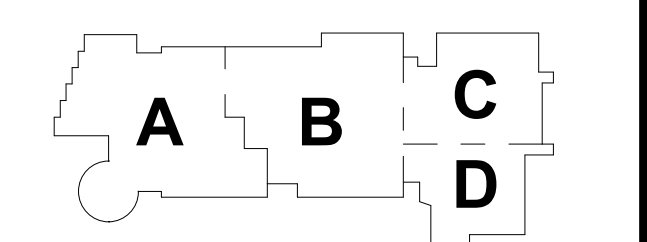
**NORTHEAST
METRO TECH**

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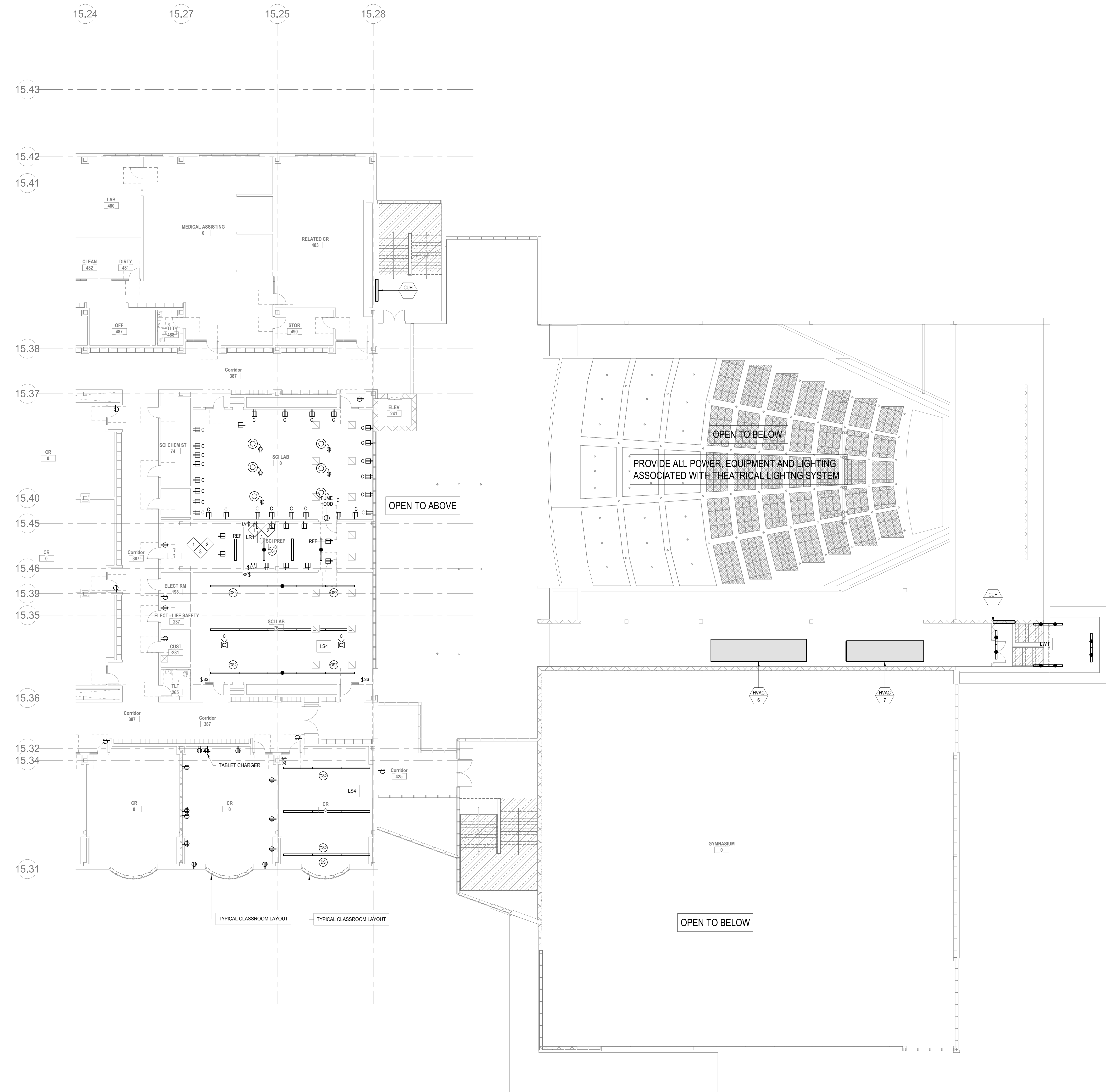
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SCHEMATIC
DESIGN
SUBMITTAL
JUNE 17, 2021



**ELECTRICAL
SECOND FLOOR
PLAN - PLAN
WEST**

Scale: As indicated
Job No.: 0520409
Drawn By: DRA
Date: JUNE 17, 2021

E1-1-2W



- GENERAL LIGHTING TYPES:**
1. LR1 RECESSED LENSED LED
 2. LS1 HIGH BAY LED STRIP
 3. LS2 LED STRIP
 4. LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 5. LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
 6. LSW1 LED EXTERIOR SCONCE
 7. LW1 LED LINEAR WITH OPAL DIFFUSER AND INTEGRAL OCCUPANCY SENSOR

- GENERAL POWER NOTES:**
1. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH MECHANICAL EQUIPMENT. REFER TO MECHANICAL DRAWINGS.
 2. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH PLUMBING EQUIPMENT. REFER TO PLUMBING DRAWINGS.
 3. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FIRE PROTECTION EQUIPMENT. REFER TO FIRE PROTECTION DRAWINGS.
 4. PROVIDE ALL POWER RACEWAYS AND CONNECTIONS ASSOCIATED WITH DIVISION 27 SECTIONS INCLUDING TELECOMMUNICATIONS, CCTV, ACCESS CONTROL, SECURITY CABLE TRAYS/RACKS AND GROUNDING. REFER TO DIVISION 27 DRAWINGS.
 5. PROVIDE ALL POWER AND CONNECTIONS ASSOCIATED WITH FURNITURE, FIXTURES AND EQUIPMENT. REFER TO FURNITURE, FIXTURES AND EQUIPMENT DRAWINGS.

- GENERAL NOTES:**
1. PROVIDE 2 SWITCH PACKS PER CLASSROOM FOR ALL CLASSROOM CONTROLLED RECEPTACLES.
 2. PROVIDE PAC BOX AT CLASSROOM DIGITAL DISPLAYS.
 3. PROVIDE CIRCUIT ABOVE CLASSROOM CEILING FOR FUTURE SOUND AMPLIFICATION SYSTEM.
 4. PROVIDE SWITCHPACK AND CIRCUIT FOR TABLE CHARGERS IN ALL CLASSROOMS.
 5. PROVIDE 4 SWITCH PACKS FOR 4 ZONES OF LIGHTING CONTROL FOR ALL CLASSROOMS.



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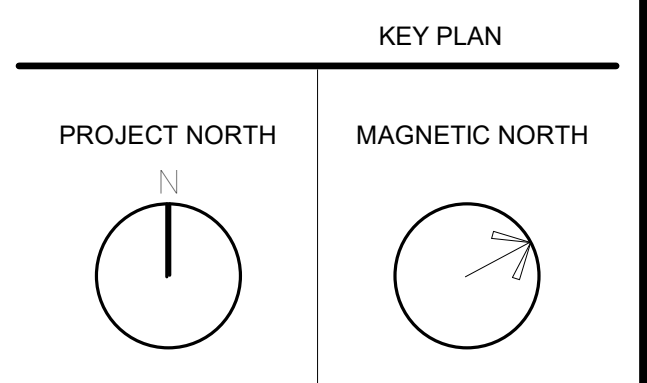
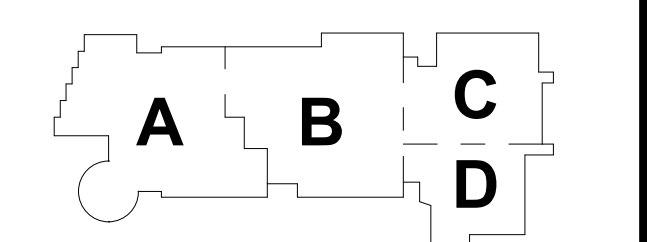
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JUNE 17, 2021



ELECTRICAL THIRD FLOOR PLAN - PLAN EAST

Scale: 3/32" = 1'-0"
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021
E1-1-3E

HEALTH ASSISTING POWER CONNECTIONS NOTES

PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#4C, VIA FLOOR BOX TO A 120V 20A FUSED DISCONNECT SWITCH FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 19 DENTAL CHAIRS
- PANO X-RAY

PROVIDE 20A 120V GFCI POWER FEEDS WITH (2) 2#10, 1#10G, 3#4C, VIA OVERHEAD CONDUIT 120V 20A GFCI RECEPTACLE FOR THE FOLLOWING EQUIPMENT:

- VACUUM PUMP
- AUTOClave
- 2 ULTRASONIC CLEANERS
- 2 MODEL TRIMMERS
- 2 DENTAL LATHES
- 2 X-RAY CHAIRS
- INTRINSICAL FILM PROCESSOR
- 2 INSTRUMENT WASHERS

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

MEDICAL ASSISTING POWER CONNECTIONS NOTES

PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#4C, VIA FLOOR BOX TO A 120V 20A FUSED DISCONNECT SWITCH FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:

- 19 DENTAL CHAIRS
- PANO X-RAY

PROVIDE 20A 120V GFCI POWER FEEDS WITH (2) 2#10, 1#10G, 3#4C, VIA OVERHEAD CONDUIT 120V 20A GFCI RECEPTACLE FOR THE FOLLOWING EQUIPMENT:

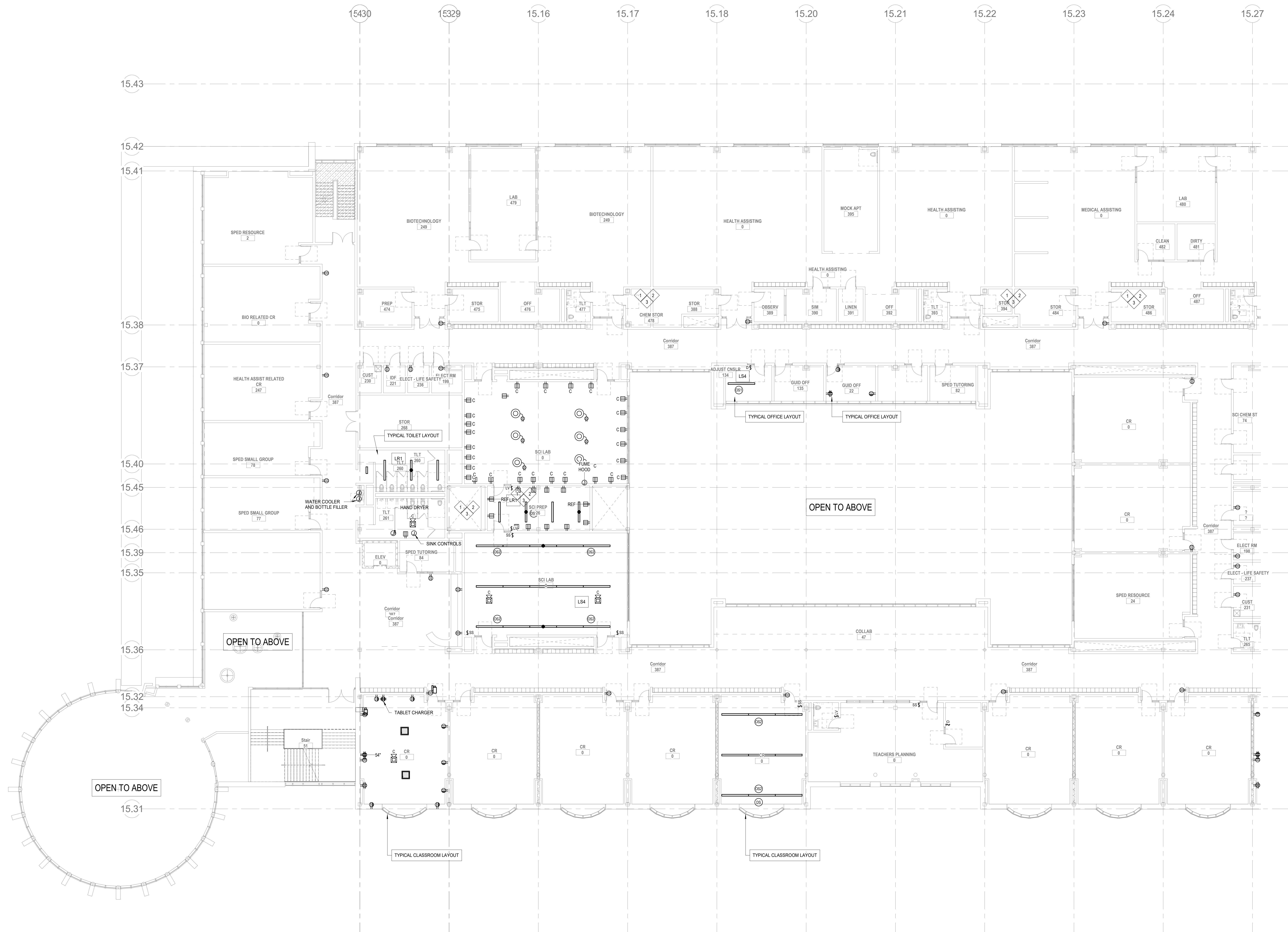
- VACUUM PUMP
- AUTOClave
- 2 ULTRASONIC CLEANERS
- 2 MODEL TRIMMERS
- 2 DENTAL LATHES
- 2 X-RAY CHAIRS
- INTRINSICAL FILM PROCESSOR
- 2 INSTRUMENT WASHERS

PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.

PROVIDE 6 CORD REELS WITH GFCI QUADROPLEX RECEPTACLES WIRED TO DEDICATED 20A 120V CIRCUITS.

REFER TO FOURTH FLOOR PLANS FOR TYPICAL CORRIDOR LIGHTING LAYOUTS

- 1 480277V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS
- 2 DRY TYPE TRANSFORMER LOCATION; REFER TO ONE-LINE DIAGRAMS
- 3 208/120V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS



- GENERAL LIGHTING TYPES:**
- LR1 RECESSED LENSED LED
 - LS1 HIGH BAY LED STRIP
 - LS2 LED STRIP
 - LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 - LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
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- PROVIDE 2 SWITCH PACKS PER CLASSROOM FOR ALL CLASSROOM CONTROLLED RECEPTACLES.
 - PROVIDE PAC BOX AT CLASSROOM DIGITAL DISPLAYS.
 - PROVIDE CIRCUIT ABOVE CLASSROOM CEILING FOR FUTURE SOUND AMPLIFICATION SYSTEM.
 - PROVIDE SWITCH-PACK AND CIRCUIT FOR TABLE CHARGERS IN ALL CLASSROOMS.
 - PROVIDE 4 SWITCH PACKS FOR 4 ZONES OF LIGHTING CONTROL FOR ALL CLASSROOMS.

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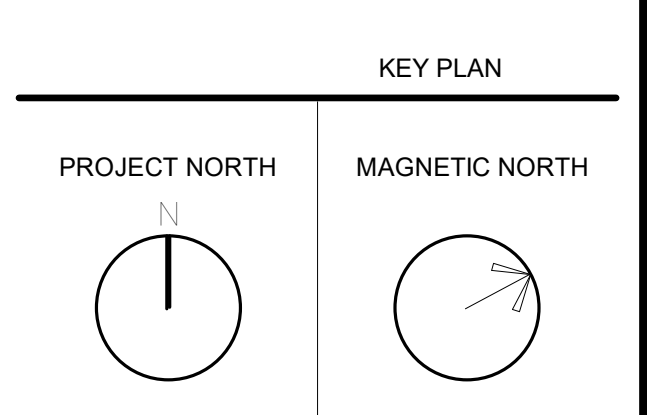
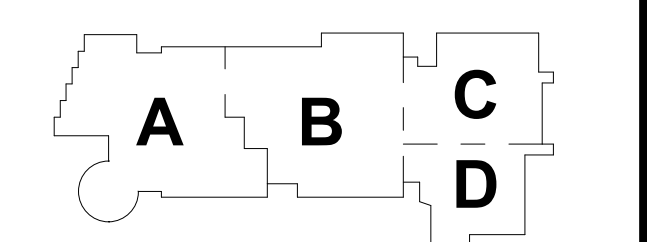
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BALA ENGINEERS

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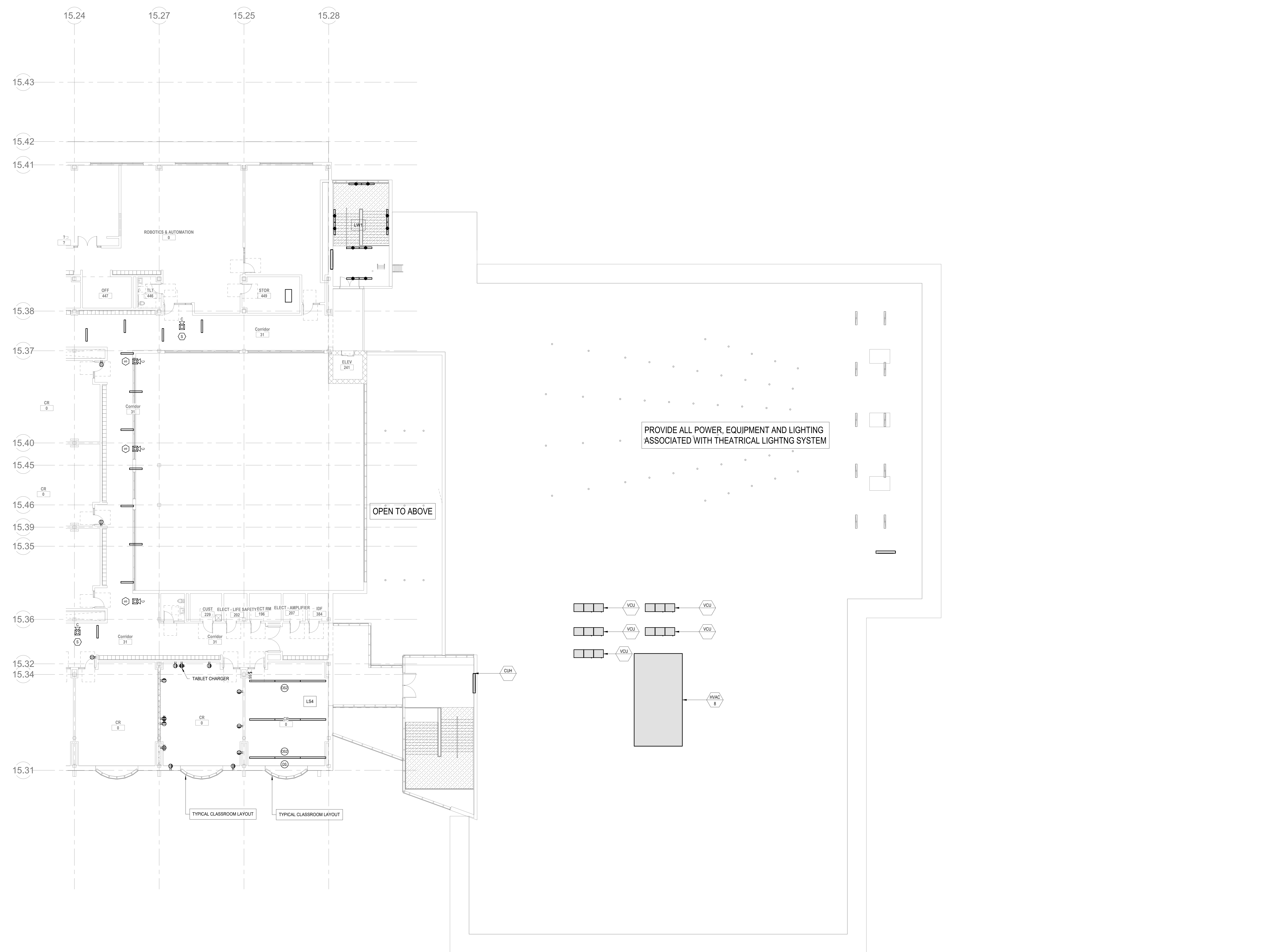
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 JUNE 17, 2021



ELECTRICAL THIRD FLOOR PLAN - PLAN WEST

Scale: As indicated
 Job No.: 6520409
 Drawn By: DRA
 Date: JUNE 17, 2021

E1-1-3W



- GENERAL LIGHTING TYPES:**
1. LR1 RECESSED LENSED LED
 2. LS1 HIGH BAY LED STRIP
 3. LS2 LED STRIP
 4. LS3 LED HIGH EFFICIENCY LINEAR PENDANT
 5. LS4 LED HIGH EFFICIENCY DECORATIVE LINEAR PENDANT
 6. LSW1 LED EXTERIOR SCENCE
 7. LW1 LED LINEAR WITH OPAL DIFFUSER AND INTEGRAL OCCUPANCY SENSOR

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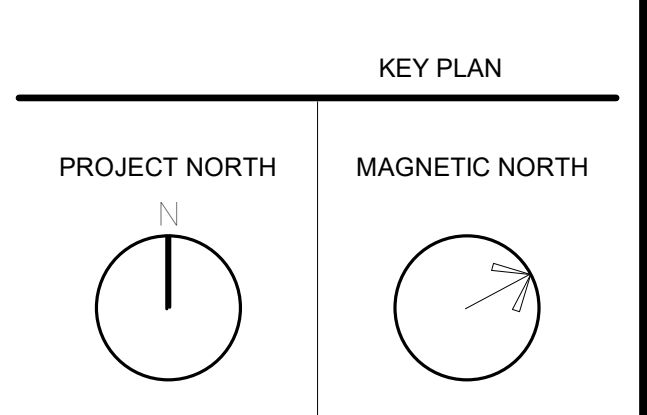
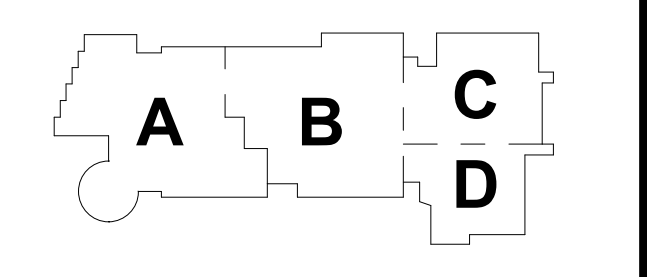
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ELECTRICAL FOURTH FLOOR PLAN - PLAN EAST

Scale: 3/32" = 1'-0"
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021

E1-1-4E

DENTAL ASSISTING POWER CONNECTIONS NOTES

REFER TO FOURTH FLOOR PLANS FOR TYPICAL CORRIDOR LIGHTING LAYOUTS

- PROVIDE 20A 120V GFCI POWER FEED WITH 2#10, 1#10G, 3#4C, VIA FLOOR BOX TO A 120V 20A FUSED DISCONNECT SWITCH FUSED AT 20A WITH LIQUID TIGHT FLEXIBLE CONNECTION FOR THE FOLLOWING EQUIPMENT:
- 19 DENTAL CHAIRS
 - 1 PANO X-RAY
- PROVIDE 20A 120V GFCI POWER FEEDS WITH (2) 2#10, 1#10G, 3#4C, VIA OVERHEAD CONDUIT 120V 20A GFCI RECEPTACLE FOR THE FOLLOWING EQUIPMENT:
- VACUUM PUMP
 - AUTOClave
 - 2 ULTRASONIC CLEANERS
 - 2 MODEL TRIMMERS
 - 2 DENTAL LATHEs
 - 2 X-RAY CHAIRS
 - INTRINSICAL FILM PROCESSOR
 - 2 INSTRUMENT WASHERS
- PROVIDE ALL CONDUIT AND WIRING ASSOCIATED WITH CONTROLS FURNISHED WITH EQUIPMENT TO BE INSTALLED BY ELECTRICAL CONTRACTOR FOR OPERATIONAL EQUIPMENT.
- PROVIDE 6 CORO REELS WITH GFCI QUADROPLEX RECEPTABLES WIRED TO DEDICATED 20A 120V CIRCUITS.

- 1 480277V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS
- 2 DRY TYPE TRANSFORMER LOCATION; REFER TO ONE-LINE DIAGRAMS
- 3 208/120V 3PH 4W PANEL LOCATION; REFER TO ONE-LINE DIAGRAMS



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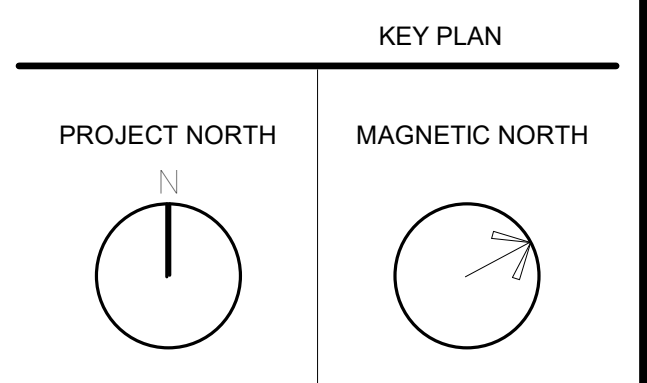
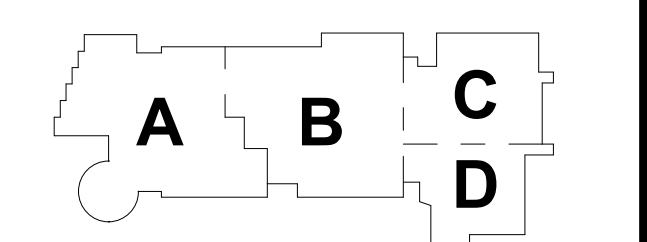
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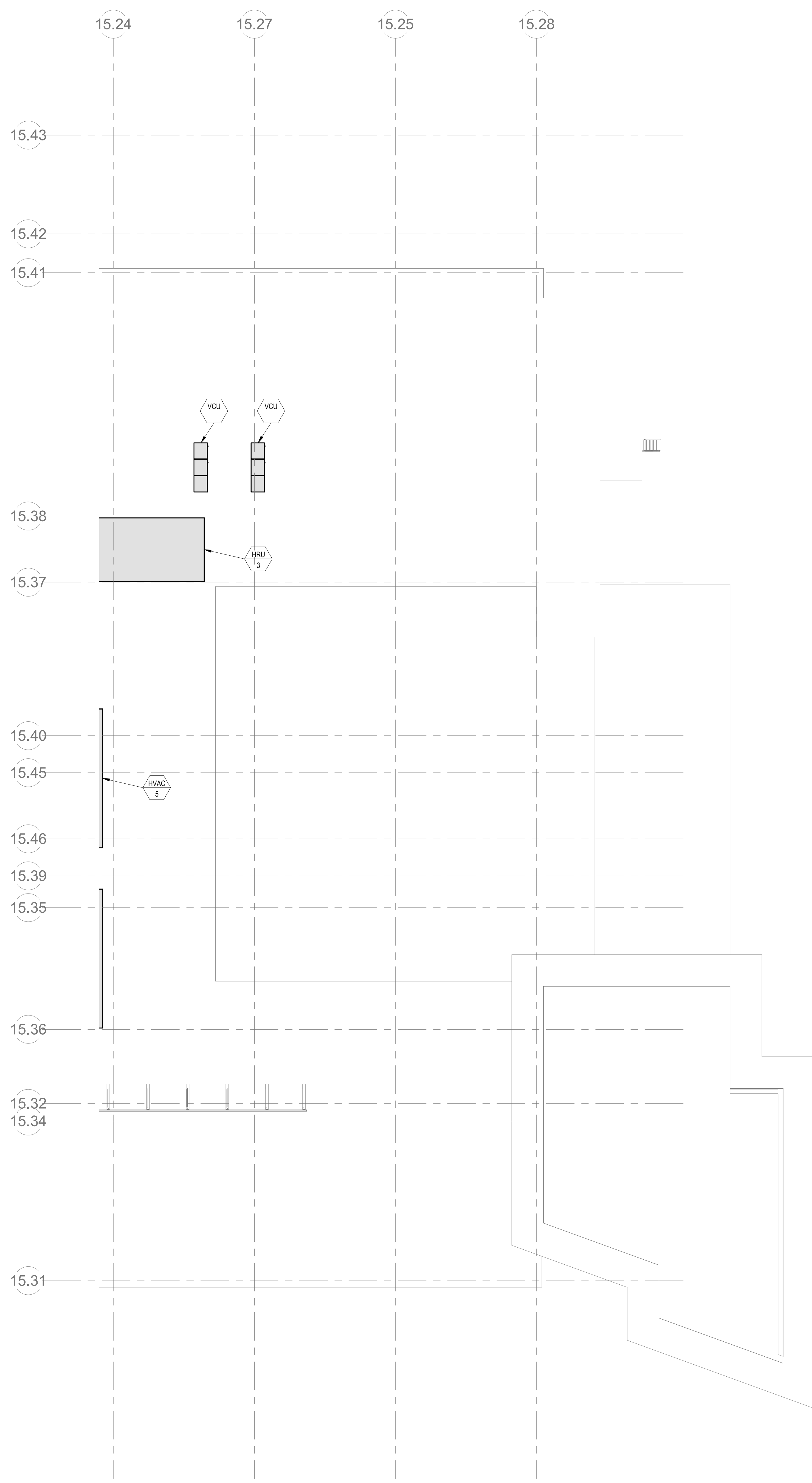
MSBA SCHEMATIC DESIGN SUBMITTAL
JUNE 17, 2021



ELECTRICAL FOURTH FLOOR PLAN - PLAN WEST

Scale: As indicated
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021

E1-1-4W



GENERAL POWER NOTES:

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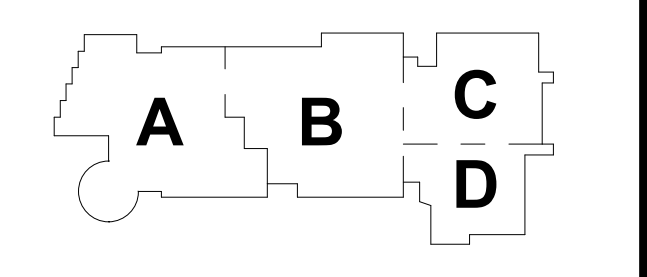
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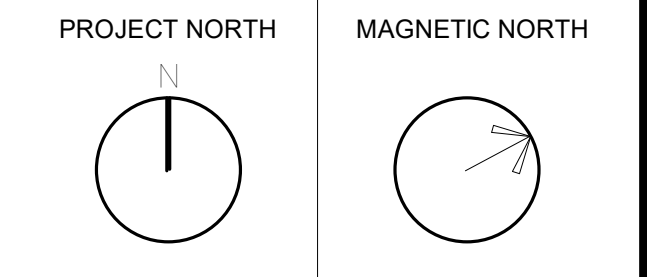
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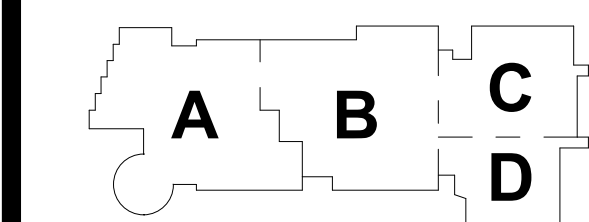


KEY PLAN



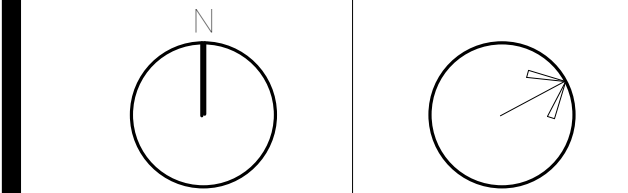
**ELECTRICAL
 ROOF PLAN -
 PLAN EAST**

Scale: 3/32" = 1'-0"
 Job No.: 6520409
 Drawn By: DRA
 Date: JUNE 17, 2021
E1-2-1E



KEY PLAN

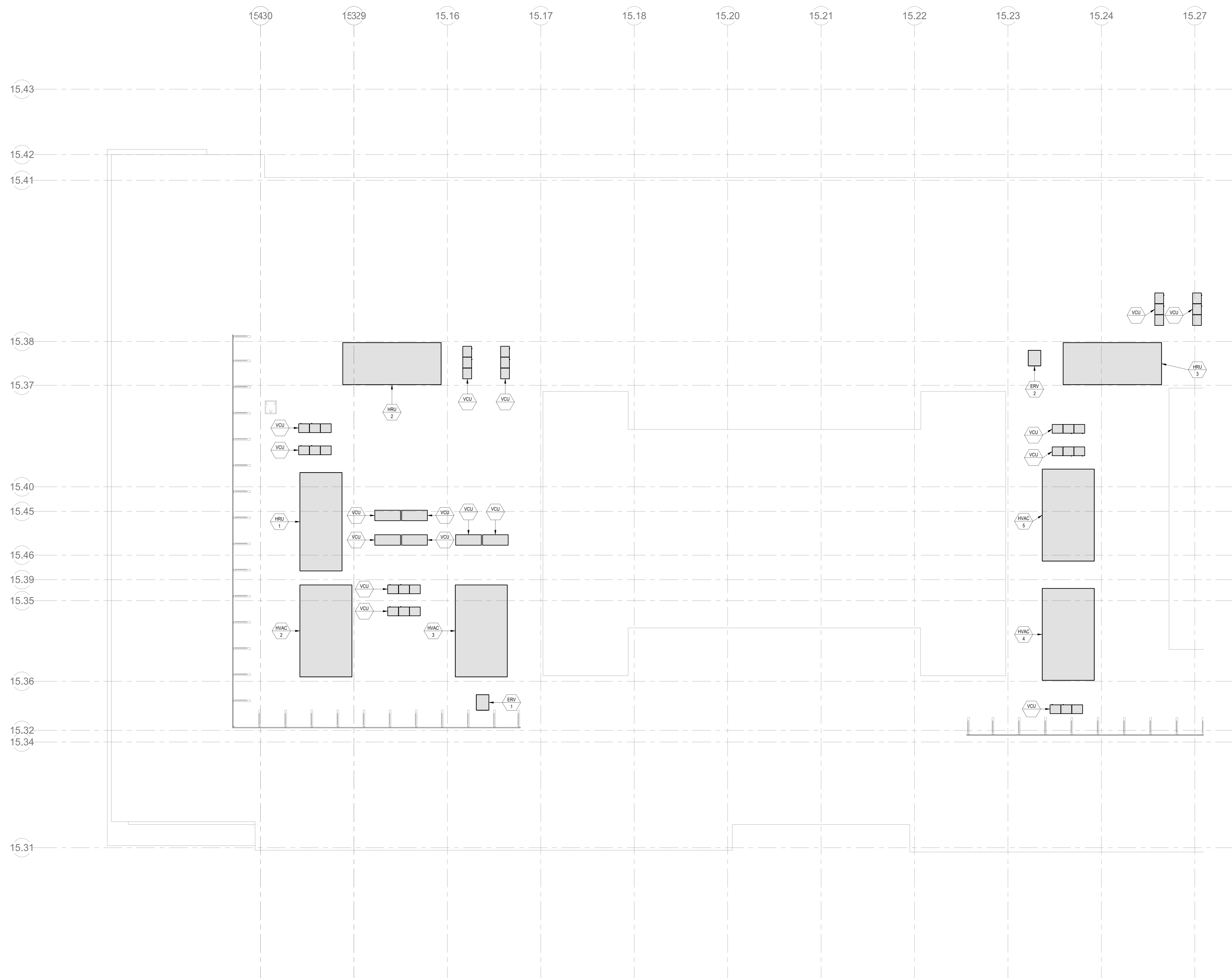
PROJECT NORTH MAGNETIC NORTH



ELECTRICAL
ROOF PLAN -
PLAN WEST

Scale: 3/32" = 1'-0"
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021

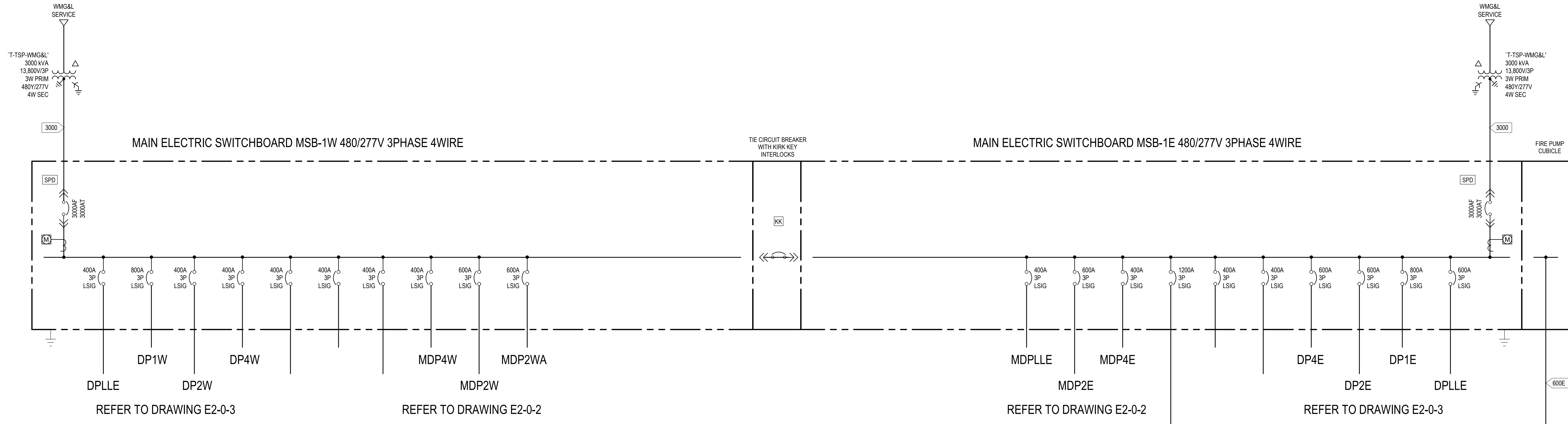
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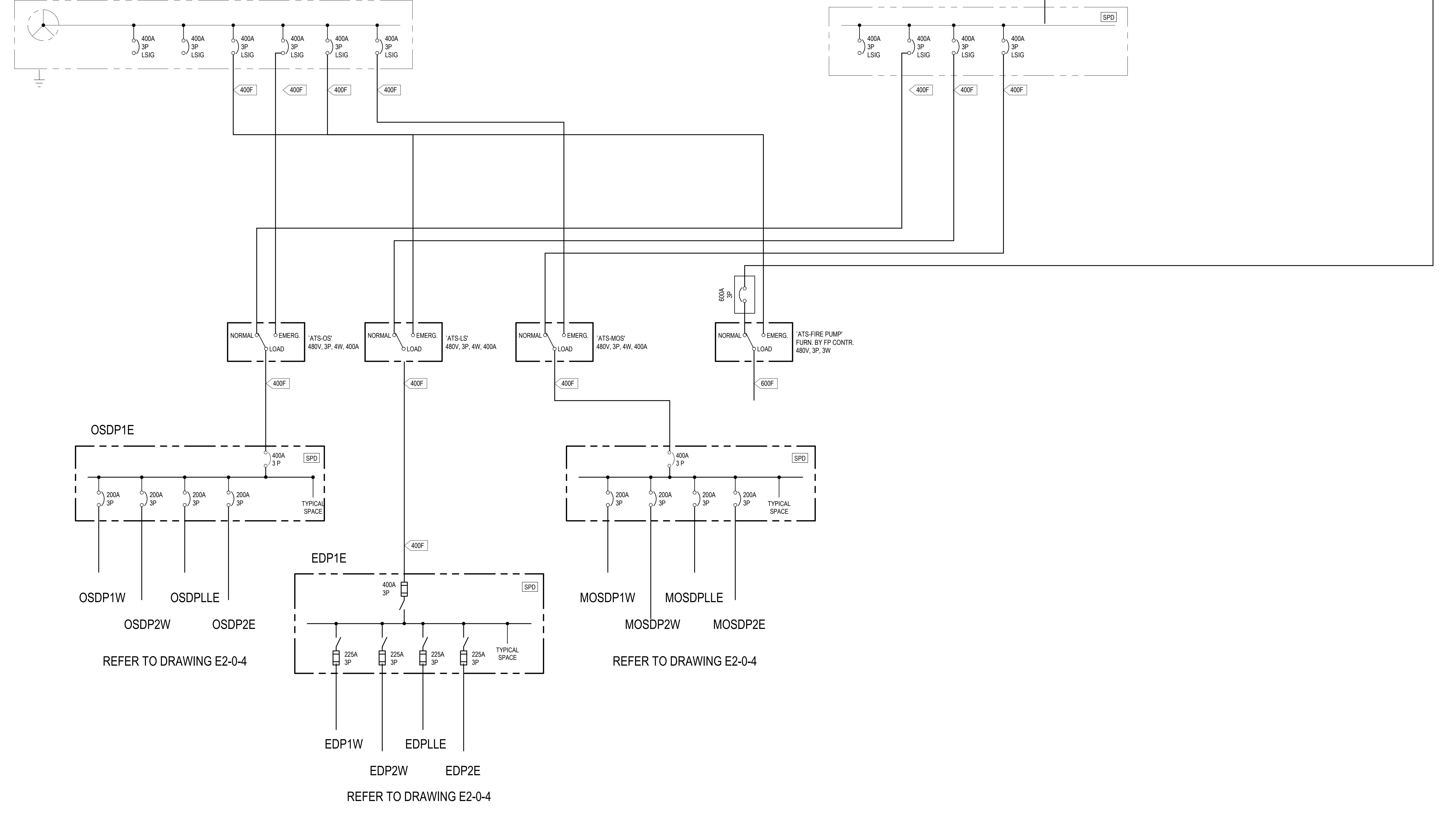
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675 KW 844 KVA 480/277V 3 PHASE 4 WIRE DIESEL GENERATOR IN WEATHERPROOF SOUND ATTENUATED HOUSING AND SKID BASE FUEL TANK WITH 48 HOUR CAPACITY MINIMUM



- ### ONE LINE GENERAL NOTES
- REFER TO CONDUIT AND FEEDER SCHEDULES ON DRAWING E2-0-5 FOR FEEDER SIZES.
 - INCREASE ALL FEEDER SIZES BASED ON LENGTH OF FEEDER TO LIMIT VOLTAGE DROP TO 2 PER CENT.
 - PROVIDE AN ENERGY MONITORING SYSTEM BY E-MON, D-MON, CLASS 2000 kWh METER, INTELLIMETER OR EQUAL FOR RECEPTACLES AND MECHANICAL EQUIPMENT POWER THAT ALLOWS USERS TO READ AND MONITOR ENERGY CONSUMPTION VIA ON-SITE OR OFF-SITE NON-DEDICATED COMPUTERS. SOFTWARE APPLICATION SHALL BE E-MON ENERGY SOFTWARE. OPTERGY PROTON AND OPTERGY 864 AS A STAND ALONE REPORTING SYSTEM. THE APPLICATION SHALL BE COMPATIBLE AND OPERATE IN CONJUNCTION THE BAS AND LIGHTING FRONT-END APPLICATION PACKAGES (MICROSOFT WINDOWS OPERATING SYSTEM).
 - PROVIDE 40AMPERE 480/277VOLT, 3 PHASE 4 WIRE 3-WAY MANUAL TRANSFER SWITCH FOR TEMPORARY ROLL-UP GENERATOR CONNECTION; ESL, TRIPLE SWITCH OR EQUAL. INSTALLATION SHALL COMPLY WITH NEC ARTICLE 705.3(F).
 - PROVIDE GENERATOR START CIRCUIT MINERAL INSULATED CABLE AS REQUIRED FROM ALL AUTOMATIC TRANSFER SWITCHES TO GENERATOR IN SEPARATE CONDUITS. WIRING SHALL BE MONITORED FOR STATUS AND OPERATIONS.
 - PROVIDE EMERGENCY FUEL SHUTOFF SWITCH MOUNTED ON GENERATOR ENCLOSURE. PROVIDE BREAK GLASS SWITCH WITH SHUTOFF SWITCH MOUNTED ON BUILDING WALL IN VICINITY OF GENERATOR AND AT FIRE ALARM CONTROL PANEL.

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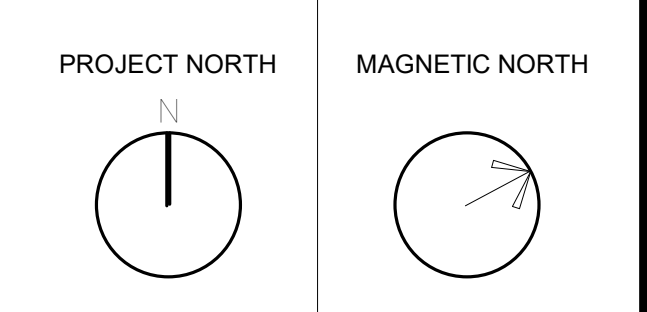
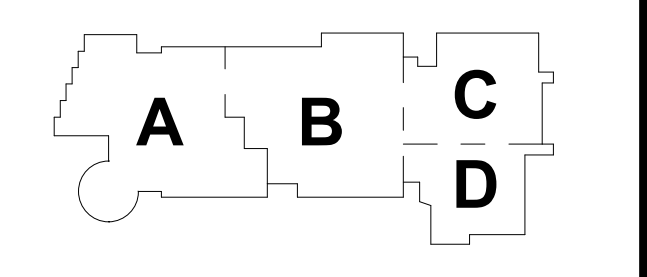
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MSBA SCHEMATIC DESIGN SUBMITTAL
 JUNE 17, 2021



MAIN POWER ONE LINE DIAGRAM

Scale: 1/2" = 1'-0"
 Job No.: 0520409
 Drawn By: DRA
 Date: JUNE 17, 2021

1 MAIN ONE LINE DIAGRAM
 E2-0-1 1/2" = 1'-0"

E2-0-1

ONE LINE GENERAL NOTES

1. REFER TO CONDUIT AND FEEDER SCHEDULES ON DRAWING E2-0-5 FOR FEEDER SIZES.
2. INCREASE ALL FEEDER SIZES BASED ON LENGTH OF FEEDER TO LIMIT VOLTAGE DROP TO 2 PER CENT.
3. PROVIDE AN ENERGY-MONITORING SYSTEM BY E-MON, D-MON, CLASS 2000 KWH METER, INTELLECTUAL OR EQUAL, FOR RECEPTACLES AND MECHANICAL EQUIPMENT POWER THAT ALLOWS USERS TO READ AND MONITOR ENERGY CONSUMPTION VIA ON-SITE OR OFF-SITE NON-DEDICATED COMPUTERS. SOFTWARE APPLICATION SHALL BE E-MON ENERGY SOFTWARE. OPTIMIZED PROTON AND OPTIMIZED 884 AS A STAND ALONE REPORTING SYSTEM. THE APPLICATION SHALL BE COMPATIBLE AND OPERATE IN CONJUNCTION THE BAS AND LIGHTING FRONT END APPLICATION PACKAGES (MICROSOFT WINDOWS OPERATING SYSTEM).
4. PROVIDE ALL REQUIRED ELECTRICAL EQUIPMENT REQUIRED FOR MECHANICAL UNIT INSTALLATIONS INCLUDING GFCI SERVICE RECEPTACLES, DISCONNECT SWITCH SUPPORTS, VAPORPROOF LIGHTING AT UNITS AND AT TOP OF ROOF HATCHES WITH 20A WEATHERPROOF SWITCHES AND GFCI RECEPTACLES.

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NORTHEAST METRO TECH

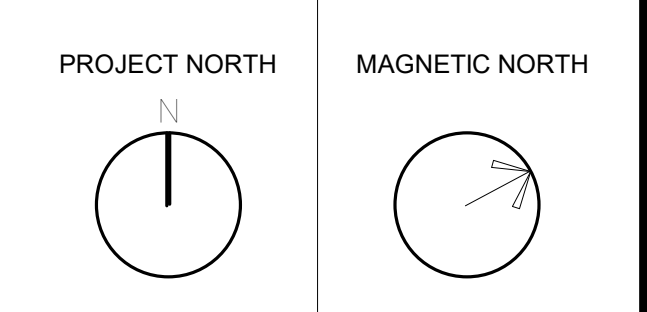
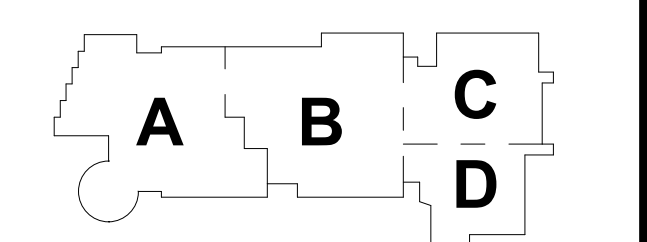
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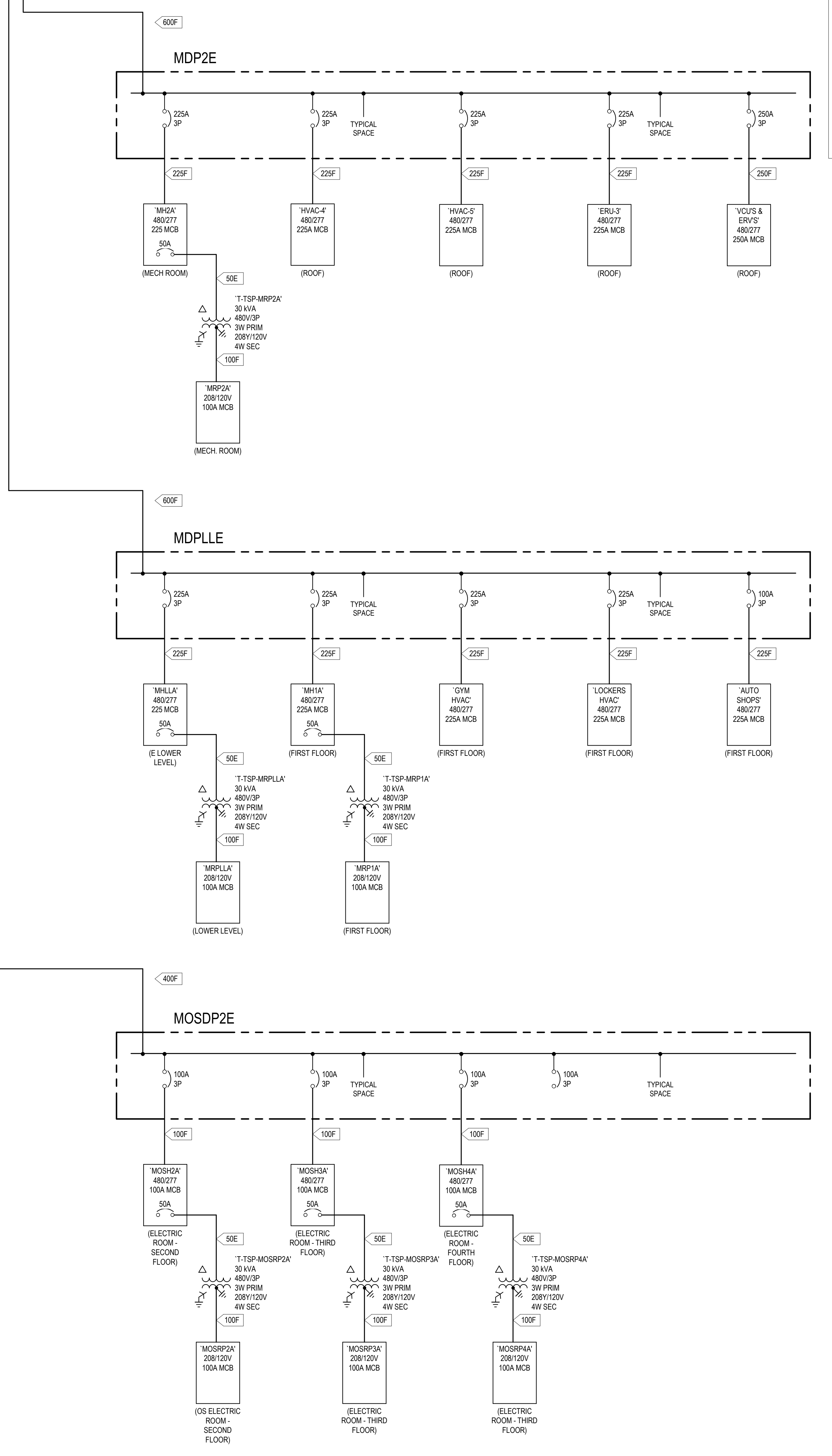
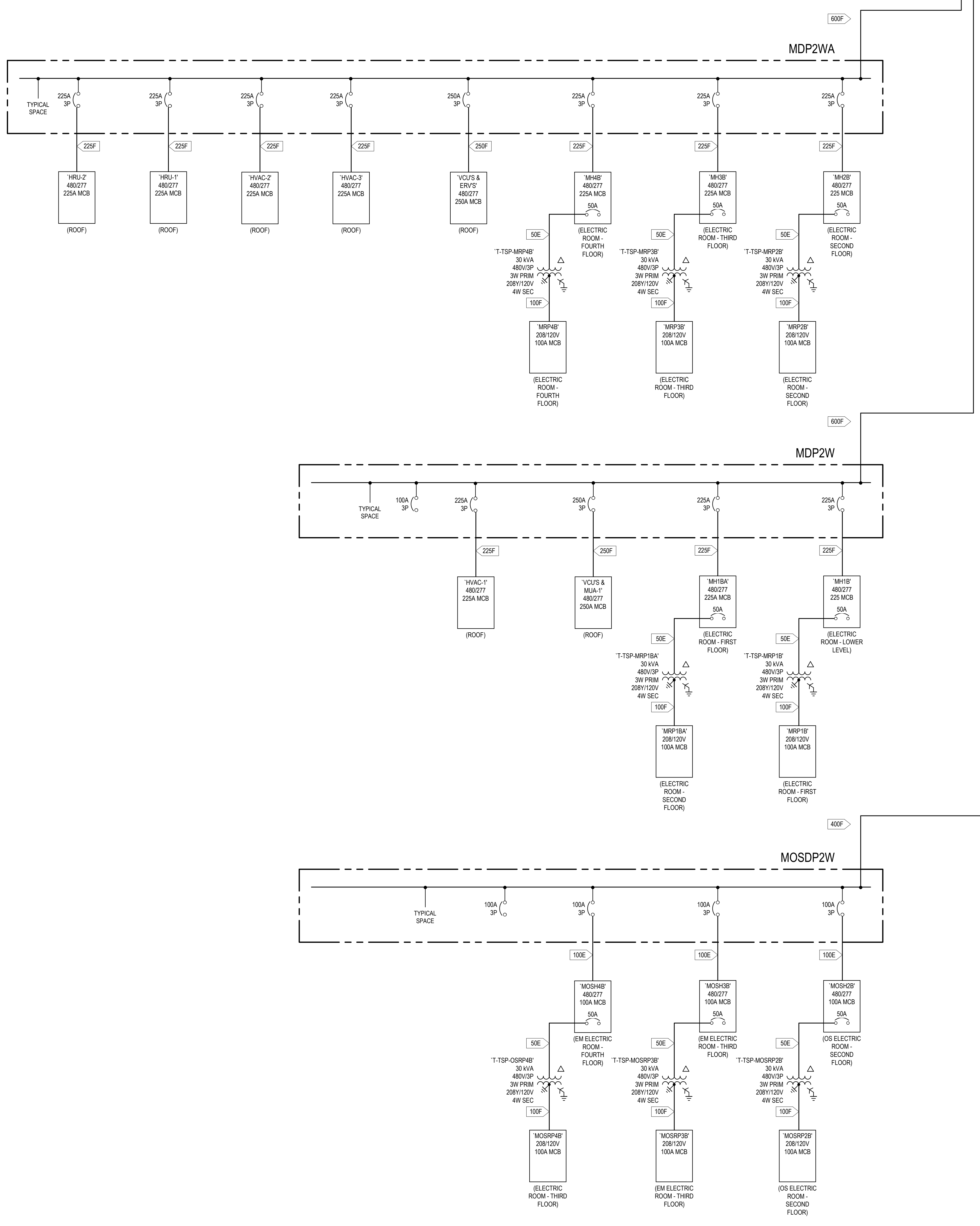
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JUNE 17, 2021



MECHANICAL POWER ONE LINE DIAGRAM

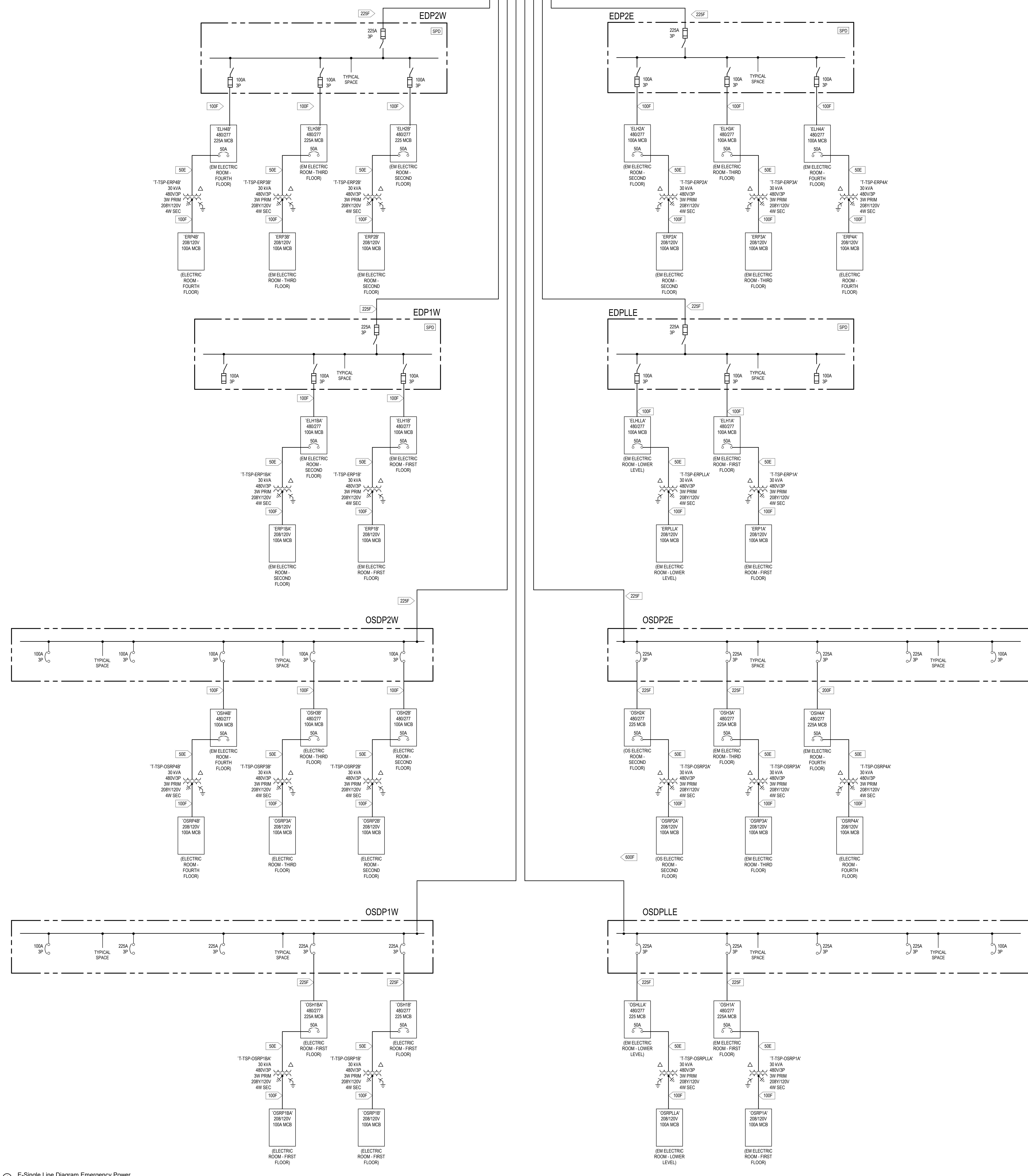
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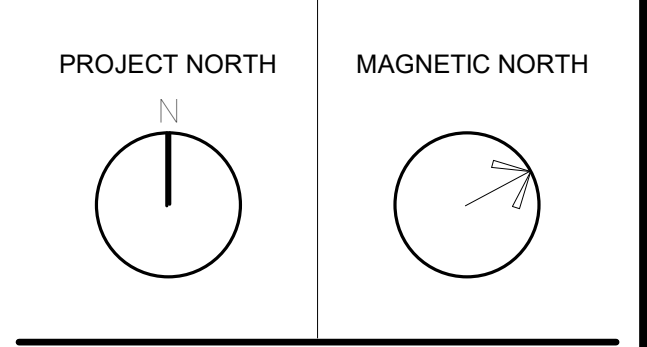
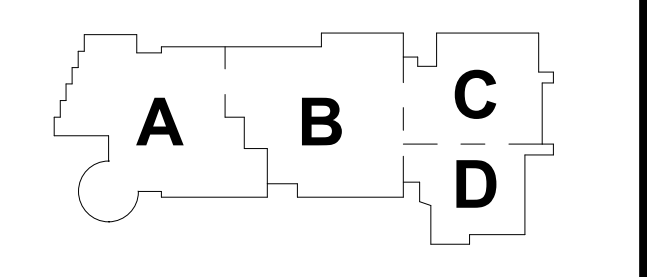
① E-Single Line Diagram Mechanical Power
 1/2" = 1'-0"

E2-0-2

- ONE LINE GENERAL NOTES**
1. REFER TO CONDUIT AND FEEDER SCHEDULES ON DRAWING E2-0-5 FOR FEEDER SIZES.
 2. INCREASE ALL FEEDER SIZES BASED ON LENGTH OF FEEDER TO LIMIT VOLTAGE DROP TO 2 PER CENT.
 3. ALL EMERGENCY FEEDERS NOT ROUTED BELOW FLOOR SLABS IN A MINIMUM OF 2 INCHES OF CONCRETE TO PROVIDE REQUIRED 2-HOUR FIRE RATING SHALL BE ROUTED IN TYPE M CABLE IN IMPACT-RESISTANT CONDUIT TO MAINTAIN 2-HOUR FIRE RATING.



1 E-Single Line Diagram Emergency Power
12" = 1'-0"



EMERGENCY POWER ONE LINE DIAGRAM

CONDUIT AND FEEDER SCHEDULE - WITH 200% NEUTRAL								
AMPS	1P+N+G	1P+N+G+G	2P+G	2P+N+G	3P+G	3P+N+G	3P+200%N+G	3 PHASE MOTORS
	A	B	C	D	E	F	F2	M
15	2#12-1#12G, 3/4"	2#12-1#12G-1#12G, 3/4"	2#12-1#12G, 3/4"	3#12-1#12G, 3/4"	3#12-1#12G, 3/4"	4#12-1#12G, 3/4"	5#12-1#12G, 3/4"	3#12-1#12G, 3/4"
20	2#12-1#12G, 3/4"	2#12-1#12G-1#12G, 3/4"	2#12-1#12G, 3/4"	3#12-1#12G, 3/4"	3#12-1#12G, 3/4"	4#12-1#12G, 3/4"	5#12-1#12G, 3/4"	3#12-1#12G, 3/4"
30	2#10-1#10G, 3/4"	2#10-1#10G-1#10G, 3/4"	2#10-1#10G, 3/4"	3#10-1#10G, 3/4"	3#10-1#10G, 3/4"	4#10-1#10G, 3/4"	5#10-1#10G, 3/4"	3#10-1#10G, 3/4"
50	2#8-1#10G, 3/4"	2#8-1#10G-1#10G, 3/4"	2#8-1#10G, 3/4"	3#8-1#10G, 3/4"	3#8-1#10G, 3/4"	4#8-1#10G, 3/4"	5#8-1#10G, 3/4"	3#8-1#10G, 3/4"
60	2#6-1#8G, 1"	2#6-1#8G-1#8G, 1"	2#6-1#8G, 1"	3#6-1#8G, 1"	3#6-1#8G, 1"	4#6-1#8G, 1"	5#6-1#8G, 1"	3#6-1#8G, 1"
70	2#4-1#8G, 1"	2#4-1#8G-1#8G, 1 1/4"	2#4-1#8G, 1"	3#4-1#8G, 1"	3#4-1#8G, 1"	4#4-1#8G, 1 1/4"	5#4-1#8G, 1 1/4"	3#4-1#8G, 1"
80	2#4-1#8G, 1"	2#4-1#8G-1#8G, 1 1/4"	2#4-1#8G, 1"	3#4-1#8G, 1"	3#4-1#8G, 1"	4#4-1#8G, 1 1/4"	5#4-1#8G, 1 1/4"	3#4-1#8G, 1"
90	2#3-1#8G, 1 1/4"	2#3-1#8G-1#8G, 1 1/4"	2#3-1#8G, 1 1/4"	3#3-1#8G, 1 1/4"	3#3-1#8G, 1 1/4"	4#3-1#8G, 1 1/4"	5#3-1#8G, 1 1/4"	3#3-1#8G, 1 1/4"
100	2#3-1#8G, 1 1/4"	2#3-1#8G-1#8G, 1 1/4"	2#3-1#8G, 1 1/4"	3#3-1#8G, 1 1/4"	3#3-1#8G, 1 1/4"	4#3-1#8G, 1 1/4"	5#3-1#8G, 1 1/4"	3#3-1#8G, 1 1/4"
125	2#1-1#8G, 1 1/4"	2#1-1#8G-1#8G, 1 1/4"	2#1-1#8G, 1 1/4"	3#1-1#8G, 1 1/4"	3#1-1#8G, 1 1/4"	4#1-1#8G, 1 1/2"	5#1-1#8G, 1 1/2"	3#1-1#8G, 1 1/2"
150	2#10-1#8G, 1 1/4"	2#10-1#8G-1#8G, 1 1/2"	2#10-1#8G, 1 1/4"	3#10-1#8G, 1 1/2"	3#10-1#8G, 1 1/2"	4#10-1#8G, 2"	5#10-1#8G, 2"	3#10-1#8G, 1 1/2"
175	2#20-1#8G, 1 1/2"	2#20-1#8G-1#8G, 2"	2#20-1#8G, 1 1/2"	3#20-1#8G, 2"	3#20-1#8G, 2"	4#20-1#8G, 2"	5#20-1#8G, 2"	3#20-1#8G, 2"
200	2#30-1#8G, 1 1/2"	2#30-1#8G-1#8G, 2"	2#30-1#8G, 1 1/2"	3#30-1#8G, 2"	3#30-1#8G, 2"	4#30-1#8G, 2"	5#30-1#8G, 2"	3#30-1#8G, 2"
225	2#40-1#8G, 2"	2#40-1#8G-1#8G, 2"	2#40-1#8G, 2"	3#40-1#8G, 2"	3#40-1#8G, 2"	4#40-1#8G, 2 1/2"	5#40-1#8G, 2 1/2"	3#40-1#8G, 2"
250	2#250-1#4G, 2"	2#250-1#4G-1#4G, 2"	2#250-1#4G, 2"	3#250-1#4G, 2 1/2"	3#250-1#4G, 2 1/2"	4#250-1#4G, 3"	5#250-1#4G, 3"	3#250-1#4G, 2 1/2"
300	2#350-1#4G, 2"	2#350-1#4G-1#4G, 2"	2#350-1#4G, 2"	3#350-1#4G, 2 1/2"	3#350-1#4G, 2 1/2"	4#350-1#4G, 3"	5#350-1#4G, 3"	3#350-1#4G, 2 1/2"
400	2#500-1#3G, 3"	2#500-1#3G-1#3G, 3"	2#500-1#3G, 3"	3#500-1#3G, 3"	3#500-1#3G, 3"	4#500-1#3G, 3 1/2"	5#500-1#3G, 3 1/2"	3#500-1#3G, 3"
500			4#250-1#3G, 2 1/2"	(2 SETS)3#250-1#3G, (2) 2 1/2"	(2 SETS)3#250-1#3G, (2) 2 1/2"	(2 SETS)4#250-1#3G, (2) 2 1/2"	(2 SETS)5#250-1#3G, (2) 2 1/2"	(2 SETS)3#250-1#3G, (2) 2 1/2"
600			4#350-1#1G, 3"	(2 SETS)3#350-1#1G, (2) 3"	(2 SETS)3#350-1#1G, (2) 3"	(2 SETS)4#350-1#1G, (2) 3"	(2 SETS)5#350-1#1G, (2) 3"	(2 SETS)3#350-1#1G, (2) 3"
700			4#500-1#10G, 3 1/2"	(2 SETS)3#500-1#10G, (2) 3 1/2"	(2 SETS)3#500-1#10G, (2) 3 1/2"	(2 SETS)4#500-1#10G, (2) 3 1/2"	(2 SETS)5#500-1#10G, (2) 3 1/2"	(2 SETS)3#500-1#10G, (2) 3 1/2"
800			4#600-1#10G, 3 1/2"	(2 SETS)3#600-1#10G, (2) 3 1/2"	(2 SETS)3#600-1#10G, (2) 3 1/2"	(2 SETS)4#600-1#10G, (2) 3 1/2"	(2 SETS)5#600-1#10G, (2) 3 1/2"	(2 SETS)3#600-1#10G, (2) 3 1/2"
900				(3 SETS)3#450-1#20G, (3) 3"	(3 SETS)3#450-1#20G, (3) 3"	(3 SETS)4#450-1#20G, (3) 3"	(3 SETS)5#450-1#20G, (3) 3"	(3 SETS)3#450-1#20G, (3) 3"
1000				(3 SETS)3#400-1#20G, (3) 3 1/2"	(3 SETS)3#400-1#20G, (3) 3 1/2"	(3 SETS)4#400-1#20G, (3) 3 1/2"	(3 SETS)5#400-1#20G, (3) 3 1/2"	(3 SETS)3#400-1#20G, (3) 3 1/2"
1200				(3 SETS)3#600-1#40G, (3) 3 1/2"	(3 SETS)3#600-1#40G, (3) 3 1/2"	(3 SETS)4#600-1#40G, (4) 4"	(3 SETS)5#600-1#40G, (4) 4"	(3 SETS)3#600-1#40G, (3) 3 1/2"
1600				(4 SETS)3#800-1#40G, (4) 3 1/2"	(4 SETS)3#800-1#40G, (4) 3 1/2"	(4 SETS)4#800-1#40G, (4) 4"	(4 SETS)5#800-1#40G, (4) 4"	(4 SETS)3#800-1#40G, (4) 3 1/2"
2000				(5 SETS)3#600-1#250G, (5) 3 1/2"	(5 SETS)3#600-1#250G, (5) 3 1/2"	(5 SETS)4#600-1#250G, (5) 4"	(5 SETS)5#600-1#250G, (5) 4"	(5 SETS)3#600-1#250G, (5) 3 1/2"
2400				(6 SETS)3#600-1#350G, (6) 3 1/2"	(6 SETS)3#600-1#350G, (6) 3 1/2"	(6 SETS)4#600-1#350G, (6) 4"	(6 SETS)5#600-1#350G, (6) 4"	(6 SETS)3#600-1#350G, (6) 3 1/2"
3000				(8 SETS)3#500-1#400G, (8) 3 1/2"	(8 SETS)3#500-1#400G, (8) 3 1/2"	(8 SETS)4#500-1#400G, (8) 4"	(8 SETS)5#500-1#400G, (8) 4"	(8 SETS)3#500-1#400G, (8) 3 1/2"

- NOTES:
1. ADJUST SIZE OF GROUNDING CONDUCTOR FOR SEPARATELY DERIVED SYSTEMS ACCORDING TO NEC TABLE 250.66.
2. INCREASE SIZE OF UNGROUNDED CONDUCTORS FOR VOLTAGE DROP ACCORDING TO NEC 250.122(B).

COPPER BRANCH AND FEEDER SCHEDULE					
AMPS	1P+N+G	2P+G	2P+N+G	3P+G	3P+N+G
	A	C	D	E	F
15	2#12-1#12G, 3/4"	2#12-1#12G, 3/4"	3#12-1#12G, 3/4"	3#12-1#12G, 3/4"	4#12-1#12G, 3/4"
20	2#12-1#12G, 3/4"	2#12-1#12G, 3/4"	3#12-1#12G, 3/4"	3#12-1#12G, 3/4"	4#12-1#12G, 3/4"
25	2#10-1#10G, 3/4"	2#10-1#10G, 3/4"	3#10-1#10G, 3/4"	3#10-1#10G, 3/4"	4#10-1#10G, 3/4"
30	2#10-1#10G, 3/4"	2#10-1#10G, 3/4"	3#10-1#10G, 3/4"	3#10-1#10G, 3/4"	4#10-1#10G, 3/4"
35	2#8-1#10G, 3/4"	2#8-1#10G, 3/4"	3#8-1#10G, 3/4"	3#8-1#10G, 3/4"	4#8-1#10G, 3/4"
40	2#8-1#10G, 3/4"	2#8-1#10G, 3/4"	3#8-1#10G, 3/4"	3#8-1#10G, 3/4"	4#8-1#10G, 3/4"
45	2#6-1#10G, 3/4"	2#6-1#10G, 3/4"	3#6-1#10G, 1"	3#6-1#10G, 1"	4#6-1#10G, 1"
50	2#6-1#10G, 3/4"	2#6-1#10G, 3/4"	3#6-1#10G, 1"	3#6-1#10G, 1"	4#6-1#10G, 1"
60	2#4-1#10G, 1"	2#4-1#10G, 1"	3#4-1#10G, 1"	3#4-1#10G, 1"	4#4-1#10G, 1-1/4"
70	2#4-1#8G, 1"	2#4-1#8G, 1"	3#4-1#8G, 1-1/4"	3#4-1#8G, 1-1/4"	4#4-1#8G, 1-1/4"
80	2#3-1#8G, 1"	2#3-1#8G, 1"	3#3-1#8G, 1-1/4"	3#3-1#8G, 1-1/4"	4#3-1#8G, 1-1/4"
90	2#2-1#8G, 1"	2#2-1#8G, 1"	3#2-1#8G, 1-1/4"	3#2-1#8G, 1-1/4"	4#2-1#8G, 1-1/2"
100	2#1-1#8G, 1-1/4"	2#1-1#8G, 1-1/4"	3#1-1#8G, 1-1/2"	3#1-1#8G, 1-1/2"	4#1-1#8G, 2"
110		2#2-1#8G, 1-1/4"	3#2-1#8G, 1-1/4"	3#2-1#8G, 1-1/4"	4#2-1#8G, 1-1/2"
125		2#1-1#8G, 1-1/4"	3#1-1#8G, 1-1/2"	3#1-1#8G, 1-1/2"	4#1-1#8G, 2"
150		2#10-1#8G, 1-1/2"	3#10-1#8G, 1-1/2"	3#10-1#8G, 1-1/2"	4#10-1#8G, 2"
175		2#20-1#8G, 1-1/2"	3#20-1#8G, 2"	3#20-1#8G, 2"	4#20-1#8G, 2"
200		2#30-1#8G, 1-1/2"	3#30-1#8G, 2"	3#30-1#8G, 2"	4#30-1#8G, 2-1/2"
225		2#40-1#8G, 2"	3#40-1#8G, 2"	3#40-1#8G, 2"	4#40-1#8G, 2-1/2"
250		2#250-1#4G, 2"	3#250-1#4G, 2-1/2"	3#250-1#4G, 2-1/2"	4#250-1#4G, 3"
300		2#350-1#4G, 2"	3#350-1#4G, 2 1/2"	3#350-1#4G, 2 1/2"	4#350-1#4G, 3"
400		2#500-1#3G, 3"	3#500-1#3G, 3"	3#500-1#3G, 3"	4#500-1#3G, 3-1/2"
450			3#600-1#3G, 3-1/2"		4#600-1#3G, 4"
500			(2 Sets) 3#400-1#2G, (2) 2"	(2 Sets) 4#400-1#2G, (2) 2-1/2"	(2 Sets) 4#250-1#2G, (2) 3"
600			(2 Sets) 3#350-1#1G, (2) 3"	(2 Sets) 4#350-1#1G, (2) 3"	(2 Sets) 4#350-1#1G, (2) 3"
700			(2 Sets) 3#500-1#10G, (2) 3"	(2 Sets) 4#500-1#10G, (2) 3-1/2"	(2 Sets) 4#500-1#10G, (2) 3-1/2"
800			(2 Sets) 3#600-1#10G, (2) 3-1/2"	(2 Sets) 4#600-1#10G, (2) 4"	(2 Sets) 4#600-1#10G, (2) 4"
1000			(3 Sets) 3#400-1#20G, (3) 3"	(3 Sets) 4#400-1#20G, (3) 3-1/2"	(3 Sets) 4#400-1#20G, (3) 3-1/2"
1200			(3 Sets) 3#600-1#30G, (3) 3-1/2"	(3 Sets) 4#600-1#30G, (3) 4"	(3 Sets) 4#600-1#30G, (3) 4"
1600			(4 Sets) 3#600-1#40G, (4) 3-1/2"	(4 Sets) 4#600-1#40G, (4) 4"	(4 Sets) 4#600-1#40G, (4) 4"
2000			(5 Sets) 3#600-1#250G, (5) 3-1/2"	(5 Sets) 4#600-1#250G, (5) 4"	(5 Sets) 4#600-1#250G, (5) 4"
2500			(6 Sets) 3#600-1#350G, (6) 3-1/2"	(6 Sets) 4#600-1#350G, (6) 4"	(6 Sets) 4#600-1#350G, (6) 4"
3000			(8 Sets) 3#500-1#400G, (8) 3-1/2"	(8 Sets) 4#500-1#400G, (8) 3-1/2"	(8 Sets) 4#500-1#400G, (8) 3-1/2"
4000			(10 Sets) 3#600-1#500G, (10) 3-1/2"	(10 Sets) 4#600-1#500G, (10) 4"	(10 Sets) 4#600-1#500G, (10) 4"

- NOTES:
1. DESIGN BASIS:
a. CONDUCTOR SIZES BASED ON AMBIENT TEMPERATURE OF 78F TO 86F (26C TO 30C). FOR AMBIENT TEMPERATURES ABOVE 30C, THE AMPACITY SHALL BE REDUCED PER NEC TABLE 310.15(B)(2)(a). WIRE SIZES SHALL NOT BE REDUCED BELOW THE 30C RATING.
b. OCPD SIZES FOR SMALL CONDUCTORS BASED ON NEC 240.4(D)(3), NEC 240.4(D)(5) AND NEC 240.4(D)(7).
c. CONDUCTOR SIZES BASED ON 60C COLUMN OF NEC 2017 TABLE 310.15(B)(16) FOR 100A AND SMALLER OCPDs. WIRES ARE ALLOWED TO BE SIZED BASED ON THE 75C COLUMN AS PERMITTED BY THE NEC AND WHEN COORDINATED WITH EQUIPMENT TERMINATION TEMPERATURE RATINGS AT EACH WIRE TERMINATION POINT.
d. CONDUCTOR SIZES BASED ON 75C COLUMN OF NEC 2017 TABLE 310.15(B)(16) FOR OCPDs LARGER THAN 100A.
e. WHEN TYPE NM CABLE IS ALLOWED ON THE PROJECT, THE WIRE SIZES SHALL BE BASED ON THE 60C COLUMN OF NEC 2017 TABLE 310.15(B)(16).
2. CONDUIT SIZES ARE BASED ON THHW COPPER CONDUCTORS AND DO NOT APPLY TO CONDUCTORS WITH LARGER DIAMETERS THAN THHW. REFER TO THE PROJECT SPECIFICATIONS FOR SPECIFIC WIRE REQUIREMENTS.
3. RACEWAY SIZES SHOWN IN THE ABOVE TABLE APPLY TO TYPES EMT, FMC, IMC, LFMC, RMC AND PVC SCHEDULE 40. THE ABOVE RACEWAY SIZES DO NOT APPLY TO PVC SCHEDULE 80 CONDUIT. IF PVC SCHEDULE 80 CONDUIT IS REQUIRED, CONSULT THE ENGINEER OF RECORD FOR CONDUIT SIZING OR SEE THE SPECIFIC WIRE/CONDUIT CALLOUT ON THE SINGLE LINE DIAGRAM. REFER TO THE PROJECT SPECIFICATIONS FOR SPECIFIC RACEWAY REQUIREMENTS.
4. CONDUCTOR SIZES SHOWN IN THE ABOVE TABLE ARE IN AWG FOR WIRES SMALLER THAN 250KCMIL AND ARE IN KCMIL FOR 250KCMIL WIRES AND LARGER.
5. IF ALUMINUM CONDUCTORS ARE APPROVED DURING THE BIDDING PROCESS BY THE OWNER & THE ENGINEER, THE CONTRACTOR SHALL PROVIDE A SUBMITTAL INDICATING EQUIVALENT FEEDERS AND CONDUITS.
6. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL EQUIPMENT LUG SIZES AND RATINGS WITH THE CONDUCTORS.
7. PARALLEL SETS OF SMALLER CONDUCTORS IN LIEU OF 600KCMIL IS PERMITTED AS ALLOWED BY CODE AND UPON APPROVAL BY THE ENGINEER.
8. ALL WIRING SHALL BE RATED AT 90C MINIMUM BASED ON THE INSTALLATION CONDITIONS. UNDERGROUND CONDUITS SHALL BE CONSIDERED WET LOCATIONS.

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06074
Tel: 860.644.8300
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260 Charles Street
Studio 300
Waltham, MA
02453

Planning | Architecture | Interior Design

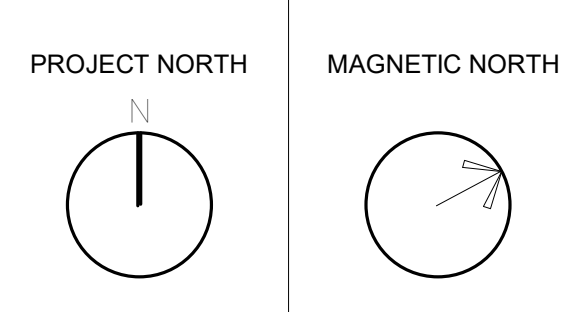
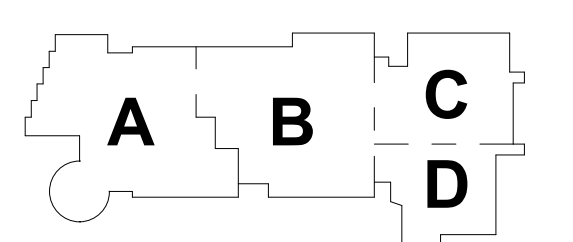
NORTHEAST METRO TECH

100 Hemlock Rd,
Wakefield, MA 01880

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BALA ENGINEERS

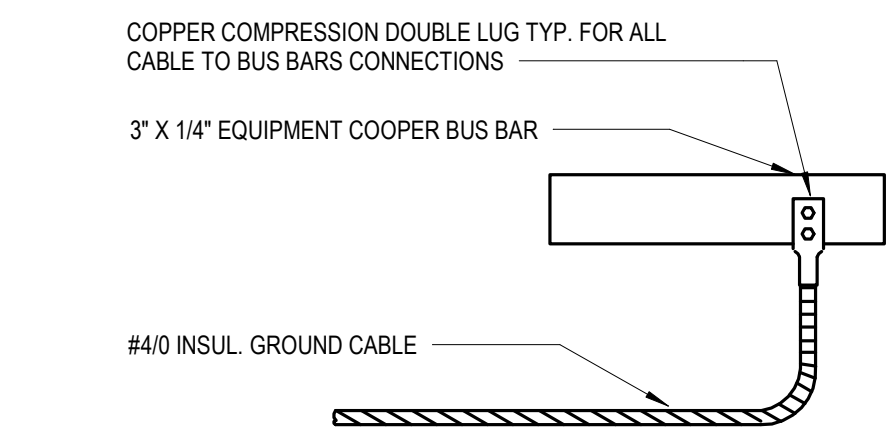
MSBA SCHEMATIC DESIGN SUBMITTAL
JUNE 17, 2021



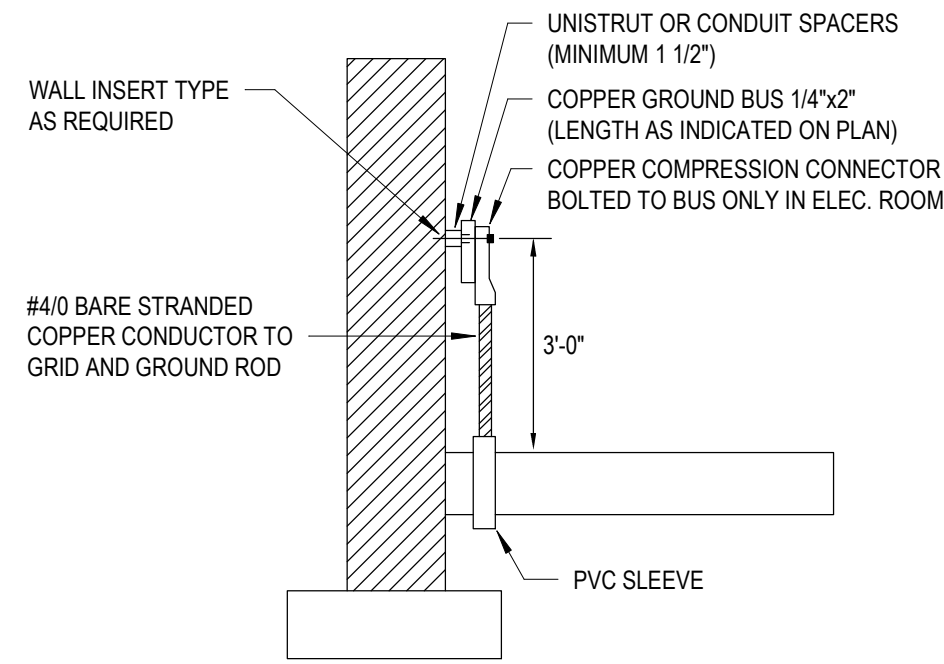
ELECTRICAL POWER SCHEDULES

Scale: NOT TO SCALE
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021

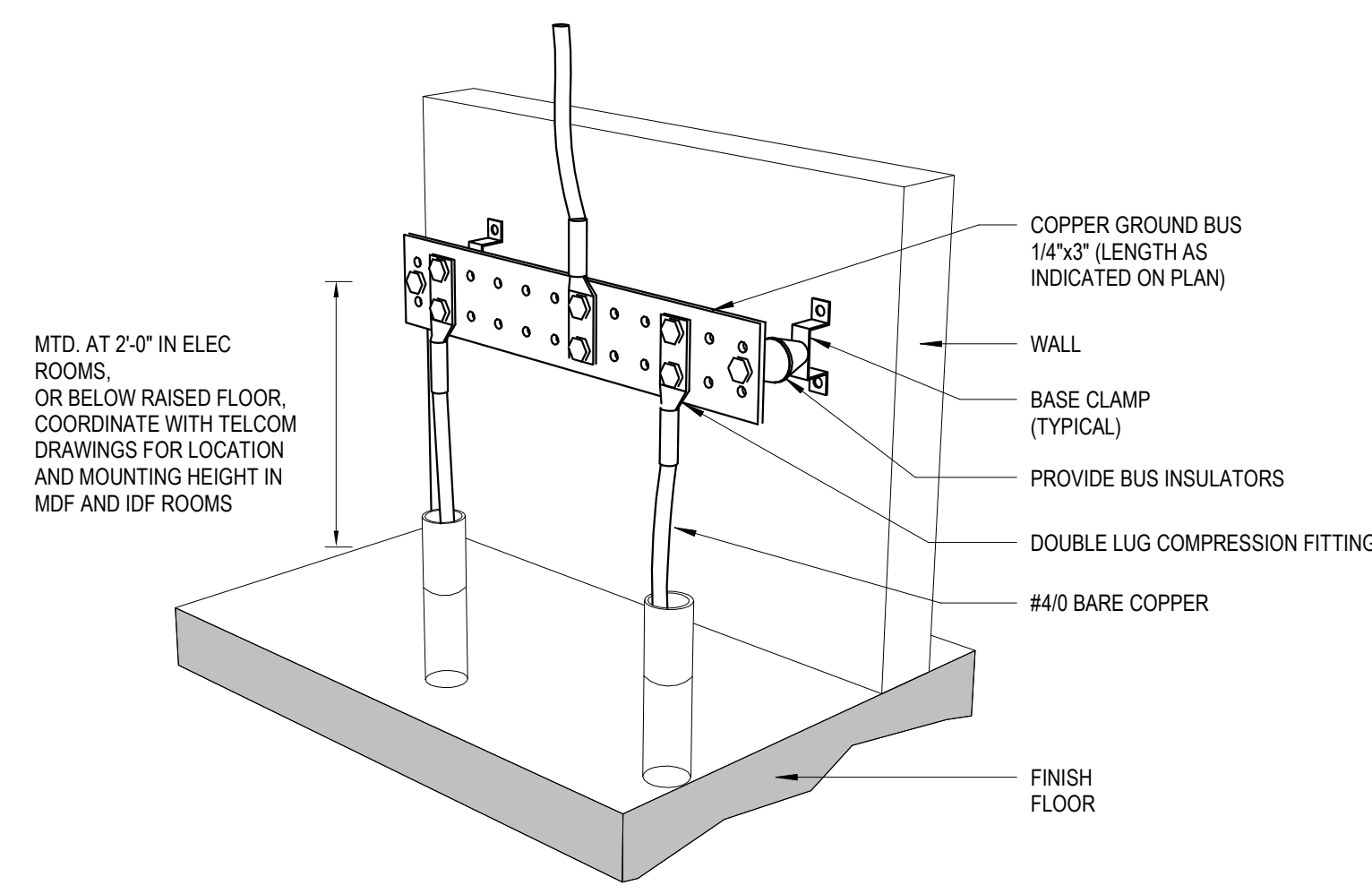
E2-0-5



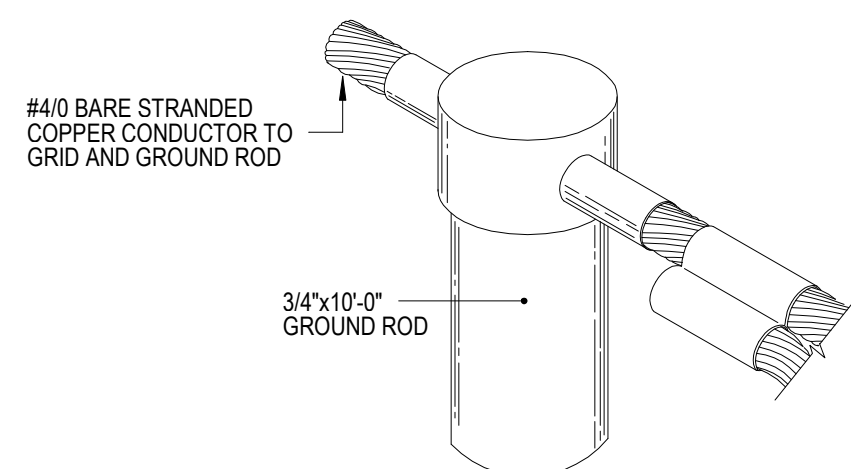
4 CABLE TO GROUND BUS
E3-0-1
NOT TO SCALE



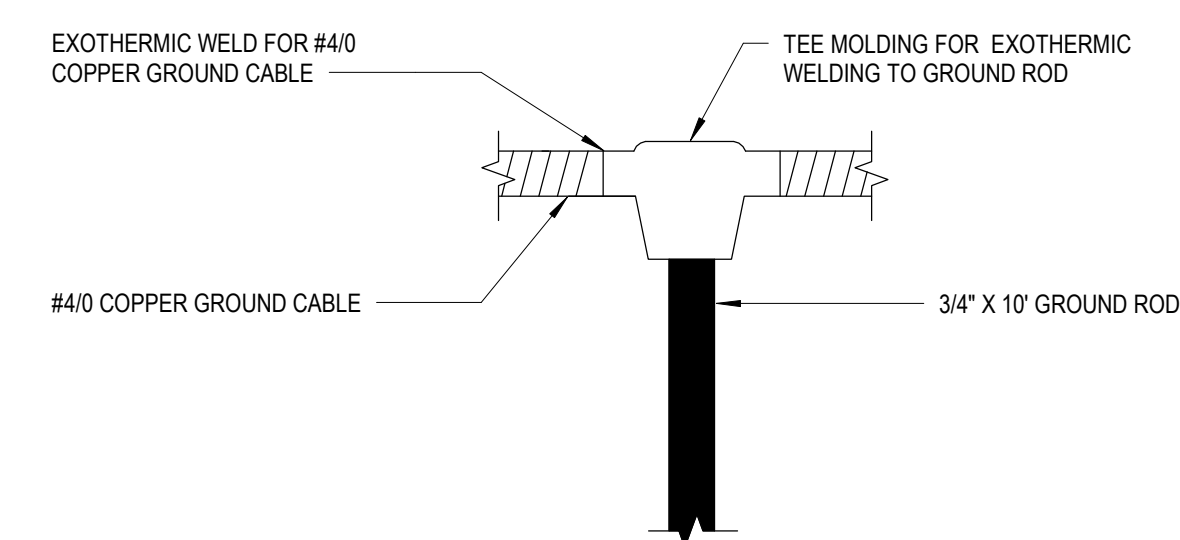
16 TYPICAL GROUND BUS DETAIL
E3-0-1
NOT TO SCALE



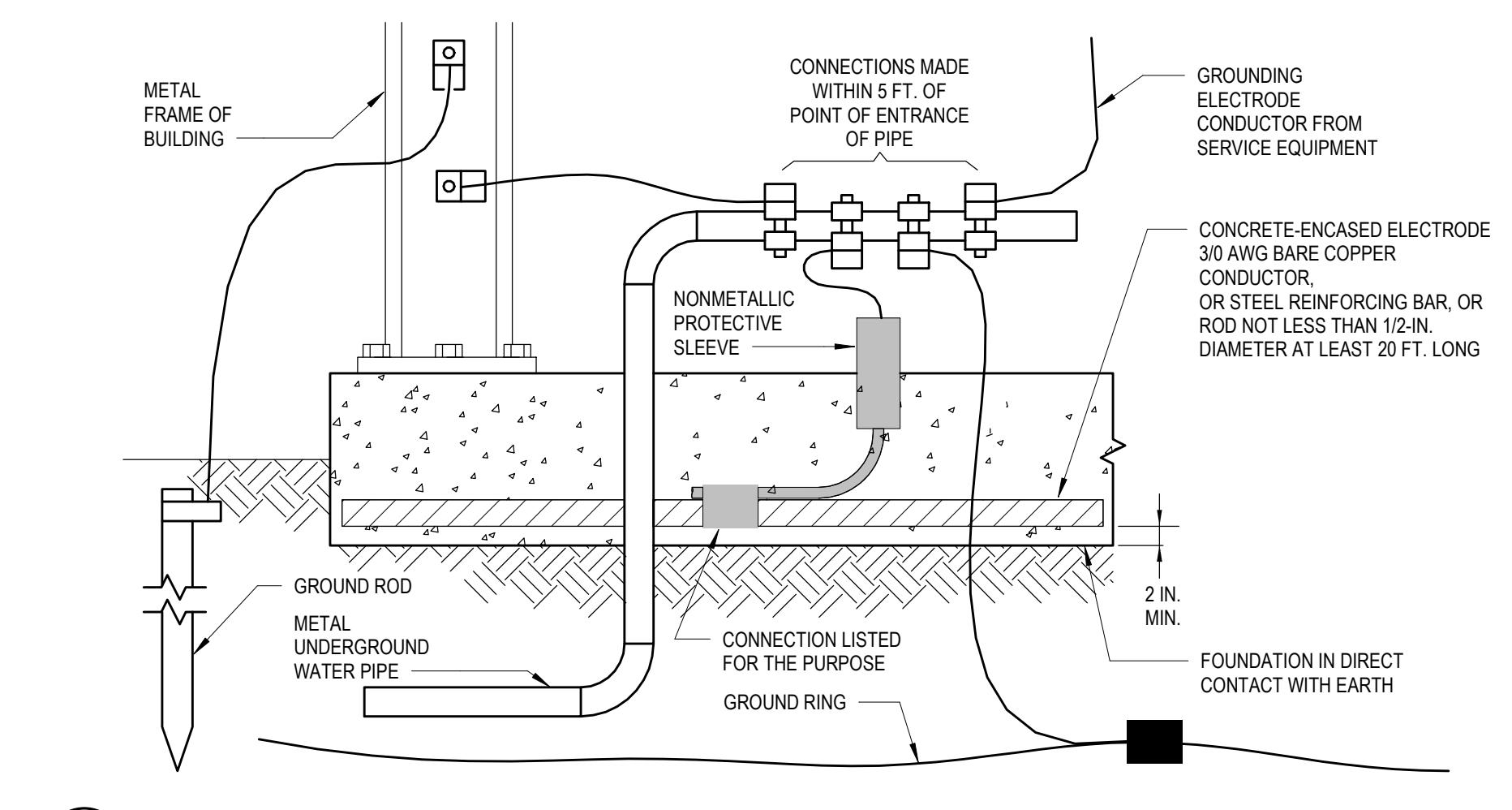
9 GROUND BUS DETAIL
E3-0-1
NOT TO SCALE



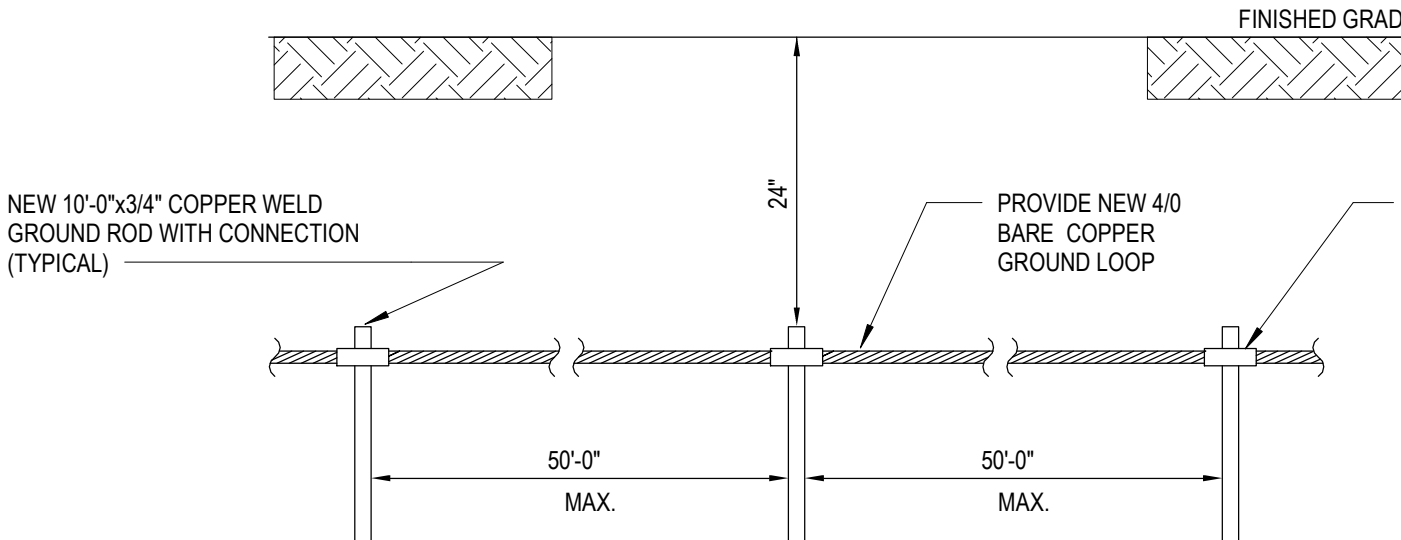
10 GROUND ROD CONNECTION
NOT TO SCALE



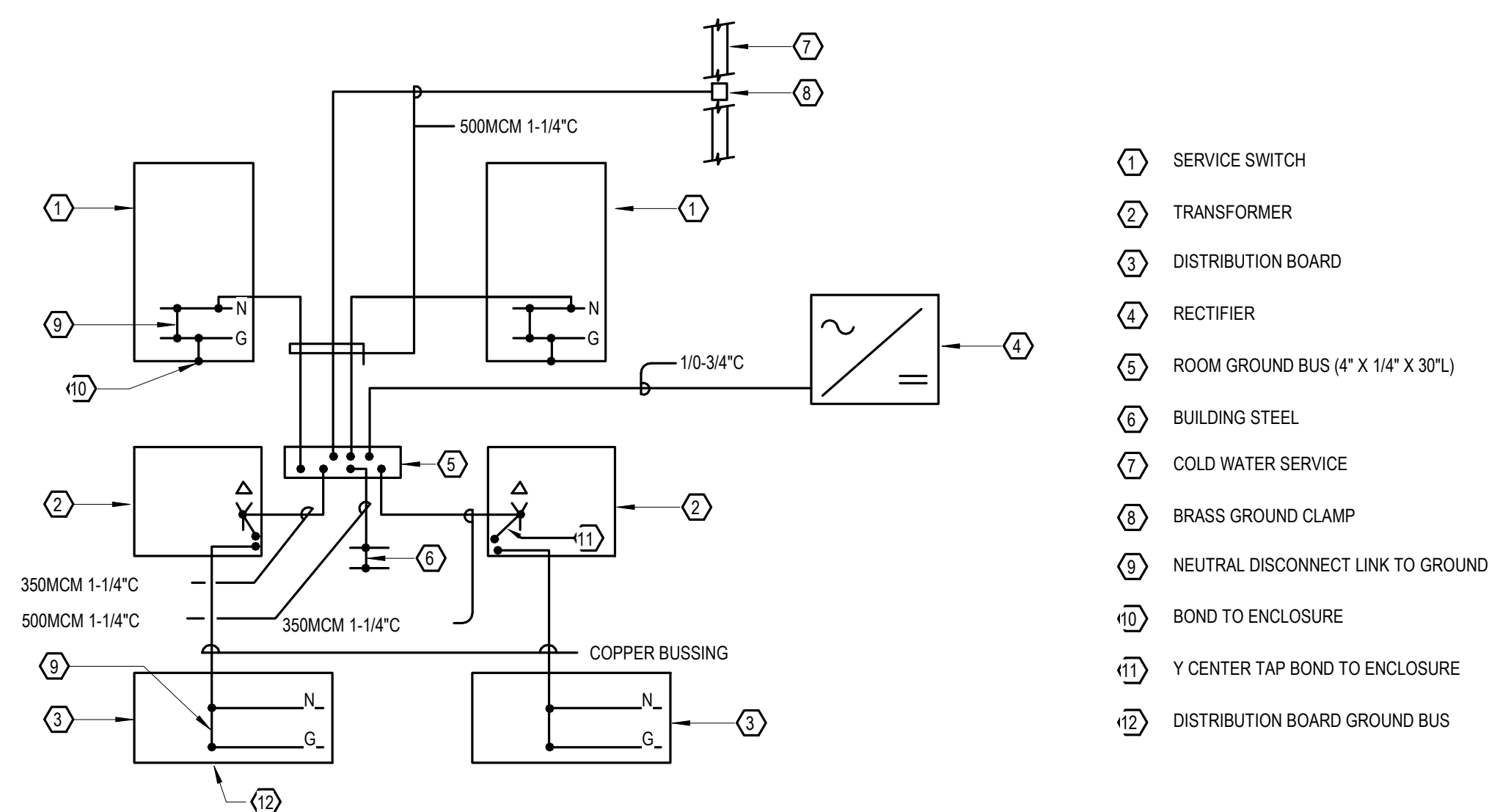
11 BELOW GRADE GROUND CABLE
E3-0-1
NOT TO SCALE



2 CONCRETE ENCASED ELECTRODE DETAIL
E3-0-1
NOT TO SCALE



1 GROUND - LOOP/GRID DETAIL
E3-0-1
NOT TO SCALE



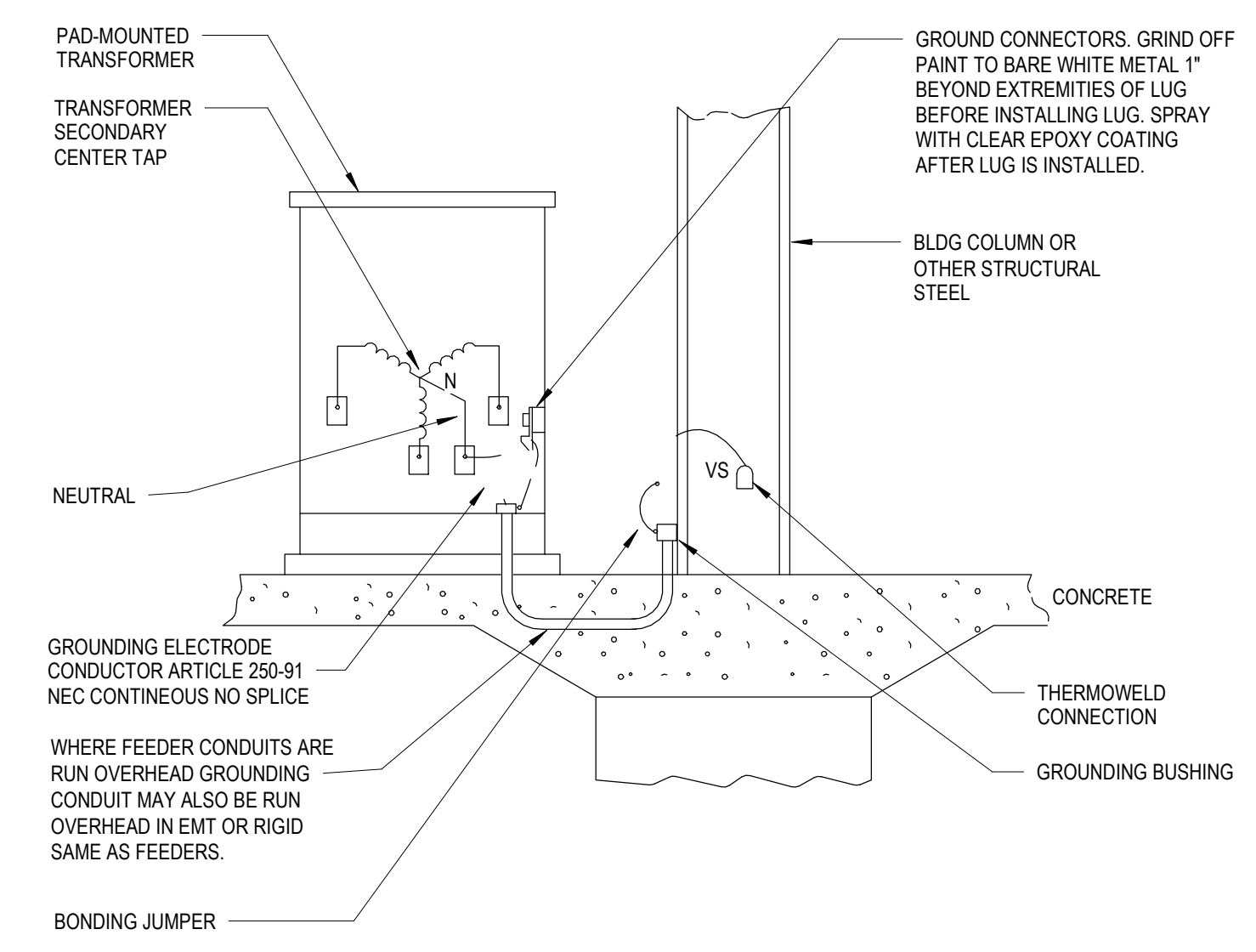
NOTE: WHERE SIZES ARE NOT INDICATED, USE SIZES SHOWN ON SINGLE LINE DIAGRAM OR PART OF FEEDER.

5 GROUNDING DIAGRAM
E3-0-1
NOT TO SCALE

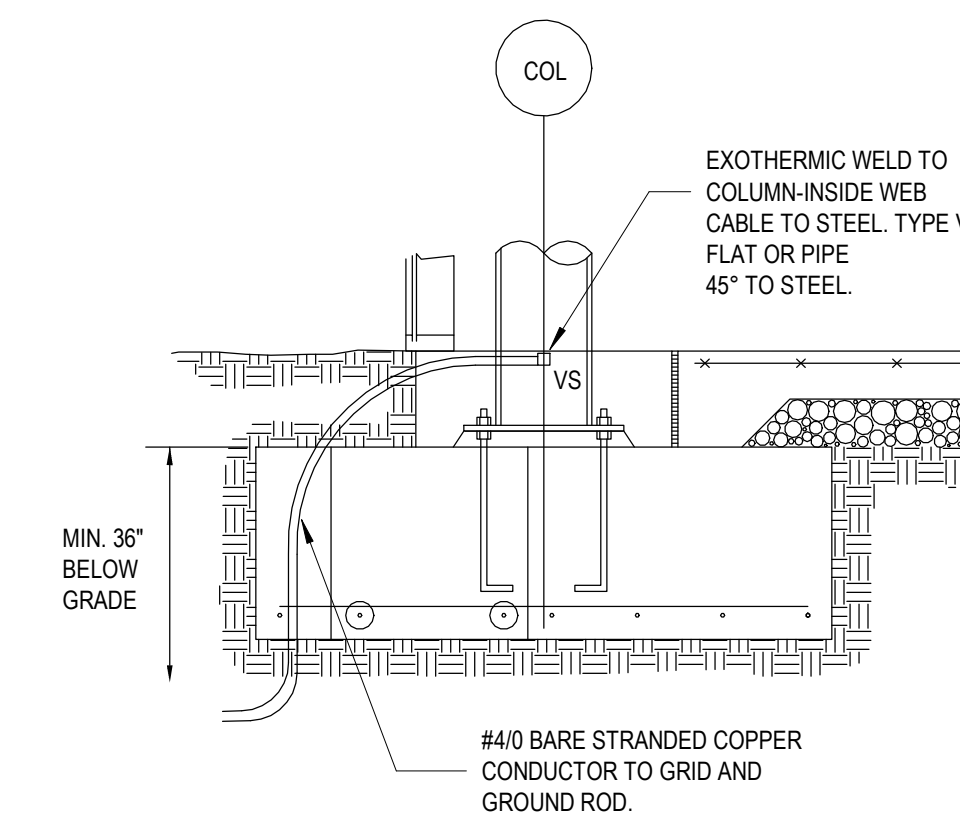
BUILDING GROUNDING SHEET NOTES:

- CONTRACTOR SHALL VERIFY LOCATION OF SWITCHGEAR PRIOR TO INSTALLATION OF GROUND BUS.
- ALL EMBEDDED CONDUIT STUB-UPS TO BE RGS CONDUIT.
- GROUNDINGS SHALL BE IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE (NEC) AND THE NOTES AND DETAILS ON THIS DRAWING.
- ALL BELOW GRADE AND EMBEDDED GROUND CONNECTIONS SHALL BE BY EXOTHERMIC WELDING PROCESS OR APPROVED EQUAL.
- ALL EXPOSED GROUND CONNECTIONS SHALL BE MECHANICAL TYPE.
- SURFACES WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEANED TO BARE METAL AND SHALL BE FREE OF ALL PAINT, SCALE, GREASE, DIRT AND OILS.
- UNDERGROUND CABLES AND GROUND LOOP TO BE BACKFILLED COMPLETELY AROUND CABLE WITH NON-CORROSIVE FILL.
- GROUND LOOP CONDUCTORS SHALL BE INSTALLED 2 FT. FROM BUILDING FOUNDATION FOOTER WITH A MINIMUM OF 3'-0" COVER.
- CONTRACTOR SHALL INVESTIGATE FOR UNDERGROUND OBSTACLES PRIOR TO EXCAVATION FOR UNDERGROUND WORK.

