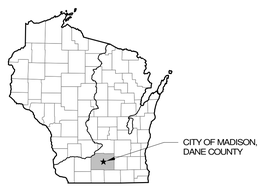
CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

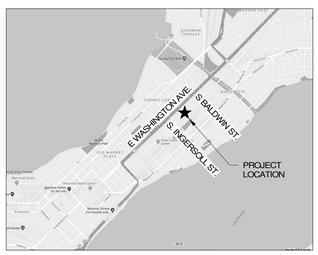
PROJECT No.: 4503500-170148.02
CONTRACT No.: 8238
MUNIS No.: 11228

STATE MAP:

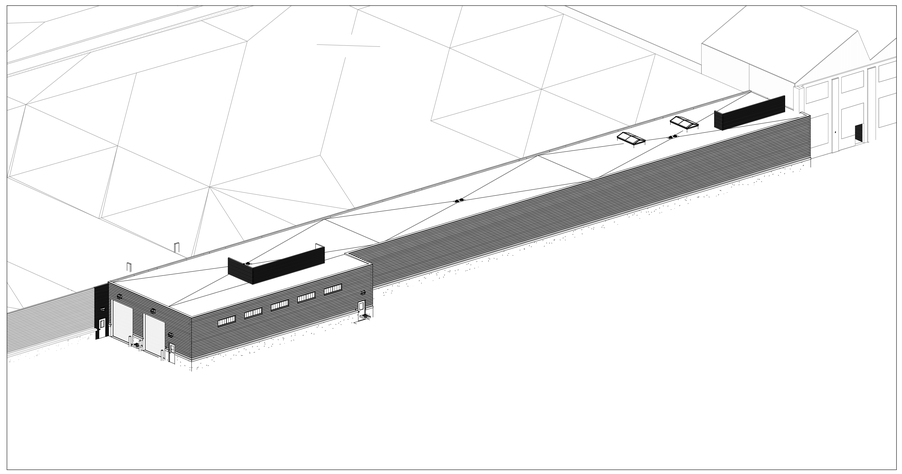


STATE OF WISCONSIN

VICINITY MAP:



EXTERIOR 3D PERSPECTIVE



PUBLIC IMPROVEMENT PROJECT APPROVED:	PUBLIC IMPROVEMENT DESIGN APPROVED BY:
RES – 19 – 00014	
FILE ID 53937	CITY ENGINEER
DATE January 8, 2019	January 14, 2019
BY THE COMMON COUNCIL OF MADISON, WI	DATE

SHEET INDEX

WISCONSIN — LEVI G. KOLLMANSBERGER — E-26071 — MADISON, WI — PROFESSIONAL ENGINEER — 1-17-19

WISCONSIN — DAVID K. COCKRUM — E-37729 — MILWAUKEE, WI — PROFESSIONAL ENGINEER — 1-17-19

WISCONSIN — STACEY L. KELLER — E-33277 — MADISON, WISCONSIN — REGISTERED ARCHITECT

WISCONSIN — ROBERT M. MUTSCH — E-39741-6 — WEST ALLIS, WI — PROFESSIONAL ENGINEER — 1/17/2019 — PLUMBING

WISCONSIN — DANIEL J. GREEN — E-33526 — MADISON, WI — PROFESSIONAL ENGINEER — 1-17-19

WISCONSIN — MARK A. MLADENOFF — D-1960-E — MACHESNEY PARK, ILLINOIS — DESIGNED BY A PROFESSIONAL ENGINEER — 1-17-19

Mead & Hunt
Mead & Hunt, Inc.
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Middleton, WI 53562
phone: 608-273-6380
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metro transit

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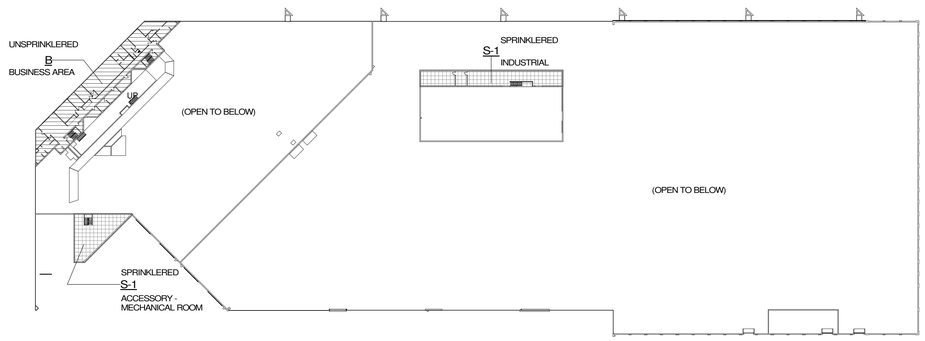
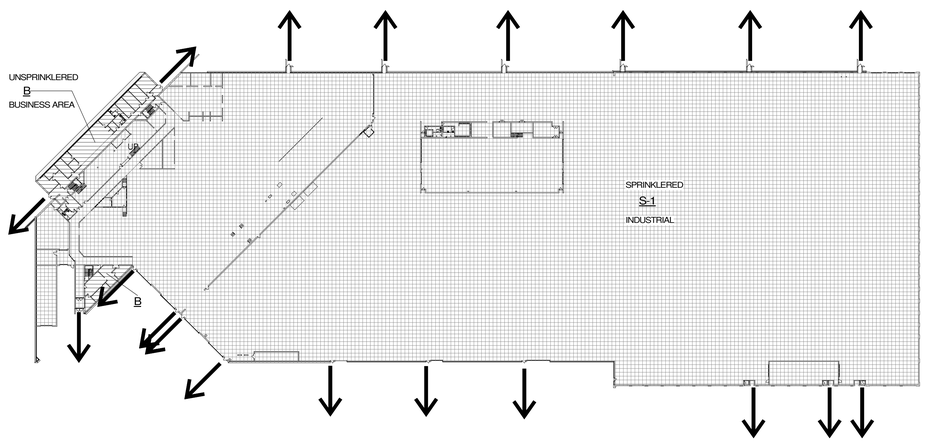
SHEET CONTENTS
COVER SHEET

SHEET NO.:
G-001



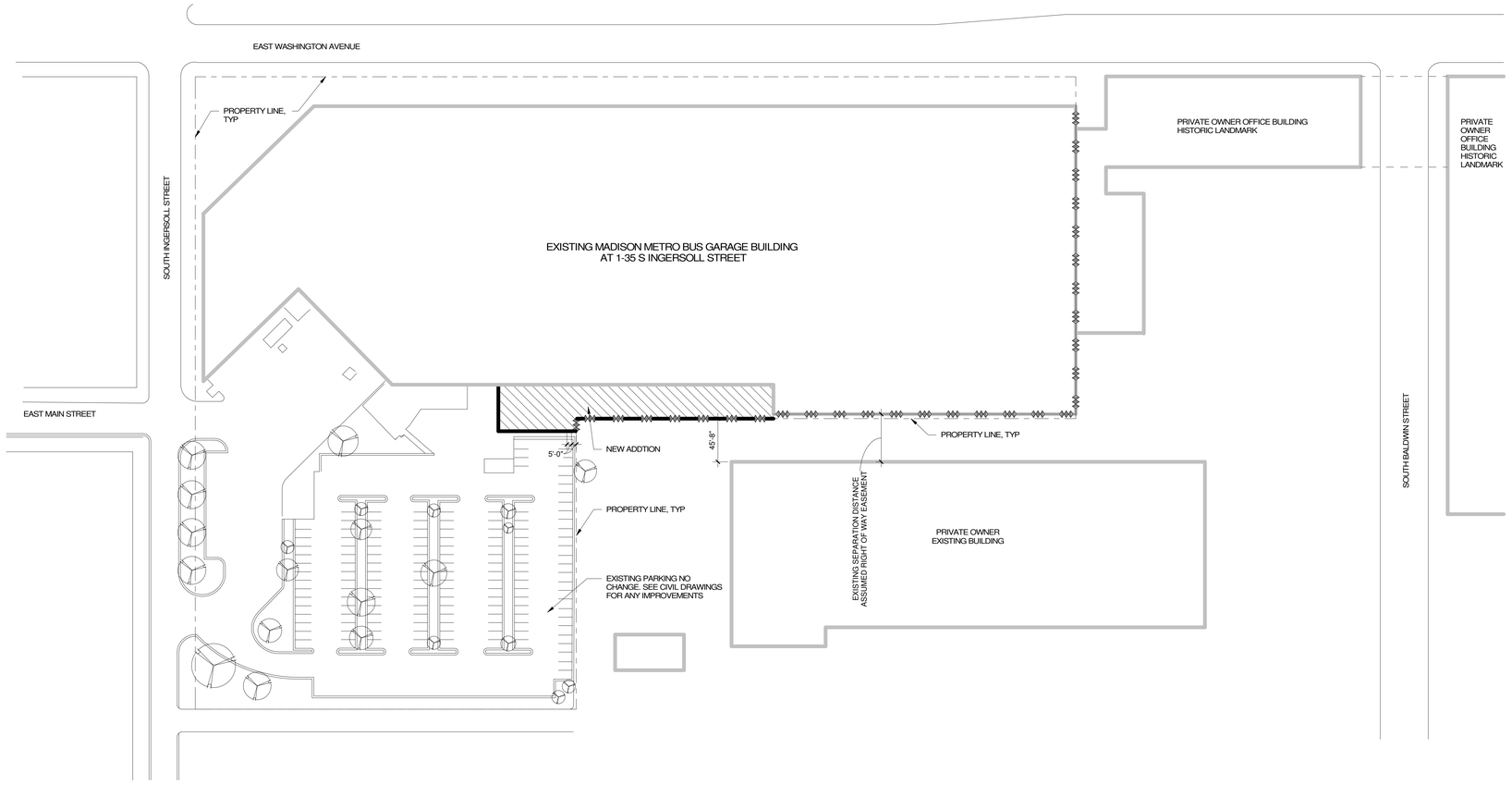
3 EXISTING SECOND FLOOR OCCUPANCY PLAN

1/64" = 1'-0"



2 EXISTING FIRST FLOOR OCCUPANCY PLAN

1/64" = 1'-0"



1 LIFE SAFETY SITE PLAN

1" = 60'-0"

APPLICABLE CODES AND DESIGN CRITERIA

Project Name and Location:

Madison Metro Transit
Bus Storage Renovations and Service Lane Addition
1101 E. Washington Ave.
Madison, WI 53703

Applicable Design Criteria and Codes:

Building Code / Structural Code: International Building Code (IBC 2015)
2018 Wisconsin Commercial Building Code, Chapter SPS 362

Existing Building Code: International Existing Building Code (2015)
2018 Wisconsin Commercial Existing Building Code, Chapter SPS 366

Work Area Method (301.1.2) — **Defined Compliance Methods and Classifications of Work:**

Work Area # 1:	Addition (IEBC Section 507)
Work Area # 2:	Alteration -Level 2 (IEBC Section 504)
Work Area # 3:	Alteration -Level 1 (IEBC Section 504)
Work Area # 4:	Alteration -Level 1 (IEBC Section 503)
Work Area # 5:	Alteration -Level 1 (IEBC Section 504)
Work Area # 6:	Addition (IEBC Section 507)

Plumbing Code: Wisconsin Administrative Code, Chapters SPS 381 - SPS 384

Mechanical Code: International Mechanical Code (IMC 2015)
Wisconsin Administrative Code, Chapter SPS 364

Electrical Code: National Electric Code (NEC 2017)
Wisconsin Administrative Code, Chapter SPS 316

Fire/Life Safety Code: National Fire Protection Association, Chapter 1 (NFPA-1, 2012)
Wisconsin Administrative Code, Chapters SPS 314 & SPS 330

Accessibility Code: International Building Code, Chapter 11 (IBC 2015)
Wisconsin Administrative Code, Chapter SPS 369

Energy Code: International Energy Conservation Code, (IEEC 2015)
Wisconsin Administrative Code, Chapter SPS 363

Gas Code: International Fuel Gas Code, (IFGC 2015)
Wisconsin Administrative Code, Chapter SPS 365

Boiler Code: Wisconsin Administrative Code, Chapter SPS 341

Elevator Code: ASME A17.1-2013
Wisconsin Administrative Code, Chapter SPS 318

CODE PLAN GENERAL NOTES

PROJECT SCOPE OF WORK AND DEFINITION OF THE PROJECT ALTERATIONS DEFINED AS AN ALTERATION AND ADDITION

USING THE WORK AREA METHOD COMPLIANCE METHOD (IBC - 301.1.2) THE TOTAL COMBINED WORK AREAS IS 22,138 SQ.FT. EACH AREA IS INDIVIDUALLY CLASSIFIED. the ENTIRE PROJECT CONSISTS OF ALL WORK AREAS AS DEFINED ON THE PLANS.

1. THERE ARE SIX (6) SEPARATE WORK AREAS EACH INDIVIDUALLY CLASSIFIED BY THE CLASSIFICATION OF WORK IN CHAPTER FIVE (5) OF THE WISCONSIN EXISTING BUILDING CODE.
2. THE EGRESS SYSTEM IS UNCHANGED IN ALL THE AREAS OF ALTERATIONS EXCEPT FOR AREA # 2 WHERE THE EXIT ACCESS, EXITS, AND EXIT DISCHARGE IS SHOWN ON THE LIFE SAFETY PLANS.
3. THE LIFE SAFETY PLAN ILLUSTRATES THE NEW EGRESS SYSTEM IN THE ADDITIONS.
4. REFER TO EACH INDIVIDUAL WORK AREA FOR THE SPECIFIC CODE ANALYSIS FOR THAT AREA.

CODE SITE PLAN NOTES

1. **ZONING:**
CITY OF MADISON, WISCONSIN ZONING
ORDINANCE EFFECTIVE OCTOBER 23, 2018
THROUGH THE CODE OF ORDINANCES CODIFIED
THROUGH ORDINANCE NO. ORD-18-00108.

DISTRICT CLASSIFICATION:
TE = TRADITIONAL EMPLOYMENT

SETBACKS & LOT COVERAGE
FRONT - NONE - INGERSOLL STREET
SIDES - NONE UNLESS NEEDED FOR ACCESS
REAR - 20'-0"
85% MAX LOT COVERAGE

2. **FIRE SEPARATION DISTANCE:**
IBC TABLE 602 X<5 FOR S-1 = 2 HOURS
IBC TABLE 705.8 MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE:
0'-3' = NOT PERMITTED
3'-5' = UNPROTECTED, SPRINKLERED = 15%

3. **PARKING REQUIREMENTS:**
DISTURBED AREA LESS THAN 4,000 SF - NO CHANGE

LIFE SAFETY PLAN LEGEND:

- 1 HR RATED WALL
- 2 HR RATED WALL
- 3 HR RATED WALL
- EXIT ACCESS
- EXIT
- EXIT DISCHARGE
- F.E. — FIRE EXTINGUISHER - WALL MOUNTED
- F.E.C. — FIRE EXTINGUISHER - CABINET
- AREAS OF WORK

Existing Building Data

Building Occupancy Classifications		
IBC Chapter 3: Moderate-hazard Storage, Group S-1 - Areas currently are not classified as any H -...		
Accessory Occupancy: Group B: Business - 8% of Total Area		
Occupancy Use Classifications:		
Motor Vehicle (Bus) Parking Storage		
Motor Vehicle (Bus) Repair and Maintenance		
Adminstration Offices		
Existing Construction Type		
Construction Type is Prescriptively Assumed Type IIB		
Fire Resistive Requirements for Building Elements		
IBC Table 601: Type IIB		
Structural Frame:	0 hr	
Bearing Walls		
Exterior:	0 hr	
Interior:	0 hr	
Interior Nonbearing Walls and Partitions:	0 hr	
Floor Construction:	0 hr	
Roof construction and secondary framing:	0 hr	
Fire Resistive Requirements for Exterior Walls Based on Separation Distance		
IBC Table 602		
Exterior Nonbearing Walls and Partitions where "x" is distance from fire separation	Group S-1	
0 ≥ 5 ft	2 hr	
5 ≥ 10 ft	1 hr	
X ≥ 10 ft	0 hr	
Required Separation of Occupancies		
IBC Table 508.4: Required Separation of Occupancies (Hours)		
B / S-1	No Separation Requirement	
Building Area		
IBC Section 507, Unlimited Area Buildings:		
Section 507.5 Two Story Buildings: Sprinklered, one or two-story buildings - Type S, shall not be limited in area where the building is provided with an automatic sprinkler system throughout and is surrounded by public ways not less than 60ft in width.		
Section 507.2, Reduced Open Space: Public ways may be reduced to 40 feet provided that the reduced width shall not be allowed for more than 75% of the building and the exterior walls and openings have a 3 hour fire resistance rating.		
Automatic Sprinkler System:		
Existing Moderate-Hazard Storage Occupancies include an Automatic Sprinkler System		
Existing Accessory Occupancy (B) does NOT include an Automatic Sprinkler System		
Occupant Load		
IBC Table 1004.1.1		
Business Occupancy: 1 occupant / 100 gsf		
Industrial Occupancy: 1 occupant / 100 gsf		
Warehouses Occupancy: 1 occupant / 500 gsf		
Accessory Storage, Mech. Equip Rm. Occupancy: 1 occupant / 300 gsf		
Function / Floor	Area	Occupants
Business	21,467	215
Vehicle Warehouse Storage	172,470	345
Industrial Occupancy	55,085	551
Accessory Storage, Mech. Equip Rm.	5,064	22
Total	267,577	1,133
Means of Egress of Egress System and Egress Capacity		
IBC Section 1005 - Means of Egress Width for Other Components .2"		
Common Path of Travel		
IBC Chapter 10 (All work Areas are S-1, with an automatic sprinkler system)		
Storage Occupancy - S-1	100 feet	
Exit Access Travel Distance		
IBC Chapter 10		
Storage Occupancy - S-1	250 feet	
Group S-1 Increase	400 feet where roof deck is 24 ft	
Minimum Corridor Width		
IBC Chapter 10		
No Exceptions	44 inches	
Dead-end Corridor Distance		
IBC Chapter 10		
Storage Occupancy - S-1	50 feet	

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CITY OF MADISON WISCONSIN

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SHEET CONTENTS
LIFE SAFETY SITE PLAN AND EXISTING PLANS

SHEET NO.:

G-010

WORK AREA NUMBER 3/4/5

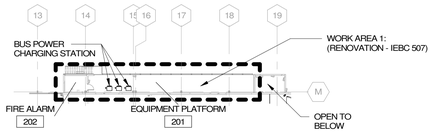
Work Area Occupancy Classification		
IBC Section 311.2: Moderate-hazard Storage, Group S-1		
Construction Type		
Classification of Work = Alteration Level 1 (IEBC Section 504)		
Occupancy Group: S-1		
Type of Construction: Assummed Type IIB		
Existing Automatic Sprinkler System		
Scope: Adding/removing equipment and associated slab alterations within existing building footprint. No change to purpose/function		
Occupant Load		
IBC Table 1004.1.2 - Function of Space		
Industrial Occupant Load Factor = 100 gross		
Function of Space	Area	Occupants
Work Area 3 - Industrial	2,343	*
Work Area 4 - Industrial	5,000	*
Work Area 3 - Industrial	40	*
*Existing Occupant Load Unaltered (Typical)		

WORK AREA NUMBER 6

Work Area Occupancy Classification				
IBC Section 311.2: Moderate-hazard Storage, Group S-1				
Construction Type				
Classification of Work = Addition (IEBC Section 507)				
Occupancy Group: S-1				
Type of Construction: Type IIB				
No Automatic Sprinkler System				
Scope: This is an existing pre-engineered booth that is relocated from within the building to this new poistion				
Occupant Load				
IBC Table 1004.1.2 - Function of Space				
Business/Industrial Occupant Load Factor = 100 gross				
Function of Space	Area	Occupants		
Industrial (Relocated Booth)	65 sf	1		
Total	65 sf	1		
Allowable Building Height and Number of Stories				
IBC Chapter 5:				
	Maximum Allowed		Actual	
	Height	Stories	Height	Stories
Exterior Room - Pre-engineered booth	75'-0"	3	9'-0"	1

WORK AREA NUMBER 2

Work Area Occupancy Classification		
IBC Section 311.2: Moderate-hazard Storage, Group S-1		
Construction Type		
Classification of Work = Alteration Level 2 (IEBC Section 504)		
Occupancy Group: S-1		
Type of Construction: Type IIB		
Existing Automatic Sprinkler System		
Scope: This area reconfigured with new walls and rooms within the existing building footprint.		
Fire Resistive Requirements for Building Elements		
IBC Table 601: Type IIB		
Structural Frame:	0 hr	
Bearing Walls		
Exterior:	0 hr	
Interior:	0 hr	
Interior Nonbearing Walls and Partitions:	0 hr	
Floor Construction:	0 hr	
Roof construction and secondary framing:	0 hr	
Occupant Load		
IBC Table 1004.1.2 - Function of Space		
Industrial Occupant Load Factor = 100 gross		
Function of Space	Area	Occupants
Industrial	4,500 sf	45
Total	4,500 sf	45
Interior Finishes:		
IBC Table 803.9 (Building fully sprinklered)		
Interior Wall and Ceiling Finish for Exit Enclosures and Exit Passageways: Class C (Minimum)		
Interior Wall and Ceiling Finish for Corridors: Class C (Minimum)		
Interior Wall and Ceiling Finish for Rooms and Enclosed Spaces: Class C (Minimum)		
Interior Floor Finish for All Floor Coverings: Class II		
Combustible materials in type IIB construction shall comply with Sections 805.1.1-805.1.3		



2 **2ND FLOOR EQUIPMENT PLATFORM PLAN**
1/32" = 1'-0"

WORK AREA NUMBER 1

Work Area Occupancy Classification				
IBC Section 311.2: Moderate-hazard Storage, Group S-1,				
Fuel/Fluid Types and Quantities do not classify space as H - Occupancy				
Construction Type				
Classification of Work = Addition (IEBC Section 507)				
Occupancy Group: S-1				
Type of Construction: Type IIB				
Proposed New Automatic Sprinkler System				
Fire Resistive Requirements for Building Elements				
IBC Table 601: Type IIB				
Structural Frame:	0 hr			
Bearing Walls				
Exterior:	0 hr			
Interior:	0 hr			
Interior Nonbearing Walls and Partitions:	0 hr			
Floor Construction:	0 hr			
Roof construction and secondary framing:	0 hr			
Fire Resistive Requirements for Exterior Walls Based on Separation Distance				
IBC Table 602				
Exterior Nonbearing Walls and Partitions where "x" is distance from fire separation				
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0 ≥ 5 ft	2 hr			
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Building Area				
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Section 507.2, Reduced Open Space: Public ways may be reduced to 40 feet provided that the reduced width shall not be allowed for more than 75% of the building and the exteriror walls and openings have a 3 hour fire resistance rating.				
Allowable Building Height and Number of Stories				
IBC Table 504.3 & 504.4:				
	Maximum Allowed		Actual	
	Height	Stories	Height	Stories
Group S-1 / IIB Sprinkled, Addition	75'-0"	3	20'-0"	1
Occupant Load				
IBC Table 1004.1.1				
Business Occupancy: 1 occupant / 100 gsf				
Industrial Occupancy: 1 occupant / 100 gsf				
Accessory Storage, Mech. Equip Rm. Occupancy: 1 occupant / 300 gsf				
Function / Floor	Area		Occupants	
Business (Renovation)	402		4	
Industrial Occupancy Addition	10,300		103	
Accessory Storage, Mech. Equip Rm. (Renovation)	2,035		7	
2nd Floor Equipment Platform (Renovation)	1,033		4	
Total	11,735		111	
Interior Finishes:				
IBC Table 803.9 (Building fully sprinklered)				
Interior Wall and Ceiling Finish for Exit Enclosures and Exit Passageways: Class C (Minimum)				
Interior Wall and Ceiling Finish for Corridors: Class C (Minimum)				
Interior Wall and Ceiling Finish for Rooms and Enclosed Spaces: Class C (Minimum)				
Interior Floor Finish for All Floor Coverings: Class II				
Combustible materials in type IIB construction shall comply with Sections 805.1.1-805.1.3				
Plumbing Fixtures				
IBC Chapter 29				
Minimum Number of Plumbing Fixtures for S-1 Occupancy Classification				
Fixture Calculation per 2902.1: To determine the occupant load for each sex the total occupant shall be divided in half. 98 total occupants: 49 occupants for each sex. This does not increase the occupant load by more than 20%. None are required.	Water Closets		Lavatories	
	Males	Females	Males	Females
	1 PER 100		1 PER 100	
	1 UNISEX PROVIDED		1 UNISEX PROVIDED	
Urinal substitution for water closets per IPC Chapter 4.				
Drinking Fountains: 1 per 1000 for S-1 occupancy; 0 drinking fountains required.				
Service Sinks: 1 service sink for the entire building.				

CODE PLAN GENERAL NOTES

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LIFE SAFETY PLAN LEGEND:

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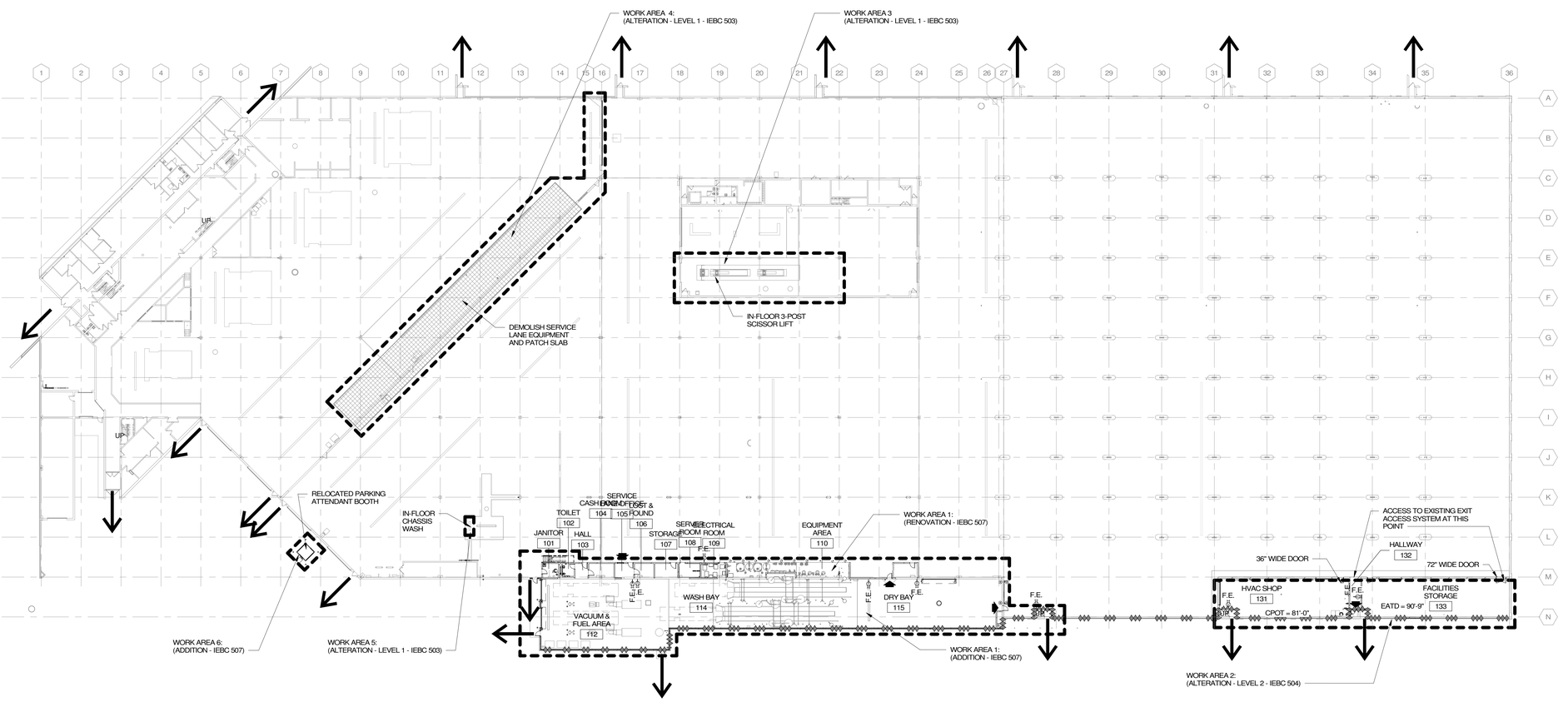

1 **OVERALL FIRST FLOOR CODE PLAN**
1/32" = 1'-0"

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LIFE SAFETY WORK AREA PLANS

SHEET NO.:
G-011

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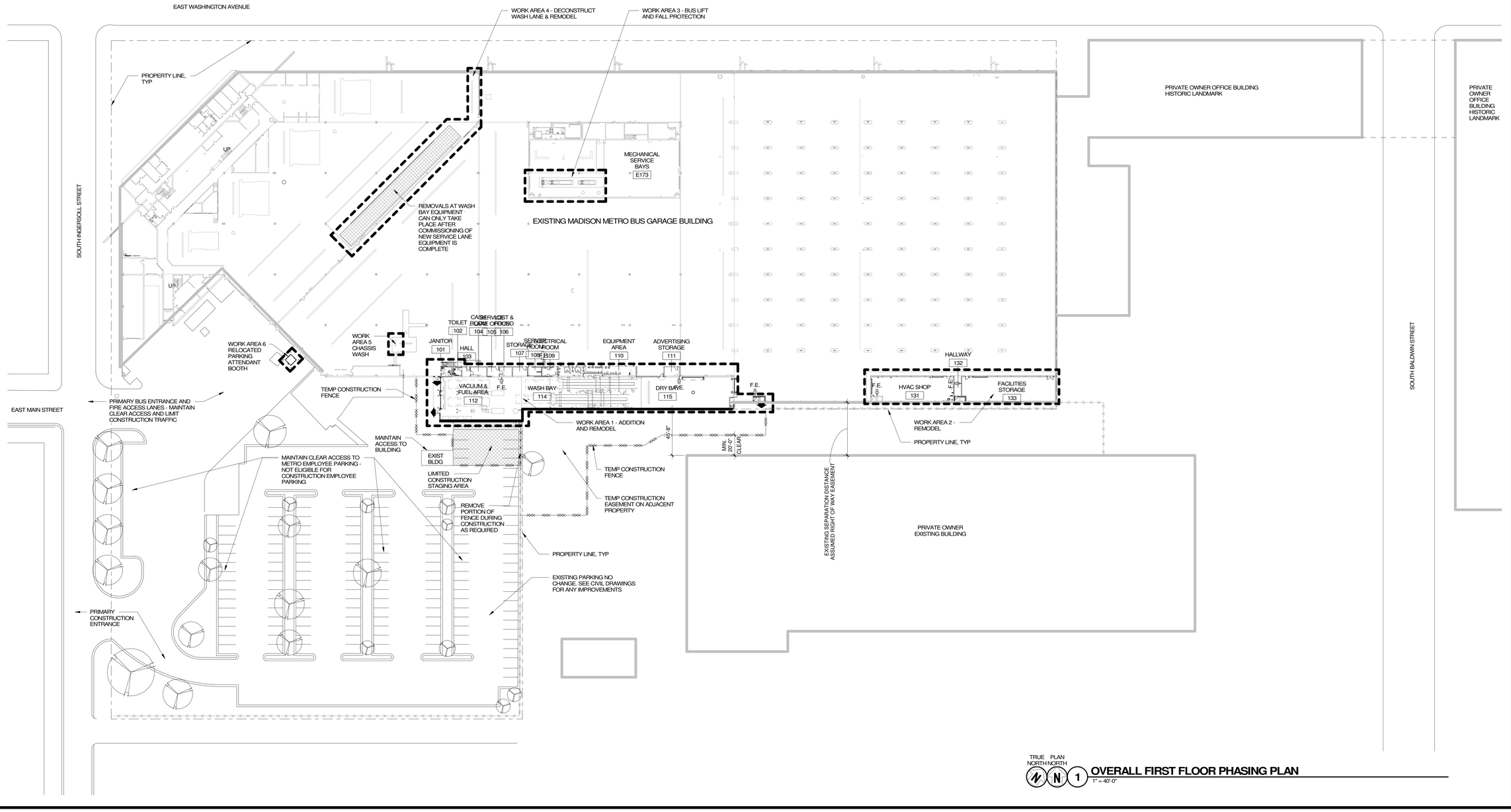
PHASING PLAN GENERAL NOTES:

1. BUILDING SHALL BE OWNER OCCUPIED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. OWNER OPERATES 24 HOURS A DAY, 7 DAYS A WEEK. BUS STORAGE AND TRAVEL LANES ARE REQUIRED TO REMAIN CLEAR FOR CONTINOUS ACCESS.
2. WORK AREAS 1 & 2 SHALL BE FULLY ABANDONED. PROVIDE TEMPORARY PARTITIONS AND/OR SAFETY BARRIERS TO PREVENT ACCESS INTO CONSTRUCTION ZONES AND CAUTION ONGOING BUS TRAFFIC.
3. WORK AREAS 3, 5, & 6 WILL REQUIRE COORDINATION WITH OWNER OPERATION DOWN TIME. WORK SHALL BE CONDUCTED IN AN EXPEDIANT WAY TO LIMIT DOWN TIME.
4. WORK AREA 4 - WASH LANE DECONSTRUCTION MAY ONLY BEGIN ONCE WORK AREA 1 - NEW SERVICE LANE IS COMMISSIONED AND OPERATIONAL. PROVIDE TEMPORARY PARTITIONS AND/OR SAFETY BARRIERS TO PREVENT ACCESS INTO CONSTRUCTION ZONES AND CAUTION ONGOING BUS TRAFFIC.
5. A NEGOTIATED CONSTRUCTION EASMENT WITH THE ADJACENT SOUTHWEST PROPERTY OWNER IS IN PLACE FOR CONSTRUCTION ACCESS TO THE ADDITION PORTION OF WORK IN WORK AREA 1. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A SECURE SITE ON THE ADJACENT PROPERTY. A TEMPORARY 8'-0" CONSTRUCTION SECURITY FENCE IS REQUIRED. SITE RESTORATION REQUIREMENTS ARE NOTED ON THE CIVIL DRAWINGS.
6. CONSTRUCTION EMPLOYEE PARKING IS NOT PERMITTED IN METRO EMPLOYEE PARKING.
7. CONSTRUCTION ACCESS SHALL BE LIMITED AT THE PRIMARY BUS DRIVE ACCESS AND FIRE LANE ACCESS.
8. WORK AREA NUMBERING IS NOT INTENDED TO DICTATE ORDER.



TRUE NORTH PLAN NORTH

1 OVERALL FIRST FLOOR PHASING PLAN

1" = 40'-0"

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PHASING PLANS

SHEET NO.:
G-101

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Site Information Block	
Site Address	1101 E. Washington
Site Acreage	10.28
No. of Stories	2
Building Height	30 Ft.
DSPS Type of New Constuction	IIB
Existing Building Square Feet	267,577
Building Addition Square Feet	10,300
Use of Property	Commercial
Number of New Trees	2
Existing Regular Surface Stalls	218
Existing HCP Surface Stalls	8
Proposed Regular Surface Stalls	209
Proposed HCP Surface Stalls	8
Existing Bicycle Parking (Interior)	
Proposed Bicycle Parking (Interior)	
Existing % Impervious	91.5
Proposed % Impervious	92
Green Space Being Removed	2127 SF
Pvmt. Being Converted to Roof	10,076 SF
Green Space Becoming Roof	668 SF
Green Space Becoming Pvmt.	1459 SF
Total Disturbed Area	25,900 SF

Side of Lot	Setback (ft.)
Front -West (Ingersoll)	None
Back - East	20
Side - North (E. Washington)	None
Side - South (MG&E)	None

NOTES:

1) EXCEPT AS SPECIFICALLY STATED OR SHOWN ON THIS MAP, THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT REAL ESTATE: EASEMENTS; BUILDING SETBACK LINES; RESTRICTIVE COVENANTS; SUBDIVISION RESTRICTIONS; ZONING OR OTHER LAND USE REGULATIONS; AND ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT.

2) NO ATTEMPT HAS BEEN MADE AS A PART OF THIS SURVEY TO OBTAIN OR SHOW DATA CONCERNING EXISTENCE, SIZE, DEPTH, CONDITION, CAPACITY, OR LOCATION OF ANY UTILITY OR MUNICIPAL/PUBLIC SERVICE FACILITY. FOR INFORMATION REGARDING THESE UTILITIES OR FACILITIES, PLEASE CONTACT THE APPROPRIATE AGENCIES.

3) DATES OF FIELD WORK: JULY 10, 16, & 26, AND AUG 17, 2018 SURVEY BY: BURSE ENGINEERING

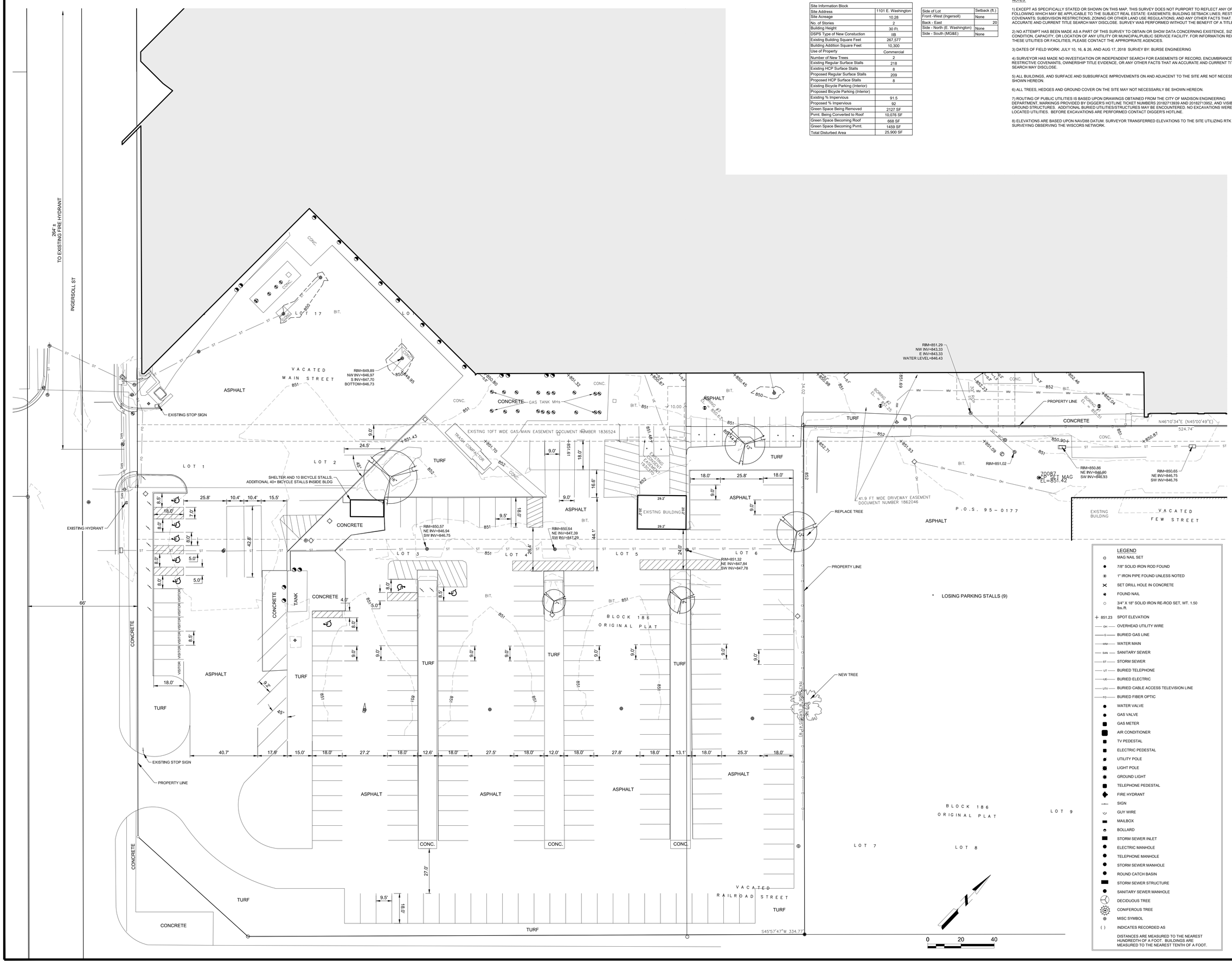
4) SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

5) ALL BUILDINGS, AND SURFACE AND SUBSURFACE IMPROVEMENTS ON AND ADJACENT TO THE SITE ARE NOT NECESSARILY SHOWN HEREON.

6) ALL TREES, HEDGES AND GROUND COVER ON THE SITE MAY NOT NECESSARILY BE SHOWN HEREON.

7) ROUTING OF PUBLIC UTILITIES IS BASED UPON DRAWINGS OBTAINED FROM THE CITY OF MADISON ENGINEERING DEPARTMENT, MARKINGS PROVIDED BY DIGGER'S HOTLINE TICKET NUMBERS 20182713939 AND 20182713952, AND VISIBLE ABOVE GROUND STRUCTURES. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE TO LOCATED UTILITIES. BEFORE EXCAVATIONS ARE PERFORMED CONTACT DIGGER'S HOTLINE.

8) ELEVATIONS ARE BASED UPON NAVD88 DATUM. SURVEYOR TRANSFERRED ELEVATIONS TO THE SITE UTILIZING RTK GPS SURVEYING OBSERVING THE WISCORS NETWORK.



LEGEND

- MAG NAIL SET
- 7/8" SOLID IRON ROD FOUND
- 1" IRON PIPE FOUND UNLESS NOTED
- SET DRILL HOLE IN CONCRETE
- FOUND NAIL
- 3/4" X 18" SOLID IRON RE-ROD SET, WT. 1.50 lbs./ft.
- 851.23 SPOT ELEVATION
- OH OVERHEAD UTILITY WIRE
- G BURIED GAS LINE
- WM WATER MAIN
- SAN SANITARY SEWER
- ST STORM SEWER
- UT BURIED TELEPHONE
- UE BURIED ELECTRIC
- UTV BURIED CABLE ACCESS TELEVISION LINE
- FO BURIED FIBER OPTIC
- WATER VALVE
- GAS VALVE
- GAS METER
- AIR CONDITIONER
- TV PEDESTAL
- ELECTRIC PEDESTAL
- UTILITY POLE
- LIGHT POLE
- GROUND LIGHT
- TELEPHONE PEDESTAL
- FIRE HYDRANT
- SIGN
- GUY WIRE
- MAILBOX
- BOLLARD
- STORM SEWER INLET
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- STORM SEWER MANHOLE
- ROUND CATCH BASIN
- STORM SEWER STRUCTURE
- SANITARY SEWER MANHOLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- MISC SYMBOL
- ( ) INDICATES RECORDED AS

DISTANCES ARE MEASURED TO THE NEAREST HUNDREDTH OF A FOOT. BUILDINGS ARE MEASURED TO THE NEAREST TENTH OF A FOOT.

Mead & Hunt

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KUENY ARCHITECTS, LLC

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CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: LGK
DRAWN BY: CAJ
CHECKED BY: SZK
DO NOT SCALE DRAWINGS

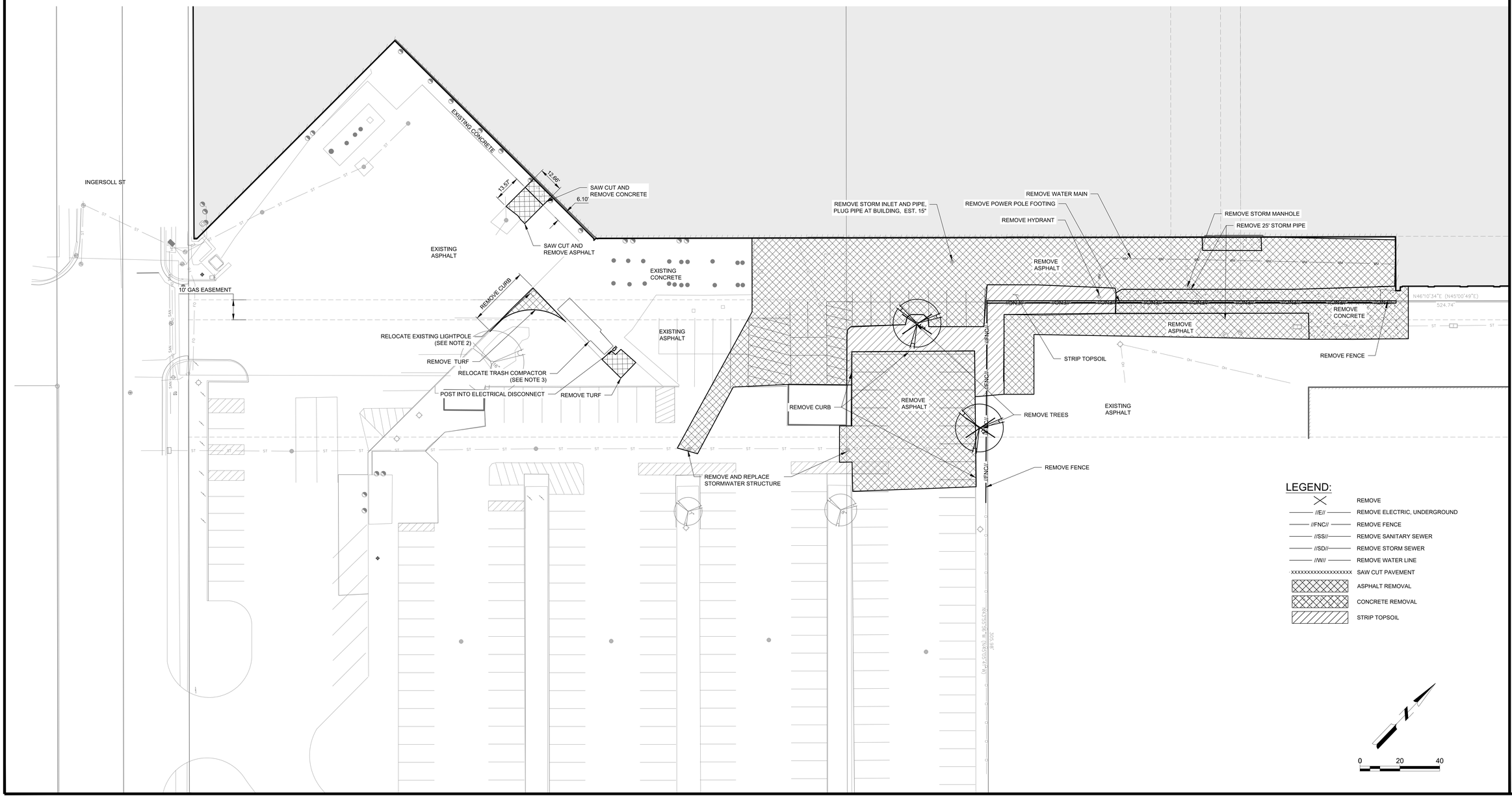
SHEET CONTENTS
EXISTING SITE PLAN

SHEET NO.
C-021

X:\4503500\170148.02\TECH\CAD\C-021.DWG
1/15/2019 3:34:49 PM

SITE REMOVALS PLAN NOTES:

1. REMOVED HYDRANTS SHALL BE SALVAGED AND DELIVERED TO THE MADISON WATER UTILITY.
2. ELECTRICAL CONTRACTOR TO DISCONNECT POLE AND LUMINAIRE FOR RELOCATION AS SHOWN ON SHEET C-101. REMOVE CONDUIT AND WIRING AS NECESSARY TO ALLOW REMOVAL OF CONCRETE BASE, BUT RETAIN IN PLACE TO EXTEND TO NEW LOCATION.
3. ELECTRICAL CONTRACTOR TO DISCONNECT TRASH COMPACTOR BACK TO EXISTING DISCONNECT SWITCH TO ALLOW RELOCATION OF COMPACTOR. REMOVE DISCONNECT SWITCH AND POST FOR RELOCATION AS SHOWN ON SHEET C-101. REMOVE FEEDER CONDUIT TO BELOW GRADE. EXTEND BELOW GRADE SAME AS NEW WORK MATCHING EXISTING CONDUIT AND WIRING TO NEW DISCONNECT LOCATION.



LEGEND:

X	REMOVE
//E//	REMOVE ELECTRIC, UNDERGROUND
//FNC//	REMOVE FENCE
//SS//	REMOVE SANITARY SEWER
//SD//	REMOVE STORM SEWER
//W//	REMOVE WATER LINE
XXXXXXXXXXXXXXXXXX	SAW CUT PAVEMENT
	ASPHALT REMOVAL
	CONCRETE REMOVAL
	STRIP TOPSOIL

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CITY OF MADISON
WISCONSIN

CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

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SHEET CONTENTS
SITE REMOVALS PLAN

SHEET NO.
C-041

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EAST WASHINGTON AVE

EXISTING HYDRANT

342' ±

BUS CIRCULATION FROM BUILDING TO WASH LANE

8" THICK CONCRETE PAD

BOLLARD

RIM=849.89
NW INV=846.97
S INV=847.70
BOTTOM=846.73

12.7'

13.0'

6.1'

RELOCATED DISPATCH KIOSK - SLOPE PATCHED ASPHALT TO PROVIDE POSITIVE DRAINAGE AROUND NEW SLAB

INGERSOLL ST

FIRE LANE*

FIRE LANE*

FIRE LANE*

20'

ASPHALT

RELOCATED LIGHT POLE (SEE NOTE 6)

9" THICK CONCRETE

RELOCATED TRASH COMPACTOR

RELOCATED TRASH COMPACTOR ELECTRICAL DISCONNECT

EXISTING HYDRANT

RIM=850.57
NE INV=846.94
SW INV=846.75

INSTALL 48" STORM MANHOLE WITH GRATED LID
RIM=850.54
NE INV=847.39
SW INV=847.29

12" PVC FROM BUILDING

CATCH BASIN
RIM EL=850.35
S INV EL=847.89
NW INV EL = 848.14
INV EL @ BLDG = 848.29

BOLLARD

FFE = 850.75

9" THICK CONCRETE

ASPHALT

15" RCP @ 0.50%

EX BUILDING

CATCH BASIN
RIM EL=850.60
S INV=848.07
N INV=848.09

12" RCP @ 0.50%

15" RCP @ 0.50%

INSTALL 48" STORM MANHOLE WITH GRATED LID
RIM=851.32
NE INV=847.84
SW INV=847.78

ASPHALT

TURF

CURB

PROPERTY LINE

6' HIGH CHAINLINK FENCE

CONNECT TO EXISTING FENCE

NOTE: FINISHED FLOOR OF NEW ADDITION HAS VARYING SLOPED AND FLAT AREAS, SEE STRUCTURAL

ACCEPT CURB

20.0' CURB TRANSITION

REVERSE / REJECT CURB

2.0' DISTANCE BACK OF CURB TO BUILDING

CONNECT NEW PIPE TO EXISTING PIPE
EX NW INV=843.33, MATCH INVERTS

30" RCP STORM

30" CURB AND GUTTER

1 1/2"LANDSCAPE STONE OVER GEOTEXTILE FABRIC

FFE = 852.75

5.0'

TYPE H CURB INLET
RIM FLOW LINE EL=850.30
S INV EL=848.18
SW INV EL =848.51
INV EL @ BLDG =848.76

FFE = 851.67

8" PVC FROM BUILDING

CONCRETE STOOP

FFE = 851.00

16.9'

N46°10'34"E (N45°50'49"E)

524.74'

26.3'

ASPHALT

PROTECT LIGHT POLE AND OVERHEAD POWER

EX RIM 851.02
ADJUST EXISTING MANHOLE RIM TO EL 850.90

60" STORM MANHOLE
RIM EL = 851.06
EST INV EL = 843.50

30' CONSTRUCTION EASEMENT REQUIRED

TEMP CONST FENCE

30" RCP STORM
MINIMUM NEW PIPE
SLOPE = 0.30%

20.0'

60" STORM MANHOLE
RIM EL = 851.12
EST INV EL = 843.40

75' CONSTRUCTION EASEMENT FROM BUILDING REQUIRED

SITE IMPROVEMENT AND UTILITIES PLAN NOTES:

1. REMOVED HYDRANTS SHALL BE SALVAGED AND DELIVERED TO THE MADISON WATER UTILITY.
2. ALL STORM SEWER SYSTEM IMPROVEMENTS SHALL MEET THE REQUIREMENTS OF THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (CURRENT EDITION).
3. ALL PAVEMENT DAMAGE TO INGERSOLL ST. THAT IS ADJACENT TO THE PROJECT SHALL BE RESTORED IN ACCORDANCE WITH THE CITY'S PATCHING CRITERIA. REFER TO HTTP://WWW.CITYOFMADISON.COM/ENGINEERING/PATCHING CRITERIA.CFM.
4. THE UTILITY CONTRACTOR SHALL OBTAIN CONNECTION PERMIT FROM THE CITY PRIOR TO ANY UTILITY CONSTRUCTION. APPLICATION IS AVAILABLE CITYOFMADISON. COM/ENGINEERING/PERMITS.CFM
5. MAINTAIN / PROTECT EXISTING FIRE LANE SIGNS.
6. RELOCATE POLE AND LUMINAIRE. ELECTRICAL CONTRACTOR TO PROVIDE NEW CONCRETE BASE TO MATCH REMOVED BASE. PROVIDE NEW CONNECTION TO EXISTING LIGHTING BRANCH CIRCUIT MADE AVAILABLE FROM REMOVED POLE AND LUMINAIRE.

LEGEND:

- BOLLARD
- FIRE HYDRANT
- LIGHT POLE
- STORM INLET, ROUND
- STORM SEWER MANHOLE
- WATER VALVE
- FENCE
- TEMPORARY CONSTRUCTION FENCE
- STORM SEWER / CULVERT
- WATER
- ASPHALT
- CONCRETE

0 20 40

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CITY OF MADISON WISCONSIN

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DESIGNED BY: LGK
DRAWN BY: CAJ
CHECKED BY: SZK
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SITE IMPROVEMENTS AND UTILITIES PLAN

SHEET NO.
C-101

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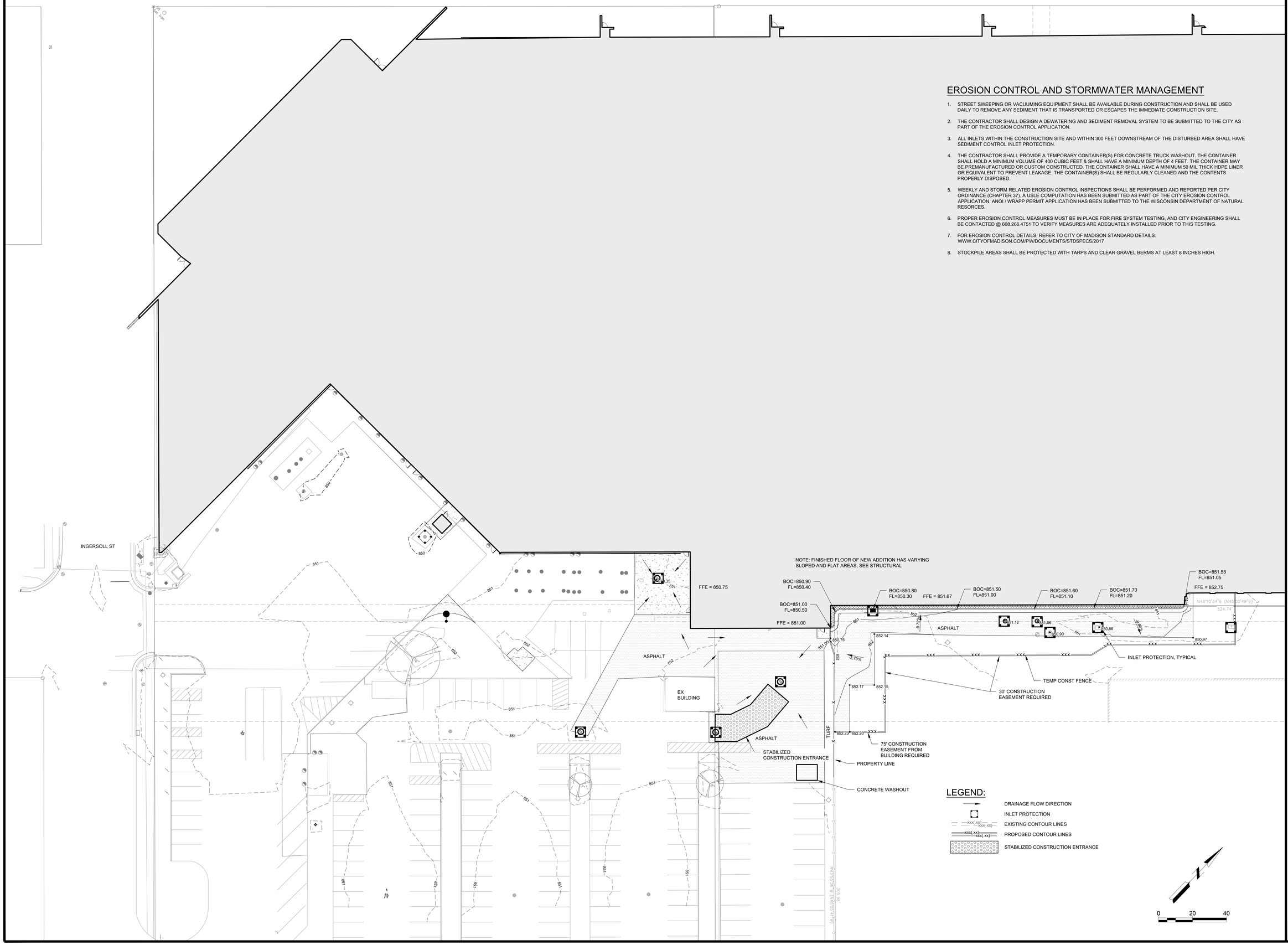

EROSION CONTROL AND STORMWATER MANAGEMENT

1. STREET SWEEPING OR VACUUMING EQUIPMENT SHALL BE AVAILABLE DURING CONSTRUCTION AND SHALL BE USED DAILY TO REMOVE ANY SEDIMENT THAT IS TRANSPORTED OR ESCAPES THE IMMEDIATE CONSTRUCTION SITE.
2. THE CONTRACTOR SHALL DESIGN A DEWATERING AND SEDIMENT REMOVAL SYSTEM TO BE SUBMITTED TO THE CITY AS PART OF THE EROSION CONTROL APPLICATION.
3. ALL INLETS WITHIN THE CONSTRUCTION SITE AND WITHIN 300 FEET DOWNSTREAM OF THE DISTURBED AREA SHALL HAVE SEDIMENT CONTROL INLET PROTECTION.
4. THE CONTRACTOR SHALL PROVIDE A TEMPORARY CONTAINER(S) FOR CONCRETE TRUCK WASHOUT. THE CONTAINER SHALL HOLD A MINIMUM VOLUME OF 400 CUBIC FEET & SHALL HAVE A MINIMUM DEPTH OF 4 FEET. THE CONTAINER MAY BE PREMANUFACTURED OR CUSTOM CONSTRUCTED. THE CONTAINER SHALL HAVE A MINIMUM 50 MIL THICK HDPE LINER OR EQUIVALENT TO PREVENT LEAKAGE. THE CONTAINER(S) SHALL BE REGULARLY CLEANED AND THE CONTENTS PROPERLY DISPOSED.
5. WEEKLY AND STORM RELATED EROSION CONTROL INSPECTIONS SHALL BE PERFORMED AND REPORTED PER CITY ORDINANCE (CHAPTER 37). A USLE COMPUTATION HAS BEEN SUBMITTED AS PART OF THE CITY EROSION CONTROL APPLICATION. ANOI / WRAPP PERMIT APPLICATION HAS BEEN SUBMITTED TO THE WISCONSIN DEPARTMENT OF NATURAL RESORCES.
6. PROPER EROSION CONTROL MEASURES MUST BE IN PLACE FOR FIRE SYSTEM TESTING, AND CITY ENGINEERING SHALL BE CONTACTED @ 608.266.4751 TO VERIFY MEASURES ARE ADEQUATELY INSTALLED PRIOR TO THIS TESTING.
7. FOR EROSION CONTROL DETAILS, REFER TO CITY OF MADISON STANDARD DETAILS: WWW.CITYOFMADISON.COM/PW/DOCUMENTS/STDSPECS/2017
8. STOCKPILE AREAS SHALL BE PROTECTED WITH TARPS AND CLEAR GRAVEL BERMS AT LEAST 8 INCHES HIGH.

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DESIGNED BY: LGK
DRAWN BY: CAJ
CHECKED BY: ACA
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SHEET CONTENTS
EROSION CONTROL AND GRADING PLAN

SHEET NO.
C-121

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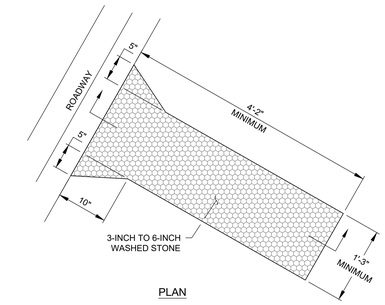
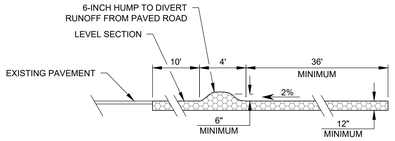


PLAN

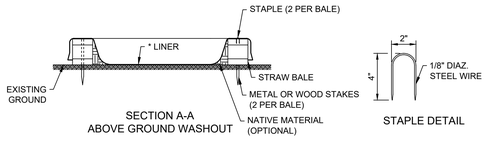


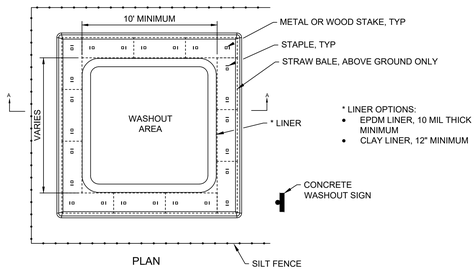
NOTE:
MAINTAIN THE TRACKING PAD IN A CONDITION TO PREVENT SEDIMENT FROM LEAVING THE SITE. SHOULD MUD BE TRACKED OR WASHED ONTO EXISTING PAVEMENT, IT MUST BE REMOVED IMMEDIATELY.

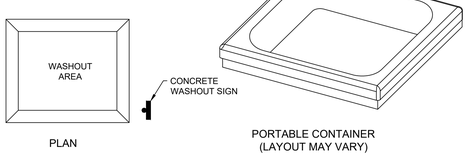
SECTION

12 STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE







NOTES:

WASHOUT LOCATION SHALL BE MARKED WITH A SIGN.

IF PROJECT SITE WARRANTS, ADDITIONAL SIGNAGE MAY BE REQUIRED TO DIRECT CONCRETE WASHOUT ACTIVITIES TO THE WASHOUT LOCATION(S).

WASHOUT SHALL BE INSPECTED DAILY FOR LEAKS AND REPAIRED AS NECESSARY.

PUMPING OF WASH WATER MAY BE REQUIRED IF ADEQUATE SPACE IS NOT AVAILABLE FOR NEXT CONCRETE POUR.

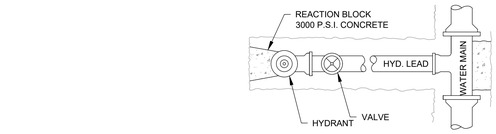
REPLACEMENT WASHOUT, SHALL BE CONSIDERED INCIDENTAL.

PORTABLE CONTAINERS SHALL BE IMPERMEABLE AND EASILY MOVED WITHOUT OVERFLOW.

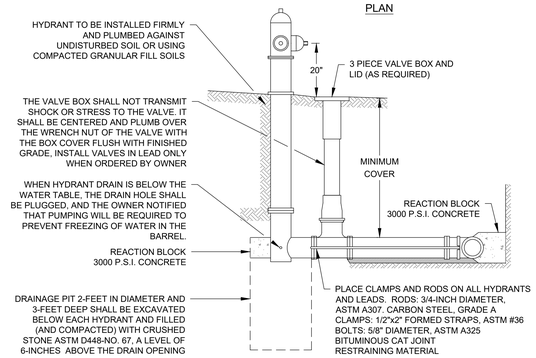
* LINER OPTIONS:
- EPDM LINER, 10 MIL THICK MINIMUM
- CLAY LINER, 12" MINIMUM

13 CONCRETE WASHOUT DETAIL

NOT TO SCALE



PLAN



8 FIRE HYDRANT INSTALLATION DETAIL

NOT TO SCALE

DEWATERING

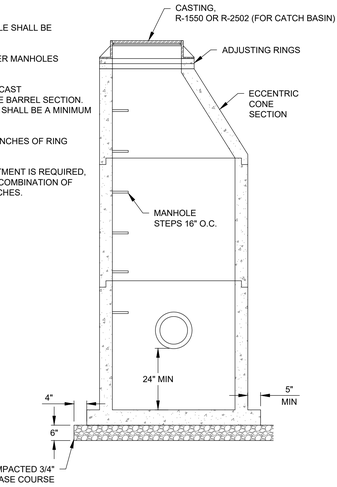
DEWATERING SHALL COMPLY WITH WISCONSIN DEPT. OF NATURAL RESOURCES CONSERVATION PRACTICE STANDARD CODE NO. 1061. THE CONTRACTOR SHALL PROVIDE A TWO STAGE SETTLING BOX AND A SEDIMENT BAG / FILTER SYSTEM FOR THE SETTLING BOX EFFLUENT. A POLYMER MAY BE REQUIRED FOR FINER PARTICLE SETTLING. THE TANK / BAG / FILTER SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR TO MEET THE PUMPING RATE. THE SEDIMENT REMOVAL SYSTEM MUST BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION. PERMANENT WELLS SHALL BE SCREENED AND ADEQUATE SCREEN FILTER SAND INSTALLED TO PREVENT PLUGGING OF THE SCREEN OR PUMPING OF SOIL.TEMPORARY WELLS DESIGN / LAYOUT SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION. THE CONTRACTOR SHALL SECURE ALL DEWATERING PERMITS AS APPLICABLE PRIOR TO PERFORMING DEWATERING ACTIVITIES.

PERMIT	REMARK
MMSD	REQUIRED IF SOILS ARE CONTAMINATED & WATER IS DISCHARGED TO SANITARY SEWER
CITY	REQUIRED FOR ANY DEWATERING DISCHARGE
WDNR	REQUIRED FOR PUMPING RATE EXCEEDING 70 GPM
DANE CO	
PUBLIC HEALTH	REQUIRED IF DISCHARGE IS TO THE STORM SEWER

9 DEWATERING SUMP DETAIL

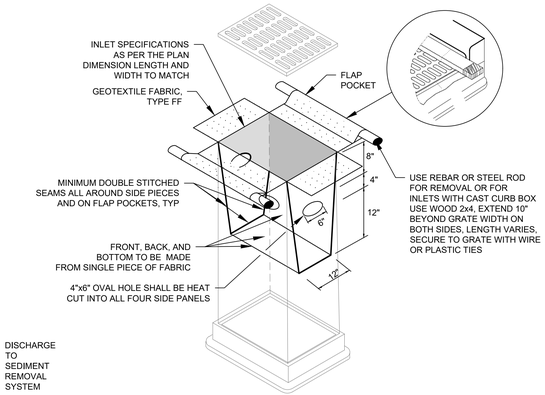
NOT TO SCALE

NOTES:
1. 4-FOOT DIAMETER MANHOLE SHALL BE CONSIDERED STANDARD.
2. PROVIDE LARGER DIAMETER MANHOLES WHERE SHOWN ON PLAN.
3. MANHOLE BASE SHALL BE CAST MONOLITHICALLY WITH THE BARREL SECTION. BOTTOM BARREL SECTION SHALL BE A MINIMUM OF 28 INCHES HIGH.
4. PROVIDE A MINIMUM OF 4-INCHES OF RING ADJUSTMENT.
5. WHEN ADDITIONAL ADJUSTMENT IS REQUIRED, IT SHALL BE DONE WITH A COMBINATION OF RINGS THICKER THAN 2-INCHES.



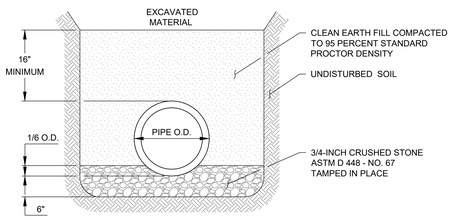
5 PRECAST CONCRETE STORM MANHOLE OR CATCH BASIN DETAIL

NOT TO SCALE



6 INLET PROTECTION DETAIL, TYPE D

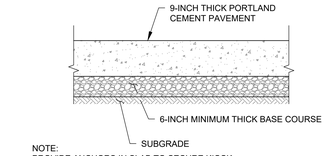
NOT TO SCALE



NOTE:
BOTTOM OF TRENCH WIDTH SHALL BE THE PIPE O.D. PLUS 16-INCHES MINIMUM.

7 CONCRETE PIPE BEDDING DETAIL

NOT TO SCALE

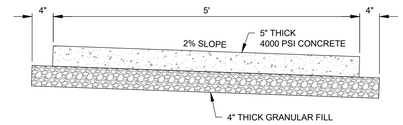


NOTE:
PROVIDE ANCHORS IN SLAB TO SECURE KIOSK

SECTION

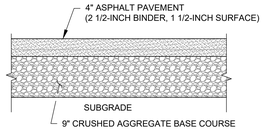
1 CONCRETE PAVEMENT DETAIL

NOT TO SCALE



2 SIDEWALK DETAIL

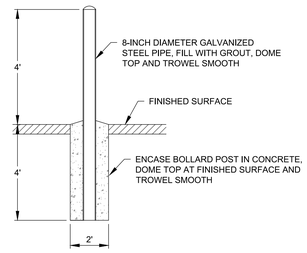
NOT TO SCALE



SECTION

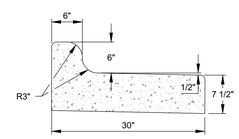
3 ASPHALT PAVEMENT DETAIL

NOT TO SCALE



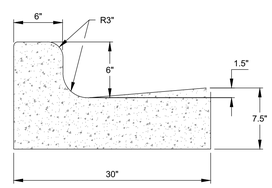
4 BOLLARD DETAIL

NOT TO SCALE



10 30" REJECT CURB AND GUTTER

NOT TO SCALE



11 30" CONCRETE CURB AND GUTTER

NOT TO SCALE

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: LGK
DRAWN BY: CAJ
CHECKED BY: SZK
DO NOT SCALE DRAWINGS

SHEET CONTENTS
DETAILS

SHEET NO.
C-501

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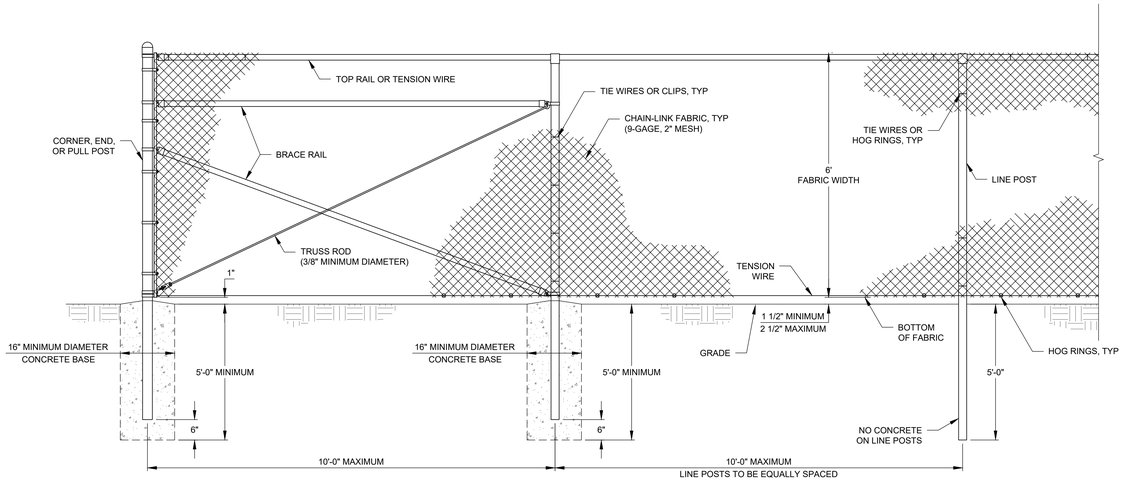


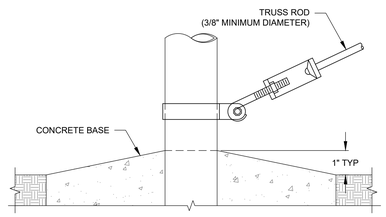
CHAIN-LINK SECURITY FENCE DETAIL

NOT TO SCALE

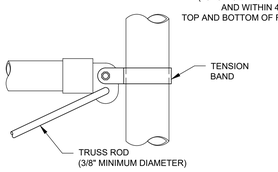
STEEL POST SCHEDULE			
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)		
	FABRIC WIDTH 72-INCHES OR LESS	FABRIC WIDTH 84-INCH TO 96-INCH	FABRIC WIDTH 108-INCH AND OVER
CORNER, END AND PULL POSTS			
TUBULAR - ROUND	2.375" OD	2.875" OD	4.00" OD
TUBULAR - SQUARE	2.00" SQ	2.50" SQ	3.00" SQ
C-SECTION (ROLL-FORMED)	3.50" x 3.50"	3.50" x 3.50"	--
LINE POSTS			
TUBULAR - ROUND	1.90" x OD	2.375" OD	2.875" OD
H-SECTION	2.25" x 1.70"	2.25" x 1.70"	2.25" x 1.70"
C-SECTION (ROLL-FORMED)	1.875" x 1.625"	2.25" x 1.70"	--
TOP, BOTTOM AND BRACE RAILS			
TUBULAR - ROUND	1.66" OD		
TUBULAR - SQUARE	1.50" SQ		
H-SECTION	1.625 x 1.50"		
C-SECTION (ROLL-FORMED)	1.625" x 1.25"		

GENERAL NOTES:

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.
2. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE SIDE OPPOSITE THE SECURE AREA.
3. UNLESS SPECIFICALLY SHOWN OR SPECIFIED, ALL FENCE SHALL HAVE APRON EXTENDED OUTWARD FROM THE AREA BEING PROTECTED.
4. C-SECTION POSTS SHALL BE INSTALLED SO THAT THE VOID INSIDE THE POST IS COMPLETELY FILLED WITH CONCRETE UP TO THE TOP OF THE FOUNDATION.
5. ALL GATE AND CORNER POSTS SHALL BE SET IN CONCRETE.
6. A CONCRETE LINE POST SHALL BE SET MAXIMUM OF EVERY 500 FEET OF FENCE LINE.

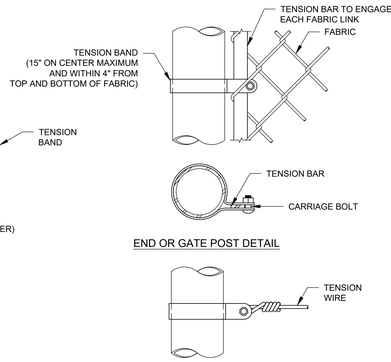


TRUSS ROD AND BAND



ROUND POST

H-BEAM
BRACE RAIL CLAMP DETAILS

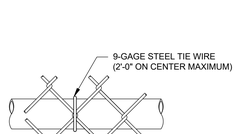


END OR GATE POST DETAIL

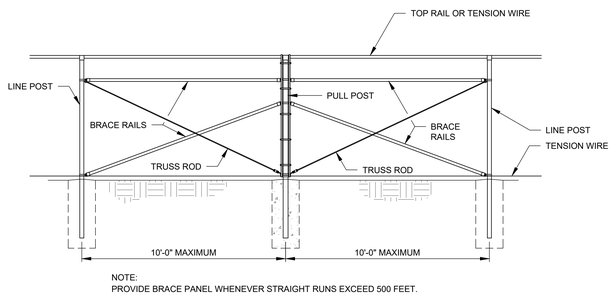
TENSION BAND DETAIL

FASTENING DETAILS

NOT TO SCALE



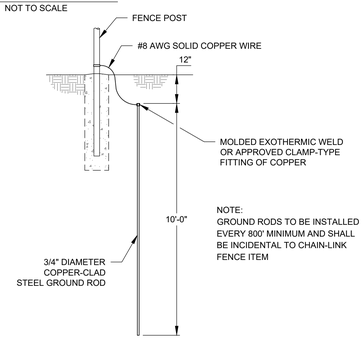
TOP OR BRACE RAIL ATTACHMENT



NOTE:
PROVIDE BRACE PANEL WHENEVER STRAIGHT RUNS EXCEED 500 FEET.

BRACE PANEL DETAIL

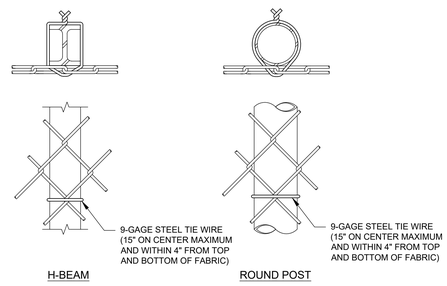
NOT TO SCALE



NOTE:
GROUND RODS TO BE INSTALLED EVERY 800' MINIMUM AND SHALL BE INCIDENTAL TO CHAIN-LINK FENCE ITEM

GROUNDING DETAIL

NOT TO SCALE



H-BEAM ROUND POST

LINE POST ATTACHMENTS

NOT TO SCALE

Mead & Hunt

Mead and Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

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FENCE DETAILS

SHEET NO.
C-601

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STRUCTURAL DESIGN CRITERIA

1. GOVERNING CODE: WISCONSIN COMMERCIAL BUILDING CODE SPS 361-366
   2015 INTERNATIONAL BUILDING CODE

2. RISK CATEGORY: 1

3. FLOOR LIVE LOAD (1603.1.1)

   FLOOR AT GRADE: WI DOT: 11K WHEEL, 34K TANDEM
   MEZZANINE: 80 PSF

4. ROOF LIVE LOAD (1603.1.2)

   MINIMUM ROOF LIVE LOAD: 50 PSF (UNREDUCIBLE)

5. ROOF SNOW LOAD (1603.1.3)

   GROUND SNOW LOAD: P_G = 30 PSF
   FLAT-ROOF SNOW LOAD: P_F = 21 PSF
   SNOW EXPOSURE FACTOR: C_E = 1
   SNOW LOAD IMPORTANCE FACTOR: I_S = 1
   THERMAL FACTOR: C_T = 1

6. WIND DESIGN DATA (1603.1.4)

   ULTIMATE WIND SPEED (3-SECOND GUST): V_{ULT} = 115 MPH
   NOMINAL WIND SPEED (3-SECOND GUST) V_{ASD} = 90 MPH
   WIND EXPOSURE: C
   INTERNAL PRESSURE COEFFICIENT: GCPI = +/- 0.15

7. EARTHQUAKE DESIGN DATA (1603.1.5)

   IMPORTANCE FACTOR: I_E = 1

   MAPPED, MCE, 5% DAMPED, SPECTRAL ACCELERATIONS:
   AT SHORT PERIODS: S_S = 0.08 G
   AT A PERIOD OF 1 SECOND: S_1 = 0.05 G

   SITE CLASS: D

   DESIGN EARTHQUAKE SPECTRAL ACCELERATIONS
   AT SHORT PERIODS: S_{DS} = 0.09 G
   AT A PERIOD OF 1 SECOND: S_{D1} = .073 G

   SEISMIC DESIGN CATEGORY: SDC = B
   BASIC SEISMIC-FORCE-RESISTING-SYSTEM: SFRS = A6 (TABLE 12.2-1)
   DESIGN BASE SHEAR: V_S = 80 KIPS
   SEISMIC RESPONSE COEFFICIENTS: C_S = 0.05
   RESPONSE MODIFICATION FACTOR: R = 2
   ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

8. GEOTECHNICAL DESIGN DATA (1603.1.6)

   NET ALLOWABLE SOIL BEARING PRESSURE = 1500PSF PER CGC GEOTECHNICAL REPORT. PROJECT: C15051-8, DATED 06/12/2018

9. FLOOD DESIGN DATA (1603.1.7)

   BUILDING IS NOT LOCATED IN FLOOD HAZARD AREA; THEREFORE FLOOD DESIGN DATA IS NOT REQUIRED

10. SPECIAL LOADS (1603.1.8)

    SPECIAL LOADING CONDITIONS ARE NOT APPLICABLE TO THE DESIGN OF THIS BUILDING; THEREFORE SPECIAL LOADS ARE NOT REQUIRED

11. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (1603.1.9)

    BUILDING IS DESIGNATED SEISMIC DESIGN CATEGORY B; THEREFORE SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE ARE NOT REQUIRED.

12. STRUCTURAL OBSERVATIONS FOR SEISMIC AND/OR WIND RESISTANCE

    STRUCTURAL OBSERVATIONS FOR SEISMIC AND WIND RESISTANCE ARE NOT REQUIRED.

GENERAL NOTES

G-1. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION - RESOLVE ANY DISCREPANCY WITH ARCHITECT/ENGINEER.

DO NOT SCALE DRAWINGS!!!!

G-2. FOR CLARITY, ALL EXTERIOR SLABS AND SIDEWALKS MAY NOT BE SHOWN. FOR EXACT DIMENSIONS, LOCATIONS, JOINTS AND SCORE LINES, SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS.

G-3. VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL AND ELECTRICAL EQUIPMENT, ROOF PENETRATIONS, DUCTS, ETC. WITH MECHANICAL AND ELECTRICAL CONTRACTORS AND FIELD CONDITIONS.

G-4. DETAILS MARKED "TYPICAL" MAY OR MAY NOT BE CUT ON PLANS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.

G-5. STRUCTURAL SYSTEM IS DESIGNED TO WORK AS A COMPLETED SYSTEM, ANY SHORING OR BRACING NECESSARY DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

G-6. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING PLANS FOR SLEEVES, INSERTS, ETC. NOT SHOWN ON STRUCTURAL PLANS.

G-7. NO PIPES OR SLEEVES FOR MECHANICAL TRADES SHALL PASS THROUGH STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

G-8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SITE SAFETY AND ALL ACCIDENTS WHICH RESULT IN DEATH, PERSONAL INJURY, OR DAMAGE TO PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE PERFORMANCE OF THE WORK.

G-9. CONTRACTOR SHALL POST LIVE LOADS PER SECTION 1603.3 OF THE GOVERNING CODE.

G-10. SECTIONS, DETAILS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR CONDITIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.

FOUNDATION NOTES

F-1. ALL COLUMN FOOTINGS ARE TO BE CENTERED UNDER COLUMN CENTERLINES, UNLESS NOTED OR DETAILED OTHERWISE.

F-2. THE FOUNDATION CONTRACTOR SHALL FULLY REVIEW UNDER-GROUND PLUMBING DRAWINGS AND SHALL COORDINATE WITH THE UNDER-GROUND PLUMBING CONTRACTOR TO DEPRESS FOOTINGS AND PROVIDE PIPE SLEEVES THROUGH FOUNDATION WALLS AS NECESSARY TO ACCOMMODATE PLUMBING LINES OR TRAPS WHICH PENETRATE CONCRETE FOOTINGS OR FOUNDATIONS.

F-3. PROVIDE PVC SLEEVES THROUGH FOUNDATION WALLS/FOOTINGS FOR PIPE, CONDUIT, AND CABLE PENETRATIONS, INCLUDING ELECTRICAL GROUNDING SYSTEM CABLES. SEE APPROPRIATE DRAWINGS FOR LOCATIONS/SIZES. PLACE SLEEVES IN LOCATIONS TO AVOID DISPLACING REINFORCING STEEL.

F-4. FOOTING SUBGRADES SHALL BE CLEAN AND FREE OF DEBRIS, STANDING WATER, AND LOOSE SOIL.

F-5. REFER TO ELECTRICAL DRAWING SITE LIGHTING FOR POLE BASES. SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

F-6. COORDINATE WITH ARCHITECTURAL AND CIVIL DRAWINGS FOR MISCELLANEOUS FOUNDATIONS NOT SHOWN ON STRUCTURAL DRAWINGS.

F-7. CONTROL JOINTS IN THE CAST-IN-PLACE CONCRETE FOUNDATION WALLS SHALL BE PLACED AT SPACING NOT TO EXCEED 20' O.C. OR AS LOCATED PER DRAWINGS AND SHOULD ALIGN WITH MASONRY CONTROL JOINTS WHERE APPLICABLE. SEE DETAIL SHEETS FOR CONTROL JOINT DETAILS. PROVIDE VERTICAL "V" GROOVE AT ALL CONSTRUCTION AND CONTROL JOINTS. CONTRACTOR SHALL SUBMIT PLANS OF JOINT LOCATIONS FOR APPROVAL.

F-8. SEE TYPICAL SLAB-ON-GRADE DETAILS FOR SLAB AND SUB-BASE REQUIREMENTS. THESE WILL BE TYPICAL THROUGHOUT UNLESS NOTED OTHERWISE.

F-9. A LEAN CONCRETE MUD SLAB 2" TO 3" THICK SHALL BE USED IN THE FOOTING EXCAVATION IF THE BOTTOM OF THE EXCAVATION TENDS TO BECOME MUDDY AND SOFT DUE TO CONSTRUCTION ACTIVITY. LEAN CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI.

F-10. COORDINATE GROUNDING REQUIREMENTS FOR FOUNDATION/FOOTING REINFORCING STEEL WITH ELECTRICAL DRAWINGS. COORDINATE INSTALLATION OF GROUNDING WIRES/EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO CASTING CONCRETE.

MASONRY NOTES

MATERIAL PROPERTIES (U.N.O.)
COMPRESSIVE STRENGTH - F'm = 1500 PSI
MASONRY REINFORCEMENT - Fy = 60 KSI (A615 GR 60)
MORTAR - TYPE S (ASTM C270)
GROUT AT 28-DAYS - 2500 PSI (ASTM C476)

M-1. ALL MASONRY WALLS ARE TO HAVE 9 GAUGE HORIZONTAL JOINT REINFORCEMENT WHICH DOES NOT EXCEED 16 INCHES ON CENTER VERTICALLY.

M-2. ALL LAPS SHALL BE 50 BAR DIAMETERS, UNLESS NOTED OTHERWISE.

M-3. HOLLOW MASONRY UNITS SHALL BE LAID WITH FULL HEAD JOINTS AND FULL BED JOINTS OF THE FACE SHELLS AND UNDER WEBS WHERE THE ADJACENT CELLS ARE TO BE FILLED WITH GROUT AND AT THE BOTTOM COURSE.

M-4. GROUT SOLID ALL JAMBS IN ALL MASONRY WALLS FULL HEIGHT TO UNDERSIDE OF LINTEL. EXTEND GROUTED JAMB FROM FACE OF MASONRY OPENING AT LEAST 24" (A MINIMUM OF 3 CELLS). AT OTHER BEAM BEARING LOCATIONS, GROUT SOLID A MINIMUM 24"x24" AREA BENEATH THE BEARING PLATE, UNLESS NOTED OTHERWISE.

M-5. PROVIDE CORNER SPLICE BARS FOR ALL BOND BEAMS OCCURRING AT CORNERS OR WALL INTERSECTIONS. SPLICE BAR TO BE THE SAME SIZE AS BARS IN THE BOND BEAM.

M-6. WHERE MASONRY IS APPLIED ADJACENT TO STEEL MEMBERS (BEAMS AND COLUMNS) PROVIDE ANCHORING DEVICES PER SPECIFICATIONS.

M-7. REFER TO ARCHITECTURAL PLANS AND DOOR/FRAME SCHEDULES FOR LINTEL ROUGH OPENING LOCATIONS, SIZES, AND ELEVATIONS.

M-8. USE SLEEVE TYPE EXPANSION ANCHORS IN NON-STRUCTURAL CMU WALL PARTITIONS, UNLESS NOTED OTHERWISE.

M-9. ALL NON-STRUCTURAL CMU WALLS SHALL BE REINFORCED WITH A MINIMUM #5 VERTICAL BAR AT 48" O.C. WITH THAT CMU CORE GROUTED AND HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. THE BOTTOM TWO COURSES SHALL BE GROUTED SOLID. PROVIDE A CONTINUOUS BOND BEAM AT TOP OF WALL WITH (2) #5 BARS CONTINUOUS, GROUT BOND BEAM SOLID. PROVIDE #5 DOWEL AT 48" O.C., INTO FOOTINGS.

M-10. REFER TO STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS FOR CONTROL JOINT LOCATIONS. WHERE CMU CONTROL JOINT LOCATIONS ARE NOT INDICATED, PROVIDE THEM AT 25' MAXIMUM CENTERS; SUBMIT CMU CONTROL JOINT LAYOUT TO THE ENGINEER FOR APPROVAL.

M-11. MASONRY DESIGN IS BASED ON INSPECTED WORKMANSHIP.

M-12. PROVIDE HOT AND COLD WEATHER PROCEDURES AND TEMPORARY MOISTURE PROTECTION IN ACCORDANCE WITH ACI RECOMMENDATIONS AND PROJECT SPECIFICATIONS.

M-13. PROVIDE HORIZONTAL BOND BEAMS (DIAPHRAGM CHORDS) WITH (2) #5 BARS CONTINUOUS, BENEATH FLOOR/ROOF MEMBER BEARING ELEVATIONS AND AT DECK EDGE.

M-14. MASONRY SHALL BE PLACED IN ONE-HALF RUNNING BOND U.N.O.

M-15. UNLESS DETAILED OTHERWISE, PROVIDE 10 GAGE BENT SLIP JOINT PLATES 4" x 4" x 1'-0" LONG AT 3'-0" O.C. EACH SIDE OF THE TOP OF ALL NON-STRUCTURAL MASONRY WALLS. ATTACH TO UNDERSIDE OF METAL ROOF DECK OR STRUCTURAL STEEL WITH 3 (MIN.) SELF-DRILLING, SELF-THREADING SCREWS (#12) AS REQUIRED BY THICKNESS OF BASE METAL. ATTACH TO UNDERSIDE OF CONCRETE DECK WITH 3 (MIN.) SELF-TAPPING CONCRETE SCREWS 3/16" DIA. SEE ARCHITECTURAL DRAWINGS FOR NON-STRUCTURAL MASONRY WALL LOCATIONS. MAINTAIN 1" (MIN.) GAP BETWEEN TOP OF MASONRY WALL AND BOTTOM OF STRUCTURE. DO NOT ATTACH PLATES TO MASONRY WALL.

CONCRETE & REINFORCING STEEL NOTES

MATERIAL PROPERTIES (U.N.O.)
COMPRESSIVE STRENGTH - F'c = 4 KSI
CONCRETE REINFORCEMENT - Fy = 60 KSI (A615 GR 60)

CR-1. PROVIDE ONE (1) HOOKED REINFORCING BAR IN CONCRETE FOOTING TO SERVE AS A "CONCRETE ENCASED ELECTRODE" IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE. COORDINATE WITH ELECTRICAL CONTRACTOR FOR EXACT LOCATION. HOOKED REINFORCING BAR SHALL CONFORM TO THE FOLLOWING:
   A. UNCOATED, LOW-ALLOY STEEL, CONFORMING TO ASTM A706.
   B. BAR SIZE NUMBER 4 HOOKED AT ONE END ONLY.
   C. MINIMUM HORIZONTAL LENGTH OF REINFORCING BAR ENCASED IN CONCRETE FOOTING SHALL BE 20'-0" AS DEFINED IN NEC, ARTICLE 250.
   D. MINIMUM VERTICAL PROJECTION OF REINFORCING BAR ABOVE CONCRETE SLAB SHALL BE 0'-6".
   E. MINIMUM COVER ALL AROUND REINFORCING BAR SHALL BE 2".

CR-2. ALL BAR LAPS SHALL CONFORM TO ACI 318 CLASS "B" SPLICE CRITERIA. USE TOP BAR LAP LENGTHS FOR TOP BARS IN SLABS AND BEAMS OVER 14" DEEP. MINIMUM BAR LAPS AS FOLLOWS U.N.O.:

#3 = 1'-4" #4 = 1'-4" #5 = 1'-10" #6 = 2'-7" #7 = 4'-2"
#8 = 5'-2" #9 = 6'-4" #10 = 7'-8" #11 = 9'-0"

FOR EPOXY COATED BARS, PROVIDE 1.5 TIMES THE INDICATED LAP LENGTH. FOR TOP BARS PROVIDE 1.3 TIMES THE INDICATED LAP LENGTH.

CR-3. LAP LENGTH SHALL BE SPECIFICALLY NOTED ON SHOP DRAWINGS WHERE MORE THAN ONE BAR MAKES UP A CONTINUOUS STRING.

CR-4. HORIZONTAL BARS SHALL BE DETAILED TO SHOW THE DISTANCE FROM AT LEAST ONE END OF THE BAR TO THE NEAREST BUILDING GRID LINE OR WALL.

CR-5. REINFORCING SHALL BE DETAILED IN ACCORDANCE WITH ACI 315.

CR-6. ALL REINFORCEMENT BARS SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST CRSI MANUAL OF STANDARD PRACTICE AND SHALL BE CLEAN AND FREE OF GREASE AND SCALING RUST.

CR-7. CONTINUOUS TOP AND BOTTOM BARS, WHEN SHOWN IN TRANSVERSE SECTION ONLY, SHALL BE LAPPED AS FOLLOWS:

TOP BARS NEAR MID-SPANS; BOTTOM BARS DIRECTLY OVER SUPPORTS, U.N.O.

CR-8. WATER STOPS SHALL BE PROVIDED IN HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS WHERE FINISHED FLOOR IS BELOW EXTERIOR GRADE UNLESS OMISSION IS APPROVED BY THE ENGINEER.

CR-9. HOOK HORIZONTAL WALL AND BEAM REINFORCING BARS AT DISCONTINUOUS ENDS, TYPICAL U.N.O. EXTEND REINFORCEMENT TO FAR FACE OF PIERS/PEDESTALS AND/OR COLUMNS U.N.O.

CR-10. PROVIDE HOT/COLD WEATHER PROCEDURES AND PROTECTION IN ACCORDANCE WITH ACI RECOMMENDATIONS AND PROJECT SPECIFICATIONS.

CR-11. CONCRETE REINFORCEMENT PROTECTION/CLEAR COVER, U.N.O.:

FOOTINGS:
BOTTOM & SIDES 3"
TOP 2"

WALLS:
EXTERIOR EXPOSURE 2"
INTERIOR EXPOSURE 1"

BEAMS/COLUMNS:
OVER TIES OR STIRRUPS 1 1/2"

ELEVATED SLABS: 1"

CR-12. PROVIDE ADDITIONAL #4 BARS AT 4'-0" LONG 1" BELOW TOP OF SLAB AT 45° TO ALL REENTRANT CORNERS,OPENINGS IN CONCRETE SLABS AND AS INDICATED ON DRAWINGS.

CR-13. ALL CONCRETE FOUNDATION WALLS SHALL HAVE A MINIMUM OF (2) #5 BARS CONTINUOUS TOP AND BOTTOM, UNLESS NOTED OR DETAILED OTHERWISE.

CR-14. EXTEND ALL PIER STEEL TO PROVIDE STD. HOOK UNDER FOOTING REINFORCEMENT, UNLESS NOTED OTHERWISE.

CR-15. ALL CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM WITH THE LOCAL BUILDING CODE REQUIREMENTS AND THOSE OF THE FOLLOWING STANDARDS (LATEST EDITION):

"ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONC."
"ACI 315, DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
"ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BLDGS."
"ACI 307, RECOMMENDED PRACTICE FOR CONCRETE FORM WORK"

CR-16. SEE SECTION 033000 OF SPECIFICATIONS FOR INFORMATION REGARDING CONCRETE MIX DESIGN, TESTING, MATERIALS, AND ADMIXTURES.

CR-17. ALUMINUM CONDUIT IS NOT PERMITTED TO BE EMBEDDED IN CONCRETE.

CR-18. REFER TO FLATWORK DRAWINGS AND/OR SPECIFICATIONS FOR SLAB-ON-GRADE FINISH TYPES AND DEPRESSIONS REQUIRED FOR MATS, TILE, AND OTHER FINISH MATERIALS.

CR-19. PROVIDE FOOTING DOWELS TO MATCH VERTICAL WALL REINFORCING. WHERE WALL REINFORCING IS NOT INDICATED, DOWEL FOOTING TO FOUNDATION WALLS WITH #5 REBAR AT 16" O.C. BY 3'-0" LONG, WITH STANDARD HOOKS EMBEDDED A MINIMUM OF 9" INTO FOOTING.

CR-20. ALL PIER FOOTINGS TO HAVE DOWELS WITH STANDARD HOOKS OF SAME SIZE AND QUANTITY AS PIER STEEL. DOWELS TO LAP PIER STEEL AS REQUIRED FOR A CLASS "B" TENSION SPLICE.

CR-21. ALL OPENINGS IN CONCRETE FOUNDATION WALLS ARE TO HAVE (4) #5 DIAGONAL BARS EACH FACE OF THE WALL UNLESS OTHERWISE NOTED. BARS SHALL EXTEND 2 FEET BEYOND OPENING ON EACH SIDE.

CR-22. UNLESS NOTED OTHERWISE, THICKEN THE SLAB-ON-GRADE BENEATH INTERIOR MASONRY PARTITIONS 8 INCHES BELOW BOTTOM OF SLAB ON GRADE. THICKENED PORTION TO EXTEND 8 INCHES BEYOND THE FACE OF THE

WALL ON EACH SIDE. REINFORCE THE THICKENED PORTION WITH (3) #5 CONTINUOUS. LONGITUDINAL REINFORCING BARS AND #5 TRANSVERSE BARS AT 16" O.C., U.N.O.

CR-23. PITCH CONCRETE TO FLOOR DRAINS. COORDINATE WITH PLUMBING AND ARCHITECTURAL DRAWINGS.

CR-24. U.N.O., PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS-ON-GRADE AT 15 FOOT MAXIMUM CENTERS EACH DIRECTION. CONTRACTOR SHALL SUBMIT PLANS OF JOINT LOCATIONS TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO CASTING SLABS-ON GRADE. COORDINATE WITH ARCHITECTURAL DRAWINGS AND FLOOR FINISHES SUCH AS TILE AND TERRAZZO.

CR-25. ALL DOWELS INTO EXISTING CONCRETE OR SOLID MASONRY TO BE EPOXY ANCHORED WITH HILTI HIT-RE 500 V3 ADHESIVE OR EQUIVALENT, (UNLESS INDICATED OTHERWISE.)

EARTHWORK NOTES

EW-1. REFERENCE GEOTECHICAL DATA AND SECTION 312000 - EARTH MOVING FOR DEFINITION OF MATERIALS AND COMPACTION REQUIREMENTS.

EW-2. REFERENCE SECTION 312000 FOR EXCAVATION, HANDLING AND DISPOSAL OF CONTAMINATED SOILS. REFERENCE SECTION 312000 FOR EXCAVATION, SUBGRADE INSPECTION AND SUBGRADE PREPARATION.

EW-3. U.N.O., THE CONTRACTOR SHALL RETAIN AN INDEPENDENT, QUALIFIED GEOTECHNICAL ENGINEERING FIRM/TESTING AGENCY TO IDENTIFY AREAS OF POOR SOILS, TO MONITOR PROPER SUBGRADE PREPARATIONS AND TO OVERSEE AND TEST THE PLACEMENT OF COMPACTED FILL MATERIAL.

EW-4. ALL SUBTERRANEAN STRUCTURES, UTILITIES, PIPING, ETC. IIN THE AREA OF EXCAVATIONS TO BE LOCATED AND MARKED BY CONTRACTOR PRIOR TO EARTH REMOVAL WORK. CONTRACTOR TO MAINTAIN MARKERS UNTIL EXCAVATION ACTIVITIES HAVE CEASED. IF UNDERGROUND UTILITY CONFLICTS ARE DISCOVERED BEFORE OR ENCOUNTERED DURING EXCAVATION, NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY.

EW-5. BEFORE PLACING FOOTINGS, FOUNDATIONS OR SLAB-ON-GRADE, THE SUB-GRADE SHALL BE PREPARED AND INSPECTED AS REQUIRED BY THE SPECIFICATIONS.

EW-6. DO NOT BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST AND/OR ICE.

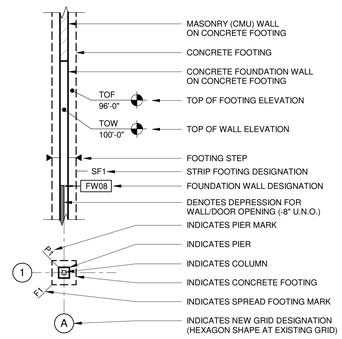
EW-7. PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.

ABBREVIATIONS

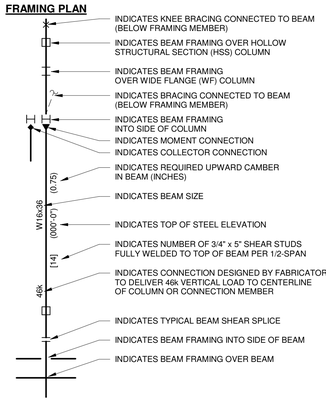
B.O.	= BOTTOM OF _____
BP#	= BASE PLATE TYPE
BRG	= BEARING
C TO C	= CENTER TO CENTER
CCJ	= CONSTRUCTION CONTROL JOINT
CJ	= CONTROL JOINT
CLSM	= CONTROLLED LOW STRENGTH MATERIAL ("FLOWABLE FILL")
CONT	= CONTINUOUS
DBLT	= DOUBLE-TEE
DIA	= DIAMETER
DTB	= DOUBLE-TEE BEARING
EF	= EACH FACE
EL	= ELEVATION
EW	= EACH WAY
F#	= SPREAD FOOTING TYPE
FDTN	= FOUNDATION
FT	= FOOT / FEET
FV	= FIELD VERIFY
GALV	= GALVANIZED
GB	= GRADE BEAM
HPC	= HIGH PERFORMANCE COATING
JB	= JOIST BEARING
K	= KIPS
LLH	= LONG LEG HORIZONTAL
LLV	= LONG LEG VERTICAL
NIC	= NOT IN CONTRACT
NTS	= NOT TO SCALE
OC	= ON CENTER
P#	= PIER TYPE
PCB	= PRECAST BEARING (ELEVATION)
PRCST	= PRECAST
Rxn	= REACTION
SF#	= STRIP FOOTING TYPE
SIM	= SIMILAR
SST	= STAINLESS STEEL
STL	= STEEL
T.O.	= TOP OF _____
TBD	= TO BE DETERMINED
TOC	= TOP OF COLUMN
TOF	= TOP OF FOOTING
TOL	= TOP OF LEDGE
TOP	= TOP OF PIER
TOS	= TOP OF STEEL
TOW	= TOP OF WALL
TPC	= TOP OF PRECAST
TSL	= TOP OF SLAB
TYP	= TYPICAL
UNO	= UNLESS NOTED OTHERWISE
WWF	= WELDED WIRE FABRIC/REINFORCEMENT

STRUCTURAL SYMBOLOGY

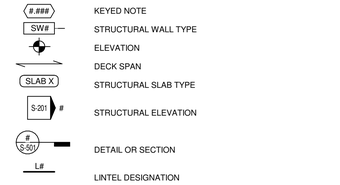
FOUNDATION PLAN



FRAMING PLAN



GENERAL SYMBOLS



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DO NOT SCALE DRAWINGS

SHEET CONTENTS
STRUCTURAL NOTES

SHEET NO.:
S-001

PRECAST CONCRETE NOTES

PC-1. PRECAST CONCRETE SUPPLIER SHALL BE RESPONSIBLE FOR DESIGN OF PRECAST ELEMENTS AND CONNECTIONS TO CARRY ALL DESIGN LOADS (VERTICAL AND LATERAL) TO THE FOUNDATIONS.

PC-2. REFER TO GENERAL NOTES AND DRAWINGS FOR SUPERIMPOSED LOADS USED IN DESIGN.

PC-3. WHERE COMPOSITE TOPPING IS INDICATED, THE TOPPING THICKNESS SHOWN IS REQUIRED AT THE PRECAST BEARING LOCATIONS. THE TOPPING THICKNESS MAY BE LESS AT MID SPAN DEPENDING ON THE CAMBER OF THE PRECAST SLAB, BUT NO LESS THAN 1 1/2". THE DESIGN OF CORED SLABS WITH TOPPING SHALL CONSIDER THE ACTUAL TOPPING THICKNESS AT VARIOUS SPAN LOCATIONS.

PC-4. PRECAST SLABS SHALL HAVE THAT PART OF THE TOTAL DEFLECTION OCCURRING AFTER ATTACHMENT OF THE NON STRUCTURAL ELEMENTS (SUM OF THE LONGTIME DEFLECTION DUE TO ANY ADDITIONAL LIVE LOAD) LIMITED TO L/480.

PC-5. ALL STEEL SHAPES AND PLATES SHALL COMPLY WITH ASTM A36. THE WELDING OF ALL STEEL IS TO BE WITH E70XX ELECTRODES.

PC-6. ALL EMBEDDED PLATES, CONNECTIONS, AND INSERTS EXPOSED TO WEATHER ARE TO BE GALVANIZED PER ASTM A153. ALL OTHER CONNECTIONS ARE TO BE COATED WITH A RUST INHIBITIVE PRIMER. ALL FIELD WELDED AND SCRATCHED CONNECTIONS ARE TO BE TOUCHED UP AFTER FINAL CONNECTION HAS BEEN COMPLETED. ALL GALVANIZED CONNECTIONS ARE TO BE REPAIRED WITH A COLD GALVANIZING COMPOUND.

PC-7. PROVIDE EMBEDDED PLATES FOR ATTACHMENT OF MECHANICAL EQUIPMENT WHERE REQUIRED. VERIFY EQUIPMENT WEIGHTS, LOCATIONS, AND ATTACHMENT REQUIREMENTS WITH THE MECHANICAL CONTRACTOR.

PC-8. ALL HEADERS REQUIRED AT SLAB OPENINGS ARE TO BE DESIGNED AND FURNISHED BY THE PRECAST SLAB SUPPLIER. VERIFY SIZE AND LOCATION OF ALL INDICATED OPENINGS WITH THE MECHANICAL CONTRACTOR. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR HOLES SMALLER THAN 10" SQUARE OR ROUND.

PC-9. ALL HOLES IN SLABS WHICH HAVE NOT BEEN CAST IN BY THE MANUFACTURER ARE TO BE FIELD CUT BY THE TRADES REQUIRING THEM, USING ONLY POWER SAWS OR CORE DRILLS. FIELD CUTS WHICH VARY IN SIZE AND/OR LOCATION FROM THOSE INDICATED ON PRECAST SHOP DRAWINGS SHALL BE APPROVED BY THE PRECAST SUPPLIER PRIOR TO CUTTING.

PC-10. DRAWINGS SHOW GENERAL REQUIREMENTS FOR BEARING AND ANCHORAGE. THE PRECAST SUPPLIER SHALL PROVIDE ADDITIONAL MATERIAL, ACCESSORIES AND WORK NECESSARY TO ACCOMMODATE ALL SPECIFIC JOB, SPAN AND LOADING REQUIREMENTS.

PC-11. ALL EMBEDDED PLATES AND CONNECTIONS SHOWN ARE MINIMUM REQUIREMENTS. THE PRECAST SUPPLIER SHALL VERIFY BY ANALYSIS THAT PLATE SIZES AND SPACING ARE ADEQUATE TO TRANSFER THE DESIGN LOADS INDICATED. ALL PRECAST CONNECTIONS SHALL BE DESIGNED USING THE CODE REQUIRED LOAD FACTORS. THE MINIMUM WELD SIZE SHALL BE 3/16", AND THE MINIMUM LENGTH OF WELD SHALL BE 4".

STRUCTURAL STEEL NOTES

MATERIAL PROPERTIES (U.N.O.)

W-SHAPES	- Fy = 50 KSI (A992 OR A572 Gr 50)
C-SHAPES & ANGLES	- Fy = 36 KSI (A36)
PLATES & BARS	- Fy = 36 KSI (A36)
RECTANGULAR HSS	- Fy = 46 KSI (A500 Gr B)
ROUND HSS	- Fy = 42 KSI (A500 Gr B)
PIPE	- Fy = 35 KSI (A53 Gr B)
RODS	- Fy = 36 KSI (A36)

S-1. STEEL BEAMS WITH RESIDUAL CAMBER RESULTING FROM MILL FABRICATION OR ROLLING SHALL BE SHOP FABRICATED AND ERECTED SUCH THAT THIS RESIDUAL CAMBER COUNTERACTS GRAVITY LOAD DEFLECTION.

S-2. U.N.O., ALL BOLTED CONNECTIONS SHALL UTILIZE 3/4 INCH DIAMETER A325 BOLTS TIGHTENED TO THE SNUG-TIGHT CONDITION. THE SNUG-TIGHT CONDITION IS DEFINED BY THE RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".

S-3. ALL ANCHOR BOLTS ARE TO BE 1 INCH DIAMETER F1554 Gr. 36 THREADED RODS UNLESS NOTED OTHERWISE. (2)-1/2 INCH DIAMETER ANCHOR BOLTS SHALL BE PROVIDED AT ALL BEAM AND LINTEL BEARINGS ON CONCRETE OR MASONRY.

S-4. U.N.O., POST INSTALLED ANCHORS ARE TO BE HILTI HIT-HY 200-R ADHESIVE ANCHORS FOR CONCRETE BASE MATERIAL AND HILTI HIT-HY 70 ADHESIVE ANCHORS FOR CONCRETE MASONRY BASE MATERIAL AS MANUFACTURED BY HILTI FASTENING SYSTEMS OF TULSA, OKLAHOMA OR EQUAL. INSTALL ANCHORS WITH EMBEDMENT DEPTHS INDICATED.

S-5. STUD ANCHORS ARE TO BE NELSON STUDS OR EQUAL (ASTM A108).

S-6. BEAM AND LINTEL PLATES SHALL BE FULLY GROUTED WITH A MINIMUM 1/2" NON-SHRINK GROUT.

S-7. ALL WELDING OF NEW STEEL IS TO BE WITH E70XX ELECTRODES, U.N.O. WELDING SHALL BE IN ACCORDANCE WITH THE LATEST AWS SPECIFICATIONS BY CERTIFIED WELDERS.

S-8. WHEN FIELD WELDING TO EXISTING STEEL, ADJUST WELDING PROCEDURES AS REQUIRED TO BE COMPATIBLE WITH THE NEW AND EXISTING STEEL.

S-9. STEEL CONNECTIONS NOT DETAILED ON THE PLANS ARE TO BE THE FABRICATOR'S STANDARD AND ARE TO BE SELECTED AND DESIGNED IN ACCORDANCE WITH AISC ASD SPECIFICATIONS, TYPE 2 FRAMING CONNECTIONS, FOR THE REACTIONS INDICATED.

MINIMUM NO. BOLTS PER CONNECTION
- n = 2 FOR MEMBERS 10 INCHES DEEP OR LESS
- n = 3 FOR MEMBERS 12, 14, OR 15 INCHES DEEP
- n = 4 FOR MEMBERS 16 OR 18 INCHES DEEP
- n = 5 FOR MEMBERS 21 OR 24 INCHES DEEP
- n = 6 FOR MEMBERS 27 OR 30 INCHES DEEP
- n = 8 FOR MEMBERS 33 OR 36 INCHES DEEP

S-10. UNLESS NOTED OTHERWISE, THE MINIMUM CONNECTION PLATE/ANGLE THICKNESS SHALL BE 5/16", THE MINIMUM WELD 1/4", AND THE MINIMUM DESIGN LOAD ON ANY CONNECTION 10 KIPS.

S-11. ALL CONNECTIONS TO PIPE AND TUBE COLUMNS SHALL BE THROUGH PLATE CONNECTIONS UNLESS OTHERWISE INDICATED.

S-12. THE CONTRACTOR SHALL FURNISH AND INSTALL MISCELLANEOUS STEEL (CURBS, HANGERS, BRACING, ETC.) AS INDICATED AND AS NECESSARY PER ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

S-13. ALL EXTERIOR MASONRY SHELF ANGLES, LINTEL BEAMS, AND LINTEL PLATES SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A123.

METAL DECK

MD-1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING POUR STOPS AT EDGES OF METAL DECK PER SDI POUR STOP SELECTION TABLE/RECOMMENDATIONS OR BENT PLATE POUR STOPS AS REQUIRED TO FORM THE SLAB EDGE.