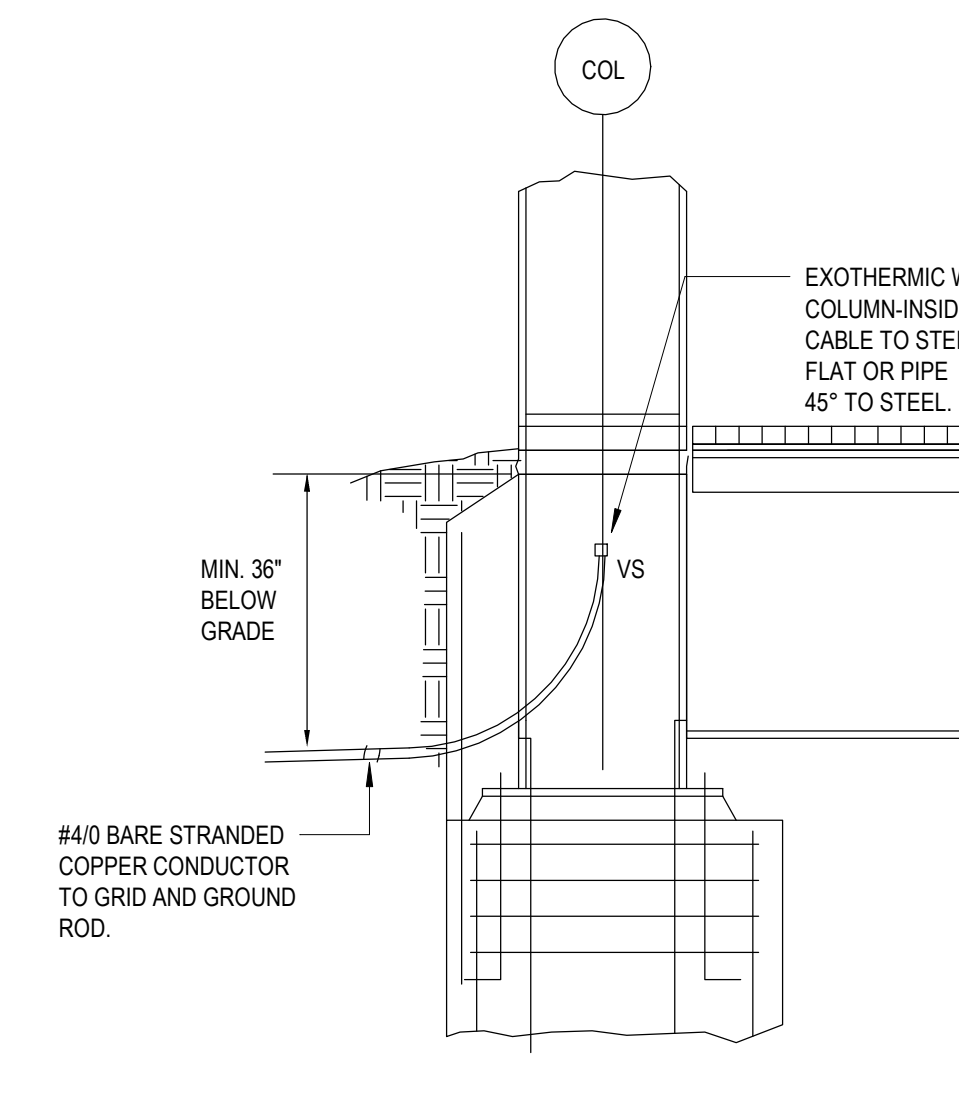
7 BUILDING GROUNDING SHEET NOTES
E3-0-1
NOT TO SCALE



13 PAD-MOUNTED XFMR. & GENERATOR GROUNDING DETAIL
E3-0-1
NOT TO SCALE



8 TYPICAL COLUMN FOOTING DETAIL
E3-0-1
NOT TO SCALE



5 RAISED GROUNDING DETAIL
E3-0-1
NOT TO SCALE

DRA

Drumsey Rosane Anderson, Inc.
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06074
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NORTHEAST
METRO TECH

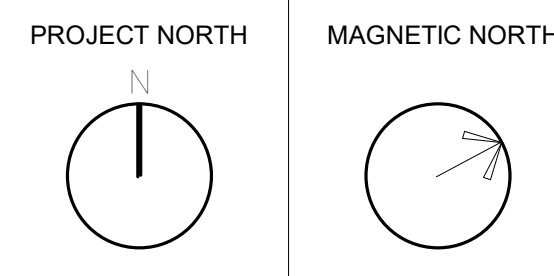
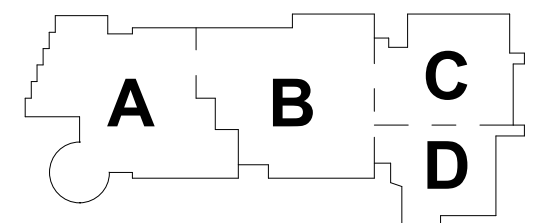
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BALA
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SCHEMATIC
DESIGN
SUBMITTAL

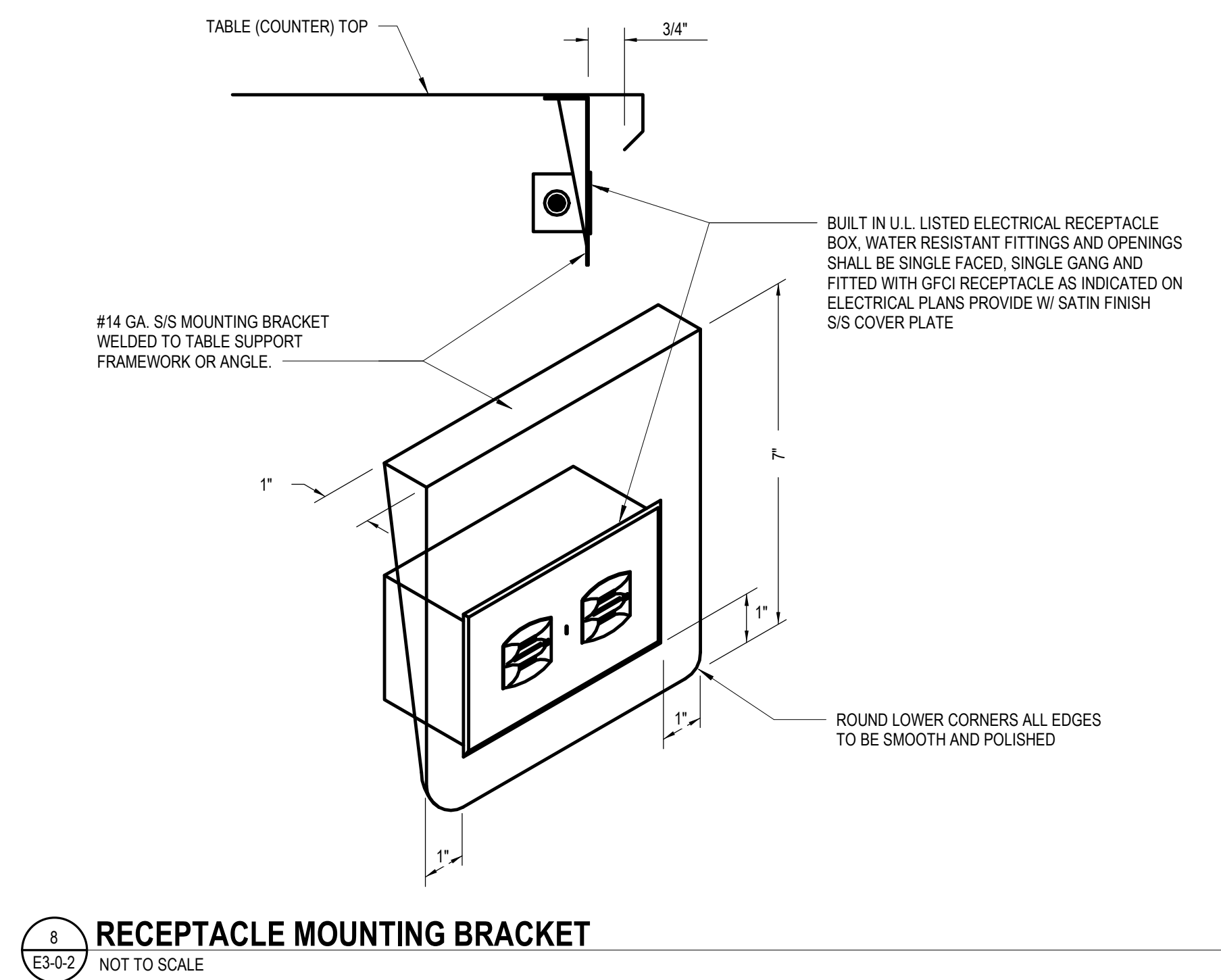
JUNE 17, 2021



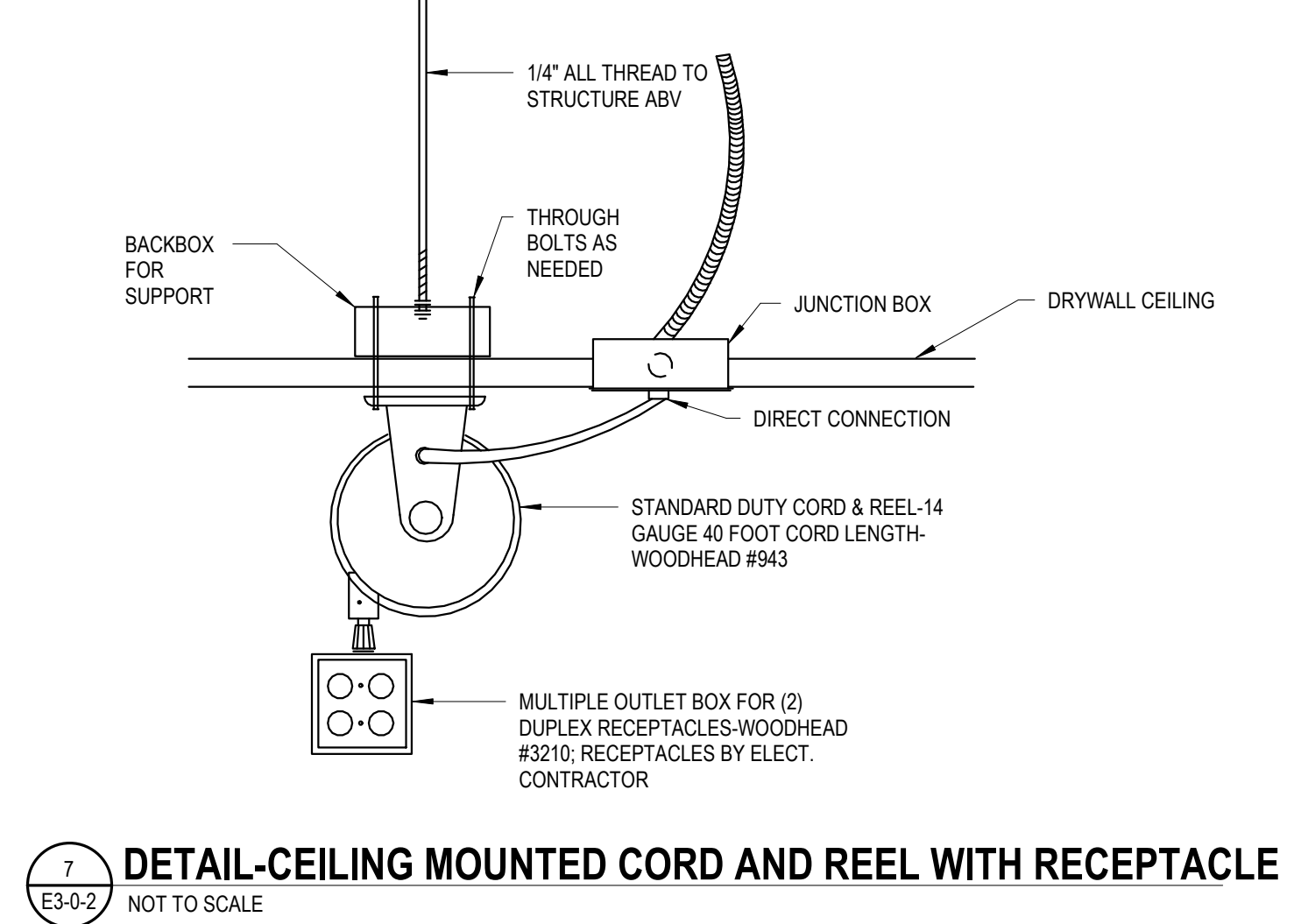
GROUNDING
DETAILS

Scale: As indicated
Job No.: 6520409
Drawn By: DRA
Date: JUNE 17, 2021

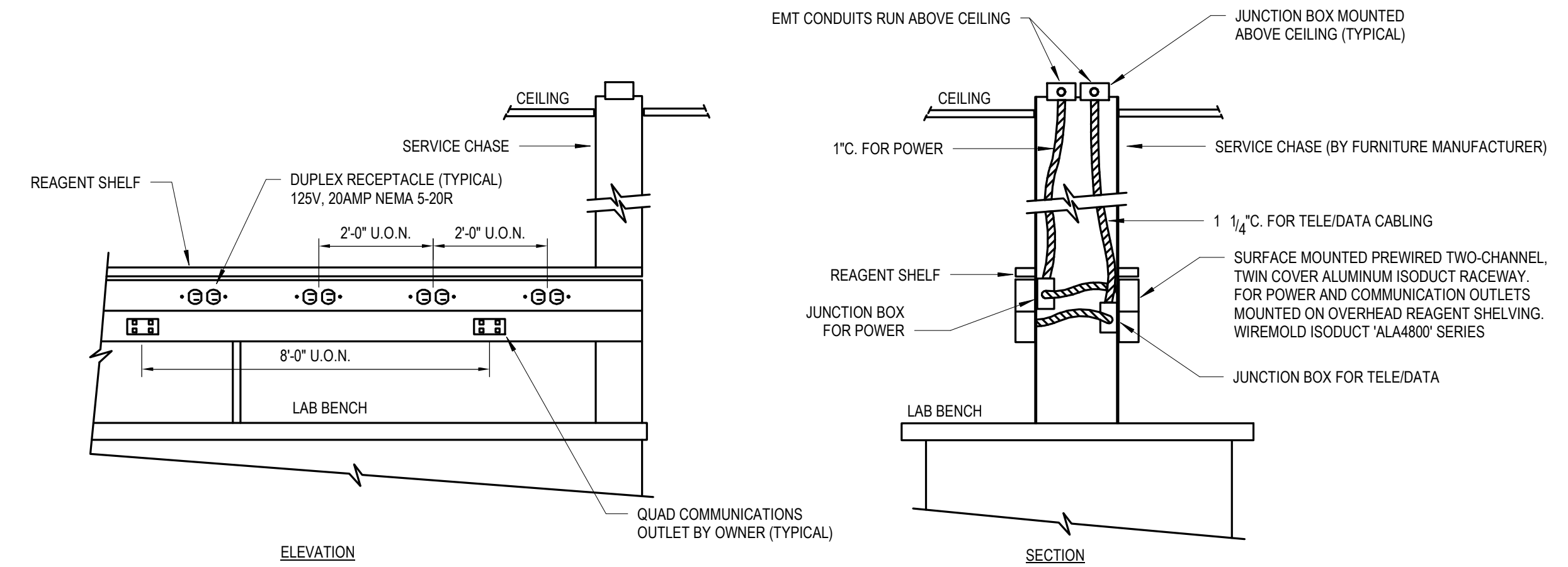
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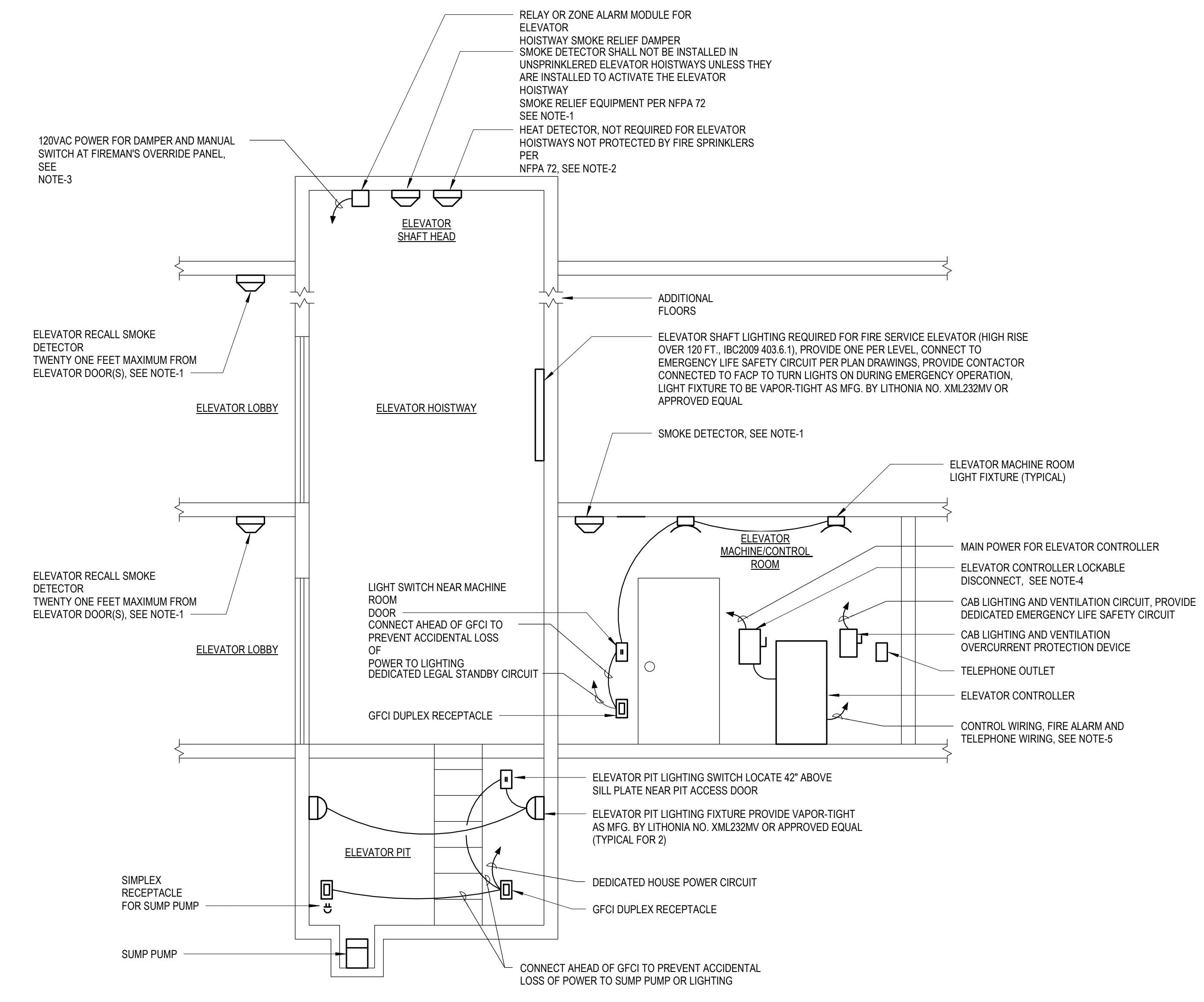
2 RECEPTACLE MOUNTING BRACKET
NOT TO SCALE



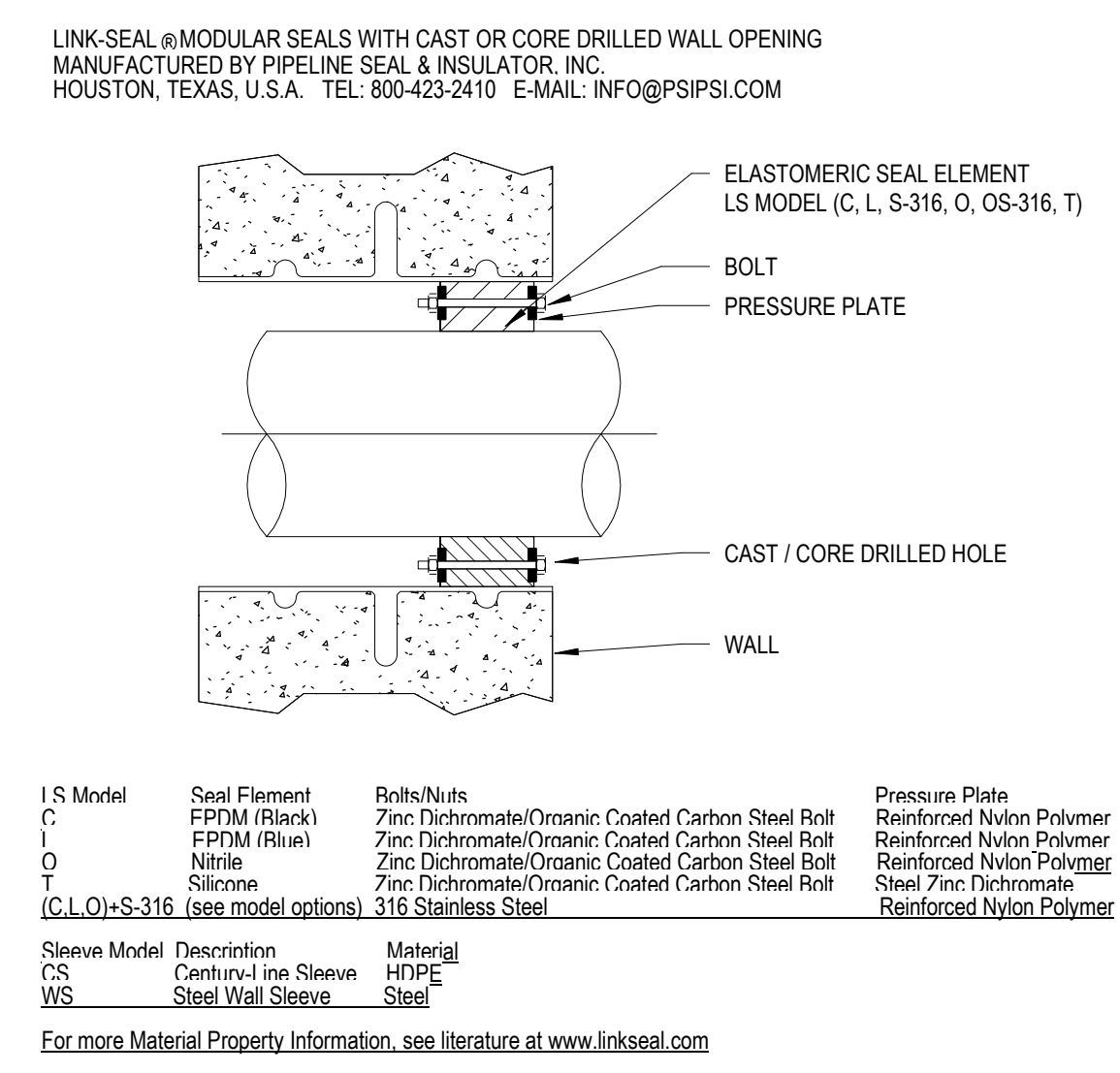
1 DETAIL-CEILING MOUNTED CORD AND REEL WITH RECEPTACLE
NOT TO SCALE



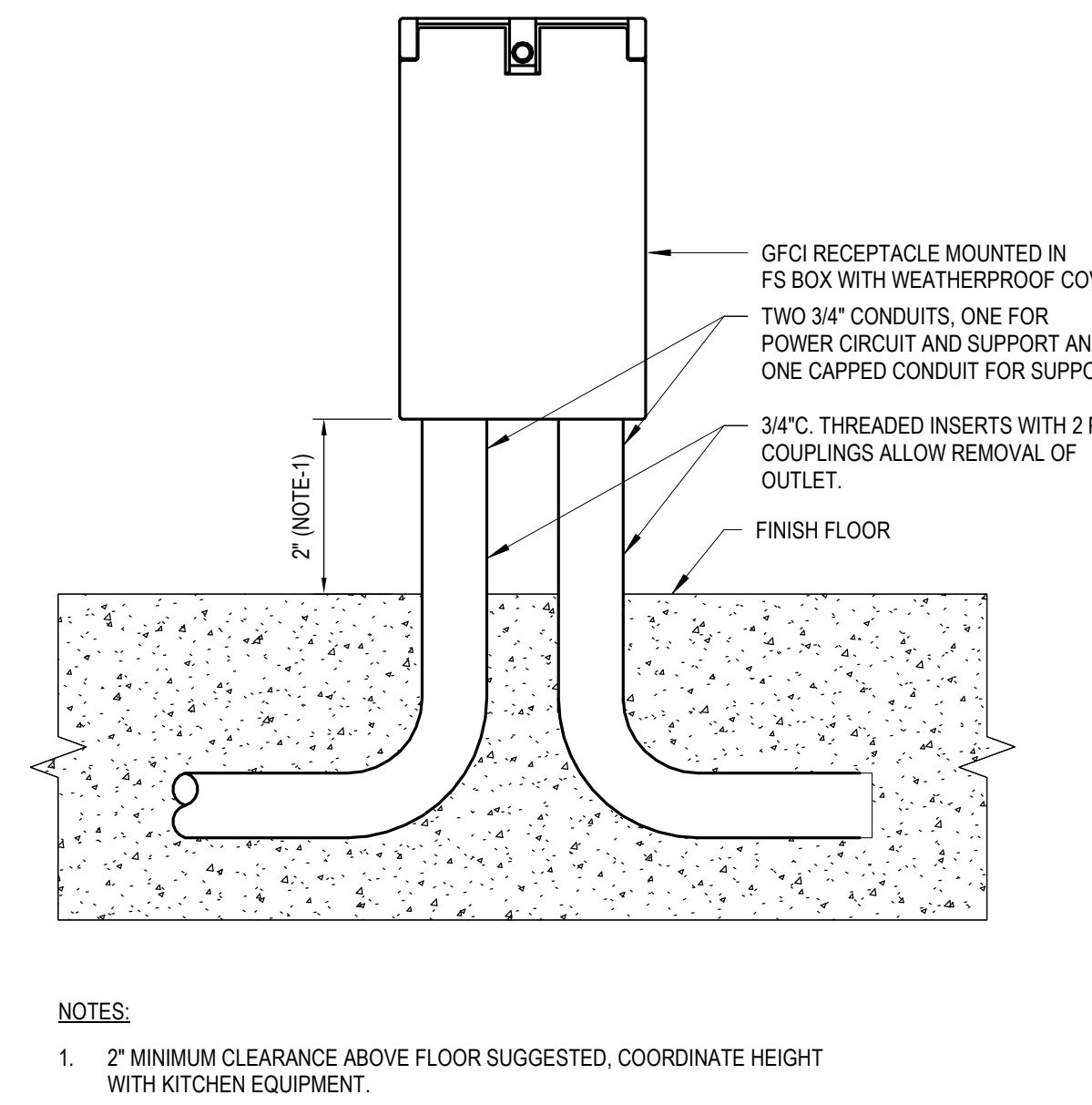
3 TYPICAL BENCH TOP MULTI-OUTLET RACEWAY DETAIL
NOT TO SCALE



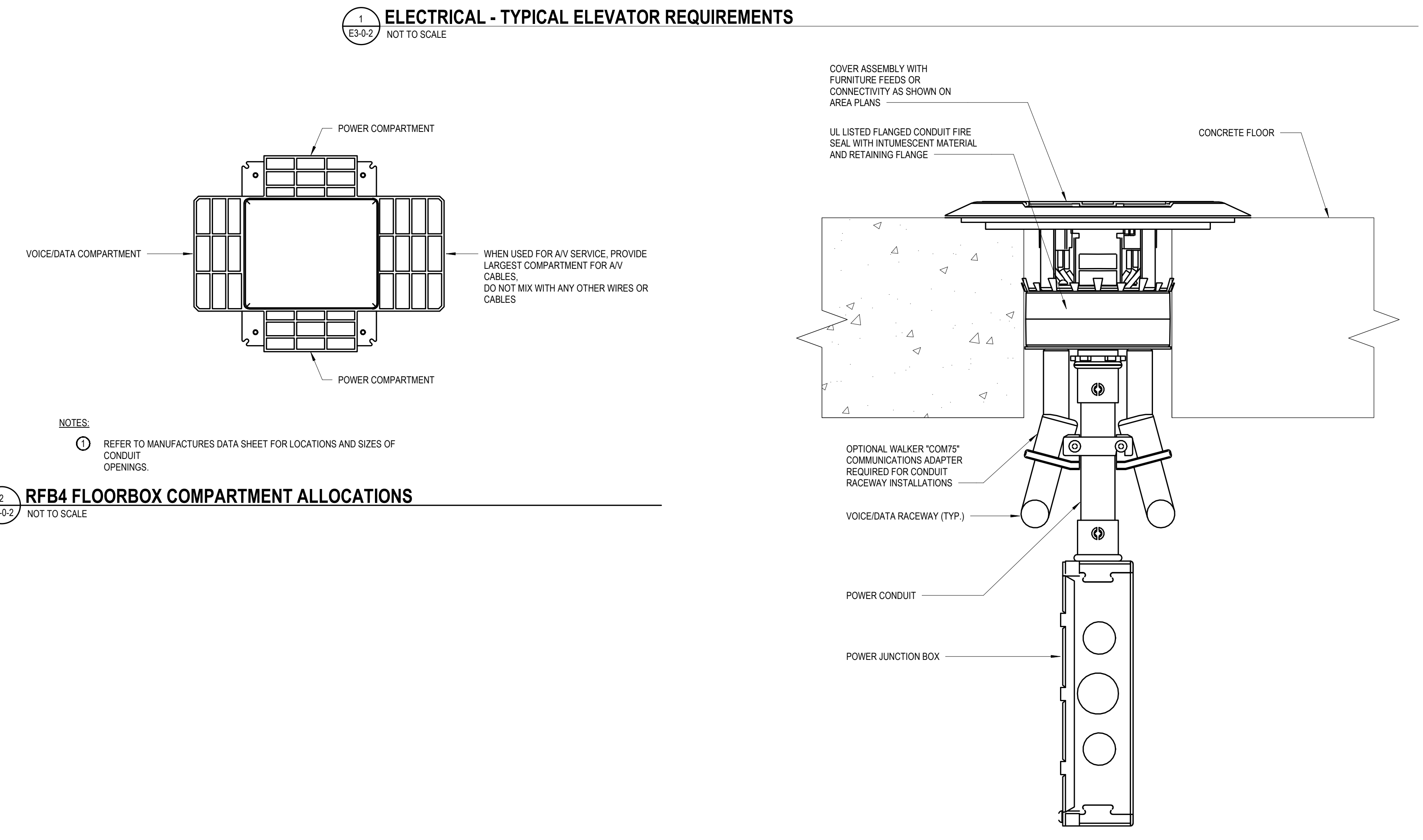
- NOTES:**
- ACTIVATION OF ANY OF THE SMOKE DETECTORS SHOWN SHALL INITIATE ELEVATOR RECALL. ACTIVATION OF SMOKE DETECTORS ON DESIGNATED LEVEL SHALL CAUSE THE ELEVATOR TO RETURN TO AN ALTERNATE LEVEL DESIGNATED AND ALTERNATE LEVELS TO BE DETERMINED BY THE ELEVATOR INSPECTOR AND FIRE MARSHAL.
 - IF THE HOISTWAY OR MACHINE CONTROL ROOM IS SPRINKLERED, THEN THERE MUST BE A 135 DEGREE RATE OF RISE OR RATE COMPENSATION HEAT DETECTOR INSTALLED WITHIN 24" OF EACH SPRINKLER HEAD AND SET FOR A LOWER TRIP TEMPERATURE THAN THE SPRINKLER HEAD. WHEN ANY HEAT DETECTOR IS ACTIVATED, PRIMARY ELEVATOR POWER SHALL BE SHUT DOWN VIA A SHUNT TRIP BREAKER SUPPLYING THE ELEVATOR EQUIPMENT. THE SHUNT TRIP POWER MUST BE 120VAC (EMERGENCY LIFE SAFETY CIRCUIT) AND MUST BE SUPERVISED BY THE FIRE ALARM SYSTEM.
 - DAMPER AT TOP OF SHAFT SHALL BE MANUALLY CONTROLLED FROM FIRE ALARM PANEL.
 - FUSIBLE ELEVATOR DISCONNECT, LOCATE ADJACENT TO DOOR ENTERING MACHINE ROOM. PROVIDE WITH MEANS FOR LOCKING IN "OPEN" POSITION PROVIDE WITH CLASS-1/0-DUAL ELEMENT, TIME-DELAY FUSES.
 - CONTROL AND COMMUNICATION WIRING, PROVIDE THE FOLLOWING TO EACH ELEVATOR CONTROLLER.
 - SHUNT TRIP CONTROL WIRES TO HEAT DETECTOR(S) OR CONTROL PANEL
 - AUXILIARY CONTACTS FOR SELF LOWERING ELEVATORS (IF APPLICABLE)
 - TELEPHONE AND DATA CABLES
 - COMMUNICATION WIRES FROM AUTOMATIC TRANSFER SWITCH
 - COMMUNICATION WIRES FROM FIRE ALARM CONTROL PANEL.



5 LINK SEAL CORE DRILLED WALL OPENING
NOT TO SCALE



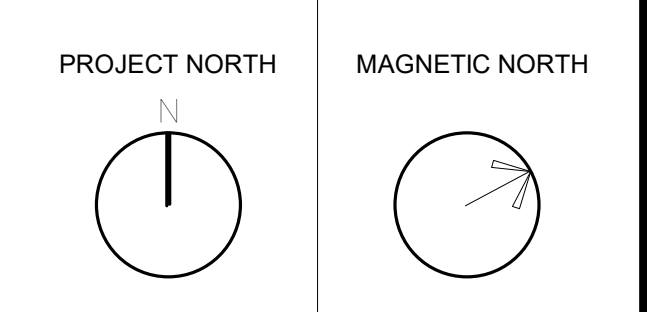
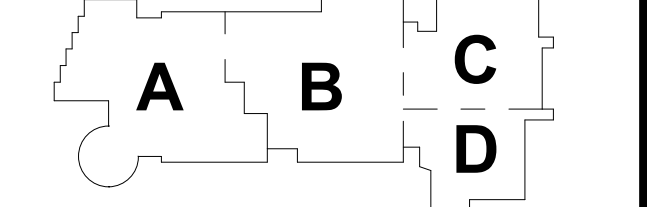
6 KITCHEN FLOOR OUTLET
NOT TO SCALE



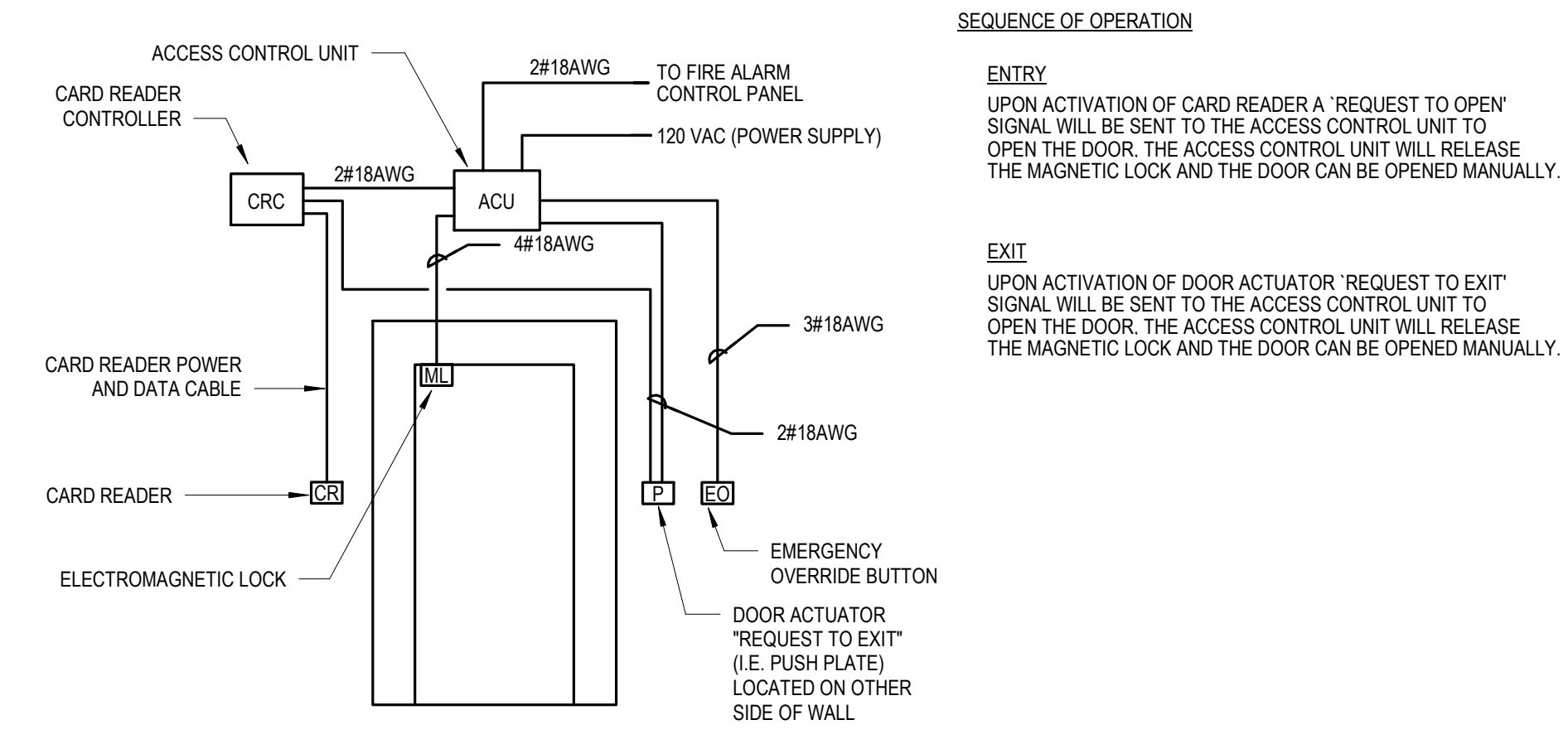
7 RFB4 FLOORBOX COMPARTMENT ALLOCATIONS
NOT TO SCALE

- NOTES:**
- FOLLOW MANUFACTURERS INSTRUCTIONS FOR MINIMUM AND MAXIMUM O.D. CORE BIT SIZES.
 - HOLES SHALL BE SPACED A MINIMUM OF 24" ON CENTER AND NOT MORE THAN ONE HOLE PER EACH 65 SQUARE FEET OF FLOOR AREA IN EACH SPAN.
 - MINIMUM THICKNESS OF STRUCTURAL CONCRETE TOPPING TO BE 2-1/4" OVER METAL DECK OR A MINIMUM 2" THICK REINFORCED CONCRETE SLAB UNIT WEIGHT OF CONCRETE TO BE 110 TO 155 PCF.

8 FLOORBOX DETAIL, WALKER POKE-THRU
NOT TO SCALE



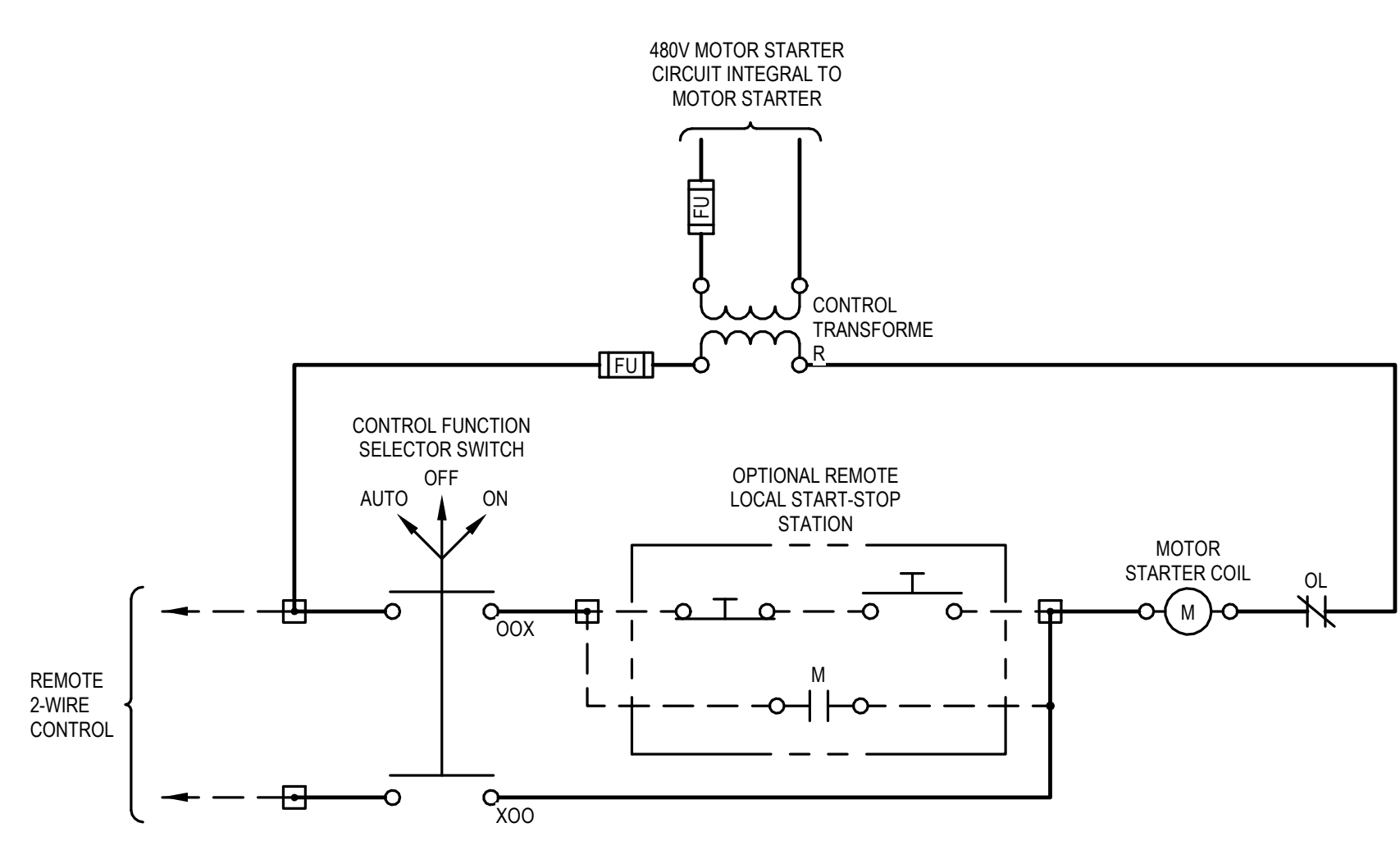
GENERAL DETAILS



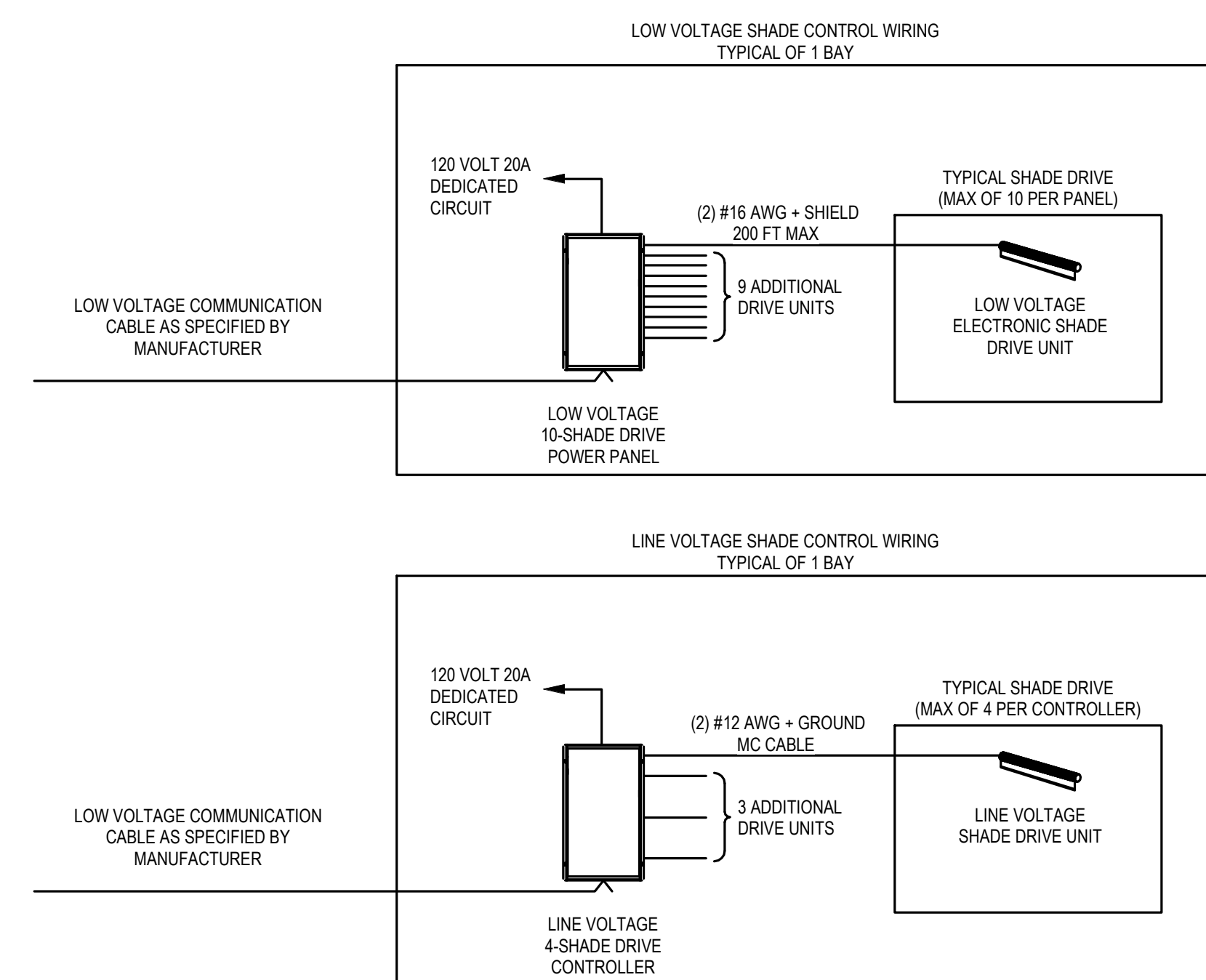
NOTE: 1. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING, CONDUIT AND ALL ASSOCIATED EQUIPMENT FOR A COMPLETE CARD READER SECURITY SYSTEM. CONTRACTOR SHALL COORDINATE EXACT REQUIREMENT WITH SECURITY VENDOR. SECURITY SYSTEM SHALL MATCH BUILDING STANDARD.

2. COORDINATE FINAL WIRE TYPE WITH SECURITY VENDOR.

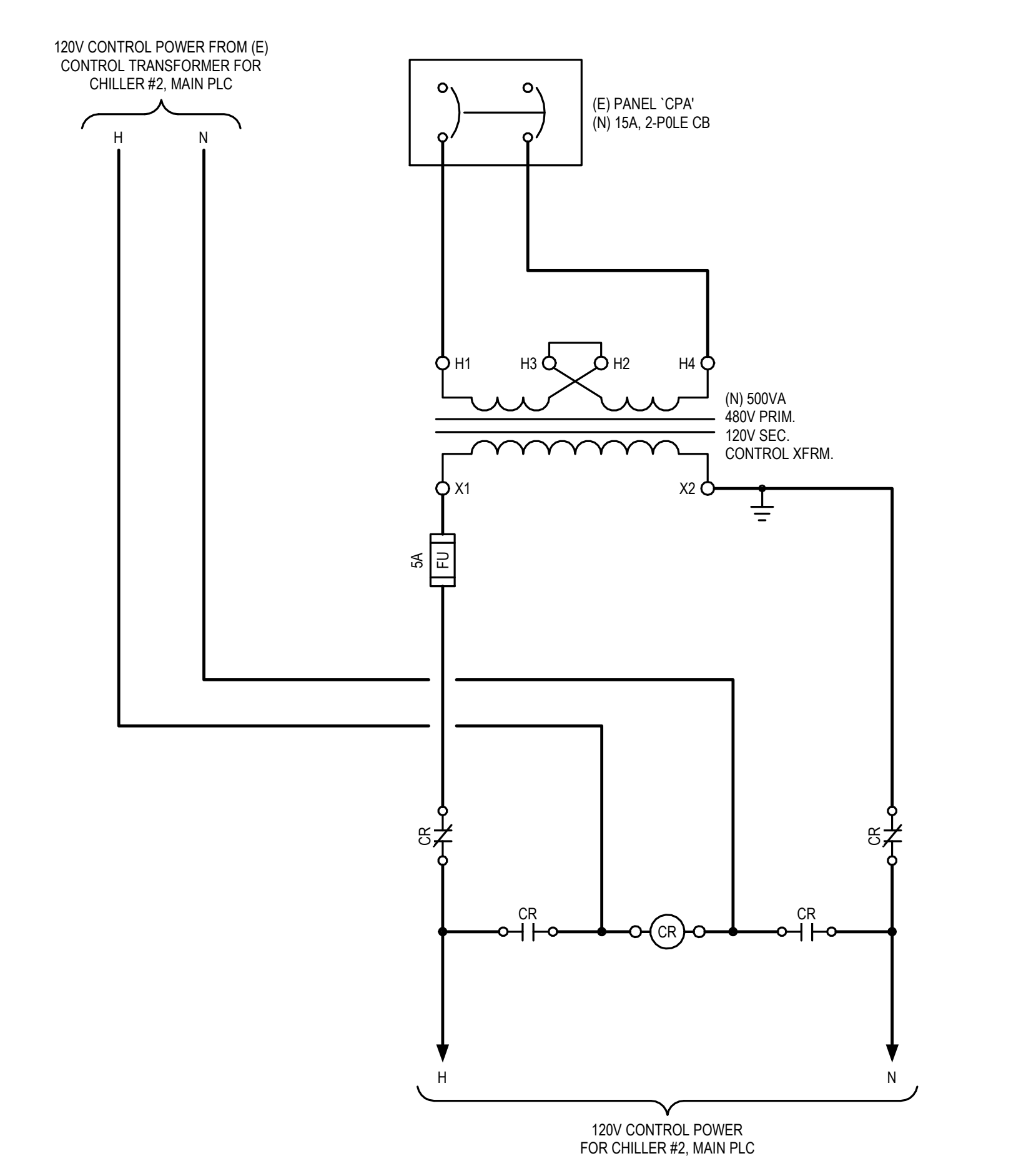
6 TYPICAL SINGLE DOOR CARD READER WIRING DIAGRAM
E3-03 NOT TO SCALE



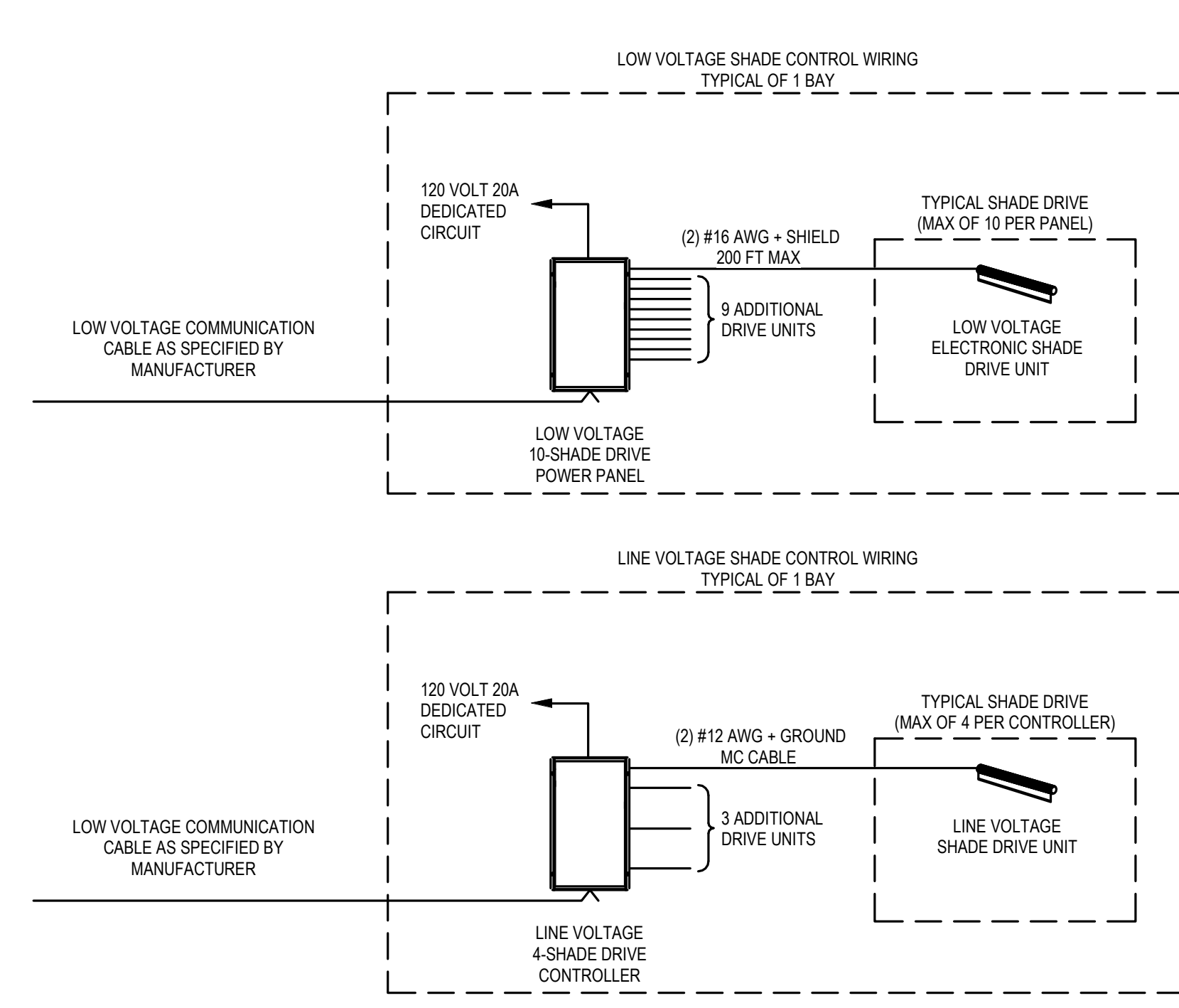
3 MOTOR CONTROL WIRING DIAGRAM
E3-03 NOT TO SCALE



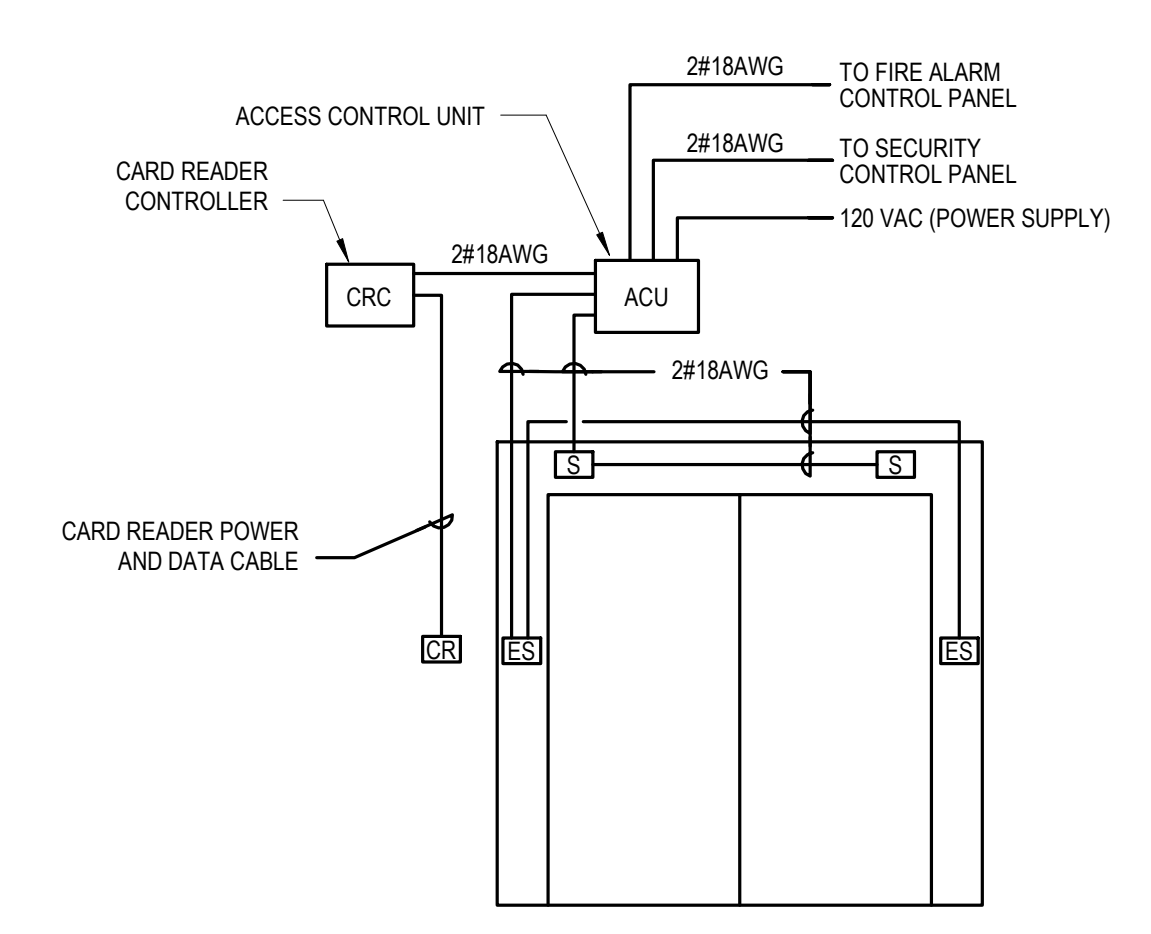
11 SHADE CONTROL WIRING
E3-03 NOT TO SCALE



2 CHILLER #2 CONTROL POWER SCHEMATIC
E3-03 NOT TO SCALE



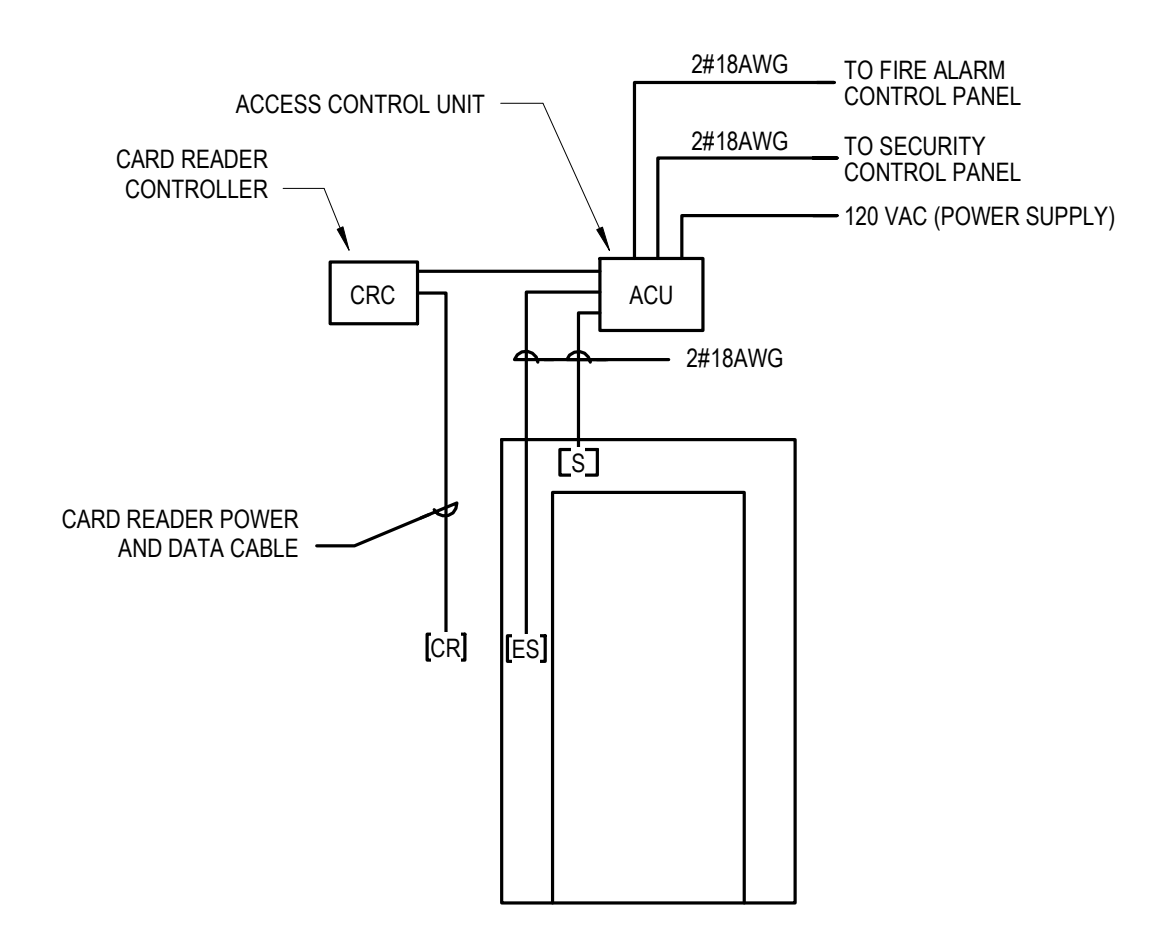
10 ELECTRICAL - TYPICAL AUTOMATED SHADES WIRING DIAGRAM
E3-03 NOT TO SCALE



NOTE: 1. COORDINATE FINAL WIRE TYPE WITH SECURITY VENDOR.

2. ELECTRICAL CONTRACTOR SHALL PROVIDE 3/4" WITH FULL STRING AND BACK BOX INSTALLATION ONLY. WIRING AND DEVICE INSTALLATION BY SECURITY VENDOR (AND/OVER). COORDINATE EXACT REQUIREMENTS WITH SECURITY VENDOR.

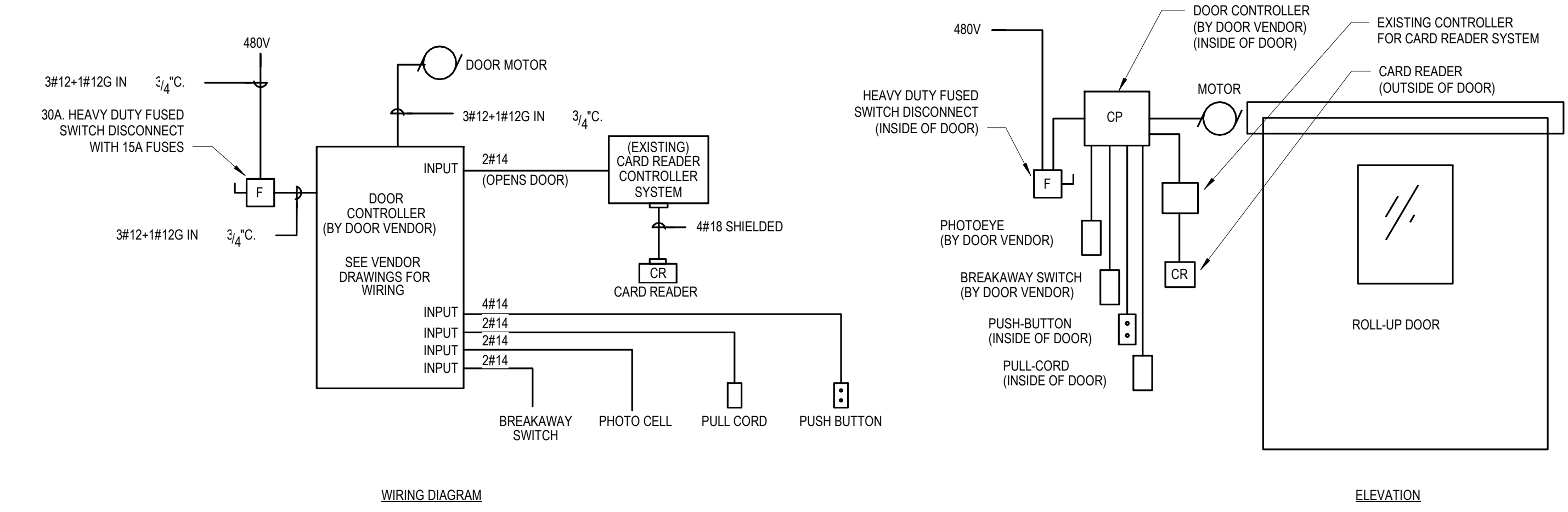
8 TYPICAL TWO DOOR CARD READER WIRING DIAGRAM
E3-03 NOT TO SCALE



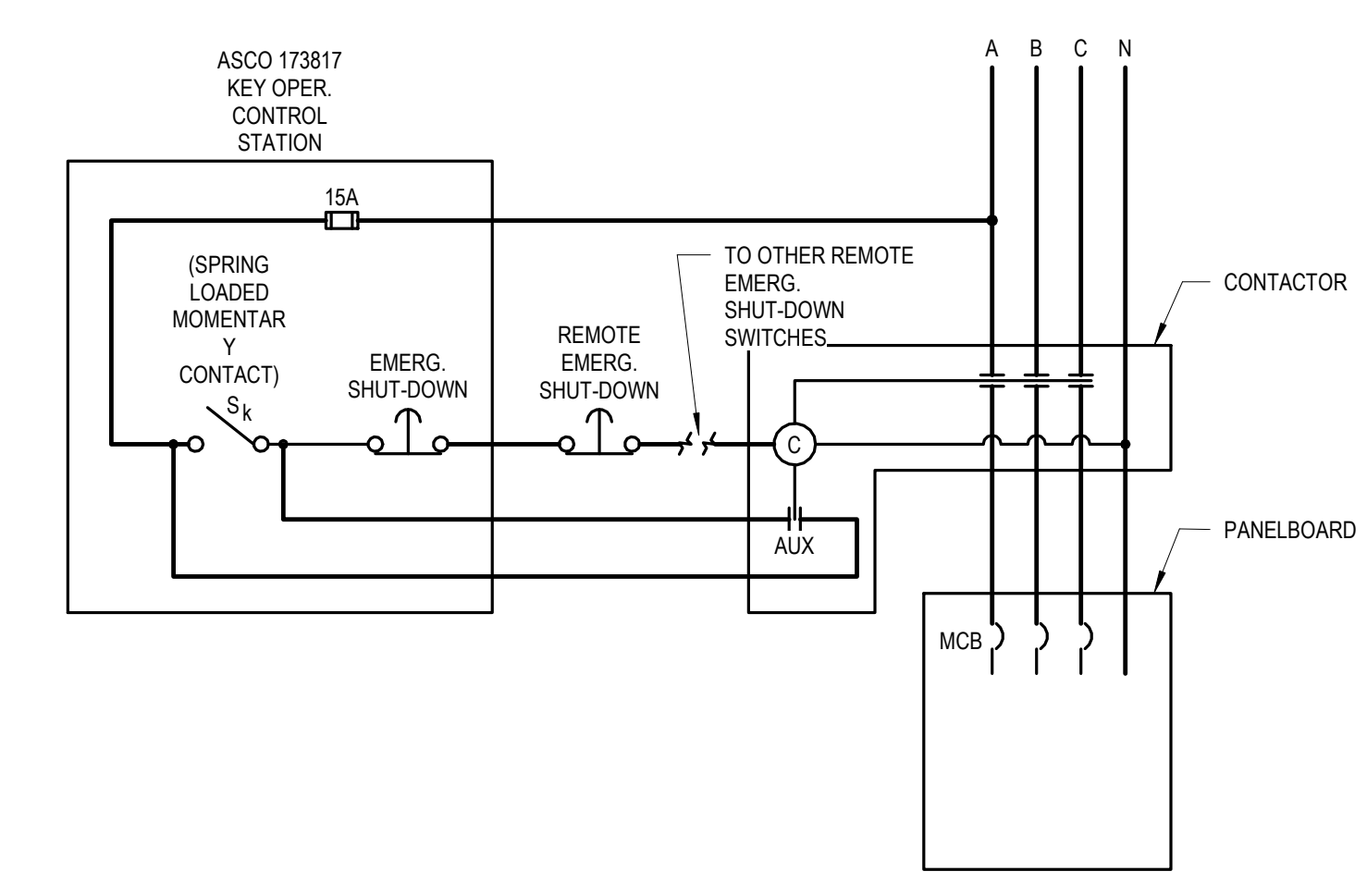
NOTE: 1. COORDINATE FINAL WIRE TYPE WITH SECURITY VENDOR.

2. ELECTRICAL CONTRACTOR SHALL PROVIDE 3/4" WITH FULL STRING AND BACK BOX INSTALLATION ONLY. WIRING AND DEVICE INSTALLATION BY SECURITY VENDOR (AND/OVER). COORDINATE EXACT REQUIREMENTS WITH SECURITY VENDOR.

7 TYPICAL SINGLE DOOR CARD READER WIRING DIAGRAM
E3-03 NOT TO SCALE

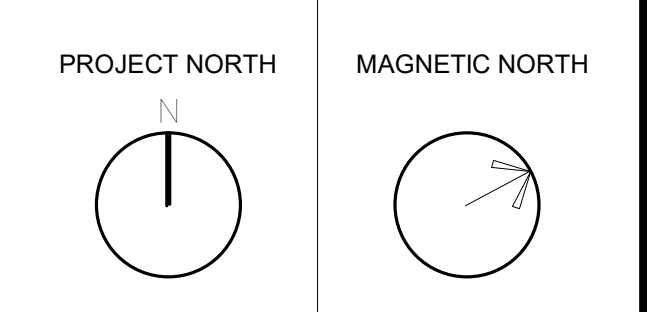
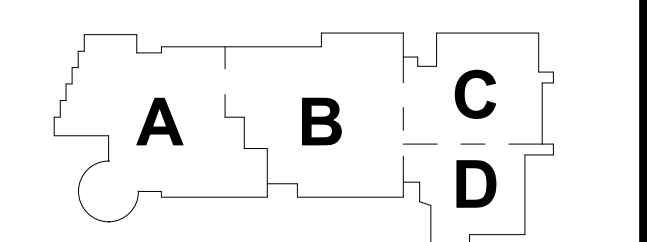


5 TYPICAL ROLL-UP DOOR W/CARD READER WIRING DIAGRAM
E3-03 NOT TO SCALE



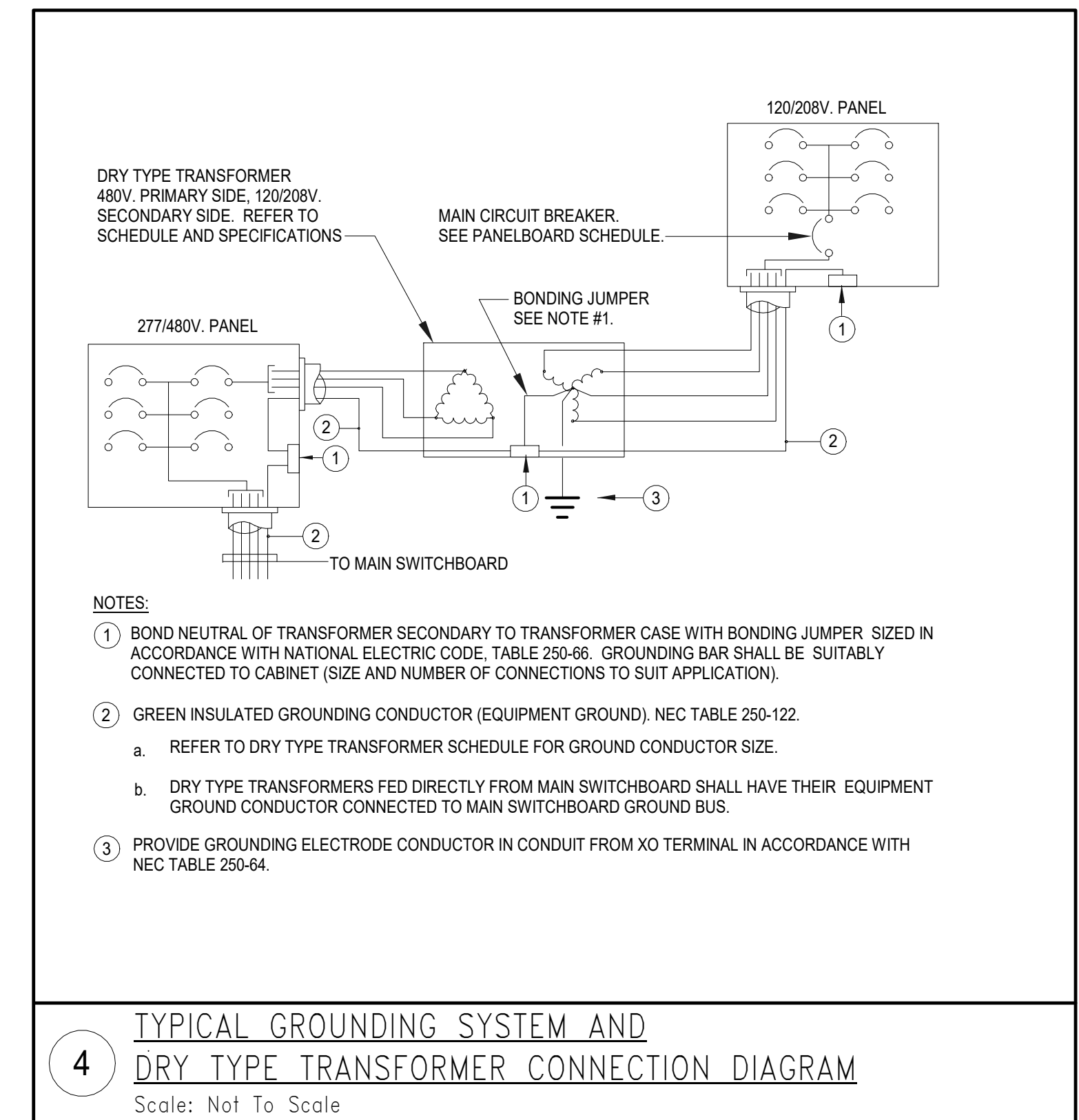
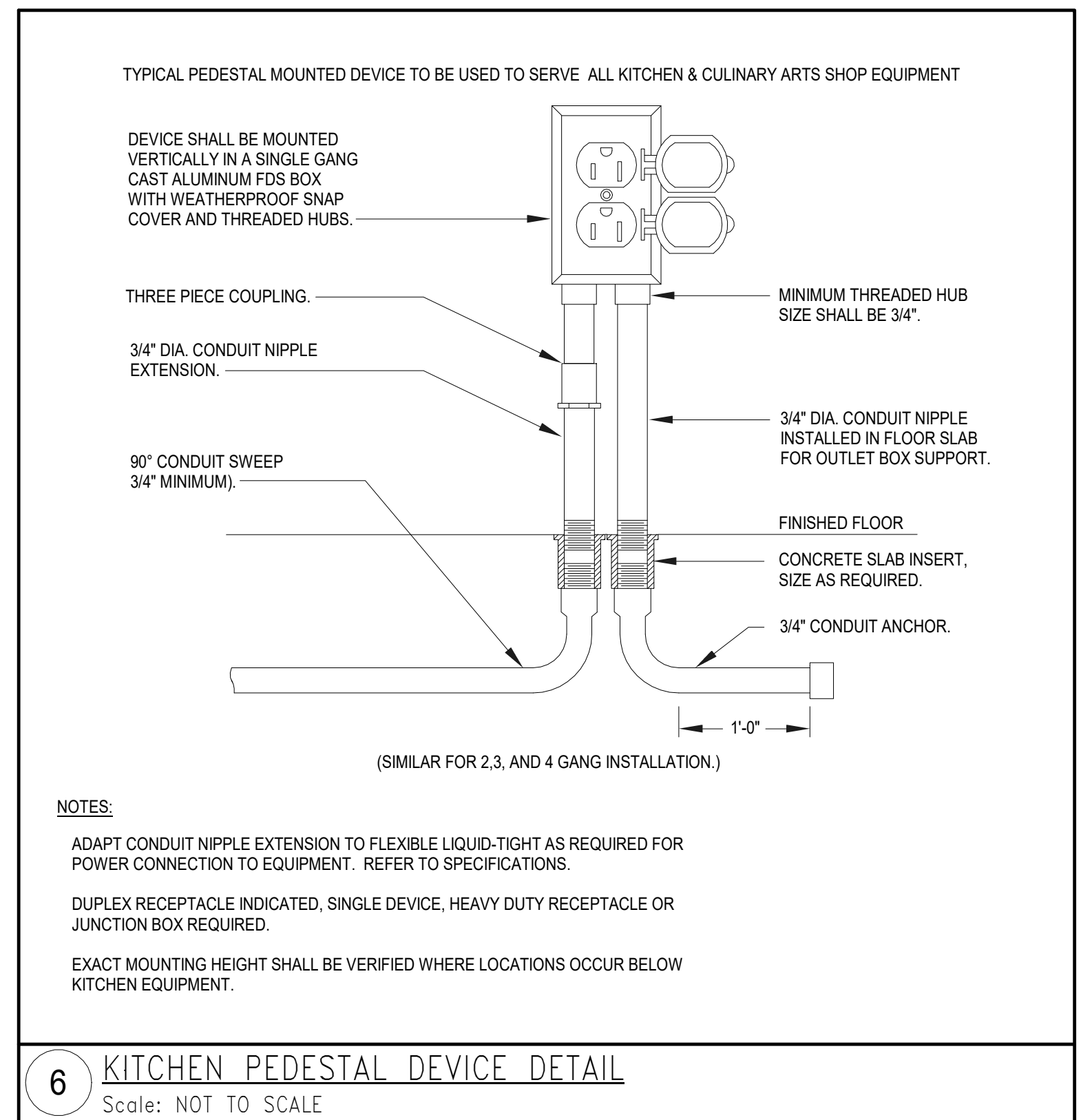
9 EMERGENCY SHUT-OFF DIAGRAM FOR SHOP EQUIPMENT
E3-03 NOT TO SCALE

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MAIN SWITCHBOARD MSB1 SCHEDULE

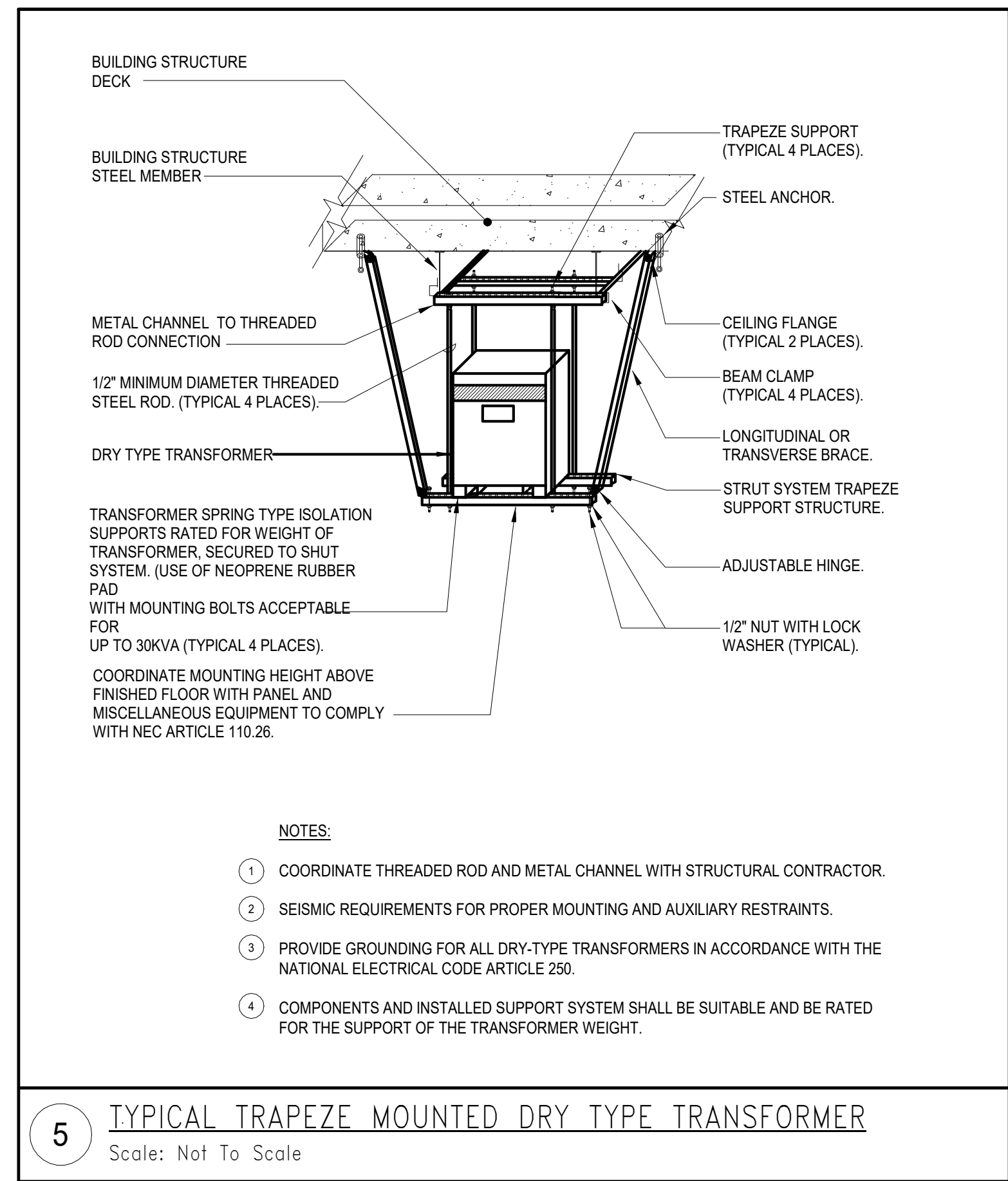
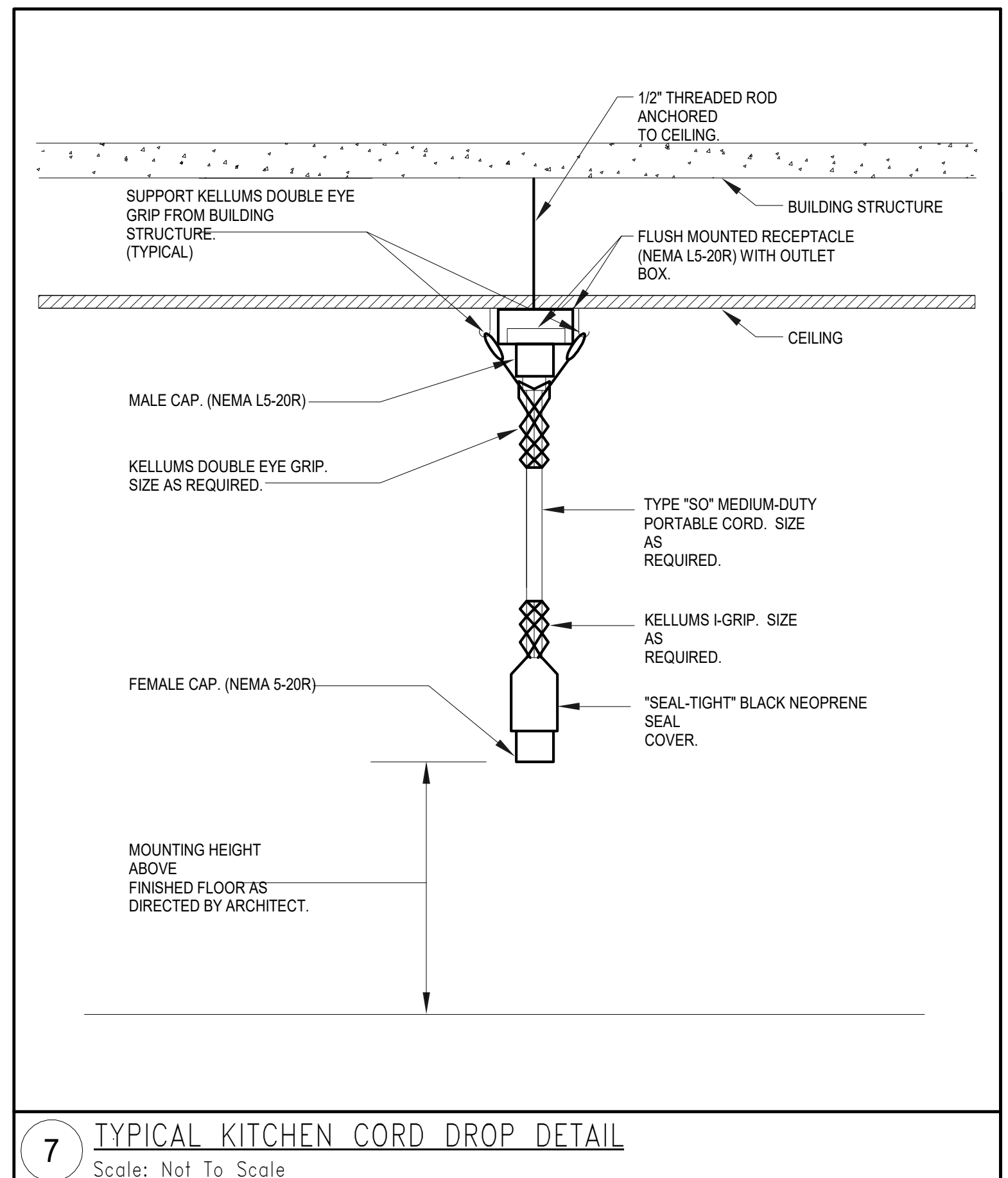
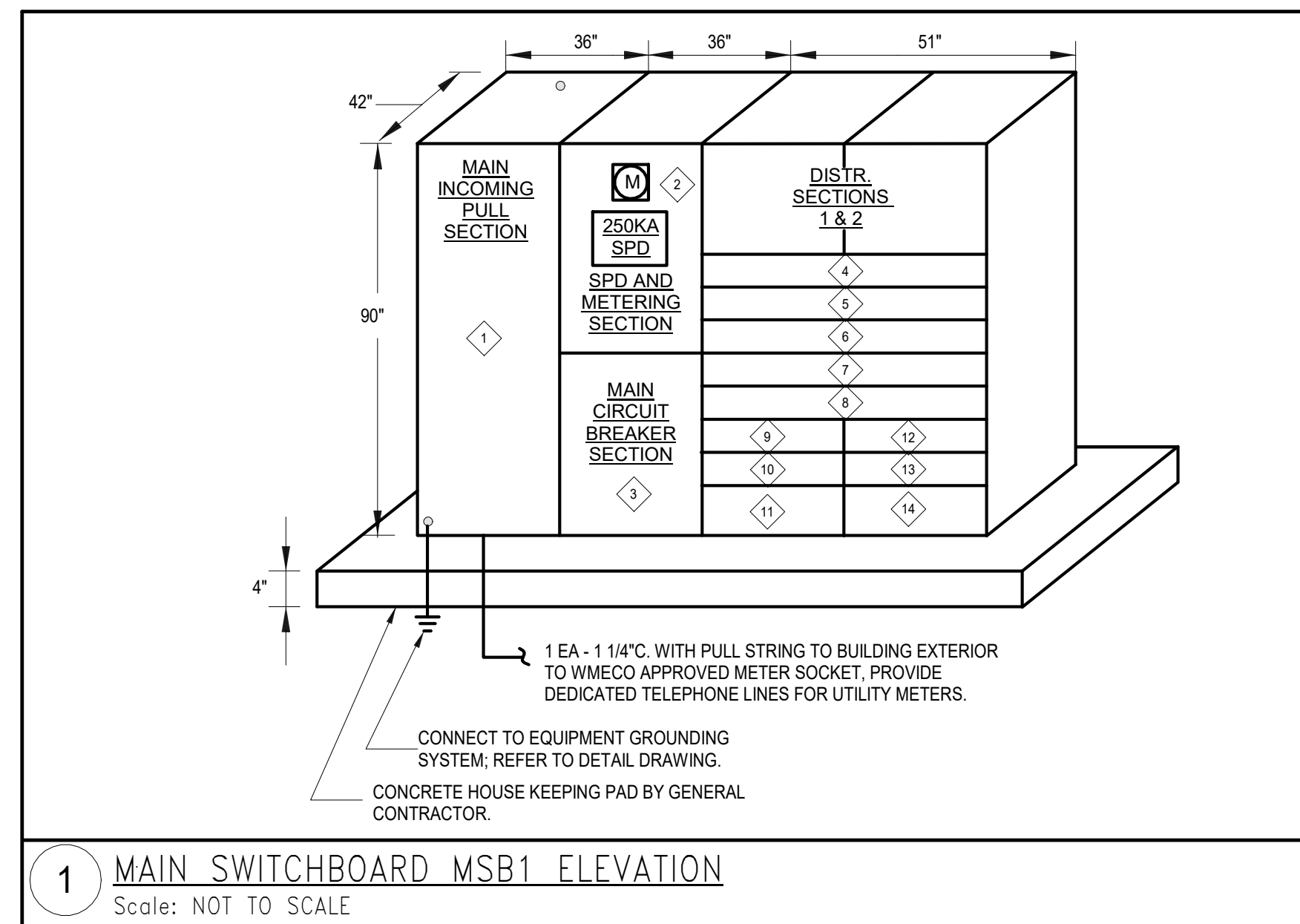
ITEM No.	POLES	TRIP	CIRCUIT BREAKER FRAME	DESIG.	A.I.C.	SEE NOTE	EQUIPMENT AND NAMEPLATE
1			2000				MAIN INCOMING PULL SECTION
2			2000				SPD & OWNERS' METERING SECTION
3	3	2000	2000	-	65K	-	MAIN CIRCUIT BREAKER SECTION
4	3	1000	1000	-	65K	-	DISTRIBUTION PANEL DP41
5	3	1000	1000	-	65K	-	DISTRIBUTION PANEL DP42
6	3	1000	1000	-	65K	-	DISTRIBUTION PANEL DP4M
7	3	400	400	-	65K	-	AIR COOLED CHILLER SCL-1
8	3	300	400	-	65K	-	STANDBY AUTOMATIC TRANSFER SWITCH ATS-1
9	3	300	400	-	65K	-	LIFE SAFETY AUTOMATIC TRANSFER SWITCH ATS-2
10	3	600	600	-	65K	-	SITE LIGHTING DISTRIBUTION PANEL SLP-1
11	3	70	150	-	65K	-	PANEL PPEV
12	3	300	400	-	65K	-	SPARE
13	3	300	400	-	65K	-	PV SYSTEM BREAKER
14	3	400	400	-	65K	-	SPARE

GENERAL SWITCHBOARD SCHEDULE NOTES:

- PV SYSTEM BREAKER SHALL BE LAST BREAKER CONNECTED TO BUS. APPROVED FOR REVERSE POWER FEED. USE (UL489).
- CIRCUIT BREAKERS LISTED AS SPARE SHALL BE LEFT IN THE OFF POSITION AND LABELLED AS "SPARE".

NOTES:

- PROVIDE GROUND FAULT PROTECTION.
- ALL SWITCHBOARD FEEDER CIRCUIT BREAKERS SHALL BE METERED PER EPMS SYSTEM, AS INDICATED ON DETAIL ON THIS SHEET.
- PROVIDE MAIN CIRCUIT BREAKER WITH PROGRAMMABLE TRIP UNIT, EATON 500M OR APPROVED EQUAL.
- PROVIDE FEEDER CIRCUIT BREAKER WITH PROGRAMMABLE TRIP UNIT, EATON 1150+ OR APPROVED EQUAL.

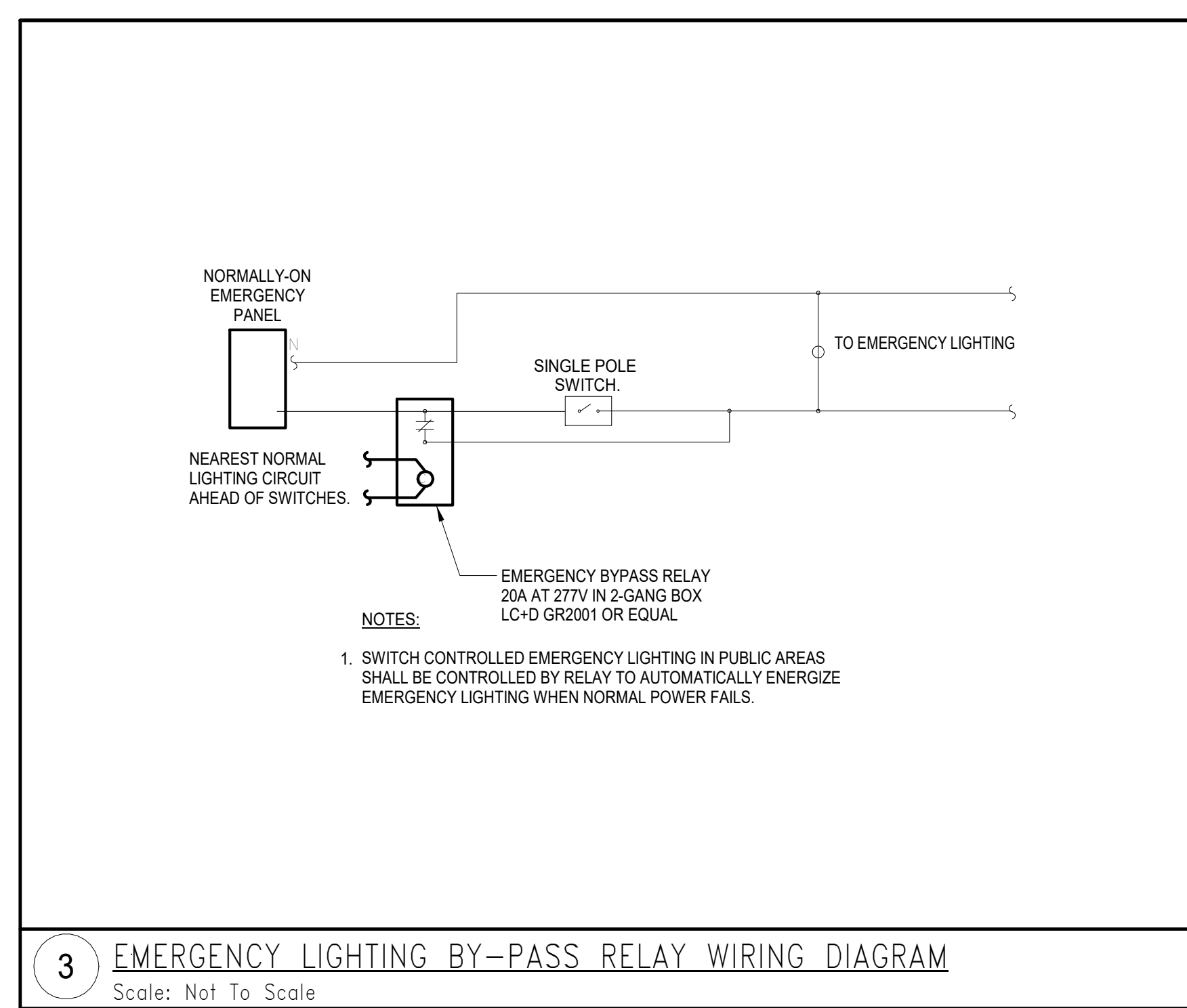
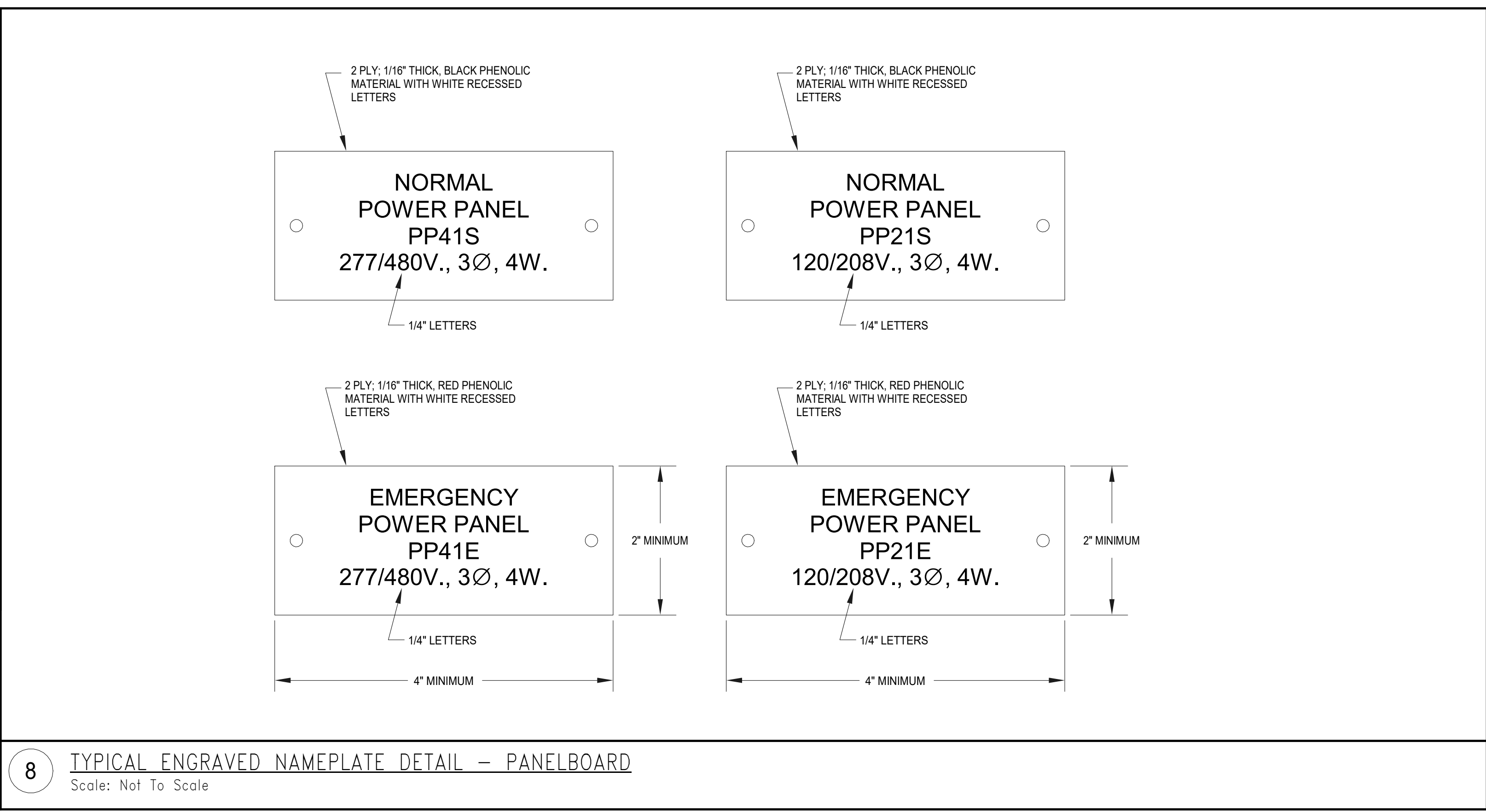
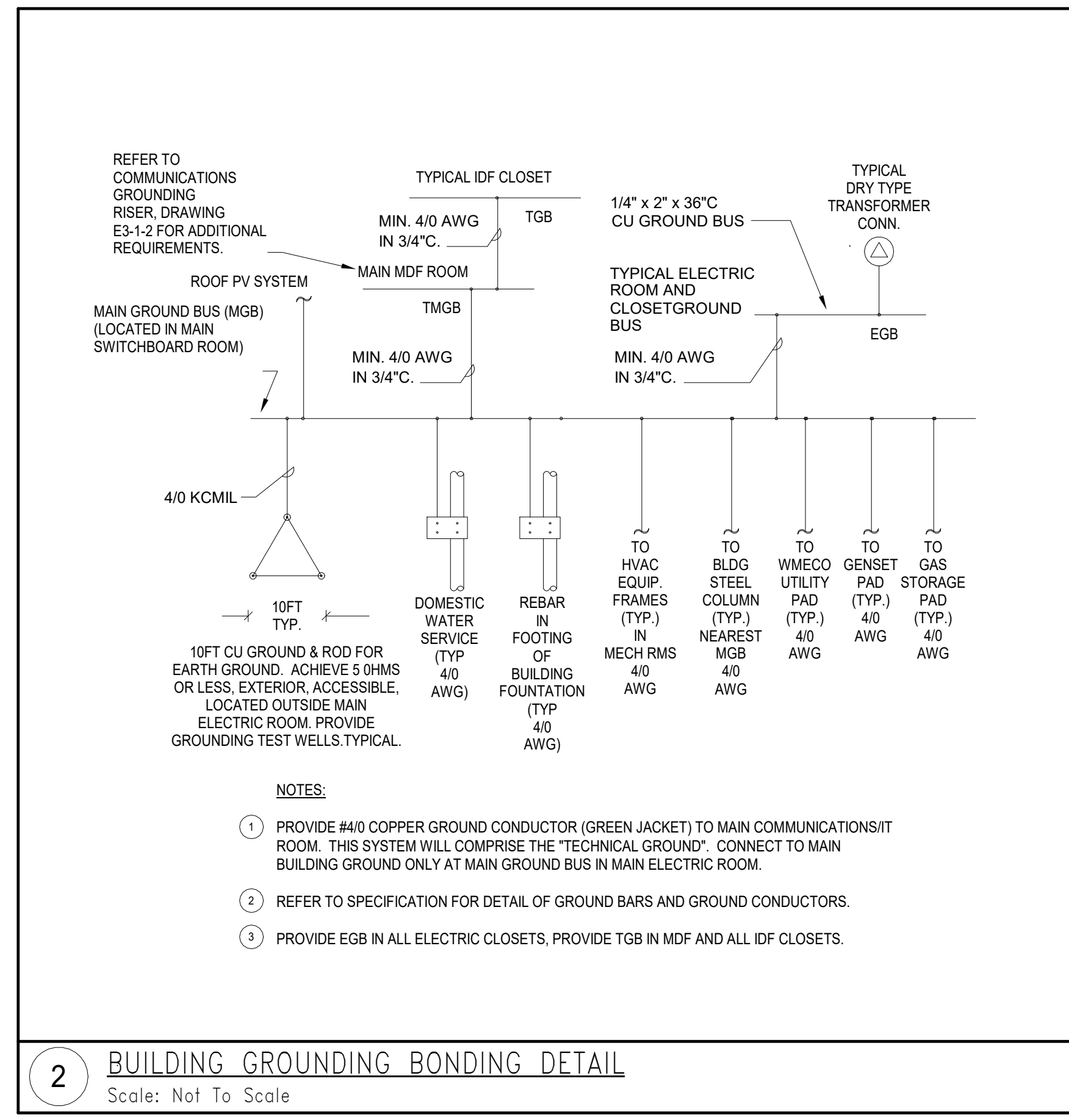


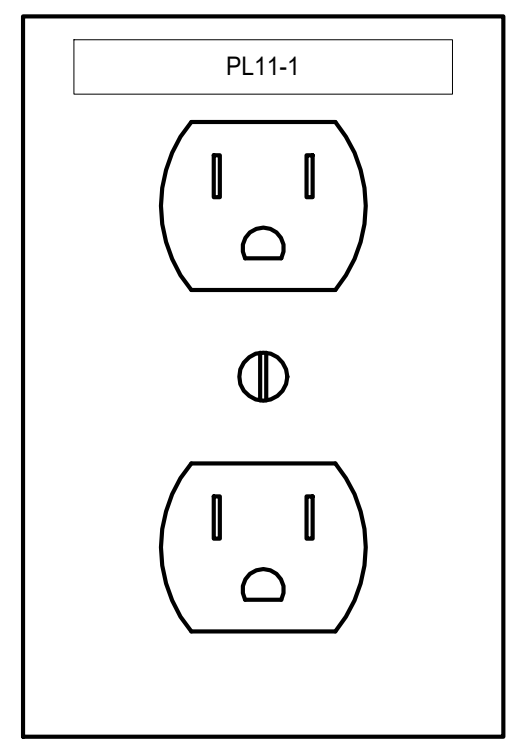
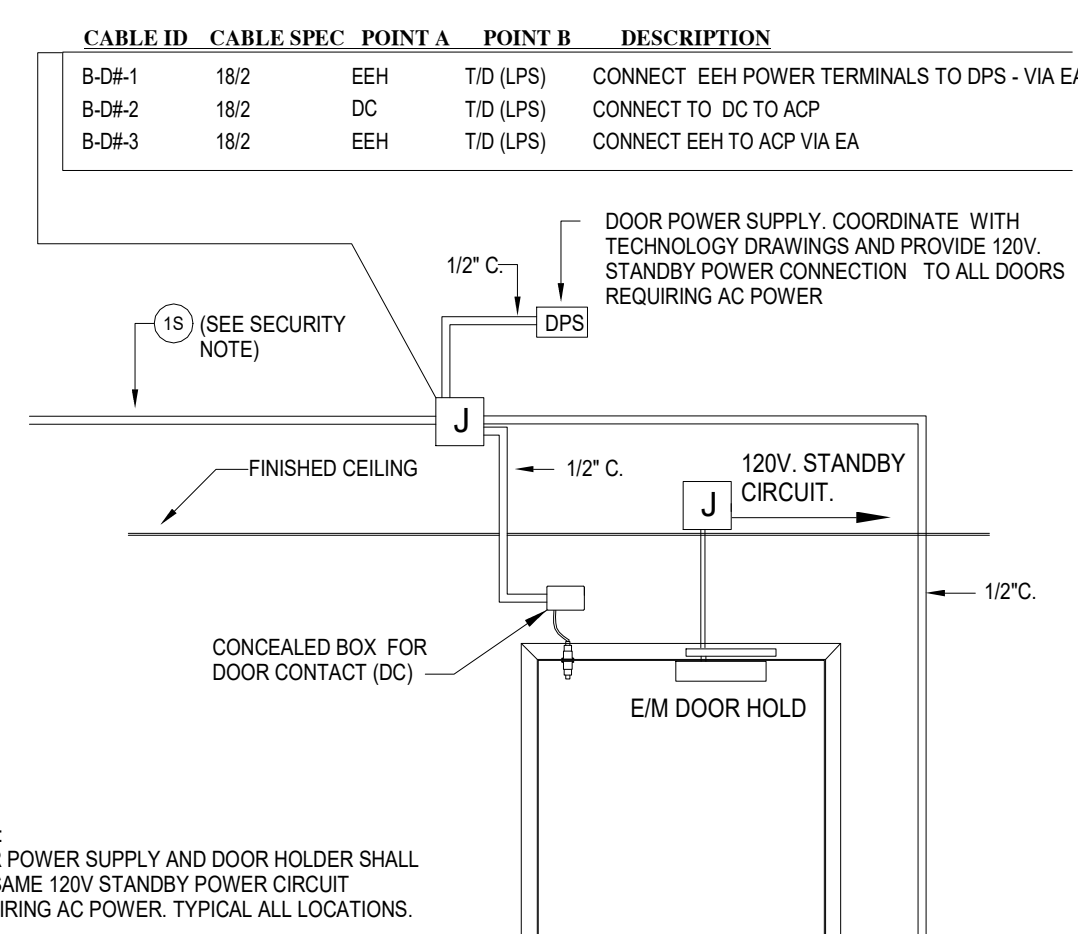
DRY-TYPE TRANSFORMER SCHEDULE

I.D.	NAMEPLATE kVA	480V, 3Ø, 3W PRIMARY		120/208V, 3Ø, 4W SECONDARY			
		480V OVERCURRENT	48V FEEDER	208V OVERCURRENT	120/208V FEEDER		
9T1	9	11	20A-3P	3Ø12, 1Ø12 GND, 3/4"C.	25	3ØA-3P	4Ø10, 1Ø10 GND, 3/4"C.
15T2	15	18	30A-3P	3Ø10, 1Ø10 GND, 3/4"C.	42	5ØA-3P	4Ø8, 1Ø8 GND, 1/2"
3ØT3	30	36	50A-3P	3Ø8, 1Ø8 GND, 1/2"	83	10ØA-3P	4Ø2, 1Ø8 GND, 1/2"
45T4	45	54	70A-3P	3Ø4, 1Ø8 GND, 1/4"C.	125	15ØA-3P	4Ø10, 1Ø8 GND, 2/2"
75T5	75	90	125A-3P	3Ø4, 1Ø8 GND, 1/2"C.	208	225A-3P	4Ø40, 1Ø4 GND, 2/2"
112.5T6	112.5	135	175A-3P	3Ø20, 1Ø8 GND, 2/2"	313	400A-3P	4-50ØKCM, 1Ø8 GND, 4/2"
150T7	150	181	250A-3P	3-25Ø KCM, 1Ø4 GND, 2/2"	417	500A-3P	2 SETS (4-25Ø KCM, 1Ø1 GND, 2/2")
225T8	225	270	350A-3P	3-50Ø KCM, 1Ø4 GND, 4/2"	625	800A-3P	2 SETS (4-50Ø KCM, 1Ø10 GND, 4/2")
300T9	300	360	450A-3P	2 SETS (3Ø40, 1Ø2 GND, 2/2")	833	1,000A-3P	3 SETS (4-36Ø KCM, 1Ø30 GND, 3/2")

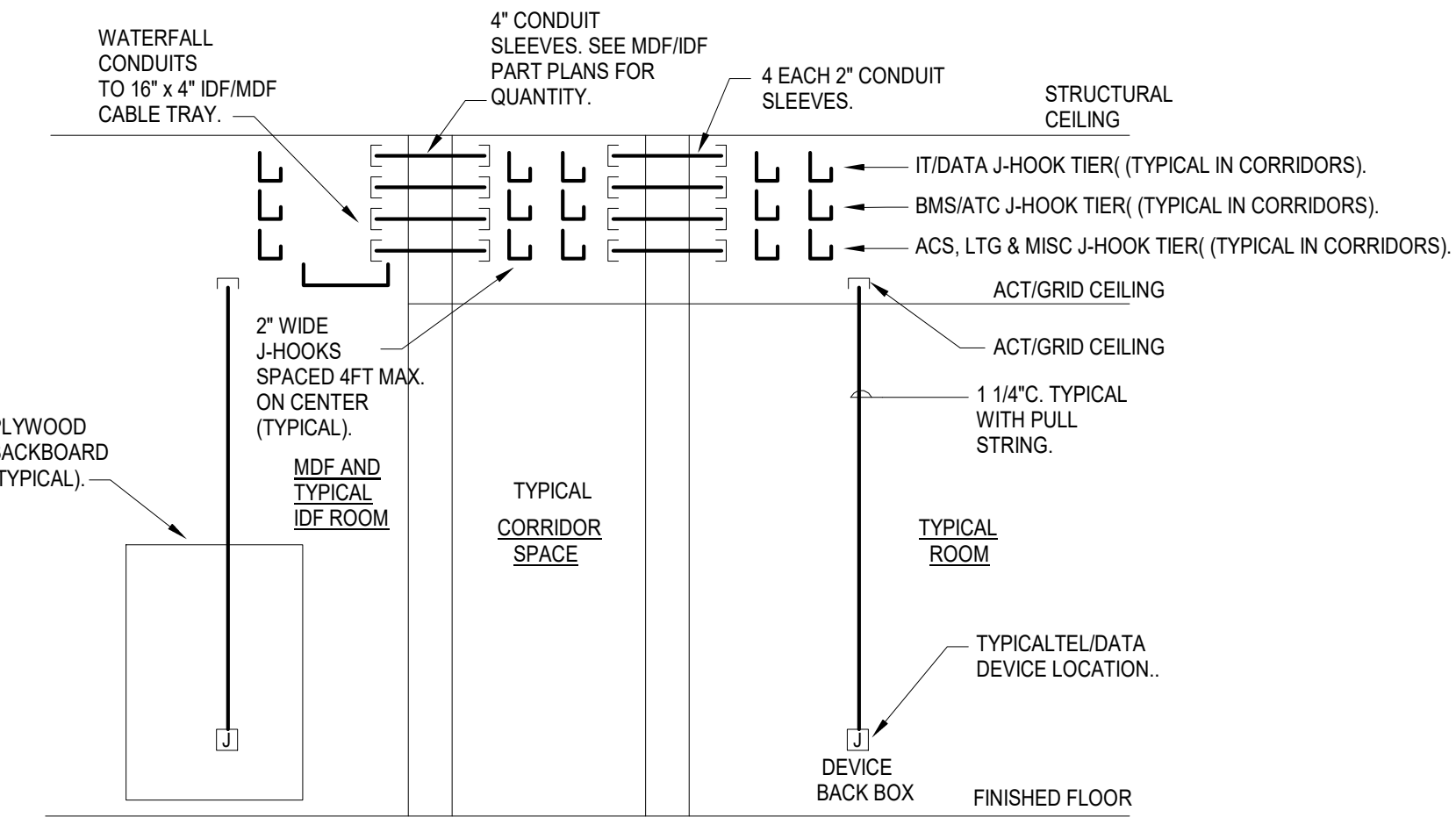
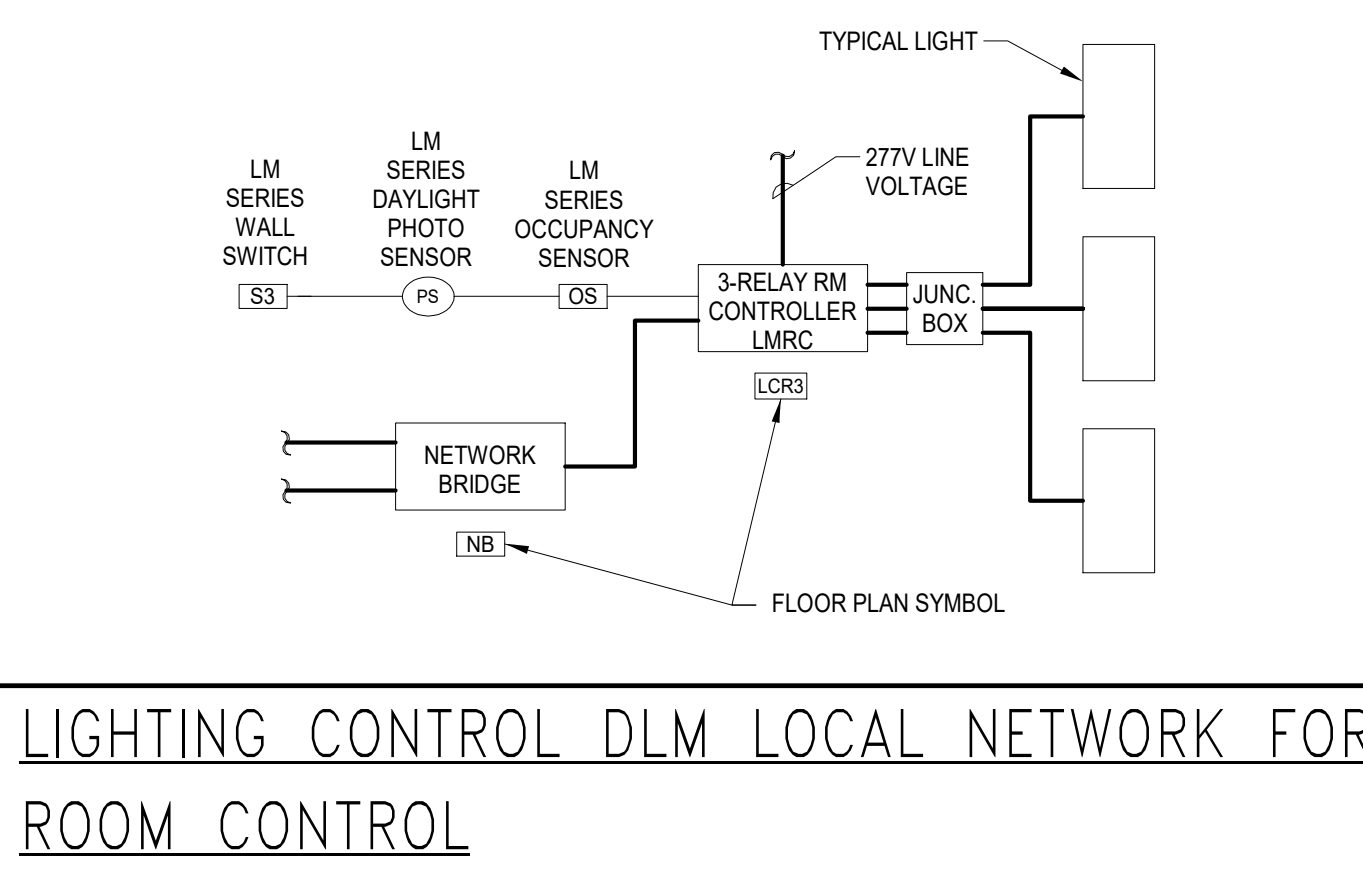
NOTES:

- CONDUCTOR SIZES ARE FOR COPPER CONDUCTORS AND ARE MINIMUM. LARGER SIZES SHALL BE USED WHERE INDICATED ON DRAWINGS.