POST-INSTALLED ANCHORS

PA-1. POST-INSTALLED ANCHORS BASIS OF DESIGNS UNLESS INDICATED OTHERWISE;

A. EXPANSION ANCHORS
- CONCRETE BASE MATERIAL - HILTI KWIK BOLT-TZ
- MASONRY BASE MATERIAL - HILTI KWIK BOLT-3

B. CONCRETE SCREW ANCHORS
- CONCRETE BASE MATERIAL - SIMPSON TITEN-HD
- MASONRY BASE MATERIAL - SIMPSON TITEN-HD

C. EPOXY ANCHORS
- CONCRETE BASE MATERIAL - HILTI HIT-HY 200-R
- MASONRY BASE MATERIAL - HILTI HIT-HY 270
- REBAR - HILTI HIT-RE 500 V3

D. SLEEVE ANCHORS
- MASONRY BASE MATERIAL - HILTI HLC-HX

E. FLUSH ANCHOR (DROP-IN)
- TYPICAL - HILTI HDI
- PRECAST - HILTI HDI-P

DELEGATED DESIGN SUBMITTALS

DOCUMENTS FOR DELEGATED DESIGN SUBMITTAL ITEMS SHALL BE REVIEWED BY THE ENGINEER OF RECORD IN RESPONSIBLE CHARGE WHO SHALL FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THEY HAVE BEEN REVIEWED AND ARE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING.

DS-1. ANCHORAGE AND BRACING REQUIREMENTS FOR MECHANICAL, HVAC, PLUMBING, PROCESS AND ELECTRICAL EQUIPMENT INCLUDING FLOOR AND ROOF SUPPORTED EQUIPMENT.

DS-2. METAL STAIRS - SPECIFICATION SECTION 055113 AND 055119.

DS-3. PIPE AND TUBE RAILINGS - SPECIFICATION SECTION 055213.

SHOP DRAWINGS

SD-1. SHOP DRAWINGS SHALL BE SUBMITTED FOR STRUCTURAL ITEMS AS REQUIRED BY THE SPECIFICATIONS. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.

SD-2. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMITTAL. REVIEWED SUBMITTALS SHALL BE STAMPED BY THE CONTRACTOR. ANY SHOP DRAWING OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE REJECTED. GENERAL CONTRACTOR SHALL CLOUD OR FLAG ALL ITEMS NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SHALL VERIFY ALL DIMENSIONS.

SD-3. ANY CHANGES, SUBSTITUTIONS OR DEVIATIONS FROM THE ORIGINAL CONTRACT DRAWINGS SHALL BE CLOUDED BY THE MANUFACTURER OR FABRICATOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS WHICH ARE CLOUDED OR FLAGGED BY SUBMITTING PARTIES SHALL NOT BE CONSIDERED APPROVED AFTER THE ENGINEER'S REVIEW, UNLESS SPECIFICALLY NOTED ACCORDINGLY BY THE ENGINEER.

SD-4. THE APPROVED SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY ARE NOT TO BE CONSIDERED CHANGES TO THE ORIGINAL CONTRACT DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ITEMS OMITTED OR SHOWN INCORRECTLY ARE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DRAWINGS.

SD-5. SHOP DRAWING REVIEW IS INTENDED ONLY FOR GENERAL CONFORMANCE TO THE DESIGN CONCEPT AND CONSTRUCTION DOCUMENTS.

SD-6. SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF MAJOR ERRORS ARE FOUND DURING REVIEW.

SD-7. ALLOW A MINIMUM OF (10) WORKING DAYS FOR REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER.

STRUCTURAL TESTING AND INSPECTION

TI-1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT ALL STRUCTURAL WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY STRUCTURAL INSPECTION PROVIDED BY OTHERS DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY. ANY STRUCTURAL DEVIATIONS FROM THE CONTRACT DOCUMENTS THAT ARE FOUND AT A LATER DATE AND ARE DECLARED TO BE SIGNIFICANT BY THE STRUCTURAL ENGINEER SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT COST OR ANY DELAY TO THE PROJECT SCHEDULE.

TI-2. THE CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING AGENCY TO PROVIDE FIELD AND LAB TESTING OF CONSTRUCTION MATERIALS AND TO PROVIDE CONSTRUCTION INSPECTIONS. THE CONSTRUCTION INSPECTION SHALL BE DONE BY QUALIFIED INSPECTORS THAT ARE SATISFACTORY TO THE ARCHITECT AND ENGINEER.

TI-3. THE CONTRACTOR SHALL PROVIDE THE TESTING AND INSPECTING AGENCY ACCESS TO ALL PLACES WHERE THE WORK IS BEING PERFORMED. A MINIMUM OF 24 HOURS NOTIFICATION SHALL BE GIVEN TO THE TESTING AGENCY AND ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF WORK REQUIRING TESTING OR INSPECTION.

TI-4. THE TESTING AGENCY IS NOT AUTHORIZED TO DIRECT OR APPROVE ANY CHANGES FROM THE CONTRACT DOCUMENTS. IF THE CONTRACTOR WISHES TO QUESTION THE TESTING AGENCY'S INTERPRETATION OF THE CONTRACT DOCUMENTS, HE MAY DO SO DIRECTLY WITH THE ARCHITECT OR STRUCTURAL ENGINEER.

TI-5. THE TESTING AGENCY IS NOT AUTHORIZED TO STOP OR DELAY THE WORK. IF THE CONTRACTOR ELECTS TO CONTINUE WITH A CERTAIN PORTION OF WORK AFTER BEING NOTIFIED BY THE TESTING AGENCY THAT SUCH WORK IS NOT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR DOES SO AT THEIR OWN RISK AND MAY BE REQUIRED TO CORRECT THE WORK AT A LATER DATE.

TI-6. THE TESTING AND INSPECTING AGENCY IS NOT INSPECTING FOR O.S.H.A. COMPLIANCE OR REQUIRED TO INSPECT TEMPORARY CONSTRUCTION, SUCH AS TEMPORARY BRACING. TEMPORARY CONSTRUCTION IS THE CONTRACTOR'S SOLE RESPONSIBILITY.

TI-8. TESTING AND INSPECTION IS NOT REQUIRED FOR WORK PERFORMED AT AN OFF-SITE FABRICATION SHOP, UNLESS SPECIFICALLY NOTED OR SPECIFIED OTHERWISE.

TI-9. THE PROJECT SPECIFICATIONS TYPICALLY INDICATE THE FREQUENCY OF CONSTRUCTION TESTING AND INSPECTIONS. WHERE THE FREQUENCY IS NOT INDICATED, TESTING AGENCY SHALL SUBMIT A PROPOSAL OF INSPECTION INTERVALS TO THE ARCHITECT/ENGINEER.

TI-10. THE TESTING AND INSPECTING AGENCY SHALL ISSUE ONGOING REPORTS OF INSPECTIONS AND TESTS TO THE CONTRACTOR, ENGINEER, AND ARCHITECT OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE ENGINEER AND ARCHITECT OF RECORD.

TI-11. INSPECTION AGENCY SHALL INSPECT FOR CONFORMANCE TO SPECIFIED REQUIREMENTS FOR PROTECTING NEW CONCRETE AND MASONRY FROM THE ADVERSE EFFECTS OF WEATHER, HEATING EQUIPMENT AND OTHER POTENTIALLY HARMFUL CONDITIONS.

TI-12. CONSTRUCTION TESTING AND INSPECTION BY THE TESTING AND INSPECTING AGENCY IS REQUIRED AS FOLLOWS:

A. CONCRETE TESTING PER THE SPECIFICATIONS.

B. CONCRETE INSPECTION SHALL INCLUDE THE PLACEMENT OF REINFORCEMENT. REINFORCING BAR SIZES, SPACING, TIES, LAPS, AND COVER.

C. MASONRY TESTING PER THE SPECIFICATIONS.

D. MASONRY INSPECTION SHALL INCLUDE THE PLACEMENT OF REINFORCEMENT. REINFORCING BAR SIZES, SPACING, AND LAPS.

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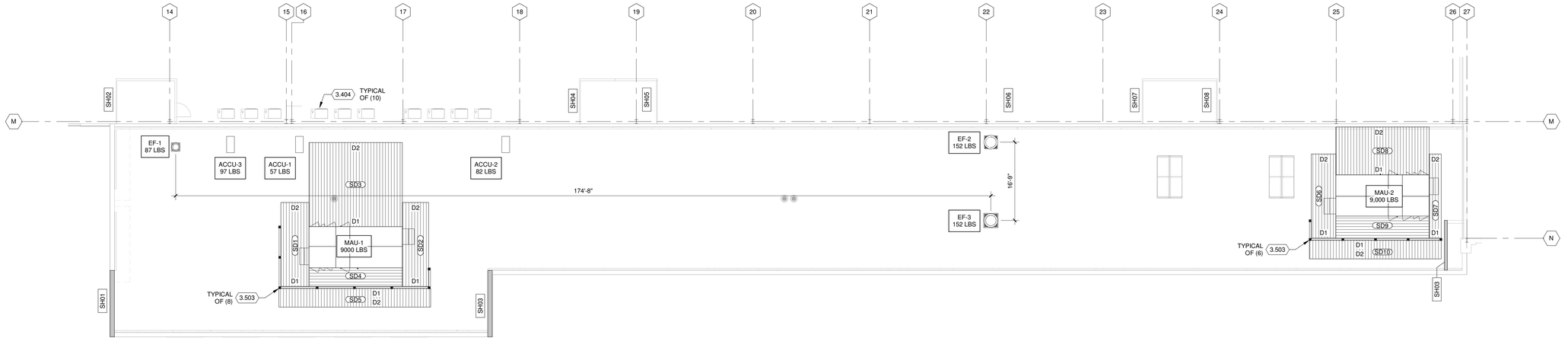
SHEET CONTENTS
STRUCTURAL NOTES

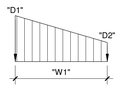
SHEET NO.:
S-002



TRUE NORTH PLAN NORTH

1 ROOF LOADING PLAN

1" = 10'-0"



SNOW DRIFT LOADING VARIABLES

MARK	D1	D2	W1
SD1	101 PSF	21 PSF	18'-0"
SD2	101 PSF	21 PSF	18'-0"
SD3	101 PSF	21 PSF	18'-0"
SD4	101 PSF	101 PSF	4'-3"
SD5	37 PSF	21 PSF	4'-0"
SD6	101 PSF	21 PSF	18'-0"
SD7	101 PSF	21 PSF	18'-0"
SD8	101 PSF	21 PSF	10'-3"
SD9	101 PSF	101 PSF	4'-9"
SD10	37 PSF	21 PSF	4'-0"

NOTE:
DRIFT VALUES SHOWN IN SNOW DRIFT LOADING SCHEDULE INCLUDE THE BASE SNOW.

SHEAR WALLS

MARK	SHEAR (k)	LENGTH
SH01	34	14'-3"
SH02	14	9'-8"
SH03	33	14'-3"
SH04	23	9'-8"
SH05	23	9'-8"
SH06	28	9'-8"
SH07	14	9'-8"
SH08	13	9'-8"
SH09	36	10'-8

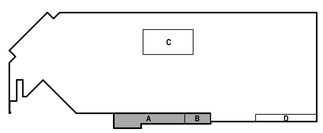
ROOF LOADING PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS, AND SYMBOLOGY.
4. REFER TO SHEET S-001 AND S-002 FOR ADDITIONAL LOADS NOT INDICATED ON THIS SHEET.
5. SHEAR LOADS INDICATED ARE STRENGTH LEVEL WIND LOADS. GRAVITY LOADS ARE SERVICE LEVEL.
6. INDICATED DRIFT LOADS INCLUDE FLAT-ROOF SNOW LOAD. FLAT-ROOF SNOW LOAD, PER SHEET S-001, SHALL BE APPLIED TO ROOF STRUCTURE WHERE DRIFT LOADS ARE NOT INDICATED. A SEPARATE SNOW-LOAD CASE SHALL BE CONSIDERED WHERE THE MINIMUM UNIFORM FLAT-ROOF SNOW LOAD IS APPLIED TO THE ENTIRE ROOF STRUCTURE WITHOUT ANY DRIFT LOADING, SEE S-001.
7. NOT ALL EQUIPMENT LOADS MAY BE CAPTURED ON THIS PLAN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL ROOF SUPPORTED EQUIPMENT AND PIPING.
8. INDICATED LOCATIONS OF EQUIPMENT ARE PROVIDED FOR REFERENCE AND TO LOCATE REQUIRED SUPPORT FRAMING. VERIFY EXACT SIZES AND LOCATIONS WITH EQUIPMENT SUPPLIER AND OTHER TRADES PRIOR TO FABRICATION.
9. WEIGHTS OF EQUIPMENT PROVIDED ARE SELF WEIGHT AND DO NOT INCLUDE HANGERS, CURBS, ETC. VERFIY WEIGHTS WITH EQUIPMENT SUPPLIER AND OTHER TRADES PRIOR TO FABRICATON.
10. SHEAR LOADS INDICATED AT PERIMETER OF PRECAST ARE MINIMUM SHEAR LOADS DUE TO WIND. DESIGN ALL EMBED PLATES TO MEET MINIMUM LOAD REQUIREMENTS INDICATED ON SHEET S-001 AND S-002, UNLESS INDICATED OTHERWISE. DESIGN DIAPHRAGM TO SHEAR WALL CONNECTIONS TO THE SHEAR LOADS GIVEN.

KEYED NOTES

3.404 ELECTRIC CHARGER ON EQUIPMENT PLATFORM, 1400 LB LOAD.

3.503 PRECAST EMBED PLATE FOR MECHANICAL SCREEN WALL POST, SEE DETAILS ON SHEET S-551. COORDINATE SCREEN WALL LOCATION WITH ARCHITECTURAL AND MECHANICAL.



KEY PLAN

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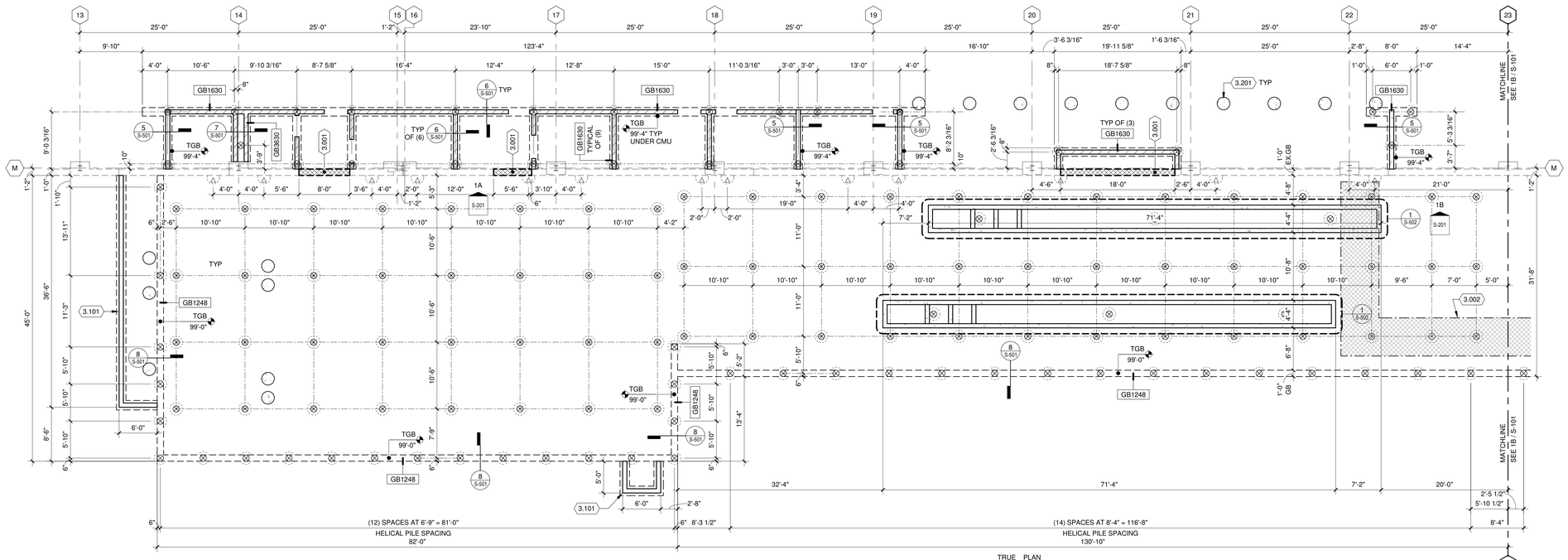
SHEET CONTENTS
ROOF LOADING PLAN

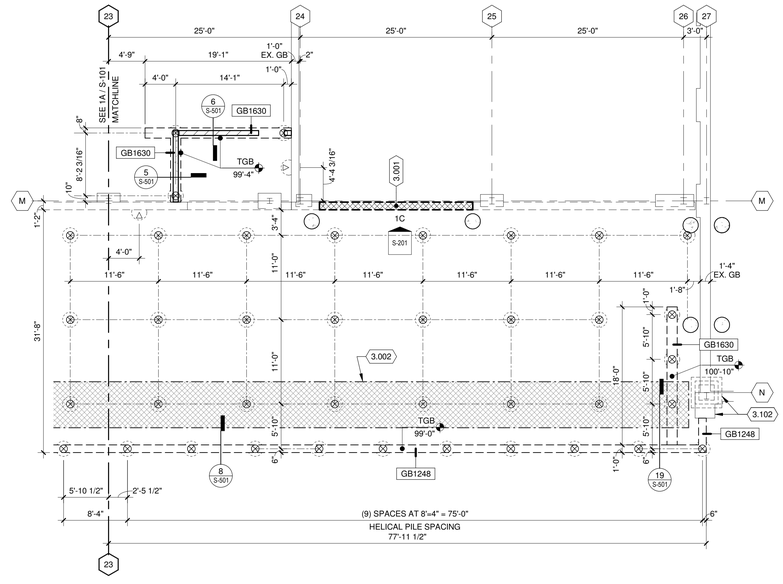
SHEET NO.:
S-010



TRUE NORTH PLAN NORTH

PARTIAL FOUNDATION PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

PARTIAL FOUNDATION PLAN - AREA B

1/8" = 1'-0"

FOUNDATION PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS, AND SYMBOLOGY.
4. REFER TO SHEET S-501 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
5. TOP OF FOOTING ELEVATION = 96'-0" UNLESS NOTED OTHERWISE.
6. TOP OF FOUNDATION WALL ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.
7. STRIP FOOTINGS SHALL BE CENTERED UNDER FOUNDATION/MASONRY WALLS UNLESS NOTED OTHERWISE.
8. △ = RETROFIT HELICAL PIER, 28 KIP SERVICE LEVEL CAPACITY, MINIMUM EMBEDMENT DEPTH = 25 FT

   ⊙ = NEW HELICAL PIER, 40 KIP SERVICE LEVEL CAPACITY, MINIMUM EMBEDMENT DEPTH = 30 FT

KEYED NOTES

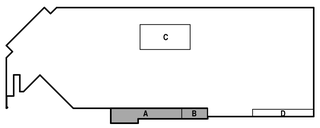
3.001 DEMO PORTION OF EXISTING GRADE BEAM, SEE ELEVATIONS ON SHEET S-201.

3.002 DEMOLISH AND REMOVE ANY REMAINING FOUNDATIONS IN THIS AREA.

3.101 STOOP FOUNDATION, SEE DETAIL 15/S-501.

3.102 FIELD LOCATE EXISTING FOOTING/FOUNDATION, LOCATE NEW PILES, GRADE BEAM AND SHEAR WALL AS CLOSE AS PRACTICAL TO EXISTING FOOTING.

3.201 BOLLARD, SEE DETAIL 8/S-511. COORDINATE LOCATIONS WITH ARCHITECTURAL.



KEY PLAN

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
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phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

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M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DXC
DRAWN BY: MJE
CHECKED BY: DXC
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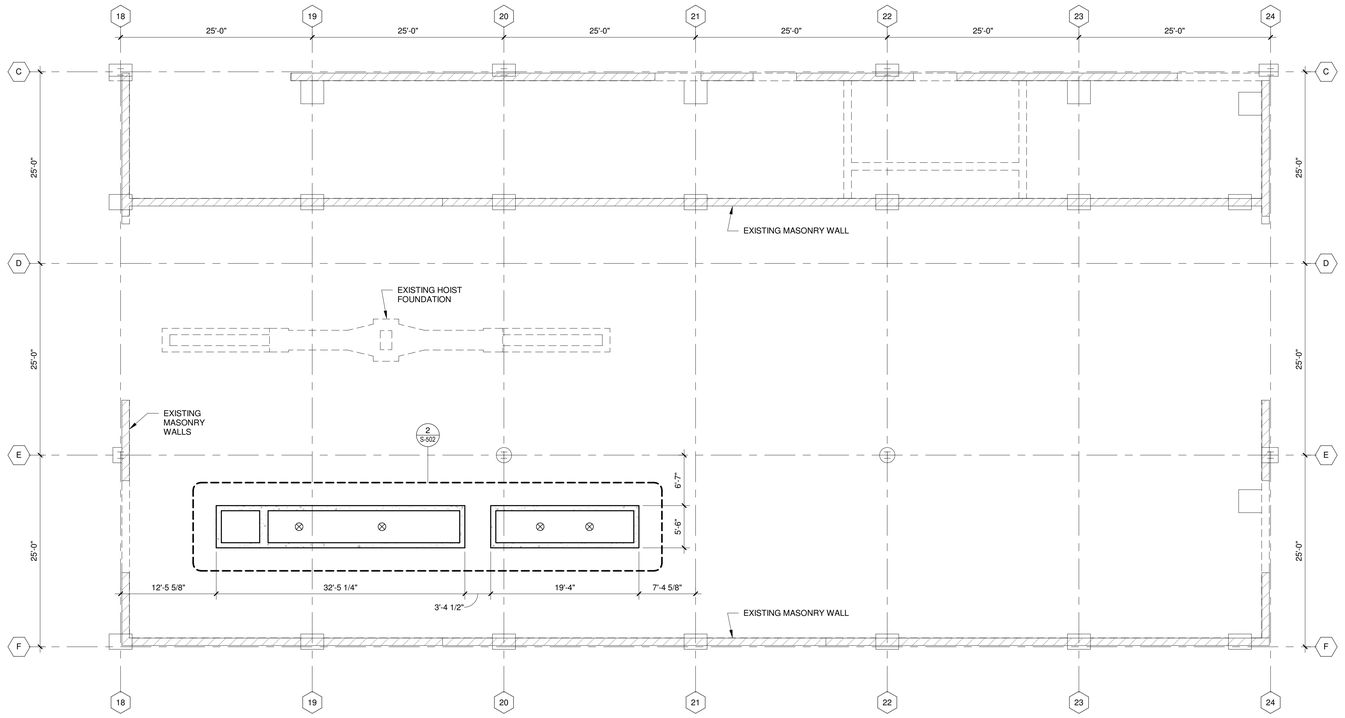
SHEET CONTENTS
PARTIAL FOUNDATION PLANS

SHEET NO.:

S-101



TRUE NORTH PLAN NORTH

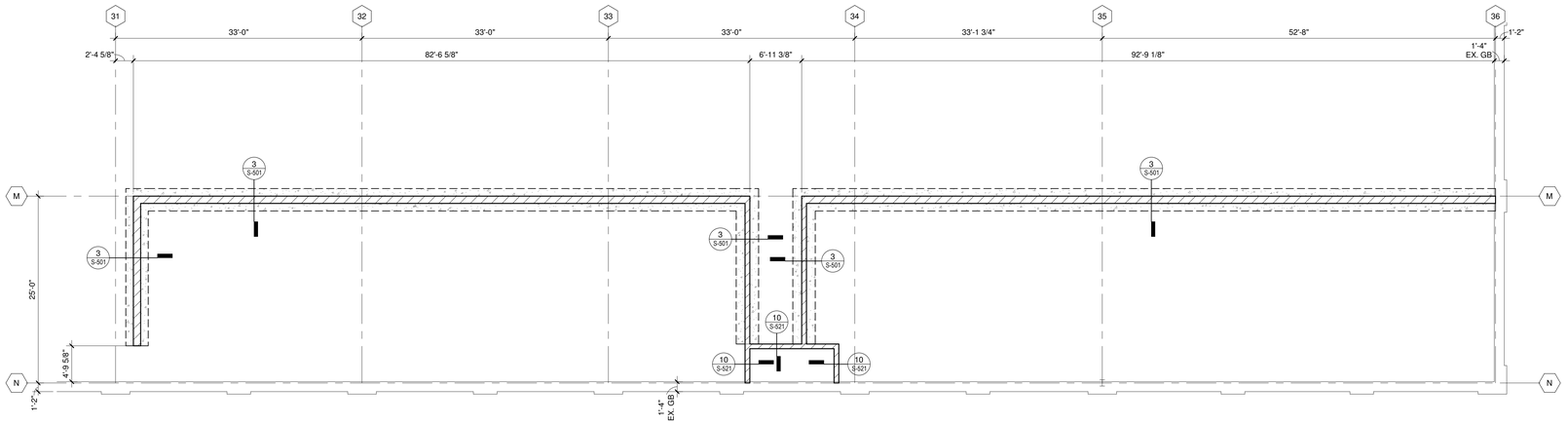
PARTIAL FOUNDATION PLAN - AREA C

1/8" = 1'-0"

FOUNDATION PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS, AND SYMBOLOGY.
4. REFER TO SHEET S-501 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
5. TOP OF FOOTING ELEVATION = 96'-0" UNLESS NOTED OTHERWISE.
6. TOP OF FOUNDATION WALL ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.
7. STRIP FOOTINGS SHALL BE CENTERED UNDER FOUNDATION/MASONRY WALLS UNLESS NOTED OTHERWISE.
8. = RETROFIT HELICAL PIER, 28 KIP SERVICE LEVEL CAPACITY, MINIMUM EMBEDMENT DEPTH = 25 FT
   = NEW HELICAL PIER, 40 KIP SERVICE LEVEL CAPACITY, MINIMUM EMBEDMENT DEPTH = 30 FT

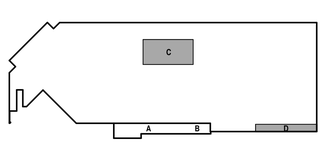
KEYED NOTES



TRUE NORTH PLAN NORTH

PARTIAL FOUNDATION PLAN - AREA D

1/8" = 1'-0"



KEY PLAN

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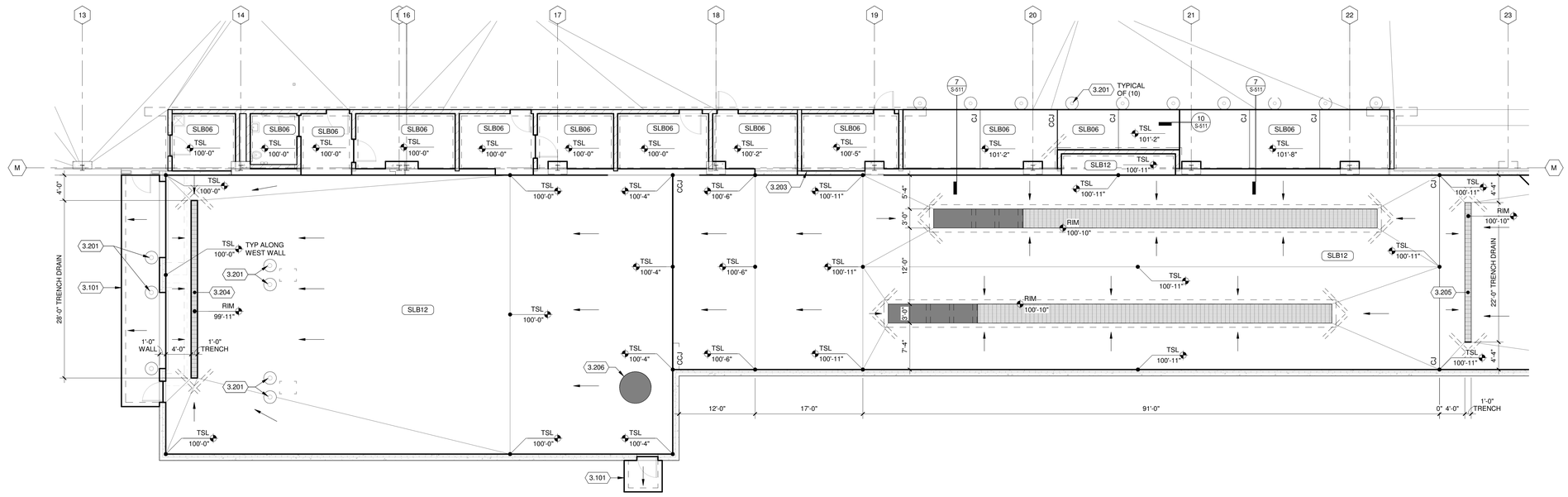
SHEET CONTENTS
PARTIAL FOUNDATION PLANS

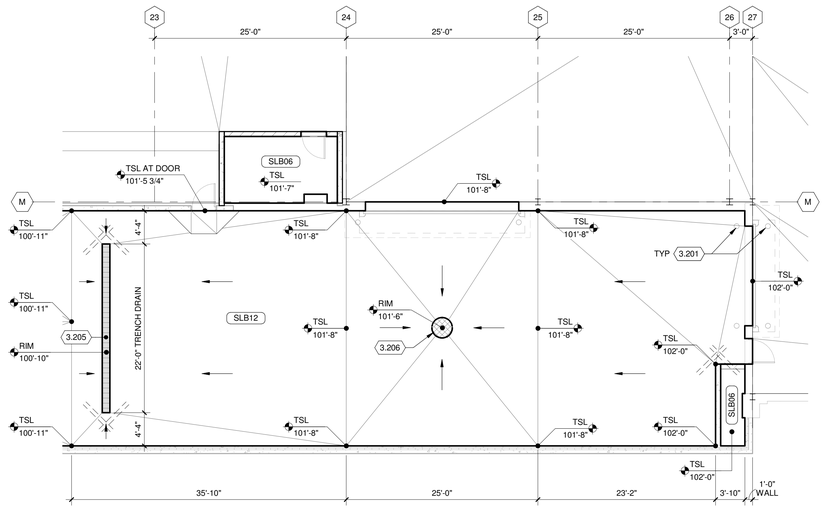
SHEET NO.:
S-102



TRUE NORTH PLAN NORTH

PARTIAL FLATWORK PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

PARTIAL FLATWORK PLAN - AREA B

1/8" = 1'-0"

FLATWORK PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS, AND SYMBOLOGY.
4. REFER TO SHEET S-511 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
5. REFER TO DETAIL 1/S-511 FOR STRUCTURAL SLAB TYPES.
6. SLB12 IS A STRUCTURAL MAT SLAB ON PILES.
   - NO CONTROL JOINTS ALLOWED OTHER THAN THE CONSTRUCTION CONTROL JOINTS (CCJ) INDICATED.
   - CONCRETE BETWEEN CONSTRUCTION CONTROL JOINTS SHALL BE PLACED IN CONTINUOUS MONOLITHIC POUR.
   - HELICAL PILES ARE 40K CAPACITY SERVICE LEVEL. SEE FOUNDATION PLAN ON SHEET S-101 FOR PILE LOCATIONS.
7. FLOAT AND TROWEL FLOOR SLABS PER REQUIREMENTS OF ARCH. FLOOR FINISH SYSTEM.
8. (2) DASHED LINES = = = = INDICATE (2) ADDITIONAL #4 BARS (5'-0" LONG) DIAGONAL 6" FROM CORNER IN SLAB, 2" CLEAR FROM TOP OF SLAB.

KEYED NOTES

3.101 STOOP FOUNDATION, SEE DETAIL 15/S-501.

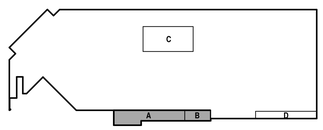
3.201 BOLLARD, SEE DETAIL 8/S-511. COORDINATE LOCATIONS WITH ARCHITECTURAL.

3.203 #6 DOWELS X 1'-4" LONG AT 14" O.C., 8" EMBED INTO EXISTING GRADE BEAM IN EPOXY. LOCATE DOWELS COINCIDENT WITH SLAB BOTTOM BARS.

3.204 TRENCH DRAIN, SEE DETAIL 14/S-511. PROVIDE 1 1/2 x 1 1/2 x 14" SOLID STEEL FILLER BAR.

3.205 TRENCH DRAIN, SEE DETAIL 14/S-511. PROVIDE 1 1/4 x 1 1/4 x 14" SOLID STEEL FILLER BAR.

3.206 CATCH BASIN, SEE PLUMBING.



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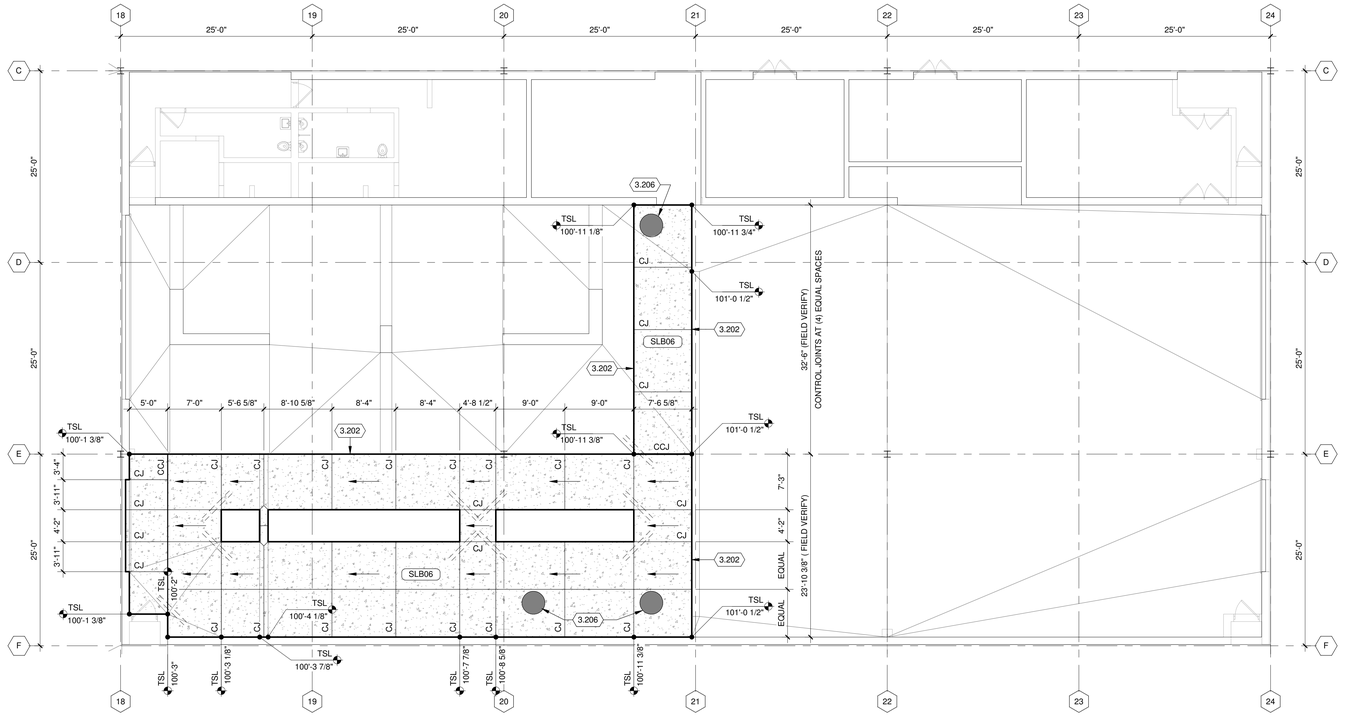
SHEET CONTENTS
PARTIAL FIRST FLOOR FLATWORK PLANS

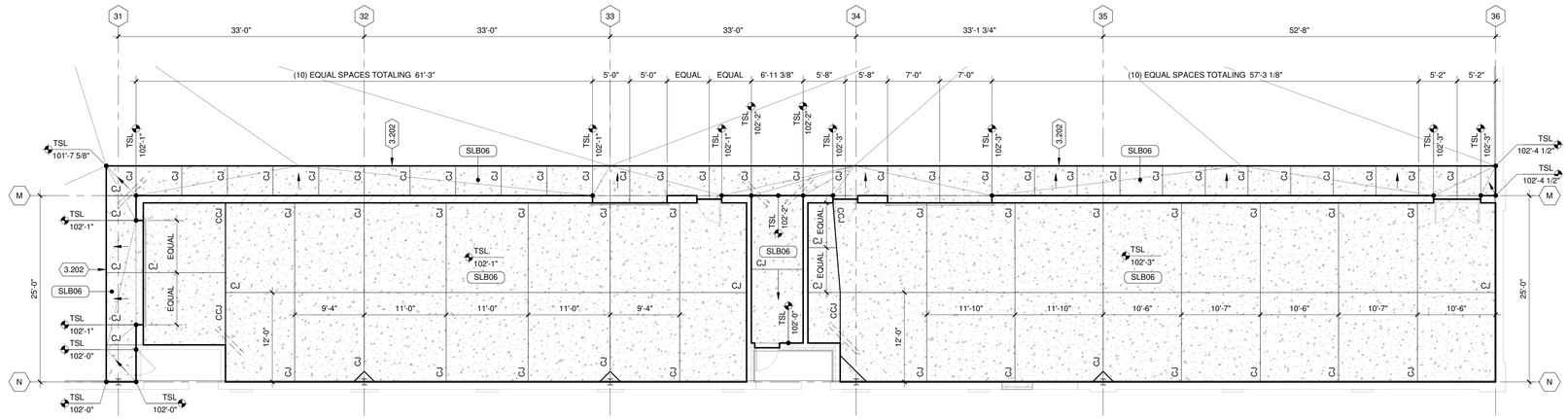
SHEET NO.:
S-111



TRUE NORTH PLAN NORTH

PARTIAL FLATWORK PLAN - AREA C

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

PARTIAL FLATWORK PLAN - AREA D

1/8" = 1'-0"

FLATWORK PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
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6. SLB12 IS A STRUCTURAL MAT SLAB ON PILES.
   - NO CONTROL JOINTS ALLOWED OTHER THAN THE CONSTRUCTION CONTROL JOINTS (CCJ) INDICATED.
   - CONCRETE BETWEEN CONSTRUCTION CONTROL JOINTS SHALL BE PLACED IN CONTINUOUS MONOLITHIC POUR.
   - HELICAL PILES ARE 40K CAPACITY SERVICE LEVEL. SEE FOUNDATION PLAN ON SHEET S-101 FOR PILE LOCATIONS.
7. FLOAT AND TROWEL FLOOR SLABS PER REQUIREMENTS OF ARCH. FLOOR FINISH SYSTEM.
8. (2) DASHED LINES = = = = INDICATE (2) ADDITIONAL #4 BARS (5'-0" LONG) DIAGONAL 6" FROM CORNER IN SLAB, 2" CLEAR FROM TOP OF SLAB.

KEYED NOTES

3.202 NEW TOP OF SLAB ELEVATION SHALL MATCH EXISTING TOP OF SLAB ELEVATION. SEE DETAIL 5/S-511 FOR JOINT CONDITION.

3.206 CATCH BASIN, SEE PLUMBING.

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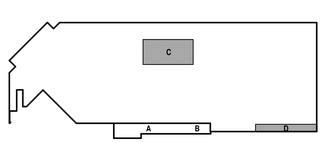
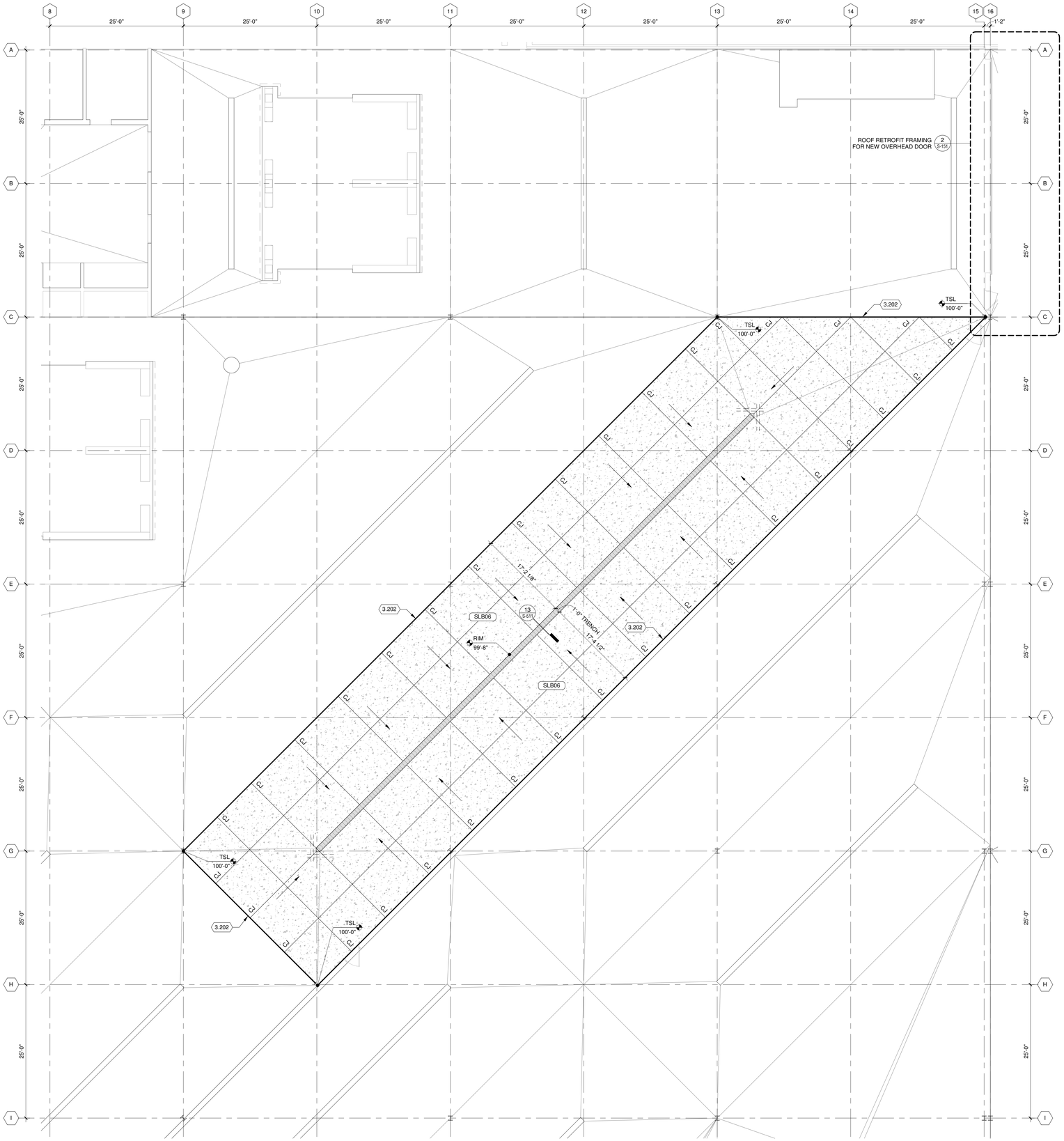
SHEET CONTENTS
PARTIAL FIRST FLOOR FLATWORK PLANS

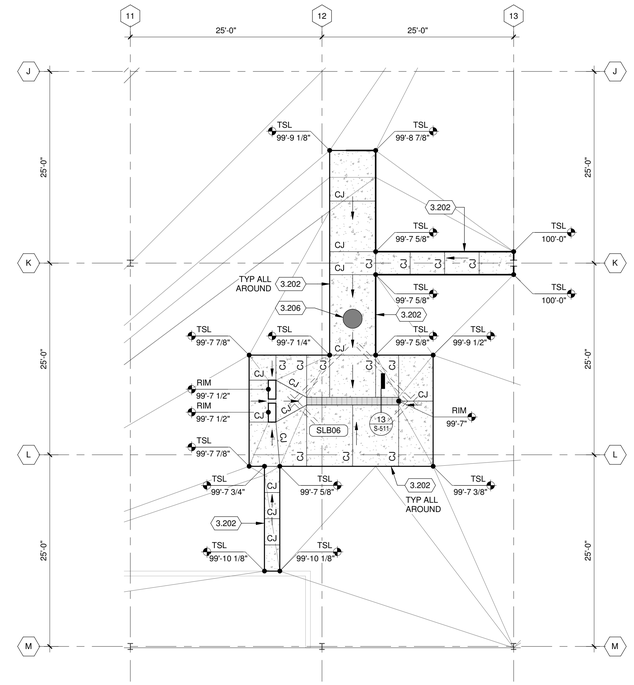
SHEET NO.:
S-112



KEY PLAN



TRUE NORTH PLAN NORTH **B** **PARTIAL FLATWORK PLAN - WASH BAY INFILL**
1/8" = 1'-0"



TRUE NORTH PLAN NORTH **1** **PARTIAL FLATWORK PLAN - CHASSIS WASH INFILL**
1/8" = 1'-0"

FLATWORK PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
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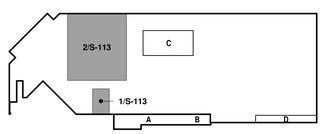
4. REFER TO SHEET S-511 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
5. REFER TO DETAIL 1/S-511 FOR STRUCTURAL SLAB TYPES.
6. SLB12 IS A STRUCTURAL MAT SLAB ON PILES.
   - NO CONTROL JOINTS ALLOWED OTHER THAN THE CONSTRUCTION CONTROL JOINTS (CCJ) INDICATED.
   - CONCRETE BETWEEN CONSTRUCTION CONTROL JOINTS SHALL BE PLACED IN CONTINUOUS MONOLITHIC POUR.
   - HELICAL PILES ARE 40K CAPACITY SERVICE LEVEL. SEE FOUNDATION PLAN ON SHEET S-101 FOR PILE LOCATIONS.
7. FLOAT AND TROWEL FLOOR SLABS PER REQUIREMENTS OF ARCH. FLOOR FINISH SYSTEM.
8. (2) DASHED LINES = = = = INDICATE (2) ADDITIONAL #4 BARS (5'-0" LONG) DIAGONAL 6" FROM CORNER IN SLAB, 2" CLEAR FROM TOP OF SLAB.

KEYED NOTES

3.202 NEW TOP OF SLAB ELEVATION SHALL MATCH EXISTING TOP OF SLAB ELEVATION. SEE DETAIL 5/S-511 FOR JOINT CONDITION.

3.206 CATCH BASIN, SEE PLUMBING.



KEY PLAN

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metro transit

CITY OF MADISON WISCONSIN

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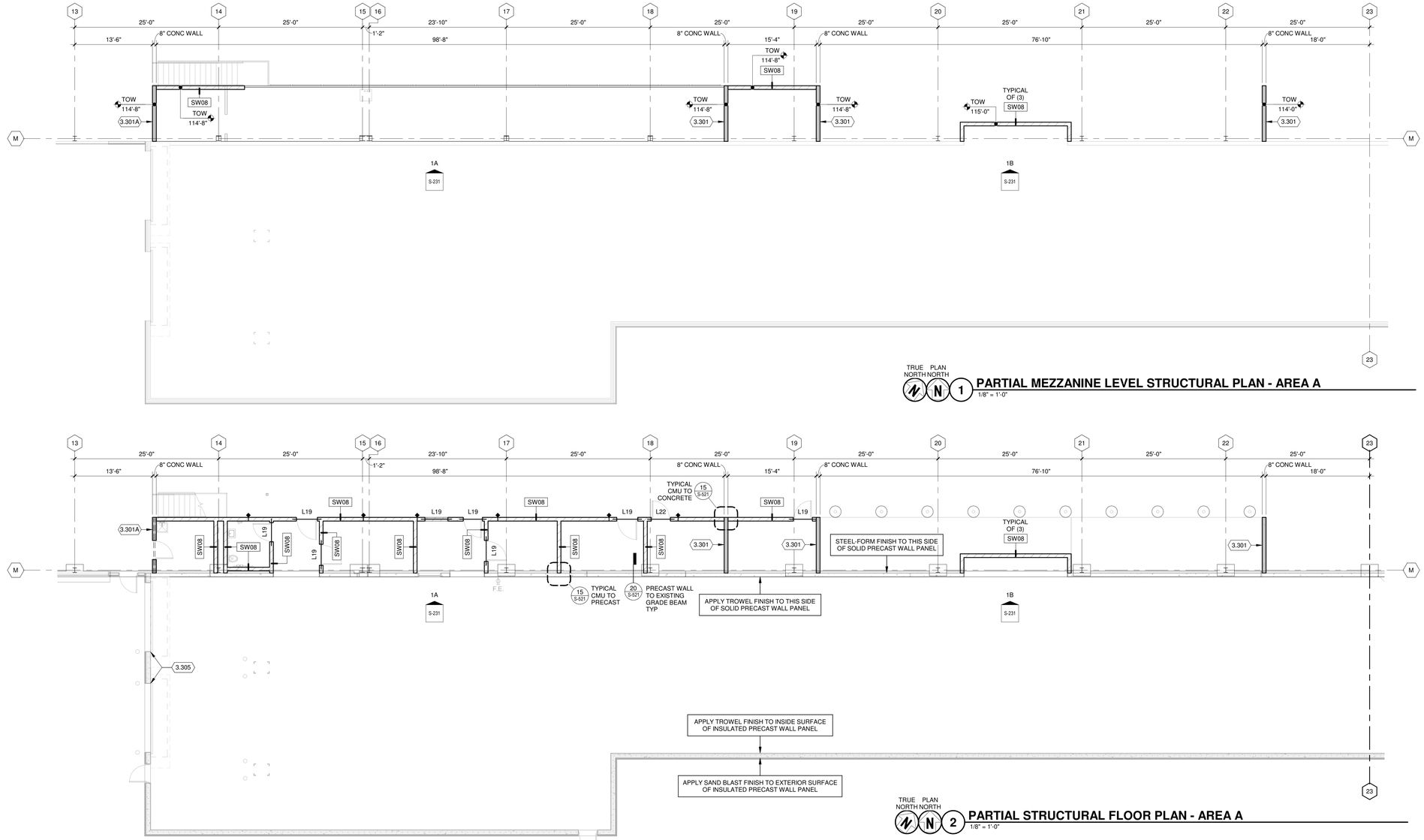
SHEET CONTENTS
PARTIAL FIRST FLOOR FLATWORK PLANS

SHEET NO.:
S-113



TRUE NORTH PLAN NORTH

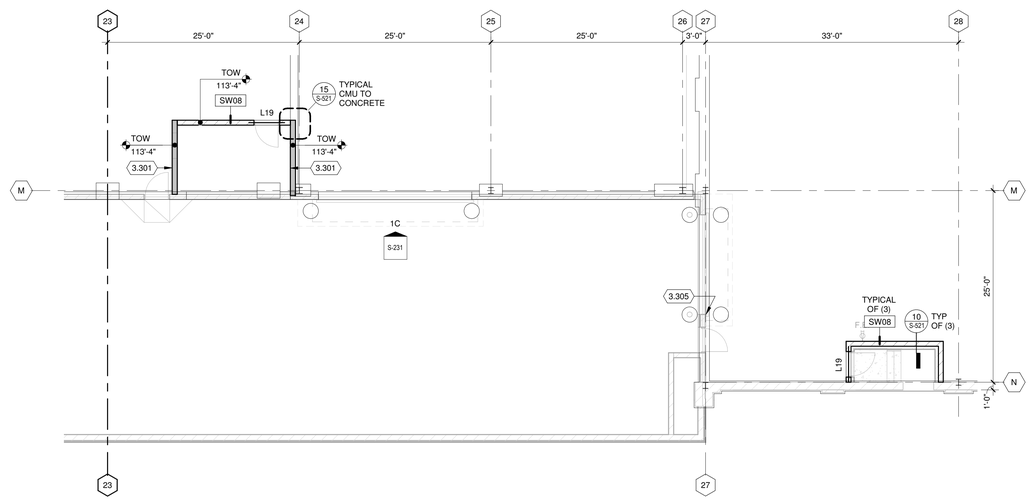
PARTIAL MEZZANINE LEVEL STRUCTURAL PLAN - AREA A

1/8" = 1'-0"

TRUE NORTH PLAN NORTH

PARTIAL STRUCTURAL FLOOR PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

PARTIAL STRUCTURAL FLOOR PLAN - AREA B

1/8" = 1'-0"

STRUCTURAL FLOOR PLAN GENERAL NOTES:

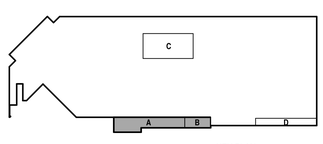
1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS AND SYMBOLOGY.
4. REFER TO SHEET S-521 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
5. ALL 8" (NOMINAL) MASONRY WALLS SHALL BE SW08 UNLESS NOTED OR DETAILED OTHERWISE.
6. GROUT ALL MASONRY SOLID BELOW ELEVATION 100'-0".
7. ALL MASONRY WALL REINFORCEMENT SHALL BE FULL HEIGHT UNLESS NOTED OR DETAILED OTHERWISE.
8. STRUCTURAL WALL TYPES SHALL REMAIN CONTINUOUS ACROSS LINTELS AND MASONRY CONTROL JOINTS (MCJ), UNLESS NOTED OR DETAILED OTHERWISE.
9. PROVIDE L19 LINTEL AT ALL MASONRY OPENINGS (NOT INDICATED) EXCEEDING 1'-0" IN WIDTH AND LESS THAN 4'-0" IN WIDTH. COORDINATE WITH ALL OTHER DISCIPLINES FOR LOCATION AND SIZE OF SUCH PENETRATIONS.
10. COORDINATE REQUIRED WALL PENETRATIONS WITH ALL OTHER DISCIPLINES TO AVOID PENETRATION OF STRUCTURAL MEMBERS AT LINTELS, TOP OF WALL, AND ANY OTHER STRUCTURAL ELEMENTS IN THE FIELD OF THE MASONRY WALL. NOTIFY ENGINEER PRIOR TO PENETRATION OF ANY STRUCTURAL MEMBERS INCLUDING, BUT NOT LIMITED TO, BOND BEAMS AND PORTIONS OF FULLY GROUTED MASONRY WALLS.
11. ◆ = CONTROL JOINT IN MASONRY WALL. CONTROL JOINTS IN MASONRY SHALL NOT BE LOCATED CLOSER THAN 2'-0" TO THE EDGE OF MASONRY OPENINGS, UNLESS NOTED OTHERWISE.
12. ALL PRECAST CONNECTIONS SHALL BE MADE WITH STAINLESS STEEL PLATE, WELDING WIRE/ROD, AND WORKED WITH TOOLS DEDICATED TO STAINLESS STEEL WORK.

KEYED NOTES

3.301 CONCRETE SHEAR WALL, SEE DETAIL 6/S-521.

3.301A CONCRETE SHEAR WALL, SEE DETAIL 6/S-521. ADD (2) #5 BARS 3" OVER DOOR OPENING, FULL LENGTH OF WALL.

3.305 1.9K HORIZONTAL REACTION LOAD FROM COILING DOOR. PROVIDE SOLID PRECAST JAMB AND HEAD FOR ANCHORAGE OF DOOR WITH CONCRETE SCREWS. COORDINATE SIZE AND LOCATION OF EMBED WITH DOOR SUPPLIER. TYPICAL AT ALL OVERHEAD DOOR JAMBS AT PRECAST WALLS.



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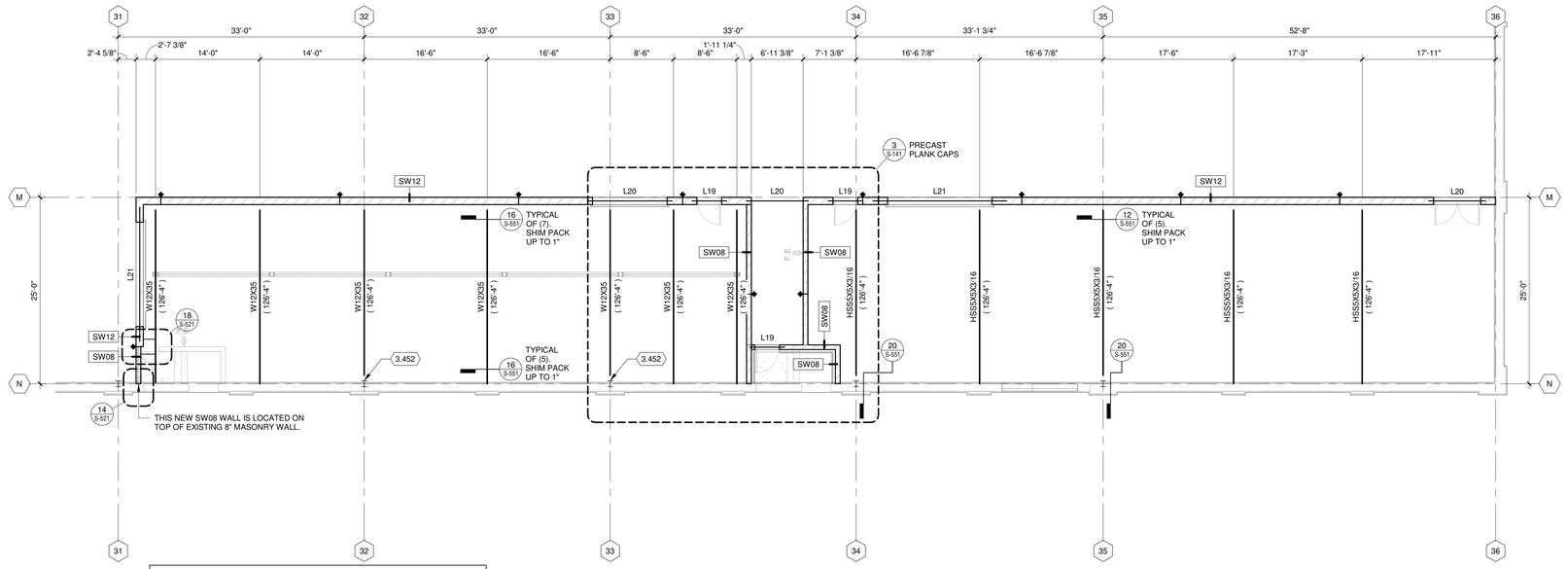
SHEET CONTENTS
PARTIAL STRUCTURAL FLOOR PLANS

SHEET NO.:
S-131



FALL PROTECTION FRAMING GENERAL NOTES:

1. FALL PROTECTION SUPPORT BEAMS HAVE BEEN DESIGNED FOR 5000 LB LOAD WITHIN MIDDLE FOURTH OF BEAM. CONNECION TO JOIST GIRDER DESIGNED AND JOIST GIRDER CHECKED FOR 3K REACTION.

TRUE NORTH PLAN NORTH

PARTIAL STRUCTURAL FLOOR PLAN - AREA D

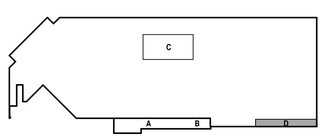
1/8" = 1'-0"

STRUCTURAL FLOOR PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS AND SYMBOLOGY.
4. REFER TO SHEET S-521 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
5. ALL 8" (NOMINAL) MASONRY WALLS SHALL BE SW08 UNLESS NOTED OR DETAILED OTHERWISE.
6. GROUT ALL MASONRY SOLID BELOW ELEVATION 100'-0".
7. ALL MASONRY WALL REINFORCEMENT SHALL BE FULL HEIGHT UNLESS NOTED OR DETAILED OTHERWISE.
8. STRUCTURAL WALL TYPES SHALL REMAIN CONTINUOUS ACROSS LINTELS AND MASONRY CONTROL JOINTS (MCJ), UNLESS NOTED OR DETAILED OTHERWISE.
9. PROVIDE L19 LINTEL AT ALL MASONRY OPENINGS (NOT INDICATED) EXCEEDING 1'-0" IN WIDTH AND LESS THAN 4'-0" IN WIDTH. COORDINATE WITH ALL OTHER DISCIPLINES FOR LOCATION AND SIZE OF SUCH PENETRATIONS.
10. COORDINATE REQUIRED WALL PENETRATIONS WITH ALL OTHER DISCIPLINES TO AVOID PENETRATION OF STRUCTURAL MEMBERS AT LINTELS, TOP OF WALL, AND ANY OTHER STRUCTURAL ELEMENTS IN THE FIELD OF THE MASONRY WALL. NOTIFY ENGINEER PRIOR TO PENETRATION OF ANY STRUCTURAL MEMBERS INCLUDING, BUT NOT LIMITED TO, BOND BEAMS AND PORTIONS OF FULLY GROUTED MASONRY WALLS.
11. ◆ = CONTROL JOINT IN MASONRY WALL. CONTROL JOINTS IN MASONRY SHALL NOT BE LOCATED CLOSER THAN 2'-0" TO THE EDGE OF MASONRY OPENINGS, UNLESS NOTED OTHERWISE.
12. ALL PRECAST CONNECTIONS SHALL BE MADE WITH STAINLESS STEEL PLATE, WELDING WIRE/ROD, AND WORKED WITH TOOLS DEDICATED TO STAINLESS STEEL WORK.

KEYED NOTES

3.452 ATTACH NEW BEAM TO EXISTING WF COLUMN WITH SINGLE PLATE SHEAR FRAMING CONNECTION, SIMILAR TO DETAIL 6/S-551. FIELD WELD SINGLE PLATE SHEAR PLATE TO EXISTING COLUMN.



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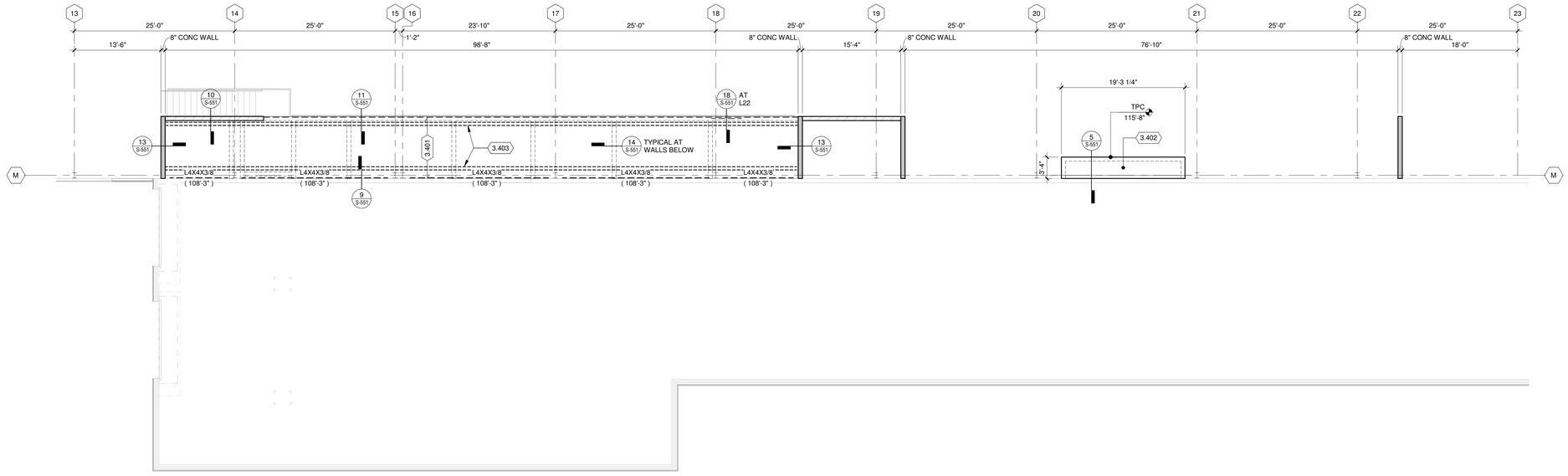
SHEET CONTENTS
PARTIAL STRUCTURAL FLOOR PLANS

SHEET NO.:
S-132

1/11/2019 3:58:48 PM C:\Revit Local\4503500-170148.02-S-Central-2018_mark.ellis@meadhunt.com.rvt



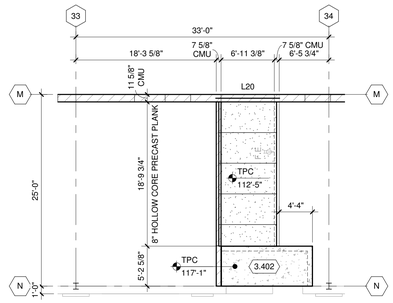
FRAMING PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS, AND SYMBOLOGY.
4. REFER TO SHEET S-551 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
5. TYPICAL AT ALL COLUMNS AT MEZZANINE: HOLD THE METAL DECK BACK FROM COLUMNS BY 1". PROVIDE LOOSE COLUMN CLOSURE PLATES AND 1" OF EXPANDED POLYSTYRENE INSULATION BETWEEN COLUMNS AND SLAB.

TRUE NORTH / PLAN NORTH — 1

PARTIAL MEZZANINE LEVEL FRAMING PLAN - AREA A

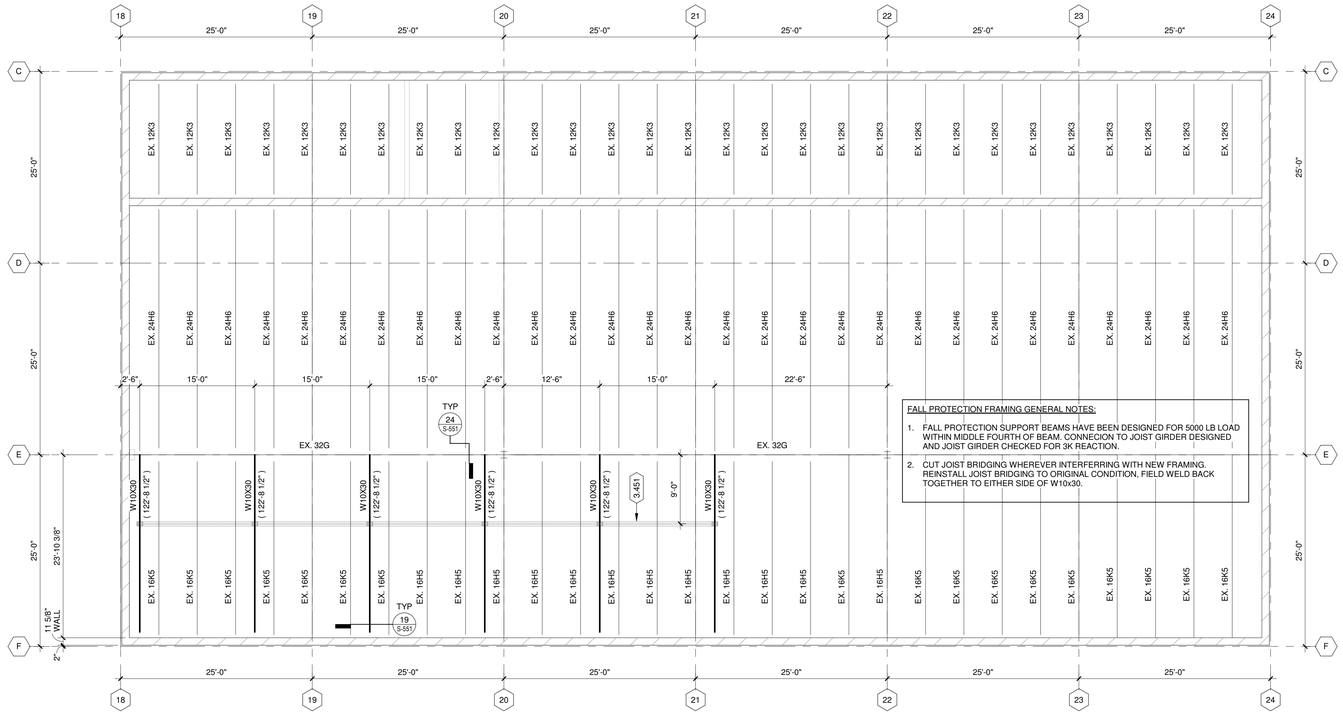
1/8" = 1'-0"



TRUE NORTH / PLAN NORTH — 3

PRECAST PLANK FRAMING PLAN - AREA D

1/8" = 1'-0"



FALL PROTECTION FRAMING GENERAL NOTES:

1. FALL PROTECTION SUPPORT BEAMS HAVE BEEN DESIGNED FOR 5000 LB LOAD WITHIN MIDDLE FOURTH OF BEAM. CONNECION TO JOIST GIRDER DESIGNED AND JOIST GIRDER CHECKED FOR 3K REACTION.
2. CUT JOIST BRIDGING WHEREVER INTERFERRING WITH NEW FRAMING. REINSTALL JOIST BRIDGING TO ORIGINAL CONDITION, FIELD WELD BACK TOGETHER TO EITHER SIDE OF W10x30.

TRUE NORTH / PLAN NORTH — 2

FALL PROTECTION FRAMING PLAN - AREA C

1/8" = 1'-0"

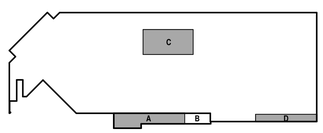
KEYED NOTES

3.401 3" NORMAL WEIGHT CONCRETE ON 2" 18GA. COMPOSITE DECKING (5" TOTAL THICKNESS), REINFORCED WITH 6x6-W2.1xW2.1 WWF. FASTEN METAL DECK TO SUPPORTS WITH #12 SCREW AT 12" O.C. AND AT SIDE LAPS WITH (4) #10 SCREWS.

3.402 8" SOLID PRECAST CONCRETE PLANK LID.

3.403 PROVIDE (2) #4 BARS CONTINUOUS CENTERED IN 3" CONCRETE OVER METAL DECK.

3.451 DBI SALA GLYDE-SAF HD FALL PROTECTION SYSTEM.



KEY PLAN

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

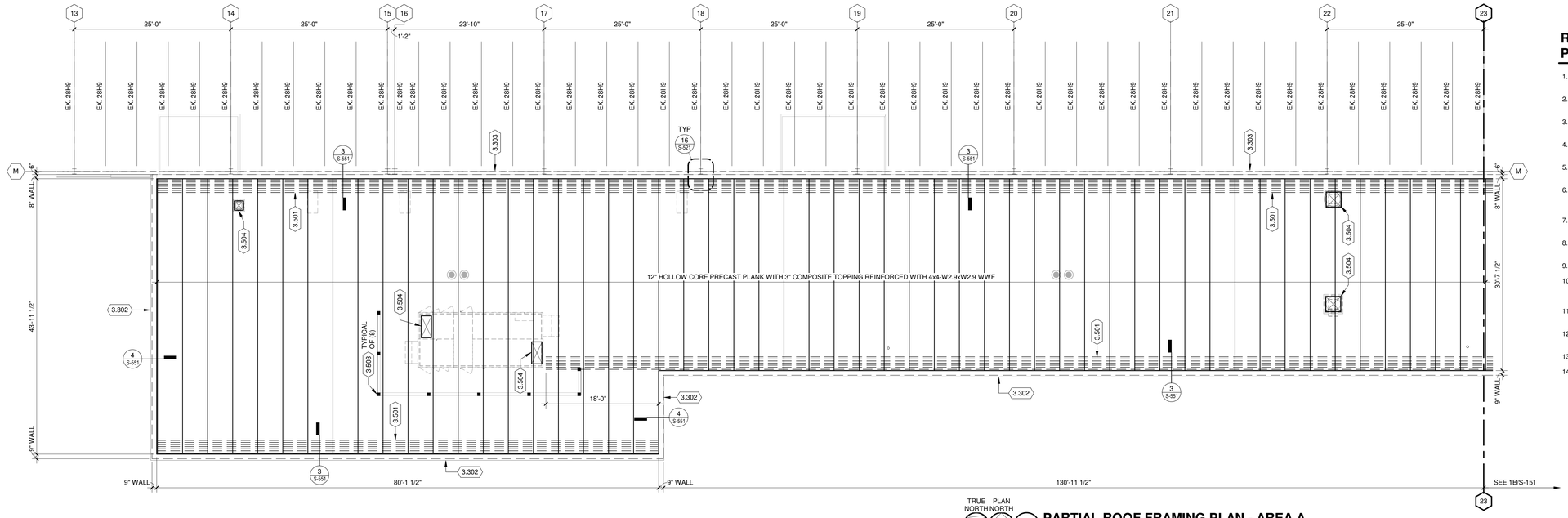
ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DXC
DRAWN BY: MJE
CHECKED BY: DXC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
PARTIAL MEZZANINE LEVEL FRAMING AND FALL PROTECTION FRAMING PLANS

SHEET NO.:

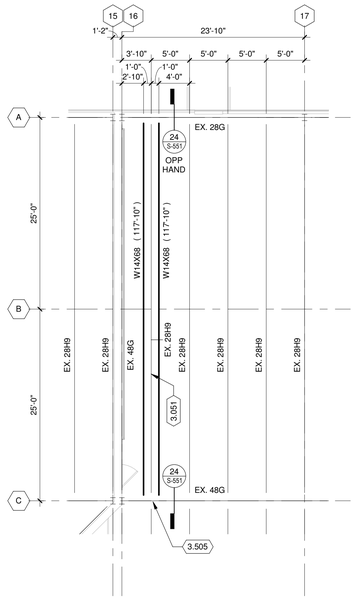
S-141



TRUE NORTH PLAN NORTH

PARTIAL ROOF FRAMING PLAN - AREA A

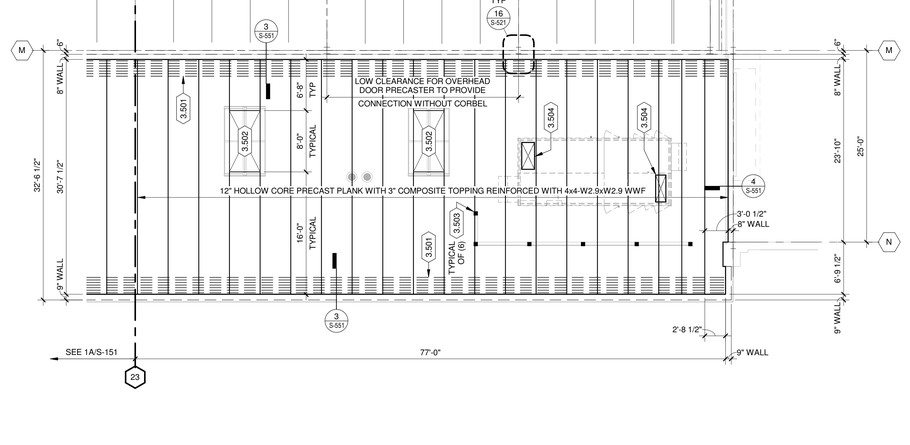
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

INTERIOR OVERHEAD DOOR RETROFIT FRAMING PLAN

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

PARTIAL ROOF FRAMING PLAN - AREA B

1/8" = 1'-0"

ROOF FRAMING PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON CIVIL SITE PLAN = ELEVATION 100'-0" ON STRUCTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. REFER TO SHEET S-001 FOR STRUCTURAL LEGENDS, ABBREVIATIONS, AND SYMBOLOGY.
4. REFER TO SHEET S-010 FOR ROOF LOADING PLAN AND SPECIAL JOIST LOADING REQUIREMENTS.
5. REFER TO SHEET S-551 FOR TYPICAL DETAILS NOT REFERENCED ON THIS SHEET.
6. ALL STRUCTURAL STEEL IN WASHBAY SHALL BE TYPE 316 STAINLESS STEEL. THIS INCLUDES PRECAST CONNECTION PLATES, EMBEDS, AND PLANK HEADERS.
7. SANDWICH PANEL TO PANEL FLATNESS TOLERANCE EQUALS 1/4 INCH, UNLESS NOTED OTHERWISE.
8. PRECAST ROOF PLANK AND 3" TOPPING WIEGHT SHALL NOT EXCEED 117 PSF.
9. MAXIMUM PRECAST ROOF PLANK CAMBER AT ERECTION = 1.0 INCHES.
10. 3" TOPPING IS AT ENDS OF PRECAST ROOF PLANK. PRECAST ROOF PLANK. CAMBER REDUCES TOPPING DEPTH AWAY FROM ENDS OF PLANK.
11. TOPPING IS COMPOSITE. PRECAST ROOF PLANK TOP SURFACE SHALL BE ROUGHENED.
12. MOISTEN PRECAST ROOF PLANK TOP SURFACE BEFORE PLACEMENT OF TOPPING CONCRETE.
13. MAXIMUM LONG TERM CHANGE IN CAMBER EQUALS -1.0 INCHES.
14. NORTH-SOUTH DIAPHRAGM COLLECTORS SHALL BE PROVIDED BY PLANK

KEYED NOTES

3.051 CUT WEBS OF EXISTING JOIST 1" BELOW TOP CHORD. REMOVE BOTTOM CORD AND WEB BELOW CUTS.

3.302 EXTERIOR PRECAST WALL PANEL SHALL BE FULLY COMPOSITE STRUCTURALLY. EXPOSED EXTERIOR FACE FINISH TO BE ABRASIVE-BLAST FINISH. INTERIOR SURFACE TO BE TROWEL FINISHED. SEAL EXTERIOR SIDE OF PRECAST WITH CONCRETE SEALER - SEE 033000. INSIDE FACE TO BE FINISHED PER ARCHITECTURAL FINISH SCHEDULE.

3.303 LINE "M" PRECAST WALL PANEL SHALL BE TROWEL FINISHED ON ADDITION SIDE AND AS-CAST FINISH ON EXISTING BUILDING SIDE. SEAL EXISTING BUILDING SIDE OF PRECAST WITH CONCRETE SEALER. ADDITION SIDE TO BE FINISHED PER ARCHITECTURAL FINISH SCHEDULE.

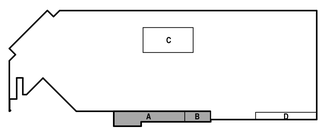
3.501 DIAPHRAGM CHORD SHALL CONSIST OF (7) #4 BARS SPACED AT 4" O.C. CENTERED IN TOPPING, MAINTAIN 2" CLEAR FROM EDGE OF SLAB.

3.502 ROOF OPENING FOR SKYLIGHT. PRECAST PLANK HEADER SUPPORT PER DETAIL 2/S-551. COORDINATE EXACT SIZE AND LOCATION WITH ARCHITECTURAL.

3.503 PRECAST EMBED PLATE FOR MECHANICAL SCREEN WALL POST, SEE DETAILS ON SHEET S-551. COORDINATE SCREEN WALL LOCATION WITH ARCHITECTURAL AND MECHANICAL.

3.504 ROOF OPENING FOR MECHANICAL PENETRATION. PRECAST HEADER SUPPORT PER DETAIL 2/S-551. COORDINATE EXACT SIZE AND LOCATION OF OPENING WITH MECHANICAL.

3.505 REINFORCE EXISTING GIRDER PER DETAIL 8/S-551.



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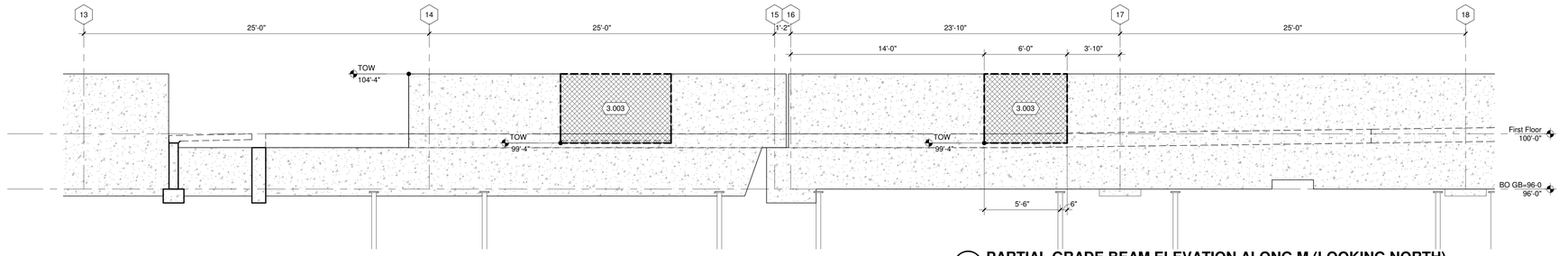
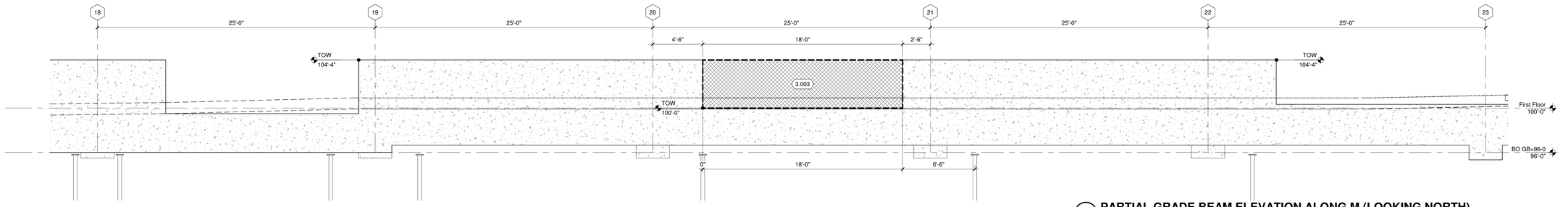
SHEET CONTENTS
PARTIAL ROOF FRAMING PLANS

SHEET NO.:
S-151

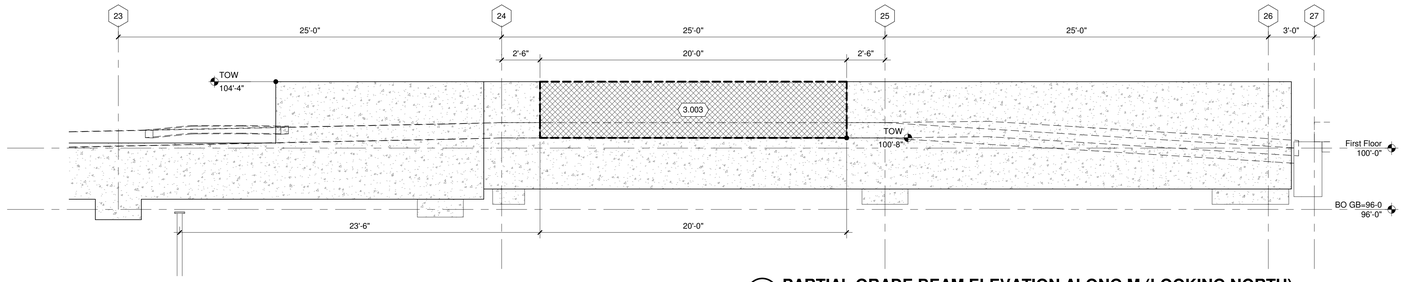
1/11/2019 3:59:02 PM C:\Revit Local\4503500-170148.02-S-Central-2018_mark.ellis@meadhunt.com.rvt



1A PARTIAL GRADE BEAM ELEVATION ALONG M (LOOKING NORTH)
1/4" = 1'-0"



1B PARTIAL GRADE BEAM ELEVATION ALONG M (LOOKING NORTH)
1/4" = 1'-0"



1C PARTIAL GRADE BEAM ELEVATION ALONG M (LOOKING NORTH)
1/4" = 1'-0"

KEYED NOTES

3.003 SAW CUT AND REMOVE PORTION OF EXISTING GRADE BEAM, DO NOT OVER CUT CORNERS.

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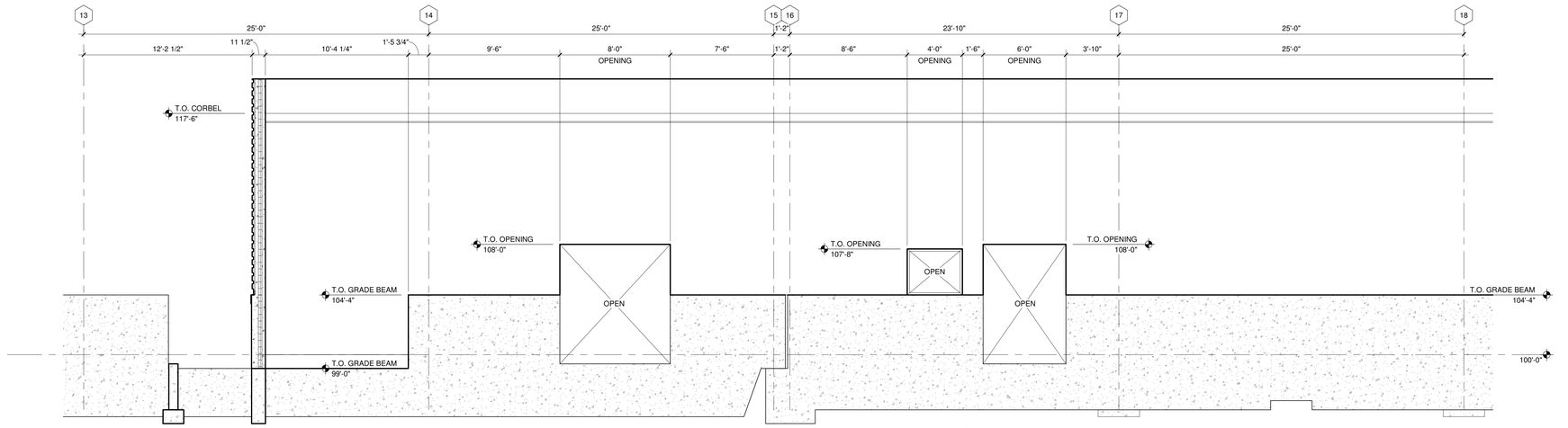
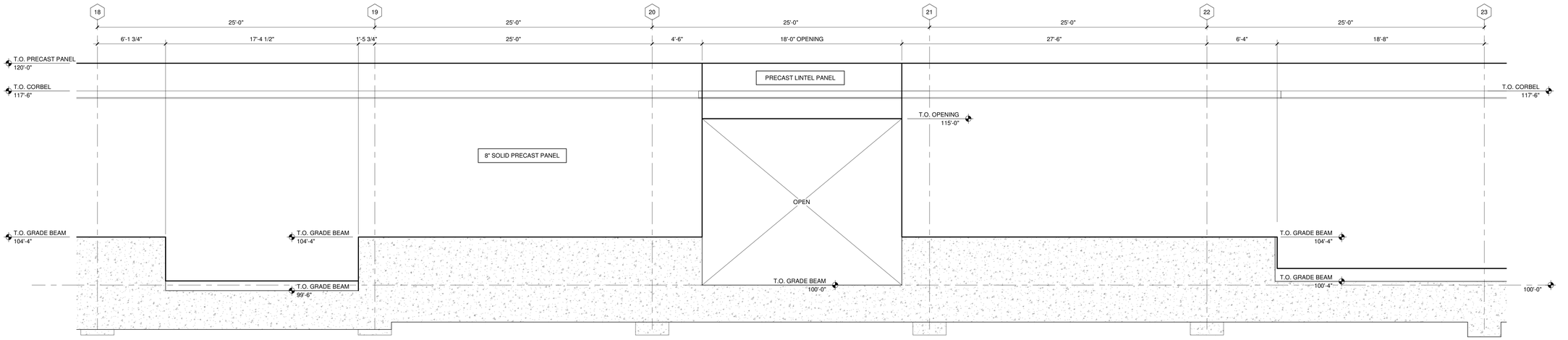
SHEET CONTENTS
WALL ELEVATIONS

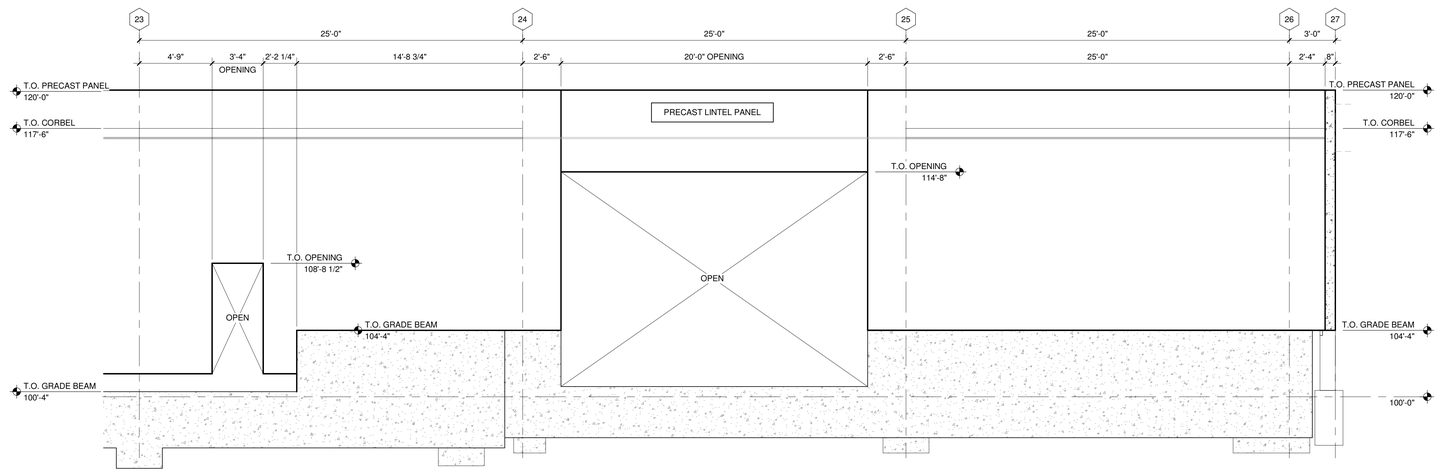
SHEET NO.:
S-201



1A PARTIAL PRECAST WALL ELEVATION ALONG M (LOOKING NORTH)
1/4" = 1'-0"



1B PARTIAL PRECAST WALL ELEVATION ALONG M (LOOKING NORTH)
1/4" = 1'-0"



1C PARTIAL PRECAST WALL ELEVATION ALONG M (LOOKING NORTH)
1/4" = 1'-0"

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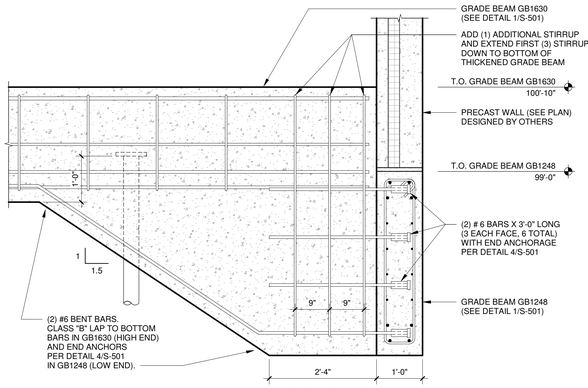
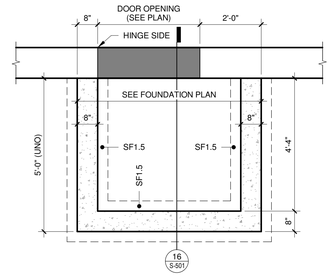
SHEET CONTENTS
WALL ELEVATIONS

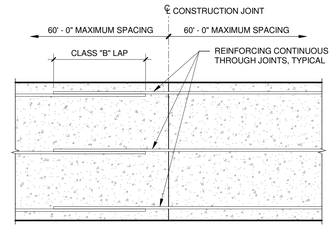
SHEET NO.:
S-231



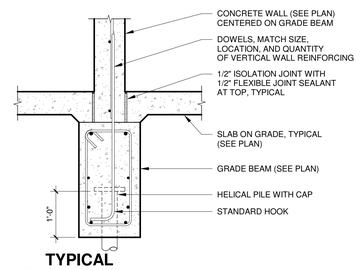
19 GRADE BEAM TO GRADE BEAM CONNECTION
3/4" = 1'-0"



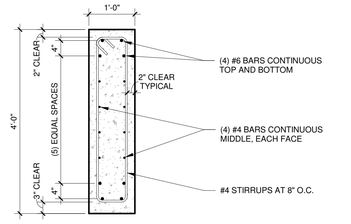
15 TYPICAL STOOP PLAN VIEW
1/2" = 1'-0"



10 TYPICAL FOOTING CONSTRUCTION JOINT
3/4" = 1'-0"



5 TYPICAL CONCRETE WALL AT GRADE BEAM
3/4" = 1'-0"



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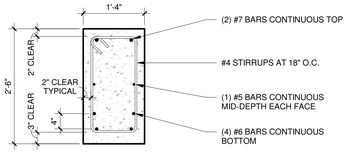
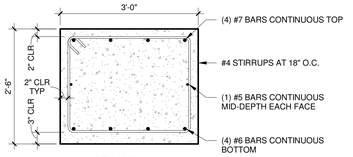
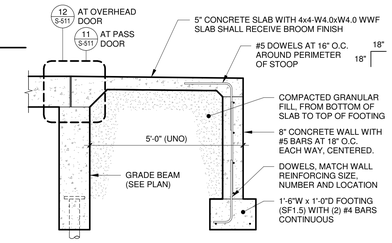


GB1630

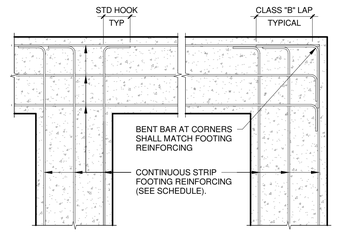


GB3630

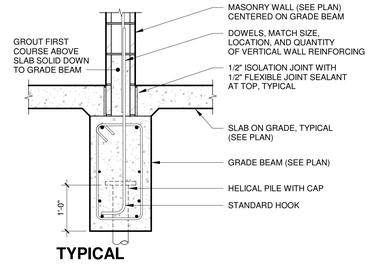
1 TYPICAL GRADE BEAMS
3/4" = 1'-0"



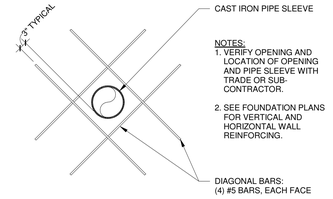
16 TYPICAL STOOP SECTION
1/2" = 1'-0"



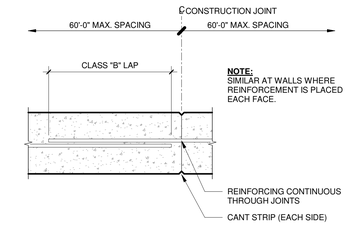
11 TYPICAL FOOTING INTERSECTIONS
1/2" = 1'-0"



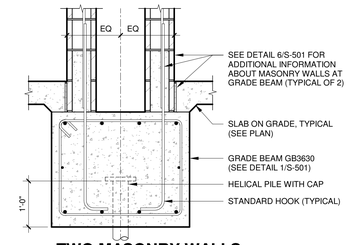
6 TYPICAL MASONRY WALL AT GRADE BEAM
3/4" = 1'-0"



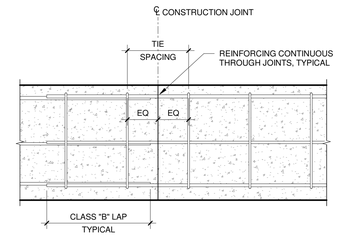
17 GRADE BEAM/ FOUNDATION WALL PENETRATION
1/2" = 1'-0"



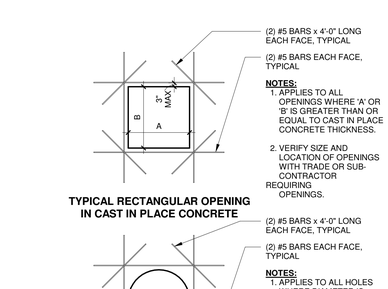
12 TYPICAL FOUNDATION AND CONCRETE WALL CONST. JOINT
1" = 1'-0"



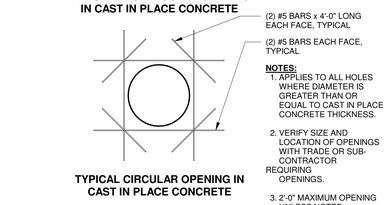
7 TWO MASONRY WALLS AT SINGLE GRADE BEAM
3/4" = 1'-0"



2 TYPICAL GRADE BEAM CONSTRUCTION JOINT
NO SCALE

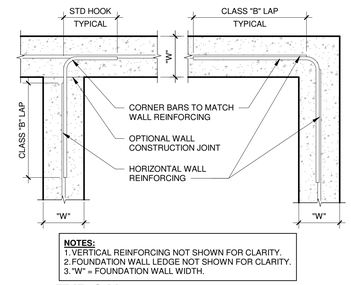


TYPICAL RECTANGULAR OPENING IN CAST IN PLACE CONCRETE

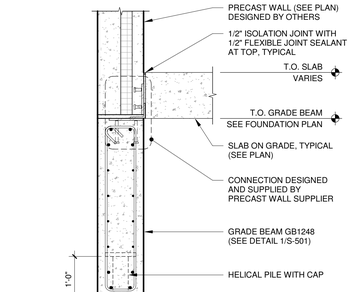


TYPICAL CIRCULAR OPENING IN CAST IN PLACE CONCRETE

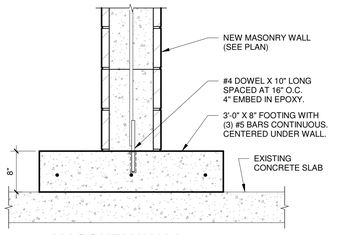
18 TYPICAL CONCRETE PENETRATION REINFORCEMENT
1/4" = 1'-0"



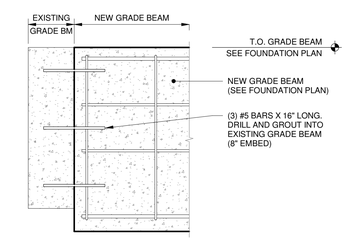
13 TYPICAL FOUNDATION WALL INTERSECTIONS
1" = 1'-0"



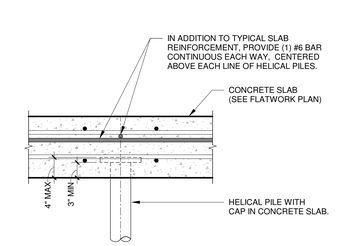
8 TYPICAL PRECAST WALL AT GRADE BEAM
3/4" = 1'-0"



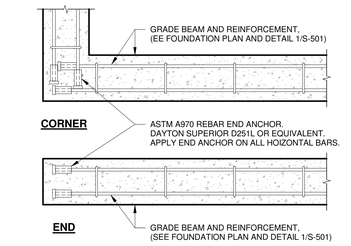
3 MASONRY WALL FOOTING ON EXISTING SLAB
1" = 1'-0"



14 TYPICAL NEW TO EXISTING GRADE BEAM CONNECTION
3/4" = 1'-0"



9 HELICAL PILE AT SLAB
1" = 1'-0"



4 TYPICAL GRADE BEAM CORNER/END
3/4" = 1'-0"

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

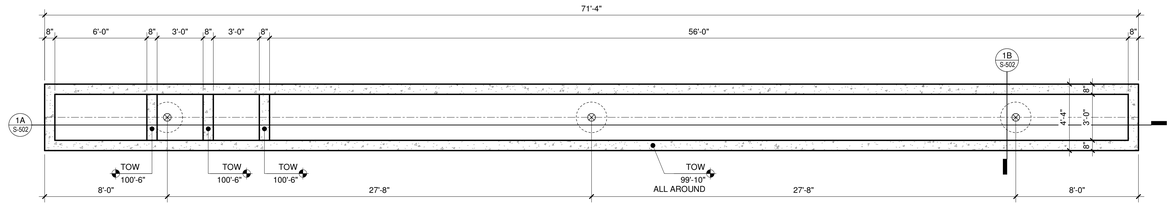
1101 EAST WASHINGTON AVE.
MADISON, WI 53703

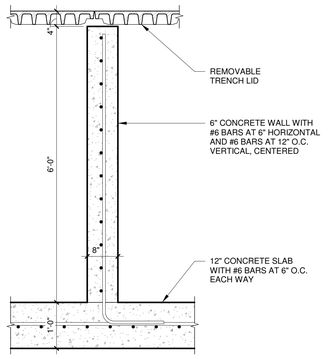
ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DXC
DRAWN BY: MJE
CHECKED BY: DXC
DO NOT SCALE DRAWINGS

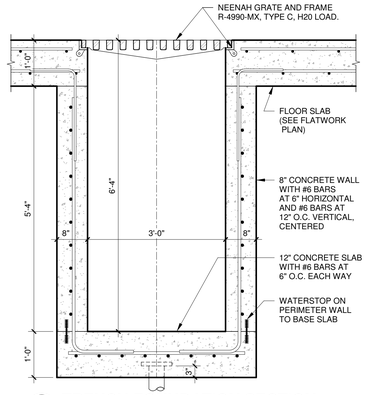
SHEET CONTENTS
FOUNDATION DETAILS

SHEET NO.:
S-501





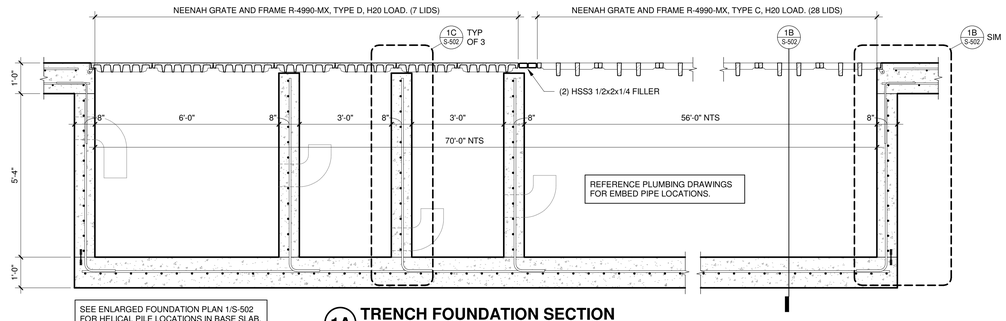
1C TRENCH FOUNDATION SECTION
3/4" = 1'-0"



1B TRENCH FOUNDATION SECTION
3/4" = 1'-0"

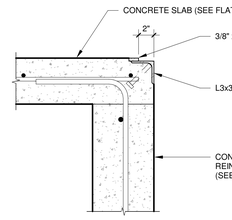
TRUE NORTH PLAN NORTH

1 ENLARGED FOUNDATION PLAN
1/4" = 1'-0"

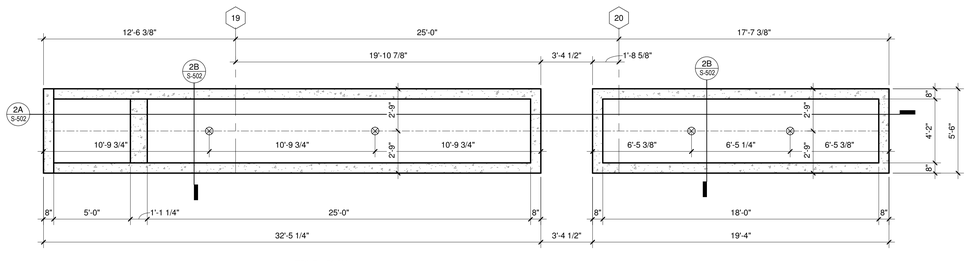


SEE ENLARGED FOUNDATION PLAN 1/S-502
FOR HELICAL PILE LOCATIONS IN BASE SLAB.

1A TRENCH FOUNDATION SECTION
1/2" = 1'-0"

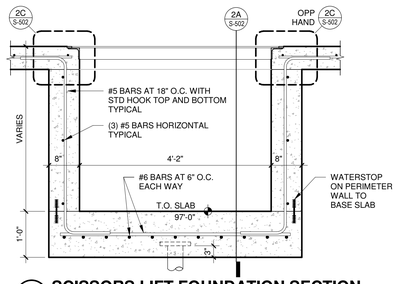


2C SCISSORS LIFT FOUNDATION DETAIL
1 1/2" = 1'-0"

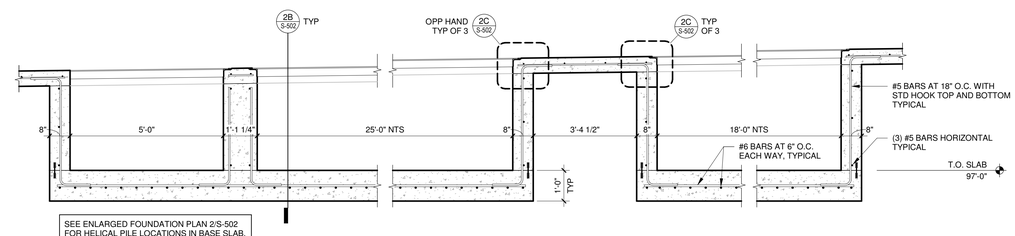


TRUE NORTH PLAN NORTH

2 ENLARGED FOUNDATION PLAN
1/4" = 1'-0"



2B SCISSORS LIFT FOUNDATION SECTION
3/4" = 1'-0"



SEE ENLARGED FOUNDATION PLAN 2/S-502
FOR HELICAL PILE LOCATIONS IN BASE SLAB.

2A SCISSORS LIFT FOUNDATION SECTION
1/2" = 1'-0"

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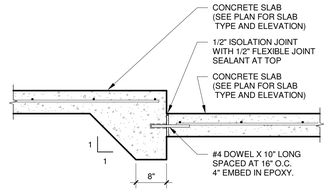
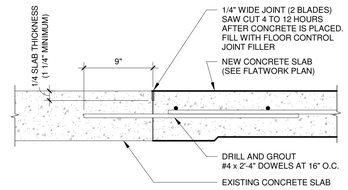
DO NOT SCALE DRAWINGS

SHEET CONTENTS
FOUNDATION
DETAILS

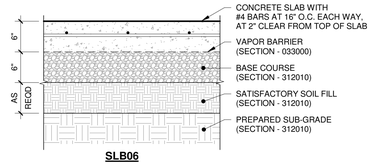
SHEET NO.:
S-502



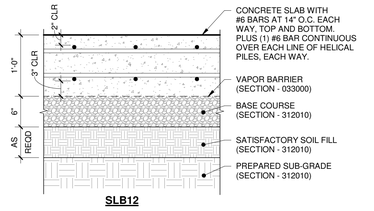
10 EQUIPMENT AREA SLAB STEP
3/4" = 1'-0"



5 NEW SLAB AT EXISTING
NO SCALE

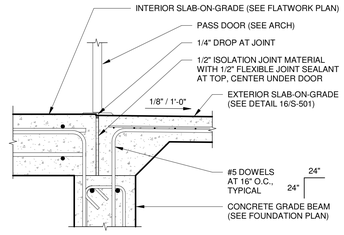


SLB06

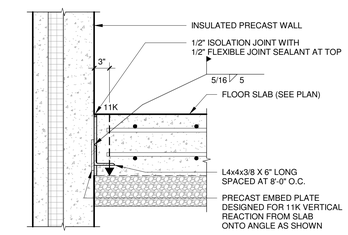


SLB12

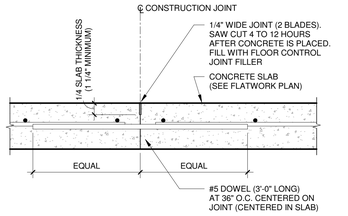
1 STRUCTURAL SLAB TYPES
NO SCALE



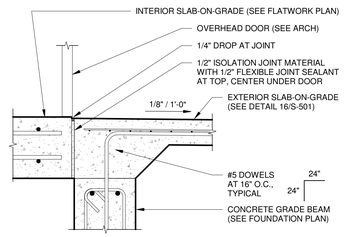
11 SLAB AT PASS DOOR
1" = 1'-0"



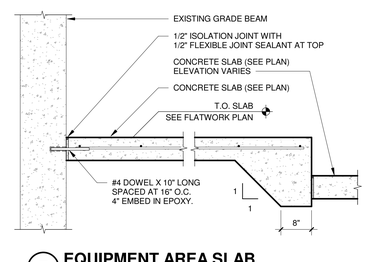
6 SLAB AT PRECAST WALL
1" = 1'-0"



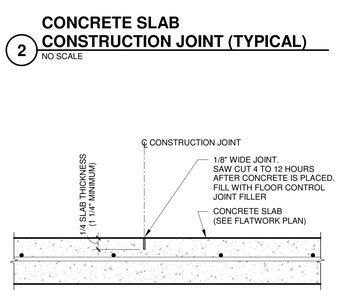
CONCRETE SLAB CONSTRUCTION JOINT (TYPICAL)
NO SCALE



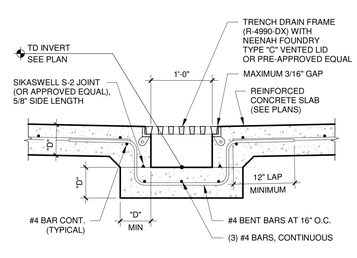
12 SLAB AT OVERHEAD DOOR
1" = 1'-0"



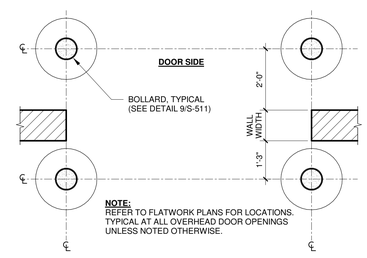
7 EQUIPMENT AREA SLAB
3/4" = 1'-0"



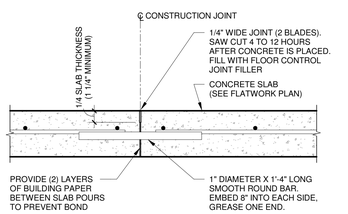
CONCRETE SLAB CONTROL JOINT "CJ" (TYPICAL)
NO SCALE



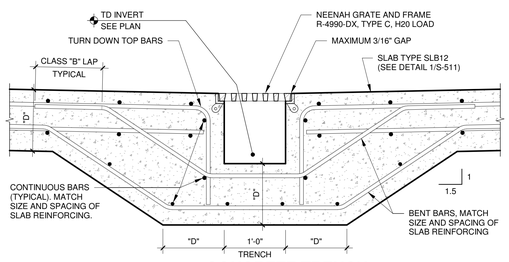
13 CONCRETE TRENCH DRAIN
1" = 1'-0"



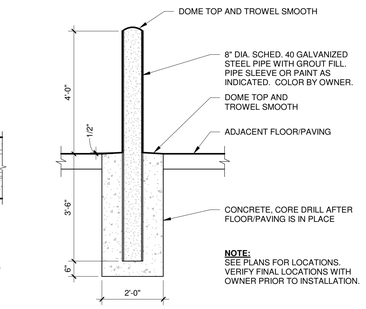
8 BOLLARD LOCATION PLAN
1/2" = 1'-0"



CONCRETE SLAB CONSTRUCTION CONTROL JOINT "CCJ" (TYPICAL)
NO SCALE



CONCRETE TRENCH DRAIN IN STRUCTURAL SLAB
1" = 1'-0"



8" DIAMETER GALVANIZED BOLLARD POST
1/2" = 1'-0"

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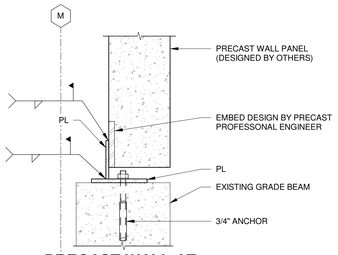
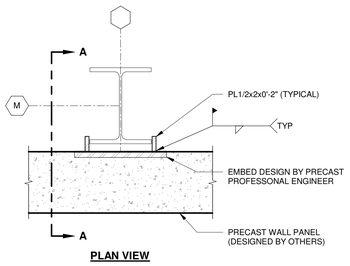
SHEET CONTENTS
FLATWORK DETAILS

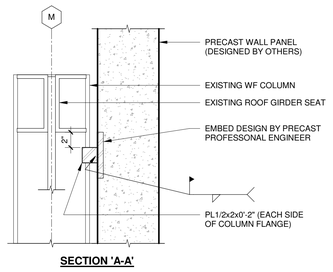
SHEET NO.:
S-511



20 PRECAST WALL AT EXISTING GRADE BEAM
1 1/2" = 1'-0"

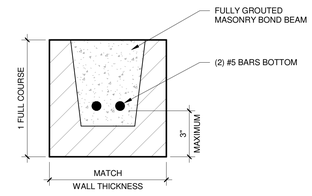


PLAN VIEW

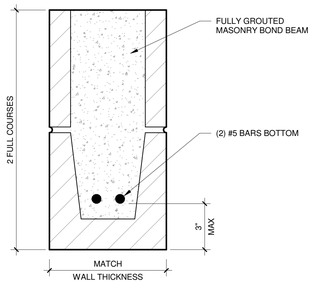


SECTION 'A-A'

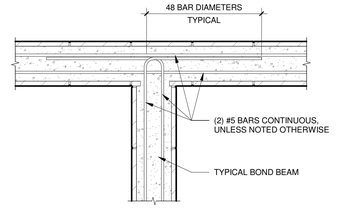
16 PRECAST WALL AT EXISTING COLUMN
1 1/2" = 1'-0"



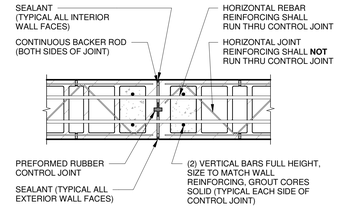
11 BOND BEAM LINTEL L19
3" = 1'-0"



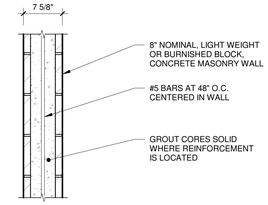
12 BOND BEAM LINTEL L20
3" = 1'-0"



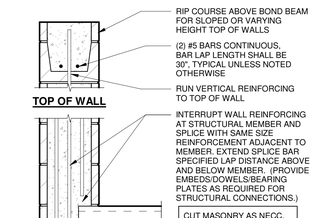
7 TYPICAL MASONRY BOND BEAM INTERSECTION
NO SCALE



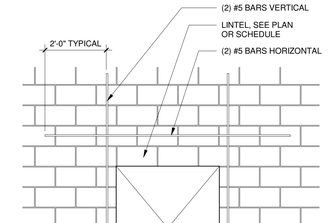
4 TYPICAL MASONRY CONTROL JOINT
NO SCALE



SW08

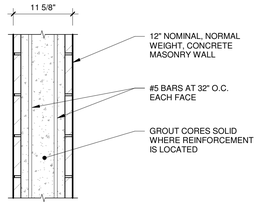


8 TYPICAL MASONRY BOND BEAM
NO SCALE



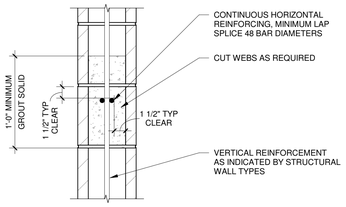
NOTE:
IN ADDITION TO OPENINGS SHOWN ON THE DRAWINGS, MASONRY AND STEEL WORK SHALL INCLUDE PROVIDING MASONRY WALL OPENINGS AND ASSOCIATED LINTELS REQUIRED FOR MECHANICAL/ELECTRICAL EQUIPMENT (OTHER THAN INDIVIDUAL PIPE PENETRATIONS FIELD DRILLED BY THE APPROPRIATE TRADES DURING THEIR WORK), INCLUDING COORDINATING WITH OTHER TRADES, GENERAL CONTRACTOR, ARCHITECT/ENGINEER, AND FINAL MECHANICAL AND ELECTRICAL DRAWINGS TO VERIFY EXACT SIZES AND LOCATIONS OF ALL SUCH OPENINGS AS WORK PROGRESSES. FINAL SIZES MAY NOT BE AVAILABLE UNTIL EQUIPMENT SHOP DRAWINGS ARE RECEIVED FROM SUCCESSFUL BIDDERS. ALL PARTIES SHOULD BE PREPARED TO PLAN AND COOPERATE ACCORDINGLY TO AVOID UNNECESSARY DELAYS IN THE WORK.

5 TYPICAL MASONRY OPENING REINFORCEMENT
NO SCALE

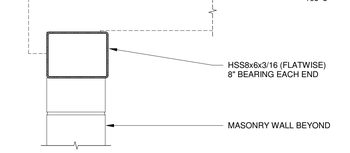


SW12

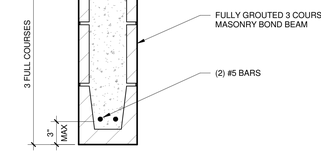
1 STRUCTURAL WALL TYPES
NO SCALE



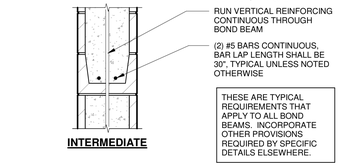
HORIZONTAL REINFORCING



17 HSS LINTEL L22
1 1/2" = 1'-0"



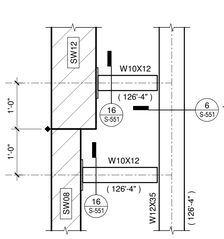
13 BOND BEAM LINTEL L21
1 1/2" = 1'-0"



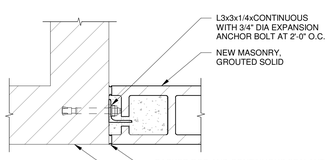
10 MASONRY WALL ON EXISTING SLAB
NO SCALE

NOTE:
DOWEL PLACEMENT IN FOUNDATION WALL TO MATCH REBAR PLACEMENT

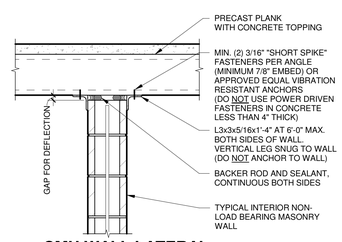
3 TYPICAL REBAR PLACEMENT IN MASONRY WALL
NO SCALE



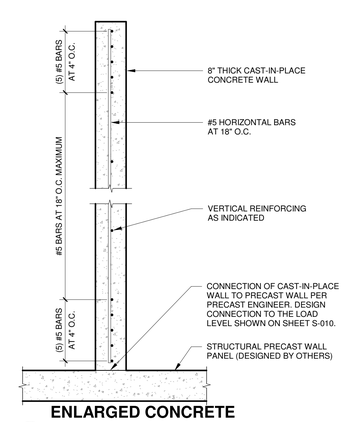
18 MASONRY WALL TOP BRACE
3/4" = 1'-0"



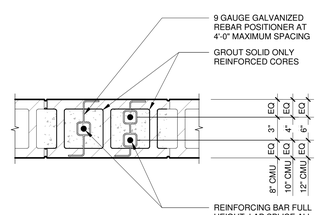
14 MASONRY CONNECTION
NO SCALE



9 CMU WALL LATERAL SUPPORT AT PRECAST PLANK
NO SCALE

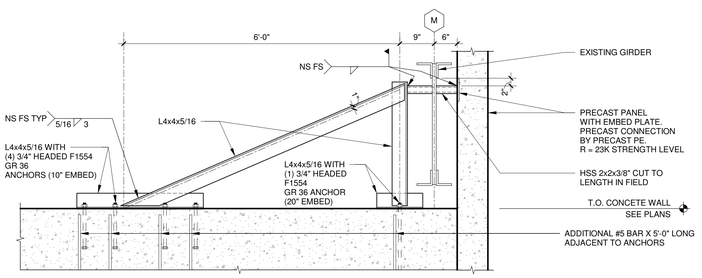


6 ENLARGED CONCRETE SHEAR WALL PLAN DETAIL
NO SCALE

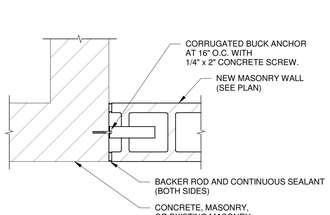


VERTICAL REINFORCING

2 TYPICAL BAR PLACEMENT IN MASONRY CORE
NO SCALE



19 CONCRETE SHEAR WALL TO PRECAST WALL CONNECTION
3/4" = 1'-0"



NOTE:
TYPICAL WHERE NEW MASONRY ABUTS CONCRETE, PRECAST, OR EXISTING MASONRY, UNLESS NOTED OTHERWISE.

15 MASONRY TO CONCRETE, PRECAST, OR EXISTING MASONRY
NO SCALE

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phone: 608-273-6380
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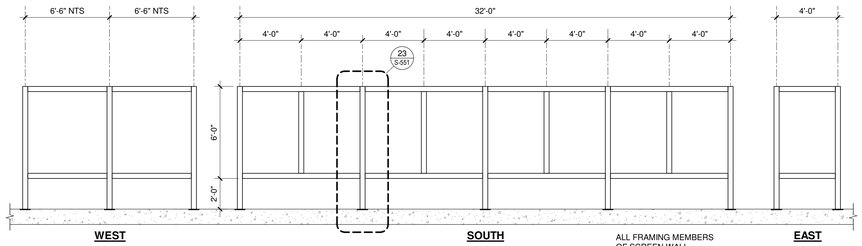
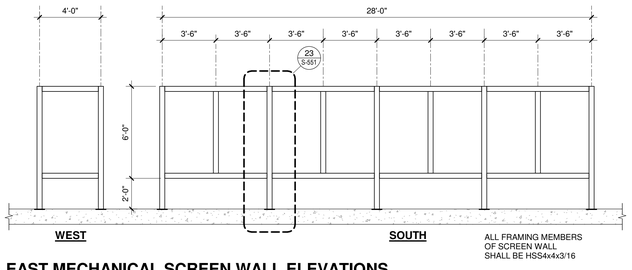
CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DXC
DRAWN BY: MJE
CHECKED BY: DXC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
WALL DETAILS

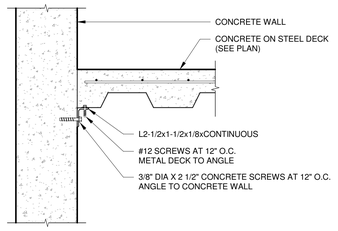
SHEET NO.:
S-521



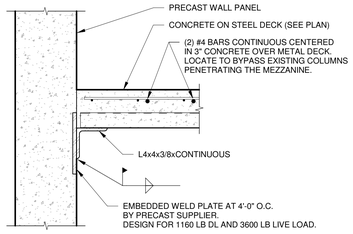
21 WEST MECHANICAL SCREEN WALL ELEVATIONS
1/4" = 1'-0"



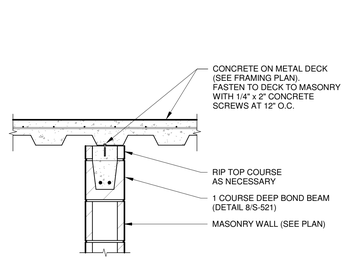
22 EAST MECHANICAL SCREEN WALL ELEVATIONS
1/4" = 1'-0"



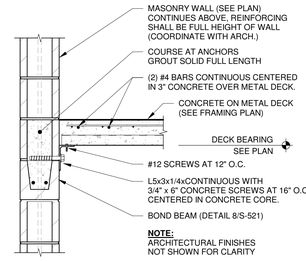
13 DECK SIDELAP AT CONCRETE WALL
1 1/2" = 1'-0"



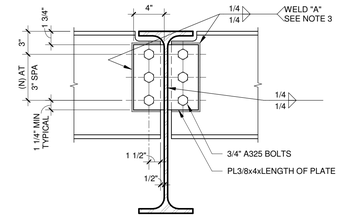
9 DECK BEARING AT PRECAST WALL
1 1/2" = 1'-0"



14 DECK BEARING AT MASONRY WALL
1" = 1'-0"



10 DECK BEARING AT MASONRY WALL
1" = 1'-0"



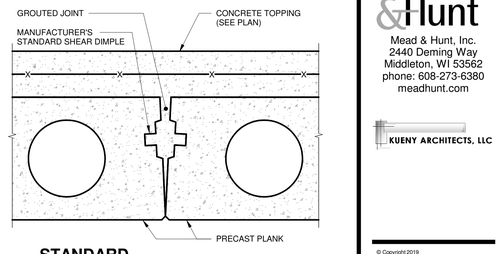
SINGLE PLATE SHEAR CONNECTION

NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS (N)	LENGTH OF PLATE
W36	10	29 1/2"
W33	9	26 1/2"
W30	8	23 1/2"
W24 - W27	7	20 1/2"
W21	6	17 1/2"
W18	5	14 1/2"
W16	4	11 1/2"
W12 - W14	3	8 1/2"
W8 - W10	2	5 1/2"

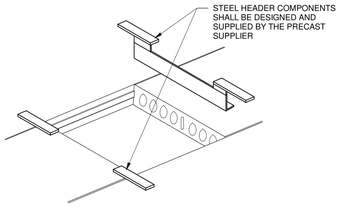
SINGLE PLATE SHEAR CONNECTION NOTES

1. ALL FRAMING CONNECTIONS SHALL CONFORM TO SCHEDULE UNLESS DETAILED OR NOTED OTHERWISE.
2. STANDARD HOLES OR HORIZONTAL-SHORT SLOT HOLES MAY BE UTILIZED AT CONTRACTORS OPTION IN EITHER THE CONNECTION ANGLE OR THE FRAMING MEMBERS.
3. WELD "A" MAY BE USED IN LIEU OF "A" SIDE BOLTS AT CONTRACTORS OPTION. WELD SHALL BE ON ALL 3 SIDES.
4. FOR MISS-ALIGNED BOLT HOLES, PROVIDE FIELD WELDS. NOTIFY THE ARCHITECT/ENGINEER OF LOCATIONS USING FIELD WELDED CONNECTION.
5. REFER TO TYPICAL COPING DETAIL 5/S-541 FOR CONNECTIONS WHERE COPING IS REQUIRED.
6. THIS DETAIL IS NOT INTENDED FOR EVERY WF SECTION. CHECK RIDING THE FILLET AND COPE DEPTH PRIOR TO FABRICATION.

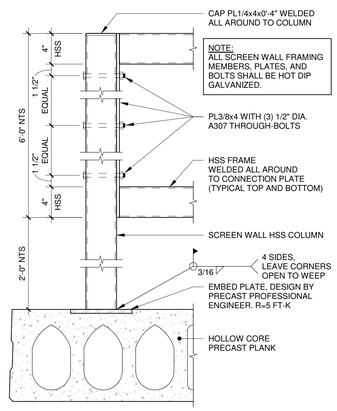
6 TYPICAL SINGLE PLATE SHEAR FRAMING CONNECTION
NO SCALE



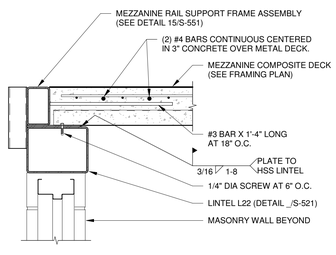
1 STANDARD PRECAST PLANK SHEAR DIMPLE
NO SCALE



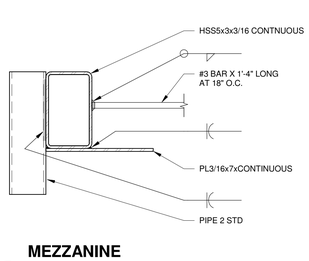
2 PRECAST PLANK HEADER SUPPORT
NO SCALE



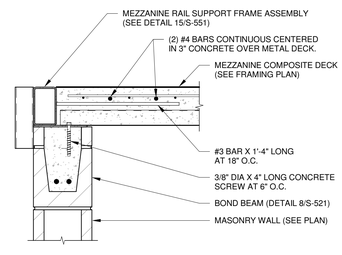
23 SCREEN WALL POST CONNECTIONS
1 1/2" = 1'-0"



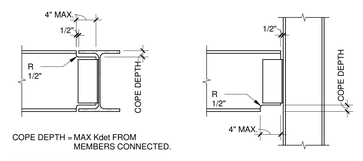
18 DECK BEARING HSS LINTEL
1 1/2" = 1'-0"



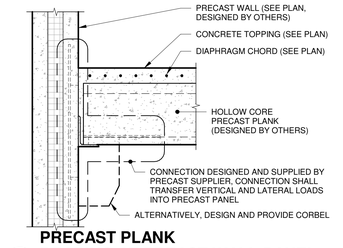
MEZZANINE RAIL SUPPORT ASSEMBLY
3" = 1'-0"



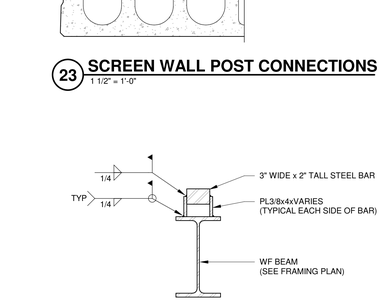
11 DECK BEARING AT MASONRY WALL
1 1/2" = 1'-0"



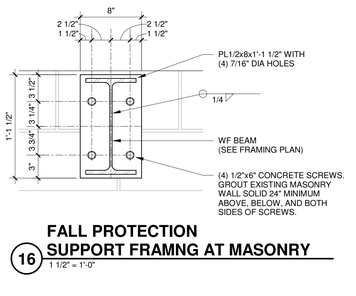
8 TYPICAL PROVISIONS AT CONCRETE LOADS ON OPEN WEB STEEL JOIST/GIRDERS
NO SCALE



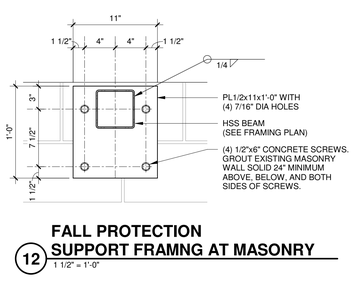
3 PRECAST PLANK BEARING AT PREAST WALL PANEL
1" = 1'-0"



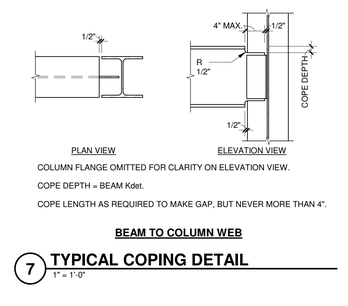
19 FALL PROTECTION SUPPORT FRAMNG AT MASONRY
1 1/2" = 1'-0"



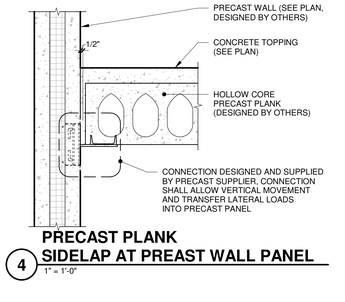
16 FALL PROTECTION SUPPORT FRAMNG AT MASONRY
1 1/2" = 1'-0"



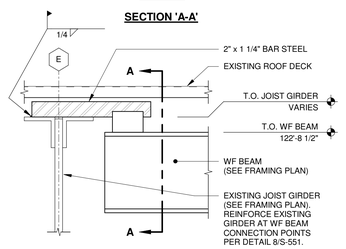
12 FALL PROTECTION SUPPORT FRAMNG AT MASONRY
1 1/2" = 1'-0"



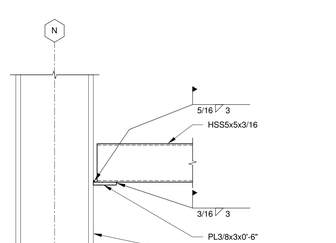
7 TYPICAL COPING DETAIL
1" = 1'-0"



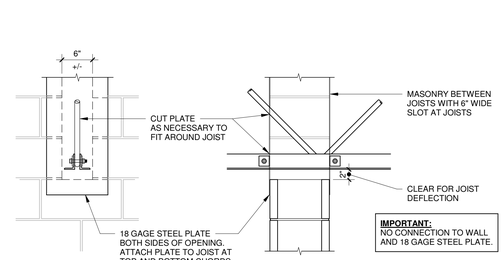
4 PRECAST PLANK SIDELAP AT PREAST WALL PANEL
1" = 1'-0"



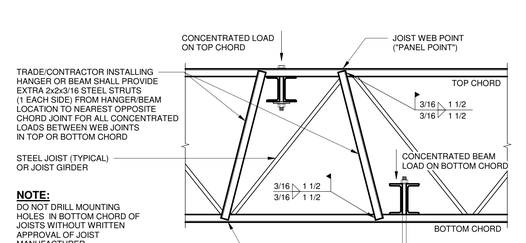
24 FALL PROTECTION SUPPORT FRAMNG AT GIRDER
1 1/2" = 1'-0"



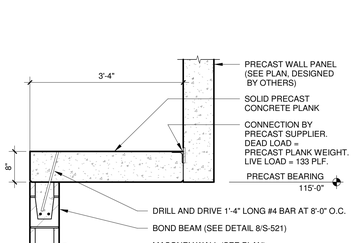
20 HSS BEAM AT EXISTING WF COLUMN
1 1/2" = 1'-0"



17 JOIST DEFLECTION PROVISIONS AT NON-LOAD BEARING MASONRY, TYPICAL
NO SCALE



5 TYPICAL PROVISIONS AT CONCRETE LOADS ON OPEN WEB STEEL JOIST/GIRDERS
NO SCALE



15 PRECAST PLANK BEARING
3/4" = 1'-0"

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

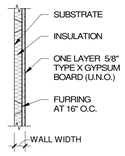
CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DXC
DRAWN BY: MJE
CHECKED BY: DXC
DO NOT SCALE DRAWINGS

SHEET CONTENTS
FRAMING DETAILS

SHEET NO.:
S-551

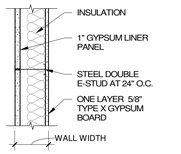
PARTITION GENERAL NOTES:

1. ALL ELEMENTS OF ACOUSTIC PARTITIONS SHALL EXTEND TO ROOF OR FLOOR DECK ABOVE AND ALL JOINTS AND PENETRATIONS OF ACOUSTIC RATED PARTITIONS SHALL BE FILLED AND SEALED.
2. REFER TO "INTERIOR PARTITION TYPE MODIFIERS" FOR SYMBOLS USED TO IDENTIFY ADDITIONAL REQUIREMENTS OR MODIFICATIONS TO BASIC PARTITION TYPES.
3. PARTITION TYPES DESCRIBE GENERAL REQUIREMENTS FOR PARTITIONS REFER TO PRODUCT MANUFACTURERS' SPECIFICATIONS AND REQUIREMENTS FOR APPLICABLE TESTING AGENCIES FOR SPECIFICS OF PARTITION CONSTRUCTION.
4. PARTITION REQUIREMENTS SHOWN ARE CONSIDERED MINIMUMSTANDARDS. WHERE CONDITIONS OF THE WORK CAUSE PARTITION(S) TO EXCEED LIMITS RECOMMENDED BY MANUFACTURER, REINFORCE PARTITION(S).
5. PENETRATIONS IN RATED PARTITIONS AND CONNECTIONS OF THE PARTITIONS TO OTHER PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDED DETAILS AND IN COMPLIANCE WITH APPLICABLE TESTING AGENCY REQUIREMENTS.
6. WHERE A CLEAR DIMENSION OR OPENING IS REQUIRED OR NOTED, MEASURE DIMENSION TO FACE OF PARTITION FINISH.
7. REFER TO STRUCTURAL DRAWINGS FOR EXTENT AND DESCRIPTION OF INTERIOR STRUCTURAL WALLS NOT IDENTIFIED BY PARTITION TYPES.
8. INSTALL BLOCKING OR BACKER MATERIAL FOR ATTACHMENT/MOUNTING OF WALL HUNG ITEMS OR EQUIPMENT DESCRIBED IN THE DOCUMENTS.
9. FIRE RATED PARTITIONS: GA AND UL TEST NUMBERS MAY VARY DEPENDING ON THE MANUFACTURER OF COMPONENTS ACTUALLY USED.
10. PROVIDE 5/8" TYPE "X" GYPSUM BOARD (UNLESS NOTED OTHERWISE)
11. PROVIDE WATER RESISTANT TYPE GYPSUM BOARD AT AREAS THAT ARE SCHEDULED TO RECEIVE CERAMIC TILE FINISH AND AT AREAS SO REQUIRED BY CODE TO RECEIVE IT.
12. INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS.
13. TYPICAL FLOOR PLAN DIMENSIONS OF PARTITIONS ARE TO THE NOMINAL FINISH FACE OF GYPSUM BOARD UNLESS NOTED TO THE CENTERLINE OF THE PARTITION.
14. WHERE PARTITIONS AND/OR FURRING MEET, MAINTAIN A FLUSH SURFACE ON THE SIDE WHERE THE FINISH IS STRAIGHT OR CONTINUOUS UNLESS OTHERWISE NOTED.



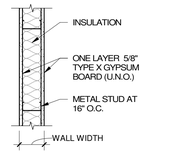
"FA" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
FA78	7/8"	1 1/2"	HAT CHANNEL
FA1	1"	1 5/8"	Z-FURRING
FA15	1 1/2"	2 1/8"	Z-FURRING
FA2	2"	2 5/8"	Z-FURRING
FA3	3"	3 5/8"	Z-FURRING



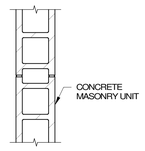
"AA" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
AA3	3 5/8"	4 1/4"	
AA6	6"	6 5/8"	
AA8	8"	8 5/8"	



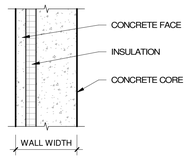
"SA" SERIES

PTN TYPE	STUD WIDTH	WALL WIDTH	NOTES
SA2	2 1/2"	3 3/4"	
SA3	3 5/8"	4 7/8"	
SA4	4"	5 1/4"	
SA6	6"	7 1/4"	
SA8	8"	9 1/4"	



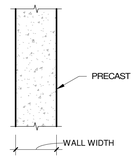
"MA" SERIES

PTN TYPE	CMU WIDTH	WALL WIDTH	NOTES
MA4	3 5/8"	4"	
MA6	5 5/8"	6"	
MA8	7 5/8"	8"	
MA0	9 5/8"	10"	
MA2	11 5/8"	12"	



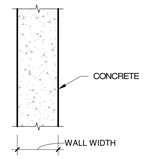
"PA" SERIES

PTN TYPE	FACE WIDTH	INSUL WIDTH	CORE WIDTH	WALL WIDTH	NOTES
PA3	3"	3"	3"	12"	-
PA6	6"	3"	3"	13"	



"PB" SERIES

PTN TYPE	WALL WIDTH	NOTES
PB8	8"	SOLID CORE



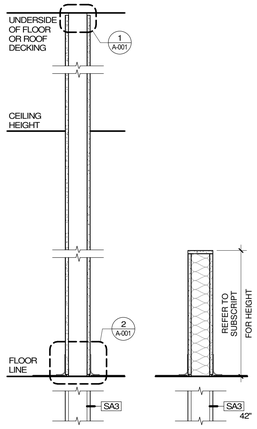
"CA" SERIES

PTN TYPE	WALL WIDTH	NOTES
CA4	4"	
CA6	6"	
CA8	8"	
CA0	10"	
CA2	12"	

PARTITION TYPES

NO SCALE

PARTITION TYPE SYMBOL AND SUBSCRIPT DEFINITIONS:



NO SUBSCRIPT

EXTEND TOTAL PARTITION TO STRUCTURE

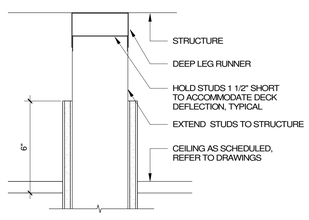
SUBSCRIPT (XX")

PARTITION HEIGHT IN INCHES AS NOTED, SEE ABOVE DETAIL FOR OTHER REQUIREMENTS

ABBREVIATIONS

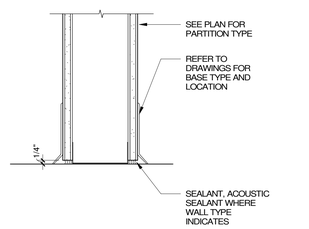
∠	ANGLE
@	AT
AB	ANCHOR BOLT
AC	ACOUSTIC
ACC	ACCESS
ACT	ACOUSTIC CEILING TILE
ACP	ACOUSTIC CEILING PANEL
AD	AREA DRAIN
ADD	ADDITIONAL
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AP	ACCESS PANEL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
BB	BOND BEAM
BD	BOARD
BF	BOTH FACES
BFC	BELOW FINISH CEILING
BG	BUMPER GUARD
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BLKT	BLANKET
BM	BEAM/BENCH MARK
BLK	BLOCK
BOT	BOTTOM
BRG	BEARING
BRKR	BREAKER
BRK	BRICK
BRKT	BRACKET
BS	BACK SPLASH
BSMT	BASEMENT
BTWN	BETWEEN
	CHANNEL
CAB	CABINET
CER	CERAMIC
CFCI	CONTRACTOR FURNISHED, CONTRATOR INSTALLED
CG	CORNER GUARD
CH	COAT HOOK
CIP	CAST IN PLACE
CJ	CONTROL JOINT/CONSTRUCTION JOINT
CLG	CEILING
CLO	CLOSET/CLOSURE
CLR	CLEAR
COL	COLUMN
COMB	COMBINATION
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION/CONNECT
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CPT	CARPET
CR	COAT RACK/CURTAIN ROD
CSG	CASING
CT	CERAMIC TILE
CTR	CENTER/COUNTER
CTSK	COUNTERSUNK
CUH	CABINET UNIT HEATER
CW	COLD WATER
D	DEPTH
DBL	DOUBLE
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIR	DIRECTION
DIV	DIVISION
DM	DEMOUNTABLE PARTITION
DN	DOWN
DO	DITTO
DR	DOOR
DRWR	DRAWER
DS	DOWNSPOUT
DWG	DRAWING
DWL	DOWEL
DWS	DEFORMED WELDED STUD
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EACH FACE
EH	ELECTRICAL HEATER/EXHAUST HOOD
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR/ELEVATION
EMBED	EMBEDDED
EMER	EMERGENCY
ENT	ENTRANCE
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EMERGENCY SHOWER
ESR	ELASTOMERIC SHEET ROOFING
ETR	EXISTING TO REMAIN
EVC	ELASTIC VINYL COATING
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATE
EXP	EXPANSION
EXPD	EXPOSED
EXPF	EXPLOSION PROOF
EXT	EXTERIOR
FA	FIELD ADJUSTABLE
FV	FIELD VERIFY
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FIX	FIXTURE
FLEX	FLEXIBLE
FLR	FLOOR
FLRG	FLOORING
FP	FIREPROOF/FIRE PROTECTION
FR	FIRE RETARDANT
FS	FULL SIZE/FULL SCALE
FT	FEET
FTG	FOOTING
FURG	FURRING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GMU	GLAZED MASONRY UNIT
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	HEIGHT
HDBD	HARDBOARD
HDCP	HANDICAPPED
HDWD	HARDWOOD
HDWE	HARDWARE
HK	HOOK
HM	HOLLOW METAL
HP	HIGH POINT
HR	HANDRAIL
HT	HEIGHT
HVAC	HEATING VENTILATION AND AIR CONDITIONING
HWS	HEAD WELDED STUDS
ID	INSIDE DIAMETER
IMP	INSULATED METAL PANEL
IN	INCHES
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IPW	INSULATED PLENUM WALL
IRF	INSULATED ROOF FILL
JAN	JANITOR
JS	JANITOR SINK
JST	JOIST
JT	JOINT
KD	KNOCKED DOWN
KO	KNOCK-OUT / KNEE OPENING
L	LENGTH
LAB	LABORATORY
LAM	LAMINATED
LB	POUND
LBS	POUNDS
LD	LINEAR DIFFUSER
LDG	LANDING
LF	LINEAR FOOT
LG	LONG
LGT	LIGHT
LKR	LOCKER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
LSH	LONG SLOTTED HOLE
LTG	LIGHTING
LVR	LOUVER
LWC	LIGHTWEIGHT CONCRETE
MACH	MACHINE
MAN	MANUAL
MAR	MARBLE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBW	MASONRY BEARING WALL
MC	MECHANICAL CONTRACTOR
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MK	MARK
ML	METAL LATH
MLDG	MOLDING
MO	MASONRY OPENING
MP	METAL PARTITION
MS	MACHINE SCREW
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NS	NONSHRINK
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER/OVERFLOW DRAIN
OFF	OFFICE
OPNG	OPENING
OPP	OPPOSITE
OZ	OUNCE
PART	PARTITION
PC	PIECE
PCC	PRECAST CONCRETE
PCPL	PORTLAND CEMENT PLASTER
PDWR	PAPER TOWEL DISPENSER & WASTE RECEPTACLE
PH	PHILLIPS HEAD/PHASE
PL	PLASTIC LAMINATE/PLATE/PROPERTY LINE
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PM	PROTECTED METAL
PNL	PANEL
PNLG	PANELING
POL	POLISHED
PR	PAIR
PRE FAB	PREFABRICATED
PRE FIN	PRE-FINISHED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT/PAINT
PTM	PAINT TO MATCH
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTY	QUANTITY
RAD	RADIUS
RAH	ROOFTOP AIR HANDLING UNIT
RB	RUBBER BASE
RC	REINFORCED CONCRETE
RCP	RADIANT CEILING PANEL / REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC	RECESSED
REF	REFERENCE
REINF	REINFORCING
REL	RELOCATE
REM	REMAINDER
REQD	REQUIRED
RES	RESILIENT
RET	RETURN
RI	ROUGH IN
RM	ROOM
RO	ROUGH OPENING
RT	RUBBER TILE
RUB	RUBBER
SAT	STANDARD AGGREGATE TOPPING
SB	SOIL BEARING
SC	SEAMLESS COATING
SCF	SPECIAL CONCRETE FINISH
SCHD	SCHEDULE
SD	SOAP DISPENSER
SE	SHELF EDGE
SECT	SECTION
SF	SAND FLOAT
SG	SUPPLY AIR GRILLE
SGL	SINGLE
SH	SHELF
SHD	SHOWER DOOR
SHT	SHEET
SIM	SIMILAR
SJ	STEEL JOIST
SLV	SHORT LEG VERTICAL
SM	SMOOTH
SND	SANITARY NAPKIN DISPENSER
SNV	SANITARY NAPKIN VENDER
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SPR	SPRINKLER
SQ	SQUARE
SR	SHOWER ROD
SS	STAINLESS STEEL
ST	STREET
STD	STANDARD
STL	STEEL
STO	STORAGE
STRU	STRUCTURAL/STRUCTURE
SUSP	SUSPENDED
SV	SHEET VINYL
SYM	SYMMETRICAL
T & B	TOP AND BOTTOM
TB	TACKBOARD/TOWEL BAR
TBR	TO BE REMOVED
TCP	THIN COAT PLASTER
TD	TOWEL DISPENSER
TDW	TOWEL DISPENSER AND WASTE
TEMP	TEMPERATURE/TEMPERED
TER	TERRAZZO
TEX	TEXTURE
TFC	TROWELED FLOOR COVERING
T & G	TONGUE AND GROOVE
THK	THICK
TOB	TOP OF BEAM
TOC	TOP OF CURB/TOP OF CONCRETE
TOD	TOP OF DECK/TOP OF DUCT ELEVATION
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOP	TOP OF PIPE ELEVATION
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPG	TOPPING
TPH	TOILET PAPER HOLDER
TRAN	TRANSOM
TRANS	TRANSVERSE
TS	TUBE STEEL
TSL	TOP OF SLAB
TWS	THREADED WELDED STUD
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VINYL
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VOL	VOLUME
VWC	VINYL WALL COVERING
W	WIDE FLANGE STEEL BEAM
W/	WITH
WAF	WELDED ANGLE FRAME
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WG	WIRE GLASS
W/O	WITHOUT
WP	WEATHERPROOF
WPFG	WATERPROOFING
WR	WASTE RECEPTACLE
WSCT	WAINSCOT
WSTP	WEATHERSTRIP
WTR	WATER
WWF	WELDED WIRE FABRIC
X	EXISTING

ABBREVIATIONS ABOVE ARE FOR ARCHITECTURAL SHEETS ONLY.



1 PARTITION HEAD

3" = 1'-0"



2 GYP WALL BASE

3" = 1'-0"

DEMOLITION LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE DEMOLISHED, TYP (U.N.O.)
- EXISTING DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE DEMOLISHED COMPLETE, TYP (U.N.O.)

GENERAL NOTES:

1. CONTRACTOR SHALL CONSTRUCT IN CONFORMANCE WITH THE CITY OF MADISON GUIDELINES, STATE AND LOCAL CODES, ORDINANCES AND PROCEDURES, UNDER THE JURISDICTION OF HAVING AUTHORITY.
2. ALL CONTRACTORS SHALL BE LICENSED TO PERFORM WORK WITHIN THE CITY OF MADISON, WI.
3. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE ARCHITECTURAL AND STRUCTURAL WITH ALL OTHER BUILDING TRADES THAT SHALL CORRELATE TO SUCH WORK IN ORDER TO ENSURE THAT THE WORK DESIGNATED IS COMPLETED ON SCHEDULE. GENERAL CONTRACTOR SHALL COORDINATE ALL FIRE PROTECTION, PLUMBING, HVAC, TECHNOLOGY, AND ELECTRICAL FLOOR, ROOF, AND WALL SLEEVES AND ALL MECHANICAL SHAFTS WITH ALL OTHER TRADES' DRAWINGS.
4. DRAWINGS AND MANUFACTURERS' TEMPLATE DRAWINGS FOR ALL MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, BOLT SETTING TEMPLATES, ISOLATIONS, ISOLATION SPRINGS, ETC.
5. ALL DRAWINGS ARE OF EQUAL IMPORTANCE IN DEFINING THE CONTRACT DOCUMENTS. CONTRACTORS SHALL CAREFULLY STUDY AND COMPARE ALL DRAWINGS DURING THE BIDDING PERIOD AND BEFORE INSTALLATION OF THEIR WORK. ANY INCONSISTENCIES IN THE DRAWINGS SHALL BE REPORTED PROMPTLY TO THE ARCHITECT/ ENGINEER FOR CLARIFICATION.
6. DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE PRIOR TO THE START OF CONSTRUCTION. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT ARCHITECT / ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. THE EXISTING BUILDING INFORMATION, INCLUDING BUT NOT LIMITED TO, ARCHITECTURAL, MECHANICAL, FIRE PROTECTION, PLUMBING, ELECTRICAL, AND TECHNOLOGY DEPICTED IN THESE CONSTRUCTION DOCUMENTS ARE BASED UPON EXISTING BUILDING DRAWINGS PROVIDED BY THE OWNER AND LIMITED FIELD VERIFICATION. THE ARCHITECT / ENGINEER MAKES NO WARRANTY OR REPRESENTATION WITH REFERENCE TO THE ACCURACY AND COMPLETENESS OF THE ORIGINAL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY THE ACCURACY OF THE EXISTING CONDITIONS.
8. PROTECT THE BUILDING FABRIC AND INTERIOR FROM INCLEMENT WEATHER, AS IT RELATES TO THE WORK OUTLINED IN THESE DOCUMENTS.
9. CONTRACTOR SHALL SECURE BUILDING AREAS OF WORK AT END OF EACH WORK DAY. PROVIDE ENCLOSURES AT EXTERIOR PENETRATIONS AND OBTAIN OWNER REPRESENTATIVE APPROVAL ON METHOD OF SECURING PENETRATIONS. EXTERIOR EQUIPMENT SHALL BE SECURED AT END OF EACH WORK DAY.
10. CONTRACTOR MAY UTILIZE SPACE DELINEATED BY CONSTRUCTION LIMITS. THE CONTRACTOR IS RESPONSIBLE TO REPAIR, RESTORE OR REPLACE ALL SITE ELEMENTS DAMAGED DURING CONSTRUCTION. THE SITE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO GRASS, CONCRETE SIDEWALKS, CURBS, ASPHALT, MARKINGS, SIGNAGE, MANHOLES, AND ELECTRICAL APPARATUS.
11. COORDINATE LOCATION OF GARBAGE RECEPTACLES AND CONTRACTOR WASTE AREA WITH OWNER'S REPRESENTATIVE.
12. REPAIR OR REPLACE ANY EXISTING CONSTRUCTION (WINDOWS, WALLS, DOORS, CEILINGS, FLOORS, ETC.) TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION. REPLACEMENT MATERIAL SHALL MATCH IN KIND.
13. REFER TO THE PROJECT MANUAL FOR ALL RELATED SPECIFICATIONS.
14. WHERE ANY CUTTING IS NECESSARY FOR RENOVATED LAYOUT OR INSTALLATION OF MEP WORK, REFERENCE SPECIFICATION SECTION "CUTTING AND PATCHING" AND "SELECTIVE DEMOLITION."
15. ALL BUILDING MATERIALS DESIGNATED FOR REMOVAL SHALL BE RECYCLED AND/OR DEMOLISHED AND REMOVED FROM THE SITE PER SPECIFICATION SECTION "CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL" AND THE REQUIREMENTS OF THE CITY OF MADISON.

HATCH SYMBOLS

- EARTHWORK
- GRAVEL
- PLASTER, SAND, GROUT
- CONCRETE
- CONCRETE MASONRY
- CLAY MASONRY
- PRECAST CONCRETE
- METAL
- PLYWOOD
- FINISH LUMBER
- WOOD STUDS, BLOCKING
- STEEL STUDS
- GYPSUM WALLBOARD
- ACOUSTICAL TILE
- BATT INSULATION
- RIGID INSULATION

LEGEND - PLAN SYMBOLS

- BUILDING SECTION SYMBOL
- WALL SECTION SYMBOL
- DETAIL SYMBOL
- ENLARGED PLAN SYMBOL
- EXTERIOR ELEVATION SYMBOL
- INTERIOR ELEVATION SYMBOL
- KEYED NOTE IDENTIFICATION
- ROOM NAME AND NUMBER
- WALL TYPE IDENTIFICATION
- WINDOW IDENTIFICATION
- DOOR IDENTIFICATION
- 1 HOUR FIRE RATED WALL
- FIRE EXTINGUISHER - SURFACE MOUNT
- FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER - SEMI-RECESSED
- FLOOR DRAIN
- EXISTING GRID LINES
- NEW GRID LINES
- LEVEL OR SPOT ELEVATIONS

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metro transit

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

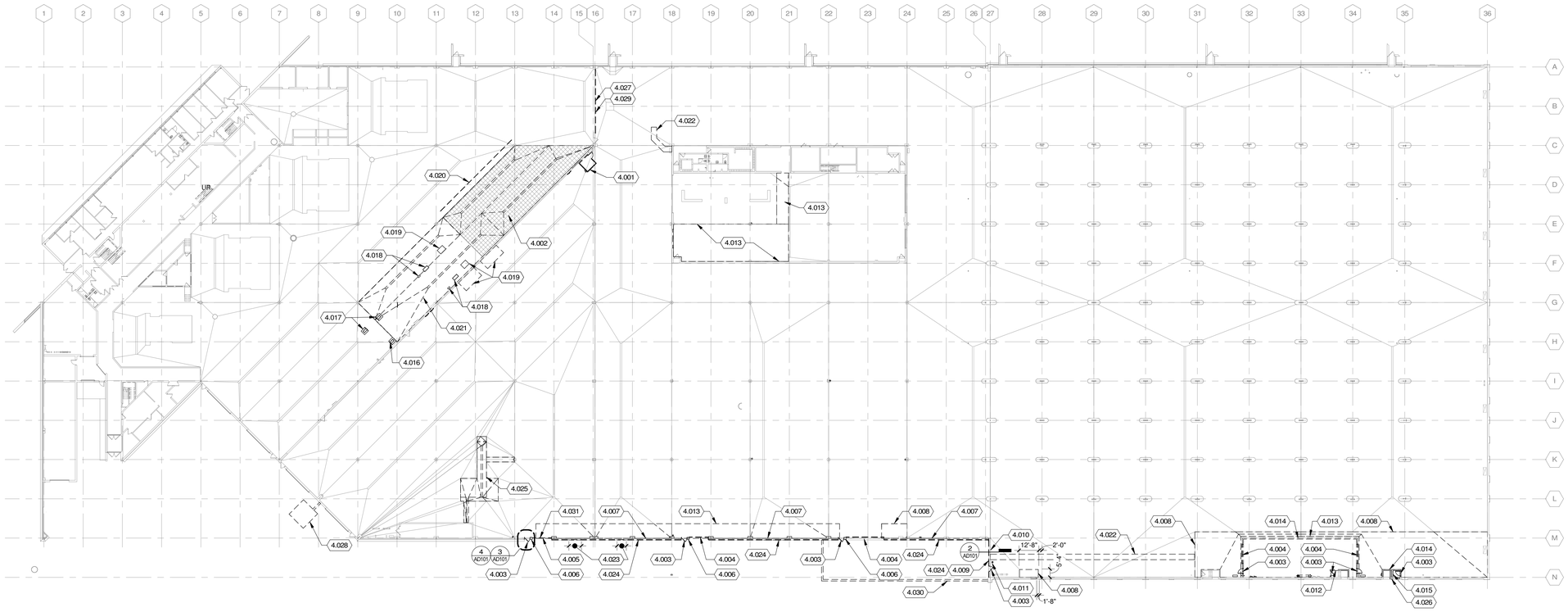
1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
NOTES & SYMBOLS

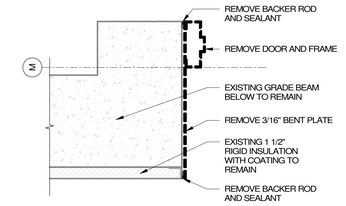
SHEET NO.:
A-001



TRUE NORTH PLAN NORTH

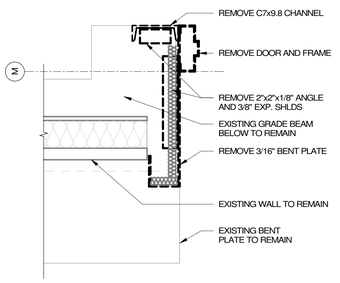
OVERALL EXISTING FIRST FLOOR PLAN

1/32" = 1'-0"



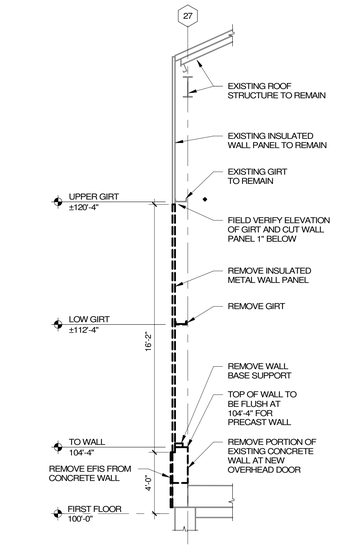
DEMOLITION DETAIL DOOR AT GRADE BEAM

3 1 1/2" = 1'-0"



DEMOLITION DETAIL DOOR ABOVE GRADE BEAM

4 1 1/2" = 1'-0"



DEMOLITION WALL SECTION

2 1/4" = 1'-0"

DEMOLITION PLAN GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL BUILDING AND SITE CONDITIONS AND REPORT ANY DISCREPENCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY SCHEDULED DEMOLITION WORK.
2. THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING WORK AND ALL SUBCONTRACTORS FOR DEMOLITION AND REPAIR WORK.
3. IT IS THE INTENT OF THESE DRAWINGS TO INDICATE THE REMOVAL OF ALL ITEMS WHICH INTERFERE WITH THE FINAL CONSTRUCTION AS SHOWN ON THE FLOOR PLANS, ELEVATIONS, DETAILS, AND SCHEDULES. ALL FLOOR FINISHES, BASE, ABANDONED FURNITURE, WINDOW TREATMENTS, SHELVING, SIGNAGE, AND ROOFING MATERIALS SHALL BE DEMOLISHED IN THEIR ENTIRETY.
4. REMOVE ALL ITEMS OF DEMOLITION WORK FROM THE PROJECT DAILY AND DISPOSE OF PROPERLY.
5. EXISTING CONCRETE AND STEEL STRUCTURE TO REMAIN, TYP. PROTECT COLUMNS, PILASTERS, BEAMS, AND SLABS.
6. THE EXISTING MECHANICAL, ELECTRICAL,TECHNOLOGY, AND PLUMBING ITEMS AND/OR SYSTEMS, AND GAS, WATER AND ELECTRICAL METERS ARE GENERALLY INTENDED TO REMAIN. WHERE WORK CONFLICTS WITH NEW WORK, DEMOLITION OR REROUTING OF EXISTING INFRASTURCTURE SHALL BE REQUIRED. REF: MEP FOR ALL ITEMS TO BE REUSED TYP. ALL ITEMS TO BE DEMOLISHED SHALL BE REMOVED IN THEIR ENTIRETY, BACK TO THE ORIGINAL SOURCE. SURROUNDING MATERIALS WHICH ARE DISTURBED OR DEMOLISHED THAT ARE SCHEDULED TO REMAIN SHALL BE PATCHED WITH LIKE SURROUNDING MATERIALS, TYPICAL.
7. DEMOLISH CONCRETE FLOOR SLABS AS REQUIRED TO INSTALL NEW EQUIPMENT, UNDERGROUND CONDUIT, PLUMBING SYSTEMS, AND FLOOR DRAINS, REF: STRUCTURAL, EQUIPMENT, ELECTRICAL, PLUMBING DEMOLITION, AND PLUMBING DRAWINGS.
8. PROTECT EXISTING SURFACES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
9. REPAIR OR REPLACE ANY EXISTING CONSTRUCTION (WINDOWS, WALLS, DOORS, CEILINGS, FLOORS, ETC.) TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION. REPLACEMENT MATERIAL SHALL MATCH IN KIND.
10. COORDINATE WITH OWNER-CONTRACTED ASBESTOS ABATEMENT CONTRACTOR FOR REMOVAL OF SEALANTS CONTAINING ASBESTOS.
11. REFERENCE SHEET G-101 PHASING PLANE FOR CONSTRUCTION PHASING / SEQUENCING AND SITE ACCESS.
12. REFERENCE A-800 SHEETS FOR EQUIPMENT AND EXCAVATION REQUIREMENTS.

DEMOLITION LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE DEMOLISHED, TYP (U.N.O.)
- EXISTING DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE DEMOLISHED COMPLETE, TYP (U.N.O.)

KEYED NOTES

4.001 RELOCATE DISPATCH PARKING BOOTH TO NEW LOCATION OUTSIDE OF BUILDING AT THE END OF CONSTRUCTION BY OWNER.

4.002 REMOVE EXISTING WASH BAY EQUIPMENT COMPLETE, INCLUDING ALL PIPING AND ELECTRICAL COMPONENTS BACK TO THE SOURCE. REF - SPECIFIC DISCIPLINES FOR REQUIREMENTS. EXISTING WASH BAY MUST STAY FULLY OPERATIONAL UNTIL THE COMPLETION OF THE NEW SERVICE LANE/WASH BAY ADDITION - SEE PHASING PLAN ON G-101.

4.003 REMOVE HOLLOW METAL DOOR, FRAME, AND TRANSOM COMPLETE.

4.004 REMOVE OVERHEAD DOOR, RAILS, MTL SURROUND COMPLETE.

4.005 REMOVE TRANSLUCENT WALL PANEL SYSTEM

4.006 REMOVE SHEET METAL TRIM AND AND CANOPY STRUCTURE OVERHEAD, COMPLETE.

4.007 REMOVE METAL PANEL AND SUPPORT GIRTS, COMPLETE.

4.008 REMOVE PORTION OF ASPHALT FLOOR SLAB

4.009 REMOVE PORTION OF METAL PANEL BETWEEN GRID M & N FROM CONCRETE WALL UP TO 120'-3" (FIELD VERIFY) AND LOW GIRT, RETAINING UPPER GIRT SEE DETAIL 2/AD101

4.010 REMOVE PORTION OF CONCRETE WALL FOR NEW OVERHEAD DOOR

4.011 REMOVE FIRE PROTECTION PIPE TO FIRE HYDRANT

4.012 REMOVE PORTION OF WALL FOR NEW OPENING

4.013 REMOVE PORTION OF CONCRETE FLOOR SLAB

4.014 REMOVE MASONRY WALL, FLOOR TO CEILING, TYP.

4.015 REMOVE CONCRETE STAIRS

4.016 RELOCATE CASH VAULT 3 TO FINAL LOCATION BETWEEN SERVICE LANES

4.017 RELOCATE CASH VAULTS 1 & 2 TO FINAL LOCATION AFTER COMPLETION OF SERVICE LANE. VAULTS TO REMAIN OPERATIONAL IN CURRENT LOCATION UNTIL CHANGE OVER TO NEW SERVICE OPERATION.

4.018 REMOVE AND RELOCATE FUELING EQUIPMENT PER SPECIFICATIONS

4.019 REMOVE BUS VACUUM SYSTEM, COMPLETE

4.020 REMOVE CORRUGATED SCREEN WALL IN ITS ENTIRETY

4.021 REMOVE TRENCH DRAINS AND FLOOR SLABS. PROVIDE NEW TRENCH DRAIN AND CONCRETE SLAB.

4.022 REMOVE FLOOR SLAB FOR NEW PLUMBING PIPING.

4.023 REMOVE PORTION OF GRADE BEAM FOR NEW OPENING. REFER TO STRUCTURAL DRAWINGS FOR LOCATION AND ELEVATION.

4.024 REMOVE EIFS FROM GRADE BEAM, COMPLETE AT ADDITION AREA, TYP

4.025 REMOVE FLOOR SLAB AND TRENCH DRAIN FOR CHASSIS WASH, TRENCH DRAIN, CATCH BASIN AND ASSOCIATED PIPING.

4.026 REMOVE CONCRETE WALL CAP, PREP WALL FOR NEW INFILL

4.027 REMOVE AND SALVAGE RAPID ROLL FABRIC OVERHEAD DOOR FOR MODIFICATION AND REINSTALLATION.

4.028 SITE DEMOLITION FOR NEW CONCRETE PAD FOR RELOCATED DISPATCH PARKING BOOTH, SEE CIVIL DRAWINGS

4.029 CUT EXISTING WALL INFILL, HEADER AND MISC. STEEL COMPONENTS FRAMING. UP TO DECK. SALVAGE METAL PANEL FOR REINSTALLATION.

4.030 POSSIBLE ABANDONED BELOW GRADE EXISTING BUILDING FOUNDATIONS. LOCATION IS SHOWN GRAPHICALLY EXACT LOCATION IS UNKNOWN. REMOVE ALL EXTENT OF FOUNDATIONS FOUND

4.031 REMOVE STEEL FRAME WINDOW SYSTEM COMPLETE, TYPICAL

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CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

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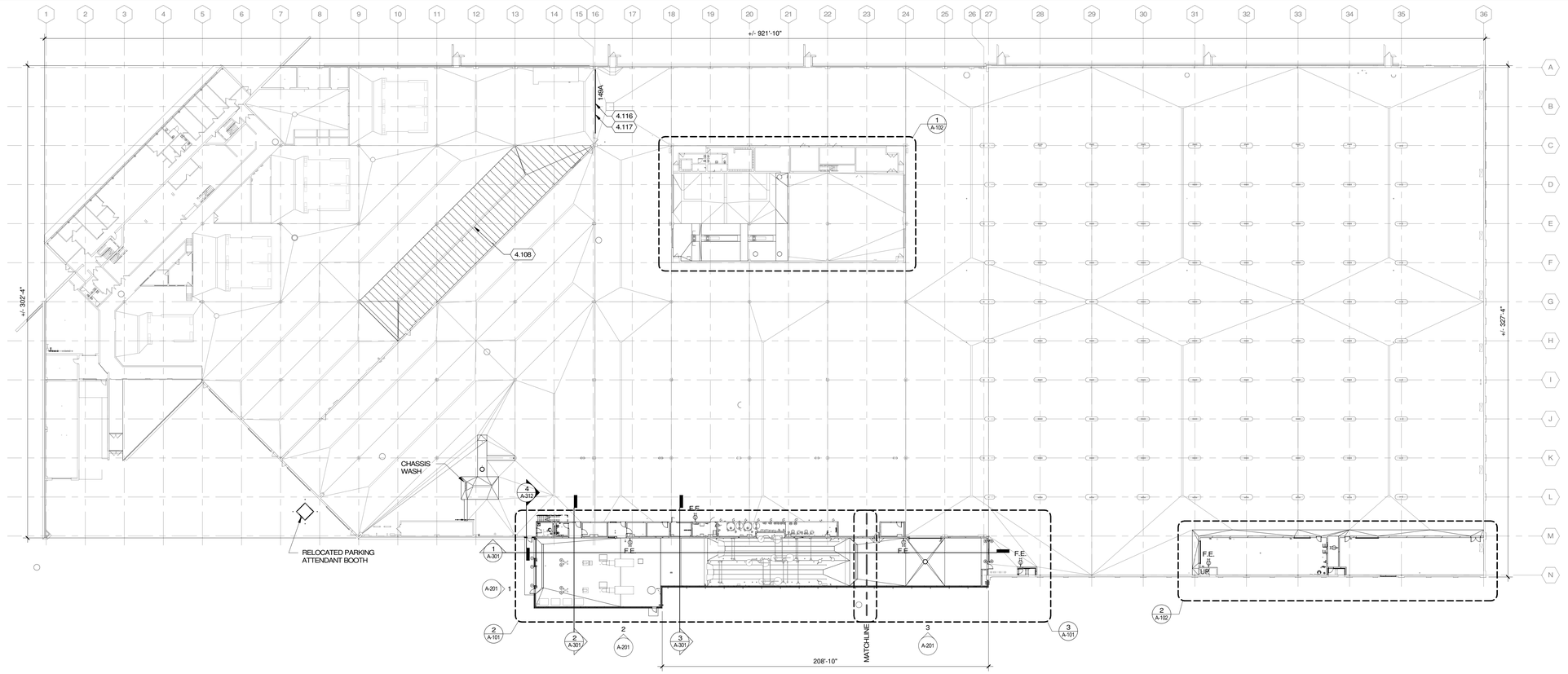
SHEET CONTENTS
FIRST FLOOR DEMOLITION PLAN

SHEET NO.:
AD101

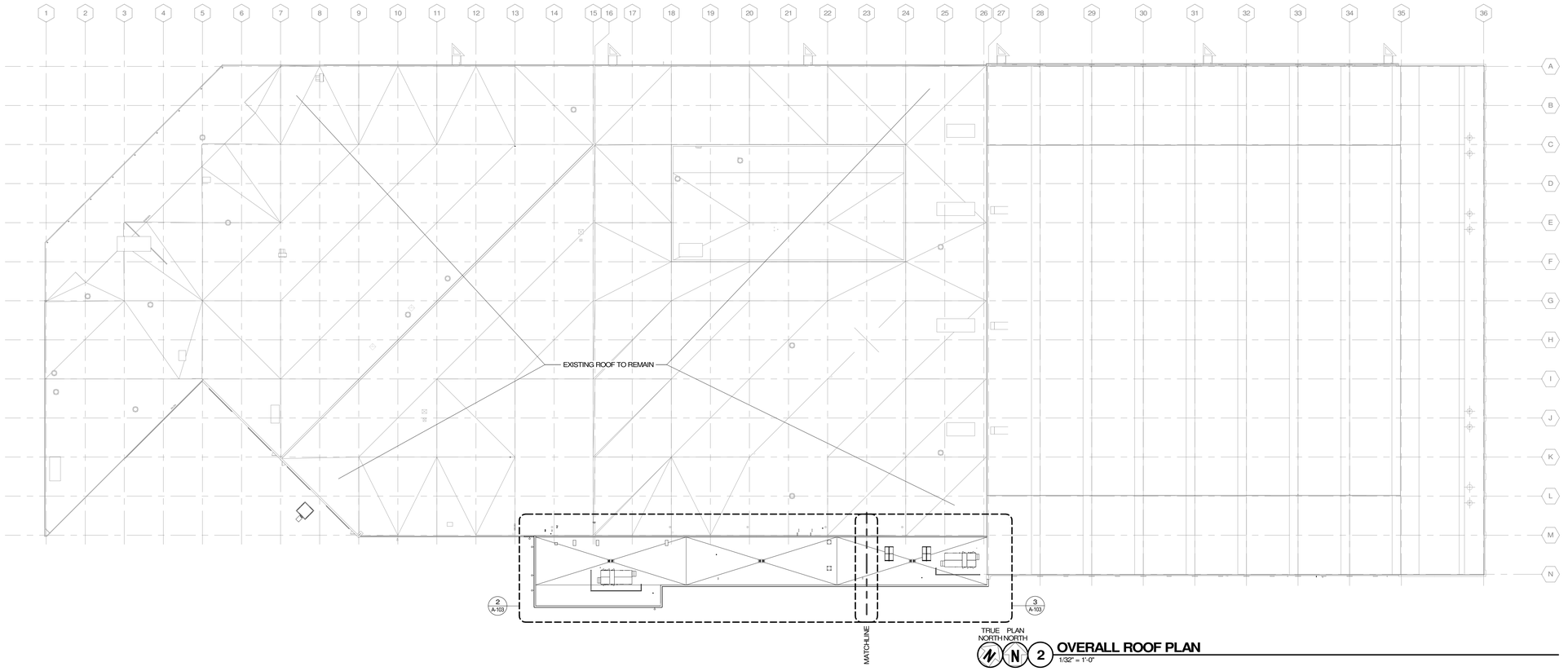


OVERALL FIRST FLOOR PLAN

1/32" = 1'-0"

FLOOR PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL EXTERIOR DIMENSIONS ARE FROM FINISH FACE OF CMU BACKUP, OR PRE-CAST CONCRETEUNLESS NOTED OTHERWISE.
3. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
4. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
5. REFERENCE SHEET G-010 AND G-011 FOR ALL CODE, FIRE RATING, AND SEPARATION REQUIREMENTS.
6. GENERAL CONTRACTOR SHALL PATCH AND REPAIR EXISTING CONSTRUCTION (WALLS, DOORS, CEILINGS, FLOORS, ETC.) AS REQUIRED FROM DEMOLITION OR CONSTRUCTION TO ALLOW FOR THE PREP WORK AND NEW OR COMPLETION OF EXISTING FINISHES. REPAIRS OR REPLACEMENTS MUST BE DURABLE, SEAMLESS, AND MATCH THE EXISTING MATERIAL.
7. GENERAL CONTRACTOR SHALL PATCH ALL FLOOR AND WALL PENETRATIONS CAUSED BY DEMOLITION OF MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING, INCLUDING BUT NOT LIMITED TO PIPING AND CONDUIT RUNS, IN A MANNER THAT IS CONSISTENT WITH THE EXISTING FLOOR AND WALL CONSTRUCTION AND FINISH. ALL PENETRATIONS SHALL MEET REQUIRED FIRE RATINGS.
8. COORDINATE THE INSTALLATION OF ALL OWNER-SUPPLIED EQUIPMENT. REFERENCE PLANS, SPECS, AND INTERIOR ELEVATIONS FOR SPECIFIC EQUIPMENT AND ITS INSTALLATION REQUIREMENTS.
9. GENERAL CONTRACTOR SHALL PROVIDE BLOCKING, STIFFENERS, BRACINGS, BACKING PLATES, SUPPORTING BRACKETS, AND NECESSARY SELECTIVE DEMOLITION REQUIRED FOR THE PROPER INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, TOILET PARTITIONS AND MISCELLANEOUS EQUIPMENT.
10. EXISTING AND INFILL CONCRETE SUB-FLOOR SHALL BE MADE LEVEL, PLUMB AND IN SOUND CONDITION AS REQUIRED FOR THE INSTALLATION OF FINAL FLOOR FINISHES, TYPICAL. PROVIDE ARDEX OR EQUAL LEVELING CONCRETE TO PROVIDE A SMOOTH WALKABLE AREA.
11. ALL RECESSED CABINETS, PANELS, BOXES, ETC. LOCATED IN FIRE-RATED PARTITIONS SHALL BE INSTALLED IN A MANNER WHICH MAINTAINS THE FIRE RATED CONSTRUCTION.
12. WHERE EXISTING STRUCTURE INTERSECTS WITH NEW CMU/PRE-CAST WALLS, SEPARATION FOR EXPANSION IS REQUIRED. PROVIDE GYP BD/METAL STUD INFILL TO ENCLOSE/SEPARATE ROOMS.
13. SEE ENLARGED PLANS FOR NOTES, DIMENSIONS, AND WALL TYPES WITHI THE DETAIL CALLOUT BOUNDARIES.
14. REFERERNCE SHEET A-001 FOR INTERIOR PARTITION TYPES. INTERIOR PARTITION TAGS NOTED ENCOMPASS THE ENTIRE LENGTH OF WALL SHOWN TO CORNERS OF ROOM, OVER AND AROUND DOORWAYS SHOWN.
15. REFERENCE SHEET A-800'S FOR EQUIPMENT LAYOUTS AND COORDINATION REQUIREMENTS.
16. REFERENCE G-101 FOR ALL CONSTRUCTION STAGING AND SEQUENCING PHASING REQUIREMENTS.
17. REFERENCE A-103 FOR HIGH BAY WINDOW LOCATIONS AND PRECAST PLANK LAYOUT, PECAST MANUFACTURER SHALL PROVIDE FINAL PLANK LAYOUT FOR ARCHITECT REVIEW.



OVERALL ROOF PLAN

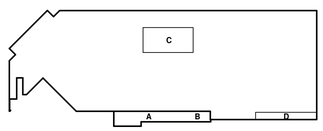
1/32" = 1'-0"

KEYED NOTES

4.108 NEW CONCRETE FLOOR SLAB WITH TRENCH DRAIN, SEE STRUCTURAL

4.116 REINSTALL EXISTING FABRIC RAPID ROLL OVERHEAD COILING DOOR AT 13'-0" AFF. PROVIDE 1'-0" EXTENSION ON SIDE RAILS AND FABRIC DOOR.

4.117 INSTALL NEW STEEL HEADER AT REINSTALLED RAPID ROLL DOOR REFERENCE STRUCTURAL. REFRAME INFILL WALL HEADER WITH STEEL STUDS AND WITH SALVAGED METAL PANEL TO MATCH ORIGINAL CONDITION.



KEY PLAN

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
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phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

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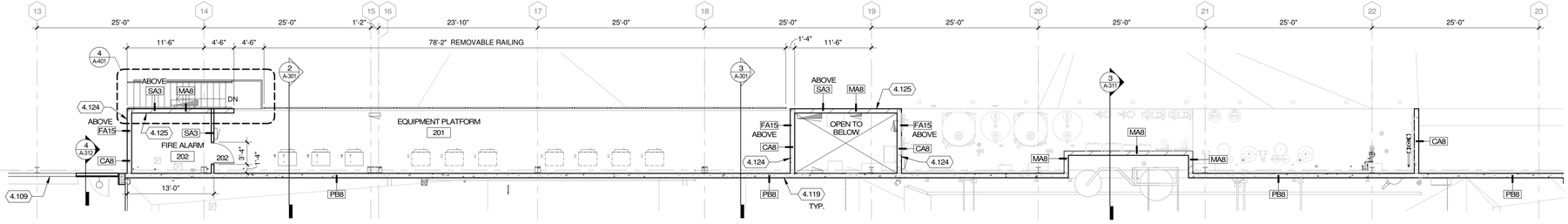
DATE: January 17, 2019
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS:
OVERALL FLOOR & ROOF PLANS

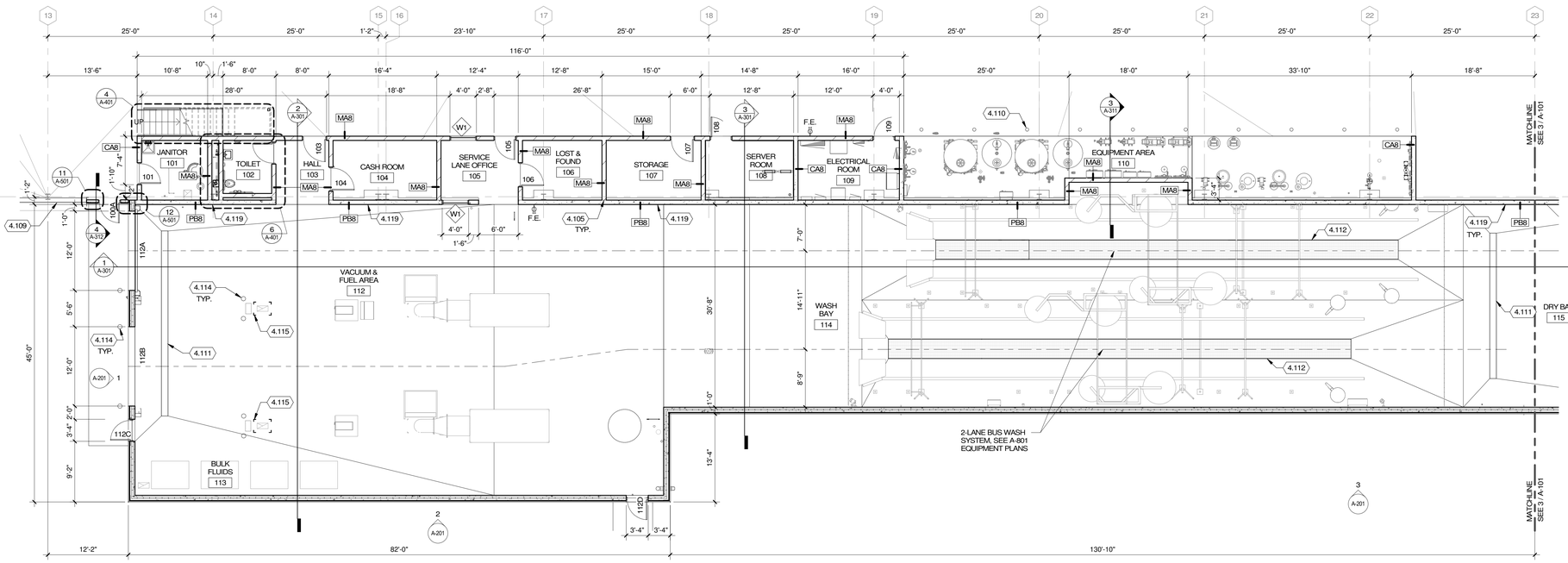
SHEET NO.:
A-100



TRUE NORTH PLAN NORTH

1 PARTIAL EQUIPMENT PLATFORM PLAN - AREA A

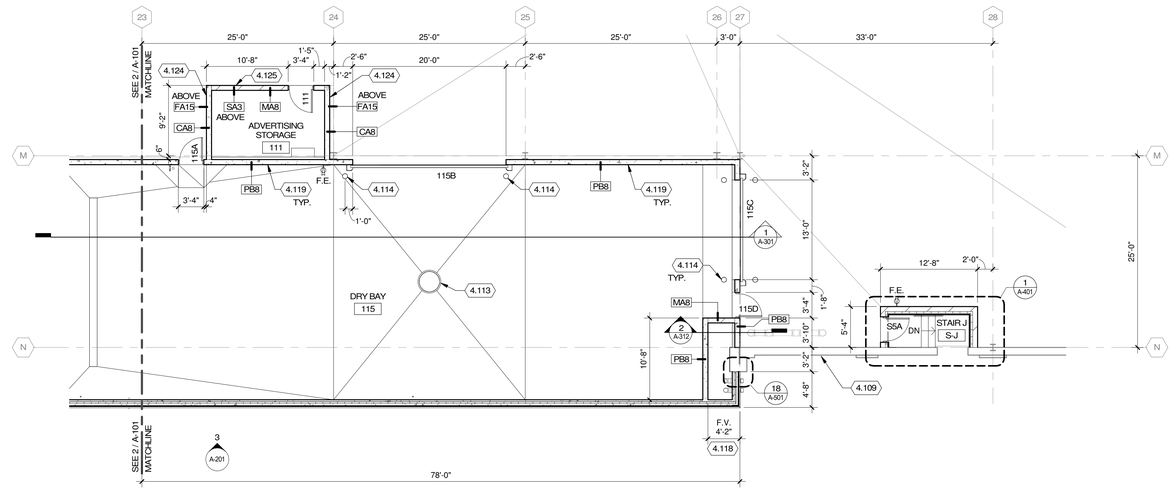
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 PARTIAL FIRST FLOOR PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

3 PARTIAL FIRST FLOOR PLAN - AREA B

1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL EXTERIOR DIMENSIONS ARE FROM FINISH FACE OF CMU BACKUP, OR PRE-CAST CONCRETEUNLESS NOTED OTHERWISE.
3. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
4. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
5. REFERENCE SHEET G-010 AND G-011 FOR ALL CODE, FIRE RATING, AND SEPARATION REQUIREMENTS.
6. GENERAL CONTRACTOR SHALL PATCH AND REPAIR EXISTING CONSTRUCTION (WALLS, DOORS, CEILINGS, FLOORS, ETC.) AS REQUIRED FROM DEMOLITION OR CONSTRUCTION TO ALLOW FOR THE PREP WORK AND NEW OR COMPLETION OF EXISTING FINISHES. REPAIRS OR REPLACEMENTS MUST BE DURABLE, SEAMLESS, AND MATCH THE EXISTING MATERIAL.
7. GENERAL CONTRACTOR SHALL PATCH ALL FLOOR AND WALL PENETRATIONS CAUSED BY DEMOLITION OF MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING, INCLUDING BUT NOT LIMITED TO PIPING AND CONDUIT RUNS, IN A MANNER THAT IS CONSISTENT WITH THE EXISTING FLOOR AND WALL CONSTRUCTION AND FINISH. ALL PENETRATIONS SHALL MEET REQUIRED FIRE RATINGS.
8. COORDINATE THE INSTALLATION OF ALL OWNER-SUPPLIED EQUIPMENT. REFERENCE PLANS, SPECS, AND INTERIOR ELEVATIONS FOR SPECIFIC EQUIPMENT AND ITS INSTALLATION REQUIREMENTS.
9. GENERAL CONTRACTOR SHALL PROVIDE BLOCKING, STIFFENERS, BRACINGS, BACKING PLATES, SUPPORTING BRACKETS, AND NECESSARY SELECTIVE DEMOLITION REQUIRED FOR THE PROPER INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, TOILET PARTITIONS AND MISCELLANEOUS EQUIPMENT.
10. EXISTING AND INFILL CONCRETE SUB-FLOOR SHALL BE MADE LEVEL, PLUMB AND IN SOUND CONDITION AS REQUIRED FOR THE INSTALLATION OF FINAL FLOOR FINISHES, TYPICAL. PROVIDE ARDEX OR EQUAL LEVELING CONCRETE TO PROVIDE A SMOOTH WALKABLE AREA
11. ALL RECESSED CABINETS, PANELS, BOXES, ETC. LOCATED IN FIRE-RATED PARTITIONS SHALL BE INSTALLED IN A MANNER WHICH MAINTAINS THE FIRE RATED CONSTRUCTION.
12. WHERE EXISTING STRUCTURE INTERSECTS WITH NEW CMU/PRE-CAST WALLS, SEPARATION FOR EXPANSION IS REQUIRED. PROVIDE GYP BD/METAL STUD INFILL TO ENCLOSE/SEPARATE ROOMS.
13. SEE ENLARGED PLANS FOR NOTES, DIMENSIONS, AND WALL TYPES WITHI THE DETAIL CALLOUT BOUNDARIES.
14. REFERERNCE SHEET A-001 FOR INTERIOR PARTITION TYPES. INTERIOR PARTITION TAGS NOTED ON FLOOR PLANS THE ENTIRE LENGTH OF WALL SHOWN TO CORNERS OF ROOM, OVER AND AROUND DOORWAYS SHOWN.
15. REFERENCE SHEET A-800'S FOR EQUIPMENT LAYOUTS AND COORDINATION REQUIREMENTS.
16. REFERENCE G-101 FOR ALL CONSTRUCTION STAGING AND SEQUENCING PHASING REQUIREMENTS.
17. REFERENCE A-103 FOR HIGH BAY WINDOW LOCATIONS AND PRECAST PLANK LAYOUT, PECAST MANUFACTURER SHALL PROVIDE FINAL PLANK LAYOUT FOR ARCHITECT REVIEW.

KEYED NOTES

4.105 CMU WALL CONNECTION SEE STRUCTURAL DETAIL 14 & 15/S-521. PROVIDE BACKER ROD AND SEALANT BOTH SIDES OF WALL.

4.109 EXISTING WALL TO REMAIN

4.110 (10) 8" BOLLARDS LOCATED 12" FROM EQUIPMENT CURB AT 8'-0" OC.

4.111 TRENCH DRAIN, SEE STRUCTURAL AND PLUMBING DRAWINGS

4.112 WASH BAY TRENCH DRAIN AND BUS GRATING, SEE STRUCTURAL AND PLUMBING DRAWINGS

4.113 CATCH BASIN, SEE PLUMBING DRAWINGS

4.114 8" BOLLARDS, SEE STRUCTURAL

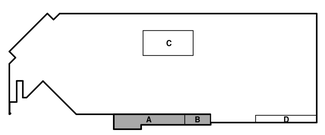
4.115 DUCT SUPPORT STRUCTURE, (4) L4X4X1/4 FLOOR TO CEILING

4.118 LOCATE SHEAR WALL AS CLOSE TO EXISTING BUILDING AS POSSIBLE, SEE STRUCTURAL DRAWINGS.

4.119 PRECAST CONCRETE INTERIOR WALL ON EXISTING GRADE BEAM TO REMAIN. SEE STRUCTURAL WALL ELEVATIONS.

4.124 INTERIOR STRUCTURAL SHEAR CONCRETE WALL, SEE STRUCTURAL FOR TOW ELEVATION. PROVIDE 2 STUD WALLS (FA15) ABOVE TO ROOF DECK, ONE ON EACH SIDE FACE. SEE DETAIL 22/A-501

4.125 INTERIOR CMU WALL, SEE STRUCTURAL FOR TOW ELEVATION. PROVIDE STUD WALL (SA3) ABOVE TO ROOF DECK. ALIGN WALL TO STORAGE BAY FACE OF WALL.



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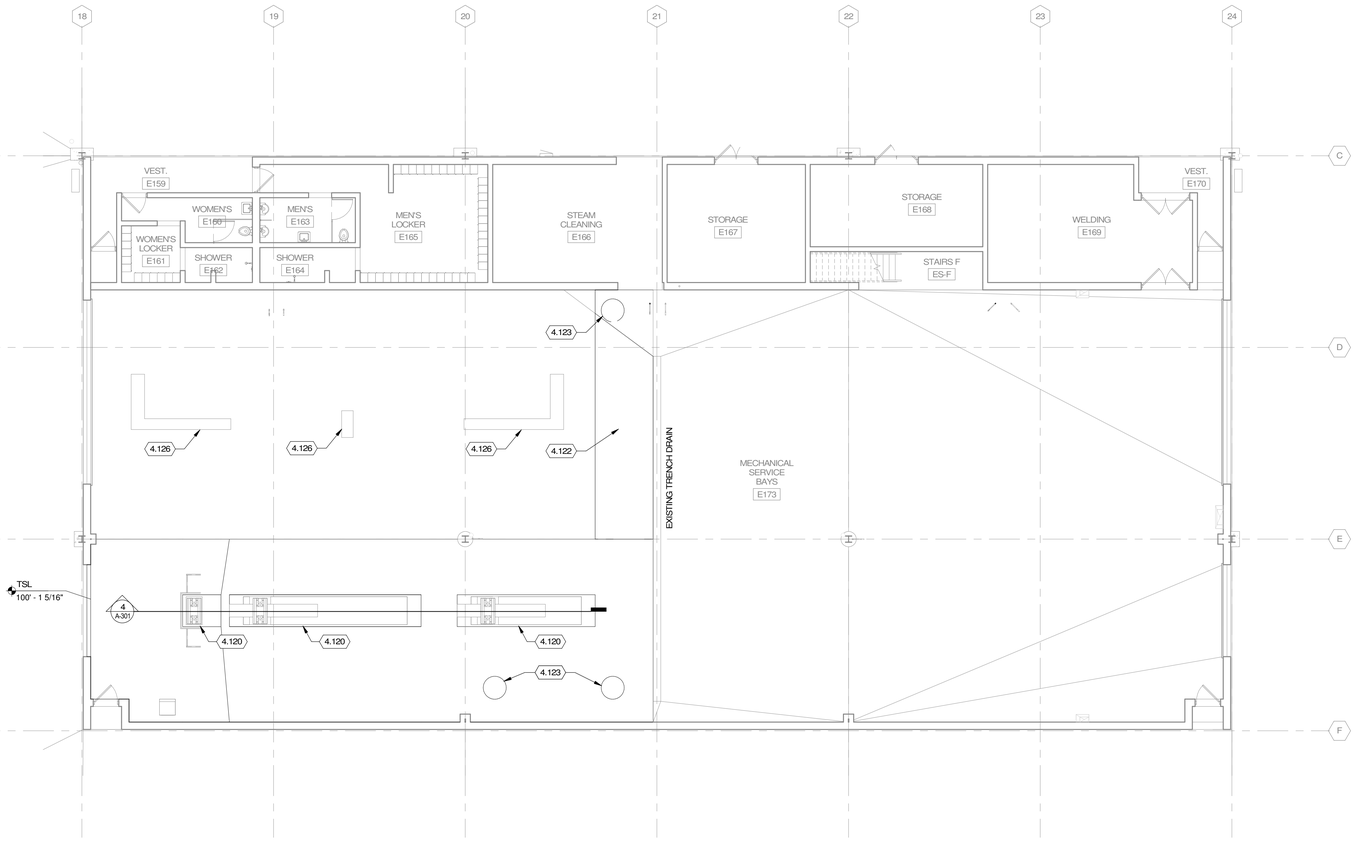
SHEET CONTENTS
PARTIAL FIRST FLOOR PLANS - AREA A & B

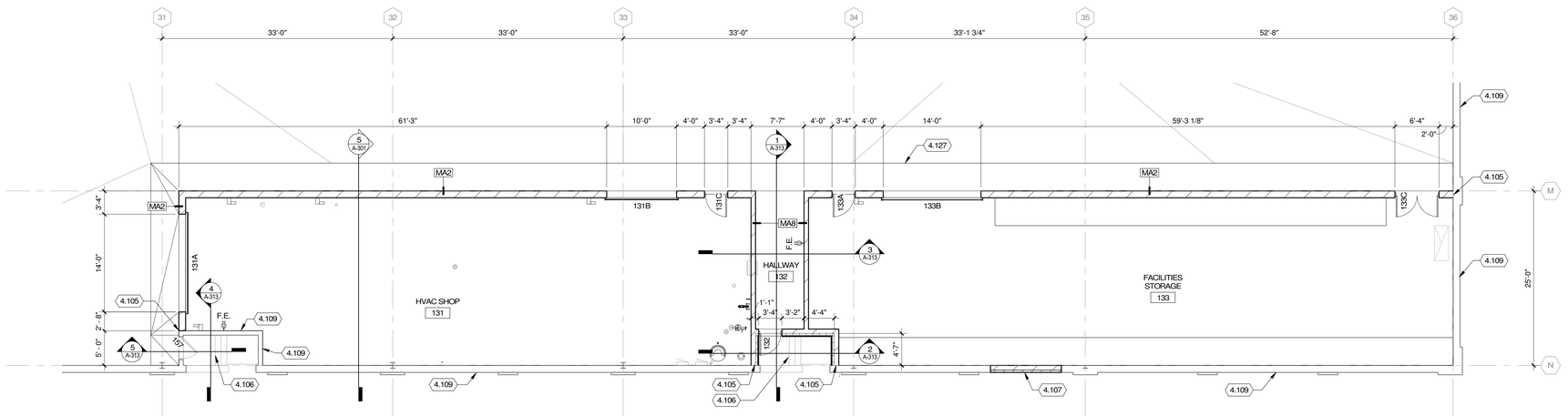
SHEET NO.:
A-101



TRUE NORTH PLAN NORTH

PARTIAL FIRST FLOOR PLAN - AREA C

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

PARTIAL FIRST FLOOR PLAN - AREA D

1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES:

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12. WHERE EXISTING STRUCTURE INTERSECTS WITH NEW CMU/PRE-CAST WALLS, SEPARATION FOR EXPANSION IS REQUIRED. PROVIDE GYP BD/METAL STUD INFILL TO ENCLOSE/SEPARATE ROOMS.
13. SEE ENLARGED PLANS FOR NOTES, DIMENSIONS, AND WALL TYPES WITHI THE DETAIL CALLOUT BOUNDARIES.
14. REFERERNCE SHEET A-001 FOR INTERIOR PARTITION TYPES. INTERIOR PARTITION TAGS NOTED ENCOMPASS THE ENTIRE LENGTH OF WALL SHOWN TO CORNERS OF ROOM, OVER AND AROUND DOORWAYS SHOWN.
15. REFERENCE SHEET A-800'S FOR EQUIPMENT LAYOUTS AND COORDINATION REQUIREMENTS.
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17. REFERENCE A-103 FOR HIGH BAY WINDOW LOCATIONS AND PRECAST PLANK LAYOUT, PECAST MANUFACTURER SHALL PROVIDE FINAL PLANK LAYOUT FOR ARCHITECT REVIEW.

KEYED NOTES

4.105 CMU WALL CONNECTION SEE STRUCTURAL DETAIL 14 & 15/S-521. PROVIDE BACKER ROD AND SEALANT BOTH SIDES OF WALL.

4.106 EXISTING STAIR TO REMAIN

4.107 WALL INFILL WITH BRICK FACE TO MATCH EXISTING, AND CMU BACKUP FULLY GROUTED MASS WALL.

4.109 EXISTING WALL TO REMAIN

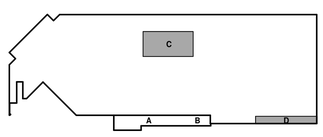
4.120 EQUIPMENT PITS, SEE STRUCTURAL DRAWING S-502.

4.122 CONCRETE FLOOR PATCH

4.123 CATCH BASIN, SEE PLUMBING DRAWINGS

4.126 EXISTING 3-POST LIFT TO REMAIN

4.127 NEW SLAB MATCH TOP OF SLAB TO EXISTING TOP OF SLAB ELEVATION



KEY PLAN

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SHEET CONTENTS
PARTIAL FIRST FLOOR PLANS - AREA C & D

SHEET NO.:

A-102

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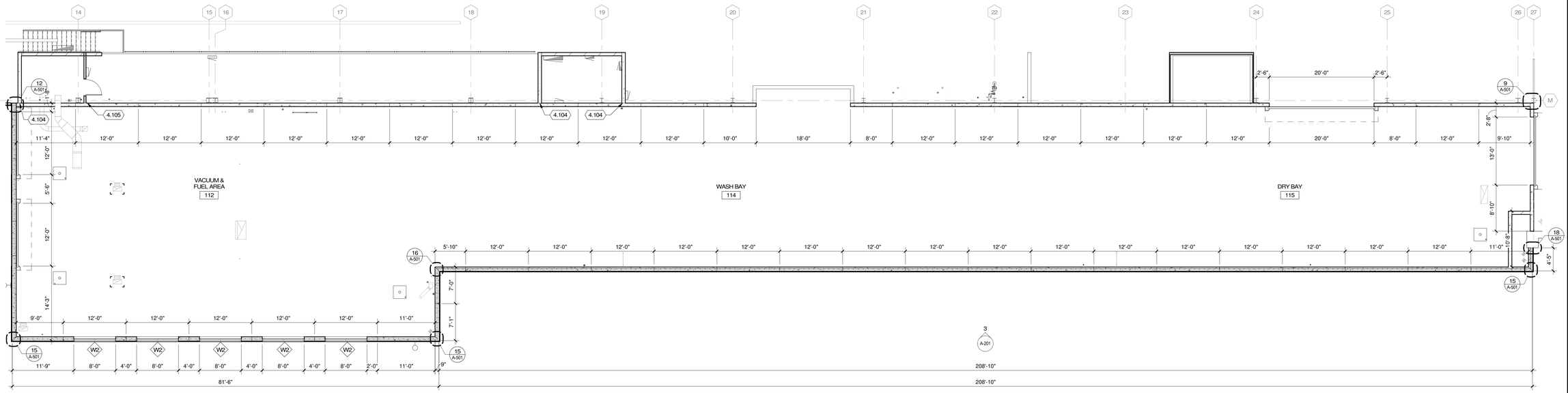
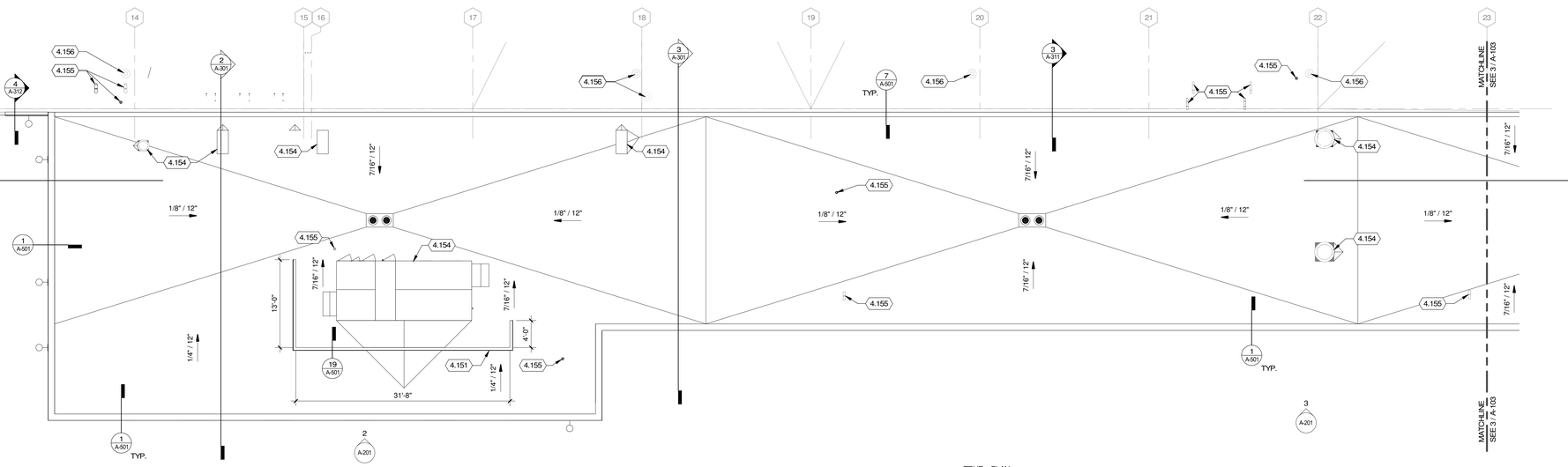


TRUE NORTH PLAN NORTH

1 PRECAST PANEL AND WINDOW LAYOUT - AREA A & B

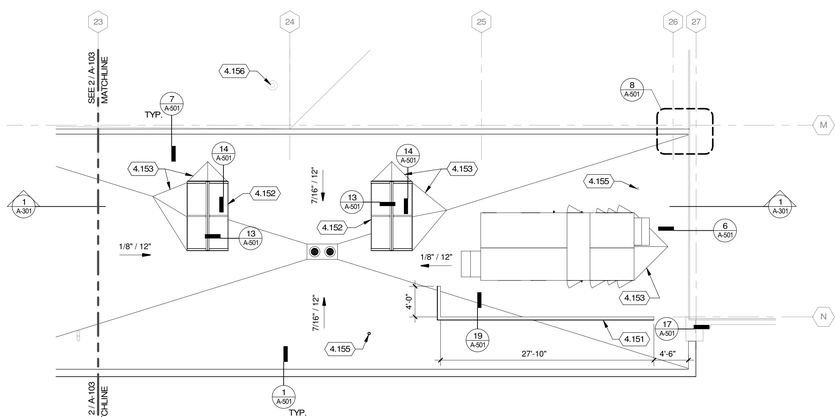
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 ROOF PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

3 ROOF PLAN - AREA B

1/8" = 1'-0"

ROOF PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY ALL EXISTING ROOF CONDITIONS AND CONNECTIONS.
3. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL ROOFTOP PENETETRATIONS NOT SHOWN.
4. PROVIDE TAPERED ROOF INSULATION AT MINIMUM SLOPE 1/4" PER FOOT, AT 4" MINIMUM.
5. REFER TO BUILIDNG/WALL SECTIONS FOR ROOF EDGE CONDTIONS UNLESS NOTED OTHERWISE.
6. MECHANICAL EQUIPMENT CURBS BY MECHANICAL EQUIPMENT MANUFACTURER IF REQUIRED. DUE TO VARIED INSULATION HEIGHTS, PROVIDE 10" MIN CLEAR ABOVE ROOF MEMBRANE.
7. REFERENCE DETAIL 25 / A-501 FOR ALL PIPE PENETRATION CONDITIONS.
8. REFERENCE DETAIL 26 / A-501 FOR ALL DUCT PENETRATION CURB CONDITIONS.
9. REFERENCE DETAIL 27 / A-501 FOR ALL ROOF CURB CONDITIONS.
10. PROVIDE CONCRETE PAVERS FOR ROOFTOP USE OVER A SECOND LAYER OF PROTECTION MEMBRANE AROUND ALL POWERED ROOFTOP EQUIPMENT.

KEYED NOTES

4.104 NEW CONCRETE WALL CONNECTION TO PRECAST, SEE STRUCTURAL DETAIL __/S-551. PROVIDE BACKER ROD AND SEALANT BOTH SIDES OF WALL.

4.105 CMU WALL CONNECTION SEE STRUCTURAL DETAIL 14 & 15/S-521. PROVIDE BACKER ROD AND SEALANT BOTH SIDES OF WALL.

4.151 SCREENWALL, SEE DETAIL 19/A-501 AND SEE STRUCTURAL SHEET S-551 FOR FRAMING REQUIREMENTS

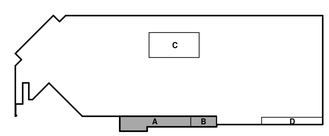
4.152 SKYLIGHT, SELF-SUPPORTED RIDGE ROOF WITH ENDWALLS, SEE DETAIL 13 & 14/A-501

4.153 CRICKET ALL MECHANICAL EQUIPMENT AND SKYLIGHTS TYPICAL

4.154 MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS

4.155 PLUMBING PIPING, SEE PLUMBING DRAWINGS

4.156 EXISTING PRIMARY OR SECONDARY ROOF DRAIN, SEE PLUMBING DRAWINGS



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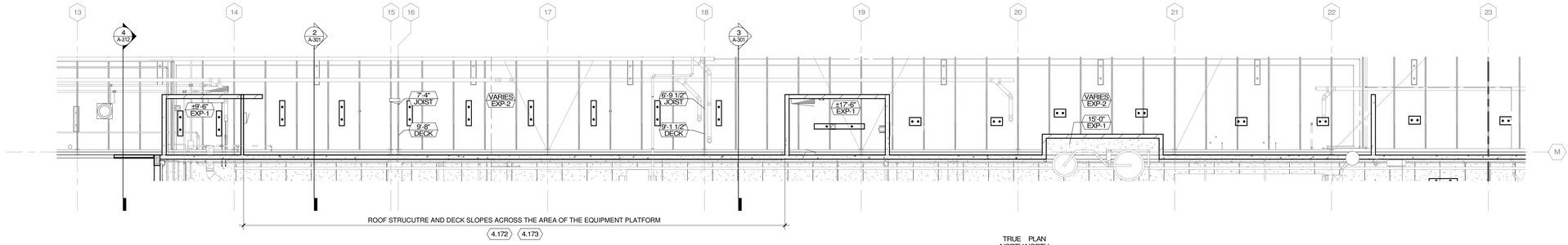
SHEET CONTENTS
WINDOW LAYOUT AND ROOF PLANS - AREA A & B

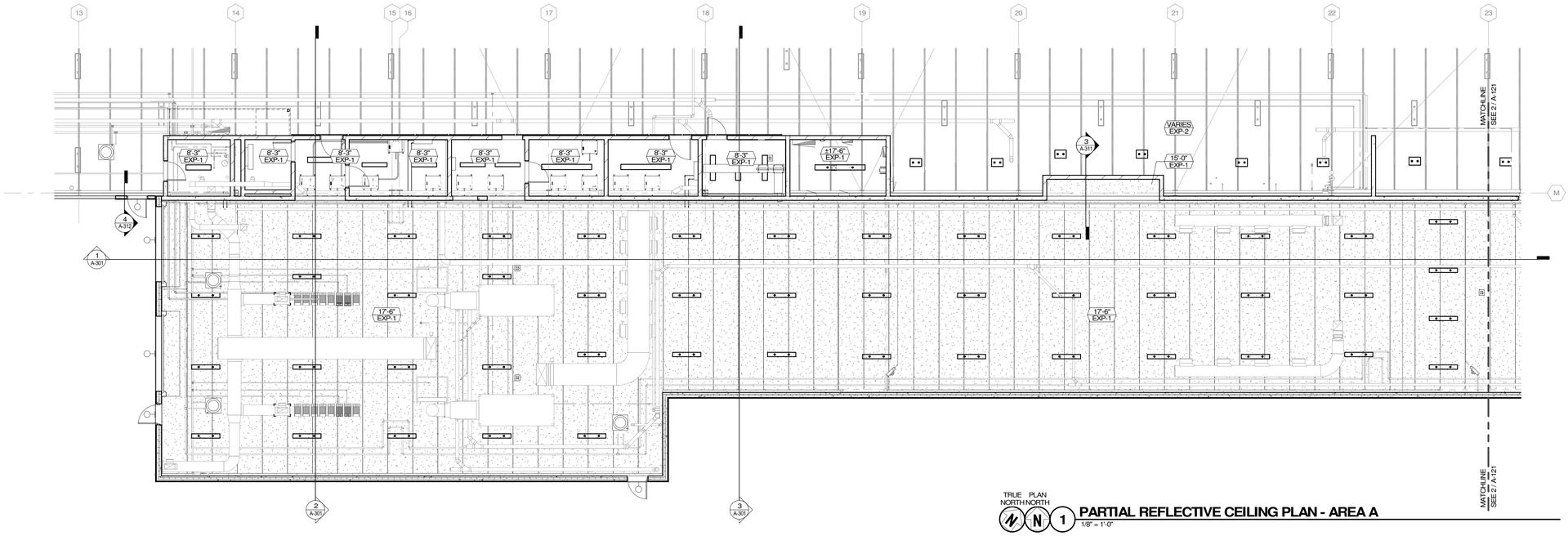
SHEET NO.:
A-103



TRUE NORTH PLAN NORTH

3 EQUIPMENT PLATFORM REFLECTIVE CEILING PLAN

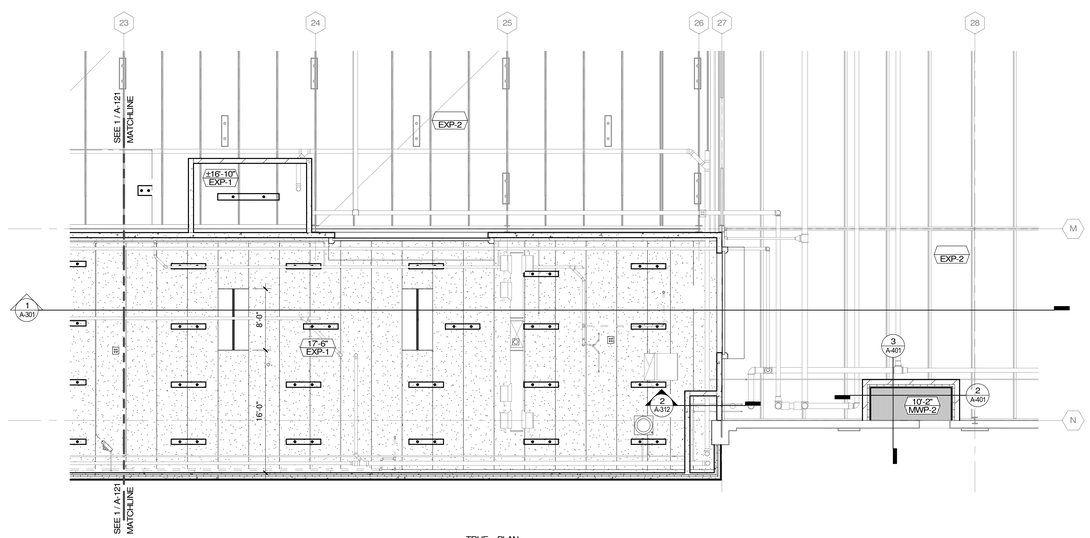
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

1 PARTIAL REFLECTIVE CEILING PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 PARTIAL REFLECTIVE CEILING PLAN - AREA B

1/8" = 1'-0"

CEILING PLAN GENERAL NOTES:

1. SEE ROOM FINISH SCHEDULE FOR FLOOR, WALL AND CEILING FINISHES AND ROOM HEIGHTS.
2. FIELD VERIFY ALL DIMESIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT FOR FINAL DECISION.

CEILING LEGEND:

SEE ELECTRICAL FOR EXACT FIXTURE MODEL

CEILING TYPE TAG
- X'-X" / XX-X — ELEVATION ABOVE FINISHED FLOOR / CEILING TYPE
- EXPOSED PRECAST PLANK (PAINTED)
- LIGHT FIXTURE (RECESSED MOUNTED)
- LIGHT FIXTURE (RECESSED MOUNTED 4" WIDE OR LESS)
- OR LIGHT FIXTURE (RECESSED MOUNTED)
- LIGHT FIXTURE (RECESSED CAN)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SUSPENDED)
- OR LIGHT FIXTURE (SUSPENDED)
- CEILING RECEPTACLES
- CEILING OCCUPANCY SENSOR
- CEILING FIRE ALARM DEVICES
- CEILING MASS NOTIFICATION DEVICE
- CEILING SPEAKER
- CEILING SECURITY STRODE
- CEILING CAMERA
- SPRINKLER HEADS
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER / EXHAUST GRILL
- EXHAUST FAN

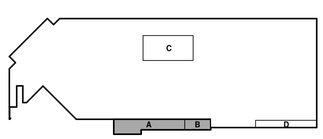
CEILING FINISHES LIST:

- X'-X" / EXP-1 — PAINTED EXPOSED STRUCTURE; COLOR: SEE ROOM SCHEDULE ON A-601
- EXP-2 — EXISTING EXPOSED STRUCTURE; TO REMAIN AS IS
- X'-X" / MWP-2 — METAL PANELS; MANUFACTURER: MORIN; SERIES: VB-36; COLOR: BLUE

KEYED NOTES

4.172 BOTTOM OF ROOF DECK ELEVATION VARIES IN HEIGHT FROM ±9'-1 1/2" AFF TO ±9'-7 1/2" AFF

4.173 BOTTOM OF ROOF JOISTS ELEVATION VARIES IN HEIGHT FROM ±6'-9 1/2" AFF TO ±7'-4" AFF



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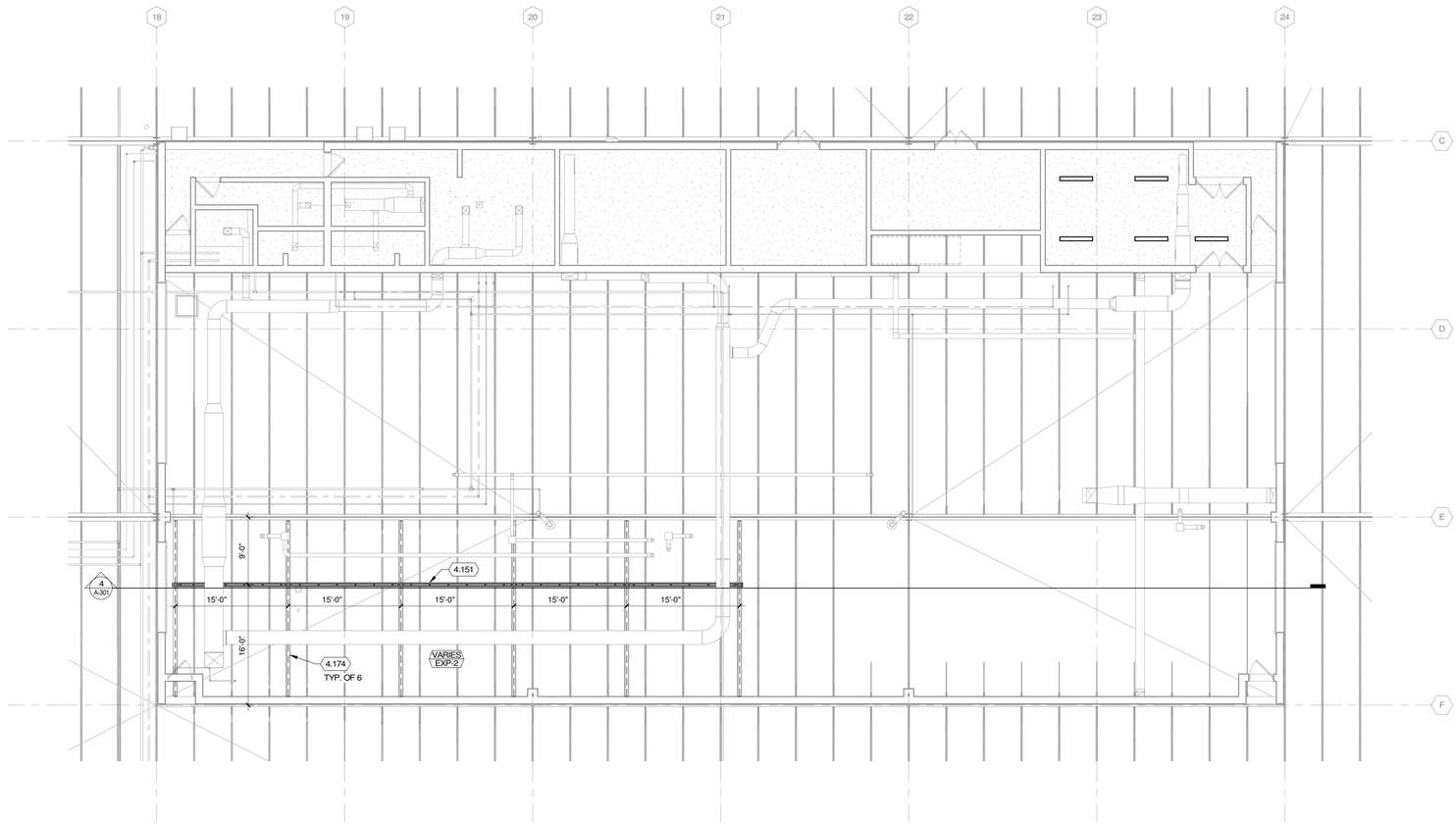
SHEET CONTENTS
PARTIAL FIRST FLOOR REFLECTIVE CEILING PLANS - AREA A & B

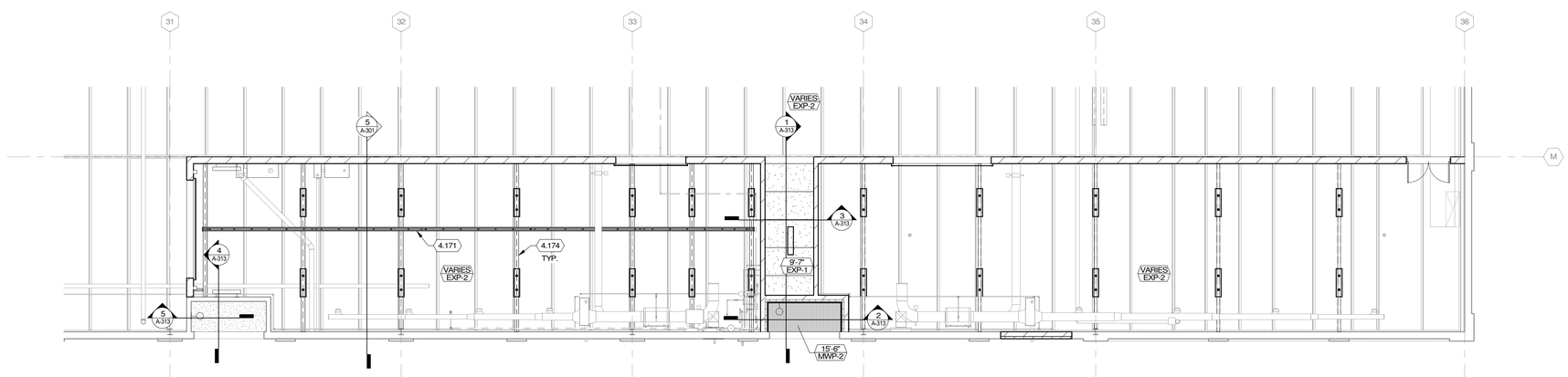
SHEET NO.:
A-121



TRUE NORTH PLAN NORTH

1 REFLECTIVE CEILING PLAN - AREA C

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 REFLECTIVE CEILING PLAN - AREA D

1/8" = 1'-0"

CEILING PLAN GENERAL NOTES:

1. SEE ROOM FINISH SCHEDULE FOR FLOOR, WALL AND CEILING FINISHES AND ROOM HEIGHTS.
2. FIELD VERIFY ALL DIMESIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT FOR FINAL DECISION.

CEILING LEGEND:

SEE ELECTRICAL FOR EXACT FIXTURE MODEL

CEILING TYPE TAG
- XX / XXX — ELEVATION ABOVE FINISHED FLOOR / CEILING TYPE
- EXPOSED PRECAST PLANK (PAINTED)
- LIGHT FIXTURE (RECESSED MOUNTED)
- LIGHT FIXTURE (RECESSED MOUNTED 4" WIDE OR LESS)
- OR — LIGHT FIXTURE (RECESSED MOUNTED)
- LIGHT FIXTURE (RECESSED CAN)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SURFACE MOUNTED)
- LIGHT FIXTURE (SUSPENDED)
- OR — LIGHT FIXTURE (SUSPENDED)
- CEILING RECEPTACLES
- CEILING OCCUPANCY SENSOR
- CEILING FIRE ALARM DEVICES
- CEILING MASS NOTIFICATION DEVICE
- CEILING SPEAKER
- CEILING SECURITY STRODE
- CEILING CAMERA
- SPRINKLER HEADS
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER / EXHAUST GRILL
- EXHAUST FAN

CEILING FINISHES LIST:

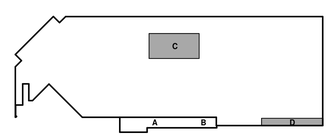
- XX / EXP-1 — PAINTED EXPOSED STRUCTURE
  COLOR: SEE ROOM SCHEDULE ON A-601
- EXP-2 — EXISTING EXPOSED STRUCTURE
  TO REMAIN AS IS
- XX / MWP-2 — METAL PANELS
  MANUFACTURER: MORIN
  SERIES: VB-36
  COLOR: BLUE

KEYED NOTES

4.151 SCREENWALL, SEE DETAIL 19/A-501 AND SEE STRUCTURAL SHEET S-551 FOR FRAMING REQUIREMENTS

4.171 FALL PROTECTION DEVICE - DOUBLE RAIL CEILING MOUNTED, SEE STRUCTURAL FOR CONNECTION DETAIL.

4.174 STRUCTURAL SUPPORT FOR FALL PROTECTION, SEE STRUCTURAL



KEY PLAN

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CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

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MADISON, WI 53703

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01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS:
PARTIAL FIRST FLOOR REFLECTIVE CEILING PLANS - AREA C & D

SHEET NO.:

A-122

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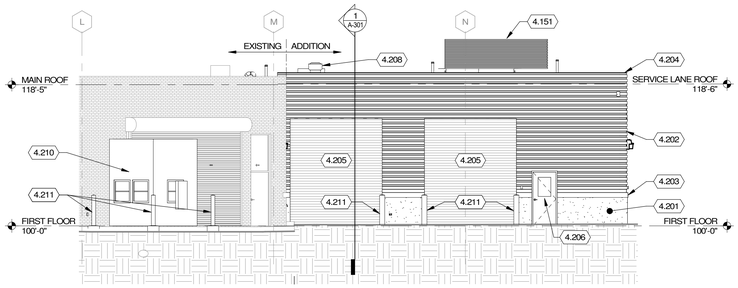
EXTERIOR ELEVATIONS GENERAL NOTES

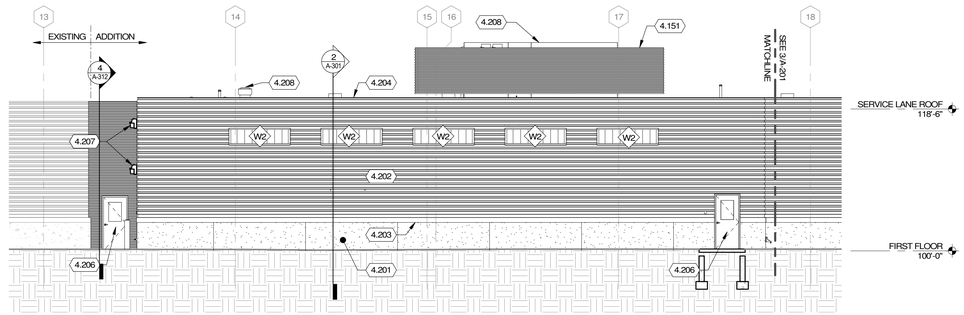
1. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL WORK NOT SHOWN ON ELEVATIONS.
2. SEE A-300'S FOR BUILDING SECTIONS.
3. APPLY WATER REPELLANT TO THE ENTIRE EXTERIOR OF THE PRECAST CONCRETE BUILDING PANELS. WATER REPELLANTS SHALL BE APPLIED TO THE EXTERIOR PRIOR TO INSTALLATION OF METAL PANELS AND WINDOWS.