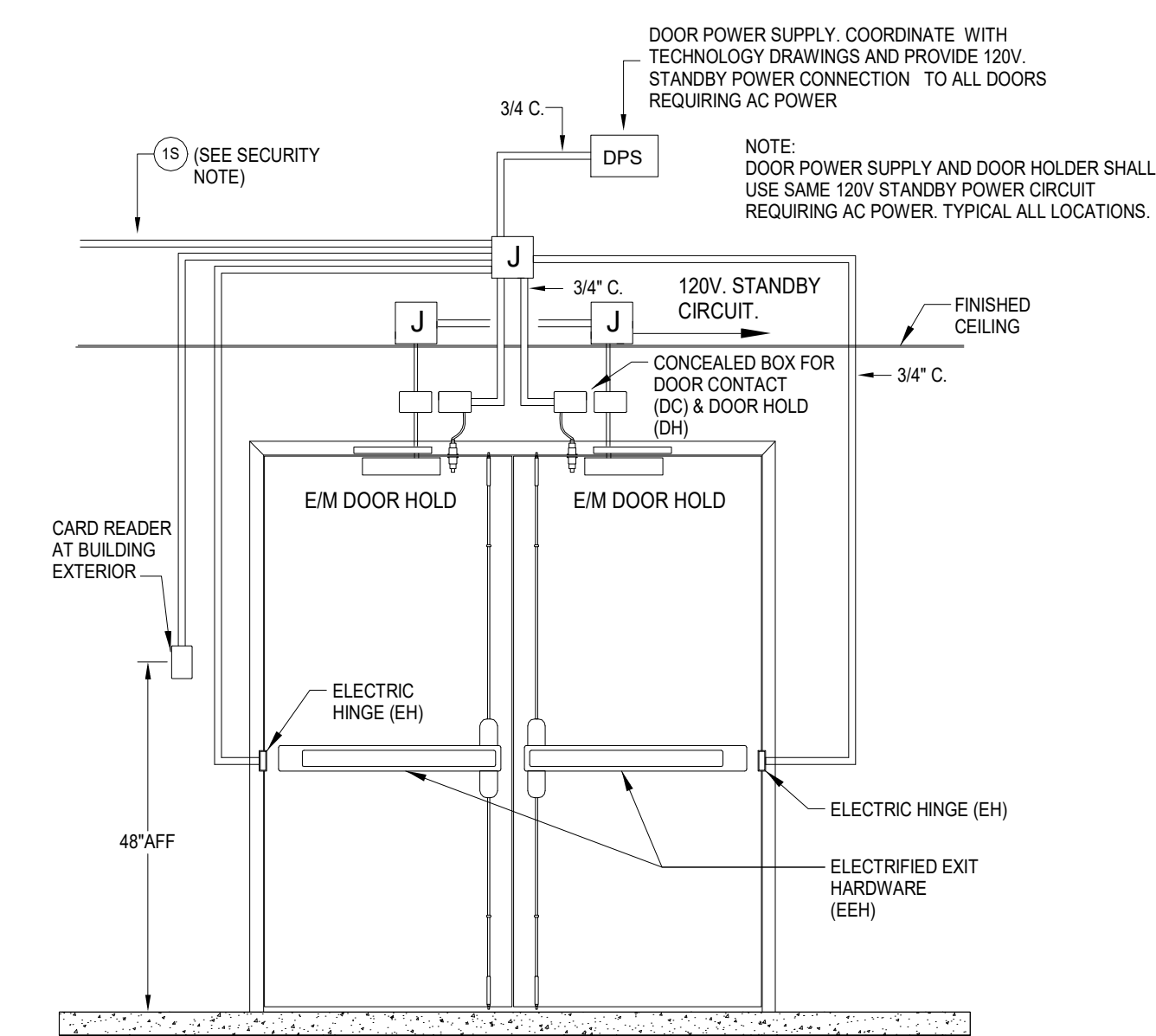




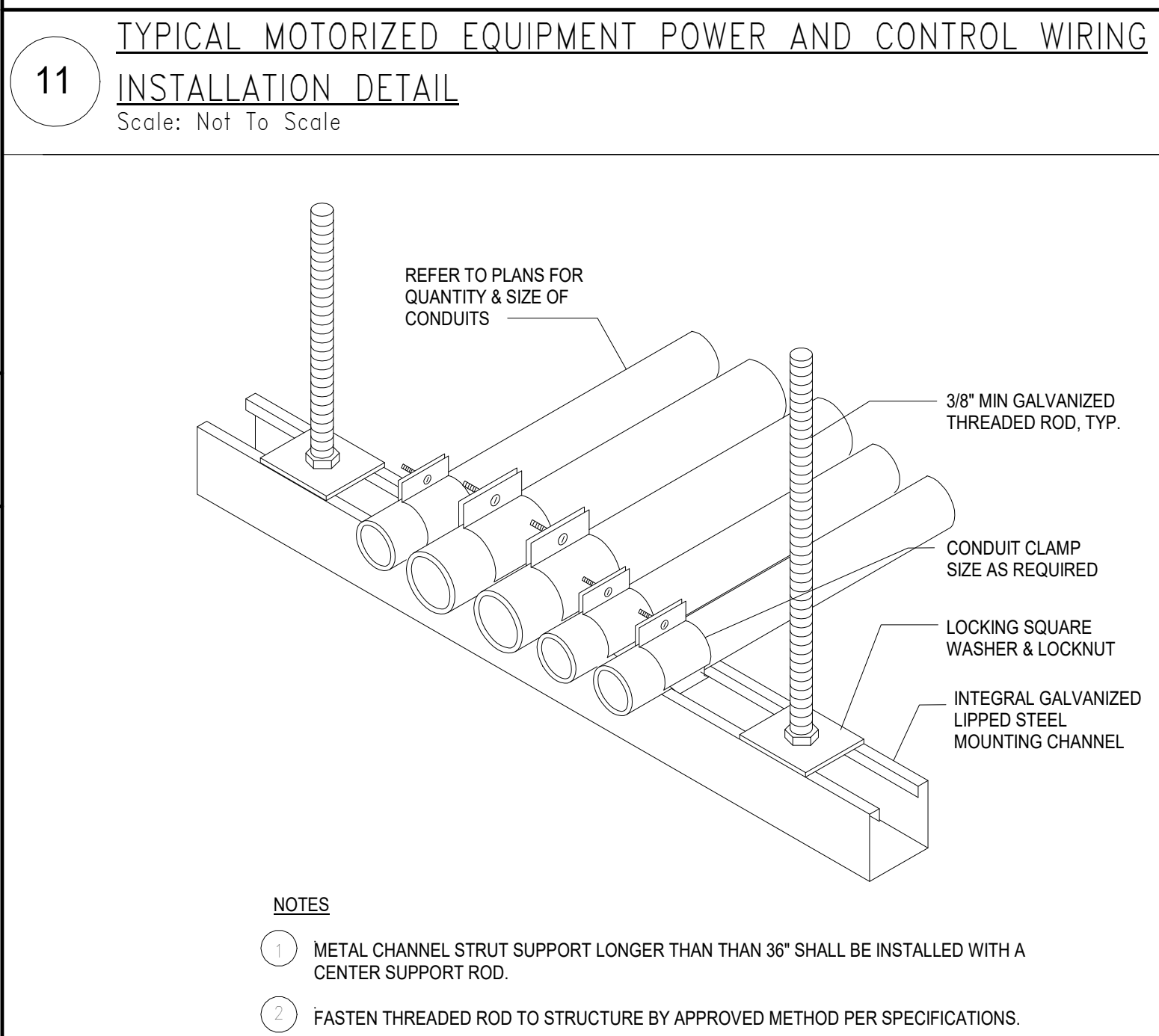
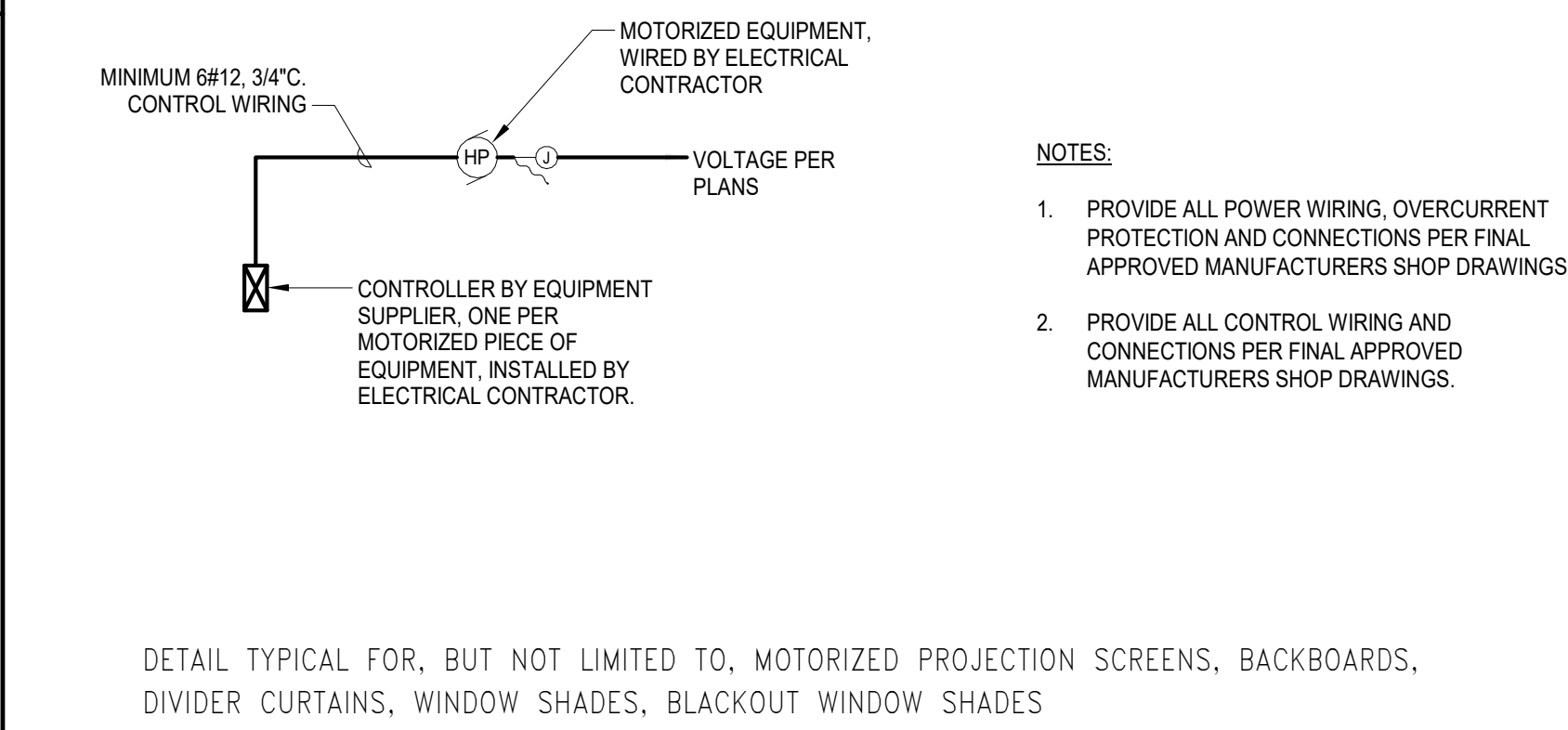
NOTES:
 1 ALL CIRCUIT IDENTITIES SHALL INCLUDE THE FULL PANELBOARD ID AND CIRCUIT NUMBER.



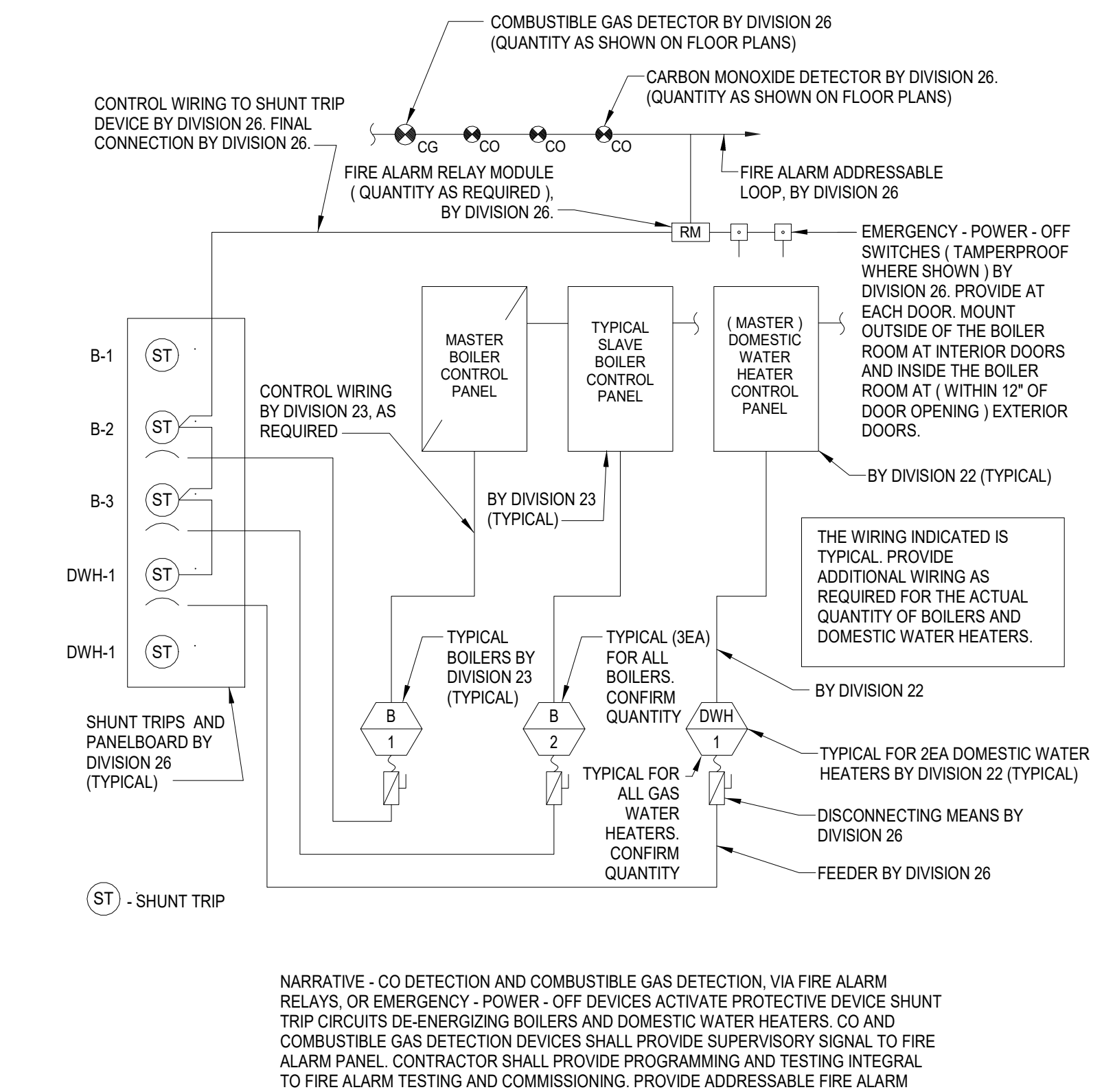
13 TYPICAL SINGLE DOOR-ELECTRIC DOOR HOLDER WIRING & DOOR MONITORED WITH INTEGRAL REQUEST-TO-EXIT & ALARM
 NOT TO SCALE



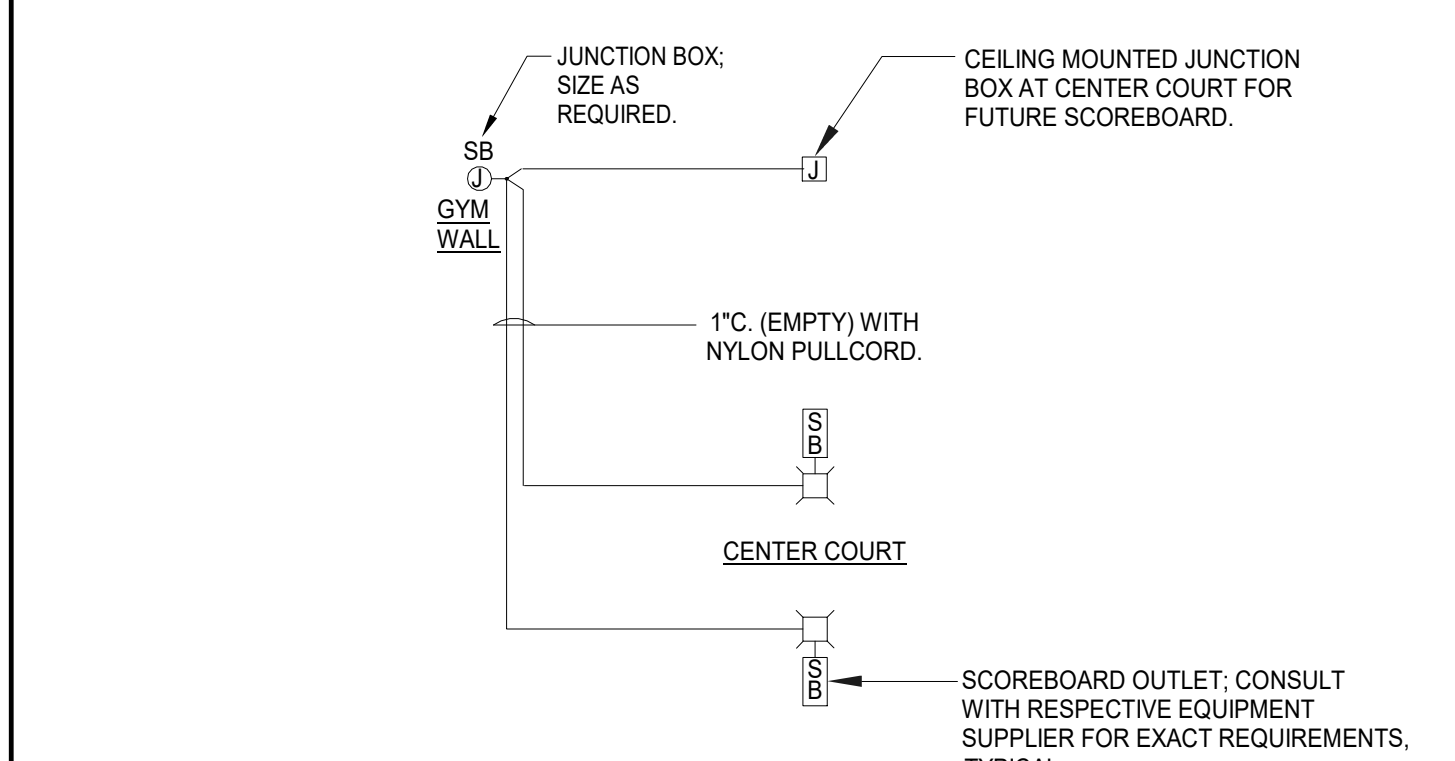
10 TYPICAL RECEPTACLE STICK-ON CIRCUIT IDENTITY
 Scale: NOT TO SCALE



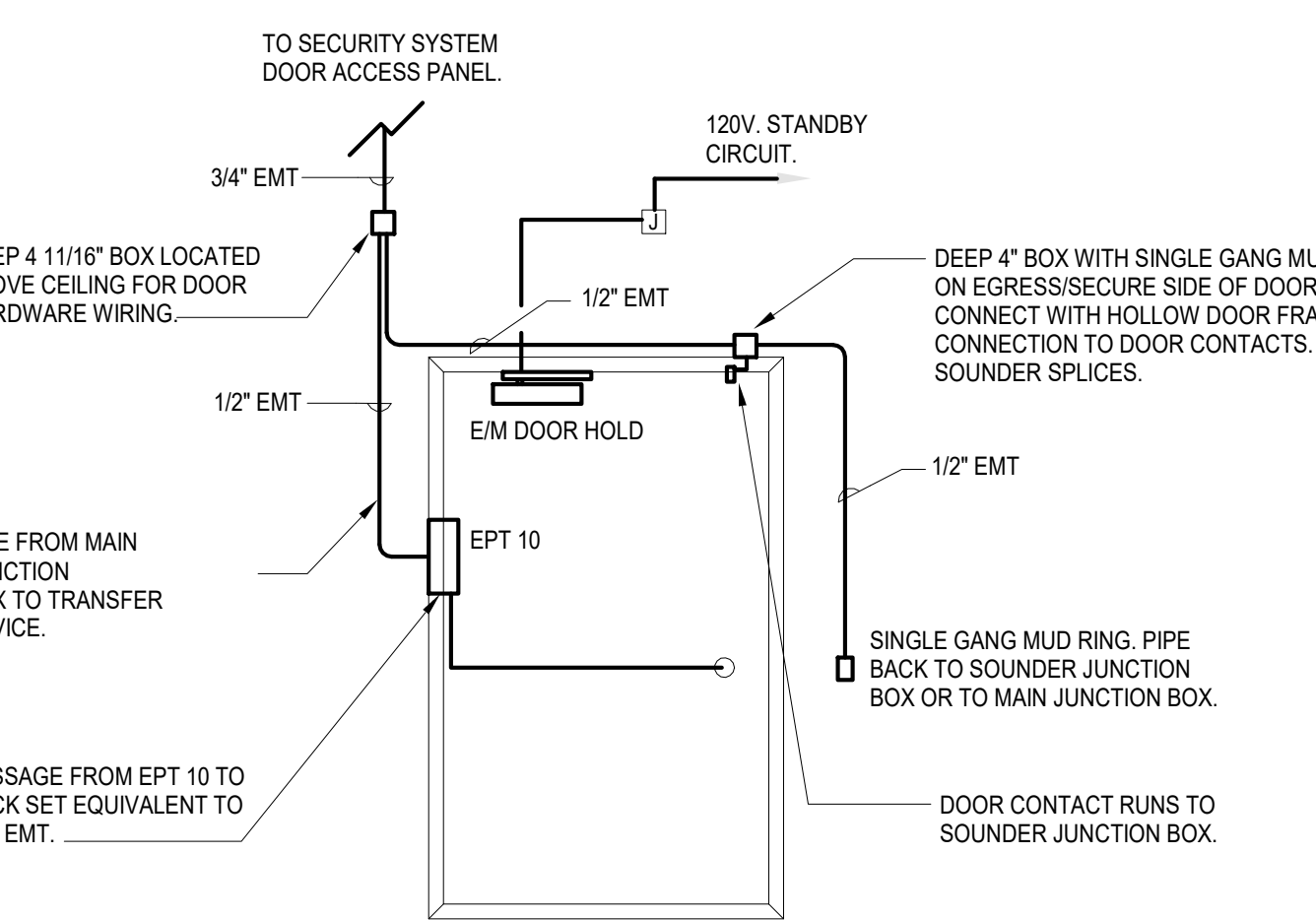
7 LIGHTING CONTROL SEGMENT MANAGER TOPOLOGY
 Scale: Not To Scale



2 GYM SHOT TIMER SYSTEM WIRING DIAGRAM
 Scale: Not To Scale



14 TYPICAL DOUBLE DOOR-ELECTRIC DOOR HOLDER WIRING & CARD ACCESS WITH INTEGRAL REQUEST-TO-EXIT & ALARM
 NOT TO SCALE



SECURITY NOTES

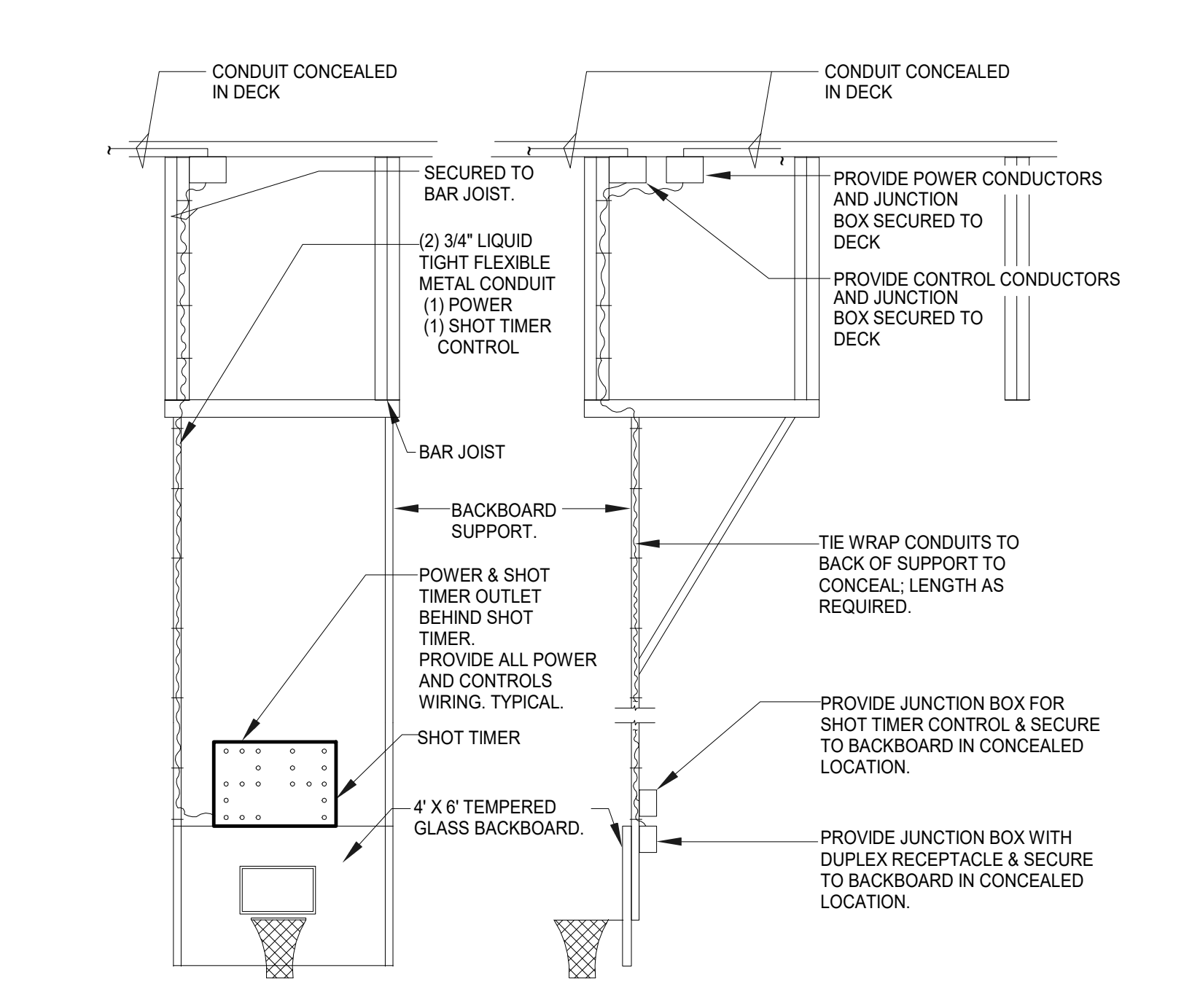
DOOR DETAIL NOTES

TYPICAL LIGHTING CONTROL DLM DETAIL NOTES

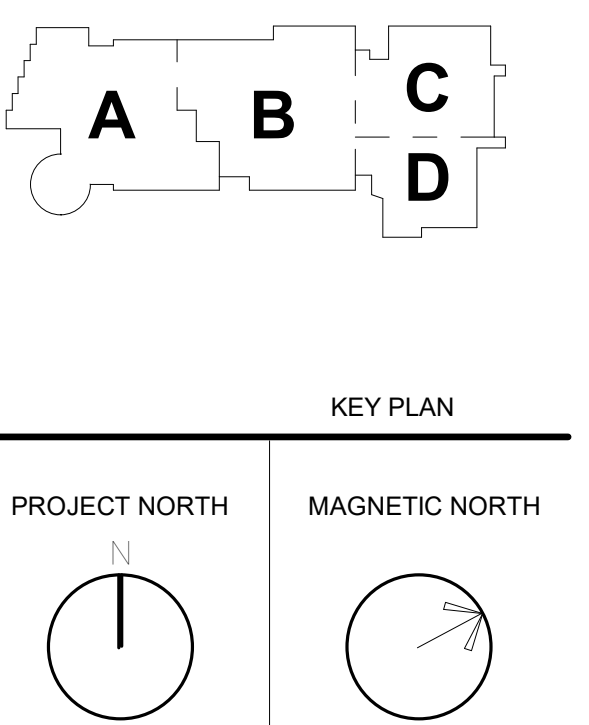
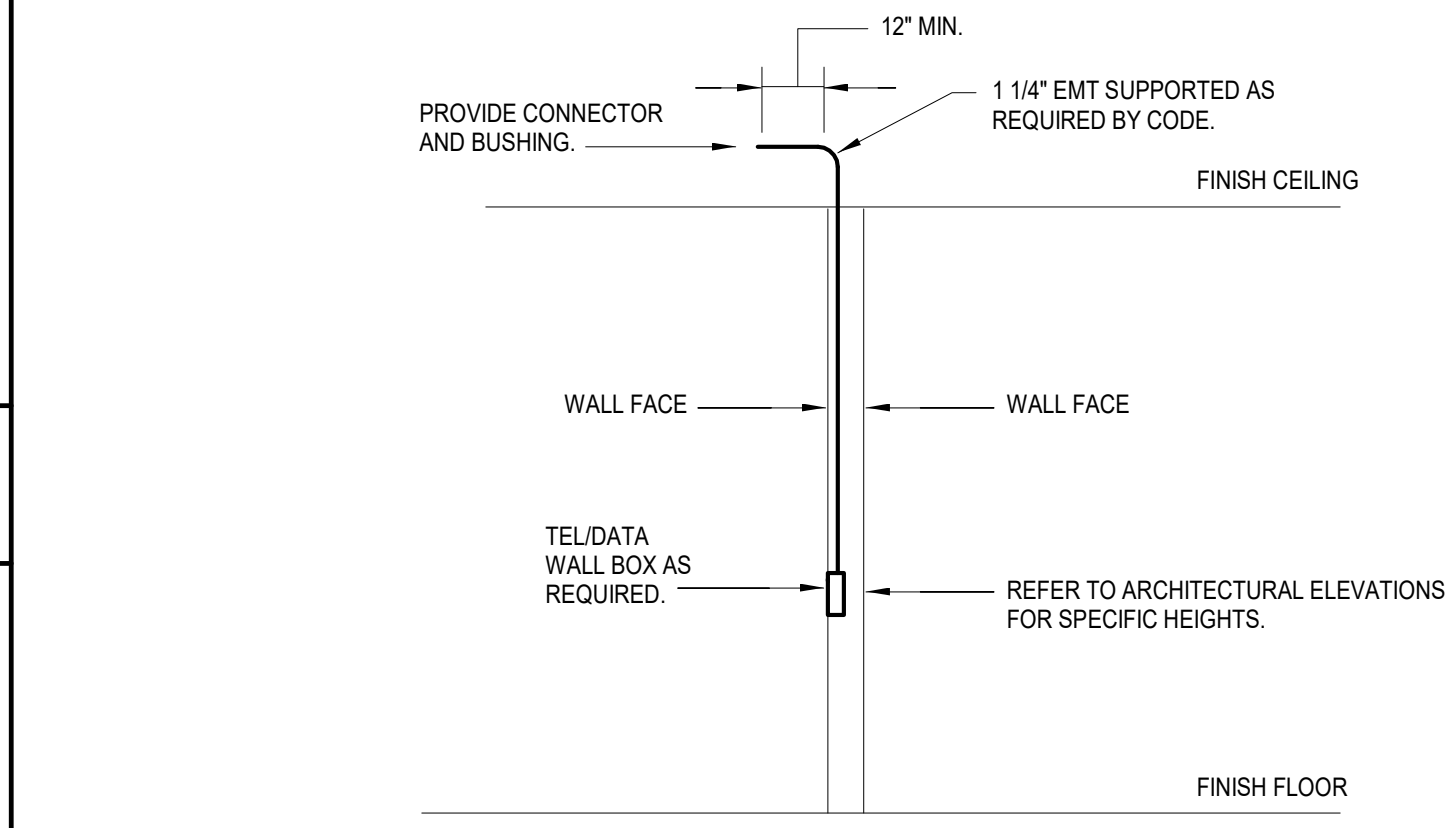
15 TYPICAL ELEC. DOOR HOLD & SECURITY ROUGH-IN
 Scale: Not To Scale



8 BOILER ROOM EMERGENCY POWER OFF DIAGRAM
 Scale: NOT TO SCALE

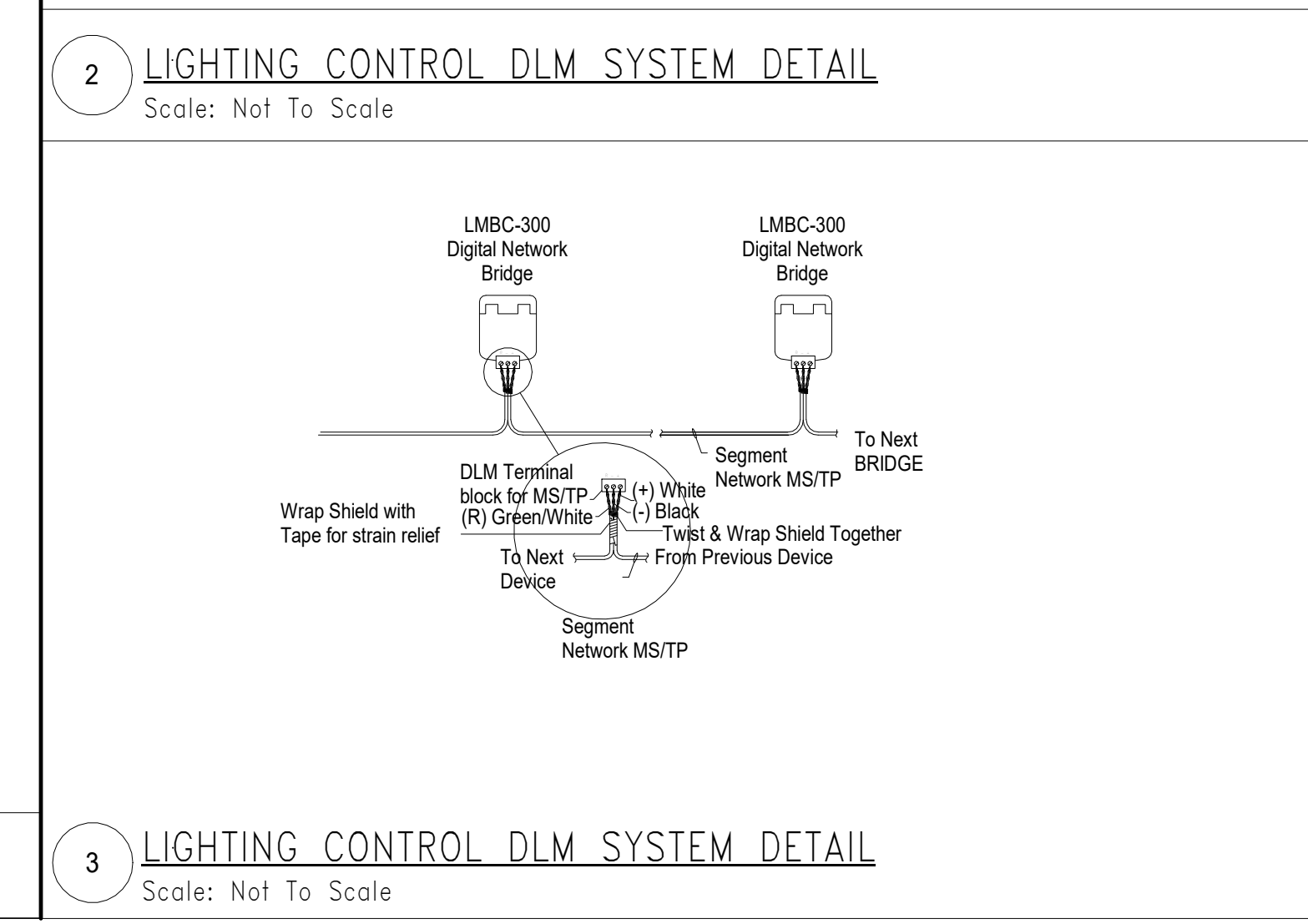
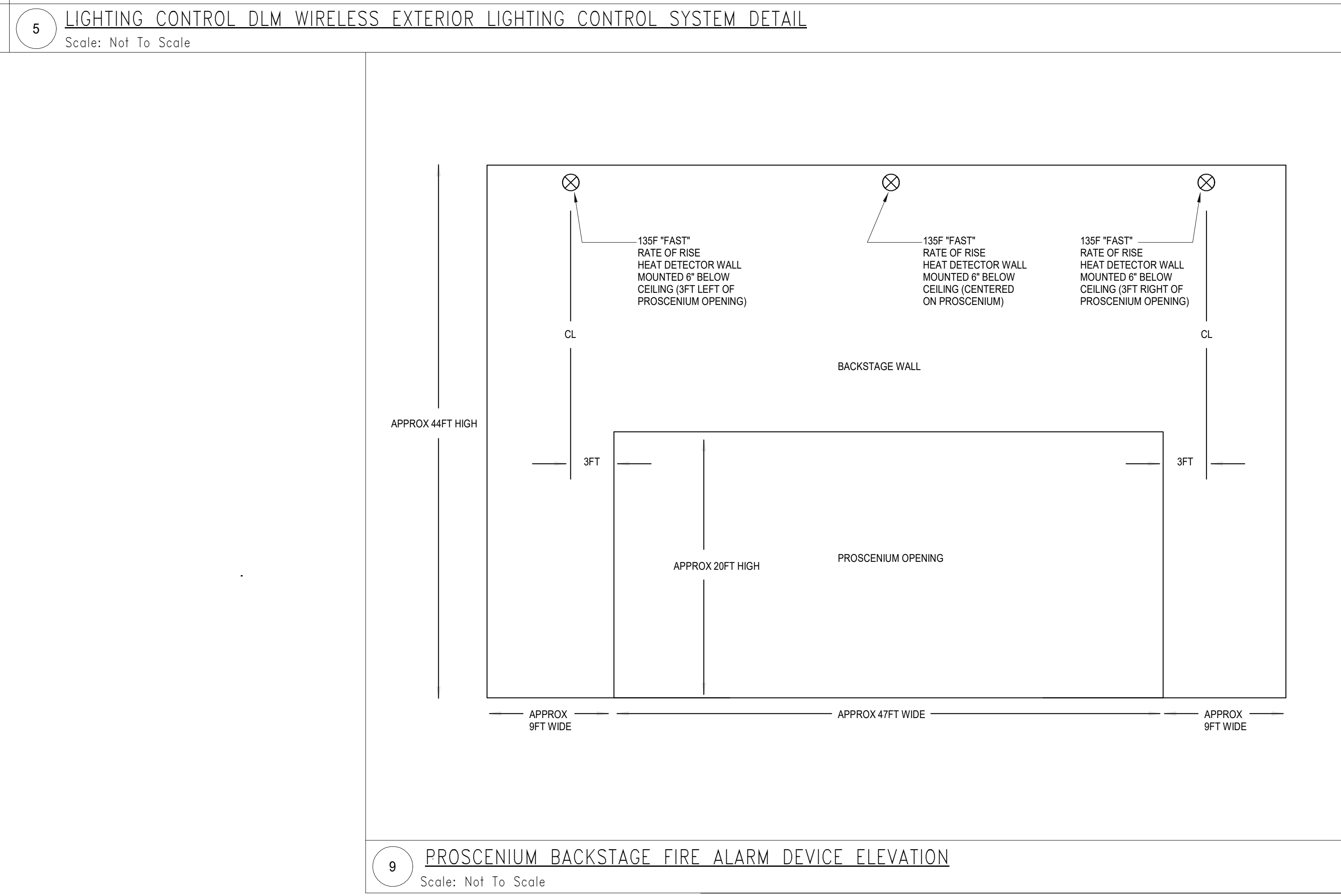
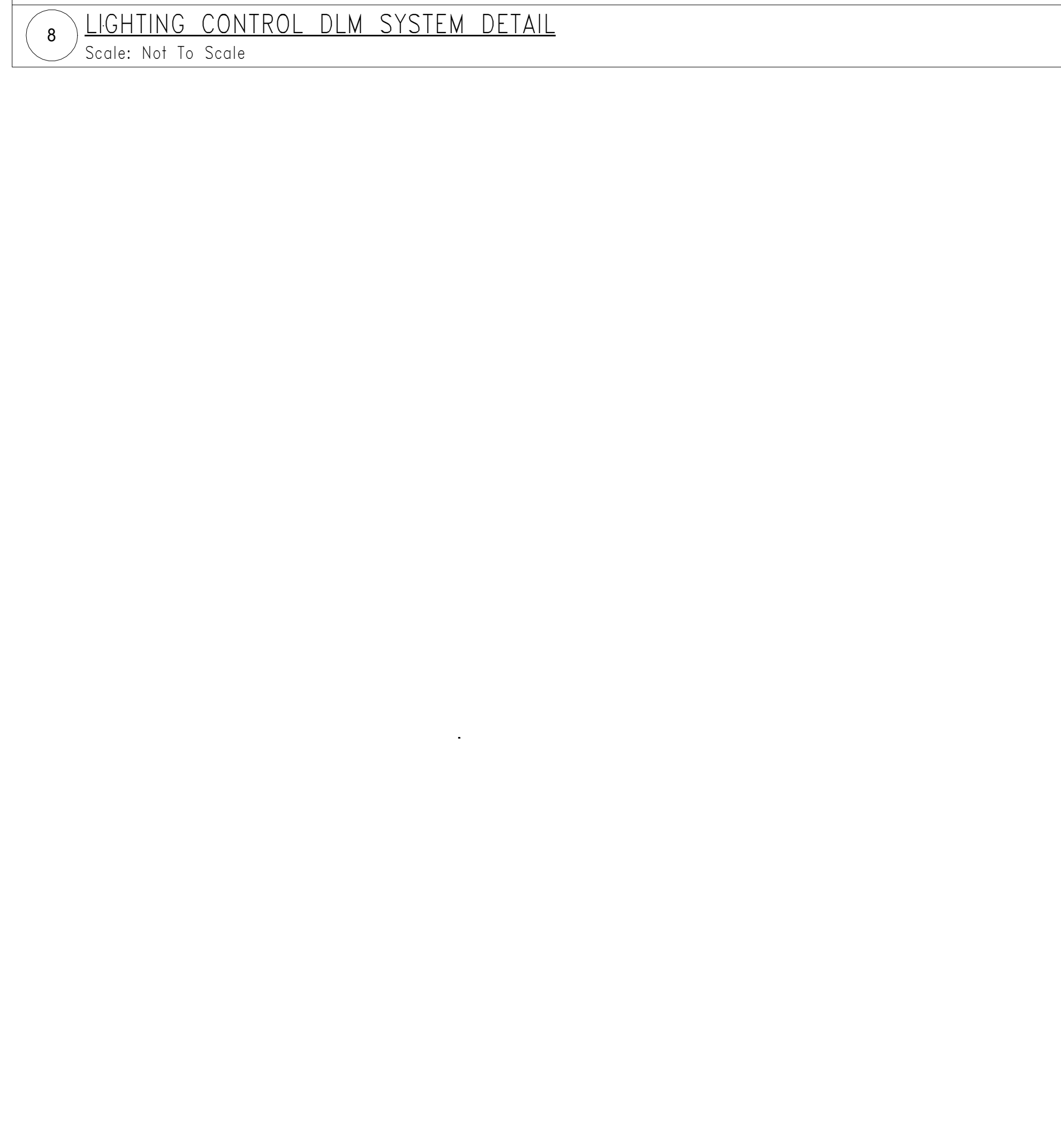
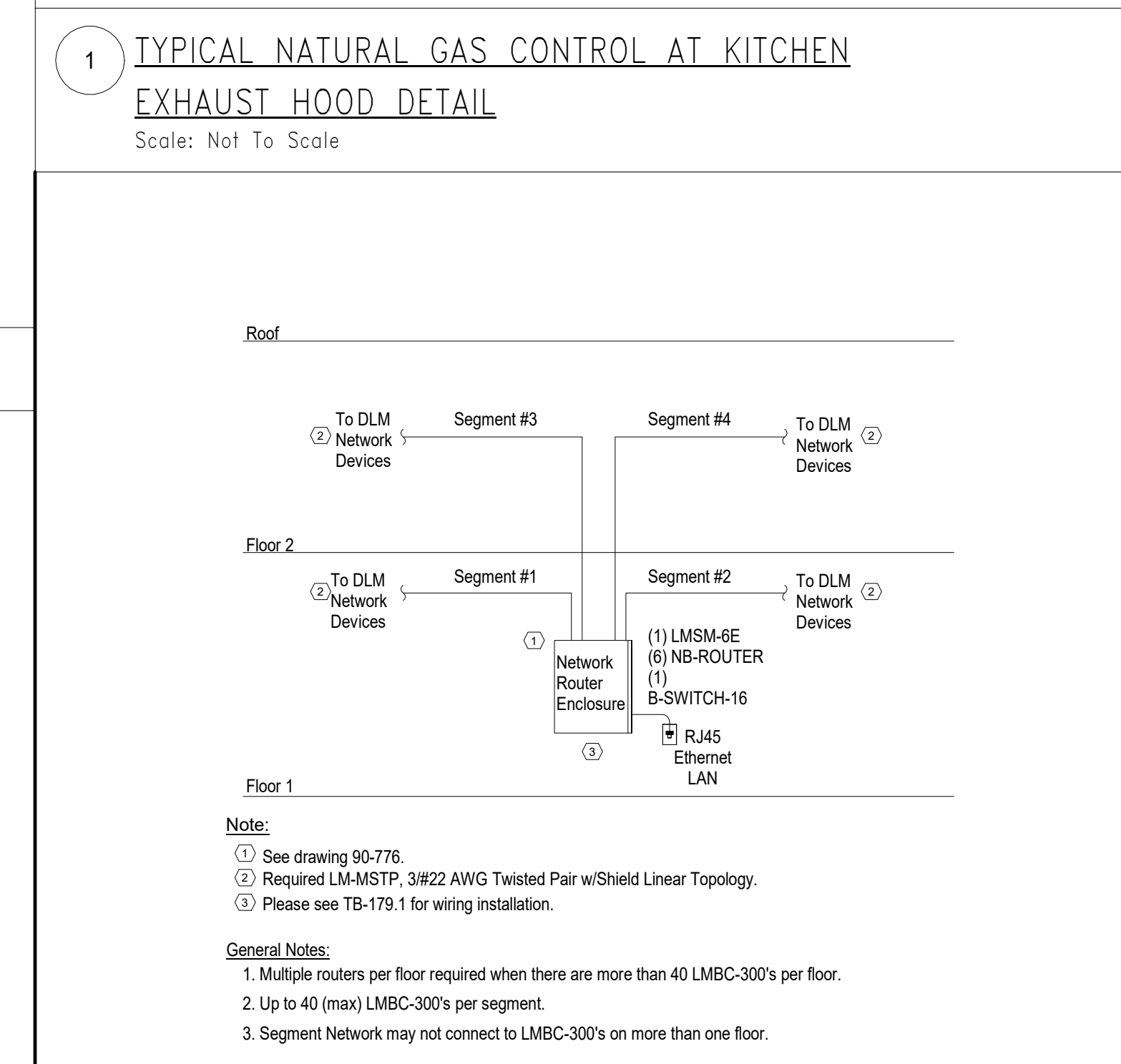
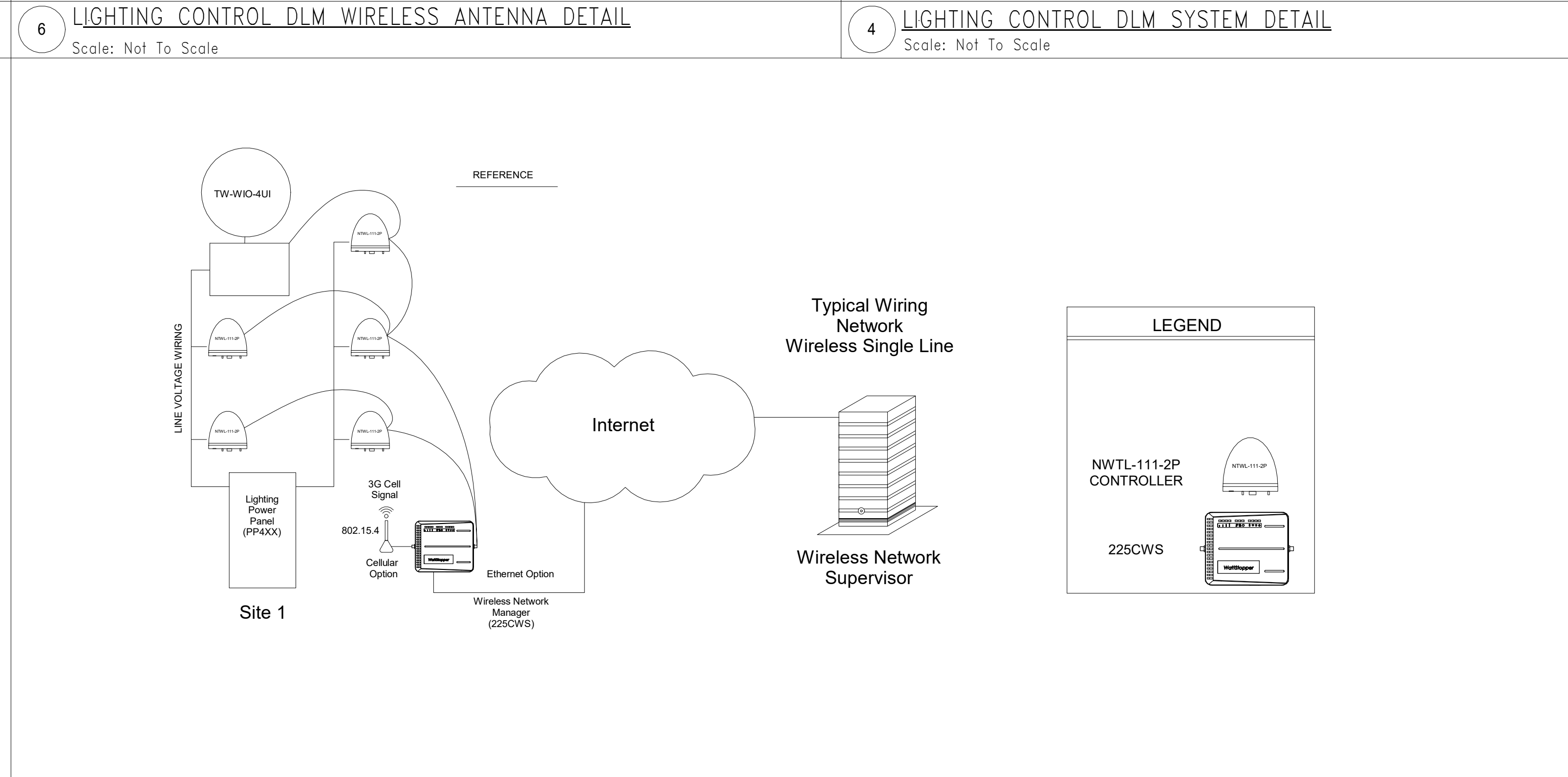
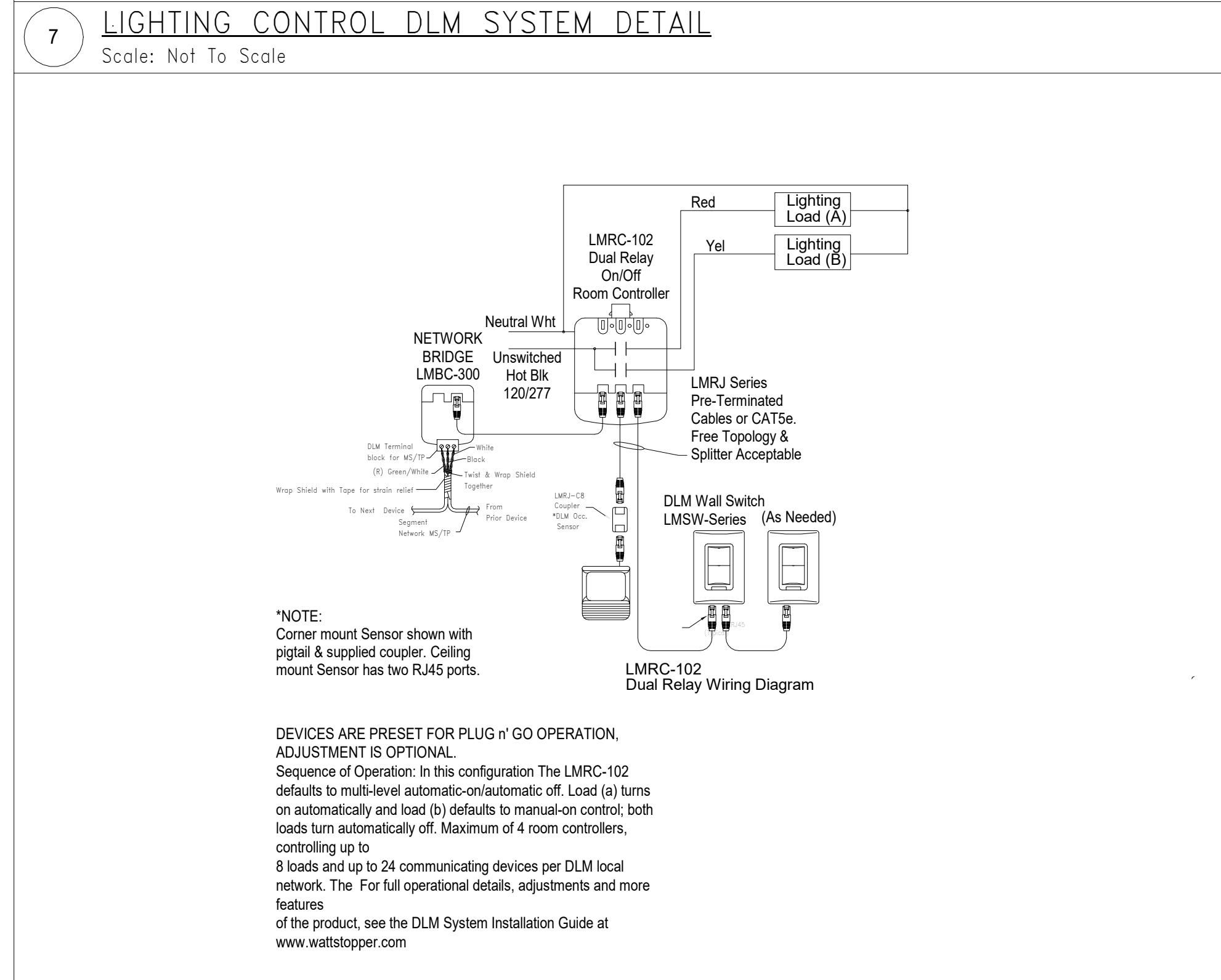
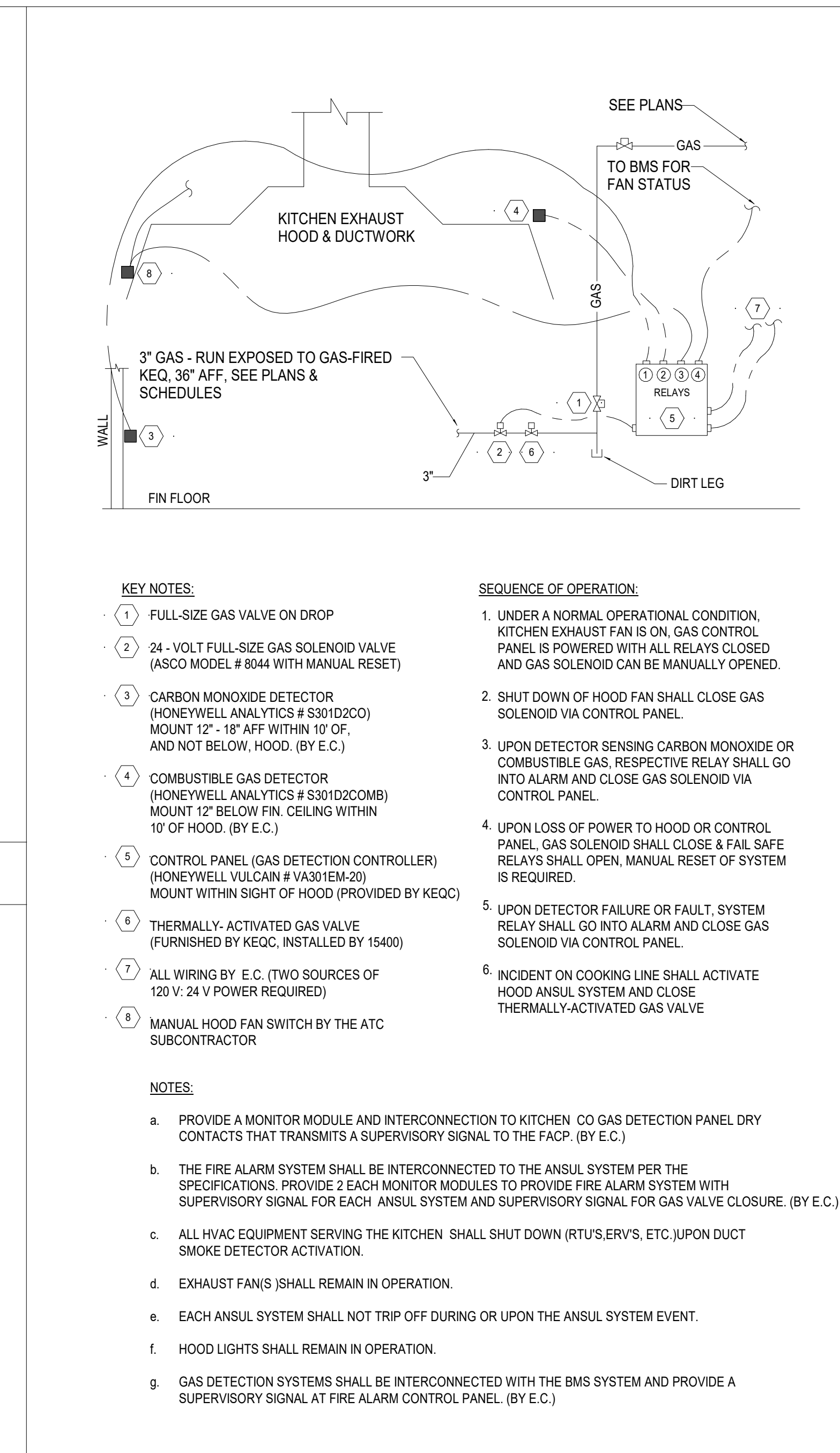
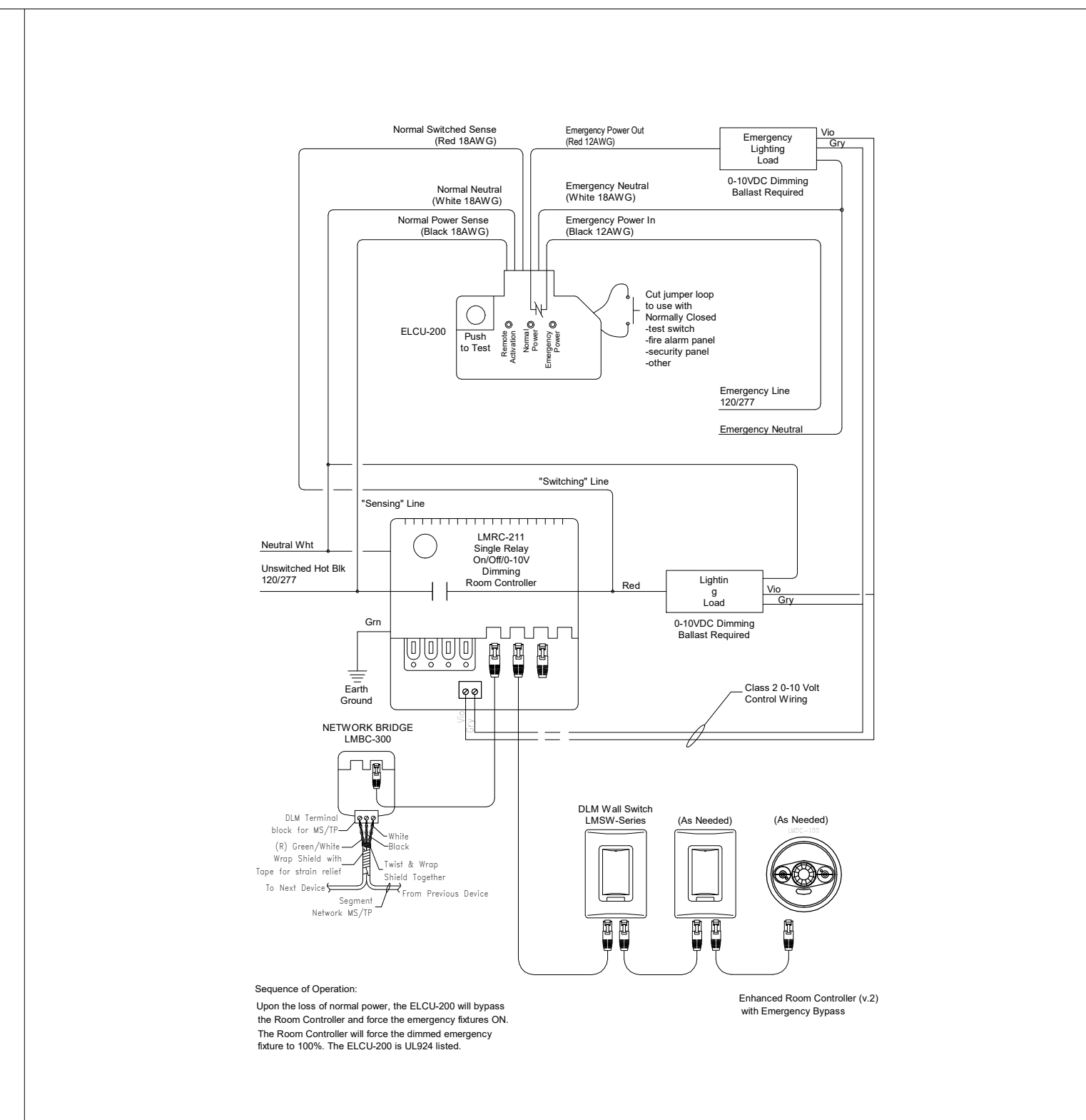
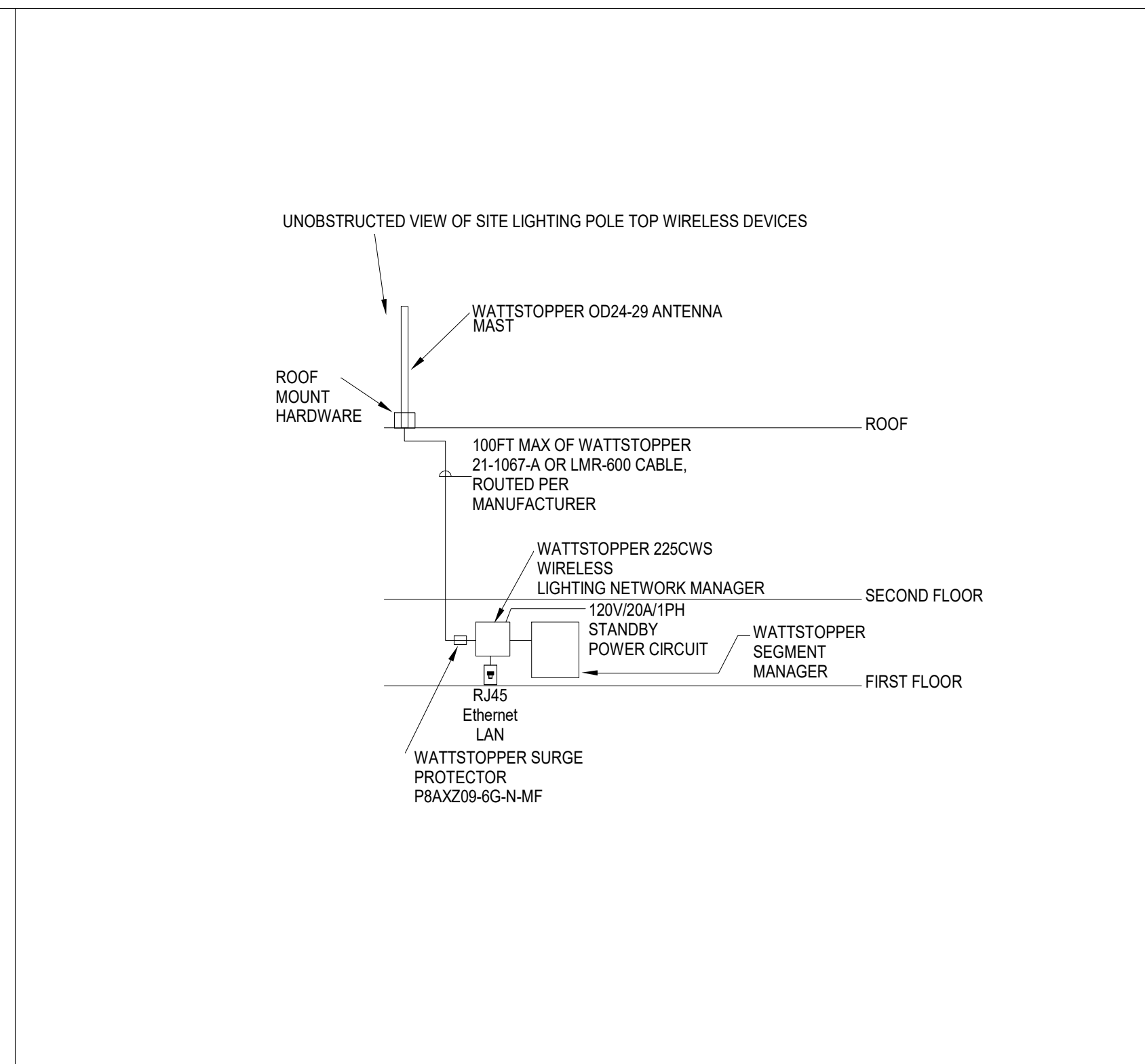
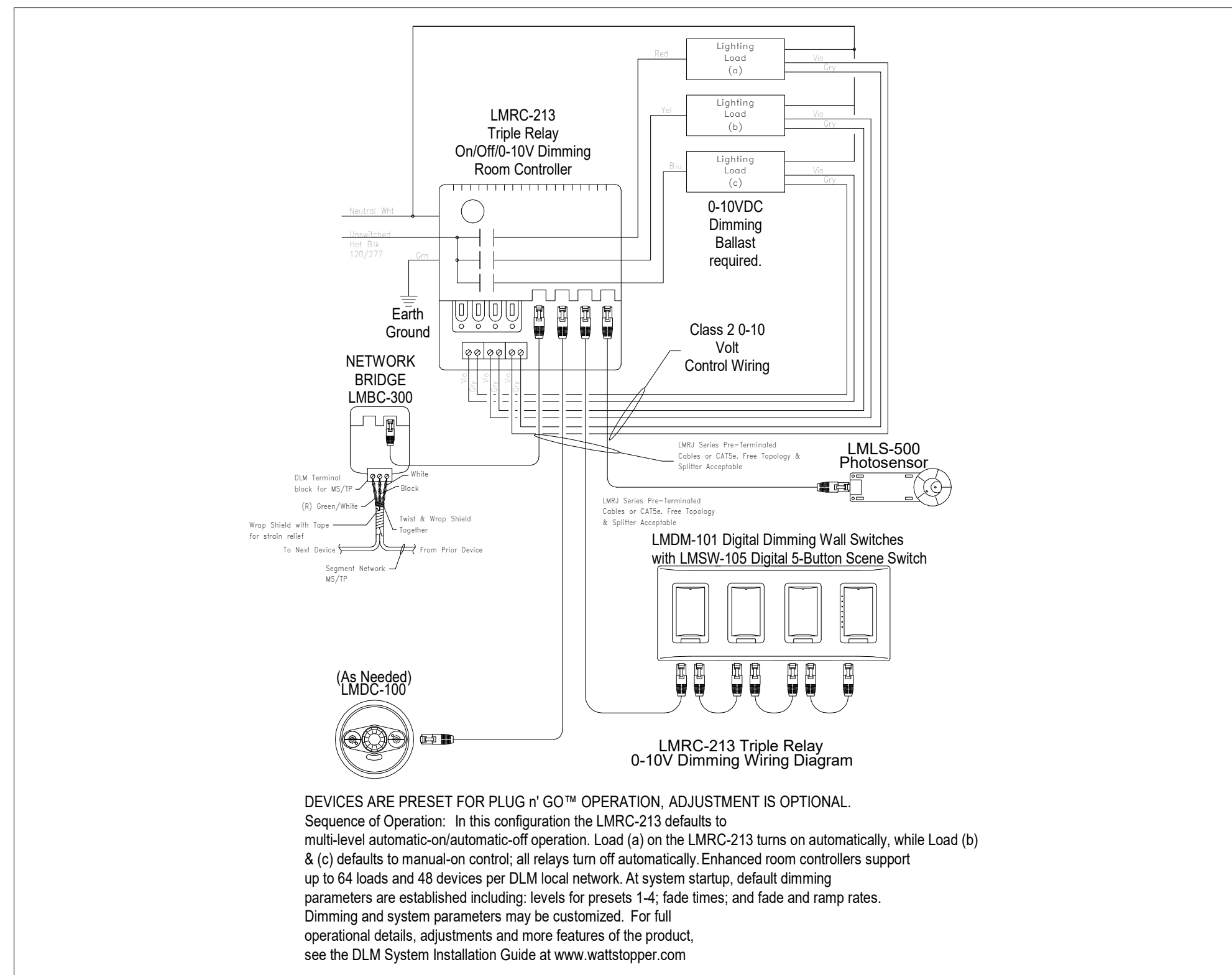


3 GYM SCOREBOARD CONTROL SYSTEM WIRING DIAGRAM
 Scale: Not To Scale

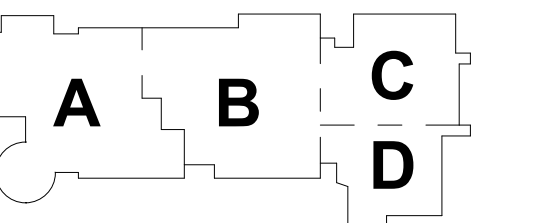


NORTHEAST METRO TECH

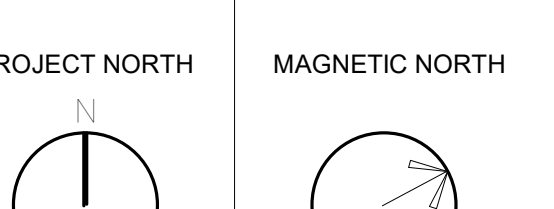
100 Hemlock Rd.
 Wakefield, MA 01880

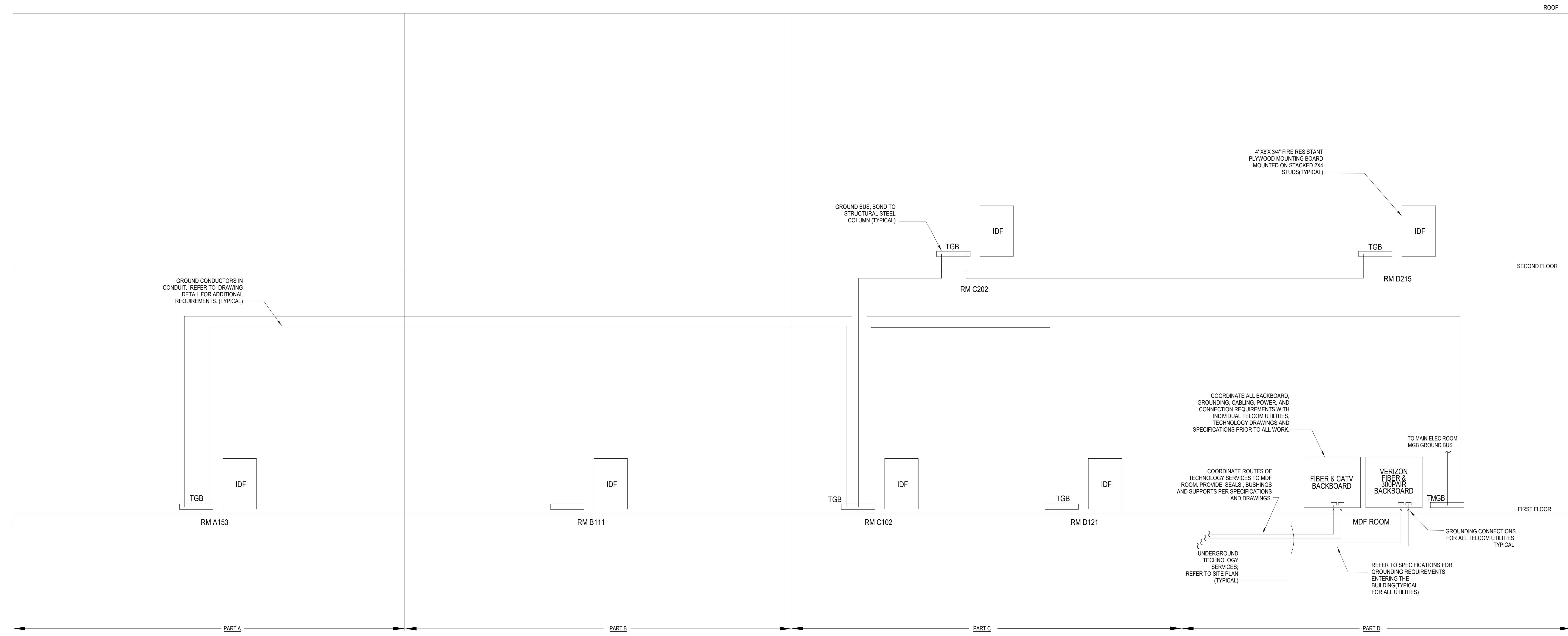


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PROJECT NORTH MAGNETIC NORTH





MDF/IDF ROOM GROUNDING SYSTEM RISER DIAGRAM
 Scale: NOT TO SCALE

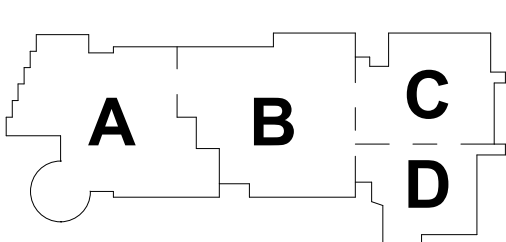
- MS/IDF GROUNDING RISER DIAGRAM NOTES**
- SPECIAL REFERENCE IS MADE TO SECTION 18100, PARAGRAPH 3.04 "RACEWAY WORK", REGARDING INSTALLATION OF CONDUITS.
 - PROVIDE NYLON PULL CORDS AND INSULATED BUSHINGS FOR ALL CONDUITS.
 - REFER TO TECHNOLOGY NOTES AND REQUIREMENT ON DRAWING E0-1.

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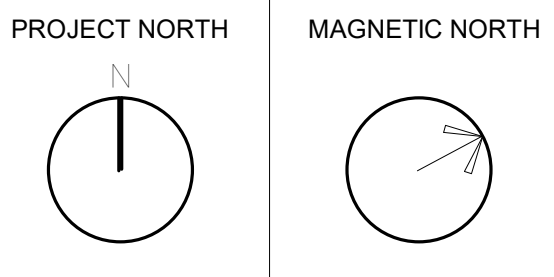


**MSBA
 SCHEMATIC
 DESIGN
 SUBMITTAL**

JUNE 17, 2021



KEY PLAN



**COMMUNICATIONS
 RISER DIAGRAM**

Theatrical Lighting System Device Schedule

DEVICE #	TYPE	LOCATION	PLAN REF	NETWORK	SWITCH	PORT	QTY	PANEL	DEVICE DETAIL	MOUNTING	HEIGHT	MOUNTING DETAIL	FACEPLATE FINISH
1	CS1	Booth	1	200V	1	1	1	TRD	CONCATINATED	Flush	FLOOR	Mount Above Counter	BLACK
2	CS2	Flash Table (next to booth)	1	2	1	1	1	TRD	CONCATINATED	Flush	FLOOR	Mount Above Counter	BLACK
3	EP1	Entry Station - House Left (inside main entrance)	1	3	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
4	EP2	Entry Station - House Right (inside main entrance)	1	3	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
5	EP3	Entry Station - Back Stage Left (inside main entrance)	1	3	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
6	EP4	Entry Station - Back Stage Right (inside main entrance)	1	3	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
7	EP5	Entry Station - House Left (inside main entrance)	1	3	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
8	EP6	Booth	1	4	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
9	EP7	Message Equipment Rack (back mount)	1	4	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
10	CS1	Up Stage Right	1	6	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
11	CS2	Down Stage Right	1	7	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
12	CS3	Up Stage Left	1	8	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
13	CS4	Down Stage Left	1	9	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
14	CS5	Leading Gallery	1	10	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
15	TL1	1st Electric	1	11	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
16	TL2	2nd Electric	1	12	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
17	TL3	3rd Electric	1	13	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
18	TL4	4th Electric	1	14	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
19	TL5	5th Electric	1	15	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
20	TL6	6th Electric	1	16	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
21	TL7	7th Electric	1	17	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
22	TL8	8th Electric	1	18	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
23	TL9	9th Electric	1	19	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
24	TL10	10th Electric	1	20	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
25	US1	US1	1	21	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
26	US2	US2	1	22	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
27	US3	US3	1	23	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
28	US4	US4	1	24	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
29	US5	US5	1	25	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
30	US6	US6	1	26	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
31	US7	US7	1	27	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
32	US8	US8	1	28	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
33	US9	US9	1	29	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
34	US10	US10	1	30	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
35	US11	US11	1	31	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
36	US12	US12	1	32	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
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54	US30	US30	1	50	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
55	US31	US31	1	51	1	1	1	TRD	CONCATINATED	Flush	FLOOR	per Architect	BLACK
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Notes:
 1. P.S.H. - PROJECT SWITCH HEIGHT
 2. P.A.H. - PROJECT RECEPTACLE HEIGHT
 3. A.F.F. - ABOVE FINISHED FLOOR
 4. ALL MOUNTING DIMENSIONS ARE TO THE BOTTOM OF THE DEVICE

LARGE VENUE AUDIOVISUAL SYSTEM SYMBOLS (CONTINUED) Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

AUDIO MONITORING SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

VIDEO SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, LOCATION, FACEPLATE, NOTES.

VIDEO SURVEILLANCE CAMERA SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

DOOR AUDIO / VIDEO INTERCOM CONTROL SYSTEM Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

INTRUSION ALARM SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

ACCESS CONTROL SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

LARGE VENUE AUDIOVISUAL SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES. Includes various AV control and monitoring symbols.

TELECOMMUNICATIONS WORK AREA OUTLET SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, TYPICAL FACEPLATE, NOTES.

SECURITY AND BUILDING SYSTEMS SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, TYPICAL FACEPLATE, NOTES.

MISC. BACK BOXES, FLOOR BOXES, BRACKETS AND ENCLOSURE SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, ENCLOSURE BACK BOX, NOTES.

PUBLIC ADDRESS SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES.

CLASSROOM SPEECH REINFORCEMENT SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, LOCATION, BACK BOX / FACEPLATE, NOTES.

CLOCK SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, FACEPLATE, NOTES.

LOCAL INSTRUCTIONAL AUDIOVISUAL PRESENTATION CABLING SYSTEM SYMBOLS Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, LOCATION, FACEPLATE, NOTES.

GENERAL NOTES APPLIES TO ALL TECHNOLOGY DRAWINGS. List of 7 notes regarding electrical and technology specifications.

SCOPE OF WORK NOTES. Detailed notes for sections A through F regarding network, security, and intercom systems.

Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, TYPICAL FACEPLATE, NOTES. Contains notes G through F.

Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, ENCLOSURE BACK BOX, NOTES. Contains notes G through H.

Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX, NOTES. Contains notes I through K.

Table with columns: POWER REQUIRED, SYMBOL, DESCRIPTION, TYPICAL LOCATION, BACK BOX / FACEPLATE, NOTES. Contains notes L through P.

MSBA SCHEMATIC DESIGN SUBMITTAL

PROJECT NORTH MAGNETIC NORTH

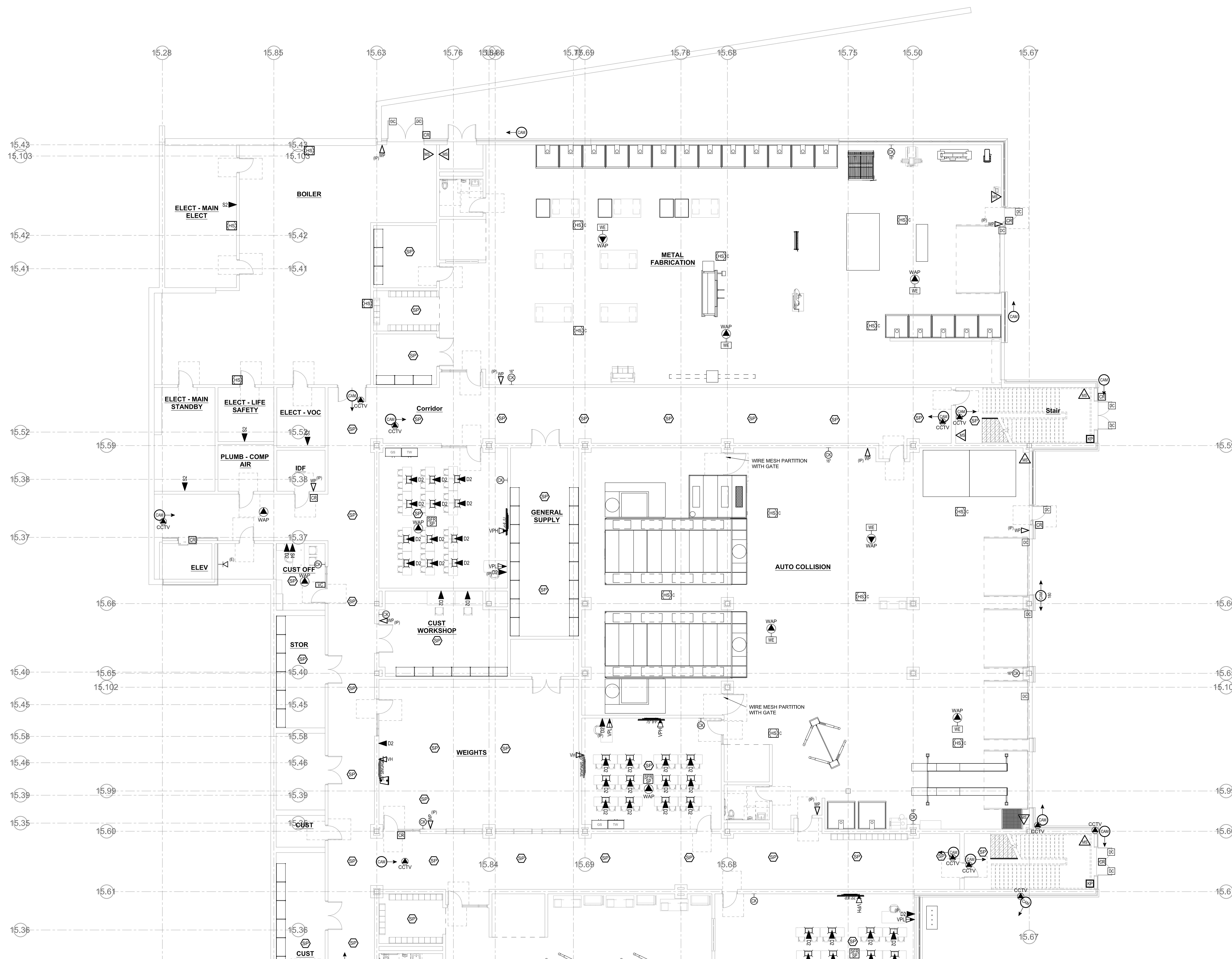


KEY PLAN

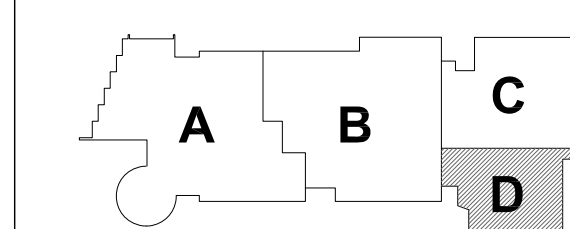
TECHNOLOGY, SECURITY & AUDIOVISUAL SYMBOL LIST

Scale: NONE Job No.: 20202 Drawn by:MLD/AMD Date: JUNE 17, 2021

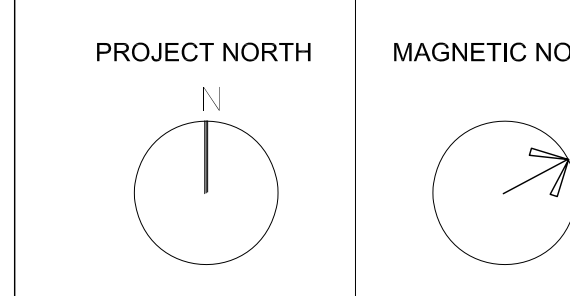
T08-0-0



1 LOWER LEVEL - AREA C
1/8" = 1'-0"



KEY PLAN



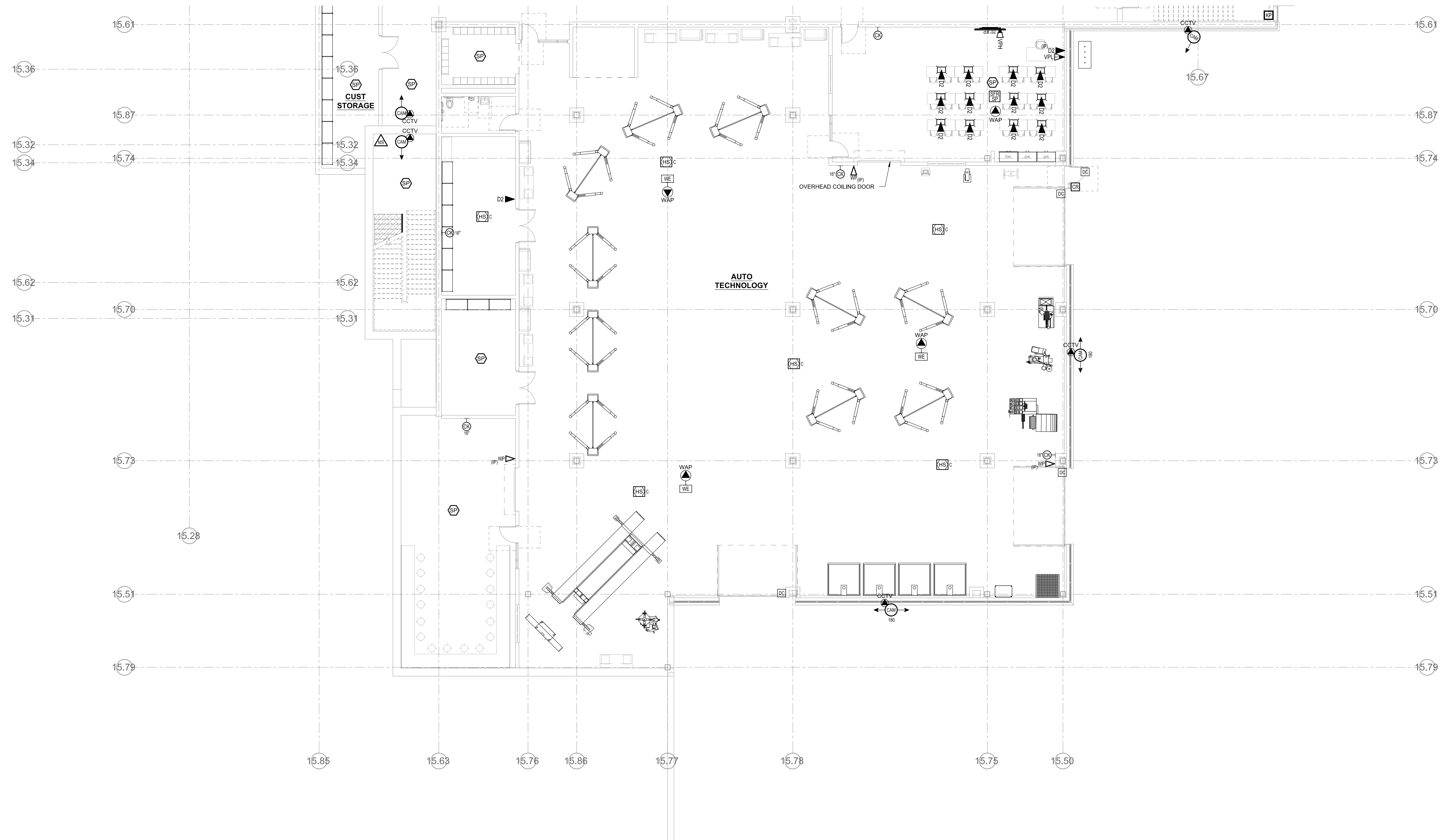
LOWER LEVEL FLOOR PLAN - AREA C TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-0C

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

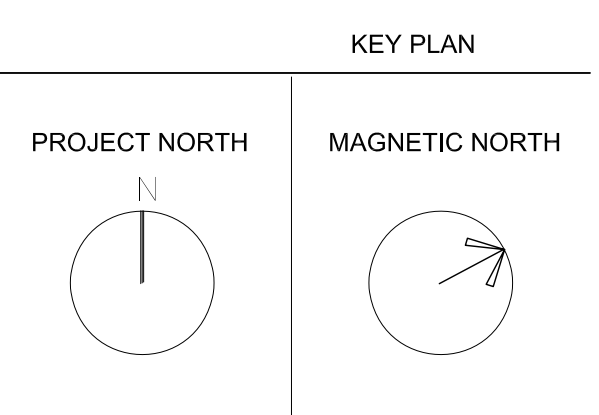
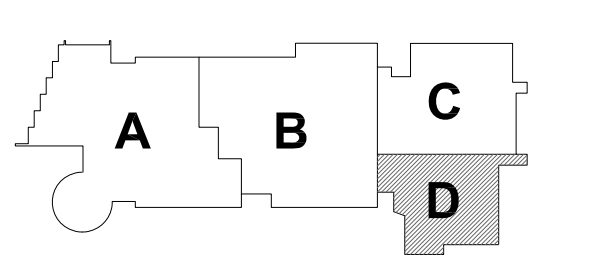
100 Hemlock Rd, Wakefield, MA 01880



1 LOWER LEVEL - AREA D
 1/8" = 1'-0"

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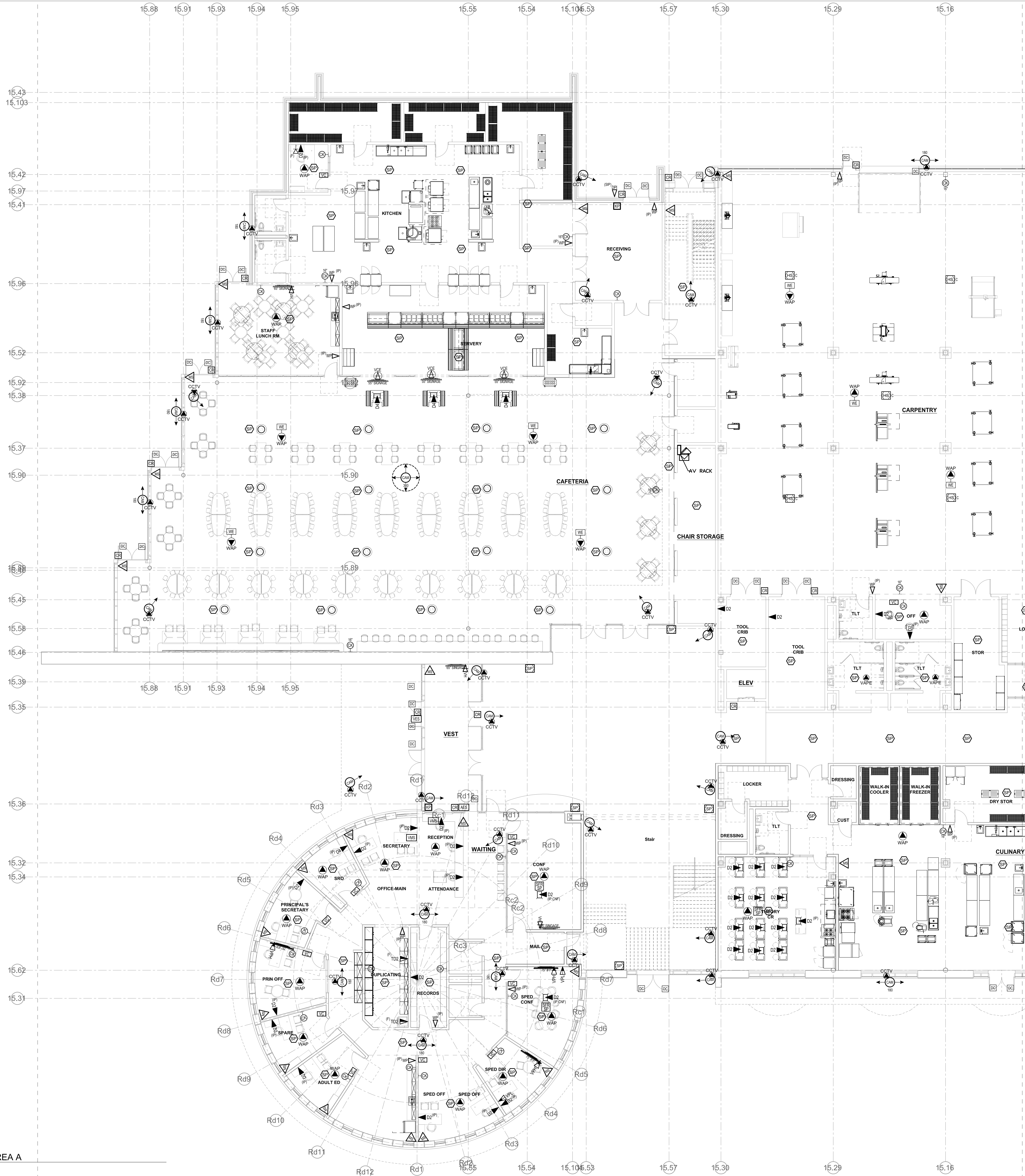
MSBA SCHEMATIC DESIGN SUBMITTAL



LOWER LEVEL FLOOR PLAN - AREA D TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: MLD/AMD
 Date: JUNE 17, 2021

T1-1-0D



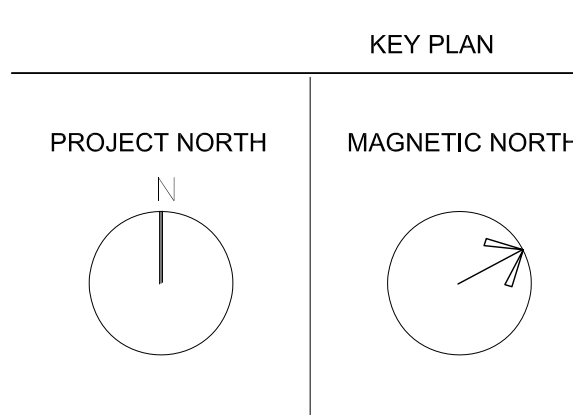
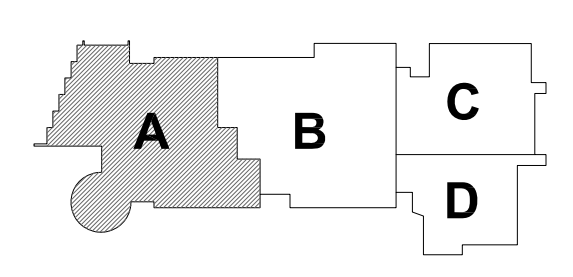
1 FIRST FLOOR - AREA A
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880



MSBA SCHEMATIC DESIGN SUBMITTAL

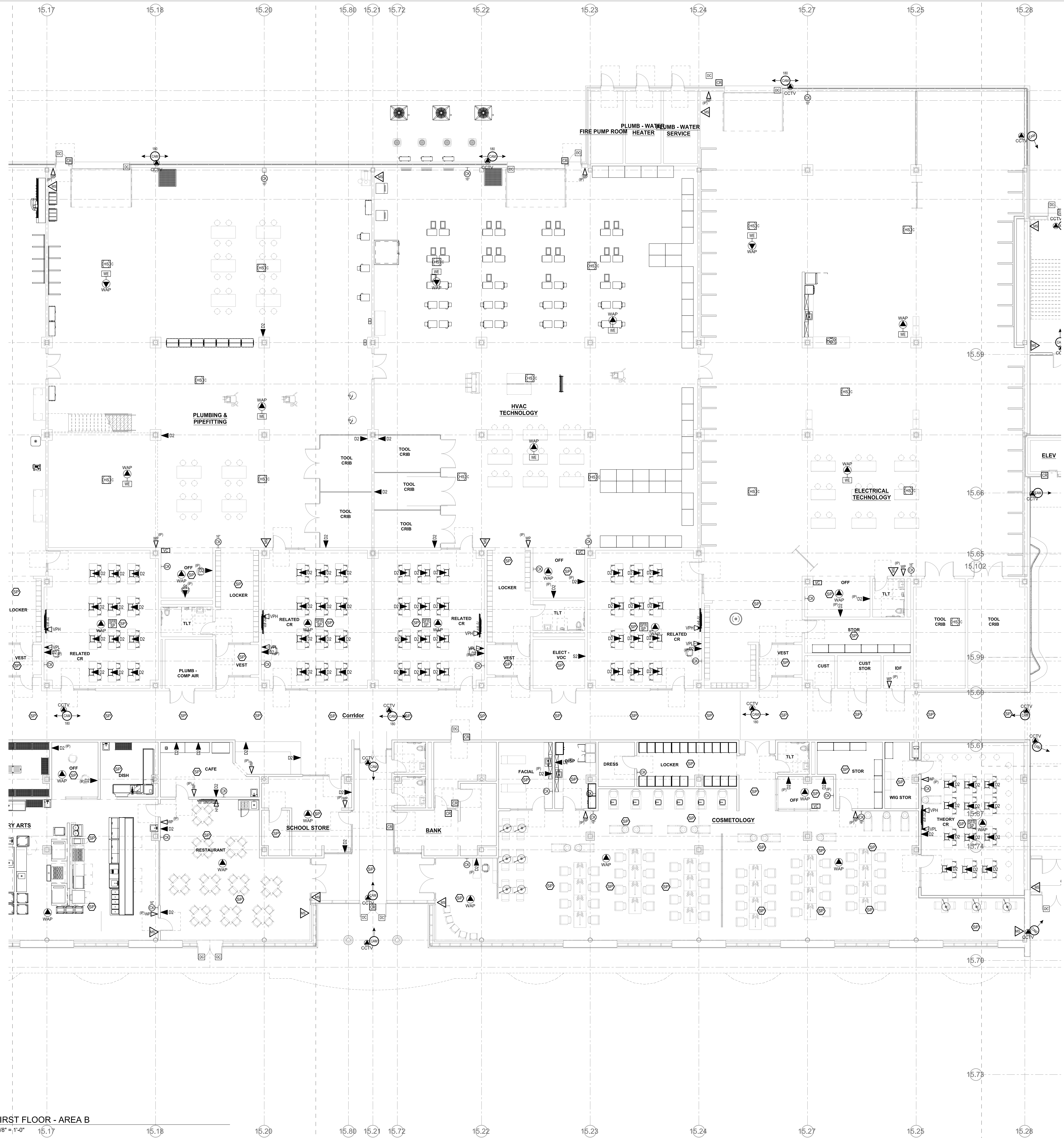


FIRST FLOOR PLAN - AREA A TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-1A

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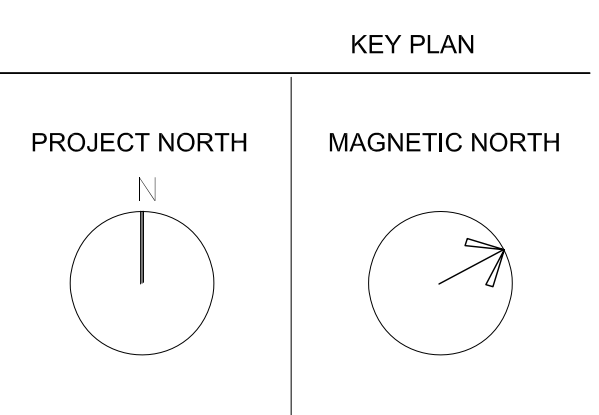
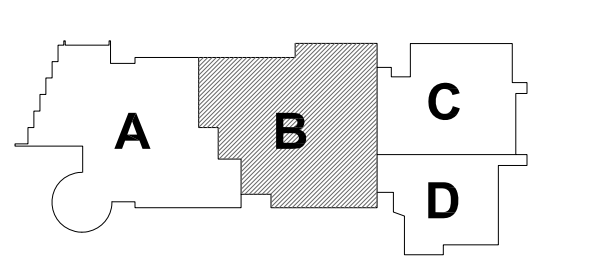
1 FIRST FLOOR - AREA B
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd,
Wakefield, MA 01880



MSBA SCHEMATIC DESIGN SUBMITTAL

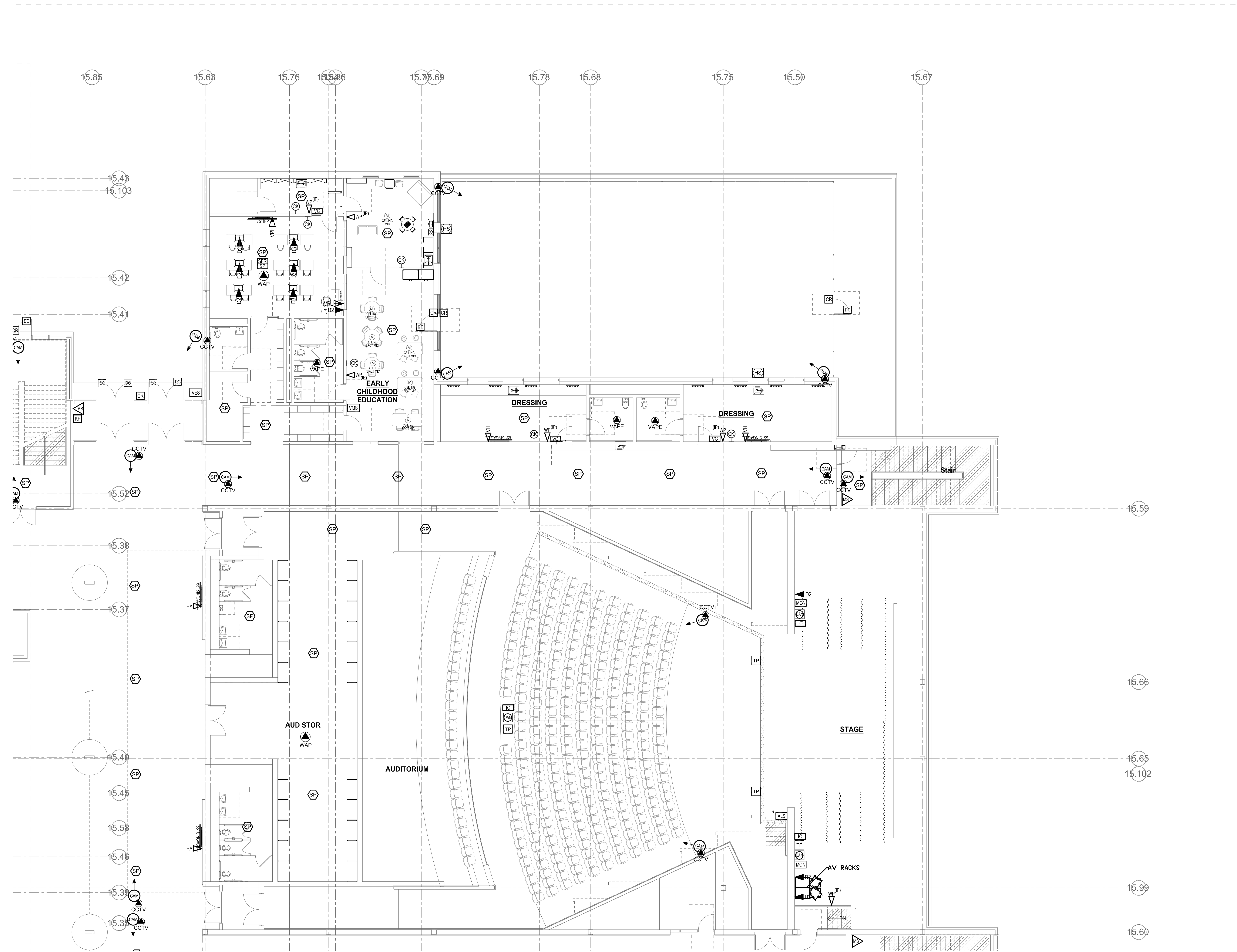


FIRST FLOOR PLAN - AREA B TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

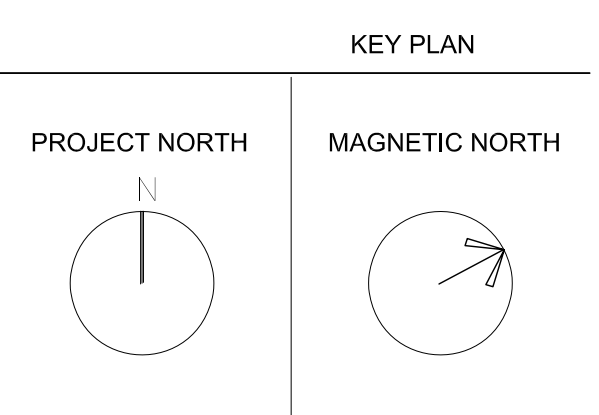
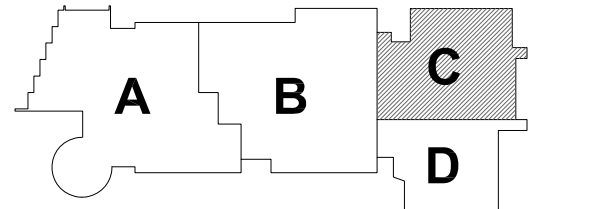
T1-1-1B

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MSBA SCHEMATIC DESIGN SUBMITTAL

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FIRST FLOOR PLAN - AREA C TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-1C

1 FIRST FLOOR - AREA C
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

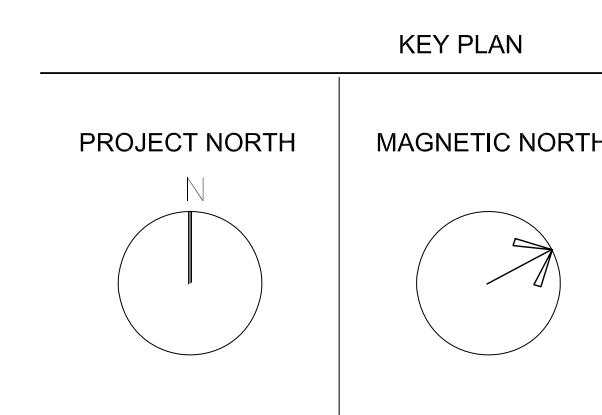
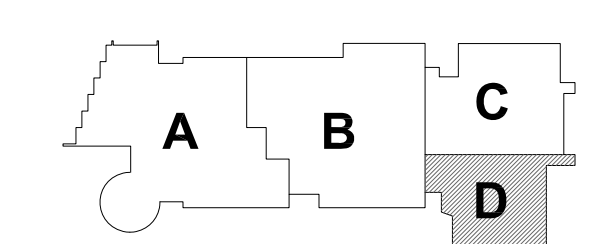
100 Hemlock Rd, Wakefield, MA 01880



MSBA SCHEMATIC DESIGN SUBMITTAL



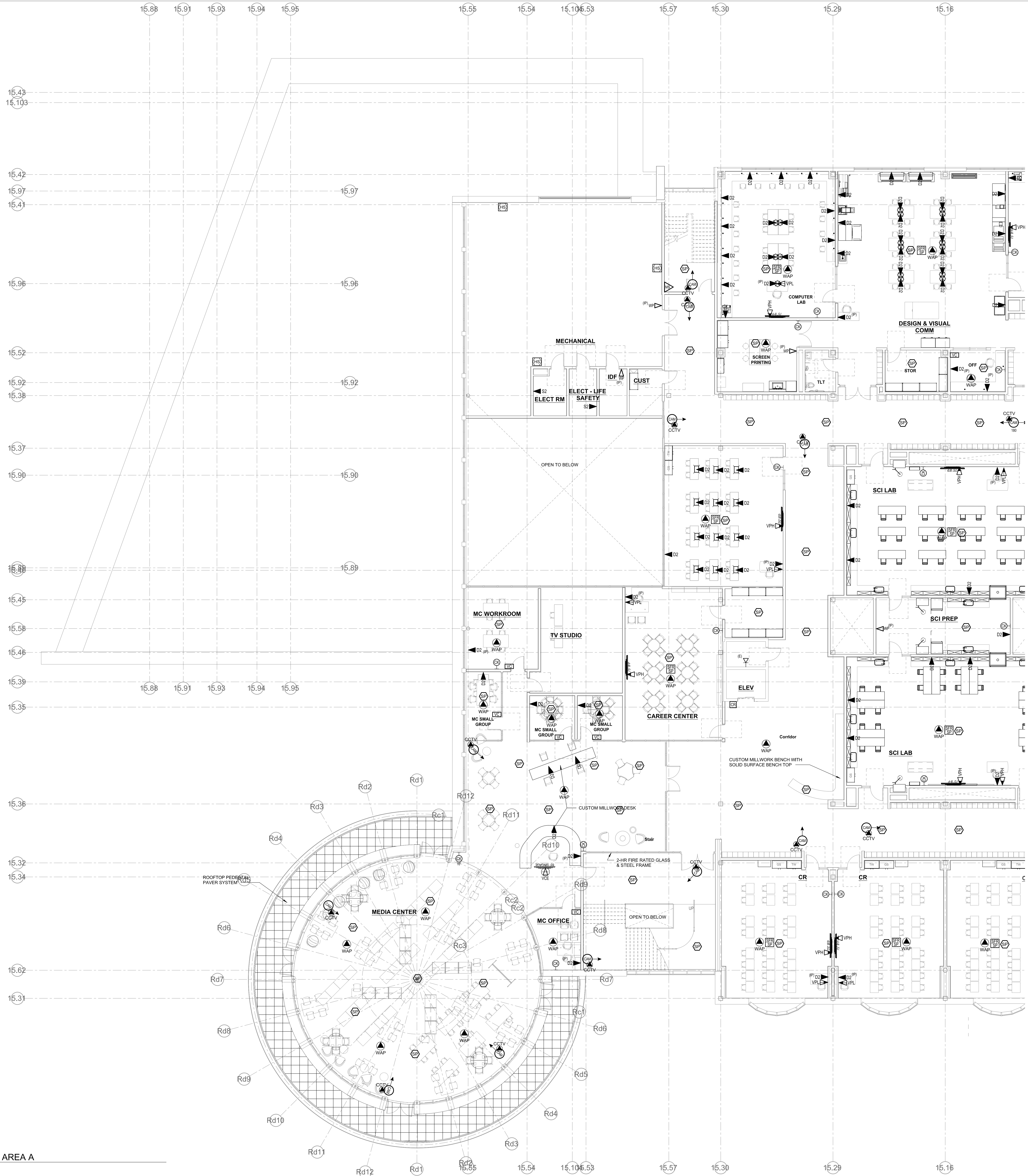
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FIRST FLOOR PLAN - AREA D TECHNOLOGY & SECURITY

1 FIRST FLOOR - AREA D
1/8" = 1'-0"

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021
T1-1-1D



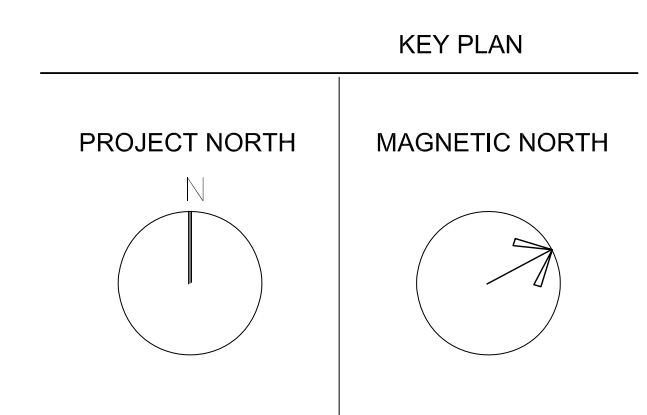
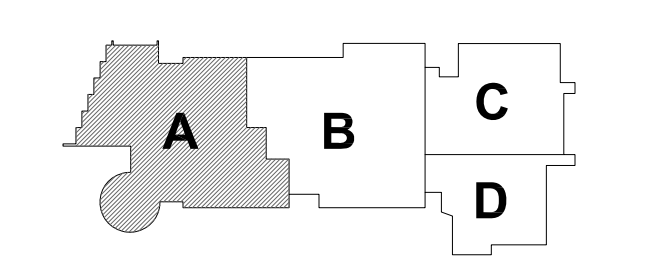
1 SECOND FLOOR - AREA A
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880



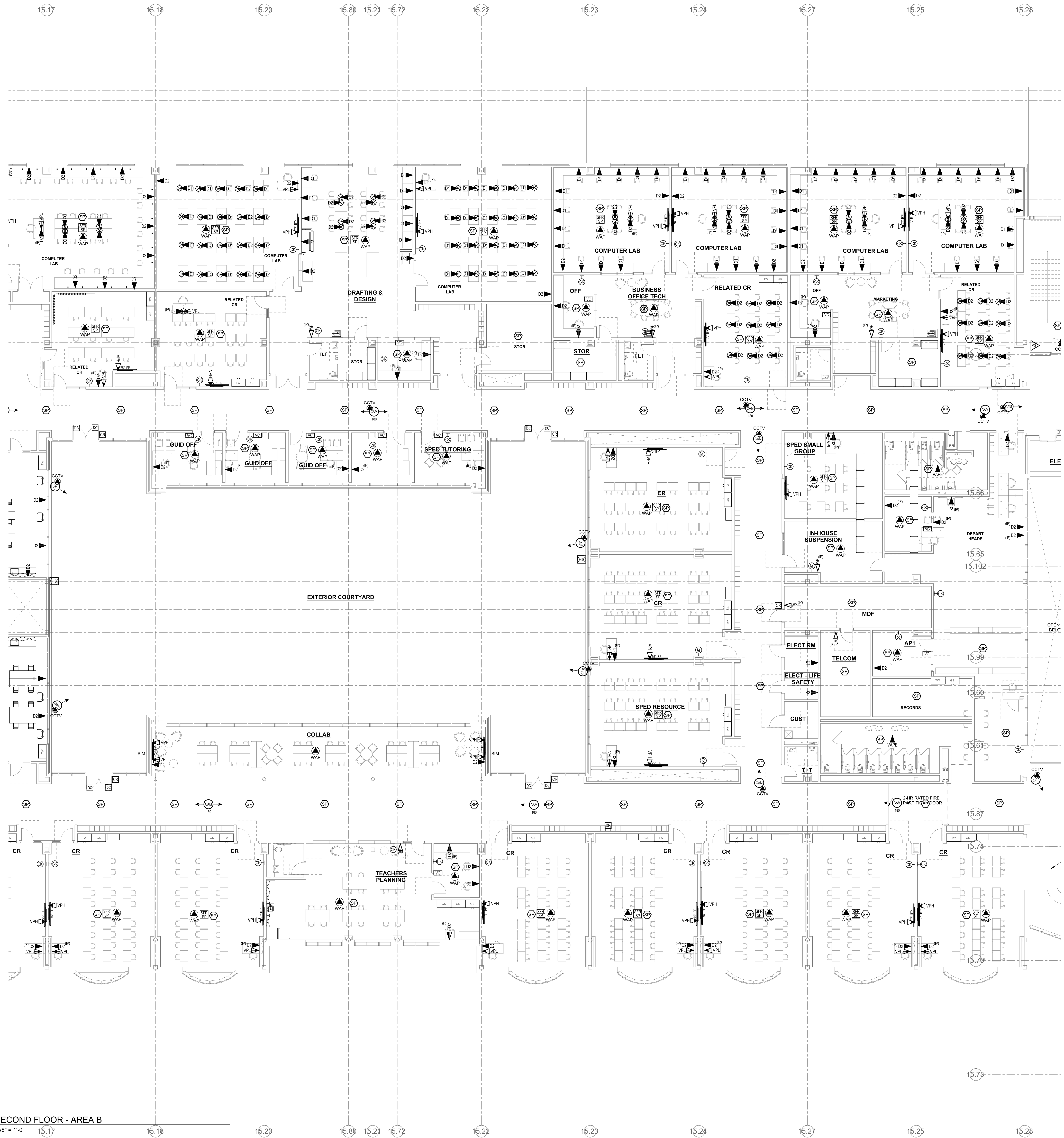
MSBA SCHEMATIC DESIGN SUBMITTAL



SECOND FLOOR PLAN - AREA A TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-2A

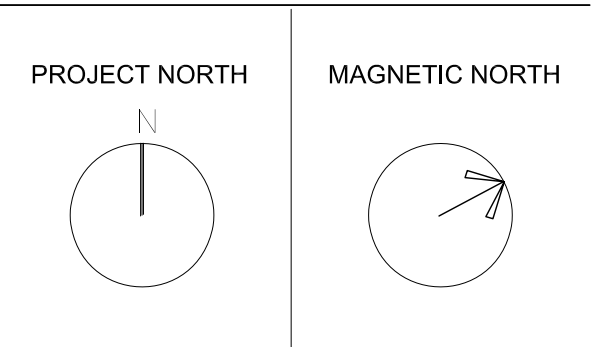
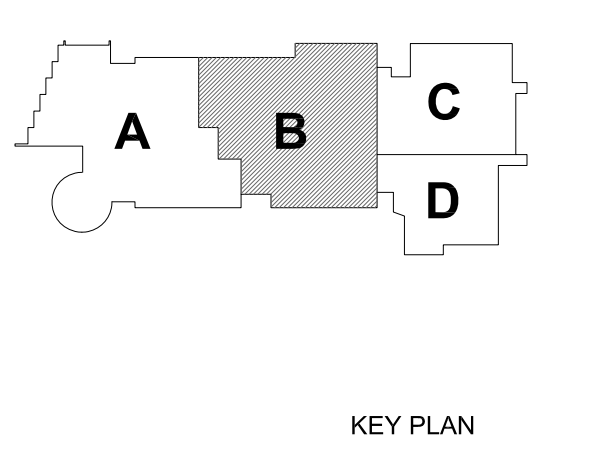


1 SECOND FLOOR - AREA B
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880
SSI
Systems, Software, Support, Inc.
88 Main Street Suite 3, 100 2 Wakefield, MA 01880
Tel: 413-498-0069
Fax: 413-498-4286
www.ssi.net

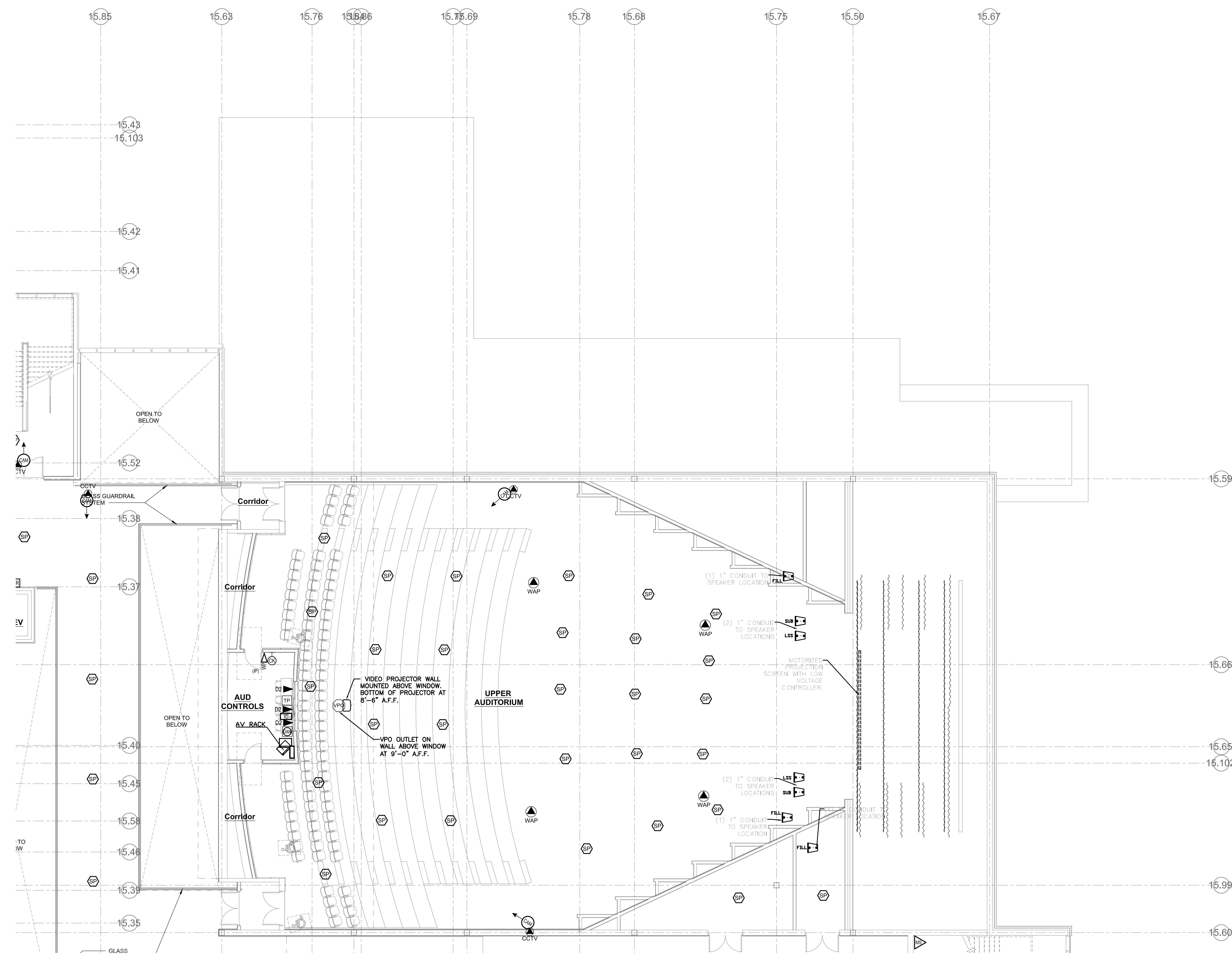
MSBA SCHEMATIC DESIGN SUBMITTAL



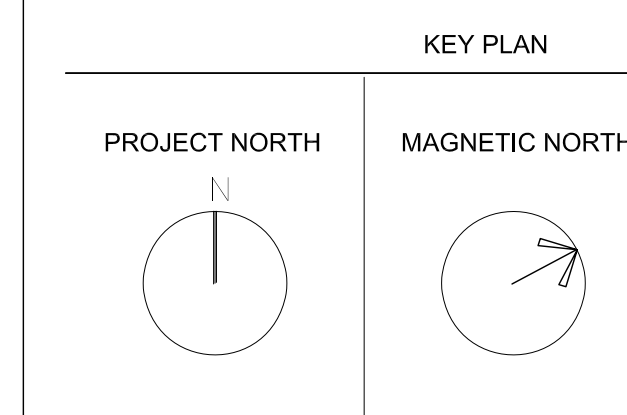
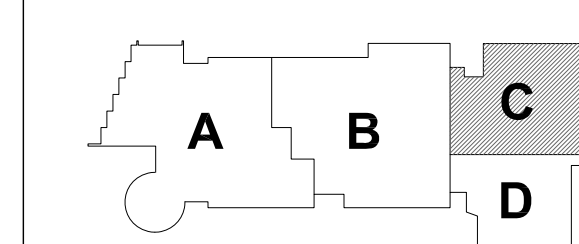
SECOND FLOOR PLAN - AREA B TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021
T1-1-2B

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1 SECOND FLOOR - AREA C
1/8" = 1'-0"



**SECOND FLOOR PLAN - AREA C
TECHNOLOGY & SECURITY**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-2C

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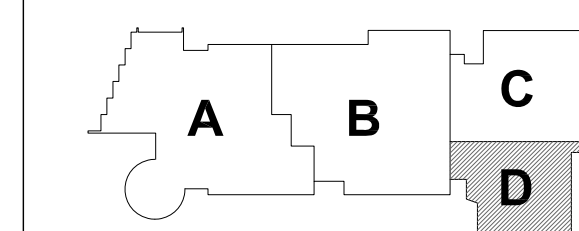
NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880

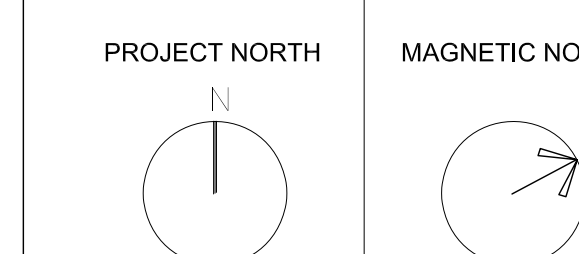


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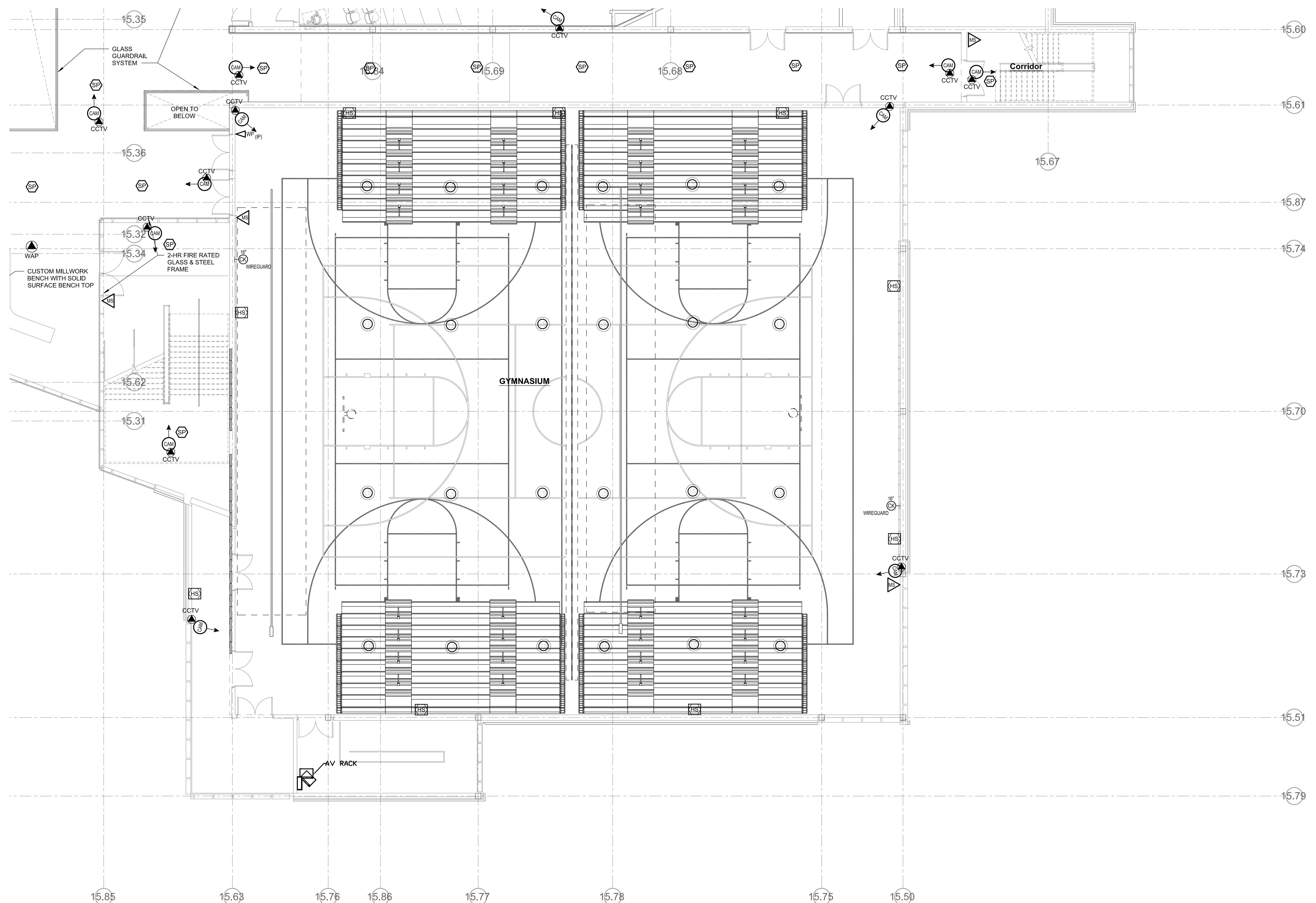
KEY PLAN



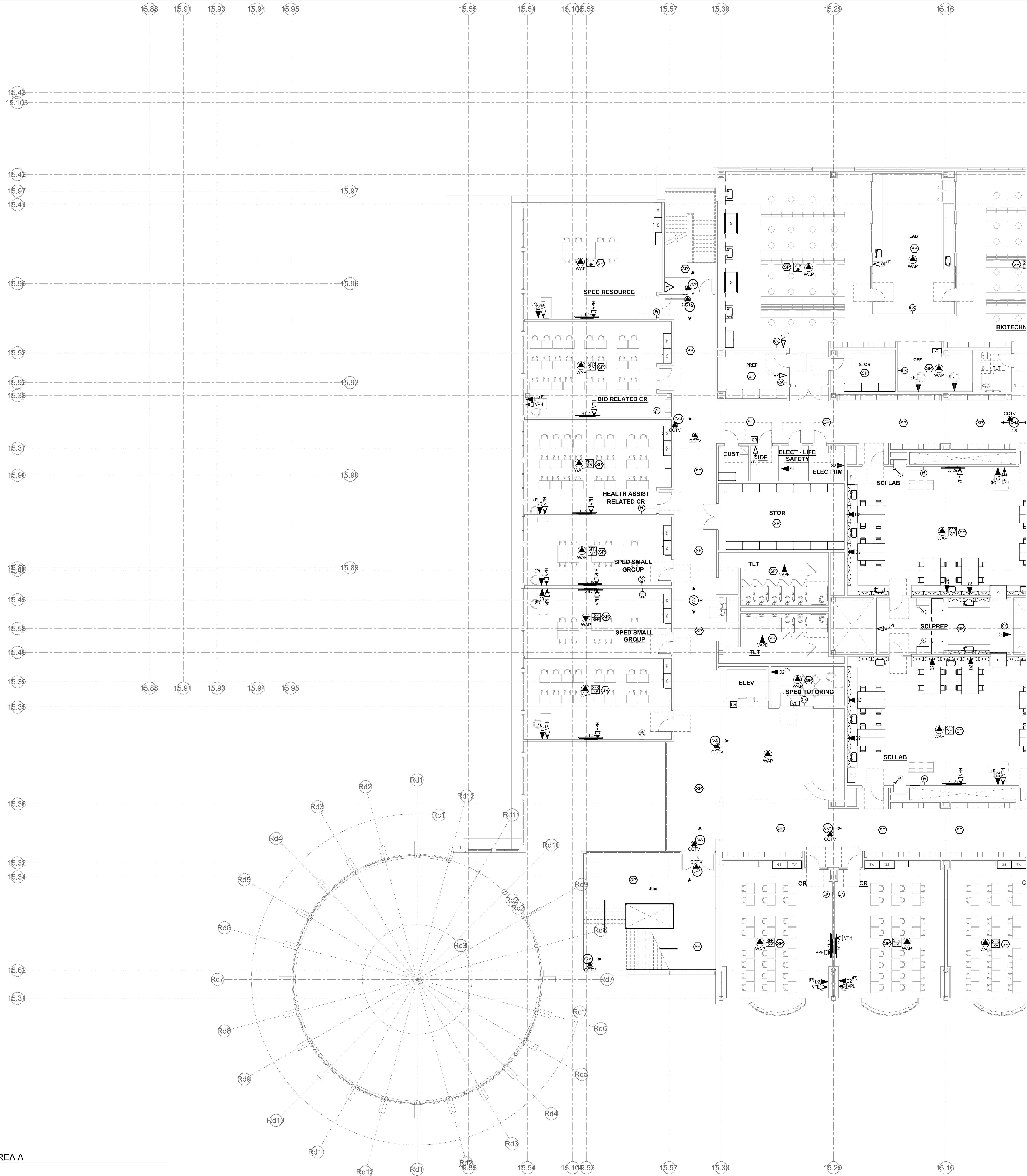
SECOND FLOOR PLAN - AREA D TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: MLD/AMD
 Date: JUNE 17, 2021

T1-1-2D



1 SECOND FLOOR - AREA D
 1/8" = 1'-0"



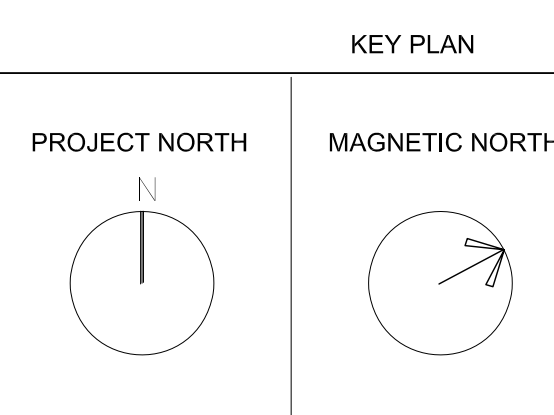
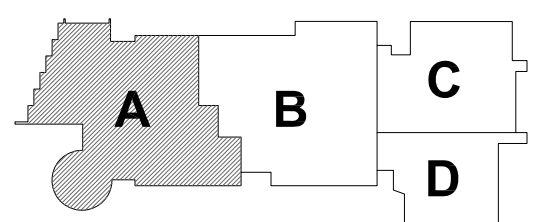
1 THIRD FLOOR - AREA A
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880



MSBA SCHEMATIC DESIGN SUBMITTAL

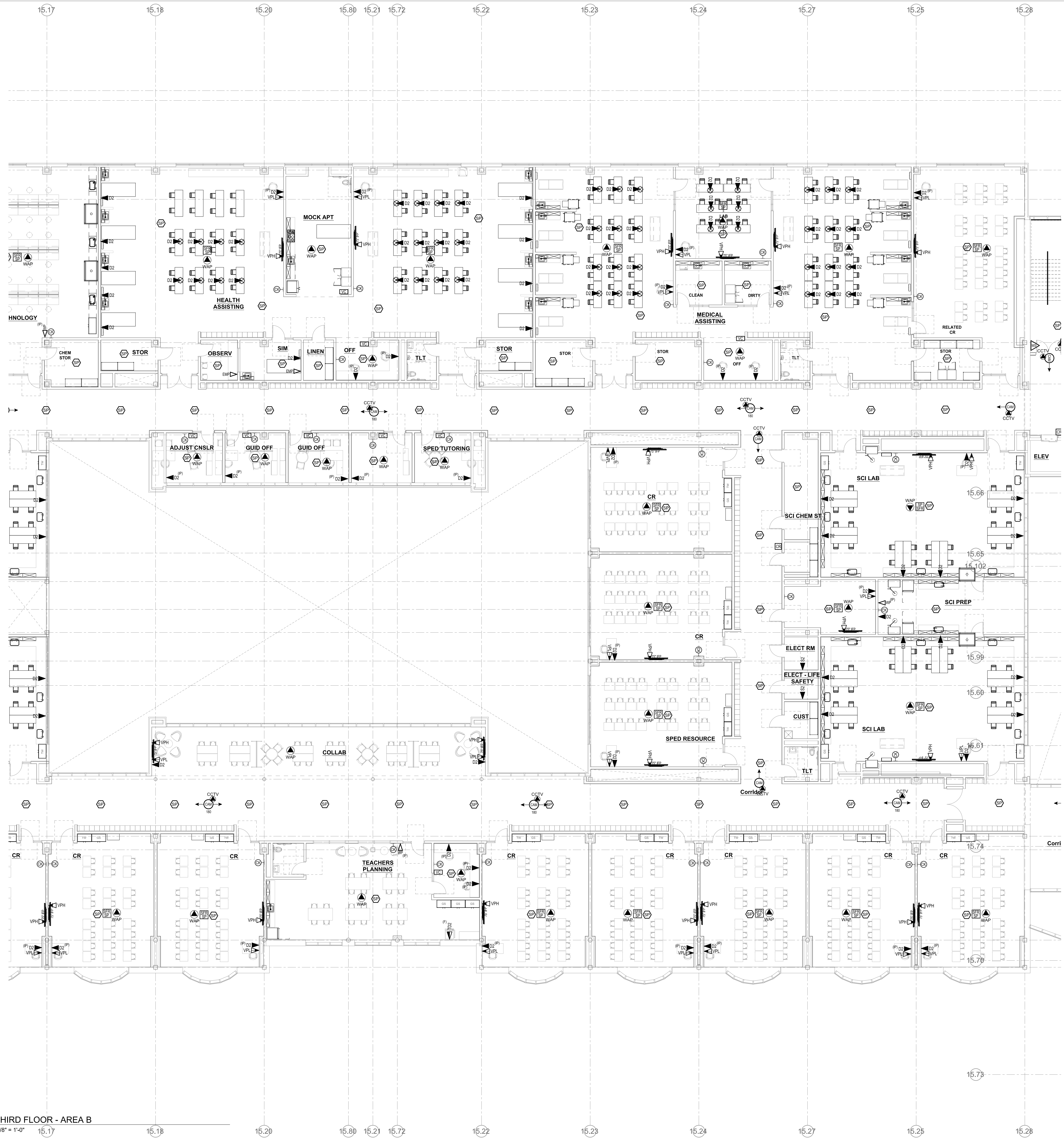


THIRD FLOOR - AREA A TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-3A

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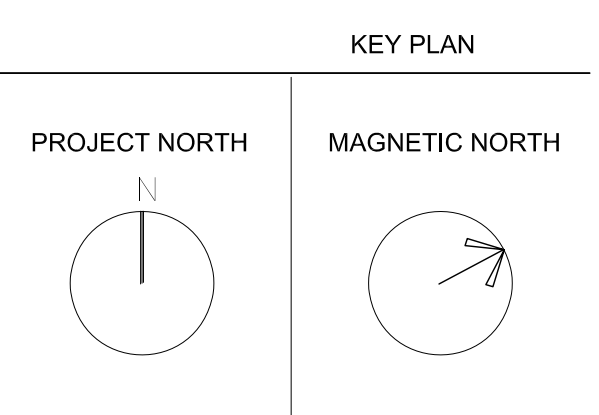
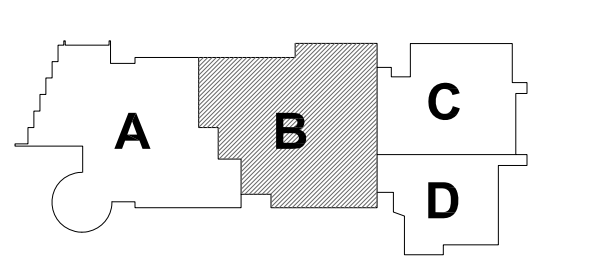
1 THIRD FLOOR - AREA B
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880



MSBA SCHEMATIC DESIGN SUBMITTAL



THIRD FLOOR PLAN - AREA B TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-3B

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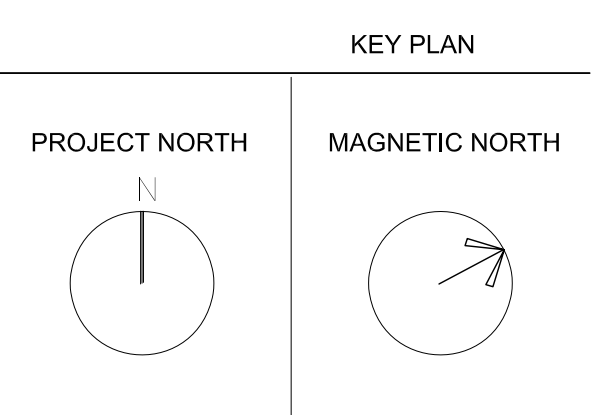
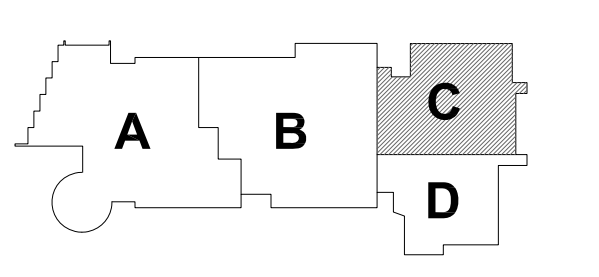
NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880



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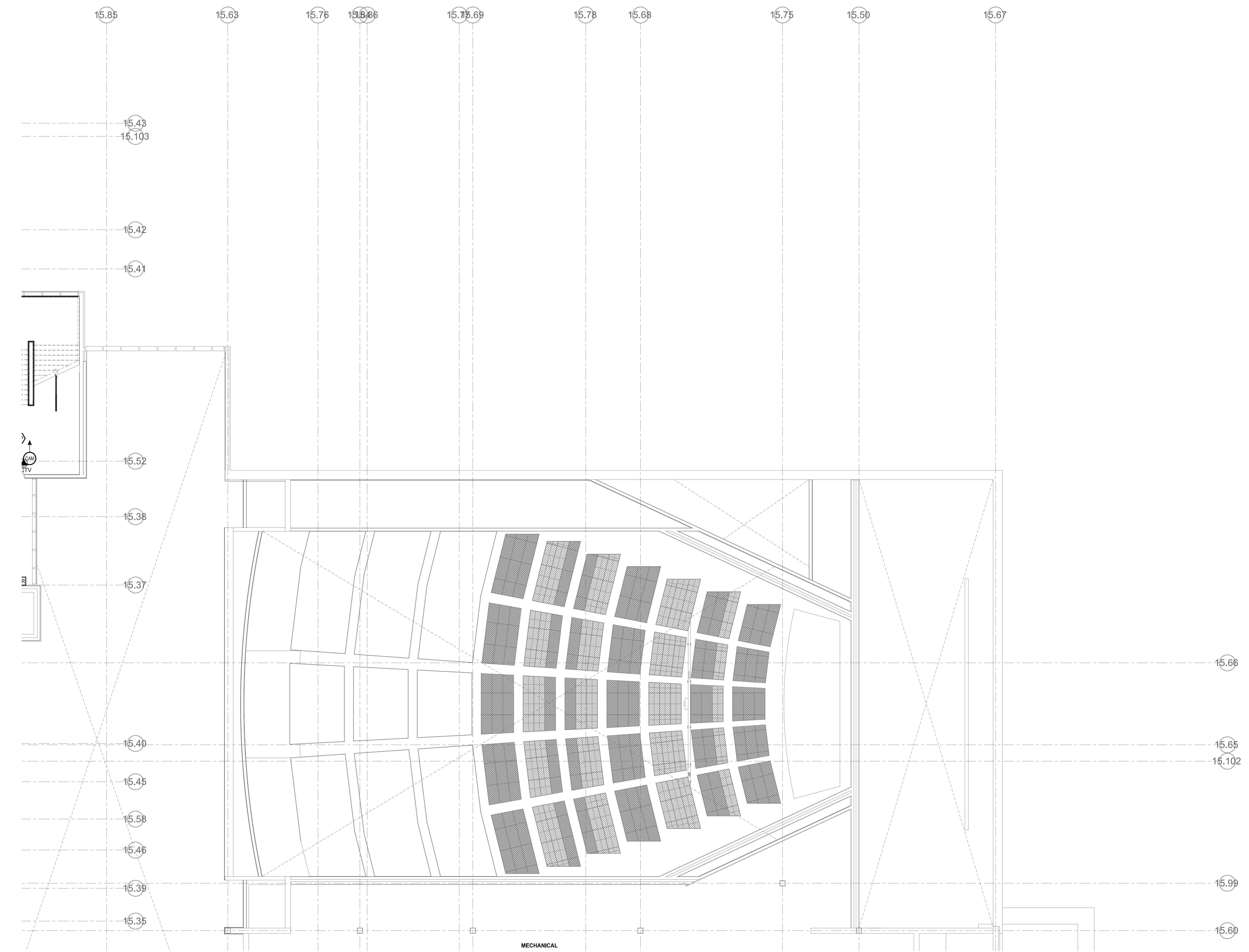
MSBA SCHEMATIC DESIGN SUBMITTAL



THIRD FLOOR PLAN - AREA C TECHNOLOGY & SECURITY

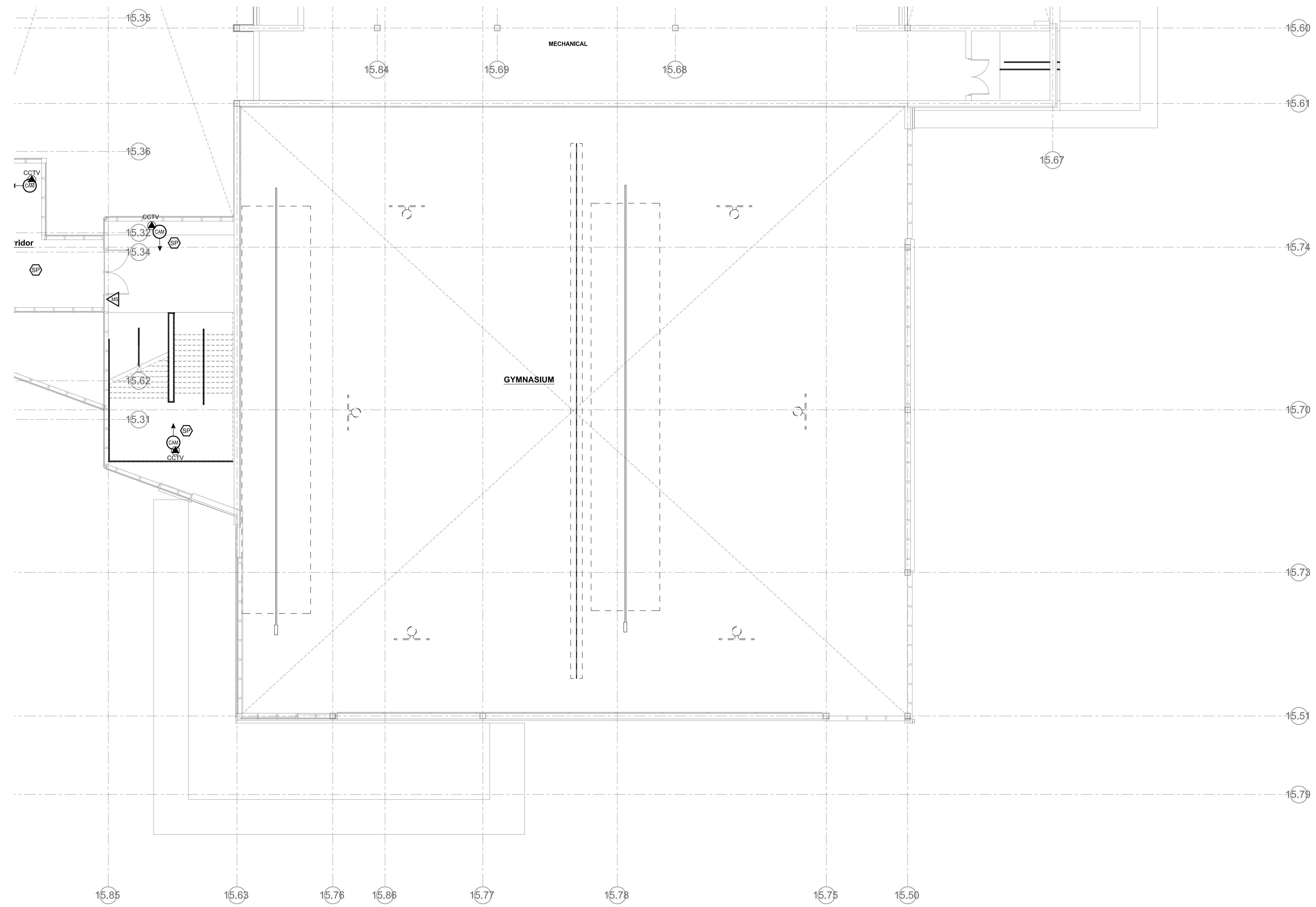
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 Job No.: 20202
 Drawn By: MLD/AMD
 Date: JUNE 17, 2021

T1-1-3C

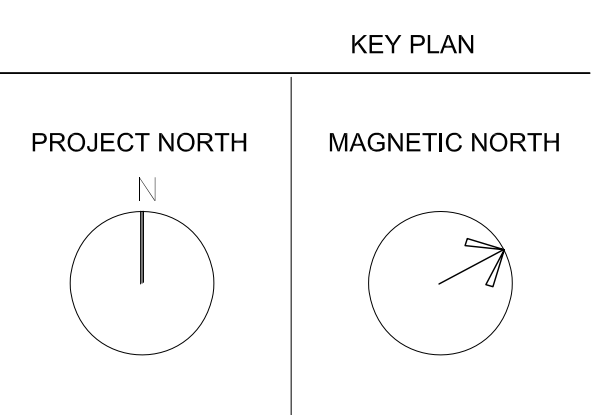
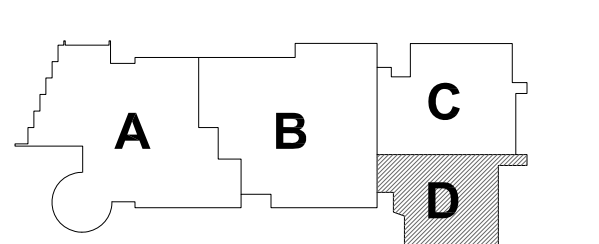


1 THIRD FLOOR - AREA C
 1/8" = 1'-0"

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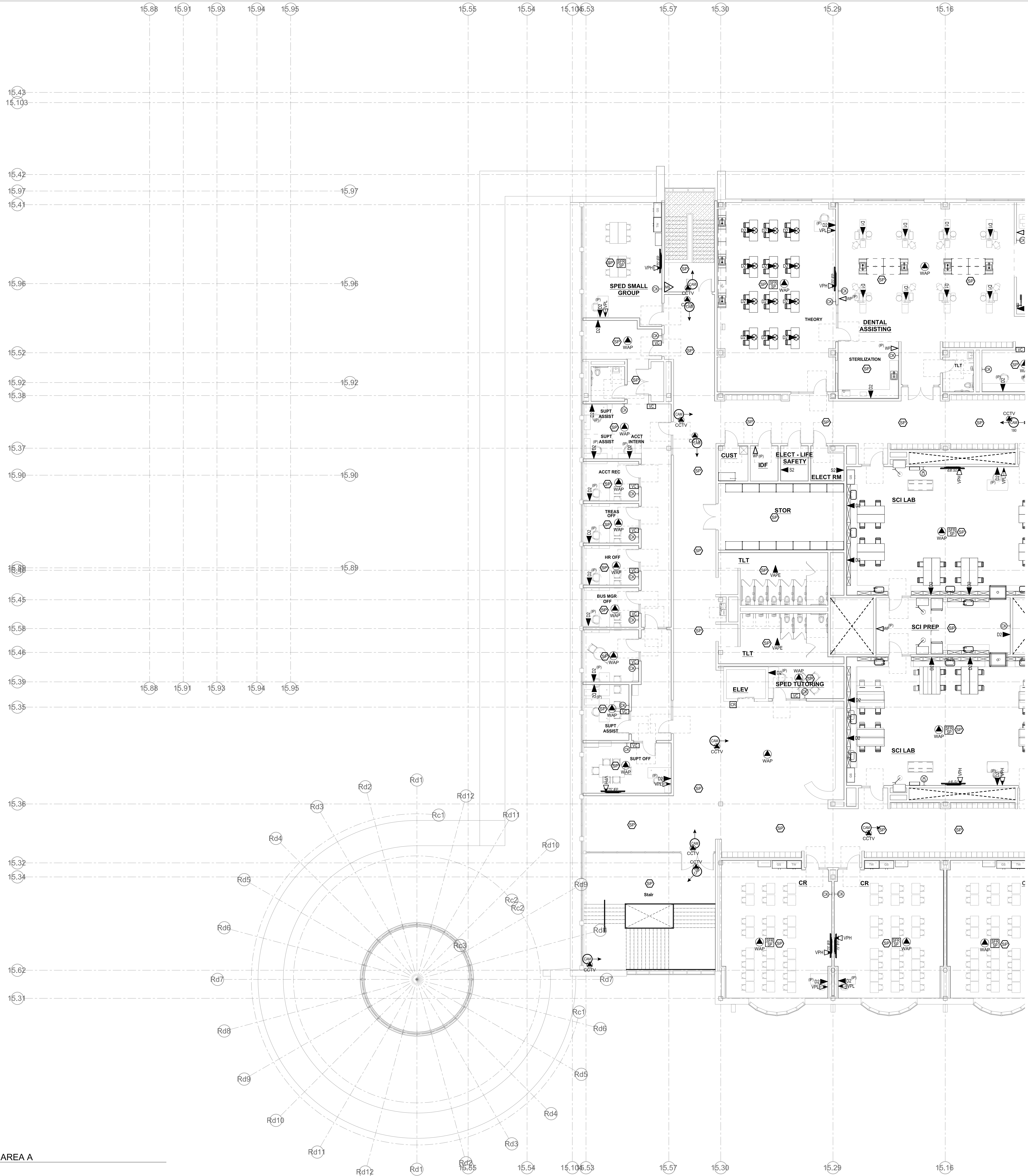
1 THIRD FLOOR - AREA D
1/8" = 1'-0"



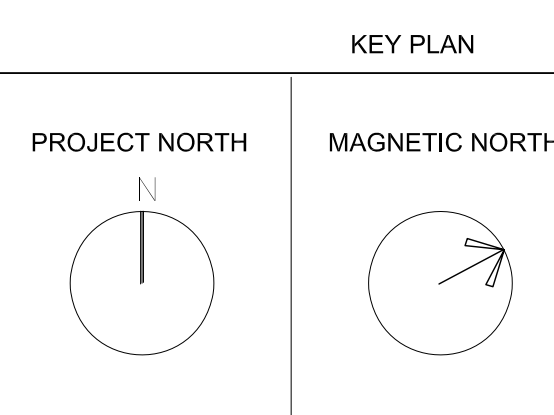
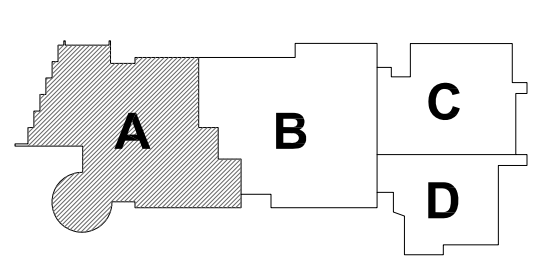
**THIRD FLOOR
PLAN - AREA D
TECHNOLOGY &
SECURITY**

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

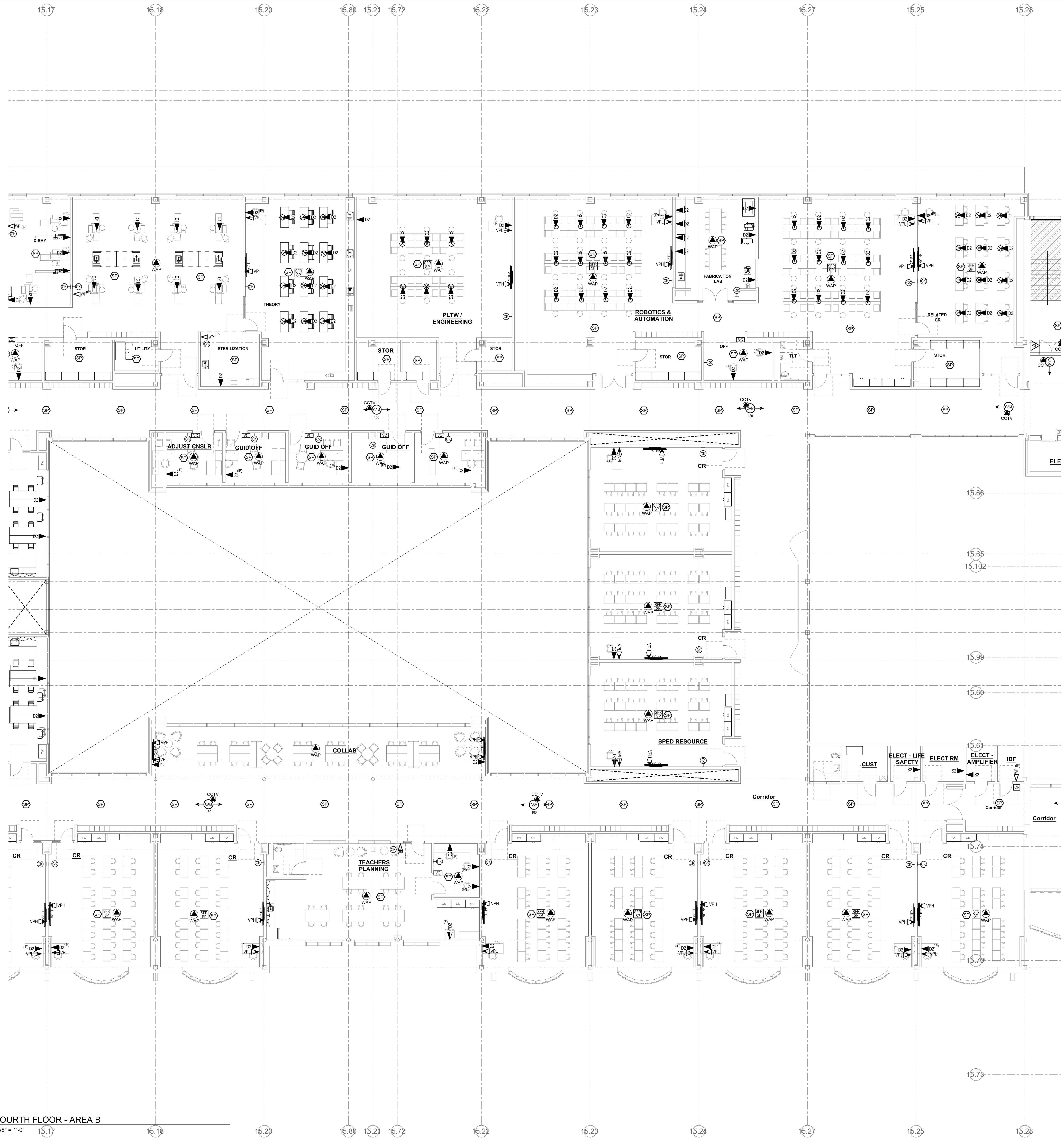
T1-1-3D



1 FOURTH FLOOR - AREA A
1/8" = 1'-0"



FOURTH FLOOR - AREA A TECHNOLOGY & SECURITY



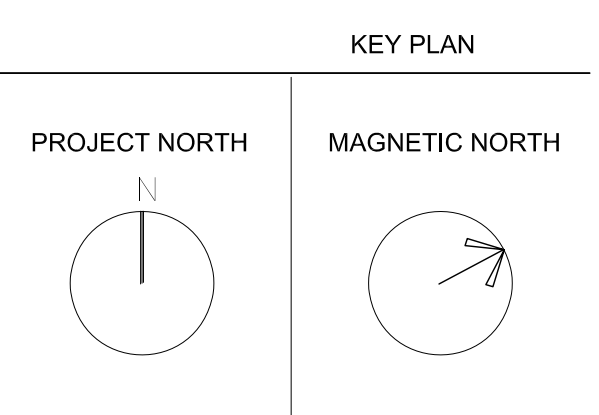
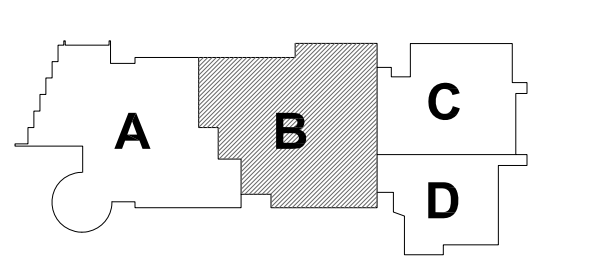
1 FOURTH FLOOR - AREA B
1/8" = 1'-0"

NORTHEAST METROPOLITAN REGIONAL VOCATIONAL HIGH SCHOOL

100 Hemlock Rd, Wakefield, MA 01880



MSBA SCHEMATIC DESIGN SUBMITTAL



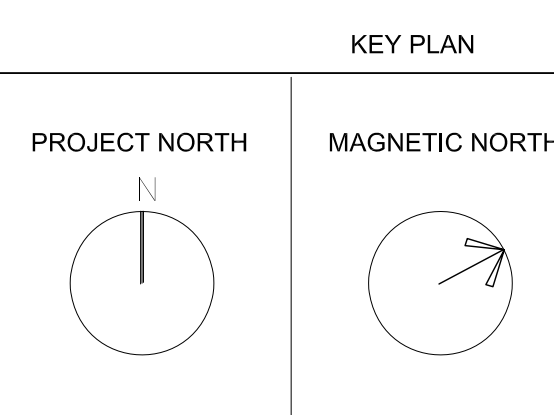
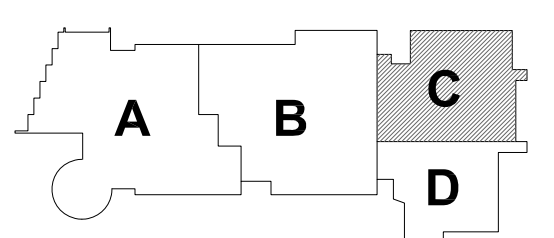
FOURTH FLOOR PLAN - AREA B TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-4B

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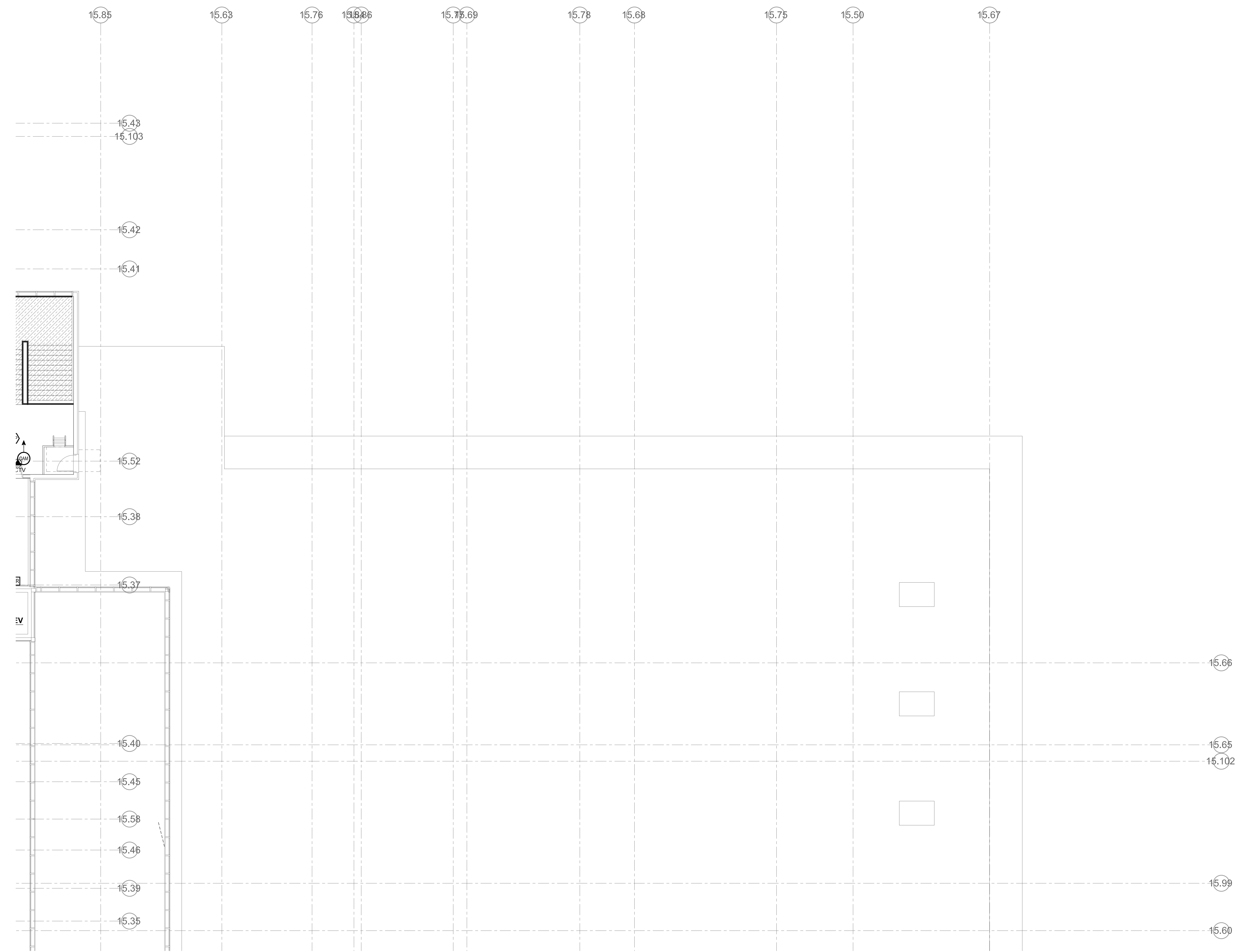
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FOURTH FLOOR PLAN - AREA C TECHNOLOGY & SECURITY

Scale: 1/8" = 1'-0"
Job No.: 20202
Drawn By: MLD/AMD
Date: JUNE 17, 2021

T1-1-4C



1 FOURTH FLOOR - AREA C
1/8" = 1'-0"



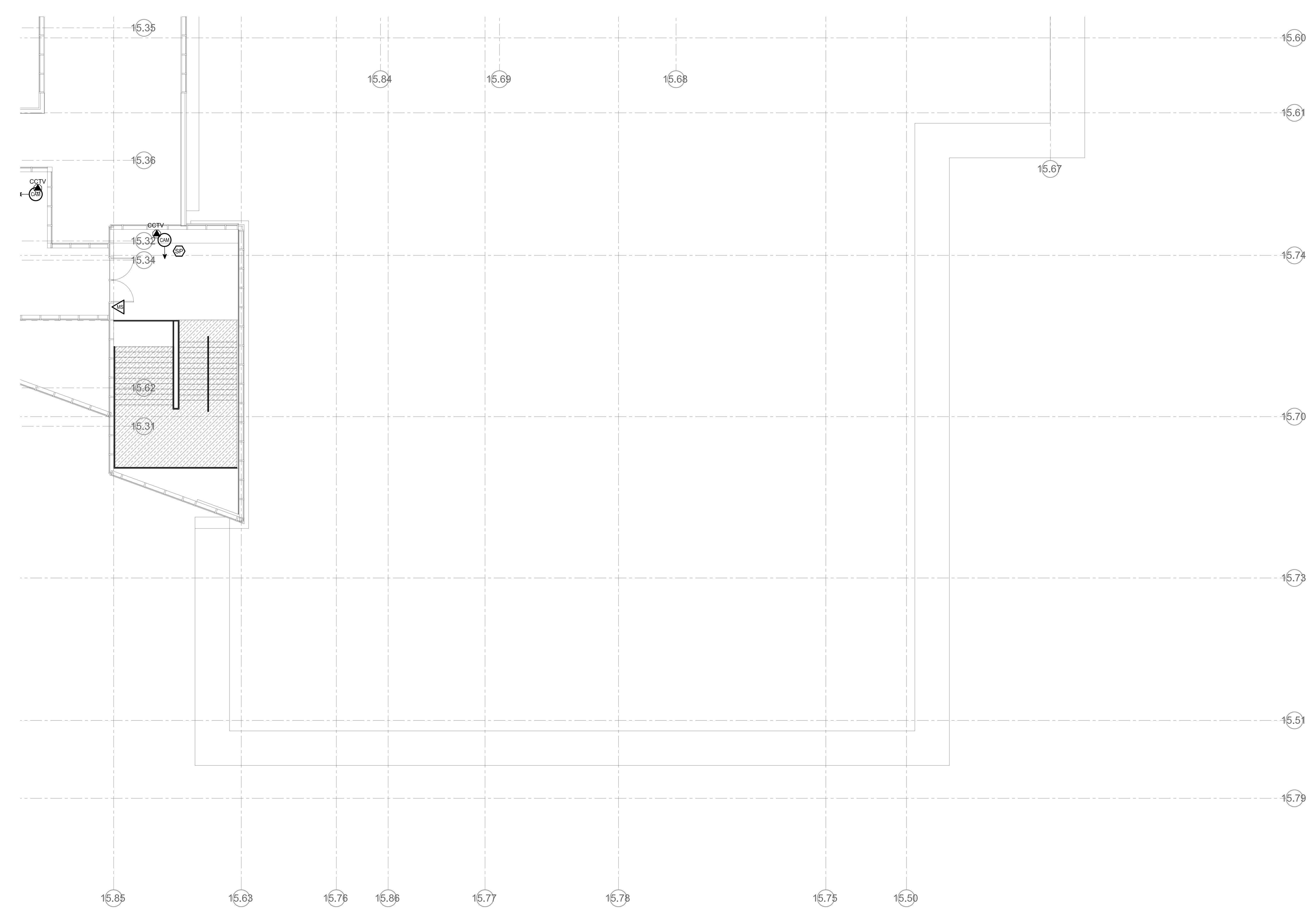
Drumey Rosane Anderson, Inc.
 225 Oakland Road Studio 300
 South Windsor, CT 06074
 260 Charles Street Studio 300
 Waltham, MA 02453
 Planning Architecture Interior
 Tel: 860.700.1100
 www.dra.com

**NORTHEAST
 METROPOLITAN
 REGIONAL
 VOCATIONAL
 HIGH SCHOOL**

100 Hemlock Rd,
 Wakefield, MA 01880



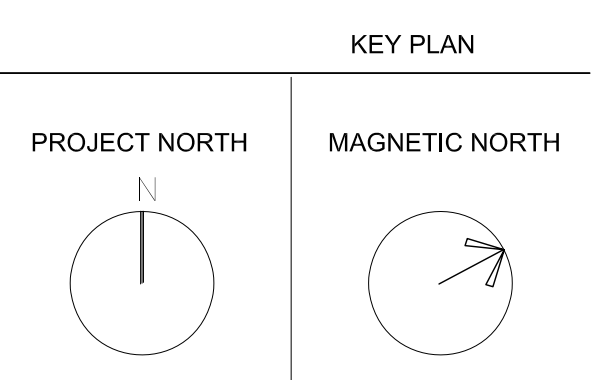
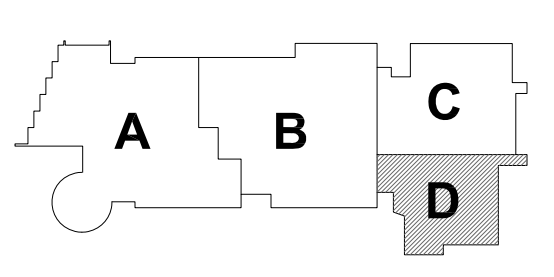
SSI
 Systems, Software, Support Inc.



1 FOURTH FLOOR - AREA D
 1/8" = 1'-0"

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 DESIGN SUBMITTAL



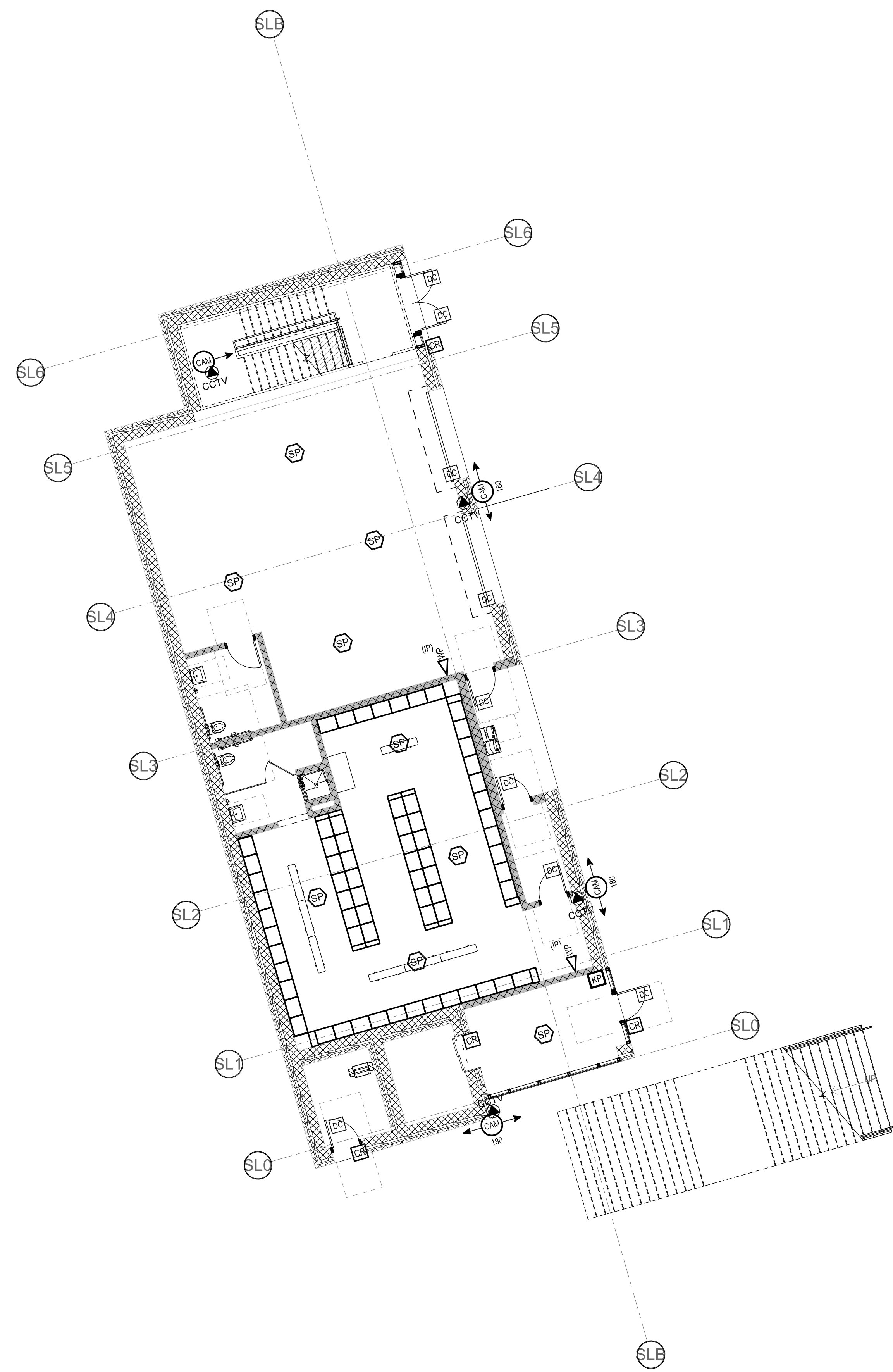
**FOURTH FLOOR
 PLAN - AREA D
 TECHNOLOGY &
 SECURITY**

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: MLD/AMD
 Date: JUNE 17, 2021

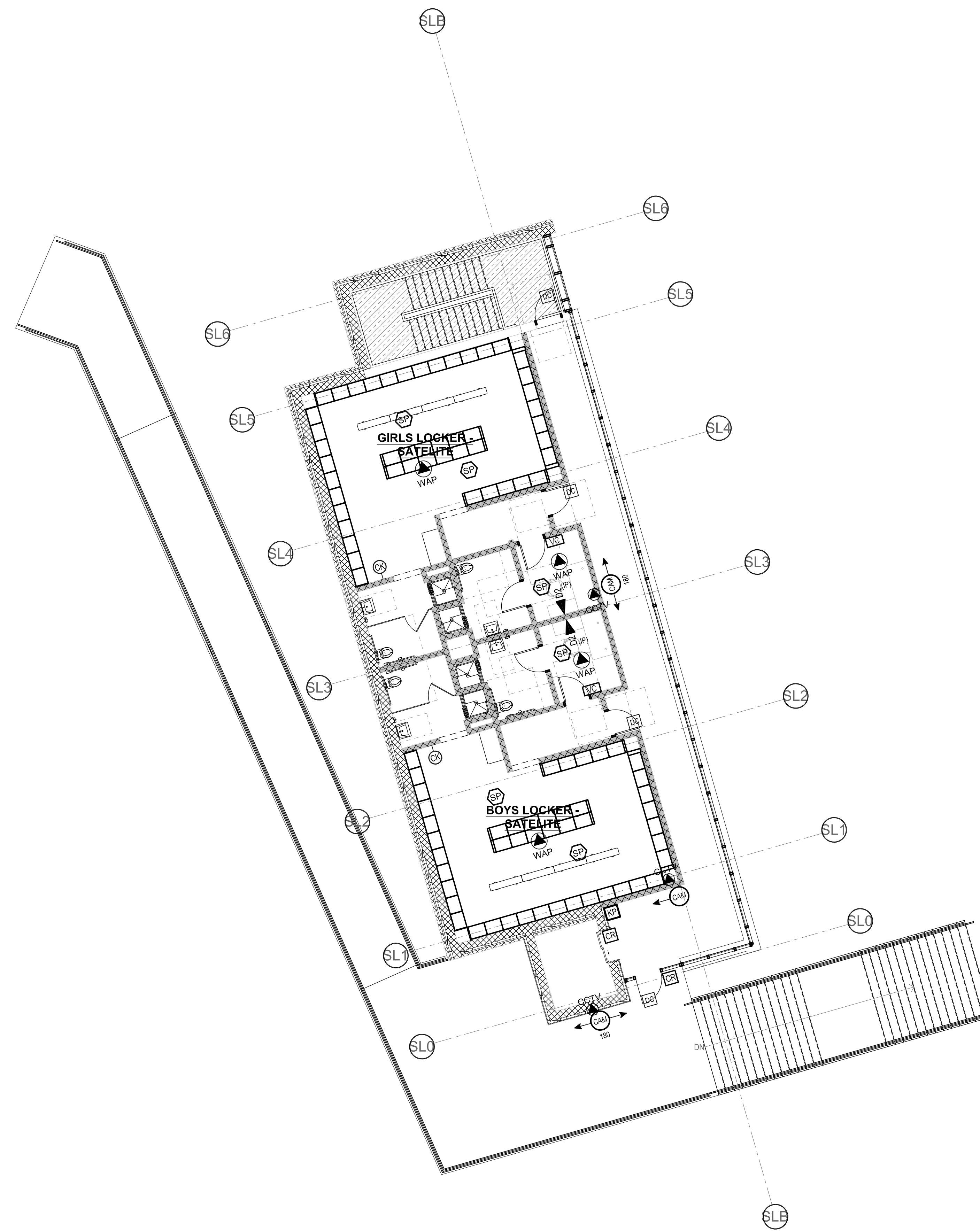
T1-1-4D

**NORTHEAST
 METROPOLITAN
 REGIONAL
 VOCATIONAL
 HIGH SCHOOL**

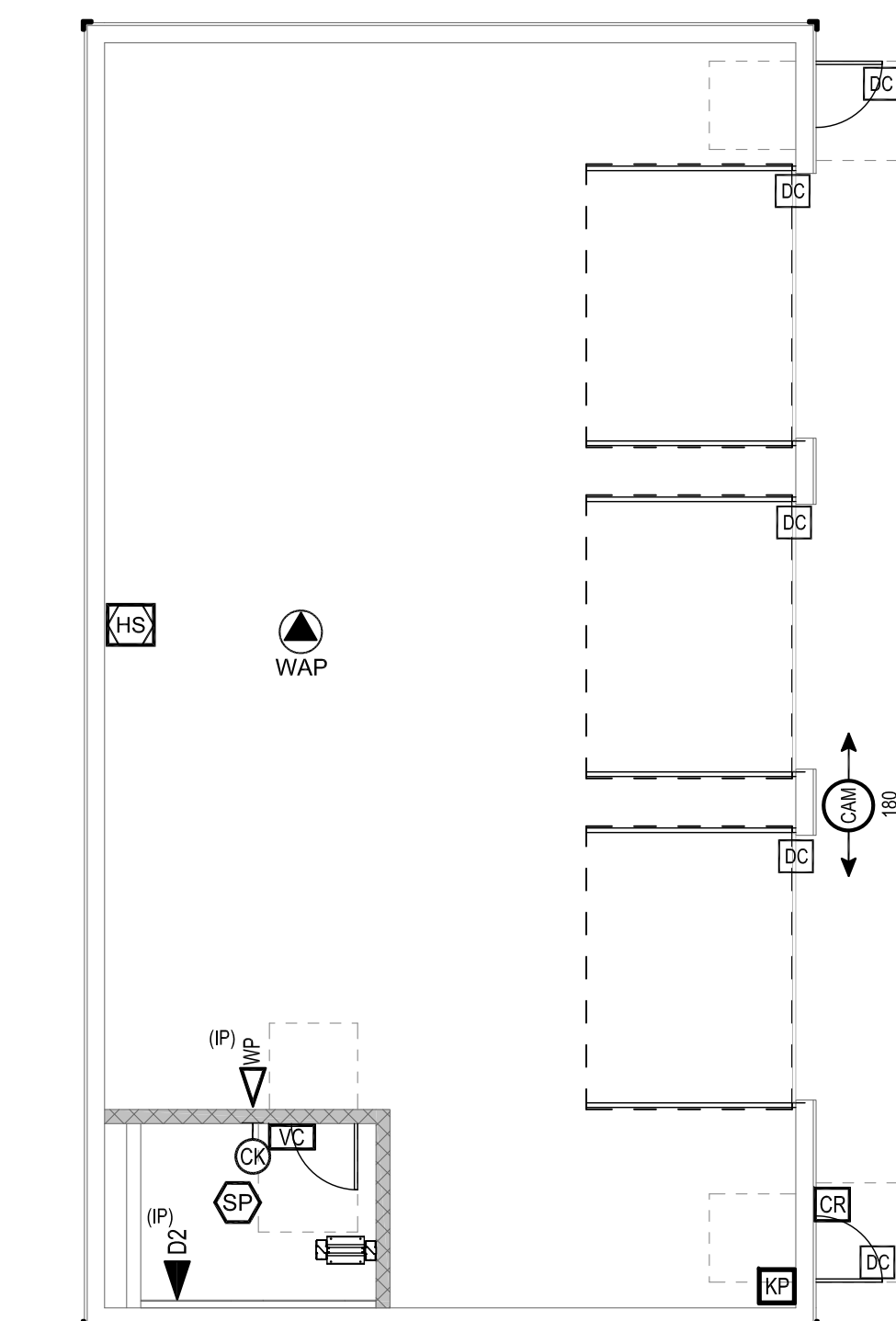
100 Hemlock Rd,
 Wakefield, MA 01880



1 LOCKER BUILDING FIRST FLOOR PLAN
 1/8" = 1'-0"



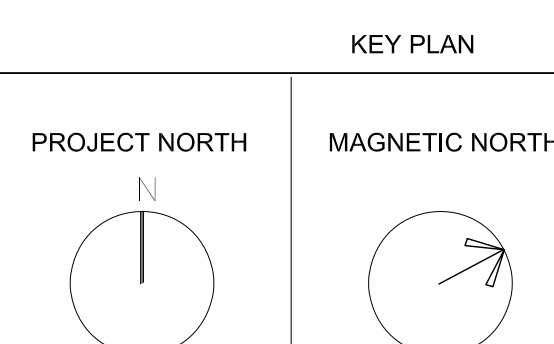
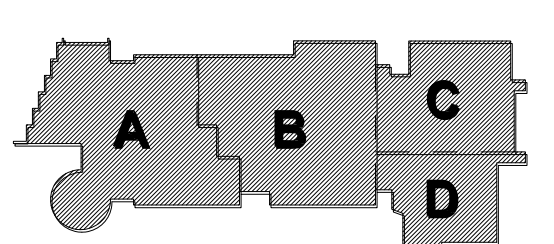
2 LOCKER BUILDING SECOND FLOOR PLAN
 1/8" = 1'-0"



3 MAINTENANCE BUILDING
 1/8" = 1'-0"

MSBA SCHEMATIC
 DESIGN SUBMITTAL

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**OUTBUILDING
 PLANS
 TECHNOLOGY &
 SECURITY**

Scale: 1/8" = 1'-0"
 Job No.: 20202
 Drawn By: MLD/AMD
 Date: JUNE 17, 2021

T1-1-5

4.1.2 - 12

ROOM DATA SHEETS

CORE ACADEMIC SPACES

ACAD - 01	Classroom - General
ACAD - 02	Teachers Planning/Workrooms
ACAD - 03	Small Group Seminar/ Collaborative Space
ACAD - 04	Science Classroom / Lab
ACAD - 05	Prep Room
ACAD - 06	Central Chemical Storage
ACAD - 07	Health Classroom
ACAD - 08	Language Lab/Distance Learning

SPECIAL EDUCATION

SPED - 01	Learning Center (Resource Room)
SPED - 02	Small Group Room
SPED - 03	Tutorial
SPED - 04	Adjustment Counselors
SPED - 05	Special Education Office – Director & Assistants
SPED - 06	Special Education Conference Room

VOCATIONAL & TECHNOLOGY

VOC - 01	Technology/Engineering Rooms
VOC - 02	Automotive Collision Repair
VOC - 03	Automotive Technology
VOC - 04	Business Office Technology
VOC - 05	Carpentry
VOC - 06	Cosmetology
VOC - 07	Culinary Arts
VOC - 08	Dental Assisting
VOC - 09	Design & Visual Communications
VOC - 10	Drafting & Design
VOC - 11	Early Childhood Education
VOC - 12	Electrical Technology
VOC - 13	Health Assisting
VOC - 14	HVAC Technology
VOC - 15	Metal Fabrication
VOC - 16	Plumbing & Pipefitting
VOC - 17	Robotics & Automation
VOC - 18	Biotechnology
VOC - 19	Marketing
VOC - 20	Medical Assisting

HEALTH & PHYSICAL EDUCATION

PE - 01	Gymnasium
PE - 02	PE Alternatives
PE - 03	Gym Storeroom
PE - 04	Locker Rooms
PE - 05	Satellite Locker Rooms
PE - 06	Physical Ed. Storage
PE - 07	Athletics Director's Office
PE - 08	Officials/Trans Locker Rm W/ Shower and Toilet
PE - 09	PE Instructor & Coach Offices W/ Shower and Toilet
PE - 10	Trainer

MEDIA CENTER

MC - 01	Media Center/Reading Room
MC - 02	Workroom
MC - 03	Office
MC - 04	Small Group Rooms
MC - 05	TV Studio

AUDITORIUM/DRAMA

AUD - 01	Auditorium
AUD - 02	Stage
AUD - 03	Auditorium Storage
AUD - 04	Make-up/Dressing/Green Rooms
AUD - 05	Controls/Lighting/Projection

DINING & FOOD SERVICE

CAF - 01	Cafeteria/Student Lounge/Break Out
CAF - 02	Chair/Table Storage
CAF - 03	Scramble Serving Area
CAF - 04	Kitchen
CAF - 05	Staff Lunch Room

MEDICAL

MED - 01	Medical Suite Toilets
MED - 02	Nurses' Office / Waiting Room
MED - 03	Interview / Exam Room
MED - 04	Resting

OTHER

OTHER - 01	Adult Ed Offices
OTHER - 02	Superintendent's Office
OTHER - 03	Superintendent's Assistant
OTHER - 04	Business Offices Suite HR

ADMINISTRATION & GUIDANCE

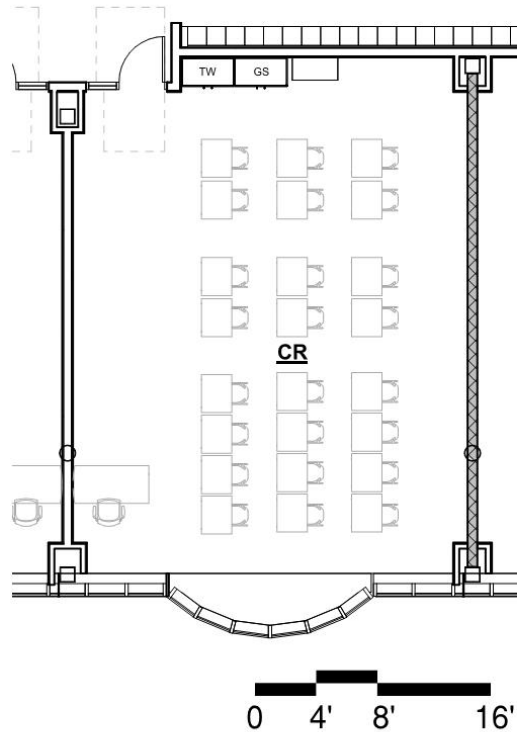
ADMIN - 01	General Office/Waiting/Toilet
ADMIN - 02	Teachers' Mail
ADMIN - 03	Duplicating Room
ADMIN - 04	Records Room
ADMIN - 05	Principal's Office W/ Conf. Area
ADMIN - 06	Principal's Secretary / Waiting
ADMIN - 07	Assistant Principal's Office
ADMIN - 08	Academic Proq. Coordinator
ADMIN - 09	Attendance Reception
ADMIN - 10	Department Head Offices
ADMIN - 11	Safety Resource Officer
ADMIN - 12	In-House Suspension
ADMIN - 13	Conference Rooms
ADMIN - 14	Guidance /Adj, Psych., Diversity Offices
ADMIN - 15	Guidance Waiting Room
ADMIN - 16	Guidance Storeroom
ADMIN - 17	Career Center
ADMIN - 18	Records Room
ADMIN - 19	Digital Learning

CUSTODIAL & MAINTENANCE

CUST - 01	Custodian Office
CUST - 02	Custodian's Workshop & Toilet
CUST - 03	Custodian's Storage
CUST - 04	Recycling Room/Trash
CUST - 05	Receiving & General Supply
CUST - 06	Storeroom
CUST - 07	Network

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Classroom - General ACAD -01



<p style="text-align: center;">Functional Criteria</p> <p>Description: General Classroom Area: 858 sf Quantity: 36 Occupancy Load: 24</p> <p>Location Criteria Users: • Students • Teachers • Aides • Guests • -</p> <p>Activities: • Class • Lecture And Note Taking • Drill And Practice • Project Based Learning • Technology Bases Learning</p>	<p>Adjacency: Academic Cluster, Vocational Programs</p> <p>Related Spaces: Academic Cluster, Vocational Programs, Special Education Spaces</p>
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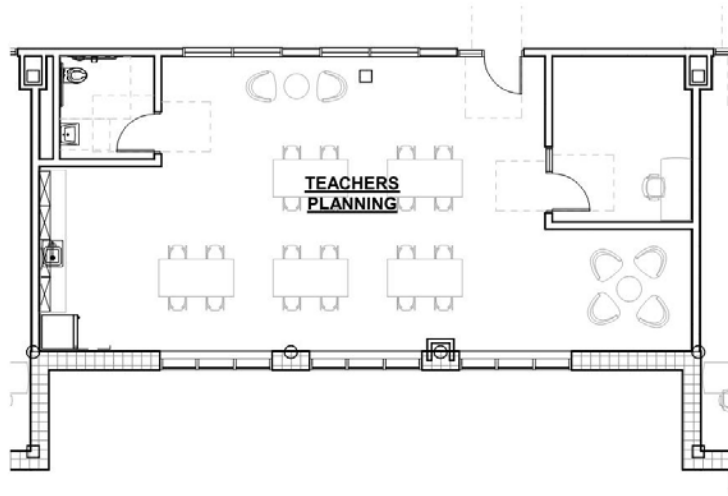
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Classroom - General ACAD -01

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames Acoustical: LEED Requirements</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – Light Hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles at teaching wall, four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control</p> <p>Fire Alarm Lens 75 CD, Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - 01 <input checked="" type="checkbox"/>-Audio Visual System - 01 <input type="checkbox"/>-Audio Visual System Rack - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01
<p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <input checked="" type="checkbox"/>-Cubby Storage - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24 <input checked="" type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - 04 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 	<p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input checked="" type="checkbox"/>-Wireless Media Connector for Sound Field - 01 <input checked="" type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor (if on first floor or accessible via lower roof) - 01 	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Teacher Planning/ Workrooms ACAD -02



Functional Criteria	
Description: Teachers Planning	Adjacency: Near Academic Clusters
Area: 1192 sf	
Quantity: 3	
Occupancy Load: 15	
Location Criteria	
Users:	
• Teachers	
• -	
Activities:	
•	
• -	
• -	
• -	
• -	

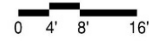
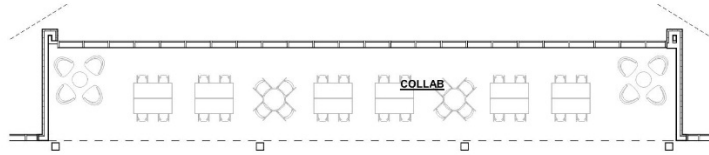
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Teacher Planning/ Workrooms ACAD -02

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-3 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – Light Hazard</p> <p>Plumbing: Casework sink, appliances, ADA Toilet Room.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power and fire alarm below.</p> <p>Lighting: LED 35-50 C, 0-10V dim, multi-level switching, occupancy sensor controls</p> <p>Power: One each 120V refrigerator circuit, two each counter circuits, six each convenience receptacles, two each work station receptacles, one each bathroom GFCI receptacle.</p> <p>Fire Alarm One each Lens 30 CD Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 13 <input type="checkbox"/>-Data System-Fiber Optic Drops - 01 <input type="checkbox"/>-Voice System – Fax Line - 01 <input type="checkbox"/>-Video Distribution System - 01 <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - 01 <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 02 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 02 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Teacher Computing-Laptop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Intrusion Detectors -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 03 <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input checked="" type="checkbox"/>-Base Cabinet - 04 <input checked="" type="checkbox"/>-Wall Cabinet - 04 <input checked="" type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input checked="" type="checkbox"/>-Refrigerator/Freezer - 01 <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-Side Chair - 15 <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 05 <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input checked="" type="checkbox"/>-Café Table - 02 <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input checked="" type="checkbox"/>-Lounge Seat - 06</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Small Group Seminar ACAD -03



<p style="text-align: center;">Functional Criteria</p> <p>Description: Small Group Seminar/Collaboration Area: 663 Quantity: 3 Occupancy Load: 24</p> <p>Location Criteria Users: • Teachers • Students Activities: • Collaboration • - • - • -</p>	<p>Adjacency: Near Academic Clusters</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

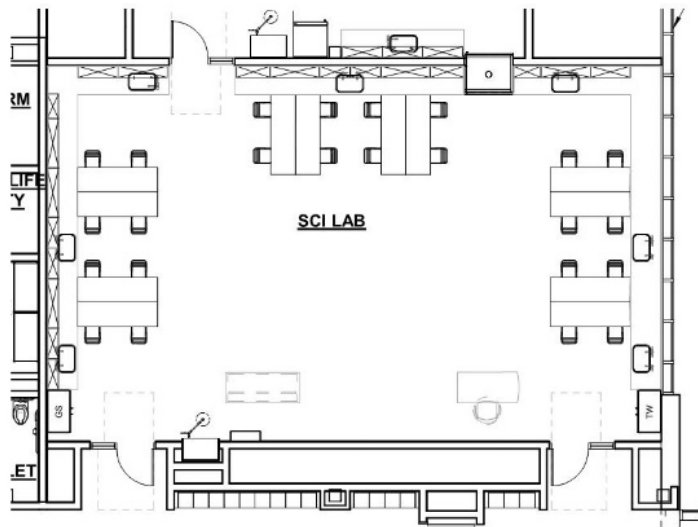
Small Group Seminar ACAD -03

<p>Technical Criteria-Architectural</p> <p>Floor: Resilient Carpet Walls: Ceramic Tile Base W/ Ceramic Tile Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Windows: Exterior Insulating Units in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – Light Hazard.</p> <p>Plumbing: None.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 10 <input type="checkbox"/>-Data System-Fiber Optic Drops - 01 <input checked="" type="checkbox"/>-Video Distribution System - 02 <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - 01 <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input type="checkbox"/>-PA / Intercom System -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 20 <input type="checkbox"/>-Student Desk - <input checked="" type="checkbox"/>-Student Worktable - 16 <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - 04 <input type="checkbox"/>-Cafeteria Table - <input checked="" type="checkbox"/>-Café Table - 02 <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input checked="" type="checkbox"/>-Lounge Seat - 08</p>	<p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 35-50 FC, 0-10V dim, multi-level switching, occupancy sensor controls.</p> <p>Power: Three each floor box (furniture feeds), three each USB receptacles, three each receptacles.</p> <p>Fire Alarm Two each 30 CD Audio/Video device.</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Teacher Computing-Laptop - <input type="checkbox"/>-VoIP Desk Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 02 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller Device - 02 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Intrusion Detectors -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Science Classrooms/Lab

ACAD -04



Functional Criteria

Description: Science Lab
Area: 1494 SF
Quantity: 8
Occupancy Load: 24

Location Criteria

- Users:
- Teachers
 - Students
- Activities:
- Science Experiments

Adjacency: Near Academic Cluster and Special Education Spaces

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

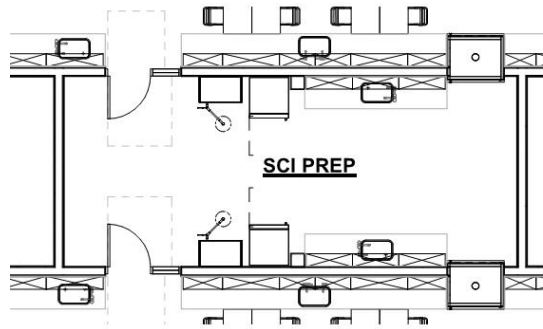
Science Classrooms/Lab

ACAD -04

<p>Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames Acoustical: LEED Requirements</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – Light Hazard.</p> <p>Plumbing: Science casework sinks, bench top gas turrets, master gas valve, emergency cabinet fed by tempered water system, floor drain, non-potable water system, lab waste piping system</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (18) - <input type="checkbox"/>-Data System-Fiber Optic Drops - 01 <input checked="" type="checkbox"/>-Video Distribution System - 01 <input checked="" type="checkbox"/>-Audio Visual System - 01 <input type="checkbox"/>-Audio Visual System Rack - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 15 <input checked="" type="checkbox"/>-Wall Cabinet - 19 <input checked="" type="checkbox"/>-Sink - 07 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input checked="" type="checkbox"/>-Fume Hood - 01 <input checked="" type="checkbox"/>-Safety Cabinet - 01 <input checked="" type="checkbox"/>-Goggle Cabinet - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input checked="" type="checkbox"/>-Student Worktable - 12 <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input checked="" type="checkbox"/>-Stool - 15 <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control. Dedicated exhaust fan for fume hoods and dedicated VAV exhaust terminal to maintain minimum exhaust rate.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED low glare, 0-10V dim, 50 FC, multi-level switching, occupancy and photocell controls.</p> <p>Power: Six each GFCI receptacles at teaching wall, G3000 wire mold at all benches with GFCI receptacles every 18 inch on center, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control circuit shunt trip panelboard with emergency power off EPO pushbutton</p> <p>Fire Alarm 75 CD Audio/Video device. Carbon monoxide detection interlocked with gas and electrical for EPO</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input checked="" type="checkbox"/>-Wireless Media Connector for Sound Field - 01 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 - <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Intrusion Detectors -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Prep Room ACAD -05



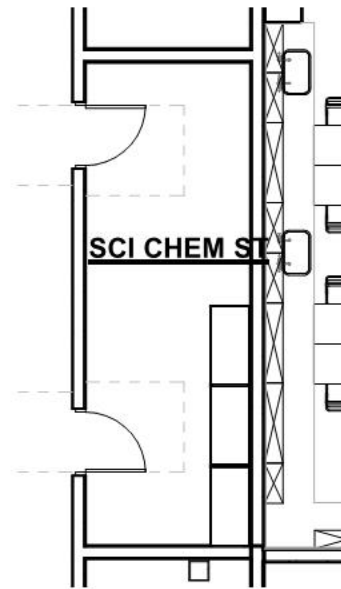
Functional Criteria	
Description: General Classroom	Adjacency: Science Labs
Area: 425 sf	
Quantity: 4	
Occupancy Load: 2	
Location Criteria	
Users:	
• Students	
• Teachers	
• -	
• -	
• -	
Activities:	
• Preparation of science lab experiments	
• Storage	
•	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Prep Room ACAD -05

<p>Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl</p> <p>Walls: Painted Impact Resistant GWB & Pre-cast Concrete</p> <p>Ceiling: ACT-1 (2x2) High NRC</p> <p>Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection:</p> <p>Sprinklers – Light Hazard.</p> <p>Plumbing:</p> <p>Science casework sinks, bench top gas turrets, master gas valve, fume hood, emergency cabinet fed by tempered water system, floor drain, non-potable water system, lab waste system</p> <p>HVAC:</p> <p>Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Dedicated exhaust fan for fume hoods and dedicated VAV exhaust terminal to maintain minimum exhaust rate.</p> <p>Electrical:</p> <p>Refer to lighting, power, and fire alarm below.</p> <p>Lighting:</p> <p>LED, 50 F, 0-10V dim, multi-level switching, occupancy sensor controls</p> <p>Power:</p> <p>One each 120V circuits to fume hood, one each 120V circuit to refrigerator, six each GFCI receptacles, one each 120V circuit for dishwasher.</p> <p>Fire Alarm</p> <p>One each 15 CD Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 03</p> <p><input type="checkbox"/>-Data System-Fiber Optic Drops -</p> <p><input type="checkbox"/>-Video Distribution System -</p> <p><input type="checkbox"/>-Audio Visual System -</p> <p><input type="checkbox"/>-Audio Visual System Rack - 01</p> <p><input type="checkbox"/>-Sound Field System -</p> <p><input checked="" type="checkbox"/>-Wall Clock- wired - 01</p> <p><input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Teacher Computing-Laptop -</p> <p><input checked="" type="checkbox"/>-VoIP Wall Phone - 01</p> <p><input type="checkbox"/>-Wireless Media Connector for Sound Field -</p> <p><input type="checkbox"/>-System -</p> <p><input type="checkbox"/>-Document Camera -</p> <p><input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw -</p> <p><input type="checkbox"/>-Projector -</p> <p><input type="checkbox"/>-Wireless Video Device -</p> <p><input type="checkbox"/>-Wireless Access Point-Ceiling Mounted -</p> <p><input type="checkbox"/>-Teacher Wireless Devices -</p> <p><input type="checkbox"/>-Student Wireless Devices -</p> <p>-</p> <p><input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Intrusion Detectors -</p>
<p>Technical Criteria-FFE</p> <p>Casework:</p> <p><input checked="" type="checkbox"/>-General Storage Cabinet - 01</p> <p><input type="checkbox"/>-Teacher Wardrobe Cabinet -</p> <p><input type="checkbox"/>-Mailbox Assembly -</p> <p><input type="checkbox"/>-Built in Counter -</p> <p><input checked="" type="checkbox"/>-Base Cabinet - 09</p> <p><input checked="" type="checkbox"/>-Wall Cabinet - 06</p> <p><input checked="" type="checkbox"/>-Sink - 01</p> <p><input type="checkbox"/>-Tote Tray Cabinet -</p> <p><input type="checkbox"/>-Kiln -</p> <p><input checked="" type="checkbox"/>-Refrigerator/Freezer - 01</p> <p><input checked="" type="checkbox"/>-Dishwasher - 01</p> <p><input type="checkbox"/>-Microwave -</p> <p><input type="checkbox"/>-Oven -</p> <p><input type="checkbox"/>-Clothes Washer -</p> <p><input type="checkbox"/>-Clothes Dryer -</p> <p><input type="checkbox"/>-Fume Hood -</p> <p><input checked="" type="checkbox"/>-Safety Cabinet - 01</p> <p><input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings:</p> <p><input type="checkbox"/>-Teacher Desk -</p> <p><input type="checkbox"/>-Teacher Chair -</p> <p><input type="checkbox"/>-Side Chair -</p> <p><input type="checkbox"/>-File Cabinet -</p> <p><input type="checkbox"/>-Bookcase -</p> <p><input type="checkbox"/>-Teacher Lectern -</p> <p><input type="checkbox"/>-Worktable -</p> <p><input type="checkbox"/>-Student Chair -</p> <p><input type="checkbox"/>-Student Desk -</p> <p><input type="checkbox"/>-Student Worktable -</p> <p><input type="checkbox"/>-Student Sit Stand -</p> <p><input type="checkbox"/>-Conference Table -</p> <p><input type="checkbox"/>-Metal Storage Shelving -</p> <p><input type="checkbox"/>-Cafeteria Table -</p> <p><input type="checkbox"/>-Café Table -</p> <p><input type="checkbox"/>-Stool -</p> <p><input type="checkbox"/>-Tall Stool -</p> <p><input type="checkbox"/>-Library Shelving -</p> <p><input type="checkbox"/>-Lounge Seat -</p>		

Central Chemical Storage Rm ACAD -06



<p style="text-align: center;">Functional Criteria</p> <p>Description: Science Chemical Storage Area: 210 sf Quantity: 1 Occupancy Load: 0</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Teachers• -• -• -• - <p>Activities:</p> <ul style="list-style-type: none">• Storage• Chemical Storage• -• -• -	<p>Adjacency: Science Classrooms / Labs</p> <p>Related Spaces:</p>
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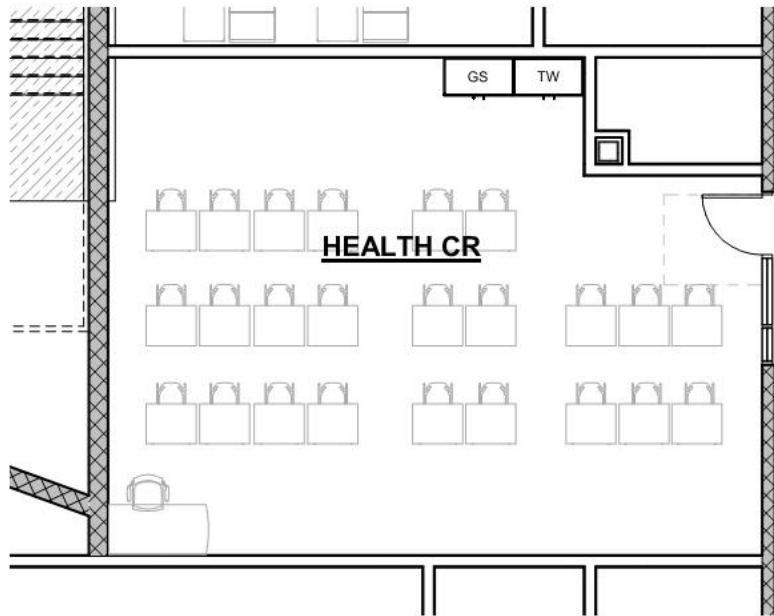
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Central Chemical Storage Rm ACAD -06

<p>Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Epoxy Paint Ceiling: ACT-1 (2x2) High NRC Doors: Flush Wood Door w/ Painted Metal Frame Windows: None</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler- Extra Hazard.</p> <p>Plumbing: Emergency cabinet supplied with tempered water</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 03 <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input checked="" type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: Dedicated exhaust to a roof mounted exhaust fan.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED low glare, 0-10V dim, 50 FC, multi-level switching, occupancy control</p> <p>Power: Two receptacles.</p> <p>Fire Alarm 30 CD Audio/Video device.</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Teacher Computing-Laptop - <input type="checkbox"/>-VoIP Desk Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Intrusion Detectors -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Health CR/ Team meeting Rm ACAD -07

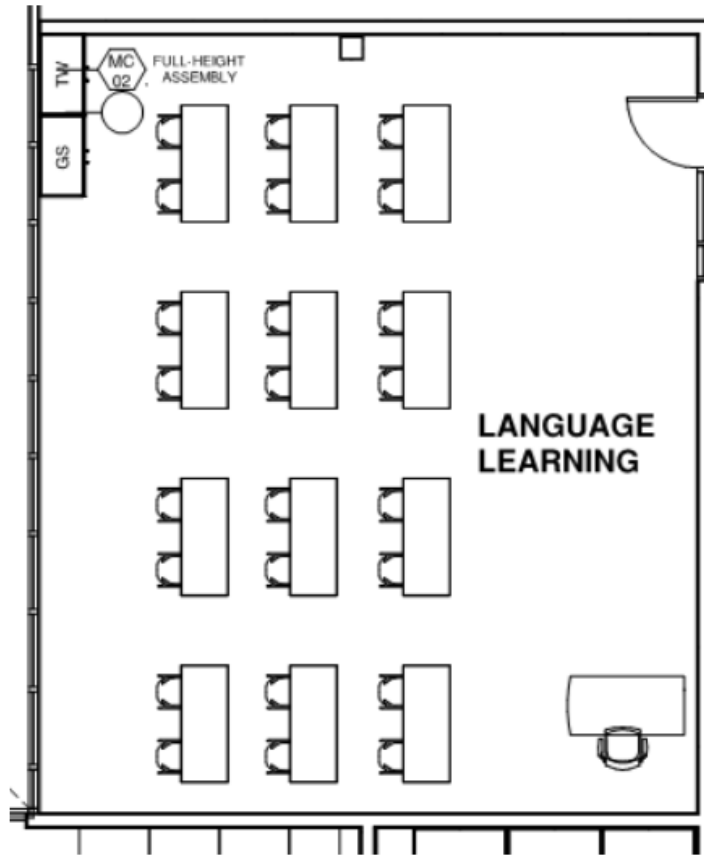


<p style="text-align: center;">Functional Criteria</p> <p>Description: Health Classroom Area: 750 sf Quantity: 1 Occupancy Load: 24</p> <p>Location Criteria Users: • Teachers • Students • Aides • Guests • - Activities: • Lecture And Note Taking • - • Athletic Team Meeting Room • - • - • -</p>	<p>Adjacency: Team Locker Rooms, Fitness Room Related Spaces: Athletic Department</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Health CR/ Team meeting Rm ACAD -07

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Ceiling: ACT-1 (2x2) High NRC Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Acoustical: LEED Requirements</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – Light Hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles at teaching wall, four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control</p> <p>Fire Alarm Lens 75 CD, Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (30) - <input type="checkbox"/>-Data System-Fiber Optic Drops - 01 <input checked="" type="checkbox"/>-Video Distribution System - 01 <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input checked="" type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - 01 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input type="checkbox"/>- Intrusion Detectors -
<p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-General Storage Cabinet - 03 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24 <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 		



Functional Criteria

Description: Provide a space for audio and/or visual systems for learning languages

Area: 940 sf

Quantity: 1

Occupancy Load: 24

Location Criteria

Users:

- Teachers
- Students
- Aides
- Guests
- -

Activities:

- Language Learning
- -
- -
- -
- -
- -

Adjacency: Academic Classrooms, Special Education

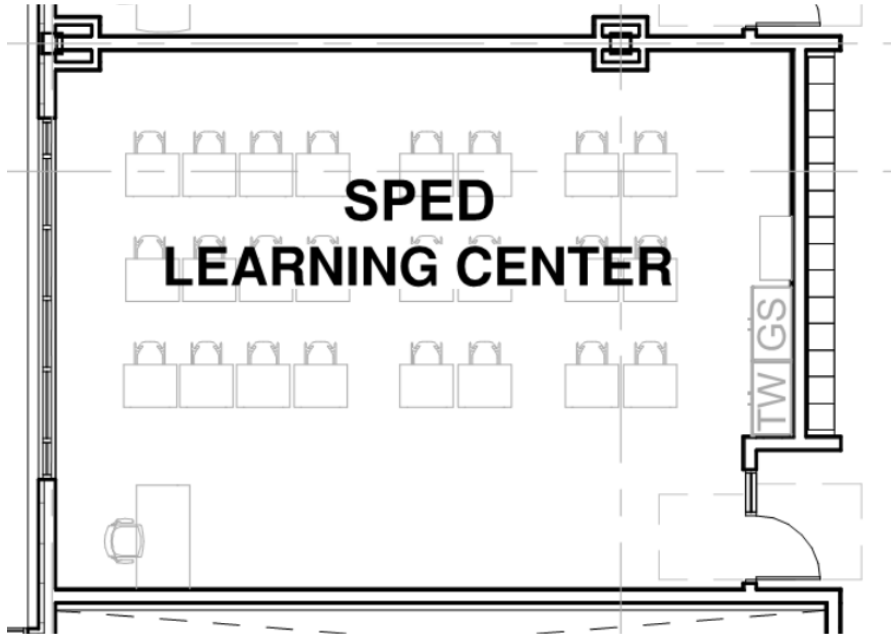
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Language Lab/Distance Learning

ACAD -08

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Insulating Units Acoustical: LEED Requirements</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – Light Hazard.</p> <p>Plumbing: None.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - 01 <input checked="" type="checkbox"/>-Video Distribution System - 01 <input checked="" type="checkbox"/>-Audio Visual System - 01 <input type="checkbox"/>-Audio Visual System Rack - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 16 <input checked="" type="checkbox"/>-Student Desk - 16 <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles at teaching wall, four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control.</p> <p>Fire Alarm Lens 75 CD, Audio/Video device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input checked="" type="checkbox"/>-Wireless Media Connector for Sound Field - 01 <input type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller Device - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input checked="" type="checkbox"/>-Student Wireless Devices (16) - <input type="checkbox"/>- Student Wireless Charging Cart - 01</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Intrusion Detectors -</p>

Learning Center (Resource Room) SPED -01



Functional Criteria

Description: The Learning Center is sized to be comparable to a full-size academic classroom to provide academic support to larger groups of students in ELA, Math, and Science. It shall be located in proximity to the general academic classrooms within the flow of each small learning community.

Area: 850 sf

Quantity: 4

Occupancy Load: 24

Location Criteria

Users:

- Students
- Teachers
- SPED Staff

• -

• -

Activities:

- Group Work
- Tutoring
- Testing

• -

• -

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

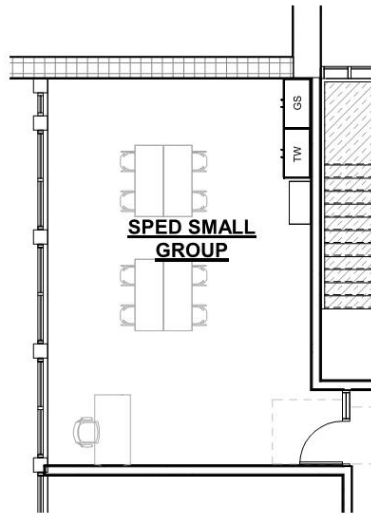
Learning Center (Resource Room) SPED -01

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames Acoustical: LEED Requirements</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC multi-level switching, occupancy sensor control.</p> <p>Power: General receptacles at teaching wall, four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control.</p> <p>Fire Alarm One each 75 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - 01 <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - 02 <input checked="" type="checkbox"/>-Local Intercom System Cabling - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24 <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat panel - 01 <input checked="" type="checkbox"/>-IPTV Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cabinet - 01</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor (if on first floor or accessible via lower roof) - 01 <input type="checkbox"/>- CCTV Camera -</p>	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

SPED Small Group Room

SPED -02



Functional Criteria

Description: The Small Group Room is sized to serve groups of up to eight students to provide academic support in Reading, Speech & Language, and English Language Learning. It shall be located in proximity to the general academic classrooms within the flow of each small learning community.

Area: 500 sf

Quantity: 4

Occupancy Load: 8

Location Criteria

Users:

- Students
- Teachers
- SPED Staff

• -

• -

Activities:

- Group Work
- Tutoring
- Testing

• -

• -

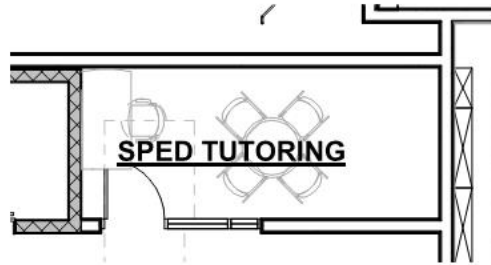
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

SPED Small Group Room

SPED -02

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames Acoustical: LEED Requirements</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, multi-level switching, occupancy sensor controls</p> <p>Power: One each poke-thru with power and data, two each convenience 120V circuits. General receptacles at teaching wall, two each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control.</p> <p>Fire Alarm One each 30 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - 02 <input type="checkbox"/>-Local Intercom System Cabling - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 08 <input type="checkbox"/>-Student Desk - <input checked="" type="checkbox"/>-Student Worktable - 04 <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input checked="" type="checkbox"/>- Storage Cabinet - 01 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat panel - 01 <input checked="" type="checkbox"/>-IPTV Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input checked="" type="checkbox"/>-Student Wireless Devices - 08 <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cabinet - 01</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor (if on first floor or accessible via lower roof) - 01 <input type="checkbox"/>- CCTV Camera -</p>

Tutoring/Assessment SPED -03



Functional Criteria

Description: The Tutorial Space is sized for one-on-one or one-on two instruction and assessment. It shall be located in proximity to the distributed Guidance and Administrative offices within the flow of each small learning community.

Area: 150 sf

Quantity: 4

Occupancy Load: 2-3

Location Criteria

Users:

- Students
- Teachers
- SPED Staff

- -
- -

Activities:

- Group Work
- Tutoring

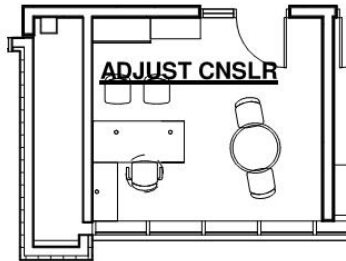
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Tutoring/Assessment SPED -03

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 35-50 FC, multi-level switching, occupancy sensor control.</p> <p>Power: One each poke-thru with power and data, two each 120V convenience circuits.</p> <p>Fire Alarm One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor (if on first floor or accessible via lower roof) - 01 <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 04 <input type="checkbox"/>-Student Desk - <input checked="" type="checkbox"/>-Student Worktable - 01 <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>- Storage Cabinet - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

SpED Adjustment Counselor SPED -04



Functional Criteria

Description: The Adjustment Counselor Office is sized for one-on-one or one-on two instruction and assessment. It shall be located in proximity to the distributed Guidance and Administrative offices within the flow of each small learning community.

Area: 150 sf

Quantity: 2

Occupancy Load: 2-3

Location Criteria

Users:

- Adjustment Counselor

- -
- -
- -
- -

Activities:

- Administrative Work
- Phone Calls
- Meetings
- -

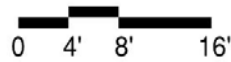
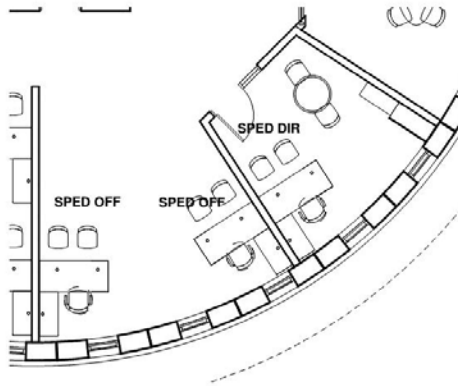
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

SpED Adjustment Counselor SPED -04

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, multi-level switching, occupancy sensor control.</p> <p>Power: Two each poke-thru with power and data, six each GFCI counter/kitchen circuits, four each 120V circuits at teaching wall. General receptacles at walls per code, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control.</p> <p>Fire Alarm One each 30 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input checked="" type="checkbox"/>-Local Intercom System Cabling - 01 <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - <input checked="" type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>- Storage Cabinet - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Chair - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>		<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 01</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

SpED Office SPED -05



Functional Criteria

Description:

Director's Office is sized to provide office workspace, file area, and a small conference area for up to 4 people. The office shall be located in the Main Administration area in close proximity to the Special Education Conference Room.

Special Education Assistant workstation is sized to provide workspace and file area for one of the Director's Assistants. It shall be located immediately adjacent to the Director's Office.

Area: 150 sf

Quantity: 3

Occupancy Load: 4

Location Criteria

Users:

- SPED Director
- SPED Assistant

• -

• -

• -

Activities:

- Administrative Work
- Phone Calls
- Meetings

• -

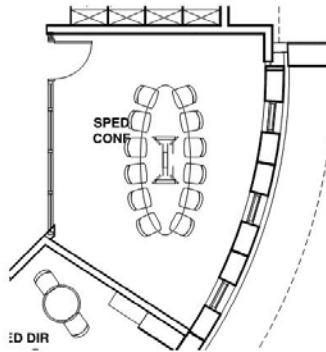
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

SpED Office SPED -05

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p> <p>HVAC:</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 04 <input checked="" type="checkbox"/>-Bookcase - 02 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>- Storage Cabinet - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Chair - 02 <input checked="" type="checkbox"/>-Office Task Chair - 02</p>	<p>Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 35-50 FC, multi-level switching, occupancy sensor control.</p> <p>Power: One each poke-thru with power and data, two each 120V office circuits. General receptacles at walls, four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control.</p> <p>Fire Alarm One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor (if on first floor or accessible via lower roof)r - 01 <input type="checkbox"/>- CCTV Camera -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

SpED Conference RM SPED -06



Functional Criteria

Description: Conference Room is sized to serve up to 12 people. It shall be conveniently located in the Main Administration area adjacent to the main Visitor Entrance.