KEYED NOTES

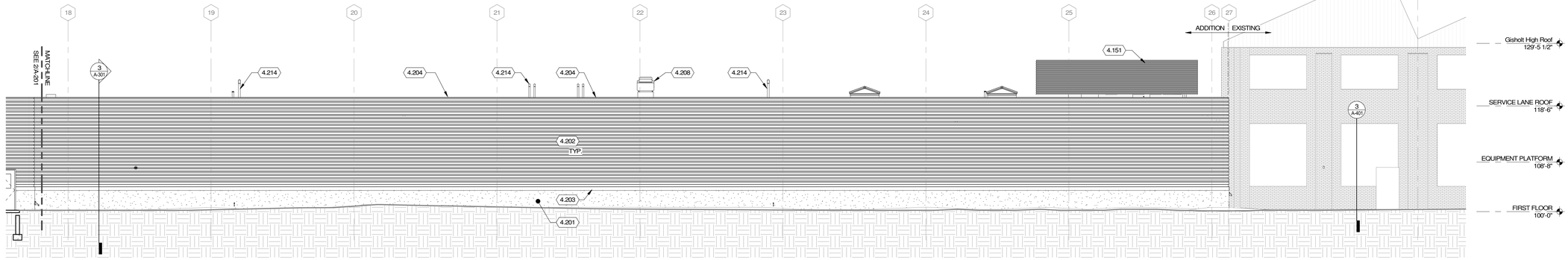
4.151	SCREENWALL, SEE DETAIL 19/A-501 AND SEE STRUCTURAL SHEET S-551 FOR FRAMING REQUIREMENTS
4.201	CONCRETE PRECAST WALL PANEL SYSTEM
4.202	METAL PANEL (MWP-1)
4.203	PREFINISHED METAL TRIM, COLOR TO MATCH MWP-2
4.204	PREFINISHED METAL CAP, COLOR TO MATCH MWP-1
4.205	ROLLUP DOORS
4.206	MAN DOORS
4.207	ELECTRICAL LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
4.208	MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS
4.209	OVERFLOW DRAINS DAYLIGHT LOCATION, SEE PLUMBING DRAWINGS.
4.210	RELOCATED PARKING ATTENDANT BOOTH
4.211	PIPE BOLLARD, SEE STRUCTURAL DRAWINGS
4.213	EXPANSION JOINT, SEE DETAIL 18/A-501
4.214	PLUMBING PIPING, SEE PLUMBING DRAWINGS



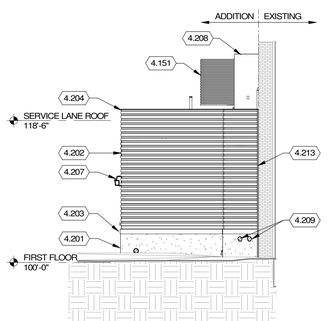
1 WEST BUILDING ELEVATION
1/8" = 1'-0"



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



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



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

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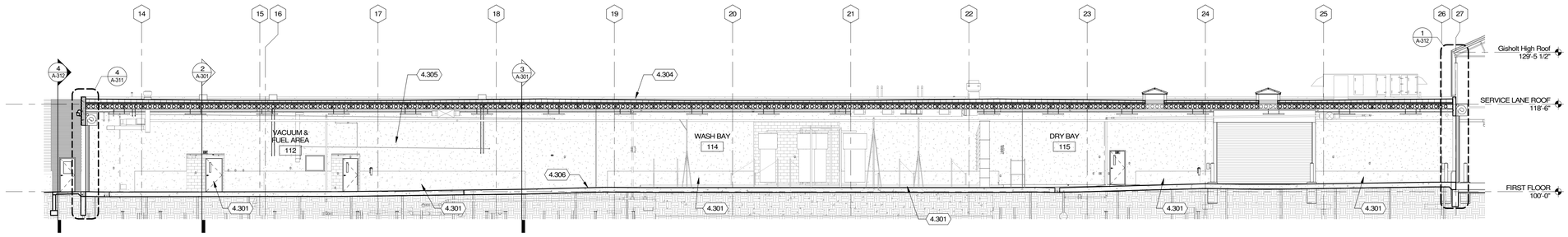
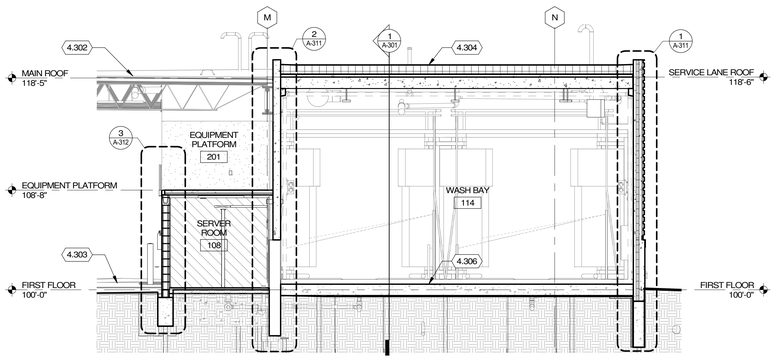
SHEET CONTENTS
BUILDING ELEVATIONS

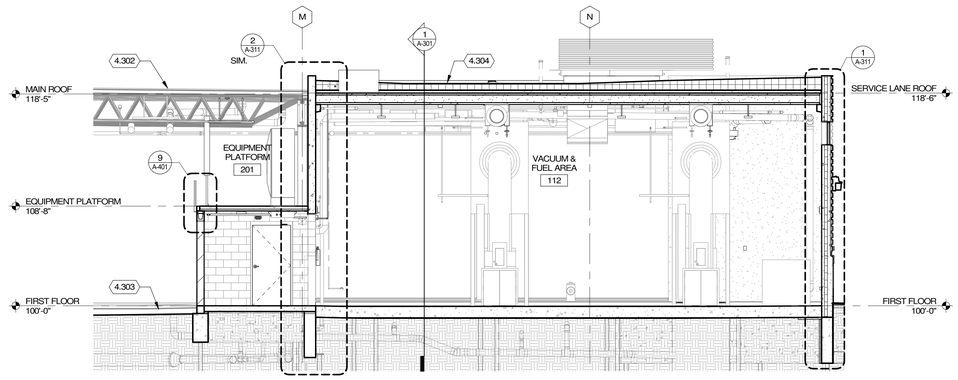
SHEET NO.:
A-201



1 SERVICE LANE - LONGITUDINAL SECTION
3/32" = 1'-0"



3 TRANSVERSE SECTION AT WASH BAY
3/16" = 1'-0"



2 TRANSVERSE SECTION AT VACUUM
3/16" = 1'-0"

KEYED NOTES

4.171 FALL PROTECTION DEVICE - DOUBLE RAIL CEILING MOUNTED, SEE STRUCTURAL FOR CONNECTION DETAIL.

4.301 EXISTING CONCRETE GRADE BEAM BEYOND TO REMAIN TYPICAL

4.302 EXISTING EPDM ROOF SYSTEM TO REMAIN

4.303 EXISTING SLAB TO REMAIN

4.304 EPDM ROOF SYSTEM WITH INSULATION OVER PRECAST ROOF DECK

4.305 PRECAST CONCRETE WALL BUILT ON EXISTING CONCRETE GRADE BEAM, TYP. BEYOND

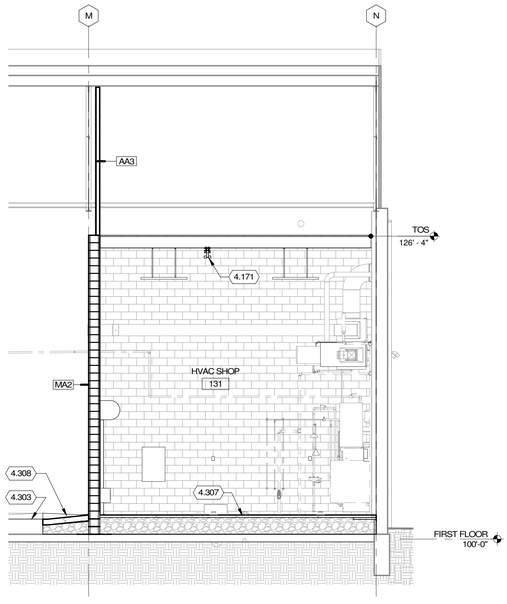
4.306 CONCRETE SLAB-ON-GRADE

4.307 CONCRETE SLAB ON COMPACTED FILL, SEE STRUCTURAL

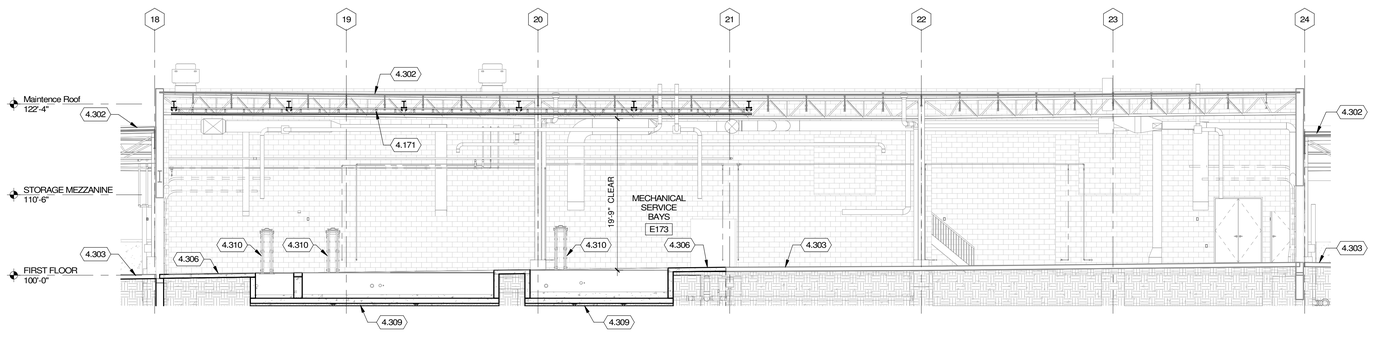
4.308 TRANSITION CONCRETE SLAB

4.309 CONCRETE PITS FOR LIFTS, SEE SHEET A-800 AND STRUCTURAL DRAWINGS

4.310 EQUIPMENT LIFTS



5 TRANSVERSE SECTION AT HVAC SHOP
3/16" = 1'-0"



4 LONGITUDINAL SECTION AT MAINTENACE B SERVICE BAY
1/8" = 1'-0"

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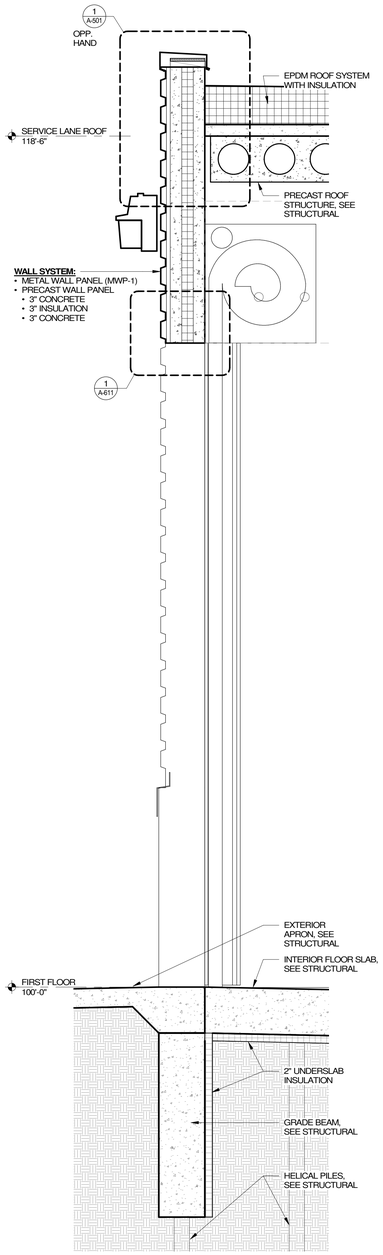
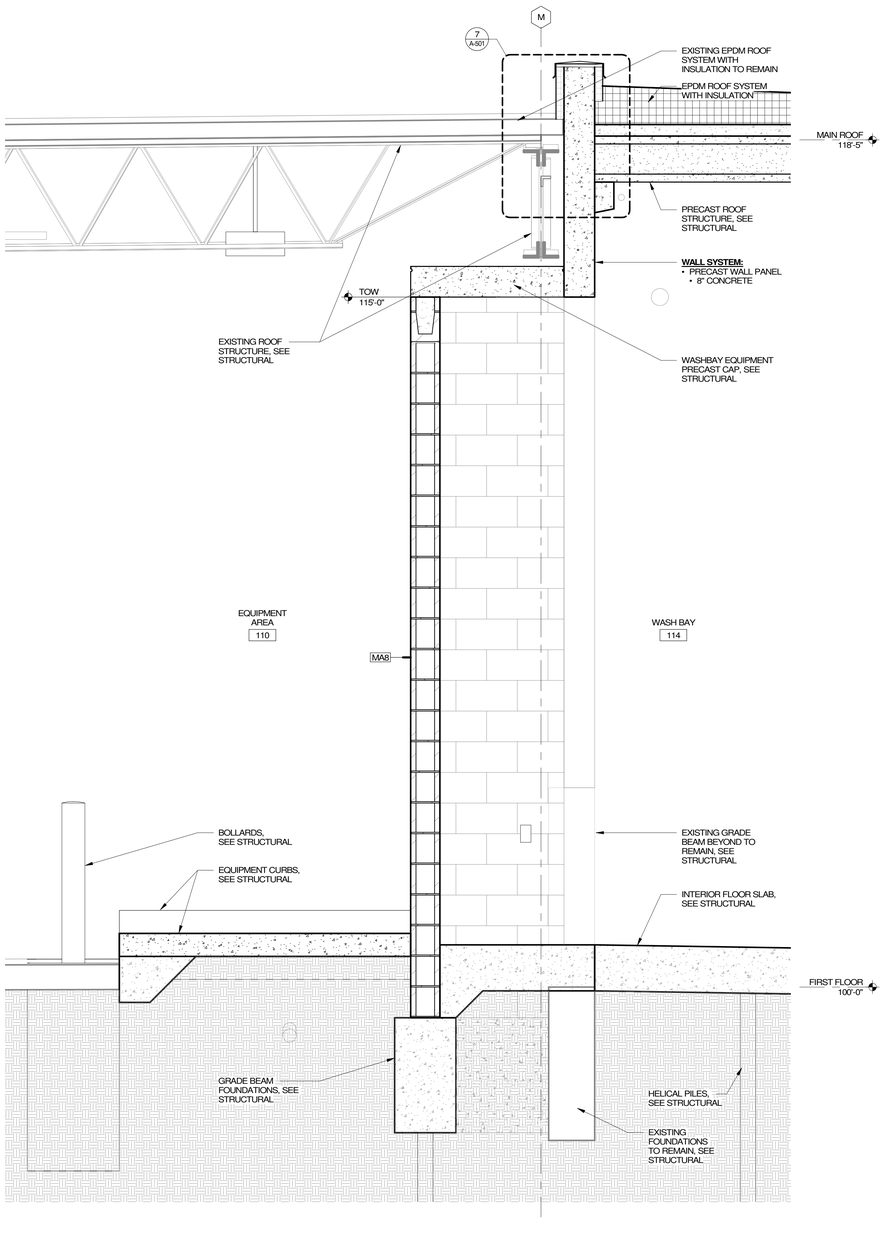
SHEET CONTENTS
BUILDING SECTIONS

SHEET NO.:
A-301



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



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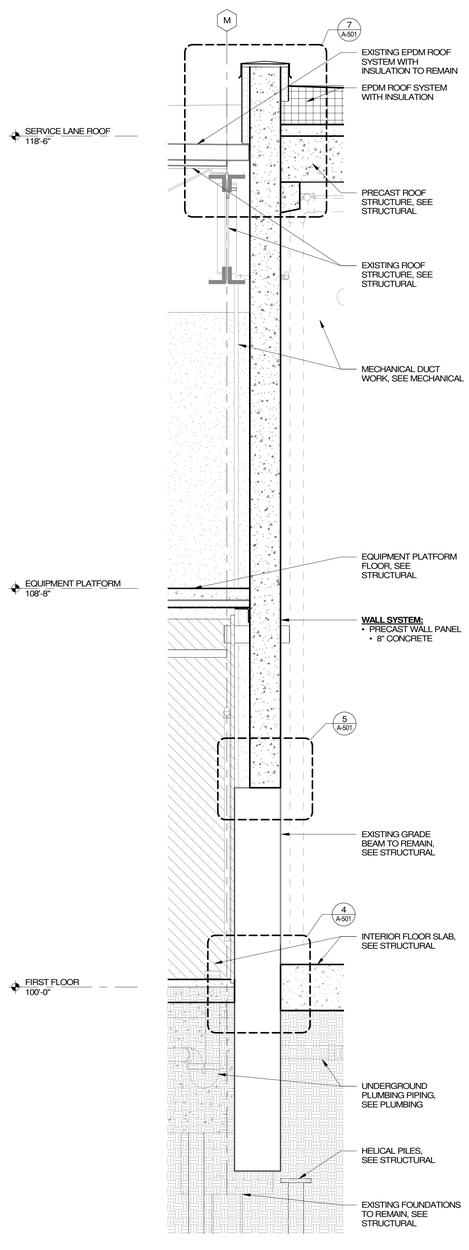
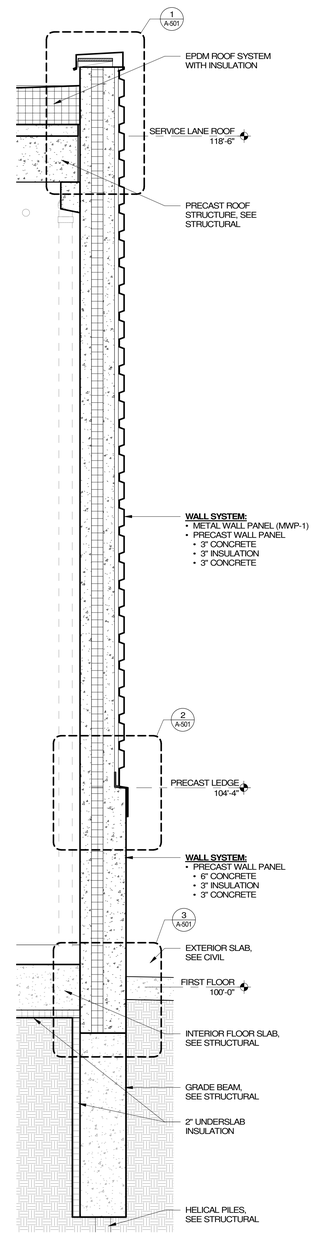
3/4" = 1'-0"



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



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

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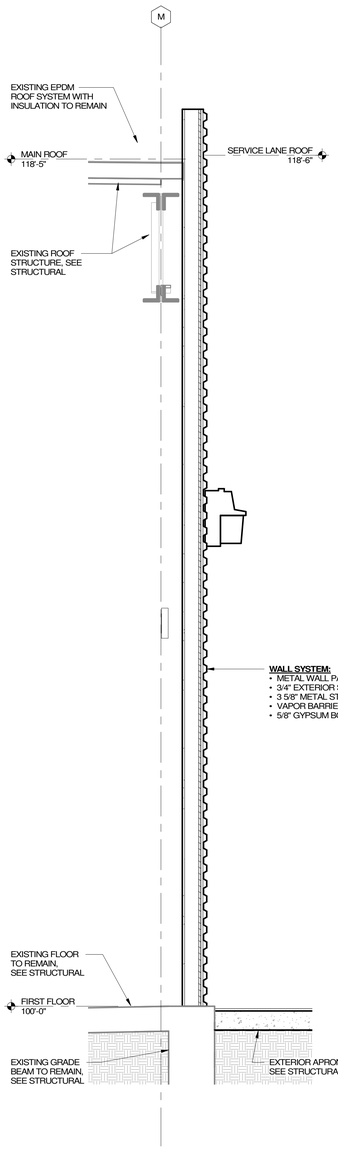
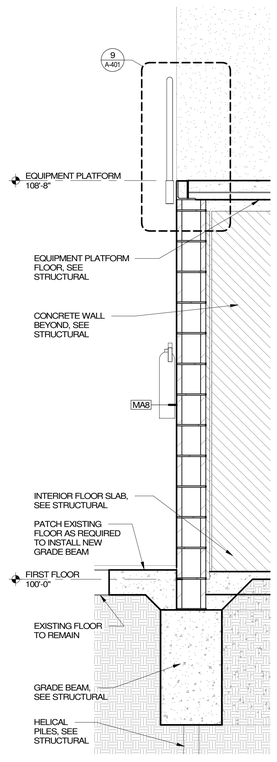
SHEET CONTENTS
WALL SECTIONS

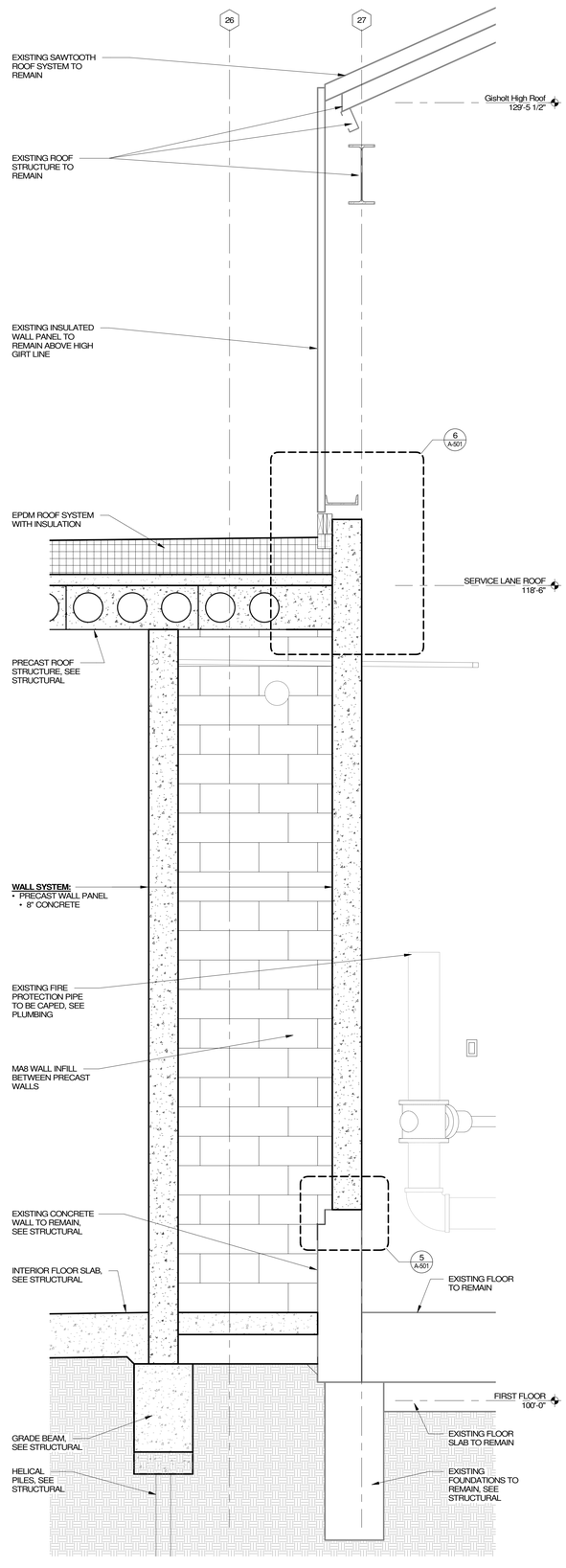
SHEET NO.:
A-311



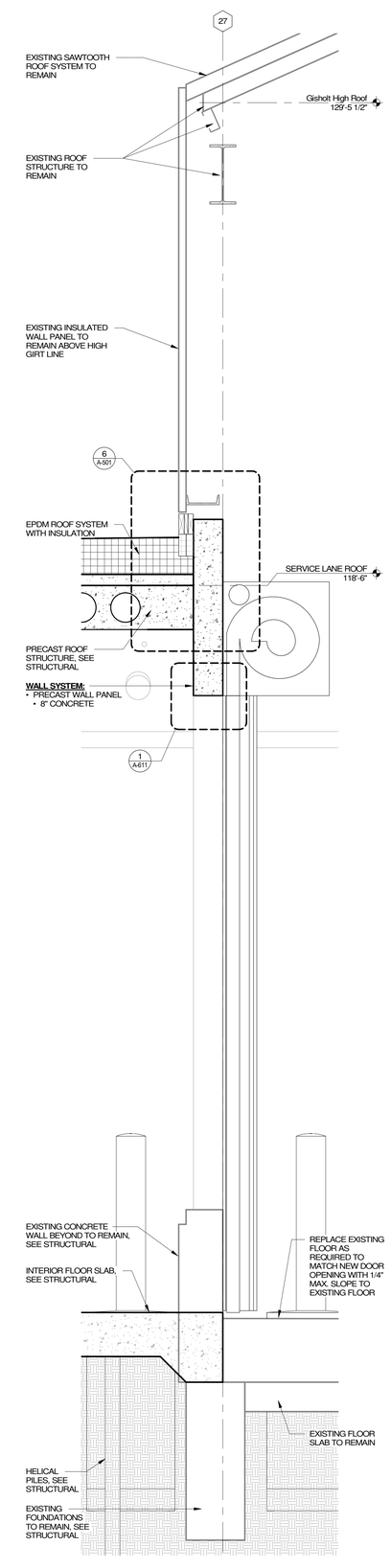
4 **WALL SECTION**
3/4" = 1'-0"



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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SHEET CONTENTS
WALL SECTIONS

SHEET NO.:
A-312

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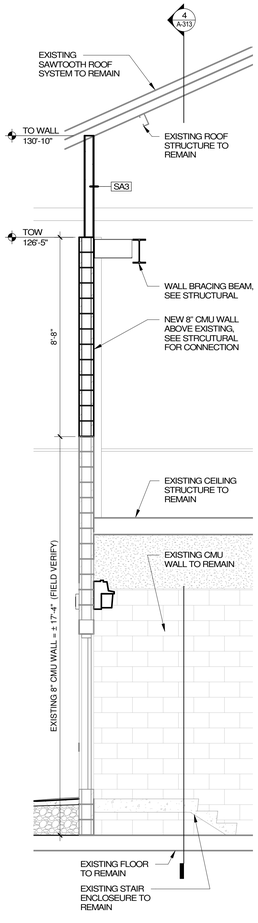
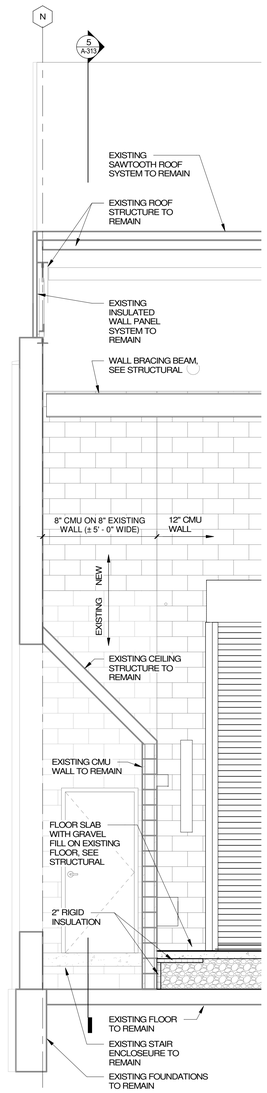
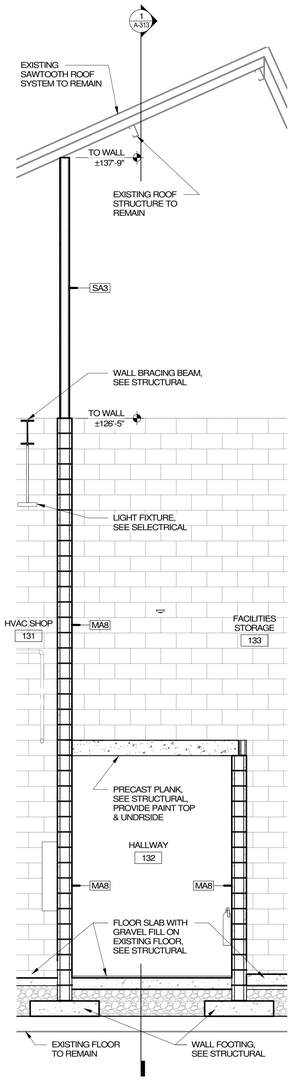


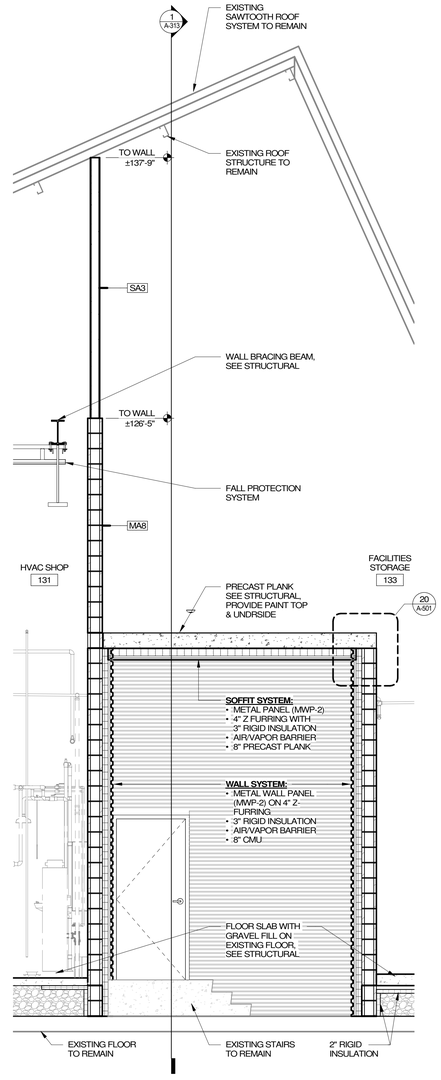
5 WALL SECTION
3/8" = 1'-0"



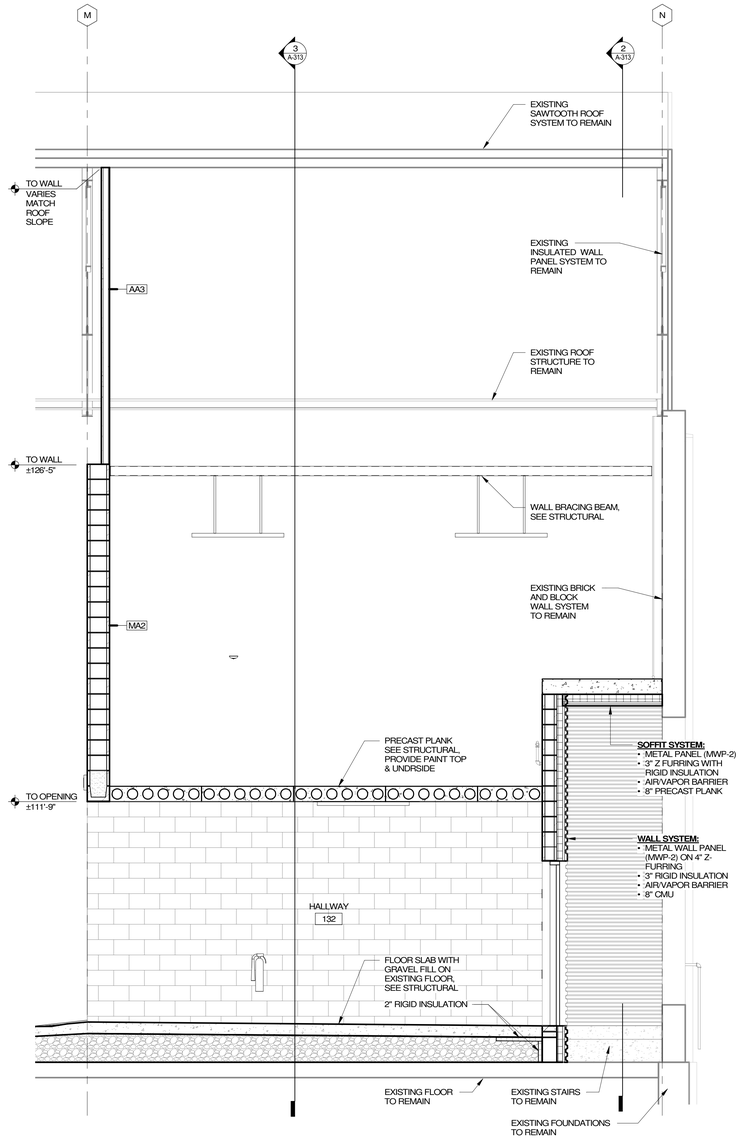
4 WALL SECTION
3/8" = 1'-0"



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



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



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

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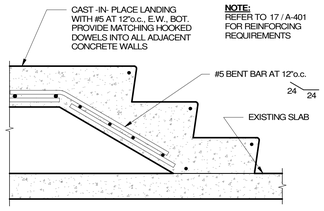
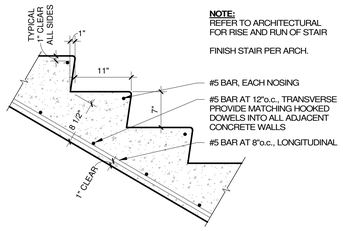
SHEET CONTENTS
WALL SECTIONS

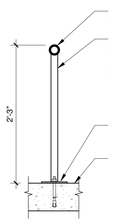
SHEET NO.:
A-313



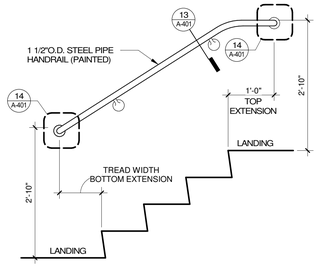
16 CAST -IN- PLACE CONCRETE STAIR BASE AT SLAB
1" = 1'-0"



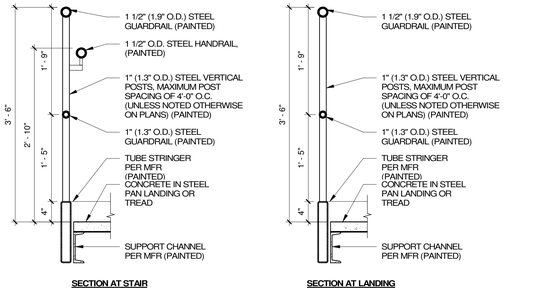
17 CAST -IN- PLACE CONCRETE STAIR TREAD
1" = 1'-0"



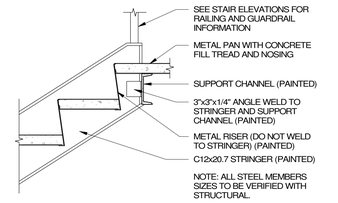
18 UNDER STAIR GUARDRAIL
1" = 1'-0"



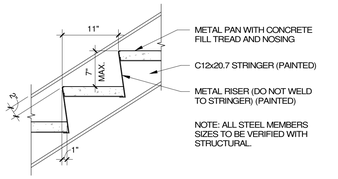
19 TYPICAL HANDRAIL EXTENSION REQUIREMENTS
3/4" = 1'-0"



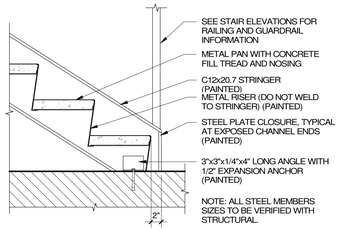
20 STAIR GUARDRAIL
1" = 1'-0"



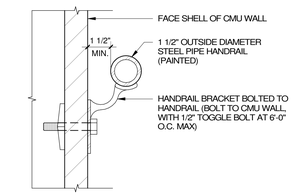
10 METAL PAN STAIR - FLOOR DETAIL
1" = 1'-0"



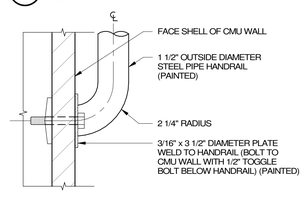
11 METAL PAN STAIR - TREAD
1" = 1'-0"



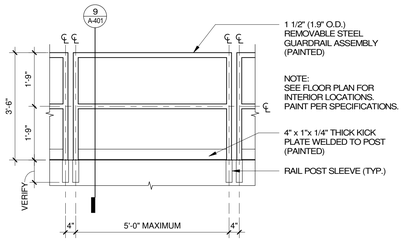
12 METAL PAN STAIR - BASE DETAIL
1" = 1'-0"



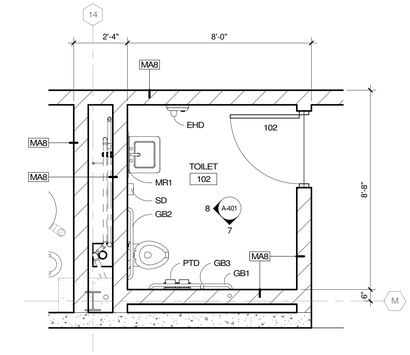
13 TYPICAL HANDRAIL DETAIL
3" = 1'-0"



14 TYPICAL HANDRAIL RETURN DETAIL
3" = 1'-0"

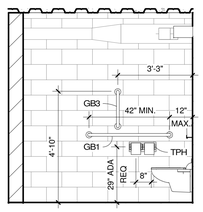


15 REMOVABLE GUARDRAIL ELEVATION
1/2" = 1'-0"

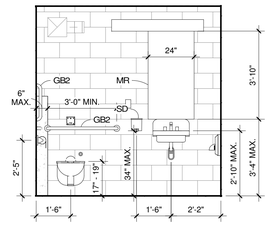


TRUE NORTH PLAN NORTH

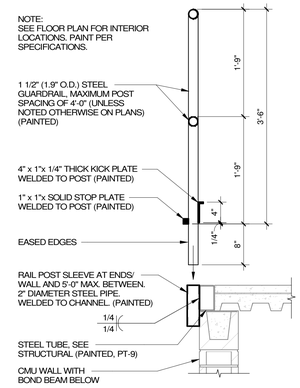
6 ENLARGED TOILET ROOM PLAN
3/8" = 1'-0"



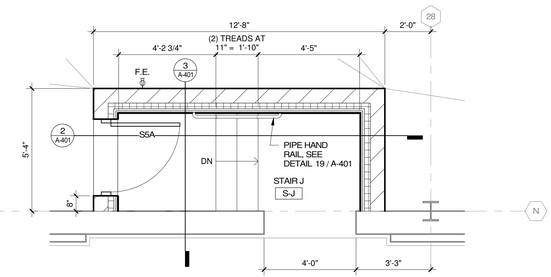
7 INTERIOR ELEVATION
3/8" = 1'-0"



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

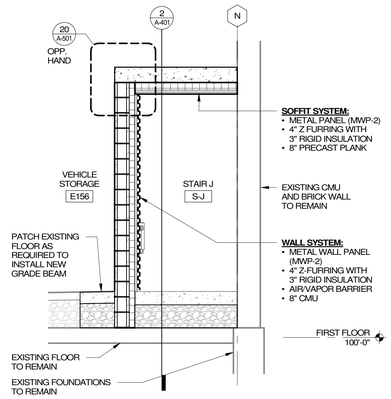


9 REMOVABLE RAILING
1" = 1'-0"

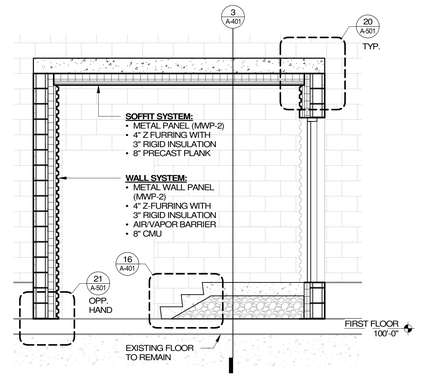


TRUE NORTH PLAN NORTH

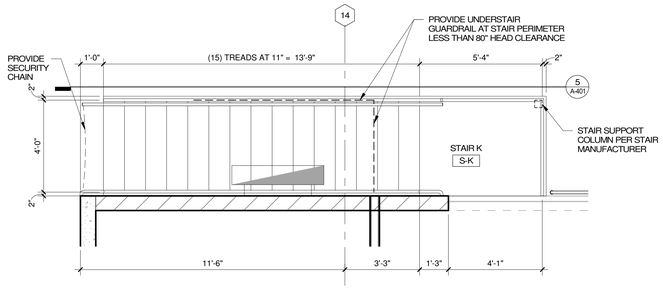
1 ENLARGED STAIR "J" PLAN
3/8" = 1'-0"



3 STAIR SECTION
3/8" = 1'-0"

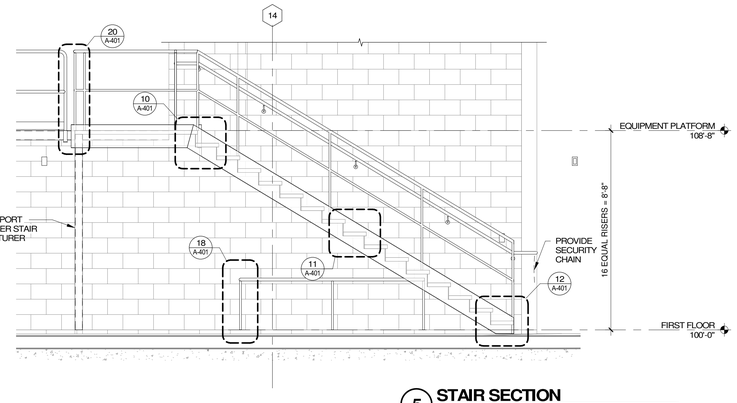


2 STAIR SECTION
3/8" = 1'-0"



TRUE NORTH PLAN NORTH

4 ENLARGED STAIR "K" PLAN
3/8" = 1'-0"



5 STAIR SECTION
3/8" = 1'-0"

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

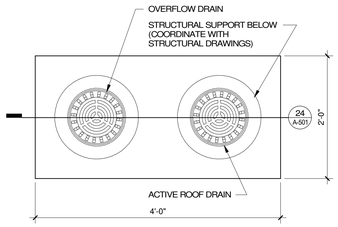
1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

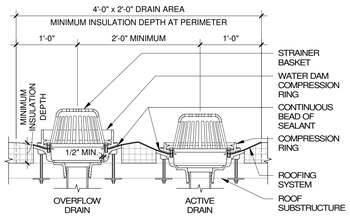
CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
ENLARGED STAIR PLAN, SECTIONS AND TOILET ELEVATIONS

SHEET NO.:
A-401

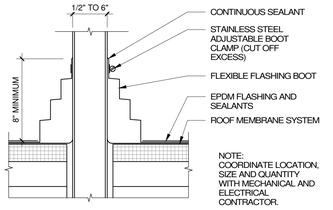


23 ROOF DRAIN - PLAN
1" = 1'-0"



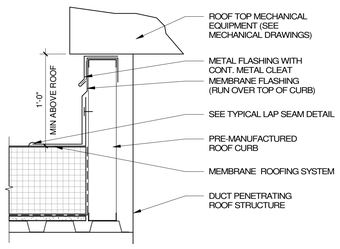
NOTE:
HOLE IN MEMBRANE SHOULD EXTEND A MINIMUM OF 1/2" BEYOND CLAMPING RING AND SHOULD NOT BE SMALLER THAN THE DIAMETER OF THE LEADER PIPE.

24 ROOF DRAIN - SECTION
1" = 1'-0"

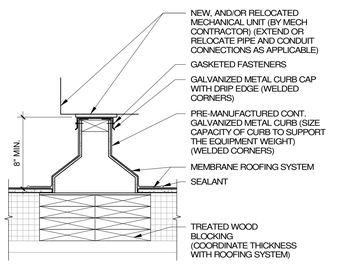


NOTE:
COORDINATE LOCATION, SIZE AND QUANTITY WITH MECHANICAL AND ELECTRICAL CONTRACTOR.

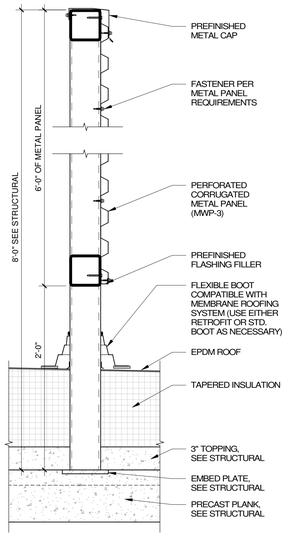
25 PIPE PENTRATION - EPDM
NO SCALE



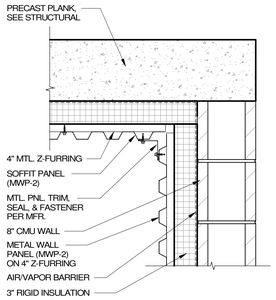
EPDM MECHANICAL DUCT PENTRATION CURB
26 1 1/2" = 1'-0"



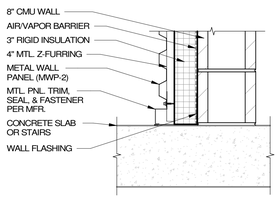
MECHANICAL EQUIPMENT SUPPORT CURB
27 1 1/2" = 1'-0"



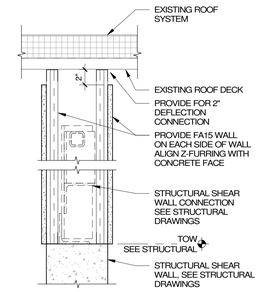
19 SCREEN WALL SECTION
1 1/2" = 1'-0"



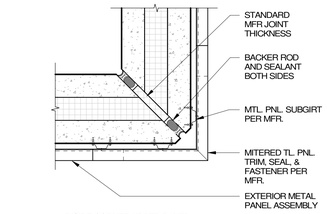
20 SOFFIT TO WALL DETAIL
1 1/2" = 1'-0"



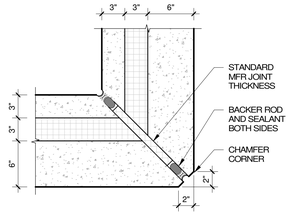
21 WALL BASE DETAIL
1 1/2" = 1'-0"



22 STUD WALL ON SHEAR WALL
1 1/2" = 1'-0"

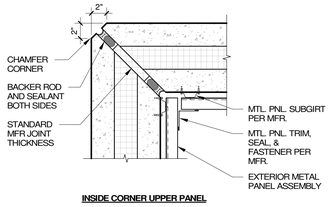


INSIDE CORNER UPPER PANEL

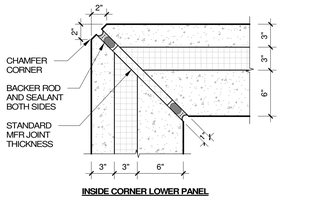


OUTSIDE CORNER LOWER PANEL

TYPICAL EXTERIOR OUTSIDE CORNER
15 1 1/2" = 1'-0"

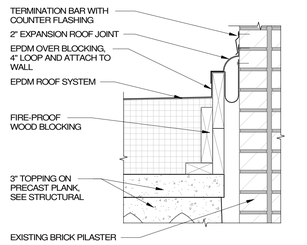


INSIDE CORNER UPPER PANEL

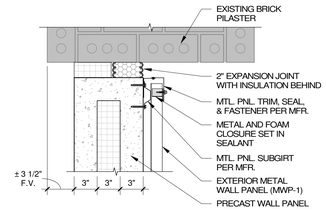


INSIDE CORNER LOWER PANEL

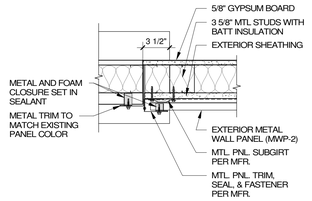
TYPICAL EXTERIOR INSIDE CORNER
16 1 1/2" = 1'-0"



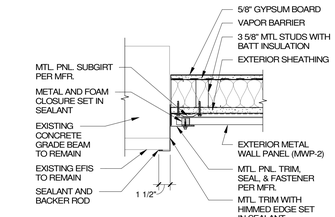
17 ROOF TO WALL DETAIL AT EXISTING
1 1/2" = 1'-0"



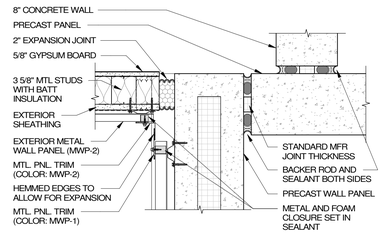
18 ENLARGED DETAIL PLAN
1 1/2" = 1'-0"



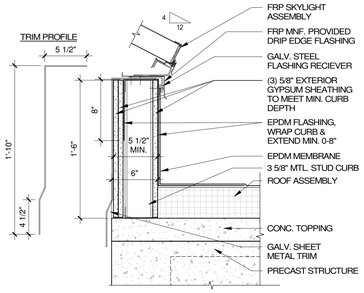
10 ENLARGED DETAIL PLAN
1 1/2" = 1'-0"



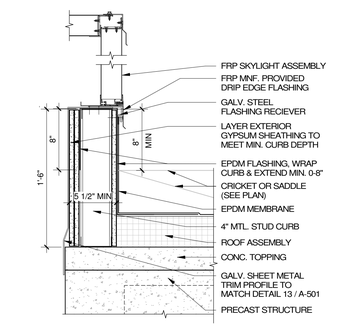
11 ENLARGED DETAIL PLAN
1 1/2" = 1'-0"



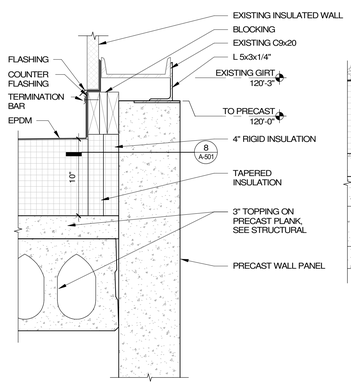
12 ENLARGED DETAIL PLAN
1 1/2" = 1'-0"



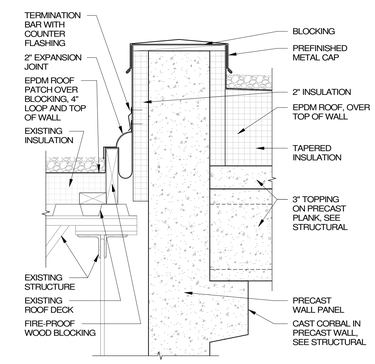
FRP SKYLIGHT ASSEMBLY ROOF CURB DETAIL
13 1 1/2" = 1'-0"



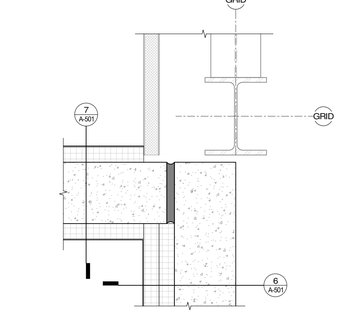
FRP SKYLIGHT ASSEMBLY ROOF CURB DETAIL
14 1 1/2" = 1'-0"



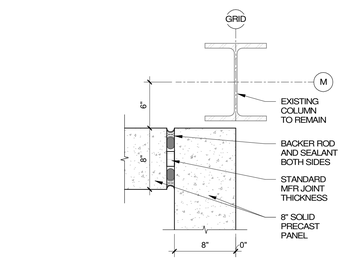
6 ROOF TO WALL DETAIL AT EXISTING
1 1/2" = 1'-0"



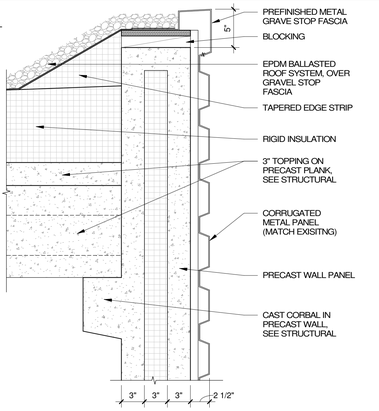
7 PARAPET WALL CAP
1 1/2" = 1'-0"



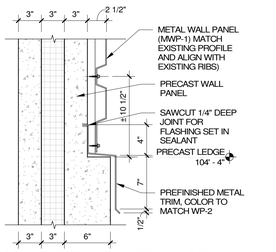
8 ROOF PLAN DETAIL
1 1/2" = 1'-0"



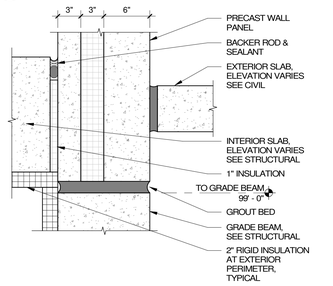
9 ENLARGED PLAN DETAIL
1 1/2" = 1'-0"



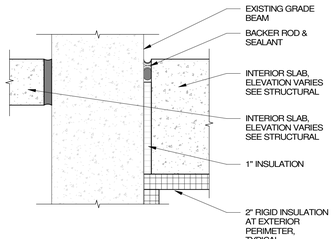
1 PARAPET WALL CAP
1 1/2" = 1'-0"



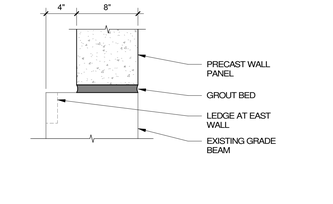
2 TYPICAL METAL PANEL BASE
1 1/2" = 1'-0"



3 TYPICAL PRECAST BASE
1 1/2" = 1'-0"



4 SLABS TO EXISTING GRADE BEAM
1 1/2" = 1'-0"



5 PRECAST BASE ON GRADE BEAM
1 1/2" = 1'-0"

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
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CONTRACT NO.: 8238
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DESIGNED BY: SZK
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CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
DETAILS

SHEET NO.:
A-501

ARCHITECTURAL FINISHES SCHEDULE

FINISH NUMBER	FINISH DESCRIPTION	PRODUCT DESCRIPTION					REMARKS
		MANUFACTURER	MODEL NUMBER	STYLE	COLOR	SIZE	
EPX	EPOXY FLOOR & INTEGRAL BASE	TNEMEC	DECO-FLECK 224	-	512	-	
PFMP	PRE-FINISHED METAL PANEL	-	-	-	-	-	SEE SPECIFICATIONS
PT-1	PAINT COLOR - TYPE 1	HALLMAN LINDSAY	0526		METROPOLIS MOOD		
PT-2	PAINT COLOR - TYPE 2	HALLMAN LINDSAY	0528		GREYBEARD		
PT-3	PAINT COLOR - TYPE 3	HALLMAN LINDSAY	0523		FELICITY		
SC-1	SEALED CONCRETE		SILANE				

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING		REMARKS
				NORTH	EAST	SOUTH	WEST	MTL	HEIGHT	
101	JANITOR	EPX	EPX	PT-1	PT-1	PT-1	PT-1	EXP/PT-1		1, 3
102	TOILET	EPX	EPX	PT-3	PT-3	PT-3	PT-3	EXP/PT-3		1, 3
103	HALL	SC-1	-	-	PT-1	PT-1	PT-1	EXP/PT-1		
104	CASH ROOM	SC-1	-	PT-3	PT-3	PT-3	PT-3	EXP/PT-3		1
105	SERVICE LANE OFFICE	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP/PT-1		1
106	LOST & FOUND	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP/PT-1		1
107	STORAGE	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP/PT-1		1
108	SERVER ROOM	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP/PT-1		1
109	ELECTRICAL ROOM	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP/PT-1		1
110	EQUIPMENT AREA	SC-1	-	-	PT-1	PT-1	PT-1	EXP/PT-1		1
111	ADVERTISING STORAGE	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP/PT-1		1
112	VACUUM & FUEL AREA	SC-1	-	PT-1	PT-1	PT-1	-	EXP/PT-1		2
113	BULK FLUIDS	SC-1	-	-	-	PT-1	PT-1	EXP/PT-1		2
114	WASH BAY	SC-1	-	PT-1	-	PT-1	-	EXP/PT-1		2
115	DRY BAY	SC-1	-	PT-1	PT-1	PT-1	-	EXP/PT-1		2
131	HVAC SHOP	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP		
132	HALLWAY	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP		
133	FACILITIES STORAGE	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP		
201	EQUIPMENT PLATFORM	SC-1	-	-	PT-1	PT-1	-	EXP		
202	FIRE ALARM	SC-1	-	PT-1	PT-1	PT-1	PT-1	EXP		
S-J	STAIR J	SC-1	-	PFMP	PFMP	-	PFMP	PFMP		
S-K	STAIR K	SC-1	-	PFMP	PFMP	-	PFMP	PFMP		

ROOM FINISH SCHEDULE REMARKS:

1. PROVIDE PAINT AT EXTERIOR SIDE OF ROOM - OPEN TO THE MAIN INTERIOR BUS STORAGE.
2. EXTERIOR PRE-CAST WALLS AND CEILING REQUIRE BLOCK PRIMER AND PAINT FOR A CONTINUOUS VAPOR BARRIER AT EXTERIOR CONDITIONS.
3. EPOXY BASE SHALL BE INTEGRAL WITH THE FLOOR WITH A STANDARD RADIUS COVE AND COVE STRIP CAP.

INTERIOR FINISH GENERAL NOTES:

1. PREP ALL EXISTING AND/OR NEW WORK AREAS AS REQUIRED TO ACCOMMODATE SCHEDULED FINISHES.
2. ALL INSTALLATION BASED ON MANUFACTURER'S GUIDELINES, TYP.
3. FLOOR PREP BY INSTALLER FOR FLUSH TRANSITIONS.
4. FLOOR LEVELING SHALL BE 1/8" TOLERANCE FOR GENERAL FLOORING.
5. CONTRACTOR TO CAULK AROUND ALL WINDOW FRAMES. CAULK TO MATCH ALUMINUM FRAME COLOR.
6. ALL WALLS PAINTED PT-1, U.N.O.
7. ALL PAINTED WALLS/CEILINGS SHALL BE PAINTED IN EGGSHELL SHEEN, U.N.O. GYPSUM BOARD SUBSTRATE SHALL HAVE LIGHT ORANGE PEEL TEXTURE.
8. ALL INTERIOR HM DOOR AND FRAME FINISHES TO BE PAINTED PT-2.
9. ALL METAL LINEAR DIFFUSERS, SHOP PRIMED ACCESS PANELS, ELECTRICAL PANELS, EXPOSED CONDUIT, MECH PIPING, AND SPRINKLER PIPING SHALL BE PAINTED TO MATCH ADJACENT SURFACE, TYPICAL U.N.O.
10. ALL EXPOSED MECHANICAL DUCTS SHALL BE GALVANIZED METAL, TYPICAL.
11. ALL EXPOSED CONCRETE AND CMU NOT SCHEDULED TO RECEIVE A FINISH SHALL BE SEALED, U.N.O.
12. ALL PAINT TRANSITIONS ARE INTENDED TO MEET INSIDE CORNERS, TYP. COORDINATE W/ ARCHITECT ANY DISCREPANCIES WITH ARCHITECT.
13. ALL CMU OUTSIDE CORNERS SHALL BE BULLNOSE.
14. REFERENCE INTERIOR ELVATIONS FOR MOUNTING HEIGHTS.
15. REFERENCE A-120'S FOR CEILING FINISH COORDINATION.

DOOR AND HARDWARE SCHEDULE

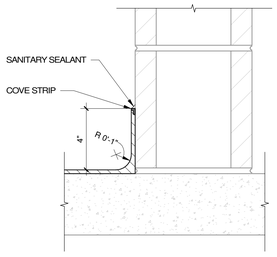
DOOR NUMBER	DOOR							FRAME					MISCELLANEOUS		REMARKS
	LEAF SIZE			TYPE	MAT'L	GLAZING TYPE	FINISH	TYPE	MAT'L	DETAILS HEAD	DETAILS JAMB	FINISH	LABEL	HDWR SET	
	QTY.	WIDTH	HEIGHT												
100A	(1)	3'-0"	7'-0"	HG	FRP	GL-1	-	F1	AL	10 & 11/A-611	9/A-611	ANN	-	1.0	2
101	(1)	3'-0"	7'-0"	F	HM	-	PT	F2	HM	20/A-611	19/A-611	PT	-	3.0	
102	(1)	3'-0"	7'-0"	F	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	4.0	
103	(1)	3'-4"	7'-0"	N	FRP	GL-2	-	F2	AL	18/A-611	17/A-611	ANN	-	2.0	
104	(1)	3'-4"	7'-0"	F	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	6.0	6
105	(1)	3'-0"	7'-0"	N	FRP	GL-2	-	F2	AL	18/A-611	17/A-611	ANN	-	5.0	
106	(1)	3'-4"	7'-0"	F	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	3.0	
107	(1)	3'-4"	7'-0"	F	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	3.0	
108	(1)	3'-0"	7'-0"	F	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	6.0	6
109	(1)	3'-0"	7'-0"	F	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	3.0	
111	(1)	3'-0"	7'-0"	N	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	3.0	
112A	(1)	12'-0"	14'-0"	RC	ST	VL	PT	-	ST	1/A-611	2,3,&4/A-611	GAL	-	7.0	
112B	(1)	12'-0"	14'-0"	RC	ST	VL	PT	-	ST	1/A-611	2,3,&4/A-611	GAL	-	7.0	
112C	(1)	3'-0"	7'-0"	HG	FRP	GL-1	-	F1	AL	13/A-611	11 & 12/A-611	ANN	-	1.0	2
112D	(1)	3'-0"	7'-0"	HG	FRP	GL-1	-	F1	AL	13/A-611	11 & 12/A-611	ANN	-	1.0	1, 2
115A	(1)	3'-0"	7'-0"	N	FRP	GL-2	-	F1	AL	20/A-611	19/A-611	ANN	-	2.0	
115B	(1)	20'-0"	13'-0"	RC	ST	VL	PT	-	ST	7/A-611	8/A-611	GAL	-	7.0	
115C	(1)	13'-0"	14'-0"	RC	ST	VL	PT	-	ST	7/A-611	8/A-611	GAL	-	7.0	
115D	(1)	3'-0"	7'-0"	N	FRP	GL-2	-	F1	AL	20/A-611	19/A-611	PT	-	2.0	
131A	-	14'-0"	14'-0"	RC	ST	-	PT	-	ST	5/A-611	6/A-611	PT	-	7.0	
131B	-	10'-0"	8'-0"	RC	ST	-	PT	-	ST	5/A-611	6/A-611	PT	-	7.0	
131C	(1)	3'-0"	7'-0"	N	HM	GL-2	PT	F2	HM	18/A-611	17/A-611	PT	-	3.0	
132	(1)	3'-0"	7'-0"	F	HM	-	PT	F2	HM	15/A-611	14/A-611	PT	90	1.1	
133A	(1)	3'-0"	7'-0"	N	HM	GL-2	PT	F2	HM	18/A-611	17/A-611	PT	-	3.0	
133B	-	14'-0"	14'-0"	RC	ST	-	PT	-	ST	5/A-611	6/A-611	PT	-	7.0	
133C	(2)	3'-0"	7'-0"	F	HM	-	PT	F2	HM	18/A-611	17/A-611	PT	-	3.1	
149A	-	40'-0"	13'-0"	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	4
157	(1)	3'-0"	7'-0"	F	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	1.1	3
202	(1)	3'-0"	7'-0"	EXISTING	HM	-	PT	F1	HM	18/A-611	17/A-611	PT	-	3.0	5
S5A	(1)	3'-0"	7'-0"	F	HM	-	PT	F2	HM	15/A-611	14/A-611	PT	90	1.1	

DOOR AND HARDWARE SCHEDULE ABBREVIATIONS

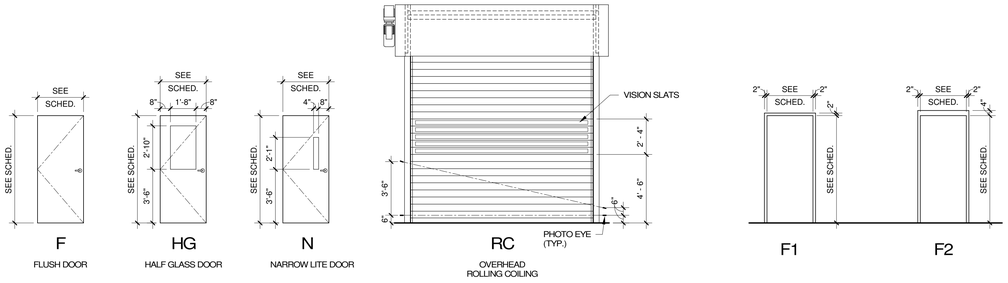
DOOR/FRAME MATERIALS
- AL = ALUMINUM
- ANN = ANNODIZED
- EX = EXISTING
- FRP = FIBERGLASS REINFORCED PLASTIC
- GAL = GALVANIZED
- HM = HOLLOW METAL
- PT = PAINT
- ST = STEEL

DOOR AND HARDWARE SCHEDULE GENERAL NOTES

1. DOOR IS NOT REQUIRED TO BE RATED - FALLING WITHIN THE 15% UNPROTECTED, SPRINKLERED CATEGORY PER IBC TABLE 705.8
2. DOOR SHALL BE PREPPED WITH CONDUIT INFRASTRUCTURE FOR FUTURE ACCESS CONTROL SYSTEM. NO WIRING OR ELECTRONIC HARDWARE SHALL BE PROVIDED.
3. NEW HARDWARE ON EXISTING DOOR
4. EXTEND EXISTING DOOR AND RAILS BY 1'-0" FOR NEW HEIGHT REQUIREMENTS TO NOTED 13'-0"
5. KEY DOOR HARDWARE TO KNOX BOX
6. DOOR SHALL BE PREPPED WITH CONDUIT INFRASTRUCTURE FOR FUTURE ACCESS CONTROL SYSTEM. CARD READERS, WIRING, AND DATA BY OWNER.

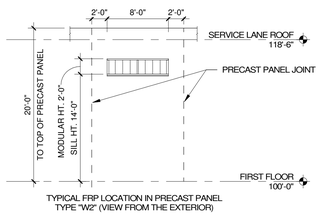


1 RESINOUS FLOOR COVE DETAIL
3" = 1'-0"



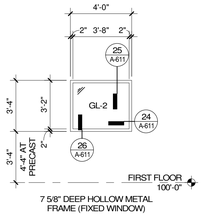
DOOR TYPES
NO SCALE

DOOR FRAME TYPES
NO SCALE



TYPICAL FRP LOCATION IN PRECAST PANEL
TYPE "W2" (VIEW FROM THE EXTERIOR)

WINDOW TYPE "W2"
1/8" = 1'-0"



7 5/8" DEEP HOLLOW METAL
FRAME (FIXED WINDOW)

WINDOW TYPE "W1"
1/4" = 1'-0"

Mead & Hunt
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2440 Deming Way
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phone: 608-273-6380
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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
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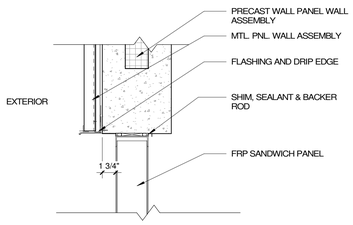
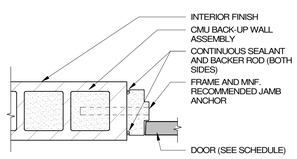
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SCHEDULES

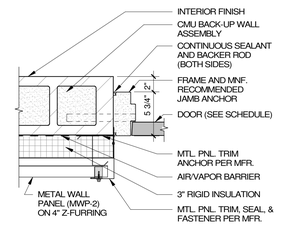
SHEET NO.:
A-601



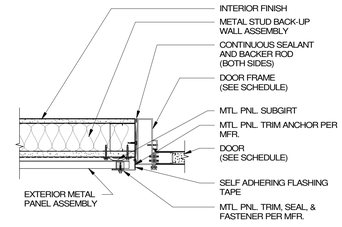
21 PRECAST FRP HEAD DETAIL
1 1/2" = 1'-0"



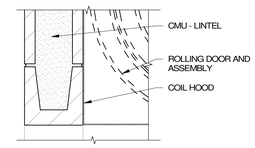
17 INTERIOR DOOR JAMB AT CMU
1 1/2" = 1'-0"



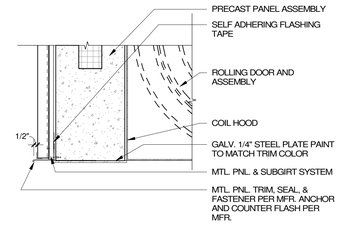
14 EXTERIOR DOOR JAMB AT CMU AND METAL PANEL
1 1/2" = 1'-0"



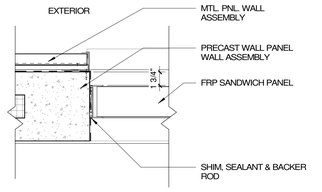
9 EXTERIOR DOOR JAMB AT METAL STUD
1 1/2" = 1'-0"



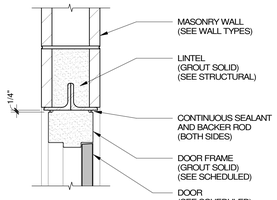
5 ROLL-UP DOOR HEAD AT INTERIOR CMU
1 1/2" = 1'-0"



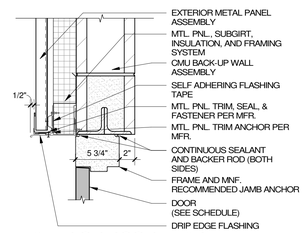
1 ROLL-UP DOOR HEAD AT EXTERIOR METAL PANEL & PRECAST
1 1/2" = 1'-0"



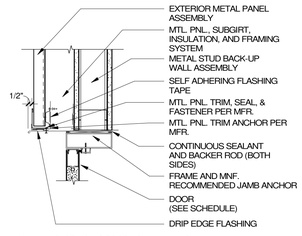
22 PRECAST FRP JAMB DETAIL
1 1/2" = 1'-0"



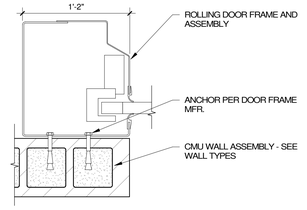
18 INTERIOR DOOR HEAD AT CMU
1 1/2" = 1'-0"



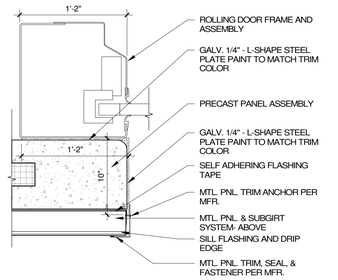
15 EXTERIOR DOOR HEAD AT CMU AND METAL PANEL
1 1/2" = 1'-0"



10 EXTERIOR DOOR JAMB AT METAL STUD
1 1/2" = 1'-0"



6 ROLL-UP DOOR JAMB AT INTERIOR CMU
1 1/2" = 1'-0"



2 ROLL-UP DOOR JAMB AT EXTERIOR MATERIAL TRANSITION
1 1/2" = 1'-0"

23 PRECAST FRP SILL DETAIL
1 1/2" = 1'-0"

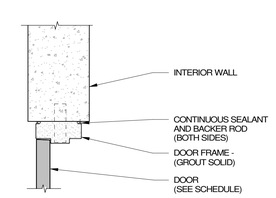
19 INTERIOR DOOR JAMB AT CONCRETE/PRECAST
1 1/2" = 1'-0"

25 INTERIOR HOLLOW METAL WINDOW HEAD DETAIL
3" = 1'-0"

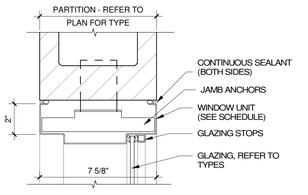
11 EXTERIOR DOOR JAMB AT PRECAST AND METAL PANEL
1 1/2" = 1'-0"

7 ROLL-UP DOOR HEAD AT INTERIOR CONCRETE/PRECAST
1 1/2" = 1'-0"

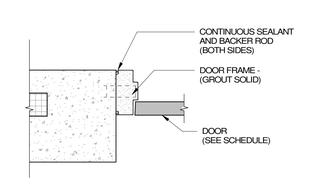
3 ROLL-UP DOOR JAMB EXTERIOR METAL PANEL & PRECAST
1 1/2" = 1'-0"



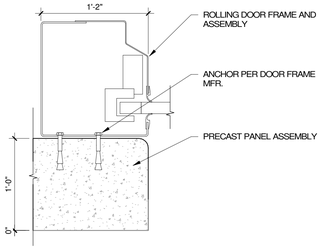
20 INTERIOR DOOR HEAD AT CONCRETE/PRECAST
1 1/2" = 1'-0"



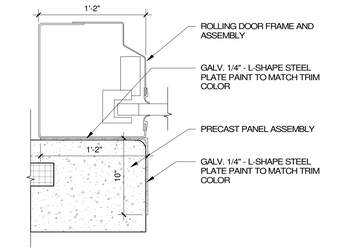
24 INTERIOR HOLLOW METAL WINDOW HEAD DETAIL
3" = 1'-0"



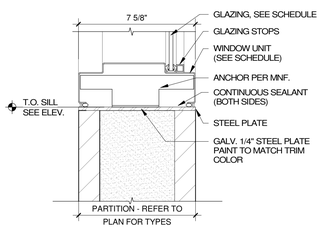
12 EXTERIOR DOOR JAMB AT PRECAST PANEL BASE
1 1/2" = 1'-0"



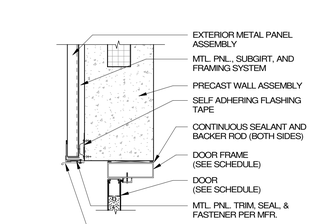
8 ROLL-UP DOOR JAMB AT INTERIOR CONCRETE/PRECAST
1 1/2" = 1'-0"



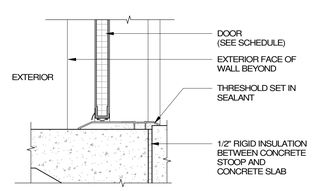
4 ROLL-UP DOOR JAMB AT EXTERIOR PRECAST PANEL BASE
1 1/2" = 1'-0"



26 INTERIOR HOLLOW METAL WINDOW SILL DETAIL
3" = 1'-0"



13 EXTERIOR DOOR HEAD AT PRECAST AND METAL PANEL
1 1/2" = 1'-0"



16 EXTERIOR DOOR SILL DETAIL
1 1/2" = 1'-0"

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phone: 608-273-6380
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metro transit

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CHECKED BY: RCL
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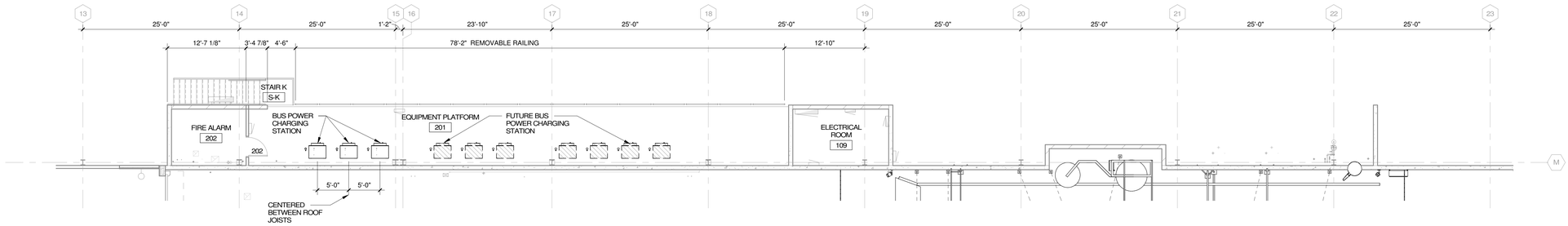
SHEET CONTENTS
DOOR & WINDOW DETAILS

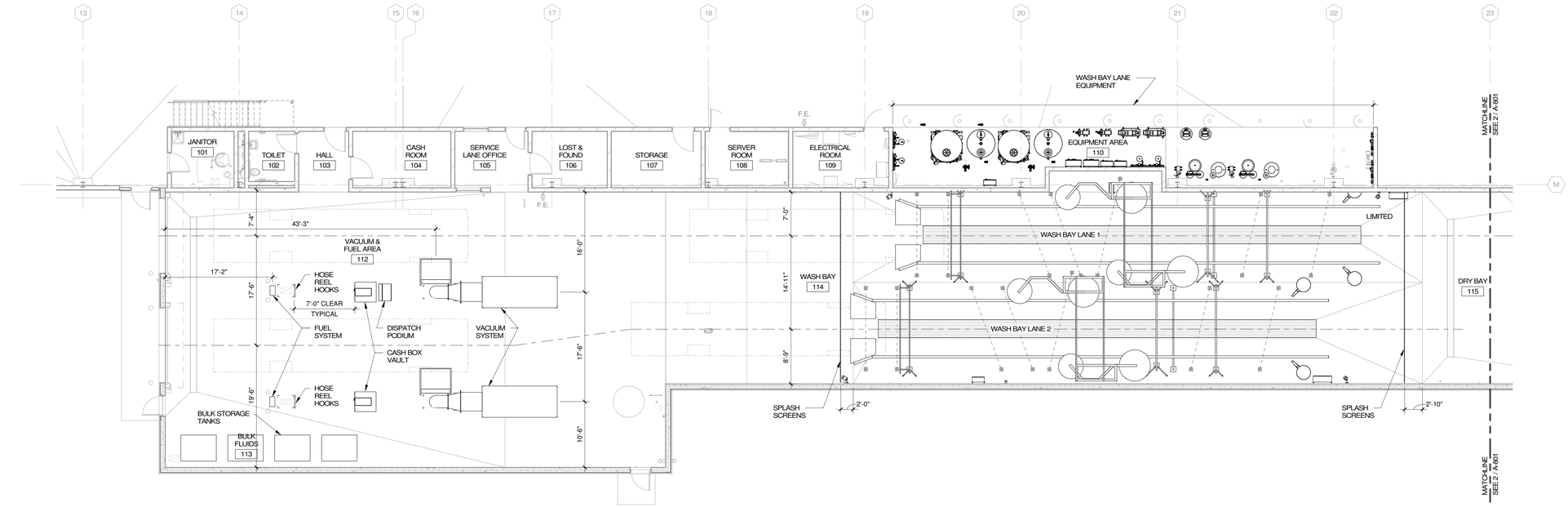
SHEET NO.:
A-611



TRUE NORTH PLAN NORTH

3 EQUIPMENT PLATFORM PLAN

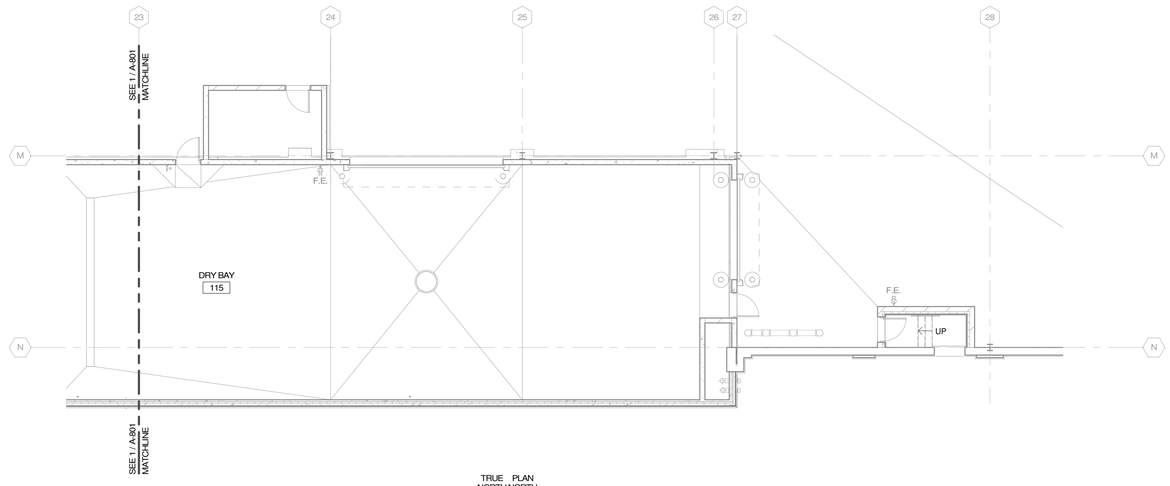
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

1 FIRST FLOOR PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

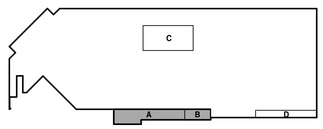
2 FIRST FLOOR PLAN - AREA B

1/8" = 1'-0"

EQUIPMENT PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
3. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
4. REFER TO MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING FOR COORDINATION AND CONNECTIONS TO EQUIPMENT.
5. ALL EQUIPMENT SHALL BE PROVIDED AS A COMPLETE SYSTEM, INCLUDING PRODUCT PIPING AND INTEGRAL ELECTRICAL CONNECTIONS. INSTALLATION SHALL BE BY QUALIFIED CONTRACTOR.
6. ALL EQUIPMENT SHALL BE COMMISSIONED AND IN PROPER WORKING ORDER BEFORE WORK AREAS ARE RELEASED TO THE OWNER.

KEYED NOTES



KEY PLAN

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

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SHEET CONTENTS:
EQUIPMENT PLAN - AREA A & B

SHEET NO.:

A-801

1/11/2019 3:55:31 PM C:\Revit Local\4503500-170148.02-A-Central-2018_NateDeMaster.rvt

EQUIPMENT PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
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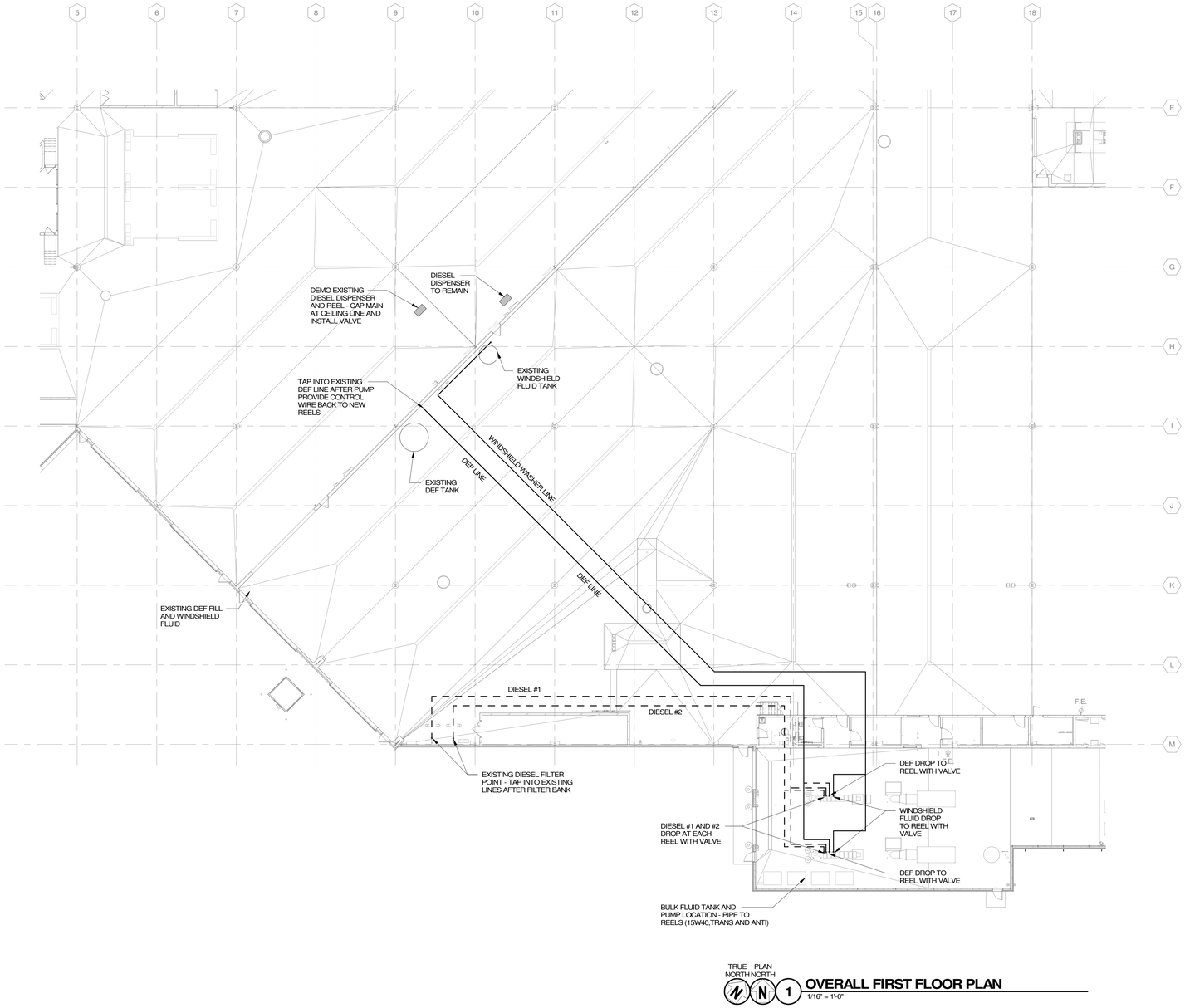

TRUE NORTH PLAN NORTH

OVERALL FIRST FLOOR PLAN

1/16" = 1'-0"

Mead & Hunt

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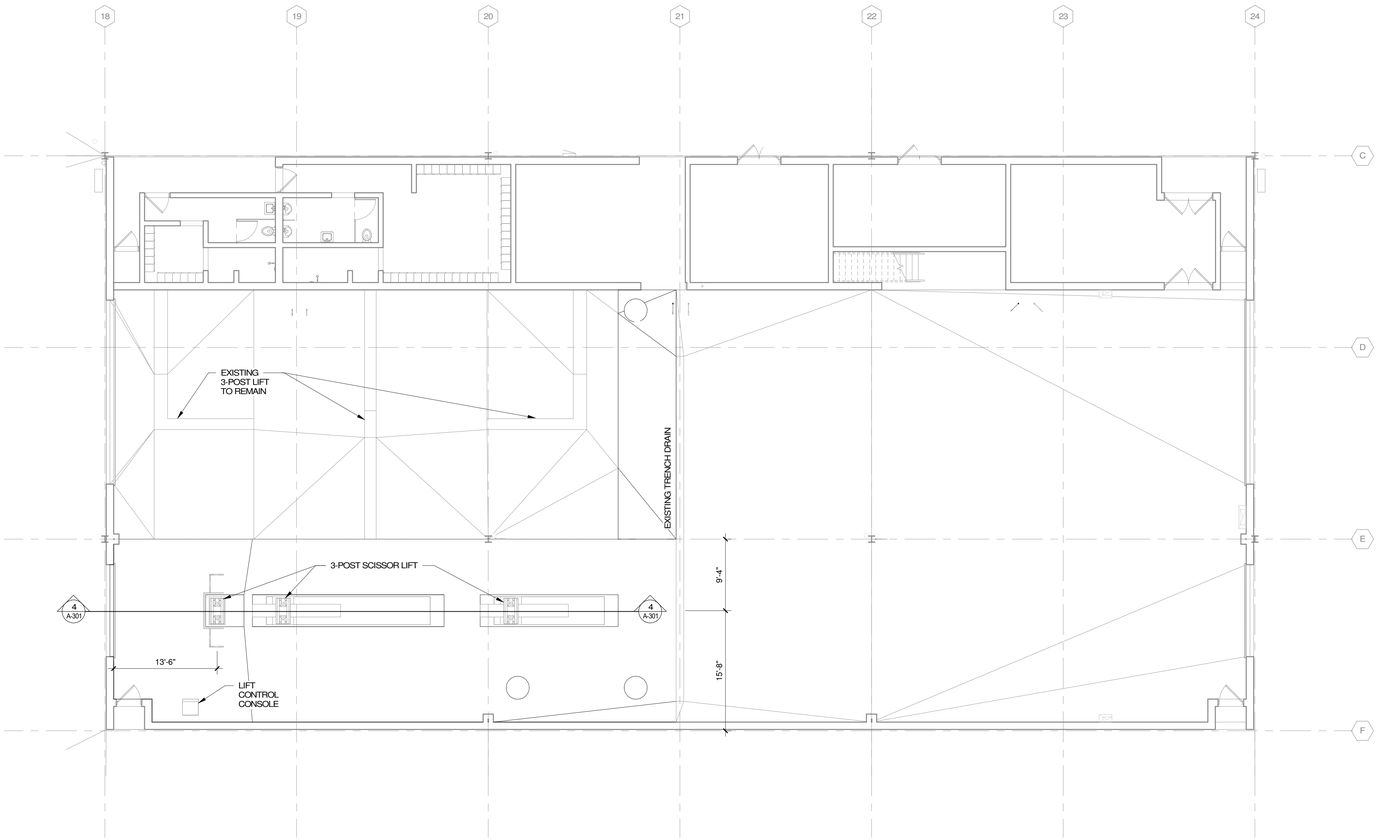
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: SZK
DRAWN BY: NJD
CHECKED BY: RCL
DO NOT SCALE DRAWINGS

SHEET CONTENTS
FUEL EQUIPMENT PLAN

SHEET NO.:
A-802

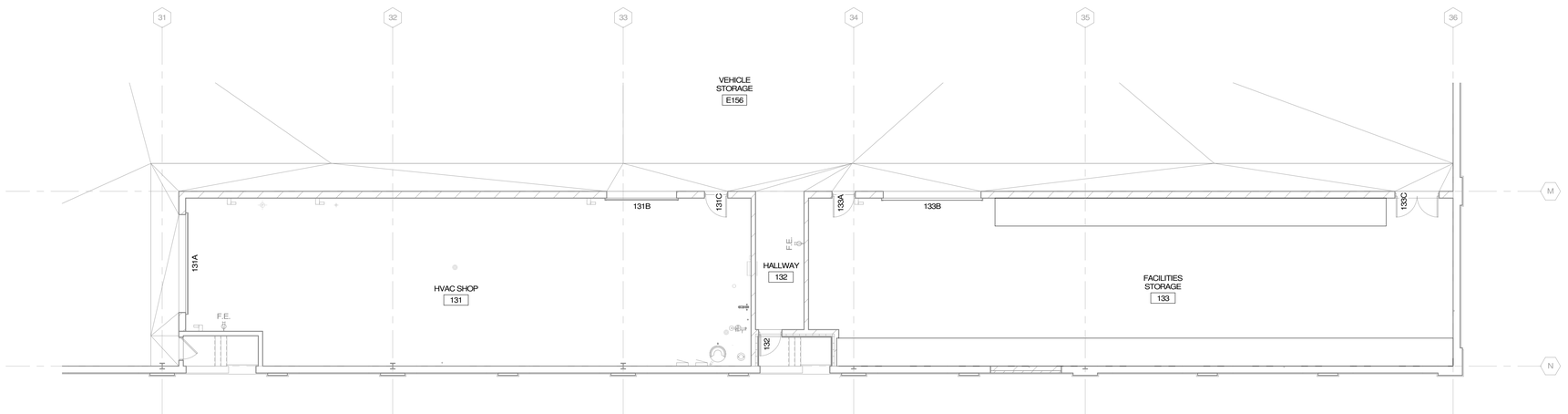
1/11/2019 3:55:41 PM C:\Revit Local\4503500-170148.02-A-Central-2018_NateDeMaster.rvt



TRUE NORTH PLAN NORTH

1 FIRST FLOOR PLAN - AREA C

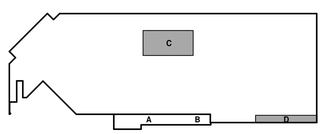
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 FIRST FLOOR PLAN - AREA D

1/8" = 1'-0"



KEY PLAN

EQUIPMENT PLAN GENERAL NOTES:

1. SITE DATUM OF FINISHED FIRST FLOOR INDICATED ON SITE PLAN = 100'-0" ON ARCHITECTURAL DRAWINGS.
2. ALL INTERIOR DIMENSIONS ARE FROM FINISH FACE OF WALLS (I.E. GYPSUM WALLBOARD OR CMU), UNLESS NOTED OTHERWISE.
3. FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
4. REFER TO MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING FOR COORDINATION AND CONNECTIONS TO EQUIPMENT.
5. ALL EQUIPMENT SHALL BE PROVIDED AS A COMPLETE SYSTEM, INCLUDING PRODUCT PIPING AND INTEGRAL ELECTRICAL CONNECTIONS. INSTALLATION SHALL BE BY QUALIFIED CONTRACTOR.
6. ALL EQUIPMENT SHALL BE COMMISSIONED AND IN PROPER WORKING ORDER BEFORE WORK AREAS ARE RELEASED TO THE OWNER.

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KUENY ARCHITECTS, LLC

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CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

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SHEET CONTENTS:
EQUIPMENT PLAN - AREA C & D

SHEET NO.:
A-803

1/11/2019 3:55:46 PM C:\Revit Local\4503500-170148.02-A-Central-2018_NateDeMaster.rvt

FIRE PROTECTION ABBREVIATIONS

ANG	AIR NATIONAL GUARD
AFF	ABOVE FINISHED FLOOR
BPD	BACKFLOW PREVENTION DEVICE
CW	COLD WATER
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DI	DUCTILE IRON
DOD	DEPARTMENT OF DEFENSE
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FPE	PROFESSIONAL FIRE PROTECTION ENGINEER
PIV	POST INDICATOR VALVE
SP	SPRINKLER MAIN ENGINEER
TFB	TO FLOOR BELOW
UFC	UNIFIED FACILITIES CRITERIA

FIRE PROTECTION SYMBOLS:

- FIRE DEPARTMENT CONNECTION
- ORIFICE
- FLOW SWITCH
- ALARM BELL
- ISOLATION VALVE
- GATE VALVE
- PRESSURE GAUGE
- CHECK VALVE
- VALVE SUPERVISION/TAMPER SWITCH
- STRAINER
- PIPE DROP
- PIPE RISE
- STRAINER

FIRE PROTECTION GROUP PATTERN LEGEND:

- LIGHT HAZARD
- ORDINARY HAZARD GROUP 1
- ORDINARY HAZARD GROUP 2
- EXTRA HAZARD GROUP 1

WATER SUPPLY FLOW BASES FOR BID:

NOTE: INFORMATION SHOW FOR BID ONLY, NOT FOR DESIGN.

FIRE PROTECTION DESIGN / INSTALLATION CONTRACTOR SHALL CONDUCT SEPARATE WATER FLOW TEST AND USE RESULTS IN HYDRAULIC CALCULATIONS.

DATE OF TEST:	7/24/2018
LOCATION:	HYDRAULIC MODEL
TEST HYDRANTS	H-1, 100 S. INGERSOL ST.
HYD. OUTLET ELEV.:	20" OFF FINISHED GRADE
STATC PRESSURE:	86 PSI
RESIDUAL PRESSURE:	76 PSI
FLOW GPM:	2000 GPM

NFPA-13 HYDRAULIC CALCULATION STANDARD

HAZARD CLASIFICATION	DESITY GPM/SQ.FT	AREA OF SPRINKLER OPERATION SQ.FT	TOTAL HOSE STREAM GPM	DURATION MINIMUM
LIGHT HAZARD	0.10	1500	100	60
ORDINARY HAZARD GROUP 1	0.15	1500	250	60-90
ORDINARY HAZARD GROUP 2	0.20	1500	250	60-90
EXTRA HAZARD GROUP 1	0.30	2500	500	90-120

* THE MOST HYDRAULICALLY REMOTE LOCATIONS MUST MEET THE ABOVE...

FIRE PROTECTION GENERAL NOTES

1. ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
2. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC, THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENTS, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT, AND PIPING SYSTEMS IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERENCES. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT, AND PIPING FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN EXTRA COST TO CONTRACT.
3. ELEVATION OF PIPING INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.
4. ANY AND ALL INFORMATION SHOWN ON THESE DRAWINGS WITH RESPECT TO EXISTING STRUCTURES, UTILITIES, AND MECHANICAL SYSTEMS, IS AS EXACT AS COULD BE SECURED. THE INFORMATION IS NOT WARRANTED NOR GUARANTEED ACCURATE. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
5. DO NOT SCALE DRAWINGS. USE GIVEN DIMENSIONS. CONTRCTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE PRIOR TO THE START OF CONSTRUCTION. WHERE SPECIFIC DEMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMIND, CONSULT COR BEFORE PROCEEDING WITH THE WORK.
6. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH OWNER & EXISTING OPERATIONS.
7. ACCURATE AND LEGIBLE RECORD (AS-BUILT) DRAWINGS SHALL BE MAINTAINED AT THE JOB SITE, AND BE SUBMITTED PRIOR TO FINAL PAYMENT.
8. ALL EXISTING ROOFING SYSTEMS SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
9. TEMPORARILY PATCH ALL ROOF OPENINGS WATERTIGHT UNTIL FINAL CLOSURE CAN BE MADE.
10. VERIFY ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OWNER PRIOR TO INSTALLATION.
11. ALL SPRINKLER IN ACOUSTICAL CELINGS SHALL BE LOCATED IN THE CENTER OF CEILING TILE.
12. PROVIDE CONCEALED SPRINKLER HEADS IN ALL FINISHED AREAS.
13. COORDINATE WITH ARCHITECTURAL PLANS FOR CEILINGS TYPES AND HEIGHTS.
14. VISIT THE BUILDING SITE & BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS AFFECTING WORK.
15. NOMINAL FINISHED FLOOR ELEVATION = 100.0 FT. UNLESS OTHERWISE NOTED.

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METRO TRANSIT - SERVICE LANE ADDITION

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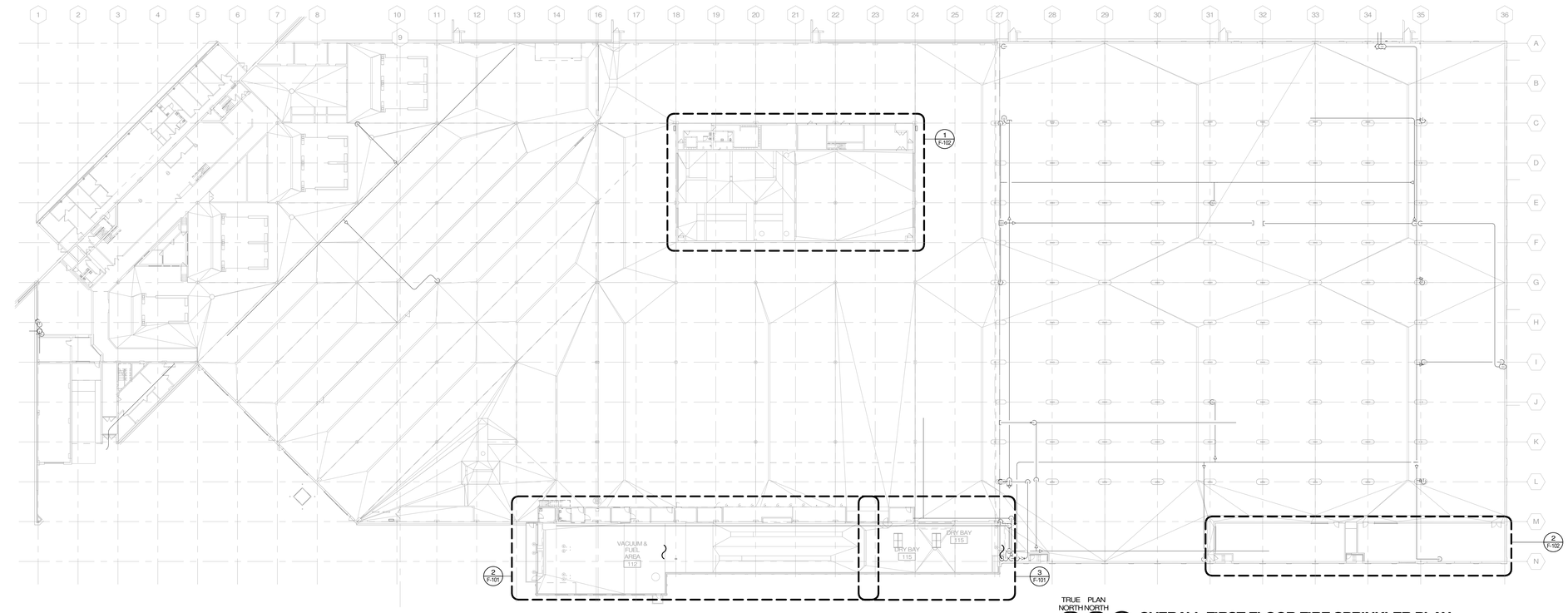
SHEET CONTENTS
SYMBOLS, ABBREVIATIONS, NOTES AND DETAILS

SHEET NO.:

F-001



TRUE NORTH PLAN NORTH

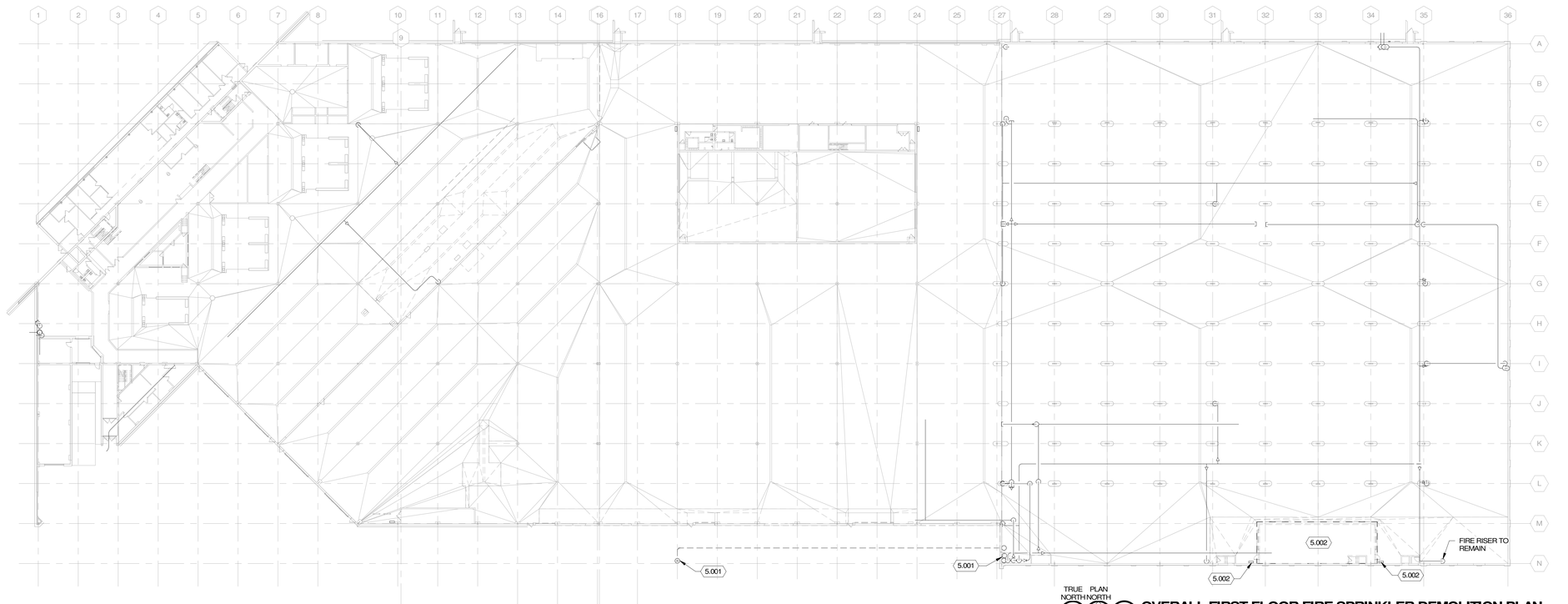
1 **OVERALL FIRST FLOOR FIRE SPRINKLER PLAN**

1/32" = 1'-0"

KEYED NOTES

5.001 DEMOLISH FIRE HYDRANT AND ASSOCIATED PIPE BELOW GROUND AND UP OVER THE DOOR. CAP FIRE PIPE AT THE VALVE INSIDE THE BUILDING.

5.002 DEMOLISH ALL FIRE PROTECTION PIPING IN EXISTING DYNAMO (HEAVY DASHED LINE) BACK TO MAIN. DEMOLISH ALL VALVE SETS OUTSIDE DYNAMO DEMOLITION AREA.



TRUE NORTH PLAN NORTH

2 **OVERALL FIRST FLOOR FIRE SPRINKLER DEMOLITION PLAN**

1/32" = 1'-0"

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SHEET CONTENTS:
FIRST FLOOR FIRE SPRINKLER PLAN

SHEET NO.:

F-100

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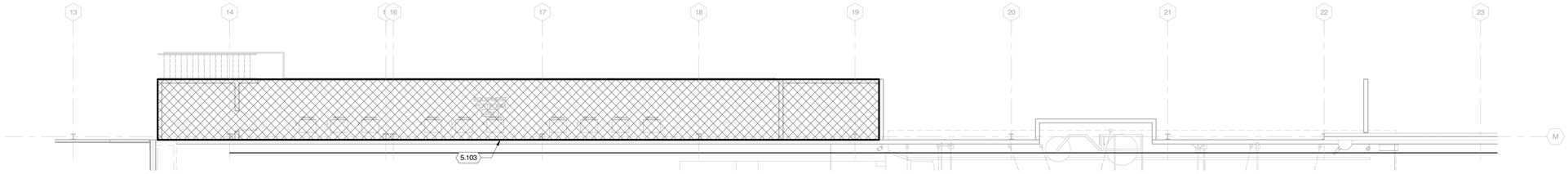
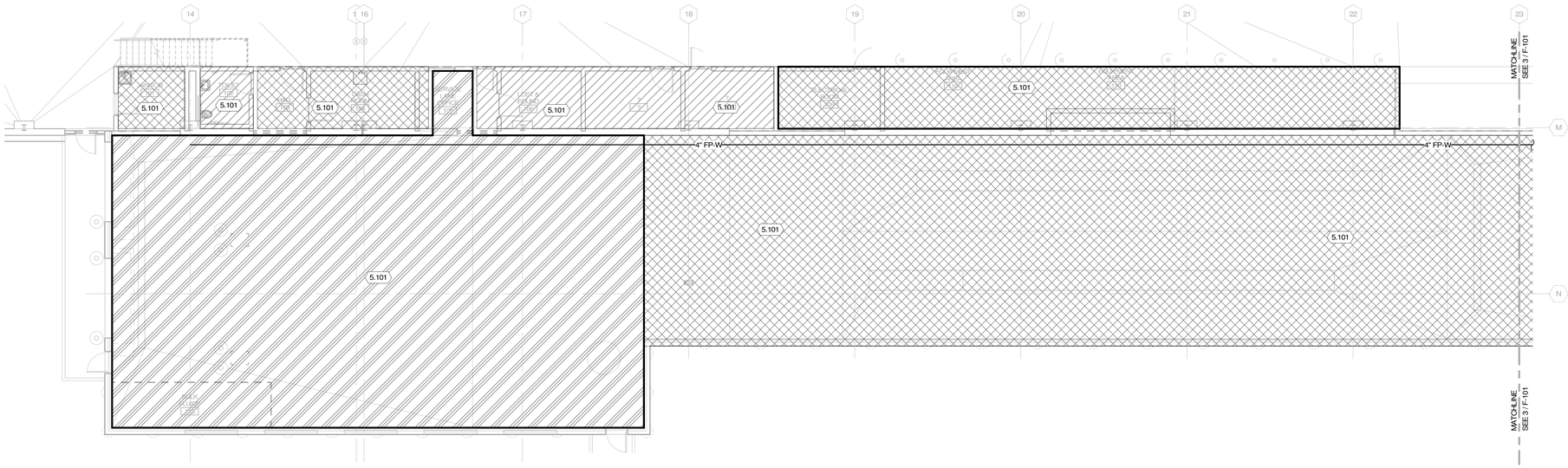


TRUE NORTH PLAN NORTH

1 FIRE SPRINKLER PLAN - EQUIPMENT MEZZANINE

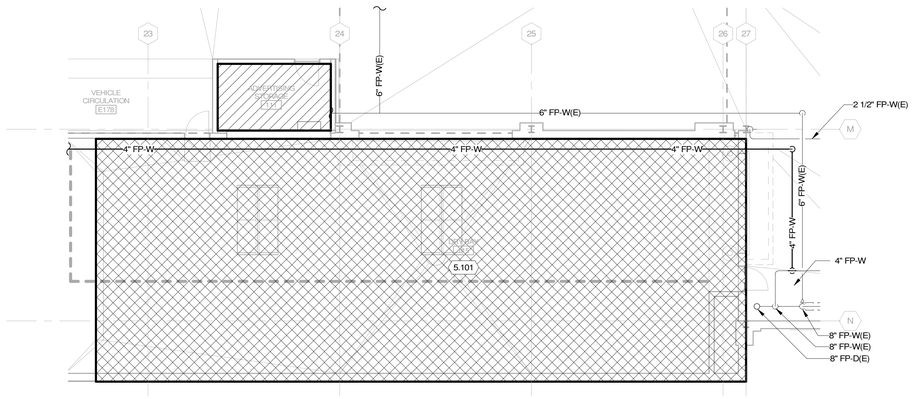
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 FIRE SPRINKLER PLAN - AREA A

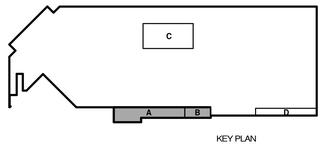
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

3 FIRE SPRINKLER PLAN - AREA B

1/8" = 1'-0"



KEY PLAN

KEYED NOTES

5.101 EXTEND EXISTING WET PIPE FIRE SPRINKLER SYSTEM INTO NEW BUS WASH AND SUPPORT AREAS.

5.103 REWORK EXISTING SPRINKLERS FOR THE NEW EQUIPMENT PLATFORM.

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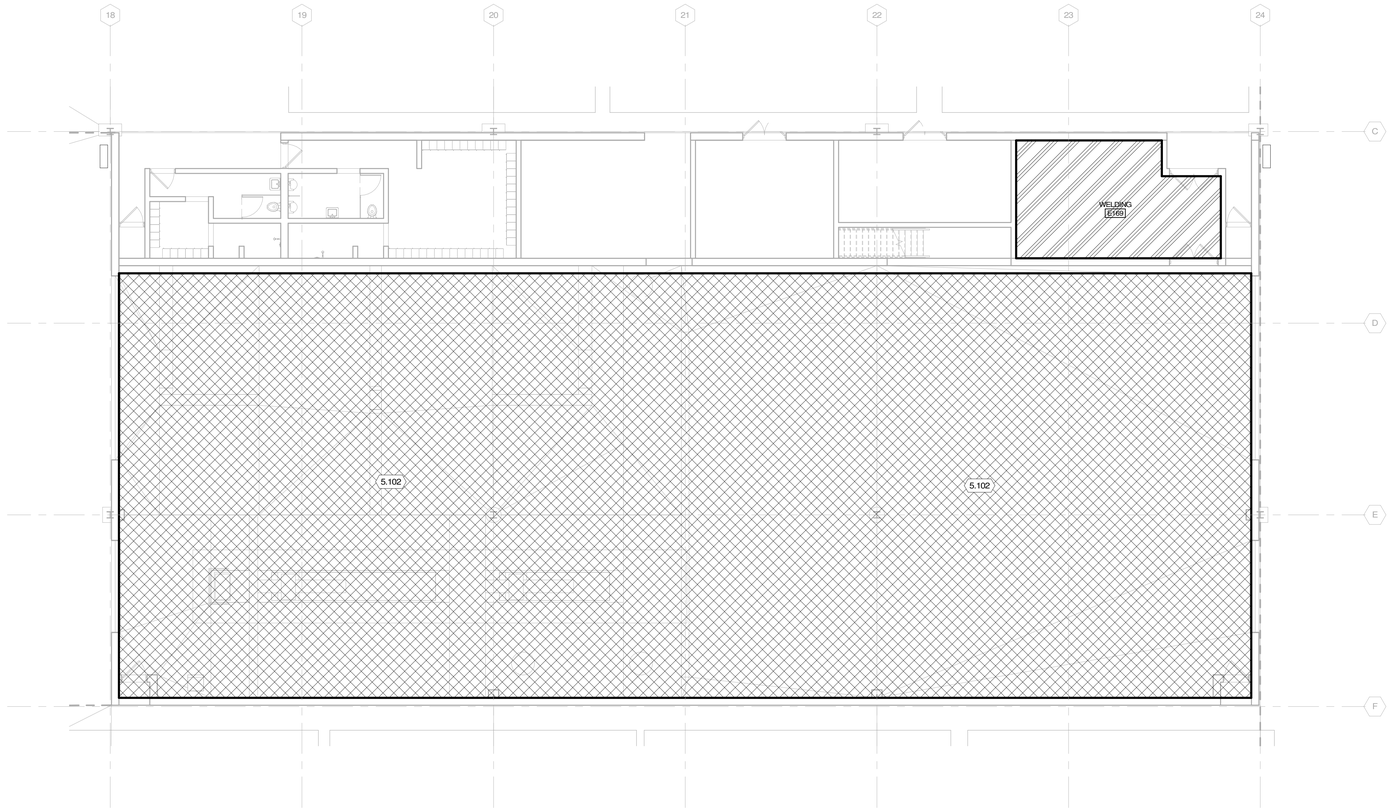
SHEET CONTENTS
FIRST FLOOR FIRE SPRINKLER PLANS - AREAS A & B

SHEET NO.:

F-101

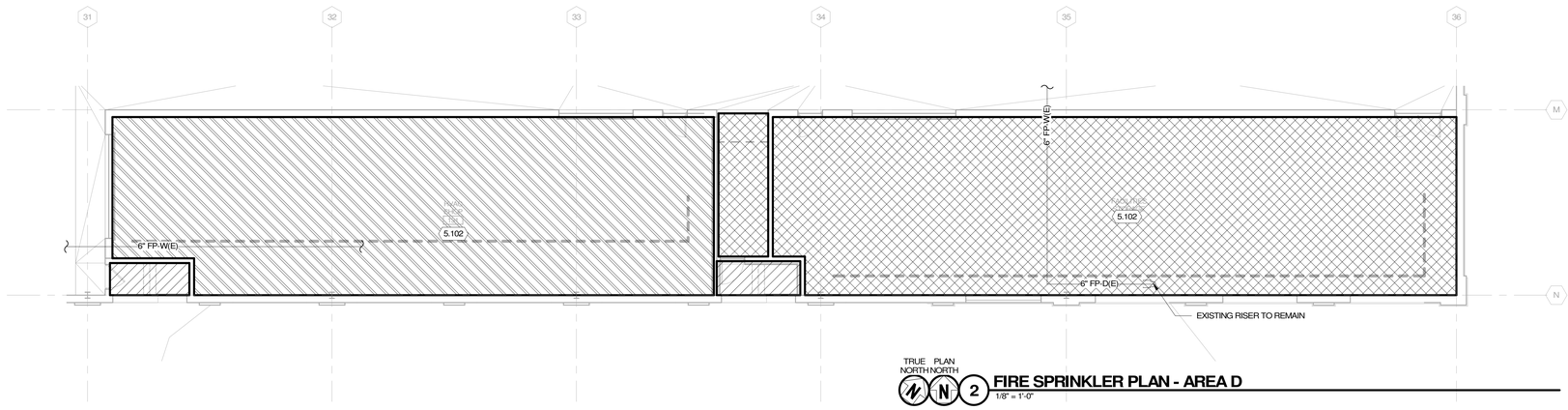
1/10/2019 4:40:28 PM C:\Revit Local\4503500-170148.02-P-Central-2018_NateDeMaster.rvt



TRUE NORTH PLAN NORTH

FIRE SPRINKLER PLAN - AREA C

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

FIRE SPRINKLER PLAN - AREA D

1/8" = 1'-0"

KEYED NOTES

5.102 EXTEND EXISTING WET PIPE SPRINKLER SYSTEM INTO THE NEW HVAC MAINTENANCE AREA AND STORAGE ROOM.

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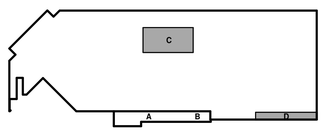
SHEET CONTENTS
FIRST FLOOR FIRE SPRINKLER PLANS - AREAS C & D

SHEET NO.:

F-102



KEY PLAN

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PLUMBING ABBREVIATIONS

A	AMPS
ABI	ALTERNATE BID ITEM
AFF	ABOVE FINISHED FLOOR
AGD	ABOVE GROUND
AHJ	AUTHORITY HAVING JURISDICTION
ALUM	ALUMINUM
ANG	AIR NATIONAL GUARD
APPROX	APROXIMATELY
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASL	ABOVE SEA LEVEL
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESSTING AND MATERIALS
BHF	BUTT HEAT FUSION
BLDG	BUILDING
BO	BID OPTION
BPD	BACKFLOW PREVENTION DEVICE
BR	BRAZE
BRS	BRASS
BRZ	BRONZE
BS	BLACK (MILD) STEEL
BTU	BRITISH THERMAL UNIT
BW	BUTT WELD
BZ	BRONZE
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CI	CAST IRON
CISPI	CAST IRON SOIL PIPE INSTITUTE
CL	CENTERLINE
COMP	COMPRESSOR
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CRA	CONCRETE REACTION ANCHOR
CS	CARBON STEEL
CTCLG	CLOSE TO CEILING
CTCLM	CLOSE TO COLUMN
CTW	CLOSE TO WALL
CU	COPPER OR CUBIC
DBA	DECIBELS, BAND A
DCVA	DOUBLE CHECK VALVE ASSEMBLY BPD
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DFD	DEPARTMENT OF DEFENSE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
DWG	DRAWING
DWV	DRAIN, WASTE AND VENT
E	EXISTING TO REMAIN
EEW	EMERGENCY EYE/FACE WASH
EFF	EFFICIENCY
EL	ELEVATION
ELEC	ELECTRIC
EQPT	EQUIPMENT
ESEW	EMERGENCY SHOWER/EYE WASH
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
F	fAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FLOW	FLOW OR FLOWRATE
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
FTWC	FEET WATER COLUMN PRESSURE
GAL	GALLON OR GAUGE
GBS	GASKETED BELL AND SPIGOT
GPM	GALLONS PER MINUTE
GR	GROOVED
GS	GALVANIZED STEEL
H	HEIGHT
HC	HOSE CONNECTION
HDB	HYDROSTATIC DESIGN BASIS
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HX	HEAT EXCHANGER
HZ	HERTZ
IAW	IN ACCORDANCE WITH
IBNLT	INCLUDED BUT NOT LIMITED TO
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INHG	INCHES MERCURY PRESSURE
INWC	INCHES WATER COLUMN PRESSURE
IPC	INTERNATIONAL PLUMBING CODE
L	LENGTH OR LAVATORY
LAV	LAVATORY
LB	POUNDS
LCO	LINE CLEAN OUT
LIN	LINEAR
LPG	LIQUIFIED PETROLEUM GAS
MADP	MAXIMUM ALLOWABLE DIFFERENTIAL PRESSURE
MAWP	MAXIMUM ALLOWABLE WORKING PRESSURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL COUPLING
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MMBH	MILLION BTU PER HOUR
MOCP	MINIMUM OVER CURRENT PROTECTION
MSS	MANUFACTURERS STANDARDIZATION SOCIETY
MTL	MATERIAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NH	NO-HUB
NHC	NO-HUB COUPLING
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPSH	NET POSITIVE SUCTION HEAD
NPSHA	NPSH AVAILABLE
NPSHR	NPSH REQUIRED
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
P	PRESSURE
PCN	PLANT CONTROL NETWORK
PD	PRESSURE DROP/DIFFERENTIAL
PDI	PLUMBING DEVELOPMENT INSTITUTE
PE	POLYETHYLENE
PH	PHASE
PL	PLACES
PP	POLYPROPYLENE
PPH	POUND PER HOUR
PREDV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSID	PSI DIFFERENTIAL
PSIG	PSI GAGE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE BPD
SCH	SCHEDULE
SCO	STACK CLEANOUT
SD	SOLDER
SDR	STANDARD DIMENSION RATIO
SH	SHOWER
SHR	SOCKET HEAT FUSION
SHT	SHEET
SMLS	SEAMLESS
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SQ	SQUARE
SRV	SAFETY RELIEF VALVE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
SV	SOLVENT WELD
SW	SOCKET WELD
TDH	TOTAL DEVELOPED HEAD
TDS	TOTAL DISSOLVED SOLIDS
TEMP	TEMPERATURE
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TH	THREADED
TYP	TYPICAL
UFC	UNIFIED FACILITIES CRITERIA
UGD	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UV	ULTRAVIOLET
V	VOLTS OR VENT
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE
VTR	VENT THROUGH ROOF
W	WATTS OR WIDTH
WC	WATER CLOSET
WCO	WALL CLEANOUT
YCO	YARD CLEANOUT

PIPING SYMBOLS

- PIPE TURNED TOWARD
- PIPE TURNED AWAY
- PIPE TURNED AWAY
- PIPE TURNED TOWARD
- FLEXIBLE CONNECTOR
- UNION
- FLANGES
- REDUCER (CONCENTRIC)
- REDUCER (ECCENTRIC)
- PIPE CAP
- PIPE PLUG
- FLUID FLOW DIRECTION
- PG — PIPE GUIDE
- PA — PIPE ANCHOR
- PITCH — PIPE PITCH DIRECTION
- NEW CONNECTION TO EXISTING
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- NEW TO BE INSTALLED
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- WATER HAMMER ARRESTOR
- AV — AIR VENT (AUTO)
- MV — AIR VENT (MANUAL)
- AUTOMATIC CONTROL VALVE (2-WAY)
- AUTOMATIC CONTROL VALVE (3-WAY)
- BALL VALVE
- BALANCING VALVE
- BUTTERFLY VALVE
- BACKFLOW PREVENTION VALVE
- CHECK VALVE
- FILTER
- FLOW MEASUREMENT STATION
- GATE VALVE
- GAUGE CONNECTION
- GLOBE ANGLE VALVE
- GLOBE VALVE
- ISOLATION/SHUT-OFF/ MANUAL VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE REGULATING VALVE
- RELIEF VALVE
- SOLENOID VALVE ONE-WAY (ELECTRIC)
- STRAINER
- THROTTLING VALVE
- VACUUM BREAKER
- FS — FLOW SENSOR
- LS — LEVEL SENSOR
- PS — PRESSURE SENSOR
- TS — TEMPERATURE SENSOR

WATER CALCULATION WORKSHEET

Information Needed for Water Sizing.