Area: 320 sf

Quantity: 1

Occupancy Load: 12

Location Criteria

Users:

- SPED Director
- SPED Staff
- Guests

• -

Activities:

- Meetings

• -

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

SpED Conference RM SPED -06

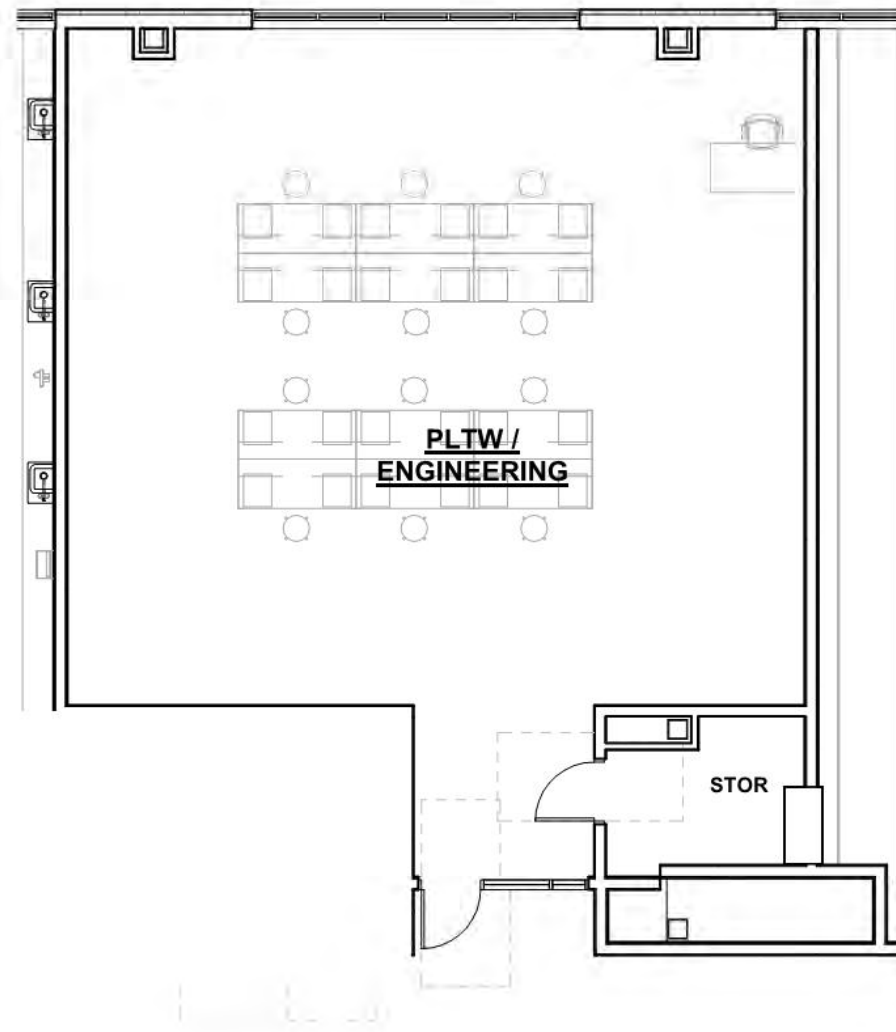
<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, multi-level switching, occupancy sensor control.</p> <p>Power: Two each poke-thru with power and data, six each GFCI counter/kitchen circuits, four each 120V circuits at teaching wall. General receptacles at walls per code, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control.</p> <p>Fire Alarm One each 30 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 05 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - 02 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>- Storage Cabinet - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat panel - 01 <input checked="" type="checkbox"/>-IPTV Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor (if on first floor or accessible via lower roof) - 01 <input type="checkbox"/>- CCTV Camera -</p>	

Technology/Engineering Rooms- PLTW
















Room Data Sheet

VOC-01

6/16/21



Legend

	Ventilation to Exterior Required *Equipment Vented to Exhaust Hood		Emergency Power Off (EPO)		Emergency Shower/Eyewash Combination Unit		Emergency Eyewash		Fire Extinguisher *Includes Fire Blanket		Flammable Storage Cabinet		Electrical Outlet / Voltage 120/220 # # On Overhead Reel		Goggle Cabinet		Hose Bib		Hand Washing Station		Floor Drain		Compressed Air # # On Overhead Reel		Drinking Fountain		Utility Sink		Washer & Dryer
---	---	---	---------------------------	---	---	---	-------------------	--	---	---	---------------------------	---	--	---	----------------	---	----------	---	----------------------	---	-------------	---	--	---	-------------------	---	--------------	---	----------------

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Technology/Engineer Rooms VOC -01

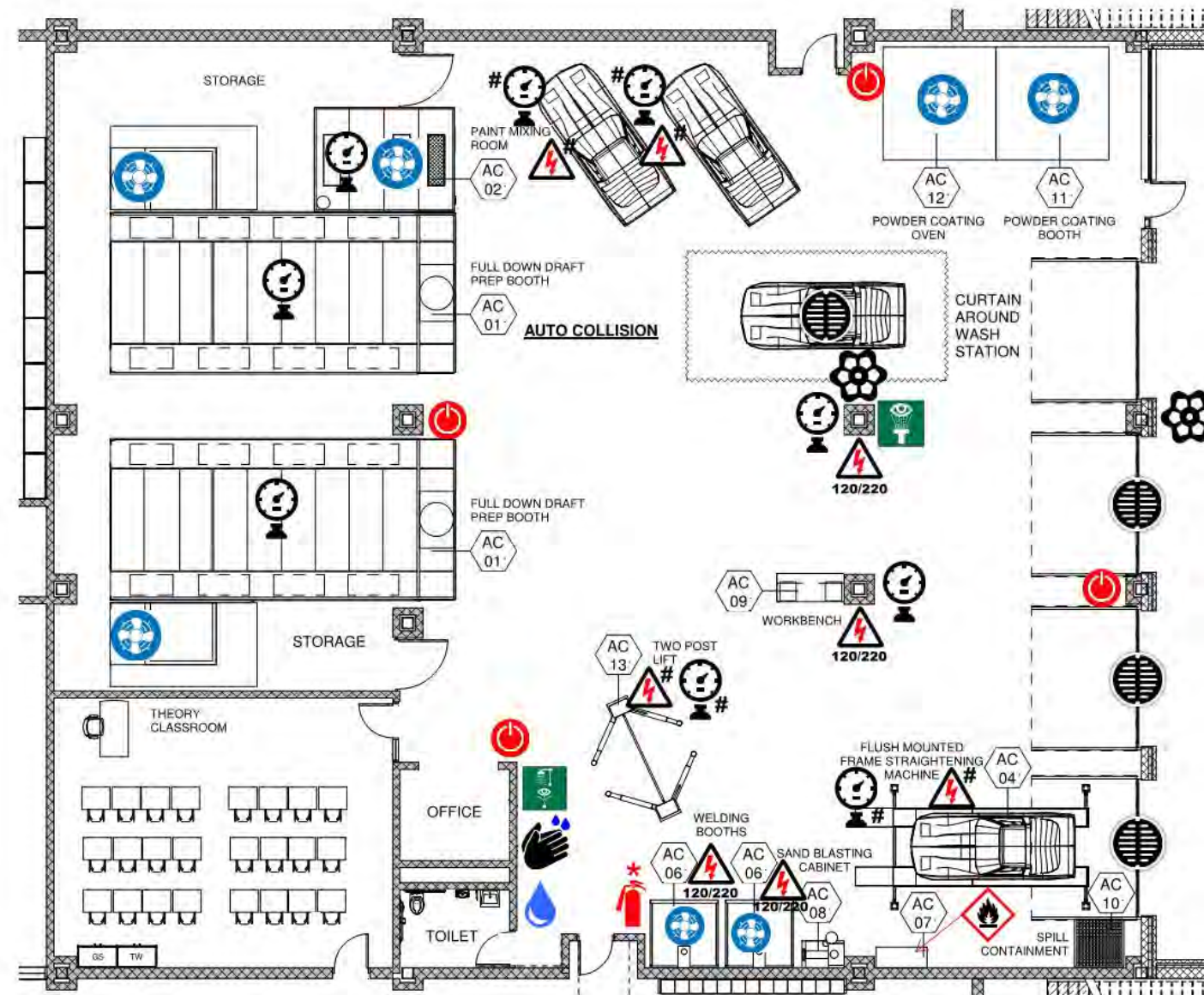
<p align="center">Functional Criteria</p> <p>Description: Project Lead the Way (PLTW) students work on hands-on projects that explore engineering design processes, applying math, science, and engineering standards.</p> <p>Area: 1435 SF Quantity: 1 Occupancy Load:</p> <p>Location Criteria Users: • Teachers • Students</p>	<p align="center">Technical Criteria-FFE</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Student Worktable - 12 <input checked="" type="checkbox"/>-Tall Stool - 12</p>	<p align="center">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – Light hazard in main space. Ordinary hazard in Storage</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles at teaching wall, four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels</p> <p>Fire Alarm: Lens 75 CD, Audio/Video device.</p>	<p align="center">Technical Criteria-Communication:</p> <p> <input checked="" type="checkbox"/>-Data System-Data Drops (18) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 01 </p>
<p align="center">Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames Acoustical: LEED Requirements</p>			<p align="center">Technical Criteria-Technology</p> <p> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input checked="" type="checkbox"/>-Student Desktop Devices - 12 <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 </p>

Automotive Collision Repair

VOC-02

Room Data Sheet

6/16/21



Legend

*Equipment Vented to Exhaust Hood				*Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

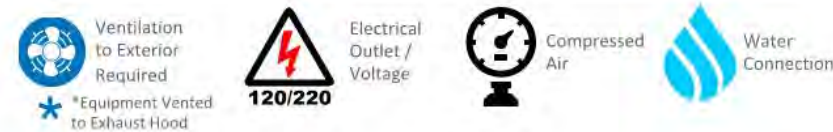
AUTO COLLISION SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
AC-01	2	*		G.C./116100	FULL DOWN DRAFT SPRAY BOOTH WITH HEATER	GLOBAL FINISHING SOLUTIONS	---	---	---	---	1,139,000 BTU/HR, (2) 36" DIA DUCT W/ AIR, (3) 6.3 CFM.
				G.C./116100	INTAKE		28.6	7.5	208	3	
				G.C./116100	INTAKE DIRECT DRIVE		42.3	10	208	3	
				G.C./116100	EXHAUST		23.3	5	208	3	
				G.C./116100	LIGHTS		4.0	---	120	1	0.62 FLA
AC-02	1	*		G.C./116100	PAINT MIXING ROOM	GLOBAL FINISHING SOLUTIONS	---	---	---	---	10" EXHAUST W/ AIR AND DATA CONNECTION, (3) 6.3 CFM
				G.C./116100	INTAKE		9.8	1/2	120	1	
				G.C./116100	EXHAUST		9.8	1/2	120	1	
				G.C./116100	LIGHTS		4.0	---	120	1	
AC-04	1	*		G.C./116100	FRAME MACHINE - FLUSH W/PIT		---	---	120	1	W/ AIR CONNECTION, 9.5 CFM AT 90 PSI
AC-06	2	*		G.C./116100	WELDING BOOTH W/FUME EXTRACTION ARM	LINCOLN ELECTRIC W/ K1655-14	---	---	---	---	
AC-07	1	*		OWNER	FLAMMABLE STORAGE		---	---	---	---	
AC-08	1	*		OWNER	SAND BLASTING CABINET		---	---	---	---	W/ AIR CONNECTION, 9.5 CFM AT 90 PSI
AC-09	1	*		OWNER	WORKBENCH		---	---	---	---	120V POWER ON WALL, 44" AFF
AC-10	1	*		OWNER	SPILL CONTAINMENT		---	---	---	---	
AC-11	1	*		G.C./116100	POWDER COATING BOOTH 10"W	GLOBAL FINISHING SOLUTIONS...		5			10,000 CFM @ 1.5" S.P. / 28" DIA EXHAUST
AC-12	1	*		G.C./116100	POWDER COATING OVEN 10"W	GLOBAL FINISHING SOLUTIONS #GBO-101010	---	10 & 1.5	---	---	1,000 BTUS; 288 KW. RECIRCULATION FAN: 12,000 CFM, SIZE-25", 10HP...
AC-13	1	*			TWO POST LIFT - 10,000 LBS	ROTARY SPOA 10	---	---	208/230	1	W/ AIR CONNECTION; 6.0 SCFM REQUIRES 12' OVERALL HEIGHT

NOTE:
 AC-02: DATA LINE IN MIXING BOOTH PROVIDED BY TECHNOLOGY CONTRACTOR. MIXING ROOM CONTRACTOR SHALL COORDINATE WITH TECHNOLOGY CONTRACTOR FOR LOCATION OF DATA LINE IN INTERIOR OF ROOM.
 AC-01 PROVIDE AIR LINE CONNECTION BY PLUMBER TO SINGLE POINT CONNECTION. BOOTH SHALL BE SUPPLIED WITH FOUR (4) PRE-PIPED INTERIOR AIR OUTLETS

Legend



Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Automotive Collision Repair VOC -02

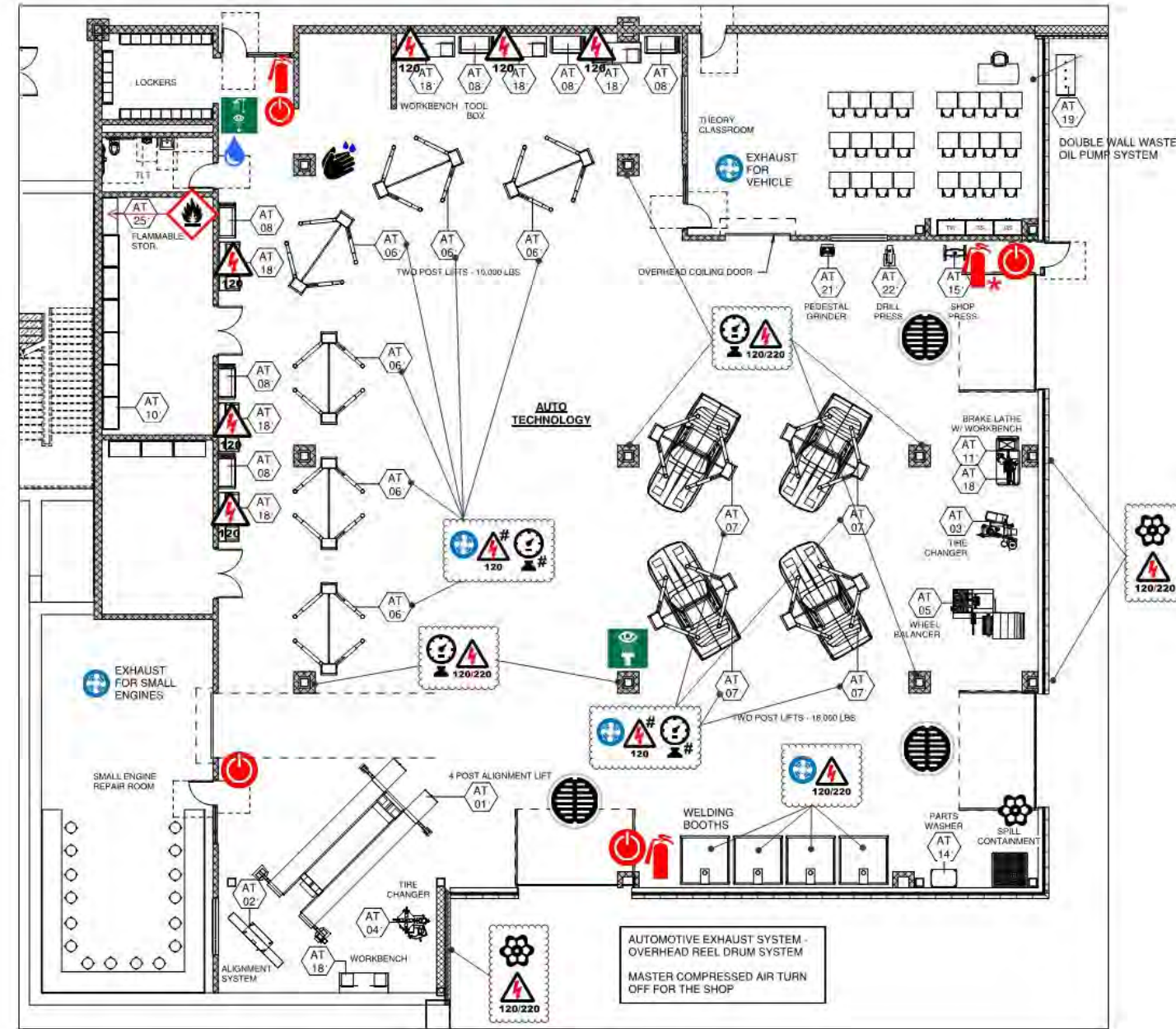
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Automotive Collision Repair & Refinishing. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Understanding Vehicular Construction • OSHA 10-hour General Safety Card • Diagnosing Mechanical & Electrical Components • Sheet Metal Repair • Automotive Welding • Paint Mixing • Surface Preparation & Refinishing • Non-structural & Structural Body Repair • Plastic Welding • Frame Straightening <p>Area:7580 SF Quantity: 1 Occupancy Load: 37 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers • Students</p>	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Painted CMU Ceiling: Exposed Painted Structural Steel & Metal Deck, Sound Barrier ceiling occurring between steel beams. Doors: Flush Metal Door w/ Painted Metal Frame Windows: Insulated Translucent Wall Panel System with Glazed Insulated Units (Operable & Fixed) Acoustical: Sound Barrier Ceiling</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – Ordinary Hazard Group 2, any exhaust 10 inch or larger duct handling hazardous materials will be provided with a dedicated sprinkler system of ordinary hazard group 2. Storage room with hazardous materials to be extra hazard</p> <p>Plumbing: Compressed air for all air powered equipment. Garage drainage system to exterior gas/oil separator. Tempered water system for emergency equipment. All plumbing connections and systems to handle toilet room. Hose bibs compressed air drops with quick connects. Oil storage tanks.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (45) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 03 <input checked="" type="checkbox"/>-PA / Intercom System - 06
	<p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework at Related Classroom: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01</p> <p>Loose Furnishings at Related Classroom: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24</p>	<p>HVAC: Heating, and ventilating only with individual room thermostat (DDC sensor). Dedicated industrial exhaust systems for shop equipment.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Emergency OFF pushbuttons, mechanical and plumbing power connections</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 04 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - - 01 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 03 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - <p style="text-align: center;">Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detectors - 02

Automotive Technology

VOC-03

Room Data Sheet

6/16/21



Legend

*Equipment Vented to Exhaust Hood				*Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

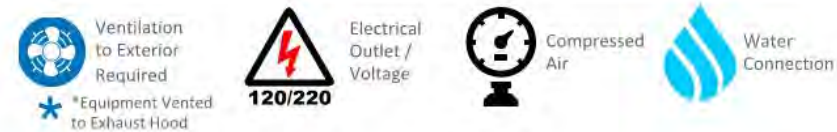
AUTO TECHNOLOGY SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
AT-01	1	*		G.C.	FOUR POST ALIGNMENT LIFT	HUNTER L451L	26	---	208-230	1	AIR SUPPLY 90-150 PSI (6.2-10.3 BAR)
AT-02	1	*		G.C.	ALIGNMENT SYSTEM	HUNTER WA600	15	---	115-230	1	ETHERNET CABLE
AT-03	1	*		G.C.	TIRE CHANGER	HUNTER TCR1X	30	---	208-230	1	125 ± 25 PSI (8.6 ± 1.7 bar) / 1 SCFM (27 L/Min)
AT-04	1	*		G.C.	TIRE CHANGER	HUNTER TCX53	10	---	220	1	AIR: 110-145 PSI; 14 CFM
AT-05	1	*		G.C.	WHEEL BALANCER	HUNTER ROAD FORCE ELITE	10	---	196-253	1	AIR: 100-175 PSI; CFM
AT-06	6	*		G.C.	TWO POST LIFT - 10,000 LBS	ROTARY SPOA 10	---	---	208-230	1	W/ AIR CONNECTION; 6.0 SCFM REQUIRES 12' OVERALL HEIGHT
AT-07	4	*		G.C.	TWO POST LIFT - 16,000 LBS	ROTARY SPO16 CARGO	---	---	---	1	W/ AIR CONNECTION; 6.0 SCFM REQUIRES 16'-8" OVERALL HEIGHT
AT-08	6	*		OWNER	TOOL BOX	SNAP-ON EPIQ SERIES	---	---	208-230	---	
AT-10	1	*		OWNER	HD SHELVING UNIT	MSC/GRAINGER	---	---	---	---	
AT-11	1	*		OWNER	BRAKE LATHE	HUNTER	15	---	115	1	
AT-14	1	*		OWNER	SAFETY CLEAN PARTS WASHER	SAFETY CLEAN	---	---	110	1	
AT-15	1	*		OWNER	SHOP PRESS	SNAP-ON	---	---	---	---	
AT-18	8	*		OWNER	BENCH	LAPPENS	---	---	---	---	NOTE: POWER OUTLET AT ALL WORKBENCH LOCATIONS
AT-19	1	*		PLUMBER	WASTE FLUIDS/ NEW OIL TANKS	LAPPENS	---	---	---	---	LOCATED OUTSIDE
AT-21	1	*			PEDESTAL GRINDER	SNAP-ON	---	---	115	1	
AT-22	1	*			DRILL PRESS	SNAP-ON	---	---	120	1	
AT-25	1	*			FLAMMABLE STORAGE CABINET	SURE-GRIP EX SAFETY CABINET-45 GAL 8945008	---	---	---	---	

NOTE: LIFTS SHALL BE PROVIDED WITH 120V DUPLEX ELECTRICAL AND AIR OUTLET IN ADDITION TO LIFT REQUIREMENTS. OVERHEAD VERTICAL EXHAUST SYSTEM SHALL BE BY HVAC. FINAL LIFT WIRING, INCLUDING SAFETY WIRING, SHALL BE BY ELECTRICAL CONTRACTOR

Legend



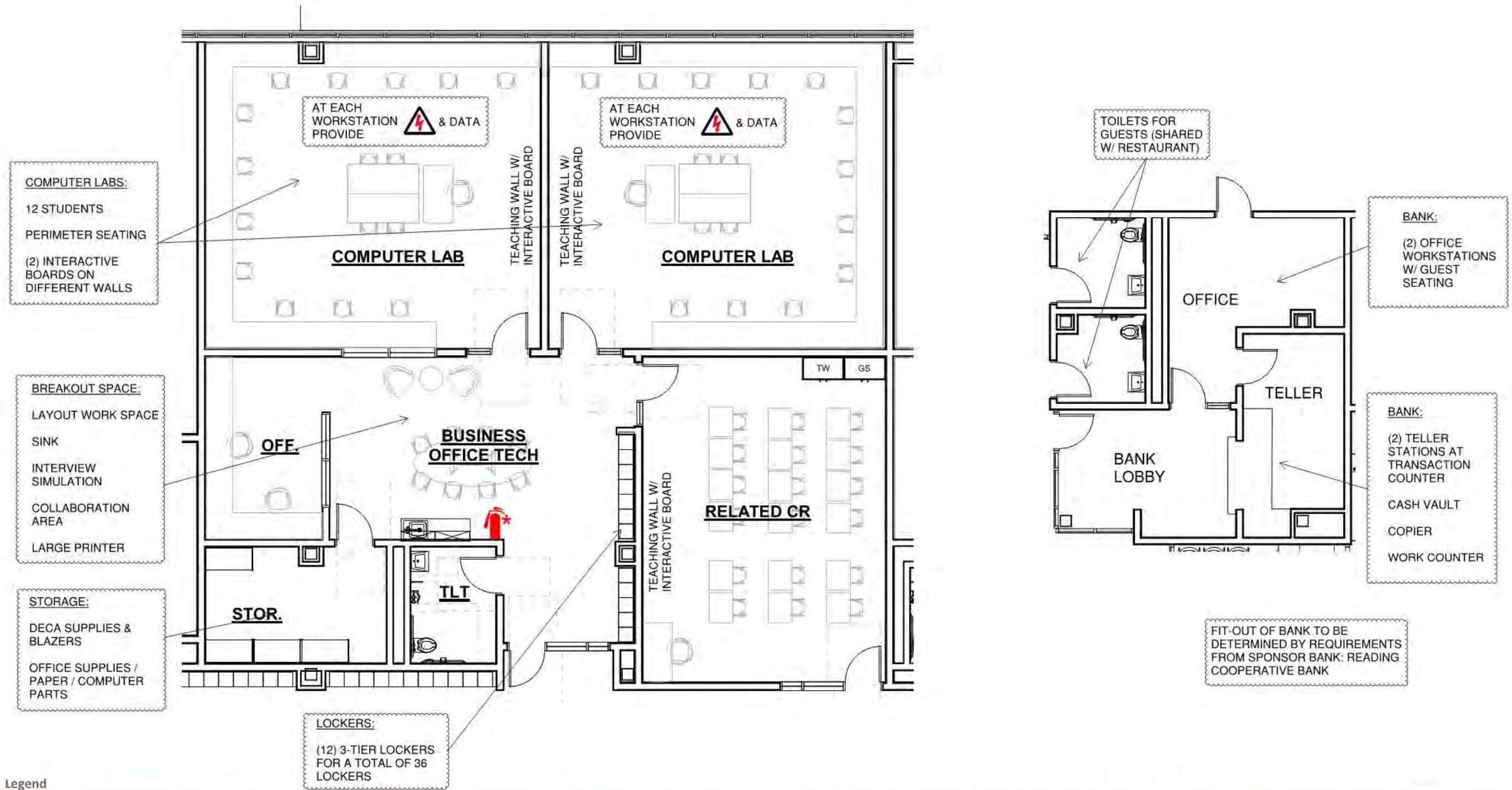
<p align="center">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Automotive Technology. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • OSHA 10-hour General Safety Card • Wheel Alignment • Steering & Suspension • Electrical & Electronic Theory • Braking Systems • Engine Operation • Cooling System Maintenance & Service • Emissions Control Systems • Repair & Diagnosis of Clutch, Differential & Drive Components • Principals of Operation of Automatic Transmission, Fuel Systems and Emissions Control <p>Area:12615 SF Quantity: 1 Occupancy Load: 69 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students 	<p align="center">Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Painted CMU Ceiling: Exposed Painted Structural Steel & Metal Deck,Sound Barrier ceiling occurring between steel beams. Doors: Flush Metal Door & Sidelite w/ Painted Metal Frame Windows: Insulated Translucent Wall Panel System with Glazed Insulated Units (Operable & Fixed) Acoustical: Sound Barrier Ceiling</p>	<p align="center">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – Ordinary hazard group 2. any exhaust 10 inch or larger duct handling hazardous materials will be provided with a dedicated sprinkler system of ordinary hazard group 2. Storage room with hazardous materials to be extra hazard</p> <p>Plumbing: Compressed air for all air powered equipment. Garage drainage system to exterior gas/oil separator. Tempered water system for emergency equipment. All plumbing connections and systems to handle toilet room and handwashing sink. Hose bibs, compressed air drops with quick connects. Oil storage tanks.</p> <p>HVAC: Heating and ventilating only with specialized vehicle Exhaust and individual room thermostat (DDC sensor).</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Emergency OFF pushbuttons, mechanical and plumbing power connections</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p align="center">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (36) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 02 <input checked="" type="checkbox"/>-PA / Intercom System Speakers - 06 <p align="center">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 03 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 03 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 <p align="center">Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detectors - 02
	<p align="center">Technical Criteria-FFE</p> <p>Casework at Related Classroom: <input checked="" type="checkbox"/>-General Storage Cabinet - 02 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01</p> <p>Loose Furnishings at Related Classroom: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24</p> <p><input checked="" type="checkbox"/>-Metal Storage Shelving - 05</p>		

Business Office Technology

VOC-04

Room Data Sheet

6/16/21



Legend

*Equipment Vented to Exhaust Hood				*Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Business Office Technology VOC -04

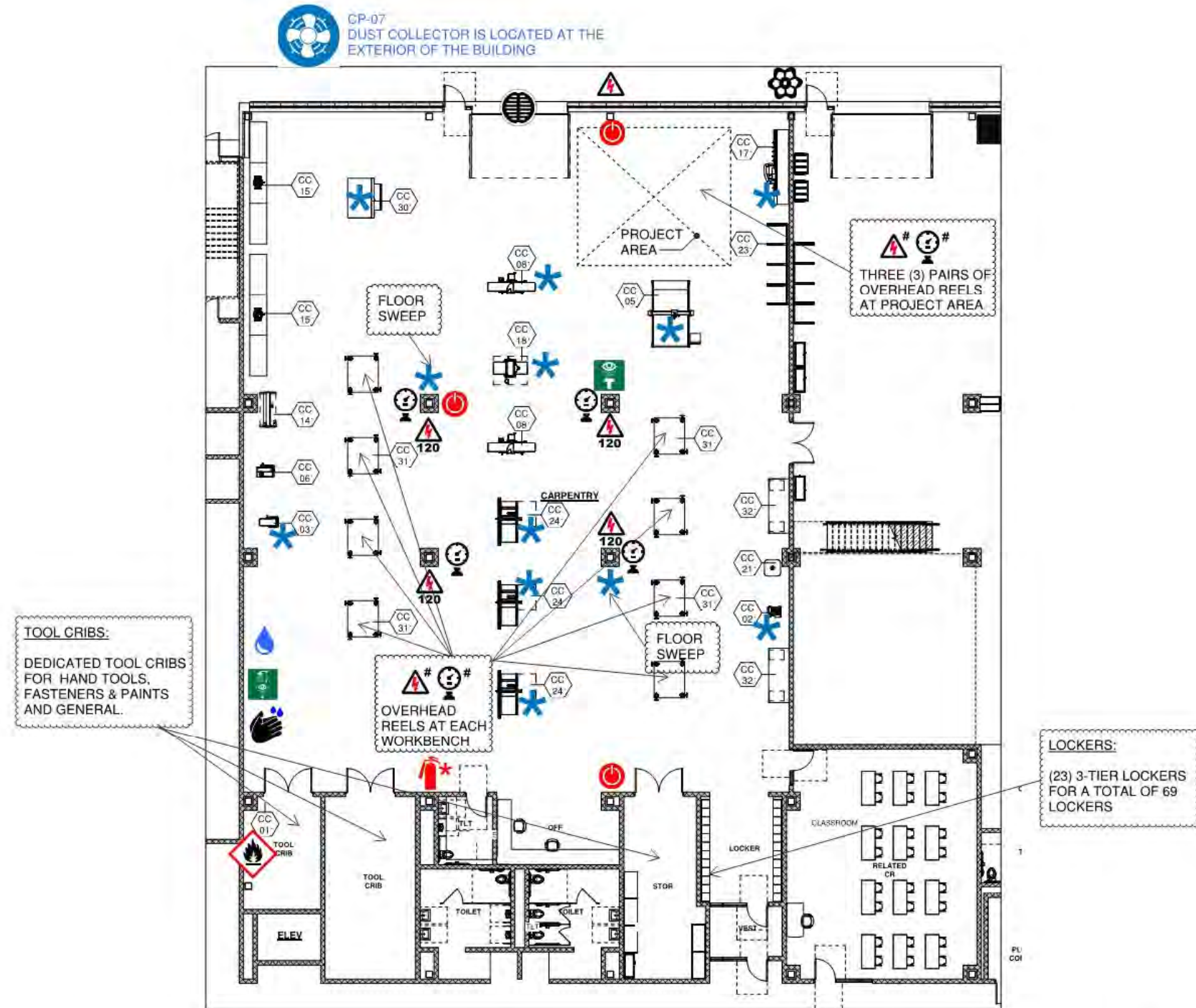
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Business Office Technology. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Office Administration • Computerized Accounting • Word Processing • Spreadsheets • Presentations • Accounting • Finance • Law • Marketing • Computerized Taxes • Computerized Business Simulations • Keyboards • Social Media • Banking/Financial Training: "Real Life" Experience Working in School's Branch Office Federal Credit Union <p>Area:3180 SF Quantity: 1 Occupancy Load: 36 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <hr/> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input checked="" type="checkbox"/>-Built in Counter - 03 <input checked="" type="checkbox"/>-Base Cabinet - 02 <input checked="" type="checkbox"/>-Wall Cabinet - 02 <input checked="" type="checkbox"/>-Sink - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input checked="" type="checkbox"/>-Worktable - 01 <input checked="" type="checkbox"/>-Student Chair - 18 <input checked="" type="checkbox"/>-Student Desk - 18</p> <p><input checked="" type="checkbox"/>-Metal Storage Shelving - 04 <input checked="" type="checkbox"/>-Lounge Seat - 02</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – light hazard most spaces, ordinary hazard for storage room</p> <p>Plumbing: Plumbing system and connections to handle all noted plumbing fixtures.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles at teaching wall, four each receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control</p> <p>Fire Alarm: Lens 75 CD, Audio/Video device.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (81) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 03 <input checked="" type="checkbox"/>-Sound Field System - 03 <input checked="" type="checkbox"/>-Wall Clock- wired - 05 <input checked="" type="checkbox"/>-PA / Intercom System - 06</p> <hr/> <p style="text-align: center;">Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 06 <input checked="" type="checkbox"/>-Document Camera - 03 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - - 03 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 05 <input checked="" type="checkbox"/>-Student Desktop Devices (36) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 03</p> <p style="text-align: center;">Technical Criteria-Security</p> <p><input checked="" type="checkbox"/>- Intrusion Detectors - 03</p>
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Carpentry

Room Data Sheet

VOC-05

6/16/21



Legend

* Equipment Vented to Dust Collector				* Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

Carpentry

VOC-05

Room Data Sheet

6/16/21

CARPENTRY SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	CFM	DIA.PORT	NOTES
CC-01	1	*		OWNER	FLAMMABLE STORAGE CABINET	TBD	---	---	---	---	---	---	
* CC-02	1	*		OWNER	DISC & BELT SANDER	TBD	---	---	---	---	---	---	
* CC-03	2	*		OWNER	BAND SAW	NORTHFIELD	---	---	---	3	400	(2) 4"	
* CC-05	1	*		G.C.	CNC ROUTING TABLE	BAILEIGH WR-84; 101199185	35	---	220	1	---	4"	The minimum required air speed at the end of flexible tube is 20 m/sec. The minimum required air volume of the machine is 750 m ³ /hr. (43,000-49,000 cu. ft./hr.). Use antistatic and electrically conductive hoses only.
CC-06	2	*		OWNER	DRILL PRESS	MAX 20VS	---	---	230/460	3	---	---	
* CC-07	1	*		OWNER	DUST COLLECTOR	AAF ARRESTALL AR SERIES	---	---	208/230/460/575	3	---	---	
* CC-08	2	*		OWNER	JOINTER	NORTHFIELD	---	---	575	3	1500	6"	
CC-14	1	*		OWNER	LATHE	ONEWAY 1236SD	---	---	220	1	---	---	
CC-15	2	*			MITER SAW	DEWALT DWS780	15	---	120	---	---	---	
* CC-17	1	*		OWNER	PANEL SAW	SAWTRAX FS76SM	---	---	120	---	---	2.5"	
* CC-18	1	*		G.C.	PLANER/SURFACER	NORTHFIELD #8	---	---	550	3	1500	6"	
CC-20		*		OWNER	SHAPER		---	---	---	---	---	---	
* CC-21	1	*		OWNER	SPINDLE SANDER	MAX OVS	---	---	220	1	---	2"	
CC-23	4	*			STORAGE RACK FOR LUMBER	CANTILEVER-RACKS.COM SKUCRMHDSK001	---	---	---	---	---	---	
* CC-24	2	*		OWNER	TABLE SAW	SAWSTOP ICS51230	---	---	230	3	400	4"	
CC-25	1	*		OWNER	TABLE SAW ACCESSORY-SLIDING TABLE	SAWSTOP TSA-SA70	---	---	---	---	---	---	
* CC-29	2	*		OWNER	UPRIGHT VERTICAL BELT SANDER	KALAMAZOO S612	---	---	220	1	100	---	
* CC-30	1	*		OWNER	WIDE BELT SANDER	TIME SAVERS 3300 SERIES	---	---	460	---	3000	(2) 8"	3 HEAD, 37"W, 6FM AIR CONN.
CC-31	8	*		OWNER	WORKBENCH W/VICES	SCHOOL OUTFITTERS; HANN MANUFACTURING	---	---	---	---	---	---	
CC-32	2	*		OWNER	WORKBENCH 72"X30"	SCHOOL OUTFITTERS; HANN MANUFACTURING HANM-2315	---	---	---	---	---	---	

Legend

Ventilation to Exterior Required
 *Equipment Vented to Dust Collector
 Electrical Outlet / Voltage 120/220
 Compressed Air
 Water Connection

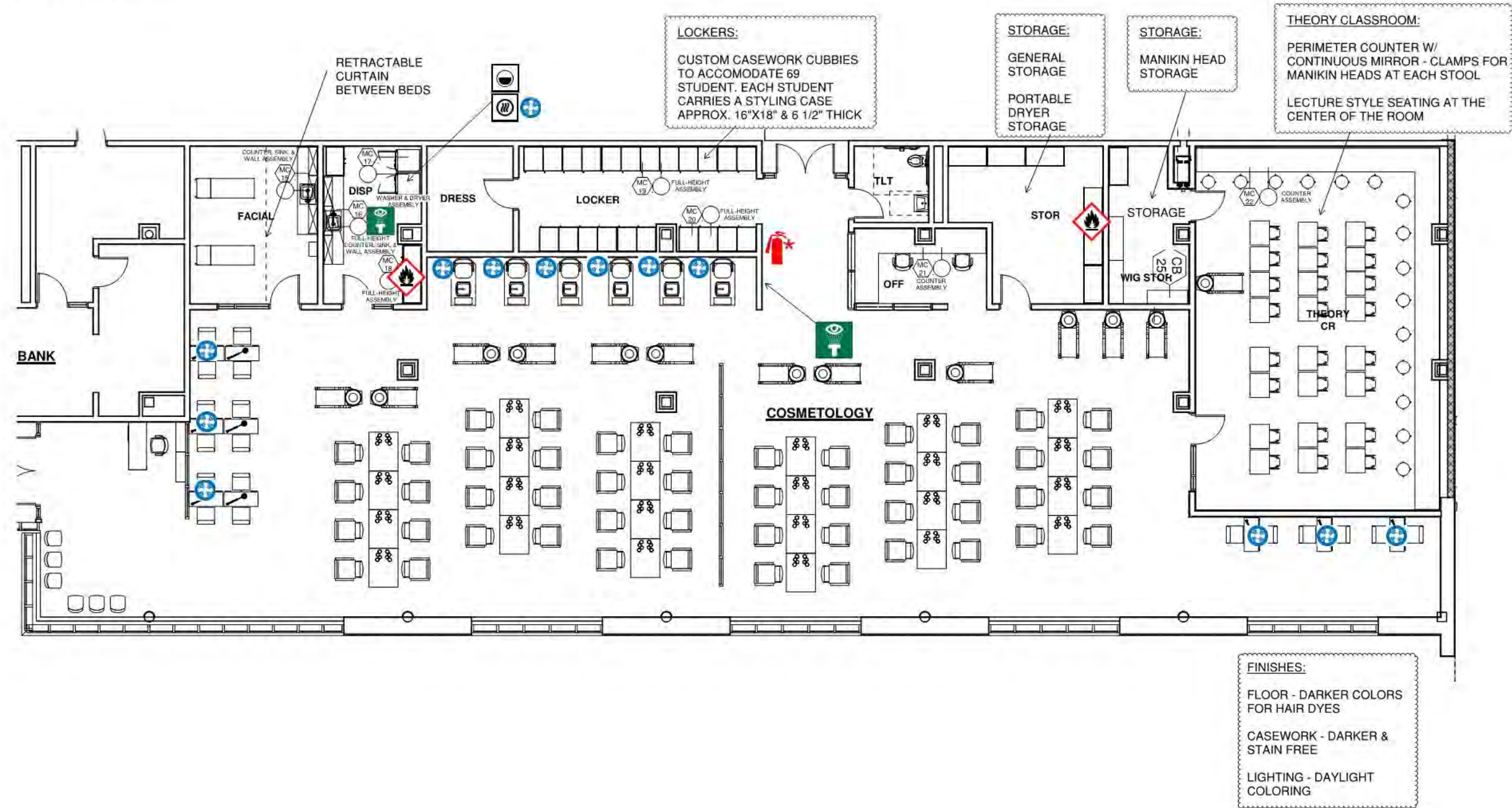
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Carpentry VOC -05

<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Carpentry. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • OSHA 10-hour General Safety Card • Construction Techniques including Layout, Framing, Roofing. • Finish Construction Techniques including drywall installation, wall finishes, exterior siding, trim work and floor finishes. • Reading Construction Drawings • Job Site Safety • Estimating • Code Requirements • Purchasing & Billing • Construction Scheduling <p>Area:10280 SF Quantity: 1 Occupancy Load: 69 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Painted CMU Ceiling: Exposed Painted Structural Steel & Metal Deck,Sound Barrier ceiling occurring between steel beams. Doors: Flush Metal Door & Sidelite w/ Painted Metal Frame Windows: Insulated Translucent Wall Panel System with Glazed Insulated Units (Operable & Fixed) Acoustical: Sound Barrier Ceiling</p> <hr/> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Worktable - 12 <input checked="" type="checkbox"/>-Metal Storage Shelving - 04</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – Ordinary hazard group 2 for all shop areas. dedicated sprinkler system if any exhaust duct 10 inch in diameter or larger.</p> <p>Plumbing: Plumbing systems and connections for all noted plumbing fixtures. Tempered water for all emergency equipment. Compressed air for all air powered tools. Garage drainage to exterior gas/oil separator.</p> <p>HVAC: Heating, and ventilating only with individual room thermostat (DDC sensor). Woodshop dust collection system.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Plug in busway and cord reels for equipment power connections Emergency OFF pushbuttons, Shop equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (43) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 03 <input checked="" type="checkbox"/>-PA / Intercom System - 13</p> <hr/> <p style="text-align: center;">Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 07 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling & Wall Mounted - 04 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01</p> <p style="text-align: center;">Technical Criteria-Security</p> <p><input checked="" type="checkbox"/>- Intrusion Detectors - 02</p>
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Cosmetology
Room Data Sheet

VOC-06
6/16/21



Legend



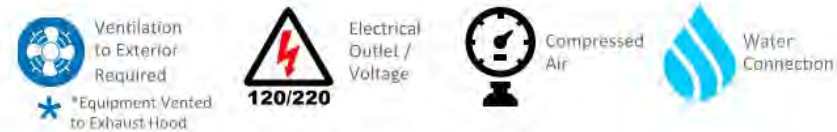
COSMETOLOGY SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	VOLT	PHASE	C&P	REMARKS:
CB-01	48	*		OWNER	ALL-PURPOSE CHAIRS W/HYDRAULIC BASE	AGS BEAUTY "CANON" #B-001	---	---	---	---	
CB-04	6	*		OWNER FF&E	PORTABLE DRYER	TBD	---	---	---	---	
CB-05	X	NOP		OWNER	ROLLER BALL F HAIR PROCESSOR	TAKARA BELMONT	9	120	1	YES	
CB-06	3	*		G.C, 115730	SINGLE SIDED STYLING STATION	CUSTOM	20	120	1	---	W/DEDICATED CIRCUITS
CB-07	24	*		G.C, 115730	DOUBLE SIDED STYLING STATION	CUSTOM	(2)20	120	1	---	W/DEDICATED CIRCUITS
CB-08	13	*		G.C, 115730	BACKWASH SHAMPOO SYSTEM	MINERVA BEAUTY AVANT	---	---	---	---	CW,HW & W
CB-09	6	*		G.C, 115730	PEDICURE CHAIR, W/ VENTING	KATAI V#AF-KATAI-V CONTINUUM "BRAVO"LE	15	120	1	---	70 W, DIRECT CONNECTION, 3/8" CW, 3/8" HW, 1-1/2" DRAIN, 50 CFM
CB-11	12	*		G.C, 115730	VENTED MANICURE TABLE	B.S.F. #NT-350V	13.0	120	1	YES	50 CFM, 4" DIA CONNECTION
CB-12	6	*		OWNER	PORTABLE MANICURE STATION	TBD	---	---	---	---	
CB-14	1	*		OWNER	LARGE HOT TOWEL CABINET	GARFIELD HC-82	1.8	120	1	YES	180 W
CB-15	X	NOP		OWNER	FUNCTION SKIN CARE SYSTEM-MOBILE	GARFIELD 8000	---	120	1	YES	
CB-16	X	NOP		OWNER	12-PIECE STOVE IRON COMBO	BURMAX GH5250	---	---	---	---	
CB-17	X	NOP		OWNER	FOLD-AWAY SERVICE TRAY	BURMAX K-FT59CB	---	---	---	---	
CB-18	X	NOP		OWNER	THREE-HEADED LAMP CASTER BASE	BURMAX P-TL931	---	120	1	YES	
CB-19	24	*		OWNER	TECHNICIAN STOOLS	TAKARA BELMONT VCFS STOOL	---	---	---	---	
CB-21	2	*		OWNER	FACIALS TREATMENT CHAIR	FEDERICO-HYDRAULIC	---	---	---	---	
CB-22	2	*		OWNER	DISPLAY CASE	REM #119	---	120	1	YES	
CB-23	1	*		OWNER	RECEPTION DESK	REM #113	---	---	---	---	FLOOR BOX BY ELECTRICAL W/ DATA
CB-24	1	*		OWNER	FLAMMABLE STORAGE	EAGLE	---	---	---	---	
CB-25	1	*		OWNER	WIG DRYING CABINET	GUARDIAN 9	20	120	---	YES	
CB-26	X	*		OWNER	CUSTOMER CHAIR	VEKSA #AYC-HAI-CUCHR-11804	---	---	---	---	

NOTE: SUBMITTED SHOP DRAWINGS MUST SHOW DIMENSIONED ELECTRICAL, PLUMBING AND HVAC ROUGH-IN POINT.

Legend



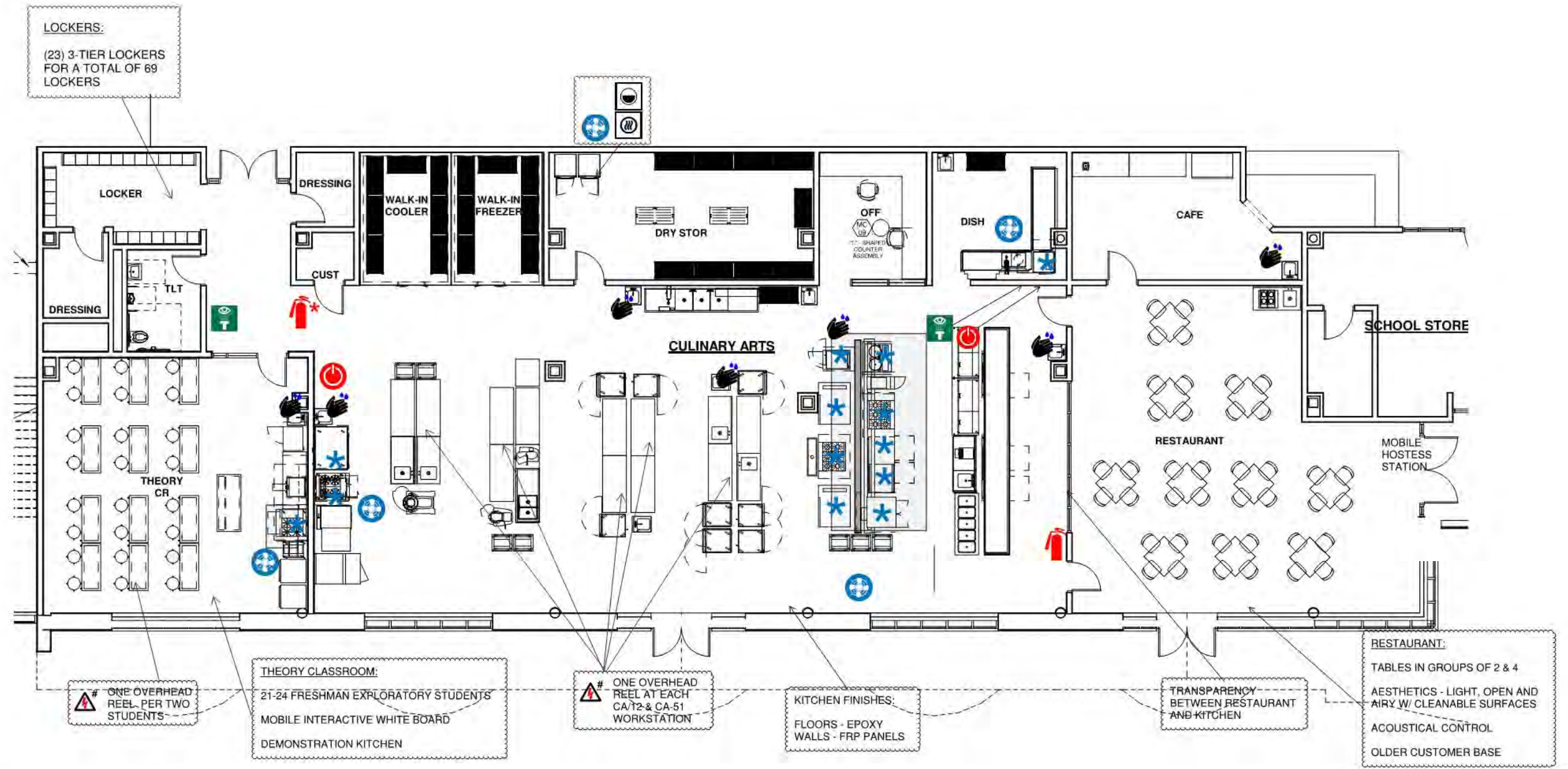
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Cosmetology VOC -06

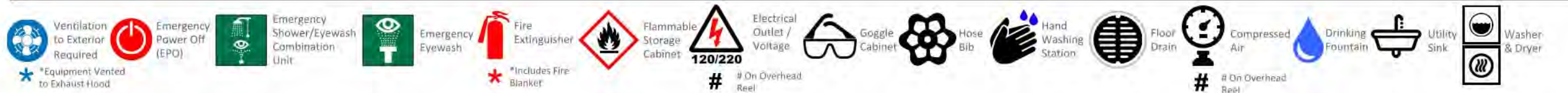
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Cosmetology. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Salon Safety • Wet Hairstyling & Cutting • Shampooing & Conditioning • Hair Coloring • Roller Sets & Pin Curl Placement • Blow Drying • Wig Styling • Facials / Skin Care • Eyebrow Waxing • Manicure & Pedicuring • Sterilization & Sanitation • Thermal Hair Styling • Permanent Waving • Salon Management <p>Area:5890 SF Quantity: 1 Occupancy Load: 69 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students • Guest 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: 2x6 High NRC Tegular Acoustical Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input checked="" type="checkbox"/>-Wall Cabinet - 03 <input checked="" type="checkbox"/>-Sink - 01 <input checked="" type="checkbox"/>-Base Cabinet - 03 <input checked="" type="checkbox"/>-Refrigerator/Freezer - 02 <input checked="" type="checkbox"/>-Clothes Washer - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Portable Dryer Storage - 05 <input checked="" type="checkbox"/>-Perimeter Counter W/ Mirror - 01 <input checked="" type="checkbox"/>-All-purpose Chair w/ hydraulic base - 48 <input checked="" type="checkbox"/>-Double Sided Styling Station - <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24 <input checked="" type="checkbox"/>-Manikin Head Storage - 04 <input checked="" type="checkbox"/>-Stool - 15</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – light hazard except for ordinary hazard in storage areas.</p> <p>Plumbing: Plumbing connections and systems for all noted plumbing fixtures and cosmetology equipment requiring plumbing connections such as pedicure chairs and shampoo stations, etc. Tempered water for all emergency equipment.</p> <p>HVAC: Heating, Ventilating and Air Conditioning with individual room thermostat (DDC sensor). Dedicated exhaust system for vented equipment.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles with GFCI on all walls, 120V poke through devices at cosmetology stations, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, equipment power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to area Emergency OFF pushbuttons, mechanical and plumbing power connections</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <p> <input checked="" type="checkbox"/>-Data System-Data Drops (46) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock-- 07 <input checked="" type="checkbox"/>-PA / Intercom System (17) - </p> <p style="text-align: center;">Technical Criteria-Technology</p> <p> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 07 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling & Wall Mounted - 04 <input checked="" type="checkbox"/>-Student Wireless Devices (26) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 </p> <p style="text-align: center;">Technical Criteria-Security</p> <p> <input checked="" type="checkbox"/>- Intrusion Detectors - 02 </p>
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Culinary Arts
Room Data Sheet

VOC-07
6/16/21



Legend



CULINARY ARTS - FOOD SERVICE EQUIPMENT SCHEDULE & CONNECTIONS



ITEM#	Q.T.Y.	NEW	EXIST.	DISCRIPTION	MAKE & MODEL	PLUMBING						VENT CFM	ELECTRICAL				NOTES		
						HW	CW	W	I.W.	F.D.	G		M/MTU	HP	KW	VOLT		PHASE	C&P
CA-01	1	*		SOILED DISHTABLE W/PRE SINK RINSE	FABRICATE - S/S	1/2"	1/2"	---	---	---	---	---	---	---	---	---	---	---	
CA-02	2	*		HOSE REEL ASSEMBLY	T&S BRASS #B-7232-01	3/8"	3/8"	---	---	---	---	---	---	---	---	---	---	---	
CA-03	3	*		DISPOSER		---	---	---	---	---	---	---	---	---	---	---	---	---	
* CA-04	1	*		DISHWASHING MACHINE	HOBART SELECT #AM-15T (TALL)	3/4"(120F)	---	---	2"	YES	---	---	2.0	5.0	480	3	---	---	W/ EXTENDED HEIGHT TANK
* CA-05	1	*		EXHAUST HOOD	FABRICATE - S/S	---	---	---	---	---	---	450	---	---	---	---	---	---	SEE DETAIL ON DRAWING FS-5
CA-06	1	*		HOT WATER BOOSTER	HATCO CC-12	3/4"(120F)	---	---	3/4"	YES	---	---	---	12.0	480	3	---	---	
CA-07	1	*		CLEAN DISHTABLE	FABRICATE - S/S	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-08	1	*		WALL SHELF	FABRICATE - S/S	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-09	2	*		WIRE RACK	METRO	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-10	5	*		HAND SINK	ADVANCE TABCO #7-PS-25	1/2"	1/2"	1-1/2"	---	---	---	---	---	---	---	---	---	---	W/WRIST ACTION HANDLES
CA-11	1	*		VEGETABLE PREP SINK	FABRICATE - S/S	1/2"	1/2"	(2)2"	---	---	---	---	---	---	---	---	---	---	
CA-12	9	*		WORKTABLE - 30"X72"	FABRICATE - S/S	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-13	1	*		WALK-IN COOLER (+35-F)	BALLYCASE: THERMO-KOOL	---	---	---	---	---	---	---	---	1.0	120	1	---	---	TO LIGHTS , DOOR DEFROST & TEMPERATURE MONITORING SYSTEM BY ELECTRICAL SUB-CONTRACTOR. CONTACTS SHALL BE PROVIDED FOR BMS SYSTEM.
		*		CONDENSING UNIT	BALLY #BLP209MA-SV-S1BP-E	---	---	---	---	---	---	---	1.1	---	208	3	---	---	ROOF MOUNTED
		*		EVAPORATOR COIL	BALLY #BESA010-M6-HT3BB	---	---	---	1"	YES	---	---	(2) 1/15	---	120	1	---	---	
CA-14	1	*		WALK-IN FREEZER (-10-F)	BALLYCASE: THERMO-KOOL	---	---	---	---	---	---	---	---	1.2	120	1	---	---	TO LIGHTS , DOOR DEFROST & TEMPERATURE MONITORING SYSTEM BY ELECTRICAL SUB-CONTRACTOR. CONTACTS SHALL BE PROVIDED FOR BMS SYSTEM.
		*		CONDENSING UNIT	BALLY #BLP314LE-SV-S2BP-E	---	---	---	---	---	---	---	3.0	3.738	208	3	---	---	ROOF MOUNTED
		*		EVAPORATOR COIL	BALLY #BESA030-L6-HT3BF	---	---	---	1"	YES	---	---	(2) 1/15	---	208	1	---	---	
CA-15	1	*		LOT-MOBILE SHELVING (COOLER)	METROWIRE-METROMAX-Q	---	---	---	---	---	---	---	---	---	---	---	---	---	EPOXY COATED
CA-16	1	*		LOT-MOBILE SHELVING (FREEZER)	METROWIRE-METROMAX-Q	---	---	---	---	---	---	---	---	---	---	---	---	---	EPOXY COATED
CA-17	1	*		POT & PAN WASHING SINK ASSEMBLY	FABRICATE - S/S	(2)3/4"	(2)3/4"	(3)2"	---	YES	---	---	---	---	---	---	---	---	
CA-18	1	*		LOT STORAGE SHELVING	METRO-WIRE "SUPER-ERECTA"	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-19	2	*		DUNNAGE RACK	TBD	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-20	1	*		WALL SHELF	FABRICATE - S/S	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-21	6	*		PAN RACK	FABRICATE - S/S	1/2"	1/2"	---	1-1/2"	---	---	---	---	---	---	---	---	---	
CA-22	2	*		WORKTABLE W/SINK	FEDERAL 4834	---	---	---	---	---	---	---	---	---	120	1	YES	---	15.0 AMPS; NEMA 5-15P
CA-23	2	*		TABLE - 30"X36"	FABRICATE S/S	---	---	---	---	1"	184	---	---	120	1	YES	---	---	W/CASTERS & FLEXIBLE GAS CONN.
* CA-24	1	*		CONVECTION OVEN	VULCAN VC44D	---	---	---	---	---	---	---	---	---	---	---	---	---	
* CA-25	1	*		RANGE	VULCAN SX36-6B	---	---	---	---	---	---	---	---	---	---	---	1	YES	
CA-26	1	*		TILTING SKILLET	GROEN BPP-40GC	1/4"	1/4"	---	1-1/2"	YES	---	---	---	---	115	1	YES	---	
* CA-27	1	*		TILTING KETTLE - 2 TRUNNION	CLEVELAND	---	---	---	---	---	---	---	---	---	---	---	---	---	(2) 10 GALLON TILTING KETTLES
* CA-28	1	*		2 COMPARTMENT STEAMER	MARKET FORGE ETP-10G	---	---	---	---	---	---	---	---	---	---	---	---	---	
* CA-29	1	*		CHARBROILER-COUNTER MOUNTED	VULCAN #VACB36	---	---	---	---	---	3/4"	108	---	---	(2)115	1	YES	---	(2)0.7 AMPS.; W/ NEMA 5-15P PLUG
* CA-29A	1	*		FLAT GRILL	WELLS G13	---	---	---	---	---	---	---	---	6.8	208	1	YES	---	32.0 AMPS;
CA-30	1	*		EQUIPMENT STAND, REFRIGERATED...	SOUTHBEND 20072RSB	---	---	---	1/2	---	---	---	---	1/3	---	120	1	YES	3.0 AMPS.; W/ NEMA 5-15P PLUG
CA-31	1	*		DONUT FRYER	TBD	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-32	2	*		RANGE	VULCAN SX36-6B	---	---	---	---	---	---	---	---	---	---	---	---	---	
CA-33	1	*		CLOTHES WASHER	GE #GFWN1100WW	1/2"	1/2"	---	1-1/2"	---	---	---	---	---	120	1	YES	---	12.0 AMPS.; W/ NEMA 5-15P
CA-34	1	*		CLOTHES DRYER	GE #GFDN240ELWW	---	---	---	---	---	---	---	---	4.4	208	1	YES	---	22.0 AMPS.;
* CA-35	2	*		COMBI OVEN	RATIONAL SCCWE101E	---	---	---	---	---	---	---	---	---	---	---	---	---	
* CA-36	1	*		EXHAUST HOOD	GAYLORD EXL SERIES	---	---	---	---	---	---	9600	---	---	---	---	---	---	
CA-37	1	*		FIRE SUPPRESSION SYSTEM	ANSUL/RANGEGUARD	---	---	---	---	---	---	---	---	---	120	1	---	---	
CA-38	1	*		SANDWICH/SALAD PREP	TRUE TFP-48-18M-D-4	---	---	---	---	---	---	---	---	---	120	1	YES	---	2.9 AMPS; DEDICATE; NEMA 5-15P

Legend

Ventilation to Exterior Required
 Electrical Outlet / Voltage
 Compressed Air
 Water Connection
 *Equipment Vented to Exhaust Hood
 120/220

Culinary Arts

Room Data Sheet

VOC-07

6/16/21



ITEM#	Q.T.Y.	NEW	EXIST.	DISCRIPTION	MAKE & MODEL	PLUMBING						VENT	ELECTRICAL			NOTES			
						HW	CW	W	I.W.	F.D.	G	M/BTU	CFM	HP	KW		VOLT	PHASE	C&P
CA-39	1	*		COLD FOOD COUNTER	TRUE TFP-72-30M-D-6	---	---	---	---	---	---	---	---	---	---	120	1	YES	5.1 AMPS; DEDICATE; NEMA 5-15P
CA-40	1	*		TOASTER	HOLMAN T710	---	---	---	---	---	---	---	---	---	---	208	1	YES	14.0 AMPS; NEMA 6-15P
CA-41	1	*		S/S COUNTER W/ SINK & SHIELD	FABRICATE S/S	1/2"	1/2"	---	1-1/2"	---	---	---	---	---	---	---	---	---	---
CA-42	1	*		HOT FOOD COUNTER	EAGLE GROUP DCS6-HFU-B	---	---	---	3/4"	YES	---	---	---	---	6.0	208	1	YES	25.0 AMPS; NEMA 6-50P
CA-43	1	*		REFRIGERATED BASE	SOUTHBEND 84	---	---	---	---	---	---	---	---	1/3	---	120	1	YES	7.0 AMPS
CA-44	1	*		REFRIGERATED BASE	SOUTHBEND 36	---	---	---	---	---	---	---	---	---	---	120	1	YES	---
CA-45	1	*		MICROWAVE	AMANA RCS10TS	---	---	---	---	---	---	---	---	---	1.55	120	1	YES	13.0 AMPS; NEMA 5-15P
CA-46	1	*		COUNTER & SINK ASSEMBLY	FABRICATE S/S	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-47	1	*		MIXER - 30QT	HOBART HL300	---	---	---	---	---	---	---	---	3/4	---	208	3	---	2.8 AMPS
CA-48	7	*		INGREDIENT BIN	CAMBRO IBS27148	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-49	2	*		WORKTABLE W/SINK	FABRICATE S/S	1/2"	1/2"	---	1-1/2"	---	---	---	---	---	---	---	---	---	---
CA-50	1	*		WORKTABLE W/SINK	FABRICATE S/S	1/2"	1/2"	---	1 1/2"	---	---	---	---	---	---	---	---	---	---
CA-51	1	*		BAKERS TABLE	JOHN BOOS BT3S04	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-52	1	*		60 QT MIXER	HOBART HL600	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-53	1	*		BLAST CHILLER	EURODIB OBF084	---	---	---	---	---	---	---	---	---	---	208/240	---	YES	---
CA-54				ITEM NUMBER NOT USED	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-55	1	*		REACH-IN REFRIGERATOR	TRULSEN AHT226WUT-HHS	---	---	---	---	---	---	---	---	1/3	---	115	1	YES	8.5 AMPS; NEMA 5-15P
CA-56	1	*		ROLL-IN PROOFER	DOYON DRIP1	---	---	---	---	---	---	---	---	---	5.7	120/208	1	---	28.0 AMPS
* CA-57	1	*		ROLL-IN OVEN	REVENT ONE 26/3/G	---	1/2"	1"	---	---	1/2"	170	589	---	---	120/280	1/3	---	15.0 AMPS, DEDICATE / 9.0 AMPS, 4-WIRE
CA-58	1	*		FOUR BURNER RANGE	TBD	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-59	1	*		PIZZA MAKING OVEN	GARLAND #GPD60-2	---	---	---	---	YES	1"	244,000	---	1/3	71.4	120/208	1	YES	120V/1 CONTROL PLUG
CA-60	3	*		MIXER	HOBART N50	---	---	---	---	---	---	---	---	1/6	---	120	1	YES	16.7 AMPS; NEMA 5-20P
CA-61	1	*		UNDERCOUNTER REFRIGERATOR	TRUE #TUC-67	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-62	1	*		DEMO TABLE	EAGLE DT3660SE	---	---	---	---	---	---	---	---	---	---	---	---	---	---
+ CA-63	1	*		EXHAUST HOOD	GAYLORD	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-64	1	*		HOT PLATES	NEMCO 6310-2	---	---	---	---	---	---	---	---	---	2.0	120	---	---	---
CA-65	1	*		ICE MACHINE	MANITOWOC QM-45A	---	3/8"	---	3/4"	YES	---	---	---	---	---	115	1	YES	5.2 AMPS.; NEMA 5-15P
CA-66	12	*		2-STUDENT WORKTABLE - 24"X60"	FABRICATE S/S	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-67	2	*		UNDERCOUNTER REFRIGERATOR	BEVERAGE -AIR UCR34HC-25	---	---	---	---	---	---	1110	---	1/10	---	115	1	YES	2.0 AMPS.; NEMA 5-15P
+ CA-68	1	*		BEVERAGE DISPENSER	SERVEND SV-175	---	---	---	3/4"	---	---	---	---	---	---	120/220	1	YES	2.8
CA-69	1	*		UNIVERSAL VENTLESS HOOD	WELLS #WVU-96	---	---	---	---	---	---	---	3000	1.5	---	208/204	1	YES	8.0 AMPS
CA-70	1	*		ELECTRIC COUNTERTOP HOT PLATE	WELLS #H115	---	---	---	---	---	---	---	---	---	1.6	120	1	YES	13.8 AMPS; NEMA 5-15P
CA-71	1	*		HALF SIZE ELECTRIC OVEN	WELLS #OC1	---	---	---	---	---	---	---	---	---	5.0	208	1	YES	24.0 AMPS; NEMA 6-30P
CA-72	1	*		ELECTRIC COUNTERTOP GRIDDLES	WELLS #G13	---	---	---	---	---	---	---	---	---	6.8	208	1	YES	---
CA-73	2	*		OVEN RACK	ADAMATIC #1807C	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-74	1	*		BAKERY DISPLAY CASE	CAL-MIL MFR-3413-55	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CA-75	1	*		COFFEE BREWERS	GRINDMASTER P400E	---	1/4"	---	---	---	---	---	---	---	---	120/208	1	YES	24.0 AMPS; NEMA 5-15P

Legend

Ventilation to Exterior Required
 *Equipment Vented to Exhaust Hood
 Electrical Outlet / Voltage
 120/220
 Compressed Air
 Water Connection

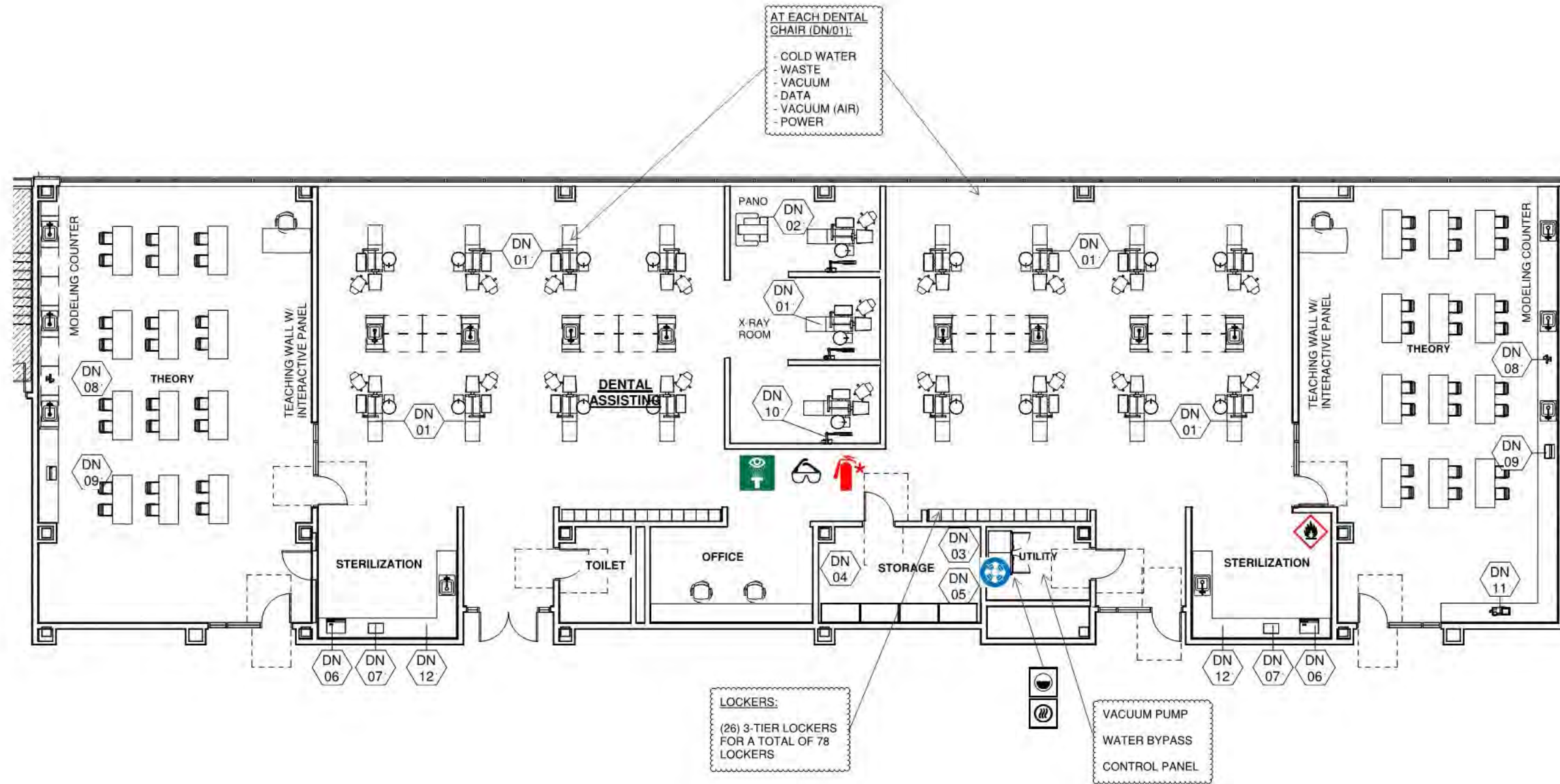
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Culinary Arts VOC -07

<p>Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Culinary Arts. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> Cooking & Baking House Management Buffet Presentation Dining Room Management Food Inventory, Ordering & Receiving <p>Restaurant</p> <ul style="list-style-type: none"> Customer Service Table Service Cashier Protocols – Point of Sale Sanitation & Safety Procedures Hostess Duties <p>Kitchen</p> <ul style="list-style-type: none"> Baking: Cookie & Pie Production, Quick Breads, Yeast Dough, Bench Work Techniques Cooking: Fruit & Vegetables / Grains / Legumes & Starches / Marinades / Dressings / Soups / Stocks <p>Area: 6000 SF Quantity: 1 Occupancy Load: 69 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> Teachers Students Guest 	<p>Technical Criteria-Architectural</p> <p><u>Floor:</u> Kitchen – Epoxy Flooring Restaurant – Porcelain Paver Theory & Walk-in Cooler-Freezer – Sheet Vinyl (Slip Resistant)</p> <p><u>Walls:</u> Kitchen – FRP Panels over GWB Walls Theory Room – Painted Impact Resistant GWB</p> <p><u>Ceiling:</u> Kitchen – 2x2 Washable Acoustical Ceiling Tiles Restaurant – Aluminum Vertical Blade Ceiling System</p> <p><u>Doors:</u> Flush Wood Door & Sidelite w/ Painted Metal Frame</p> <p><u>Windows:</u> Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p><u>Acoustical:</u> Sound Barrier Ceiling between steel beams</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – ordinary hazard group 1</p> <p>Plumbing: Plumbing connections and systems for all items requiring plumbing connections per kitchen equipment schedule to all items and plumbing fixtures requiring plumbing connections. All items susceptible to generate greasy waste to be extended to exterior grease interceptor. Tempered water for emergency equipment.</p> <p>HVAC: Heating, ventilating, and air conditioning with individual room thermostat (s) (DDC sensors). Kitchen hood exhaust system.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles on all adjacent walls and food service equipment, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to area. Emergency OFF pushbuttons, mechanical, plumbing and food service equipment power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> -Data System-Data Drops (53) - -Video Distribution System - -Audio Visual System - 01 -Audio Visual System Rack - -Sound Field System - 01 -Wall Clock- wired - 04 -PA / Intercom System - 14 <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> -Teacher Computing-Laptop - 02 -VoIP Desk & Wall Phones - 07 -Wireless Access Point-Ceiling & Wall Mounted - 06 -Student Wireless Devices (24) - -Wireless sound field Media Connector - 01 - Student Wireless Charging Cart - 01 <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> - Intrusion Detectors - 02
	<p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> -Built in Counter - 01 -Sink - 01 -Refrigerator/Freezer - 01 -Dishwasher - -Microwave - -Clothes Washer - 01 -Clothes Dryer - 01 <p>Loose Furnishings:</p> <ul style="list-style-type: none"> -Teacher Chair - 02 -Restaurant Chairs - 40 -Student Worktable - 10 -Tall Stool - 24 		


Dental Assisting
Room Data Sheet

VOC-08
6/16/21








Legend



DENTAL SCHEDULE 											
ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
DN-01	19	*		G.C.	DENTAL CHAIR	MARUS #DC1700	---	---	120	1	COLD WATER, WASTE, VACUUM, DATA, AIR
DN-02	1	*		G.C.	PANO X-RAY MACHINE	INSTRUMENTATION NOVUS #OP30	---	---	120	1	
DN-03	1	*		G.C.	VACUUM PUMP	MIDMARK #CV3	20	---	208	1	1/2" COLD WATER
DN-04	1	*		G.C.	WATER BYPASS	MIDMARK #77002146	20	---	208	1	1/2" COLD WATER
DN-05	1	*		G.C.	CONTROL PANEL	MIDMARK #77001589	---	---	---	---	CONTROL FOR DN-03 AND DN-04
DN-06	1	*		OWNER	AUTOCLAVE	RITTER #M11	15	---	120	1	CORD AND PLUG
DN-07	2	*		OWNER	ULTRA SONIC CLEANER	AUC 300B-115	---	---	120	1	CORD AND PLUG
DN-08	2	*		OWNER	MODEL TRIMMER	BUFFALO #61790A	---	1/3	120	1	CORD AND PLUG, 1/4 CW TUBING CONN & PRE MOUNTED WATER SOLENOID VALVE.
DN-09	2	*		OWNER	DENTAL LATHE	BUFFALO #58300	---	1/2	120	1	CORD AND PLUG
DN-10	2	*		G.C.	CHAIR X-RAY	BELMONT #PHOT-XLLS-505	10	---	120	---	DATA LINE, WALL MOUNTED
DN-11	1	*		OWNER	INTRAORAL FILM PROCESSOR	PERIPRO III					
DN-12	2	*		G.C.	INSTRUMENT WASHER	TBD			208	1	WATER / WASTE

NOTE: ITEMS DN-03, DN-04 AND DN-05 ARE CONNECTED TO DN-01 DENTAL CHAIR BOX.

Legend

 Ventilation to Exterior Required
 *Equipment Vented to Exhaust Hood
 Electrical Outlet / Voltage
120/220
 Compressed Air
 Water Connection

<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Dental Assisting. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Clerical Skills such as Appointment Booking, Inventory & Insurance Forms • Nutrition • Oral Anatomy • Dental Charting • Infection Control Procedures • Patient Exam Preparation & Operatory Management • Digital Radiology <p>Area: 6500 SF Quantity: 1 Occupancy Load: 78 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: ACT-2 (2x2 Washable Acous. Ceiling Tile) Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <hr/> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - <input checked="" type="checkbox"/>-Wall Cabinet - <input checked="" type="checkbox"/>-Sink - 03 <input checked="" type="checkbox"/>-Clothes Washer - 01 <input checked="" type="checkbox"/>-Clothes Dryer - 01 <input checked="" type="checkbox"/>-Safety Cabinet - 01 <input checked="" type="checkbox"/>-Goggle Cabinet - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 02 <input checked="" type="checkbox"/>-Teacher Chair - 02 <input checked="" type="checkbox"/>-Student Chair - 48 <input checked="" type="checkbox"/>-Student Worktable - 24 <input checked="" type="checkbox"/>-Metal Storage Shelving - 04</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – light hazard.</p> <p>Plumbing: Plumbing connections to all noted plumbing fixtures. Water, medical air and vacuum to all dental chairs noted on drawings all supplied from dedicated system.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Emergency OFF pushbuttons, mechanical and plumbing power connections</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (101) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Sound Field System - 02 <input checked="" type="checkbox"/>-Wall Clock- wired - 08 <input checked="" type="checkbox"/>-PA / Intercom System - 12 <hr/> <p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 09 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 02 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 05 <input checked="" type="checkbox"/>-Student Wireless Devices (48) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 02 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 02
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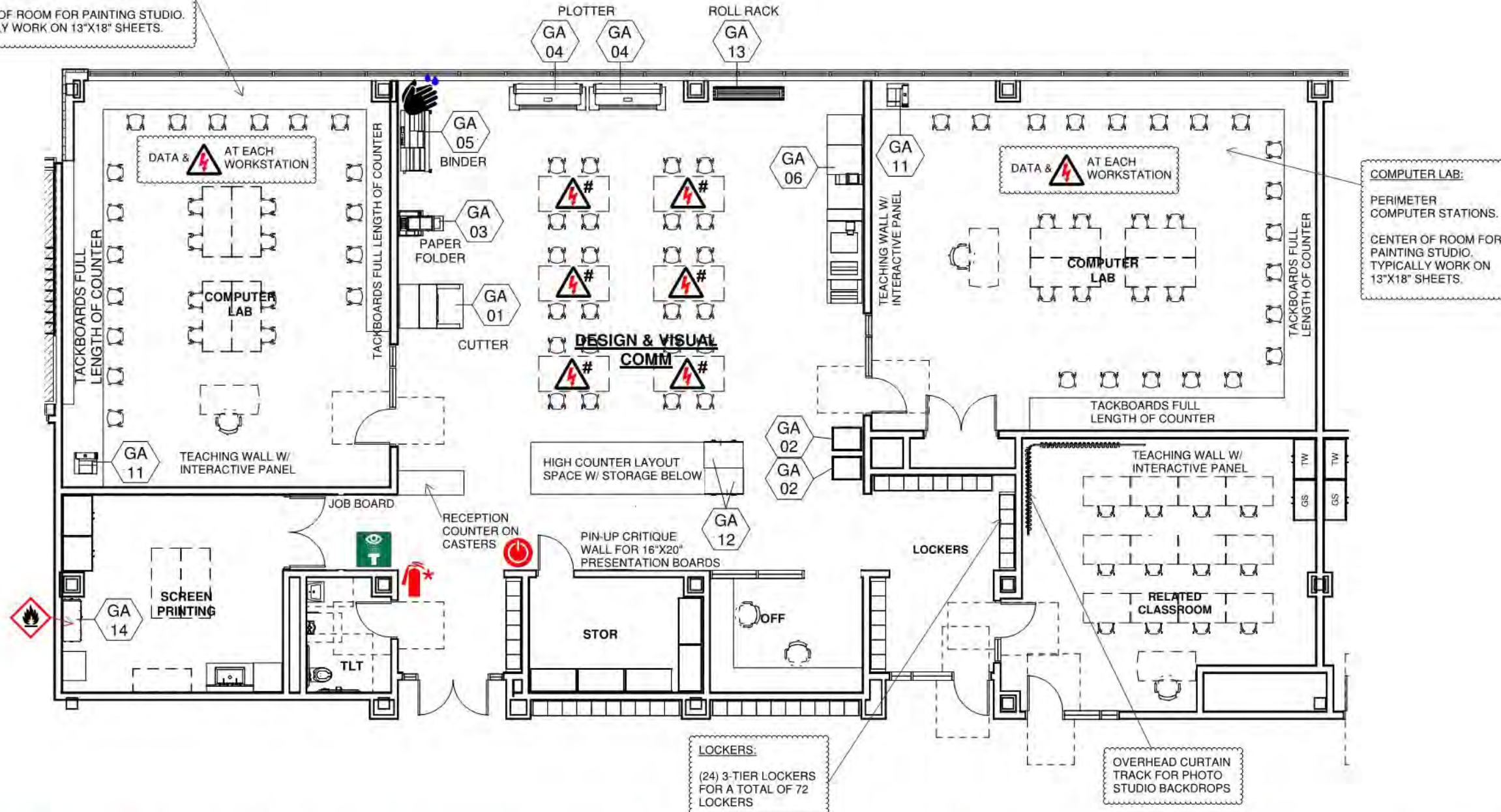
Design & Visual Communications

VOC-09

Room Data Sheet

6/16/21

COMPUTER LAB:
PERIMETER COMPUTER STATIONS.
CENTER OF ROOM FOR PAINTING STUDIO.
TYPICALLY WORK ON 13"X18" SHEETS.



Legend

-  Ventilation to Exterior Required
 -  Emergency Power Off (EPO)
 -  Emergency Shower/Eyewash Combination Unit
 -  Emergency Eyewash
 -  Fire Extinguisher
 -  Flammable Storage Cabinet
 -  Electrical Outlet / Voltage
120/220
 -  Goggle Cabinet
 -  Hose Bib
 -  Hand Washing Station
 -  Floor Drain
 -  Compressed Air
 -  Drinking Fountain
 -  Utility Sink
 -  Washer & Dryer
- *Flexible Exhaust System - Workbench
*Includes Fire Blanket
On Overhead Reel

DESIGN & VISUAL COMMUNICATIONS SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
GA-01	1	•		OWNER	CUTTER	POLAR CUTTER D56 PLUS	---	---	220	---	W/ C&P AND AIR DROP
GA-02	2	•		OWNER	PAPER RACK	MY BINDING #DR-1	---	---	---	---	NO POWER
GA-03	1	•		OWNER	PAPER FOLDER	BAUM ULTRAFOLD 714XLT	13.6	---	110	---	W/ C&P
GA-04	2		•	OWNER	PRINTER	ROLAND SP540I	---	---	120	---	W/ C&P
GA-05	1		•	OWNER	BINDER	PERFECT BINDER 460A	20	---	220-240	1	W/ C&P AND ENCLOSED VACUUM SYSTEM
GA-06	1		•	OWNER	PRINTER/COPIER	INDIGO PRINTING PRESS	---	---	(3)220	---	W/ C&P
GA-11	2	•	•	OWNER	PRINTER	HP COLOR LASERJET PRO CP5225N	---	---	120	---	W/ C&P
GA-12	2	•		OWNER	FLAT FILE	SHAIN FLAT FILE SYSTEM	---	---	---	---	
GA-13	1	•		OWNER	VINYL ROLL RACK	MBS-STANDOFF #EZH17	---	---	---	---	
GA-14	1	•		OWNER	FLAMMABLE STORAGE CABINET		---	---	---	---	

Legend



Ventilation to Exterior Required

*Flexible Exhaust System - Workbench



Electrical Outlet / Voltage



Compressed Air



Water Connection

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Design & Visual Communication

VOC -09

<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Design & Visual Communication. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Freehand Drawing • Computer Based Drawings using Adobe Create Suite and QuarkXpress • Critical Visual Problem-Solving Skills • Study Color Theory using Watercolor, Gouache, Pastels, Color Pencils & Markers • Typography • Ad Agency-based Assignments • Digital Photography & Studio Lighting <p>Area: 5240 SF Quantity: 1 Occupancy Load: 72 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: ACT-2 (2x2 Washable Acous. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input checked="" type="checkbox"/>-Built in Counter - 03 <input checked="" type="checkbox"/>-Base Cabinet - 01 <input checked="" type="checkbox"/>-Wall Cabinet - 01 <input checked="" type="checkbox"/>-Sink - 01 <input checked="" type="checkbox"/>-High Counter - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 03 <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-Student Chair - 36 <input checked="" type="checkbox"/>-Student Desk - 12 <input checked="" type="checkbox"/>-Student Worktable - 24</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – ordinary hazard group1</p> <p>Plumbing: Plumbing connections to all noted plumbing fixtures. Tempered water to all noted emergency equipment.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles with GFCI on all walls, 120V poke through and cord reel devices at workstations, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, equipment power connections with disconnect switches per equipment schedule, 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to area Emergency OFF pushbuttons, equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (114) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 02 <input checked="" type="checkbox"/>-Sound Field System - 03 <input checked="" type="checkbox"/>-Wall Clock- wired - 06 <input checked="" type="checkbox"/>-PA / Intercom System - 09</p> <p style="text-align: center;">Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 07 <input checked="" type="checkbox"/>-Document Camera - 03 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 03 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 06 <input checked="" type="checkbox"/>-Student Wireless Devices (66) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 03 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 03</p>
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DRAFTING & DESIGN SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
DR-01	1	*		OWNER	PLOTTER		---	---	120	1	W/ C&P
DR-02	1	*		OWNER	LASER CUTTER		---	---	208	1	W/ C&P AND VENTING
DR-03	1	*		OWNER	3D PRINTER		---	---	120	1	W/ C&P AND VENTING
DR-04	40	*		OWNER	COMPUTER DESK		---	---	120	1	POWER & DATA OUTLETS IN FLOOR BOXES

Legend



Ventilation to Exterior Required

*Equipment Vented to Exhaust Hood



Electrical Outlet / Voltage



Compressed Air



Water Connection

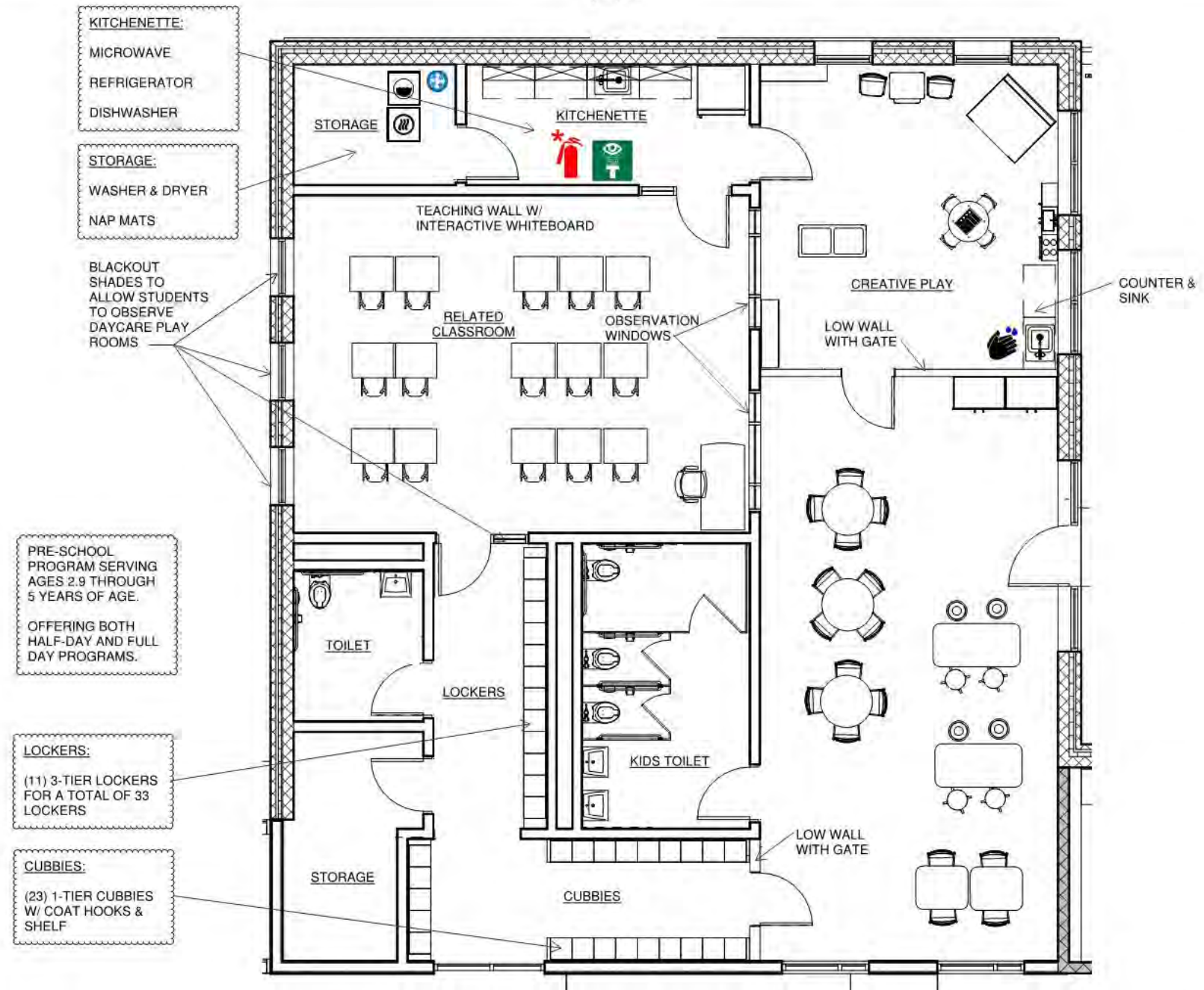
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Drafting & Design. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> Mechanical Design including Solid Part Modeling, Assembly Modeling and Orthographic Projection Architectural Drafting including plans, elevations, sections, and details. 3D Modeling 3D Prototype Printing Working & Technical Drawings Coursework includes Architectural History, Structural Theory, Building Materials, Code Research, Sketching, Presentation Drawings and Models <p>Area:4580 SF Quantity: 1 Occupancy Load: 62 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> Teachers Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input checked="" type="checkbox"/>-Built in Counter - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 05 <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-Student Desk - 18 <input checked="" type="checkbox"/>-Student Chair - 18 <input checked="" type="checkbox"/>-Student Office Chair - 40 <input checked="" type="checkbox"/>-Student Drafting Desk - 40 <input checked="" type="checkbox"/>-Metal Storage Shelving - 04 <input checked="" type="checkbox"/>-Student Standing Table - 06 <input checked="" type="checkbox"/>-Tall Open Shelving - 10</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – light hazard.</p> <p>Plumbing: Plumbing connections to all noted plumbing fixtures in this area. Compressed air to required air drop. Tempered water to emergency equipment.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control. Dedicated exhaust for laser cutter and 3D printer.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles four each on all walls, 120V poke through and cord reel devices at workstations, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, equipment power connections with disconnect switches per equipment schedule, 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to area Emergency OFF pushbuttons, equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <p> <input checked="" type="checkbox"/>-Data System-Data Drops (93) - <input checked="" type="checkbox"/>-Video Distribution System- <input checked="" type="checkbox"/>-Audio Visual System - 02 <input checked="" type="checkbox"/>-Sound Field System - 03 <input checked="" type="checkbox"/>-Wall Clock- wired - 06 <input checked="" type="checkbox"/>-PA / Intercom System - 07</p> <p style="text-align: center;">Technical Criteria-Technology</p> <p> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 03 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 06 <input checked="" type="checkbox"/>-Document Camera - 03 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 03 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 05 <input checked="" type="checkbox"/>-Student Wireless Devices (79) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 03 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 03</p>
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Early Childhood Education

Room Data Sheet

VOC-11

6/16/21



KITCHENETTE:
MICROWAVE
REFRIGERATOR
DISHWASHER

STORAGE:
WASHER & DRYER
NAP MATS

BLACKOUT SHADES TO ALLOW STUDENTS TO OBSERVE DAYCARE PLAY ROOMS

PRE-SCHOOL PROGRAM SERVING AGES 2.9 THROUGH 5 YEARS OF AGE.
OFFERING BOTH HALF-DAY AND FULL DAY PROGRAMS.

LOCKERS:
(11) 3-TIER LOCKERS FOR A TOTAL OF 33 LOCKERS

CUBBIES:
(23) 1-TIER CUBBIES W/ COAT HOOKS & SHELF

Legend

*Equipment Vented to Exhaust Hood				*Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Early Childhood Education VOC -11

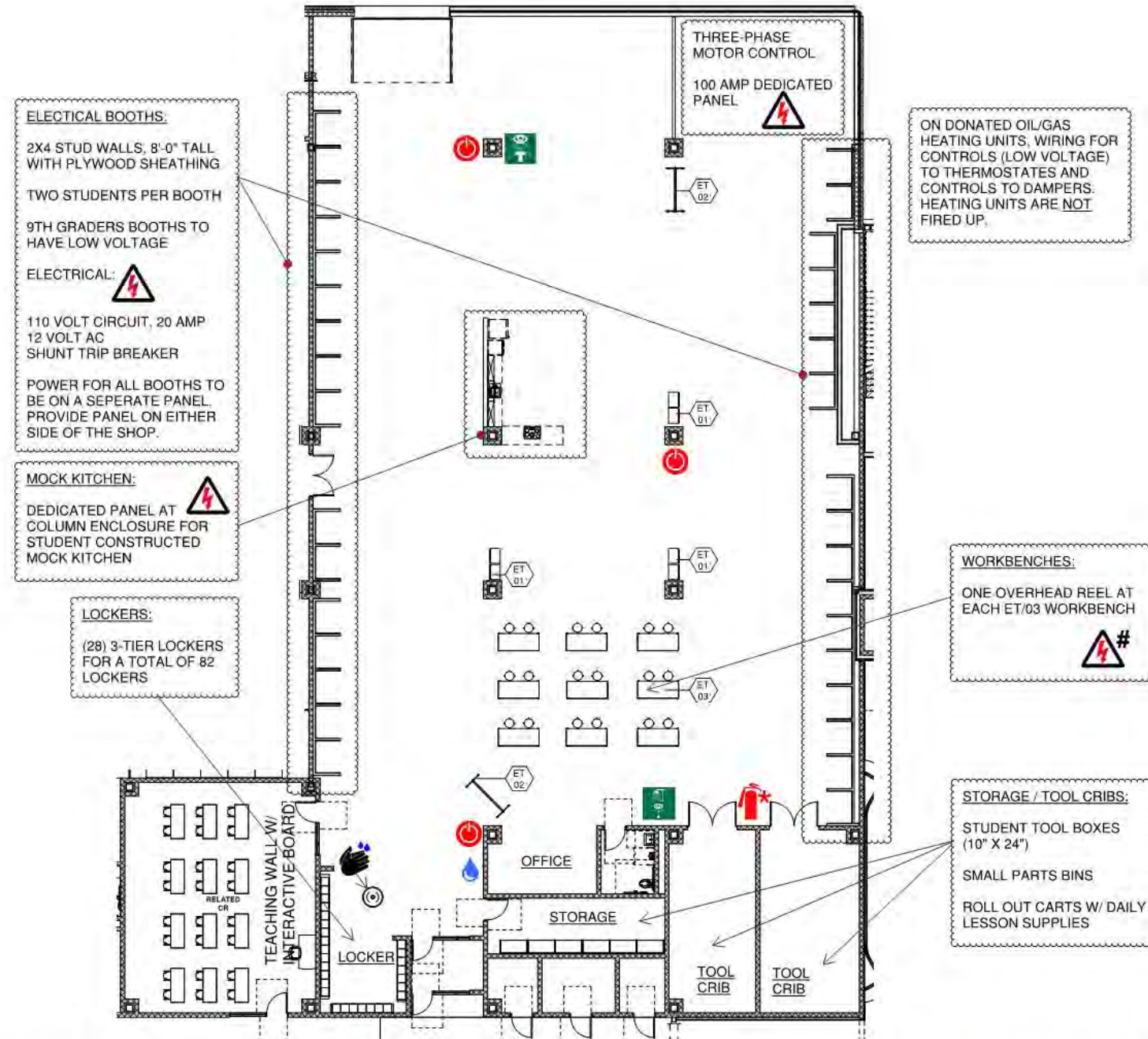
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Early Childhood Education. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Assist with on-site Preschool. • Care giving skills for infants, toddlers and preschool aged children. • Planning age-appropriate curriculum and daily activity for preschoolers. • Understanding physical, intellectual, emotional and social development of preschool aged children. <p>Area:2060 SF Quantity: 1 Occupancy Load: 33 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers • Students</p>	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 02 <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 04 <input checked="" type="checkbox"/>-Wall Cabinet - 04 <input checked="" type="checkbox"/>-Sink - 01 <input checked="" type="checkbox"/>-Refrigerator/Freezer - 01 <input checked="" type="checkbox"/>-Dishwasher - 01 <input checked="" type="checkbox"/>-Microwave - 01 <input checked="" type="checkbox"/>-Clothes Washer - 01 <input checked="" type="checkbox"/>-Clothes Dryer - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 18 <input checked="" type="checkbox"/>-File Cabinet - 02 <input checked="" type="checkbox"/>-Student Desk - 15 <input checked="" type="checkbox"/>-Student Chair - 15 <input checked="" type="checkbox"/>-Collaboration Table - 07 <input checked="" type="checkbox"/>-Stool - 08</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – light hazard</p> <p>Plumbing: Plumbing connections to all plumbing fixtures and appliances noted on the drawings. Tempered water to emergency equipment.</p> <p>HVAC: Heating, ventilating, and air conditioning with an ERV and VRF system. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles at teaching wall, four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, GFCI appliance circuits in kitchenette.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video device. Carbon monoxide detection.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (21) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input checked="" type="checkbox"/>-Audio Visual System Rack - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 04 <input checked="" type="checkbox"/>-PA / Intercom System - 07 <p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 04 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 03 <input checked="" type="checkbox"/>-Student Wireless Devices - 15 <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 <p style="text-align: center;">Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detectors - 03
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Electrical Technology

VOC-12

Room Data Sheet

6/16/21



Legend



ELECTRICAL SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
ET-01	6	•		OWNER	MOBILE TOOL BOXES		---	---	---	---	NO POWER
ET-02	2	•		OWNER	MOBILE MARKER BOARD		---	---	---	---	NO POWER
ET-03	9	•		OWNER	WORKBENCH W/POWER		---	---	120	1	CORD & PLUG

NOTE:

Legend



Ventilation to Exterior Required

*Equipment Vented to Exhaust Hood



Electrical Outlet / Voltage



Compressed Air



Water Connection

Electrical Technology VOC -12

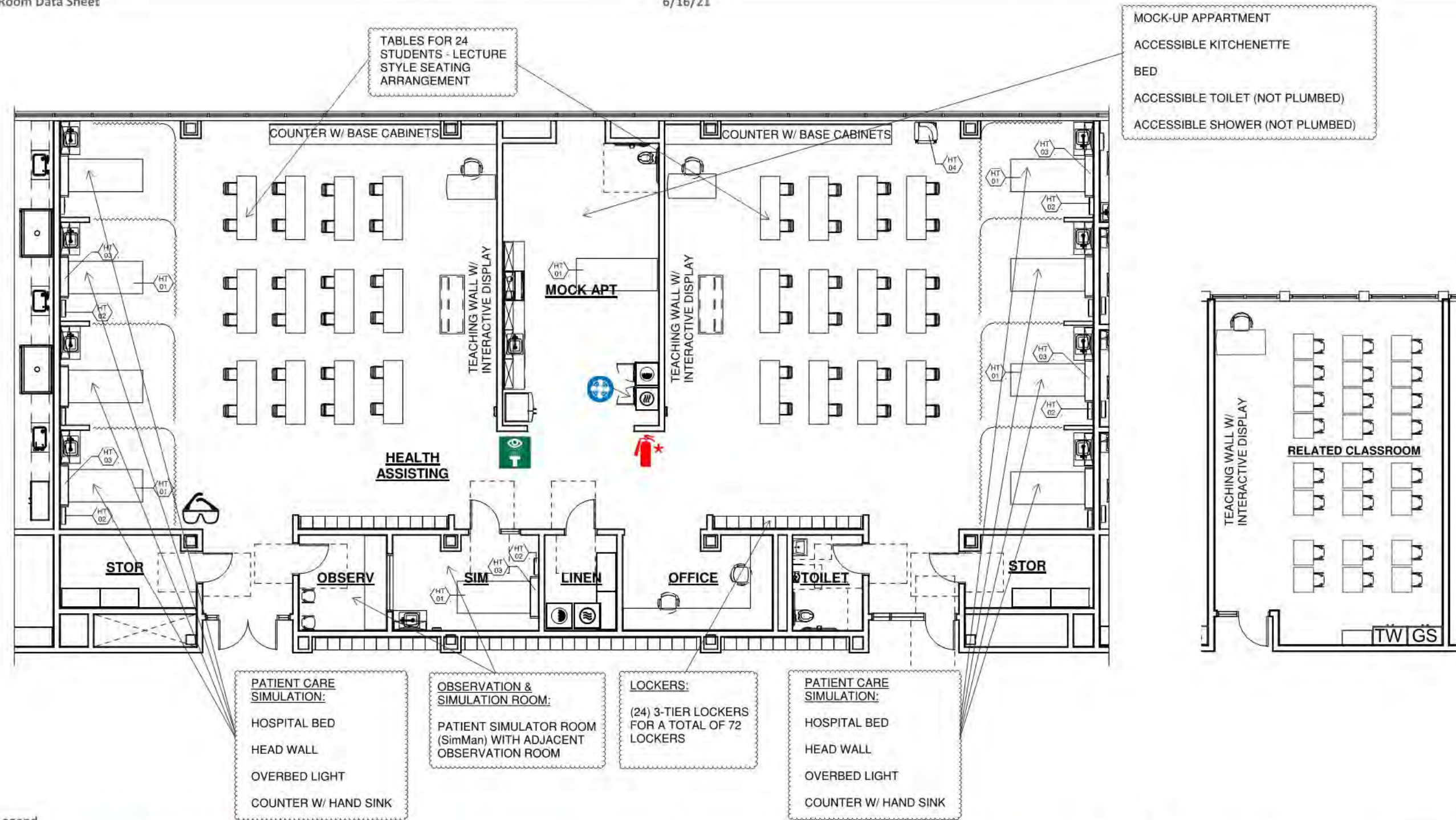
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Electrical Technology. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Electrical Safety Practices • Understanding National & State Electrical Code • Understanding-Reading Electrical Drawings & Circuit Drawings • Electrical Wiring • Installation of Residential Electrical Services • Hardware Installation • Repair of electrical and related equipment. • Proper Use of Tools such as hand tools, power tools, hydraulic tools, taps/dies, grinders, and heating tools for bending PVC conduit. • Specialty Wiring such as Fire Alarm Systems, Burglar Alarms, Signal Circuits, Television, Communications Circuits, and Boilers. <p>Area: 12335 SF Quantity: 1 Occupancy Load: 82 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Painted CMU Ceiling: Exposed Painted Structural Steel & Metal Deck, Sound Barrier ceiling occurring between steel beams. Doors: Flush Metal Door & Sidelite w/ Painted Metal Frame Windows: Insulated Translucent Wall Panel System with Glazed Insulated Units (Operable & Fixed) Acoustical: Sound Barrier Ceiling</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – ordinary hazard group 2</p> <p>Plumbing: Plumbing connections for all noted plumbing fixtures and for all handwashing sinks. Tempered water for all noted emergency equipment. compressed air for all noted air tools or air drops. Garage drains to extend to exterior gas/oil separator.</p> <p>HVAC: Heating, and ventilating only with individual room thermostat (DDC sensor).</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, nine cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Plug in busway and cord reels for equipment power connections Emergency OFF pushbuttons, Shop equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (46) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 04 <input checked="" type="checkbox"/>-PA / Intercom System - 07
	<p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-Student Chair - 18 <input checked="" type="checkbox"/>-Student Worktable - 21 <input checked="" type="checkbox"/>-Stool -18</p>		<p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 05 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 04 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 <p style="text-align: center;">Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detectors - 02

Health Assisting

VOC-13

Room Data Sheet

6/16/21



Legend


*Equipment Vented to Exhaust Hood				*Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

Health Assisting

VOC-13

Room Data Sheet

6/16/21

HEALTH ASSISTING SCHEDULE 											
ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
HT-01	10	*		OWNER	HOSPITAL BED	POCKET NURSE #04-50-0460 HALF	20	---	120	1	CORD AND PLUG
HT-02	9	*		OWNER	HEAD WALL	HOSPITAL SYSTEMS "COGENT" SINGLE PATIENT	---	---	120	1	CORD AND PLUG
HT-03	9	*		OWNER	OVERBED LIGHT	HOSPITAL SYSTEMS "AURORA" OVERBED LIGHT	---	---	120	1	HARD WIRED BY ELECTRICAL CONTRACTOR
HT-04	1	*		OWNER	BLOOD DRAWING CHAIR	SCHOOL HEALTH #24362	---	---	---	---	NO POWER

NOTE: ITEMS HT-02, HT-02A, SHALL BE WALL MOUNTED BY GENERAL CONTRACTOR.

Legend



Ventilation to Exterior Required

*Equipment Vented to Exhaust Hood



Electrical Outlet / Voltage



Compressed Air



Water Connection

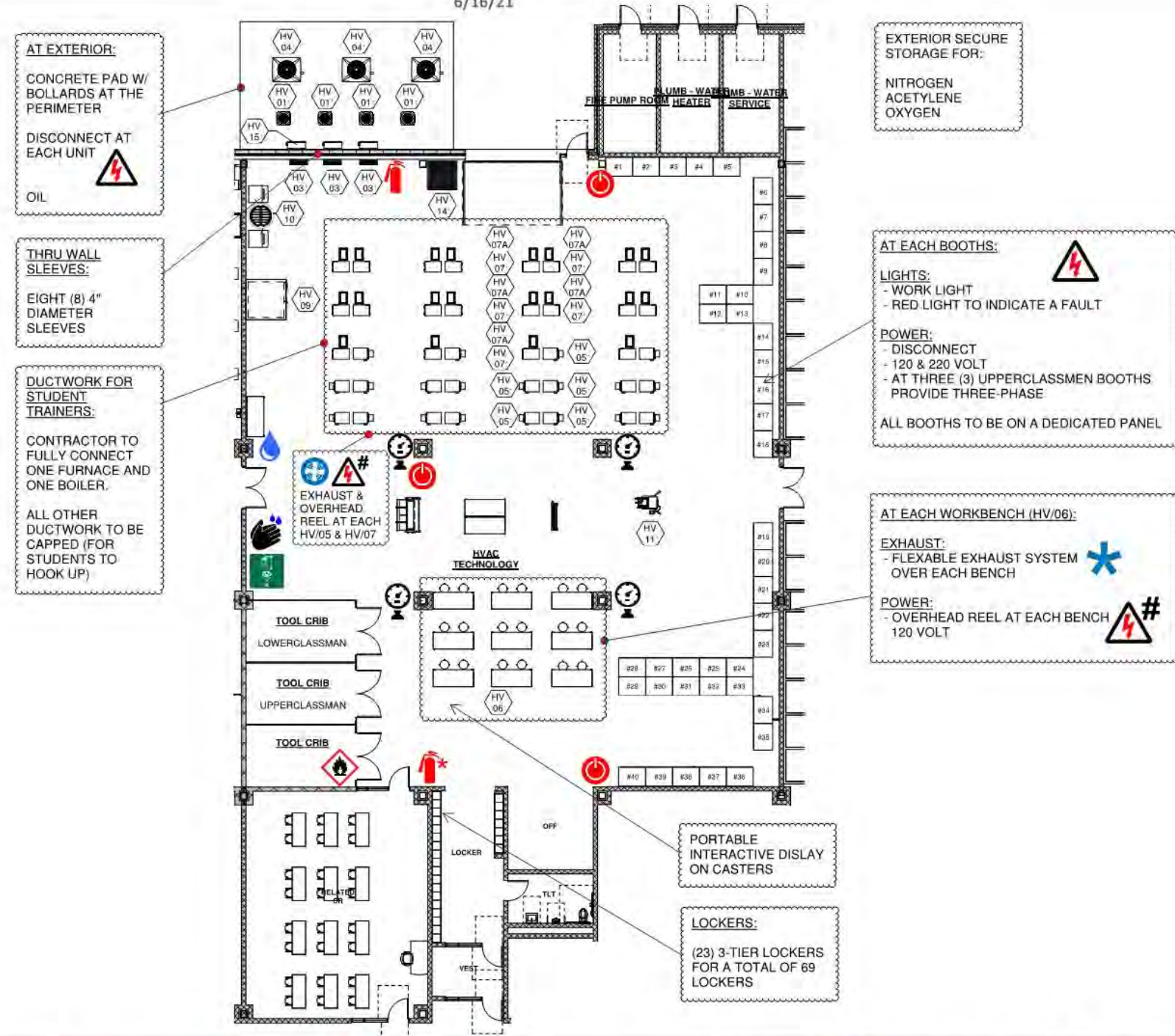
<p align="center">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Health Assisting. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Nurse Assisting • Medical Office Assisting • Medical Related Sciences including Anatomy, Physiology, Nutrition and Biology. • Medical Terminology • Thirty-hour Home Care Aide Course • Introduction to Electrocardiography • Introduction to Phlebotomy <p>Area:5790 SF Quantity: 1 Occupancy Load: 70 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers</p>	<p align="center">Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p align="center">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 15 <input checked="" type="checkbox"/>-Wall Cabinet - 04 <input checked="" type="checkbox"/>-Sink - 09 <input checked="" type="checkbox"/>-Refrigerator/Freezer - 01 <input checked="" type="checkbox"/>-Clothes Washer - 01 <input checked="" type="checkbox"/>-Clothes Dryer - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 03 <input checked="" type="checkbox"/>-Teacher Chair - 05 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24 <input checked="" type="checkbox"/>-Student Worktable 24 -</p>	<p align="center">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – light hazard</p> <p>Plumbing: Plumbing connections to all sinks and equipment requiring plumbing connections. Tempered water to all emergency equipment.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles with GFCI on all walls, General receptacles at bed locations to comply with Mass Electric code, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, equipment power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to area Emergency OFF pushbuttons, equipment, mechanical and plumbing power connections</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p align="center">Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (78) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Sound Field System - 03 <input checked="" type="checkbox"/>-Wall Clock- wired - 06 <input checked="" type="checkbox"/>-PA / Intercom System - 08</p> <p align="center">Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 06 <input checked="" type="checkbox"/>-Document Camera - 02 <input checked="" type="checkbox"/>-Wall Mounted Interactive Panel - 03 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 04 <input checked="" type="checkbox"/>-Student Wireless Devices (48) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 03 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 02</p>
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HVAC Technology

Room Data Sheet

VOC-14

6/16/21









Legend

*Flexible Exhaust System Over Bench				*Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

HVAC SCHEDULE																				
ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	PLUMBING						VENT		ELECTRICAL				NOTES	
							HW	CW	W	I.W.	F.D.	G	M/BTU	CFM	AMPS	HP	VOLT	PHASE		C&P
HV-01	4	*		G.C. - HVAC	A/C HEAT UNIT	TRANE #4YCX3018	---	---	---	---	---	---	---	15	---	208	1	---	1.685 KW	
HV-02	2	*		G.C. - HVAC	WALL HUNG BOILER	RANNAI #E75CRN	3/4"	3/4"	1"	---	---	3/4"	13.6	---	15	---	120	---	---	NATURAL GAS, 2" AHO, 3" VENT
HV-03	3	*		G.C. - HVAC	DUCTLESS SPLIT SYSTEM	FUJITSU #9RL2	---	---	---	---	---	---	---	15	---	120	1	---		
HV-04	3	*		G.C. - HVAC	1.5 TON CONDENSING UNIT	YORK #YJJD18	---	---	---	---	---	---	---	15	---	208	1	---		
HV-05	20	*		G.C. - HVAC	OIL FIRED BOILER	US BOILER CO. #V8H3W	---	---	3/4"	---	---	---	---	---	---	120	---	---	6" FLUE COLLAR, 3/8" OIL LINE	
HV-06	12	*		OWNER	STEEL WORKBENCH TABLE		---	---	---	---	---	---	---	---	---	120	1	---	OVERHEAD DROP CORDS BY ELECTRICAL	
HV-07	20	*		G.C. - HVAC	GAS FIRED FURNACE	YORK #TG9S	---	---	---	YES	---	3/4"	60	1000	7.1	1/2	120	1	---	15 AMP CIRCUIT
HV-07A	20	*		G.C. - HVAC	1.5 TON CASED EVAPS	YORK #CF24AXA1	---	---	---	---	---	---	---	---	---	---	---	---		
HV-08	4	*		G.C. 114000	MOCK REFRIG. SYSTEM	COPELAND #M4FH-0050-CAA-201	---	---	---	---	---	---	---	---	---	---	---	---		
HV-08A	4	*		G.C. 114000	EVAPORATOR	LARKIN #LCE643BB	---	---	3/4"	---	---	---	---	0.5	---	208	1	---		
HV-09	1	*		G.C. 114000	WALK-IN FREEZER / COOLER	BALLYCASE: THERMO-KOOL	---	---	---	---	---	---	---	---	---	120	1	---	TO LIGHTS , DOOR DEFROST & TEMPERATURE MONITORING SYSTEM BY ELECTRICAL SUB-CONTRACTOR	
		*		G.C. 114000	CONDENSING UNIT	BALLY #BQZA020-L8-HT3AD	---	---	---	---	---	---	---	---	2.0	208	3	---	MOUNTED TO ROOF OF WALK-IN BOX	
		*		G.C. 114000	EVAPORATOR COIL	BALLY #BLP207LE-SV-S2BT	---	---	1"	YES	---	---	---	---	(2) 1/15	208	1	---	8.2 AMPS.	
		*		G.C. 114000	CONDENSING UNIT	BALLY #BQHA008-M8-HS2A	---	---	---	---	---	---	---	---	0.8	208	1	---	7.8 AMPS. MOUNTED TO ROOF OF WALK-IN BOX	
		*		G.C. 114000	EVAPORATOR COIL	BALLY #BLP107MA-SV-S1BT	---	---	1"	YES	---	---	---	---	1/15	120	1	---		
HV-10	2	*		G.C. 114000	ICE MACHINE	MANITOWOC #ID0322A	---	---	1"	YES	---	---	---	15	---	115	1	---	15.0 AMPS.; NEMA 5-15P / FLOOR DRAIN	
HV-11	1	*		OWNER	PIPE THREADING MACHINE	RIDGID 300	---	---	---	---	---	---	---	---	---	120	1	YES	18.0 AMPS	
HV-12	4	*		G.C. HVAC	FUME EXTRACTION		---	---	---	---	---	---	---	---	---	---	---	---		
HV-14	1	*		OWNER	SPILL CONTAINMENT PLATFORM	EAGLE #35U065	---	---	---	---	---	---	---	---	---	---	---	---		
HV-15	3	*			OUTDOOR UNIT	FUJITSU #AOU12RLQ	---	---	---	---	---	---	---	20 FUSE	---	---	---	---		

Legend

 Ventilation to Exterior Required
 *Flexible Exhaust System Over Bench
 Electrical Outlet / Voltage
 120/220
 Compressed Air
 Water Connection

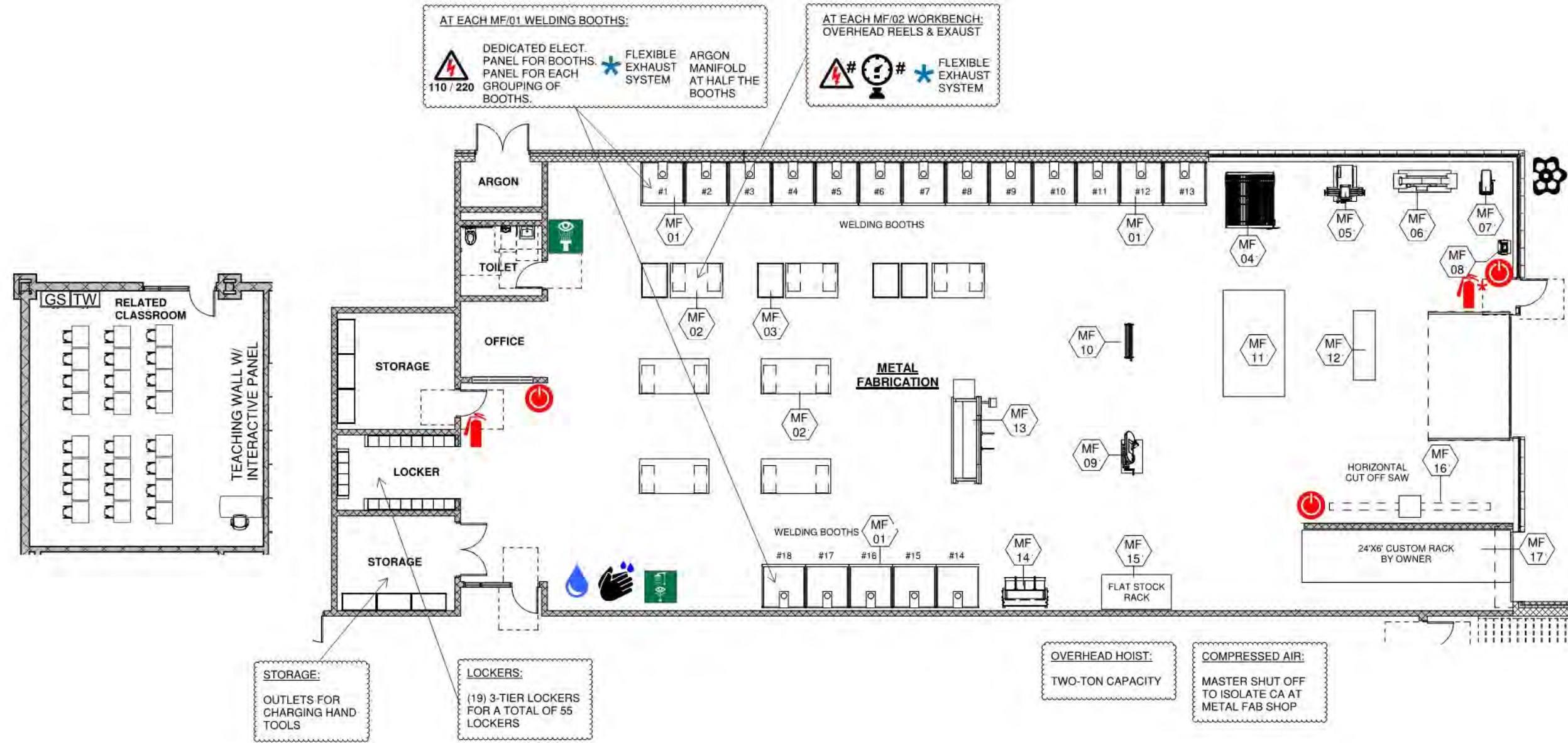
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in HVAC Technology. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> Develop skills in Light Commercial & Residential Systems such as Steam & Hot water Boilers, Oil Burners, Oil Storage & Distribution, Boiler Water Chemistry, and Gas & Oil Furnaces. Calculating Heat Loads Develop skills in Commercial Refrigeration, Advanced Controls, Split Systems, Water Chillers, Reclaiming & Recovery License, Water Towers, Pneumatic Controls, Automotive AC License, and Solar Energy. <p>Area: 9140 SF Quantity: 1 Occupancy Load: 69 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> Teachers Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Painted CMU Ceiling: Exposed Painted Structural Steel & Metal Deck, Sound Barrier ceiling occurring between steel beams. Doors: Flush Metal Door & Sidelite w/ Painted Metal Frame Windows: Insulated Translucent Wall Panel System with Glazed Insulated Units (Operable & Fixed) Acoustical: Sound Barrier Ceiling</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – ordinary hazard group 2.</p> <p>Plumbing: Plumbing connections for all noted plumbing fixtures and for all handwashing sinks. Tempered water for all noted emergency equipment. compressed air for all noted air tools or air drops. Garage drains to extend to exterior gas/oil separator. Drain and water connection with backflow prevention to all noted equipment in schedule.</p> <p>HVAC: Heating, and ventilating only with individual room thermostat (DDC sensor). Industrial exhaust systems for boilers and work areas.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Plug in busway and cord reels for equipment power connections Emergency OFF pushbuttons, Shop equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (42) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 04 <input checked="" type="checkbox"/>-PA / Intercom System - 09
	<p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Worktable - 21 <input checked="" type="checkbox"/>-Tall Stool - 18</p>		<p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 05 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 04 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 <p style="text-align: center;">Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detectors - 02

Metal Fabrication

Room Data Sheet

VOC-15

6/16/21








Legend



METAL FABRICATION SCHEDULE 											
ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
* MF-01	18	•		G.C.	WELDING BOOTH	CUSTOM			120		DUPLEX ELECTRICAL RECEPTACLE
MF-01A			•	OWNER	WELDER (ARC)	MILLER MAXSTAR 200	49	---	230	1	CORD & PLUG
* MF-02	7	•		OWNER	WORKBENCH 4'X8'		---	---	---	---	QUAD OUTLET ON DROP CORD
MF-03	3	•		OWNER	METAL WASTE BIN 4'X3'		---	---	---	---	
MF-04	1	•		OWNER	PLASMA TABLE				120		
MF-05	1	•		OWNER	VERTICAL MILL				230		
MF-06	1	•		OWNER	NOTCHER						
MF-07	1	•		OWNER	DRILL PRESS				230		
MF-08	1	•		OWNER	BENCH GRINDER				120		
MF-09	1	•		OWNER	BANDSAW				230		
MF-10	1	•		OWNER	BOX & PAN BRAKE						
MF-11	1	•		OWNER							
MF-12	1		•	OWNER	POWER ROLLS	AMERICOR #LH-180	---	15	220	3	DIRECT CONNECTION
MF-13	1		•	OWNER	ACCUPRES BRAKE		---	6	220	3	DIRECT CONNECTION
MF-14	1		•	OWNER	SHEAR	ACCURSHEAR #625010	---	15	220	3	DIRECT CONNECTION
MF-15	1	•		OWNER	FLAT STOCK RACK		---	---	---	---	
MF-16	1	•		OWNER	HORIZONTAL CUT OFF SAW						
MF-17	1		•	OWNER	CUSTOM RACK 24'X6'		---	---	---	---	OWNER TO CREATE

NOTE:

Legend

 Ventilation to Exterior Required
 *Flexible Exhaust System - Workbench
 Electrical Outlet / Voltage
120/220
 Compressed Air
 Water Connection

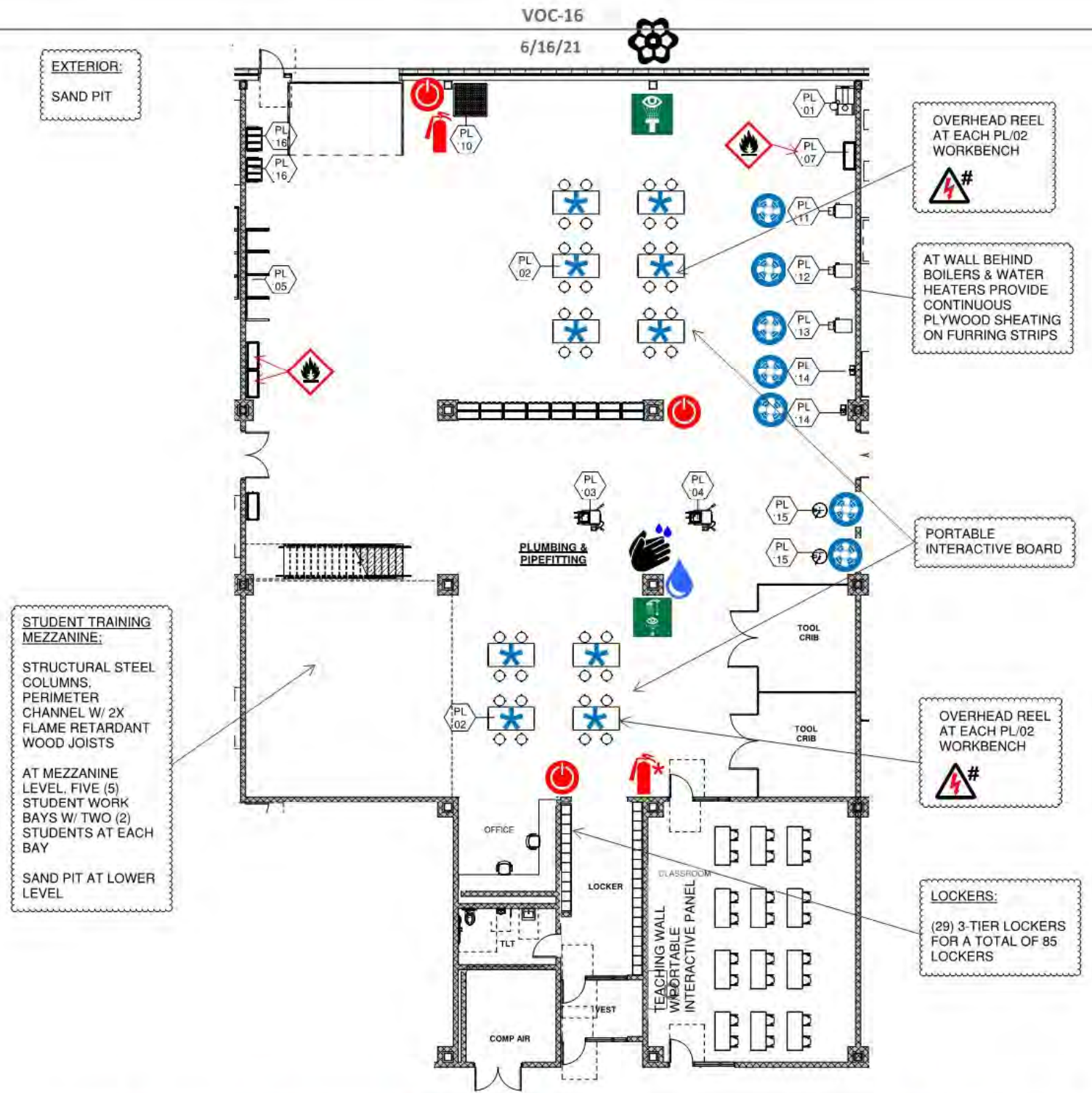
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Metal Fabrication VOC -15

<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Metal Fabrication. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> Welding Skills including Shielded Metal Arc, Gas Tungsten Arc, Flux Cored Arc, Standard & Dual Shield, Gas Metal Arc, and Gas Welding. Cutting Skills including Carbon Arc, Plasma Arc, and Flame Cutting. Handle Equipment such as Shears, CNC Bending brakes, CNC Plasma Cutting, Power Rollers, Saws and various bench and hand tools. <p>Area: 7400 SF Quantity: 1 Occupancy Load: 55 Students (Grades 10 – 12)</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> Teachers Students 	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Painted CMU Ceiling: Exposed Painted Structural Steel & Metal Deck, Sound Barrier ceiling occurring between steel beams. Doors: Flush Metal Door & Sidelite w/ Painted Metal Frame Windows: Insulated Translucent Wall Panel System with Glazed Insulated Units (Operable & Fixed) Acoustical: Sound Barrier Ceiling</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – ordinary hazard group 2.</p> <p>Plumbing: Plumbing connections for all noted plumbing fixtures and for all handwashing sinks. Tempered water for all noted emergency equipment. compressed air for all noted air tools or air drops. Garage drains to extend to exterior gas/oil separator.</p> <p>HVAC: Heating, and ventilating only with individual room thermostat (DDC sensor). Industrial exhaust systems for booths and metal dust collector.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Plug in busway and cord reels for equipment power connections Emergency OFF pushbuttons, Shop equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (36) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 02 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 04 <input checked="" type="checkbox"/>-PA / Intercom System - 07
	<p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24 <input checked="" type="checkbox"/>-Metal Storage Shelving - 06</p>		<p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 04 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 <p style="text-align: center;">Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detectors - 02

Plumbing & Pipefitting

Room Data Sheet



Legend

*Flexible Exhaust System - Workbench				*Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

Plumbing & Pipefitting






VOC-16

Room Data Sheet

6/16/21

PLUMBING SCHEDULE																					
ITEM#	Q.T.Y.	NEW	FUTURE	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	PLUMBING							VENT	ELECTRICAL					REMARKS:	
							HW	CW	W	I.W.	F.D.	G	M/BTU		SIZE	AMPS	HP	VOLT	PHASE		C&P
PL-01	1	*		OWNER	SAND BLAST CABINET	EMPIRE PRO FINISH...	---	---	---	---	---	---	---	---	---	---	1	110	1	---	W/ AIR OUTLET
* PL-02	16	*		OWNER	WORK BENCH 72"x36"	GLOBAL INDUSTRIAL #WG607715	---	---	---	---	---	---	---	---	---	---	---	---	---	---	ELECTRICAL TO PROVIDE OVERHEAD DROP CODES RECEPTACLES
PL-03	1	*		OWNER	THREADING MACHINE	RIDGID #535-93287	---	---	---	---	---	---	---	---	15	1/2	115/2...	1	---		
PL-04	1	*		OWNER	THREADING SYSTEM	RIDGID #300 COMPLETE	---	---	---	---	---	---	---	---	---	1/2	---	1	---		
PL-05	1	*		OWNER	STOCK/PIPE RACK 21'	MSC #89418081, (3)89418321	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
PL-06	2		*	OWNER	OIL FIRED BOILER	U.S. BOILER CO. BURNHAM	---	---	---	---	---	---	---	---	---	---	120	1	---	POWER FOR CONTROLS	
PL-07	2	*		OWNER	FLAMMABLE STORAGE		---	---	---	---	---	---	---	---	---	---	---	---	---	---	
PL-08	4	*		G.C. HVAC	FUME EXTRACTION ARM		---	---	---	---	---	---	---	---	---	---	---	---	---	---	450 CFM
PL 10	1	*		OWNER	SPILL CONTAINMENT PLATFORM	EAGLE #35U065	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
PL 11	1		*	VISSMANN	GAS WATER HEATER	B1HA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
PL 12	1	*		VISSMANN	COMBI BOILER	P1KA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
PL 13	1		*	NEW YORKER	BOILER	CG30EN-GH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
PL 14	2		*	I.B.C	BOILER	HC20-125	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
PL-15	2	*			HOT WATER HEATER																
PL-16	2	*			VERTICAL STOCK RACK																

Legend

 Ventilation to Exterior Required
 *Flexible Exhaust System - Workbench
 Electrical Outlet / Voltage
120/220
 Compressed Air
 Water Connection

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Plumbing & Pipefitting VOC -16

<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Plumbing & Pipefitting. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Installation of Water Supply, Sanitary Drainage and Hydronic Heating Systems • Science of the Trade • Code Compliance • Cost Profiles and Business Practices <p>Area: 8665 SF Quantity: 1 Occupancy Load: 85 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers • Students</p>	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Painted CMU Ceiling: Exposed Painted Structural Steel & Metal Deck, Sound Barrier ceiling occurring between steel beams. Doors: Flush Metal Door & Sidelite w/ Painted Metal Frame Windows: Insulated Translucent Wall Panel System with Glazed Insulated Units (Operable & Fixed) Acoustical: Sound Barrier Ceiling</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – ordinary hazard group 2.</p> <p>Plumbing: Plumbing connections for all noted plumbing fixtures and for all handwashing sinks. Tempered water for all noted emergency equipment. compressed air for all noted air tools or air drops. Garage drains to extend to exterior gas/oil separator.</p> <p>HVAC: Heating, and ventilating only with individual room thermostat (DDC sensor). Combustion air and vent system for boilers..</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, four cord reels, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Plug in busway and cord reels for equipment power connections Emergency OFF pushbuttons, Shop equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (50) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 04 <input checked="" type="checkbox"/>-PA / Intercom System - 09
	<p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-Worktable - 10 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Worktable - 12 <input checked="" type="checkbox"/>-Tall Stool - 40</p>		<p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 04 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 04 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01 <p style="text-align: center;">Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Intrusion Detectors - 02

Robotics & Automation

VOC-17

6/16/21

Room Data Sheet

ROBOTIC ARM COUNTER:

BENCHES TO BE A CONTINUOUS, FIXED 30" DEEP COUNTER WITH CLEAR KNEE SPACES. COUNTER HEIGHT TO BE 30".

CONTROLLER FOR ARM IS LOCATED UNDERTHE COUNTER. PROVIDE GROMMETS THROUGH COUNTER FOR CABLES.

PROVIDE POWER & COMPRESSED AIR FOR SIX (6) ROBOTIC ARMS

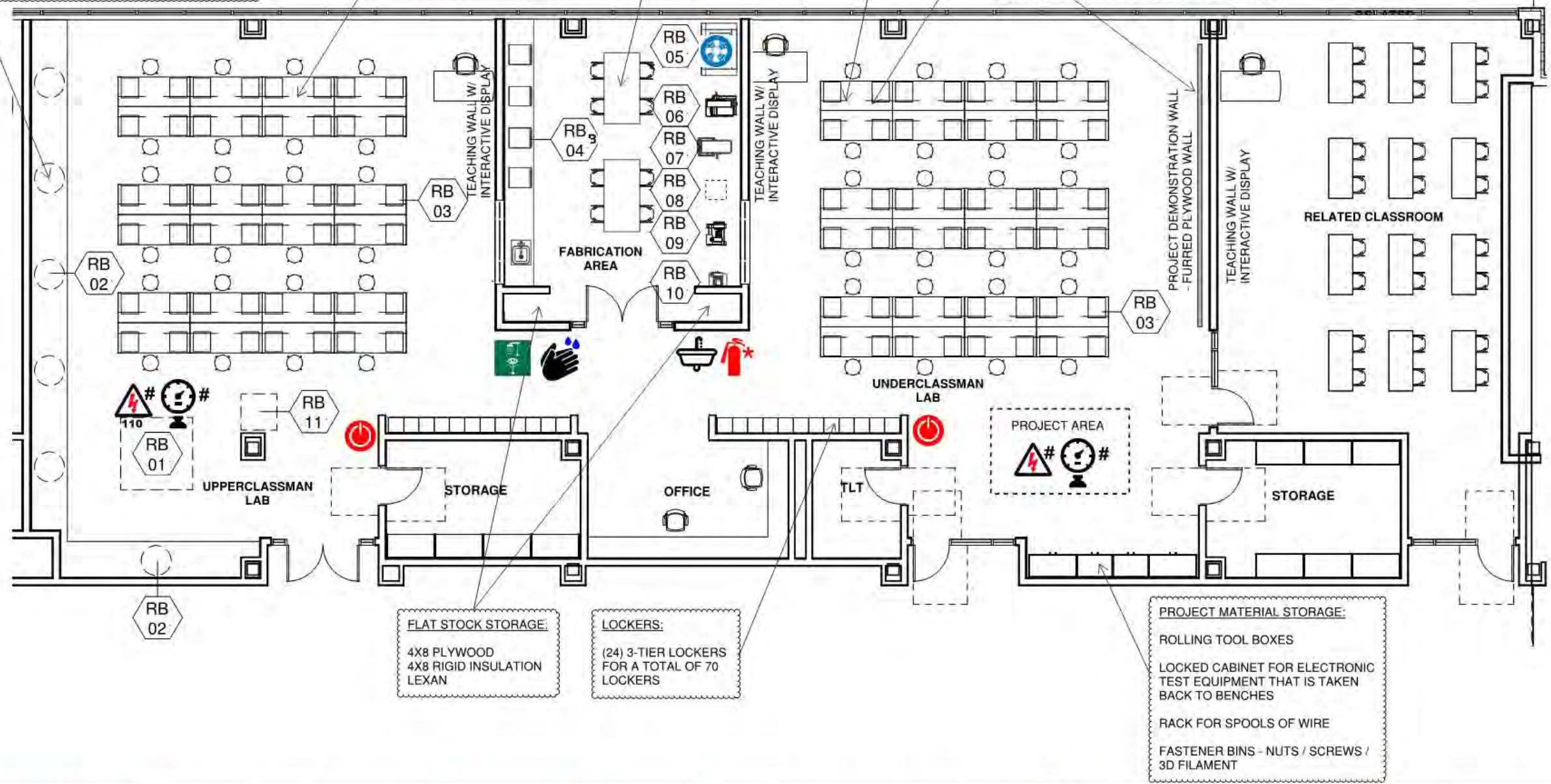


OVERHEAD REEL AT EACH RB/03 WORKBENCH
& DATA

BENCHES:
24 BENCHES (ONE PER STUDENT). BENCHES TO BE 2' BY 6' W/ LAMINATE TOPS

OVERHEAD REEL AT EACH RB/03 WORKBENCH
& DATA

DEMONSTRATION WALL:
DIN RAIL / WIRE TROUGH / PNEUMATIC HOSE



FLAT STOCK STORAGE:
4X8 PLYWOOD
4X8 RIGID INSULATION
LEXAN

LOCKERS:
(24) 3-TIER LOCKERS FOR A TOTAL OF 70 LOCKERS

PROJECT MATERIAL STORAGE:
ROLLING TOOL BOXES
LOCKED CABINET FOR ELECTRONIC TEST EQUIPMENT THAT IS TAKEN BACK TO BENCHES
RACK FOR SPOOLS OF WIRE
FASTENER BINS - NUTS / SCREWS / 3D FILAMENT

Legend

*Equipment Vented to Exhaust Hood				*Includes Fire-Blanket		# On Overhead Reel					# On Overhead Reel			



ROBOTICS & AUTOMATION SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
RB-01	1	*		OWNER	MECHATRONICS TRAINER		---	---	120	1	W/COMPRESSED AIR
RB-02	6	*		OWNER	ROBOTIC ARM		---	---	120	1	W/COMPRESSED AIR
RB-03	48	*		OWNER	WORKBENCH 72"X24"		---	---	120	1	W/ C&P
RB-04	4	*		OWNER	3D PRINTER		---	---	120	1	W/ C&P
RB-05	1	*		OWNER	LASER CUTTER		---	---	208	1	W/VENTING
RB-06	1	*		OWNER	BAND SAW		---	---	120	1	W/ C&P
RB-07	1	*		OWNER	DRILL PRESS		---	---	120	1	W/ C&P
RB-08	1	*		OWNER	SCROLL SAW		---	---	120	1	W/ C&P
RB-09	1	*		G.C.	BELT SANDER		---	---	120	1	W/ C&P
RB-10	1	*		OWNER	BENCH GRINDER		---	---	120	1	W/ C&P
RB-11	1	*			PORTABLE ROBOTIC ARM		---	---	120	1	W/ C&P AND COMPRESSED AIR
NOTE:											

Legend

Ventilation to Exterior Required
 *Equipment Vented to Exhaust Hood
 Electrical Outlet / Voltage
120/220
 Compressed Air
 Water Connection

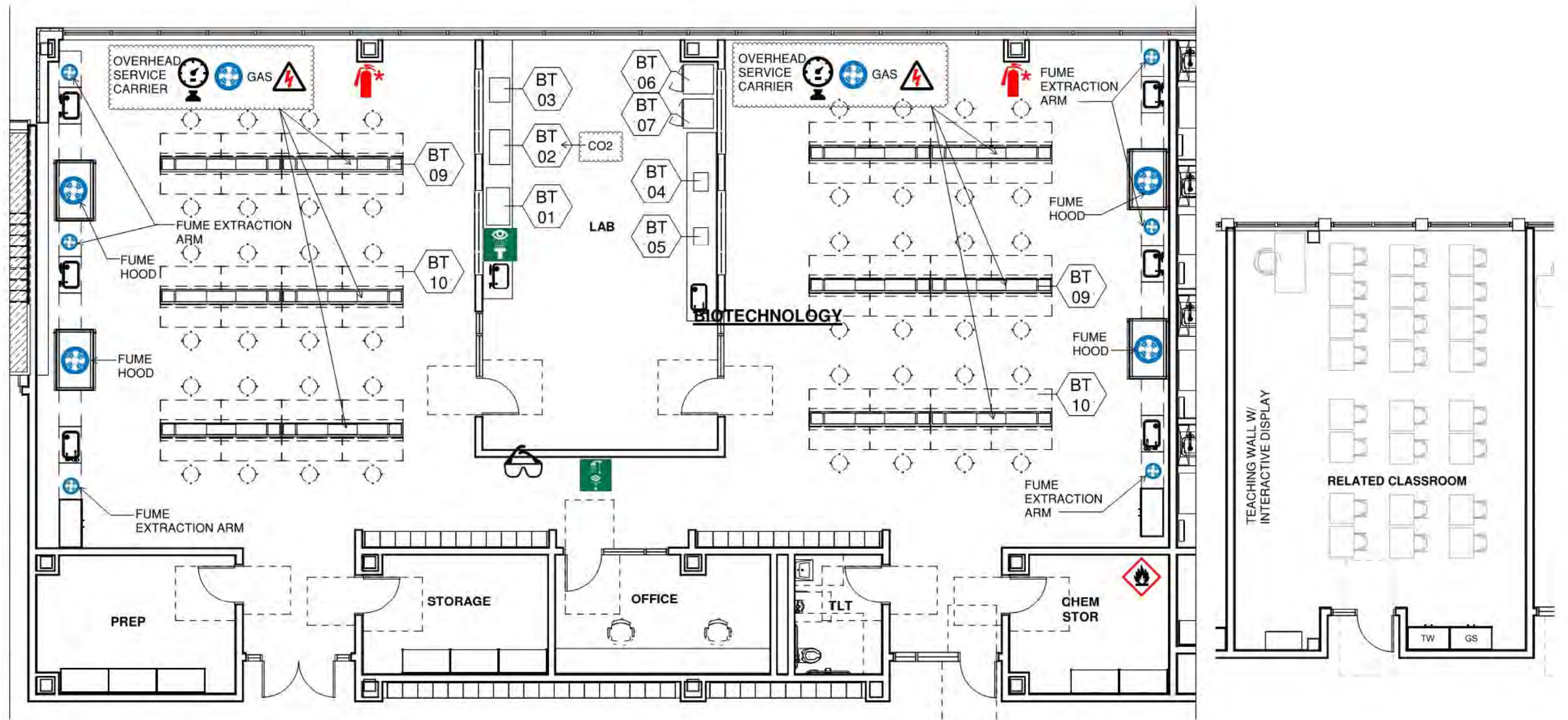
<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Plumbing & Pipefitting. Curriculum based on skills such as:</p> <ul style="list-style-type: none"> • Program combines elements of Engineering (Mechanical & Electrical), Computer Science, and Programming. • Computer Aided Design • 3-D printing rapid prototyping • Analog & Digital Control Electronics • Programmable Logic Controllers and their use in automation and manufacturing. • Robotic Systems. • AC/DC Electronic Circuits • AC/DC Electronics including the use of capacitors, resistors, transistors, diodes, inductors and LED's. • Fabrication using soldering techniques. • Fabrication of student printed circuit boards • Semiconductors and Digital Electronics <p>Area: 5175 SF Quantity: 1 Occupancy Load: 70 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers • Students</p>	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – ordinary hazard group 2.</p> <p>Plumbing: Plumbing connections for all noted plumbing fixtures and for all handwashing sinks. Tempered water for all noted emergency equipment. compressed air for all noted air tools or air drops.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control. Industrial exhaust system for laser cutter.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Plug in busway and cord reels for equipment power connections Emergency OFF pushbuttons, Shop equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops (112) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 03 <input checked="" type="checkbox"/>-Sound Field System - 03 <input checked="" type="checkbox"/>-Wall Clock- wired - 04 <input checked="" type="checkbox"/>-PA / Intercom System - 05
	<p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 03 <input checked="" type="checkbox"/>-Base Cabinet - 01 <input checked="" type="checkbox"/>-Sink - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 03 <input checked="" type="checkbox"/>-Teacher Chair - 03 <input checked="" type="checkbox"/>-High Bench - 02 <input checked="" type="checkbox"/>-Student Chair - 36 <input checked="" type="checkbox"/>-Student Worktable - 12 <input checked="" type="checkbox"/>-Metal Storage Shelving - 10 <input checked="" type="checkbox"/>-Tall Stool - 48</p>		<p style="text-align: center;">Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk Phone - 04 <input checked="" type="checkbox"/>-Document Camera - 03 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 03 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 05 <input checked="" type="checkbox"/>-Student Wireless Devices (48) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 03 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 02

Biotechnology

VOC-18

Room Data Sheet

6/16/21



Legend

*Equipment Vented to Exhaust Hood				*Includes Fire Blanket		# # On Overhead Reel					# # On Overhead Reel			

BIOTECHNOLOGY SCHEDULE



ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
BT-01	1	•		OWNER	GRAVITY CONVECTION OVEN		---	---	208	1	
BT-02	1	•		OWNER	INCUBATOR		---	---	208	1	
BT-03	1	•		OWNER	WATER BATH		---	---	120	1	
BT-04	1	•		OWNER	CENTRIFUGE		---	---	208	---	
BT-05	1	•		OWNER	ROCKER		---	---	120	1	
BT-06	1	•		OWNER	SINGLE DOOR REFRIGERATOR	AMERICAN BIOTECH SUPPLY #ABT-HC-23S-TS	---	---	208	1	
BT-07	1	•		OWNER	SINGLE DOOR ULTRA FREEZER	AMERICAN BIOTECH SUPPLY #ABT-115V-1786	---	---	208	1	
BT-08		•		OWNER	ELECTRONIC BALANCE		---	---	---	---	NO POWER
→ BT-09	12	•		G.C.	OVERHEAD SERVICE CARRIER	CIF "WING"	---	---	208/120	---	GAS/VACUUM/COMPRESSED AIR
BT-10	48	•		OWNER	SIT-STAND WORKSTATION	CIF "PINNACLE SERIES"	---	---	120	1	W/ C&P

NOTE:



Legend

 Ventilation to Exterior Required
 *Equipment Vented to Exhaust Hood
 Electrical Outlet / Voltage
120/220
 Compressed Air
 Water Connection

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Biotechnology VOC -18

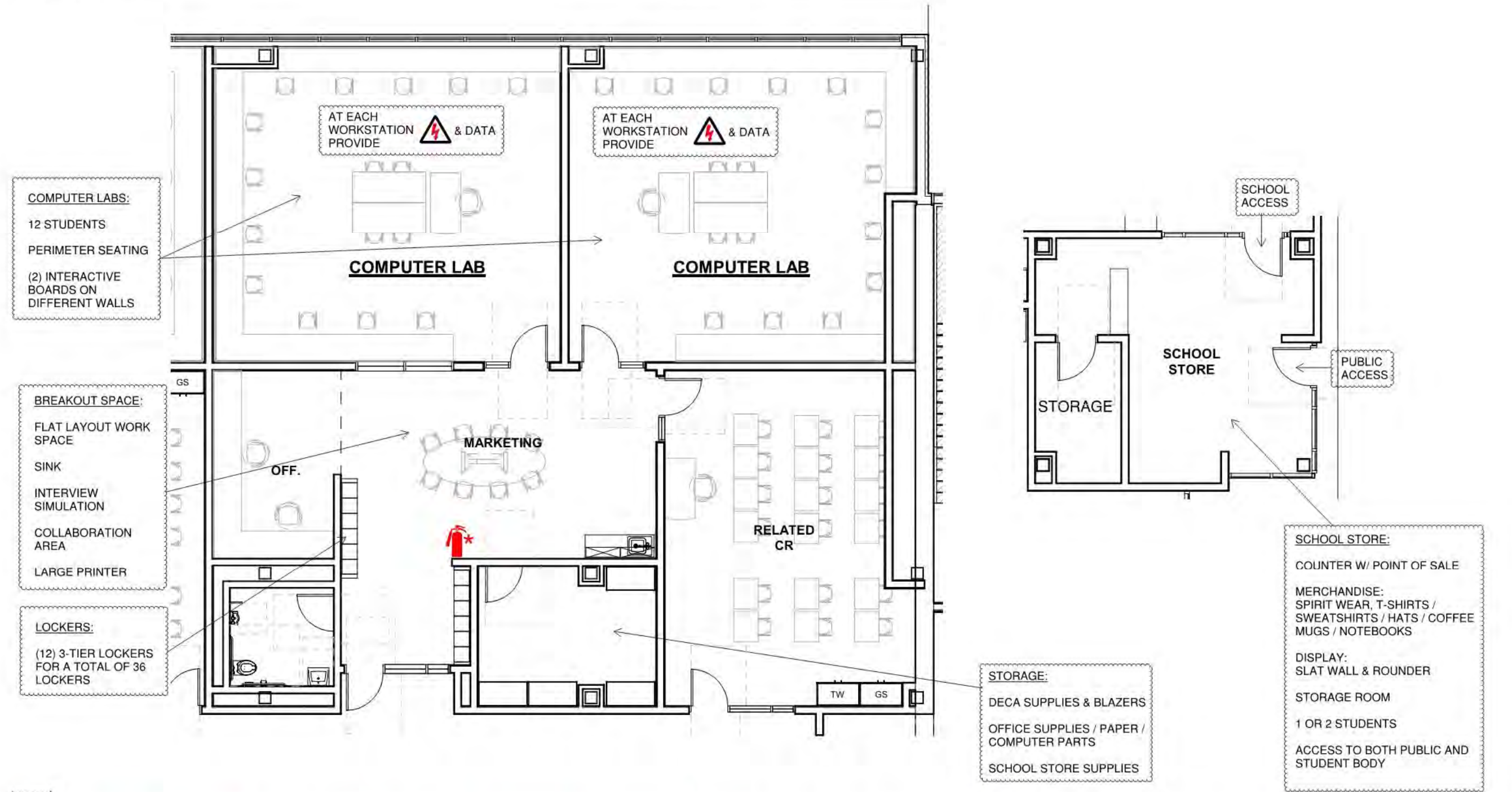
<p align="center">Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Biotechnology.</p> <p>Area:5135 SF Quantity: 1 Occupancy Load: 70 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers • Students</p> <p>Activities: • Research • Chemical Storage • Science Experiments • -</p>	<p align="center">Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p align="center">Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 15 <input checked="" type="checkbox"/>-Wall Cabinet - 15 <input checked="" type="checkbox"/>-Sink - 08 <input checked="" type="checkbox"/>-Refrigerator/Freezer - 02</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 06 <input checked="" type="checkbox"/>-Student Chair - 24 <input checked="" type="checkbox"/>-Student Desk - 24 <input checked="" type="checkbox"/>-Student Worktable - 24 <input checked="" type="checkbox"/>-Tall Stool - 48</p>	<p align="center">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – ordinary hazard group 1 in all lab type areas. Extra hazard in storage areas.</p> <p>Plumbing: Plumbing connections to all noted plumbing fixtures. Dedicated lab water and waste system where required for experiments. Tempered water for all emergency equipment. Dedicated lab grade compressed air system, lab gas system where noted as required.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General GFCI receptacles four each receptacle on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, 208V 3PH power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to shop. Plug in busway and cord reels for equipment power connections Emergency OFF pushbuttons, Shop equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p align="center">Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (22) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 05 <input checked="" type="checkbox"/>-PA / Intercom System - 08</p> <p align="center">Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 07 <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 05 <input checked="" type="checkbox"/>-Student Wireless Devices (48) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 01 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 02</p>
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Marketing

VOC-19

Room Data Sheet

6/16/21



Legend



Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Marketing VOC -19

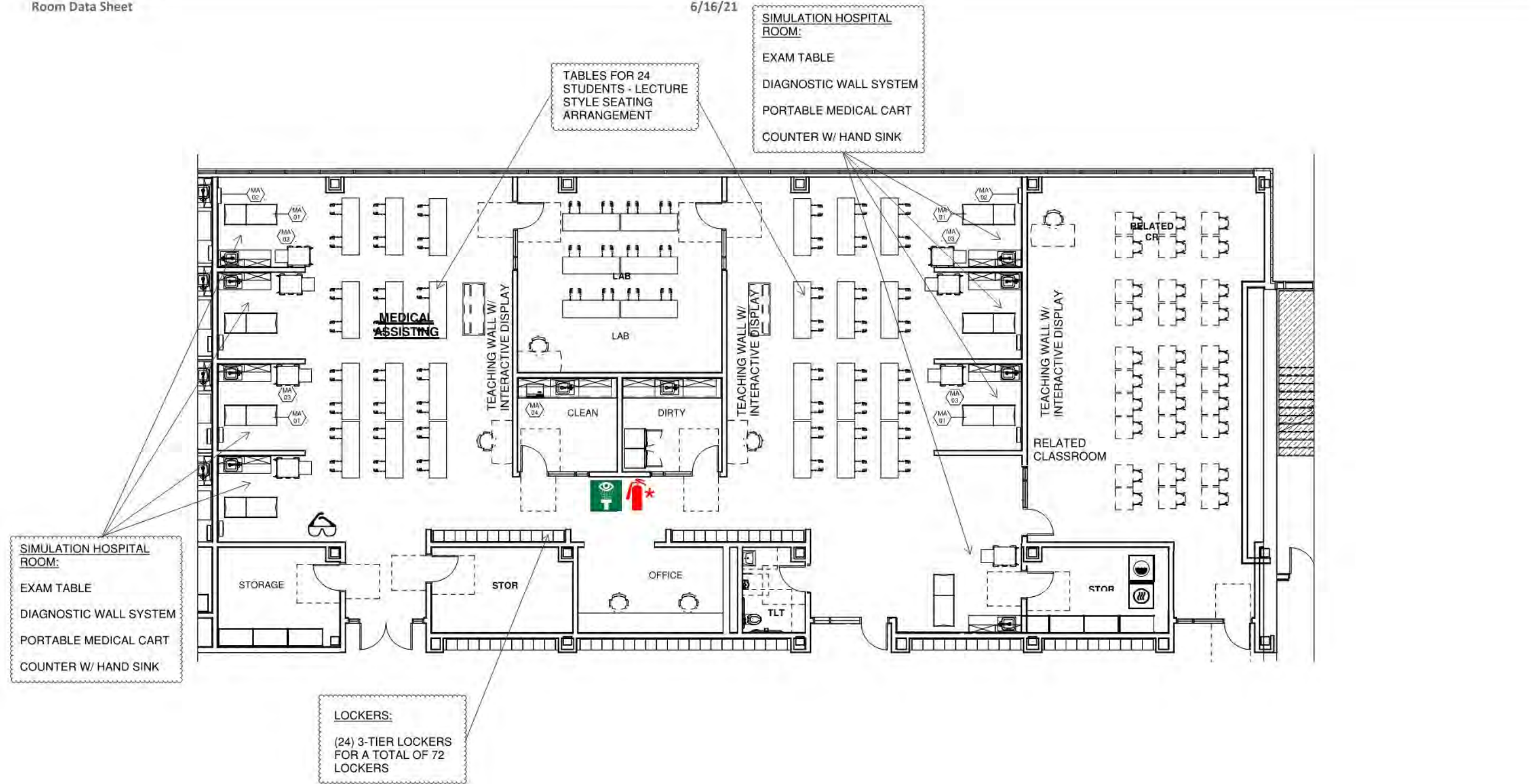
<p>Functional Criteria</p> <p>Description: Vocational curriculum providing theory and hands on instruction in Marketing.</p> <p>Area:2975 SF Quantity: 1 Occupancy Load: 35 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers • Students</p> <p>Activities: • Notes taking • Office Administration • Computer • Collaborative Learning • Study • Research</p>	<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input checked="" type="checkbox"/>-Base Cabinet - 02 <input checked="" type="checkbox"/>-Wall Cabinet - 02 <input checked="" type="checkbox"/>-Sink - 01</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input checked="" type="checkbox"/>-Worktable - 06 <input checked="" type="checkbox"/>-Student Chair - 53 <input checked="" type="checkbox"/>-Student Desk - 18 <input checked="" type="checkbox"/>-Lounge Seat - 02</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – light hazard</p> <p>Plumbing: Plumbing connections to all noted plumbing fixtures.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 35-50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles at teaching wall, receptacles on adjacent walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control</p> <p>Fire Alarm: Lens 75 CD, Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (80) - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 03 <input checked="" type="checkbox"/>-Sound Field System - 03 <input checked="" type="checkbox"/>-Wall Clock- wired - 06 <input checked="" type="checkbox"/>-PA / Intercom System - 07</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 02 <input checked="" type="checkbox"/>-VoIP Desk & Wall Phones - 06 <input checked="" type="checkbox"/>-Document Camera - 03 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - - 03 <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 05 <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>-Wireless sound field Media Connector - 03 <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01</p>
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Medical Assisting

Room Data Sheet

VOC-20

6/16/21



Legend


* Equipment Vented to Exhaust Hood				* Includes Fire Blanket		# On Overhead Reel					# On Overhead Reel			

Medical Assisting






VOC-20

Room Data Sheet

6/16/21

MEDICAL ASSISTING SCHEDULE 											
ITEM#	Q.T.Y.	NEW	EXIST.	OWNER/G.C.	DISCRIPTION	MAKE & MODEL	AMPS	HP	VOLT	PHASE	REMARKS:
MA-01	8	•		OWNER	EXAM TABLE	MIDMARK #622	---	---	120	1	CORD AND PLUG
MA-02	8	•		OWNER	DIAGNOSTIC WALL SYSTEM	WELCH ALLEN#77794-MSPOT	---	---	120	1	DIRECT CONNECTION
MA-03	8	•		OWNER	PORTABLE MEDICAL CART	DETECTO WISPER CART	---	---	---	---	
MA-04	1	•		OWNER	AUTOCLAVE, AUTOMATIC	TUTTNAUER, 10" #EZ10KP	10	---	230	---	

Legend

 Ventilation to Exterior Required
 *Equipment Vented to Exhaust Hood
 120/220 Electrical Outlet / Voltage
 Compressed Air
 Water Connection

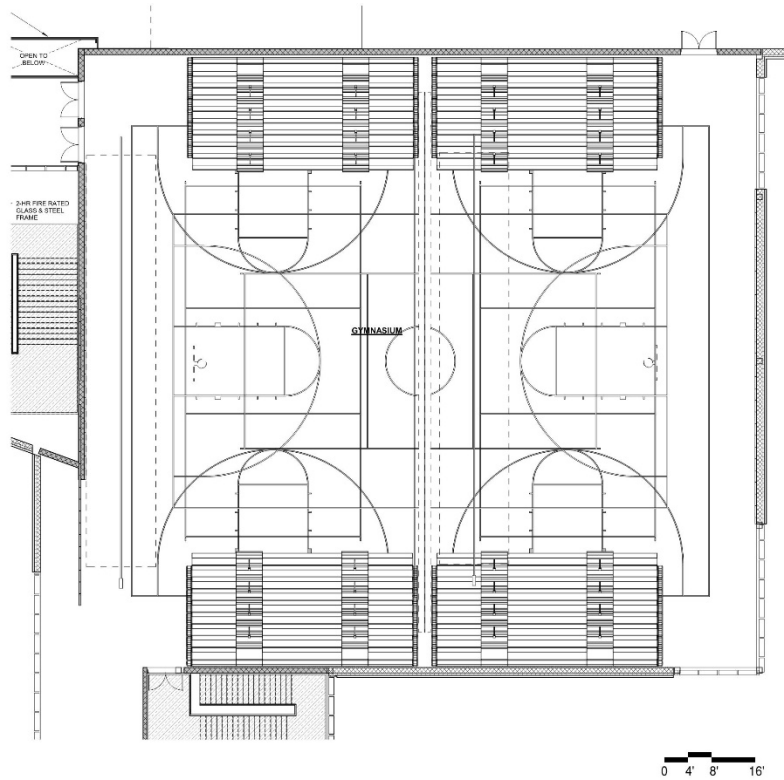
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Medical Assisting VOC -20

<p style="text-align: center;">Functional Criteria</p> <p>Description: Health Assisting</p> <p>Area:5780 SF Quantity: 1 Occupancy Load: 70 Students (Grades 10 – 12)</p> <p>Location Criteria Users: • Teachers • Students Activities: • Clinical Assessment • Project Based Learning • Research</p>	<p style="text-align: center;">Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p> <p style="text-align: center;">Technical Criteria-FFE</p> <p>Casework: ☒-Built in Counter - 01 ☒-Base Cabinet - 14 ☒-Wall Cabinet - 14 ☒-Sink - 10 ☒-Clothes Washer - 01 ☒-Clothes Dryer - 01</p> <p>Loose Furnishings: ☒-Teacher Desk - 03 ☒-Teacher Chair - 05 ☒-Worktable - 01 ☒-Student Lecture Style Chair - 60 ☒-Student Desk - 30 ☒-Student Worktable -30 ☒-Student Chair - 30</p>	<p style="text-align: center;">Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – light hazard</p> <p>Plumbing: Plumbing connections to all noted plumbing fixtures. Tempered water to all noted emergency equipment.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and sensible fan powered terminal unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm.</p> <p>Lighting: LED, 50, FC, 0-10V, dim, multi-level switching occupancy and photocell controls.</p> <p>Power: General receptacles with GFCI on all walls, one each 120V VAV circuit, one each 120V sound circuit, one each 277V lighting control, equipment power connections with disconnect switches per equipment schedule 480/277V 3PH and 208/120V 3PH panelboards and transformer dedicated to area Emergency OFF pushbuttons, equipment, mechanical and plumbing power connections.</p> <p>Fire Alarm: Lens 75 CD, Audio/Video devices.</p>	<p style="text-align: center;">Technical Criteria-Communication:</p> <p>☒-Data System-Data Drops (80) - ☒-Video Distribution System - ☒-Audio Visual System - 03 ☒-Sound Field System - 03 ☒-Wall Clock- wired - 04 ☒-PA / Intercom System - 07</p> <p style="text-align: center;">Technical Criteria-Technology</p> <p>☒-Teacher Computing-Laptop - 02 ☒-VoIP Desk Phone - 05 ☒-Document Camera - 03 ☒-Wall Mounted Interactive Flat Panel - 03 ☒-Wireless Access Point-Ceiling Mounted - 04 ☒-Student Wireless Devices (48) - ☒-Wireless sound field Media Connector - 03 ☒- Student Wireless Charging Cart - 02</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Gym PE -01



Functional Criteria	
<p>Description: Gymnasium Area: 12375 sf Quantity: 1</p> <p>Location Criteria Users:</p> <ul style="list-style-type: none"> • Teachers • Students • Community Members • Guests • - <p>Activities:</p> <ul style="list-style-type: none"> • Sport • Exercise • Games • Assemblies • - • - 	<p>Adjacency: Centrally and accessibly located by community members and the public. Grouped with other public access spaces such as the Auditorium.</p> <p>Related Spaces: Locker Rooms, Fitness Rooms, Weight Room</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

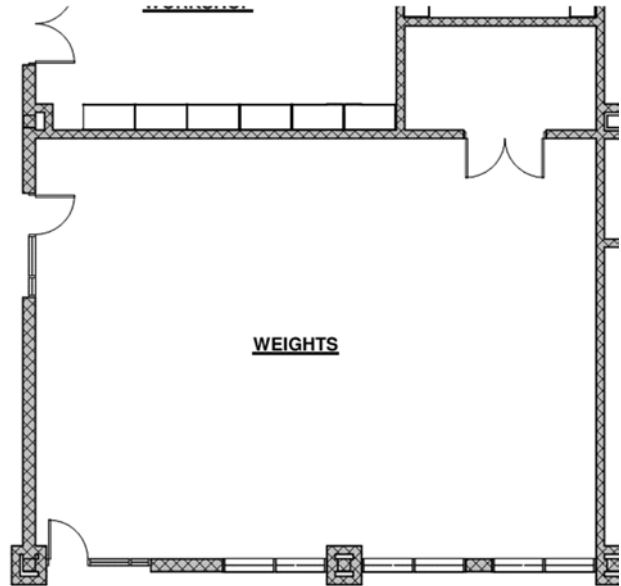
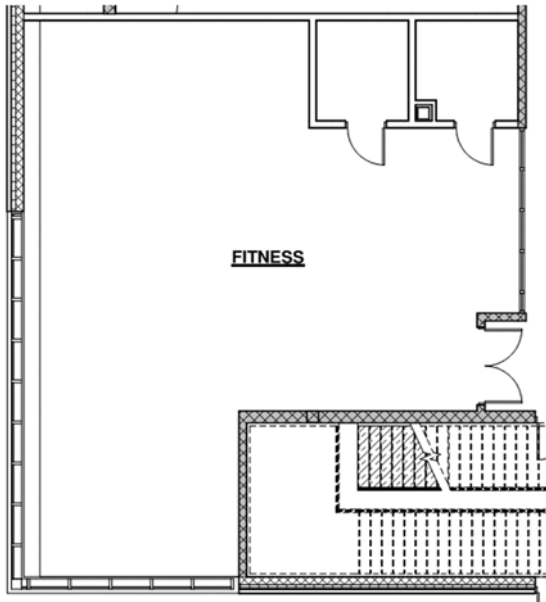
Gym PE -01

<p>Technical Criteria-Architectural</p> <p>Floor: Wood Athletic Flooring Walls: Epoxy Paint Ceiling: Exposed Painted Structural Steel & Metal Deck Doors: Double Door Flush Metal Acoustical: Acoustic Metal Deck Ceiling and Acoustical Impact Resistant Wall Panels.</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers - ordinary hazard.</p> <p>Plumbing: None</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 09 <input type="checkbox"/>-Data System-Fiber Optic Drops - 04 <input type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input checked="" type="checkbox"/>-Audio Visual System Rack - 01 <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 02 <input checked="" type="checkbox"/>-PA / Intercom System -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: HVAC through dedicated rooftop unit, space ventilation controlled using carbon dioxide sensor and thermostat (DDC).</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50-60 FC, caged, lensed diffused high bay dimmable fixtures.</p> <p>Power: Four each 208V/20A circuits for moveable bleachers with control wiring and floor boxes, six each floor boxes for shot clocks with conduit to controllers, two each 208V/30A circuits for gym curtain, six each 120V/30A circuit for basketball back stop switches and controls, one each 208V/30A circuit for multi-level with controls, four each 120V convenience circuits with devices.</p> <p>Fire Alarm: Four each pull stations, eight each 75 CD Audio/Visual devices.</p> <hr/> <p>Fixed Equipment:</p> <ul style="list-style-type: none"> • Retractable ADA Bleachers • Main Basketball Court with Electric Folding Basketball Hoops • Two Side Basketball Courts with Electric Folding Basketball Hoops • Main Volleyball Court with Net Sleeves • Center Divider Net • Scoreboards either side of Main Basketball Court 	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Teacher Computing-Laptop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - 02 <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 02 <input checked="" type="checkbox"/>- CCTV Camera - 04</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

PE Alternatives Weights/ Fitness

PE -02



Functional Criteria

Description: Fitness and Weight Rooms
 Area: 1493 sf
 Quantity: 2
 Occupancy Load: 24

Location Criteria

- Users:
- Teachers
 - Students
 - Aides
 - Staff
 - -
- Activities:
- Fitness
 - -
 - -
 - -

Adjacency:

Locker Room, Health Classroom

Related Spaces: Locker Room, Gymnasium

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

PE Alternatives Weights/ Fitness

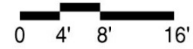
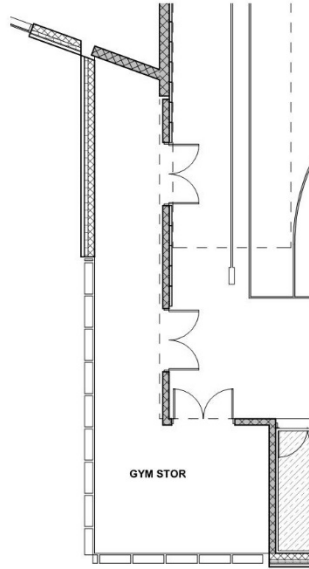
PE -02

<p>Technical Criteria-Architectural</p> <p>Floor: Athletic Sports Flooring Walls: Epoxy Paint & Painted CMU Ceiling: ACT-1 (2x2) High NRC Doors: Double Door Flush Metal Windows: Aluminum Framed Glazing System</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and VRF fan coil unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 35 FC, lensed diffused dimmable fixtures.</p> <p>Power: Four each 208V/20A circuits for treadmills, 120V/20A circuits for treadmills, ellipticals and weight machines. Four receptacles per wall.</p> <p>Fire Alarm: 75 CD Audio/Visual devices.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Audio Visual System - 01 <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 05</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Teacher Computing-Laptop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 02 <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<hr/>	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Gym Storeroom

PE -03



Functional Criteria	
Description: Gym equipment storage	Adjacency: Gymnasium
Area: 495 sf	Related Spaces Gymnasium
Quantity: 1	
Location Criteria	
Users:	
• Staff	
• -	
• -	
• -	
Activities:	
• Storage	
• -	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

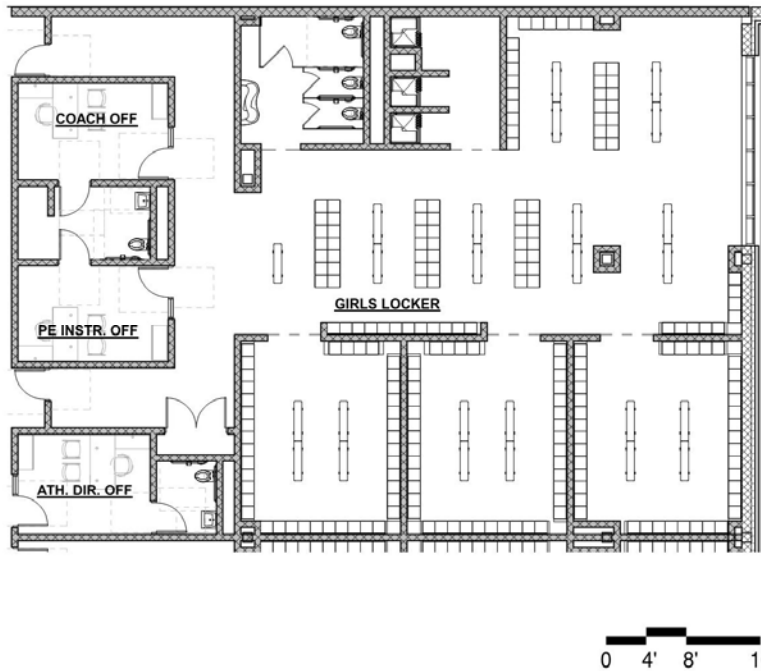
Gym Storeroom

PE -03

<p>Technical Criteria-Architectural</p> <p>Floor: Wood Athletic Flooring Walls: Epoxy Paint Ceiling: Exposed Painted Structural Steel & Metal Deck</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - ordinary Hazard.</p> <p>Plumbing: None</p> <p>HVAC: Space is Exhausted using Heat recovery.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 35 FC Occupancy Sensor Switching,</p> <p>Power: One each 120V Circuit</p> <p>Fire Alarm: Two each 30cd audio/visual signals.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input checked="" type="checkbox"/>-Audio Visual System Rack - 01 <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Locker Rooms - Boys / Girls w/ Toilets PE -04



<p style="text-align: center;">Functional Criteria</p> <p>Description: Changing and Washing for Sport and Fitness Area: 2858 sf Quantity: 2</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Students• -• -• - <p>Activities:</p> <ul style="list-style-type: none">• Changing and Showering• -• -• -	<p>Adjacency: Locker Room, Fitness, Gymnasium, Weight Room</p>
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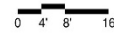
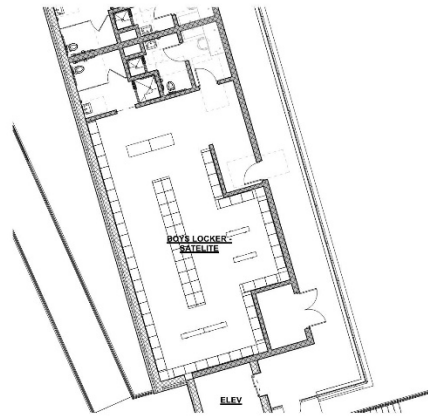
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Locker Rooms - Boys / Girls w/ Toilets PE -04

<p>Technical Criteria-Architectural</p> <p>Floor: Epoxy Flooring Walls: Epoxy Paint & Ceramic Tile Full Height Ceiling: Moisture Resistant GWB Ceiling Painted Doors: Single Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: Gang Toilet Room with Showers.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (30) - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 08 <input checked="" type="checkbox"/>-PA / Intercom System (28) -</p>
<p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 	<p>HVAC:</p> <p>Heating, ventilating, and air conditioning with HRU and VRF fan coil unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical:</p> <p>Lighting: LED. 50 FC occupancy sensor control, three each shower lights.</p> <p>Power: One each 120V circuit, for each hand dryer circuit, 120V circuits and GFCI receptacles for toilets, automatic faucet and flush controls 120v power for offices.</p> <p>Fire Alarm: Five each 30 CD Audio Visual devices.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing-Laptop - 03 <input checked="" type="checkbox"/>-VoIP Desk Phone - 03 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Flat Panel - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 10 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Satelite Locker Rooms PE -05



Functional Criteria

Description: Changing and Washing for Sport and Fitness

Area: 1363 sf

Quantity: 2

Location Criteria

Users:

- Students

• -

• -

• -

Activities:

- Changing and Showering

• -

• -

• -

Adjacency:

Athletic Sports Fields

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

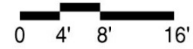
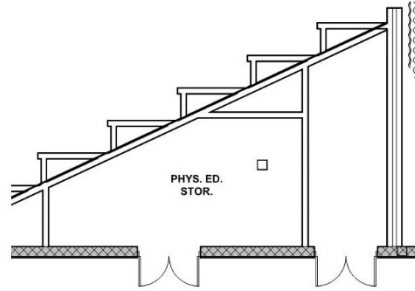
Satelite Locker Rooms PE -05

<p>Technical Criteria-Architectural</p> <p>Floor: Epoxy Flooring Walls: Epoxy Paint & Ceramic Tile Full Height Ceiling: Moisture Resistant GWB Ceiling Painted</p> <hr/> <p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: Gang Toilet Room with Showers.</p> <p>HVAC: Heating and ventilating only via an energy recovery ventilator and electric unit heaters.</p> <p>Electrical: Refer to lighting, power, and fire alarm below</p> <p>Lighting: LED. 50 FC occupancy sensor control, three each shower lights.</p> <p>Power: One each 120V circuit, for each hand dryer circuit, two each 120V circuit for storage (two times). 120V circuits and GFCI receptacles for toilets, automatic faucet and flush controls 120v power for offices.</p> <p>Fire Alarm: Five each 30 CD Audio Visual devices.</p> <hr/>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 04 <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Teacher Computing-Laptop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Phys. Ed. Storage & Closets

PE -06



Functional Criteria	
Description: Gym equipment storage	Adjacency: Gymnasium
Area: 275 sf	
Quantity: 1	
Occupancy Load:	
Location Criteria	
Users:	
• Staff	
• -	
• -	
• -	
Activities:	
• Storage	
• -	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Phys. Ed. Storage & Closets

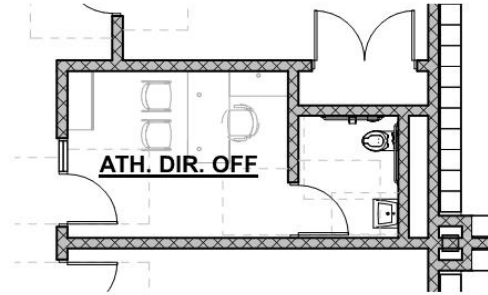
PE -06

<p>Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Epoxy Paint Ceiling: Exposed Painted Structural Steel & Metal Deck</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - ordinary Hazard.</p> <p>Plumbing: None</p> <p>HVAC: Space is Exhausted using Heat recovery.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 35 FC Occupancy Sensor Switching,</p> <p>Power: One each 120V Circuit</p> <p>Fire Alarm: Two each 30cd audio/visual signals.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input checked="" type="checkbox"/>-Audio Visual System Rack - 01 <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input type="checkbox"/>-PA / Intercom System Ceiling Speaker - <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Athletic Director's Office

PE -07



Functional Criteria

Description: Office for Athletic Director

Area: 170 sf

Quantity: 1

Location Criteria

Users:

- Staff

• -

• -

• -

Activities:

- Meeting

- Filing

- Phone Calls

- Work

• -

• -

• -

Adjacency:

Locker Rooms, Trainer, Health Classroom

Related Spaces: Athletics Program

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Athletic Director's Office

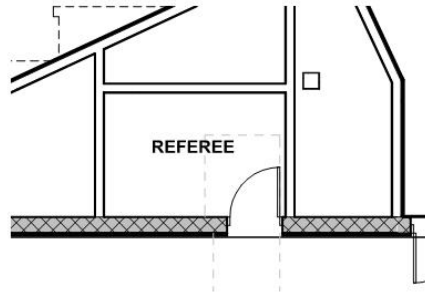
PE -07

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted CMU Ceiling: ACT-1 (2x2) High NRC Acoust & Moisture Resistant GWB- Painted Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing:</p> <p>HVAC:</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 02 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Voice System-Fax Line - 01 <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input checked="" type="checkbox"/>- Duress Alert System Button - 01 <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Official Trans Locker Rm W/ Shower & Toilet

PE -08



<p style="text-align: center;">Functional Criteria</p> <p>Description: Referee Changing Area Area: 80 sf Quantity: 1 Occupancy Load: 1</p> <p>Location Criteria Users: • Referee</p>	<p>Adjacency: Locker Rooms</p> <p>Related Spaces: Athletic Department</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Official Trans Locker Rm W/ Shower & Toilet

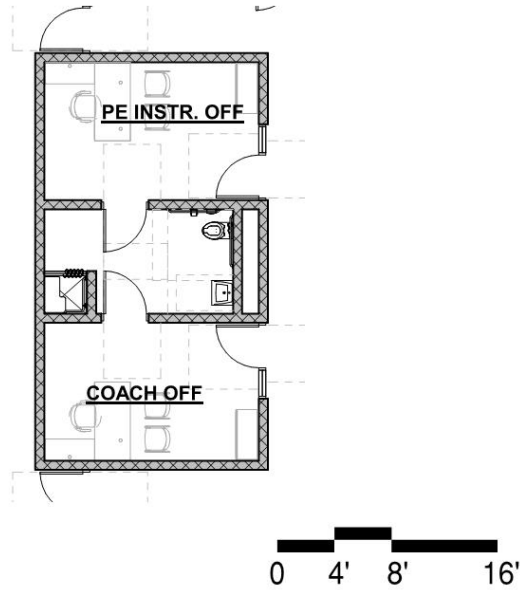
PE -08

<p>Technical Criteria-Architectural</p> <p>Floor: Epoxy Flooring Walls: Epoxy Paint Ceiling: Act High NRC Rating Doors: Barn Door Windows: - Acoustical:</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - ordinary Hazard.</p> <p>Plumbing: None</p> <p>HVAC: Space is Exhausted using Heat recovery.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 35 FC Occupancy Sensor Switching,</p> <p>Power: One each 120V Circuit</p> <p>Fire Alarm: Two each 30cd audio/visual signals.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input checked="" type="checkbox"/>-Audio Visual System Rack - 01 <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input type="checkbox"/>-PA / Intercom System Ceiling Speaker - <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

PE Instructor & Coach Offices W/ Shower & Toilet

PE -09



<p style="text-align: center;">Functional Criteria</p> <p>Description: Work area w/ toilet and Shower Area: 185 sf Quantity: 4 Occupancy Load:</p> <p>Location Criteria Users: • Staff • - • -</p> <p>Activities: • Changing and Showering • Fitness • - • -</p>	<p>Adjacency: Locker Room, Fitness, Health Classroom</p> <p>Related Spaces: Locker Room, Fitness, Health Classroom</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

PE Instructor & Coach Offices W/ Shower & Toilet

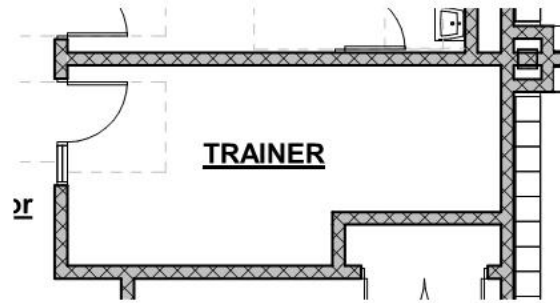
PE -09

<p>Technical Criteria-Architectural</p> <p>Floor: Epoxy Flooring Walls: Epoxy Paint & Ceramic Tile Base W/ Ceramic tile Wainscot Ceiling: ACT-1 (2x2) High NRC Acoust & Moisture Resistant GWB- Painted Doors: Single Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: Toilet room with shower.</p> <p>HVAC: Heating, ventilating, and air conditioning with HRU and VRF fan coil unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED. 50 FC occupancy sensor control, three each shower lights.</p> <p>Power: One each 120V circuit. GFCI receptacles. Office receptacles</p> <p>Fire Alarm: Three each 30 CD Audio Visual devices.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 08 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 02 <input checked="" type="checkbox"/>-PA / Intercom System - 02 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 02</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 02 <input checked="" type="checkbox"/>-VoIP Desk Phone - 02 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input checked="" type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 02 <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Trainer

PE -10

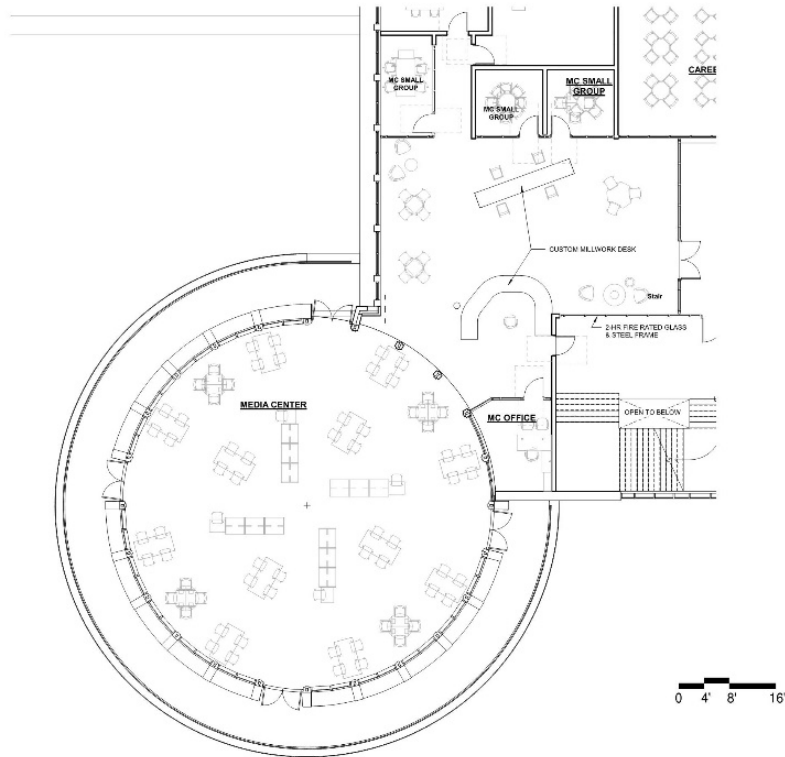


<p style="text-align: center;">Functional Criteria</p> <p>Description: Changing and Washing for Sport and Fitness Area: 190 sf Quantity: 1 Occupancy Load:</p> <p>Location Criteria Users: • Students • Staff • - • -</p> <p>Activities: • Meetings • Shower • Toilet • -</p>	<p>Adjacency: Locker Room, Health Classroom</p> <p>Related Spaces: Locker Room, Health Classroom</p>
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<p>Technical Criteria-Architectural</p> <p>Floor: Rubber Tile Walls: Epoxy Paint Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Single Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler light hazard.</p> <p>Plumbing: None.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 03 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: Heating, ventilating, and air conditioning with HRU and VRF fan coil unit. Individual room thermostat and CO2 sensor (DDC sensor) for space temperature control and ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC 0-10V occupancy sensor switching.</p> <p>Power: 120v circuits with GFCI receptacles for training tables, washer and hydrotherapy equipment. 208V/30A circuit for clothes dryer.</p> <p>Fire Alarm: 15 CD Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Media Center / Reading Rm MC -01



<p style="text-align: center;">Functional Criteria</p> <p>Description: Flexible learning, studying and reading space. Space to accommodate printed & electronic media resources.</p> <p>Area: 4150 sf</p> <p>Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none"> • Students • Teachers • Aides • Guests • - <p>Activities:</p> <ul style="list-style-type: none"> • Print & Electronic Research • Individual & Small Group Study • Library Skills Instruction & Practice • - 	<p>Adjacency: Centrally Located for Student Population</p> <p>Related Space: Media Center Small Group & Offices and Career Center</p>
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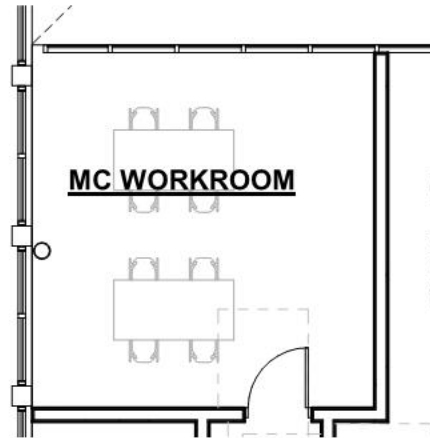
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Media Center / Reading Rm MC -01

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Wood Veneer Panels Ceiling: ACPCP (Acoustical preformed Ceiling Panels) Doors: Aluminum Frame Glazed Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: HVAC through multi-zone rooftop HVAC system, space carbon dioxide sensing for ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, 0-10V dim, multi-level switching occupancy sensor control.</p> <p>Power: 10 each poke-thru with power and data, six each 120V convenience circuits.</p> <p>Fire Alarm Six each 30 cd Audio/Visual devices.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops(20) - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 02 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 12 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input checked="" type="checkbox"/>-Teacher Chair - 02 <input checked="" type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 14 <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input checked="" type="checkbox"/>-Café Table - 02 <input checked="" type="checkbox"/>-Stool - 08 <input type="checkbox"/>-Tall Stool - <input checked="" type="checkbox"/>-Library Shelving - 10 <input checked="" type="checkbox"/>-Lounge Seat - 06</p>		<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Digital Signage Flat panel - 01 <input checked="" type="checkbox"/>-IPTV Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 05 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input checked="" type="checkbox"/>- CCTV Camera - 04</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Work room MC -02



Functional Criteria	
Description: Provide a Flexible Space to Accommodate Daily Tasks of the Media Center Staff.	Adjacency: Media Center
Area: 320 sf	Related Space: Media Center
Quantity: 1	
Location Criteria	
Users:	
• Teachers	
• Aides	
• Media Center Staff	
• -	
Activities:	
• Cataloging of Media Center Collection	
• Research	
• -	
• -	

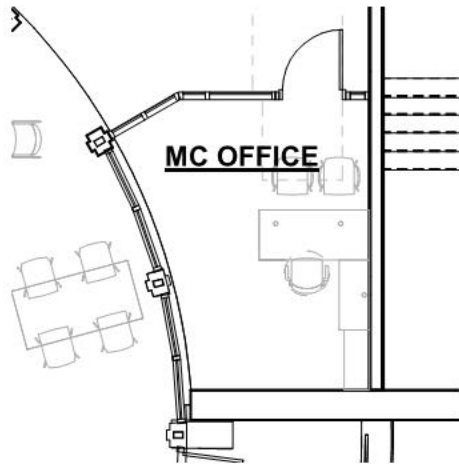
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Work room MC -02

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted GWB Ceiling: ACT - 4 (2X6 High NRC Tegular Acous. Tile Doors: Aluminum Frame Glazed</p> <hr/> <p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input checked="" type="checkbox"/>-Base Cabinet - 03 <input checked="" type="checkbox"/>-Wall Cabinet - 03 <input checked="" type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 04 <input type="checkbox"/>-File Cabinet - <input checked="" type="checkbox"/>-Bookcase - 03 <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 02 <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: HVAC through multi-zone rooftop HVAC system, space carbon dioxide sensing for ventilation control.</p> <p>Electrical: Refer to lighting, power and fire alarm below.</p> <p>Lighting: LED, 50 FC multi-level switching occupancy sensor control</p> <p>Power: Seven each poke-thru with power and data, four each 120V convenience circuits. Copier/printer circuits</p> <p>Fire Alarm One each 30 cd Audio/Visual device</p> <hr/>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops - 05 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control - 01 <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Media Center Office MC -03



Functional Criteria

Description: Provide a space to accommodate daily tasks of Librarian.

Area: 160 sf

Quantity: 1

Location Criteria

Users:

- Students
- Teachers
- Aides

• -

• -

Activities:

- Computer Work
- Small Group Meetings

• -

• -

Adjacency: Media Center

Related Space: Media Center

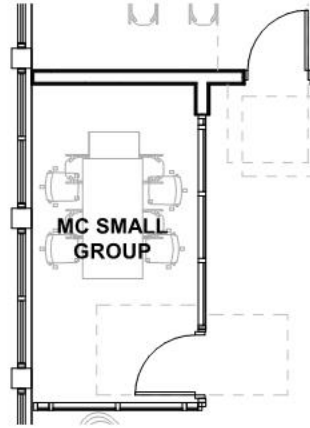
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Media Center Office MC -03

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Aluminum Frame Glazed</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input type="checkbox"/>-PA / Intercom System Speaker - <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input type="checkbox"/>-Office "L" Desk - 01 <input type="checkbox"/>-Office Task Chair - 01</p>	<p>HVAC: HVAC through multi-zone rooftop HVAC system, space carbon dioxide sensing for ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, 0-10V dim, multi-level switching occupancy sensor control.</p> <p>Power: Office receptacles, 120V convenience circuits.</p> <p>Fire Alarm One 30 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Small Group Rooms MC -04



<p style="text-align: center;">Functional Criteria</p> <p>Description: For small groups. Area: 117 sf Quantity: 3</p> <p>Location Criteria Users: • Students • Teachers • Aides • - • -</p> <p>Activities: • Group Work • - • - • -</p>	<p>Adjacency: Media Center Related Space: Media Center</p>
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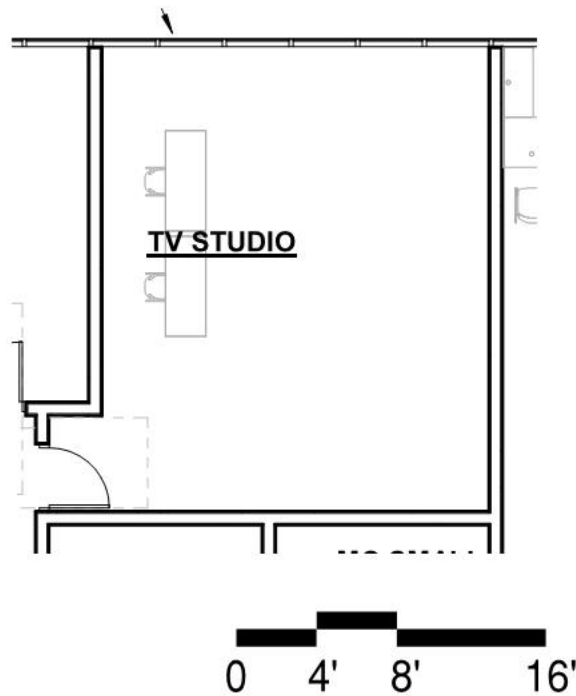
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Small Group Rooms MC -04

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted Impact Resistant GWB Ceiling: ACT - 4 (2X6 High NRC Tegular Acous. Tile Doors: Aluminum Frame Glazed</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: None.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 02 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control - 02</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 04 <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 01 <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: HVAC through multi-zone rooftop HVAC system, space carbon dioxide sensing for ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below</p> <p>Lighting: LED, 50- FC, occupancy sensor controls, 0-10V dim.</p> <p>Power: Three each 120V convenience circuits.</p> <p>Fire Alarm One each 30 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>

Project Room/ TV Studio/ Storage

MC -05



Functional Criteria

Description: Television Production Design and Direction, Producing, Camera Operation, Post Production Sound & Video Editing, Camera & Sound Operation.

Area: 475 sf

Quantity: 1

Location Criteria

Users:

- Students
- Teachers
- Aides

- -
- -

Activities:

- Pre-Production
- Television Production
- Post Production Sound & Video Editing

- -
- -

Adjacency:

Related Space: Media Center

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Project Room/ TV Studio/ Storage

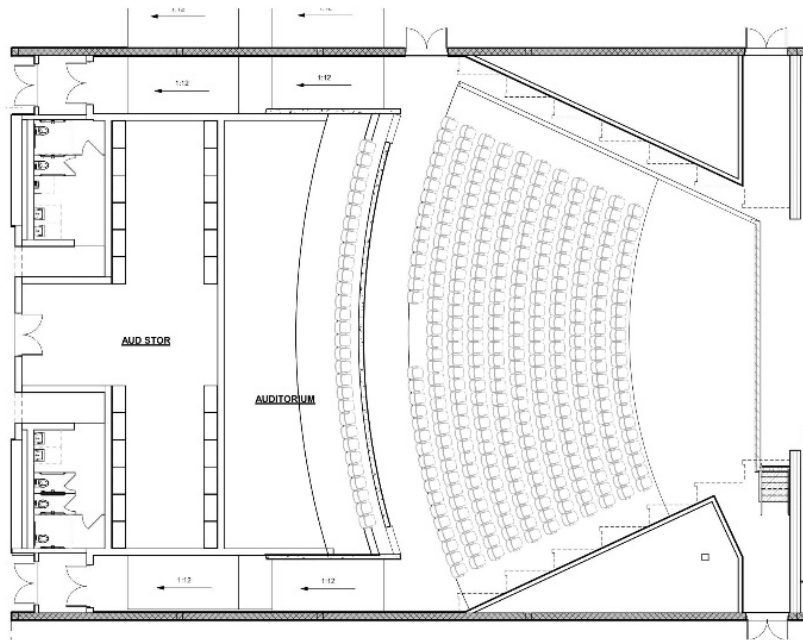
MC -05

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted Impact Resistant GWB Ceiling: Exposed Painted Structural Steel & Acoustical Metal Deck Doors: Single Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: HVAC through multi-zone rooftop HVAC system, space carbon dioxide sensing for ventilation control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, 0-10V dim, multi-level switching occupancy sensor control.</p> <p>Power: 10 each poke-thru with power and data, six each 120V convenience circuits. Power television equipment and theatrical lighting and controls.</p> <p>Fire Alarm Two each 30 cd Audio/Visual devices.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - 02 <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input type="checkbox"/>-PA / Intercom System Speaker - <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 04 <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 02 <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Auditorium-Presentation/Performance Sp

AUD -01



0 4' 8' 16'

Functional Criteria

Description: MAAB Compliant accessible auditorium
Area: 7475 sf
Quantity: 1
Occupancy Load: 750

Location Criteria

- Users:
- Students
 - Teachers
 - Guests
 - Community Members
- Activities:
- Performances
 - Assemblies
 - Meetings
 - Presentation

Adjacency:

Centrally locate, easily accessible by community members and the public. Grouped with other public access spaces such as the Gymnasium.

Related Spaces: Stage, Auditorium Storage, Dressing Rooms

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

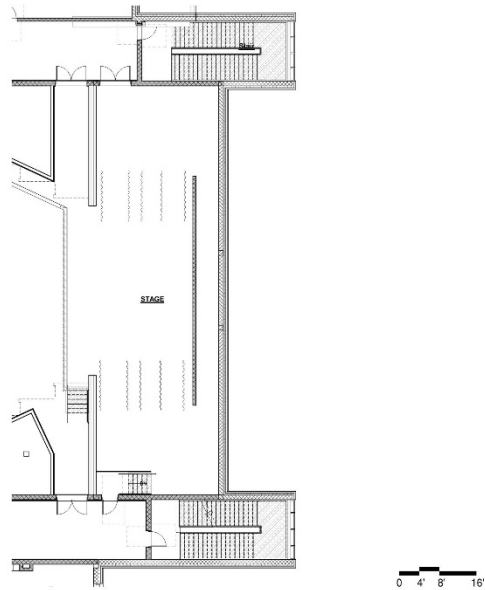
Auditorium-Presentation/Performance Sp

AUD -01

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet / Sealed Concrete</p> <p>Walls: Decorative Wood Panels & Fabric Wrapped Acoustical Panels</p> <p>Ceiling: Accoustical Clouds</p> <p>Doors: Flush Wood Doors w/ Painted Metal Frames</p> <p>Windows: None</p> <p>Acoustical: Absorptive & Reflective Surfaces</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection:</p> <p>Sprinkler - ordinary hazard most location except at seating area. Coverage above and below ceiling if there are any ceiling opening. Ordinary hazard group 2 at stage plus hose connections.</p> <p>Plumbing:</p> <p>None.</p> <p>HVAC: HVAC provide by dedicated until w/ demand controlled ventilation.</p> <p>Electrical:</p> <p>Refer to lighting, power, and fire alarm below.</p> <p>Lighting:</p> <p>LED, 50 FC Multi-level switching, 0-10V dim interface modules.</p> <p>Power:</p> <p>10 each 120V circuits for Aisle lighting, four each 120v circuits for event controls, four each 120V convenience circuits. Power for theatrical and house lighting dimming rack and associated controls. Power for motorized rigging.</p> <p>Fire Alarm:</p> <p>12 each 75 cd Audio/Visual devices, three each pull station.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 13</p> <p><input checked="" type="checkbox"/>-Data System-Fiber Optic Drops - 04</p> <p><input type="checkbox"/>-Video Distribution System -</p> <p><input checked="" type="checkbox"/>-Audio Visual System - 01</p> <p><input checked="" type="checkbox"/>-Local Sound System - 01</p> <p><input checked="" type="checkbox"/>-Assistive Listening System - 01</p> <p><input type="checkbox"/>-Wall Clock- wired -</p> <p><input checked="" type="checkbox"/>-PA / Intercom System (25) -</p> <p><input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework:</p> <p><input type="checkbox"/>-General Storage Cabinet -</p> <p><input type="checkbox"/>-Teacher Wardrobe Cabinet -</p> <p><input type="checkbox"/>-Mailbox Assembly -</p> <p><input type="checkbox"/>-Built in Counter -</p> <p><input type="checkbox"/>-Base Cabinet -</p> <p><input type="checkbox"/>-Wall Cabinet -</p> <p><input type="checkbox"/>-Sink -</p> <p><input type="checkbox"/>-Tote Tray Cabinet -</p> <p><input type="checkbox"/>-Kiln -</p> <p><input type="checkbox"/>-Refrigerator/Freezer -</p> <p><input type="checkbox"/>-Dishwasher -</p> <p><input type="checkbox"/>-Microwave -</p> <p><input type="checkbox"/>-Oven -</p> <p><input type="checkbox"/>-Clothes Washer -</p> <p><input type="checkbox"/>-Clothes Dryer -</p> <p><input type="checkbox"/>-Fume Hood -</p> <p><input type="checkbox"/>-Safety Cabinet -</p> <p><input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings:</p> <p><input type="checkbox"/>-Teacher Desk -</p> <p><input type="checkbox"/>-Teacher Chair -</p> <p><input type="checkbox"/>-Side Chair -</p> <p><input type="checkbox"/>-File Cabinet -</p> <p><input type="checkbox"/>-Bookcase -</p> <p><input type="checkbox"/>-Teacher Lectern -</p> <p><input type="checkbox"/>-Worktable -</p> <p><input type="checkbox"/>-Student Chair -</p> <p><input type="checkbox"/>-Student Desk -</p> <p><input type="checkbox"/>-Student Worktable -</p> <p><input type="checkbox"/>-Student Sit Stand -</p> <p><input type="checkbox"/>-Conference Table -</p> <p><input type="checkbox"/>-Metal Storage Shelving -</p> <p><input type="checkbox"/>-Cafeteria Table -</p> <p><input type="checkbox"/>-Café Table -</p> <p><input type="checkbox"/>-Stool -</p> <p><input type="checkbox"/>-Tall Stool -</p> <p><input type="checkbox"/>-Library Shelving -</p> <p><input type="checkbox"/>-Lounge Seat -</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop -</p> <p><input type="checkbox"/>-VoIP Wall Phone -</p> <p><input type="checkbox"/>-Wireless Media Connector for Sound Field -</p> <p><input type="checkbox"/>-System -</p> <p><input type="checkbox"/>-Document Camera -</p> <p><input type="checkbox"/>-Wall Mounted Interactive Flat Panel -</p> <p><input type="checkbox"/>-Wireless Video Device -</p> <p><input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 04</p> <p><input type="checkbox"/>-Teacher Wireless Devices -</p> <p><input type="checkbox"/>-Student Wireless Devices -</p> <p><input type="checkbox"/>-Wireless sound field Media Connector -</p> <p><input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light -</p> <p><input type="checkbox"/>- Intrusion Detection Motion Sensor -</p> <p><input checked="" type="checkbox"/>- CCTV Camera - 04</p>	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Stage AUD -02



<p style="text-align: center;">Functional Criteria</p> <p>Description: Music and drama presentations, assemblies and meetings. Area: 1610 sf Quantity: 1 Occupancy Load:</p> <p>Location Criteria Users: • Students • Teachers • Guests • Community Members • - • -</p> <p>Activities: • Performances • Assemblies • Meetings • Presentation • -</p>	<p>Adjacency: Auditorium</p> <p>Related Spaces: Auditorium, Dressing Room & Auditorium Storage</p>
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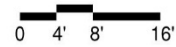
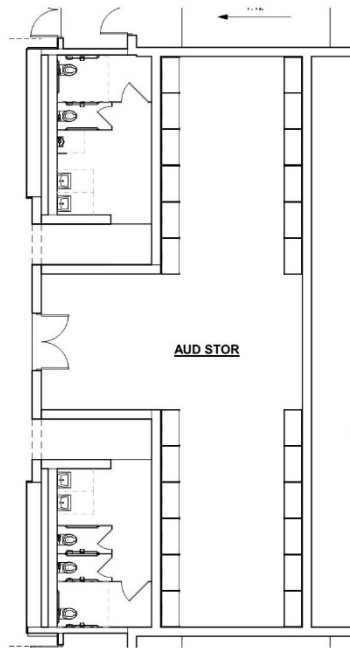
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Stage AUD -02

<p>Technical Criteria-Architectural</p> <p>Floor: Wood Sprung Stage Flooring Walls: Epoxy Paint Ceiling: Exposed Painted Structural Steel & Metal Deck Doors: Double Door Flush Metal Windows: None</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - ordinary hazard group 2 plus hose connection on both sides of stage.</p> <p>Plumbing: None.</p> <p>HVAC: Dedicated HVAC system w/ demand controlled ventilation.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 40 FC multi-level switching, occupied sensor control.</p> <p>Power: Once each 208V/100A service to stage curtain controller, four each 120V stage circuits, two each 120V circuits for stage equipment. Floor pockets for power and theatrical lighting.</p> <p>Fire Alarm: Four each 75cd audio/visual signals.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 08 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - 01 <input checked="" type="checkbox"/>-Local Intercom System Cabling - 01 <input checked="" type="checkbox"/>-Local Sound System Rack - 02 <input type="checkbox"/>-Wall Clock- wired - <input type="checkbox"/>-PA / Intercom System - <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Flat Panel - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>SR-01 Manually Operated Main Valance -1 SR-02 Manually Operated Main Draw -1 SR-03 Manually Operated Border Light -1 SR-04 Manually Operated Border Curtain -1 SR-05 Manually Operated Leg Curtain -1 SR-06 Manually Operated Spare Pipe -1 SR-07 Manually Operated Border Light -1 SR-08 Manually Operated Intermediate Draw - 1 SR-09 Manually Operated Spare Batten -1 SR-10 Manually Operated Border Curtain -1 SR-11 Manually Operated Border Light -1 SR-12 Manually Operated Spare Batten -1 SR-13 Manually Operated Rear Draw -1</p>	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Auditorium Storage AUD -03



<p style="text-align: center;">Functional Criteria</p> <p>Description: To provide a space for storage of performance related items and equipment.</p> <p>Area: 580 sf</p> <p>Quantity: 1</p> <p>Occupancy Load: 0</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none"> • Students • Teachers • Staff • - <p>Activities:</p> <ul style="list-style-type: none"> • Storage for equipment, props, costumes and set design materials • - • - • - 	<p>Adjacency: Auditorium, Stage</p> <p>Related Spaces: Auditorium</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

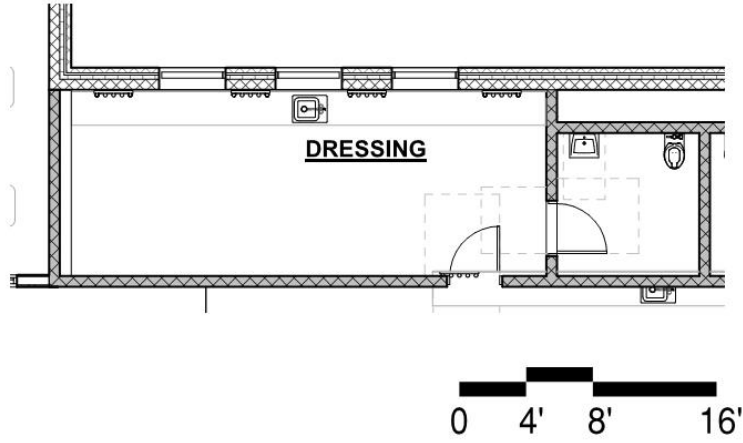
Auditorium Storage AUD -03

<p>Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Epoxy Paint Ceiling: - Doors: Double Door Flush Metal Windows: None</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler Ordinary hazard group 2.</p> <p>Plumbing: Plumbing connections for nearby toilet rooms.</p> <p>HVAC: Ventilation and temperature control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 35 FC, occupancy sensor switching controls.</p> <p>Power: Two each 120V convenience circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 02 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System - 02 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input checked="" type="checkbox"/>-Metal Storage Shelving - 15 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Make-up/Dressing Green Rooms

AUD -04



<p style="text-align: center;">Functional Criteria</p> <p>Description: Actor preparation for stage productions. Area: 303 sf Quantity: 2 Occupancy Load: 15</p> <p>Location Criteria Users: • Students • Teachers • - • -</p> <p>Activities: • - • - • - • -</p>	<p>Adjacency: Auditorium, Stage</p> <p>Related Spaces: Auditorium</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

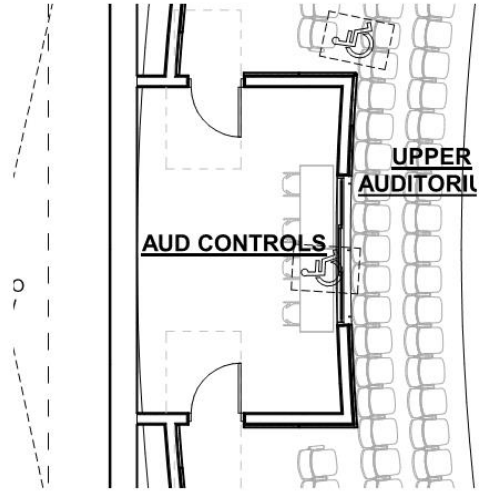
Make-up/Dressing Green Rooms

AUD -04

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Epoxy Paint Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door w/ Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - light hazard.</p> <p>Plumbing: ADA toilet rooms and nearby sink to be also picked up.</p> <p>HVAC: HVAC with heat recovery exhaust in the toilet rooms.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, 0-10V dim, multi-level switching, occupancy sensor controls.</p> <p>Power: Two each GFCI bathroom circuits, two each hand dryer circuits, four each cosmetics counter/make-up desk circuits. Contactor controls for make up counter circuits.</p> <p>Fire Alarm: Three each 15 cd Audio/Visual devices.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 03 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - 01 <input checked="" type="checkbox"/>-Local Intercom System Cabling - 01 <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Digital Signage Flat panel - 01 <input checked="" type="checkbox"/>-IPTV Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - 01 <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input checked="" type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 04 <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Control /Lighting /Projection AUD -05



<p style="text-align: center;">Functional Criteria</p> <p>Description: Actor preparation for stage productions. Area: 235 sf Quantity: 1 Occupancy Load: 4</p> <p>Location Criteria Users: • Students • Teachers • Aides • - Activities: • Stage activity support • - • - • -</p>	<p>Adjacency: Auditorium</p> <p>Related Space: Remote Control Position at Rear Auditorium Seating Area</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Control /Lighting /Projection

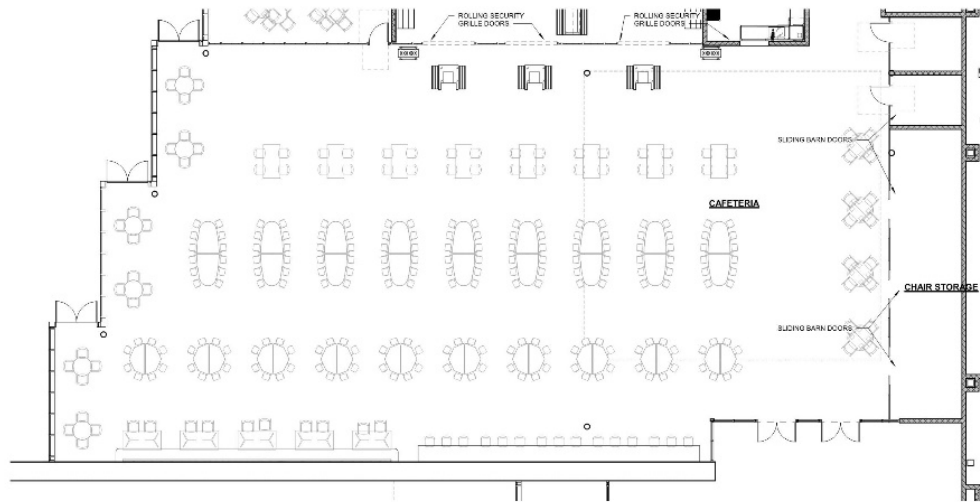
AUD -05

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door w/ Painted Metal Frame Windows: None Acoustical:</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - ordinary hazard.</p> <p>Plumbing: None.</p> <p>HVAC: Dedicated unitary HVAC System.</p> <p>Electrical: Refer to lighting, power, and fire alarm below</p> <p>Lighting: LED, 30 FC, 0-10V dim multi-level switching, occupancy sensor controls.</p> <p>Power: 10 each 120V controls circuits, 10 each 120V circuits for Aisle Lighting.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device One each Manual pull station Two each 120V/20A circuits for follow spots and main spot light.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 08 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input checked="" type="checkbox"/>-Local Intercom System Cabling - 01 <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - 01 <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input checked="" type="checkbox"/>-Teacher Chair - 04 <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Cafeteria / Student Commons / Break-out

CAF -01



0 4' 8' 16'

Functional Criteria

Description: Flexible space for student dining and various sized meetings

Area: 7990 sf

Quantity: 1

Occupancy Load: 533

Location Criteria

Users:

- Students
- Teachers
- Aides
- Guests

Activities:

- Changing and Showering
- Dining
- Socializing

Adjacency:

Kitchen, Servery

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

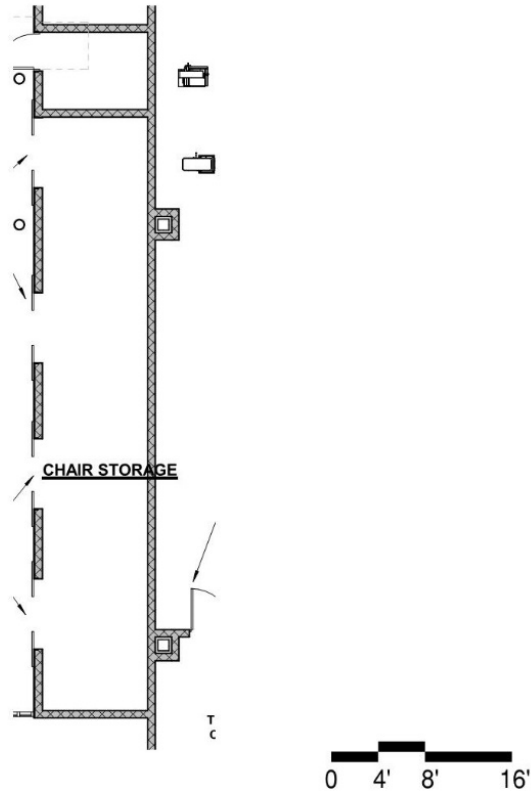
Cafeteria / Student Commons / Break-out

CAF -01

<p>Technical Criteria-Architectural</p> <p>Floor: Porcelain Paver Walls: Thin Porcelain Tile Ceiling: Linear Metal ceiling w. wood Appearance Doors: Aluminum Frame Glazed Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – light hazard.</p> <p>Plumbing: None except for drinking fountain and bottle fillers may be appropriate in that of area</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (20) - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - 02 <input checked="" type="checkbox"/>-Audio Visual System - 01 <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 02 <input checked="" type="checkbox"/>-PA / Intercom System - 15 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - 01 <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input checked="" type="checkbox"/>-Cafeteria Table - <input checked="" type="checkbox"/>-Café Table - <input checked="" type="checkbox"/>-Stool - <input checked="" type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: HVAC via dedicated variable volume rooftop unit with demand control ventilation and multiple space temperature sensors (DDC).</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: 50 FC, LED, 0-10V dim, occupancy sensor switching</p> <p>Power: Four each 120V convenience receptacles, four each 120V Audio/Video circuits, one each 120V VAV circuit.</p> <p>Fire Alarm Three each 30 CD Audio/Video devices.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Food Service Computing-Pos Station - 02 <input checked="" type="checkbox"/>-VoIP Desk Phone - 02 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - 02 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 02 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 04 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 03 <input checked="" type="checkbox"/>- Intrusion Detection Door Contact - 06 <input checked="" type="checkbox"/>- CCTV Camera - 04 <input checked="" type="checkbox"/>- Access Control Card/Proximity Reader - 03</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Chair / Table Storage CAF -02



<p style="text-align: center;">Functional Criteria</p> <p>Description: Storage for Cafeteria tables and chairs Area: 500 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Students• Custodial Staff• Aides <p>Activities:</p> <ul style="list-style-type: none">• Chair Storage• -• -• -	<p>Adjacency: Cafeteria</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

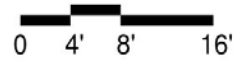
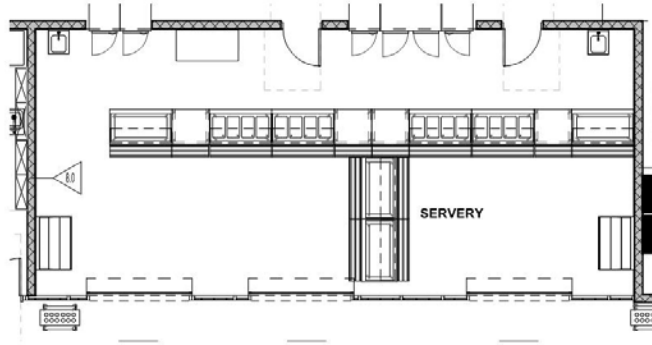
Chair / Table Storage CAF -02

<p>Technical Criteria-Architectural</p> <p>Floor: Porcelain Pavers Walls: Epoxy Paint Ceiling: Exposed Painted Structural Steel & Metal Deck</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler - ordinary Hazard.</p> <p>Plumbing: None</p> <p>HVAC: Space is Exhausted using Heat recovery.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 35 FC Occupancy Sensor Switching,</p> <p>Power: One each 120V Circuit</p> <p>Fire Alarm: Two each 30cd audio/visual signals.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input checked="" type="checkbox"/>-Audio Visual System Rack - 01 <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

- Scramble Serving Area

CAF -03



Functional Criteria	
Description: Scramble style Food Service and Payment	Adjacency: Kitchen & Cafeteria
Area: 1025 sf	
Quantity: 1	
Location Criteria	
Users:	
• Students	
• Teachers	
• Kitchen Staff	
• -	
Activities:	
• Food Service	

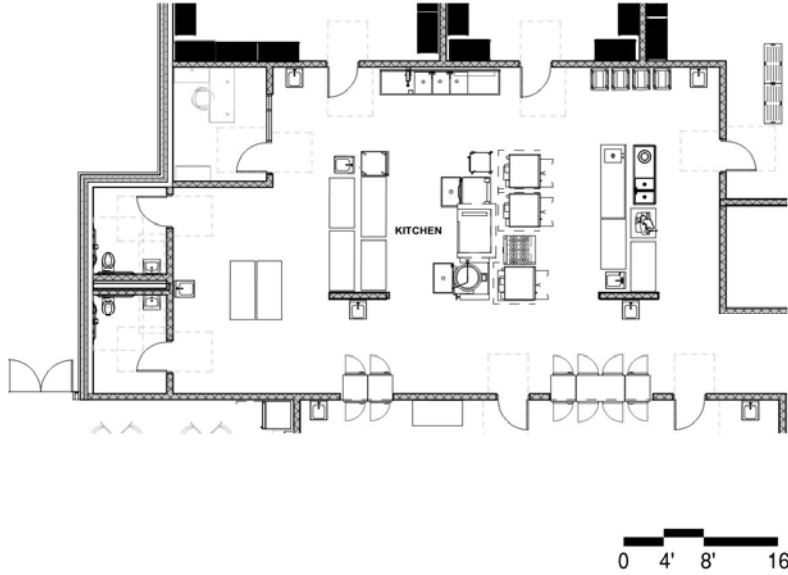
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Scramble Serving Area CAF -03

<p>Technical Criteria-Architectural</p> <p>Floor: Porcelain Pavers Walls: Ceramic Tile-partial Height Ceiling: 2x2 Washable ACT Tiles Doors: Overhead Security Grill</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler – ordinary hazard group 1.</p> <p>Plumbing: Kitchen equipment hot and cold water, floor sinks, indirect waste.</p> <p>HVAC: HVAC through kitchen and cafeteria air systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below</p> <p>Lighting: LED 50 FC occupancy sensor.</p> <p>Power: Two each 120V circuit for POS, four each 120V circuits for coolers two each 280V/20A circuits for roll up door. Floor boxes with power connections for food service equipment and refrigerators installed in serving line.</p> <p>Fire Alarm Four each 30cd audio/visual signals.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 01 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 03 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Kitchen CAF -04



Functional Criteria	
Description: Large scale meal preparation for the school body	Adjacency:
Area: 3035 sf	Receiving, Servery, Staff Lunch
Quantity: 1	Related Spaces:
Location Criteria	Receiving, Servery, Staff Lunch
Users:	
• Kitchen Staff	
• -	
• -	
• -	
Activities:	
• Food Service	
• Food Storage	
• Cleaning	
•	
• -	
• -	

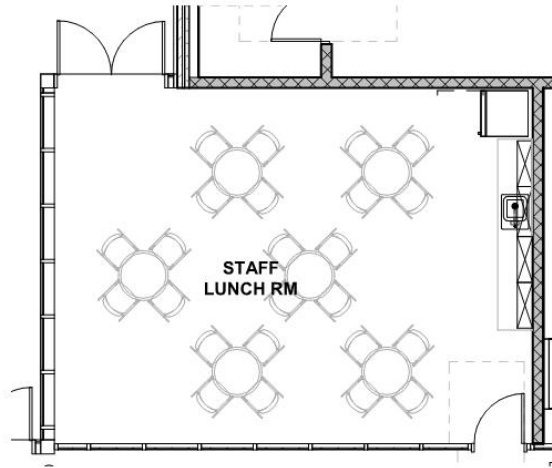
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Kitchen CAF -04

<p>Technical Criteria-Architectural</p> <p>Floor: Epoxy Flooring Walls: FRP Panels-Full Height Ceiling: ACT -2 Washable Acoustical Ceiling Tile Doors: Double Door Flush Metal Windows: - Acoustical:</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler ordinary hazard high temp. heads.</p> <p>Plumbing: Kitchen equipment hot and cold water, gas floor sinks, grease traps, ADA toilets. Plumbing connections and systems for all items requiring plumbing connections per kitchen equipment schedule to all items and plumbing fixtures requiring plumbing connections. All items susceptible to generate greasy waste to be extended to exterior grease interceptor. Tempered water for emergency equipment.</p> <p>HVAC: Dedicated hood and dishwasher exhaust systems w/ dedicated make-up air unit for make-up and air conditioning.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC occupancy sensor switching.</p> <p>Power: 4 2 each 120V/20A Kitchen circuits (normal) 22 each 120V/20A kitchen Standby circuits, eight each 208V/3 phase kitchen circuits, 18 each pedestal receptacles, eight each EPO switches, eight each 480V/3 phase circuits.</p> <p>Fire Alarm: Six each 30 CD Audio/Video devices, four each control modules for hood, eight each addressable modules for EPO's</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 02 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 02 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 07 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Food Service Computing-Pos Station - <input checked="" type="checkbox"/>-VoIP Wall Phone - 02 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Staff Lunch Room CAF -05



Functional Criteria	
Description: Separate lunch room for teachers and staff	Adjacency: Receiving, Servery, Kitchen
Area: 630 sf	
Quantity: 1	
Location Criteria	
Users:	
• Staff	
• Teachers	
• -	
• -	
Activities:	
• Dining	
• -	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

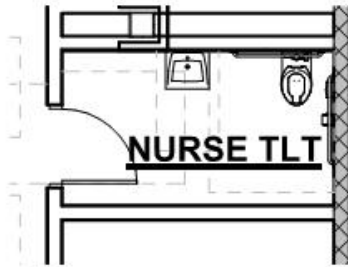
Staff Lunch Room

CAF -05

<p>Technical Criteria-Architectural</p> <p>Floor: Porcelain Pavers Walls: Ceramic Tile-partial Height Ceiling: 2x6 High NRC ACT Tile Doors: Aluminum Frame Glazed Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers – light hazard.</p> <p>Plumbing: Casework sinks, appliances to be plumbed.</p> <p>HVAC: HVAC through dedicated VAV terminal, from Cafeteria HVAC unit, with space temperature and CO₂ control.</p> <p>Electrical: Refer to lighting, power, and fire alarm below</p> <p>Lighting: LED 35 FC Occupancy Sensor Switching,</p> <p>Power: One each 120V circuit for refrigerator, one each 120V circuit for microwave, one each 120V circuit for garbage disposal, two each convenience 120V circuits.</p> <p>Fire Alarm: One each 30 CD Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 05 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - 01 <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Food Service Computing-Pos Station - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - 01 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 01 <input checked="" type="checkbox"/>- Intrusion Detection Door Contact - 02 <input checked="" type="checkbox"/>- Access Control Card/Proximity Reader - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 04 <input checked="" type="checkbox"/>-Wall Cabinet - 04 <input checked="" type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input checked="" type="checkbox"/>-Refrigerator/Freezer - 01 <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input checked="" type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input checked="" type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Medical Suite Toilet MED -01



Functional Criteria	Technical Criteria-MEP/FP
<p>Description: Private restroom at nurse's suite Area: 73 sf Quantity: 2</p> <p>Location Criteria Users: • Medical Professional • Aides • Students • Teachers</p> <p>Activities: • Personal</p> <p>Adjacency: Nurse's Suite</p> <p>Related Spaces: Nurse's Suite</p>	<p>Fire Protection: Sprinklers - light hazard.</p> <p>Plumbing: ADA Toilet Room to be plumbed.</p> <p>HVAC: Space exhausted using heat recovery system.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 30 FC Occupancy Sensor Switching,</p>
<p>Technical Criteria-Architectural</p> <p>Floor: Ceramic Mosaic Tile Walls: Ceramic Tile-partial Height Ceiling: Moisture Resistant GWB Ceiling Doors: Flush Wood Door in Painted Metal Frame</p>	<p>Power: One each GFCI 120V circuit, one each hand dryer circuit.</p> <p>Fire Alarm: One 15cd visual only signal device.</p>

Nurses' Office / Waiting Room MED -02



<p style="text-align: center;">Functional Criteria</p> <p>Description: Waiting Room and Nurse's Office Area: 192 sf Quantity: 1 Waiting Room and 2 Nurse's Offices</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none"> • Medical Professional • Students <p>Activities:</p> <ul style="list-style-type: none"> • Minor Medical Treatment • Medication Custodianship • Waiting • Administrative Work • - • - • - 	<p>Adjacency: Nurse's Suite</p> <p>Related Spaces: Nurse's Suite</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Nurses' Office / Waiting Room MED -02

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Epoxy Paint & Painted CMU Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Hollow Metal Frame w/ Glazed Sidelite</p> <hr/> <p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 01 <input checked="" type="checkbox"/>-Wall Cabinet - 01 <input checked="" type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input checked="" type="checkbox"/>-Refrigerator/Freezer - 01 <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 04 <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers - light hazard.</p> <p>Plumbing: Casework sink, eyewash, appliances to be plumbed.</p> <p>HVAC: HVAC through VRF and heat recovery system.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 50 FC 0-10V dim, multi-level switching occupancy Sensor control.</p> <p>Power: One each 120V refrigerator circuit, two each 120V Convenience circuits.</p> <p>Fire Alarm: One each 30cd, Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops - 02 <input checked="" type="checkbox"/>-Data System-Fiber Optic Drops - 01 <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01 <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Food Service Computing-Pos Station - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>- Duress Alert System Button - 01 <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Interview/ Exam Room MED -03



<p style="text-align: center;">Functional Criteria</p> <p>Description: Space for ill students to rest and be examined. Area: 120 sf Quantity: 3</p> <p>Location Criteria Users: • Medical Professional • Students</p> <p>Activities: • Resting • Exams • - • -</p>	<p>Adjacency: Nurse's Suite</p> <p>Related Spaces: Nurse's Suite</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

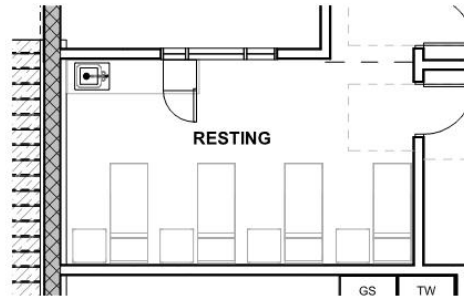
Interview/ Exam Room MED -03

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Epoxy Paint Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door w/ Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers - light hazard.</p> <p>Plumbing: Casework Sink to be plumbed.</p> <p>HVAC: HVAC through VRF and heat recovery system.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 50 FC Multi-level switching occupancy Sensor.</p> <p>Power: Two each 120V convenience circuits one each GFCI receptacle. Undercounter refrigerator receptacle.</p> <p>Fire Alarm: One each 15 cd Audio/visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Food Service Computing-Pos Station - <input type="checkbox"/>-VoIP Desk Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 01 <input checked="" type="checkbox"/>-Wall Cabinet - 01 <input checked="" type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Exam Bed - 01 <input checked="" type="checkbox"/>-Side Table- 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Resting

MED -04



<p>Functional Criteria</p> <p>Description: Space for ill students to rest and be examined.</p> <p>Area: 260 sf</p> <p>Quantity: 1</p> <p>Occupancy Load: 4</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Medical Professional• Students <p>Activities:</p> <ul style="list-style-type: none">• Resting	<p>Adjacency:</p> <p>Nurse's Suite</p> <p>Related Spaces:</p> <p>Nurse's Suite</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

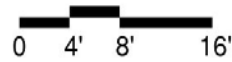
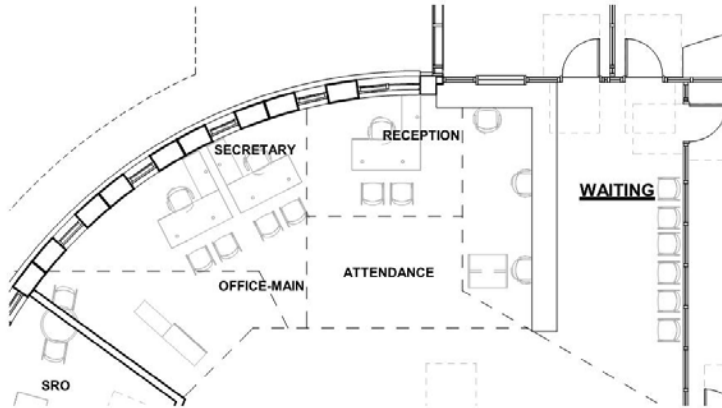
Resting

MED -04

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Epoxy Paint Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers - light hazard.</p> <p>Plumbing: Casework Sink and appliances to be plumbed.</p> <p>HVAC: HVAC through VRF and heat recovery system.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 50 FC Multi-level switching occupancy Sensor.</p> <p>Power: Two each 120V convenience circuits one each GFCI receptacle. GFCI receptacle per each bed location. Undercounter refrigerator GFCI receptacle.</p> <p>Fire Alarm: One ach 15 cd Audio/visual device.</p>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01 <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Food Service Computing-Pos Station - <input type="checkbox"/>-VoIP Desk Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat Panel - <input type="checkbox"/>-IPTV Decoder Camera - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -
<p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - 01 <input checked="" type="checkbox"/>-Base Cabinet - 01 <input checked="" type="checkbox"/>-Wall Cabinet - 01 <input checked="" type="checkbox"/>-Sink - 01 <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input type="checkbox"/>-Exam Bed - <input checked="" type="checkbox"/>-Resting Cot - 04 <input checked="" type="checkbox"/>-Side Table - 04 		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

General Office / Waiting Room / Toilet ADMIN -01



<p style="text-align: center;">Functional Criteria</p> <p>Description: Reception, Attendance Area: 170 sf Quantity: 4</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none"> • Staff • Aides • Guests • Administrators • - • - <p>Activities:</p> <ul style="list-style-type: none"> • Filing • Phone Calls • Administrative Work • - • - • - 	<p>Adjacency: Administrative Office</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

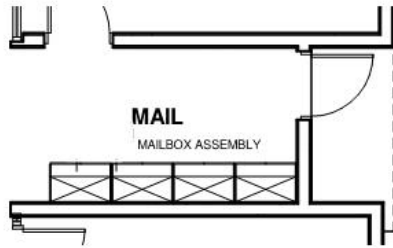
General Office / Waiting Room / Toilet ADMIN -01

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, Walk-off Carpet Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: ADA Toilet Room</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - <input checked="" type="checkbox"/>-Base Cabinet - <input checked="" type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input checked="" type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 04 <input checked="" type="checkbox"/>-File Cabinet - 04 <input checked="" type="checkbox"/>-Bookcase - 02 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office Task Chair - 03</p>	<p>HVAC: HVAC with temperature control and heat recovery for toilet exhaust.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupied sensor controls.</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 30 cd, Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 02 <input checked="" type="checkbox"/>-VoIP Desk Phone - 02 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input checked="" type="checkbox"/>- Video Entry System Master Station - 02 <input type="checkbox"/>- Alert System Board - <input type="checkbox"/>- Intrusion Detection Door Contact - <input checked="" type="checkbox"/>- CCTV Camera - 02 <input checked="" type="checkbox"/>- Access Control Card/Proximity Reader - 01 <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 02</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Teachers' Mail / Workroom

ADMIN -02



Functional Criteria	
Description: Mailroom	Adjacency: Administrative Office
Area: 100 sf	
Quantity: 1	
Occupancy Load:	
Location Criteria	
Users:	
• Staff	
• Administrators	
• -	
• -	
Activities:	
• Mail Distribution	
• -	
• -	
• -	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Teachers' Mail / Workroom

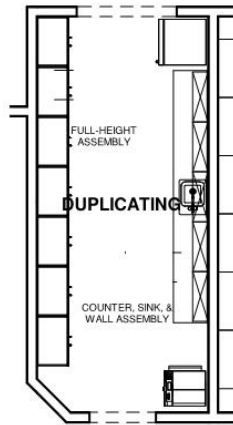
ADMIN -02

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC by Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 40 FC, occupancy sensor controls.</p> <p>Power: Two each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Desk Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Alert System Board - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input checked="" type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - <input checked="" type="checkbox"/>-Base Cabinet - <input checked="" type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Duplicating Room/ISS/ Waiting/ "drop-in"

ADMIN -03



<p style="text-align: center;">Functional Criteria</p> <p>Description: For Staff's daily task Area: 240 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none"> • Staff • Aides-- • Secretaries • Administrators • - • - <p>Activities:</p> <ul style="list-style-type: none"> • Filing • Storage • Kitchenette • - • - • - 	<p>Adjacency: Administrative Office</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Duplicating Room/ISS/ Waiting/ "drop-in"

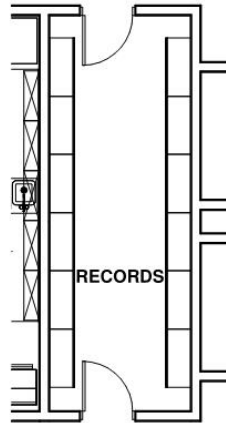
ADMIN -03

<p>Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC by Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 40 FC, occupancy sensor controls.</p> <p>Power: Two each 120V office circuits. Copier power circuits</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 05 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Voice System – Fax Line - 02 <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Alert System Board - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 04 <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - <input checked="" type="checkbox"/>-Base Cabinet - <input checked="" type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input checked="" type="checkbox"/>-Refrigerator/Freezer - 01 <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Records -Room

ADMIN -04



<p style="text-align: center;">Functional Criteria</p> <p>Description: For Staff's daily task Area: 200 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Staff• Secretaries• Administrators• -• - <p>Activities:</p> <ul style="list-style-type: none">• File Storage• Supply Storage• -• -• -• -	<p>Adjacency: Administrative Office</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

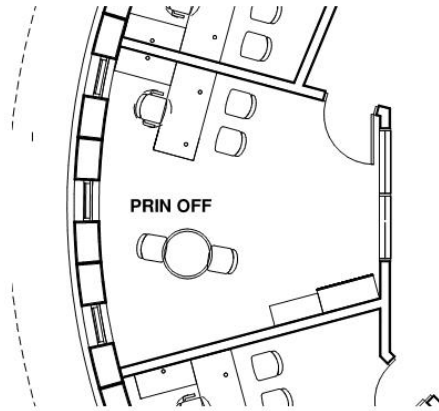
Records -Room

ADMIN -04

<p>Technical Criteria-Architectural</p> <p>Floor: Sheet Vinyl, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door in Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: None</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 03 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 12 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: HVAC by Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 40 FC, occupancy sensor controls.</p> <p>Power: Two each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Alert System Board - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Principal's Office w/ Conference Area ADMIN -05



<p style="text-align: center;">Functional Criteria</p> <p>Description: For Staff's daily task Area: 255 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Principal• -• -• - <p>Activities:</p> <ul style="list-style-type: none">• Filing• Phone Calls• Administrative Work• -• -• -	<p>Adjacency: Administrative Office</p>
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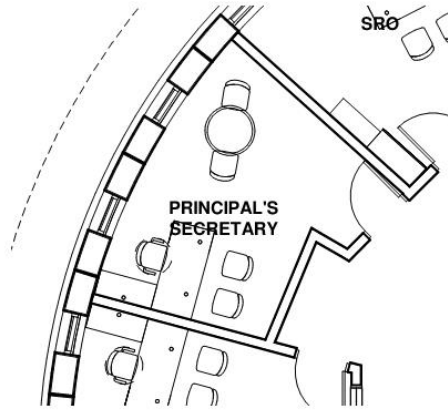
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Principal's Office w/ Conference Area ADMIN -05

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input checked="" type="checkbox"/>-Built in Counter - <input checked="" type="checkbox"/>-Base Cabinet - <input checked="" type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 06 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input checked="" type="checkbox"/>-Conference Table - 01 <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>	<p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Alert System Board - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 01 <input checked="" type="checkbox"/>- Duress Alert System Button - 01</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Principal's Secretary / Waiting ADMIN -06



<p style="text-align: center;">Functional Criteria</p> <p>Description: For principal's assistant daily task Area: 130 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Principal's Secretary• -• - <p>Activities:</p> <ul style="list-style-type: none">• Filing• Phone Calls• Administrative Work• -• -• -	<p>Adjacency: Principal's Office, Administration Suite</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

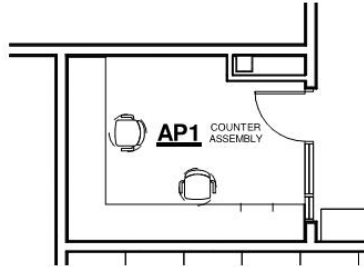
Principal's Secretary / Waiting ADMIN -06

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 03 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 03 <input checked="" type="checkbox"/>-Office Task Chair - 03</p>	<p>Electrical:</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input checked="" type="checkbox"/>- Duress Alert System Button - 01 <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader - <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 01</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Assistant Principal's Off./Academic Prog.