1. **300.0** gpm. Demand of building in gallons per minute.
2. **68.0** psi. Low pressure after Pressure Reducing Valve.
3. **0.0** ft. Difference in elevation from main to meter (or external pressure tank to building control valve)
4. **3"** in. Size of water meter (if applicable).
5. **0.0** ft. Developed length from main to meter (or external pressure tank to... control valve).

You Must First Find the Available Pressure After the Water Meter

(or at building control valve). To obtain this pressure, you must:

6. 0.00 psi. Find pressure loss due to friction in 4.0 inch water service 4.9 ft/100ft
7. 0.00 psi. Find pressure loss due to elevation, main to meter (or external pressure tank to building control valve). (difference in elevation) 0.0 x .434...
8. **0.00** psi. Find pressure loss due to meter. (from manufacturer or AWWA).
9. 68.0 psi. Subtract the loss due to friction (step 6), loss due to elevation (step 7),... due to meter (step 8) from the low main pressure (or low pressure at external. pressure tank). This calculation is the available pressure after the water meter (or at the building control valve). This answer is entered in Line B, below

Information Needed for Water Distribution Sizing

Using the following formula, find the pressure available for uniform loss (psi / 100' of pipe).

$$A = \frac{B - (C + D + E) \times 100}{F}$$

A. **4.51** psi. Pressure available for uniform loss (psi / 100 ft. of pipe).
B. 68.00 psi. Available pressure after water meter (at the building control valve or low pressure at internal pressure tank). (see item 9, above).
C. **30.0** psi. Pressure needed at controlling fixture. (emergence shower/eyewash)
D. 0.43 psi. Difference in elevation between water meter (building control valve or internal pressure tank) and controlling fixture in feet **2** ft.
E. **15.0** psi. Pressure loss due to water softeners, water treatment devices, instantaneous water heaters and backflow preventers. Conventional water heaters usually do not have a pressure loss.
F. 500.0 ft. Developed length from water meter (building control valve or internal pressure tank) to controlling fixture in feet 75.0 x 1.5.

With Pressure available for uniform loss, go to applicable table for distribution sizing.

GENERAL NOTES:

1. ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
2. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC, THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENTS, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT, PIPING AND DUCTWORK SYSTEMS IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERENCES. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT, PIPING, AND DUCTWORK FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN...
3. ELEVATION OF PIPING AND DUCTWORK INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.
4. ANY AND ALL INFORMATION SHOWN ON THESE DRAWINGS WITH RESPECT TO EXISTING STRUCTURES, UTILITIES, AND MECHANICAL SYSTEMS, IS AS EXACT AS COULD BE SECURED. THE INFORMATION IS NOT WARRANTED NOR GUARANTEED ACCURATE, FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
5. ACCURATE AND LEGIBLE AS-BUILT DRAWING MARKUPS SHALL BE MAINTAINED AT THE JOB SITE, AND BE SUBMITTED PRIOR TO FINAL PAYMENT FOR THE CREATION OF FINAL RECORD DRAWINGS.
6. ALL NEW AND EXISTING ROOFING SYSTEMS SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
7. TEMPORARILY PATCH ALL ROOF OPENINGS WATERTIGHT UNTIL FINAL CLOSURE CAN BE MADE.
8. VERIFY ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OWNER PRIOR TO INSTALLATION.
9. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH EXISTING OPERATIONS.
10. THE PLUMBING CONTRACTOR SHALL EXAMINE ALL CONTRACT DOCUMENTS AND IS REQUIRED TO DO ALL WORK WHICH IS SHOWN ON THE DRAWINGS, STATED IN THE SPECIFICATIONS, OR REASONABLY IMPLIED AS NECESSARY TO COMPLETE THEIR DIVISION OF WORK FOR THIS PROJECT REGARDLESS OF WHERE IN THE CONTRACT DOCUMENTS THE WORK IS REPRESENTED. PLUMBING CONTRACTOR TO COORDINATE WORK WITH ALL OTHER TRADES. ALL OTHER TRADE DOCUMENTS ARE TO BE CONSIDERED PART OF THIS CONTRACTORS DOCUMENTS WITH RESPECT TO COORDINATION OF WORK BETWEEN TRADES OF WORK.
11. PLUMBING CONTRACTOR SHALL NOT RUN ANY SUPPLY PIPING UNDER FLOOR SLAB IN NEW WASH BAY.

PLUMBING SYSTEM GENERAL DEMOLITION NOTES:

1. PIPING AND EQUIPMENT TO BE DEMOLISHED IS SHOWN DRAWN ON PLANS WITH BOLD AND DASHED LINES.
2. WHERE PIPES ARE REMOVED, ALSO REMOVE ALL VALVES, INSULATION, HANGERS, SUPPORTS, AND OTHER ASSOCIATED COMPONENTS.
3. WHERE FIXTURES AND EQUIPMENT ARE REMOVED, ALSO REMOVE ALL ASSOCIATED ROUGH-IN PIPING.
4. WHERE PIPES ARE REMOVED AND NOT RE-CONNECTED, REMOVE PIPE BACK TO NEXT BRANCH THAT IS TO REMAIN. INSTALL CAPS OR PLUGS ON OPENINGS. INSULATE AND PAINT DISTURBED PIPE SAME AS SPECIFIED FOR NEW WORK.
5. WHERE PIPES ARE ROUTED INSIDE CMU WALLS, PIPE MAY BE ABANDONED PIPE IN PLACE. REMOVE PIPE TO 1" INSIDE WALL ON BOTH ENDS OF PIPE. DETERMINE WHERE PIPE EMERGES FROM CMU WALL AND PIPE BACK TO NEXT BRANCH THAT IS TO REMAIN.
6. WHERE PIPES PASS THROUGH FLOOR SLABS, SAW-CUT SLAB AND REMOVE CONCRETE TO MINIMUM EXTENT NECESSARY TO GAIN ACCESS TO BELOW SLAB. REMOVE PIPE DOWN TO HORIZONTAL PIPING BELOW FLOOR.
7. PATCH EXISTING ROOFS, WALLS, AND FLOORS DISTURBED BY DEMOLITION. RESTORE TO MATCH CONDITION OF ORIGINAL SURROUNDING SURFACES PER SATISFACTION OF OWNER.
8. REMOVE ALL EXISTING PLUMBING PIPING AS INDICATED ON THE DEMOLITION PLANS. UNDERGROUND PIPING MAY BE ABANDONED IN PLACE IN LIEU OF BEING REMOVED TO AVIOD CUTTING AND PATCHING EXISTING CONCRETE. SEAL PIPING AT BOTH ENDS WHEN ABANDONING IN PLACE. PLUG UNDERSLAB PIPING WITH CONCRETE.

PLUMBING PIPING:

- A — COMPRESSOR AIR
- CD — CONDENSATE
- CW — DOMESTIC COLD WATER
- CON — COMPRESSED AIR/HYDRAULIC CONDUIT PIPING
- G — NATURAL GAS
- HW — DOMESTIC HOT WATER
- HWR — DOMESTIC HOT WATER RETURN
- MW — DOMESTIC MIXED WATER
- SCW — DOMESTIC SOFT COLD WATER
- SHW — DOMESTIC SOFT HOT WATER
- SAN — SANITARY DRAIN
- SAN-FM — SANITARY DRAIN FORCE MAIN
- ST — STORM DRAIN
- ST-OD — STORM DRAIN-OVERFLOW DRAIN
- V — VENT FOR SANITARY DRAIN
- V-CWD — VENT FOR CLEAR WATER DRAIN

DSPS PLUMBING REVIEW INDEX

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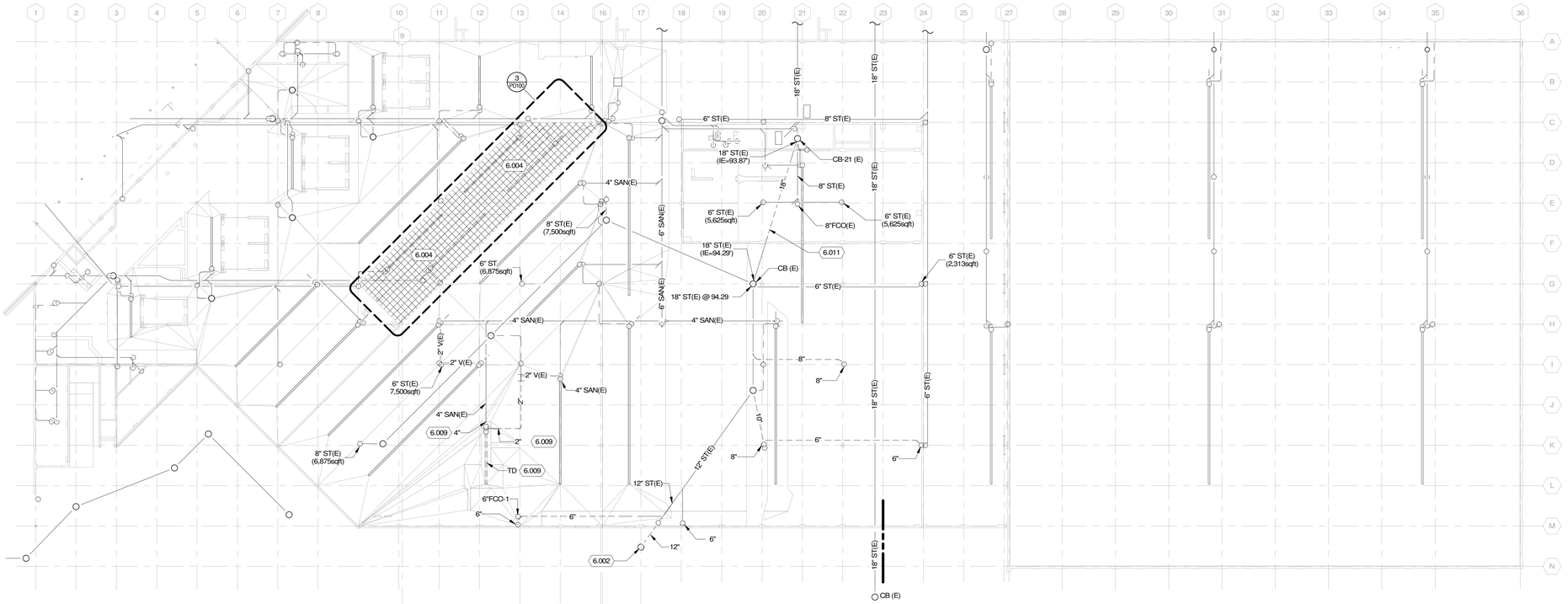
SHEET CONTENTS:
NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NO.:

P-001



TRUE NORTH PLAN NORTH

1 OVERALL UNDERSLAB DEMOLITION PLAN

1/32" = 1'-0"

KEYED NOTES

6.002 DEMOLISH EXISTING STORM CATCH BASIN AND ASSOCIATED DRAIN PIPE. PREPARE EXISTING INTERIOR PIPE FOR EXTENSION ACCORDING TO NEW WORK DRAWINGS.

6.003 DEMOLISH EXISTING DOWNSPOUT NOZZLE AND ASSOCIATED DRAIN PIPE. EXISTING OVERFLOW DRAIN TO REMAIN. PREPARE EXISTING OVERFLOW DRAIN FOR EXTENSION ACCORDING TO NEW WORK DRAWINGS.

6.004 DEMOLISH ALL FLOOR DRAINS, FLOOR CLEANOUTS, CATCH BASINS OR INTERCEPTORS IN HATCHED AREA (EXISTING BUS WASH LANE). CAP ALL SANITARY DRAINS AND/OR VENT PIPE UNDER FLOOR SLAB AND ABANDON IN PLACE.

6.006 DEMOLISH EXISTING SINK AND ASSOCIATED WATER SUPPLY, DRAIN, AND VENT PIPE. CAP PIPE BACK AT MAIN AS REQUIRED BY CODE.

6.009 DEMOLISH EXISTING TRENCH DRAIN AND ASSOCIATED DRAIN AND VENT PIPE. PREPARE EXISTING PIPE FOR EXTENSION ACCORDING TO THE NEW WORK DRAWINGS.

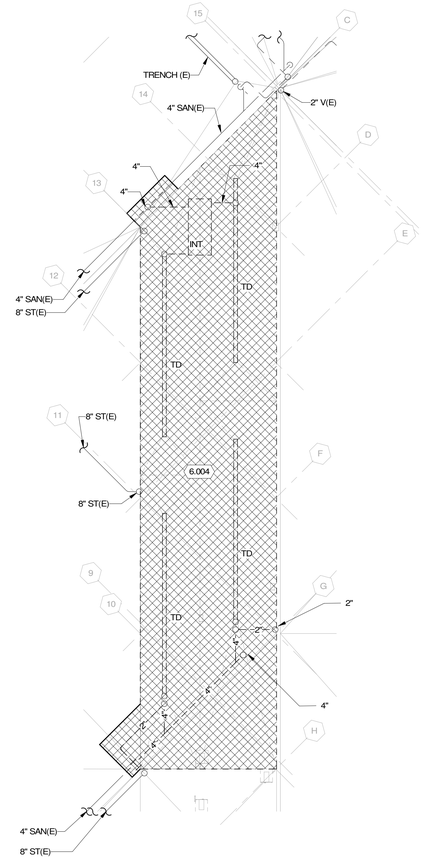
6.011 DEMOLISH 18" RCP STORM PIPE FROM SOUTH WALL TO NORTH WALL OF MECHANICAL SERVICE BAY. PREPARE EXISTING PIPE FOR EXTENSION ACCORDING TO NEW WORK.

6.014 DEMOLISH EXISTING STORM PIPE BELOW ROOF STRUCTURE FROM THE EXISTING TO REMAIN ROOF DRAIN. PREPARE EXISTING ROOF DRAIN FOR EXTENSION ACCORDING TO THE NEW WORK DRAWINGS.

6.051 DEMOLISH EXISTING PLUMBING FIXTURES AND ASSOCIATED WATER SUPPLY, DRAIN, AND VENT PIPE. CAP PIPE BACK AT MAIN AS REQUIRED BY CODE.

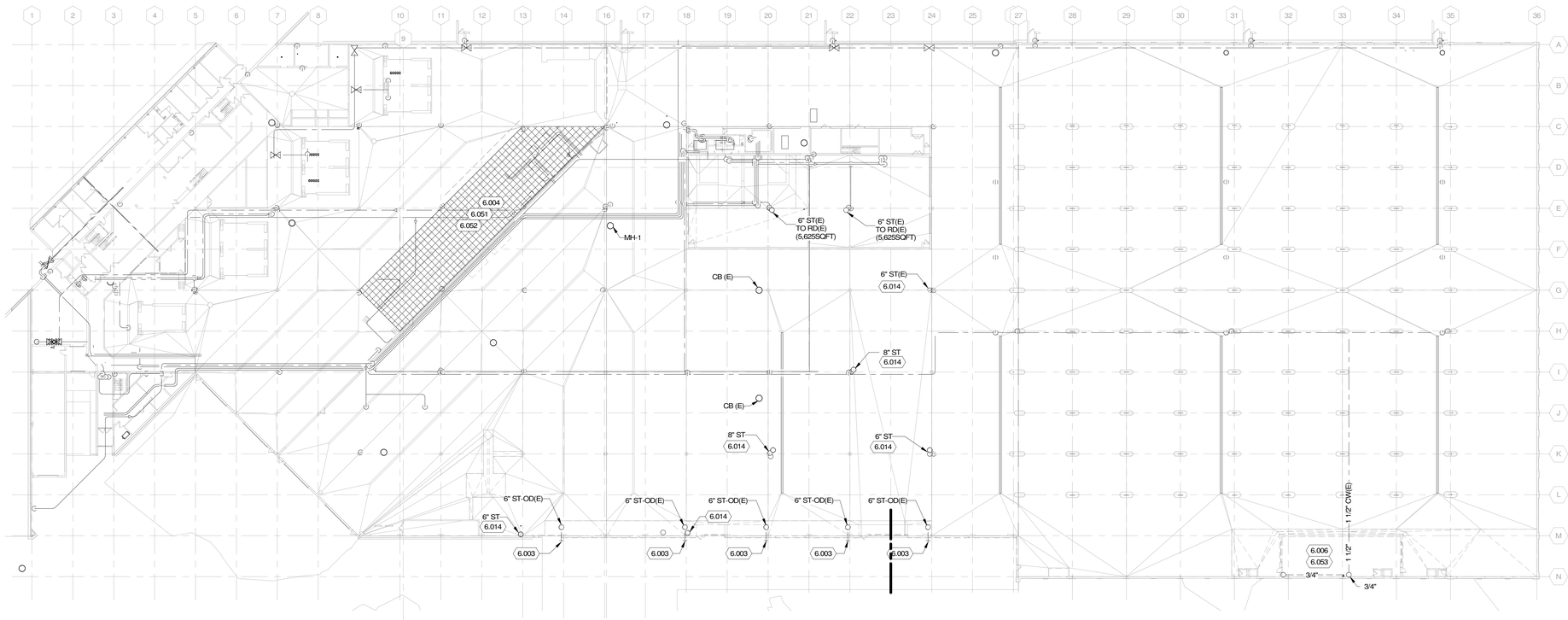
6.052 DEMOLISH EXISTING WATER SUPPLY PIPING ROUTED TO DEMOLISHED EQUIPMENT. DEMOLISH ANY DRAIN AND VENT ASSOCIATED WITH DEMOLISHED EQUIPMENT. CAP SUPPLY PIPE, VENT PIPE AND SANITARY PIPE BACK AT MAIN AS REQUIRED BY CODE.

6.053 DEMOLISH EXISTING ELECTRIC WATER HEATER, SINK, AND ASSOCIATED WATER SUPPLY, DRAIN, AND VENT PIPE. PREPARE EXISTING WATER SUPPLY FOR EXTENSION ACCORDING TO THE NEW WORK DRAWINGS.



3 EXISTING BUS WASH DRAIN & VENT DEMOLITION PLAN

1/16" = 1'-0"



TRUE NORTH PLAN NORTH

2 OVERALL FIRST FLOOR DEMOLITION PLAN

1/32" = 1'-0"

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SHEET CONTENTS
UNDERSLAB AND FIRST FLOOR DEMOLITION PLANS

SHEET NO.:

PD100

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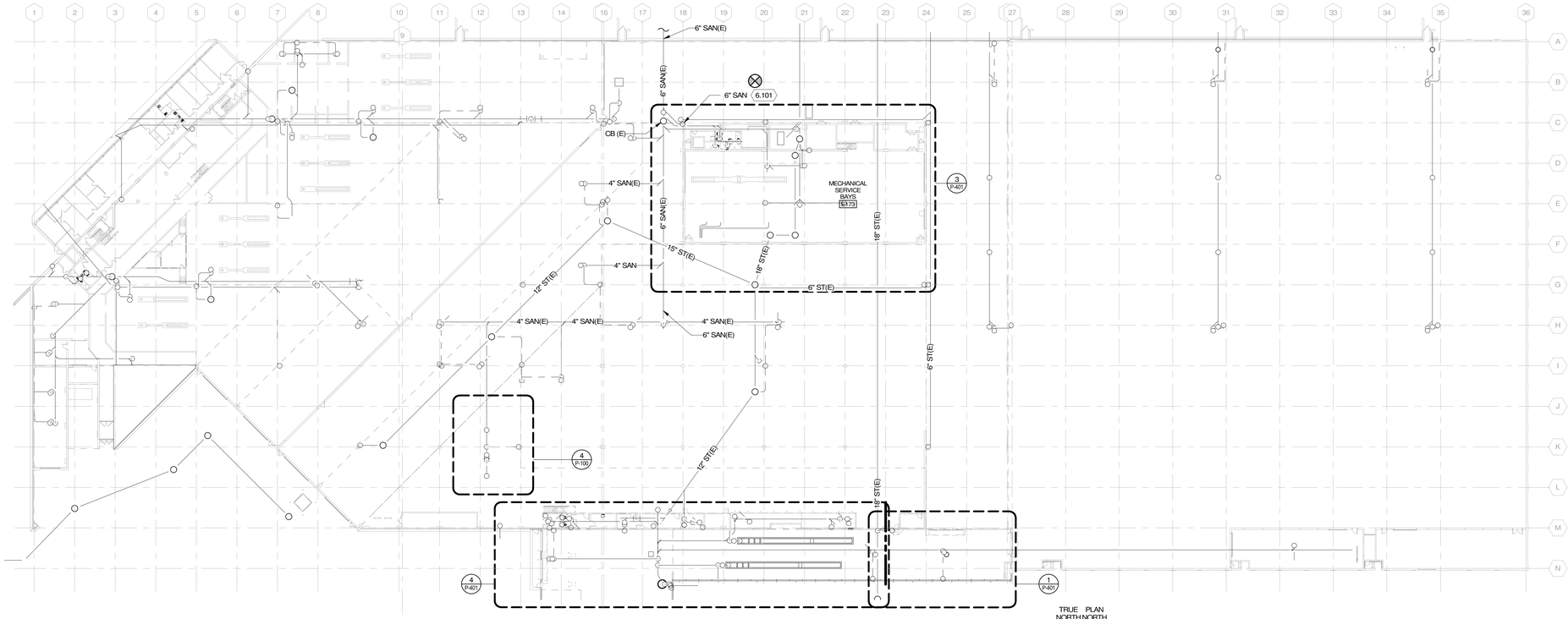
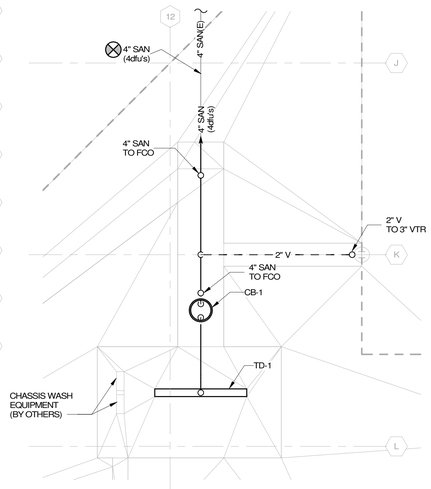


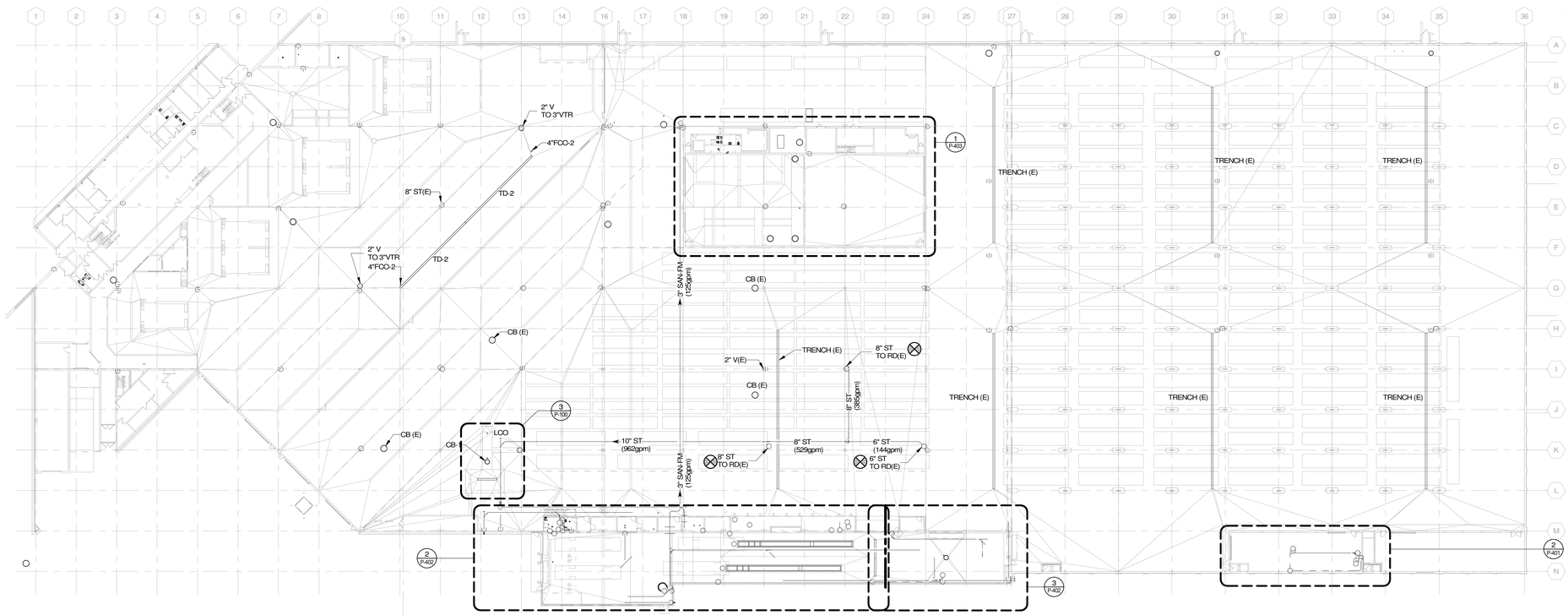
TRUE NORTH PLAN NORTH N 1 **OVERALL UNDERGOUND DRAIN AND VENT PLAN**
1/32" = 1'-0"

KEYED NOTES

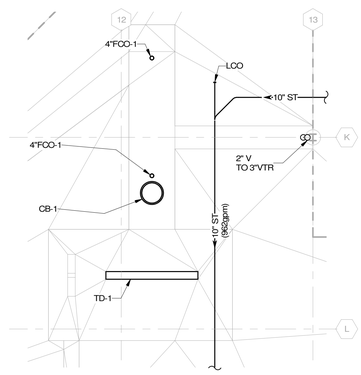
6.101 3" SANITARY FORCE MAIN TRANSITIONS TO A 6" VERTICAL GRAVITY DRAIN AND CONNECTED TO EXISTING GARAGE SANITARY SYSTEM.



TRUE NORTH PLAN NORTH N 4 **CHASSIS WASH UNDERGROUND DRAIN AND VENT PLAN**
1/8" = 1'-0"



TRUE NORTH PLAN NORTH N 2 **OVERALL FIRST FLOOR DRAIN AND VENT PLAN**
1/32" = 1'-0"



TRUE NORTH PLAN NORTH N 3 **CHASSIS WASH ABOVE GROUND DRAIN AND VENT PLAN**
1/8" = 1'-0"

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SHEET CONTENTS
UNDERSLAB AND FIRST FLOOR DRAIN AND VENT PLAN

SHEET NO.:
P-100

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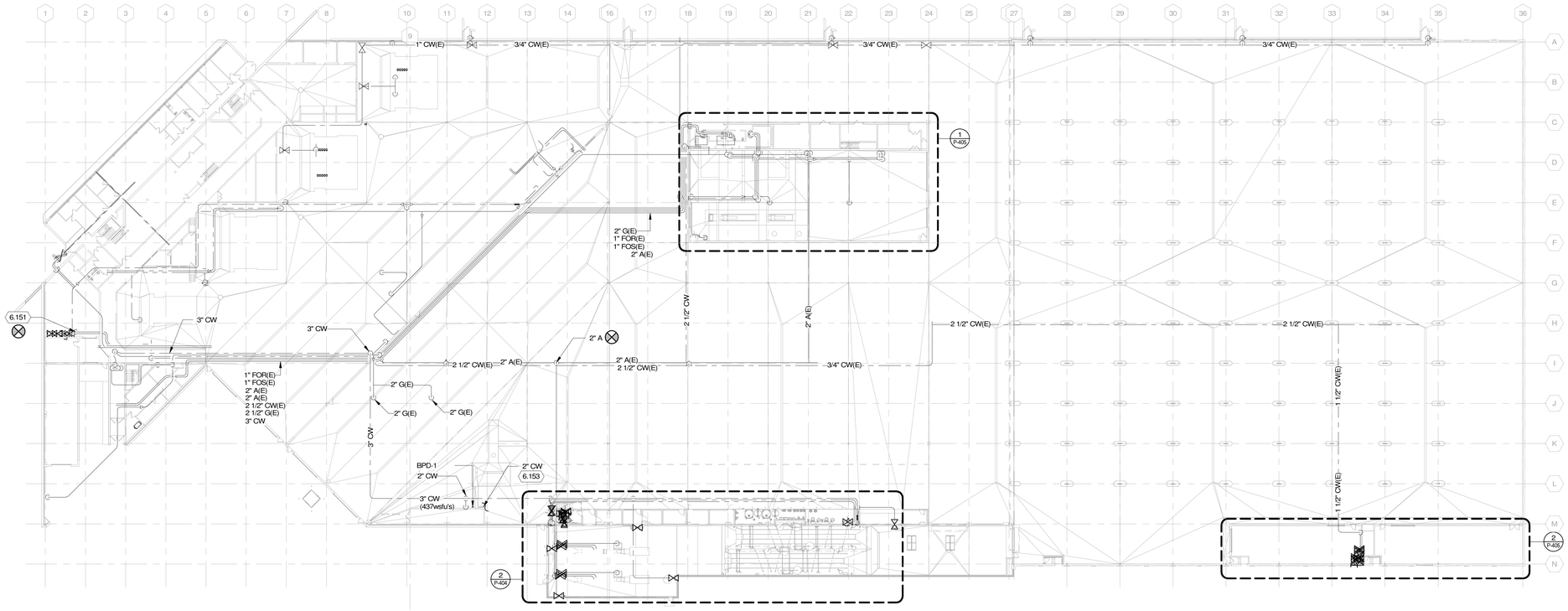

TRUE NORTH PLAN NORTH

1 OVERALL FIRST FLOOR SUPPLY PLAN

1/32" = 1'-0"

KEYED NOTES

6.151 CONNECT NEW 3" COLD WATER LINE INTO EXISTING 4" COLD WATER LINE AFTER THE EXISTING METER.

6.153 PIPE CONTINUATION ON EQUIPMENT DRAWINGS.

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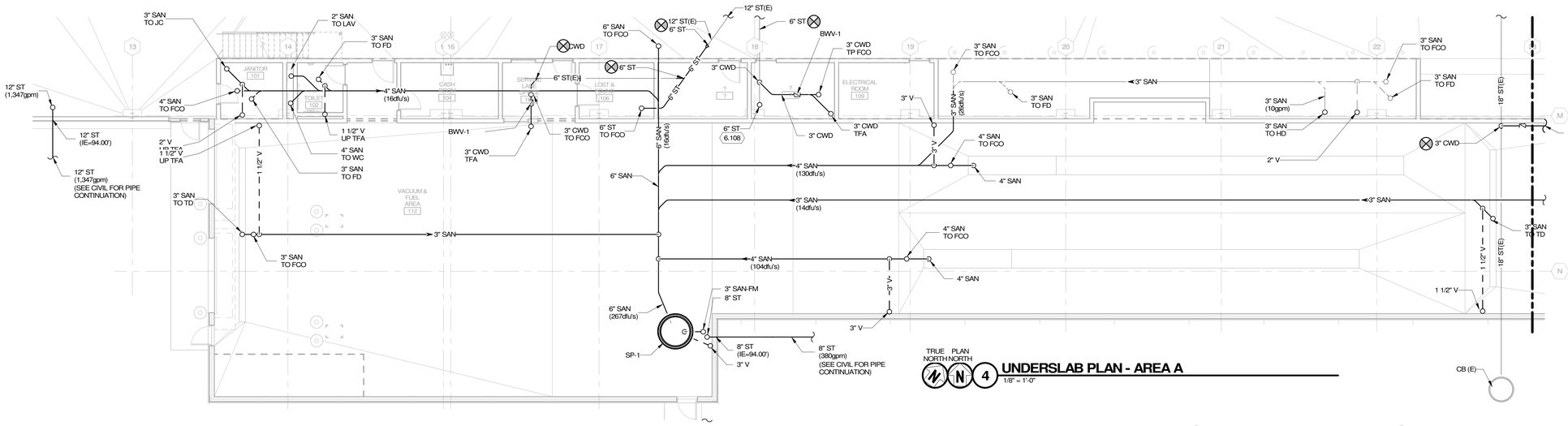
SHEET CONTENTS:
FIRST FLOOR
SUPPLY PLAN

SHEET NO.:

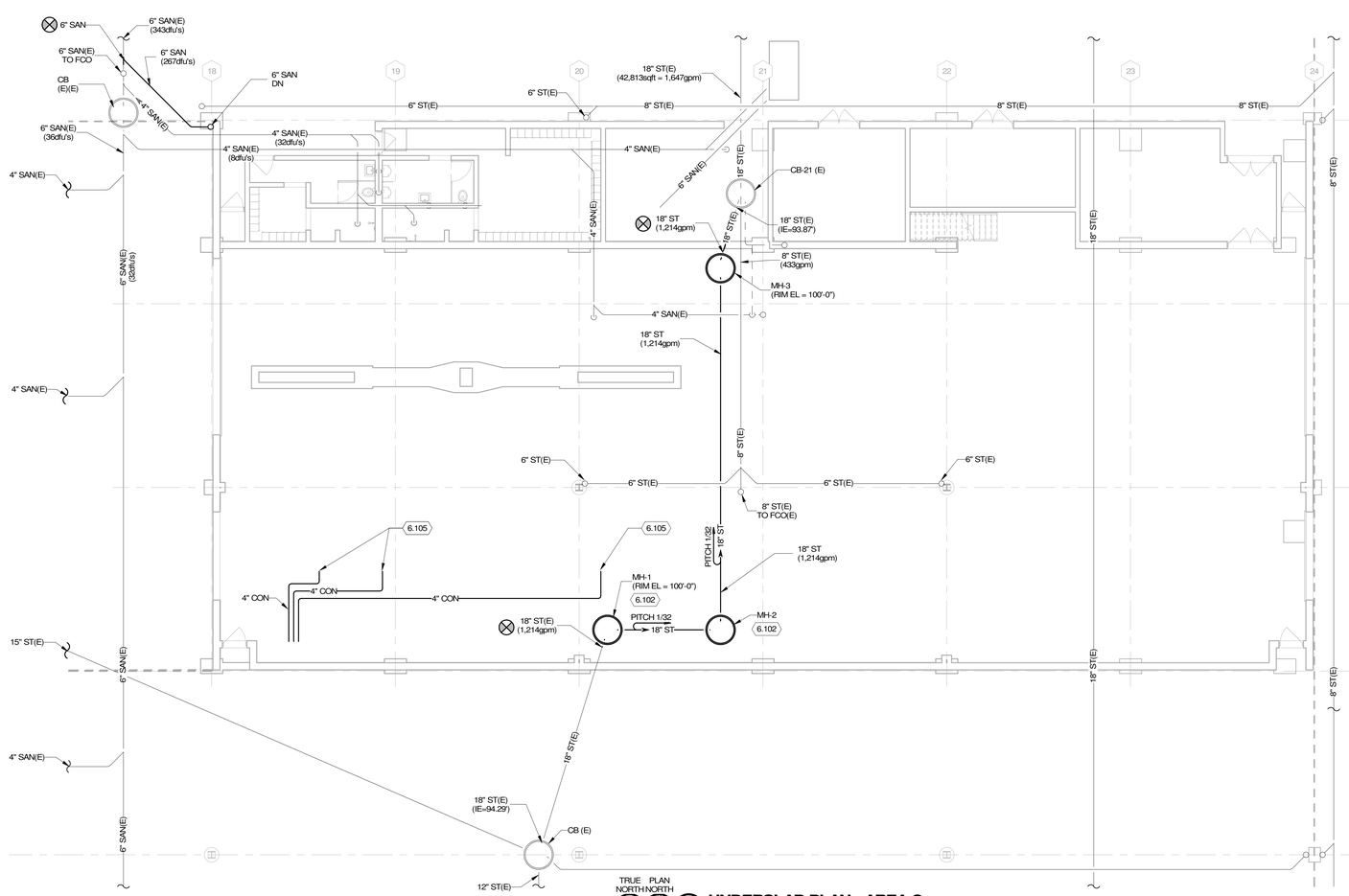
P-131



TRUE NORTH PLAN NORTH

4 UNDERSLAB PLAN - AREA A

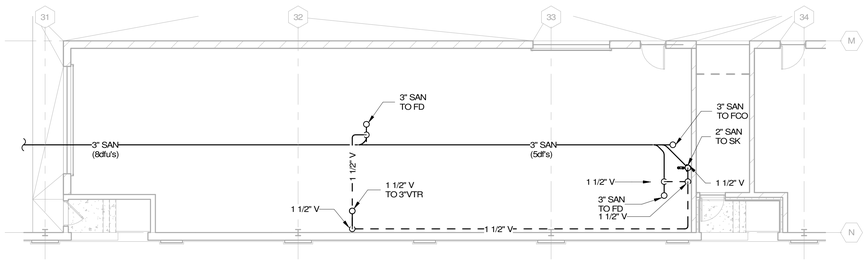
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

3 UNDERSLAB PLAN - AREA C

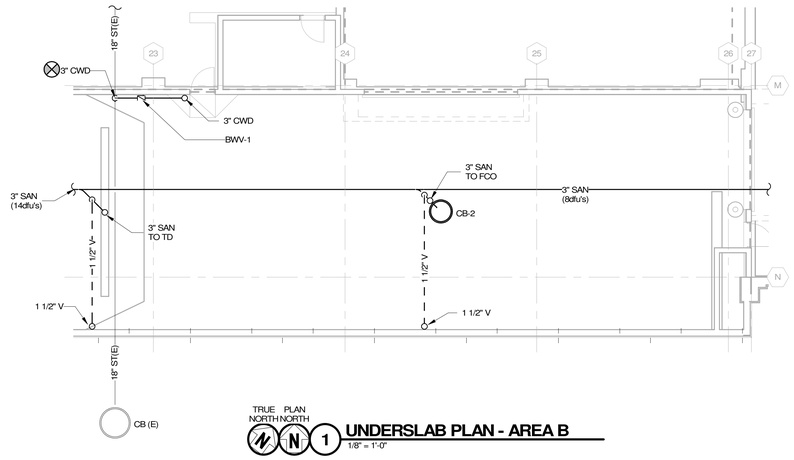
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 UNDERSLAB DRAIN AND VENT PLAN - AREA D

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

1 UNDERSLAB PLAN - AREA B

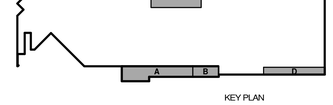
1/8" = 1'-0"

KEYED NOTES

6.102 REFERENCE SHEET C-501/DETAIL 5 FOR STORM MANHOLE DETAIL. (RIM ELEVATION IS TOP OF FINISHED FLOOR)

6.105 ROUTE 4" PVC PIPE SLEEVES FROM PODIUM TO EACH MODULE FOR THE BUS LIFT.

6.108 CAP STORM PIPE UNDER FINISHED FLOOR AND ABANDON 6" STORM IN PLACE.



KEY PLAN

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SHEET CONTENTS
UNDERSLAB PLANS - AREAS A - D

SHEET NO.:

P-401

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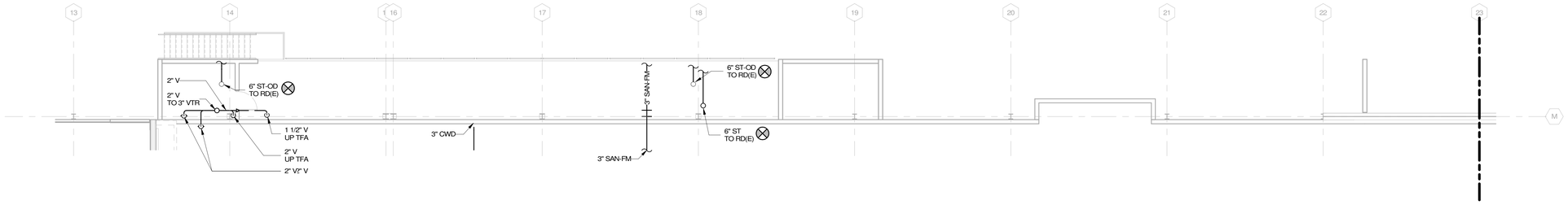


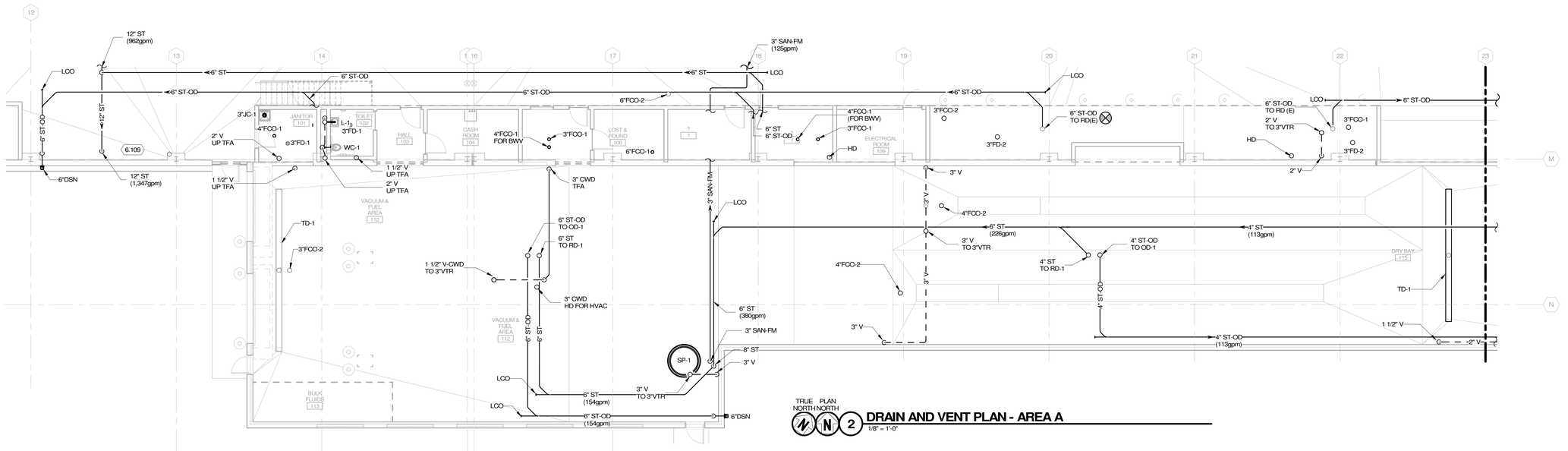
TRUE NORTH PLAN NORTH

1 DRAIN AND VENT PLAN - EQUIPMENT MEZZANINE

1/8" = 1'-0"

KEYED NOTES

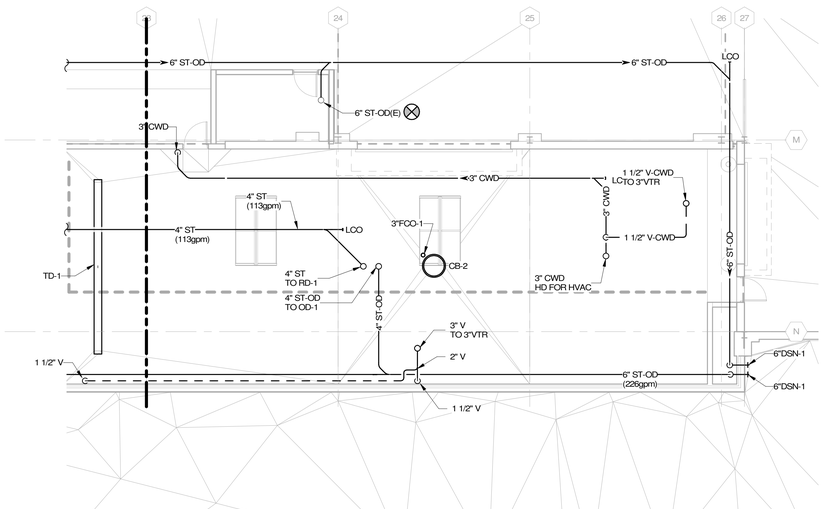
6.109 CAP PIPE APPROXIMATELY 10' AFF. ABANDON IN PLACE.



TRUE NORTH PLAN NORTH

2 DRAIN AND VENT PLAN - AREA A

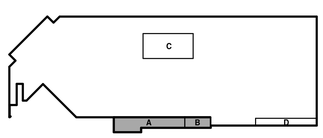
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

3 DRAIN AND VENT PLAN - AREA B

1/8" = 1'-0"



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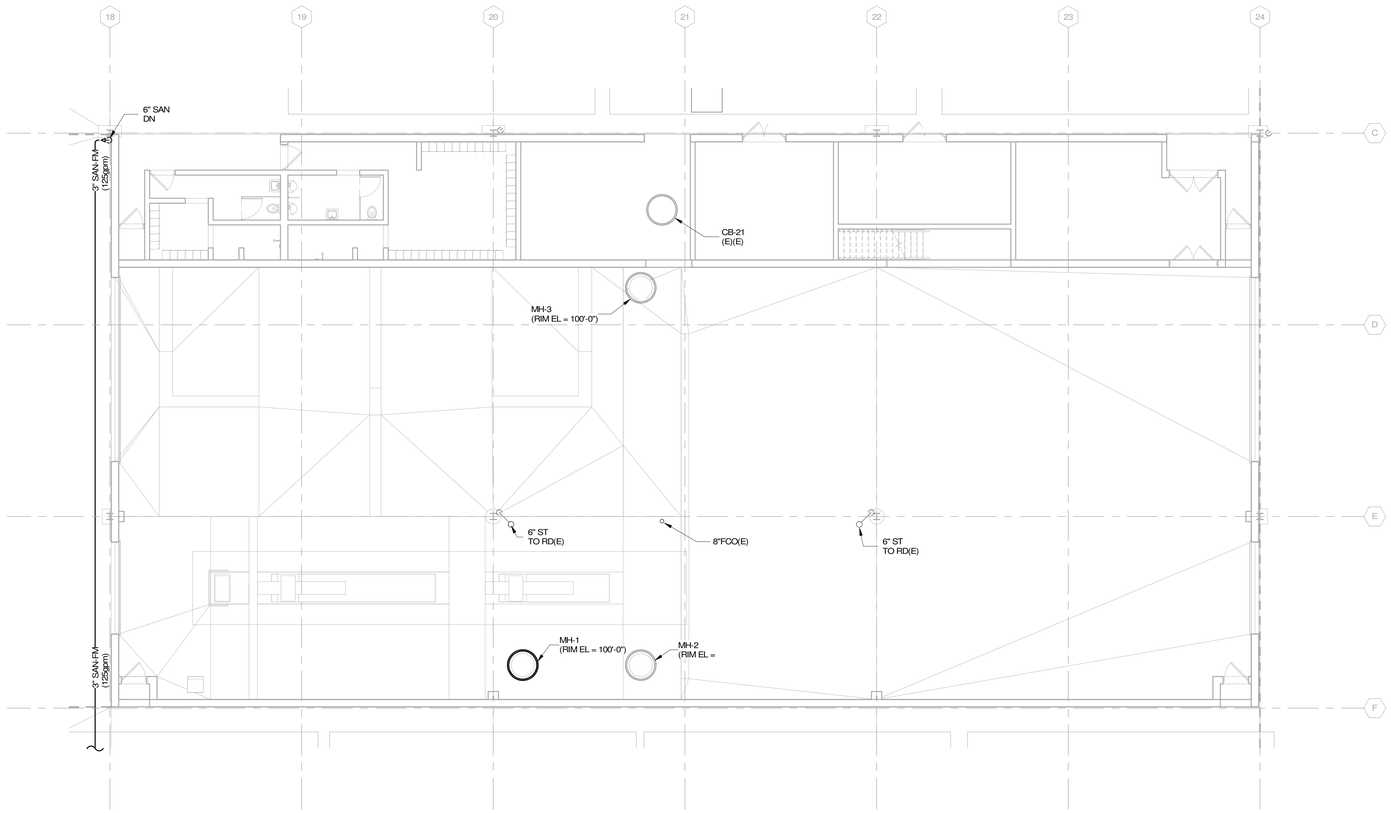
SHEET CONTENTS
FIRST FLOOR DRAIN AND VENT PLANS - AREAS A & B

SHEET NO.:
P-402

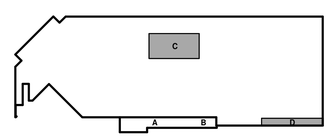


TRUE NORTH PLAN NORTH

1 ABOVEGROUND DRAIN AND VENT PLAN - AREA C

1/8" = 1'-0"

KEYED NOTES



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SHEET CONTENTS:
FIRST FLOOR DRAIN AND VENT PLANS - AREAS C & D

SHEET NO.:

P-403

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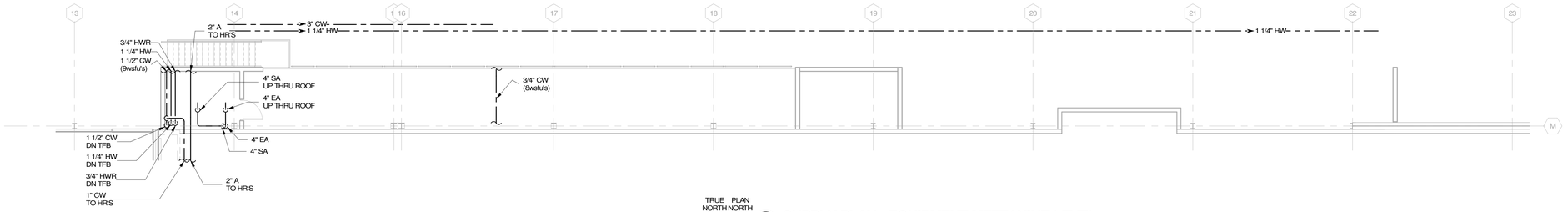
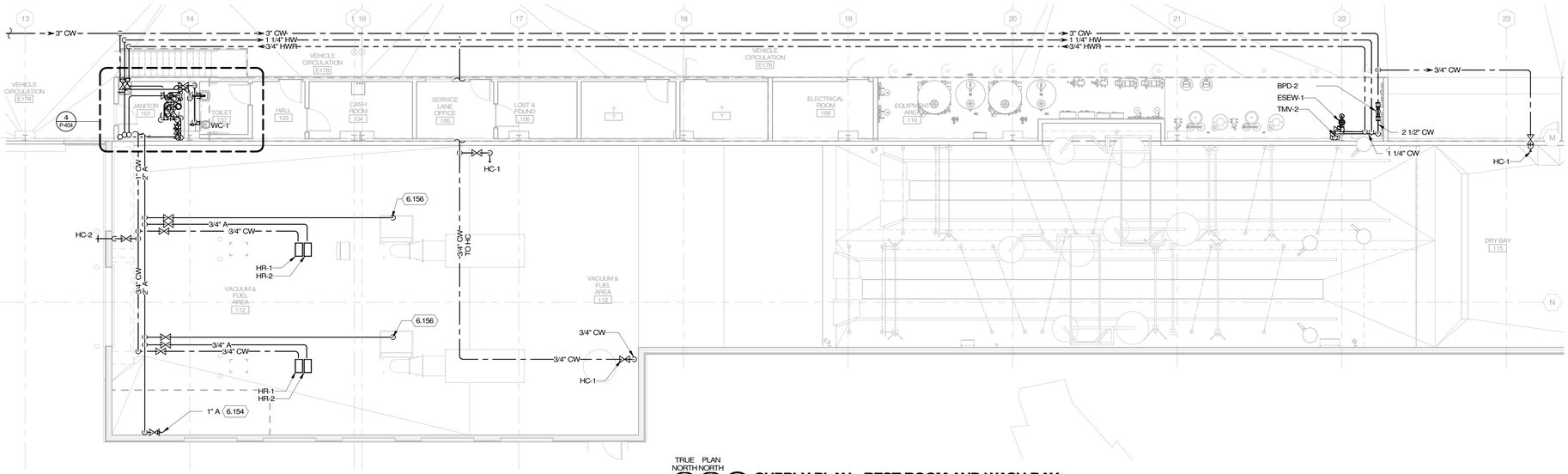


TRUE NORTH PLAN NORTH

SUPPLY PLAN - EQUIPMENT MEZZANINE LEVEL

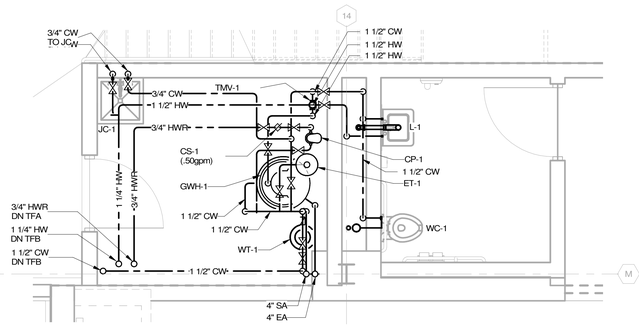
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

SUPPLY PLAN - REST ROOM AND WASH BAY

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

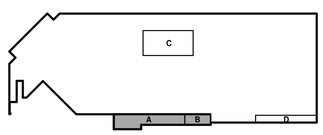
ENLARGED JANITOR AND RESTROOM SUPPLY PIPING

3/8" = 1'-0"

KEYED NOTES

6.154 BRING 2"A LINE TO BULK FLUID AREA AND INSTALL 1" AIR CONNECTION WITH A VALVE AND UNION.

6.156 PROVIDE 3/4" COMPRESSED AIR TO VACUUM MACHINE. ROUTE PIPE AND TERMINATE 9' AFF. FINAL CONNECTION BY EQUIPMENT CONTRACTOR.



KEY PLAN

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

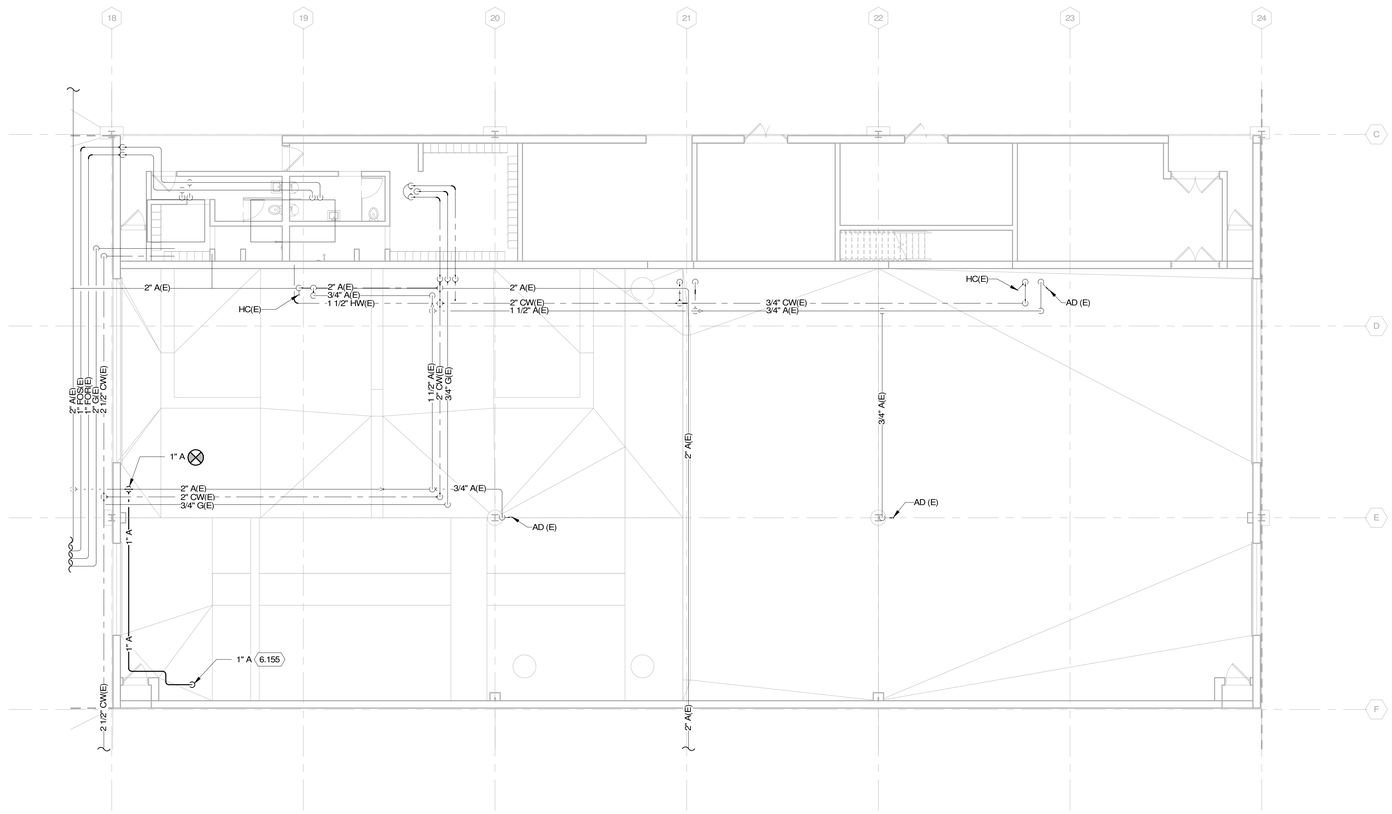
ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: JET
DRAWN BY: JET
CHECKED BY: RMM
DO NOT SCALE DRAWINGS.

SHEET CONTENTS
FIRST FLOOR SUPPLY PLANS - AREAS A & B

SHEET NO.:

P-404



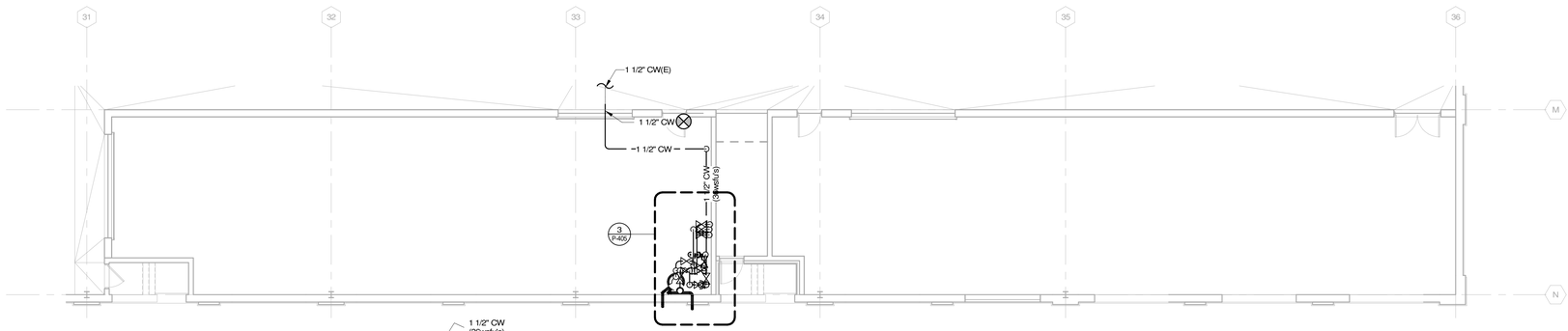
KEYED NOTES

6.155 PROVIDE 1" COMPRESSED AIR LINE TO PODIUM FOR BUS LIFT.

TRUE NORTH PLAN NORTH

1 SUPPLY PLAN - AREA C

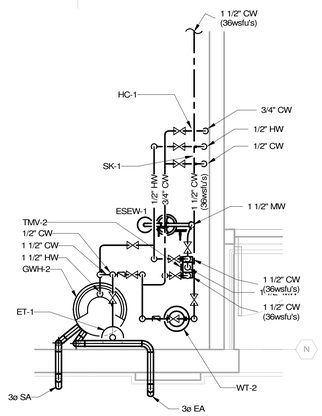
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

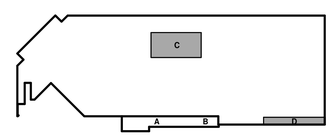
2 SUPPLY PLAN - AREA D

1/8" = 1'-0"



3 ENLARGED SUPPLY PIPE PLAN

3/8" = 1'-0"



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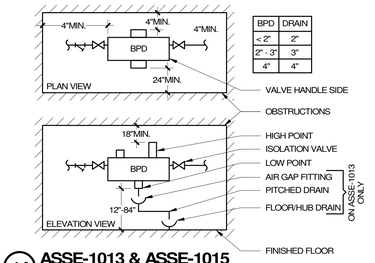
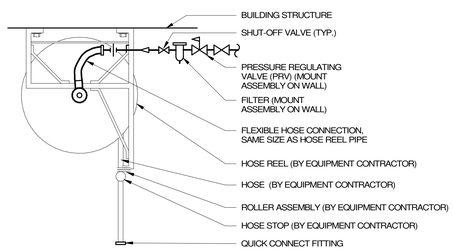
SHEET CONTENTS:
FIRST FLOOR
SUPPLY PLANS -
AREAS C & D

SHEET NO.:

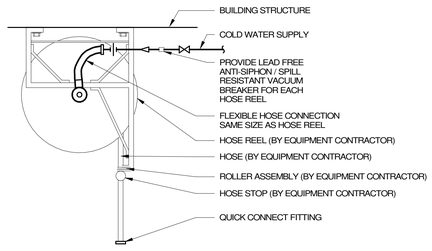
P-405



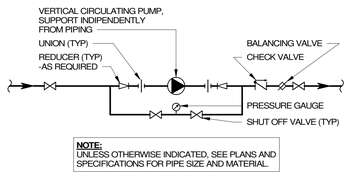
14 ASSE-1013 & ASSE-1015
NO SCALE



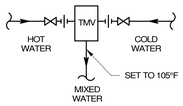
15 AIR HOSE REEL - CEILING MOUNTED (HR-1)
NO SCALE



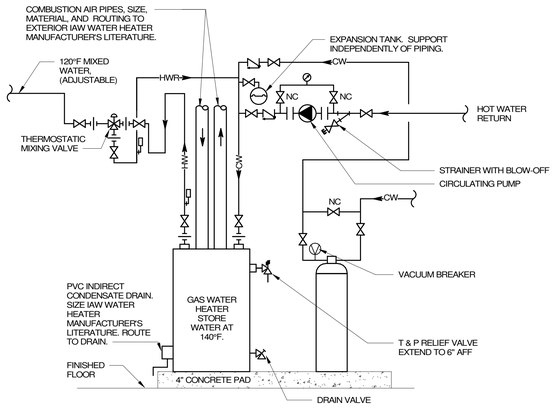
16 WATER HOSE REEL (HR-2) (BUS WASH AREA)
NO SCALE



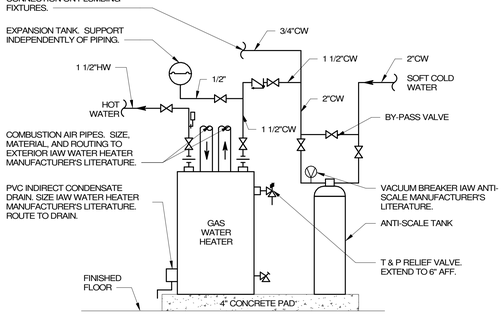
17 IN-LINE CIRCULATING PUMP PIPING
NO SCALE



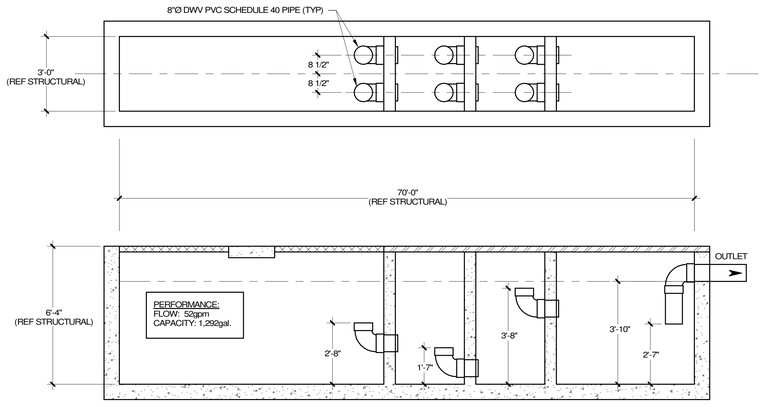
POINT OF USE THERMOSTATIC MIXING VALVE
10 NO SCALE



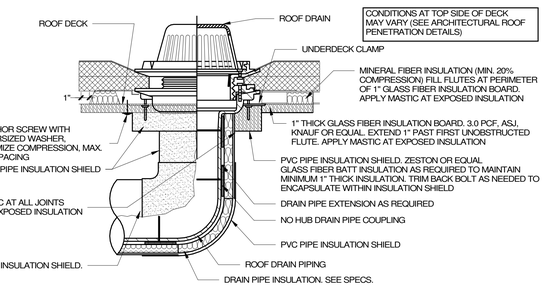
JANITOR CLOSET GAS WATER HEATER WITH MASTER THERMO-MIXING VALVE (GWH-1)
11 NO SCALE



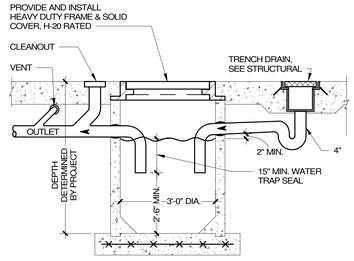
HVAC MAINTENANCE SEALED COMBUSTION GAS WATER HEATER (GWH-2)
12 NO SCALE



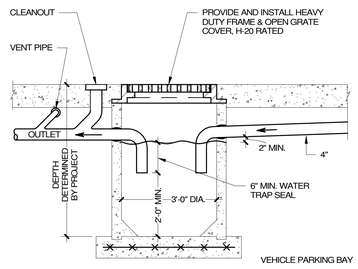
13 BUS WASH SAND INTERCEPTOR (INT-1)
NO SCALE



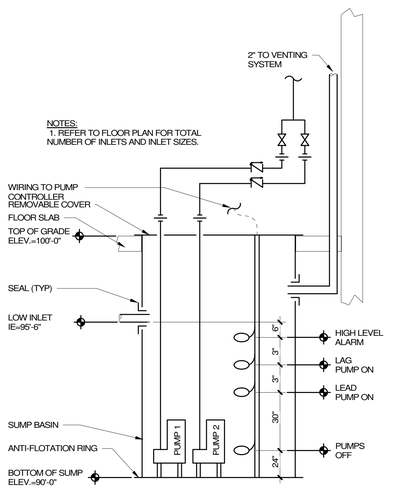
6 INSULATION ROOF DRAIN UNDERSIDE
NO SCALE



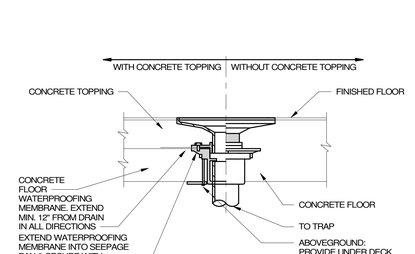
7 GARAGE CATCH BASIN CB-1 (CHASIS WASH)
NO SCALE



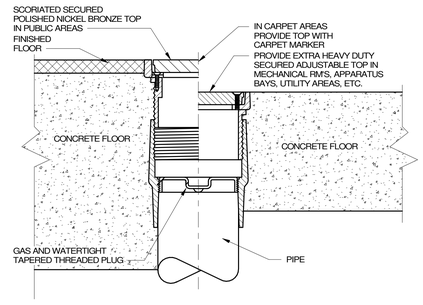
8 GARAGE CATCH BASIN CB-2 (DRY BAY)
NO SCALE



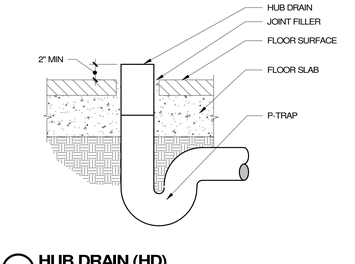
9 DUPLEX SUMP PUMP (SP-X)
NO SCALE



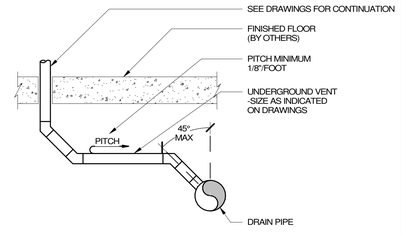
1 FLOOR DRAIN - CAST IN PLACE
NO SCALE



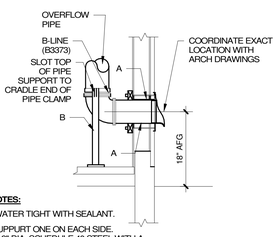
2 FLOOR CLEANOUT (FCO)
NO SCALE



3 HUB DRAIN (HD)
NO SCALE



4 UNDERGROUND VENT SECTION
NO SCALE



KEYED NOTES:

A SEAL WATER TIGHT WITH SEALANT.

B PIPE SUPPLIRT ONE ON EACH SIDE. PIPE IS 3" DIA. SCHEDULE 40 STEEL WITH A 4"x8"x1/4" BASE PLATE WITH (2) 1/2" DIA. EXPANSION ANCHORS ON EACH LONG SIDE.

5 STORM OVERFLOW DOWNSPOUT
NO SCALE

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SHEET CONTENTS
DETAILS

SHEET NO.:
P-501

1/10/2019 4:39:21 PM C:\Revit Local\4503500-170148.02-P-Central-2018_NateDeMaster.rvt

PLUMBING EQUIPMENT SCHEDULE (1)

MARK	EQUIPMENT TYPE	MANUFACTURER, MODEL NUMBER	DESCRIPTION SUMMARY (SEE SPECIFICATIONS)	ELECTRICAL VOLTS/PHASE	AMPS	HP	WATTS	REMARKS
BPD-1	BACKFLOW PREVENTION DEVICE	WATTS, LF009-QT	DOUBLE-CHECK VALVE WITH INTERMEDIATE ATMOSPHERIC VENT, ASSE 1013, 1". BRONZE. QUARTER TURN BALL VALVES.					
BPD-2	BACKFLOW PREVENTION DEVICE	WATTS, LF009-OSY	DOUBLE-CHECK VALVE WITH INTERMEDIATE ATMOSPHERIC VENT, ASSE 1013, 2 1/2". BRONZE. STEM AND YOKE RESILIENT SEATED GATE VALVES.					
BWV-1	BACKWATER VALVE	SPEARS, S375P	PVC BACKWATER VALVE WITH EPDM VALVE SEATS. PROVIDE VALVE SERVICE-ACCESS EXTENTION.					
CB-1	CATCH BASIN (CHASIS WASH)	PRECAST CONCRETE	36" DIAMETER PRECAST CONCRETE WITH H-20 SOLID SEALED COVER.					
CB-2	CATCH BASIN (DRY BAY)	PRECAST CONCRETE	36" DIAMETER PRECAST CONCRETE WITH H-20 OPEN GRATE COVER.					
CP-1	CIRCULATING PUMP	BELL & GOSSET, NBF-9	1.0 GPM AT 7 FT HEAD, STAINLESS STEEL HOUSING, 3/4" FLANGE PORTS. CONTINUOUS OPERATION.	115/1	0.4			3
CS-1	CIRCUIT SETTER	WATTS LFCSM-61-S	SEE DRAWINGS FOR LOCATION AND GPM SETTINGS					
DNS-1	DOWN SPOUT	ZURN Z199	NICKEL BRONZE DOWNSPOUT NOZZLE WITH THREADED INLET.					
FCO-1	FLOOR CLEANOUT (PUBLIC AREAS)	JR SMITH, 4020	CAST IRON, MEDIUM DUTY NICKEL-BRONZE COVER					
FCO-2	FLOOR CLEANOUT (MECHANICAL, UTILITY RMS, ETC)	JR SMITH, 4263	CAST IRON WITH ANCHOR FLANGE, HEAVY DUTY CAST IRON COVER					
FD-1	FLOOR DRAIN (PUBLIC AND STAFF AREA'S)	ZURN Z-415-B-VP	CAST IRON BODY, COMBINATION INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE COLLAR WITH HEEL PROOF POLISHED NICKEL BRONZE STRAINER VANDAL PROOF TOP.					
FD-2	FLOOR DRAIN (MECHANICAL AREA'S)	ZURN Z-556-Y-VP	CAST IRON BODY, 9" DIAMETER TOP DRAIN, COMBINATION MEMBRANE FLASHING CLAMP AND FRAME FOR HEAVY DUTY CAST IRON DEEP FLANGE, SLOTTED GRATE AND SEDIMENT BUCKET.					
GWH-1	GAS WATER HEATER	AO SMITH BTH-199A	100 GALLON GLASS LINED TANK. 199,000 BTU/HR MODULATING BURNER INPUT. SEALED COMBUSTION WITH PVC CONCENTRIC VENTING KIT. HIGH EFFICIENCY CONDENSING. 3.5 - 14 IN WC NATURAL GAS FUEL SUPPLY. 140° F SETPOINT.	120/1	15			3
GWH-2	GAS WATER HEATER	AO SMITH BTH-199A	100 GALLON GLASS LINED TANK. 199,000 BTU/HR MODULATING BURNER INPUT. SEALED COMBUSTION WITH PVC CONCENTRIC VENTING KIT. HIGH EFFICIENCY CONDENSING. 3.5 - 14 IN WC NATURAL GAS FUEL SUPPLY. 140° F SETPOINT.	120/1	15			3
HC-1	HOSE BIBB	WOODFORD, 24	STANDARD CHROME FINISH, WITH ASSE 1011 VACUUM BREAKER					
HC-2	WALL HYDRANT	WOODFORD, MODEL 65	ASSE 1019 AUTOMATIC DRAINING WITH ANTI-SIPHON ASSE 1011 VACUUM BREAKER. 3/4" INLET					
HR-1	HOSE REEL, AIR	BY OTHERS	REELS SUPPLIED AND INSTALLED BY EQUIPMENT CONTRACTOR (LUBE SPECIFICATION 11 11 19)					
HR-2	HOSE REEL, WATER	BY OTHERS	REELS SUPPLIED AND INSTALLED BY EQUIPMENT CONTRACTOR (LUBE SPECIFICATION 11 11 19)					
INT-1	BUS WASH TRENCH/INTERCEPTOR	INTEGRAL WITH FLOOR	SEE STRUCTURAL DRAWINGS.					
MH-1	STORM MANHOLE	PRECAST CONCRETE	SEE SPECIFICATION 33 41 00, PART 2, SECTION 2.3 MANHOLES					
MH-2	STORM MANHOLE	PRECAST CONCRETE	SEE SPECIFICATION 33 41 00, PART 2, SECTION 2.3 MANHOLES					
MH-3	STORM MANHOLE	PRECAST CONCRETE	SEE SPECIFICATION 33 41 00, PART 2, SECTION 2.3 MANHOLES					
OD-1	SECONDARY ROOF DRAIN	ZURN, Z100-C-W4	15" DIAMETER ROOF DRAIN, CAST IRON BODY, UNDERDECK CLAMP, 4" HIGH INTERNAL WATER DAM.					
RD-1	PRIMARY ROOF DRAIN	ZURN, Z100-C	15" DIAMETER ROOF DRAIN, CAST IRON BODY, UNDERDECK CLAMP.					
SP-1	SUMP PUMP ASSEMBLY	CUSTOM	INTERIOR SANITARY EFFLUENT LIFT STATION INCLUDING BASIN, TWO PUMPS, LIFT RAIL SYSTEM, LEVEL CONTROLLER, AND ASSOCIATED PIPING AND SPECIALTIES.					
	SUMP PUMP A	ZOELLER, MODEL G4295	DOUBLE SEALED, SUBMERSIBLE SEWAGE PUMP. 2" SOLIDS, 3" DISCHARGE @ 125 GPM FOR 40 FT HEAD AT 3450 RPM. 2 HP MOTOR. CAST IRON HOUSING.	460/3	11	7		
	SUMP PUMP B	SAME AS SUMP PUMP A		460/3	11	7		
	SUMP PUMP CONTROLLER	ZOELLER, 10-1125	2-PUMP LEAD/LAG CONTROLLER WITH 4 LEVEL SWITCHES. INCLUDE ALL WIRING BETWEEN CONTROLLER AND PUMPS AND SWITCHES. NEMA 4X ENCLOSURE. UL LISTED.	460/3	6.1			2
	BASIN	AKA INDUSTRIES GB-60-300	60" DIA X 10'-0" DEEP FRP WITH ANTI-FLOTATION FLANGE. INCLUDE INSULATED COVER.					
TD-1	TRENCH DRAIN	INTEGRAL WITH FLOOR	H-20 RATED GRATE. SEE STRUCTURAL DRAWINGS. (SLOPE TO MIDDLE)					
TD-2	TRENCH DRAIN	INTEGRAL WITH FLOOR	H-20 RATED GRATE. SEE STRUCTURAL DRAWINGS. (SLOPE TO ONE END)					
TMV-1	THERMOSTATIC MIXING VALVE	WATTS, LFUSG-B	ASSE-1070. LESS THAN 10 PSID AT .5 GPM. WITH INLET CHECK VALVES, INLET AND OUTLET SHUTOFF VALVES, AND UNIONS. SET AT 105 F.					
TMV-2	THERMOSTATIC MIXING VALVE	LAWLER, 911	ASSE-1071 FOR EMERGENCY FIXTURES. LESS THAN 5 PSID AT 25 GPM. WITH INLET CHECK VALVES, WITH INLET AND OUTLET SHUTOFF VALVES. WITH SURFACE-MOUNTED STAINLESS STEEL CABINET. SET AT 85 F.					
TMV-3	THERMOSTATIC MIXING VALVE	HOLBY, 1 INCH	ASSE-1017. LESS THAN 3 PSID AT 8 GPM. WITH INLET CHECK VALVES, INLET AND OUTLET SHUTOFF VALVES, AND UNIONS. SET AT 120° F.					
TP-1	TRAP SEAL BARRIER	J.R. SMITH	ASSE-1072. CHEMICAL RESISTANT RUBBER TRAP SEAL BARRIER.					
WT-1	ANTI-SCALE SYSTEM	WATTS, OF1465-50TM	CHEMICAL FREE SCALE PREVENTION FOR 20GPM. PROVIDE VACUUM BREAK ON OUTLET AND PROVIDE A BYPASS.					
WT-2	ANTI-SCALE SYSTEM	WATTS, OF1465-50TM	CHEMICAL FREE SCALE PREVENTION FOR 20GPM. PROVIDE VACUUM BREAK ON OUTLET AND PROVIDE A BYPASS.					

REMARKS
(1) SEE GENERAL SCHEDULE NOTES
(2) DISCONNECT INCLUDED
(3) EXTERNAL DISCONNECT REQUIRED (BY ELECTRICAL CONTRACTOR)
(4) RECEPTACLE REQUIRED (BY ELECTRICAL CONTRACTOR)

PLUMBING FIXTURE / EQUIPMENT SCHEDULE (1)

MARK	EQUIPMENT TYPE	MANUFACTURER, MODEL NUMBER	DESCRIPTION SUMMARY	ELECTRICAL (VOLT / PH)	(FLA)	REMARKS
ESEW-1	EMERGENCY SHOWER AND EYE/FACE WASH	BRADLEY, S19314BFPB	FLOOR-MOUNT, PAINTED GALVANIZED STEEL. 20 GPM FLOW REGULATOR. INCLUDE TMV-2.			
	FLOW ALARM	BRADLEY, S19-322D	FLOWSWITCH WITH 1 GPM SETPOINT. 90 DECIBEL AUDIBLE ALARM. 40 WATT FLASHING LIGHT. 5 AMP / 125 VAC DRY CONTACT FOR CONNECTION TO BUILDING AUTOMATION SYSTEM.	120/1		(3)
JC-1	JANITORS CLOSET	STERN WILLIAMS - HL-1800	FLOOR MOUNTED TERRAZZO MOP SINK. 24"X 24"X 12" WITH 3" DRAIN HOLE, STAINLESS STEEL STRAINER, STAINLESS STEEL BACK PLATES AND RIM GUARD.	N/A	N/A	
	SERVICE RECEPTOR FAUCET	CHICAGO FAUCETS - 911-IS WITH ELEVATED VACUUM BREAKER.	SERVICE SINK FAUCET WITH WALL BRACE, VACUUM BREAKER. AND PAIL HOOK ON SPOUT. INCLUDE TMV-1	N/A	N/A	(5) (9)
L-1 (ADA)	LAVATORY BOWL	KOHLER, K-2005	WALL-MOUNT, VITREOUS CHINA, 21" x 18", TWO FAUCET HOLES ON 4" CENTERS. ADA. PROVIDE CONCEALED ARM SUPPORT.	N/A	N/A	(5),(6)
	LAVATORY FAUCET	ZURN AQUASENSE Z69150-XL-CWB	DECK MOUNT, 4" CENTERS, SINGLE TEMPERATURE. SENSOR, 120 VAC. 0.5 GPM AT 30 PSI. INSTALL WITH TMV-1. INCLUDE ONE TRANSFORMER (FOR INSTALLATION INSIDE JUNCTION BOX). INCLUDE LOW VOLTAGE WIRING CONCEALED IWS BETWEEN TRANSFORMER AND FAUCETS.	120/1	N/A	(3) (5),(6),(7),(8),(10)
SK-1	SINK BOWL	MUSTEE, 19F	SINGLE COMPARTMENT, 20"W X 24" DEEP X 34" TALL HIGH STRENGTH PLASTIC TUB WITH 4" O.C. DUAL HANDLE FAUCET HOLES. PROVIDE AND INSTALL CHROME PLATED CAST BRASS "P" TRAP, LOOSE KEY ANGLE STOPS WITH SHIELD CAPS, SUPPLIES AND ESCUTCHEON PLATES ON SUPPLIES AND DRAIN PIPES.			
	SINK FAUCET	CHICAGO FAUCET 895-317GN2AE64VPAB	DECK MOUNTED MANUAL FAUCET, 4" FIXED CENTERS WITH VANDAL PROOF WRISTBLADE HANDLES. 5 1/4" SWING GOOSENECK WITH 1.0 GPM NON-AERATOR LAMINAR FLOW. PROVIDE SUPPLY ELBOWS.			
WC-1 (ADA)	WATER CLOSET BOWL	KOHLER, K-4325	WALL MOUNT, 1.28 GPF, VITREOUS CHINA, TOP SPUD. ADA. PROVIDE SUPPORT.	N/A	N/A	(6)
	WATER CLOSET SEAT	BEMIS, 9400SSCT	OPEN FRONT. STAINLESS STEEL SELF-SUSTAINING CHECK.	N/A	N/A	(6)
	WATER CLOSET FLUSHVALVE	ZURN AQUAFLUSH ZEMS6000PL-HET-IS - 1.28	EXPOSED, 1.28 GPF, SENSOR, 120 VAC. CHROME PLATED. ADA. INCLUDE ONE TRANSFORMER (FOR INSTALLATION INSIDE JUNCTION BOX). INCLUDE LOW VOLTAGE WIRING CONCEALED IWS BETWEEN TRANSFORMER AND FAUCETS.	120/1	N/A	(5),(6)

(1) SEE GENERAL NOTES P-001
(2) DISCONNECT INCLUDED
(3) EXTERNAL DISCONNECT REQUIRED.
(4) OWNER FURNISHED, CONTRACTOR INSTALLED
(5) EXPOSED PIPING TO BE CHROME PLATED
(6) INSTALL TO MEET ADA REQUIREMENTS.
(7) PROVIDE AND INSTALL WATTS, LFMMV, LEAD FREE MIXING VALVE . ASSE 1070
(8) SET MIXING VALVES AT TO MAX. TEMP OF 105°F

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION

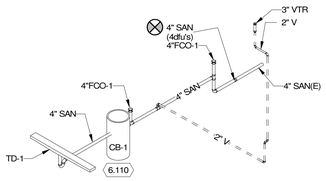
1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

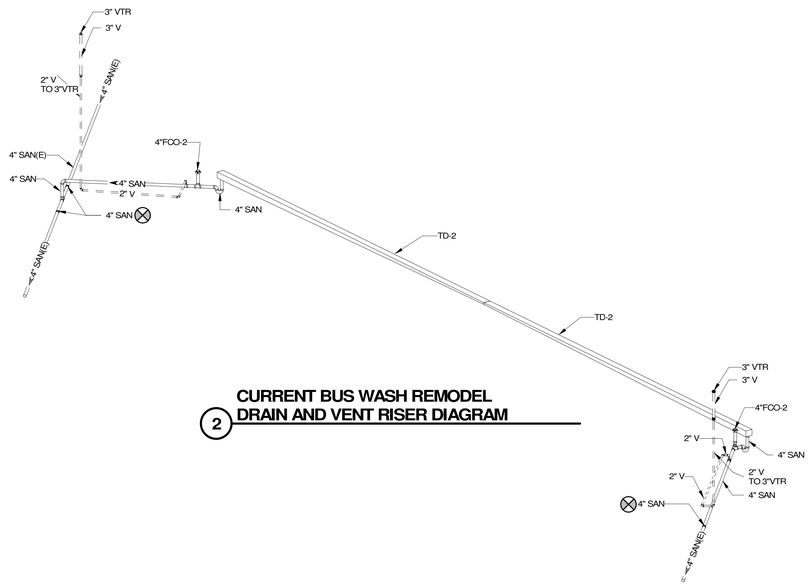
CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: JET
DRAWN BY: JET
CHECKED BY: RMM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SCHEDULES

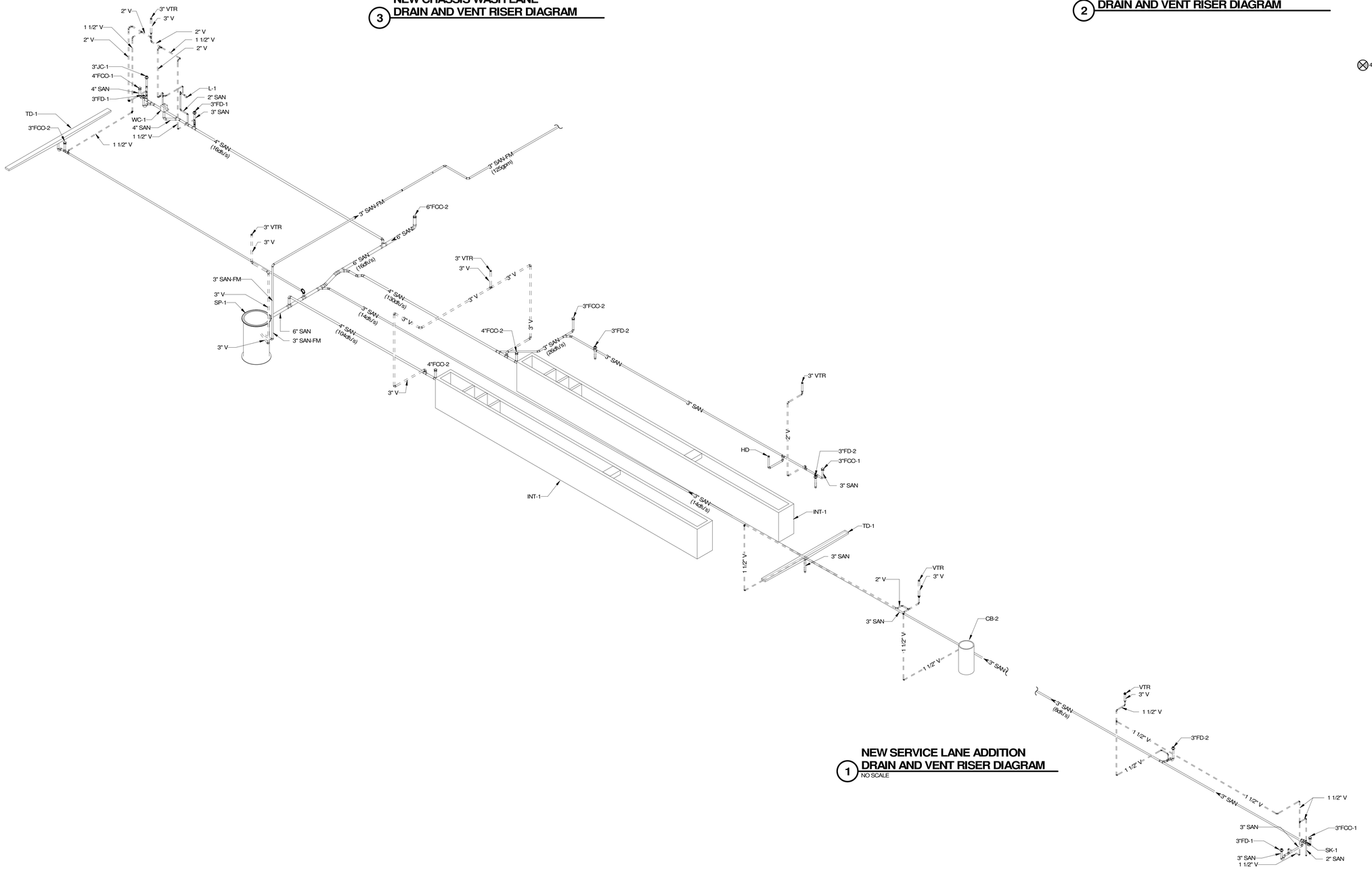
SHEET NO.:
P-601



NEW CHASSIS WASH LANE
DRAIN AND VENT RISER DIAGRAM
3



CURRENT BUS WASH REMODEL
DRAIN AND VENT RISER DIAGRAM
2



NEW SERVICE LANE ADDITION
DRAIN AND VENT RISER DIAGRAM
1
NO SCALE

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

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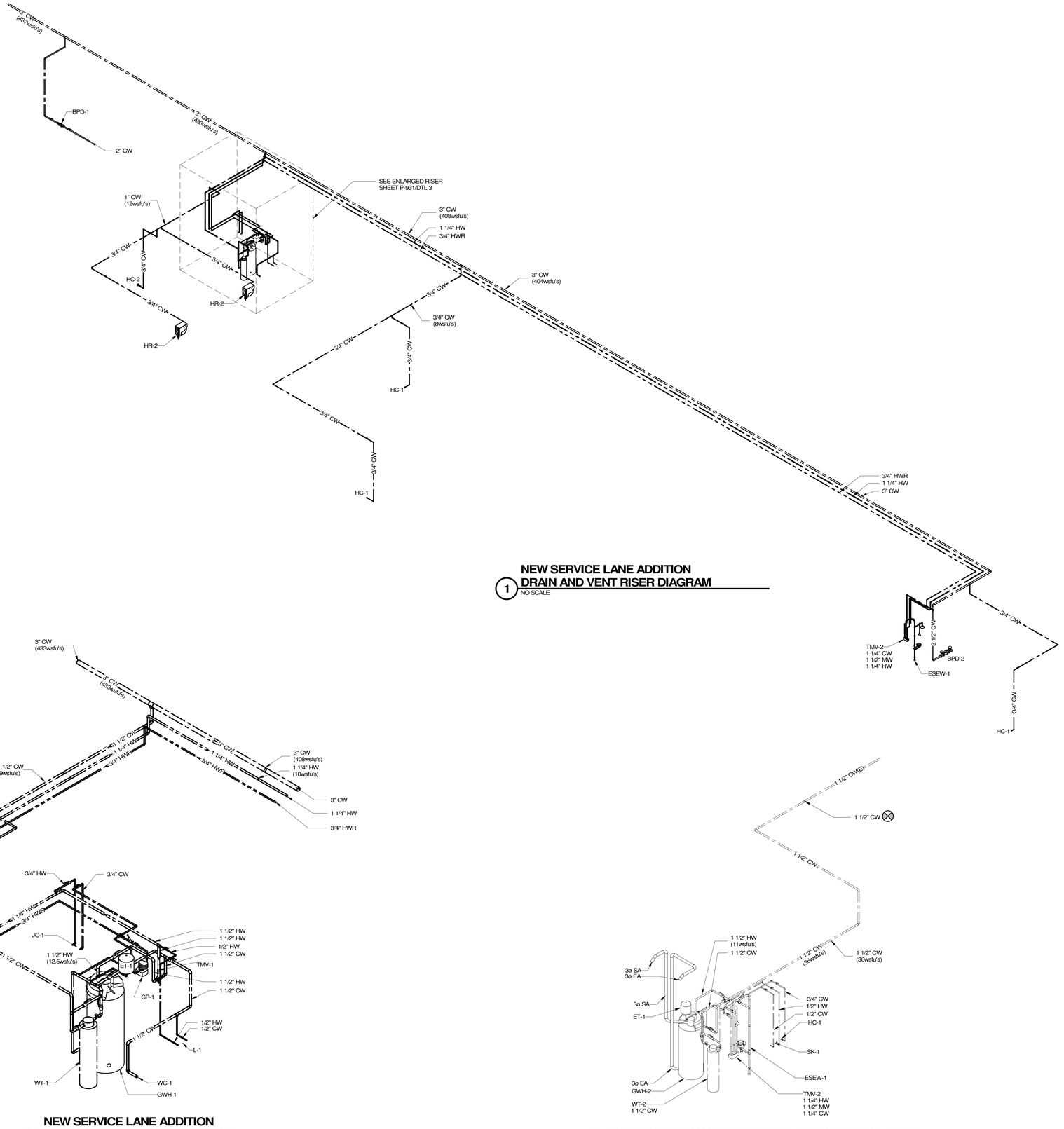
SHEET CONTENTS
DRAIN AND VENT ISOMETRICS

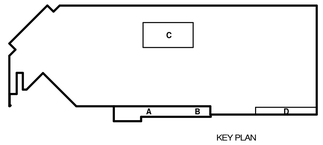
SHEET NO.:
P-901



NEW SERVICE LANE ADDITION
DRAIN AND VENT RISER DIAGRAM
1 NO SCALE

NEW SERVICE LANE ADDITION
DRAIN AND VENT RISER DIAGRAM
3 NO SCALE

HVAC MAINTENANCE ENLARGED SUPPLY PIPING RISER
2 NO SCALE



KEY PLAN

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SHEET CONTENTS
SUPPLY ISOMETRICS

SHEET NO.:
P-931

HVAC SYMBOLS

- AIRFLOW (SUPPLY/OUTSIDE AIR)
- AIRFLOW (RETURN/EXHAUST)
- DOOR GRILLE (DG)
- 3/4" DOOR UNDERCUT (DCO)
- SUPPLY OR OUTDOOR AIR
- RETURN OR TRANSFER
- EXHAUST
- SUPPLY DUCT TURNED AWAY
- SUPPLY DUCT TURNED TOWARD
- RECTANGLE DUCT SIZE (FIRST FIGURE IS SIDE SHOWN) (12x12)
- ROUND DUCT (RIGID) (12ø)
- OVAL DUCT (12/12ø)
- SMOKE DETECTOR (S)
- FLEXIBLE CONNECTION
- DUCT (FLEXIBLE ROUND)
- TURNING VANES
- TRANSITION (SQUARE-TO-ROUND)
- BACKDRAFT DAMPER (BD)
- VOLUME DAMPER
- FIRE DAMPER & ACCESS DOOR (AD, FD)
- SMOKE DAMPER & ACCESS DOOR (AD, SD)
- COMBINATION FIRE/SMOKE DAMPER & ACCESS DOOR (AD, FSD)
- MOTOR OPERATED DAMPER (MOD)
- CEILING MOUNTED ACCESS PANEL (AP)
- AIR OUTLET/INLET TYPE (CFM) (A, 100)

MECHANICAL PIPING

- A — COMPRESSED AIR
- BFW — BOILER FEED WATER
- BSD — BOILER SURFACE BLOW DOWN
- BBD — BOILER BOTTOM BLOW DOWN
- CF — CHEMICAL FEED
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- CWR — CONDENSER WATER RETURN
- CD — CONDENSATE DRAIN
- GWS — GLYCOL WATER SUPPLY
- GWR — GLYCOL WATER RETURN
- HPCR — HIGH PRESSURE CONDENSATE RETURN
- HPS — HIGH PRESSURE STEAM
- HWS — HOT WATER SUPPLY
- HWR — HOT WATER RETURN
- IWS — ICE WATER SUPPLY
- IWR — ICE WATER RETURN
- LP — LIQUID PETROLEUM
- LPS — LOW PRESSURE STEAM
- LPCR — LOW PRESSURE CONDENSATE RETURN
- MPS — MEDIUM PRESSURE STEAM
- MPCR — MEDIUM PRESSURE CONDENSATE RETURN
- G — NATURAL GAS
- PCR — PUMPED CONDENSATE RETURN
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- RHG — REFRIGERANT HOT GAS
- SV — STEAM VENT
- TWS — TOWER WATER SUPPLY
- TWR — TOWER WATER RETURN
- VAC — VACUUM

PIPING SYMBOLS

- PIPE TURNED TOWARD
- PIPE TURNED AWAY
- PIPE TURNED AWAY
- PIPE TURNED TOWARD
- FLEXIBLE CONNECTOR
- UNION
- FLANGES
- REDUCER (CONCENTRIC)
- REDUCER (ECCENTRIC)
- PIPE CAP/CLEAN OUT
- PIPE PLUG
- FLUID FLOW DIRECTION
- PIPE GUIDE (PG)
- PIPE ANCHOR (PA)
- PIPE PITCH DIRECTION (PITCH)
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- WATER HAMMER ARRESTOR
- AIR VENT (AUTO) (AV)
- AIR VENT (MANUAL) (MV)
- AUTOMATIC CONTROL VALVE (2-WAY)
- AUTOMATIC CONTROL VALVE (3-WAY)
- BALL VALVE
- BALANCING VALVE
- BUTTERFLY VALVE
- BACKFLOW PREVENTION VALVE
- CHECK VALVE
- EQUIPMENT DRAIN VALVE
- FILTER
- FLOW MEASUREMENT STATION
- GATE VALVE
- GAUGE CONNECTION
- GLOBE ANGLE VALVE
- GLOBE VALVE
- ISOLATION/SHUT-OFF/MANUAL VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE REGULATING VALVE
- RELIEF VALVE
- SOLENOID VALVE ONE-WAY (ELECTRIC) (S)
- STRAINER
- STRAINER WITH BLOW OFF VALVE AND NIPPLE
- THROTTLING VALVE
- VACUUM BREAKER
- PUMP
- FLOW SENSOR (FS)
- LEVEL SENSOR (LS)
- PRESSURE SENSOR (PS)
- TEMPERATURE SENSOR (TS)
- PRESSURE SENSOR (CT)
- TEMPERATURE SENSOR (AFMS)

GENERAL SYMBOLS

- CARBON MONOXIDE (CO) SENSOR (CO)
- CARBON DIOXIDE (CO2) SENSOR (CO2)
- DIFFERENTIAL PRESSURE SENSOR (DP)
- NITROGEN DIOXIDE (NO2) SENSOR (NO2)
- ROOM SENSOR (RS)
- STATIC PRESSURE SENSOR (SP)
- HUMIDISTAT (H)
- TEMPERATURE SENSOR (TS)
- THERMOSTAT (T)
- INSULATED BASE THERMOSTAT (T)
- SWITCH ($)
- NEW CONNECTION TO EXISTING
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- NEW TO BE INSTALLED

GENERAL NOTES

1. THE MECHANICAL CONTRACTOR SHALL EXAMINE ALL CONTRACT DOCUMENTS AND IS REQUIRED TO DO ALL WORK WHICH IS SHOWN ON THE DRAWINGS, STATED IN THE SPECIFICATIONS, OR REASONABLY IMPLIED AS NECESSARY TO COMPLETE THEIR DIVISION OF WORK FOR THIS PROJECT REGARDLESS OF WHERE IN THE CONTRACT DOCUMENTS THE WORK IS REPRESENTED. MECHANICAL CONTRACTOR TO COORDINATE WORK WITH ALL OTHER TRADES. ALL OTHER TRADE DOCUMENTS ARE TO BE CONSIDERED PART OF THIS CONTRACTORS DOCUMENTS WITH RESPECT TO COORDINATION OF WORK BETWEEN TRADES OF WORK.
2. ABBREVIATIONS AND SYMBOLS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
3. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC, THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENTS, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT, PIPING AND DUCTWORK SYSTEMS IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERENCES. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT, PIPING, AND DUCTWORK FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN EXTRA COST TO CONTRACT.
4. ELEVATION OF PIPING AND DUCTWORK INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.
5. ANY AND ALL INFORMATION SHOWN ON THESE DRAWINGS WITH RESPECT TO EXISTING STRUCTURES, UTILITIES, AND MECHANICAL SYSTEMS, IS AS EXACT AS COULD BE SECURED. THE INFORMATION IS NOT WARRANTED NOR GUARANTEED ACCURATE, FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
6. ACCURATE AND LEGIBLE AS-BUILT DRAWING MARKUPS SHALL BE MAINTAINED AT THE JOB SITE, AND BE SUBMITTED PRIOR TO FINAL PAYMENT FOR THE CREATION OF FINAL RECORD DRAWINGS.
7. ALL NEW AND EXISTING ROOFING SYSTEMS SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.
8. TEMPORARILY PATCH ALL ROOF OPENINGS WATERTIGHT UNTIL FINAL CLOSURE CAN BE MADE.
9. VERIFY ALL EQUIPMENT LOCATIONS AND PIPE AND DUCT ROUTING WITH OWNER PRIOR TO INSTALLATION.
10. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH EXISTING OPERATIONS.
11. MAINTAIN 3'-0" CLEAR HORIZONTALLY IN FRONT OF ALL ELECTRICAL EQUIPMENT.
12. COORDINATE POWER REQUIREMENTS FOR ALL POWER TO MECHANICAL EQUIPMENT INCLUDING CONTROL SYSTEM WITH ELECTRICAL CONTRACTOR AND INSURE ALL COSTS ASSOCIATED WITH SUCH ARE INCLUDED IN THE PROJECT BID COST. PROVIDE ELECTRICAL POWER, TRANFORMERS, RELAYS, ETC. AS NECESSARY TO ALL HVAC AND MECHANICAL CONTROLS.
13. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES ON ALL EQUIPMENT.

ABBREVIATIONS

A	AMPS
ABI	ALTERNATE BID ITEM
AC	DUCTLESS SPLIT SYSTEM
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
ACH	AIR COOLED CHILLER
ACOMP	AIR COMPRESSOR
ACU	AIR CONDITIONING UNIT
ACV	AUTOMATIC CONTROL VALVE
AD	AIR DROP
AF	AIR FILTER OR AIR FOIL
AFC	AFTER COOLER
AFF	ABOVE FINISHED FLOOR
AFMS	AIRFLOW MEASUREMENT STATION
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMD	AIR MIXING DEVICE
ANG	AIR NATIONAL GUARD
APPROX	APPROXIMATELY
AS	AIR SEPARATOR
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AT	AIR TERMINAL
AWC	ABSORPTION CHILLER
BC	BOOSTER COIL
BH	BOOSTER HUMIDIFIER
BHP	BRAKE HORSEPOWER
BHR	CONTINUOUS BLOWDOWN HEAT RECOVERY SYSTEM
BI	BACKWARD INCLINED
BLD	BOILER BLOWDOWN SEPARATOR
BPD	BACKFLOW PREVENTION DEVICE
BRS	BRASS
BRZ	BRONZE
BS	BLACK (MILD) STEEL
BSB	BRANCH SELECTOR BOX
BTU	BUFFER TANK
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BW	BUTTWELD
BZ	BRONZE
C	CONVECTOR
CA	COMBUSTION AIR
CAD	COMPRESSED AIR DRYER
CAF	COMPRESSED AIR FILTER
CC	COOLING COIL OR CONTROLS CONTRACTOR
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
COMP	COMPRESSOR
COND	CONDENSATE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CRP	CONDENSATE RETURN PUMP
CS	CENTRIFUGAL SEPARATOR
CT	COOLING TOWER
CTCLG	CLOSE TO CEILING
CTCLM	CLOSE TO COLUMN
CTW	CLOSE TO WALL
CU	COPPER
CUH	CABINET UNIT HEATER
DAC	DOOR AIR CURTAIN
DBA	DECIBELS, BAND A
DC	DUST COLLECTOR
DCVA	DOUBLE CHECK VALVE ASSEMBLY BPD
DDC	DIRECT DIGITAL CONTROL
DDH	DESICCANT DEHUMIDIFIER
DEMO	DEMOLISH
DF	DESTRATIFICATION FAN
DFD	DIVISION OF FACILITIES DEVELOPMENT
DIA	DIAMETER
DIM	DIMENSION
DISCH	DISCHARGE
DMPR	DAMPER
DN	DOWN
DOD	DEPARTMENT OF DEFENSE
DRC	DRY COOLER
DWG	DRAWING
DX	DIRECT EXPANSION
E	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EBH	ELECTRIC BASEBOARD HEATER
EC	EVAPORATIVE COOLER OR ELECTRICAL CONTRACTOR
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
EFT	ENTERING FLUID TEMPERATURE
EG	EXHAUST GRILLE
EGLY	ETHYLENE GLYCOL
EHC	ELECTRIC HEATING COIL
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
EOM	END OF MAIN
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
ERV	AIR-TO-AIR HEAT EXCHANGER
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EWH	ELECTRIC WALL HEATER
EWT	ENTERING WATER TEMPERATURE
°F	FAHRENHEIT
FAF	FORCED AIR FURNACE
FC	FLUID COOLER
FCU	FAN COIL UNIT
FE	FUME EXTRACTOR
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FLOW METER
FOP	FUEL OIL PUMP
FPM	FEET PER MINUTE
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FLASH TANK OR FEET
FTC	FINNED TUBE CONVECTOR
FTWC	FEET WATER COLUMN PRESSURE
GA	GAUGE
GAL	GALLON
GC	GENERAL CONTRACTOR
GFT	GLYCOL FILL TANK
GPM	GALLONS PER MINUTE
GS	GALVANIZED STEEL
H	HEIGHT
HB	HUMIDIFICATION BOILER
HC	HEATING COIL
HD	HEAD (FT)
HDB	HYDROSTATIC DESIGN BASIS
HP	HEAT PUMP OR HORSEPOWER
HPC	ERV HEAT PUMP COIL
HR	HOSE REEL
HRW	ROTARY AIR-TO-AIR EXCHANGER
HUM	HUMIDIFIER
HWB	HOT WATER BOILER
HX	FLUID HEAT EXCHANGER
HZ	HERTZ
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IH	INTAKE HOOD
IN	INCH
INHG	INCHES MERCURY PRESSURE
INWC	INCHES WATER COLUMN PRESSURE
IR	INFRARED HEATER
KH	KITCHEN HOOD
KW	KILOWATT
L	LOUVER OR LENGTH
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LD	LINEAR DIFFUSER
LFT	LEAVING FLUID TEMPERATURE
LPG	LIQUIFIED PETROLEUM GAS
LS	LEVEL SWITCH
LWT	LEAVING WATER TEMPERATURE
MADP	MAXIMUM ALLOWABLE DIFFERENTIAL PRESSURE
MAU	MAKE-UP AIR UNIT
MAWP	MAXIMUM ALLOWABLE WORKING PRESSURE
MAX	MAXIMUM
MBH	THOUSANDS BTU'S PER HOUR
MC	MECHANICAL CONTRACTOR OR MECHANICAL COUPLING
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MMBH	MILLION BTU PER HOUR
MOCP	MINIMUM OVER CURRENT PROTECTION
MOD	MOTOR OPERATED CONTROL DAMPER
MSS	MANUFACTURERS STANDARDIZATION SOCIETY
MTL	MATERIAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NG	NATURAL GAS
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NH	NO-HUB
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPSH	NET POSITIVE SUCTION HEAD
NPSHA	NPSH AVAILABLE
NPSHR	NPSH REQUIRED
OA	OUTSIDE AIR
OC	ON CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
P	HYDRONIC PUMP OR PRESSURE
PC	PLUMBING CONTRACTOR
PCP	PRESSURE POWERED CONDENSATE PUMP
PD	PRESSURE DROP/DIFFERENTIAL
PG	PROPYLENE GLYCOL
PH	PHASE
PPH	POUND PER HOUR
PROP	PROPELLER
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSID	PSI DIFFERENTIAL
PSIG	PSI GAGE
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PTHP	PACKAGED TERMINAL HEAT PUMP
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RCP	RADIANT CEILING PANEL
RDH	REFRIGERATED DEHUMIDIFIER
RG	RETURN GRILLE
RH	RELIEF HOOD
RPM	REVOLUTIONS PER MINUTE
RTD	RESISTIVE THERMAL DEVICE
RTU	ROOF TOP UNIT
RZ	RADIANT FLOOR HEATING ZONE
SA	SUPPLY AIR
SAD	SOUND ATTENUATING DEVICE
SB	SECURITY BARRIER
SCFM	STANDARD CFM
SCH	SCHEDULE
SD	SLOT DIFFUSER/SOLDER
SF	STEAM FILTER OR SUPPLY FAN
SG	SUPPLY GRILLE
SHT	SHEET
SMLS	SEAMLESS
SMS	SNOW MELTING SYSTEM DISTRIBUTION MANIFOLD
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SQ	SQUARE
SRV	SAFETY RELIEF VALVE
SS	STAINLESS STEEL
ST	STEAM TRAP
STD	STANDARD
STL	STEEL
SV	SOLVENT WELD
SW	SOCKET WELD
T	TEMPERATURE
TA	TRANSFER AIR
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TDH	TOTAL DEVELOPED HEAD
TDS	TOTAL DISSOLVED SOLIDS
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TH	THREADED
TMC	TECHNOLOGY MANAGEMENT CENTER
TMV	THERMOSTATIC MIXING VALVE
TONR	TONS COOLING
TYP	TYPICAL
UC	UNIT COOLER
UFC	UNIFIED FACILITIES CRITERIA
UGD	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UTR	UP THRU ROOF
UV	UNIT VENTILATOR OR ULTRAVIOLET
V	VOLTS
VA	VENT AIR
VER	VEHICLE EXHAUST REEL
VFD	VARIABLE FREQUENCY DRIVE
VI	VIBRATION ISOLATORS
VLV	VALVE
VRF	VARIABLE REFRIGERANT FLOW
W	WATTS OR WIDTH
WC	WATER COLUMN
WCC	WATER COOLED CONDENSER
WCH	WATER COOLED CHILLER
WF	WATER FILTER
WIV	WATER INLET VALVE
WHA	WATER HAMMER ARRESTOR

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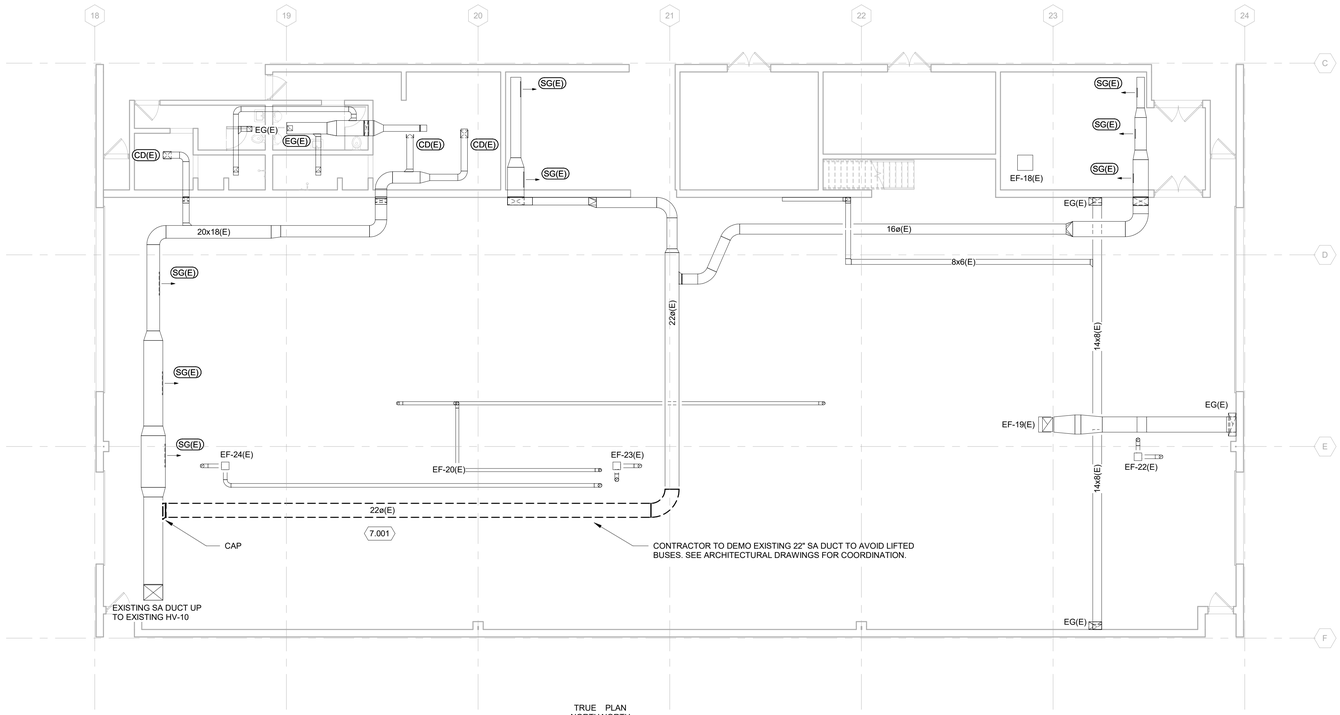
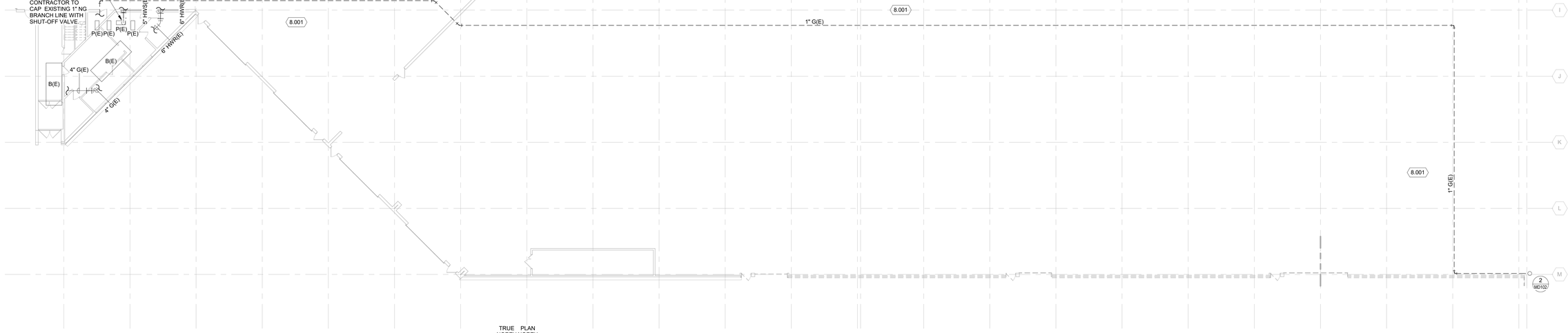


TRUE NORTH PLAN NORTH

1 FIRST FLOOR DEMOLITION PLAN - AREA C

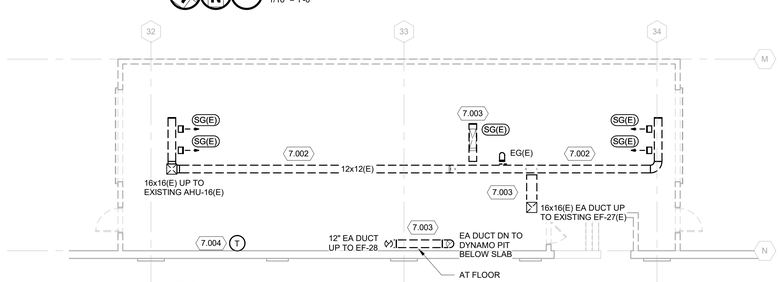
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 FIRST FLOOR DEMOLITION PLAN - NATURAL GAS PIPING

1/16" = 1'-0"



TRUE NORTH PLAN NORTH

3 FIRST FLOOR DEMOLITION PLAN - AREA D

1/8" = 1'-0"

KEYED NOTES

7.001 CONTRACTOR SHALL DEMO EXISTING EXPOSED 22" SUPPLY DUCT. REMOVE ALL ASSOCIATED DUCT HANGER SUPPORTS.

7.002 CONTRACTOR SHALL DEMO EXISTING EXPOSED SUPPLY DUCTWORK, DAMPERS, AND GRILLES. REMOVE ALL ASSOCIATED DUCT HANGER SUPPORTS.

7.003 REMOVE EXISTING EXHAUST DUCTWORK GRILLES AND DAMPERS. REMOVE ALL ASSOCIATED DUCT HANGER SUPPORTS AND ANCHORS.

7.004 REMOVE SPACE THERMOSTATS AND CONTROL WIRING BACK TO UNIT.

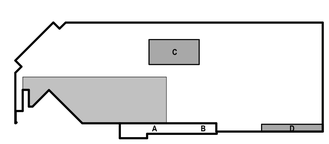
8.001 CONTRACTOR TO DEMO EXISTING NATURAL GAS PIPING FROM AHU-16(E) BACK TO EXISTING BOILER ROOM. CAP NATURAL GAS PIPING. REMOVE ALL ASSOCIATED PIPE HANGERS.

GENERAL HVAC DEMOLITION NOTES:

1. COMPLETELY DEMOLISH ALL EXISTING DUCTWORK AS SHOWN WITH BOLD DASHED LINES, INCLUDING ALL ABANDONED AND UNUSED ACCESSORIES, INSULATION, HANGER SUPPORTS, ETC. FOR REMAINING DUCT SYSTEM. PLUG OR CAP ALL OPENINGS CREATED BY DUCT DEMOLITION. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION.
2. COMPLETELY DEMOLISH ALL EXISTING EQUIPMENT AS SHOWN WITH BOLD DASHED LINES, INCLUDING ALL ABANDONED AND UNUSED ACCESSORIES, INSULATION, HANGERS, SUPPORTS, BASES, CONTROLS, ETC. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION.
3. INSTALL TEMPORARY COVERS OVER EXISTING EXTERIOR ENVELOPE OPENINGS CREATED BY REMOVED EQUIPMENT/DUCT. COVER SHALL BE WATERTIGHT, TO OWNER REQUIREMENTS, COMPLETELY REMOVE TEMPORARY COVER WHEN OPENINGS ARE PATCHED TO FINAL CONDITION. REPAIR ANY DAMAGE TO EXISTING BUILDING COMPONENTS CAUSED BY TEMPORARY COVER.
4. WHERE BRANCH DUCTWORK IS SHOWN TO BE DEMOLISHED BACK TO THE MAIN DUCT AND THE EXISTING MAIN DUCT OPENING IS NOT TO BE RE-USED, CAP AND SEAL THE MAIN DUCT BRANCH OPENING AIRTIGHT.

GENERAL PIPING DEMOLITION NOTES:

1. COMPLETELY DEMOLISH ALL INDICATED EXISTING PIPING SHOWN WITH BOLD DASHED LINES, INCLUDING ALL ABANDONED AND UNUSED PIPING, VALVES, INSULATION, HANGERS, SUPPORTS, ETC. FOR REMAINING PIPING SYSTEMS. PLUG OR CAP ALL OPENINGS CREATED BY PIPING DEMOLITION. TEST PIPING SYSTEMS AS SPECIFIED, AND INSULATE OR PAINT SAME AS NEW WORK. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION.
2. COMPLETELY DEMOLISH ALL EXISTING EQUIPMENT SHOWN WITH BOLD DASHED LINES, INCLUDING ALL ABANDONED AND UNUSED PIPING, VALVES, INSULATION, HANGERS, SUPPORTS, BASES, CONTROLS, ETC. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION.
3. WHERE PIPES ARE REMOVED AND NOT RE-CONNECTED, REMOVE PIPE BACK TO NEXT BRANCH THAT IS TO REMAIN. INSTALL CAPS OR PLUGS ON OPENINGS. PRIME, PAINT, AND INSULATE DISTURBED PIPE SAME AS SPECIFIED FOR NEW WORK.
4. WHERE PIPES OR CONDUITS ARE ROUTED INSIDE CMU WALLS, PIPE MAY BE ABANDONED PIPE IN PLACE. REMOVE PIPE TO 1" INSIDE WALL AT BOT...
5. WHERE PIPES OR CONDUITS PASS THROUGH FLOOR SLABS, SAW-CUT SLAB AND REMOVE CONCRETE TO MINIMUM EXTENT NECESSARY TO GAIN ACCESS BELOW SLAB. REMOVE PIPE DOWN TO HORIZONTAL PIPING BELOW FLOOR. SEAL AND CAP ABANDONED PIPE ENDS.
6. COORDINATE WITH ARCHITURAL AND STRUCTURAL TRADES. PATCH EXISTING ROOFS, WALLS, AND FLOORS DISTURBED BY DEMOLITION. RESTORE TO MATCH CONDITION OF ORIGINAL SURROUNDING SURFACES.



KEY PLAN

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

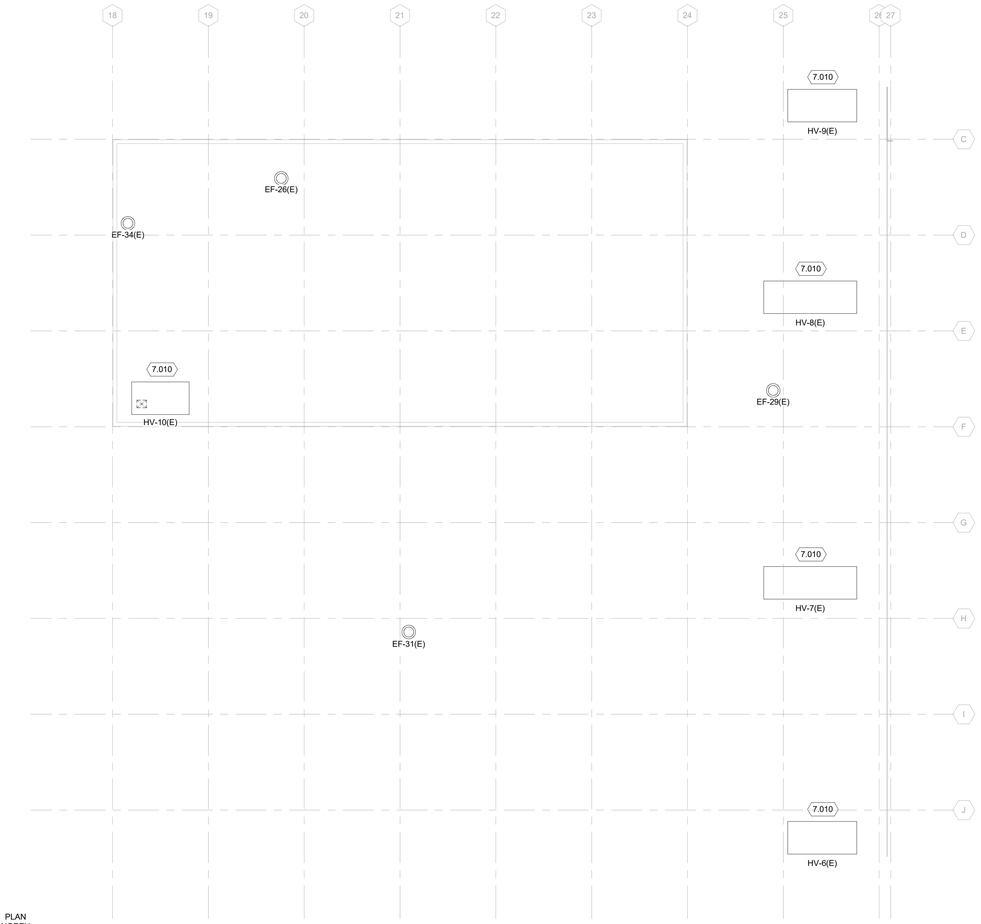
CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DJG
DRAWN BY: AR
CHECKED BY: KML
DO NOT SCALE DRAWINGS

SHEET CONTENTS
FIRST FLOOR MECHANICAL DEMOLITION PLANS

SHEET NO.:

MD101

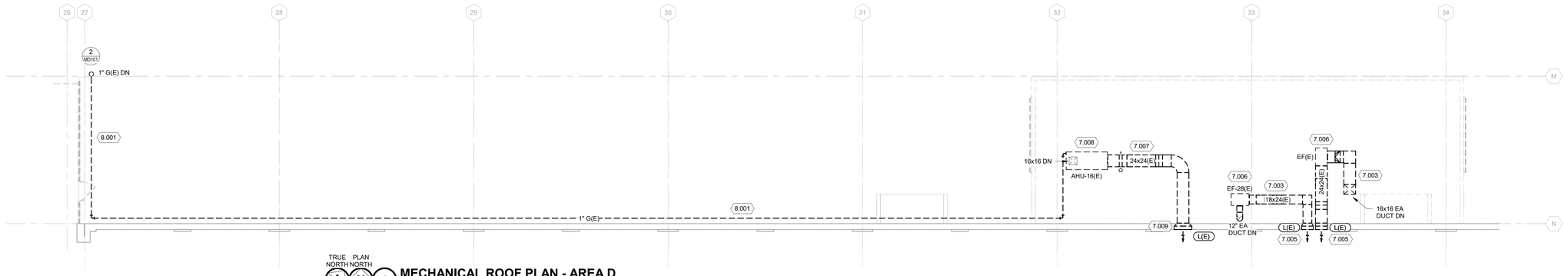
1/11/2019 3:07:36 PM C:\Revit Local\4503500-170148.02-M-Central-2018_1985ar.rvt



TRUE NORTH PLAN NORTH

1 MECHANICAL ROOF PLAN - AREA C

1/16" = 1'-0"



TRUE NORTH PLAN NORTH

2 MECHANICAL ROOF PLAN - AREA D

1/8" = 1'-0"

GENERAL HVAC DEMOLITION NOTES:

1. COMPLETELY DEMOLISH ALL EXISTING DUCTWORK AS SHOWN WITH BOLD DASHED LINES, INCLUDING ALL ABANDONED AND UNUSED ACCESSORIES, INSULATION, HANGER SUPPORTS, ETC. FOR REMAINING DUCT SYSTEM. PLUG OR CAP ALL OPENINGS CREATED BY DUCT DEMOLITION. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION.
2. COMPLETELY DEMOLISH ALL EXISTING EQUIPMENT AS SHOWN WITH BOLD DASHED LINES, INCLUDING ALL ABANDONED AND UNUSED ACCESSORIES, INSULATION, HANGERS, SUPPORTS, BASES, CONTROLS, ETC. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION.
3. INSTALL TEMPORARY COVERS OVER EXISTING EXTERIOR ENVELOPE OPENINGS CREATED BY REMOVED EQUIPMENT/DUCT. COVER SHALL BE WATERTIGHT, TO OWNER REQUIREMENTS. COMPLETELY REMOVE TEMPORARY COVER WHEN OPENINGS ARE PATCHED TO FINAL CONDITION. REPAIR ANY DAMAGE TO EXISTING BUILDING COMPONENTS CAUSED BY TEMPORARY COVER.
4. WHERE BRANCH DUCTWORK IS SHOWN TO BE DEMOLISHED BACK TO THE MAIN DUCT AND THE EXISTING MAIN DUCT OPENING IS NOT TO BE RE-USED, CAP AND SEAL THE MAIN DUCT BRANCH OPENING AIRTIGHT.

GENERAL PIPING DEMOLITION NOTES:

1. COMPLETELY DEMOLISH ALL INDICATED EXISTING PIPING SHOWN WITH BOLD DASHED LINES, INCLUDING ALL ABANDONED AND UNUSED PIPING, VALVES, INSULATION, HANGERS, SUPPORTS, ETC. FOR REMAINING PIPING SYSTEMS. PLUG OR CAP ALL OPENINGS CREATED BY PIPING DEMOLITION. TEST PIPING SYSTEMS AS SPECIFIED, AND INSULATE OR PAINT SAME AS NEW WORK. PATCH EXISTING WALLS, ROOFS, CEILINGS, AND FLOORS DISTURBED BY DEMOLITION TO ORIGINAL CONDITION.
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5. WHERE PIPES OR CONDUITS PASS THROUGH FLOOR SLABS, SAW-CUT SLAB AND REMOVE CONCRETE TO MINIMUM EXTENT NECESSARY TO GAIN ACCESS BELOW SLAB. REMOVE PIPE DOWN TO HORIZONTAL PIPING BELOW FLOOR. SEAL AND CAP ABANDONED PIPE ENDS.
6. COORDINATE WITH ARCHITURAL AND STRUCTURAL TRADES. PATCH EXISTING ROOFS, WALLS, AND FLOORS DISTURBED BY DEMOLITION. RESTORE TO MATCH CONDITION OF ORIGINAL SURROUNDING SURFACES.

KEYED NOTES

7.003 REMOVE EXISTING EXHAUST DUCTWORK GRILLES AND DAMPERS. REMOVE ALL ASSOCIATED DUCT HANGER SUPPORTS AND ANCHORS.

7.005 CONTRACTOR SHALL REMOVE EXISTING LOUVER, PLENUM, AND DAMPER. REMOVE ALL CONTROLS CONDUITS AND WIRING.

7.006 CONTRACTOR SHALL DEMO EXISTING EXHAUST FAN, MOTOR, AND HOUSING.

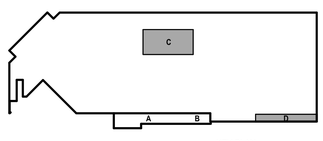
7.007 CONTRACTOR SHALL REMOVE OUTSIDE AIR DUCT, PLENUM, AND DAMPER. REMOVE ALL CONTROLS CONDUIT AND WIRING.

7.008 REMOVE EXISTING GAS-FIRED MAKEUP AIR UNIT, DUCTWORK, CONTROLS, CONDUIT, AND GAS PIPING.

7.009 CONTRACTOR TO BLANK-OFF EXISTING OUTSIDE AIR LOUVER WITH INSULATED METAL PANEL. SEAL ALL JOINTS.

7.010 CONTRACTOR TO REMOVE EXISTING FREEZE-STAT, WIRING, AND CONNECTION TO EXISTING FIRE ALARM SYSTEM. PROVIDE NEW FREEZE-STAT DOWNSTREAM OF EXISTING HOT WATER AND WIRE TO MOTOR STARTER. CONTRACTOR TO WIRE NEW FREEZE-STATS ALARMS TO DDC CONTROLLER IN SERVICE LANE TCP-4 ON SHEET M-101.

8.001 CONTRACTOR TO DEMO EXISTING NATURAL GAS PIPING FROM AHU-16(E) BACK TO EXISTING BOILER ROOM. CAP NATURAL GAS PIPING. REMOVE ALL ASSOCIATED PIPE HANGERS.



KEY PLAN

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

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SHEET CONTENTS
MECHANICAL ROOF DEMOLITION PLANS - AREAS C & D

SHEET NO.:

MD102

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GENERAL PIPING NOTES:

1. PIPING RUNOUTS TO ALL EQUIPMENT TO BE 3/4" UNLESS NOTED...
2. WELD-O-LETS AND THREAD-O-LETS MAY BE USED FOR BRANCH TAKE-OFFS UP TO ONE-HALF THE DIAMETER OF THE MAIN.
3. INSTALL DIELECTRIC FITTINGS WHERE PIPING OF DIFFERENT MATERIALS IS JOINED.
4. INSTALL PIPING FREE OF SAGS AND BENDS.
5. LOCATE ALL VALVES FOR EASY ACCESS. INSTALL VALVES WITH STEM UP OR HORIZONTAL.
6. INSTALL DRAIN VALVES AT ALL LOW POINTS IN PIPING SYSTEM AND ELSEWHERE AS REQUIRED FOR SYSTEM DRAINAGE. INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS IN PIPING, AT HEAT-TRANSFER COILS, AND ELSEWHERE AS REQUIRED FOR SYSTEM AIR VENTING.

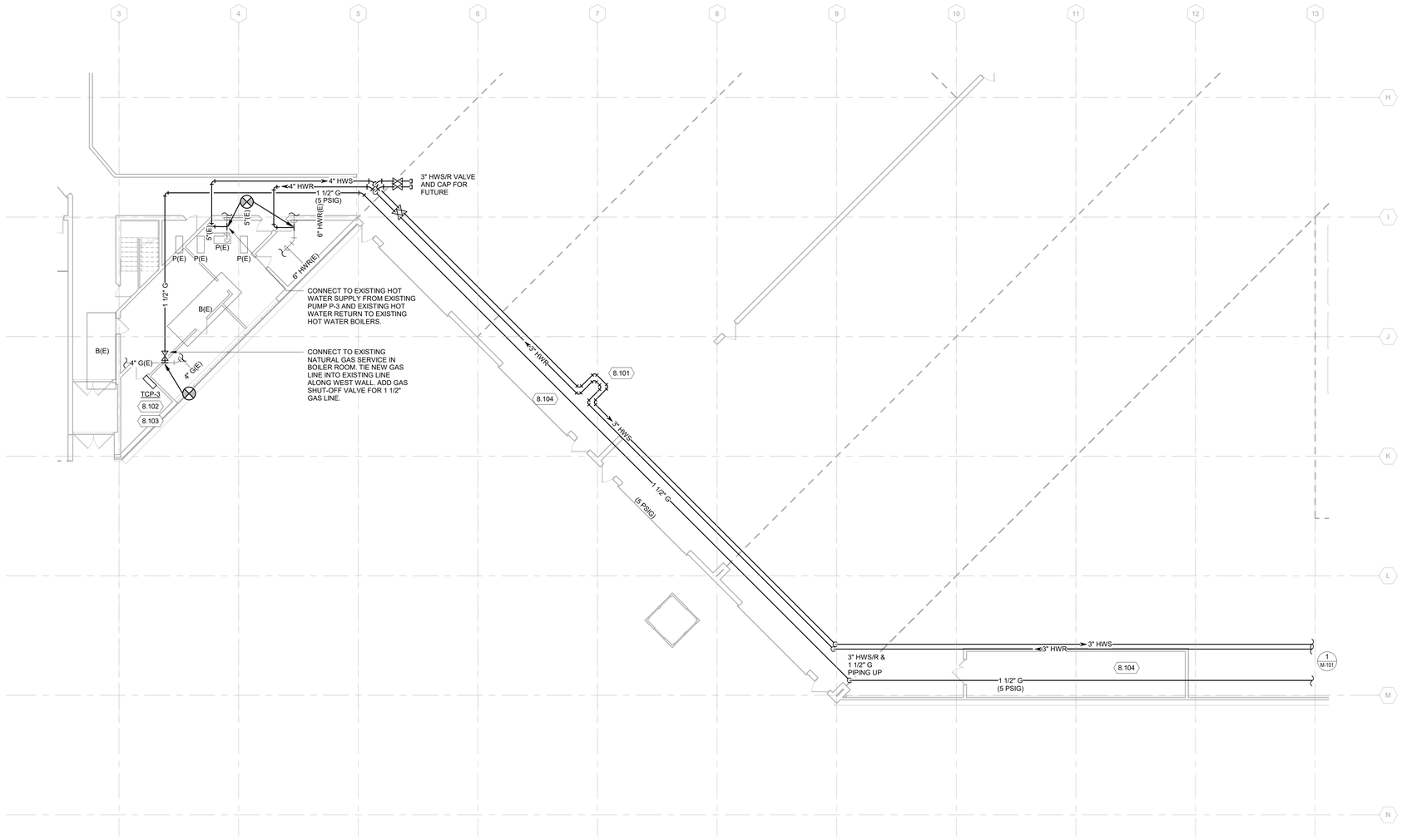
KEYED NOTES

8.101 CONTRACTOR TO PROVIDE FLEXIBLE HOSE EXPANSION LOOP. REFER TO SPECIFICATION 23 05 16. INSTALL PER MANUFACTURER'S GUIDELINES.

8.102 TEMPERATURE CONTROL CONTRACTOR TO PROVIDE DDC PANEL TCP-3 FOR NEW JACE CONTROLLER FOR BUILDING AUTOMATION SYSTEM (BAS). CONTRACTOR TO WIRE COMMUNICATION PROTOCOLS TO TCP-PANELS 1, 2, 4, AND 5 FOR SYSTEM NETWORK. REFER TO SPECIFICATION 23 09 24.

8.103 TEMPERATURE CONTROL CONTRACTOR TO COORDINATE WITH CITY OF MADISON'S TECHNOLOGY GROUP FOR DATA DROP (IP) ADDRESS FOR NETWORK COMMUNICATION. CONTRACTOR TO COORDINATE WITH CITY OF MADISON.

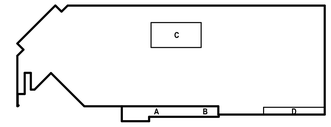
8.104 CONTRACTOR TO INSTALL NEW PIPING AS HIGH AS POSSIBLE TO UNDERSIDE OF STEEL JOIST. REFER TO SPECIFICATION 23 05 29. DO NOT SUPPORT NEW PIPING FROM BOTTOM OF STRUCTURAL JOISTS.



TRUE NORTH PLAN NORTH

1 **PARTIAL FIRST FLOOR HVAC PLAN**

3/32" = 1'-0"



KEY PLAN

Mead & Hunt

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meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

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SHEET CONTENTS:
PARTIAL FIRST FLOOR MECHANICAL PLANS

SHEET NO.:

M-100

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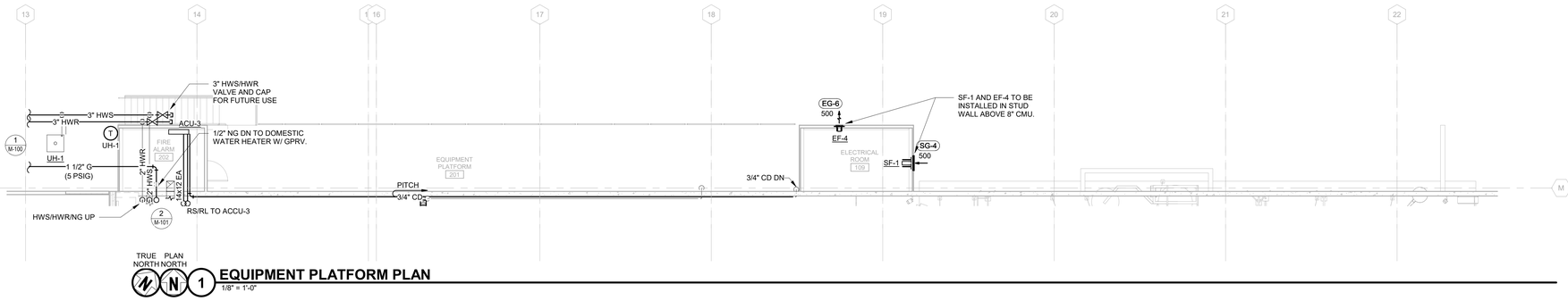
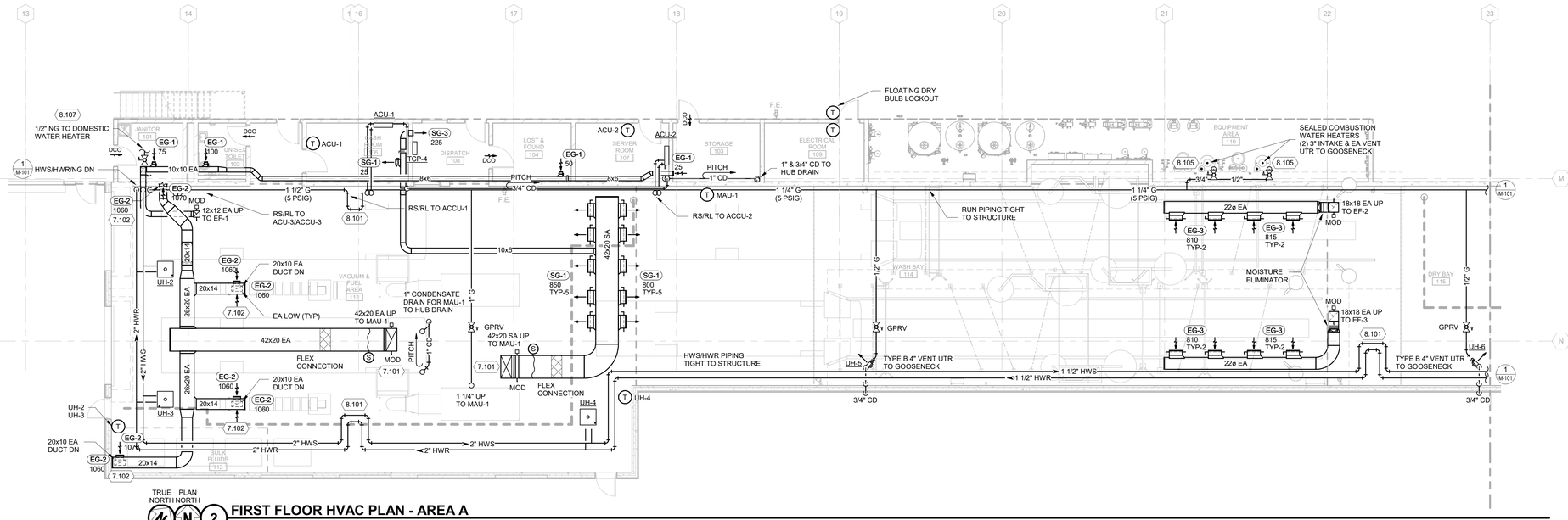


TRUE NORTH PLAN NORTH

EQUIPMENT PLATFORM PLAN

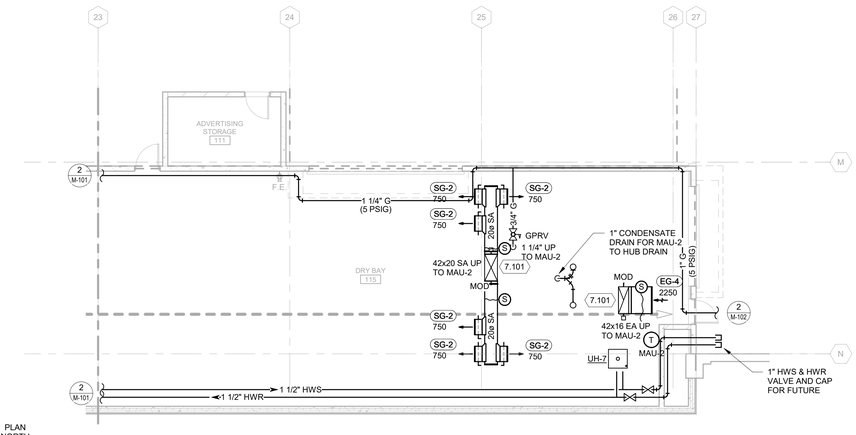
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

FIRST FLOOR HVAC PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

FIRST FLOOR HVAC PLAN - AREA B

1/8" = 1'-0"

GENERAL HVAC NOTES:

1. PROVIDE MANUAL BALANCE DAMPER AT EACH DIFFUSER, GRILLE, AND BRANCH TAKE-OFF IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK EXCEPT KITCHEN GREASE EXHAUST DUCT. LOCATE BALANCE DAMPER AS CLOSE TO BRANCH TAKE-OFF AS POSSIBLE.
2. DUCT SIZE TO DIFFUSERS, REGISTERS, AND GRILLES SHALL BE SAME AS NECK SIZE UNLESS NOTED OR DETAILED OTHERWISE.
3. COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH REFLECTED CEILING PLAN.

GENERAL PIPING NOTES:

1. PIPING RUNOUTS TO ALL EQUIPMENT TO BE 3/4" UNLESS NOTED...
2. WELD-O-LETS AND THREAD-O-LETS MAY BE USED FOR BRANCH TAKE-OFFS UP TO ONE-HALF THE DIAMETER OF THE MAIN.
3. INSTALL DIELECTRIC FITTINGS WHERE PIPING OF DIFFERENT MATERIALS IS JOINED.
4. INSTALL PIPING FREE OF SAGS AND BENDS.
5. LOCATE ALL VALVES FOR EASY ACCESS. INSTALL VALVES WITH STEM UP OR HORIZONTAL.
6. INSTALL DRAIN VALVES AT ALL LOW POINTS IN PIPING SYSTEM AND ELSEWHERE AS REQUIRED FOR SYSTEM DRAINAGE. INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS IN PIPING, AT HEAT-TRANSFER COILS, AND ELSEWHERE AS REQUIRED FOR SYSTEM AIR VENTING.

KEYED NOTES

7.101 CONTRACTOR TO COORDINATE SUPPLY AND EXHAUST DUCTWORK CONNECTIONS TO MAU-1 & MAU-2 WITH STRUCTURAL PRECAST PANEL JOINTS. SEE STRUCTURAL DRAWINGS.

7.102 CONTRACTOR TO PROVIDE HIGH AND LOW EXHAUST DUCT GRILLES PER DETAIL 3, SHEET M-501.

8.101 CONTRACTOR TO PROVIDE FLEXIBLE HOSE EXPANSION LOOP. REFER TO SPECIFICATION 23 05 16. INSTALL PER MANUFACTURER'S GUIDELINES.

8.105 CONTRACTOR TO COORDINATE WITH DIVISION 40 FOR BUS WASH WATER HEATERS. PROVIDE INTAKES AND EXHAUST VENTS FOR WATER HEATERS.

8.107 PROVIDE NATURAL GAS PIPING TO DOMESTIC WATER HEATER. PROVIDE LINE SERVICE GAS REGULATOR. VENTING SHALL BE BY PLUMBING CONTRACTOR.

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metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

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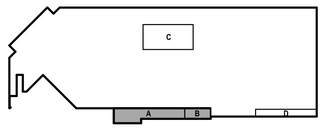
SHEET CONTENTS
FIRST FLOOR MECHANICAL PLANS - AREAS A & B



KEY PLAN

SHEET NO.:

M-101

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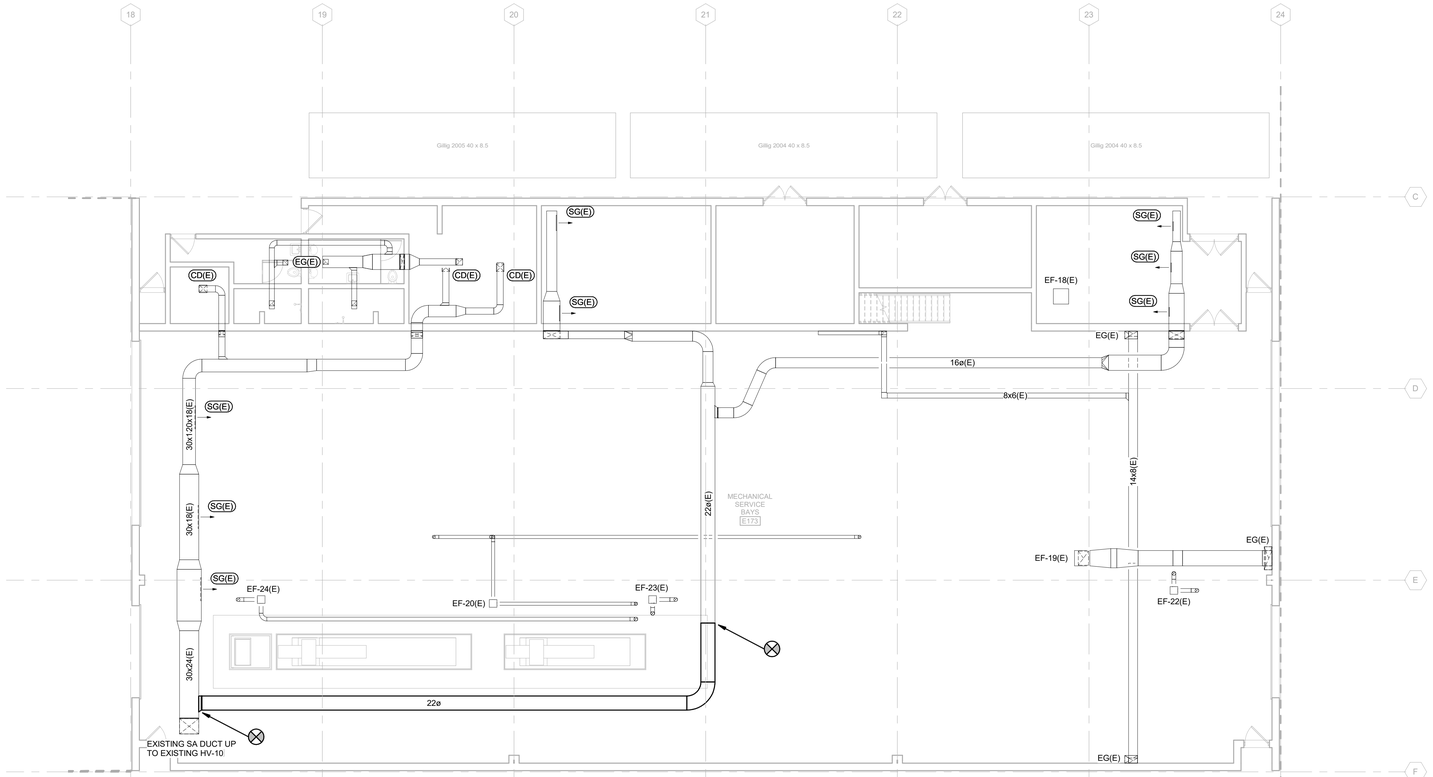
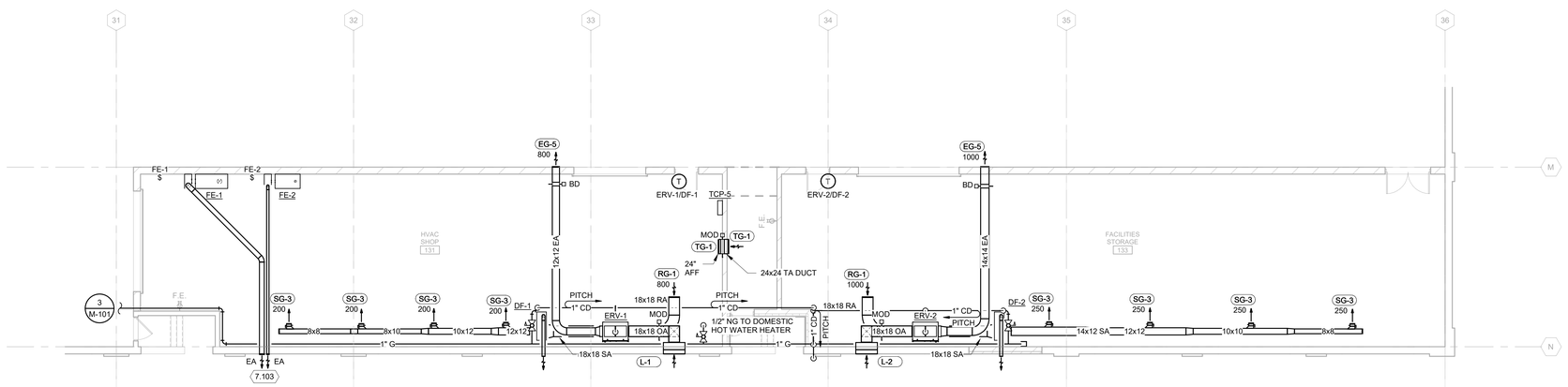


TRUE NORTH PLAN NORTH

FIRST FLOOR PLAN - AREA C

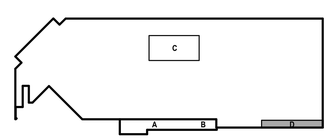
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

FIRST FLOOR PLAN - AREA D

1/8" = 1'-0"



KEY PLAN

GENERAL HVAC NOTES:

1. PROVIDE MANUAL BALANCE DAMPER AT EACH DIFFUSER, GRILLE, AND BRANCH TAKE-OFF IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK EXCEPT KITCHEN GREASE EXHAUST DUCT. LOCATE BALANCE DAMPER AS CLOSE TO BRANCH TAKE-OFF AS POSSIBLE.
2. DUCT SIZE TO DIFFUSERS, REGISTERS, AND GRILLES SHALL BE SAME AS NECK SIZE UNLESS NOTED OR DETAILED OTHERWISE.
3. COORDINATE DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH REFLECTED CEILING PLAN.

GENERAL PIPING NOTES:

1. PIPING RUNOUTS TO ALL EQUIPMENT TO BE 3/4" UNLESS NOTED...
2. WELD-O-LETS AND THREAD-O-LETS MAY BE USED FOR BRANCH TAKE-OFFS UP TO ONE-HALF THE DIAMETER OF THE MAIN.
3. INSTALL DIELECTRIC FITTINGS WHERE PIPING OF DIFFERENT MATERIALS IS JOINED.
4. INSTALL PIPING FREE OF SAGS AND BENDS.
5. LOCATE ALL VALVES FOR EASY ACCESS. INSTALL VALVES WITH STEM UP OR HORIZONTAL.
6. INSTALL DRAIN VALVES AT ALL LOW POINTS IN PIPING SYSTEM AND ELSEWHERE AS REQUIRED FOR SYSTEM DRAINAGE. INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS IN PIPING, AT HEAT-TRANSFER COILS, AND ELSEWHERE AS REQUIRED FOR SYSTEM AIR VENTING.

KEYED NOTES

7.103 CONTRACTOR TO PROVIDE STAINLESS STEEL ROUND EXHAUST GRILLE FOR EXHAUST DUCTS SERVING FE-1 AND FE-2.

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SHEET CONTENTS
FIRST FLOOR MECHANICAL PLANS - AREAS C & D

SHEET NO.:
M-102

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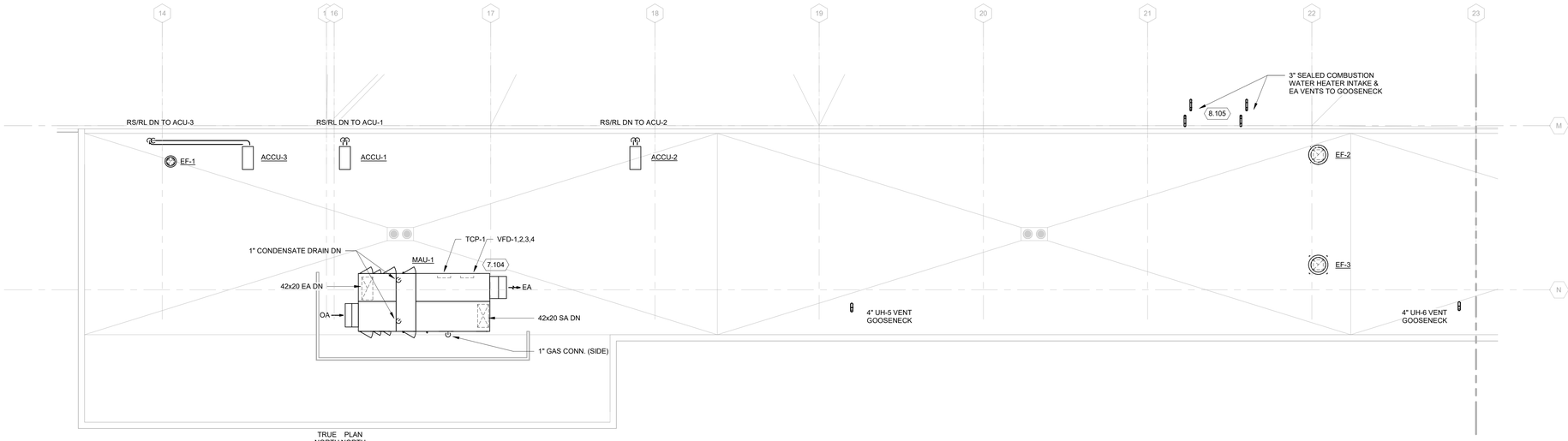
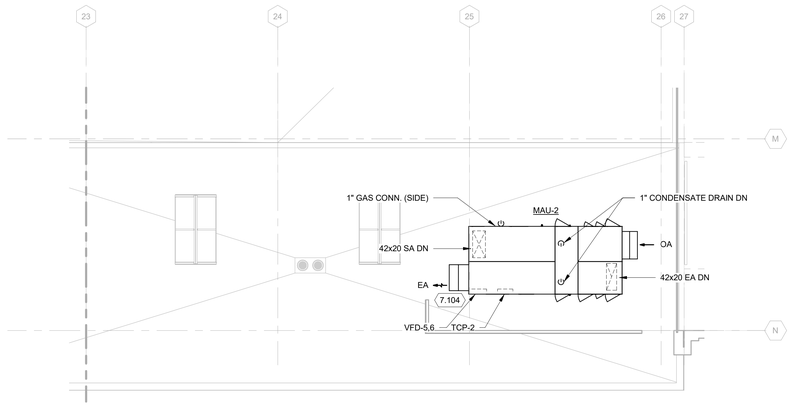


TRUE NORTH PLAN NORTH

MECHANICAL ROOF PLAN - AREA A

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

MECHANICAL ROOF PLAN - AREA B

1/8" = 1'-0"

GENERAL PIPING NOTES:

1. PIPING RUNOUTS TO ALL EQUIPMENT TO BE 3/4" UNLESS NOTED...
2. WELD-O-LETS AND THREAD-O-LETS MAY BE USED FOR BRANCH TAKE-OFFS UP TO ONE-HALF THE DIAMETER OF THE MAIN.
3. INSTALL DIELECTRIC FITTINGS WHERE PIPING OF DIFFERENT MATERIALS IS JOINED.
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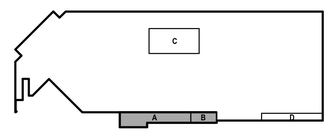
6. INSTALL DRAIN VALVES AT ALL LOW POINTS IN PIPING SYSTEM AND ELSEWHERE AS REQUIRED FOR SYSTEM DRAINAGE. INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS IN PIPING, AT HEAT-TRANSFER COILS, AND ELSEWHERE AS REQUIRED FOR SYSTEM AIR VENTING.

KEYED NOTES

7.104 CONTRACTOR TO INSTALL VARIABLE FREQUENCY DRIVES AND TCP CONTROL PANEL INSIDE OF THE MANUFACTURER'S ELECTRICAL ENCLOSURE PANEL PROVIDED BY MAKE-UP AIR UNITS IN SPECIFICATION 23 74 23.16.

8.105 CONTRACTOR TO COORDINATE WITH DIVISION 40 FOR BUS WASH WATER HEATERS. PROVIDE INTAKES AND EXHAUST VENTS FOR WATER HEATERS.



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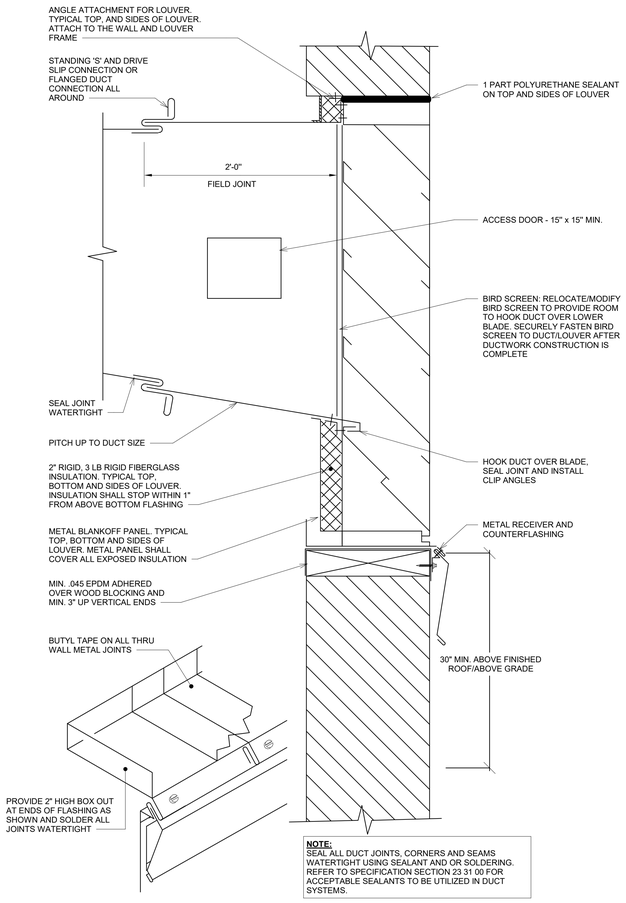
SHEET CONTENTS
MECHANICAL ROOF PLAN - AREAS A & B

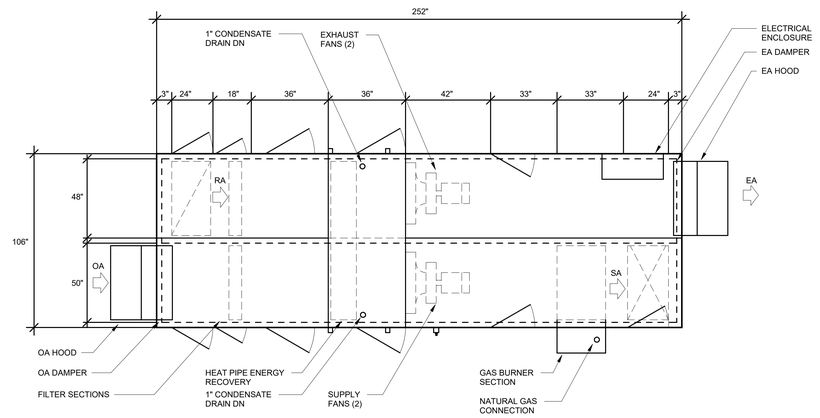
SHEET NO.:

M-103

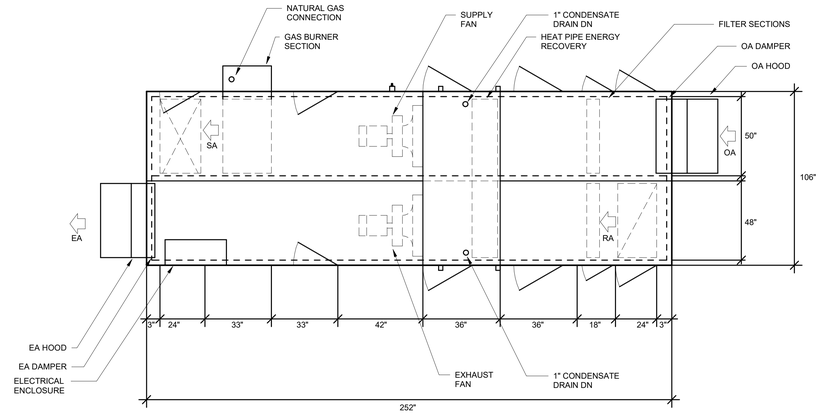


NOTE:
SEAL ALL DUCT JOINTS, CORNERS AND SEAMS WATERTIGHT USING SEALANT AND OR SOLDERING. REFER TO SPECIFICATION SECTION 23 31 00 FOR ACCEPTABLE SEALANTS TO BE UTILIZED IN DUCT SYSTEMS.

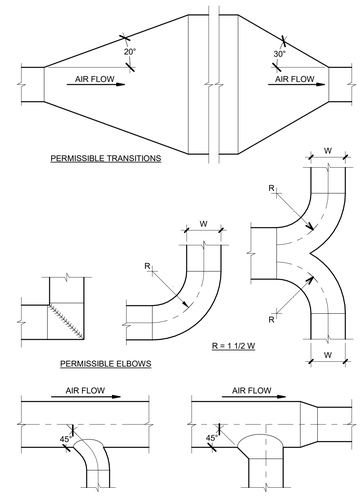
11 LOUVER INSTALLATION DETAIL
NO SCALE



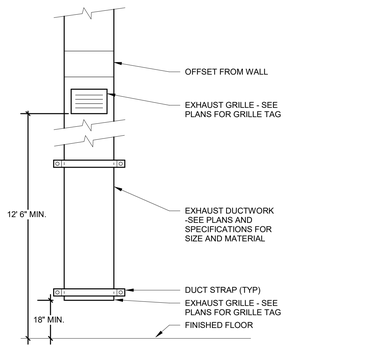
5 MAKE-UP AIR UNIT 1 (MAU-1)
NO SCALE



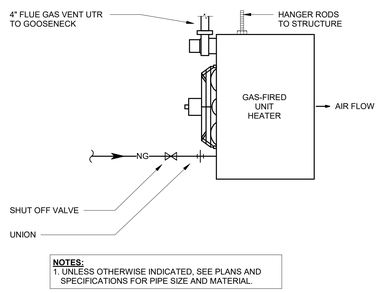
6 MAKE-UP AIR UNIT 2 (MAU-2)
NO SCALE



1 TYPICAL DUCT TRANSITIONS
NO SCALE

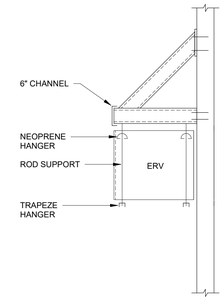


RETURN/EXHAUST GRILLE DUCT CONNECTION AT FLOOR
2
NO SCALE

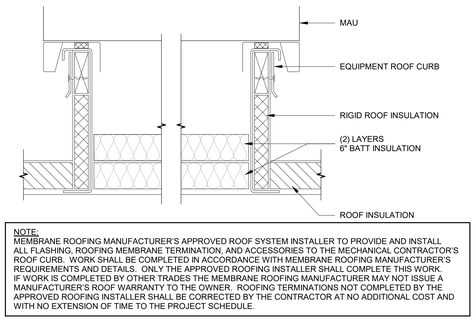


NOTES:
1. UNLESS OTHERWISE INDICATED, SEE PLANS AND SPECIFICATIONS FOR PIPE SIZE AND MATERIAL.

14 GAS-FIRED UNIT HEATER PIPING
NO SCALE

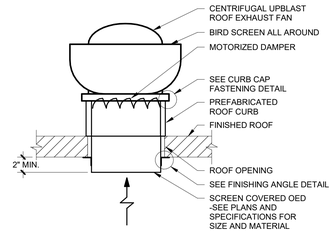


12 ERV SUPPORT DETAIL
NO SCALE

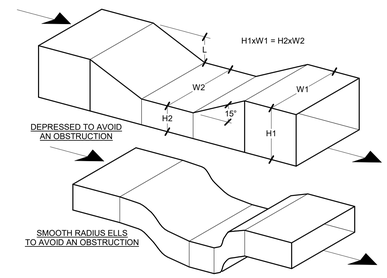


NOTE:
MEMBRANE ROOFING MANUFACTURER'S APPROVED ROOF SYSTEM INSTALLER TO PROVIDE AND INSTALL ALL FLASHING, ROOFING MEMBRANE TERMINATION, AND ACCESSORIES TO THE MECHANICAL CONTRACTOR'S ROOF CURB. WORK SHALL BE COMPLETED IN ACCORDANCE WITH MEMBRANE ROOFING MANUFACTURER'S REQUIREMENTS AND DETAILS. ONLY THE APPROVED ROOFING INSTALLER SHALL COMPLETE THIS WORK. IF WORK IS COMPLETED BY OTHER TRADES THE MEMBRANE ROOFING MANUFACTURER MAY NOT ISSUE A MANUFACTURER'S ROOF WARRANTY TO THE OWNER. ROOFING TERMINATIONS NOT COMPLETED BY THE APPROVED ROOFING INSTALLER SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST AND WITH NO EXTENSION OF TIME TO THE PROJECT SCHEDULE.

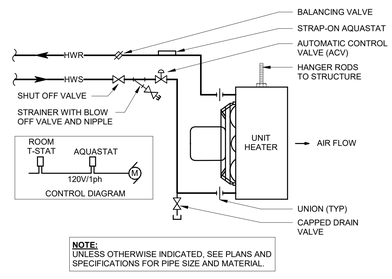
9 MAKE-UP AIR UNIT (MAU) ROOF CURB DETAIL
NO SCALE



7 UPBLAST ROOF EXHAUST FAN
NO SCALE

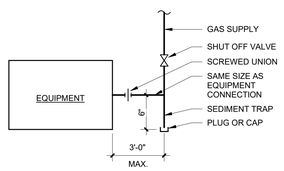


3 TYPICAL DUCT OFFSET
NO SCALE



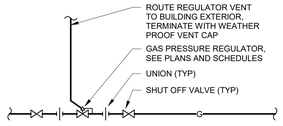
NOTE:
UNLESS OTHERWISE INDICATED, SEE PLANS AND SPECIFICATIONS FOR PIPE SIZE AND MATERIAL.

HOT WATER UNIT HEATER PIPING WITH TEMPERATURE CONTROL AND ACV
13
NO SCALE



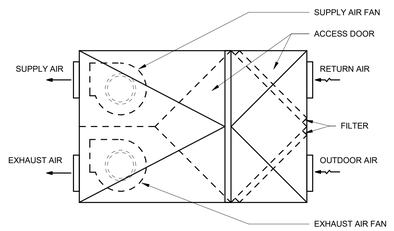
NOTE:
UNLESS OTHERWISE INDICATED, SEE PLANS AND SPECIFICATIONS FOR PIPE SIZE AND MATERIAL.

10 EQUIPMENT GAS CONNECTION (TYP)
NO SCALE



NOTE:
UNLESS OTHERWISE INDICATED, SEE PLANS AND SPECIFICATIONS FOR PIPE SIZE AND MATERIAL.

8 GAS PRESSURE REGULATING VALVE
NO SCALE



4 ENERGY RECOVERY VENTILATORS (ERV)
NO SCALE

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DJG
DRAWN BY: AR
CHECKED BY: KML
DO NOT SCALE DRAWINGS.

SHEET CONTENTS
MECHANICAL DETAILS

SHEET NO.:
M-501

HVAC DUCT INSULATION SCHEDULE

INDOOR OR OUTDOOR	CONCEALED OR EXPOSED	DUCT SHAPE	DUCT SERVICE	INSULATION TYPE	INSULATION THICKNESS (IN)	JACKETING TYPE	REMARKS
INDOOR	CONCEALED	SQUARE	OUTSIDE AIR	D2	3	J1	-
		ROUND	OUTSIDE AIR	D1	3	J1	-
	EXPOSED	SQUARE	OUTSIDE AIR	D2	3	J1	-
		ROUND	OUTSIDE AIR	D1	3	J1	-

INSULATION TYPE		JACKETING TYPE	
D1	MINERAL FIBER BLANKET (ASTM C 553 TYPE II) (ASTM C 1290 TYPE III) AVAIL. MFR'S: CERTAINTEED CORP: DUCT WRAP JOHNS MANVILLE; MICROLITE. KNAUF INSULATION; DUCT WRAP OWENS CORNING; ALL-SERVICE DUCT WRAP	J1	FACTORY APPLIED FSK
D2	MINERAL FIBER BOARD (ASTM C 612 TYPE 1A OR 1B) AVAIL. MFR'S: CERTAINTEED CORP.; COMMERCIAL BOARD. JOHNS MANVILLE; 800 SERIES SPIN-GLAS KNAUF INSULATION; INSULATION BOARD. OWENS CORNING; FIBERGLAS 700 SERIES.		

REMARKS:
(1)

HVAC DUCT SCHEDULE

SYSTEM		DUCT MATERIAL TYPE	DUCT MATERIAL REFERENCE STANDARD	DUCT MATERIAL FINISH	PRESS. CLASS (IN WC)	SEAL CLASS	LEAKAGE CLASS RECT.	LEAKAGE CLASS ROUND	COMMENTS
SUPPLY AIR	DUCT CONNECTED TO CONSTANT VOLUME MAKE-UP AIR UNITS (MAU)	304 SS	18 GAUGE	NO. 4	3	FULLY WELDED SEAMS AND JOINTS			
	DUCT CONNECTED TO OTHER FAN POWERED EQUIPMENT	G90 GALV.	ASTM A 653	MILL PHOSPHATIZED	3	A	12	6	
	DUCT CONNECTED TO CONSTANT VOLUME AIR-TO-AIR RECOVERY UNITS (ERV)	G90 GALV.	ASTM A 653	MILL PHOSPHATIZED	3	A	12	6	
RETURN AIR	DUCT CONNECTED TO CONSTANT VOLUME MAKE-UP AIR UNITS (MAU)	304 SS	18 GAUGE	NO. 4	3	FULLY WELDED SEAMS AND JOINTS			
	DUCT CONNECTED TO CONSTANT VOLUME AIR-TO-AIR RECOVERY UNITS (ERV)	G90 GALV.	ASTM A 653	MILL PHOSPHATIZED	2	A	12	6	
EXHAUST AIR	DUCT CONNECTED TO CONSTANT VOLUME MAKE-UP AIR UNITS (MAU)	304 SS	18 GAUGE	NO. 4	3	FULLY WELDED SEAMS AND JOINTS			
	DUCT CONNECTED TO CONSTANT VOLUME EXHAUST FANS	304 SS	18 GAUGE	NO. 4	3	FULLY WELDED SEAMS AND JOINTS			
	DUCT CONNECTED TO OTHER FAN POWERED EQUIPMENT	G90 GALV.	ASTM A 653	MILL PHOSPHATIZED	3	A	12	6	
	DUCT CONNECTED TO CONSTANT VOLUME AIR-TO-AIR RECOVERY UNITS (ERV)	G90 GALV.	ASTM A 653	MILL PHOSPHATIZED	2	A	12	6	
OUTSIDE AIR	DUCT CONNECTED TO OTHER FAN POWERED EQUIPMENT	G90 GALV.	ASTM A 653	MILL PHOSPHATIZED	3	A	12	6	
	FIRST 3 FEET FROM LOUVER/HOOD FOR AIR-TO-AIR RECOVERY UNITS (ERV)	PVC-COATED GALV.	ASTM A 653	4 MILL PVC	3	A	12	6	SEAL LIQUID-TIGHT. SLOPE TOWARD LOUVER.

FITTINGS

RECTANGULAR DUCT ELBOWS (COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 2-2, "RECTANGULAR ELBOWS.")
RADIUS TYPE RE 1 WITH MINIMUM 1.5 RADIUS-TO-DIAMETER RATIO.
RADIUS TYPE RE 3 WITH MINIMUM 1.0 RADIUS-TO-DIAMETER RATIO AND TWO VANES.
MITERED TYPE RE 2 WITH VANES COMPLYING WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 2-3, "VANES AND VANE RUNNERS," AND FIGURE 2-4, "VANE SUPPORT IN ELBOWS."

ROUND DUCT ELBOWS (COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 3-3, "ROUND DUCT ELBOWS.")
RADIUS TO DIAMETER RATIO: 1.5
ROUND ELBOWS, 12 INCHES AND SMALLER IN DIAMETER: STAMPED OR PLEATED
ROUND ELBOWS, 14 INCHES AND LARGER IN DIAMETER: WELDED

RECTANGULAR BRANCH DUCT CONFIGURATION (COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 2-6, "BRANCH CONNECTIONS.")
RECTANGULAR MAIN TO RECTANGULAR BRANCH: 45° ENTRY
RECTANGULAR MAIN TO ROUND BRANCH: SPIN IN

ROUND BRANCH DUCT CONFIGURATION (COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 3-4, "90 DEGREE TEES AND LATERALS," AND FIGURE 3-5, "CONICAL TEES." SADDLE TAPS ARE PERMITTED IN EXISTING DUCT)
VELOCITY 1500 FT/MIN AND LOWER: CONICAL TAP
VELOCITY GREATER THAN 1500 FT/MIN: 45° LATERAL

REMARKS:
(1) PROVIDE PAINT GRIP TYPE DUCT WHERE DUCT IS EXPOSED AND INDICATED TO BE PAINTED.
(2) INSTALL DUCT ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" UNLESS OTHERWISE INDICATED.
(3) INTERMEDIATE REINFORCEMENT MATERIAL SHALL MATCH DUCT MATERIAL.
(4) SUPPLY AIR DUCTS PASSING THROUGH UNCONDITIONED OR OUTDOOR SPACES SHALL BE SEAL CLASS A.
(5) RETURN AIR DUCTS PASSING THROUGH OUTDOOR SPACES SHALL BE SEAL CLASS A.
(6) SHEET METAL MATERIALS SHALL BE FREE OF PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS, AND OTHER IMPERFECTIONS.

LOUVER (L) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	APPLICATION	LOUVER TYPE	MTG. SYSTEM	MAX. INLET VEL. (FT/MIN.)	CAPACITY AIR FLOW (CFM)	CAPACITY PD (IN WC)	DAMPER TYPE	(3) SIZE (IN) HEIGHT	(3) SIZE (IN) WIDTH	(3) SIZE (IN) DEPTH	FINISH	MATERIAL	ACCESSORIES	(2) MTG. HEIGHT (IN)	LOCATION	REMARKS
L-1	GREENHECK, ESD - 603	INTAKE	3	ERV-1	500	800	0.15	N	36	18	4	S	ALUMINUM	1	120	AREA D	(3), (4), (5)
L-2	GREENHECK, ESD - 603	INTAKE	3	ERV-2	500	900	0.15	N	36	18	4	S	ALUMINUM	1	120	AREA D	(3), (4), (5)

APPLICATION		LOUVER TYPE		MOUNTING SYSTEM		DAMPER TYPE		FINISH		ACCESSORIES	
1	INTAKE	1	BRICK VENT	1	PLASTER/MASONRY WALL	N	NONE	M	MILL	1	BIRD SCREEN
2	EXHAUST	2	THIN LINE EXTRUDED	2	EXPOSED DUCTWORK	BF	BUTTERFLY	W	MANUFACTURER STANDARD WHITE	2	INSECT SCREEN
3	RELIEF	3	DRAINABLE BLADE	3	METAL PANEL WALL	G	GRAVITY	S	MANUFACTURER SPECIAL COLOR	3	FLANGED FRAME
		4	STATIONARY EXTRUDED	4	ROOF	MP	MOTORIZED PNEUM.	O	OTHER (SEE SPECIFICATIONS)	4	SILL EXTENSIONS
		5	ADJUSTABLE EXTRUDED	5	EXTERIOR STUD WALL	ME	MOTORIZED ELECTRIC	AA	ANODIZED ALUMINUM	5	FILTER RACK
		6	WIND-DRIVEN RAIN			OB	OPPOSED BLADE	FP	FACTORY PRIMED FOR FIELD PAINTING		
						PB	PARALLEL BLADE				
						LL	LOW LEAKAGE, INSUL.				

REMARKS:
(1) LOUVERS ARE SCHEDULED FOR REFERENCE ONLY. LOUVERS ARE SPECIFIED AS PART OF DIVISION 08.
(2) APPROXIMATE, SEE ARCHITECTURAL PLANS FOR EXACT MOUNTING HEIGHT AND LOCATION.
(3) LISTED SIZE IS BASED ON 50% FREE AREA. SELECT FINAL LOUVER SIZE BASED ON MANUFACTURER'S DATA FOR VELOCITY AND PRESSURE DROP. COORDINATE FINAL DIMENSIONS WITH GENERAL CONTRACTOR.
(4) PROVIDE BLANK-OFF PANELS FOR UNUSED PORTIONS OF LOUVER, SEE PLANS FOR DUCT CONNECTIONS, INSULATE SAME AS OUTDOOR AIR DUCTWORK.

SUPPLY (SF) AND EXHAUST FAN (EF) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	FAN TYPE	AIR FLOW RATE (CFM)	ESP (IN WC)	MOTOR (HP)	MOTOR TYPE	FAN SPEED (RPM)	DRIVE TYPE	ELECTRICAL (VOLTS / PH)	(2) MTG. HEIGHT (FT)	MAXIMUM SOUND (3) (DB)	MAXIMUM SOUND (4) SONES	MAXIMUM SOUND INSTALL. TYPE	(1) INTERLOCK WITH	OPENING (IN) LENGTH	OPENING (IN) WIDTH	ACCESSORIES	WEIGHT (LB)	LOCATION	REMARKS
EF-1	GREENHECK, CUE-101HP-VG	5	250	0.75	1/4	ECM	1470	DIRECT	120 / 1	ROOF	52.0	6.8	C	-	12	12	2,8,9,20	87	ROOF	
EF-2	GREENHECK, CUE-180-VG	5	3,250	0.50	2	ECM	1090	DIRECT	208 / 1	ROOF	67.0	15.2	C	MAU-1/MAU-2	18	18	2,8,9,20	152	ROOF	
EF-3	GREENHECK, CUE-180-VG	5	3,250	0.50	2	ECM	1063	DIRECT	208 / 1	ROOF	67.0	14.9	C	MAU-1/MAU-2	18	18	2,8,9,20	152	ROOF	
EF-4	GREENHECK, SE1-12-432-VG	9	500	0.25	1/4	ECM	1167	DIRECT	115 / 1	15	49	6	B	SF-1	14	14			ELEC	
SF-1	GREENHECK, AER-S20C-605-VG	9	500	0.25	1/4	ECM	897	DIRECT	115 / 1	15	57	8	B	-	24	24			ELEC	

FAN TYPE			
CENTRIFUGAL		AXIAL	
1	SIDEWALL	8	ROOFTOP DOWNBLAST
2	INLINE	9	SIDEWALL PROPELLER
3	UTILITY	10	TUBE AXIAL
4	CABINET	11	VANE AXIAL
5	ROOFTOP UPBLAST	12	MIXED FLOW
6	ROOFTOP HOODED	13	ROOFTOP FRP UPBLAST
7	ROOFTOP FILTERED SUPPLY		

MOTOR TYPE	
ODP	OPEN DRIP PROOF
TEFC	TOTALLY ENCLOSED FAN COOLED
XPL	EXPLOSION PROOF
INV	INVERTER DUTY
TEAO	TOTALLY ENCLOSED AIR OVER
ECM	ELECTRONICALLY COMMUTATED MOTOR

INSTALLATION TYPE	
A	FREE INLET, FREE OUTLET
B	FREE INLET, DUCTED OUTLET
C	DUCTED INLET, FREE OUTLET
D	DUCTED INLET, DUCTED OUTLET

ACCESSORIES					
1	GRAVITY BACKDRAFT DAMPER	11	OUTLET WIRE GUARD	21	HOODED WALL CAP
2	MOTORIZED BACKDRAFT DAMPER	12	INLET FILTER GUARD	22	HOODED ROOF CAP
3	WEATHERHOOD	13	MOTOR COVER	23	HINGED ROOF CURB
4	WALL COLLAR	14	HOUSING INSULATION	24	INLET GRILLE
5	MOTOR WIRE GUARD	15	BELT (OSHA) WIRE GUARD	25	BASE MOUNTED VIBRATION ISOLATORS
6	MOTOR (OSHA) WIRE GUARD	16	INLET BELL	26	DUCT ADAPTOR
7	SHUTTER GUARD	17	INLET/OUTLET FLANGES	27	HANGING SPRING ISOLATORS
8	FAN SPEED CONTROLLER	18	INLET VANE DAMPER	28	HANGING NEOPRENE ISOLATORS
9	NON-FUSED DISCONNECT SWITCH	19	EXTENDED LUBE LINES	29	FACTORY INSULATED ANGLED FILTER BOX
10	INLET WIRE GUARD	20	MFR. ROOF CURB		

REMARKS:
(1) SEE SPECIFICATION SECTION 230993 - HVAC SEQUENCE OF OPERATION.
(2) MOUNTING HEIGHT IS FROM FINISHED FLOOR LEVEL OF INDICATED ROOM, TO TOP OF FAN OR WALL OPENING.
(3) SOUND POWER LEVEL RATING PER AMCA 301.
(4) LOUDNESS VALUES AT 5 FT IN A HEMISPHERICAL FREE FIELD PER AMCA 301.

AIR FLOW MEASURING STATION (AFMS) SCHEDULE

MARK	MANUFACTURER, MODEL	DIMENSION (IN)	AIRFLOW RANGE (CFM)	VELOCITY RANGE (FPM)	(3) SENSORS (NO)	MAX PRESS. DROP (IN WG)	HONEYCOMB AIR STRAIGHTENER	SENSOR ACCURACY	TEMPERATURE RANGE (°F)	SERVES	REMARKS
AFMS-1	PIEZOMETER	-	0 - 4250	100 - 2000	PER MFGR	0.1	NO	5%	-20 TO 140	MAU-1 SA	(1)(2)(3)
AFMS-2	PIEZOMETER	-	0 - 4250	100 - 2000	PER MFGR	0.1	NO	5%	-20 TO 140	MAU-1 SA	(1)(2)(3)
AFMS-3	PIEZOMETER	-	0 - 4250	100 - 2000	PER MFGR	0.1	NO	5%	-20 TO 140	MAU-1 EA	(1)(2)(3)
AFMS-4	PIEZOMETER	-	0 - 4250	100 - 2000	PER MFGR	0.1	NO	5%	-20 TO 140	MAU-1 EA	(1)(2)(3)
AFMS-5	PIEZOMETER	-	0 - 4500	100 - 2000	PER MFGR	0.1	NO	5%	-20 TO 140	MAU-2 SA	(1)(2)(3)
AFMS-6	PIEZOMETER	-	0 - 4500	100 - 2000	PER MFGR	0.1	NO	5%	-20 TO 140	MAU-2 EA	(1)(2)(3)

REMARKS:
(1) DUCT MOUNTED MULTI-PROBE VELOCITY PRESSURE PITOT AIR FLOW STATION. REFER TO SPECIFICATION SECTION 230900 - 'INSTRUMENTATION AND CONTROL FOR HVAC'.
(2) PROVIDE AN AIR FLOW STATION TO MEASURE THE OUTDOOR AIR CFM FOR EACH AIR HANDLING UNIT.
(3) ALL DUCT AND OUTSIDE AIR OPENING DIMENSIONS TO BE FIELD VERIFIED TO DETERMINE SENSOR LENGTH, SPACING AND TUBE QUANTITIES.

AIR OUTLET AND INLET SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	APPLICATION	(4) MAX AIRFLOW (CFM)	OUTLET / INLET	TYPE	MOUNTING SYSTEM	(5) DAMPER	(3) FACE SIZE (IN)	NECK SIZE (IN)	(2) MAX. NOISE LEVEL (NC)	PATTERN	MAX SP (IN WG)	FINISH	MATERIAL	(1) MOUNTING HEIGHT (IN)	ACCESSORIES	LOCATION	REMARKS
SG-1	NAILOR, 67DV	SUPPLY	850	3	2	4	NONE	24x12	22x10	20	-	0.1	O	SS				(6)
SG-2	NAILOR, 67DV	SUPPLY	750	3	2	4	NONE	24x12	22x10	20	-	0.1	O	SS				(6)
SG-3	NAILOR, 61DV	SUPPLY	250	3	2	4	NONE	12x6	10x4	20	-	0.1	S	ALUMINUM				(6)
SG-4	NAILOR, 61SV	SUPPLY	500	3	3	3	NONE	26x26	24x24	20	-	0.1	S	ALUMINUM				(6)
RG-1	NAILOR, 61DH	RETURN	1,000	3	2	4	NONE	20x20	18x18	35	-	0.1	S	ALUMINUM				(7)
TG-1	NAILOR, 67DH	TRANSFER	1,400	3	2	3	NONE	26x26	24x24	-	-	0.1	S	SS				(7)
EG-1	NAILOR, 61DH	EXHAUST	75	3	2	4	NONE	6x6	4x4	20	-	0.1	S	ALUMINUM				(7)
EG-2	NAILOR, 67DH	EXHAUST	535	3	2	4	OB	18x18	16x16	20	-	0.1	O	SS				(7)
EG-3	NAILOR, 67DH	EXHAUST	815	3	2	4	NONE	24x18	22x16	20	-	0.1	O	SS				(7)
EG-4	NAILOR, 67EC	EXHAUST	2,250	3	8	4	NONE	42x18	40x16	20	-	0.1	O	SS				(7)
EG-5	NAILOR, 51EC	EXHAUST	1,000	3	8	3	NONE	14x14	12x12	20	-	0.1	S	ALUMINUM				
EG-6	NAILOR, 51EC	EXHAUST	500	3	8	3	NONE	16x16	14x14	20	-	0.1	S	ALUMINUM				

OUTLET/INLET		TYPE				MOUNTING SYSTEM		DAMPER		FINISH	
1	DIFFUSER	1	SINGLE DEFLECTION	9	LOUVERED	1	T-BAR CEILING	N	NONE	M	MILL
2	REGISTER	2	DOUBLE DEFLECTION	10	HOODED	2	PLASTER/CONCRETE CEILING	BF	BUTTERFLY	W	MFR. STANDARD WHITE
3	GRILLE	3	FIXED BLADE	11	DOOR TRANSFER	3	PLASTER/MASONRY WALL	G	GRAVITY	S	MFR. SPECIAL COLOR
4	LOUVER	4	PERFORATED	12	BRICK	4	EXPOSED DUCTWORK	MP	MOTORIZED PNEUMATIC	A	ANODIZED ALUMINUM
5	PENTHOUSE	5	LINEAR	13	PUNKAH	5	METAL PANEL WALL	ME	MOTORIZED ELECTRIC	P	PRIME COAT (FINAL COAT BY GC)
6	VENT	6	PLENUM SLOT	14	LAMINAR	6	FLOOR	OB	OPPOSED BLADE	O	OTHER (SEE SPECIFICATIONS)
		7	PLAQUE	15	DRUM	7	ROOF	PB	PARALLEL BLADE		
		8	EGGCRATE			8	EXTERIOR STUD WALL	LL	LOW LEAKAGE, INSUL.		

REMARKS:
(1) MOUNTING HEIGHT SHALL BE FROM FINISHED FLOOR TO BOTTOM OF OPENING.
(2) ALL GRILLES AND DIFFUSERS SHALL NOT EXCEED NOISE CRITERIA LISTED (BASED ON 10 DB ROOM ATTENUATION) AND AT THE SCHEDULED MAXIMUM STATIC PRESSURE DROP.
(3) BORDER TYPES SHALL BE COMPATIBLE WITH CEILING OR WALL TYPES WHERE AIR DEVICE IS LOCATED. REFER TO ARCHITECTURAL PLANS AND ALL OTHER TRADES.
(4) SEE PLANS FOR ACTUAL INDIVIDUAL AIR QUANTITIES OF EACH DEVICE.
(5) IF DAMPER IS SCHEDULED 'NONE', EACH SUPPLY, RETURN, AND EXHAUST DEVICE TO HAVE A BALANCE DAMPER IN THE DUCT BRANCH TAKE-OFF UNLESS AN ASSOCIATED VAV BOX SERVES A SINGLE DEVICE.
(6) INDIVIDUALLY ADJUSTABLE AIRFOIL BLADE WITH 3/4" SPACING. FRONT BLADES PARALLEL TO THE SHORT DIMENSION. INITIALLY SET BLADES FOR APPROXIMATELY 30 DEGREE THROW.
(7) AIRFOIL BLADES PARALLEL TO THE LONG DIMENSION WITH FIXED 45 DEGREE DEFLECTION AND 3/4" SPACING.

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CITY OF MADISON WISCONSIN

CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DJG
DRAWN BY: AR
CHECKED BY: KML
DO NOT SCALE DRAWINGS

SHEET CONTENTS
HVAC SCHEDULES

SHEET NO.:
M-601

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MAKE-UP AIR UNIT (MAU) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	FIRE TYPE	AIR FLOW (CFM)		SUPPLY/EXHAUST FAN			MIN. INLET TEMP. (°F)	GAS FIRED HEATER (6)							COOLING COIL TAG	(1) FILTER TYPE	FAN MOTORS		(2) INTERLOCK WITH	(4) ACCESSORIES	(3) MTG. HEIGHT (FT)	WEIGHT (LB)	LOCATION	REMARKS
				HIGH SPEED SUPPLY	LOW SPEED SUPPLY	ESP (IN WC)	MOTOR ENCL. TYPE	MOTOR POWER (HP)		INPUT (MBH)	OUTPUT (MBH)	HX MAT.	STAGES	VOLTS/PH	MCA	VENT TYPE			VOLTS/PH	FLA						
MAU-1	VENMAR, CES - ENERGY PACK	O	IF	8,500	4,250	1.5	TEFC	(4) 3.0	-10	860.0	688.5	SS	MOD	115 / 1	15	FD	NONE	4T	460/3	-	EF-2 / EF-3	1,2,4	-	9,379	ROOF	(5)
MAU-2	VENMAR, CES - ENERGY PACK	O	IF	4,500	1,350	1.5	TEFC	(2) 5	-10	546.8	437.4	SS	MOD	115 / 1	15	FD	NONE	4T	460/3	-	EF-2 / EF-3	1,2,4	-	7,434	ROOF	(5)

TYPE		FIRE TYPE	MOTOR ENCLOSURE TYPE		HEAT EXCHANGER MATERIAL		HEATER STAGES		VENT TYPE		FILTER TYPE		ACCESSORIES			
I	INDOOR	DF	ODP	OPEN DRIP PROOF	AS	ALUMINIZED STEEL	1	1-STAGE	G	GRAVITY	1W	1" WASHABLE	1	INTAKE HOOD	8	THERMOSTAT
O	OUTDOOR	IF	TEFC	TOTALLY ENCLOSED, FAN COOLED	SS	STAINLESS STEEL	2	2-STAGE	FD	FORCED DRAFT	2W	2" WASHABLE	2	ROOF CURB	9	UNIT-MOUNTED CONTROL...
V	VERTICAL		XPL	EXPLOSION PROOF			3	3-STAGE	SC	SEALED COMBUSTION	1T	1" THROWAWAY	3	DISCONNECT SWITCH	10	REMOTE CONTROL PANEL
H	HORIZONTAL						4	4-STAGE			2T	2" THROWAWAY	4	INLET DAMPER	11	7-DAY TIME CLOCK
							MOD, 10:1	MODULATING TO XX%			4T	4" THROWAWAY MERV 8	5	FACE AND BYPASS DAMPER	12	24-HOUR TIME CLOCK
													6	FREEZESTAT	13	DDC INTERFACE
													7	CLOGGED FILTER SWITCH	14	DISCHARGE GRILLE

REMARKS:

(1) PROVIDE 4-INCH, MERV 8 FILTERS.
(2) SEQUENCE OF OPERATION WITH BUILDING AUTOMATION CONTROLS.
(3) ROOF MOUNTED EQUIPMENT ON 18 INCH ROOF CURB.
(4) HEAT RECOVERY DEVICE - HEAT PIPE WITH FACE AND BYPASS DAMPERS.
(5) INVERTED DUTY RATED VFD MOTORS WITH SHAFT GROUNDING RINGS.
(6) PROVIDE INDIRECT GAS FIRED BENT TUBE IN-SHOT STYLE FURNACE.

HEAT-PIPE, AIR-TO-AIR HEAT EXCHANGER (HX) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	SUPPLY AIRSTREAM												MAX AIRFLOW (CFM)	EXHAUST AIRSTREAM											LOCATION	REMARKS
		AIRFLOW (CFM)	EAT DB (°F)	EAT WB (°F)	FH (IN)	FL (IN)	ROWS	LAT DB (°F)	LAT WB (°F)	(2) HEAT (MBH)	DELTA P (IN WC)	DELTA T (°F)	COND. (LB/HR)		(3) AIRFLOW (CFM)	EAT DB (°F)	EAT DB (°F)	FH (IN)	FL (IN)	ROWS	LAT DB (°F)	LAT WB (°F)	(2) HEAT (MBH)	DELTA P (IN WC)	DELTA T (°F)	COND. (LB/HR)		
HX-1	HEAT PIPE, HRM	8,500	-10	-10	71.25	40	2	11.2	7.9	194.9	0.17	21.2	0	8,500	4,250	60	59.8	71.25	40	2	41.7	41.7	194.9	0.13	18.3	103.1	MAU-1	
HX-2	HEAT PIPE, HRM	4,500	-10	-10	40	36	2	11.8	8.4	106.2	0.15	21.8	0	4,500	2,250	60	59.8	40	36	2	41.1	41.1	106.2	0.12	18.9	56	MAU-2	

REMARKS:

(1) PROVIDE INTERNAL DRAIN PANS FOR BOTH AIRSTREAMS. DRAIN CONNECTION SHALL EXTEND THROUGH THE ROOF CURB INTO SPACE BELOW.
(2) OPTIMIZED FOR HEATING SUPPLY AIR.
(3) EXHAUST AIRFLOW BASED ON 50% FOR BUS WASH MODE. NORMAL MODE IS 100% EXHAUST AIRFLOW.

STATIC-PLATE, ENTHALPY AIR-TO-AIR HEAT EXCHANGER (ERV) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	WINTER							SUMMER							FANS (4)				ELECTRICAL			(1) OUTSIDE AIR FILTER	(1) EXHAUST AIR FILTER	WEIGHT (LB)	LOCATION	REMARKS
		SUPPLY AIR			EXHAUST AIR			SENSIBLE HEAT RECOVERY (MBH)	EFF. (%)	SUPPLY AIR			EXHAUST AIR			SENSIBLE HEAT RECOVERY (MBH)	EFF. (%)	SUPPLY		EXHAUST		VOLTS / PH	(MOCP)	(MCA)					
		EAT (°F)	LAT (°F)	AIR FLOW (CFM)	EAT (°F)	LAT (°F)	AIR FLOW (CFM)			EAT (°F)	LAT (°F)	AIR FLOW (CFM)	EAT (°F)	LAT (°F)	AIR FLOW (CFM)			(HP)	(RPM)	(HP)	(RPM)								
ERV-1	GREENHECK ECV-10-VG	-10	43.5	800	68	-	800	46.6	63.1	91	83.5	800	80	-	14.0	67	67	1	1740	1	1740	115 / 1	20	18	2" MERV 8	2" MERV 8	432	RM 131	(1), (2), (3)
ERV-2	GREENHECK ECV-10-VG	-10	43.5	1,000	68	-	1,000	54.8	58	91	83.9	1,000	80	-	19.8	67	67	1	1740	1	1740	115 / 1	20	18	2" MERV 8	2" MERV 8	432	RM 133	(1), (2), (3)

REMARKS:

(1) PROVIDE 2 INCH MERV 8 FILTERS.
(2) PROVIDE ELECTRICALLY COMMUTATED MOTOR (ECM) FOR SUPPLY AND EXHAUST FANS.
(3) PROVIDE A STATIC-PLATE ENTHALPY CORE TECHNOLOGY.

FUME EXTRACTOR (FE) SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER			FAN				EXTRACTOR			TUBING		(1)(5) INTERLOCK	ACCESSORIES	(2) (3) MTG HEIGHT	WEIGHT (LBS)	SERVES	REMARKS
		FAN	EXTRACTOR	HOSE EXT	TYPE	AIRFLOW (CFM)	E.S.P (IN W.C.)	MOTOR (HP)	SPEED (RPM)	ELECTRICAL (VOLTS/PH)	OPERATOR	REEL MOUNTING	DIA. (IN)	LENGTH (FT)	FAN WITH				
FE-1	CAR-MON	DXI-12AO	TSR-P36	HTC	1	1,400	5	3	3450	460/3	MD	STD POWER REEL	8"	25	WALL SWITCH	3,7	16 FT 8 IN	250	VEH EXHAUST	15L DIESEL ENG., (4)
FE-2	CAR-MON	CMW-9	TSR-P24	HTC	1	400	3	0.75	3450	460/3	MD	STD POWER REEL	4"	25	WALL SWITCH	3,7	16 FT 8 IN	250	RADIATOR EX	

TYPE		REEL OPERATOR		DRUM MOUNTING		ACCESSORIES			
1	FLANGE MOUNTED, DIRECT DRIVE	MD	MOTOR DRIVEN (DIRECT DRIVE)	WALL	WALL MOUNTED	1	BOOM POSITIONER	5	WALL MOUNTED REEL DRIVE SWITCH
2	UTILITY SET, BELT DRIVE	MN	MANUAL CABLE WINCH	CLG	CEILING MOUNTED	2	MAGNETIC EXHAUST PIPE GRABBER	6	WIRELESS REEL DRIVE REMOTE
		SL	SPRING LOADED LATCH	BOOM	BOOM MOUNTED	3	STAINLESS CONE W/PIPE CLAMP	7	PENDANT REEL DRIVE
						4	EXHAUST NOZZLE WITH DAMPER	8	STARTER

REMARKS

(1) SEE SEQUENCE OF OPERATION SPECIFICATION SECTION 230993.
(2) APPROX. MOUNTING HEIGHT IS FROM FINISHED FLOOR LEVEL TO BOTTOM OF REEL.
(3) CONTRACTOR SHALL PROVIDE SHOP DRAWING TO ENGINEER SHOWING PROPOSED STRUCTURAL MOUNTING ARRANGEMENT PRIOR TO INSTALLATION.
(4) VEHICLE FUME EXTRACTORS ARE NOT DESIGNED FOR REGENERATION TESTING AND HIGH RPM OVER 60 SECONDS.
(5) REMOTE MOUNTED PUSH BUTTON SWITCH AND CONTROLLED BY AN ADJUSTABLE LIMIT SWITCH AND REVERSING IEC CONTACTOR WITH 115 V POWER.

DUCT FURNACE (DF) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	DUCT SIZE (IN)		AIR FLOW (CFM)		HEATING				VENT (IN)	ELECTRICAL (VOLTS/PH)	CONTROL VOLTS	(1) ACCESSORIES	TYPE OF CONTROL	WEIGHT (LB)	LOCATION	REMARKS
			WIDTH	DEPTH	MINIMUM	DESIGN	FUEL TYPE	INPUT (MBH)	OUTPUT (MBH)	AFUE (%)								
DF-1	MODINE, DFP-075-TM--N23A1	H	24	14	-	800	NG	75	60	80	5	115/1	24 V	8	2-STAGE	127	131	(2),(3)
DF-2	MODINE, DFP-075-TM--N23A1	H	24	14	-	1,000	NG	75	60	80	5	115/1	24 V	8	2-STAGE	127	133	(2),(3)

TYPE		ACCESSORIES							
H	HORIZONTAL	1	FILTER RACK	4	INSULATED CABINET	7	GAS CONVERSION KIT		
V	VERTICAL	2	ELECTRONIC AIR CLEANER	5	NON-PROGRAMMABLE THERMOSTAT	8	COMBUSTION AIR PIPING WITH TERMINATIONS		
		3	MECHANICAL AIR CLEANER	6	PROGRAMMABLE THERMOSTAT	9	VENT AIR PIPING WITH TERMINATIONS		

REMARKS:

(1) SEE SPECIFICATION SECTION 235500 - GAS-FIRED DUCT FURNACES, FOR ADDITIONAL INFORMATION.
(2) 304 STAINLESS STEEL HEAT EXCHANGER, INDIRECT GAS FIRED UNIT, 2-STAGE.
(3) PROVIDE DISCONNECT SWITCH.

VARIABLE FREQUENCY DRIVE (VFD) SCHEDULE

MARK	MODEL, MANUFACTURER NUMBER	SERVES	MOTOR (HP)	VOLTS / PHASE	ENCLOSURE	ACCESSORIES		LOCATION	REMARKS
						INTEGRAL DISCONNECT	MANUAL BYPASS		
VFD-1	DANFOSS, VLT	MAU-1 SA	3	480 / 3	NEMA 1	YES	NONE	ROOF	(1), (2), (3)
VFD-2	DANFOSS, VLT	MAU-1 SA	3	480 / 3	NEMA 1	YES	NONE	ROOF	(1), (2), (3)
VFD-3	DANFOSS, VLT	MAU-1 EA	3	480 / 3	NEMA 1	YES	NONE	ROOF	(1), (2), (3)
VFD-4	DANFOSS, VLT	MAU-1 EA	3	480 / 3	NEMA 1	YES	NONE	ROOF	(1), (2), (3)
VFD-5	DANFOSS, VLT	MAU-2 SA	5	480 / 3	NEMA 1	YES	NONE	ROOF	(1), (2), (3)
VFD-6	DANFOSS, VLT	MAU-2 EA	5	480 / 3	NEMA 1	YES	NONE	ROOF	(1), (2), (3)

REMARKS:

(1) TEMPERATURE CONTROL CONTRACTOR TO FURNISH DANFOSS VFD DRIVES PER 230914.
(2) ELECTRICAL CONTRACTOR TO INSTALL DANFOSS VFD DRIVES INSIDE THE MAKEUP UNIT'S ENCLOSED CABINET. SEE SECTION 237423.16.
(3) PROVIDE BACNET INTERFACE OF VFD DRIVES WITH BUILDING AUTOMATION SYSTEM (BAS).

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CITY OF MADISON WISCONSIN

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METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

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MADISON, WI 53703

ISSUED
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SHEET CONTENTS
HVAC SCHEDULES

SHEET NO.:
M-602

MECHANICAL PIPING & VALVE SCHEDULE

SYSTEM MARK	SERVICE	ROOM TYPE	PIPING SIZE (IN)	PIPING: MATERIAL TYPE	WALL THICKNESS	ASME PIPING: STD	GRADE	TYPE	PRESS. CLASS	FITTING TYPE	ENDS	JOINT TYPE	VALVE: TYPE	CHECK VALVES	PRESS. CLASS	CONNECTION TYPE	BODY MATERIAL	TRIM MATERIAL	VALVE EQUAL TO: [MANUFACTURER, MODEL]	REMARKS
G	NATURAL GAS	OUTDOORS	1/2 TO 2	BS	SCH 40	A 53	B	E or S	150#	MI	PLAIN	TH	2BV	-	125#	THREADED	BRONZE	BRONZE	APOLLO, 77-100	PAINT PIPE
-	- LOW PRESSURE (2 PSIG OR <)	-	2 1/2 OR MORE	BS	SCH 40	A 53	B	E or S	150#	WS	BEVELED	BW, FL	PV	-	125#	FLANGED	IRON	IRON	XOMOX TUFFLINE	PAINT PIPE
-	-	INDOORS	1/2 TO 2	BS	SCH 40	A 53	B	E or S	150#	MI	PLAIN	TH	2BV	-	125#	THREADED	BRONZE	BRONZE	APOLLO, 77-100	PAINT PIPE
-	-	-	2 1/2 OR MORE	BS	SCH 40	A 53	B	E or S	150#	WS	BEVELED	BW, FL	PV	-	125#	FLANGED	IRON	IRON	XOMOX TUFFLINE	PAINT PIPE
-	NATURAL GAS	OUTDOORS	1/2 TO 2	BS	SCH 40	A 53	B	E or S	150#	WS	PLAIN	SW	2BV	-	125#	THREADED	BRONZE	BRONZE	APOLLO, 77-100	PAINT PIPE
-	- HIGH PRESSURE (> 2 PSIG)	-	2 1/2 OR MORE	BS	SCH 40	A 53	B	E or S	150#	WS	BEVELED	BW, FL	PV	-	125#	FLANGED	IRON	IRON	XOMOX TUFFLINE	PAINT PIPE
-	-	INDOORS	1/2 TO 2	BS	SCH 40	A 53	B	E or S	150#	WS	PLAIN	SW	2BV	-	125#	THREADED	BRONZE	BRONZE	APOLLO, 77-100	PAINT PIPE
-	-	-	2 1/2 OR MORE	BS	SCH 40	A 53	B	E or S	150#	WS	BEVELED	BW, FL	PV	-	125#	FLANGED	IRON	IRON	XOMOX TUFFLINE	PAINT PIPE
HWS/R	HEATING WATER SUPPLY/RETURN	ALL AREAS	3/4 TO 2	Cu	L	B 88	-	-	-	WCu	PLAIN	SD	2BV	SWING	125#	THREADED	BRONZE	BRONZE	APOLLO, 77-100	-
-	- (HVAC)	-	2 1/2 OR MORE	BS	SCH 40	A 53	A or B	E or S	150#	WS,WC,FS	BEVELED	BW, FL	SBV	SWING	125#	FLANGED	IRON	IRON	AMERICAN 4000	PFA FUSED BALL
CD	HVAC CONDENSATE DRAIN	ALL AREAS	3/4 TO 2	Cu	ACR	B 280	-	-	-	WCu	PLAIN	SD	-	-	-	-	-	-	-	-
RL/RS	REFRIGERANT	ALL AREAS	ALL SIZES	Cu	ACR	B 280	-	-	-	WCu	PLAIN	SD	-	-	-	-	-	-	-	-

MATERIAL TYPE		JOINT TYPE		FITTING TYPE				ASME PIPING TYPE		VALVE TYPE	
BS	BLACK STEEL	BW	BUTT WELD	CI	CAST IRON (THREADED) (ASME B16.4 FOR IRON, ASME A 351 FOR SS) (FLANGED) (ASME B16.1)	WC	WROUGHT CAST (FLANGES, ASME B16.5)	S	SEAMLESS	1BV	ONE PIECE FULL PORT BALL VALVE
SS	STAINLESS STEEL	SW	SOCKET WELD	MI	MALLEABLE IRON (THREADED) (ASME B16.3)	FS	FORGED STEEL (FLANGES, ASME B16.5)	E	ELECTRIC RESISTANCE WELDED	2BV	TWO PIECE FULL PORT BALL VALVE
GS	GALVANIZED STEEL	TH	THREADED	WS	WROUGHT STEEL (ASTM A 234 FOR STEEL, ASTM A 403 FOR SS)	PS	PVC SOCKET	F	FURNACE BUTT WELDED	3BV	THREE PIECE FULL PORT BALL VALVE
PE	POLYETHYLENE	FL	FLANGED	PE	POLYETHYLENE (ASTM D 2683 (SOCKET) OR ASTM D 3261 (BUTT))	WCu	WROUGHT COPPER (ASME B 16.22)			SBV	STEEL BODY BALL VALVE
CU	COPPER	SF	SOCKET FUSION	WW	WELDED WROUGHT STEEL (ASTM A 774 FOR SS)					NGV	NON-RISING STEM GATE VALVE
PVC	PVC	BF	BUTT FUSION							RGV	RISING STEM GATE VALVE
		SD	SOLDERED							OGV	OSY GATE VALVE
		BZ	BRAZED							BFV	BUTTERFLY VALVE
		SV	SOLVENT WELD							PV	PLUG VALVE

PIPING SYSTEM JOINING MATERIALS

1. PIPE-FLANGE GASKET MATERIALS: SUITABLE FOR CHEMICAL AND THERMAL CONDITIONS OF PIPING SYSTEM CONTENTS.
2. PIPE FLANGE GASKETS: ASME B16.21, NONMETALLIC, FLAT, ASBESTOS-FREE, 1/8IN MAXIMUM THICKNESS UNLESS SPECIFIED OTHERWISE.
   A. FULL-FACE TYPE: FOR FLAT-FACE, CLASS 125, CAST-IRON AND CAST-BRONZE FLANGES.
   B. NARROW-FACE TYPE: FOR RAISED-FACE, CLASS 250, CAST-IRON AND STEEL FLANGES.
3. FLANGE BOLTS AND NUTS: ASME B18.2.1, CARBON STEEL, UNLESS OTHERWISE INDICATED.
4. PLASTIC, PIPE-FLANGE GASKET, BOLTS, AND NUTS: TYPE AND MATERIAL RECOMMENDED BY PIPING SYSTEM MANUFACTURER, UNLESS OTHERWISE INDICATED.
5. SOLDER FILLER METALS: ASTM B 32, LEAD-FREE ALLOYS. INCLUDE WATER-FLUSHABLE FLUX ACCORDING TO ASTM B 813.
6. GENERAL DUTY BRAZING FILLER METALS: AWS A5.8, BCUP SERIES, COPPER-PHOSPHORUS ALLOYS UNLESS OTHERWISE INDICATED.
7. REFRIGERANT PIPING BRAZING FILLER METALS: AWS A5.8, BAG1, SILVER ALLOY UNLESS OTHERWISE INDICATED.
8. WELDING FILLER METALS: AWS D10.12 FOR WELDING MATERIALS APPROPRIATE FOR WALL THICKNESS AND CHEMICAL ANALYSIS OF STEEL PIPE.
9. SOLVENT CEMENTS FOR JOINING PLASTIC PIPING: CPVC PIPING: ASTM F 493, PVC PIPING: ASTM D 2564. INCLUDE PRIMER ACCORDING TO ASTM F 656.

REMARKS:

(1) FITTING MATERIAL SHALL MATCH PIPING MATERIAL (EXCEPTION: MI FITTINGS SHALL BE USED FOR BS PIPING WHERE INDICATED).
(2) PRESS. CLASS LISTED IS MIN. REQUIRED. PROVIDE GREATER PRESS. CLASS VALVE AND PIPE SYSTEM IF PRESS. CLASS INDICATED IS NOT AVAILABLE FOR GIVEN VALVE AND PIPE TYPE.
(3) FLANGES SHALL BE RAISED FACE WITH SPOT FACED BOLT HOLES.
(4) AIR VENT, VACUUM BREAKER, AND SAFETY VALVE PIPING SHALL BE THE SAME AS THE CONNECTED SERVICE PIPING.
(5) PROVIDE GEAR OPERATORS FOR VALVES LARGER THAN 6" IN SIZE.

UNIT HEATER (UH) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	TYPE	CAPACITY (MBH)	AIR FLOW (CFM)	AIR FLOW HOR. or VER.	AIR THROW (FT)	MOTOR (HP)	ELECTRICAL (VOLTS/PH)	EAT (°F)	LAT (°F)	WATER: FLOW (GPM)	PD (FT)	EWT (°F)	LWT (°F)	FUEL FIRED: FUEL TYPE	INPUT (MBH)	OUTPUT (MBH)	VENT TYPE	ACCESSORIES	(1) MTG. HEIGHT (FT)	WEIGHT (LB)	LOCATION	REMARKS
UH-1	STERLING, VSB70041	HYD	150	2,400	VER.	-	1 1/2	208 / 3	65	100	7.5	5	140	100	-	-	-	-	1,7	15	155	SEE PLANS	(2)
UH-2	STERLING, VSB70041	HYD	150	2,400	VER.	-	1 1/2	208 / 3	65	100	7.5	5	140	100	-	-	-	-	1,7	15	155	SEE PLANS	(2)
UH-3	STERLING, VSB70041	HYD	150	2,400	VER.	-	1 1/2	208 / 3	65	100	7.5	5	140	100	-	-	-	-	1,7	15	155	SEE PLANS	(2)
UH-4	STERLING, VSB70041	HYD	150	2,400	VER.	-	1 1/2	208 / 3	65	100	7.5	5	140	100	-	-	-	-	1,7	15	155	SEE PLANS	(2)
UH-5	STERLING, SHIELD GF 150	GF/WD	150	2,400	HOR.	-	1/4	115 / 1	65	112	-	-	-	-	NG	150	125	PV	2,3,4,6	15	155	SEE PLANS	(2)
UH-6	STERLING, SHIELD GF 150	GF/WD	150	2,400	HOR.	-	1/4	115 / 1	65	112	-	-	-	-	NG	150	125	PV	2,3,4,6	15	155	SEE PLANS	(2)
UH-7	STERLING, VSB70041	HYD	150	2,400	VER.	-	1 1/2	208 / 3	65	100	7.5	5	140	100	-	-	-	-	1,7	15	155	SEE PLANS	(2)

TYPE				VENT TYPE		ACCESSORIES			
HYD	HYDRONIC	XPL	EXPLOSION PROOF	GV	GRAVITY VENT	1	LOUVER CONE DIFFUSER	5	MANUFACTURER SUPPLIED MOUNTING HARDWARE
STM	STEAM	WD	WASH DOWN	PV	POWER VENT	2	DOWNTURN AIR NOZZLE	6	INTEGRAL THERMOSTAT
GF	GAS-FIRED			SC	SEPARATED COMBUSTION	3	STAINLESS STEEL HEAT EXCHANGER	7	REMOTE THERMOSTAT
EL	ELECTRIC					4	STAINLESS STEEL BURNER	8	DISCONNECT SWITCH

REMARKS:

(1) MOUNTING HEIGHT SHALL BE FROM FINISHED FLOOR TO BOTTOM OF UNIT.
(2) SEE SEQUENCE OF OPERATION SPECIFICATION SECTION 230993.

MECHANICAL PIPE & EQUIPMENT INSULATION SCHEDULE

MARK	SERVICE	PIPE SIZES (IN)	NON-SERVICE LANE AREA: INSULATION TYPE	THICKNESS (IN)	JACKETING TYPE	SERVICE LANE AREA: INSULATION TYPE	THICKNESS (IN)	JACKETING TYPE	OUTDOORS: INSULATION TYPE	THICKNESS (IN)	JACKETING TYPE	PIPE/EQUIP LABEL (Y/N)	HEAT TRACE	REMARKS
HWS/R	HEATING HOT WATER SUPPLY & RETURN (120ºF - 180ºF)	3/4 TO 1 1/4	I2	1 1/2	J2	I2	1 1/2	J2	I2	2	J2	Y	NONE	-
		1 1/2 OR MORE	I2	2	J2	I2	2	J2	I2	3	J2	Y	NONE	-
RS	REFRIGERANT SUCTION	ALL SIZES	I2	1	J2	I2	1	J2	I2	1	J2	N	NONE	-
CD	ERV AND HX CONDENSATE DRAIN	ALL SIZES	I2	1	J2	-	-	-	-	-	-	-	NONE	-

INSULATION TYPE		JACKETING TYPE (FIELD APPLIED)	
I1	RIGID MOLDED HYDROUS CALCIUM SILICATE (ASTM C 533, TYPE I) FABRICATE SHAPES ACCORDING TO ASTM C 450 AND ASTM C 585 AVAIL. MFR'S: JOHNS MANVILLE: THERMO-12 GOLD	J1	PVC, 30 MIL THICK, WHITE, UVC RESISTANT, ASTM D 1784 CLASS 16354-C, AVAIL. MFR'S: JOHNS MANVILLE; ZESTON
I2	MINERAL FIBER, PRE-FORMED PIPE (ASTM C 547, Type I, Grade A) INCLUDING SSL-ASJ WITH PREFORMED FITTING JACKETS AVAIL. MFR'S: JOHNS MANVILLE: MICRO-LOK KNAUF INSULATION: 1000 PIPE INSULATION OWENS CORNING: FIBERGLAS PIPE INSULATION	J2	STAINLESS STEEL, 304, 0.016" THICK, SMOOTH, 2B OR 4 FINISH, ASTM A 167 OR ASTM A 240 FACTORY FABRICATED FITTING COVERS AVAIL. MFR'S: CHILDERS PRODUCTS, DIV OF ITW RPR PRODUCTS, INC.; INSUL-MATE

REMARKS:

(1)

AIR COOLED CONDENSING UNIT (ACCU) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	NOM. CAP. (TON)	MIN. EER	MIN. SEER	REF. TYPE	SST (°F)	HOT GAS BYPASS	NO. OF STAGES	AMB. AIR TEMP. (°F): MINIMUM	MAXIMUM	COMPRESSORS: QTY.	TYPE	ELECTRICAL: VOLTS	PHASE	MCA	MOCP	(2) MAX. SOUND (DB)	MATCHING EQUIPMENT COOLING COIL	WEIGHT (LB)	LOCATION	REMARKS
ACCU-1	LG, LS120HSV5	1	8.5	17.0	R-410A	-	NO	1	66	115	1	RCP	208	1	7.7	15.0	48	ACU-1	57	ROOF	(1)
ACCU-2	LG, LS180HSV5	1 1/2	10.5	17.0	R-410A	-	NO	1	66	112	1	RCP	208	1	13.2	20.0	53	ACU-2	82	ROOF	(1)
ACCU-3	LG, LS120HSV5	1	8.5	17.0	R-410A	-	NO	1	66	115	1	RCP	208	1	7.7	15.0	48	ACU-3	57	ROOF	(1)

COMPRESSOR TYPE	
RCP	RECIPROCATING
SCR	SCROLL
SCW	SCREW

REMARKS:

(1) MANUFACTURER SHALL SIZE REFRIGERANT PIPING, VALVES, AND ACCESSORIES FOR PROPER OPERATION OF SYSTEM.
(2) PER ARI STANDARD 320 "SOUND RATING OF LARGE OUTDOOR REFRIGERATING AND AIR-CONDITIONING EQUIPMENT".