ADMIN -07



<p style="text-align: center;">Functional Criteria</p> <p>Description: for assistant principal's office Area: 153 sf Quantity: 2</p> <p>Location Criteria Users: • Assistant Principal • - • -</p> <p>Activities: • Meeting • Filing • Phone Calls • - • - • -</p>	<p>Adjacency: Department Heads Suite</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Assistant Principal's Off./Academic Prog.

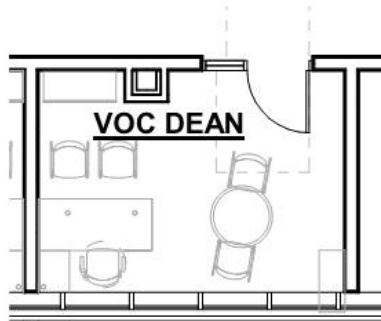
ADMIN -07

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC:</p> <p>Electrical:</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm One each 15 cd Audio/Visual device</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 02 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Voice System-Fax Line - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Audio Visual System - <input type="checkbox"/>-Audio Visual System Rack - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Ultra Short Throw - <input type="checkbox"/>-Projector - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Teacher Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input checked="" type="checkbox"/>- Duress Alert System Button - 01 <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 01 <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - 01 <input type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 04 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input checked="" type="checkbox"/>-Conference Table - 01 <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Assistant Principal's Off./Academic Prog.

ADMIN -08



<p style="text-align: center;">Functional Criteria</p> <p>Description: Vocational Dean's Office Area: 155 sf Quantity: 4</p> <p>Location Criteria Users: • Vocational Dean's Office • - • -</p> <p>Activities: • Meeting • Filing • Phone Calls • - • - • -</p>	<p>Adjacency: Guidance Counsel offices</p> <p>Related Spaces: Administration Offices</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

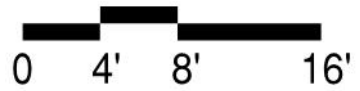
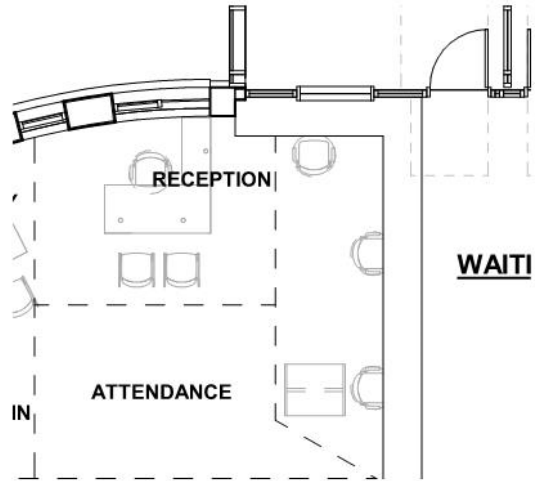
Assistant Principal's Off./Academic Prog.

ADMIN -08

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet Walls: Painted GWB Ceiling: ACT-3 (2x2 HIGH NRC Tegular Acoustical Ceiling Tile At Admin. Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC:</p> <p>Electrical:</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm One each 15 cd Audio/Visual device</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 14 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Desk Phone - 06 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Flat Panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - 01 <input type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 04 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input checked="" type="checkbox"/>-Conference Table - 01 <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Attendance Reception ADMIN -09



Functional Criteria	
<p>Description: Attendance & Reception Area: 121 sf Quantity: 4</p> <p>Location Criteria Users: • Staff • Student • Teachers • Visitors • - • -</p> <p>Activities: • Attendance • Receptionist • - • - • -</p>	<p>Adjacency: Administrative Suite</p>

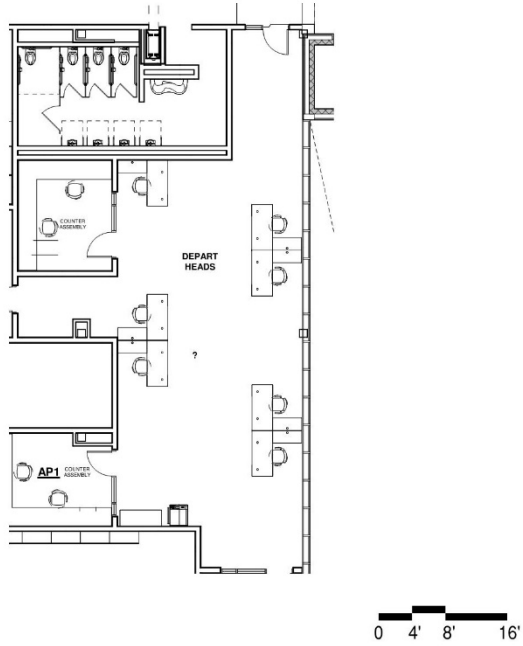
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Attendance Reception ADMIN -09

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Single Flush Metal Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits. Wall and floor outlets per code</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 14 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Desk Phone - 06 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Flat Panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 01 <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Credenza - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Dept. Head of Offices ADMIN -10



Functional Criteria	
Description: Department Head Offices	Adjacency: Department Head Office Suite
Area: 120 sf	
Quantity: 7	
Location Criteria	
Users:	
• Staff	
• Student	
• Teachers	
• Visitors	
• -	
• -	
Activities:	
• Administrative Work	
• Meetings	
• -	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

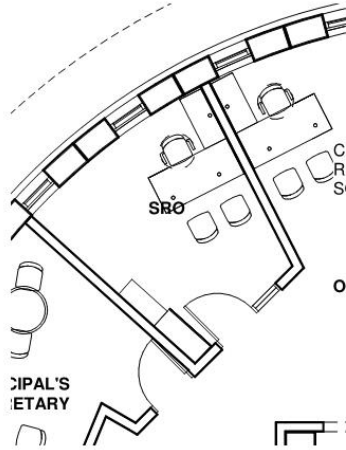
Dept. Head of Offices ADMIN -10

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Windows: Interior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits. Wall and floor outlets per code</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 14 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Desk Phone - 06 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Interactive Flat Panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 14 <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input checked="" type="checkbox"/>-Conference Table - 01 <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input type="checkbox"/>-Credenza - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Safety Resource Office

ADMIN -11



<p style="text-align: center;">Functional Criteria</p> <p>Description: Safety Resource Officer's (SRO) Office Area: 120 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none"> • Safety Resource Officer's Office • - • - <p>Activities:</p> <ul style="list-style-type: none"> • Meeting • Administrative Work • Discipline • - 	<p>Adjacency: Administration Suite</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

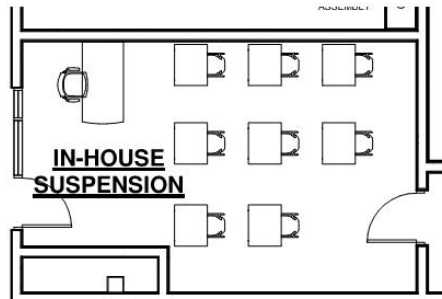
Safety Resource Office

ADMIN -11

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 02 <input type="checkbox"/>-File Cabinet - <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 01 <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>	<p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input checked="" type="checkbox"/>- Duress Alert System Button - 01 <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

In-House Suspension ADMIN -12



<p style="text-align: center;">Functional Criteria</p> <p>Description: In school suspension and waiting Area:340 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Staff• Student• -• -• - <p>Activities:</p> <ul style="list-style-type: none">• In school suspension• Discipline• -• -	<p>Adjacency: Department Head Office Suite</p>
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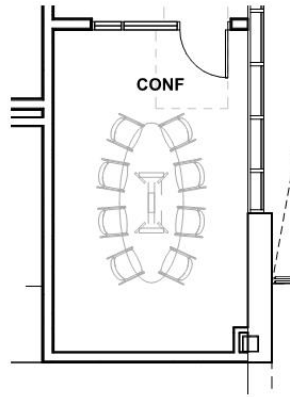
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

In-House Suspension ADMIN -12

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum, - Walls: Painted Impact Resistant GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Acoustical: LEED Requirements</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 06 <input checked="" type="checkbox"/>-Student Desk - 06 <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Conference Room ADMIN -13

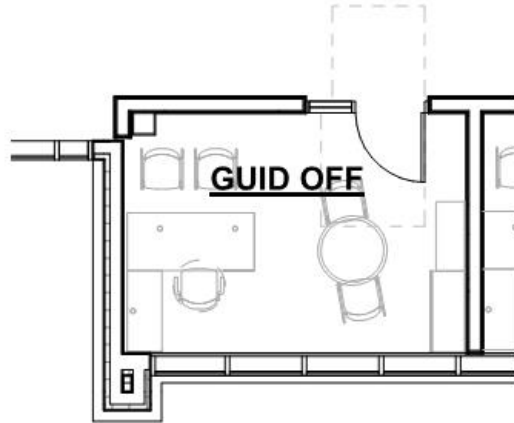


<p style="text-align: center;">Functional Criteria</p> <p>Description: Meeting space for small and medium groups Area: 323 sf Quantity: 3</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Teachers• Students• Staff• Visitors• - <p>Activities:</p> <ul style="list-style-type: none">• Group Work• Group Presentations• -• -	<p>Related: Administration, Department Head Suite, District Office Suite</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Conference Room ADMIN -13

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None.</p> <p>HVAC: HVAC by Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and data below.</p> <p>Lighting: LED 50 FC, multi-level switching, occupancy sensor control.</p> <p>Power: Poke-thru with power and data per code, one each Pac box with power and data, four each 120V Conference Room circuits. Wall outlets per code</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 07 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - 01 <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - 01 <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 10 <input type="checkbox"/>-File Cabinet - <input checked="" type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - 01 <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Conference Table - 01 <input checked="" type="checkbox"/>-Credenza - 01</p>		<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Conference Phone - 01 <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input checked="" type="checkbox"/>- Intrusion Detection Door Contact (when on first floor with windows, or on upper levels when accessible by lower rooflines) - 01 <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>



Functional Criteria	
Description: for guidance counseling for Students	Related: Guidance
Area: 158 sf	
Quantity: 8	
Location Criteria	
Users:	
• Guidance Counselor	
• Students	
• Teachers	
• Staff	
• -	
Activities:	
• Counseling	
• Filing	
• Phone Calls	
• Meetings	
• -	
• -	
• -	

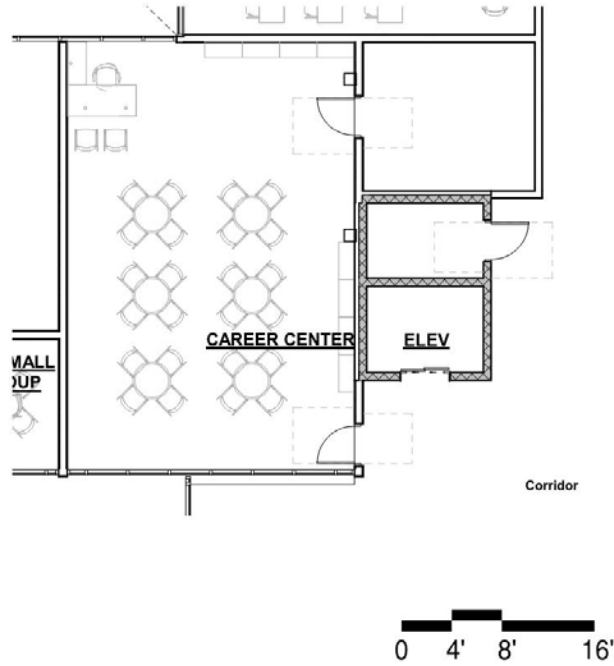
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Guidance/Adj. Psych., Diversity Office ADMIN -14

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input checked="" type="checkbox"/>-Local Intercom System Cabling - 01 <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input type="checkbox"/>-Office Task Chair - 01</p>	<p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor control.</p> <p>Power: Two each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input checked="" type="checkbox"/>- Duress Alert System Button - 01 <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Carreer Center/Classrooms ADMIN -17



<p style="text-align: center;">Functional Criteria</p> <p>Description: for counseling Students regarding Career & college Area:985 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none"> • Guidance Counselor • Students • Teachers • Staff • - <p>Activities:</p> <ul style="list-style-type: none"> • Meetings • Research • - • - • - • - 	<p>Adjacency: Media Center</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Carreer Center/Classrooms

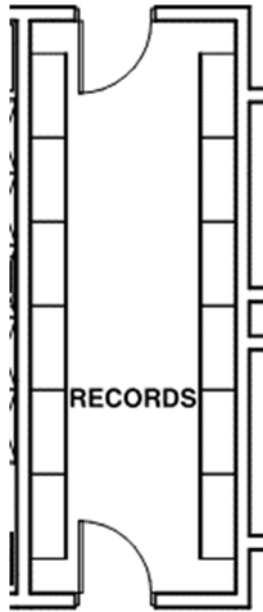
ADMIN -17

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted Impact Resistant GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC by Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls.</p> <p>Power: Two each 120V office circuits.</p> <p>Fire Alarm: One each 30 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - 01 <input type="checkbox"/>-Local Intercom System Cabling - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input checked="" type="checkbox"/>-Wireless Media Connector for Sound Field System- - 01 <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 01 <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 02 <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 09 <input checked="" type="checkbox"/>-Student Chair - 24 <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Records -Room

ADMIN -18



Functional Criteria

Description: for record storage

Area: 225 sf

Quantity: 1

Location Criteria

Users:

- Secretaries
- Administrators
- Staff

- -
- -
- -

Activities:

- File Storage

- -
- -
- -
- -
- -

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Records -Room

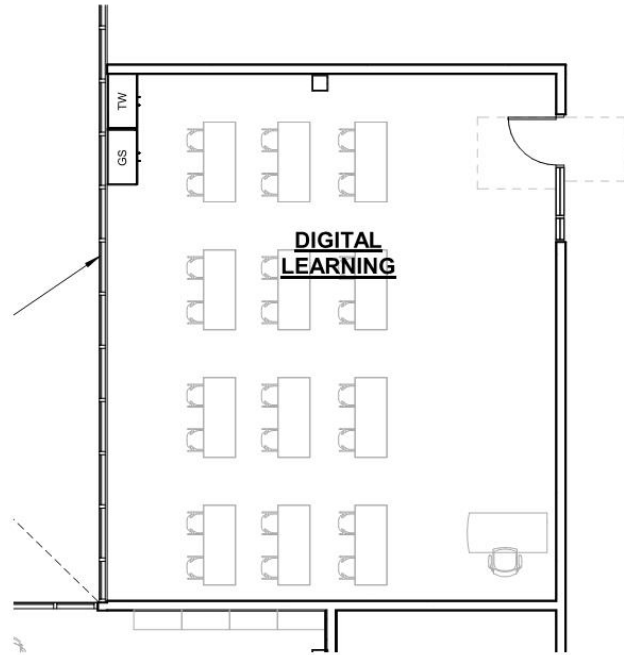
ADMIN -18

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted Impact Resistant GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door in Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: None</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 01 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 12 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<p>HVAC: HVAC by Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls.</p> <p>Power: Two each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Laptop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Digital Learning

ADMIN -19



Functional Criteria	
Description: for record storage	
Area: 800 sf	
Quantity: 1	
Location Criteria	
Users:	
• Teachers	
• Staff	
•	
• -	
• -	
Activities:	
• Lesson Planning	
• Presentation	
• Technology Bases Learning	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

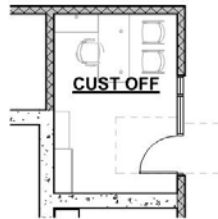
Digital Learning

ADMIN -19

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, Linoleum Walls: Painted Impact Resistant GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units in Aluminum Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 30 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops (32) - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input checked="" type="checkbox"/>-Local Audio-Visual Cabling - 01 <input type="checkbox"/>-Local Intercom System Cabling - <input checked="" type="checkbox"/>-Sound Field System - 01 <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input checked="" type="checkbox"/>-General Storage Cabinet - 02 <input checked="" type="checkbox"/>-Teacher Wardrobe Cabinet - 01 <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 01 <input checked="" type="checkbox"/>-Teacher Chair - 01 <input type="checkbox"/>-Side Chair - <input checked="" type="checkbox"/>-File Cabinet - 01 <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input checked="" type="checkbox"/>-Student Chair - 24 <input type="checkbox"/>-Student Desk - 15 <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Computer Table - 01</p>		<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Teacher Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input checked="" type="checkbox"/>-Wireless Media Connector for Sound Field - 01 <input type="checkbox"/>-Data System-Data Drops - <input checked="" type="checkbox"/>-Document Camera - 01 <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input checked="" type="checkbox"/>-Student Wireless Devices (24) - <input checked="" type="checkbox"/>- Student Wireless Charging Cart - 01</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Custodian's Office CUST. -01



<p style="text-align: center;">Functional Criteria</p> <p>Description: For custodian's administrative duties. Area: 140 sf Quantity: 1</p> <p>Location Criteria Users: • Custodian Staff • - • - • - • -</p> <p>Activities: • Administrative Work • - • - • - • -</p>	<p>Adjacency: General Supply, Custodian Workshop Related Space: Custodian Workshop</p>
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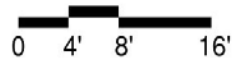
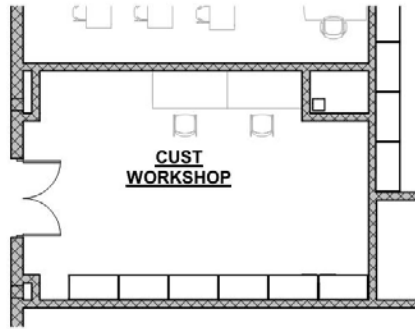
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Custodian's Office CUST. -01

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted Pre-Cast Concrete Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Single Flush Metal w/ Sidelite</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard</p> <p>Plumbing: None.</p> <p>HVAC: HVAC from HRU and VRF systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 50 FC, 0-10V dim, occupancy sensor switch controls.</p> <p>Power: Four each convenience receptacles</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>- Storage Cabinet - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input type="checkbox"/>-Office "L" Desk - 01 <input type="checkbox"/>-Office Task Chair - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Custodian's Workshop CUST. -02



Functional Criteria

Description: repair and maintenance of school equipment.

Area: 475 sf

Quantity: 1

Location Criteria

Users:

- Maintenance Staff

- -
- -
- -
- -

Activities:

- Repair and Maintenance

- -
- -
- -
- -

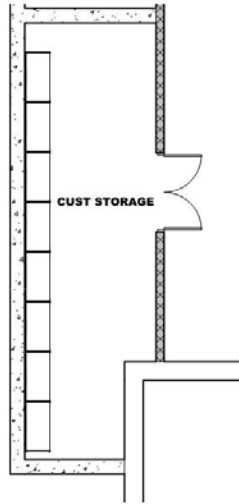
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Custodian's Workshop CUST. -02

<p>Technical Criteria-Architectural</p> <p>Floor: Rubber Tile Walls: Painted Pre-Cast Concrete Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Double Door Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: None.</p> <p>HVAC: HVAC from HRU and VRF systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED 50 FC, occupancy sensor switch controls.</p> <p>Power: Eight each, 120V receptacles,, one each 208V/20A circuit. Cord reels</p> <p>Fire Alarm: One each 30 CD Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 02 <input checked="" type="checkbox"/>-VoIP Desk Phone - 02 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input checked="" type="checkbox"/>-Teacher Desk - 02 <input checked="" type="checkbox"/>-Teacher Chair - 02 <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input checked="" type="checkbox"/>-Worktable - 02 <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input checked="" type="checkbox"/>-Metal Storage Shelving - 09 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input checked="" type="checkbox"/>-Stool - 02 <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>	<hr/>	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Custodian's Storage CUST. -03



Functional Criteria

Description: General Storage and Custodial Supplies/Equipment Storage.

Area: 330 sf

Quantity: 1

Location Criteria

Users:

- Custodian Staff

- -
- -
- -
- -

Activities:

- Storage

- -
- -
- -
- -

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

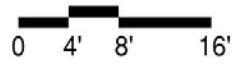
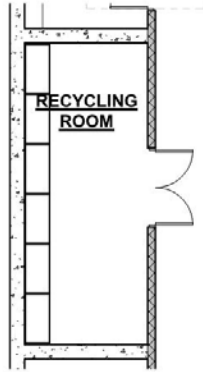
Custodian's Storage CUST. -03

<p>Technical Criteria-Architectural</p> <p>Floor: Rubber Tile Walls: Epoxy Paint Ceiling: Exposed Painted Structural Steel & Metal Deck Doors: Double Door Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard group 2.</p> <p>Plumbing: None</p> <p>HVAC: Room exhausted using heat recovery exhaust system.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor control switching.</p> <p>Power: Two each 120V receptacles.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - <input type="checkbox"/>-PA / Intercom System Volume Control -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input checked="" type="checkbox"/>- Storage Cabinet - 05 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Metal Storage - <input checked="" type="checkbox"/>-Shelving - 14</p>		<p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Recycling Room / Trash

CUST. -04



Functional Criteria	
Description: Recycling Room	Adjacency: Receiving and Custodial
Area: 360 sf	
Quantity: 1	
Location Criteria	
Users:	
• Custodian Staff	
• -	
• -	
• -	
• -	
Activities:	
• Sorting of Recyclable Materials	
• -	
• -	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

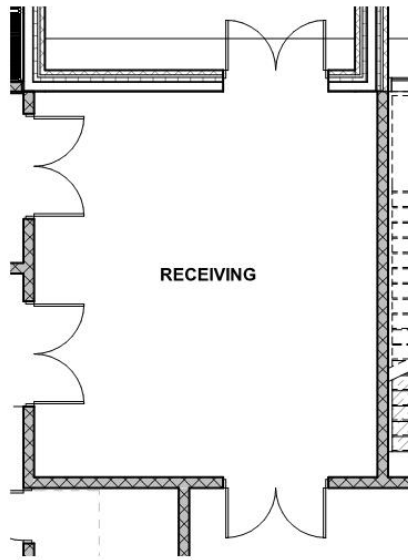
Recycling Room / Trash

CUST. -04

<p>Technical Criteria-Architectural</p> <p>Floor: Epoxy Flooring Walls: Epoxy Paint Ceiling: Exposed Painted Structural Steel & Metal Deck Doors: Double Door Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: Hose bibb, floor drain.</p> <p>HVAC: Heating and ventilating through dedicated heaters and exhaust fans systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC occupancy sensor switch controls.</p> <p>Power: Six each 120V receptacles.</p> <p>Fire Alarm: One each 30 CD Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <p><input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Wall Phone - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Duress Alert System Prizm Light - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input checked="" type="checkbox"/>-Metal Storage Shelving - 06 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Receiving and General Supply CUST. -05



Functional Criteria	
Description: receiving and storage of deliveries.	
Area: 428 sf	
Quantity: 2	
Occupancy Load:	
Location Criteria	
Users:	
• Custodial Staff	
• -	
• -	
• -	
• -	
Activities:	
• Storage	
• Receiving	
• -	
• -	
• -	

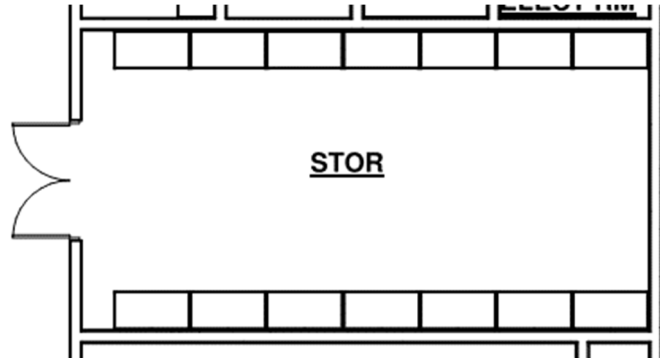
Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Receiving and General Supply CUST. -05

<p>Technical Criteria-Architectural</p> <p>Floor: Sealed Concrete Walls: Epoxy Paint Ceiling: Moisture Resistant GWB Ceiling Doors: Double Door Flush Metal</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: Hose bibb, floor drain.</p> <p>HVAC: Heating and ventilating using local heaters and exhaust fans.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor switch controls.</p> <p>Power: One each 208V/20A door circuit, six each 120V receptacles, one each 208V/40A compressor circuit.</p> <p>Fire Alarm: One each 30 CD Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 03 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom Ceiling Speaker - 01 <input type="checkbox"/>-PA / Intercom System Volume Control -</p> <p>Technical Criteria-Technology</p> <p><input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Door Phone Intercom - 01 <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet -</p> <p>Technical Criteria-Security</p> <p><input checked="" type="checkbox"/>- Intrusion Detection Keypad - 01 <input checked="" type="checkbox"/>- Intrusion Detection Motion Sensor - 01 <input checked="" type="checkbox"/>- Intrusion Detection Door Contact - 02 <input checked="" type="checkbox"/>- CCTV Camera - 01 <input checked="" type="checkbox"/>- Access Control Card/Proximity Reader - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input checked="" type="checkbox"/>-Metal Storage Shelving - 06 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat -</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Storeroom CUST. -06



<p style="text-align: center;">Functional Criteria</p> <p>Description: General Building Storage. Area: 326 sf Quantity: 4</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• Staff• -• -• -• - <p>Activities:</p> <ul style="list-style-type: none">• Storage• -• -• -	<p>Adjacency: Distributed throughout the School</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

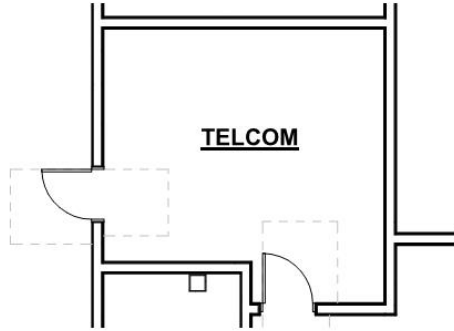
Storeroom CUST. -06

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Epoxy Paint Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile Doors: Pair of Flush Wood Doors in Painted Metal Frame</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers ordinary hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from HRU and VRF systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 F, occupancy sensor switch control.</p> <p>Power: Four each 120V receptacle.</p> <p>Fire Alarm: One each 30 CD Audio/Video device.</p>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input checked="" type="checkbox"/>-PA / Intercom Ceiling Speaker - <input type="checkbox"/>-PA / Intercom System Volume Control - <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Administrative Computing -Desktop - <input type="checkbox"/>-VoIP Door Phone Intercom - <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input type="checkbox"/>- Intrusion Detection Keypad Sensor - <input type="checkbox"/>- Intrusion Detection Motion - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -
<p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input checked="" type="checkbox"/>-Metal Storage Shelving - 08 <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Network / Telecom Room

CUST. -07



<p style="text-align: center;">Functional Criteria</p> <p>Description: general Building storage. Area: 200 sf Quantity: 1</p> <p>Location Criteria</p> <p>Users:</p> <ul style="list-style-type: none">• IT Staff• -• -• -• - <p>Activities:</p> <ul style="list-style-type: none">• Information Technology• Administrative Work• -• -	<p>Adjacency: Main Distribution Frame (MDF) Room</p>
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Network / Telecom Room

CUST. -07

<p>Technical Criteria-Architectural</p> <p>Floor: Linoleum Walls: Painted GWB Ceiling: ACT-1 (2x2) High NRC Acoust. Ceiling Tile</p> <hr/> <p>Technical Criteria-FFE</p> <p>Casework:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet - <p>Loose Furnishings:</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Cafeteria Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - 	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinkler ordinary hazard.</p> <p>Plumbing: None</p> <p>HVAC: Dedicated split system HVAC system.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor switch controls.</p> <p>Power: 10 each receptacles, three each 120V/30A circuits.</p> <p>Fire Alarm: Smoke detector with remote alarm indicator</p> <hr/>	<p>Technical Criteria-Communication:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/>-Data System-Data Drops - 01 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input type="checkbox"/>-Wall Clock- wired - <input type="checkbox"/>-PA / Intercom Horn Speaker - <input type="checkbox"/>-PA / Intercom System Volume Control - <p>Technical Criteria-Technology</p> <ul style="list-style-type: none"> <input type="checkbox"/>-Administrative Computing -Desktop - <input checked="" type="checkbox"/>-VoIP Wall Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-System - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input type="checkbox"/>-Wireless Access Point-Ceiling Mounted - <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices - <input type="checkbox"/>-Wireless sound field Media Connector - <input type="checkbox"/>- Student Wireless Charging Cabinet - <p>Technical Criteria-Security</p> <ul style="list-style-type: none"> <input type="checkbox"/>- Intrusion Detection Keypad Sensor - <input type="checkbox"/>- Intrusion Detection Motion - <input type="checkbox"/>- Intrusion Detection Door Contact - <input type="checkbox"/>- CCTV Camera - <input checked="" type="checkbox"/>- Access Control Card/Proximity Reader - 01
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Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Adult Education Office OTHER -01



Functional Criteria

Description: Adult Education Office

Area: 455 sf

Quantity: Comprised of 1 Enclosed Office and 2 Assistants in an open office.

Location Criteria

Users:

- Teachers
- Staff

• -

• -

Activities:

•

- Meetings
- Phone Calls
- Filing
- Administrative Work

Adjacency: Administration Main Office

Related: Administration

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

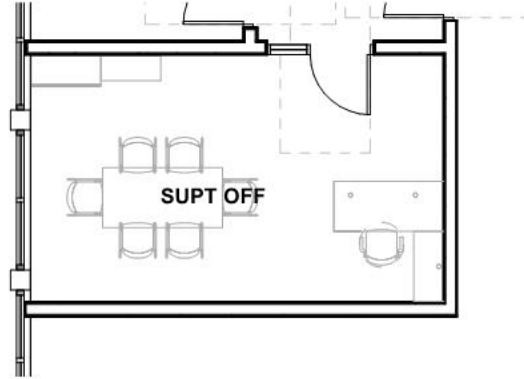
Adult Education Office OTHER -01

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Superintendents Office

OTHER -02



Functional Criteria	
<p>Description: Office Area: 260 sf Quantity: 1 Occupancy Load: 1 to 6</p> <p>Location Criteria Users: • Superintendent</p> <p>Activities: • • Meetings • Administrative Work • Phone Calls • -</p>	<p>Adjacency: District's Business Office Suite Related: Administration</p>

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Superintendents Office

OTHER -02

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 06 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input checked="" type="checkbox"/>-Video Distribution System - 01 <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input checked="" type="checkbox"/>-Wall Mounted Interactive Flat Panel - 01 <input checked="" type="checkbox"/>-IPTV Video Decoder/Controller - 01 <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input type="checkbox"/>-Side Chair - <input type="checkbox"/>-File Cabinet - <input type="checkbox"/>-Bookcase - <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input checked="" type="checkbox"/>-Conference Table - 01 <input checked="" type="checkbox"/>-Conference chairs - 06 <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Superintendents Assistant OTHER -03



Functional Criteria	
Description: Office	Adjacency: Adjacent to Superintendent's Office, District Business Office Suite
Area: 125 sf	
Quantity: 1	Related: Administration
Occupancy Load:	
Location Criteria	
Users:	
• Teachers	
• Staff	
• -	
• -	
Activities:	
•	
• -	
• -	
• -	
• -	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Superintendents Assistant

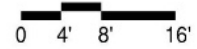
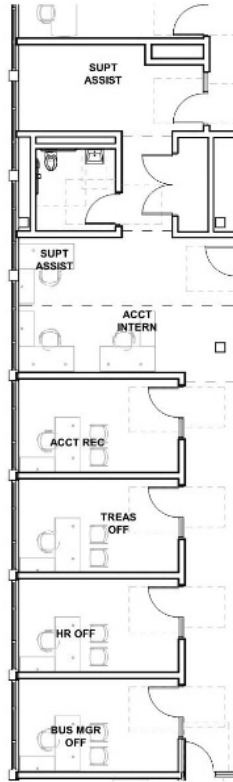
OTHER -03

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p> <p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p> <p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Desktop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - 01 <input type="checkbox"/>-Teacher Chair - 01 <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Conference chairs - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>		

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Business Office Suite HR

OTHER -04



Functional Criteria	
Description: District Administration Offices	Adjacency: District's Business Office Suite
Area: 150 sf	Related: Administration
Quantity: 7	
Location Criteria	
Users:	
• Teachers	
• Staff	
• -	
• -	
Activities:	
• Administrative Work	
• Meetings	
• Phone Calls	
• Filing	

Northeast Metropolitan Regional Vocational High School – Wakefield, MA

Business Office Suite HR

OTHER -04

<p>Technical Criteria-Architectural</p> <p>Floor: Carpet, - Walls: Painted GWB Ceiling: ACT - 3 (2X2 High NRC Tegular Acous. Tile Doors: Flush Wood Door & Sidelite w/ Painted Metal Frame Windows: Exterior Insulating Units, Operable & Fixed Combination, in Aluminum Frames</p>	<p>Technical Criteria-MEP/FP</p> <p>Fire Protection: Sprinklers light hazard.</p> <p>Plumbing: None</p> <p>HVAC: HVAC from Admin. VRF and ERV systems.</p>	<p>Technical Criteria-Communication:</p> <p><input checked="" type="checkbox"/>-Data System-Data Drops - 04 <input type="checkbox"/>-Data System-Fiber Optic Drops - <input type="checkbox"/>-Video Distribution System - <input type="checkbox"/>-Local Audio-Visual Cabling - <input type="checkbox"/>-Local Intercom System Cabling - <input type="checkbox"/>-Sound Field System - <input checked="" type="checkbox"/>-Wall Clock- wired - 01 <input checked="" type="checkbox"/>-PA / Intercom System Ceiling Speaker - 01 <input checked="" type="checkbox"/>-PA / Intercom System Volume Control - 01</p>
<p>Technical Criteria-FFE</p> <p>Casework: <input type="checkbox"/>-General Storage Cabinet - <input type="checkbox"/>-Teacher Wardrobe Cabinet - <input type="checkbox"/>-Mailbox Assembly - <input type="checkbox"/>-Built in Counter - <input type="checkbox"/>-Base Cabinet - <input type="checkbox"/>-Wall Cabinet - <input type="checkbox"/>-Sink - <input type="checkbox"/>-Tote Tray Cabinet - <input type="checkbox"/>-Kiln - <input type="checkbox"/>-Refrigerator/Freezer - <input type="checkbox"/>-Dishwasher - <input type="checkbox"/>-Microwave - <input type="checkbox"/>-Oven - <input type="checkbox"/>-Clothes Washer - <input type="checkbox"/>-Clothes Dryer - <input type="checkbox"/>-Fume Hood - <input type="checkbox"/>-Safety Cabinet - <input type="checkbox"/>-Goggle Cabinet -</p> <p>Loose Furnishings: <input type="checkbox"/>-Teacher Desk - <input type="checkbox"/>-Teacher Chair - <input checked="" type="checkbox"/>-Side Chair - 02 <input checked="" type="checkbox"/>-File Cabinet - 01 <input checked="" type="checkbox"/>-Bookcase - 01 <input type="checkbox"/>-Teacher Lectern - <input type="checkbox"/>-Worktable - <input type="checkbox"/>-Student Chair - <input type="checkbox"/>-Student Desk - <input type="checkbox"/>-Student Worktable - <input type="checkbox"/>-Student Sit Stand - <input type="checkbox"/>-Side Table - <input type="checkbox"/>-Metal Storage Shelving - <input type="checkbox"/>-Conference Table - <input type="checkbox"/>-Café Table - <input type="checkbox"/>-Stool - <input type="checkbox"/>-Tall Stool - <input type="checkbox"/>-Library Shelving - <input type="checkbox"/>-Lounge Seat - <input checked="" type="checkbox"/>-Office "L" Desk - 01 <input checked="" type="checkbox"/>-Office Task Chair - 01</p>	<p>Electrical: Refer to lighting, power, and fire alarm below.</p> <p>Lighting: LED, 50 FC, occupancy sensor controls</p> <p>Power: Three each 120V office circuits.</p> <p>Fire Alarm: One each 15 cd Audio/Visual device</p>	<p>Technical Criteria-Technology</p> <p><input checked="" type="checkbox"/>-Administrative Computing -Laptop - 01 <input checked="" type="checkbox"/>-VoIP Desk Phone - 01 <input type="checkbox"/>-Wireless Media Connector for Sound Field - <input type="checkbox"/>-Data System-Data Drops - <input type="checkbox"/>-Document Camera - <input type="checkbox"/>-Wall Mounted Digital Signage Flat panel - <input type="checkbox"/>-IPTV Decoder/Controller - <input type="checkbox"/>-Wireless Video Device - <input checked="" type="checkbox"/>-Wireless Access Point-Ceiling Mounted - 01 <input type="checkbox"/>-Administration Wireless Devices - <input type="checkbox"/>-Student Wireless Devices -</p> <p>Technical Criteria-Security</p> <p><input type="checkbox"/>- Video Entry System Master Station - <input type="checkbox"/>- Duress Alert System Button - <input type="checkbox"/>- Intrusion Detection Motion Sensor - <input type="checkbox"/>- CCTV Camera - <input type="checkbox"/>- Access Control Card/Proximity Reader -</p>

Northeast Metropolitan Regional Vocational High School Project

SCHEMATIC DESIGN SPECIFICATIONS (UNIFORMAT)

SCHEMATIC DESIGN SPECIFICATIONS ORGANIZATION

Introduction
Element A - Substructure
Element B - Shell
Element C - Interiors
Element D - Services
Element E - Equipment and Furnishings
Element F - Special Construction and Demolition
Element G - Sitework

INTRODUCTION

10 PROJECT DESCRIPTION

1010 Project Summary

- The project consists of the construction of a new four-story high school at the site of the existing Northeast Metropolitan Regional Vocational High School (NEMT) in Wakefield, MA. Site work includes but not limited to significant ledge removal operation, construction of the new access roads with traffic light and turn-off lanes at the new site entrance. The Work consists of a steel framed, concrete masonry and light gauge metal framing walls with CMU veneer, granite (stone) veneer, and high performance insulated rainscreen composite material panels at exterior envelope of the building. The exterior envelope also includes rain screen metal shingles and insulated metal panels. The roofing system includes but not limited to low slope single-ply membrane roofing over tapered and non-tapered insulation, roof pavers plazas, and vegetated roof areas.
- The Work includes the demolition and removal of the existing High School after completion of the new construction.
- The work also includes construction of several freestanding accessory structures.
- Phasing: The Project will be constructed in two major phases, also site enabling ledge removal phase is being considered. The existing building will be occupied during the first phase and demolished during Phase two.

1030 Project Criteria

1030.50 Sustainable Design Requirements

- LEED Version 4.1 for Schools – Silver rating.

1090 Funding

- Budget; Elemental Cost Estimate: Not yet determined.
- Assumptions and Qualifications: Not yet determined.

20 OWNER DEVELOPMENT

2080 Budget Project Contingencies

- Alternates: Not yet determined.
- Unit Prices: Not yet determined.
- Proprietary Products: Access Control and CCTV by Genetec Inc.



Hazardous Materials Summary Report | Existing Conditions Report

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

HAZARDOUS MATERIALS SUMMARY REPORT

**Northeast Metropolitan Technical Vocational High School
100 Hemlock Road
Wakefield, MA 01880**

Prepared for

Drummey Rosane Anderson, Inc.
235 Bear Hill Road, 4th Floor
Waltham, MA 02451

April 2020

CDW Project # 1893.0

6 Huron Drive, Natick, Massachusetts 01760
www.cdwconsultants.com
508-875-2657



Hazardous Materials Summary Report | Existing Conditions Report

NE Metropolitan Technical Vocational High School

Wakefield, MA

CDW Project #1893.0

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Table 1: ACM Quantities

Table 2: OHM Quantities

APPENDICES

Appendix A: Asbestos Laboratory Reports

Appendix B: Lead Paint Laboratory Reports



1.0 INTRODUCTION

CDW Consultants, Inc. (CDW) is pleased to present this Hazardous Materials Summary Report summarizing the findings of the suspect asbestos-containing materials (ACM) and lead-based paint (LBP) and hazardous materials inspection of the Northeast Metropolitan Technical Vocational High School (“Site”) located in Wakefield, Massachusetts. The ACM, LBP and hazardous materials survey were conducted in support of a Feasibility Study for school renovations. In February and March 2020, Ms. Susan Cahalan (Massachusetts DLS Asbestos Inspector #AI60784) conducted an inspection for suspect materials. An inspection is required by the United States Environmental Protection Agency (USEPA) Title 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation and Massachusetts Department of Environmental Protection (MassDEP) Regulation 310 CMR 7.15. These regulations require that buildings be inspected for ACM prior to renovation/demolition projects.

2.0 PROJECT UNDERSTANDING

The hazardous materials inspection was conducted in support of a Feasibility Study for the Northeast Metropolitan Technical Vocational High School. The hazardous building material survey was conducted to identify ACM, LBP, visible hazardous materials including mercury switches, transformers, light ballasts, fluorescent tubes, and other visible hazardous materials connected to building systems. Electronic wastes are not part of building systems and will not be counted. This study excludes sampling for poly-chlorinated biphenyl (PCB) containing building materials.

3.0 GENERAL SITE CONDITIONS

CDW reviewed Plans prepared by Korslund, LeNormand & Quann, Inc. and dated November 24, 1967, the Massachusetts School Board Authority (MSBA) Statement of Interest and our observations for this summary. Northeast Metropolitan Regional Vocational High School, is a grades 9-12 comprehensive vocational and technical high school that is approximately 240,000 square feet which provides academic and vocational programs for approximately 1,250 students from twelve surrounding communities. The school is located on a 30-acre plot at 100 Hemlock Road in Wakefield, Massachusetts. On-site west and north of the building are a football/track field with grandstand, basketball courts, baseball/softball fields and a practice field. The Site building was built in 1968, with a small storage outbuilding constructed in 1975. Apart from minor alterations and construction of other small storage outbuildings, there have not been any significant renovations, additions, or improvements. The flat EPDM roofs were replaced in 1980.

The lowest level floor is a concrete slab-on-grade. The portion of the first floor above the basement is a 12-inch thick reinforced concrete flat slab supported on wide flange steel columns. The primary roof structure throughout the building consists steel bar joists supported on masonry bearing walls on the interior as well as the perimeter with a 2-inch poured gypsum deck. The Gymnasium roof consists of pre-cast concrete supported on pre-cast concrete beams on masonry bearing walls. The



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typical second floor framing is a 2 ½-inch concrete slab on form deck supported on steel bar joists spanning between interior and exterior masonry walls. The pool roof is a concrete slab on metal deck supported on reinforced concrete pool walls and exterior walls. The basic exterior wall type is brick veneer over concrete masonry unit (CMU) back-up.

The majority of exterior doors are hollow metal with metal frames. Typical windows throughout the building are aluminum frames with a hopper-style, operable sash and non- insulated single pane glass. They are the original windows based on record drawings. Fiberglass-faced, insulated, translucent panels are located in the shop spaces and gymnasium.

Numerous types of flooring in various conditions were found throughout the Site building. Terrazzo flooring is located at the entrances, corridors, cafeteria and at shower bases in girl's locker room. Vinyl floor tile is located throughout the building in classrooms and administration spaces. Wood flooring is located in the gymnasium, stage in cafetorium, and platform flooring in a couple of rooms and the carpentry shop. Carpeted areas include the library, conference rooms and offices. Ceramic tile floors are located in locker rooms, the pool deck, and bathrooms. Red quarry tile is located in the main kitchen and student kitchen. Concrete slab flooring is located in the food storage area, loading dock, shop spaces, boiler room and area beneath the pool deck.

Walls also vary throughout the building. Some corridors, stair wells, the cafeteria and platform opening have brick walls with terrazzo base. Concrete Masonry corridors are painted CMU in good condition. The shop spaces also have painted and non-painted walls. Classroom spaces consist of 6" metal stud with metal lath and painted plaster finish. The pool, bathrooms and kitchen/food service area have 4"x4" ceramic wall tile and water fountains found in hallways are marked by the mosaic wall tile behind. Fiberglass reinforced panels are located in the weight room. A few offices in the administrative area have wood paneling. Moveable partition walls were noted in 2nd floor classrooms.

Acoustical ceiling tile are 2'x2' acoustical dropped ceiling systems with steel grids. The classrooms and cafetorium have 1'x1' suspended ceiling tiles. Shop spaces have exposed structural trusses revealing the gypsum roof deck system above. This system consists of gypsum concrete over formboards supported by a wire mesh system.

There are two (2) Cleaver Brooks CB 655-350 350 boiler horsepower fire-tube hot water boilers, which burn No. 4 fuel oil. These boilers are original to the building. Original #4 fuel oil UST supplies the oil burners. The UST is monitored by a Veeder Root TLS350 leak detection and monitoring system. The classroom areas are provided with individual wall mounted classroom unit ventilators located on the exterior wall of each space with adjacent fin tube radiation. All the unit ventilators, as well as fin tube, are served by the hot water heating system. The pool heating system has been mothballed and anti-freeze added to the piping system. The pool was heated by a cast iron boiler firing propane. The shops contain heating and ventilating units with roof mounted fresh air hoods. The Site building has a propane fired interior generator manufactured by Kohler.

Most of the building is air conditioned except for the gym and shop areas. A 255-ton electric chiller



Hazardous Materials Summary Report | Existing Conditions Report

NE Metropolitan Technical Vocational High School
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was installed in 1995. The chiller connects to an open cooling tower located on the roof. The chiller is a Trane RTHA 255 screw chiller utilizing R-22 refrigerant.

Underground electricity runs into the vault that contains the transformer is housed. Switch gear is located in the adjoining electric room. Lighting fixtures throughout the Site building consist of retrofitted T8 lamps and electronic ballasts, T12 lamps and magnetic ballasts, recessed lighting in corridors, the gym has metal halide lamps, the Cafetorium has recessed LED lamps and the stage has incandescent fixtures.

Water piping that is visible is copper tubing with fiberglass insulation. Sanitary, waste, and vent piping is cast iron bell and some of the connections have lead packing. Natural gas is provided to the building for kitchen equipment, science classrooms and abandoned pool heating equipment.

4.0 ASBESTOS SURVEY

4.1 Report Review April 16, 2015

CDW Reviewed the Universal Environmental Consultants Hazardous Materials Summary Report dated May 2015. The materials collected and results are provided in the below tables.

April 16, 2015

Material and Location	Result
Exterior unit vent grille caulking	No Asbestos Detected
Exterior window framing caulking	No Asbestos Detected
Exterior window framing caulking	No Asbestos Detected
Exterior unit vent grille caulking	No Asbestos Detected
Exterior window framing caulking	No Asbestos Detected
Exterior window glazing caulking	No Asbestos Detected
Exterior door framing caulking	No Asbestos Detected
Exterior door framing caulking	No Asbestos Detected
Exterior window glazing caulking	8% Asbestos
Exterior window framing caulking	No Asbestos Detected
Exterior door framing caulking	No Asbestos Detected
Exterior window glazing caulking	8% Asbestos
Exterior caulking on window panel	No Asbestos Detected
Exterior glue daub on window panel	No Asbestos Detected
Exterior window framing caulking	No Asbestos Detected
Exterior unit vent grille caulking	5% Asbestos
Exterior window glazing caulking	No Asbestos Detected
Exterior window framing caulking	No Asbestos Detected
Exterior window glazing caulking	8% Asbestos
Exterior door framing caulking	No Asbestos Detected
Exterior window glazing caulking	No Asbestos Detected
Exterior window framing caulking	No Asbestos Detected
Exterior expansion joint caulking	No Asbestos Detected
Exterior concrete soffit fascia	No Asbestos Detected
Exterior caulking on window panel	No Asbestos Detected



Hazardous Materials Summary Report | Existing Conditions Report

NE Metropolitan Technical Vocational High School
 Wakefield, MA
 CDW Project #1893.0

April 22, 2015

Material and Location	Sample Result
Interior window glazing caulking at pool	No Asbestos Detected
Interior window glazing caulking at hallway by room 154	2% Asbestos
Interior window glazing caulking at room 158	2% Asbestos
Interior door glazing caulking at room 107	2% Asbestos
Interior door glazing caulking at room 104	2% Asbestos
Fire door insulation at cafeteria	60% Asbestos
Fire door insulation at cafeteria	60% Asbestos
1'x 1' Acoustical ceiling tile at room 135	No Asbestos Detected
1'x 1' Acoustical ceiling tile at room 157	No Asbestos Detected
2'x 2' Acoustical ceiling tile at break room	No Asbestos Detected
2'x 2' Acoustical ceiling tile at room 107	No Asbestos Detected
2'x 4' Acoustical ceiling tile at room 011	No Asbestos Detected
2'x 4' Acoustical ceiling tile at room 011	No Asbestos Detected
Plaster at room 120	No Asbestos Detected
Plaster at room 120	No Asbestos Detected
Plaster at room 126	No Asbestos Detected
Plaster at room 126	No Asbestos Detected
Plaster at room 128	No Asbestos Detected
Plaster at room 128	No Asbestos Detected
Plaster at room 128	No Asbestos Detected
Wall joint compound at room 152	No Asbestos Detected
Wall joint compound at room 152	No Asbestos Detected
Black sink coating at break room	5% Asbestos
Black sink coating at break room	5% Asbestos
Pink sink coating at room 153	3% Asbestos
Pink sink coating at room 153	3% Asbestos
White sink coating at room 019	No Asbestos Detected
White sink coating at room 019	No Asbestos Detected
Old lab countertop at room 123	No Asbestos Detected
Old lab countertop at room 123	No Asbestos Detected
Lab table at room 012	No Asbestos Detected
Lab table at room 012	No Asbestos Detected
Vertical caulking between block and column at room 162	5% Asbestos
Vertical caulking between block and column at room 162	5% Asbestos
Vertical caulking between block and block at gymnasium	No Asbestos Detected
Vertical caulking between block and block at gymnasium	No Asbestos Detected
Black mastic on fiberglass insulated pipe at mechanical room	No Asbestos Detected
Black mastic on fiberglass insulated pipe at mechanical room	No Asbestos Detected
Boiler gasket at boiler room	No Asbestos Detected



Hazardous Materials Summary Report | Existing Conditions Report

NE Metropolitan Technical Vocational High School
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Material and Location	Sample Result
Boiler gasket at boiler room	No Asbestos Detected
Boiler exhaust insulation at boiler room	20% Asbestos
Boiler exhaust insulation at boiler room	20% Asbestos
Boiler exhaust insulation at boiler room	30% Asbestos
Generator exhaust insulation at generator room	3% Asbestos
Generator exhaust insulation at generator room	40% Asbestos
Generator exhaust insulation at generator room	30% Asbestos
Hard joint insulation off fiberglass pipe at pool mechanical room	No Asbestos Detected
Hard joint insulation off fiberglass insulated pipe at room 153	No Asbestos Detected
Hard joint insulation off fiberglass insulated pipe at room 158	No Asbestos Detected
Hard joint insulation off fiberglass insulated pipe at room 158	No Asbestos Detected
Hard joint insulation off fiberglass pipe at mechanical room	No Asbestos Detected
Cement floor at library	No Asbestos Detected
Cement floor at library	No Asbestos Detected
Beige 12" x 12" vinyl floor tile at room 128	3% Asbestos
Beige 12" x 12" vinyl floor tile at room 128	3% Asbestos
Black mastic for beige 12" x 12" vinyl floor tile at room 128	3% Asbestos
Black mastic for beige 12" x 12" vinyl floor tile at room 128	10% Asbestos
Brown 12" x 12" vinyl floor tile at room 155	3% Asbestos
Brown 12" x 12" vinyl floor tile at room 158	No Asbestos Detected
Brown 12" x 12" vinyl floor tile at room 158	2% Asbestos
Black mastic for brown 12" x 12" vinyl floor tile at room 155	10% Asbestos
Black mastic for brown 12" x 12" vinyl floor tile at room 158	10% Asbestos
Dark grey 12" x 12" vinyl floor tile at room 103	No Asbestos Detected
Dark grey 12" x 12" vinyl floor tile at room 103	No Asbestos Detected
Pink 12" x 12" vinyl floor tile at office	No Asbestos Detected
Pink 12" x 12" vinyl floor tile at office	No Asbestos Detected
Light blue 12" x 12" vinyl floor tile at room 010	No Asbestos Detected
Light blue 12" x 12" vinyl floor tile at room 010	No Asbestos Detected
White/green 12" x 12" vinyl floor tile at room 018	No Asbestos Detected
White/green 12" x 12" vinyl floor tile at room 018	No Asbestos Detected
Black mastic for white/green 12" x 12" vinyl floor tile at room 018	<1% Asbestos
Black mastic for white/green 12" x 12" vinyl floor tile at room 018	2% Asbestos
Yellow/blue 12" x 12" vinyl floor tile at room 019	No Asbestos Detected
Yellow/blue 12" x 12" vinyl floor tile at room 019	No Asbestos Detected
Black/white 12" x 12" vinyl floor tile at room 120	No Asbestos Detected
Black/white 12" x 12" vinyl floor tile at room 120	No Asbestos Detected
Blue 12" x 12" vinyl floor tile at room 161	No Asbestos Detected
Blue 12" x 12" vinyl floor tile at room 161	No Asbestos Detected
Tan 12" x 12" vinyl floor tile at room 120	2% Asbestos
Tan 12" x 12" vinyl floor tile at room 120	2% Asbestos
Black mastic for tan 12" x 12" vinyl floor tile at room 120	10% Asbestos
Black mastic for tan 12" x 12" vinyl floor tile at room 120	10% Asbestos



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Material and Location	Sample Result
White/tan specks 12" x 12" vinyl floor tile at room 135	No Asbestos Detected
White/tan specks 12" x 12" vinyl floor tile at room 135	No Asbestos Detected
Black mastic for white/tan specks 12" x 12" floor tile at room 135	10% Asbestos
Black mastic for white/tan specks 12" x 12" floor tile at room 135	No Asbestos Detected
White/blue and red flecks 12" x 12" vinyl floor tile at room 151	No Asbestos Detected
White/blue and red flecks 12" x 12" vinyl floor tile at room 151	No Asbestos Detected
White/blue spots 12" x 12" vinyl floor tile at room 126	No Asbestos Detected
White/blue spots 12" x 12" vinyl floor tile at room 126	No Asbestos Detected
Slate window sill at room 126	5% Asbestos
Slate window sill at room 128	15% Asbestos
Interior caulking for exterior window	3% Asbestos
Interior caulking for exterior window	3% Asbestos

4.2 Methods

The USEPA and Massachusetts Department of Environmental Protection (MassDEP) are responsible for developing and enforcing regulations necessary to protect the general public from airborne contaminants that are known to be hazardous to human health. They regulate ACM associated with renovation, demolition, and asbestos abatement projects via the National Emissions Standard for Hazardous Air Pollutants (NESHAP) Title 40 CFR Part 61 regulation and MassDEP Regulation 310 CMR 7.15. These regulations require that buildings be inspected for ACM prior to renovation/demolition projects. They stipulate that all friable ACM as well as non-friable ACM that are in poor condition or will be made friable by renovation or demolition activity be removed or otherwise appropriately abated before they are disturbed. Samples of suspect materials were collected to confirm the presence or absence of ACM and LBP. Suspect materials were grouped into homogenous areas. A homogenous area is an area that is similar in color, texture and date of application. Hand tools were used to collect bulk samples which were promptly placed in sealed plastic bags using a unique numbering system. Samples were not collected of non-suspect materials, including wood, fiberglass, plastic/vinyl, ceramic, concrete, neoprene/rubber, glass, and carpeting.

The investigative work for the asbestos survey included conducting a visual inspection of physically accessible areas of the structure, reviewing plans and coring and repairing brick to observe any vapor barrier, as well as the roof for suspect materials. Once the inspection was completed, the building components were categorized into homogeneous areas. These homogeneous areas included: surfacing materials, thermal system insulation, and miscellaneous materials. CDW collected bulk samples of different homogeneous suspect materials for asbestos analysis. The bulk samples were delivered under chain of custody to Asbestos Identification Laboratory, Inc. (AIL), of Woburn, Massachusetts, fully accredited asbestos analytical laboratories, analyzed the bulk samples utilizing Polarized Light Microscopy (PLM) in accordance with the requirements of 40 CFR Part 763, Subpart F. Samples analyzed to contain greater than 1% asbestos are to be treated as ACM as defined by the USEPA and MassDEP. A positive stop method was used – if one sample in a



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homogeneous group is positive then additional samples of the same material are not analyzed. The asbestos analytical reports are provided in Appendix A.

4.3 Findings

Field ID	Material	Location	Asbestos %
Roof-1A	Tan Paper Top + Bottom Roof Foam	Top of Roof Foam NW Core Wood Shop	None Detected
Roof-1B	Dark Gray Paper	Bottom Foam NW Core Wood Shop	None Detected
Roof-1C	Black Asphaltic Layer	Top of Roof Deck Gypsum NW Core Wood Shop	None Detected
Roof-1D	Gypsum Deck	Roof Core-NE Wood Shop	None Detected
Roof-2A	Gray Paper Top + Bottom Foam	Roof Core-North Over Auto	None Detected
Roof-2B	Asphaltic Layer	Roof Core-North Over Auto	None Detected
Roof-2C	Gypsum Deck	Roof Core-North Over Auto	None Detected
Roof-3A	Gray Paper Top + Bottom Foam	Roof Core-Low Roof Near Gym	None Detected
Roof-3B	Asphaltic Layer	Roof Core Low Roof Near Gym	None Detected
Roof-3C	Gypsum Roof Deck	Roof Core Low Roof Near Gym	None Detected
Roof-4	Gray Paper	Roof Expansion Joint N Side	None Detected
Roof-5A	Gray Paper Top + Bottom Foam	SW Roof Near Front	None Detected
Roof-5B	Asphaltic Layer	Roof-NW Near Core Front	None Detected
Roof-5C	Gypsum	Roof Deck-Core SW	None Detected
Roof-6A	Tan Paper Top + Bottom Foam	Top Pool/Gym Roof	None Detected
Roof-6B	White + Gray Membrane	Top Pool/Gym Roof	None Detected



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Field ID	Material	Location	Asbestos %
Roof-6C	Gypsum Roof Deck	Top Pool/Gym Roof	None Detected
Roof-7A	Gray Paper Top + Bottom Roof Foam	Low Roof-Front	None Detected
Roof-7B	Asphaltic Layer	Low Roof-Front	None Detected
Roof-7C	Gypsum Deck	Low Roof-Front	None Detected
Roof-8A	DK Gray/Black Paper Top + Bottom Roof Foam	Roof-Middle Front	None Detected
Roof-8B	Asphaltic Layer	Roof Core Middle Front	None Detected
Roof-8C	Gypsum	Roof Deck Middle Front	None Detected
Roof-9A	Gray Paper Top + Bottom Roof Foam	Main Entrance Roof	None Detected
Roof-9B	Asphaltic Layer	Core- Main Entrance Roof	None Detected
Roof-9C	Gypsum	Roof Deck-Main Entrance Roof	None Detected
Roof-10A	Gray Paper Top + Bottom Roof Foam	Roof Core Center	None Detected
Roof-10B	Asphaltic Layer	Roof Core Center	None Detected
Roof-10C	Gypsum	Roof Deck-Roof Core Center	None Detected
Roof-11A	Gray Paper Top + Bottom Roof Foam	Roof Over Kitchen Cage	None Detected
Roof-11B	Asphaltic Layer	Roof Over Kitchen Café	None Detected
Roof-11C	Gypsum Deck	Roof Over Kitchen Café	None Detected
Roof-12A	Dark Gray Paper Top + Bottom Roof Foam	Sloped Roof	None Detected
Roof-12B	Asphaltic Layer	Sloped Roof	20% Chrysotile
Roof-12C	Gypsum	Sloped Roof	None Detected
Roof-13A	Gray Paper Top + Bottom Foam	Sloped Roof	None Detected



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Field ID	Material	Location	Asbestos %
Roof-13B	Asphaltic Layer	Curb Cut at Chimney	None Detected
Roof-13C	Gypsum Deck	Curb Cut at Chimney	None Detected
Roof-13D	Black Tar	Curb Cut at Chimney Original Tar (Old)	None Detected
Roof-14A	Gray Paper Top + Bottom Foam	Front Older Roof	None Detected
Roof-14B	Asphaltic Layer	Front Older Roof	None Detected
Roof-14C	Gypsum Deck	Front Older Roof	None Detected
Roof-15A	Gray Paper Top + Bottom Foam	Front Older Roof	None Detected
Roof-15B	Asphaltic Material	Older Front Roof	None Detected
Roof-15C	Gypsum Deck	Older Front Roof	None Detected
1A, 1B, 1C	Gray Caulk	On Metal Flashing Wood Shop to Low Roof	2% Chrysotile
2A, 2B, 2C, 2D, 2E	Gray Window Glaze	Exterior at Frosted Windows Roof Level Gym and Shops	10% Chrysotile
3A, 3B, 3C, 3D, 3E	White Caulk	Gym Window Roof Level	None Detected
4A, 4B, 4C, 4D, 4E	Tan/Pinkish Hue Over Black Expansion Join	Gym Upper Level	None Detected
5A, 5B, 5C	White Caulk on Silicone	Roof Stand Pipe Vents	None Detected
6A, 6B, 6C	Black Brittle Tar	On Metal Flash Entrance Roof Top Lower Roof	None Detected
7A, 7B, 7C	Black Caulk	Around Roof Drains	None Detected
8A, 8B, 8C	White Caulk	On Steel Vents Near Chimney	None Detected
9A, 9B, 9C	Dark Gray Caulk	Inside Roof Drain Under Rubber	None Detected
10, 10B	Black Caulk	Corner of Chimney	5% Chrysotile



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Field ID	Material	Location	Asbestos %
11A, 11B	Black Bumper Material	Kitchen Loading Dock	None Detected
12A, 12B	Gray Caulk	Around Large Vent Near Kitchen Dock	None Detected
13A, 13B	Interior Gray Window Glaze	Office in Kitchen	5% Chrysotile
14A, 14B, 14C	Gray/Black Mastic	Under Red Ceramic Tile in Kitchen	None Detected
15A, 15B, 15C	2'X2' Pindot + Fissure Ceiling Tile	Kitchen Storage	None Detected
16A, 16B, 16C	White Mastic	Under Ceramic Wall Tile Kitchen	None Detected
17A, 17B, 17C	Yellowish Grout	Under Ceramic Wall Tile, Kitchen	None Detected
18A, 18B, 18C, 18D, 18E	White Plaster	Kitchen Ceiling	None Detected
19A, 19B	Interior Door Assembly Window Glaze	Near Door 109	2% Chrysotile
20	White Material	Inside Wood Door Near 109	15% Chrysotile 10% Amosite
21A, 21B, 21C, 21D, 21E	Tan Expansion Joint-Vertical	Exterior Pool, Gym Near Front and Kitchen	None Detected
22A, 22B	Gray Caulk	Exterior Door #02	None Detected
23A, 23B	Gray White Caulk	Exterior Door #23	None Detected
24A	Black Window Glaze on Metal Door	Door #02	None Detected
25A, 25B	Gray Window Glaze	Side Light Windows Door #02	3% Chrysotile
26A, 26B	Gray Window Glaze, Exterior Windows	Door #23	3% Chrysotile
27A, 27B, 27C	White Caulk	Exterior Univents	3% Chrysotile



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Field ID	Material	Location	Asbestos %
28	Interior Door Material	Next to Main Office Assembly	None Detected
29	Interior Door Material	Assembly Near Dental	None Detected
30	Interior Door Material	Gym Door	None Detected
31	Interior Tan Door Material	Door 104	None Detected
32	Interior Tan Door Material	Door 107	None Detected
33	Gray Glaze	Interior Door Window Above Room 107	2% Chrysotile
34	Gray Glaze on Interior Window	On Wood Door 107	2% Chrysotile
35	Gray Glaze on Interior Window Glaze	On Door Room 121	2% Chrysotile
36	Gray Glaze Interior Window	Window Above Door Room 121	2% Chrysotile
37	Gray Window Glaze	Interior Hall Assembly Near 109	2% Chrysotile
38A, 38B	Gray Glaze	Interior Windows Main Office	None Detected
39A, 39B, 39C, 39D, 39E, 39F, 39G, 39H, 39I	2'X2' Tan/Brown Textured Ceiling Tile	All Hallways	None Detected
40A, 40B, 40C, 40D, 40E, 40F, 40G	1'X1' Ceiling Tile Dot + Small Fissures	Classrooms and Cafetorium-Spline Set	None Detected
41A, 41B, 41C	Black Vinyl Cove Base	Gym	None Detected
42A, 42B, 42C	Yellow Glue	Under Black Cove Base-Gym	None Detected
43A, 43B, 43C	Black Tar	On Gym Deck Under Wood	5% Chrysotile
44A, 44B, 44C	DK Gray Grout Under Stone Window Sills	123, 107, + 121 Classrooms	2% Chrysotile



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Field ID	Material	Location	Asbestos %
45A, 45B, 45C	Stone (Slate) Window Sills	132, 107, + 121 Classrooms	5% Chrysotile
46A, 46B, 46C, 46D, 46E, 46F, 46G	Plaster Skim on Walls	Rooms 103, 104, 118, 123, 125, 121, + Dental	None Detected
47A, 47B, 47C, 47D, 47E, 47F, 47G	Black Mastic	Under Terrazzo Halls + Stairs	None Detected
48A, 48B, 48C	Black Mastic	Under Terrazzo in Cafeteria	None Detected
49A, 49B	Black Mastic	Under Wood on Stage in Cafetorium	None Detected
50A, 50B, 50C	DK Brown Vinyl Cove Base	Science- Chem. + Biology	None Detected
51A, 51B, 51C	White Mastic	Under DK Brown Vinyl Cove Base	None Detected
52A, 52B, 52C	Black Vinyl Cove Base	Base of Science Tables	None Detected
53A, 53B, 53C	Black/Brown Mastic	Under Black Vinyl Cove Base	None Detected
54A, 54B, 54C	Brown Glue Daubs	Behind Acoustical Panels- Pool	None Detected
55A, 55B, 55C, 55D, 55E	Tan Grout	Under Ceramic Wall Tile- Pool	None Detected
56A, 56B, 56C, 56D, 56E	White Mastic	Under Wall Ceramic Wall Tile- Pool	None Detected
57A, 57B, 57C, 57E, 57F	Gray Grout	Under Ceramic Tile on Pool Deck	None Detected
58A, 58B, 58C	Gray Mastic	Under Ceramic Tile on Pool Deck	None Detected
59A, 59B, 59C	White Expansion Joint	Interior Walls Pool Area	None Detected
60A, 60B, 60C	White Ceiling Plaster	Girls Locker Room	None Detected
61A, 61B, 6C	White Ceiling Plaster	Bots Locker Room	None Detected



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Field ID	Material	Location	Asbestos %
62A, 62B, 62C	Gray Grout	Under Ceramic Floor Tile, Girls Locker Room	None Detected
63A, 63B, 63C	Dark Gray Mastic	Under Ceramic Floor Tile, Girls Locker Room	None Detected
64A, 64B, 64C, 64D, 64E, 64F, 64G	Gray Mastic	Under Ceramic Wall Tile-Hallways	None Detected
65A.1, 65B.1, 65C.1, 65D.1, 85E.1, 65F.1, 65G.1	White Plaster/Grout Mix	Under Ceramic Wall Tile in Hallways	None Detected
65A, 65B, 65C, 65D, 65E	Black Coating on Copper	Behind Brick Facade	10% Chrysotile
66A, 66B, 66C	Thin Copper Flashing with Black Coating	Top of Foundation Sill	None Detected
67A, 67B, 67C	Gray Concrete Skim Coat	Exterior Gym-Roof Level	None Detected
68A, 68B, 68C	Green Paper, Under Concrete Skim	Exterior Gym, Roof Level	None Detected

Chrysotile = Asbestos Mineral

Amosite= Asbestos Mineral

4.4 Recommendations

ACM that will be impacted by renovation or demolition work must be removed before they are disturbed. This work must be conducted in accordance with a project design as prepared by a licensed Asbestos Abatement Project Designer. This report is not intended for use as an abatement design. Prior to disturbance, the ACM identified must be abated by a Commonwealth of Massachusetts-licensed asbestos abatement contractor following all federal, state & local regulations governing asbestos abatement. A copy of the asbestos Waste Shipment record must be received within 35 days of removal from the Site. Asbestos air quality sampling must be conducted under USEPA regulations following asbestos abatement and prior to re-occupancy of the spaces. If additional materials are discovered that have not been sampled, those materials should be considered ACMs until laboratory analysis determines otherwise. During the course of renovation or demolition work, it is possible that additional suspect ACM will be encountered. Contractors should be apprised to conduct any such work in a controlled manner. If suspect materials that have not been sampled are encountered, they should be assumed to contain asbestos, unless appropriate sampling and analysis indicates otherwise.

If any identified ACM will remain in place, then the ACM should be managed under an Operations and Maintenance Plan (O&M Plan) so that they are not inadvertently disturbed. The O&M Plan



would include establishing a Program Manager, recordkeeping, employee and contractor notifications, periodic surveillance and training requirements.

Other Observations and Plans Review

Other observations during CDW's survey include:

- CDW dug holes next to foundation/slab, no mastic was observed.
- The coated copper flashing behind brick façade only goes up about 4-5 courses of brick, and was not found at the front of the building

CDW reviewed architectural plans prepared by CDW reviewed Plans prepared by Korslund, LeNormand & Quann, Inc. and dated November 24, 1967. Some notable items include:

- Drawing 6 shows fireproofing plaster on steel beams enclosed within CMU at A-103, A-109, A-130, A-136
- Typical classroom elevations show a pipe enclosure behind each uninvent
- Thru wall flashing is shown on several drawings in several locations, and is unknown if it contains ACM
- Plan #15 depicts firebrick lining inside chimney
- A pipe tunnel is shown in the pool area

5.0 LEAD-BASED PAINT

5.1 Methods

CDW performed a visual inspection of painted surfaces. CDW collected samples from different color paints on various types of building component substrates. Samples were submitted to EMSL Analytical in Cinnaminson, New Jersey for lead analysis via Atomic Absorption Spectrometry (AAS).

5.2 Findings

The analytical results revealed that four of the nine samples analyzed had detectable concentrations of lead. The Environmental Protection Agency (EPA) defines LBP as any paint or surface coating that contains lead equal to exceeding one milligram per square centimeter (1.0 mg/cm²) or 5,000 ppm by weight. OSHA has not set numerical threshold limits for lead and the OSHA lead-in-construction standard defines lead containing paint (LCP) as a paint or coating containing any detectable level of lead. Based on the EPA and OSHA criteria listed above, 17 samples are LCP and six samples are LBP. The lead paint analytical results are provided in the below table. The laboratory analytical report is included in Appendix B.



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Sample ID	Site	Lead Concentration (% Weight)
LP-1	White Paint on Wood-Sloped Roof Under Soffit	2.5
LP-2	White Paint on Wood Main Roof	6.7
LP-3	Red Paint-Steel Window Lintel	0.3
LP-4	Gray Paint on Roof Stair Rail	12
LP-5	Tan Door Paint on Metal Door #23	0.034
LP-6	Brown Paint Metal Door Assembly #23	0.068
LP-7	Brown Paint on Metal HVAC Ext. Near Kitchen	0.0084
LP-8	Tan Paint on Wood Garage Door	0.1
LP-9	Brown Paint Metal Door U2	0.12
LP-10	Brown Over Red Stair Rail Paint	20
LP-11A	White Textured Paint on Concrete- Front	0.035
LP-11B	White Textured Paint on Concrete- Front	0.013
LP-12	Tan Paint Ext. Metal Door	<0.008
LP-13	Brown Over Red Metal Door Assembly 109	0.42
LP-14	Pink- White Paint- Hall on CMU	0.0094
LP-15	Gray Paint Metal Door Dental	<0.008
LP-16	White Parking Stripe Paint Rear Near Kitchen	0.02
LP-17A	Yellow Paint on Curb	<0.008
LP-17B	Yellow Paint on Curb	0.6
LP-18	Gray Wall Paint on CMU Hall	<0.008
LP-19	Silver Paint on Bleachers Football Field	0.71
LP-20	DK Gray/Black/Green Announcement Booth	<0.008

5.3 Recommendations

Based on the conclusions of this testing, the following recommendations are offered:

- Renovation or demolition activities that disturb surfaces that contain lead must be conducted in accordance with the OSHA regulation 29 CFR 1926.62 “Lead Exposure in Construction: Interim Final Rule.” This regulation requires that a site-specific health and safety plan be prepared before conducting activities that create airborne lead emissions. Such a plan should include the identification of lead components, an exposure assessment, and, if applicable, the required work procedures and personnel protection to be used. Handling or impacting components that are covered by LBP may require compliance with the OSHA lead standard. To minimize exposure to airborne dust or fumes, torch burning, cutting, grinding, or similar high impact work on components covered by LBP should be avoided. Such work would need



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to be conducted by properly trained workers using appropriate worker protection and engineering controls.

- In addition to the worker protection requirements stipulated by OSHA, MassDEP and the USEPA regulate the disposal of wastes that are potentially hazardous. Such wastes may include paint chips and residue generated during abatement or repainting work, or whole components, such as wood windows, doors, and trim that are coated with LBP and that are disposed of as the result of renovation or demolition work. To determine the required method for disposing of permeable items coated with LBP, the MassDEP and the USEPA require representative sampling of the debris to determine the quantity of lead that would be expected to leach into the environment if the debris were disposed of in a landfill. The representative sample(s) must be analyzed by the Toxicity Characteristic Leaching Process (TCLP) to determine the proper disposal method.
- Those components/colors not tested, or in locations not inventoried in this report, should be sampled for lead content prior to disturbance that may cause airborne release of lead.

6.0 HAZARDOUS MATERIALS SURVEY

6.1 Methods

OHM Visual Inspection

CDW visually inspected the Site building for universal, special and hazardous wastes associated with building materials. These included but were not limited to the following:

- Mercury-containing devices (fluorescent light tubes, thermostats, gauges, etc.);
- Polychlorinated bi-phenyl (PCB)-containing articles, equipment and devices (light ballasts, electrical switches, etc.);
- Chlorofluorocarbon (CFC)-containing equipment (refrigerants, air conditioners/HVAC equipment, water bubblers, etc.)
- Tritium-containing devices (Exit signs);
- Lead-Acid batteries (emergency lights, etc.); and
- Pressurized-cylinders (fire extinguishers, etc.).

6.2 Findings

OHM

The visual survey for hazardous materials identified mercury-containing light tubes, electronic



ballasts, mercury containing thermostats and switches, lead and tritium batteries, hydraulic fluids, science chemicals, hair chemicals, lead wall in dentistry, Xray materials, gas cylinders, oils, drums of waste oil, underground fuel tank, transformer, refrigerants and other hazardous materials. No hazardous materials sampling or analysis was conducted as part of this preliminary survey. A list of OHMs identified are included in Table 2.

6.3 Recommendations

Prior to removal, light tubes, ballasts, compact florescent bulbs, lead and tritium batteries, thermostats and switches will require proper handling, removal, transportation and off-site recycling/reclamation. Hydraulic oil from the automobile lift reservoirs, transformer and refrigerants will require handling and disposal in accordance with regulations. Any sludge in the science sink traps and drainage structures trenches in floor in science rooms and cosmetology rooms will need to be sampled for laboratory analysis of lead and mercury and other constituents via TCLP to determine proper disposal requirements. Laboratory and hair chemicals, gas cylinders, Xray and other reusable items should be properly stored, in their original containers, and are recommended for re-use. The UST will have to be removed under local, federal and state regulations.

7.0 POLYCHLORINATED BIPHENYLS SURVEY

CDW conducted a visual survey for polychlorinated biphenyls (PCBs) in building materials. No sampling for laboratory analysis was conducted. Suspect PCB containing materials include: interior expansion joints in hallway near gym, interior of gym, interior of pool, exterior expansion joints at the gym and pool building and tech shops, window glaze on frosted and glass windows, exterior window, door and uninvent caulk. The list of assumed PCB containing materials and quantities are included in Table 1.

Limitations

The conclusions are limited to the information available at the time of the field survey and the scope of services, as defined. No subsurface soil or groundwater sampling and analysis was performed. Where access to portions of the Site or to structures on the site was unavailable or limited, CDW renders no opinion as to the presence of hazardous material or the presence of indirect evidence related to hazardous material in that portion of the site or structure. A through, destructive survey cannot occur until the building is vacant. This report cannot be solely relied upon for renovation or demolition. The testing performed forms the basis for conclusions expressed and areas inaccessible for testing limits those conclusions. No other conclusions, interpretations or recommendations are contained or implied in this report other than those expressed. While CDW followed industry standards during the inspection, we do not warrant that all suspect hazardous building materials were identified in or on the buildings and shall not be held liable related to future abatement costs related to hazardous materials that are either not discovered or not



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appropriately characterized. This is due in part to inherent problems with every building inspection, such as, but not limited to:

- Seemingly homogeneous materials that are not in fact homogeneous;
- Seemingly representative locations that are not in fact representative;
- Layered materials that are not uniformly present or are isolated;
- Materials that are present and accessible but were not considered to be hazardous,
- Materials that are present in an isolated and limited quantity; and
- Material that is present in locations that are unsafe or otherwise difficult to access.

Client acknowledges that CDW's inspection is limited and all hazardous materials may only become apparent during the course of future renovation or demolition. During the course of future renovation/demolition work, it is likely that additional hazardous materials or materials suspected of being hazardous will be identified. Such materials should be assumed to be hazardous unless appropriate evaluation or sampling and analysis demonstrate otherwise. No other use of this report is warranted without the written consent of CDW Consultants, Inc.

CDW appreciates the opportunity to provide our services to you on this project.

Very truly yours,

CDW CONSULTANTS, INC.

Susan Cahalan, PG, ISSP-SA
Senior Environmental Geologist

TABLES

TABLE 1
ACM Quantities
Northeast Metro Tech High School
Wakefield, Massachusetts

Material Description	NESHAP Cat.	Location	Est. Quantity	Units
Pipe Insulation and Fittings >6-Inches in Diameter	Friable ACM	Pipe Trench, Behind Wet Walls, Boiler Room, Fixed Walls, Tunnels	2,500	LF
Pipe Insulation and Fittings < 6-Inches in Diameter	Friable ACM	Pipe Trench, Behind Wet Walls, Boiler Room, Fixed Walls, Tunnels	12,000	LF
Thermal System Insulation	Friable ACM	Breeching in Boiler Room, Generator Exhaust Insulation	800	SF
Vinyl Floor Tiles and Mastic, Various Colors	Cat. 1 Non-friable ACM	Classrooms and Offices	93,000	SF
Wood Doors with Fire Insulation	Friable ACM	Majority of Classroom Doors with Windows, Doors Without Windows and Ten Doors in Cafetorium	240	EA
Wood Door Window Glaze	Cat. 2 Non-friable ACM	Majority of Classroom Doors with Windows	200	EA
Pink and Black Sink Coating	Cat. 2 Non-friable ACM	Science, Art, Break Rooms, Various Rooms	50	EA
Interior Window Glaze	Cat. 2 Non-friable ACM	Doors and Sidelights in Hall Assemblies	20	EA
Interior Window Glaze	Cat. 2 Non-friable ACM	2'x3' Windows Above Doors to Classrooms and Other to Hallways and Some Divider	200	EA
Interior Window Glaze	Cat. 2 Non-friable ACM	Admin Area, Offices in Kitchen Areas, Locker Rooms, Tech Areas. Majority 4'x4'	80	EA
Interior Vertical Caulking	Cat. 2 Non-friable ACM	Room 162	100	LF
Slate Window Sills Including Grout	Cat. 2 Non-friable ACM	Classrooms, Offices, Some Tech	2,000	LF
Black Mastic	Cat. 2 Non-friable ACM	Under Wood Floor In Gym	8,200	SF

TABLE 1
ACM Quantities
Northeast Metro Tech High School
Wakefield, Massachusetts

Material Description	NESHAP Cat.	Location	Est. Quantity	Units
Slate Boards With Glue Daubs	Suspect ACM, Not Sampled	Classrooms	100	EA
Old Flex Connectors	Suspect ACM, Not Sampled	On HVAC Near Ceiling in Technical Classrooms (HVAC, Auto Shop, Etc.), Gym, Other Areas in Tunnel or Fixed Walls	50	EA
Gaskets	Suspect ACM, Not Sampled	Located on Piping Connections, Valves, Ts	500	EA
Walk In Refrigerator and Freezer Mastic	Suspect ACM, Not Sampled	Cafeteria Kitchen and Kitchen for Foodservice	4	EA
Boilers	Suspect ACM, Not Sampled	Interior Components, Boiler Room and Pool Area	3	EA
Vault Door Fireproofing	Suspect ACM, Not Sampled	Admin Area	1	EA
Dry Transformer Transite	Suspect ACM, Not Sampled	Noted on Walls in Tech Shops	20	EA
Transite in Switch Gear	Suspect ACM, Not Sampled	In Electric Room, Typical Panels are 12"x6" with 20 Per Switch	100	EA
Fire Brick	Suspect ACM, Not Sampled	Chimney Lining	1	EA
Transite Fume Hood	Suspect ACM, Not Sampled	Science, Chemistry	1	EA
Gray Caulk	Cat. 2 Non-friable ACM	On Metal Flashing, Wood Shop to Low Roof	200	LF
Gray Window Glaze *also assumed to contain PCBs	Cat. 2 Non-friable ACM	On Fiberglass Frosted Windows, Tech Shops, Gym, Pool. Approximate Sizes 10'x4', 20'x10', 6'x4'	190	EA

TABLE 1
ACM Quantities
Northeast Metro Tech High School
Wakefield, Massachusetts

Material Description	NESHAP Cat.	Location	Est. Quantity	Units
Gray Window Caulk *assumed to contain PCBs	Non ACM, Sampled	Non ACM Exterior Window Caulk, Auumed to Contain PCBs	6,500	LF
Gray Window Glaze * also assumed to contain PCBs	Cat. 2 Non-friable ACM	On Exterior Windows, Various Sizes, Approximately 15'x4', 8'x4', 6'x4', 10'x4', 4'x4', other various sizes. Quantity includes any old caulk under new.	225	EA
Gray Caulk *also assumed to contain PCBs	Cat. 2 Non-friable ACM	Around Exterior Univents	480	LF
Dark Brown Caulk	Cat. 2 Non-friable ACM	Exterior of Chimney	40	LF
Roofing Asphaltic Type	Cat. 1 Non-friable ACM	Sloped Roof on Main School Building and Outbuilding with Football Training Gear	10,600	SF
Exterior Vapor Barrier	Cat. 2 Non-friable ACM	Black Coating on Copper Behind Brick Façade, Lower Courses Only	8,500	SF
Exterior Door Caulk *Also assumed to contain PCBs	Cat. 2 Non-friable ACM	Exterior Doors, Old Under New	600	LF
Subsurface Transite	Suspect ACM, Not Sampled	Subsurface	1,000	LF

Table 2
Hazardous Materials
Northeast Metrotech High School

Material Description	Location	Est. Quantity	Units
Compact Fluorescent Bulbs	Throughout	200	EA
Fluorescent Bulbs (Mercury)	Throughout	12000	Tubes
Electric Light Ballasts	Throughout	6000	Each
Thermostats and Switches (Mercury)	Throughout	500	Ampules
Emergency Light Batteries (Lead)	Throughout	80	EA
Refrigerants Associated With HVAC, Bubblers, HVAC Shop, Kitchen, Cooling Unit	Throughout	10000	Gallons
Fire Extinguishers (Compressed Gas)	Throughout	250	EA
Lead-Based Paint	Metal	NA	NA
Dark Room Chemicals	Dark Room	10	Gallons
Exit Signs (Tritium)	Throughout	80	EA
Chemicals in Sludge	Science Sink Traps, Drainage in Floor Trench, Science, Cosmetology, Xray, Auto Shop	50	Gallons
Laboratory Chemicals	Science Labs	Reuse	Reuse
Waste Oil and Other Fluids (Brake, Antifreeze, Etc.).	Automotive	20	Drums
Fuel Oil UST	Subsurface	1	Each
Lead Backed Wall and Door	Dental Shop	Reuse	Reuse
Xray	Dental Shop	Reuse	Reuse
Old Door Retractors	Remnant-Classrooms, Main Doors, Offices, Assemblies	50	Each

Table 2
Hazardous Materials
Northeast Metrotech High School

Material Description	Location	Est. Quantity	Units
Hydraulic Fluid	Old Hydraulic Reservoirs	200	Gallons
PCB Fluid	Transformers	200	Gallons

APPENDIX A



Asbestos Identification Laboratory

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentificationlab.com
Email: mikemanning@asbestosidentificationlab.com

Batch: 51442



March 10, 2020

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Name: *NE Metropolitan Technical Vocational School, Wakefield, MA*

Project Number:

Date Sampled: 2020-02-18

Work Received: 2020-03-04

Work Analyzed: 2020-03-09

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

Dear Susan Cahalan,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Susan Cahalan for your business.

Michael Manning
Owner/Director

March 10, 2020

Susan Cahalan
 CDW Consultants, Inc.
 6 Huron Drive
 Natick, MA 01760

Project Name: NE Metropolitan Technical Vocational School, Wakefield, MA
Project Number:
Date Sampled: 2020-02-18
Work Received: 2020-03-04
Work Analyzed: 2020-03-09

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
Roof-1A 572983	Tan Paper	Top of Roof Foam NW Core Wood Shop	tan	Fiberglass 10 Cellulose 10 Non-Fibrous 80	None Detected
Roof-1B 572984	Dark Gray Paper	Bottom Foam NW Core Wood Shop	gray	Fiberglass 10 Cellulose 60 Non-Fibrous 30	None Detected
Roof-1C 572985	Black Asphaltic Layer	Top of Roof Deck Gypsum NW Core Wood Shop	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-1D 572986	Gypsum Decl	Roof Core- NE Wood Shop	gray	Cellulose 3 Non-Fibrous 97	None Detected
Roof-2A 572987	Grey Paper Top + Bottom Foam	Roof Core- North Over Auto	gray	Fiberglass 10 Cellulose 60 Non-Fibrous 30	None Detected
Roof-2B 572988	Asphaltic Layer	Roof Core- Norht Over Auto	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-2C 572989	Gypsum Deck	Roof Core- North Over Auto	gray	Cellulose 3 Non-Fibrous 97	None Detected
Roof-3A 572990	Grey Paper	Top + Bottom Foam Roof Core Low Roof Near Gym	gray	Fiberglass 30 Cellulose 50 Non-Fibrous 20	None Detected
Roof-3B 572991	Asphaltic Layer	Roof Core Low Roof Near Gym	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-3C 572992	Gypsum Roof Deck	Roof Core Low Roof NEar Gym	gray	Cellulose 3 Non-Fibrous 97	None Detected
Roof-4 572993	Gray Paper	Roof Expansion Joint N Side	gray	Fiberglass 20 Cellulose 60 Non-Fibrous 20	None Detected
Roof-5A 572994	Gray Paper	Top + Bttom Foam SW Roof Near Front	gray	Fiberglass 20 Cellulose 50 Non-Fibrous 30	None Detected
Roof-5B 572995	Asphaltic Layer	Roof- NW Near Core Front	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-5C 572996	Gypsum	Roof Deck- Core SW	gray	Cellulose 3 Non-Fibrous 97	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
Roof-6A 572997	Tan Paper Top + Bottom Foam	Top Pool/Gym Roof	brown	Cellulose 98 Non-Fibrous 2	None Detected
Roof-6B 572998	White + Gray Membrane	Top Pool/Gym Roof	multi	Cellulose 20 Non-Fibrous 80	None Detected
Roof-6C 572999	Gypsum Roof Deck	Top Pool/Gym Roof	multi	Cellulose 40 Non-Fibrous 60	None Detected
Roof-7A 573000	Grey Paper Top + Bottom Roof Foam	Low Roof- Front	gray	Fiberglass 30 Cellulose 50 Non-Fibrous 20	None Detected
Roof-7B 573001	Asphaltic Layer	Low Roof Front	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-7C 573002	Gypsum Deck	Low Roof Front	multi	Cellulose 5 Non-Fibrous 95	None Detected
Roof-8A 573003	DK Gray/Black Paper	Top + Bottom Roof Foam Middle Front	gray	Fiberglass 30 Cellulose 50 Non-Fibrous 20	None Detected
Roof-8B 573004	Asphaltic Layer	Roof Core Middle Front	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-8C 573005	Gypsum	Roof Deck Middle Front	gray	Cellulose 3 Non-Fibrous 97	None Detected
Roof-9A 573006	Gray Paper	Top + Bottom Roof Foam Main Entrance Roof	gray	Fiberglass 20 Cellulose 50 Non-Fibrous 30	None Detected
Roof-9B 573007	Asphaltic Layer	Core- Main Entrance Roof	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-9C 573008	Gypsum	Roof Deck Main Entrance Roof	gray	Cellulose 3 Non-Fibrous 97	None Detected
Roof-10A 573009	Gray Paper Top + Bottom Roof Foam	Roof Core Center	gray	Fiberglass 20 Cellulose 60 Non-Fibrous 20	None Detected
Roof-10B 573010	Asphaltic Layer	Roof Core Center	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-10C 573011	Gypsum	Roof Deck Roof Core Center	gray	Cellulose 2 Non-Fibrous 98	None Detected
Roof-11A 573012	Gray Paper Top + Bottom Roof Foam	Roof Over Kitchen Cafe	gray	Fiberglass 20 Cellulose 60 Non-Fibrous 20	None Detected
Roof-11B 573013	Asphaltic Layer	Roof Over Kitchen Cafe	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-11C 573014	Gypsum Deck	Roof Over Kitchen Cafe	gray	Cellulose 2 Non-Fibrous 98	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
Roof-12A 573015	Dark Gray Paper	Top + Bottom Roof Foam Sloped Roof	gray	Fiberglass 30 Cellulose 50 Non-Fibrous 20	None Detected
Roof-12B 573016	Asphaltic Layer	Sloped Roof	black	Non-Fibrous 80	Detected Chrysotile 20
Roof-12C 573017	Gypsum	Sloped Roof	multi	Cellulose 5 Non-Fibrous 95	None Detected
Roof-13A 573018	Gray Paper Top + Bottom Foam	Sloped Roof	gray	Fiberglass 30 Cellulose 50 Non-Fibrous 20	None Detected
Roof-13B 573019	Asphalt Layer	Curb Cut at Chimney	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-13C 573020	Gypsum Deck	Curb Cut at Chimney	gray	Cellulose 3 Non-Fibrous 97	None Detected
Roof-13D 573021	Black Tar	Curb Cut at Chimney Original Tar (Old)	black	Non-Fibrous 100	None Detected
Roof-14A 573022	Gray Paper	Top + Bottom Foam Front Older Roof	gray	Fiberglass 30 Cellulose 50 Non-Fibrous 20	None Detected
Roof-14B 573023	Asphaltic Layer	Front Older Roof	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-14C 573024	Gypsum Deck	Front Older Roof	gray	Cellulose 3 Non-Fibrous 97	None Detected
Roof-15A 573025	Gray Paper	Top + Bottom Foam Front Older Roof	gray	Fiberglass 20 Cellulose 60 Non-Fibrous 20	None Detected
Roof-15B 573026	Asphaltic Material	Older Front Roof	black	Fiberglass 20 Non-Fibrous 80	None Detected
Roof-15C 573027	Gypsum Deck	Older Front Roof	gray	Cellulose 3 Non-Fibrous 97	None Detected

Tuesday 10 March

Analyzed by:

Erik Longas

End of Report

Batch: 51442

Page 3 of 3

North east Metropolitan Technical Vocational School Wakefield

CHAIN OF CUSTODY

EPA/600/R-93/116

Asbestos Identification Lab

65 New Boston St.

Suite 227

Woburn, MA 01801

(781)932-9600

www.asbestosidentificationlab.com



Date Sampled: 2/18-19, 3/1-3/3 2020

BATCH#

514472

Rev 06/16

Page 1 of 2

Turnaround Time

Less 3 Hrs

Same Day

Next Day

Two Day

Stop on 1st Positive? Yes/No

Notify Method: Mail/E-Mail/Verbal

Analyzed By: *[Signature]*

Date: 3/4/2020

Sample Method

Bulk

Soil

Wipe

Point Count

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereo Scope				Optical Properties							RI	Non-Asbestos Percentage (%)								
			Temp in Celsius = 21	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation		Birefringence	Pleochroism	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
572983	1A	Tan paper Location: Top of roof foam NW Core wood shop		0.5	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
	1B	Dark Gray Paper Location: Bottom foam NW Core wood shop		0.5	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
	1C	Black Asphaltic Location: Top of Roof Deck NW Core wood shop		0.5	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~

of Samples Received:

45

Received by date:

3/4/2020

Relinquish by date:

3/4/2020

Contact: Susan Chelala

Phone Email address: s.chelala@asbestosidentificationlab.com

Project Site & #: NE Metro Technical Vocational

Address: Le Huron Drive, North, MA

Client: CDW CONSULTANTS

NE Metro Tech

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celsius = 91	Material / Location	Stereo Scope					Asbestos Minerals	Optical Properties							Non-Asbestos Percentage (%)											
				% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous					
91	Roof-3TB		Material: Asphaltic layer Location: Roof core Low roof near gym	0% Bln	n	shn	n	Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite												2							20	
92	Roof-3C		Material: Gypsum roof deck Location: Roof core Low roof near gym	0% shn	n	shn	n	Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite													2	2	3					20
93	Roof-A		Material: Gray paper Location: roof expansion joint N, side	0% shn	n	shn	n	Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite													2	2	6					20
94	Roof-SA		Material: Gray paper Location: Top + Bottom foam SW Roof near front	0% shn	n	shn	n	Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite													2		50	4				30
95	Roof-SB		Material: Asphaltic layer Location: Roof - SW near core front	0% Bln	n	shn	n	Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrsoilite Amosite Crocidolite Tremolite Anthrophyllite Actinolite													2							20

NE Method Tool

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celsius = 21	Material / Location	Stereo Scope					Asbestos Minerals	Optical Properties							RI	Non-Asbestos Percentage (%)										
				% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism			⊥	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous			
06	Roof-9A		Material: Gray paper Location: Top & Bottom Roof, Main Entrance roof	0	gray	~	~	~	Chrysotile										~	~	~						~	
5	Roof-9B		Material: Asphaltic layer Location: Core - Main Entrance roof	0	black	~	~	~	Chrysotile										~	~	~						~	
8	Roof-9C		Material: Gypsum Location: Roof Deck, Main Entrance roof	0	white	~	~	~	Chrysotile										~	~	~						~	
5	Roof-10A		Material: Gray paper Location: Top & Bottom Roof, roof core Center	0	gray	~	~	~	Chrysotile										~	~	~						~	
2	Roof-10B		Material: Asphaltic layer Location: Roof core Center	0	black	~	~	~	Chrysotile										~	~	~						~	

NE Metro Tech

Lab ID# (Lab Use Only)		Field ID/ (Client Reference)	Temp in Celsius = 21	Stereo Scope					Asbestos Minerals	Optical Properties						Non-Asbestos Percentage (%)					
Material / Location				% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic
12B	Roof- Location Sloped roof	Asphaltic layers		0	green	fine	yes	Chrysotile	3		+	✓									30
12C	Roof- Location Sloped roof	Gypsum		0	white	fine	yes	Chrysotile													45
13A	Roof- Location Cura cut at Chimney	Gray paper top + bottom Cura cut at Chimney		0	gray	fine	yes	Chrysotile													30
13B	Roof- Location Cura cut at Chimney	Asphalt layer		0	black	fine	yes	Chrysotile													30
13C	Roof- Location Cura cut at Chimney	Gypsum Deck		0	gray	fine	yes	Chrysotile													30

EG-



Asbestos Identification Laboratory

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentificationlab.com
Email: mikemanning@asbestosidentificationlab.com

Batch: 51493



Lab Code: 200919-0

March 11, 2020

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Name: *Northeast Metropolitan Vocational
Technical School, Wakefield, MA*
Project Number:
Date Sampled: 2020-03-02
Work Received: 2020-03-05
Work Analyzed: 2020-03-09

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

Dear Susan Cahalan,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Susan Cahalan for your business.