DUCTLESS SPLIT SYSTEM (AC) SCHEDULE

MARK	MANUFACTURER, MODEL NUMBER	UNIT TYPE	AIR FLOW (CFM): SUPPLY	OUTDOOR	AMBIENT TEMP. (°F): MINIMUM	MAXIMUM	COOLING: TYPE	EAT (°F): DB	WB	CAPACITY (MBH): TOTAL	SENS.	HEATING: TYPE	EAT (°F)	CAP. (MBH)	STAGES	ELECTRICAL: VOLTS/PH	MCA	MOCP (A)	HEATER (KW)	UNIT DIMENSIONS (IN): LENGTH	WIDTH	HEIGHT	ACCESSORIES	MTG. HEIGHT (FT)	ASSOCIATED CONDENSING UNIT	WEIGHT (LB)	LOCATION	REMARKS
ACU-1	LG, LS120HSV5	W	320	0	-	95	DX	80	67	11	8.2	-	-	-	-	208/1	10	15	-	35	8	12	2,4,14	7	ACCU-1	20	106	(1)
ACU-2	LG, LS180HSV5	W	450	0	-	95	DX	80	67	18	8.2	-	-	-	-	208/1	13	20	-	35	8	12	2,14	7	ACCU-2	20	107	(1)
ACU-3	LG, LS120HSV5	W	320	0	-	95	DX	80	67	11	8.2	-	-	-	-	208/1	10	15	-	35	8	12	2,14	7	ACCU-3	20	202	(1)

UNIT TYPE		ACCESSORIES															
R	RECESSED	1	POWERED OA VENT & DAMPER	6	WALL SLEEVE	11	LEVELING LEGS	16	FUSE HOLDER								
SR	SEMI-RECESSED	2	REMOTE/WALL THERMOSTAT	7	ARCHITECTURAL OUTDOOR GRILLE	12	ADJOINING ROOM DUCT TRANSITION	17	HYDRONIC HEAT								
W	WALL SURFACE	3	REMOTE TEMPERATURE SENSOR	8	CONDENSER BAFFLES	13	HARD WIRE JUNCTION BOX	18	HYDRONIC CONTROL VALVE								
C	CEILING	4	CONDENSATE REMOVAL PUMP	9	CONDENSATE DRAIN	14	DISCONNECT SWITCH (LOOSE)	19	FILTER								
SU	SUSPENDED	5	SUB-BASE	10	KEY LOCK CONTROL COVER	15	CIRCUIT BREAKER										

REMARKS:

(1) SINGLE POINT ELECTRICAL CONNECTION AT OUTDOOR UNIT.

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DJG
DRAWN BY: AR
CHECKED BY: KML
DO NOT SCALE DRAWINGS

SHEET CONTENTS
PIPING SCHEDULES

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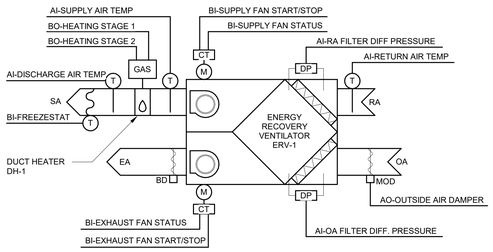
M-611



SEQUENCE OF OPERATION:
FAN CONTROL: START/STOP: THE DDC SYSTEM SHALL START THE SUPPLY AND EXHAUST FANS VIA THEIR RESPECTIVE ECM MOTORS.

VENTILATION AIR CONTROL: ERV IS A 100% OUTSIDE AIR UNIT AND 100% EXHAUST.

FAN CONTROL: START/STOP: THE SUPPLY AND EXHAUST FANS SHALL BE STARTED AND STOPPED VIA HAND-OFF-AUTO SWITCH AND LOCAL SPACE TEMPERATURE SENSOR. PROVIDE DDC START/STOP FOR FAN CONTROL. THE FAN SHALL START ON A CALL FOR HEATING. WHEN SPACE IS SATISFIED FAN SHALL BE OFF. ERV GAS SOLENOID VALVE SHALL BE COMMANDED CLOSED WHEN THE ERV FAN IS OFF.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR SUPPLY AND EXHAUST FAN.

PROVIDE A DDC SPACE TEMPERATURE SENSOR TO STAGE GAS HEATING OF DUCT FURNACE TO MAINTAIN SPACE TEMPERATURE. WHEN THE SPACE TEMPERATURE IS BELOW SETPOINT, THE DDC CONTROLLER SHALL STAGE THE GAS ON TO MAINTAIN SETPOINT. THE REVERSE SHALL OCCUR WHEN SPACE TEMPERATURE IS ABOVE SETPOINT. DUCT FURNACE SHALL OPERATE ACCORDING TO PACKAGED FACTORY GAS CONTROLS AND SEQUENCES.

PROVIDE INDIVIDUAL DISCHARGE TEMPERATURES SENSORS FOR ERV AND DUCT FURNACE FOR MONITORING PURPOSES.

SPACE TEMPERATURE SHALL BE MONITORED THRU DDC SYSTEM WITH LOCAL SPACE TEMPERATURE SENSOR OF 68°F (ADJ.). PROVIDE ALARM THRU DDC SYSTEM IF SPACE TEMPERATURE RISES ABOVE 85°F (ADJ.) OR DROPS BELOW 60°F (ADJ.) FOR 15 CONSECUTIVE MINUTES.

OCCUPIED/UNOCCUPIED SCHEDULE SHALL BE SET AT THE DDC OPERATOR INTERFACE OR MANUAL OVERRIDE BUTTON. WHEN INDEXED TO UNOCCUPIED THE UNIT SHALL SHUTDOWN. PROVIDED INDEX DDC CONTROLLED HEATING AND VENTILATION ASSOCIATED WITH THIS ERV UNIT TO MAINTAIN SETBACK AND SETUP TEMPERATURE SETPOINTS UNLESS OVERRIDDEN BY LOCAL PUSHBUTTON SWITCH. SPACE TEMPERATURE SENSOR SHALL HAVE A MANUAL OVERRIDE BUTTON THAT SHALL INDEX THE SPACE TO THE OCCUPIED MODE FOR A PERIOD OF FOUR HOURS (ADJ.).

UNIT CYCLING TO MAINTAIN SETBACK/SETUP TEMPERATURES: CYCLE THE UNIT ON TO MAINTAIN THE SETBACK AND SETUP TEMPERATURE ZONE SETPOINTS TO MAINTAIN 50 °F AND 85 °F RESPECTIVELY. IN THE HEATING MODE, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL OPEN, AND HEATING DISCHARGE TEMPERATURE CONTROL SHALL FUNCTION AS SPECIFIED. IN THE VENTILATION MODE, THE UNIT SHALL BE ALLOWED TO FUNCTION AS SPECIFIED. MINIMUM ON RUNTIME TIMER SHALL BE SET FOR 15 MINUTES (ADJ.) AND THE OFF TIMER FOR 30 MINUTES (ADJ.).

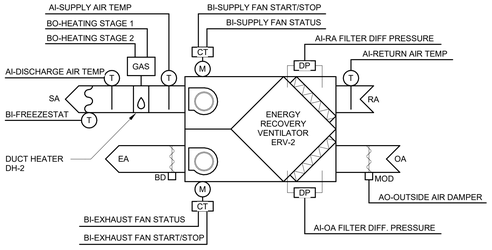
FILTERS: INSTALL A DIFFERENTIAL STATIC PRESSURE SENSOR ACROSS EACH FILTER BANK. ENSURE THAT THE STATIC PROBES DO NOT IMPEDE FILTER REMOVAL.

FOR FILTER BANK, PROVIDE AN ALARM TO THE OPERATOR INTERFACE WHEN THE DIFFERENTIAL STATIC PRESSURE EXCEEDS 0.5" W.C. (ADJ.).

FREEZESTAT: INSTALL AN ELECTRIC FREEZESTAT TO SHUT DOWN THE UNIT (SEE UNIT SHUTDOWN FOR ADDITIONAL INFORMATION) IF THE TEMPERATURE DOWNSTREAM OF THE HEATING SECTION DROPS BELOW 35° F (ADJ.). THE ELECTRIC FREEZESTAT SHALL ACT INDEPENDENTLY OF THE DDC SYSTEM VIA HARDWIRE INTERLOCK AND SHALL OVERRIDE THE DDC SYSTEM CONTROL SIGNAL TO DEENERGIZE THE SUPPLY AND EXHAUST FAN. THE OUTSIDE AIR DAMPER SHALL CLOSE. A FREEZESTAT TRIP SHALL NOTIFY THE DDC SYSTEM THAT SHALL SEND AN ALARM TO THE OPERATOR INTERFACE.

UNIT SHUTDOWN: WHENEVER THE SYSTEM IS INDEXED OFF, THE SUPPLY AND EXHAUST FANS SHALL STOP. ON A FAILURE OF THE SUPPLY AND/OR EXHAUST FAN, AN ALARM SHALL BE SENT THROUGH THE DDC SYSTEM. WHENEVER THE SUPPLY/EXHAUST FAN ARE OFF FOR ANY REASON THE FOLLOWING SHALL OCCUR: THE SUPPLY/EXHAUST FAN SHALL STOP AND THE OUTSIDE AIR DAMPER SHALL CLOSE.

2 ENERGY RECOVERY VENTILATOR / DUCT HEATER - ERV-1 / DH-1
NO SCALE



SEQUENCE OF OPERATION:
FAN CONTROL: START/STOP: THE DDC SYSTEM SHALL START THE SUPPLY AND EXHAUST FANS VIA THEIR RESPECTIVE ECM MOTORS.

VENTILATION AIR CONTROL: ERV IS A 100% OUTSIDE AIR UNIT AND 100% EXHAUST.

FAN CONTROL: START/STOP: THE SUPPLY AND EXHAUST FANS SHALL BE STARTED AND STOPPED VIA HAND-OFF-AUTO SWITCH AND LOCAL SPACE TEMPERATURE SENSOR. PROVIDE DDC START/STOP FOR FAN CONTROL. THE FAN SHALL START ON A CALL FOR HEATING. WHEN SPACE IS SATISFIED FAN SHALL BE OFF. ERV GAS SOLENOID VALVE SHALL BE COMMANDED CLOSED WHEN THE ERV FAN IS OFF.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR SUPPLY AND EXHAUST FAN.

PROVIDE A DDC SPACE TEMPERATURE SENSOR TO STAGE GAS HEATING OF DUCT FURNACE TO MAINTAIN SPACE TEMPERATURE. WHEN THE SPACE TEMPERATURE IS BELOW SETPOINT, THE DDC CONTROLLER SHALL STAGE THE GAS ON TO MAINTAIN SETPOINT. THE REVERSE SHALL OCCUR WHEN SPACE TEMPERATURE IS ABOVE SETPOINT. DUCT FURNACE SHALL OPERATE ACCORDING TO PACKAGED FACTORY GAS CONTROLS AND SEQUENCES.

PROVIDE INDIVIDUAL DISCHARGE TEMPERATURES SENSORS FOR ERV AND DUCT FURNACE FOR MONITORING PURPOSES.

SPACE TEMPERATURE SHALL BE MONITORED THRU DDC SYSTEM WITH LOCAL SPACE TEMPERATURE SENSOR OF 68°F (ADJ.). PROVIDE ALARM THRU DDC SYSTEM IF SPACE TEMPERATURE RISES ABOVE 85°F (ADJ.) OR DROPS BELOW 60°F (ADJ.) FOR 15 CONSECUTIVE MINUTES.

OCCUPIED/UNOCCUPIED SCHEDULE SHALL BE SET AT THE DDC OPERATOR INTERFACE OR MANUAL OVERRIDE BUTTON. WHEN INDEXED TO UNOCCUPIED THE UNIT SHALL SHUTDOWN. PROVIDED INDEX DDC CONTROLLED HEATING AND VENTILATION ASSOCIATED WITH THIS ERV UNIT TO MAINTAIN SETBACK AND SETUP TEMPERATURE SETPOINTS UNLESS OVERRIDDEN BY LOCAL PUSHBUTTON SWITCH. SPACE TEMPERATURE SENSOR SHALL HAVE A MANUAL OVERRIDE BUTTON THAT SHALL INDEX THE SPACE TO THE OCCUPIED MODE FOR A PERIOD OF FOUR HOURS (ADJ.).

UNIT CYCLING TO MAINTAIN SETBACK/SETUP TEMPERATURES: CYCLE THE UNIT ON TO MAINTAIN THE SETBACK AND SETUP TEMPERATURE ZONE SETPOINTS TO MAINTAIN 50 °F AND 85 °F RESPECTIVELY. IN THE HEATING MODE, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL OPEN, AND HEATING DISCHARGE TEMPERATURE CONTROL SHALL FUNCTION AS SPECIFIED. IN THE VENTILATION MODE, THE UNIT SHALL BE ALLOWED TO FUNCTION AS SPECIFIED. MINIMUM ON RUNTIME TIMER SHALL BE SET FOR 15 MINUTES (ADJ.) AND THE OFF TIMER FOR 30 MINUTES (ADJ.).

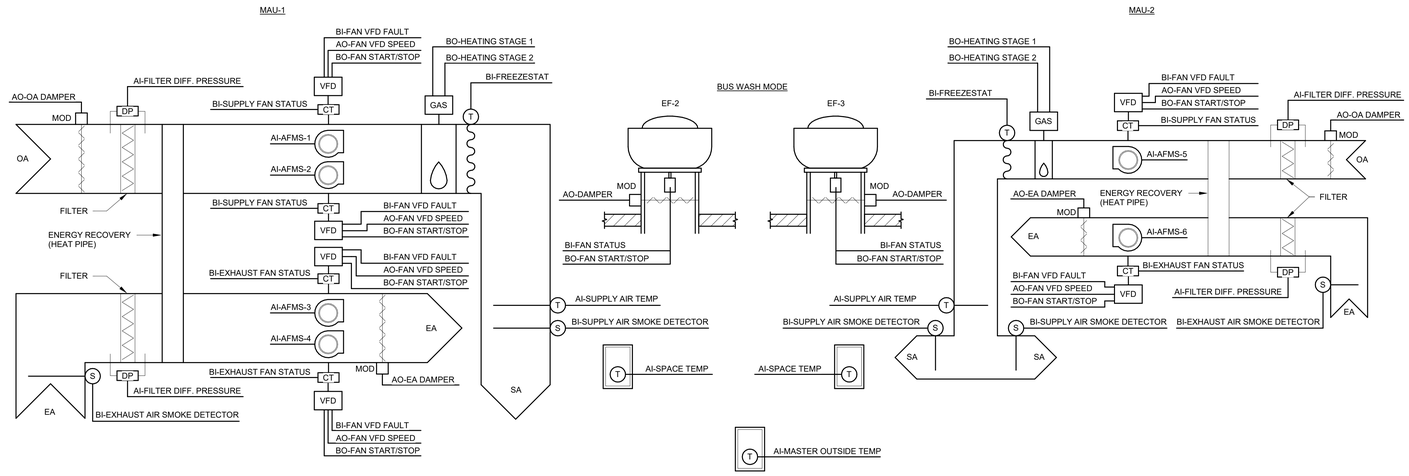
FILTERS: INSTALL A DIFFERENTIAL STATIC PRESSURE SENSOR ACROSS EACH FILTER BANK. ENSURE THAT THE STATIC PROBES DO NOT IMPEDE FILTER REMOVAL.

FOR FILTER BANK, PROVIDE AN ALARM TO THE OPERATOR INTERFACE WHEN THE DIFFERENTIAL STATIC PRESSURE EXCEEDS 0.5" W.C. (ADJ.).

FREEZESTAT: INSTALL AN ELECTRIC FREEZESTAT TO SHUT DOWN THE UNIT (SEE UNIT SHUTDOWN FOR ADDITIONAL INFORMATION) IF THE TEMPERATURE DOWNSTREAM OF THE HEATING SECTION DROPS BELOW 35° F (ADJ.). THE ELECTRIC FREEZESTAT SHALL ACT INDEPENDENTLY OF THE DDC SYSTEM VIA HARDWIRE INTERLOCK AND SHALL OVERRIDE THE DDC SYSTEM CONTROL SIGNAL TO DEENERGIZE THE SUPPLY AND EXHAUST FAN. THE OUTSIDE AIR DAMPER SHALL CLOSE. A FREEZESTAT TRIP SHALL NOTIFY THE DDC SYSTEM THAT SHALL SEND AN ALARM TO THE OPERATOR INTERFACE.

UNIT SHUTDOWN: WHENEVER THE SYSTEM IS INDEXED OFF, THE SUPPLY AND EXHAUST FANS SHALL STOP. ON A FAILURE OF THE SUPPLY AND/OR EXHAUST FAN, AN ALARM SHALL BE SENT THROUGH THE DDC SYSTEM. WHENEVER THE SUPPLY/EXHAUST FAN ARE OFF FOR ANY REASON THE FOLLOWING SHALL OCCUR: THE SUPPLY/EXHAUST FAN SHALL STOP AND THE OUTSIDE AIR DAMPER SHALL CLOSE.

3 ENERGY RECOVERY VENTILATOR / DUCT HEATER - ERV-2 / DH-2
NO SCALE



SEQUENCE OF OPERATIONS:
VARIABLE VOLUME MAKEUP AIR UNIT CONTROL (MAU-1 AND 2):

FAN CONTROL: START/STOP: THE DDC SYSTEM SHALL START THE SUPPLY AND EXHAUST FANS VIA THEIR RESPECTIVE VFDS.

CURRENT STATUS SWITCH: PROVIDE VFD MOTOR RUN STATUS, IN THIS SECTION FOR THE SUPPLY AND EXHAUST FANS.

VENTILATION AIR CONTROL:
MAU-1 IS A 100% OUTSIDE AIR UNIT AND 100% EXHAUST.

NORMAL MODE CONTROL:
THE SUPPLY AND EXHAUST FANS SHALL OPERATE AT A CONSTANT SPEED DURING NORMAL MODE OPERATION.

MAU-1 IS A 100% OUTSIDE AIR UNIT AND 100% EXHAUST.
MAU-2 IS A 100% OUTSIDE AIR UNIT AND 100% EXHAUST.
EF-2 AND EF-3 ARE OFF.

OCCUPIED/UNOCCUPIED SCHEDULE SHALL BE SET AT THE DDC OPERATOR INTERFACE. WHEN INDEXED TO UNOCCUPIED THE UNIT SHALL SHUTDOWN. PROVIDED INDEX DDC CONTROLLED HEATING AND VENTILATION ASSOCIATED WITH THIS MAKE-UP AIR UNIT TO MAINTAIN SETBACK AND SETUP TEMPERATURE SETPOINTS UNLESS OVERRIDDEN BY MANUAL PUSHBUTTON SWITCH AT THE DISPATCH 108 STATION. SPACE TEMPERATURE SENSOR SHALL HAVE A MANUAL OVERRIDE BUTTON THAT SHALL INDEX THE SPACE TO THE OCCUPIED MODE FOR A PERIOD OF FOUR HOURS (ADJ.).

UNIT CYCLING TO MAINTAIN SETBACK/SETUP TEMPERATURES: CYCLE THE MAKE-UP AIR UNIT ON TO MAINTAIN THE SETBACK AND SETUP TEMPERATURE ZONE SETPOINTS TO MAINTAIN 50 °F AND 85 °F RESPECTIVELY. IN THE HEATING MODE, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL OPEN, AND HEATING DISCHARGE TEMPERATURE CONTROL SHALL FUNCTION AS SPECIFIED. MINIMUM ON RUNTIME TIMER SHALL BE SET FOR 15 MINUTES (ADJ.) AND THE OFF TIMER FOR 30 MINUTES (ADJ.).

BUS WASH MODE CONTROL:
BUS WASH MODE SCHEDULE SHALL BE SET AT THE DDC OPERATOR INTERFACE OR THE LIGHTING RELAY CONTROLLER SERVING THE SERVICE LANE.

THE SUPPLY AND EXHAUST FANS SHALL OPERATE AT A CONSTANT SPEED DURING BUS WASH MODE OPERATION.

MAU-1 IS A 100% OUTSIDE AIR UNIT AND 50% EXHAUST.
MAU-2 IS A 100% OUTSIDE AIR UNIT AND 50% EXHAUST.
EF-2 AND EF-3 ARE 100% EXHAUST.

SUPPLY FAN SPEED CONTROL: THE PURPOSE OF THE SUPPLY FAN SPEED CONTROL IS TO MAINTAIN VENTILATION WITHIN THE SPACE IN DIFFERENT OPERATING MODES. THE SUPPLY AND EXHAUST FAN SHALL OPERATE IN (2) MODES: NORMAL MODE AND BUS WASH MODE. THE AIRFLOW MEASURING STATION PROVIDED WITH THE SUPPLY FAN SHALL BE TO DETERMINE THE VFD SPEED SETTINGS THAT CORRESPOND WITH THE CFM FLOWRATES FOR EACH OPERATING MODE AS SCHEDULED ON THE DRAWINGS. REFER TO NORMAL MODE AND BUS WASH MODE CONTROL BELOW.

EXHAUST FAN SPEED CONTROL: THE PURPOSE OF THE EXHAUST FAN SPEED CONTROL IS TO MAINTAIN VENTILATION WITHIN THE SPACE IN DIFFERENT OPERATING MODES. THE EXHAUST FAN SHALL OPERATE IN (2) MODES: NORMAL MODE AND BUS WASH MODE. THE AIRFLOW MEASURING STATION PROVIDED WITH THE EXHAUST FAN SHALL BE USED TO DETERMINE THE VFD SPEED SETTINGS THAT CORRESPOND WITH THE CFM FLOWRATES FOR NORMAL MODE AS SCHEDULED ON THE DRAWINGS. REFER TO NORMAL MODE AND BUS WASH MODE CONTROL BELOW.
FILTERS: INSTALL A DIFFERENTIAL STATIC PRESSURE SENSOR ACROSS EACH FILTER BANK. ENSURE THAT THE STATIC PROBES DO NOT IMPEDE FILTER REMOVAL.

FOR FILTER BANK, PROVIDE AN ALARM TO THE OPERATOR INTERFACE WHEN THE DIFFERENTIAL STATIC PRESSURE EXCEEDS 1.0" W.C. (ADJ.).

DISCHARGE AIR TEMPERATURE CONTROL: DISCHARGE AIR TEMPERATURE SETPOINT (HEATING ONLY UNIT): THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE A FIXED 65º F (ADJ.).

GAS HEATING COIL CONTROL: MODULATE THE GAS HEATING COIL TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT.

ROOM OVERRIDE CONTROL: DISCHARGE AIR TEMPERATURE SETPOINT (HEATING ONLY UNIT): THE SPACE AIR TEMPERATURE SETPOINT SHALL BE A FIXED 60º F (ADJ.).

SAFETIES: GENERAL: ALL SAFETIES SHALL BE HARD WIRED TO THE SUPPLY AND RETURN FAN STARTERS OR VFD SAFETY CIRCUITS. STARTERS SHALL NOT FUNCTION IN THE "HAND" OR "AUTO" AND VFD'S SHALL BE DISABLED IF THEY ARE INDEXED TO THE "AUTO" OR "HAND" POSITION IN EITHER THE VFD.

FREEZESTAT: INSTALL AN ELECTRIC FREEZESTAT TO SHUT DOWN THE UNIT (SEE UNIT SHUTDOWN FOR ADDITIONAL INFORMATION) IF THE TEMPERATURE UPSTREAM OF THE HEATING SECTION DROPS BELOW 35º F (ADJ.). THE ELECTRIC FREEZESTAT SHALL ACT INDEPENDENTLY OF THE DDC SYSTEM VIA HARDWIRE INTERLOCK AND SHALL OVERRIDE THE DDC SYSTEM CONTROL SIGNAL TO DEENERGIZE THE SUPPLY(S) AND EXHAUST FAN(S). THE OUTSIDE AIR DAMPER AND EXHAUST DAMPER SHALL CLOSE.
A FREEZESTAT TRIP SHALL NOTIFY THE DDC SYSTEM THAT SHALL SEND AN ALARM TO THE OPERATOR INTERFACE.

FIRE ALARM SHUTDOWN: UPON A FIRE ALARM SYSTEM ALARM, THE FIRE ALARM CONTROL MODULE PROVIDED BY THE ELECTRICAL CONTRACTOR AT THE TEMPERATURE CONTROL PANEL SHALL CHANGE STATE OF ITS CONTACTS. THIS SHALL CAUSE THE UNIT TO BE SHUT DOWN (SEE UNIT SHUTDOWN FOR ADDITIONAL INFORMATION). AN AUXILIARY CONTACT SHALL BE PROVIDED TO NOTIFY THE DDC SYSTEM OF A FIRE ALARM SHUTDOWN.

UNIT SHUTDOWN: WHENEVER THE MAKEUP AIR UNIT IS INDEXED OFF, THE SUPPLY AND EXHAUST FAN(S) SHALL STOP. ON A FAILURE OF THE SUPPLY OR EXHAUST FAN(S), AN ALARM SHALL BE SENT THROUGH THE DDC SYSTEM. WHENEVER THE SUPPLY FAN(S) IS OFF FOR ANY REASON THE FOLLOWING SHALL OCCUR:

THE OUTSIDE AIR DAMPER AND EXHAUST DAMPER SHALL CLOSE.

THE GAS HEATING SOLENOID VALVE(S) SHALL CLOSE.

UNOCCUPIED CONTROL: GENERAL: OCCUPIED/UNOCCUPIED SCHEDULE SHALL BE SET AT THE DDC OPERATOR INTERFACE. WHEN INDEXED TO UNOCCUPIED THE UNIT SHALL SHUTDOWN.

POWER OUTAGE OPERATION: IN EVENT OF FAILURE OF PRIMARY ELECTRICAL SERVICE, MAKE-UP AIR UNITS AND ASSOCIATED EXHAUST FANS (EF-2/EF-3) SHALL OPERATION VIA. STANDBY POWER FROM THE EXISTING STANDBY GENERATOR. ALL TEMPERATURE CONTROL PANELS AND DDC CONTROLLER TO BE CONNECTED TO STANDBY POWER.

EXHAUST FAN CONTROL (EF-2 AND EF-3):
FAN CONTROL: START/STOP: THE DDC SYSTEM SHALL START THE EXHAUST FANS VIA THEIR ASSOCIATED ECM MOTORS.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCHES FOR EXHAUST FANS.

INTERLOCK: THE EXHAUST FANS SHALL BE INTERLOCKED VIA THE DDC SYSTEM WITH MAU-1 AND MAU-2 AND SHALL RUN WHEN BUS MODE OPERATION.

BUS WASH MODE: INTERLOCK EXHAUST FANS TO OPERATE WHEN ASSOCIATED MAU-1 AND 2 ARE IN THE BUS WASH MODE. EXHAUST FANS EF-2 AND EF-3 REQUIRED MOTORIZED AUTOMATIC DAMPERS. WHEN EXHAUST FANS EF-2 AND 3 ARE ENERGIZED, THE MOTORIZED AUTOMATIC DAMPER ASSOCIATED WITH THE FAN SHALL OPEN AND THE FAN MOTOR SHALL START. WHEN DE-ENERGIZED, THE FAN MOTOR SHALL STOP AND THE MOTORIZED AUTOMATIC DAMPER SHALL CLOSE. THE AUTOMATIC DAMPER SHALL BE HARD WIRE TO THE FAN POWER.

UNIT SHUTDOWN: WHENEVER THE SYSTEM IS INDEXED OFF, THE EXHAUST FANS SHALL STOP. THE ASSOCIATED MAKE-UP AIR HANDLINGS UNITS WILL RETURN EITHER THE NORMAL MODE OR TO NEXT DDC SCHEDULED FOR OCCUPIED/UNOCCUPIED SETTING. ON A FAILURE OF THE EXHAUST FAN, AN ALARM SHALL BE SENT THROUGH THE DDC SYSTEM. WHENEVER THE EXHAUST FAN OR EXHAUST FANS ARE OFF FOR ANY REASON THE FOLLOWING SHALL OCCUR: THE EXHAUST FANS SHALL STOP AND THE EXHAUST AIR DAMPERS SHALL CLOSE.

POWER OUTAGE OPERATION: IN EVENT OF FAILURE OF PRIMARY ELECTRICAL SERVICE, MAKE-UP AIR UNITS AND ASSOCIATED EXHAUST FANS (EF-2/EF-3) SHALL OPERATION VIA. STANDBY POWER FROM THE EXISTING STANDBY GENERATOR.

1 MAKE-UP AIR UNITS / EXHAUST FANS - MAU-1 & MAU-2 / EF-2 & EF-3
NO SCALE

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DJG
DRAWN BY: AR
CHECKED BY: KML
DO NOT SCALE DRAWINGS

SHEET CONTENTS
CONTROL SCHEMATICS

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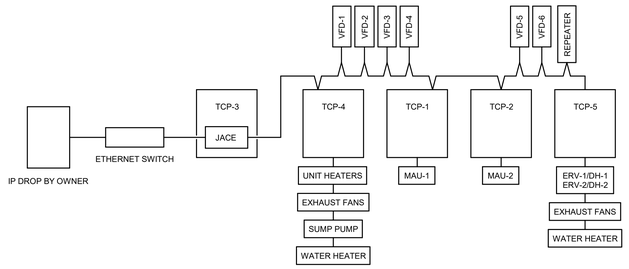
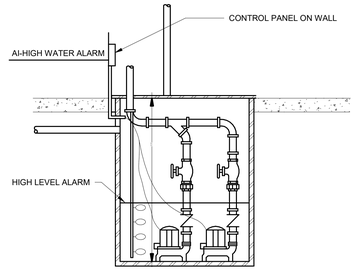
M-801

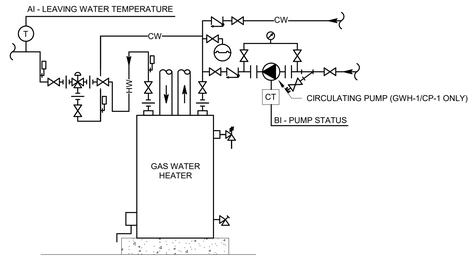


10 BAS-SYSTEM ARCHITECTURE NETWORK
NO SCALE



SEQUENCE OF OPERATION:
SUMP PUMP SHALL HAVE GENERAL ALARMS AND HIGH LEVEL ALARMS MONITORED BY THE DDC SYSTEM. CONTROLS CONTRACTOR SHALL PROVIDE ALL ASSOCIATED WIRING TO DRY CONTACTS (PROVIDED BY PUMP MANUFACTURER) ON PUMP CONTROLS FOR GENERAL ALARM. HIGH LEVEL ALARM INDICATION AND ALL ASSOCIATED WIRING SHALL BE PROVIDED BY CONTROLS CONTRACTOR FOR EACH PUMPING SYSTEM.

11 DUPLEX SUMP PUMP DETAIL
NO SCALE

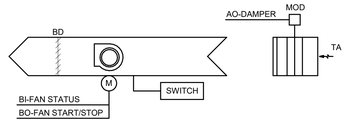


SEQUENCE OF OPERATION:
MONITOR TEMPERATURE OF DOMESTIC HOT WATER SYSTEM(S) AND PROVIDE HIGH/LOW ALARM THE BAS. THERE ARE FOUR WATER HEATERS: (1) WATER HEATERS IN JANITOR 101, (2) WATER HEATERS IN EQUIPMENT 101 AND (1) IN HVAC SHOP 131.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR EACH DOMESTIC CIRCULATION PUMP.

PROVIDE STATUS INDICATION THRU DDC FOR DOMESTIC CIRCULATION PUMPS.

12 GAS WATER HEATER WITH MASTER THERMO-MIXING VALVE
NO SCALE



SEQUENCE OF OPERATIONS:
FAN CONTROL: START/STOP: THE FAN SHALL BE STARTED AND STOPPED VIA INTERLOCK WITH THE SPACE TOGGLE SWITCH.

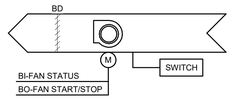
THE EXHAUST FAN SHALL STOP AND THE EXHAUST BACKDRAFT DAMPER SHALL CLOSE.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR EXHAUST FAN.

PROVIDE STATUS INDICATION THRU DDC FOR EXHAUST FANS.

DAMPER: OPEN THE MOTORIZED DAMPER ASSOCIATED WITH THE EXHAUST FAN WHEN THE EXHAUST FAN IS COMMANDED TO RUN. THE AUTOMATIC DAMPER SHALL BE HARD WIRE TO THE FAN POWER.

6 FUME EXTRACTOR - FE-1
NO SCALE



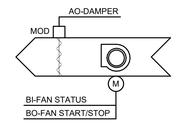
SEQUENCE OF OPERATIONS:
FAN CONTROL: START/STOP: THE FAN SHALL BE STARTED AND STOPPED VIA INTERLOCK WITH THE SPACE TOGGLE SWITCH.

THE EXHAUST FAN SHALL STOP AND THE EXHAUST BACKDRAFT DAMPERS SHALL CLOSE.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR EXHAUST FAN.

PROVIDE STATUS INDICATION THRU DDC FOR EXHAUST FANS.

7 FUME EXTRACTOR - FE-2
NO SCALE



SEQUENCE OF OPERATIONS:
FAN CONTROL: START/STOP: THE DDC SYSTEM SHALL START THE EXHAUST FAN VIA THEIR ASSOCIATED ECM MOTOR.

SCHEDULE: THE EXHAUST FAN SHALL BE CONNECTED TO A TIMECLOCK AND PROGRAMMED TO SCHEDULE AS FOLLOWING:

OCCUPIED/UNOCCUPIED SCHEDULE SHALL BE SET AT THE DDC OPERATOR INTERFACE. WHEN INDEXED TO UNOCCUPIED THE UNIT SHALL SHUTDOWN.

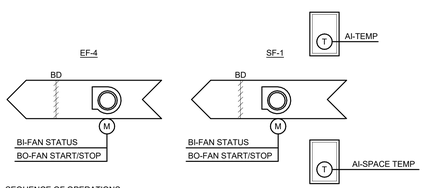
DAMPER: OPEN THE MOTORIZED DAMPER ASSOCIATED WITH THE EXHAUST FAN WHEN THE EXHAUST FAN IS COMMANDED TO RUN. THE AUTOMATIC DAMPER SHALL BE HARD WIRE TO THE FAN POWER.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR EXHAUST FAN.

PROVIDE STATUS INDICATION THRU DDC FOR EXHAUST FANS.

UNIT SHUTDOWN: WHENEVER THE SYSTEM IS INDEXED OFF, THE EXHAUST FANS SHALL STOP. ON A FAILURE OF THE EXHAUST FAN, AN ALARM SHALL BE SENT THROUGH THE DDC SYSTEM. WHENEVER THE EXHAUST FAN IS OFF FOR ANY REASON THE FOLLOWING SHALL OCCUR: THE EXHAUST FAN SHALL STOP AND THE EXHAUST AIR DAMPER SHALL CLOSE.

8 EXHAUST FAN - EF-1
NO SCALE



SEQUENCE OF OPERATIONS:
FAN CONTROL: START/STOP: THE SUPPLY AND EXHAUST FANS SHALL BE STARTED AND STOPPED VIA HAND-OFF-AUTO SWITCH AND LOCAL SPACE TEMPERATURE SENSOR.

TEMPERATURE CONTROL: INSTALL A SPACE TEMPERATURE SENSOR IN THE ELECTRICAL ROOM. CYCLE THE SUPPLY AND EXHAUST FAN TO MAINTAIN SPACE TEMPERATURE 85°F (ADJ.). AND SUBJECT TO THE FLOATING DRYBULB LOCKOUT.

FLOATING DRY BULB LOCKOUT: THE VENTILATION SYSTEM SHALL BE ENABLED WHENEVER THE ADJACENT BUS CIRCULATION/STORAGE AIR TEMPERATURE IS MORE THAN 4° F (ADJ.) COOLER THAN THE ELECTRICAL ROOM SPACE TEMPERATURE.

UNIT SHUTDOWN: WHENEVER THE VENTILATION SYSTEM IS INDEXED OFF, THE SUPPLY AND EXHAUST FANS SHALL STOP. ON A FAILURE OF EITHER THE SUPPLY OR EXHAUST FAN, AN ALARM SHALL BE SENT THROUGH THE DDC SYSTEM. WHENEVER THE SUPPLY FAN IS OFF FOR ANY REASON THE EXHAUST FAN SHALL STOP SHALL CLOSE.

CURRENT STATUS SWITCH: PROVIDE FOR BOTH SUPPLY AND EXHAUST FANS.

PROVIDE STATUS INDICATION THRU DDC FOR SUPPLY AND EXHAUST FANS.

9 SUPPLY / EXHAUST FAN - SF-1 / EF-4
NO SCALE

SEQUENCE OF OPERATIONS:
SPLIT SYSTEM AIR CONDITIONERS SHALL OPERATE ACCORDING TO PACKAGED FACTORY CONTROLS AND SEQUENCES.

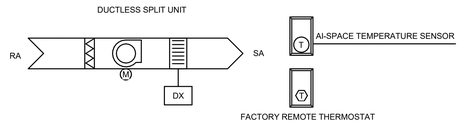
SPACE TEMPERATURE SHALL BE MONITORED THRU DDC SYSTEM WITH LOCAL SPACE TEMPERATURE SENSOR. PROVIDE ALARM THRU DDC SYSTEM IF SPACE TEMPERATURE RISES ABOVE 75°F (ADJ.) OR DROPS BELOW 65°F (ADJ.) FOR 15 CONSECUTIVE MINUTES.

1 DUCTLESS SPLIT AIR CONDITIONER - ACU-1 / ACCU-1
NO SCALE

SEQUENCE OF OPERATIONS:
SPLIT SYSTEM AIR CONDITIONERS SHALL OPERATE ACCORDING TO PACKAGED FACTORY CONTROLS AND SEQUENCES.

SPACE TEMPERATURE SHALL BE MONITORED THRU DDC SYSTEM WITH LOCAL SPACE TEMPERATURE SENSOR. PROVIDE ALARM THRU DDC SYSTEM IF SPACE TEMPERATURE RISES ABOVE 75°F (ADJ.) OR DROPS BELOW 65°F (ADJ.) FOR 15 CONSECUTIVE MINUTES.

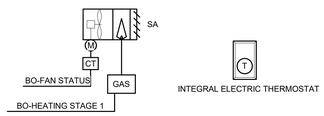
2 DUCTLESS SPLIT AIR CONDITIONER - ACU-2 / ACCU-2
NO SCALE



SEQUENCE OF OPERATIONS:
SPLIT SYSTEM AIR CONDITIONERS SHALL OPERATE ACCORDING TO PACKAGED FACTORY CONTROLS AND SEQUENCES.

SPACE TEMPERATURE SHALL BE MONITORED THRU DDC SYSTEM WITH LOCAL SPACE TEMPERATURE SENSOR. PROVIDE ALARM THRU DDC SYSTEM IF SPACE TEMPERATURE RISES ABOVE 75°F (ADJ.) OR DROPS BELOW 65°F (ADJ.) FOR 15 CONSECUTIVE MINUTES.

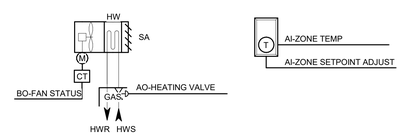
3 DUCTLESS SPLIT AIR CONDITIONER - ACU-3 / ACCU-3
NO SCALE



SEQUENCE OF OPERATIONS:
GAS-FIRED UNIT HEATER WILL BE PROVIDED BY MANUFACTURER WITH INTEGRAL ELECTRIC THERMOSTAT TO CONTROL THE GAS CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE OF 60°F (ADJ.).

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR GAS-FIRED UNIT HEATER OPERATION TIE-IN BAS FOR MONITORING EQUIPMENT STATUS.

4 GAS FIRED UNIT HEATER - UH-5,6
NO SCALE



SEQUENCE OF OPERATIONS:
PROVIDE AN ELECTRIC SPACE THERMOSTAT TO CONTROL THE CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE. PROVIDE A STRAP ON AQUASTAT MOUNTED ON THE HOT WATER RETURN LINE SET AT 100° F TO CONTROL THE UNIT FAN WHEN HOT WATER TEMPERATURE IS ABOVE SETPOINT.

CURRENT STATUS SWITCH: PROVIDE CURRENT STATUS SWITCH FOR UNIT HEATER FAN.

PROVIDE ALARM THRU DDC SYSTEM IF SPACE TEMPERATURE RISES ABOVE 75°F (ADJ.) OR DROPS BELOW 65°F (ADJ.)

5 HOT WATER UNIT HEATER - UH-1,2,3,4,7
NO SCALE

Mead & Hunt
Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: DJG
DRAWN BY: AR
CHECKED BY: KML
DO NOT SCALE DRAWINGS

SHEET CONTENTS
CONTROL SCHEMATICS

SHEET NO.:
M-802

LUMINAIRE SYMBOLS

- RECESSED LUMINAIRE
- RECESSED TROFFER
- RECESSED LINEAR
- SURFACE ROUND LUMINAIRE
- SURFACE SQUARE LUMINAIRE
- SURFACE LINEAR
- SURFACE INDUSTRIAL
- SURFACE COVE STRIP
- PENDANT ROUND LUMINAIRE
- PENDANT SQUARE LUMINAIRE
- PENDANT LINEAR
- PENDANT INDUSTRIAL
- (#) TRACK (# INDICATES NUMBER TRACK HEADS)
- WALL SURFACE BRACKET
- WALL RECESSED BRACKET
- WALL SURFACE LINEAR
- WALL RECESSED LINEAR
- CEILING MOUNTED EXIT SIGN
- WALL MOUNTED EXIT SIGN
- WALL MOUNTED COMBINATION EXIT SIGN/EBU
- ARROW DENOTES EXIT SIGN CHEVRON
- EMERGENCY BATTERY UNIT
- RECESSED EMERGENCY BATTERY UNIT
- WALL WASH MODIFIER
- EMERGENCY SHADING MODIFIER

LUMINAIRE CIRCUITRY & CONTROL KEY:

A1 — LUMINAIRE TYPE
1Ra
- LOWER CASE LETTER INDICATES SWITCHLEG CONTROL
- "R" INDICATES LIGHTING CONTROL PANEL REFER TO LIGHTING CONTROL PANEL SCHEDULE
- NUMBER INDICATES BRANCH PANEL CIRCUIT NUMBER

LUMINAIRE CONTROL SYMBOLS

- (XS) OCCUPANCY SENSOR CEILING MOUNT (X REPRESENTS OCCUPANCY/PHOTO SENSOR SCHEDULE DESIGNATION)
- (XS) DAYLIGHT SENSOR (X REPRESENTS OCCUPANCY/PHOTO SENSOR SCHEDULE DESIGNATION)
- (XS) DAYLIGHT SENSOR CEILING MOUNT (X REPRESENTS OCCUPANCY/PHOTO SENSOR SCHEDULE DESIGNATION)
- TC ELECTRONIC TIME CLOCK
- PE PHOTO ELECTRIC CONTROL (X REPRESENTS OCCUPANCY/PHOTO SENSOR SCHEDULE DESIGNATION)
- LC LIGHTING CONTACTOR
- LCP X LIGHTING CONTROL PANEL (x REPRESENTS PANEL DESIGNATION)
- PT UL 924 LISTED EMERGENCY LIGHTING BYPASS CONTROL UNIT
- PP POWER PACK USED IN CONJUNCTION WITH OCCUPANCY SENSORS OR DAYLIGHT SENSORS
- PS REMOTE POWER SUPPLY OR DRIVER
- DR DIMMER RACK
- D DIMMER CONTROL STATION MULTI-PRESET MODULAR DIMMING SYSTEM

DIMMER NOTATIONS:
MCS DENOTES MASTER CONTROL STATION
RS DENOTES REMOTE STATION
ES ENTRY STATION
PS PARTITION STATION
L. LOW VOLTAGE SWITCH
* DENOTES SWITCH NAME, LETTER IS SWITCHLEG NUMBER IS SEQUENCE OF SWITCH, SEE LIGHTING CONTROL PANEL & SWITCH SCHEDULE.
S SINGLE POLE SWITCH

SWITCH NOTATIONS:
3 DENOTES 3-WAY SWITCH
3P DENOTES 3-WAY PILOT SWITCH
4 DENOTES 4-WAY SWITCH
C MAINTAINED CONTACT, THREE POSITION, CENTER OFF
D DENOTES WALL BOX DIMMER SWITCH
F FAN SPEED CONTROL SWITCH
K DENOTES KEY SWITCH
M MOMENTARY CONTACT SWITCH
OSX DENOTES OCCUPANCY SENSOR (X REPRESENTS SCHEDULE DESIGNATION)
P DENOTES PILOT SWITCH
PB PUSH BUTTON
T DENOTES TIMER SWITCH
VSX DENOTES VACANCY SENSOR (X REPRESENTS SCHEDULE DESIGNATION)
WL DENOTES WET LOCATION SWITCH
X1 DENOTES EXPLOSION PROOF CLASS 1 DIVISION 1 SWITCH
X2 DENOTES EXPLOSION PROOF CLASS 1 DIVISION 2 SWITCH

SS SWITCHES, FOR MULTI-LEVEL SWITCHING, REFER TO FLOOR PLANS AND FIXTURE SCHEDULE FOR EXACT CONTROL INTENT.

SWBK SWITCHBANK

SERVICE & DISTRIBUTION SYMBOLS

- GAP GENERATOR ANNUNICATOR PANEL
- EPO EMERGENCY POWER OFF
- PFC POWER FACTOR CORRECTION CAPACITOR
- AHF ACTIVE HARMONIC FILTER
- GROUND ACCESS WELL
- GROUND ROD
- GR STATIC GROUND RECEPTACLE
- LIGHTNING ROD
- GROUNDING CONDUCTOR
- EGB EQUIPMENT GROUND BUS
- FEEDER BUS DUCT
- PANELBOARD
- C CONTACTOR
- P PUSH BUTTON
- EMERGENCY SHADING MODIFIER

RECEPTACLE SYMBOLS

- 60" DUPLEX RECEPTACLE TEXT INDICATES MOUNTING HEIGHT
- DOUBLE DUPLEX RECEPTACLE
- ABOVE COUNTER DUPLEX RECEPTACLE
- SIMPLEX RECEPTACLE
- SPLIT WIRED DUPLEX RECEPTACLE
- SPECIFIC USE RECEPTACLE. NEMA CONFIGURATIONAS NOTED ON DRAWINGS AND/OR SCHEDULE.
- F FLOOR BOX
- P POKE THRU
- CEILING MOUNTED DUPLEX RECEPTACLE
- C CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE
- C CEILING MOUNTED SPECIFIC USE RECEPTACLE. NEMA CONFIGURATIONAS NOTED ON DRAWINGS AND/OR SCHEDULE.
- (E) CORD REEL
- SURFACE METAL RACEWAY - REFER TO DRAWINGS AND/OR SPECIFICATIONS, MOUNTED 6" ABOVE COUNTER OR AT HEIGHT AS INDICATED.
- A MULTI-OUTLET RACEWAY - OUTLETS ON CENTER AS INDICATED ON DRAWINGS AND IN THE SPECIFICATIONS, MOUNTED 6" ABOVE COUNTER OR AT HEIGHT AS INDICATED.

MULTI-OUTLET RACEWAY NOTATIONS:
A DENOTES 2'-0" LENGTH, RECEPTACLES 6" O.C.
B DENOTES 3'-0" LENGTH, RECEPTACLES 6" O.C.
C DENOTES 5'-0" LENGTH, RECEPTACLES 6" OR 12" O.C.
D DENOTES 6'-0" LENGTH, RECEPTACLES 6", 12", 18" OR 24" O.C.
F DENOTES X'-X" LENGTH, RECEPTACLES X" O.C.

- P DATA/POWER POLE
- EMERGENCY SHADING MODIFIER

RECEPTACLE NOTATIONS:
a DENOTES SWITCH LEG FOR SWITCHED OUTLETS
D DENOTES DEDICATED OUTLETS
EWC DENOTES ELECTRIC WATER COOLER OUTLETS
GFCI DENOTES GROUND FAULT INTERRUPTER OUTLETS
IG DENOTES ISOLATED GROUND OUTLETS
H DENOTES HORIZONTALLY MOUNTED OUTLETS
TR DENOTES TAMPER RESISTANT SAFETY OUTLETS
USB DENOTES COMBINATION DUPLEX/USB OUTLETS
WP DENOTES WEATHER PROOF OUTLETS
X1 DENOTES EXPLOSION PROOF CLASS 1 DIVISION 1 OUTLETS
X2 DENOTES EXPLOSION PROOF CLASS 1 DIVISION 2 OUTLETS

RACEWAY SYMBOLS

- SURFACE MOUNTED CONDUIT
- CONCEALED CONDUIT IN CEILING OR WALL
- WIREWAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
- CABLE TRAY, SIZE AND TYPE AS INDICATED ON DRAWINGS
- UNDERFLOOR DUCT
- J JUNCTION BOX - CEILING MOUNTED
- JJ JUNCTION BOX - WALL MOUNTED
- H HANDHOLE
- M MANHOLE

MOTOR & EQUIPMENT CONNECTION SYMBOLS

- ELECTRICAL CONNECTION TO EQUIPMENT AND MOTORS, SIZED PER NEC. COORDINATE REQUIREMENTS WITH CONTRACTOR FURNISHING MOTOR OR EQUIPMENT. REFER TO SPECIFICATIONS AND EQUIPMENT WIRING SCHEDULE FOR ADDITIONALWORK ASSOCIATED WITH MOTOR OR EQUIPMENT.
- COMBINATION MAGNETIC CONTROLLER
- M INTERGRAL HORSEPOWER MANUAL CONTROLLER
- SSC COMBINATION REDUCED VOLTAGE SOLID STATE CONTROLLER
- SSC REDUCED VOLTAGE SOLID STATE CONTROLLER
- VFD VARIABLE FREQUENCY MOTOR CONTROLLER
- MAGNETIC CONTROLLER - FULL VOLTAGE, ACROSS THE LINE, ELECTRICALLY HELD
- NON-FUSIBLE DISCONNECT SWITCH
- FUSIBLE DISCONNECT SWITCH
- DOUBLE THROW SWITCH
- S_{FS} FUSED SINGLE POLE SWITCH
- S_{MS} MOTOR STARTING SWITCH WITH OVERLOADS
- S_{MX} MOTOR STARTING SWITCH WITHOUT OVERLOADS
- RVS REDUCED VOLTAGE MAGNETIC CONTROLLER
- RVS COMBINATION REDUCED VOLTAGE MAGNETIC CONTROLLER
- MS MULTI SPEED MAGNETIC CONTROLLER
- MS COMBINATION MULTI SPEED MAGNETIC CONTROLLER
- ATS AUTOMATIC TRANSFER SWITCH
- MTS MANUAL TRANSFER SWITCH
- ENCLOSED CIRCUIT BREAKER
- EMERGENCY SHADING MODIFIER

FIRE ALARM SYMBOLS

- FACP FIRE ALARM CONTROL PANEL
- FAAP FIRE ALARM ANNUNCIATOR PANEL
- DACT DIGITAL COMMUNICATON PANEL
- FIRE ALARM PULL STATION
- H FIRE ALARM HORN
- H ##/E FIRE ALARM HORN/STROBE, (##) IS CANDELA RATING
- S SUPERVISED FIRE ALARM HORN LOUDSPEAKER
- ##/E FIRE ALARM STROBE, (##) IS CANDELA RATING
- B FIRE ALARM BELL
- 2 INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR
- 2 $_{SD}$ INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR FOR SMOKE DAMPER CONTROL
- HF HEAT DETCTOR 194ºF FIXED TEMP 2 WIRE OPERATION. [PROVIDE ADDRESSIBLE CONTROL MODULE]
- HX EXPLOSION PROOF HEAT DETCTOR, COMBINATION RATE OF RISE AND 135ºF FIXED TEMPERATURE, 2-WIRE OPERATION. [PROVIDE ADDRESSIBLE CONTROL MODULE.] HAZARDOUS CLASSIFICATION: [CLASS-I], [CLASS-II], [GROUP C], [GROUP D], [GROUP E], [GROUP F], AND [GROUP G].
- DS INTELLIGENT PHOTOELECTRIC DUCT SMOKE DETECTOR
- CO CARBON MONOXIDE DETECTOR
- ##/E CEILING MOUNTED FIRE ALARM STROBE, (##) IS CANDELA RATING
- ##/E CEILING MOUNTED FIRE ALARM HORN/STROBE, (##) IS CANDELA RATING
- CEILING MOUNTED FIRE ALARM HORN
- MM MONITOR MODULE
- CM CONTROL MODULE
- FS FLOW SWITCH FOR SPRINKLER SYSTEM SUPERVISORY FLOW ALARM, NORMALLY OPEN DRY CONTACTS FOR FIRE ALARM INTERFACE, FURNISHED BY MC, WIRED BY EC.
- TS MONITOR SWITCH (TAMPER SWITCH) FOR SPRINKLER SYSTEM SUPERVISORY TROUBLE NOTIFICATION, NORMALLY OPEN DRY CONTACTS FOR FIRE ALARM INTERFACE, FURNISHED BY MC, WIRED BY EC.
- PE PRESSURE SWITCH
- RTS/I REMOTE TEST SWITCH WITH INDICATOR WALL MOUNTED 48" AFF UNLESS NOTED OTHERWISE.
- FR FIRE ALARM RELAY
- HDS ELEVATOR HOISTWAY DAMPER SWITCH
- NAC FIRE ALARM NOTIFICATION APPLIANCE EXTENDER PANEL
- FT FREEZE STAT

TELECOMMUNICATION OUTLET SYMBOLS

- TECHNOLOGY OUTLET (ROUGH-IN ONLY)
- TGB COMMUNICATIONS GROUND BUS BAR

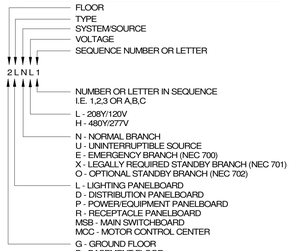
GENERAL SYMBOLS

- #/E-### DETAIL NUMBER / SHEET NUMBER
- 9.### KEYED NOTE, USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.
- # KITCHEN EQUIPMENT TAG. # REFERS TO CORRESPONDING NUMBER IN KITCHEN EQUIPMENT SCHEDULE.

LINE TYPE KEY

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK DASHED LINE)
- EXISTING TO REMAIN WORK (THIN SOLID LINE)
- NEW WORK UNDER FLOOR BY THIS CONTRACTOR
- ONE-LINE EQUIPMENT ENCLOSURE
- PANEL DIVISION LINES
- CON SITE UNDERGROUND CONDUIT
- //CON// SITE REMOVED UNDERGROUND CONDUIT
- E SITE UNDERGROUND ELECTRIC
- OHE SITE OVERHEAD ELECTRIC
- //OHE// SITE REMOVED OVERHEAD ELECTRIC
- //E// SITE REMOVED UNDERGROUND ELECTRIC

PANEL DESIGNATION KEY



ELECTRICAL ABBREVIATIONS

3R	NEMA 3R RATING
4X	NEMA 4X RATING
A	AMPERES
A/E	ARCHITECT / ENGINEER
AAC	ABOVE ACCESSIBLE CEILING
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
APE	AIRCRAFT PROCESS EQUIPMENT
ATS	AUTOMATIC TRANSFER SWITCH
BLDG	BUILDING
BRKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CEB	CONCRETE EQUIPMENT BASE
CF	CIRCULATION FAN
CH	CHILLER
CHWP	CHILLED WATER PUMP
CKT	CIRCUIT
CP	CIRCULATION PUMP
CRAC	COMPUTER ROOM AIR CONDITIONER
CRP	CONDENSATION RETURN
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
DC	DROP CORD
DDC	DIGITAL CONTROL PANEL
DH	DUCT HEATER
DISC	DISCONNECT
DO	DOOR OPERATOR
DWG	DRAWING
E/O	ELECTRICAL-TO-OPTICAL CONVERTER
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ERL	EXISTING TO BE RELOCATED
ERLD	EXISTING - RELOCATED LOCATION
ES	EQUIPMENT SUPPLIER
ETR	EXISTING TO REMAIN
EWC	ELECTRICAL WATER COOLER
EWH	ELECTRICAL WATER HEATER
F	FUSED
FA	FIRE ALARM
FAF	FORCED AIR FURNACE
FCU	FAN COIL UNIT
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GWH	GAS WATER HEATER
HD	HAND DRYER
HP	HORSEPOWER
HVAC	HEATING, VENTILATION, AIR CONDITIONING
HWB	HOT WATER BOILER
HWP	HOT WATER PUMP
IEWH	INSTANTANEOUS ELECTRIC WATER HEATER
IH	INFRARED HEATER
IMC	INTERMEDIATE METALLIC CONDUIT
IWH	INSTANTANEOUS WATER HEATER
J-BOX	JUNCTION BOX
LBS	POUNDS
LFS	LIGHTING FIXTURE SCHEDULE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MIN.	MINIMUM
MNS	MASS NOTIFICATION SYSTEM
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NL/EL	NIGHT LIGHT AND EMERGENCY LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PH	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RCP	RADIANT CEILING PANEL
RECPT	RECEPTACLE
REF	REFRIGERATOR
REQ'D	REQUIRED
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL CONDUIT MAY ALSO BE REFERENCED AS RMC OR GRC
RMC	RIGID METAL CONDUIT
RTU	ROOF TOP UNIT
S/N	SOLID NEUTRAL
SE	SERVICE ENTRANCE
SEC-P	SECURITY PANEL
SF	SUPPLY FAN
SP	SUMP PUMP
SS	STAINLESS STEEL
SW	SWITCH
SWBK	SWITCH BANK
TBR	TO BE REMOVED
TCP	TEMPERATURE CONTROL PANEL
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TOB	TO BOTTOM OF LUMINAIRE
TYP	TYPICAL
UC	UNIT COOLER
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATER
V	VOLTS
VER	VEHICLE EXHAUST REEL
VFD	VARIABLE FREQUENCY DRIVE
VS	VERSUS
W	WATTS
WCC	WATER COOLED CONDENSER
WFE	WELDING FUME EXTRACTOR
WH	WATER HEATER
WL	WET LOCATION LISTED
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

GENERAL NOTES:

1. REFER TO THE G SERIES DRAWINGS FOR CODE ANALYSIS PLANS, INFORMATION AND NOTES.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE DETAILS OF WORK, VERIFY DIMENSIONS IN THE FIELD, AND ADVISE THE ARCHITECT/ENGINEER OF ANY DISCREPANCY BEFORE PERFORMING ANY WORK.
3. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADAAG (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES).
4. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS AND FLOORS. MAKE RATED PENETRATIONS AS REQUIRED. SEAL ALL RATED PENETRATIONS AS IDENTIFIED IN DIVISION 1 REQUIREMENTS.
5. FLUSH MOUNT ALL TOGGLE SWITCHES, RECEPTACLE , FIRE ALARM PULL STATIONS AND FIRE ALARM NOTIFICATION DEVICES AT HEIGHTS ABOVE FINISHED FLOOR AS SHOWN IN THE DEVICE MOUNTING HEIGHT DETAIL, EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
6. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL SCHEDULES PROVIDED. BALANCE THE LOAD ON PANELS AS EVENLY AS POSSIBLE BETWEEN EACH PHASE. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
7. CIRCUITS SERVING EMERGENCY AND EXIT LUMINAIRES WILL BE RUN IN SEPARATE RACEWAY FROM ALL OTHER CIRCUITS.
8. A #12 GREEN INSULATED GROUND CONDUCTOR SHALL BE INSTALLED WITH CIRCUIT CONDUCTORS TO ALL RECEPTACLES.
9. CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE. WHERE RACEWAY IS REQUIRED ON EXISTING CONCRETE AND MASONRY WALLS, SURFACE RACEWAY MAY BE USED IN LIEU OF CHANNELING WALLS TO ALLOW CONCEALED ROUTING. THE RACEWAY SHALL BE SINGLE CHANNEL STYLE TYPE WITH IVORY FINISH. THIS APPLIES FOR BRANCH CIRCUIT CONDUITS UP TO 3/4" SIZE. CONDUITS LARGER THAN 3/4" MAY BE ROUTED EXPOSED, BUT INSTALLED PARALLEL AND/OR PERPENDICULAR TO BUILDING LINES AND RUN AS UNOBTRUSIVELY AS POSSIBLE.
10. BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
11. COORDINATE AND CO-LOCATE WALL MOUNTED RECEPTACLE LOCATIONS WITH TECHNOLOGY (VOICE/DATA CATV, FIDS, ETC) OUTLETS SHOWN. EACH TECHNOLOGY OUTLET SHALL BE LOCATED WITHIN 24"OF ITS ASSOCIATED RECEPTACLE. ASSOCIATED RECEPTACLE SHALL BE DEFINED AS THE RECEPTACLE NEAREST THE LOCATION OF, AND AT THE SAME HEIGHT AS,THE TECHNOLOGY OUTLET WHEN MULTIPLE RECEPTACLES ARE SHOWN ON A WALL.
12. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL DETECTORS WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
13. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
14. ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
15. CONTRACTOR TO PROVIDE SUITABLE MECHANICAL PROTECTION AROUND ALL CONDUITS STUBBED OUT FROM FLOORS, WALLS OR CEILINGS DURING CONSTRUCTION TO PREVENT BENDING OR DAMAGING OF STUB OUTS DUE TO CARELESSNESS WITH CONSTRUCTION EQUIPMENT.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
17. DRAWINGS INDICATE THE EXTENT OF HAZARDOUS OR WET LOCATIONS. INSTALLATION MEANS AND METHODS SHALL BE SUITABLY RATED FOR THE ENVIRONMENT INDICATED ON THE DRAWINGS.
18. CONTRACTOR SHALL REMOVE AND REINSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK THAT IS OUTSIDE THE CONTRACT LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
19. ALL INTERLOCKING REQUIRED BY THE DRIVE MANUFACTURER BETWEEN THE VARIABLE FREQUENCY DRIVE AND THE DISCONNECT SWITCHES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
20. SCCR RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.

DEMOLITION GENERAL NOTES:

1. THE INFORMATION SHOWN IS BASED ON EXISTING DRAWINGS AND SITE OBSERVATIONS TO ASSIST CONTRACTOR IN BIDDING. THE ELECTRICAL DRAWINGS INDICATE EXISTING ELECTRICAL ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS. REFER TO SPECIFICATION SECTION 26 05 02 FOR ADDITIONAL REQUIREMENTS.
2. DASHED WALLS ON THE FLOOR PLANS INDICATE EXISTING WALLS BEING DEMOLISHED. REFER TO THE ARCHITECTURAL DEMOLITION PLANS FOR THE EXACT EXTENT OF WORK REQUIRED BY THIS PROJECT. REMOVE ALL DEVICES ON DASHED WALLS NOT SHOWN ON THE CONTRACT DRAWINGS. REFER TO DEMOLITION DRAWINGS OF OTHER TRADES. WHERE MOTORS CONTROL PANELS, AND OTHER LOADS OR APPARATUS THAT HAVE ELECTRICAL CONNECTION ARE BEING REMOVED, INCLUDE DISCONNECTION AND REMOVAL OF ALL ASSOCIATED CONDUIT, WIRING, ETC.
3. ELECTRICAL ITEMS (i.e., LIGHTING FIXTURES, PANELBOARDS, DISCONNECTS, MOTOR CONTROLLERS , ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER, IN A STORAGE AREA TO BE DESIGNATED BY THE OWNER. EQUIPMENT BEING REMOVED SHALL BE HANDLED SO AS NOT TO FURTHER REDUCE ITS VALUE TO THE OWNER. THE CONTRACTOR SHALL DISPOSE OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN FOR MAINTENANCE PURPOSES.
4. WHERE LIGHTS, SWITCHES, RECEPTACLES, ETC., ARE BEING REMOVED ALL ASSOCIATED CONDUIT AND WIRE BACK TO THE PANELBOARD OR FEEDER JUNCTION BOX SERVING THE DEVICE SHALL ALSO BE REMOVED, UNLESS THE CONDUIT CAN BE REUSED FOR NEW CONNECTIONS. THE CONTRACTOR SHALL DISPOSE OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN FOR MAINTENANCE PURPOSES.
5. ALL BOXES THAT REMAIN IN PLACE IN EXISTING MASONRY WALLS THAT ARE TO REMAIN SHALL BE PROVIDED WITH A BLANK COVERPLATE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH TYPE AND ATTACHMENT.
6. ALL CONDUIT SHALL BE REMOVED WHERE WALLS ARE BEING REMOVED. WHERE CONDUIT IS IN THE CONCRETE SLAB, CUT OFF FLUSH, PULL OUT WIRE, AND PLUG. WHERE CONDUIT IS RUN EXPOSED, ALL ASSOCIATED CLAMPS, SUPPORTS, HANGERS, ETC., SHALL ALSO BE REMOVED. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
7. THIS CONTRACTOR SHALL COORDINATE ALL HIS WORK, INCLUDING PHASING WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING ELECTRICAL AND INSTALLING NEW ITEMS.
8. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
9. MAINTAIN CIRCUIT CONTINUITY OF DEVICES LOCATED OUTSIDE OF CONSTRUCTION AREA. DEVICE AND EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
10. BALLASTS MANUFACTURED PRIOR TO 1980 CONTAIN PCBs AND SHALL BE DISPOSED OF IN ACCORDANCE WITH SPECIFICATIONS.
11. HID AND FLUORESCENT LAMPS CONTAIN MERCURY AND SHALL BE DISPOSED OF IN ACCORDANCE WITH SPECIFICATIONS.
12. CONTRACTOR SHALL REMOVE AND INSTALL ALL CEILING TILES AS REQUIRED FOR THE EXECUTION OF ELECTRICAL WORK THAT IS OUTSIDE THE CONTRACT LIMITS OF CONSTRUCTION. CONTRACTOR SHALL REPLACE CEILING TILES WITH IDENTICAL MATERIAL WHERE DAMAGED BY THIS CONTRACTOR.
13. PROVIDE REVISED TYPED CIRCUIT DIRECTORY IN PANELBOARDS THAT HAVE CIRCUITS REMOVED OR ADDED CIRCUITS.
14. REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT RACEWAY FLUSH WITH WALLS AND FLOORS, PATCH SURFACES TO MATCH EXISTING. REMOVE ALL ASSOCIATED CLAMPS, HANGERS, SUPPORTS, ETC. ASSOCIATED WITH RACEWAY REMOVAL.
15. DISCONNECT AND REMOVE ABANDONED LUMINAIRES, INCLUDING BRACKETS, STEMS, HANGERS, AND OTHER ACCESSORIES.
16. DISCONNECT AND REMOVED ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED.
17. REFER TO G SERIES DRAWINGS FOR PHASING OF DEMOLITION AND NEW CONSTRUCTION.

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CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

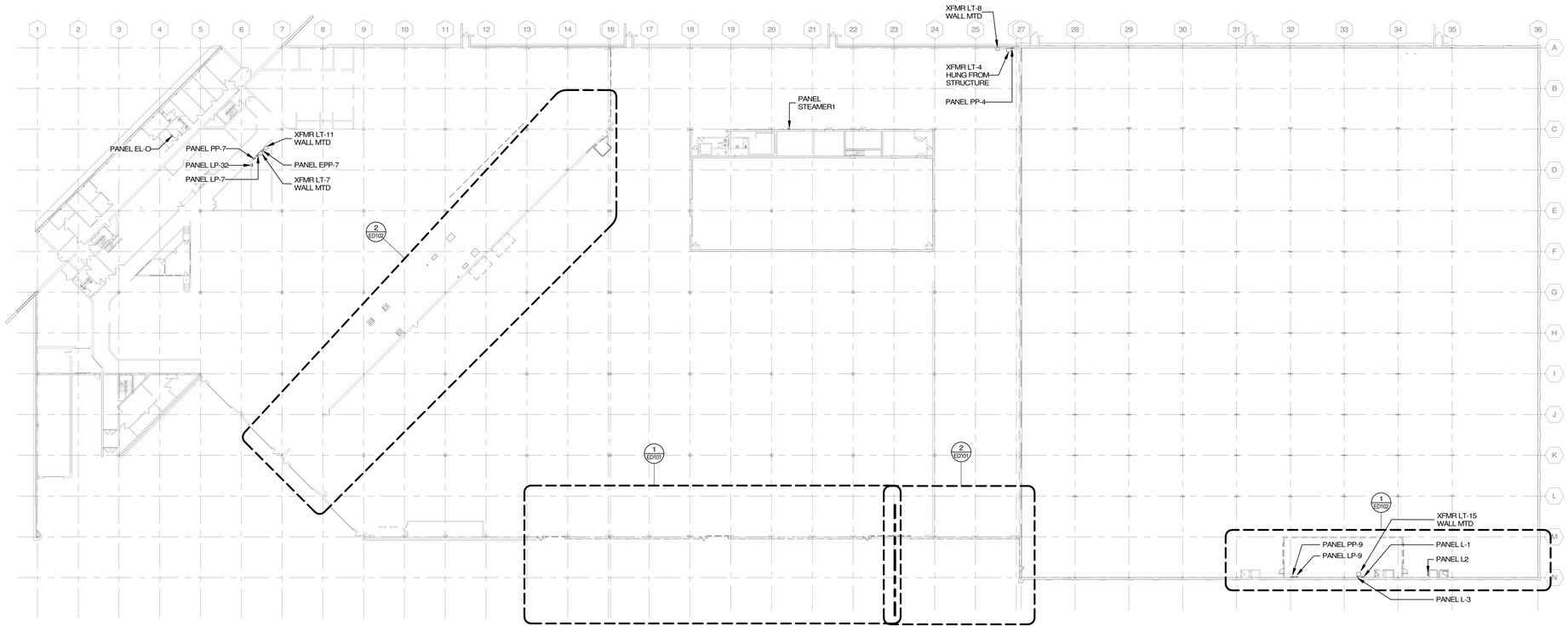
1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
CHECKED BY: ARG/MAM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
NOTES, SYMBOLS & ABBREVIATIONS

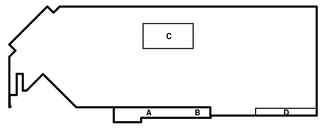
SHEET NO.:
E-001



TRUE NORTH PLAN NORTH

1 OVERALL FIRST FLOOR POWER DEMOLITION PLAN

1/32" = 1'-0"



KEY PLAN

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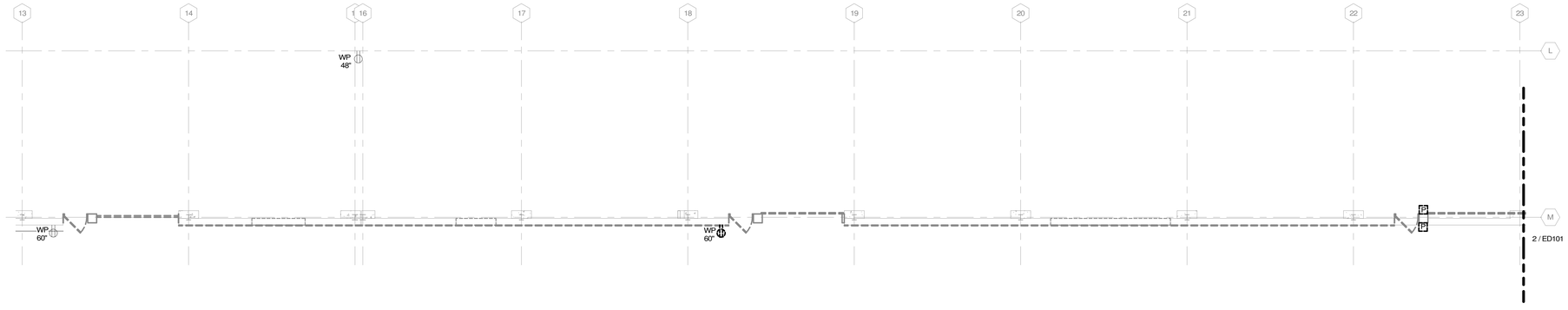
SHEET CONTENTS
OVERALL FIRST FLOOR POWER DEMOLITION PLAN

SHEET NO.:

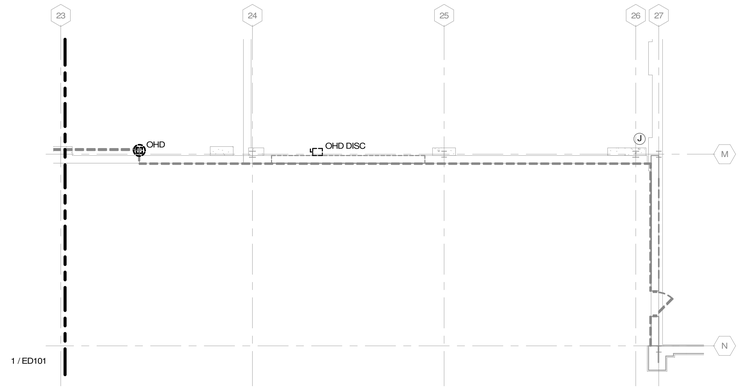
ED100



TRUE NORTH PLAN NORTH

1 **FIRST FLOOR POWER DEMOLITION PLAN - AREA A**

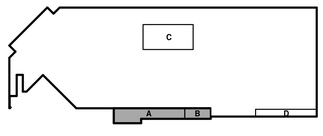
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 **FIRST FLOOR POWER DEMOLITION PLAN - AREA B**

1/8" = 1'-0"



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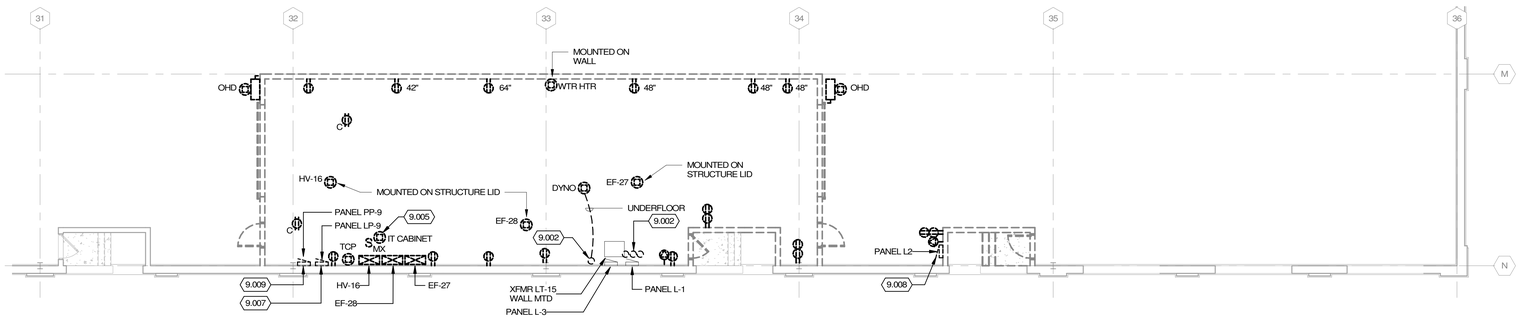
SHEET CONTENTS
FIRST FLOOR POWER DEMOLITION PLAN - AREAS A & B

SHEET NO.:

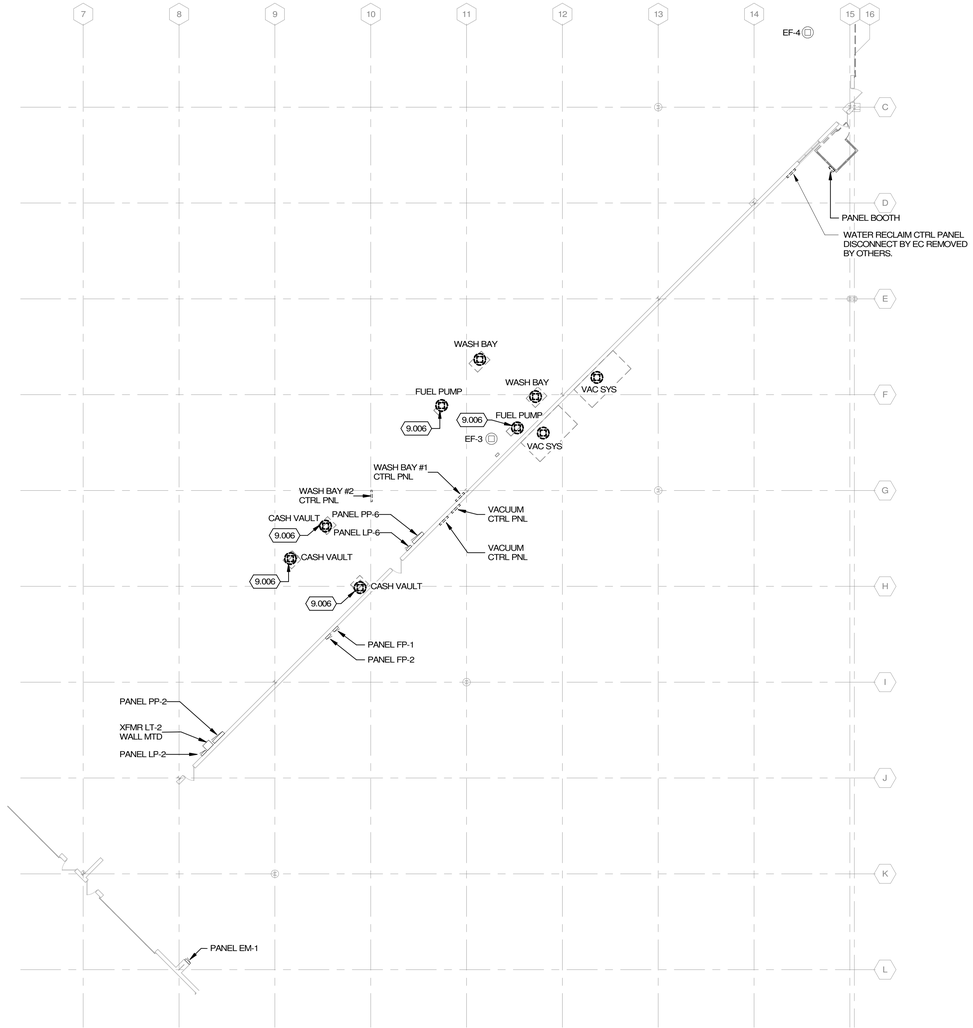
ED101



TRUE NORTH PLAN NORTH

1 FIRST FLOOR POWER DEMOLITION PLAN - AREA D

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 FIRST FLOOR POWER DEMOLITION PLAN - EXISTING SERVICE LANE

1/16" = 1'-0"

KEYED NOTES

9.002 EXISTING DYNAMO FEEDER & CONTROL CONDUITS TO BE REMOVED COMPLETELY ONCE CONCRETE FLOOR IS REMOVED BY GC.

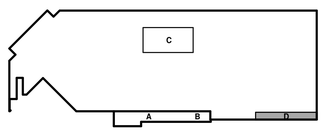
9.005 IT CABINET AND ASSOCIATED CABLING TO BE REMOVED BY OWNER.

9.006 EC TO REMOVE ELECTRICAL COMPONENTS, EQUIPMENT REMOVED AND RELOCATED BY OTHERS.

9.007 EC TO REMOVE 50A FEEDER BACK TO SOURCE PANEL L-1.

9.008 EC TO REMOVE 100A FEEDER BACK TO SOURCE PANEL L-1.

9.009 EC TO REMOVE 90A FEEDER BACK TO SOURCE PANEL IMDS IN ROOM E174, SEE 3/E-401 FOR LOCATION OF PANEL.



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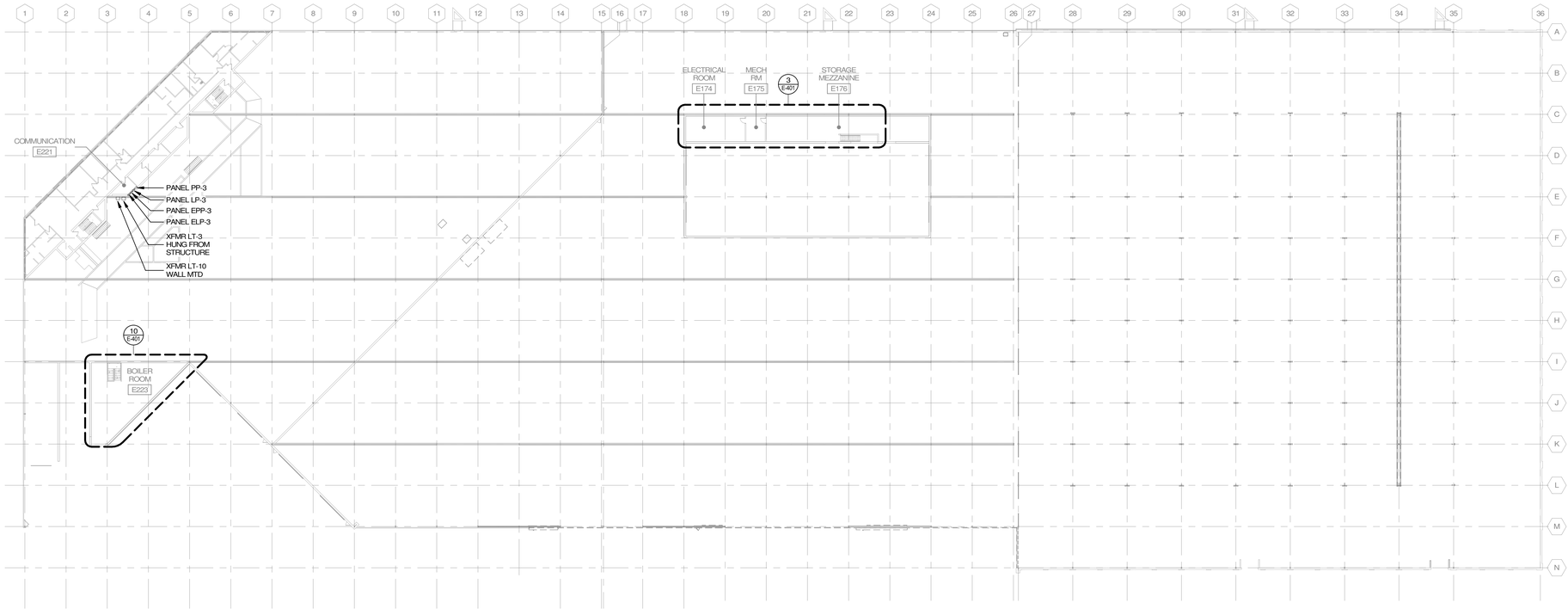
SHEET CONTENTS
FIRST FLOOR POWER DEMOLITION PLAN - AREA D & SERVICE LANE

SHEET NO.:

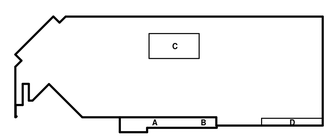
ED102



TRUE NORTH PLAN NORTH

1 OVERALL SECOND FLOOR POWER DEMOLITION PLAN

1/32" = 1'-0"



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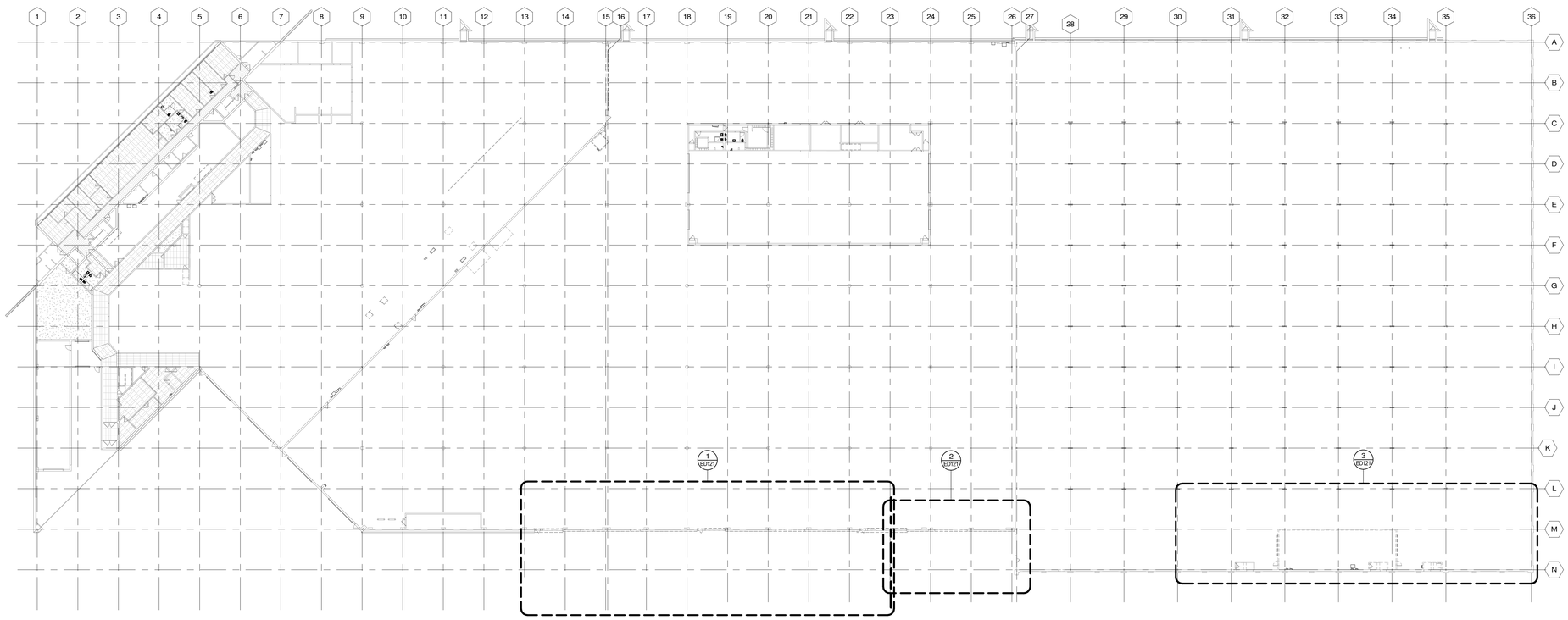
SHEET CONTENTS
OVERALL SECOND FLOOR POWER DEMOLITION PLAN

SHEET NO.:

ED103

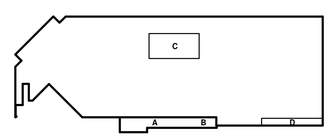
1/10/2019 4:09:51 PM C:\Revit Local\4503500-170148.02-E-Central-2018_NateDeMaster.rvt



TRUE NORTH | PLAN NORTH

1 OVERALL FIRST FLOOR LIGHTING DEMOLITION PLAN

1/32" = 1'-0"



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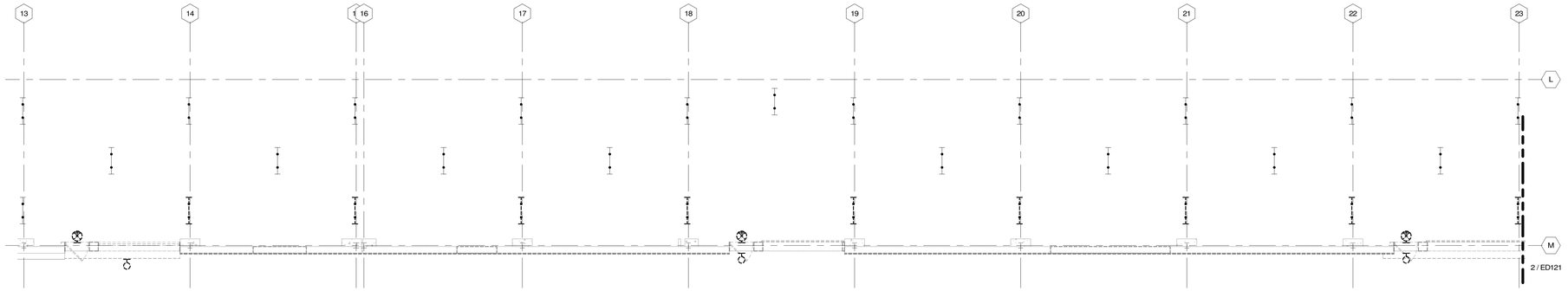
SHEET CONTENTS
OVERALL FIRST FLOOR LIGHTING DEMOLITION PLAN

SHEET NO.:

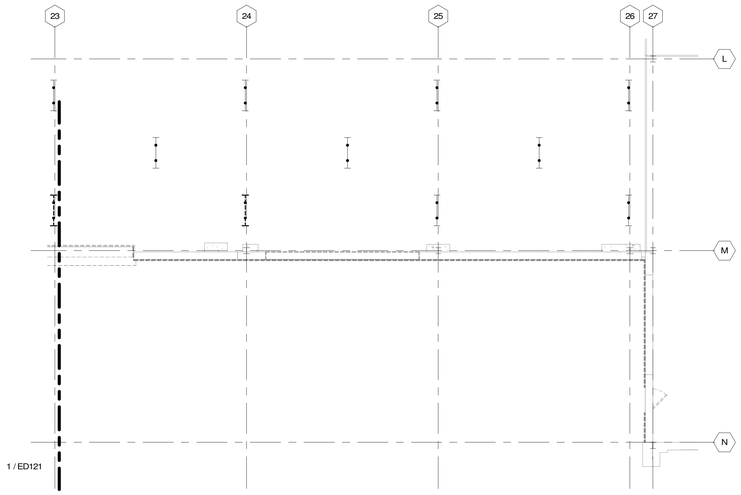
ED120



TRUE NORTH PLAN NORTH

1 FIRST FLOOR LIGHTING DEMOLITION PLAN - AREA A

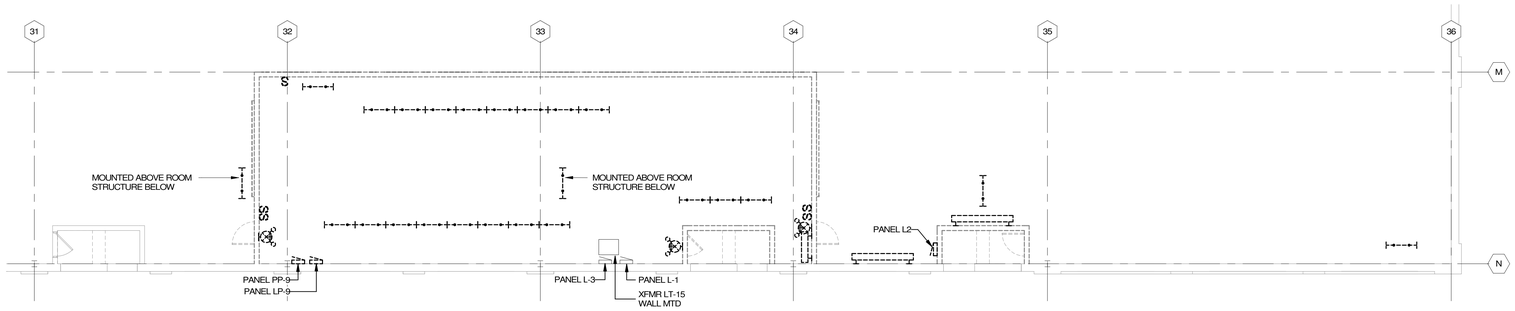
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 FIRST FLOOR LIGHTING DEMOLITION PLAN - AREA B

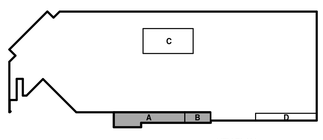
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

3 FIRST FLOOR LIGHTING DEMOLITION PLAN - AREA D

1/8" = 1'-0"



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SHEET CONTENTS
FIRST FLOOR LIGHTING DEMOLITION PLAN - AREAS A & B

SHEET NO.:
ED121

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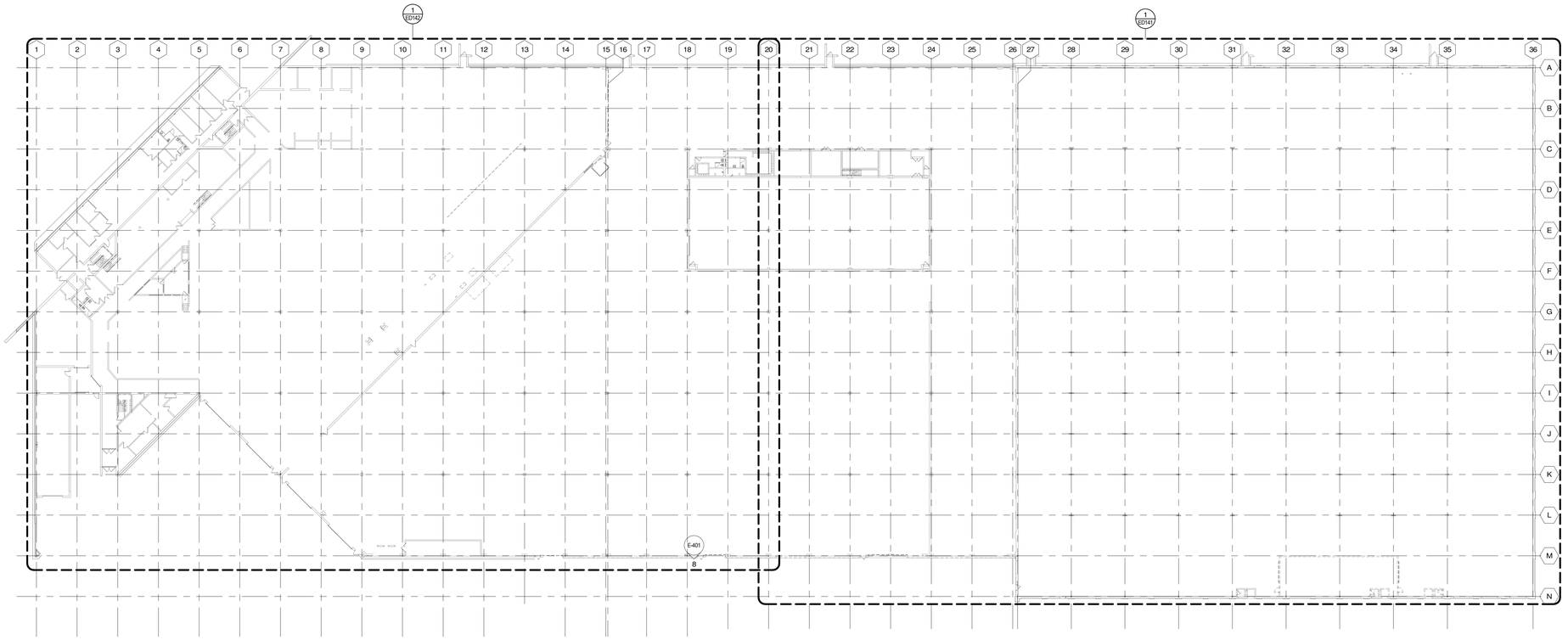
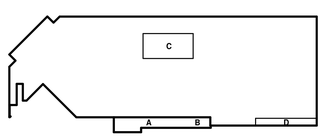


TRUE NORTH PLAN NORTH

1 OVERALL FIRST FLOOR FIRE ALARM DEMOLITION PLAN

1/32" = 1'-0"



KEY PLAN

Mead & Hunt

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2440 Deming Way
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phone: 608-273-6380
meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
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SHEET CONTENTS
OVERALL FIRST FLOOR FIRE ALARM DEMOLITION PLAN

SHEET NO.:

ED140

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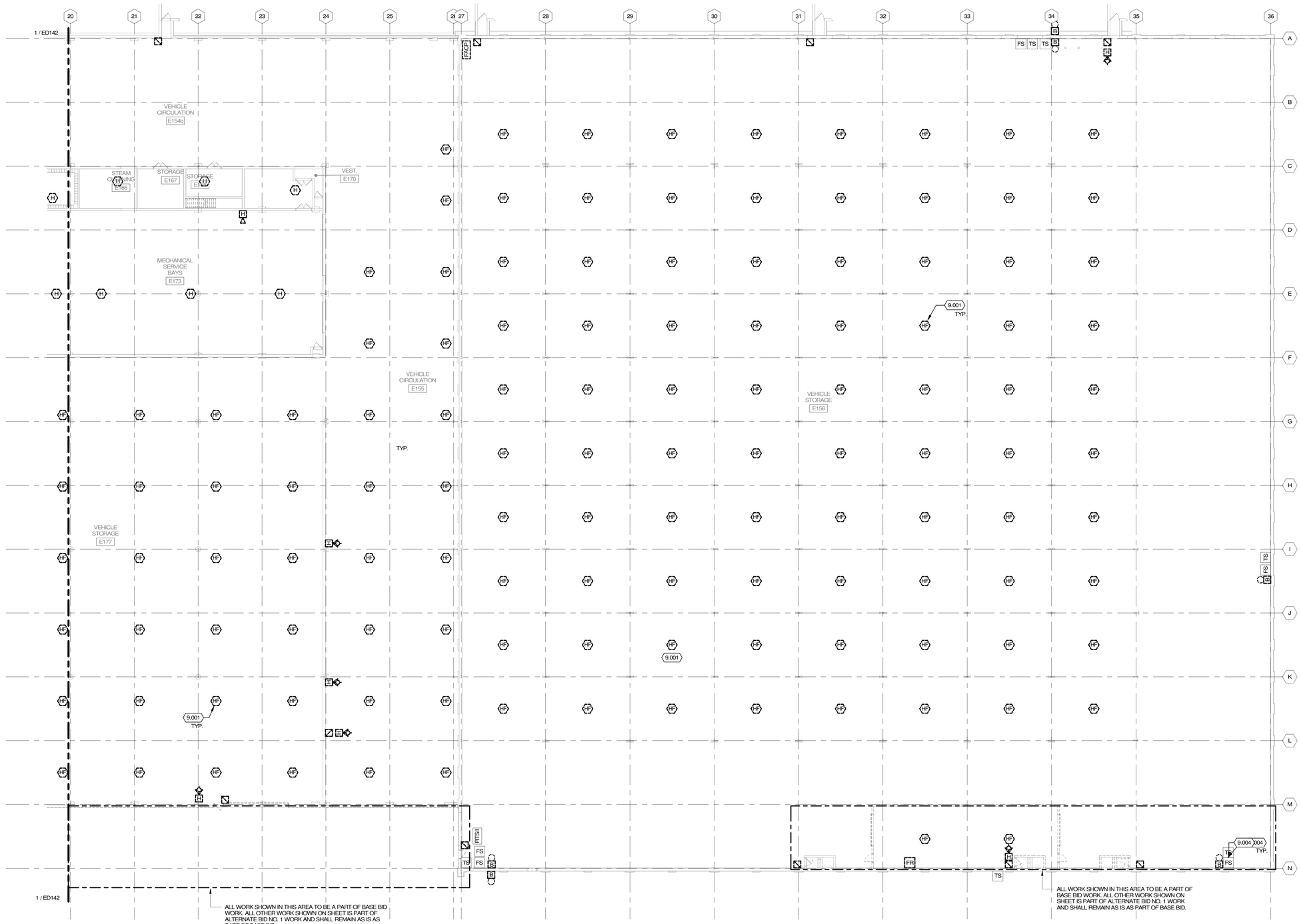

TRUE NORTH PLAN NORTH

1 FIRST FLOOR FIRE ALARM DEMOLITION PLAN - EAST

1/16" = 1'-0"

KEYED NOTES

9.001 EXISTING HEAT DETECTORS IN THIS AREA TO BE REMOVED, INCLUDING ALL WIRING BACK TO SOURCE, INCLUDING RACEWAY AND BACK BOXES.

9.004 EC SHALL DISCONNECT AND REMOVE ALL WIREWAY BACK TO SOURCE. DEVICES ARE TO BE MAINTAINED IN PLACE FOR NEW CONNECTION AS SHOWN ON 1/E-141 & 1/E-142.

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SHEET CONTENTS
FIRST FLOOR FIRE ALARM DEMOLITION PLAN - EAST

SHEET NO.:

ED141

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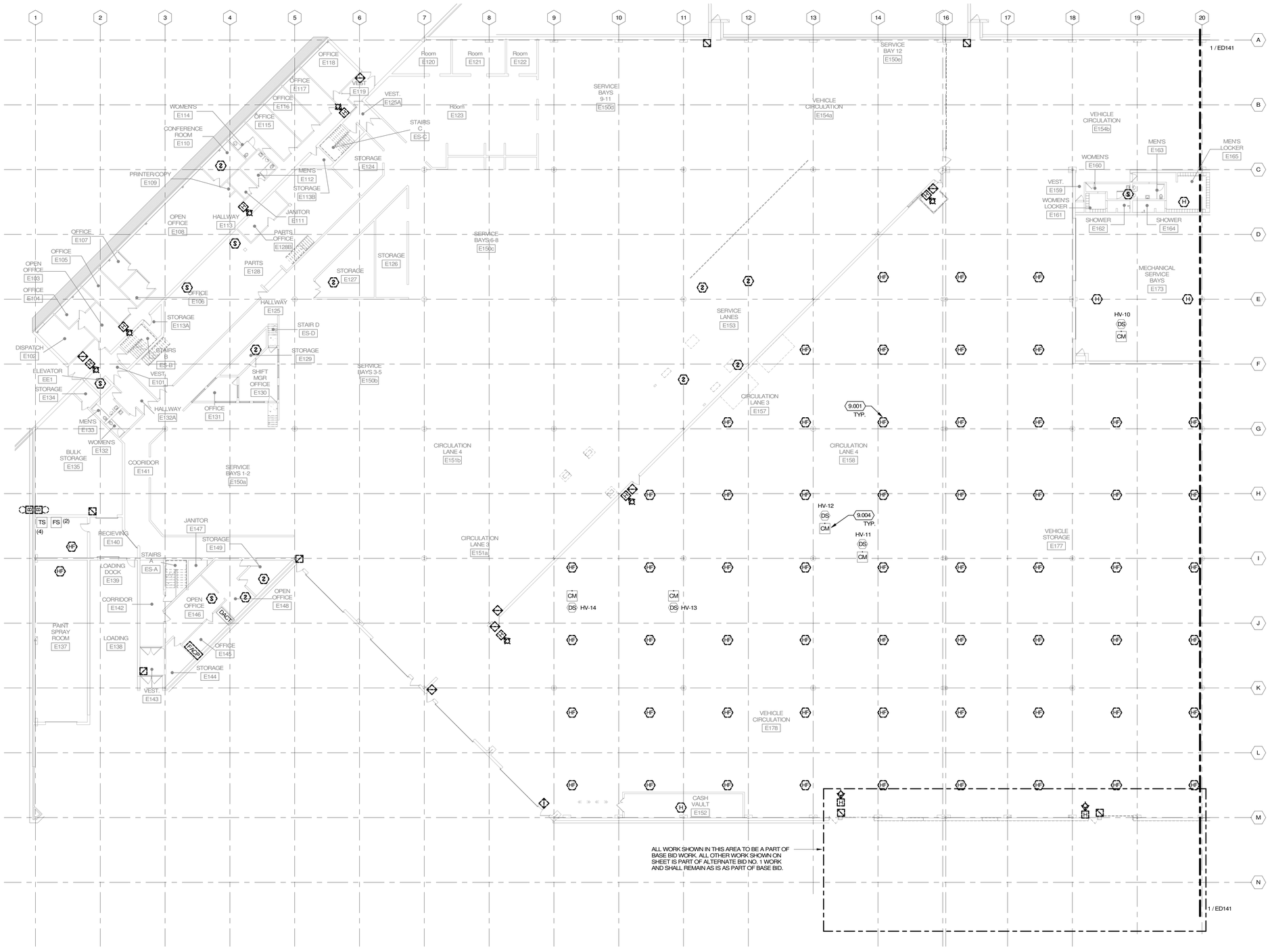

TRUE NORTH PLAN NORTH

1 FIRST FLOOR FIRE ALARM DEMOLITION PLAN - WEST

1/16" = 1'-0"

KEYED NOTES

9.001 EXISTING HEAT DETECTORS IN THIS AREA TO BE REMOVED, INCLUDING ALL WIRING BACK TO SOURCE. INCLUDING RACEWAY AND BACK BOXES.

9.004 EC SHALL DISCONNECT AND REMOVE ALL WIREWAY BACK TO SOURCE. DEVICES ARE TO BE MAINTAINED IN PLACE FOR NEW CONNECTION AS SHOWN ON 1/E-141 & 1/E-142.

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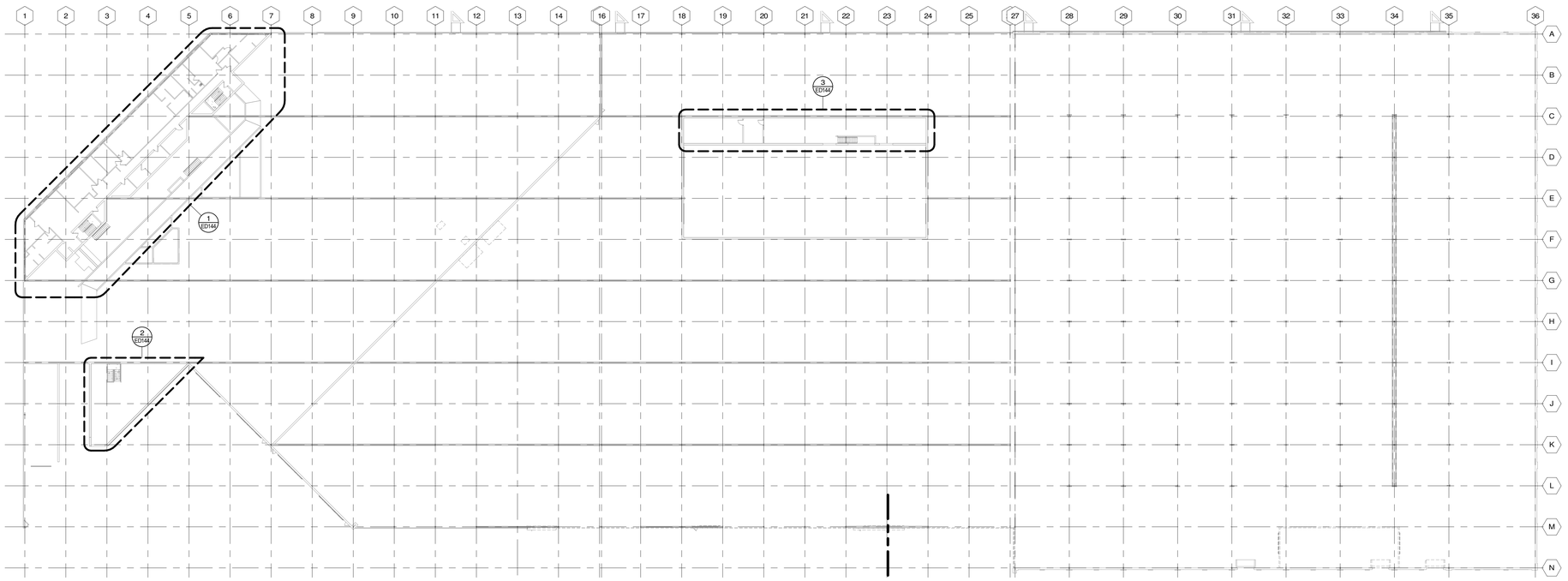
SHEET CONTENTS
FIRST FLOOR FIRE ALARM DEMOLITION PLAN - WEST

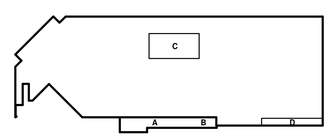
SHEET NO.:

ED142



TRUE NORTH PLAN NORTH

1 OVERALL SECOND FLOOR FIRE ALARM DEMOLITION PLAN
1/32" = 1'-0"



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SHEET CONTENTS
OVERALL SECOND FLOOR FIRE ALARM DEMOLITION PLAN

SHEET NO.:

ED143

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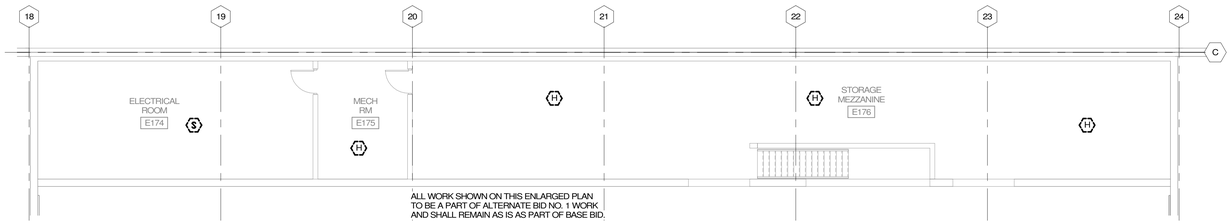
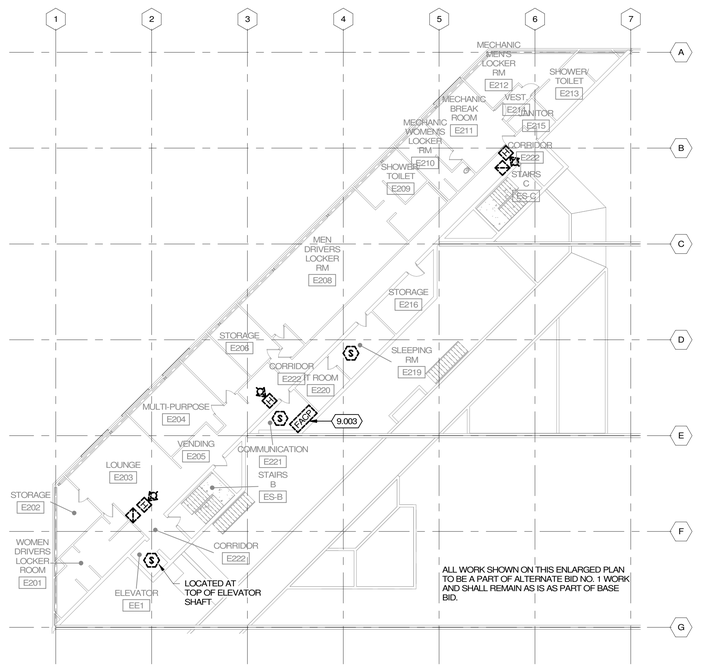


TRUE NORTH PLAN NORTH

3 SECOND FLOOR FIRE ALARM DEMOLITION PLAN - MAINTENANCE MEZZANINE

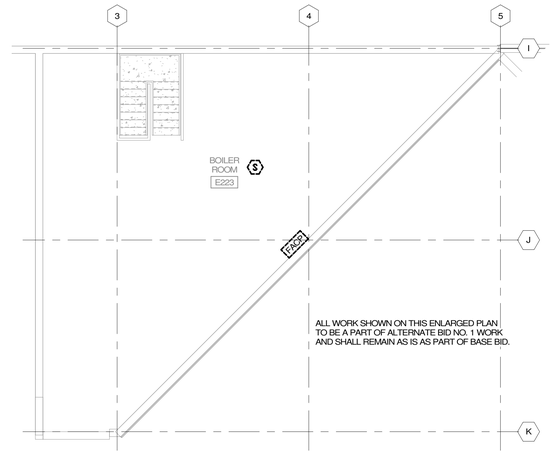
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

1 SECOND FLOOR FIRE ALARM DEMOLITION PLAN - ADMIN AREA

1/16" = 1'-0"



TRUE NORTH PLAN NORTH

2 SECOND FLOOR FIRE ALARM DEMOLITION PLAN - BOILER ROOM

1/8" = 1'-0"

KEYED NOTES

9.003 DISCONNECT AND REMOVE ABANDON CABINET AND UNUSED WIRING BACK TO SOURCE.

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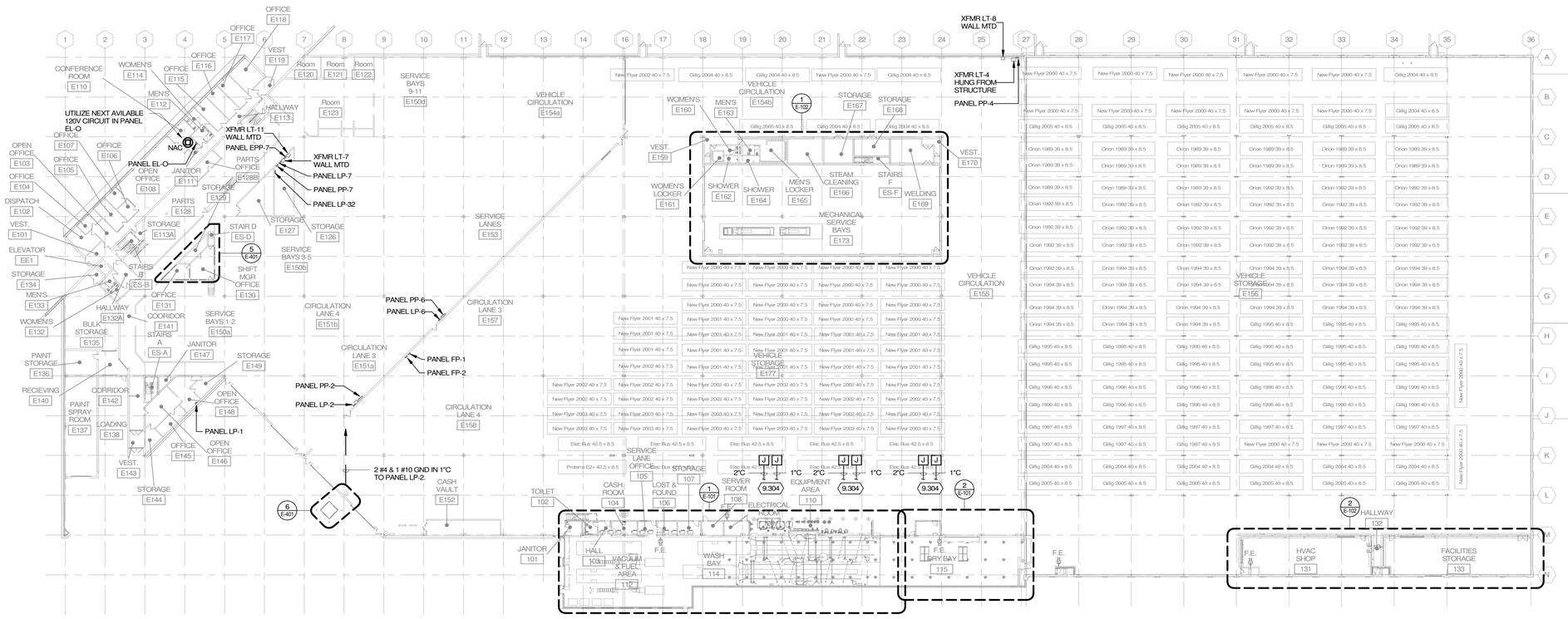
SHEET CONTENTS:
SECOND FLOOR FIRE ALARM DEMOLITION PLAN - ENLARGED PLANS

SHEET NO.:

ED144



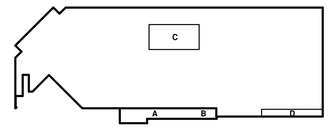
TRUE NORTH PLAN NORTH

1 OVERALL FIRST FLOOR POWER PLAN

1/32" = 1'-0"

KEYED NOTES

9.304 PROVIDE 2"C FOR FUTURE DC POWER AND 1"C FOR FUTURE 24VDC CONTROL WIRING. EXTEND FROM 24" X 30" X 6" JUNCTION BOX TO EACH RESPECTIVE JUNCTION BOX FOR DISPENSING UNITS AS SHOWN ON E-100. EC TO COORDINATE EXACT LOCATION WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.