Michael Manning
Owner/Director

Susan Cahalan
 CDW Consultants, Inc.
 6 Huron Drive
 Natick, MA 01760

Project Name: Northeast Metropolitan Vocational
 Technical School, Wakefield, MA
Project Number:
Date Sampled: 2020-03-02
Work Received: 2020-03-05
Work Analyzed: 2020-03-09

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
11A 573703	Black Bumper Material	Kitchen Loading Dock		Cellulose 5 Non-Fibrous 95	None Detected
11B 573704	Black Bumper Material	Kitchen Loading Dock		Cellulose 5 Non-Fibrous 95	None Detected
12A 573705	Gray Caulk	Around Large Vent Near Kitchen Dock		Non-Fibrous 100	None Detected
12B 573706	Gray Caulk	Around Large Vent Near Kitchen Dock		Non-Fibrous 100	None Detected
13A 573707	Interior Gray Window Glaze	Office in Kitchen		Non-Fibrous 95	Detected Chrysotile 5
13B 573708	Interior Gray Window Glaze	Office in Kitchen			Not Analyzed
14A 573709	Gray/Black Mastic	Under Red Ceramic Tile in Kitchen		Non-Fibrous 100	None Detected
14B 573710	Gray/Black Mastic	Under Red Ceramic Tile in Kitchen		Non-Fibrous 100	None Detected
14C 573711	Gray/Black Mastic	Under Red Ceramic Tile in Kitchen		Non-Fibrous 100	None Detected
15A 573712	2'x2' Pindot + Fissure Ceiling Tile	Kitchen Storage		Mineral Wool 30 Cellulose 60 Non-Fibrous 10	None Detected
15B 573713	2'x2' Pindot + Fissure Ceiling Tile	Kitchen Storage		Mineral Wool 30 Cellulose 60 Non-Fibrous 10	None Detected
15C 573714	2'x2' Pindot + Fissure Ceiling Tile	Kitchen Storage		Mineral Wool 30 Cellulose 60 Non-Fibrous 10	None Detected
16A 573715	White Mastic	Under Ceramic Wall Tile, Kitchen		Non-Fibrous 100	None Detected
16B 573716	White Mastic	Under Ceramic Wall Tile, Kitchen		Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
16C 573717	White Mastic	Under Ceramic Wall Tile, Kitchen		Non-Fibrous 100	None Detected
17A 573718	Yellowish Grout	Under Ceramic Wall Tile, Kitchen		Non-Fibrous 100	None Detected
17B 573719	Yellowish Grout	Under Ceramic Wall Tile, Kitchen		Non-Fibrous 100	None Detected
17C 573720	Yellowish Grout	Under Ceramic Wall Tile, Kitchen		Non-Fibrous 100	None Detected
18A 573721	White Plaster	Kitchen Ceiling		Non-Fibrous 100	None Detected
18B 573722	White Plaster	Kitchen Ceiling		Non-Fibrous 100	None Detected
18C 573723	White Plaster	Kitchen Ceiling		Non-Fibrous 100	None Detected
18D 573724	White Plaster	Kitchen Ceiling		Non-Fibrous 100	None Detected
18E 573725	White Plaster	Kitchen Ceiling		Non-Fibrous 100	None Detected
19A 573726	Interior Door Assembly Window Glaze	Near Door 109		Non-Fibrous 98	Detected Chrysotile 2
19B 573727	Interior Door Assembly Window Glaze	Near Door 109			Not Analyzed
20 573728	White Material	Inside Wood Door Near 109		Non-Fibrous 75	Detected Chrysotile 15 Amosite 10
21A 573729	Tan Expansion Joint- Vertical	Exterior Pool, Gym Near Front Door & Kitchen		Non-Fibrous 100	None Detected
21B 573730	Tan Expansion Joint- Vertical	Exterior Pool, Gym Near Front Door & Kitchen		Non-Fibrous 100	None Detected
21C 573731	Tan Expansion Joint- Vertical	Exterior Pool, Gym Near Front Door & Kitchen		Non-Fibrous 100	None Detected
21D 573732	Tan Expansion Joint- Vertical	Exterior Pool, Gym Near Front Door & Kitchen		Non-Fibrous 100	None Detected
21E 573733	Tan Expansion Joint- Vertical	Exterior Pool, Gym Near Front Door & Kitchen		Non-Fibrous 100	None Detected
22A 573734	Gray Caulk	Exterior Door #02		Other 2 Non-Fibrous 98	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
22B 573735	Gray Caulk	Exterior Door #02		Other 2 Non-Fibrous 98	None Detected
23A 573736	Gray White Caulk	Exterior Door #23		Non-Fibrous 100	None Detected
23B 573737	Gray White Caulk	Exterior Door #23		Non-Fibrous 100	None Detected
24A 573738	Black Window Glaze on Metal Door	Door #02		Non-Fibrous 100	None Detected
25A 573739	Gray Window Glaze	Slide Light Windows Door #02		Non-Fibrous 97	Detected Chrysotile 3
25B 573740	Gray Window Glaze	Slide Light Windows Door #02			Not Analyzed
26A 573741	Gray Window Glaze, Exterior Windows	Door #23		Non-Fibrous 97	Detected Chrysotile 3
26B 573742	Gray Window Glaze, Exterior Windows	Door #23			Not Analyzed
27A 573743	White Caulk	Exterior Univents		Non-Fibrous 97	Detected Chrysotile 3
27B 573744	White Caulk	Exterior Univents			Not Analyzed
27C 573745	White Caulk	Exterior Univents			Not Analyzed

Wednesday 11 March

Analyzed by:

Erik Longas

End of Report

Batch: 51493

Page 3 of 3

CHAIN OF CUSTODY

EPA/600/R-93/116

Asbestos Identification Lab

165 New Boston St.

Suite 227

Woburn, MA 01801

(781)932-9600

www.asbestosidentificationlab.com



Date Sampled: 3/1-3/2/2000

BATCH# 51493

Rev 06/16

Page 1 of 2

Turnaround Time Sample Method

Less 3 Hrs Bulk

Same Day Soil

Next Day Wipe

Two Day Point Count

Stop on 1st Positive? Yes/No Yes No

Notify Method: Mail/E-Mail/Verbal

Analyzed By: [Signature]

Date: 3/19/2000

RI Non-Asbestos Percentage (%)

Client: CBF Consultants
 Address: 6 Huron Drive Northwick MA
 Project Site & #: Northwest Metropolitan
Vocational/ Technical School, Wake
 Phone / email address: Wakefield MA
 Contact: John Cahale
 Relinquish by date: 3/1/2000
 Received by date: 3/15/2000
 # of Samples Received: 43

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celsius = 21	Stereo Scope				Optical Properties							RI	Non-Asbestos Percentage (%)						
			Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation		Birefringence	Pleochroism	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic
513763	111A		Material Black bumper Location Kitchen loading dock	0	Black	Homogeneous	Fragmentary	Asbestos Minerals	24												AS
04	11B		Material " " Location " "	0	Black	Homogeneous	Fragmentary	Asbestos Minerals	2												AS
05	12A		Material Grey cork Location Around rear vent kitchen duct	0	Black	Homogeneous	Fragmentary	Asbestos Minerals													AS

EC

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celsius = 91	Material / Location	Stereo Scope					Optical Properties							RI	Non-Asbestos Percentage (%)				
				% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism		Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic
02	12B		Material 11 Location 11		0	10	20	20	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite	5	W	+	+	2							
07	13A		Material <i>Materia</i> gray window Location Office in kitchen		0	10	20	20	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite												
08	13B		Material 11 Location 11						Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite												
09	14A		Material Gray / Black - Mamic Location Under floor ceramic tile in kitchen		0	10	20	20	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite												
10	14B		Material 11 Location 11		0	10	20	20	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite												

DATA

NE Network

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereo Scope				Asbestos Minerals	Optical Properties						Non-Asbestos Percentage (%)										
			Temp in Celcius = 21	% of Asbestos	Color	Homogeneity		Texture	Friable	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
19A	19A	Material: <i>Interior Door Assembly</i> Location: <i>Window near door 109</i>					Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite	3	3	0	+	0	2	1.5									68	
19B	19B	Material: <i>White Material</i> Location: <i>in side wood door near 109</i>					Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite	15	5	2	+	0	2	1.5										75
20	20	Material: <i>Expansion Joint-Vertical</i> Location: <i>External Pool, gym near front Door/Fitnes</i>					Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																	10
21B	21B	Material: <i>Expansion Joint-Vertical</i> Location: <i>External Pool, gym near front Door/Fitnes</i>					Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																	100

DNF

~~EC~~

NE Notes Text

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = 27	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)										
			Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous		
36	Q34		Material: Gray White Quilt Location: # Q3 # Q2 Door	0																				ws	
37	Q35		Material: Location:	0																					ws
32	Q4		Material: Black window Location: metal door Door # Q2	0																					ws
39	Q5A		Material: Gray window Location: Sidelight windows Door # Q2	0																					47
40	Q5B		Material: Location:																						

QNT

Lab ID# (Lab Use Only)		Field ID/ (Client Reference)	Temp in Celcius = <u>21</u>	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)								
Material / Location				% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
41	210A	Gray window Location windows																						
		Doc # 23																						
42	210B	" "																						
		" "																						
43	211A	White Caulk Location EXTERIOR UNIVERSITY																						
		" "																						
44	211B	" "																						
		" "																						
573745	212C	" "																						
		" "																						

NE Metro Tech

DNA

DNA

DNA

07

07

RI
||
T

Asbestos Minerals
Chrysotile
Amosite
Crocidolite
Tremolite
Anthrophyllite
Actinolite
Chrysotile
Amosite
Crocidolite
Tremolite
Anthrophyllite
Actinolite
Chrysotile
Amosite
Crocidolite
Tremolite
Anthrophyllite
Actinolite



Asbestos Identification Laboratory

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentificationlab.com
Email: mikemanning@asbestosidentificationlab.com

Batch: 51443



March 10, 2020

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Name: *Northeast Metropolitan Technical
Vocational School- Wakefield, MA*
Project Number:
Date Sampled: 2020-02-18
Work Received: 2020-03-04
Work Analyzed: 2020-03-09

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

Dear Susan Cahalan,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Susan Cahalan for your business.

Michael Manning
Owner/Director

March 10, 2020

Susan Cahalan
 CDW Consultants, Inc.
 6 Huron Drive
 Natick, MA 01760

Project Name: Northeast Metropolitan Technical
 Vocational School- Wakefield, MA
Project Number:
Date Sampled: 2020-02-18
Work Received: 2020-03-04
Work Analyzed: 2020-03-09

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
1A 573070	Gray Caulk	On Metal Flashing Wood Shop to Low Roof	gray	Non-Fibrous 98	Detected Chrysotile 2
1B 573071	Gray Caulk	On Metal Flashing Wood Shop to Low Roof			Not Analyzed
1C 573072	Gray Caulk	On Metal Flashing Wood Shop to Low Roof			Not Analyzed
2A 573073	Gray Window Glaze	Exterior at Frosted Windows Roof Level Gym	gray	Non-Fibrous 90	Detected Chrysotile 10
2B 573074	Gray Window Glaze	Exterior at Frosted Windows Roof Level Gym			Not Analyzed
2C 573075	Gray Window Glaze	Exterior at Frosted Windows Roof Level Gym			Not Analyzed
2D 573076	Gray Window Glaze	Exterior at Frosted Windows Roof Level Gym			Not Analyzed
2E 573077	Gray Window Glaze	Exterior at Frosted Windows Roof Level Gym			Not Analyzed
3A 573078	White Caulk	Gym Window Roof Level	white	Non-Fibrous 100	None Detected
3B 573079	White Caulk	Gym Window Roof Level	white	Non-Fibrous 100	None Detected
3C 573080	White Caulk	Gym Window Roof Level	white	Non-Fibrous 100	None Detected
3D 573081	White Caulk	Gym Window Roof Level	white	Non-Fibrous 100	None Detected
3E 573082	White Caulk	Gym Window Roof Level	white	Non-Fibrous 100	None Detected
4A 573083	Tan/Pink-ish Hue Over Black Expansion Joint	Gym Upper Level	multi	Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
4B 573084	Tan/Pink-ish Hue Over Black Expansion Joint	Gym Upper Level	multi	Non-Fibrous 100	None Detected
4C 573085	Tan/Pink-ish Hue Over Black Expansion Joint	Gym Upper Level	multi	Non-Fibrous 100	None Detected
4D 573086	Tan/Pink-ish Hue Over Black Expansion Joint	Gym Upper Level	multi	Non-Fibrous 100	None Detected
4E 573087	Tan/Pink-ish Hue Over Black Expansion Joint	Gym Upper Level	multi	Non-Fibrous 100	None Detected
5A 573088	White Caulk on Silicone	Roof Stand Pipe Vents	gray	Non-Fibrous 100	None Detected
5B 573089	White Caulk on Silicone	Roof Stand Pipe Vents	gray	Non-Fibrous 100	None Detected
5C 573090	White Caulk on Silicone	Roof Stand Pipe Vents	gray	Non-Fibrous 100	None Detected
6A 573091	Black Brittle Tar	On Metal Flash Entrance Roof Top Lower Roof	black	Non-Fibrous 100	None Detected
6B 573092	Black Brittle Tar	On Metal Flash Entrance Roof Top Lower Roof	black	Non-Fibrous 100	None Detected
6C 573093	Black Brittle Tar	On Metal Flash Entrance Roof Top Lower Roof	black	Non-Fibrous 100	None Detected
7A 573094	Black Caulk	Around Roof Drains	black	Non-Fibrous 100	None Detected
7B 573095	Black Caulk	Around Roof Drains	black	Non-Fibrous 100	None Detected
7C 573096	Black Caulk	Around Roof Drains	black	Non-Fibrous 100	None Detected
8A 573097	White Caulk	On Steel Vents Near Chimney	clear	Non-Fibrous 100	None Detected
8B 573098	White Caulk	On Steel Vents Near Chimney	clear	Non-Fibrous 100	None Detected
8C 573099	White Caulk	On Steel Vents Near Chimney	clear	Non-Fibrous 100	None Detected
9A 573100	Dark Gray Caulk	Inside Roof Drain Under Rubber	gray	Non-Fibrous 100	None Detected
9B 573101	Dark Gray Caulk	Inside Roof Drain Under Rubber	gray	Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
9C 573102	Dark Gray Caulk	Inside Roof Drain Under Rubber	gray	Non-Fibrous 100	None Detected
10A 573103	Black Caulk	Corner of Chimney	black	Non-Fibrous 95	Detected Chrysotile 5
10B 573104	Black Caulk	Corner of Chimney			Not Analyzed

Tuesday 10 March
Analyzed by:

Erik Gargas

End of Report
Batch: 51443

Page 3 of 3

DUR 31101200

CHAIN OF CUSTODY

EPA/600/R-93/116

Asbestos Identification Lab

165 New Boston St.
Suite 227
Woburn, MA 01801
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www.asbestosidentificationlab.com



Page 1 of 2

Turnaround Time Less 3 Hrs Bulk Same Day Soil Next Day Wipe Two Day Point Count

Stop on 1st Positive Yes No

Notify Method: Mail/E-Mail/Verbal

Analyzed By: [Signature]

Date: 3/9/2000

Client: DW Consultants

Address: 12 Horn Drive Natick MA

Project Site & #: Northeast Metropolitan Technical

Phone / email address: Vocational Street - Wakefield MA

Contact: S. Chabran a caucann Hartt, CA

Relinquish by/date: 3/12/2000

Received by/date: 3/11/2000

of Samples Received: 35

Temp in Celsius = 21

Stereo Scope

% of Asbestos

Color

Homogeneity

Texture

Friable

Asbestos Minerals

Asbestos %

Morphology

Extinction

Sign of Elongation

Birefringence

Pleochroism

RI

Non-Asbestos Percentage (%)

Fiberglass

Mineral Wool

Cellulose

Hair

Synthetic

Other

Non-Fibrous

Asbestos Identification Lab
165 New Boston St.
Suite 227
Woburn, MA 01801
(781)932-9600
www.asbestosidentificationlab.com
Date Sampled: 2/18-2/19 3/1-3/2/2000
BATCH# 5144B Rev 06/16

Turnaround Time Less 3 Hrs Bulk Same Day Soil Next Day Wipe Two Day Point Count
Stop on 1st Positive Yes No
Notify Method: Mail/E-Mail/Verbal
Analyzed By: [Signature]
Date: 3/9/2000

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Temp in Celsius =	Stereo Scope	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Non-Asbestos Percentage (%)	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
573070	1A	Material Gray Caillc Location Metal Flashing on wood shop to low roof	21							Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite	2-3															
17	1B	Material " " Location " "																								
22	1C	Material " " Location " "																								

DW

DW

AE Method

Lab ID# (Lab Use Only)		Field ID/ (Client Reference)		Temp in Celcius = 21	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)								
Material / Location		Material / Location			% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
573104	8	10A	Stack caulk Location corner of chimney						Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite	5	~		+	~	~	1.5									
		10B	" " " "						Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																
			Material Location						Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																
			Material Location						Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																

DNA



Asbestos Identification Laboratory

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentificationlab.com
Email: mikemanning@asbestosidentificationlab.com

Batch: 51550



March 12, 2020

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Name: *Northeast Metropolitan Vocational
Technical School, Wakefield, MA*
Project Number:
Date Sampled: 2020-03-02
Work Received: 2020-03-09
Work Analyzed: 2020-03-10

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

Dear Susan Cahalan,

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- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Susan Cahalan for your business.

Michael Manning
Owner/Director

Susan Cahalan
 CDW Consultants, Inc.
 6 Huron Drive
 Natick, MA 01760

Project Name: Northeast Metropolitan Vocational
 Technical School, Wakefield, MA
Project Number:
Date Sampled: 2020-03-02
Work Received: 2020-03-09
Work Analyzed: 2020-03-10

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
28 574208	Interior Door Material	Next to Main Office Assembly	multi	Cellulose 95 Non-Fibrous 5	None Detected
29 574209	Interior Door Material	Assembly Near Dental	multi	Cellulose 95 Non-Fibrous 5	None Detected
30 574210	Interior Door Material	Gym Door	multi	Cellulose 95 Non-Fibrous 5	None Detected
31 574211	Interior Tan Material	Door 104	multi	Cellulose 95 Non-Fibrous 5	None Detected
32 574212	Interior Tan Door Material	Door 107	multi	Cellulose 95 Non-Fibrous 5	None Detected
33 574213	Gray Glaze	Interior Door Window Above Rm 107	gray	Non-Fibrous 98	Detected Chrysotile 2
34 574214	Gray Glaze on Interior Window	On Wood Door #107	gray	Non-Fibrous 98	Detected Chrysotile 2
35 574215	Gray Glaze on Interior Window Glaze	On Door Rm 121	gray	Non-Fibrous 98	Detected Chrysotile 2
36 574216	Gray Glaze Interior Window	Window Above Door Rm 121	gray	Non-Fibrous 98	Detected Chrysotile 2
37 574217	Window Glaze Gray	Interior Hall Assembly Near 109	gray	Non-Fibrous 98	Detected Chrysotile 2
38A 574218	Gray Glaze	Interior Windows Main Office	black	Non-Fibrous 100	None Detected
38B 574219	Gray Glaze	Interior Windows Main Office	black	Non-Fibrous 100	None Detected
39A 574220	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
39B 574221	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
39C 574222	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
39D 574223	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
39E 574224	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
39F 574225	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
39G 574226	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
39H 574227	2x2 Tan/Brown Textured Ceiling Tile	All Hallway	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
39I 574228	2x2 Tan/Brown Textured Ceiling Tile	Classrooms	gray	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
40A 574229	1x1 Ceiling Tile Pin Dot + Small Fissures	Classrooms	tan	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
40B 574230	1x1 Ceiling Tile Pin Dot + Small Fissures	Classrooms	tan	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
40C 574231	1x1 Ceiling Tile Pin Dot + Small Fissures	Classrooms	tan	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
40D 574232	1x1 Ceiling Tile Pin Dot + Small Fissures	Classrooms	tan	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
40E 574233	1x1 Ceiling Tile Pin Dot + Small Fissures	Classrooms	tan	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
40F 574234	1x1 Ceiling Tile Pin Dot + Small Fissures	Classrooms	tan	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
40G 574235	1x1 Ceiling Tile Pin Dot + Small Fissures	Classrooms	tan	Fiberglass 40 Mineral Wool 50 Non-Fibrous 10	None Detected
41A 574236	Black Vinyl Cove Base	Gym	black	Non-Fibrous 100	None Detected
41B 574237	Black Vinyl Cove Base	Gym	black	Non-Fibrous 100	None Detected
41C 574238	Black Vinyl Cove Base	Gym	black	Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
42A 574239	Yellow Glue	Under Black Cove Base Gym	tan	Non-Fibrous 100	None Detected
42B 574240	Yellow Glue	Under Black Cove Base Gym	tan	Non-Fibrous 100	None Detected
42C 574241	Yellow Glue	Under Black Cove Base Gym	tan	Non-Fibrous 100	None Detected
43A 574242	Black Tar	On Gym Deck Under Wood	black	Cellulose 20 Non-Fibrous 75	Detected Chrysotile 5
43B 574243	Black Tar	On Gym Deck Under Wood			Not Analyzed
43C 574244	Black Tar	On Gym Deck Under Wood			Not Analyzed
44A 574245	DK Gray Grout Under Stone Window Sills	123 + 107 -121 Classrooms	gray	Non-Fibrous 98	Detected Chrysotile 2
44B 574246	DK Gray Grout Under Stone Window Sills	123 + 107 -121 Classrooms			Not Analyzed
44C 574247	DK Gray Grout Under Stone Window Sills	123 + 107 -121 Classrooms			Not Analyzed
45A 574248	Stone (Slate) Window Sills	132 + 107 + 121 Classrooms	black	Non-Fibrous 95	Detected Chrysotile 5
45B 574249	Stone (Slate) Window Sills	132 + 107 + 121 Classrooms			Not Analyzed
45C 574250	Stone (Slate) Window Sills	132 + 107 + 121 Classrooms			Not Analyzed
46A 574251	Plaster Skim on Walls	Rms 103 + 104 + 118 + 123 + 125 + 121 + Dental	white	Non-Fibrous 100	None Detected
46B 574252	Plaster Skim on Walls	Rms 103 + 104 + 118 + 123 + 125 + 121 + Dental	white	Non-Fibrous 100	None Detected
46C 574253	Plaster Skim on Walls	Rms 103 + 104 + 118 + 123 + 125 + 121 + Dental	white	Non-Fibrous 100	None Detected
46D 574254	Plaster Skim on Walls	Rms 103 + 104 + 118 + 123 + 125 + 121 + Dental	white	Non-Fibrous 100	None Detected
46E 574255	Plaster Skim on Walls	Rms 103 + 104 + 118 + 123 + 125 + 121 + Dental	white	Non-Fibrous 100	None Detected
46F 574256	Plaster Skim on Walls	Rms 103 + 104 + 118 + 123 + 125 + 121 + Dental	white	Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
46G 574257	Plaster Skim on Walls	Rms 103 + 104 + 118 + 123 + 125 + 121 + Dental	white	Non-Fibrous 100	None Detected
47A 574258	Black Mastic	Under Terrazzo Halls + Stairs	black	Cellulose 10 Non-Fibrous 90	None Detected
47B 574259	Black Mastic	Under Terrazzo Halls + Stairs	black	Cellulose 10 Non-Fibrous 90	None Detected
47C 574260	Black Mastic	Under Terrazzo Halls + Stairs	black	Cellulose 10 Non-Fibrous 90	None Detected
47D 574261	Black Mastic	Under Terrazzo Halls + Stairs	black	Cellulose 10 Non-Fibrous 90	None Detected
47E 574262	Black Mastic	Under Terrazzo Halls + Stairs	black	Cellulose 10 Non-Fibrous 90	None Detected
47F 574263	Black Mastic	Under Terrazzo Halls + Stairs	black	Cellulose 10 Non-Fibrous 90	None Detected
47G 574264	Black Mastic	Under Terrazzo Halls + Stairs	black	Cellulose 10 Non-Fibrous 90	None Detected
48A 574265	NO SAMPLE	NO SAMPLE			Not Analyzed
48B 574266	Black Mastic	Under Terrazzo in Cafereria	gray	Cellulose 10 Non-Fibrous 90	None Detected
48C 574267	Black Mastic	Under Terrazzo in Cafereria	gray	Cellulose 10 Non-Fibrous 90	None Detected
49A 574268	Black Mastic	Under Side of Stage	brown	Cellulose 5 Non-Fibrous 95	None Detected
49B 574269	Black Mastic	Under Side of Stage	brown	Cellulose 5 Non-Fibrous 95	None Detected
50A 574270	DK Brown Vinyl Cove Base	Science- Chem + Biology	black	Non-Fibrous 100	None Detected
50B 574271	DK Brown Vinyl Cove Base	Science- Chem + Biology	black	Non-Fibrous 100	None Detected
50C 574272	DK Brown Vinyl Cove Base	Science- Chem + Biology	black	Non-Fibrous 100	None Detected
51A 574273	White Mastic	Under DK Brown Vinyl Cove Base	brown	Non-Fibrous 100	None Detected
51B 574274	White Mastic	Under DK Brown Vinyl Cove Base	brown	Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
51C 574275	White Mastic	Under DK Brown Vinyl Cove Base	brown	Non-Fibrous 100	None Detected
52A 574276	Black Vinyl Cove Base	Base of Science Tables	black	Non-Fibrous 100	None Detected
52B 574277	Black Vinyl Cove Base	Base of Science Tables	black	Non-Fibrous 100	None Detected
52C 574278	Black Vinyl Cove Base	Base of Science Tables	black	Non-Fibrous 100	None Detected
53A 574279	Black/Brown Mastic	Under Black Vinyl Cove Base	black	Other 10 Non-Fibrous 90	None Detected
53B 574280	Black/Brown Mastic	Under Black Vinyl Cove Base	black	Other 10 Non-Fibrous 90	None Detected
53C 574281	Black/Brown Mastic	Under Black Vinyl Cove Base	black	Other 10 Non-Fibrous 90	None Detected
54A 574282	Brown Glue Daubs	Behind Acoustical Panels-Pool	brown	Non-Fibrous 100	None Detected
54B 574283	Brown Glue Daubs	Behind Acoustical Panels-Pool	brown	Non-Fibrous 100	None Detected
54C 574284	Brown Glue Daubs	Behind Acoustical Panels-Pool	brown	Non-Fibrous 100	None Detected
55A 574285	Tan Grout	Under Ceramic Wall Tile-Pool	tan	Cellulose 5 Non-Fibrous 95	None Detected
55B 574286	Tan Grout	Under Ceramic Wall Tile-Pool	tan	Non-Fibrous 100	None Detected
55C 574287	Tan Grout	Under Ceramic Wall Tile-Pool	tan	Non-Fibrous 100	None Detected
55D 574288	Tan Grout	Under Ceramic Wall Tile-Pool	tan	Non-Fibrous 100	None Detected
55E 574289	Tan Grout	Under Ceramic Wall Tile-Pool	tan	Non-Fibrous 100	None Detected
56A 574290	White Mastic	Under Wall Ceramic Tile-Pool	white	Non-Fibrous 100	None Detected
56B 574291	White Mastic	Under Wall Ceramic Tile-Pool	white	Non-Fibrous 100	None Detected
56C 574292	White Mastic	Under Wall Ceramic Tile-Pool	white	Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
56D 574293	White Mastic	Under Wall Ceramic Tile-Pool	white	Non-Fibrous 100	None Detected
56E 574294	White Mastic	Under Wall Ceramic Tile-Pool	white	Non-Fibrous 100	None Detected
57A 574295	Mastic Gray	Under Ceramic Tile on Pool Deck	gray	Non-Fibrous 100	None Detected
57B 574296	Mastic Gray	Under Ceramic Tile on Pool Deck	gray	Non-Fibrous 100	None Detected
57C 574297	Mastic Gray	Under Ceramic Tile on Pool Deck	gray	Non-Fibrous 100	None Detected
57F 574298	Mastic Gray	Under Ceramic Tile on Pool Deck	gray	Non-Fibrous 100	None Detected
57E 574299	Mastic Gray	Under Ceramic Tile on Pool Deck	gray	Non-Fibrous 100	None Detected

Thursday 12 March

Analyzed by:



End of Report

Batch: 51550

Page 6 of 6

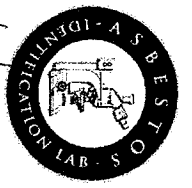
Page 1 of 1 Thursday 3-12-20

CHAIN OF CUSTODY

EPA/600/R-93/116

Client: CDW Contractors
Address: 10 Huron Drive North MA
Project Site & # Northeast Metropolitan Vocational
Technical School Wakefield MA
Phone / email address: Saharana Educators/contractors.com

Asbestos Identification Lab
165 New Boston St.
Suite 227
Woburn, MA 01801
(781) 932-9600
www.asbestosidentificationlab.com



Turnaround Time Less 3 Hrs Bulk
 Same Day Soil
 Next Day Wipe
 Two Days Point Count
Stop on 1st Positive? Yes No
Notify Method: Mail/E-Mail/Verbal
Analyzed By: [Signature]
Date: 3/10/2020

Contact: SUSAN CAHALA
Relinquish by/date: 3/10/2020
Received by/date: 3-9-20
of Samples Received: 92

Temp in Celsius = 93
Stereo Scope
% of Asbestos
Color
Homogeneity
Texture
Friable
Asbestos Minerals
Asbestos %
Morphology
Extinction
Sign of Elongation
Birefringence
Pleochroism
RI
Non-Asbestos Percentage (%)

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Temp in Celsius =	Stereo Scope	Optical Properties	RI	Non-Asbestos Percentage (%)
574208	28	Material: <u>Fiberglass Duct</u> Location: <u>Next to main office Assembly</u>					
09	29	Material: <u>Fiberglass Door Material</u> Location: <u>Assembly near Portal</u>					
10	30	Material: <u>Fiberglass door Material</u> Location: <u>Gym Door</u>					

DIVE: Thursday 3-12-20

NE

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Temp in Celcius =	Stereo Scope					Asbestos Minerals	Optical Properties							RI	Non-Asbestos Percentage (%)						
				% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Fiberglass		Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
11	31	Material Interior TAN Location Door 104		0	DK	~	~	~	Chrysotile												5			
12	32	Material Interior TAN Location Door Material Door 107		0	DK	~	~	~	Chrysotile													5		
13	33	Material Gray Glaze Location Interior Door Window above		0	DK	~	~	~	Chrysotile													98		
14	34	Material Gray Glaze on Location Interior window on Door # Wood 107		0	DK	~	~	~	Chrysotile													98		
15	35	Material Gray Glaze on Location Interior window on Door 121 on Rm.		0	DK	~	~	~	Chrysotile	2	~	~	~	~	~	1.55/1.551						98		

2/11/19

EdE Webb

Page 5 of 19

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = _____	Stereo Scope						Asbestos Minerals	Optical Properties						RI	Non-Asbestos Percentage (%)										
			Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism		=	T	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous		
26	B96	11	11	0	SA	SA	SA	Chrysotile									I	I									
27	B94	11	11	0	SA	SA	SA	Chrysotile										I	I								
28	B91	11	11	0	SA	SA	SA	Chrysotile										I	I								
29	Y0A	11	11	0	SA	SA	SA	Chrysotile										I	I								
30	Y0B	11	11	0	SA	SA	SA	Chrysotile										I	I								

*Material 1X1' Ceiling
Location TPC Airstair
+ small fissures
classrooms*

*Material
Location
11*

*0
SA
SA
SA*

*Chrysotile
Amosite
Crocidolite
Tremolite
Anthophyllite
Actinolite*

*I
I*

0

AE Metro

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = _____	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)										
			Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous		
31	40C	Material Location	11 11	0+	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite									II								
32	40D	Material Location	11 11	0+	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										II							
33	40E	Material Location	11 11	0+	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										II							
34	40F	Material Location	11 11	0+	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										II							
35	40G	Material Location	11 11	0+	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite										II							

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereo Scope						Optical Properties										Non-Asbestos Percentage (%)					
			Temp in Celcius =	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
15	432	Material 11 Location 11			01	SS		Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																
25	434	Material Black Tar Location on gym deck under wood			05N	SS		Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																
35	433	Material 11 Location 11						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																
55	444	Material Dark Gray Gnat Location stone stills 121			08	SS		Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite	2	✓	✓	✓	✓	✓	1.55-1.551									

CHRISTIANSON'S

DNA
DNA

NE Metro Tech

Page 9 of 19

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius =	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)																											
			Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous																			
46 45	44B	" "	Material	"																																						
			Location	"																																						
			Material	"																																						
47 46	44C	" "	Material	"																																						
			Location	"																																						
			Material	"																																						
48 47	45A	" "	Material	"																																						
			Location	"																																						
			Material	"																																						
			Location	"																																						
			Material	"																																						
			Location	"																																						
			Material	"																																						
50	45C	" "	Material	"																																						
			Location	"																																						
			Material	"																																						
			Location	"																																						

DIVA
DIVA
DIVA
DIVA

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = _____	Stereo Scope						Asbestos Minerals	Optical Properties					RI	Non-Asbestos Percentage (%)										
			Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence		Pleochroism		└	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
10	47D	"	Material	"	"	Obs	y	y	Chrysotile									✓						70		
29	47E	"	Material	"	"	Obs	y	y	Chrysotile										✓						80	
83	47F	"	Material	"	"	Obs	y	y	Chrysotile										✓						50	
64	47G	"	Material	"	"	Obs	y	y	Chrysotile										✓						90	
59	48A	"	Material	"	"				Chrysotile																	
	48A		Material						Chrysotile																	

NE WATERBURY

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = _____	Stereo Scope					Asbestos Minerals	Optical Properties						RI	Non-Asbestos Percentage (%)							
			% of Asbestos	Color	Homogeneity	Texture	Friable		Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism			⊥	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other
14	53C	11 11	0.5 0.5	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite												4%	20%			
28	57A	Brown Glue Location Behind Acoustical Panels - Pod	0.5 0.5	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite												1%	10%			74
33	57B	11 11	0.5 0.5	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																100
48	57C	11 11	0.5 0.5	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																100
55	55A	Tan Grout Location Under Ceramic Wall Tile - Pod					Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite													0	5		95

AE Microtech

Lab ID# (Lab Use Only)		Temp in Celcius = _____	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)									
Field ID/ (Client Reference)	Material / Location		% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous		
91	SL03	Material Location " "	0	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																	
92	SL0C	Material Location " "	0	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																	
93	SL0D	Material Location " "	0	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																	
94	SL0E	Material Location " "	0	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																	
95	SL0A	Material Location " "	0	~	~	~	Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																	

Material
Mastic
Gray
Location
Under Ceramic
Tile on Pool Deck



Asbestos Identification Laboratory

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentificationlab.com
Email: mikemanning@asbestosidentificationlab.com

Batch: 51610



Lab Code: 200919-0

March 16, 2020

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Name: *Northeast Metro Technical Vocational H.S.,
Wakefield, MA*

Project Number:

Date Sampled: 2020-03-04

Work Received: 2020-03-11

Work Analyzed: 2020-03-12

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

Dear Susan Cahalan,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The information and analysis contained in this report have been generated using the EPA /600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or products that contain more than 1% of any kind or combination of asbestos are considered an asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The results of the point counting supersede visual PLM results. Results in this report only relate to the items tested. This report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volume, etc., was provided by the customer. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Susan Cahalan for your business.

Michael Manning
Owner/Director

March 16, 2020

Susan Cahalan
 CDW Consultants, Inc.
 6 Huron Drive
 Natick, MA 01760

Project Name: Northeast Metro Technical Vocational H.S.,
 Wakefield, MA
Project Number:
Date Sampled: 2020-03-04
Work Received: 2020-03-11
Work Analyzed: 2020-03-12

Analysis Method: BULK PLM ANALYSIS EPA/600/R-93/116

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
58A 575062	Gray Mastic	Under Ceramic Pool Deck Tiles	gray	Non-Fibrous 100	None Detected
58B 575063	Gray Mastic	Under Ceramic Pool Deck Tiles	gray	Non-Fibrous 100	None Detected
58C 575064	Gray Mastic	Under Ceramic Pool Deck Tiles	gray	Non-Fibrous 100	None Detected
59A 575065	White Expansion Joint	Pool Area Interior Walls	white	Non-Fibrous 100	None Detected
59B 575066	White Expansion Joint	Pool Area Interior Walls	white	Non-Fibrous 100	None Detected
59C 575067	White Expansion Joint	Pool Area Interior Walls	white	Non-Fibrous 100	None Detected
60A 575068	White Ceiling Plaster	Girls Locker Room	white	Non-Fibrous 100	None Detected
60B 575069	White Ceiling Plaster	Girls Locker Room	white	Non-Fibrous 100	None Detected
60C 575070	White Ceiling Plaster	Girls Locker Room	white	Non-Fibrous 100	None Detected
61A 575071	White Ceiling Plaster	Boys Locker Room	white	Non-Fibrous 100	None Detected
61B 575072	White Ceiling Plaster	Boys Locker Room	white	Non-Fibrous 100	None Detected
61C 575073	White Ceiling Plaster	Boys Locker Room	white	Non-Fibrous 100	None Detected
62A 575074	Gray Grout	Under Ceramic Floor Tile, Girls Locker Room	gray	Non-Fibrous 100	None Detected
62B 575075	Gray Grout	Under Ceramic Floor Tile, Girls Locker Room	gray	Non-Fibrous 100	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
62C 575076	Gray Grout	Under Ceramic Floor Tile, Girls Locker Room	gray	Non-Fibrous 100	None Detected
63A 575077	Dark Gray Mastic	Under Ceramic Floor Tile, Girls Locker Room	gray	Cellulose 10 Non-Fibrous 90	None Detected
63B 575078	Dark Gray Mastic	Under Ceramic Floor Tile, Girls Locker Room	gray	Cellulose 10 Non-Fibrous 90	None Detected
63C 575079	Dark Gray Mastic	Under Ceramic Floor Tile, Girls Locker Room	gray	Cellulose 10 Non-Fibrous 90	None Detected
64A 575080	Gray Mastic	Under Ceramic Wall Tile - Halls	gray	Non-Fibrous 100	None Detected
64B 575081	Gray Mastic	Under Ceramic Wall Tile - Halls	gray	Non-Fibrous 100	None Detected
64C 575082	Gray Mastic	Under Ceramic Wall Tile - Halls	gray	Non-Fibrous 100	None Detected
64D 575083	Gray Mastic	Under Ceramic Wall Tile - Halls	gray	Non-Fibrous 100	None Detected
64E 575084	Gray Mastic	Under Ceramic Wall Tile - Halls	gray	Non-Fibrous 100	None Detected
64F 575085	Gray Mastic	Under Ceramic Wall Tile - Halls	gray	Non-Fibrous 100	None Detected
64G 575086	Gray Mastic	Under Ceramic Wall Tile - Halls	gray	Non-Fibrous 100	None Detected
65A 575087	Black Coating on Copper	Behind Brick Facade	black	Cellulose 10 Non-Fibrous 80	Detected Chrysotile 10
65B 575088	Black Coating on Copper	Behind Brick Facade			Not Analyzed
65C 575089	Black Coating on Copper	Behind Brick Facade			Not Analyzed
65D 575090	Black Coating on Copper	Behind Brick Facade			Not Analyzed
65E 575091	Black Coating on Copper	Behind Brick Facade			Not Analyzed
66A 575092	Thin Copper Flashing With Black Coating	Top Foundation Sill	black	Cellulose 20 Non-Fibrous 80	None Detected
66B 575093	Thin Copper Flashing With Black Coating	Top Foundation Sill	black	Cellulose 15 Non-Fibrous 85	None Detected

FieldID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
66C 575094	Thin Copper Flashing With Black Coating	Top Foundation Sill	black	Cellulose 15 Non-Fibrous 85	None Detected
67A 575095	Gray Concrete Skim	Exterior Gym Roof Level	gray	Non-Fibrous 100	None Detected
67B 575096	Gray Concrete Skim	Exterior Gym Roof Level	gray	Non-Fibrous 100	None Detected
67C 575097	Gray Concrete Skim	Exterior Gym Roof Level	gray	Non-Fibrous 100	None Detected
68A 575098	Green Paper	Under Concrete Skim	green	Non-Fibrous 100	None Detected
68B 575099	Green Paper	Under Concrete Skim	green	Non-Fibrous 100	None Detected
68C 575100	Green Paper	Under Concrete Skim	green	Non-Fibrous 100	None Detected
65A.1 575101	Plaster		white	Non-Fibrous 100	None Detected
65B.1 575102	Plaster		white	Non-Fibrous 100	None Detected
65C.1 575103	Plaster		white	Non-Fibrous 100	None Detected
65D.1 575104	Plaster		white	Non-Fibrous 100	None Detected
65E.1 575105	Plaster		white	Non-Fibrous 100	None Detected
65F.1 575106	Plaster		white	Non-Fibrous 100	None Detected
65G.1 575107	Plaster		white	Non-Fibrous 100	None Detected

Monday 16 March

Analyzed by:

Elena Blatus

End of Report

Batch: 51610

Page 3 of 3

Client: CD Cann Harts

Address: 6 Horan Drive Natick MA

Project Site & # Northwest Neto Technical

Phone / email address: Personal H.S. Wakefield

Contact: Stahler & Cannon Harts

Relinquish by date: 3/9/2020

Received by date: 3/11/20

of Samples Received: 37 410

CHAIN OF CUSTODY
EPA/600/R-93/116

Asbestos Identification Lab
165 New Boston St.
Suite 227
Woburn, MA 01801
(781)932-9600
www.asbestosidentificationlab.com



Date Sampled: 3/4/2020

BATCH# 51610 Rev 06/16

Page 1 of 10

Turnaround Time Less 3 Hrs Bulk Same Day Soil Next Day Wipe Two Day Point Count

Stop on 1st Positive? Yes No

Notify Method: Mail/E-Mail/Verbal

Analyzed By: Gene Blakely

Date: 3/12/2020

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereo Scope				Optical Properties							Non-Asbestos Percentage (%)									
			Temp in Celsius = <u>25C</u>	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
<u>575062</u>	<u>SBA</u>	<u>Material Gray Mastic</u> <u>Location Under Ceramic pool deck tiles</u>		<u>0</u>	<u>gray</u>	<u>N</u>	<u>Gr N</u>	<u>N</u>															<u>100</u>
<u>63</u>	<u>SBB</u>	<u>Material</u> <u>Location</u>		<u>0</u>	<u>gray</u>	<u>N</u>	<u>Gr N</u>	<u>N</u>															<u>100</u>
<u>64</u>	<u>SBC</u>	<u>Material</u> <u>Location</u>		<u>0</u>	<u>gray</u>	<u>N</u>	<u>Gr N</u>	<u>N</u>															<u>100</u>

DEAFY DUE MONDAY 3/16 PER SUSAN

AE Method

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius =	Stereo Scope					Asbestos Minerals	Optical Properties						RI	Non-Asbestos Percentage (%)										
			Material / Location	% of Asbestos	Color	Homogeneity	Texture		Friable	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence		Pleochroism		T	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
70	606		Material " "		W	N	Gr	Y	Chrysotile																100	
71	601A		Material White Ceiling Location Boys locker room		W	N	Gr	Y	Chrysotile																	100
72	601B		Material " "		W	N	Gr	Y	Chrysotile																	100
73	601C		Material " "		W	N	Gr	Y	Chrysotile																	100
74	601A		Material Gray GROUT Location Under beam 2 Floor tile		W	N	Gr	N	Chrysotile																	100

gms locker room

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereo Scope					Asbestos Minerals	Optical Properties						Non-Asbestos Percentage (%)											
			Temp in Celcius = ___	% of Asbestos	Color	Homogeneity	Texture		Friable	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous			
82	LAF	Material Gray Mastic Location Mold Caulk Tile Walls		0	Gray	N	Gr	N	Chrysotile																100	
81	LAB	Material " " Location " "		0	Gray	N	Gr	N	Chrysotile																	100
80	LAC	Material " " Location " "		0	Gray	N	Gr	N	Chrysotile																	100
83	LAD	Material " " Location " "		0	Gray	N	Gr	N	Chrysotile																	100
84	LAE	Material " " Location " "		0	Gray	N	Gr	N	Chrysotile																	100

NE Network

NE Network

Page 4 of 10

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = _____	Stereo Scope					Asbestos Minerals	Optical Properties						RI	Non-Asbestos Percentage (%)										
			Material / Location	% of Asbestos	Color	Homogeneity	Texture		Friable	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence		Pleochroism		⊥	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
88	LAF		Material " "		Ogy N Gr N		Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																			
88	LAC		Material " "		Ogy N Gr N		Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																			
88	L5A		Material Black Coatings Location On Copper Behind Brick Facade		Ogy N Gr N		Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																			
88	L5B		Material " "				Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																			
88	L5C		Material " "				Chrysotile Amosite Crocidolite Tremolite Anthophyllite Actinolite																			

DNA

DNA

88

100

100

NE Microtext

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____	Stereo Scope					Optical Properties							Non-Asbestos Percentage (%)									
		Material / Location	% of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous		
90	65D		Material 11 Location 11						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite Chrysotile Amosite Crocidolite															
91	65E	Material 11 Location 11						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																
92	66A	Material Thin copper with Flashing black Location TP Foundation sill						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																
93	66B	Material 11 Location 11						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																
94	66C	Material 11 Location 11						Chrysotile Amosite Crocidolite Tremolite Anthrophyllite Actinolite																

DNA
DNA

APPENDIX B



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 786-5974

<http://www.EMSL.com>

cinnaminsonleadlab@emsl.com

EMSL Order: 202003023

CustomerID: CDWC26

CustomerPO:

ProjectID:

Attn: **Susan Cahalan**
CDW Consultants
6 Huron Drive
Natick, MA 01760

Phone: (508) 875-2657
Fax:
Received: 03/12/20 10:15 AM
Collected: 3/5/2020

Project: **NE Metro Tech Voc Wakefield**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	Lab ID	Collected	Analyzed	Weight	Lead Concentration
LP-1 Site: White Paint on Wood Sloped Roof	202003023-0001	3/5/2020	3/13/2020	0.2537 g	2.5 % wt
LP-2 Site: White Paint on Wood Main Roof	202003023-0002	3/5/2020	3/13/2020	0.2523 g	6.7 % wt
LP-3 Site: Red Paint - Steel Window Lintel	202003023-0003	3/5/2020	3/13/2020	0.2521 g	0.30 % wt
LP-4 Site: Gray Paint on Roof Stair Rail	202003023-0004	3/5/2020	3/13/2020	0.2647 g	12 % wt
LP-5 Site: Tan Door Paint on Metal #23	202003023-0005	3/5/2020	3/13/2020	0.2529 g	0.034 % wt
LP-6 Site: Brown Paint Metal Door Assembly #23	202003023-0006	3/5/2020	3/13/2020	0.2925 g	0.068 % wt
LP-7 Site: Brown Paint on Metal HVAC Ext Near Kitch	202003023-0007	3/5/2020	3/13/2020	0.2636 g	0.0084 % wt
LP-8 Site: Tan Paint On Wood Garage Door	202003023-0008	3/5/2020	3/13/2020	0.2531 g	0.10 % wt
LP-9 Site: Brown Paint Metal Door U2	202003023-0009	3/5/2020	3/13/2020	0.2512 g	0.12 % wt
LP-10 Site: Brown Over Red Stair Rail Paint	202003023-0010	3/5/2020	3/13/2020	0.2592 g	20 % wt
LP-11A Site: White Textured Paint on Concrete - Front	202003023-0011	3/5/2020	3/13/2020	0.2865 g	0.035 % wt
LP-11B Site: White Textured Paint on Concrete - Front	202003023-0012	3/5/2020	3/13/2020	0.2897 g	0.013 % wt
LP-12 Site: Tan Paint Ext Metal Door	202003023-0013	3/5/2020	3/13/2020	0.2516 g	<0.0080 % wt
LP-13 Site: Brown Over Red Metal Door Assembly 109	202003023-0014	3/5/2020	3/13/2020	0.2571 g	0.42 % wt
LP-14 Site: Pink - White Paint - Hall on CMU	202003023-0015	3/5/2020	3/13/2020	0.2587 g	0.0094 % wt

Phillip Worby, Lead Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 03/14/2020 10:31:44



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 786-5974

<http://www.EMSL.com>

cinnaminsonleadlab@emsl.com

EMSL Order: 202003023

CustomerID: CDWC26

CustomerPO:

ProjectID:

Attn: **Susan Cahalan**
CDW Consultants
6 Huron Drive
Natick, MA 01760

Phone: (508) 875-2657
Fax:
Received: 03/12/20 10:15 AM
Collected: 3/5/2020

Project: **NE Metro Tech Voc Wakefield**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>Lead Concentration</i>
LP-15 Site: Gray Paint Metal Door Dental	202003023-0016	3/5/2020	3/13/2020	0.2560 g	<0.0080 % wt
LP-16 Site: White Parking Stripe Paint Rear Near Kitchen	202003023-0017	3/5/2020	3/13/2020	0.2634 g	0.020 % wt
LP-17A Site: Yellow Paint on Curb	202003023-0018	3/5/2020	3/13/2020	0.2769 g	<0.0080 % wt
LP-17B Site: Yellow Paint on Curb	202003023-0019	3/5/2020	3/13/2020	0.2586 g	0.60 % wt
LP-18 Site: Gray Wall Paint on CMU Hall	202003023-0020	3/5/2020	3/13/2020	0.2531 g	<0.0080 % wt
LP-19 Site: Silver Paint on Bleachers FB Field	202003023-0021	3/5/2020	3/13/2020	0.2503 g	0.71 % wt
LP-20 Site: Dk Gray/Black/Green Annocement Both	202003023-0022	3/5/2020	3/13/2020	0.2703 g	<0.0080 % wt

Phillip Worby, Lead Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 03/14/2020 10:31:44



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID (Lab Use Only):

202003023

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Company: CDW Consultants		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 6 Huron Drive		Third Party Billing requires written authorization from third party	
City: Natick	State/Province: MA	Zip/Postal Code: 01760	Country: US
Report To (Name): susan cahalan		Telephone #: 5088752657	
Email Address: scahalan@cdwconsultants.com		Fax #:	Purchase Order:
Project Name/Number: NE Metro Tech Voc Wakefield		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: MA		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input checked="" type="checkbox"/> 24 Hour	<input checked="" type="checkbox"/> 48 Hour
<input type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
<small>*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide</small>			
Matrix	Method	Instrument	Reporting Limit
Chips <input checked="" type="checkbox"/> % by wt. <input type="checkbox"/> mg/cm ² <input type="checkbox"/> ppm (mg/kg)	SW846-7000B	Flame Atomic Absorption	0.01%
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter
	NIOSH 7300M/NIOSH 7303	ICP-OES	0.5 µg/filter
Wipe* ASTM <input type="checkbox"/> non ASTM <input type="checkbox"/> <small>*if no box checked, non-ASTM Wipe assumed</small>	SW846-7000B	Flame Atomic Absorption	10 µg/wipe
	SW846-6010B or C	ICP-OES	1.0 µg/wipe
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW846-1311/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)
SPLP	SW846-1312/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW846-1312/SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)
TTLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	40 mg/kg (ppm)
	22 CCR App. II, SW846-6010B or C	ICP-OES	2 mg/kg (ppm)
STLC	22 CCR App. II, 7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)
	22 CCR App. II, SW846-6010B or C	ICP-OES	0.1 mg/L (ppm)
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)
	SW846-6010B or C	ICP-OES	2 mg/kg (ppm)
Wastewater Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.7	ICP-OES	0.020 mg/L (ppm)
Drinking Water Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	EPA 200.8	ICP-MS	0.001 mg/L (ppm)
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.5	ICP-OES	0.003 mg/L (ppm)
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter
Other:			
Name of Sampler: Susan Cahalan		Signature of Sampler: [Signature]	
Sample #	Location	Volume/Area	Date/Time Sampled
1 LP-1	White Paint on Wood Slop Roof	-	3/5/2020
2 LP-2	White Paint on Wood Main Roof	-	↓
Client Sample #s		Total # of Samples:	
Relinquished (Client): [Signature]	Date: 3/11/2020	Time:	
Received (Lab): [Signature]	Date: 3/12/2020	Time: 10:15am	
Comments:			



LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID (Lab Use Only):

Cinnaminson, NJ 08077

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

202003023

PHONE: 1-800-220-3675

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location	Volume/Area	Date/Time Sampled
3	LP-3 Red paint - Steel window lintel	-	3/5/2020
4	LP-4 Gray paint on wood stair rail	-	
5	LP-5 Tan door paint on Metal #23	-	
6	LP-6 Brown ^{paint} Metal Door Assembly #23	-	
7	LP-7 Brown paint on Metal HVAC ext ^{near} kitchen	-	
8	LP-8 Tan paint on wood garage door	-	
9	LP-9 Brown paint metal door 02	-	
10	LP-10 Brown over red stair rail paint	-	
11	LP-11A White textured paint on concrete - front	-	
12	LP-11B " " " "	-	
13	LP-12 Tan paint ext metal door	-	
14	LP-13 Brown over red Metal door ^{Assembly} 109	-	
15	LP-14 Pink-White paint - Hall on CMU	-	
16	LP-15 Gray paint Metal door Dental	-	
17	LP-16 White parking stripe paint ^{near} kitchen	-	
18	LP-17A Yellow paint on curb	-	
19	LP-17B " " "	-	
20	LP-18 Silver paint on Bleach ^{#B area} SS	-	
Comments/Special Instructions: \blacktriangleright Gray wall paint on CMU Hall			



LEAD (Pb) CHAIN OF CUSTODY

EMSL ORDER ID (Lab Use Only):

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

202003023

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location	Volume/Area	Date/Time Sampled
21	LP-19 Silver paint on bleachers ^{FB} field	—	3/5/2020
22	LP-20 Dk gray (black) green ^{annocement} Booth	—	↓

Comments/Special Instructions:

Controlled Document — COC-25 Lead (Pb) — R6- 7/19/2017



CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

April 14, 2020

Mr. Vladimir Lyubetsky
Drummey Rosane Anderson, Inc.
235 Bear Hill Road, 4th Floor
Waltham, MA 02451

RE: Northeast Metro Tech High School
Hazmat Study Cost Estimate
Wakefield, Massachusetts

Dear Mr. Lyubetsky:

Attached please find the updated cost estimate for abatement at the Northeast Metro Tech High School. The costs are provided in the tables in the following pages.

Very truly yours,

CDW CONSULTANTS, INC.



Susan Cahalan, P.G., ISSP-SA
Senior Environmental Geologist

Table 1
Abatement Cost Estimates
Northeast Metrotech High School
Wakefield, Massachusetts

Material Description	NESHAP Cat.	Location	Est. Quantity	Units	Unit Cost	Total Cost
Pipe Insulation and Fittings >6-Inches in Diameter	Friable ACM	Pipe Trench, Behind Wet Walls, Boiler Room, Fixed Walls, Tunnels	2,500	LF	\$ 17.00	\$ 42,500.00
Pipe Insulation and Fittings < 6-Inches in Diameter	Friable ACM	Pipe Trench, Behind Wet Walls, Boiler Room, Fixed Walls, Tunnels	12,000	LF	\$ 15.00	\$ 180,000.00
Thermal System Insulation	Friable ACM	Breaching in Boiler Room, Generator Exhaust Insulation	800	SF	\$ 14.00	\$ 11,200.00
Vinyl Floor Tiles and Mastic, Various Colors	Cat. 1 Non-friable ACM	Classrooms and Offices	93,000	SF	\$ 3.00	\$ 279,000.00
Doors with Fire Insulation	Friable ACM	Majority of Classroom Doors with Windows, Doors Without Windows, Ten Doors in Cafeterium and Metal Doors at Electric and Transformer Room	245	EA	\$ 125.00	\$ 30,625.00
Wood Door Window Glaze	Cat. 2 Non-friable ACM	Majority of Classroom Doors with Windows	200	EA	\$ 125.00	\$ 25,000.00
Pink and Black Sink Coating	Cat. 2 Non-friable ACM	Science, Art, Break Rooms, Various Rooms	50	EA	\$ 50.00	\$ 2,500.00
Interior Window Glaze	Cat. 2 Non-friable ACM	Doors and Sidelights in Hall Assemblies	25	EA	\$ 250.00	\$ 6,250.00
Interior Window Glaze	Cat. 2 Non-friable ACM	2'x3' Windows Above Doors to Classrooms and Other to Hallways and Some Divider	200	EA	\$ 200.00	\$ 40,000.00
Interior Window Glaze	Cat. 2 Non-friable ACM	Admin Area, Offices in Kitchen Areas, Locker Rooms, Tech Areas. Majority 4'x4'	80	EA	\$ 250.00	\$ 20,000.00
Interior Vertical Caulking	Cat. 2 Non-friable ACM	Room 162	100	LF	\$ 14.00	\$ 1,400.00
Slate Window Sills Including Grout	Cat. 2 Non-friable ACM	Classrooms, Offices, Some Tech	2,200	LF	\$ 25.00	\$ 55,000.00
Black Mastic	Cat. 2 Non-friable ACM	Under Wood Floor In Gym	8,200	SF	\$ 7.00	\$ 57,400.00
Slate Boards With Glue Daubs	Suspect ACM, Not Sampled	Classrooms	100	EA	\$ 150.00	\$ 15,000.00
Old Flex Connectors	Suspect ACM, Not Sampled	On HVAC Near Ceiling in Technical Classrooms (HVAC, Auto Shop, Etc.), Gym, Other Areas in Tunnel or Fixed Walls	50	EA	\$ 25.00	\$ 1,250.00

Table 1
Abatement Cost Estimates
Northeast Metrotech High School
Wakefield, Massachusetts

Material Description	NESHAP Cat.	Location	Est. Quantity	Units	Unit Cost	Total Cost
Gaskets	Suspect ACM, Not Sampled	Located on Piping Connections, Valves, Ts	500	EA	\$ 25.00	\$ 12,500.00
Walk in Refrigerator and Freezer Mastic	Suspect ACM, Not Sampled	Cafeteria Kitchen and Kitchen for Foodservice	4	EA	\$ 500.00	\$ 2,000.00
Boilers	Suspect ACM, Not Sampled	Interior Components, Boiler Room and Pool Area	3	EA	\$ 10,000.00	\$ 30,000.00
Vault Door Fireproofing	Suspect ACM, Not Sampled	Admin Area	1	EA	\$ 500.00	\$ 500.00
Dry Transformer Transite	Suspect ACM, Not Sampled	Noted on Walls in Tech Shops	20	EA	\$ 50.00	\$ 1,000.00
Transite in Switch Gear	Suspect ACM, Not Sampled	In Electric Room, Typical Panels are 12"x6" with 20 Per Switch	100	EA	\$ 25.00	\$ 2,500.00
Fire Brick	Suspect ACM, Not Sampled	Chimney Lining	1	EA	\$ 25,000.00	\$ 25,000.00
Transite Fume Hood	Suspect ACM, Not Sampled	Science, Chemistry	1	EA	\$ 1,500.00	\$ 1,500.00
Gray Caulk *also assumed to contain PCBs	Cat. 2 Non-friable ACM	On Metal Flashing, Wood Shop to Low Roof	200	LF	\$ 35.00	\$ 7,000.00
Expansion Joint Caulk * assumed to contain PCBs	Non ACM, Sampled	Non-ACM Caulk at Exterior Gym, Pool, Tech Shops, Interior Gym, Pool, Hall Near Gym	2,600	LF	\$ 35.00	\$ 91,000.00
Gray Window Glaze *also assumed to contain PCBs	Cat. 2 Non-friable ACM	On Fiberglass Frosted Windows, Tech Shops, Gym, Pool. Approximate Sizes 10"x4', 20"x10', 6"x4'	190	EA	\$ 350.00	\$ 66,500.00
Gray Window Caulk *also assumed to contain PCBs	Non ACM, Sampled	Non ACM Exterior Window Caulk, Assumed to Contain PCBs	6,500	LF	\$ 35.00	\$ 227,500.00
Gray Window Glaze *also assumed to contain PCBs	Cat. 2 Non-friable ACM	On Exterior Windows, Various Sizes, Approximately 15"x4', 8"x4', 6"x4', 10"x4', 4"x4', other various sizes. Quantity includes any old caulk under new.	250	EA	\$ 350.00	\$ 87,500.00
Gray Caulk *also assumed to contain PCBs	Cat. 2 Non-friable ACM	Around Exterior Univernts	480	LF	\$ 35.00	\$ 16,800.00
Dark Brown Caulk * also assumed to contain PCBs	Cat. 2 Non-friable ACM	Exterior of Chimney	40	LF	\$ 35.00	\$ 1,400.00

Table 1
Abatement Cost Estimates
Northeast Metrotech High School
Wakefield, Massachusetts

Material Description	NESHAP Cat.	Location	Est. Quantity	Units	Unit Cost	Total Cost
Roofing Asphaltic Type	Cat. 1 Non-friable ACM	Sloped Roof on Main School Building, Outbuilding with Football Training Gear and Wood Sheds Outside of Wood Shop	11,600	SF	\$ 14.00	\$ 162,400.00
Exterior Vapor Barrier	Cat. 2 Non-friable ACM	Black Coating on Copper Behind Brick Façade, Lower Courses Only	8,500	SF	\$ 12.00	\$ 102,000.00
Exterior Door Caulk *also assumed to contain PCBs	Cat. 2 Non-friable ACM	Exterior Doors, Old Under New	600	LF	\$ 35.00	\$ 21,000.00
Subsurface Transite	Suspect ACM, Not Sampled	Subsurface	1,000	LF	\$ 25.00	\$ 25,000.00
Other Latent/Inaccessible Items	Suspect ACM, Not Sampled	Inaccessible	--	--	\$ 100,000.00	\$ 100,000.00
* Assumed to contain PCBs greater than 50 mg/kg					TOTAL	\$ 1,750,225.00

Hazardous Materials Summary Report | Existing Conditions Report

Table 1A
Other Hazardous Materials Costs
Northeast MetroTech High School

Material Description	Location	Est. Quantity	Units	Unit Cost	Total Cost	Comments
Compact Fluorescent Bulbs	Throughout	200	EA	\$1	\$200	
Fluorescent Bulbs (Mercury)	Throughout	12000	Tubes	\$1	\$12,000	
Electric Light Ballasts	Throughout	6000	Each	\$5	\$30,000	
Thermostats and Switches (Mercury)	Throughout	500	Ampules	\$20	\$10,000	
Emergency Light Batteries (Lead)	Throughout	80	EA	\$20	\$1,600	
Refrigerants Associated With HVAC, Bubblers, HVAC Shop, Kitchen, Cooling Unit	Throughout	10000	Gallons	\$5	\$50,000	
Fire Extinguishers (Compressed Gas)	Throughout	250	EA	\$0	\$0	Reuse Recommended
Lead-Based Paint	Metal	NA	NA	\$0	\$0	TCLP likely unnecessary, Recycle
Dark Room Chemicals	Dark Room	10	Gallons	\$5	\$50	
Exit Signs (Tritium)	Throughout	80	EA	\$20	\$1,600	
Chemicals in Sludge	Science Sink Traps, Drainage in Floor Trench, Science, Cosmetology, Xray, Auto Shop	50	Gallons	\$250	\$12,500	TCLP Laboratory Analytical Costs and Disposal
Laboratory Chemicals	Science Labs	Reuse	Reuse	\$0	--	Reuse Recommended
Waste Oil and Other Fluids (Brake, Antifreeze, Etc.).	Automotive	20	Drums	\$250	\$5,000	
Fuel Oil UST	Subsurface	1	Each	\$35,000	\$35,000	
Lead Backed Wall and Door	Dental Shop	Reuse	Reuse	\$0	--	
Xray	Dental Shop	Reuse	Reuse	\$0	--	
Old Door Retractors	Remnant-Classrooms, Main Doors, Offices, Assemblies	50	Each	\$50	\$2,500	
Hydraulic Fluid	Old Hydraulic Reservoirs	200	Gallons	\$10	\$2,000	
PCB Fluid	Transformers	200	Gallons	\$35	\$7,000	
			TOTAL		\$169,450	

4.1.2-10 SUSTAINABLE DESIGN GUIDELINE DOCUMENTS

July 7, 2021

Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109
ATTN: Fenton Bradley

RE: Northeast Metropolitan Regional Vocational High School, Wakefield MA

Dear Mr. Bradley:

This is an acknowledgement that the Northeast Metropolitan Regional Vocational High School District has identified a goal of 2% additional reimbursement from the MSBA High Efficiency Green School Program. As their Designer, I have submitted a completed US Green Building Council's LEED for Schools scorecard showing all prerequisites and 54 attempted points with 12 additional possible points, which will meet that goal.

The scope of work for this project will include the construction elements and performance tasks to achieve that goal, and all subsequent documents, including but not limited to, specifications, drawings and cost estimates will match the scope of work indicated in the submitted scorecard.

Very Truly Yours,
DRUMMEY ROSANE ANDERSON, INC.



Carl R. Franceschi , AIA, LEED AP
Principal

CC:

David DiBarri, Superintendent, Northeast Metropolitan Regional Vocational High School
Joe DeSantis, PMA Consultants
Vladimir Lyubetsky, DRA Architects
DRA Files



LEED v4 for BD+C: Schools

Project Checklist

Project Name: **20202.00 Northeast Metropolitan Regional Voc. H.S**

Date: **6/17/2021**

Y ? N

1	0	14	Location and Transportation	15
Y			Credit LEED for Neighborhood Development Location	15
Y		1	Credit Sensitive Land Protection	1
Y		2	Credit High Priority Site	2
Y		5	Credit Surrounding Density and Diverse Uses	5
Y		4	Credit Access to Quality Transit	4
Y		1	Credit Bicycle Facilities	1
Y		1	Credit Reduced Parking Footprint	1
Y		1	Credit Green Vehicles	1

4	5	3	Sustainable Sites	12
Y			Prereq Construction Activity Pollution Prevention	Required
Y			Prereq Environmental Site Assessment	Required
Y		1	Credit Site Assessment	1
Y		2	Credit Site Development - Protect or Restore Habitat	2
Y		1	Credit Open Space	1
Y		2	Credit Rainwater Management	3
Y		2	Credit Heat Island Reduction	2
Y		1	Credit Light Pollution Reduction	1
Y		1	Credit Site Master Plan	1
Y		1	Credit Joint Use of Facilities	1

5	1	6	Water Efficiency	12
Y			Prereq Outdoor Water Use Reduction	Required
Y			Prereq Indoor Water Use Reduction	Required
Y			Prereq Building-Level Water Metering	Required
Y		1	Credit Outdoor Water Use Reduction	2
Y		3	Credit Indoor Water Use Reduction	7
Y		1	Credit Cooling Tower Water Use - NB:swap CT for WE pc 94 "No Cooling Tower"	2
Y		1	Credit Water Metering	1

23	1	7	Energy and Atmosphere	31
Y			Prereq Fundamental Commissioning and Verification	Required
Y			Prereq Minimum Energy Performance	Required
Y			Prereq Building-Level Energy Metering	Required
Y			Prereq Fundamental Refrigerant Management	Required
Y		5	Credit Enhanced Commissioning	6
Y		14	Credit Optimize Energy Performance	16
Y		1	Credit Advanced Energy Metering	1
Y		2	Credit Demand Response	2
Y		2	Credit Renewable Energy Production	3
Y		1	Credit Enhanced Refrigerant Management	1
Y		1	Credit Green Power and Carbon Offsets	2

8	0	5	Materials and Resources	13
Y			Prereq Storage and Collection of Recyclables	Required
Y			Prereq Construction and Demolition Waste Management Planning	Required
Y		2	Credit Building Life-Cycle Impact Reduction	5
Y		2	Credit Building Product Disclosure and Optimization - Environmental Product Declarations	2
Y		2	Credit Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
Y		2	Credit Building Product Disclosure and Optimization - Material Ingredients	2
Y		2	Credit Construction and Demolition Waste Management	2

7	2	7	Indoor Environmental Quality	16
Y			Prereq Minimum Indoor Air Quality Performance	Required
Y			Prereq Environmental Tobacco Smoke Control	Required
Y			Prereq Minimum Acoustic Performance	Required
Y		1	Credit Enhanced Indoor Air Quality Strategies	2
Y		2	Credit Low-Emitting Materials	3
Y		1	Credit Construction Indoor Air Quality Management Plan	1
Y		1	Credit Indoor Air Quality Assessment	2
Y		1	Credit Thermal Comfort	1
Y		2	Credit Interior Lighting	2
Y		3	Credit Daylight	3
Y		1	Credit Quality Views	1
Y		1	Credit Acoustic Performance	1

3	2	1	Innovation	6
Y		2	Credit Innovation	5
Y		1	Credit LEED Accredited Professional	1

3	0	1	Regional Priority	4
Y		1	Credit Optimized Energy Performance	1
Y		1	Credit Building Life-Cycle Impact Reduction	1
Y		1	Credit Renewable Energy Production	1
Y		1	Credit Regional Priority	1

54	12	44	TOTALS	Possible Points: 110
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110				



Code

HVAC

Electrical

Plumbing

Fire Protection

Commissioning

NE Metro Regional Vocational Technical School

Wakefield, Massachusetts

Code Report

May 6, 2021

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Introduction

The Northeast Metro Regional Vocational Technical School project includes the construction of a new vocational high school in Wakefield, MA. The following is a list of applicable codes:

Code Type	Applicable Code (Model Code Basis)
Building	780 CMR: Massachusetts State Building Code, 9 th Edition (2015 International Building Code)
Fire Prevention	527 CMR: Massachusetts Fire Prevention Regulations (2015 NFPA 1) M.G.L. Chapter 148 Section 26G – Sprinkler Protection
Accessibility	521 CMR: Massachusetts Architectural Access Board Regulations
Electrical	527 CMR 12.00: Massachusetts Electrical Code (2020 National Electrical Code)
Elevators	524 CMR: Massachusetts Elevator Code (2013 ASME A17.1)
Mechanical	2015 International Mechanical Code (IMC)
Plumbing	248 CMR: Massachusetts Plumbing Code
Energy Conservation	2018 International Energy Conservation Code

1. Occupancy Classification:

Non-Separated Mixed Uses:

- Use Group A-3 (Gymnasium)
- Use Group B (Offices)
- Use Group E (Educational)

The assembly spaces including the Cafeteria and Auditorium are considered part of the Use Group E occupancy. However, the Gymnasium has not been considered part of the Use Group E occupancy, since it could be used by the general public for outside events not directly associated with the school (780 CMR 303.1.3).

Also, the building will contain hazardous materials. The quantity of hazardous materials must be maintained below the exempt limits per control area in order to avoid a Use Group H classification (780 CMR 307.1 & 414). Since the building will be one control area, the total quantity of hazardous materials throughout the building cannot exceed 100% of the maximum allowable quantities (MAQ) contained in 780 CMR Table 307.1(1). In addition, each floor individually also cannot exceed the percentage of the MAQ shown in the following table (780 CMR Table 414.2.2).

Floor	Percentage of the Maximum Allowable Quantity
Lower Level	75%
1 st Floor	100%
2 nd Floor	75%
3 rd Floor	50%
4 th Floor	50%

2. Min. Construction Type:

Type IB Construction (noncombustible, 2-hr rated)

3. Height and Area Limitations:

The following table summarizes the height and area limitations for Use Group E based on Type IB construction:

Code Reference	Use Group E	
	Height	Area
<u>780 CMR Tables 504.3, 504.4 & 506.2:</u> Tabular Value	6 St. (180 ft)	UL
<u>780 CMR Section 506.2</u> Frontage Increase	-	-
Allowed Height and Area	6 St. (180 ft)	UL
Actual Height and Area	4 St.	~135,000 ft²

4. Fire Resistance Ratings:

The following fire resistance ratings are required in accordance with 780 CMR Table 601 and various sections of the code.

Building Element	Fire Resistance Rating (Hrs)
Primary Structural Frame ^A	2 ^{B,C}
Exterior Bearing Walls	2
Interior Bearing Walls	2 ^{B,C}
Exterior Non-Bearing Walls	Based on FSD
Interior Non-Bearing Walls	0
Floor Construction	2 ^C
Roof Construction	1 ^D

^A. Includes beams, trusses, floor members, etc. having a direct connection to the columns (780 CMR 202).

^B. Fire resistance ratings of structural frame and bearing walls are permitted to be reduced by one hour but not less than 1 hour rated where supporting a roof only.

^C. Not less than the rating supported (780 CMR 707.5, 709.4. and 712.4).

^D. Fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below.

Building Element	Fire Resistance Rating (Hrs)	Opening Protectives (Hrs)
Exit Access Corridors (780 CMR 1020.1)	0	0
Stair Shafts (780 CMR 1023.2) ^A	2	1½
Other Shafts (780 CMR 713.4)	2	1½
Elevator Machine Room (780 CMR 3005.4)	2	1½
Emergency Electrical Room (527 CMR 12.00 700-10(D)(2))	2 ^B	1½
Emergency Generator Room – Level 1 Installation (NFPA 110 Section 7.2.1.1)	2	1½
Electrical Vault (if needed) (NFPA 70 Section 110.31(A))	3 hours	
Electrical Closets	With Sprinklers	0
	Without Sprinklers	2
Fuel Oil Storage > 660 gallons	2	1½
Furnace room where any piece of equipment is over 400,000 Btu per hour input	Smoke resistant ^C	
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	Smoke resistant ^C	
Refrigerant machinery room	Smoke resistant ^C	
Paint shops	1 hour and provide automatic fire-extinguishing system	
Laboratories and vocational shops	Smoke resistant ^C	
Laundry rooms over 100 square feet	Smoke resistant ^C	
Waste and linen collection rooms over 100 square feet	Smoke resistant ^C	
Fire pump room (780 CMR 913.2.1)	1 hour ^D	

A. If exterior walls expose the stair at an angle of less than 180 degrees either the stair wall or adjacent wall must be 1 hour rated with ¾ hour opening protectives for a distance of 10 feet from the stair wall (780 CMR Section 1023.7).

B. No rating is required for the room when fully sprinklered, however a 2-hr rating is still required for the emergency feeder-circuit wiring and rooms containing an emergency generator (NFPA 110 Section 7.2.1.1).

C. Where smoke resistant construction and automatic fire-extinguishing system are permitted, accessory occupancies shall be separated from the remainder of the building by construction capable of resisting the passage of smoke and doors shall be self- or automatic-closing upon detection of smoke.

D. Location and access to the fire pump room shall be pre-planned with the fire department. The room must be directly accessed from the exterior or through a 1 hour fire resistance rated passageway that connects to the exterior (NFPA 20 Section 5.12.1.1.3).

Fire walls, fire barriers, fire partitions, smoke barriers, and smoke partitions, or any other wall required to have protected openings or penetrations must be

identified with signs or stenciling within accessible concealed spaces (i.e. floor-ceiling, attic spaces) at 30 ft. intervals (780 CMR 703.7).

5. Stages

The stage areas must comply with 780 CMR 410. It is assumed that the stage height is less than 50 feet. The following requirements must be met.

- Stages must be constructed of materials as required for floors for the type of construction of the building unless the finished floor is constructed of wood or approved non-combustible materials and openings through stage floors shall be equipped with tight-fitting, solid wood trap doors with approved safety locks (410.3.1).
- Galleries, gridirons, and catwalks shall be constructed of approved materials consistent with the requirements of the type of construction of the building (410.3.2).
- Combustible materials used for sets and scenery shall meet NFPA 701 fire propagation performance criteria (410.3.6).
- Emergency ventilation shall be provided for stages larger than 1,000 square feet and follow one of the below (410.3.7).
 - Two or more heat activated roof vents with aggregate opening of not less than 5% of stage area.
 - Smoke control system that maintains a smoke layer interface not less than 6 feet above the highest level of the assembly seating.
- Stage shall be separated from other parts of the building including dressing rooms and scene docks by 1 hour-rated construction (410.5.1).
- Appurtenant rooms to the stage, such as dressing rooms, scene shop, and storerooms, must be separated by 1 hour-rated construction for each other (410.5.2).
- Means of egress on each side of the stage must be provided (410.6.1)

6. Exterior Wall Openings & Fire Resistance Rating:

The exterior wall rating requirements and opening limitations are based on the fire separation distance for each wall. The fire separation distance is measured perpendicular to the exterior wall to the centerline of a public street, an interior lot line, or an imaginary lot line between two buildings on the same lot (780 CMR 702.0). Since the fire separation distance is more than 20 ft. for the entire perimeter of the building, the exterior walls are not required to be rated and the allowable area of openings is not limited (780 CMR Table 602 and Table 705.8).

7. Vertical Floor Openings

Vertical openings are required to comply with 780 CMR 712. The building contains many floor openings that are enclosed in 2 hour fire resistance rated shafts including the exit stairs, elevators, and mechanical chases. The exit stair enclosures will contain glazing that must be fire resistance rated glazing that passes ASTM E119 unless an alternative design is approved that allows the use of sprinkler protected glazing (780 CMR Table 716.5 & 1023.4).

There will also be numerous unprotected floor openings that connect the 1st and 2nd Floor of the building, including the main Lobby, Cafeteria, and Auditorium that are allowed per 712.1.9.

An alternative design is also requested to allow for sprinkler protected glass, 2 hour rated fire barrier walls, or a combination thereof on the 3rd and 4th Floors to separate the upper levels from the floor openings that communicate to the lower floors, including the Gymnasium and Media Center. Since the floor openings will be completely separated from the upper 2 stories, the unprotected floor openings would be equivalent to an allowed two story floor opening that connects the 1st and 2nd Floors in accordance with 780 CMR 712.1.9.

8. Finishes:

Interior Finish

The interior finish of walls and ceilings in exits and corridors must comply with the code for new construction as shown in the table below.

Walls & Ceilings (IBC Table 803.11)

Building Component	Use Group A-3	Use Group B & E
Exit Enclosures and Passageways	Class B	Class B
Corridors	Class B	Class C
Rooms & Enclosed Spaces	Class C	Class C

Note that where exit stairs and exit access corridors serve all use groups, the most restrictive interior finish is required.

New Floor Finishes

Since the building will be equipped with an automatic sprinkler system, traditional floor coverings such as wood, vinyl, and other resilient floor coverings as well as carpeting passing the DOC FF-1 pill test are allowed throughout the building, including all exits, exit passageways and exit access corridors (780 CMR Section 804.4.2).

Exterior Finish

Exterior wall finishes must fully comply with the requirements of 780 CMR 14. Combustible materials are permitted to be used as an exterior wall finish for

this building in accordance with 780 CMR Section 1406.0; however, all exterior wall finishes and architectural trim located greater than 40 feet above grade plane must be constructed of approved noncombustible materials and must be secured to the wall with metal or other approved noncombustible brackets (780 CMR Section 1406.2.2). Additionally, combustible exterior wall finish is limited to 10% of the exterior wall surface area where the fire separation distance is 5 ft or less.

The use of foam plastic materials as part of the exterior wall assembly must comply with 780 CMR 26. The wall assembly must be tested in accordance with NFPA 285 (780 CMR 2603.5.5). Note that this test standard is a full scale assembly test. We recommend confirming with the manufacturer that the foam plastic insulation is part of an approved NFPA 285 assembly or complies with one of the alternative standards listed in 780 CMR Section 2604.1.

9. Means of Egress:

The calculated occupant load for the proposed floor plans, the corresponding required number of exits, the provided number of exits, and the provided egress capacity are summarized below (780 CMR Table 1004.1.2, Table 1006.3.1, and 1005.3). See Code Diagram plans for detailed egress calculations.

Means of Egress

Floor	Occupant Load	Number of Exits		Exit Capacity (persons)
		Required	Provided	
Lower Level	702	3	5	1,133
1 st	2,910	4	8	4,733
2 nd	2,469	4	6	2,507
3 rd	1,471	4	4	1,873
4 th	1,257	4	4	1,873

Where means of egress from floors above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall not be less than the sum of the two floors (780 CMR 1005.6).

General Egress Requirements:

- Maximum exit access travel distance must be less than 250 ft (300 ft allowed from Use Group B spaces) (780 CMR Table 1017.2).
- Maximum dead-end corridor length must be less than 20 ft or 2.5 times the least width of space (up to 50 ft is permitted in Use Group B & E spaces) (780 CMR 1020.4).
- All rooms or spaces with an occupant load greater than 49 people or a travel distance over 75 ft (100 ft in Use Group B areas) must be provided with two egress doors swinging in the direction of egress and illuminated

exit signs at each exit (780 CMR Table 1006.2.1 & Sections 1010.1.2.1 & 1013.1). Boiler rooms require two means of egress if the room is greater than 500 sqft. and includes individual fuel-fired equipment greater than 400,000 Btuh input capacity.

- Doors serving more than 49 people in group E and A occupancies must swing in the direction of egress and be provided with panic hardware (780 CMR 1010.1.10).
- All means of egress lighting and exit signs throughout the building must be provided with an emergency power supply to assure continued illumination for not less than 1.5 hours in case of primary power loss (780 CMR 1008.2 & 1008.3.4).
- Remote means of egress must be separated by $\frac{1}{3}$ of the diagonal dimension of the room or space they serve (780 CMR 1007.1.1). The distance between exits must be measured in a straight line between exit doors / paths.
- Roofs and penthouses containing elevator equipment that must be accessed for maintenance are required to be accessed by a stairway (780 CMR 1011.12.1). Permanent means of access to any roof containing mechanical equipment must be provided in accordance with the Mechanical Code.
- All exits must discharge to the exterior of the building except that a maximum of 50% of the number and capacity of the exit enclosures are allowed to exit through areas on the level of discharge if the exit enclosures discharge to a free and unobstructed path of travel to an exterior exit that is readily visible from the discharge of the exit enclosure; the entire area of the level of exit discharge is separated from areas below by construction consistent with the rating of the exit enclosure; and the egress path and all areas open to the egress path on the level of exit discharge must be fully sprinklered (780 CMR 1028.1).
- An approved barrier must be provided at the level of exit discharge where a stair enclosure continues below its level of exit discharge (780 CMR 1023.8).
- A two-way communication system is required at each elevator landing on accessible floors that are one or more stories above or below the level of exit discharge (780 CMR 1009.8).
- At least one passenger elevator must be sized to accommodate the loading and transportation of an ambulance gurney or stretcher sized 24" wide by 84" long with 5" radius corners (524 CMR 17.40(1)).

10. Required Fire Protection Systems:

- NFPA 13 sprinkler system (780 CMR Table 903.2 & M.G.L. c148 s26G)
- Fire alarm system with emergency voice/alarm communication capabilities (780 CMR 907.2.3)
- Emergency responder radio coverage (780 CMR 916)
- Carbon monoxide detection in accordance with 780 CMR 915 and 527 CMR 1 chapter 13.
- Fire extinguishers (780 CMR 906.1)

11. Energy Code Provisions

The project is subject to the provisions of the 2018 International Energy Conservation code with Massachusetts Amendments (Massachusetts Energy Code).

12. Accessibility for Persons with Disabilities

Massachusetts Architectural Access Board Regulations

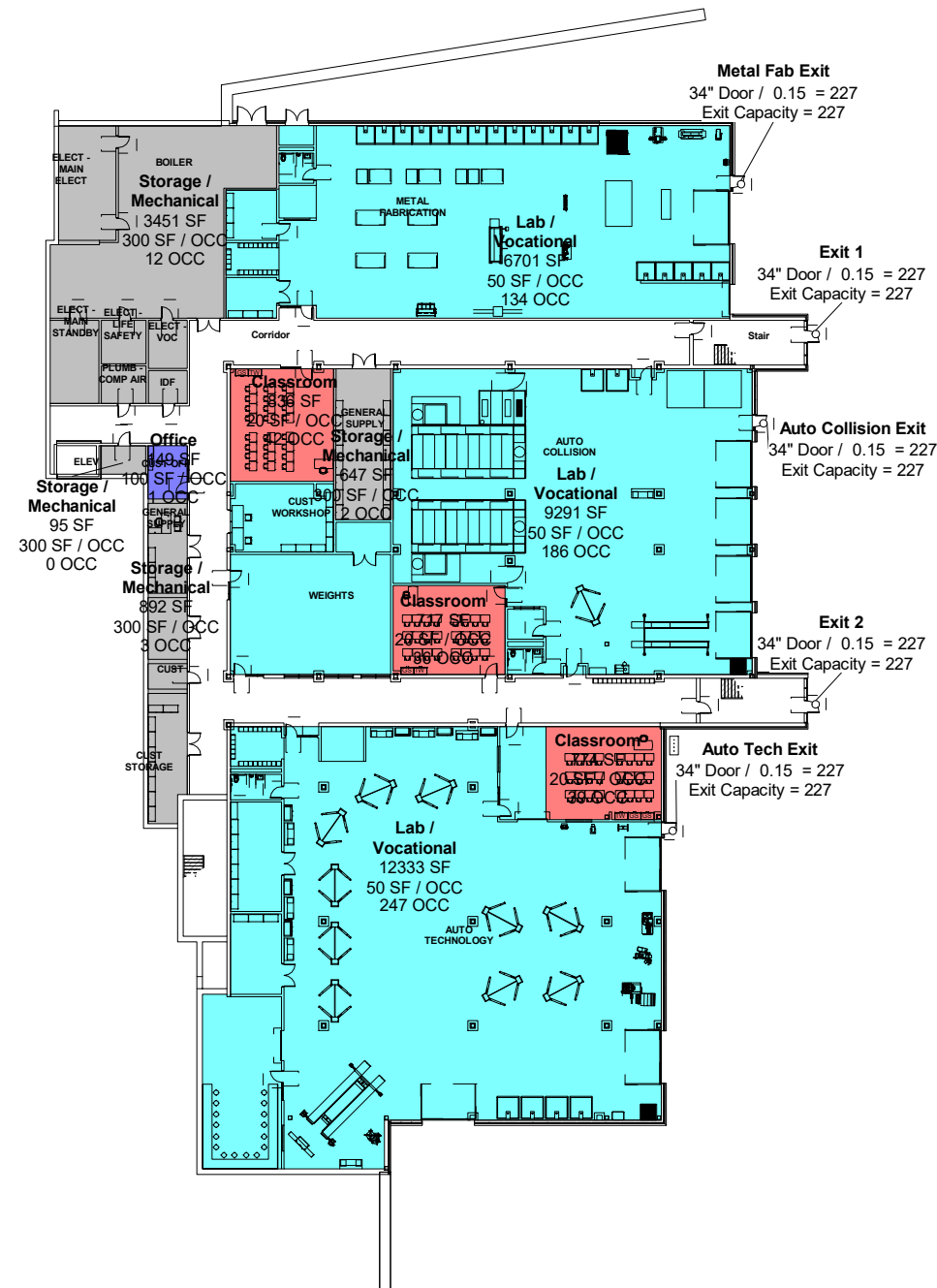
All areas open to the general public are required to comply with the requirements of the Massachusetts Architectural Access Board (521 CMR). This section includes the following major provisions:

- All public entrances must be accessible (521 CMR 25.1).
- All public and common use areas must be accessible and provided with an accessible route thereto (521 CMR Section 12.2.2 and 20.1).
- Accessible toilet rooms must be provided (521 CMR 30.1).
- Where tables, study carrels, computer workstations or fixed seating is provided at least 5% with a minimum of one of each item must be accessible (521 CMR Section 12.2.2).
- The auditorium and gymnasium must be provided with accessible seating and features in accordance with 521 CMR Chapter 14).

American's with Disabilities Act

The ADA Guidelines are not enforced by the Commonwealth of Massachusetts, they can only be enforced through a civil lawsuit or complaint filed with the U.S. Department of Justice. All public and common use areas must be accessible.

Although the provisions of the MAAB do not apply to employee only areas, the ADAAG requires that employee only work spaces must be designed to allow employees to approach, enter, and exit the work area. However, the work areas are not required be provided with accessible features (i.e. shelves, etc.).



Occupant Load Level 0

Use	Floor Area	Floor Area Per Occupant (SF / OCC)	Occupant Load
Classroom	2328 SF	20	116.4
Lab / Vocational	28325 SF	50	566.5
Office	149 SF	100	1.5
Storage / Mechanical	5086 SF	300	17.0
	35888 SF		701.3

Exit Capacity Level 0 (780 CMR 1005.3)

Exit	Stair Width	Stair Exit Allowance (in / person)	Stair Capacity (persons)	Door Width	Door Exit Allowance (in / person)	Door Capacity (persons)	Exit Capacity (persons)
Auto Collision Exit				34"	0.15	227	227
Auto Tech Exit				34"	0.15	227	227
Exit 1				34"	0.15	227	227
Exit 2				34"	0.15	227	227
Metal Fab Exit				34"	0.15	227	227

1133

Occupant Load Densities (780 CMR TABLE 1004.1.2)

Actual Population	Assembly with Fixed Seats; Posted Occupant Load
15 Net S.F. / Occ.	Assembly without Fixed Seats - Unconcentrated (Tables and Chairs)
20 Net S.F. / Occ.	Classrooms
50 Net S.F. / Occ.	Educational - Shops and Laboratories; Reading Rooms
50 Gross S.F. / Occ.	Exercise and Fitness Areas; Locker Rooms
60 Gross S.F. / Occ.	Retail
100 Gross S.F. / Occ.	Office Areas
200 Gross S.F. / Occ.	Kitchen
300 Gross S.F. / Occ.	Storage / Mechanical

RWS

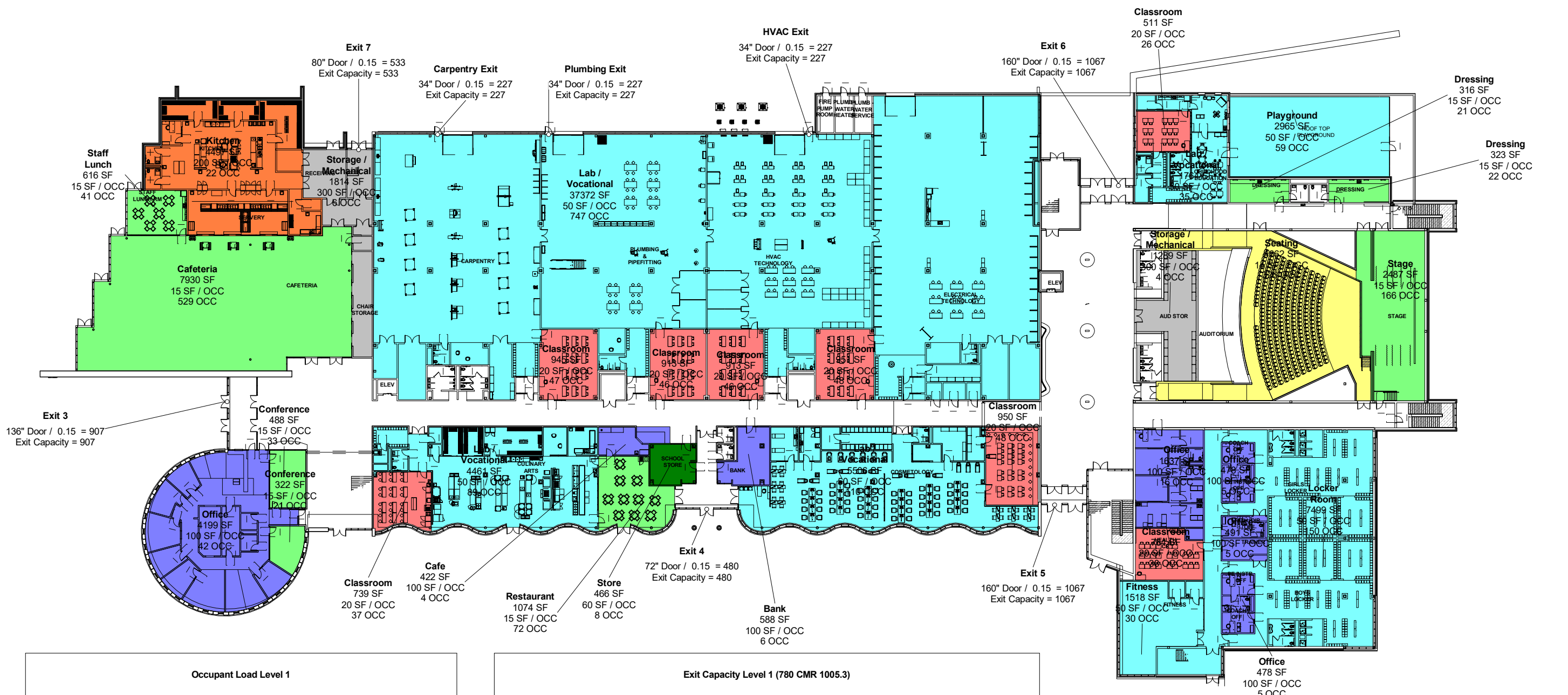
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Project: NE Metro Tech

Date: May 28, 2021

Scale: N.T.S.

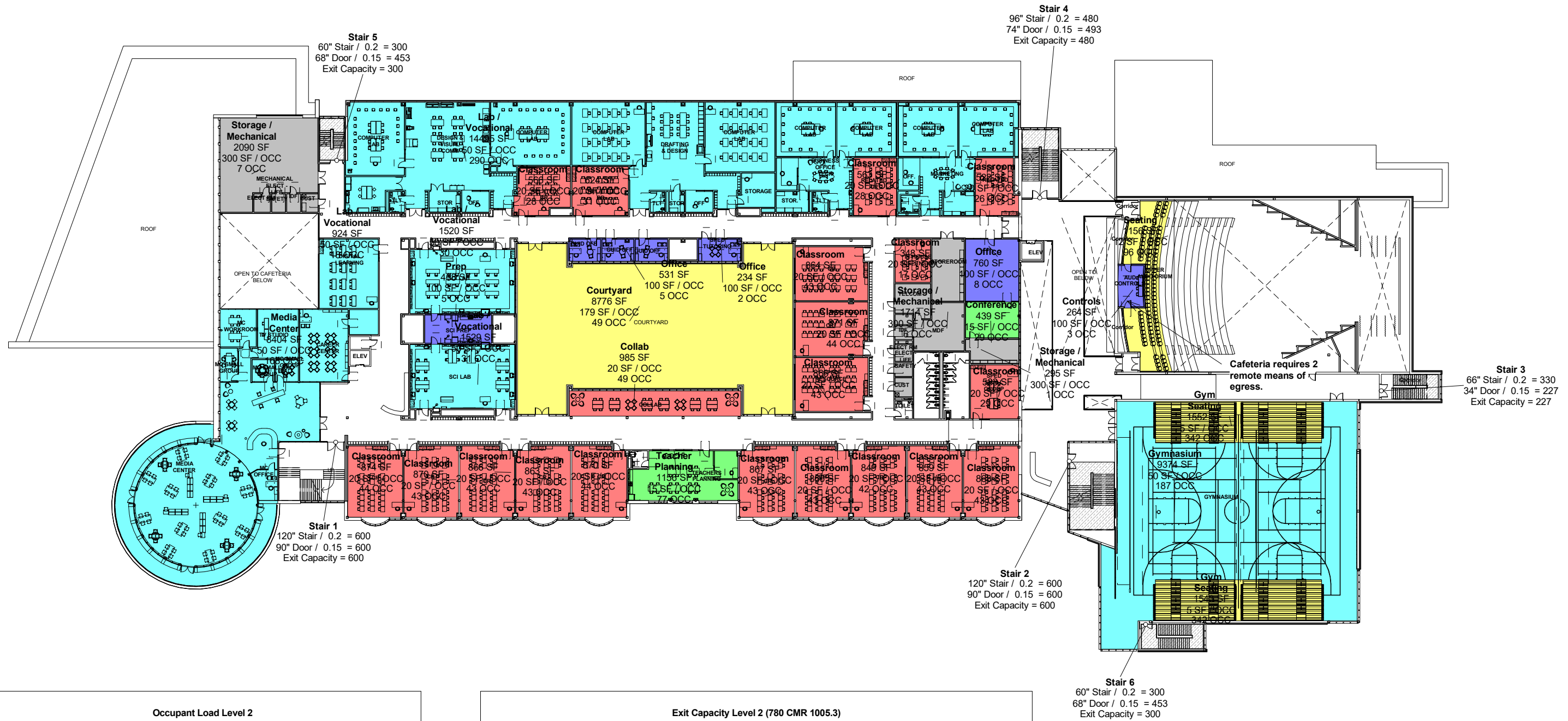
Level 0
 Egress



Occupant Load Level 1			
Use	Floor Area	Floor Area Per Occupant (SF / OCC)	Occupant Load
Bank	588 SF	100	5.9
Cafe	422 SF	100	4.2
Cafeteria	7930 SF	15	528.7
Classroom	6685 SF	20	334.3
Conference	810 SF	15	54.0
Dressing	639 SF	15	42.6
Fitness	1518 SF	50	30.4
Kitchen	4497 SF	200	22.5
Lab / Vocational	49104 SF	50	982.1
Locker Room	7499 SF	50	150.0
Office	7283 SF	100	72.8
Playground	2965 SF	50	59.3
Restaurant	1074 SF	15	71.6
Seating	4662 SF	14	326.0
Staff Lunch	616 SF	15	41.0
Stage	2487 SF	15	165.8
Storage / Mechanical	3103 SF	300	10.3
Store	466 SF	60	7.8
Total	102346 SF		2909.2

Exit Capacity Level 1 (780 CMR 1005.3)							
Exit	Stair Width	Stair Exit Allowance (in / person)	Stair Capacity (persons)	Door Width	Door Exit Allowance (in / person)	Door Capacity (persons)	Exit Capacity (persons)
Carpentry Exit				34"	0.15	227	227
Exit 3				136"	0.15	907	907
Exit 4				72"	0.15	480	480
Exit 5				160"	0.15	1067	1067
Exit 6				160"	0.15	1067	1067
Exit 7				80"	0.15	533	533
HVAC Exit				34"	0.15	227	227
Plumbing Exit				34"	0.15	227	227
Total							4733

Occupant Load Densities (780 CMR TABLE 1004.1.2)	
Actual Population	Assembly with Fixed Seats; Posted Occupant Load
15 Net S.F. / Occ.	Assembly without Fixed Seats - Unconcentrated (Tables and Chairs)
20 Net S.F. / Occ.	Classrooms
50 Net S.F. / Occ.	Educational - Shops and Laboratories; Reading Rooms
50 Gross S.F. / Occ.	Exercise and Fitness Areas; Locker Rooms
60 Gross S.F. / Occ.	Retail
100 Gross S.F. / Occ.	Office Areas
200 Gross S.F. / Occ.	Kitchen
300 Gross S.F. / Occ.	Storage / Mechanical



Occupant Load Level 2

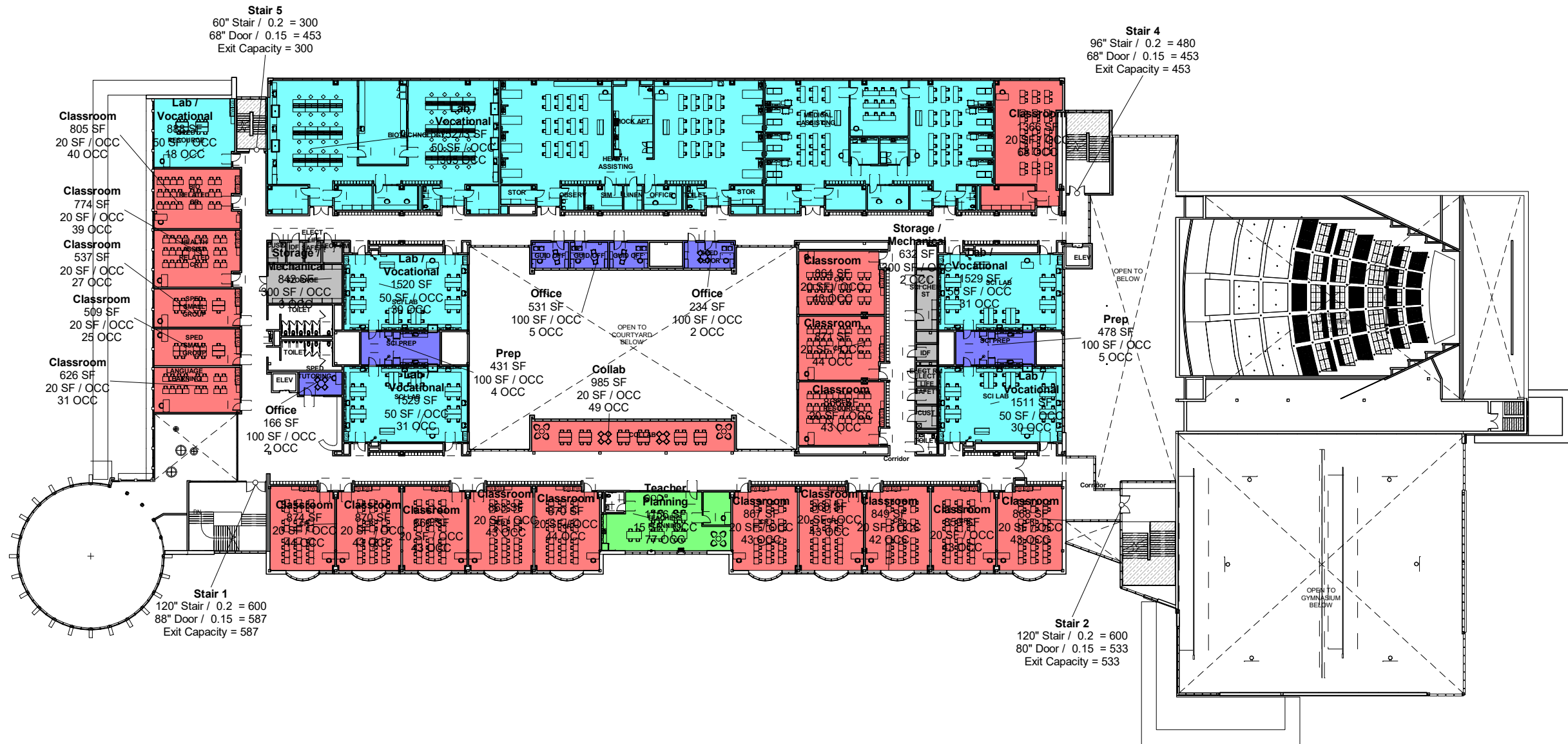
Use	Floor Area	Floor Area Per Occupant (SF / OCC)	Occupant Load
Classroom	14452 SF	20	722.6
Collab	985 SF	20	49.2
Conference	439 SF	15	29.2
Controls	264 SF	100	2.6
Courtyard	8776 SF	179	49.0
Gym Seating	3095 SF	5	619.0
Gymnasium	9374 SF	50	187.5
Lab / Vocational	18468 SF	50	369.4
Media Center	8404 SF	50	168.1
Office	1525 SF	100	15.2
Prep	468 SF	100	4.7
Seating	1156 SF	12	96.0
Storage / Mechanical	4099 SF	300	13.7
Teacher Planning	1156 SF	15	77.1
Total	72660 SF		2468.3

Exit Capacity Level 2 (780 CMR 1005.3)

Exit	Stair Width	Stair Exit Allowance (in / person)	Stair Capacity (persons)	Door Width	Door Exit Allowance (in / person)	Door Capacity (persons)	Exit Capacity (persons)
Stair 1	120"	0.2	600	90"	0.15	600	600
Stair 2	120"	0.2	600	90"	0.15	600	600
Stair 3	66"	0.2	330	34"	0.15	227	227
Stair 4	96"	0.2	480	76"	0.15	507	480
Stair 5	60"	0.2	300	68"	0.15	453	300
Stair 6	60"	0.2	300	68"	0.15	453	300
Total							2507

Occupant Load Densities (780 CMR TABLE 1004.1.2)

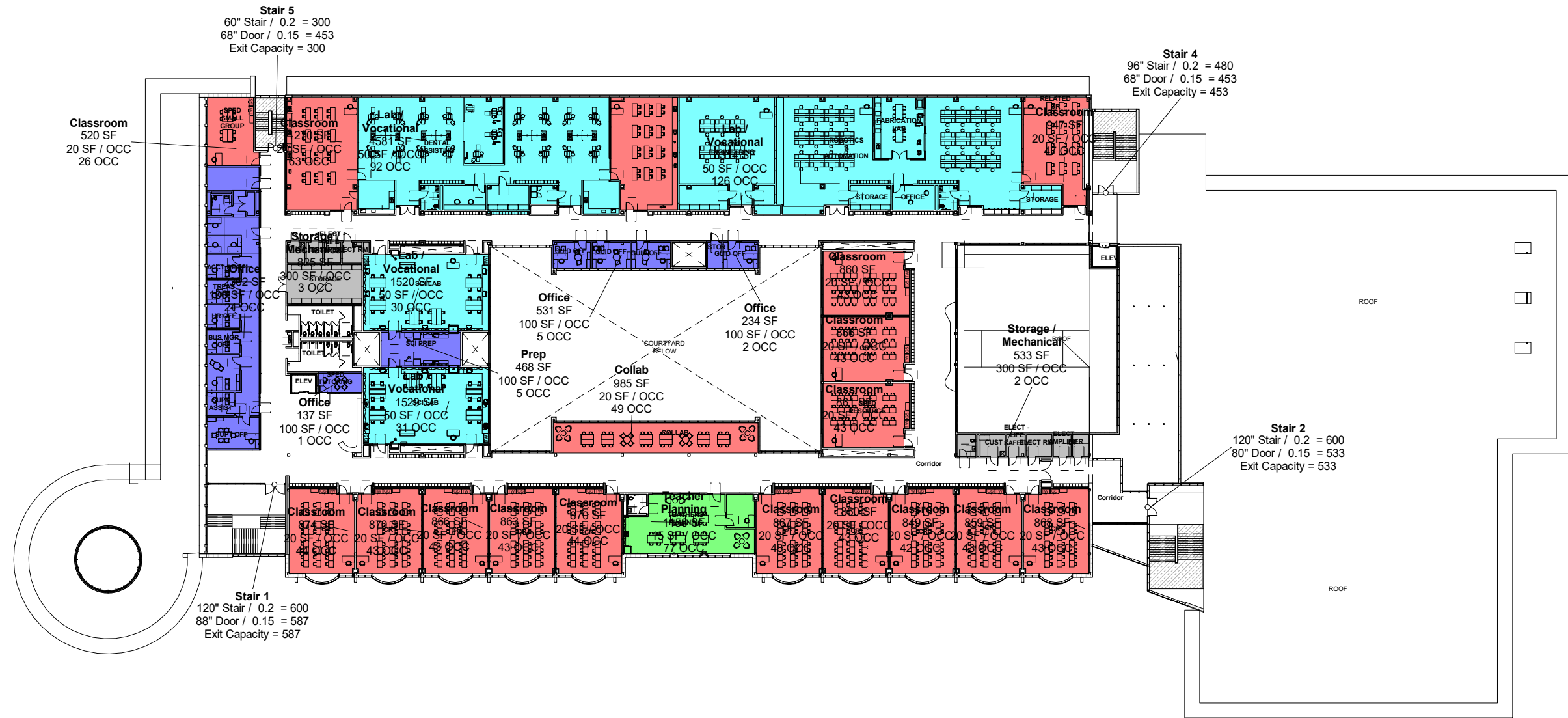
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20 Net S.F. / Occ.	Classrooms
50 Net S.F. / Occ.	Educational - Shops and Laboratories; Reading Rooms
50 Gross S.F. / Occ.	Exercise and Fitness Areas; Locker Rooms
60 Gross S.F. / Occ.	Retail
100 Gross S.F. / Occ.	Office Areas
200 Gross S.F. / Occ.	Kitchen
300 Gross S.F. / Occ.	Storage / Mechanical



Occupant Load Level 3			
Use	Floor Area	Floor Area Per Occupant (SF / OCC)	Occupant Load
Classroom	15863 SF	20	793.2
Collab	985 SF	20	49.2
Conference	0 SF	15	29.2
Lab / Vocational	22250 SF	50	445.0
Office	931 SF	100	9.3
Prep	909 SF	100	9.1
Space	0 SF	308	53.4
Storage / Mechanical	1475 SF	300	4.9
Teacher Planning	1156 SF	15	77.1
	43568 SF		1470.3

Exit Capacity Level 3 (780 CMR 1005.3)							
Exit	Stair Width	Stair Exit Allowance (in / person)	Stair Capacity (persons)	Door Width	Door Exit Allowance (in / person)	Door Capacity (persons)	Exit Capacity (persons)
Stair 1	120"	0.2	600	88"	0.15	587	587
Stair 2	120"	0.2	600	80"	0.15	533	533
Stair 4	96"	0.2	480	68"	0.15	453	453
Stair 5	60"	0.2	300	68"	0.15	453	300
							1873

Occupant Load Densities (780 CMR TABLE 1004.1.2)	
Actual Population	Assembly with Fixed Seats; Posted Occupant Load
15 Net S.F. / Occ.	Assembly without Fixed Seats - Unconcentrated (Tables and Chairs)
20 Net S.F. / Occ.	Classrooms
50 Net S.F. / Occ.	Educational - Shops and Laboratories; Reading Rooms
50 Gross S.F. / Occ.	Exercise and Fitness Areas; Locker Rooms
60 Gross S.F. / Occ.	Retail
100 Gross S.F. / Occ.	Office Areas
200 Gross S.F. / Occ.	Kitchen
300 Gross S.F. / Occ.	Storage / Mechanical



Occupant Load Level 4			
Use	Floor Area	Floor Area Per Occupant (SF / OCC)	Occupant Load
Classroom	15119 SF	20	755.9
Collab	985 SF	20	49.2
Lab / Vocational	13945 SF	50	278.9
Office	3264 SF	100	32.6
Prep	468 SF	100	4.7
Space	0 SF	308	53.4
Storage / Mechanical	1358 SF	300	4.5
Teacher Planning	1156 SF	15	77.1
	36294 SF		1256.3

Exit Capacity Level 4 (780 CMR 1005.3)							
Exit	Stair Width	Stair Exit Allowance (in / person)	Stair Capacity (persons)	Door Width	Door Exit Allowance (in / person)	Door Capacity (persons)	Exit Capacity (persons)
Stair 1	120"	0.2	600	88"	0.15	587	587
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 RWS JOB # 200066.00

Project: NE Metro Tech

Date: May 28, 2021

Scale: N.T.S.

**Level 4
Egress**

Proposed Space Summary - High Schools

1,600 Students

Northeast Metro Tech		Existing Conditions		
ROOM TYPE	ROOM NFA ¹	# OF RMS	area totals	
Satellite Locker Rooms				
Phys. Ed. Storage & Closets - 172G,172H, 172N,	115	2	230	
Athletic Director's Office - 172C	140	1	140	
Officials/ Trans Locker Rm w/ Shower & Toilet				
PE Instructor & Coach Offices w/ Shower & Toilet	115	2	230	
Health CR/ Team Mtg. Rm (see Core Academic)				
Trainer 172I	240	1	240	
MEDIA CENTER				
Media Center / Reading Room 174A	2,150	1	2,150	
Workroom 174C	400	1	400	
Office, Conf., printer- 174B,174D, 174E	120	3	360	
Small Group Rooms				
Project Room/ TV studio/ Storage				
AUDITORIUM / DRAMA				
(Auditorium) Presentation/ Performance Space				
Stage - 119B	1,510	1	1,510	
Auditorium Storage - 119T	120	1	120	
Make-up / Dressing/ Green Rooms				
Controls / Lighting / Projection				
DINING & FOOD SERVICE				
Cafeteria / Student Lounge / Break-out - 119A	7,440	1	7,440	
Chair / Table Storage - 119S,119U, 119V	300	1	300	
Scramble Serving Area - 119P	420	1	420	
Satellite Serving Area				
Kitchen - 119C, 119D, 119E, 119F, 119G, 119H,	4,120	1	4,120	
Satellite Kitchen				
Staff Lunch Room		0		
MEDICAL				
Medical Suite Toilets - 178D, 178E	45	2	90	
Nurses' Office / Waiting Room 178A, 178B	650	1	650	
Interview/ Exam Room	0	0	0	
Resting	30	2	60	
ADMINISTRATION & GUIDANCE				
General Office / Waiting / Tlt 175,175A,175H, 129	870	1	870	
Teachers' Mail and Time Room 175K ??	240	1	240	
Duplicating Room				
Records Room (Vault) 175E	190	1	190	
Principal's Office w/ Conf. Area & Tlt - 175F, 175C	360	1	360	
Principal's Secretary / Waiting - 175M	70	1	70	
Assistant Principal's Office - AP1 - 101,101B	470	1	470	
Assistant Principal's Offices - Voc.Deans, Academic Prog. Coordinator, Co-Op 175R, Supervisory & Paraprofessional Offices; incl: Attendance, Reception 175B, 175C, 175D, 183	123	3	370	
Department Head Offices 163B, 187A, 187B, 187C,188, 189, 201A	155	4	620	
Safety Resource Officer	134	7	940	
In-House Suspension 139	100	1	100	
Conference Rooms - 175N, 180	340	1	340	
Guidance/ Adj, Diversity Offices - 175O,175Q,175	440	2	880	
Guidance Waiting Room - 175P	126	8	1,010	
Guidance Storeroom	280	1	280	
Career Center/ Classroom - 112	0	0	0	
Records Room	670	1	670	
Teachers' Work Rm, Dig.Lrn'g Mgr(w/ Media Ctr)				
CUSTODIAL & MAINTENANCE				
Custodian's Office - 137G, 019FB	230	2	460	
Custodian's Workshop & Toilet - 137, 137G	2,240	1	2,240	
Custodian's Storage - 194A,194B,194C,192C,192	35	12	420	

PROPOSED								
Existing to Remain/Renovated			New			Total		
ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals	ROOM NFA ¹	# OF RMS	area totals
			1,363	2	2,725		2	2,725
		0	275	1	275		1	275
		0	170	1	170		1	170
			80	1	80		1	80
		0	185	4	740		4	740
			190	1	190	+	1	190
		0	5,455		5,455			5,455
		0	4,150	1	4,150		1	4,150
		0	320	1	320			320
			160	1	160		1	160
			117	3	350		3	350
			475	1	475		1	475
		0	10,505		10,505			10,505
		0	7,475	1	7,475		1	7,475
		0	1,610	1	1,610		1	1,610
		0	580	1	580		1	580
		0	303	2	605		2	605
		0	235	1	235		1	235
		0	13,180		13,180			13,180
		0	7,990	1	7,990		1	7,990
		0	500	1	500		1	500
		0	1,025	1	1,025		1	1,025
			300	0	0		0	0
		0	3,035	1	3,035		1	3,035
		0	600	0	0		0	0
		0	630	1	630		1	630
		0	1,340		1,340			1,340
		0	73	2	145		2	145
		0	192	3	575		3	575
		0	120	3	360		3	360
		0	260	1	260		1	260
		0	8,655		8,655			8,655
		0	170	4	680		4	680
		0	100	1	100		1	100
		0	240	1	240		1	240
		0	200	1	200		1	200
		0	255	1	255		1	255
		0	130	1	130		1	130
		0	153	2	305		2	305
		0	155	4	620		4	620
		0	121	4	485		4	485
		0	120	7	840		7	840
		0	120	1	120		1	120
		0	340	1	340		1	340
		0	323	3	970		3	970
		0	158	8	1,260		8	1,260
		0	100	0	0		0	0
		0	100	1	100		1	100
			985	1	985		1	985
			225	1	225		1	225
			800	1	800		1	800
		0	4,150		4,150			4,150
		0	140	1	140		1	140
		0	475	1	475		1	475
		0	330	1	330		1	330

Difference to MSBA Guidelines		
ROOM NFA ¹	# OF RMS	area totals
		(225)
		20
		80
		490
		255
		(1,050)
		320
		160
		350
		475
		105
		(25)
		10
		80
		5
		35
		480
		(10)
		(50)
		425
		-
		135
		-
		(20)
		-70
		85
		325
		(40)
		(440)
		2,860
		(120)
		-
		40
		-
		(120)
		5
		155
		320
		365
		840
		120
		340
		520
		60
		(100)
		-
		435
		-
		-
		1,325
		(10)
		225
		(45)

Date: 2/12/2021 Schematic Design			
MSBA Guidelines			
(refer to MSBA Educational Program & Space Standard Guidelines) see also accompanying Notes to Space Summary for highlighted revisions			
ROOM NFA ¹	# OF RMS	area totals	Comments
500	1	500	
150	1	150	
250	1	250	
		5,200	
		(1,050)	
5,200	1	5,200	
		320	
		160	
		350	
		475	
		10,400	Excess Auditorium Spaces Policy
		(25)	
7,500	1	7,500	2/3 Enrollment @ 10 SF/Seat - 750 seats MAX
1,600	1	1,600	
500	1	500	
300	2	600	
200	1	200	
		12,700	
		(10)	
8,000	1	8,000	3 seatings - 15SF per seat
550	1	550	
600	1	600	
2,900	1	2,900	1600 SF for first 300 + 1 SF/student Add'l
650	1	650	20 SF/Occupant
		1,410	
60	1	60	
250	1	250	
100	4	400	
100	7	700	
		5,795	
800	1	800	
100	1	100	
200	1	200	
200	1	200	
375	1	375	
125	1	125	
150	1	150	
150	2	300	
120	1	120	
450	1	450	
150	8	1,200	
100	1	100	
100	1	100	
550	1	550	
225	1	225	
800	1	800	
		2,825	
		(10)	
150	1	150	
250	1	250	
375	1	375	