KEY PLAN

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CITY OF MADISON
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SHEET CONTENTS
OVERALL FIRST FLOOR POWER PLAN

SHEET NO.:
E-100

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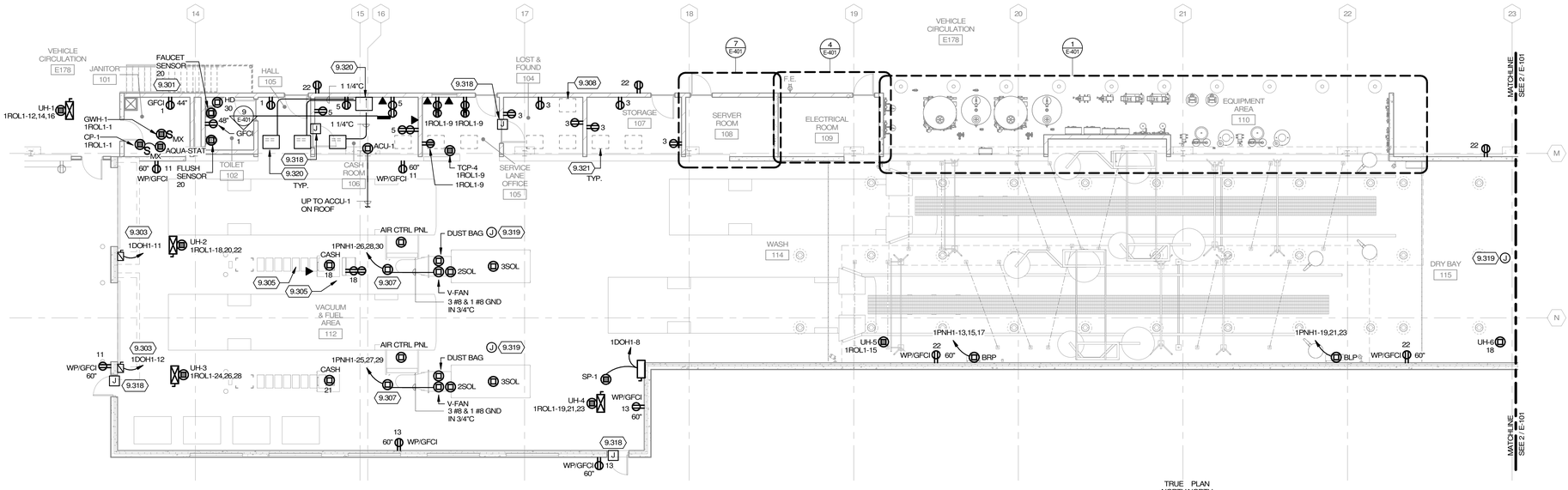


TRUE NORTH PLAN NORTH **1** **FIRST FLOOR POWER PLAN - AREA A**
1/8" = 1'-0"

TRUE NORTH PLAN NORTH **2** **FIRST FLOOR POWER PLAN - AREA B**
1/8" = 1'-0"

TRUE NORTH PLAN NORTH **3** **EQUIPMENT MEZZANINE POWER PLAN**
1/4" = 1'-0"

POWER GENERAL NOTES:

1. ALL 120V DEVICES TO BE FEED FROM PANEL 1RNL1 UNLESS NOTED OTHERWISE.
2. IN ROOMS 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.

KEYED NOTES

9.301 HARDWIRED ELECTRONIC FAUCET & FLUSH. FIELD COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.

9.303 EC TO PROVIDE AND INSTALL FUSED DISCONNECT. COORDINATE LOCATION OF DISCONNECT WITH DOOR INSTALLER. ALL WIRING & CONDUIT FROM DISCONNECT TO CONTROL PANEL AND DOOR MOTOR, CONTROL PANEL, JUNCTION BOXES AND DOOR MOTORS TO BE PROVIDED AND INSTALLED BY DOOR INSTALLER.

9.304 PROVIDE 2"C FOR FUTURE DC POWER AND 1"C FOR FUTURE 24VDC CONTROL WIRING. EXTEND FROM 24" X 30" X 6" JUNCTION BOX TO EACH RESPECTIVE JUNCTION BOX FOR DISPENSING UNITS AS SHOWN ON E-100. EC TO COORDINATE EXACT LOCATION WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.

9.305 PROVIDE FLOOR MOUNTED CHANNEL SUPPORTS 24" AFF FOR MOUNTING RECEPTACLE AND TECHNOLOGY ROUGH-IN FOR PODIUM. COORDINATE EXACT LOCATION OF PODIUM WITH OWNER PRIOR TO ROUGH-IN.

9.307 VACUUM SYSTEM CONTROLLER. EC TO PROVIDE WIRING FROM CONTROL PANEL TO V-FAN AND DUST BAG. REFER TO EQUIPMENT WIRING SCHEDULE FOR ALL WIRING REQUIREMENTS.

KEYED NOTES

9.308 PROVIDE 4" EMPTY CONDUIT FROM JUNCTION BOX IN CHARGING AREA 201 TO JUNCTION BOX IN BOILER ROOM E223 FOR FUTURE PANEL TO SERVE (3) FUTURE BUS CHARGERS. SIZE J-BOX (2) PER NEC. CONDUIT ROUTING TO BE DETERMINED IN FIELD.

9.314 MOUNT PANEL ON FLOOR MOUNTED CHANNEL SUPPORT.

9.315 CONDUIT TO FLOOR BELOW & TERMINATED IN PULL BOX BELOW FLOOR UNDER POWER CHARGING STATION. PROVIDE 2"C FOR FUTURE DC POWER AND 1"C FOR FUTURE 24VDC CONTROL WIRING. REFER TO 3/E-101 FOR CONDUIT CONTINUATION.

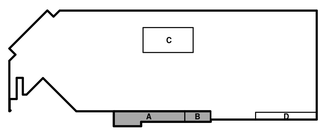
9.318 ACCESS CONTROL ROUGH-IN. REFER TO DETAIL 3/E-501.

9.319 SECURITY CAMERA ROUGH-IN. REFER TO DETAIL 4/E-501 & 5/E-501.

9.320 24" X 30" X 6" PULL BOX MOUNTED AT CEILING.

9.321 FUTURE JUNCTION BOX LOCATION FOR FUTURE BUS POWER CHARGING STATIONS. COORDINATE LIGHTING, CONDUIT AND EQUIPMENT WITH FUTURE JUNCTION BOX LOCATION.

9.322 TERMINATE CONDUIT IN THE BOTTOM OF POWER CHARGING STATION. EXTEND (2) 2" CONDUIT AND (1) 1" CONDUIT 3" ABOVE FINISHED FLOOR.



KEY PLAN

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

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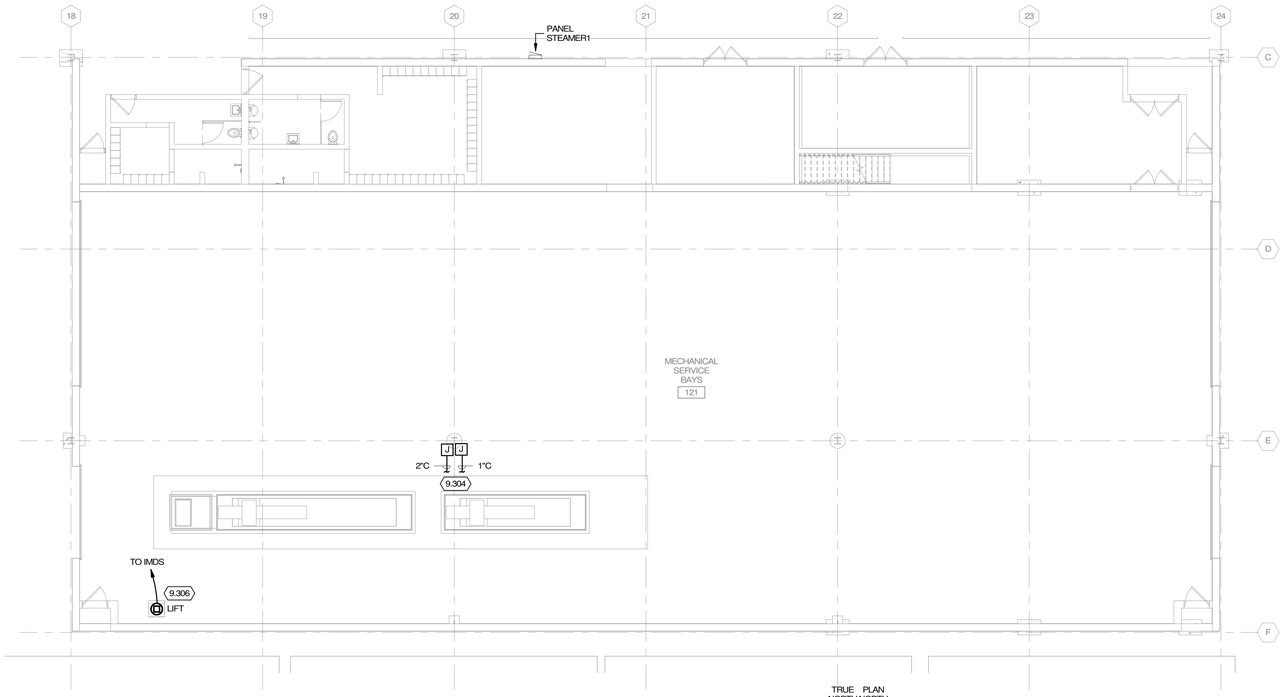
SHEET CONTENTS
FIRST FLOOR POWER PLAN - AREAS A & B

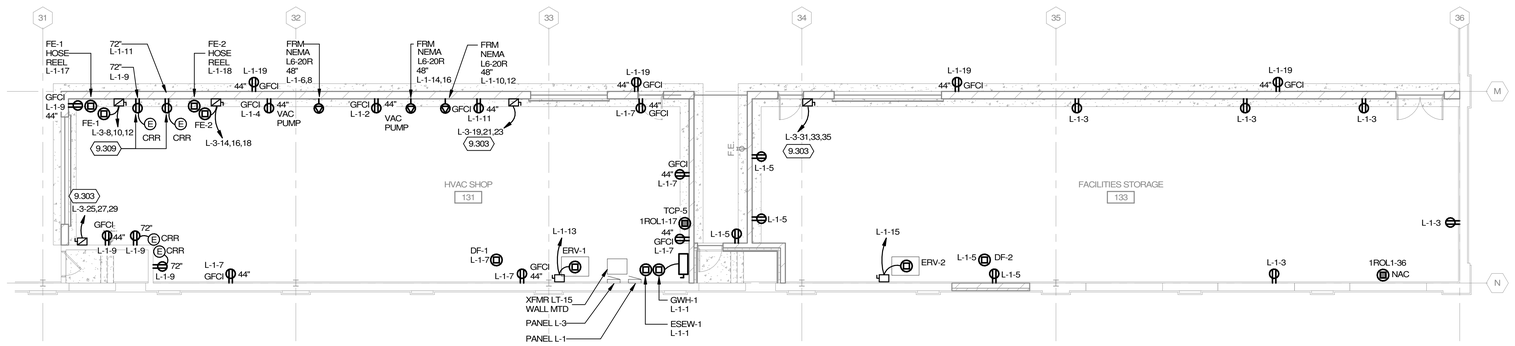
SHEET NO.:
E-101



TRUE NORTH PLAN NORTH

FIRST FLOOR POWER PLAN - AREA C

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

FIRST FLOOR POWER PLAN - AREA D

1/8" = 1'-0"

POWER GENERAL NOTES:

1. ALL 120V DEVICES TO BE FEED FROM PANEL 1RNL1 UNLESS NOTED OTHERWISE.
2. IN ROOMS 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.

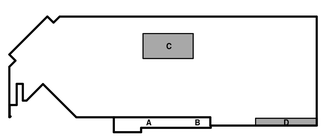
KEYED NOTES

9.303 EC TO PROVIDE AND INSTALL FUSED DISCONNECT. COORDINATE LOCATION OF DISCONNECT WITH DOOR INSTALLER. ALL WIRING & CONDUIT FROM DISCONNECT TO CONTROL PANEL AND DOOR MOTOR, CONTROL PANEL, JUNCTION BOXES AND DOOR MOTORS TO BE PROVIDED AND INSTALLED BY DOOR INSTALLER.

9.304 PROVIDE 2"C FOR FUTURE DC POWER AND 1"C FOR FUTURE 24VDC CONTROL WIRING. EXTEND FROM 24" X 30" X 6" JUNCTION BOX TO EACH RESPECTIVE JUNCTION BOX FOR DISPENSING UNITS AS SHOWN ON E-100. EC TO COORDINATE EXACT LOCATION WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.

9.306 LIFT CONTROL PANEL. EC TO COORDINATE EXACT LOCATION WITH LIFT INSTALLER PRIOR TO ROUGH IN. EC TO PROVIDE (1) 3/4" EMPTY CONDUIT FROM CONTROL PANEL TO EACH OF THREE PIT LOCATIONS FOR LIFT CONTROL CABLES. CONDUIT ROUTING COORDINATED WITH LIFT INSTALLER.

9.309 COORDINATE LOCATION OF RECEPTACLE WITH OWNER PRIOR TO ROUGH-IN.



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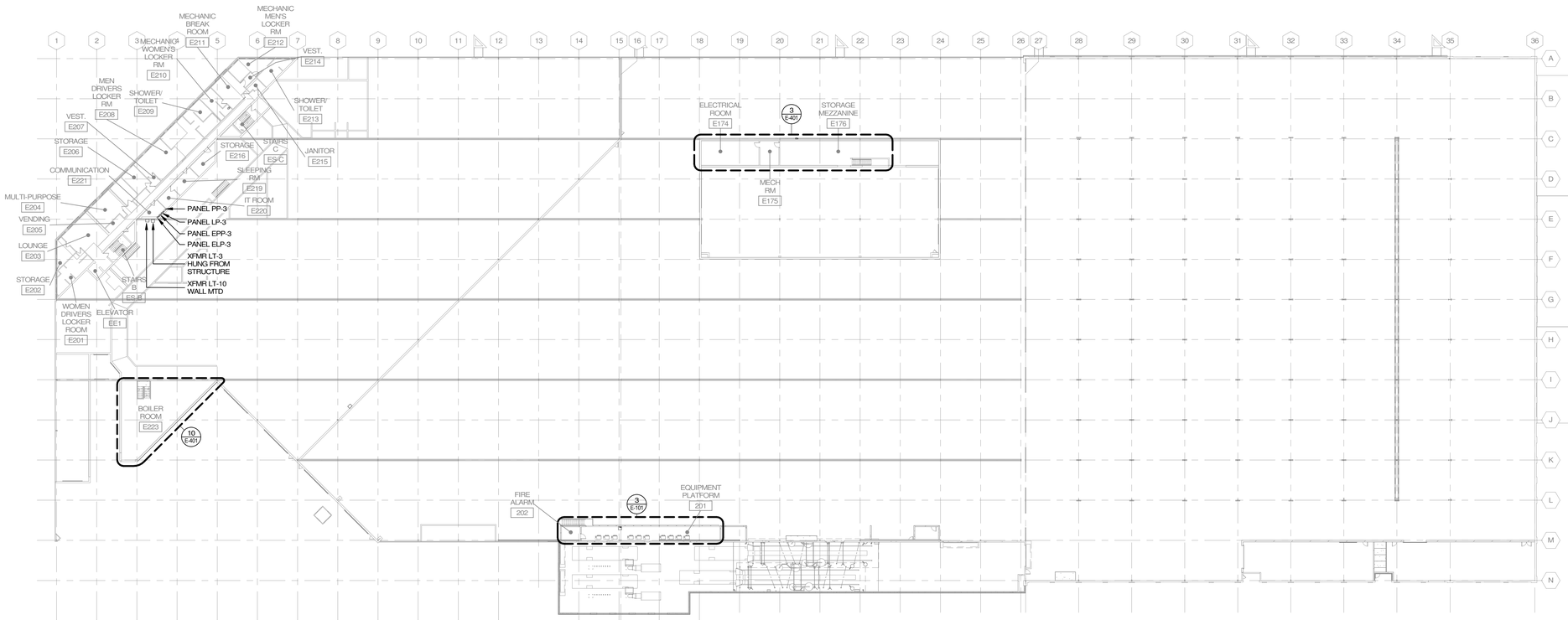
SHEET CONTENTS:
FIRST FLOOR
POWER PLAN -
AREAS C & D

SHEET NO.:

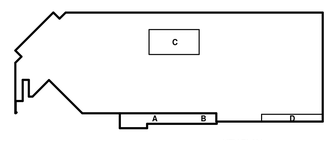
E-102



TRUE NORTH PLAN NORTH

1 OVERALL SECOND FLOOR POWER PLAN

1/32" = 1'-0"



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SHEET CONTENTS
OVERALL SECOND FLOOR POWER PLAN

SHEET NO.:

E-103

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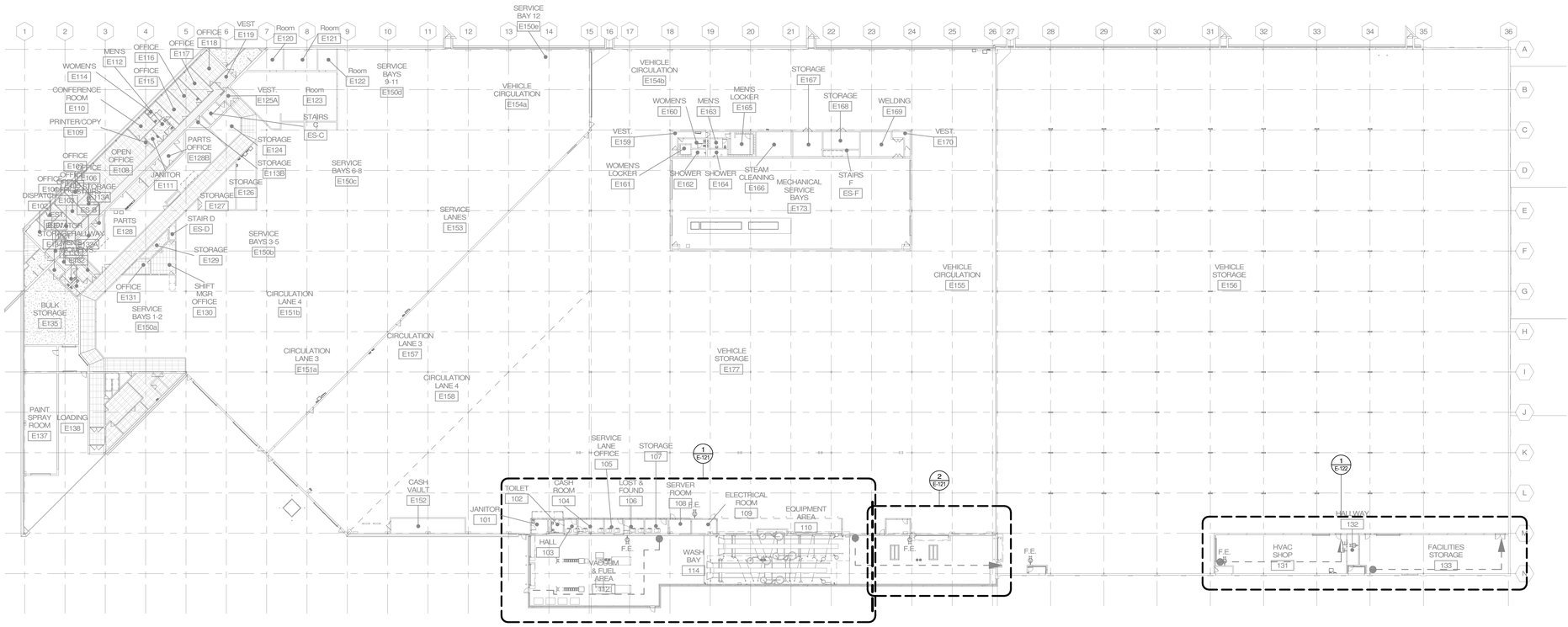
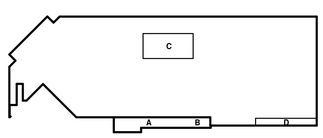


TRUE NORTH PLAN NORTH

1 OVERALL FIRST FLOOR LIGHTING PLAN

1/32" = 1'-0"



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SHEET CONTENTS
OVERALL FIRST FLOOR LIGHTING PLAN

SHEET NO.:

E-120

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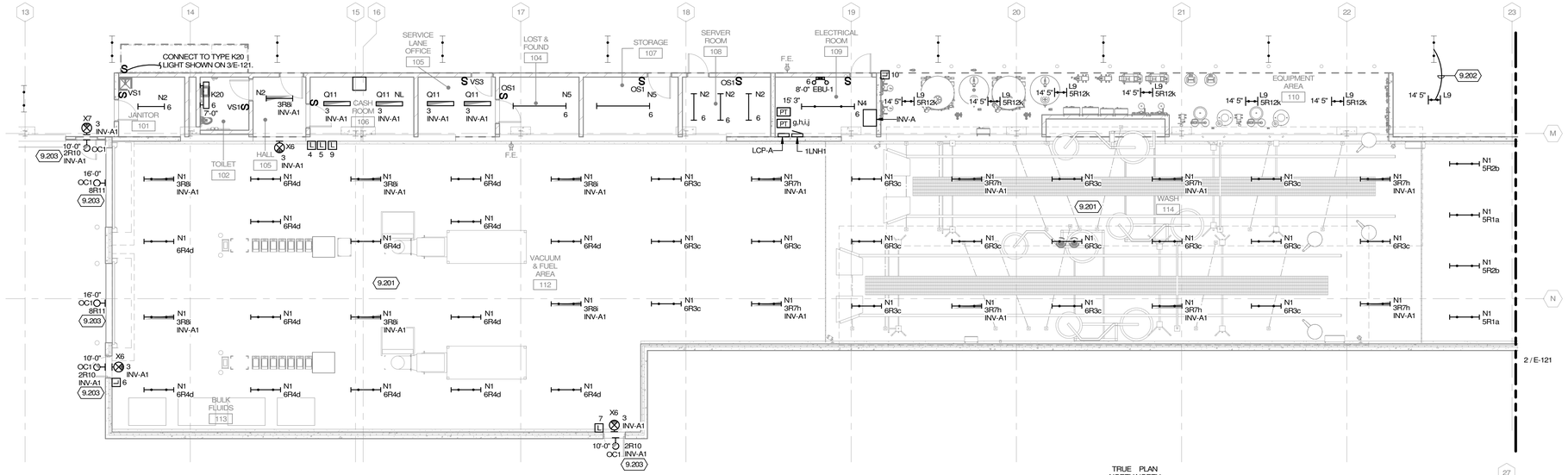
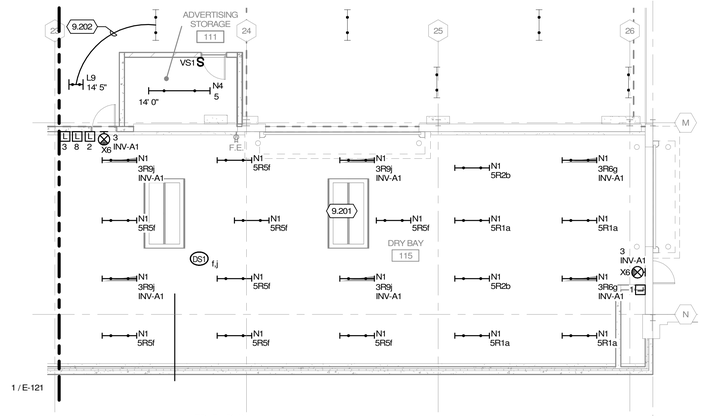


TRUE NORTH PLAN NORTH

FIRST FLOOR LIGHTING PLAN - AREA A

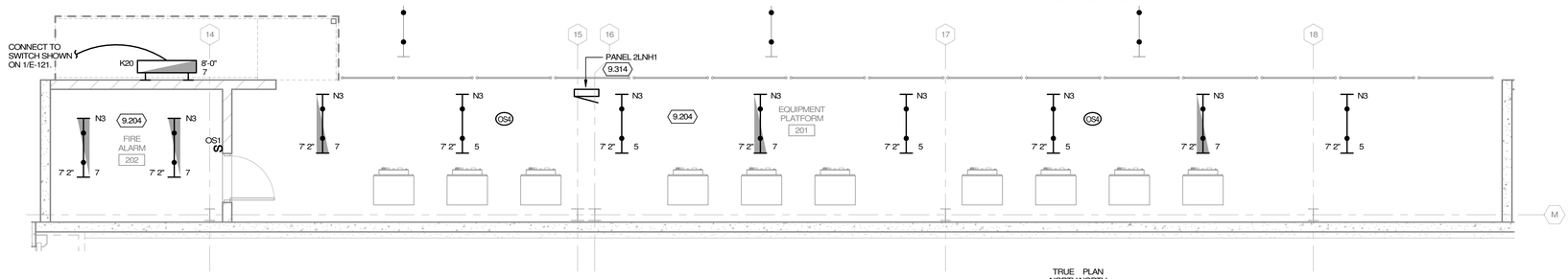
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

FIRST FLOOR LIGHTING PLAN - AREA B

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

EQUIPMENT MEZZANINE LIGHTING PLAN

1/4" = 1'-0"

LIGHTING GENERAL NOTES:

1. IN ROOMS 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.
2. ALL 277V LIGHTING TO BE FEED FROM PANEL 1LNH1 UNLESS NOTED OTHERWISE.

KEYED NOTES

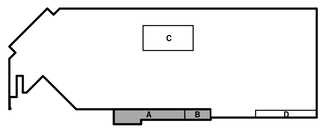
9.201 ALL TYPE N1 LUMINAIRES IN THIS AREA TO BE SUSPENDED 12" DOWN FROM CEILING TO BOTTOM OF FIXTURE. COORDINATE LOCATION OF LUMINAIRES WITH DUCTWORK, PIPING, FUELING, VACUUM & BUS WASH EQUIPMENT PRIOR TO ROUGH-IN.

9.202 EXTEND EXISTING CIRCUITRY AND CONTROLS TO NEW LUMINAIRES.

9.203 LUMINAIRE MOUNTED ON CORRUGATED PANEL, PROVIDE SURFACE BACKBOX AS REQUIRED FOR MOUNTING.

9.204 MOUNT BOTTOM OF LUMINAIRES FLUSH WITH BOTTOM OF BAR JOIST.

9.314 MOUNT PANEL ON FLOOR MOUNTED CHANNEL SUPPORT.



KEY PLAN

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meadhunt.com

KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

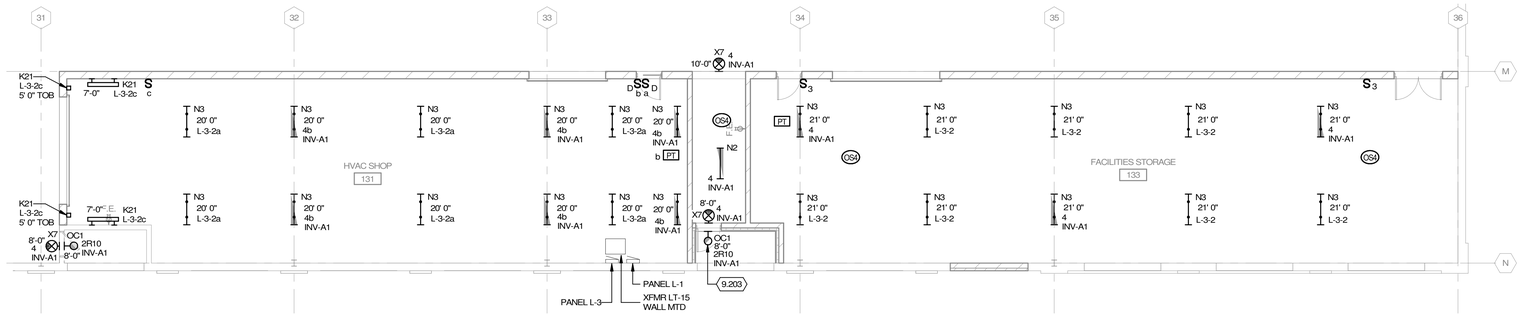
ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
CHECKED BY: ARG/MAM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
FIRST FLOOR LIGHTING PLAN - AREAS A & B

SHEET NO.:

E-121



TRUE NORTH PLAN NORTH

1 FIRST FLOOR LIGHTING PLAN - AREA D

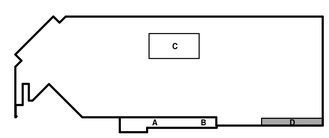
1/8" = 1'-0"

LIGHTING GENERAL NOTES:

1. IN ROOMS 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.
2. ALL 277V LIGHTING TO BE FEED FROM PANEL 1LNH1 UNLESS NOTED OTHERWISE.

KEYED NOTES

9.203 LUMINAIRE MOUNTED ON CORRUGATED PANEL, PROVIDE SURFACE BACKBOX AS REQUIRED FOR MOUNTING.



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SHEET CONTENTS:
FIRST FLOOR LIGHTING PLAN - AREA D

SHEET NO.:
E-122

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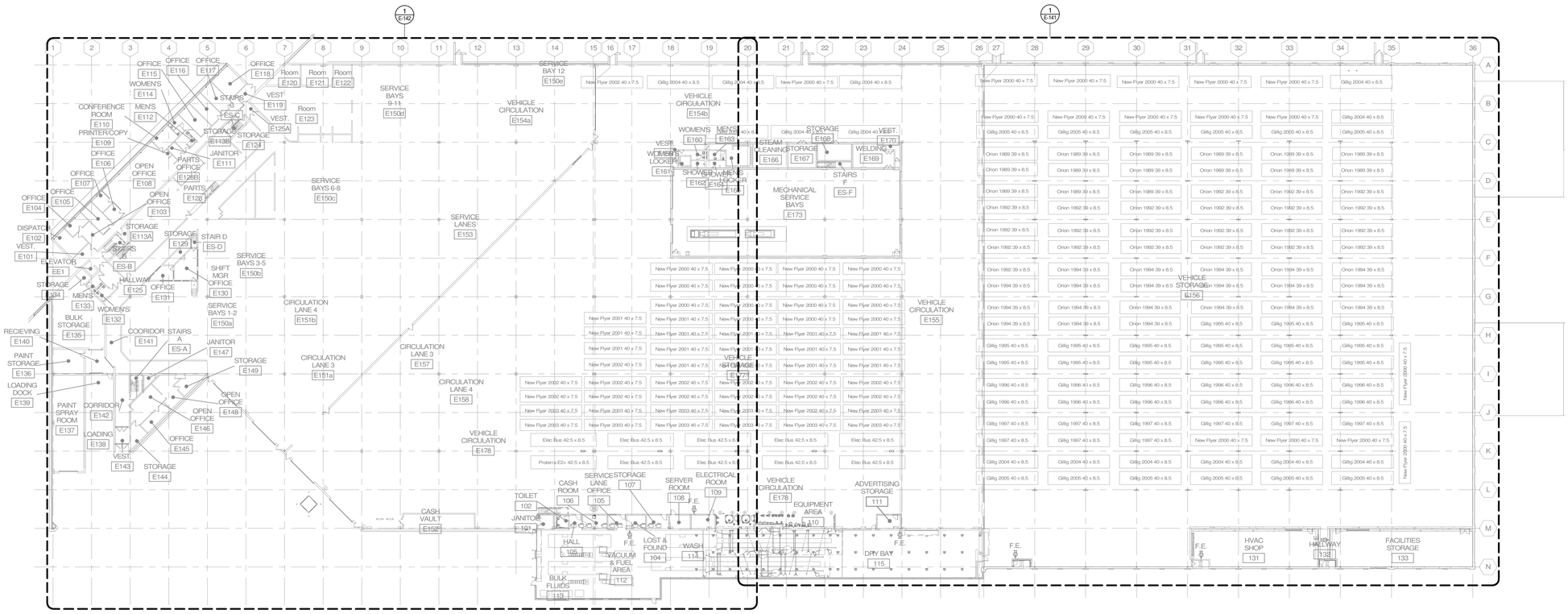
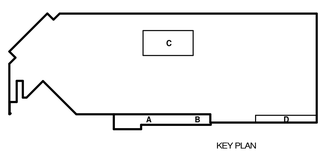


TRUE NORTH PLAN NORTH

1 OVERALL FIRST FLOOR FIRE ALARM PLAN

1/32" = 1'-0"



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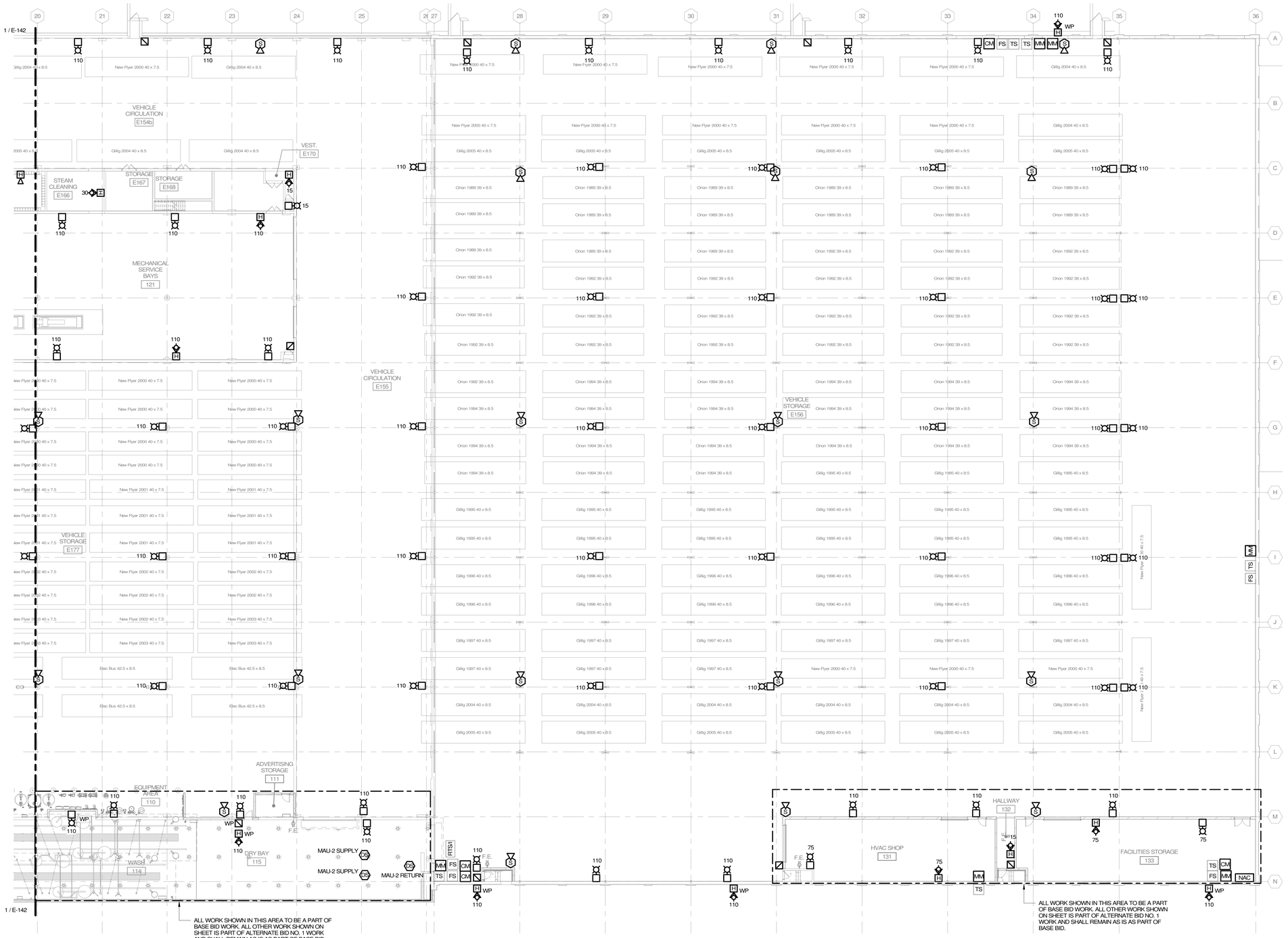
SHEET CONTENTS
OVERALL FIRST FLOOR FIRE ALARM PLAN

SHEET NO.:
E-140



TRUE NORTH PLAN NORTH

1 FIRST FLOOR FIRE ALARM PLAN - EAST

1/16" = 1'-0"

FIRE ALARM GENERAL NOTES:

1. IN ROOM 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.
2. CEILING TYPES FOR FIRST FLOOR ARE SHOWN ON SHEET E-120. CEILING TYPES FOR SECOND FLOOR OTHER THAN EXPOSED TO STRUCTURE ARE NOTED ON 2/E-144.

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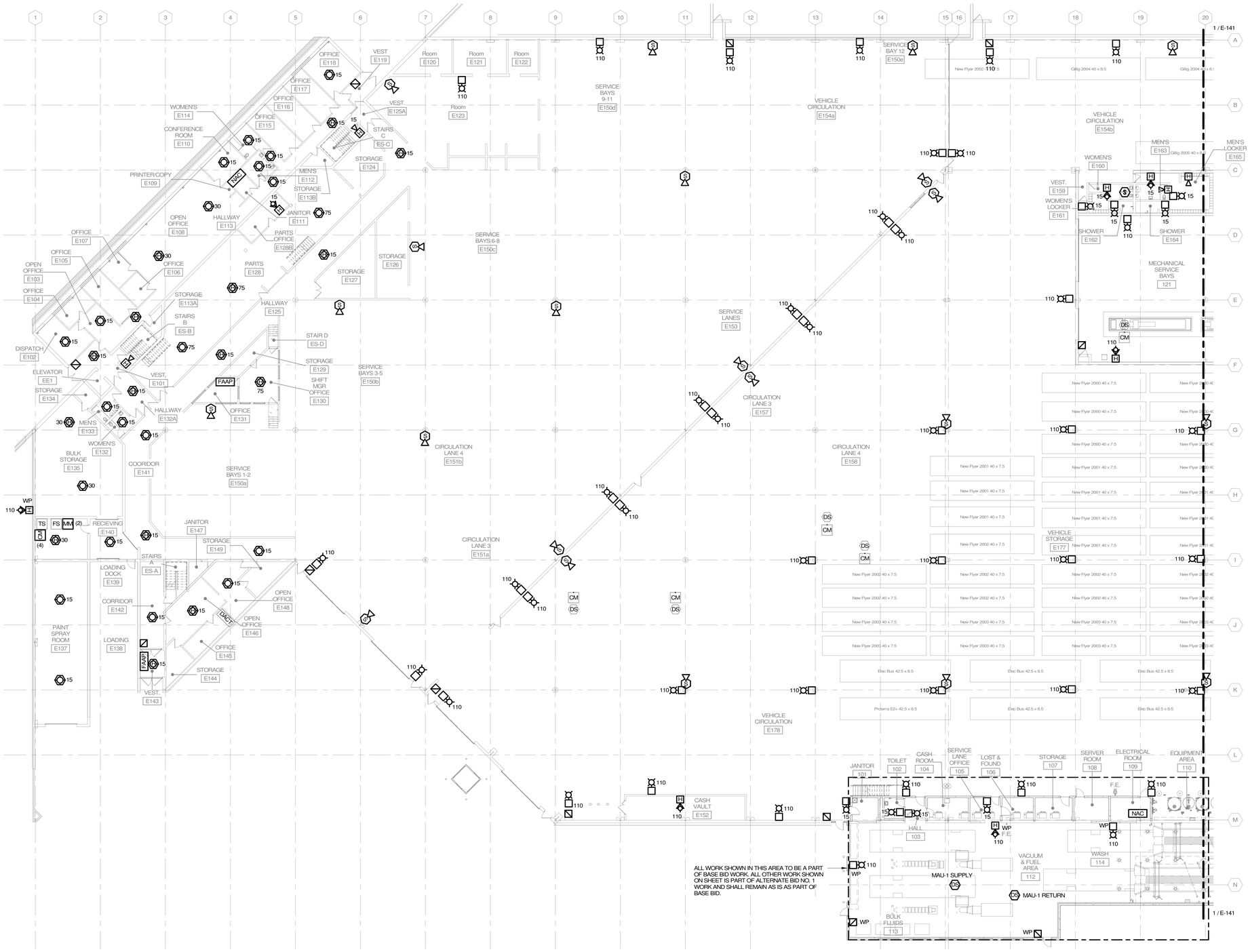
SHEET CONTENTS
FIRST FLOOR FIRE ALARM PLAN - EAST

SHEET NO.:
E-141



TRUE NORTH PLAN NORTH

1 FIRST FLOOR FIRE ALARM PLAN - WEST

1/16" = 1'-0"

FIRE ALARM GENERAL NOTES:

1. IN ROOM 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.
2. CEILING TYPES FOR FIRST FLOOR ARE SHOWN ON SHEET E-120. CEILING TYPES FOR SECOND FLOOR OTHER THAN EXPOSED TO STRUCTURE ARE NOTED ON 2/E-144.

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SHEET CONTENTS
FIRST FLOOR FIRE ALARM PLAN - WEST

SHEET NO.:
E-142

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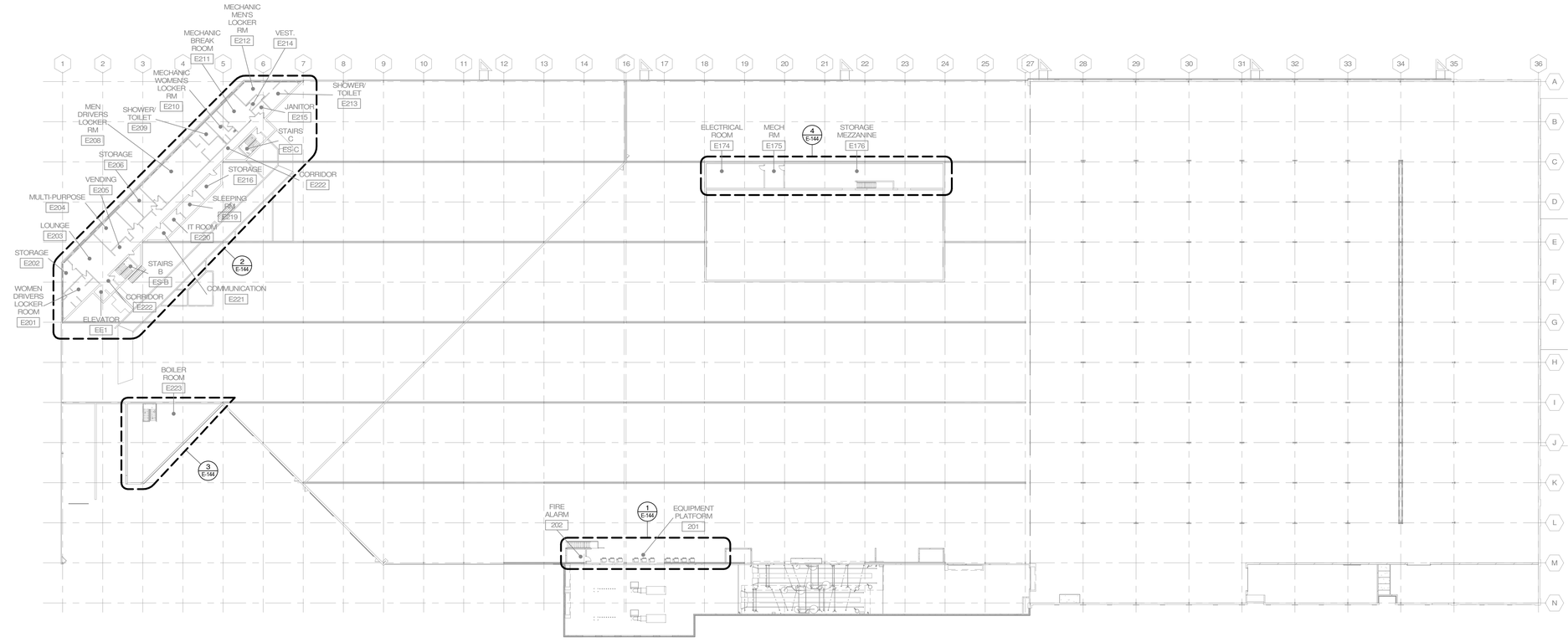


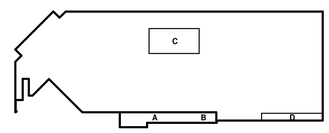
TRUE NORTH PLAN NORTH

1 OVERALL SECOND FLOOR FIRE ALARM PLAN

1/32" = 1'-0"

FIRE ALARM GENERAL NOTES:

1. IN ROOM 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.
2. CEILING TYPES FOR FIRST FLOOR ARE SHOWN ON SHEET E-120. CEILING TYPES FOR SECOND FLOOR OTHER THAN EXPOSED TO STRUCTURE ARE NOTED ON 2/E-144.



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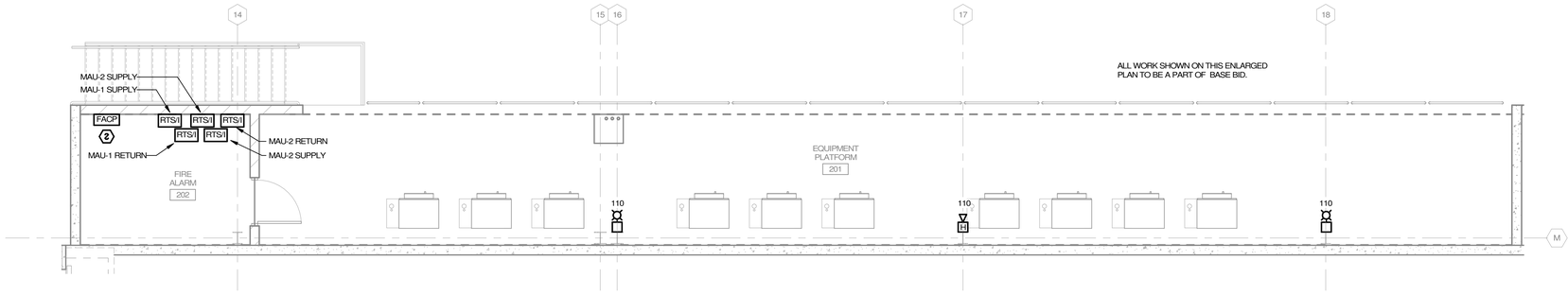
SHEET CONTENTS
OVERALL SECOND FLOOR FIRE ALARM PLAN

SHEET NO.:
E-143

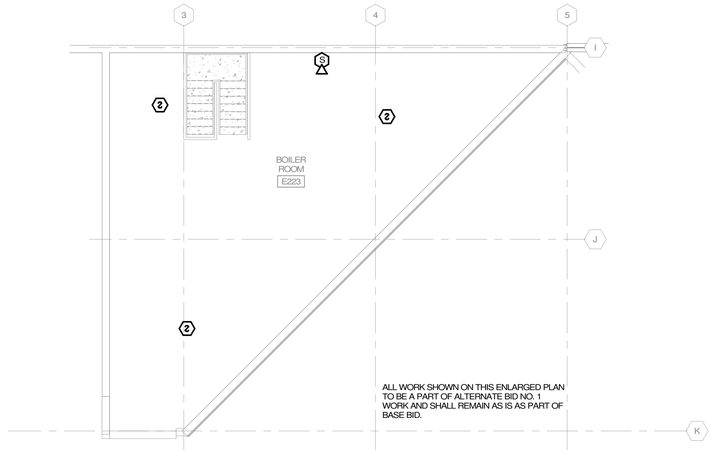
1/10/2019 4:09:13 PM C:\Revit Local\4503500-170148.02-E-Central-2018_NateDaMaster.rvt



TRUE NORTH PLAN NORTH

1 EQUIPMENT MEZZANINE FIRE ALARM PLAN

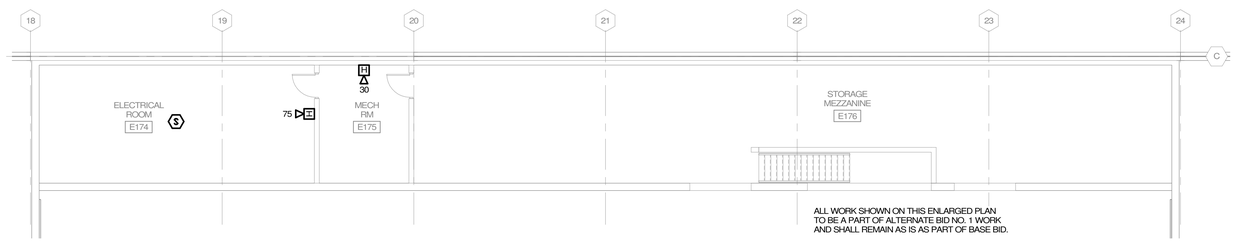
1/4" = 1'-0"



TRUE NORTH PLAN NORTH

3 SECOND FLOOR FIRE ALARM PLAN - BOILER ROOM

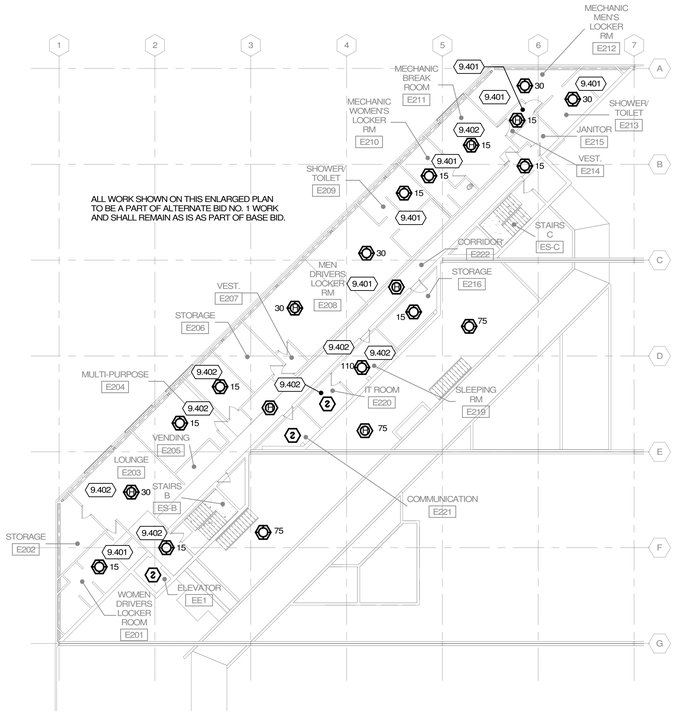
1/8" = 1'-0"



TRUE NORTH PLAN NORTH

4 SECOND FLOOR FIRE ALARM PLAN - MAINTENANCE MEZZANINE

1/8" = 1'-0"



TRUE NORTH PLAN NORTH

2 SECOND FLOOR FIRE ALARM PLAN - OFFICE AREA

1/16" = 1'-0"

FIRE ALARM GENERAL NOTES:

1. IN ROOM 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.
2. CEILING TYPES FOR FIRST FLOOR ARE SHOWN ON SHEET E-120. CEILING TYPES FOR SECOND FLOOR OTHER THAN EXPOSED TO STRUCTURE ARE NOTED ON 2/E-144.

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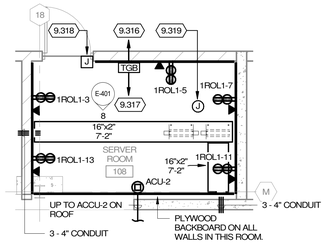
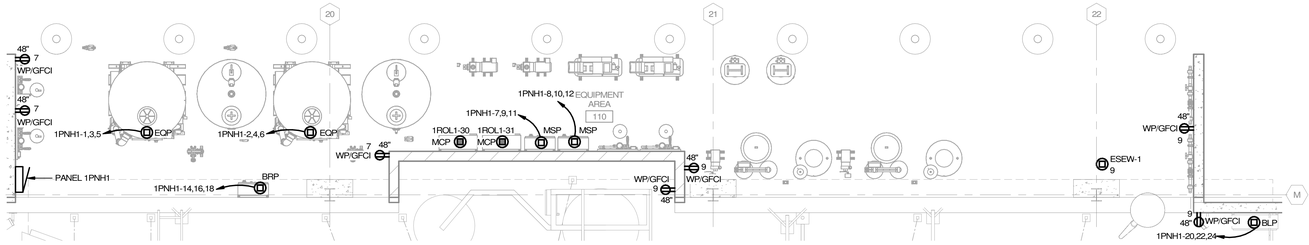
SHEET CONTENTS
SECOND FLOOR FIRE ALARM PLAN - ENLARGED PLANS

SHEET NO.:

E-144

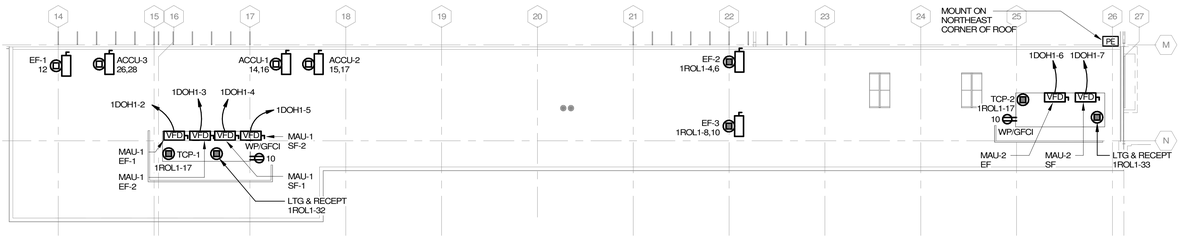


TRUE NORTH PLAN NORTH N 7 **ENLARGED SERVER ROOM**
1/4" = 1'-0"

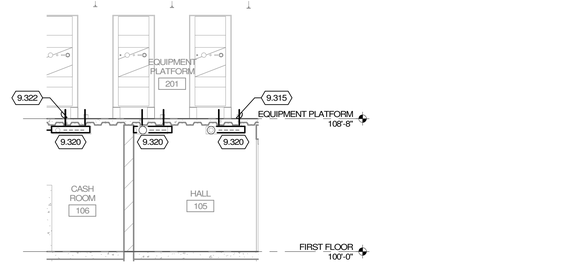


TRUE NORTH PLAN NORTH N 1 **ENLARGED EQUIPMENT AREA**
1/4" = 1'-0"

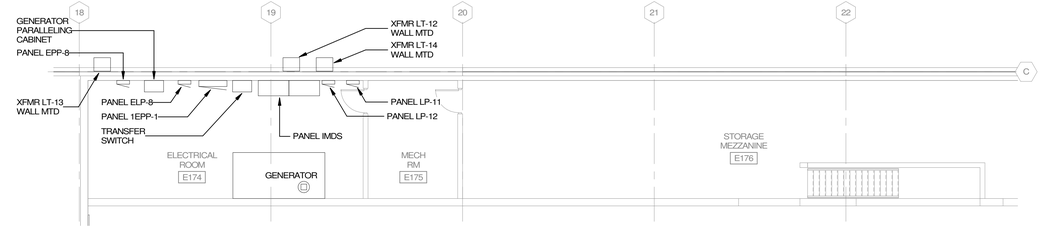
TRUE NORTH PLAN NORTH N 8 **SERVER ROOOM ELEVATION**
1/4" = 1'-0"



TRUE NORTH PLAN NORTH N 2 **ROOF POWER PLAN - AREAS A & B**
1/16" = 1'-0"

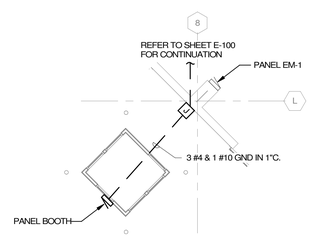


TRUE NORTH PLAN NORTH N 9 **BUS POWER CHARGING STATION CONDUIT FEED SECTION**
1/4" = 1'-0"

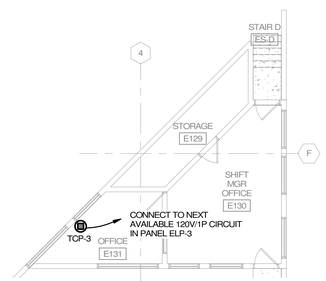


TRUE NORTH PLAN NORTH N 3 **ENLARGED ELECTRICAL ROOM E174**
1/8" = 1'-0"

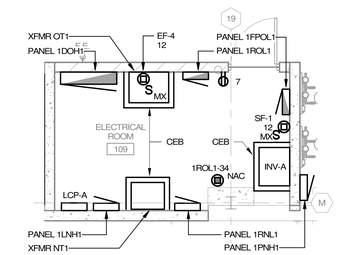
TRUE NORTH PLAN NORTH N 10 **ENLARGED BOILER ROOM**
1/8" = 1'-0"



TRUE NORTH PLAN NORTH N 6 **ENLARGED PARKING ATTENDANT BOOTH POWER PLAN**
1/8" = 1'-0"



TRUE NORTH PLAN NORTH N 5 **ENLARGED POWER PLAN**
1/8" = 1'-0"



TRUE NORTH PLAN NORTH N 4 **ENLARGED ELECTRICAL ROOM POWER PLAN**
1/4" = 1'-0"

POWER GENERAL NOTES:

1. ALL 120V DEVICES TO BE FEED FROM PANEL 1RNL1 UNLESS NOTED OTHERWISE.
2. IN ROOMS 112, 114 & 115 EC TO MINIMIZE UNDERFLOOR PENETRATIONS AND RUN CONDUIT OVER HEAD WHENEVER POSSIBLE.

KEYED NOTES

9.308 PROVIDE 4" EMPTY CONDUIT FROM JUNCTION BOX IN CHARGING AREA 201 TO JUNCTION BOX IN BOILER ROOM E223 FOR FUTURE PANEL TO SERVE (3) FUTURE BUS CHARGERS. SIZE J-BOX (2) PER NEC. CONDUIT ROUTING TO BE DETERMINED IN FIELD.

9.312 MOUNT ENCLOSED BREAKER ON FLOOR MOUNTED CHANNEL SUPPORT.

9.315 CONDUIT TO FLOOR BELOW & TERMINATED IN PULL BOX BELOW FLOOR UNDER POWER CHARGING STATION. PROVIDE 2"C FOR FUTURE DC POWER AND 1"C FOR FUTURE 24VDC CONTROL WIRING. REFER TO 3/E-101 FOR CONDUIT CONTINUATION.

KEYED NOTES

9.316 ROUTE 4/0 GND BACK TO "MAIN" IN BOILER ROOM E223 AS SHOWN ON 9/E-401.

9.317 BOND ALL RACKS TO TGB WITH #6 AWG COPPER CONDUCTOR.

9.318 ACCESS CONTROL ROUGH-IN. REFER TO DETAIL 3/E-501.

9.319 SECURITY CAMERA ROUGH-IN. REFER TO DETAIL 4/E-501 & 5/E-501.

9.320 24" X 30" X 6" PULL BOX MOUNTED AT CEILING.

9.322 TERMINATE CONDUIT IN THE BOTTOM OF POWER CHARGING STATION. EXTEND (2) 2" CONDUIT AND (1) 1" CONDUIT 3" ABOVE FINISHED FLOOR.

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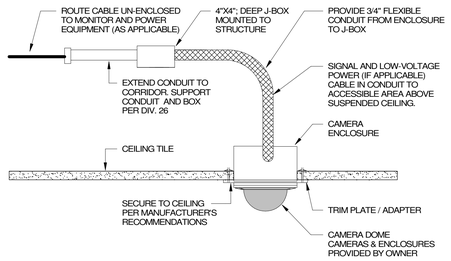
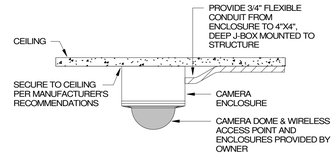
SHEET CONTENTS
ENLARGED PLANS, ELEVATIONS & SECTIONS

SHEET NO.:
E-401

1/10/2019 4:09:30 PM C:\Revit Local\4503500-170148.02-E-Central-2018_NateDeMaster.rvt

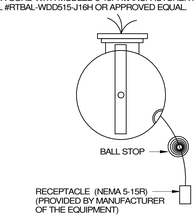


4 CAMERA DOME & WIRELESS ACCESS POINT INTERIOR CEILING
NO SCALE

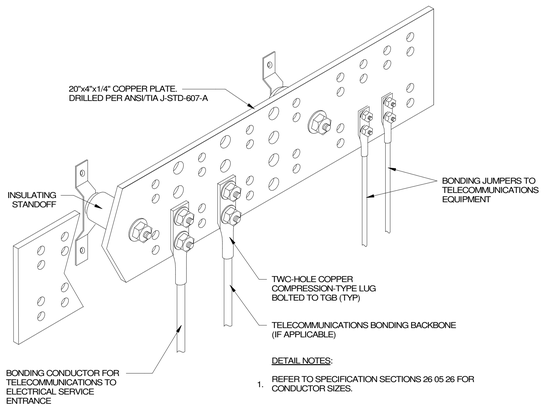


5 CAMERA DOME & WIRELESS ACCESS POINT INTERIOR CEILING - SURFACE
NO SCALE

CONTINUOUS (360 DEGREE) SWIVEL GROUNDED RETRACTABLE POWER CORD W/ SINGLE RECEPTACLE ON END. FURNISHED W/ 12 FT OF 16-3 SJO CORD (2 CONDUCTORS PLUS GROUND) ENCLOSED STEEL CONSTRUCTION, UL LISTED, LOCKING RATCHET TO HOLD CORD AT DESIRED LENGTH. 6'-0" FEEDER CORD WITH MODLED 5-15P. MANUFACTURER KH INDUSTRIES MODEL #RTBAL-WDD515-J16H OR APPROVED EQUAL.



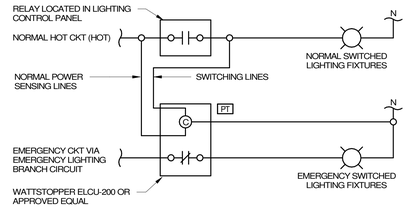
6 RETRACTABLE RECEPTACLE DETAIL
NO SCALE



DETAIL NOTES:

1. REFER TO SPECIFICATION SECTIONS 26 05 26 FOR CONDUCTOR SIZES.

7 TELECOMMUNICATIONS GROUND BAR DETAIL
NO SCALE



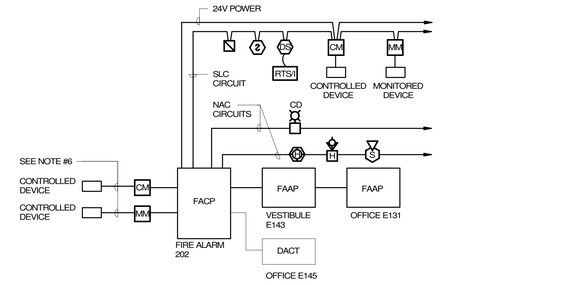
NOTES:

1. WIRE COMPLETE PER MANUFACTURERS WIRING DIAGRAM.
2. DIAGRAMS INDICATE CONTROL INTENT ONLY. REFER TO FLOOR PLANS FOR DEVICE AND FIXTURE QUANTITIES. PROVIDE ONE (1) TRANSFER DEVICE PER 20A BRANCH CIRCUIT.
3. EMERGENCY LIGHTING TRANSFER DEVICE SHALL MONITOR THE UNSWITCHED NORMAL POWER CIRCUIT THAT IS CONNECTED TO. UPON LOSS OF NORMAL POWER, DEVICE SHALL FORCE ON EMERGENCY POWER AND TURN ON ALL FIXTURES SERVED FROM EMERGENCY CIRCUIT UNLESS NOTED OTHERWISE. RATED 120/277VAC, 20A, UL 924 AND 5 YEAR WARRANTY.
4. MOUNT EMERGENCY TRANSFER DEVICE ADJACENT TO FIXTURE AS SHOWN OR AT CONTRACTOR OPTION MOUNT ADJACENT TO PANEL 1LNH1

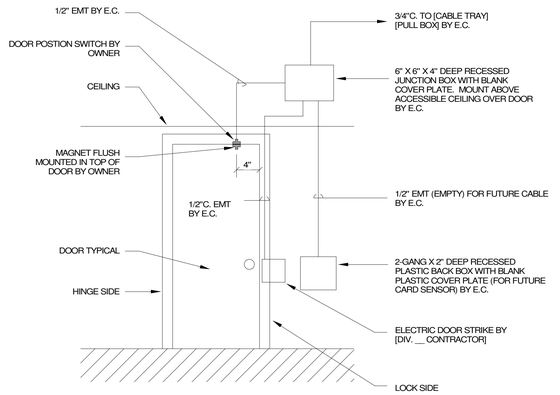
1 EMERGENCY TRANSFER DEVICE LIGHTING CONTROL DIAGRAM
NO SCALE

FIRE ALARM NOTES:

1. ALL DETECTION AND ALARM CIRCUITS SHALL BE OF THE SUPERVISED CLASS B, STYLE B FOR INITIATING CIRCUITS AND A SUPERVISED CLASS B, STYLE Y FOR NOTIFICATION APPLIANCE CIRCUITS.
2. IF NOTIFICATION APPLIANCE CIRCUIT (NAC) POWER SUPPLIES ARE REQUIRED, LOCATIONS SHALL BE APPROVED BY THE ENGINEER AND SHALL BE ACCESSIBLE TO THE FIRE DEPARTMENT. PROVIDE SMOKE DETECTOR (NOT SHOWN ON FLOOR PLANS) AT EACH NAC POWER SUPPLY LOCATION UNLESS THE ROOM IS COVERED BY AREA SMOKE DETECTION.
3. SEE PLANS FOR SPECIFIC CANDELA (CD) RATINGS ON NOTIFICATION APPLIANCES
4. ALL JUNCTION, TERMINAL, AND PULLING BOXES AND COVERS SHALL BE PAINTED RED AND SHALL BE IDENTIFIED WITH ENGRAVED LABELS BY CIRCUIT THAT IT CONTAINS. ALL CONDULETS AND SIMILAR UNITS SHALL BE PAINTED RED. ALL DETECTION AND TERMINAL DEVICES SHALL HAVE ENGRAVED PLASTIC OR METALLIC ALPHANUMERIC IDENTIFICATION, WHICH SHALL BE KEYED TO THE POSTED AND OPERATIONS AND MAINTENANCE INSTRUCTIONS.
5. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
6. AS PART OF BASE WORK PROVIDE CONTROL MODULES FOR EXISTING FIRE ALARM ZONES 1 THRU 11 AND 14 THRU 17. ALSO PROVIDE MONITOR MODULES FOR EXISTING ZONES 7 THRU 12 AS PART OF BASE BID WORK. INSTALLATION OF CONTROL AND MONITOR MODULES AS CONTRACTORS OPTION MAY BE INSTALLED IN EXISTING FACP BACKBOX.
7. REFER TO SPECIFICATIONS FOR REQUIREMENTS OF EACH NOTIFICATION APPLIANCE CIRCUIT.



2 FIRE ALARM ONE-LINE DIAGRAM
NO SCALE



NOTES:
ELECTRICAL CONTRACTOR TO PROVIDE CONDUITS AND BOXES. EMPTY CONDUITS TO CONTAIN NYLON PULL STRING ENTIRE LENGTH. HARDWARE CONTRACTOR TO PROVIDE DOOR POSITION SWITCH, MAGNET, ELECTRIC DOOR STRIKE. SEE ARCHITECTURAL DOOR SCHEDULE AND POWER DRAWINGS FOR DOORS REQUIRING SECURITY DEVICES.

3 DOOR - SINGLE - ROUGH-IN
NO SCALE

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metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
CHECKED BY: ARG/MAM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
DETAILS

SHEET NO.:
E-501

LIGHTING CONTROL PANEL SCHEDULE (LCP-A)

RELAY NUMBER	RELAY TYPE POLES	VOLTAGE	SIZE	CIRCUIT	OVERRIDE DEVICE	AREA CONTROLLED	KEYED NOTE
1	1	277V	20A	1LNH1-5	TS, Lva	DRY BAY 115 TYPE N1 LIGHTS	
2	1	277V	20A	1LNH1-5	TS, LVb	DRY BAY 115 TYPE N1 LIGHTS	
3	1	277V	20A	1LNH1-6	TS, LVc	WASH 114 TYPE N1 LIGHTS	
4	1	277V	20A	1LNH1-6	TS, LVd	VACUUM & FUEL AREA 112 TYPE N1 LIGHTS	
5	1	277V	20A	1LNH1-5	TS, LVf	DRY BAY 115 TYPE N1 LIGHTS DAYLIGHT LIGHTS	
6	1	277V	20A	1LNH1-3	TS, LVg	DRY BAY 115 TYPE N1 EM LIGHTS	1
7	1	277V	20A	1LNH1-3	TS, LVh	WASH 114 TYPE N1 EM LIGHTS	1
8	1	277V	20A	1LNH1-3	TS, LVi	VACUUM & FUEL AREA 112 TYPE N1 EM LIGHTS	1
9	1	277V	20A	1LNH1-3	TS, LVj	DRY BAY 115 TYPE N1 LIGHTS DAYLIGHT EMERGENCY LIGHTS	1
10	1	277V	20A	1LNH1-2	PE,TS	TYPE OC1 EXTERIOR EMERGENCY LIGHTING	
11	1	277V	20A	1LNH-8	PE,TS	TYPE OC1 EXTERIOR LIGHTING	
12	1	277V	20A	1LNH1-5	TS,LVk	EQUIPMENT AREA 110 TYPE L9 LIGHTS	

GENERAL NOTES:

3. INTERIOR BUILDING LIGHTING TO TURN OFF AT 3:00 AM. LIGHTS SHALL BLINK 5 MINUTES PRIOR TO SHUTOFF. AUTO OFF 7:00 AM; 3:00 AM TO 12:00 PM - LV SWITCH OVERRIDE ON FOR 2 HRS.
4. RELAYS SERVING EMERGENCY LIGHTING TO TURN LIGHTING ON IN LOSS OF POWER.
5. VERIFY PROGRAMMING WITH OWNER.

KEYED NOTES:

1. REFER TO DRAWING 1/E-501 FOR EMERGENCY TRANSFER DEVICE LIGHTING CONTROL.

ABBREVIATIONS:

LVx - LOW VOLTAGE SWITCH (x=SWITCH NUMBER)
PE - EXTERIOR PHOTOEYE
DS - DAYLIGHT SENSOR
OS - OCCUPANCY SENSOR
TS - TIME SCHEDULE BY CONTROL PANEL
S - STANDARD LINE VOLTAGE SWITCH

LCP SWITCH SCHEDULE

SWITCH ID	# BUTTONS REQUIRED	CONTROLLED RELAY	KEYED NOTE
1	6	1a,2b	1
2	6	1a,5f	1
3	3	3c	1
4	6	3c,4d	1
5	6	1a,5f	1
6	3	4d	1
7	3	4d	1
8	4	6g,9j	2
9	6	7h,8i	2
10	3	12k	1

GENERAL NOTES:

1. NOTES START HERE.
2. NOTES START HERE.

KEYED NOTES:

1. FOR EACH LETTERED SWITCHLEG TO CONTROL NORMAL LIGHTING, LOW VOLTAGE BUTTONS TO BE PROGRAMED AS 50% ON / ALL ON / ALL OFF.
2. FOR EACH LETTERED SWITCHLEG TO CONTROL EMERGENCY LIGHTING, LOW VOLTAGE BUTTONS TO BE PROGRAMED AS ALL ON / ALL OFF.

LUMINAIRE SCHEDULE

NOTE: SEE SPECIFICATION FOR ADDITIONAL INFORMATION REGARDING LUMINAIRE AND INSTALLATION REQUIREMENTS. PROVIDE OPTIONS AND ACCESSORIES REFERENCED BY THE COLUMN TITLED " OPTIONS/ACCESSORIES". MANUFACTURERS LISTED ACCEPTABLE SHALL MEET ALL REQUIREMENTS AND FEATURES INDICATED. ACCEPTABLE MANUFACTURERS MUST MEET THE PHOTOMETRIC PERFORMANCE OF THE LISTED UNIT.

ABBREVIATIONS: GWB = GYPSUM WALL BOARD; P = PENDANT; R = RECESSED; V = VARIES; ES = EXPOSED STRUCTURE; PLAS = PLASTER; S = SURFACE; W = WALL MOUNTED; LG = LAY-IN GRID; PL = POLE MOUNTED; UNV = UNIVERSAL VOLTAGE

DES.	MANUFACTURER	CATALOG SERIES	DESCRIPTION	LAMP DATA	VOLTAGE	BALLAST/ DRIVER	MOUNT	CEILING TYPE	FIXTURE DEPTH	LED SYSTEM INPUT WATTAGE	LED DELIVERED LUMENS	OPTIONS / ACCESSORIES	ACCEPTABLE MANUFACTURERS	KEYED NOTE
K20	LITHONIA	CLX SERIES	4' LED PREMIUM WALL BRACKET WITH HIGH IMPACT ACRYLIC DIFFUSER, 90 CRI AND HIGH-REFLECTIVITY BAKED WHITE POLYESTER FINISH.	4000K LED	277V	D	W	-	4 3/4"	51W	4800			
K21	CREE	LS SERIES	4' LED WALL BRACKET WITH LOW GLARE ACRYLIC LENS AND WHITE FINISH.	4000K LED	277V	D	W	-	3"	40W	4250			
L9	LITHONIA	IBH SERIES	LED HIGH BAY CHAIN HUNG PENDANT FIXTURE WITH STEEL HOUSING, HIGH REFLECTIVE WHITE PAINT REFLECTOR, SEMI-DIFFUSE ACRYLIC LENS, 90 CRI AND MEDIUM LIGHT DISTRIBUTION. DAMP LOCATION LISTED.	4000K LED	277V	D	P	-	-	78W	8,796		METALUX HB SERIES PHILIPS FBX SERIES	
N1	LITHONIA	VAP SERIES	4' ENCLOSED AND GASKETED WITH 12" CHAIN HUNG PENDANT MOUNT INDUSTRIAL LED, CLEAR POLYCARBONATE HOUSING, CAPTIVE TAMPER-RESISTANT LATCHES, IP66 RATED ENCLOSURE, IMPACT RESISTANT POLYCARBONATE LENS WITH WIDE DISTRIBUTION.	4000K LED	277V	E	P	-	4 1/8"	115W	14963		EATON VT4 LED SERIES HE WILLIAMS EGL2 SERIES	
N2	LITHONIA	MSL SERIES	4' LED SURFACE INDUSTRIAL FIXTURE WITH STEEL HOUSING AND BAKED WHITE ENAMEL FINISH.	4000K LED	277V	D	S	-	3 1/4"	40W	3636		COLUMBIA LCR SERIES	
N3	LITHONIA	MSL SERIES	4' LED CHAIN HUNG PENDANT INDUSTRIAL FIXTURE WITH STEEL HOUSING AND BAKED WHITE ENAMEL FINISH.	4000K LED	277V	D	P	-	3 1/4"	40W	3636		COLUMBIA LCR SERIES	
N4	LITHONIA	MSL SERIES	8' LED CHAIN HUNG PENDANT INDUSTRIAL FIXTURE WITH STEEL HOUSING AND BAKED WHITE ENAMEL FINISH.	4000K LED	277V	D	P	-	3 1/4"	58W	7273		COLUMBIA LCR SERIES	
N5	LITHONIA	MSL SERIES	8' LED SURFACE INDUSTRIAL FIXTURE WITH STEEL HOUSING AND BAKED WHITE ENAMEL FINISH.	4000K LED	277V	D	S	-	3 1/4"	58W	7273		COLUMBIA LCR SERIES	
OC1	LITHONIA	D-SERIES SIZE 1	LED WALL MOUNTED FIXTURE WITH DIE CAST ALUMINUM HOUSING, ACRYLIC LENS, DARK SKY FRIENDLY CERTIFIED, IP65 RATED, FORWARD THROW LIGHT DISTRIBUTION AND DARK BRONZE FINISH.	4000K LED	277V	D	W	-	10"	13W	1515		CREE EDGE SERIES PHILIPS 122 SCONCE SERIES	
Q11	LITHONIA	STL4 SERIES	4' LED SURFACE VOLUMETRIC FIXTURE WITH FACETED REFRACTOR WITH LIGHT DIFFUSING FILM AND WHITE FINISH.	4000K LED	277V	D	S	-	4"	35W	3979		METALUX WNLED SERIES HUBBELL LAW SERIES	
EBU1	LITHONIA	ELM2 LED SERIES	EMERGENCY BATTERY UNIT WITH TWO 1.5W/3.6V LED LAMPS WITH SELF DIAGNOSTICS	W/ UNIT	120/277V	-	W	-	-	3.6W	-		DUAL-LITE LZ SERIES PHILIPS VU6L SERIES	
X6	SURE-LITE	UX7 SERIES	HOSE DOWN RATED SINGLE FACE LED AC EXIT SIGN WITH UNIVERSAL MOUNT, WHITE FINISH, RED LETTERS.	W/ UNIT	120/277V	-	-	-	-	-	-			
X7	LITHONIA	LQM SERIES	AC EXIT SIGN LED WITH WHITE THERMOPLASTIC HOUSING, STENCILED SINGLE RED FACE.	W/ UNIT	120/277V	-	-	-	-	-	-		SURE-LITE LPX SERIES PHILIPS CXX SERIES	

BALLAST/DRIVER CODE LISTING: (SEE SPECIFICATIONS)

D LED DIMMABLE POWER SUPPLY (0-10V, 0-10%).
E LED BI-LEVEL POWER SUPPLY.

GENERAL NOTES:

1. ONLY BALLAST SERIES IS INDICATED ON THIS SCHEDULE. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. EACH FIXTURE SUBMITTAL SHALL BE PROVIDED WITH FULL BALLAST AND LAMP INFORMATION.
2. ALL FLUORESCENT LAMPS/BALLASTS WIRED TO THE DIMMING SYSTEM SHALL BE BURNED FOR A MINIMUM OF 100 HOURS PRIOR TO DIMMING SYSTEM SET UP/PROGRAMMING.
3. ALL LED REPLACEMENT LAMPS SHALL BE TESTED FOR DIMMING COMPATABILITY WITH DIMMING SYSTEM BEING SUPPLIED. CONTRACTOR SHALL PROVIDE MINIMUM OF (4) FOUR LAMPS OF EACH TYPE LISTED IN THIS SCHEDULE OR ANY SUBSTITUTE TO BE SUPPLIES TO DIMMING SYSTEMS/DEVICE MANUFACTURER FOR TESTING TO VERIFY LAMP PERFORMANCE.
4. EC SHALL VERIFY AND COORDINATE ALL LUMINAIRE TRIMS/FLANGES WITH RESPECTIVE CEILING TYPES SCHEDULED AND/OR SUBMITTED BY THE GC PRIOR TO ORDERING OF THE LUMINAIRES. SCHEDULE INDICATES TRIM TYPES BASED ON THE GENERIC CEILING INFORMATION AVAILABLE AT THE TIME BIDDING DOCUMENTS WERE ISSUED AND DOES NOT REFLECT ACTUAL THICKNESS OF GYPSUM WALL BOARD OR PLASTER CEILING OR EXACT GRID TYPE SPECIFIED BY THE ARCHITECT.

KEYED NOTES:

1.

INVERTER SCHEDULE

TAG	INPUT	OUTPUT	UNIT CAPACITY	POWER FACTOR	LOAD TYPE	LISTING	OUTPUT CIRCUITS	MAX TRANSFER TIME - NORM TO EM	MOUNTING
INV-A	277V/1PH	277V/1PH	5000VA	90%	LED LIGHTING	UL 924	8 @ 277V, 20A	2-4 MS	FLOOR ON CONCRETE BASE

OCCUPANCY/VACANY/PHOTO SENSOR SCHEDULE

SENSOR ID	VOLTAGE	PIR	US	PATTERN	COVERAGE	DESCRIPTION	MOUNTING	KEYED NOTE
DS1	12/24V	-	-	-	-	SINGLE ZONE DAYLIGHT SENSOR WITH SELECTABLE ON/OFF OR DIMMING APPLICATION, SIMILAR TO ACUITY SERIES CM PC ADC	CEILING	1
OS1	120/277	X	X	180	UP TO 800 SF	SINGLE RELAY, WALL MOUNT SWITCH TYPE OCCUPANCY SENSOR. SIMILAR TO ACUITY CONTROLS SERIES WSX WITH OPERATING MODE AUTO-ON (DEFAULT) OR VACANCY	WALL	
OS4	12/24V	X	X	360	UP TO 500 SF	CEILING MOUNTED PROGRAMMABLE WITH ADJUSTABLE TIME DELAY; SIMILAR TO ACUITY CONTROLS SERIES CM	CEILING	
PE	12/24V	-	-	-	-	0 FC (MIN) TO 50-750 FC (MAX) OUTDOOR PHOTOCELL INSTALLED IN APPROPRIATELY RATED ENCLOSURE	ROOF	11
VS1	120/277	X	X	180	UP TO 800 SF	SINGLE RELAY, WALL MOUNT SWITCH TYPE OCCUPANCY SENSOR. SIMILAR TO ACUITY CONTROLS SERIES WSX WITH OPERATING MODE VACANCY (DEFAULT) OR AUTO-ON	WALL	
VS3	120/277	X	X	180	UP TO 800 SF	DUAL RELAY, WALL MOUNT SWITCH TYPE OCCUPANCY SENSOR. SIMILAR TO ACUITY CONTROLS SERIES WSX WITH OPERATING MODE VACANCY (DEFAULT) OR AUTO-ON	WALL	

GENERAL NOTES:

1. COLOR OF DEVICES SHALL BE COORDINATED/MATCHING COLOR OF RECEPTACLES AND SWITCHES AS IDENTIFIED IN SPECIFICATION SECTION 26 27 26.
2. PROVIDE ADEQUATE SUPPORT FOR CONTROL WIRING, REFER TO WIRING DIAGRAMS SUPPLIED WITH SELECTED DEVICES. FOLLOW MANUFACTURER INSTRUCTIONS.
3. FOR ADDITIONAL INFORMATION REFER TO SPECIFICATION SECTION 26 09 42.23.
4. ALL LOW VOLTAGE SENSORS SHALL BE PROVIDED WITH 20A RATED POWER PACKS WITH ZERO CROSS SWITCHING TECHNOLOGY AND MANUAL ON MODE.
5. PROVIDE 8' OF ADDITIONAL WIRING ABOVE ACCESSIBLE CEILING.
6. ALL POWER PACKS AND SLAVE PACKS SHALL BE INSTALLED IN APPROVED ENCLOSURES RATED FOR THE ENVIROMENTAL SPACES WHERE THEY ARE INSTALLED.
7. WHERE OCCUPANCY SENSORS CONTROLLING LIGHTS OF A DIFFERENT VOLTAGES A SEPARATE POWER/SLAVE PACK SHALL BE PROVIDED.
8. POWER PACKS ARE NOT SHOWN ON THE PLANS, IT SHALL BE CONTRACTOR/SUPPLIER RESPONSIBIILTY TO VERIFY AND COORDINATE ALL REQURIED QUANTITIES.
9. WHERE DAYLIGHT HARVESTING IS SELECTED - PROVIDE ALL REQUIRED LABOR TO SET UP DAYTIME AND NIGHT TIME TRESHOLDS PER MANUFACTURER RECOMMENDATIONS.
10. SENSOR SWITCH MANUFACTURER CAT # /SERIES ARE SHOWN IN THIS SCHEDULE AS A BASIS OF DESIGN - REFER TO SPECIFICATION SECTION 26 09 23 FOR ACCEPTABLE SUBSTITUTIONS.

KEYED NOTES:

1. INSTALL WITHIN 3'-4' FROM THE WINDOW, PROVIDE WITH POWER PACK.
2. EXTERIOR PHOTOCELL WIRED VIA LOW VOLTAGE LIGHTING CONTROL PANEL LCP AND/OR DIMMER RACK PANEL. REFER TO RESPECTIVE LIGHTING CONTROL SCHEDULES FOR COORDINATION.

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CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
CHECKED BY: AFG/MAM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SCHEDULES

SHEET NO.:
E-601

ELECTRICAL EQUIPMENT WIRING SCHEDULE

STARTER/DISCONNECT TYPE:			KEY:
MX - MANUAL MOTOR SWITCH	2SP - 2 SPEED, 2 WINDING	ECB - ENCLOSED CIRCUIT BREAKER	MFR - MANUFACTURER
MS - MANUAL MOTOR STARTER (W/OVERLOAD RELAYS)	SW - 2 SPEED, 1 WINDING		F- FUSED
YD - WYE- DELTA	CS - COMBINATION MAGNETIC CONTROLLER		NF - NON-FUSED
FV - FULL VOLTAGE	FS - FUSED SWITCH		EC - ELECTRICAL CONTRACTOR
SS - REDUCED VOLTAGE, SOLID STATE	VFD - VARIABLE FREQUENCY DRIVE		MC - MECHANICAL CONTRACTOR
RE - REVERSING	RVS - REDUCED VOLTAGE (MAGNETIC)		PC - PLUMBING CONTRACTOR

EQUIPMENT	EQUIPMENT DESCRIPTION	LOCATION	LOAD					EQUIPMENT		BRANCH WIRING				STARTER			DISCONNECT TYPE AND RATING				KEYED NOTE
			KW	HP	FLA (AMPS)	MCA (AMPS)	MOCP (AMPS)	VOLTS	PHASE	NO.	SIZE	GND.	C	TYPE	NEMA SIZE	FURNISHED/ INSTALLED BY	TYPE	SIZE / FUSE	NEMA ENCLOSURE	FURNISHED/ INSTALLED BY	
ACCU-1	AIR COOLED CONDENSING UNIT	ROOF				7.7	15	208	1	2	12	12	3/4"	-	-	-	F	30/15	NEMA 3R	EC	
ACCU-2	AIR COOLED CONDENSING UNIT	ROOF				13.2	20	208	1	2	12	12	3/4"	-	-	-	F	30/20	NEMA 3R	EC	
ACCU-3	AIR COOLED CONDENSING UNIT	ROOF				7.7	15	208	1	2	12	12	3/4"	-	-	-	F	30/15	NEMA 3R	EC	
ACU-1	AIR COOLED CONDENSING UNIT	CASH ROOM 106			0.2			208	1	2	12	12	3/4"	-	-	-	-	-	-	MC/EC	7
ACU-2	AIR COOLED CONDENSING UNIT	SERVER ROOM 107			0.24			208	1	2	12	12	3/4"	-	-	-	-	-	-	MC/EC	7
ACU-3	AIR COOLED CONDENSING UNIT	FIRE ALARM 202			0.2			208	1	2	12	12	3/4"	-	-	-	-	-	-	MC/EC	7
CASH	CASH VAULT	VACUUM & FUEL AREA 113			3			120	1	2	12	12	3/4"	-	-	-	-	-	-	-	
CRR	RETRACKABLE CORD REEL	HVAC SHOP 131	180W					120	1	2	12	12	3/4"	-	-	-	-	-	-	-	9
CP-1	CIRCULATION PUMP (PLUMBING)	JANITOR'S CLOSET 101			0.4			120	1	2	12	12	3/4"	-	-	-	MX	-	NEMA 1	EC	12
DF-1	DUCT FURNACE	HVAC SHOP 131			2.1		15	120	1	2	12	12	3/4"	-	-	-	-	-	-	MFR	4
DF-2	DUCT FURNACE	FACILITIES STORAGE 133			2.1		15	120	1	2	12	12	3/4"	-	-	-	-	-	-	MFR	4
EF-1	EXHAUST FAN	ROOF		1/4				120	1	2	12	12	3/4"	-	-	-	-	-	-	MFR	
EF-2	EXHAUST FAN	ROOF		2	13.8			208	1	2	12	12	3/4"	-	-	-	-	-	-	MFR	4
EF-3	EXHAUST FAN	ROOF		2	13.8			208	1	2	12	12	3/4"	-	-	-	-	-	-	MFR	4
EF-4	EXHAUST FAN	ELECTRICAL ROOM 109		1/4				120	1	2	12	12	3/4"	-	-	-	MX	-	-	EC	
ERV-1	ENERGY RECOVERY UNIT	HVAC SHOP 131		(2) 1	8/MOTOR	18/UNIT	20/UNIT	120	1	2	12	12	3/4"	-	-	-	NF	-	NEMA 1	EC	11
ERV-2	ENERGY RECOVERY UNIT	FACILITIES STORAGE 133		(2) 1	8/MOTOR	18/UNIT	20/UNIT	120	1	2	12	12	3/4"	-	-	-	NF	-	NEMA 1	EC	11
ESEW-1	EM SHOWER & EYE/FACE WASH SIGNALING...	SEE PLANS			.5			120	1	2	12	12	3/4"	-	-	-	-	-	-	-	1
FE-1	FUME EXTRACTOR	HVAC SHOP 131		3	4.8			480	3	3	12	12	3/4"	CS	0	EC	F	30/6	NEMA 1	EC	
FE-2	FUME EXTRACTOR	HVAC SHOP 131		3/4	1.6			480	3	3	12	12	3/4"	CS	00	EC	F	30/2	NEMA 1	EC	
FRM	FREON RECLAIM MACHINE	HVAC SHOP 131			16			208	1	2	12	12	3/4"	-	-	-	-	-	-	-	
GWH-1	GAS WATER HEATER	SEE PLANS			15			120	1	2	12	12	3/4"				MX		NEMA 1	EC	
LIFT	BUS LIFT	MAINTENANCE SERVICE BAYS 121		(3) 5	(3) 7.6			480	3	3	10	10	3/4"								
MAU-1 SF-1	MAKE-UP AIR UNIT SUPPLY FAN	ROOF		3	4.8			480	3	3	12	12	3/4"	VFD	-	MC/EC	-	-	-	-	5
MAU-1 SF-2	MAKE-UP AIR UNIT SUPPLY FAN	ROOF		3	4.8			480	3	3	12	12	3/4"	VFD	-	MC/EC	-	-	-	-	5
MAU-1 EF-1	MAKE-UP AIR UNIT EXHAUST FAN	ROOF		3	4.8			480	3	3	12	12	3/4"	VFD	-	MC/EC	-	-	-	-	5
MAU-1 EF-2	MAKE-UP AIR UNIT EXHAUST FAN	ROOF		3	4.8			480	3	3	12	12	3/4"	VFD	-	MC/EC	-	-	-	-	5
MAU-2 SF	MAKE-UP AIR UNIT SUPPLY FAN	ROOF		5	7.6			480	3	3	12	12	3/4"	VFD	-	MC/EC	-	-	-	-	5
MAU-2 EF	MAKE-UP AIR UNIT EXHAUST FAN	ROOF		5	7.6			480	3	3	12	12	3/4"	VFD	-	MC/EC	-	-	-	-	5
MCP	MASTER CONTROL PANEL - BUS WASH	EQUIPMENT AREA 110			20			120	1	3	10	10	3/4"	-	-	-	-	-	-	-	13
EQP	EQUIPMENT CONTROL PANEL - BUS WASH	EQUIPMENT AREA 110			57			480	3	3	3	8	1 1/4"	-	-	-	-	-	-	-	13
MSP	MOTOR STARTER PANEL - BUS WASH	EQUIPMENT AREA 110			15			480	3	3	12	12	3/4"	-	-	-	-	-	-	-	13
BRP	SLAVE BRUSH PANEL - BUS WASH	WASH 114			16			480	3	3	12	12	3/4"	-	-	-	-	-	-	-	13
BLP	BLOWER PANEL - BUS WASH	WASH 114			86			480	3	3	1	6	1 1/2"	-	-	-	-	-	-	-	13
OHD	OVERHEAD DOOR	SEE PLANS			16			480	3	3	12	12	3/4"	-	-	-	F	30/20	NEMA 1	EC	3
SF-1	SUPPLY FAN	ELECTRICAL ROOM 109		1/4				120	1	2	12	12	3/4"	-	-	-	MX	-	-	EC	
SP-1	DUPLEX SUMP PUMP	VACUUM & FUEL AREA 113		(2) 7.5	31			480	3	3	8	10	3/4"	-	-	-	-	-		MFR	
UH-1	UNIT HEATER	VEHICLE CIRCULATION E178		1.5	6.9			208	3	3	12	12	3/4"	CS	00	EC/EC	F	30/9	NEMA 1	EC	
UH-2	UNIT HEATER	VACUUM & FUEL AREA 113		1.5	6.9			208	3	3	12	12	3/4"	CS	00	EC/EC	F	30/9	NEMA 1	EC	
UH-3	UNIT HEATER	VACUUM & FUEL AREA 113		1.5	6.9			208	3	3	12	12	3/4"	CS	00	EC/EC	F	30/9	NEMA 1	EC	
UH-4	UNIT HEATER	VACUUM & FUEL AREA 113		1.5	6.9			208	3	3	12	12	3/4"	CS	00	EC/EC	F	30/9	NEMA 1	EC	
UH-5	UNIT HEATER	WASH 112		1/4	4.7			120	1	2	12	12	3/4"	-	-	-	MX	-	NEMA 1	EC	
UH-6	UNIT HEATER	DRY BAY 115		1/4	4.7			120	1	2	12	12	3/4"	-	-	-	MX	-	NEMA 1	EC	
UH-7	UNIT HEATER	DRY BAY 115		1.5	6.9			208	3	3	12	12	3/4"	CS	00	EC	F	30/9	NEMA 1	EC	
VAC SYS	VACUUM SYSTEM	VACUUM & FUEL AREA 113		(1) 7.5/ (1) 30				480	3	3	2	8	1 1/4"								
VAC PUMP	VACUUM PUMP	HVAC SHOP 131						120	1	2	12	12	3/4"	-	-	-	NF	-	NEMA 1	EC	

EQUIPMENT SCHEDULE GENERAL NOTES:

1. ALL WORK BY THIS CONTRACTOR TO COMPLY WITH ALL LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
2. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH OTHER TRADES TO AVOID CONFLICTS AND TO VERIFY ALL EQUIPMENT CONNECTIONS AND FOR COMPLETE INSTALLATION.
3. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE ELECTRICAL SYSTEM PER CONTRACT DRAWINGS AND ENSURING THAT THE SYSTEM IS OPERATIONAL UPON JOB COMPLETION.
4. PROVIDE ALL POWER WIRING INCLUDING ALL CIRCUITRY CARRYING ELECTRICAL ENERGY FROM PANELBOARD OR OTHER SOURCE THROUGH STARTERS AND DISCONNECTS TO MOTORS, PACKAGED EQUIPMENT OR PACKAGED CONTROL PANELS. PROVIDE ALL WIRING BETWEEN CONTROL PANELS AND MOTORS. INCLUDE STARTERS, DISCONNECTS AND OVERLOAD PROTECTION IF NOT INCLUDED HVAC SPECIFICATION. COORDINATE WITH HVAC SPECIFICATIONS.
5. MOTORS CONNECTED TO EMERGENCY SYSTEMS CIRCUITRY SHALL HAVE CIRCUITRY INSTALLED IN SEPARATE RACEWAY PER NEC ARTICLE 700.
6. THIS CONTRACTOR SHALL VERIFY WITH MECHANICAL CONTRACTOR, ELECTRICAL REQUIREMENTS INCLUDING VOLTAGES, HORSE POWER, DISCONNECTING MEANS, STARTERS FOR MOTORS AND EQUIPMENT PRIOR TO ORDERING CIRCUIT BREAKERS, FUSIBLE SWITCHES AND STARTERS.
7. ALL INTERLOCKING REQUIRED BY THE DRIVE MANUFACTURER BETWEEN THE VARIABLE FREQUENCY DRIVE AND THE DISCONNECT SWITCHES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

EQUIPMENT SCHEDULE KEYED NOTES:

1. INSTALL AND WIRE COMPLETE ALARM AND LIGHT FURNISHED WITH UNIT. COORDINATE ROUGH-IN WITH PC.
2. DISCONNECT MOUNTED INTEGRAL TO UNIT.
3. COORDINATE DISCONNECT LOCATION PRIOR TO ROUGH-IN WITH DOOR INSTALLER. DOOR OPERATION STATIONS, SWITCHES, SENSORS, ETC ARE INSTALLED BY DOOR INSTALLER.
4. MANUFACTURER MOUNTED NON-FUSED DISCONNECT SWITCH.
5. VFD INSTALLED BY E.C. IN MAU ENCLOSED CABINET. COORDINATE ROUGH-IN AND LOCATION WITH MC.
6. COORINDATE DISCONNECT LOCATION AND INSTALLATION REQUIREMENTS WITH BUS CHARGER MANUFACTURER & INSTALLER. CONDUIT TO BE WET LOCATION RATED. CONNECT EACH PSC TO ASSOCIATED DISPENSER SHOWN ON 1/E-100 AND 1/E-102.
7. EQUIPMENT WIRED IN SERIES. WIRE AND RACEWAY ARE FROM ASSOCIATED OUTDOOR UNIT. REFER TO MANUFACTURER'S WIRING DIAGRAM PRIOR TO ROUGH-IN.
8. BRANCH CIRCUIT TO SINGLE POINT SERVICE AT OUTDOOR UNIT. ALSO PROVIDE WIRE AND RACEWAY TO ASSOCIATED INDOOR UNIT.
9. MOUNT CORD REELS 72" AFF ADJACENT TO PROVIDED RECEPTACLE SHOWN ON PLANS. REFER TO DETAIL ON E-501 FOR MANUFACTURER AND MODEL NUMBER. FIELD ADJUST CORD STOP IN FIELD PER USERS REQUEST.
10. REFER TO ONE-LINE FOR WIRE SIZES FOR V-FAN AND DUST BAG. PROVIDE 3 #14 IN 1/2"C TO AIR CONTROL PANEL, 6 #14 IN 1/2"C TO SOLENOID VALVES 2SOL & 3SOL AND 2 #14 IN 1/2"C FOR ADDITONAL CONTROL WIRING. COORDINATE EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH EQUIPMENT INSTALLER.
11. PROVIDE CONNECTIONS TO EACH FAN CONTACTOR AND CONNECTION TO MANUFACTURER PROVIDED CONTROL TRANSFORMER. TO BE COMPLETED PER MANUFACTURER'S WIRING DIAGRAM.
12. EC TO WIRE AQUA-STAT FURNISHED BY PC.
13 EC TO MAKE SINGLE POINT CONNECTION TO CONTROL PANEL.

Mead & Hunt, Inc.
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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
CHECKED BY: ARG/MAM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
SCHEDULES

SHEET NO.:
E-602

Panel L-3

Panelboard:

Bus Ampacity	225	Volts	480Y/277
Branch Brkr Space	42 Poles	Phase	3
Main Type	MLO	Wires	4
MCB Amps	-	Delta/Wye	Wye
		Mounting	Surface
		Enclosure	NEMA 1
		SCCR	
		SE Rated	No
		Pnl MCA	80 A

Panel Source:	IMDS		
Feed-Thru Lugs	None		
Sub-Feed Lugs	None		
Sub-Feed Brkr #1	None		
Sub-Feed Brkr #2	None		
SPD			
Iso Grd			

Comments:
EXISTING

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
E	PANEL L-1	1	100/3	9,935			600			20/1	2	LIGHTS	
E	|	3	|		8,048			0		20/1	4	SPARE	
E	|	5	|			6,948			0	20/1	6	SPARE	
E	SPARE	7	100/3	0			1,327			15/3	8	FE-1	
E	|	9	|		0			1,327		10	|	
E	|	11	|			0			1,327	|	12	|	
E	SPARE	13	100/3	0			443			15/3	14	FE-2	
E	|	15	|		0			443		|	16	|	
E	|	17	|			0			443	|	18	|	
	OHD	19	20/3	4,400			0			20/1	20	SPARE	
	|	21	|		4,400			0		20/1	22	SPARE	
	|	23	|			4,400			0	20/1	24	SPARE	
	OHD	25	20/3	4,400			0			20/1	26	SPARE	
	|	27	|		4,400			0		20/1	28	SPARE	
	|	29	|			4,400			0		30	SPACE	
	OHD	31	20/3	4,400			0				32	SPACE	
	|	33	|		4,400			0			34	SPACE	
	|	35	|			4,400			0		36	SPACE	
	SPACE	37		0			0				38	SPACE	
	SPACE	39			0			0			40	SPACE	
	SPACE	41				0			0		42	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GRD S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING E=EXISTING

Panel 1PNH1

Panelboard:

Bus Ampacity	600	Volts	480Y/277
Branch Brkr Space	42 Poles	Phase	3
Main Type	MCB	Wires	4
MCB Amps	600	Delta/Wye	Wye
		Mounting	Surface
		Enclosure	NEMA 4X
		SCCR	18 kA
		SE Rated	No
		Pnl MCA	445 A

Panel Source:	MAIN		
Feed-Thru Lugs	None		
Sub-Feed Lugs	None		
Sub-Feed Brkr #1	None		
Sub-Feed Brkr #2	None		
SPD			
Iso Grd			

Comments:

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	BUS WASH - EQP	1	80/3	15,778			15,778			80/3	2	BUS WASH - EQP	
	|	3	|		15,778			15,778		|	4	|	
	|	5	|			15,778			15,778	|	6	|	
	BUS WASH - MSP	7	20/3	4,152			4,152			20/3	8	BUS WASH - MSP	
	|	9	|		4,152			4,152		|	10	|	
	|	11	|			4,152			4,152	|	12	|	
	BUS WASH - BRP	13	20/3	4,429			4,429			20/3	14	BUS WASH - BRP	
	|	15	|		4,429			4,429		|	16	|	
	|	17	|			4,429			4,429	|	18	|	
	BUS WASH - BLP	19	110/3	23,793			23,793			110/3	20	BUS WASH - BLP	
	|	21	|		23,793			23,793		|	22	|	
	|	23	|			23,793			23,793	|	24	|	
	VAC SYSTEM	25	90/3	13,533			13,533			90/3	26	VAC SYSTEM	
	|	27	|		13,533			13,533		|	28	|	
	|	29	|			13,533			13,533	|	30	|	
	SPARE	31	20/3	0			0			20/3	32	SPARE	
	|	33	|		0			0		|	34	|	
	|	35	|			0			0	|	36	|	
	SPARE	37	20/3	0			0			20/3	38	SPARE	
	|	39	|		0			0		|	40	|	
	|	41	|			0			0	|	42	|	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GRD S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING E=EXISTING

Panel 1LNH1

Panelboard:

Bus Ampacity	225	Volts	480Y/277
Branch Brkr Space	30 Poles	Phase	3
Main Type	MCB	Wires	4
MCB Amps	225	Delta/Wye	Wye
		Mounting	Surface
		Enclosure	NEMA 1
		SCCR	14 kA
		SE Rated	No
		Pnl MCA	44 A

Panel Source:	IMDS		
Feed-Thru Lugs	None		
Sub-Feed Lugs	None		
Sub-Feed Brkr #1	None		
Sub-Feed Brkr #2	None		
SPD			
Iso Grd			

Comments:

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	INVERTER (INV-A)	1	25/1	4,121			52			20/1	2	EXTERIOR EM LTG	
	EM LIGHTING	3	20/1		2,645			440		20/1	4	EM LTG RMS 131 & 133	
	LTG RMS 110, 111, 115, 201 & 202	5	20/1			3,452			3,733	20/1	6	EXTERIOR EM LTG	
	RMS 201 & 202 EM LTG	7	20/1	250			30			20/1	8	LTG RMS 112, 114 & SUPPORT SPACES	
	SPARE	9	20/1		0			0		20/1	10	SPARE	
	SPARE	11	20/1			0			0	20/1	12	SPARE	
	SPARE	13	20/1	0			0			20/1	14	SPARE	
	SPARE	15	20/1		0			0		20/1	16	SPARE	
	SPACE	17				0			0		18	SPACE	
	SPACE	19		0			0				20	SPACE	
	SPACE	21			0			0			22	SPACE	
	SPACE	23				0			0		24	SPACE	
	SPACE	25		0			5,650			50/3	26	PANEL 1RNL1	
	SPACE	27			0			6,405		|	28	|	
	SPACE	29				0			5,760	|	30	|	

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Panel 1ROL1

Panelboard:

Bus Ampacity	400	Volts	208Y/120
Branch Brkr Space	42 Poles	Phase	3
Main Type	MCB	Wires	4
MCB Amps	250	Delta/Wye	Wye
		Mounting	Surface
		Enclosure	NEMA 1
		SCCR	10 kA
		SE Rated	No
		Pnl MCA	86 A

Panel Source:	1DOH1		
Feed-Thru Lugs	None		
Sub-Feed Lugs	None		
Sub-Feed Brkr #1	None		
Sub-Feed Brkr #2	None		
SPD			
Iso Grd			

Comments:

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	CP-1 & GWH-2	1	20/1	1,848			500			20/1	2	FACP	
	RECEPT SERVER RM	3	20/1		500			811		20/2	4	EF-2	
	RECEPT SERVER RM	5	20/1			500			811	|	6	|	
	RECEPT SERVER RM	7	20/1	500			811			20/2	8	EF-3	
	RECEPT DISPATCH & TCP-4	9	20/1		1,280			811		|	10	|	
	RECEPT SERVER RM	11	20/1			500			800	20/3	12	UH-1	
	RECEPT SERVER RM	13	20/1	500			800			|	14	|	
	UH-5	15	20/1		564			800		|	16	|	
	TCP-1, 2 & 5	17	20/1			1,500			800	20/3	18	UH-2	
	UH-4	19	20/3	800			800			|	20	|	
	|	21	|		800			800		|	22	|	
	|	23	|			800			800	20/3	24	UH-3	
	UH-7	25	20/3	800			800			|	26	|	
	|	27	|		800			800		|	28	|	
	|	29	|			800			2,400	25/1	30	BUS-WASH - MCP	
	BUS WASH - MCP	31	25/1	2,400			900			20/1	32	MAU-1 LTG & RECEPT	
	MAU-2 LTG & RECEPT	33	20/1		900			500		20/1	34	NAC	
	SPARE	35	20/1			0			500	20/1	36	NAC	
	SPARE	37	20/1	0			0			60/3	38	PANEL 1FPOL1	
	SPARE	39	20/1		0			0		|	40	|	
	SPARE	41	20/1			0			0	|	42	|	

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Panel 2LNH1

Panelboard:

Bus Ampacity	400	Volts	480Y/277
Branch Brkr Space	42 Poles	Phase	3
Main Type	MCB	Wires	4
MCB Amps	400	Delta/Wye	Wye
		Mounting	Surface
		Enclosure	NEMA 1
		SCCR	18 kA
		SE Rated	No
		Pnl MCA	217 A

Panel Source:	MAIN		
Feed-Thru Lugs	None		
Sub-Feed Lugs	None		
Sub-Feed Brkr #1	None		
Sub-Feed Brkr #2	None		
SPD			
Iso Grd			

Comments:

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	PCS	1	100/3	20,000			0			100/3	2	SPARE	
	|	3	|		20,000			0		|	4	|	
	|	5	|			20,000			0	|	6	|	
	PCS	7	100/3	20,000			0			100/3	8	SPARE	
	|	9	|		20,000			0		|	10	|	
	|	11	|			20,000			0	|	12	|	
	PCS	13	100/3	20,000			0			100/3	14	SPARE	
	|	15	|		20,000			0		|	16	|	
	|	17	|			20,000			0	|	18	|	
	SPACE	19		0			0				20	SPACE	
	SPACE	21			0			0			22	SPACE	
	SPACE	23				0			0		24	SPACE	
	SPACE	25		0			0				26	SPACE	
	SPACE	27			0			0			28	SPACE	
	SPACE	29				0			0		30	SPACE	
	SPACE	31		0			0				32	SPACE	
	SPACE	33			0			0			34	SPACE	
	SPACE	35				0			0		36	SPACE	
	SPACE	37		0			0				38	SPACE	
	SPACE	39			0			0			40	SPACE	
	SPACE	41				0			0		42	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GRD S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING E=EXISTING

Panel L-1

Panelboard:

Bus Ampacity	225	Volts	208Y/120
Branch Brkr Space	42 Poles	Phase	3
Main Type	MCB	Wires	4
MCB Amps	225	Delta/Wye	Wye
		Mounting	Surface
		Enclosure	NEMA 1
		SCCR	
		SE Rated	No
		Pnl MCA	59 A

Panel Source:	L-3		
Feed-Thru Lugs	None		
Sub-Feed Lugs	None		
Sub-Feed Brkr #1	None		
Sub-Feed Brkr #2	None		
SPD			
Iso Grd			

Comments:
EXISTING

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	GWH-1 & ESEW-1	1	20/1	1,815			1,000			20/1	2	VAC PUMP	
	RECEPT RM 133	3	20/1		900			1,000		20/1	4	VAC PUMP	
	RECEPT RM 133 & DF-2	5	20/1			972			1,664	20/2	6	FRM	
	RECEPT RM 131 & DF-1	7	20/1	1,152			1,664			|	8	|	
	RECEPT RM 131	9	20/1		900			1,664		20/2	10	FRM	
	RECEPT RM 131	11	20/1			920			1,664	|	12	|	
	ERV-1	13	20/1	1,920			1,664			20/2	14	FRM	
	ERV-2	15	20/1		1,920			1,664		|	16	|	
	FE-1 HOSE REEL	17	20/1			864			864	20/1	18	FE-2 HOSE REEL	
	RECEPT	19	20/1	720			0			20/1	20	SPARE	
	SPARE	21	20/1		0			0		20/1	22	SPARE	
	SPARE	23	20/1			0			0	20/1	24	SPARE	
	SPARE	25	20/1	0			0			20/1	26	SPARE	
	SPACE	27			0			0			28	SPACE	
	SPACE	29				0			0		30	SPACE	
	SPACE	31		0			0				32	SPACE	
	SPACE	33			0			0			34	SPACE	
	SPACE	35				0			0		36	SPACE	
	SPACE	37		0			0				38	SPACE	
	SPACE	39			0			0			40	SPACE	
	SPACE	41				0			0		42	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GRD S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING E=EXISTING

Panel 1RNL1

Panelboard:

Bus Ampacity	225	Volts	208Y/120
Branch Brkr Space	42 Poles	Phase	3
Main Type	MCB	Wires	4
MCB Amps	100	Delta/Wye	Wye
		Mounting	Surface
		Enclosure	NEMA 1
		SCCR	10 kA
		SE Rated	No
		Pnl MCA	49 A

Panel Source:	1LNH1		
Feed-Thru Lugs	None		
Sub-Feed Lugs	None		
Sub-Feed Brkr #1	None		
Sub-Feed Brkr #2	None		
SPD			
Iso Grd			

Comments:

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Left Side C	Right Side A	Right Side B	Right Side C	Brkr A/P	Cct No	Load Description	Key Note
	RECEPT RMS 101, 102 & 105	1	20/1	540			720			20/1	2	RECEPT RM 202	
	RECEPT RMS 103 & 104	3	20/1		1,080			540		20/1	4	RECEPT RM 201	
	RECEPT RM 106	5	20/1			1,080			720	20/1	6	RECEPT RM 115	
	RECEPT RMS 109 & 110	7	20/1	900			540			20/1	8	RECEPT RM 111	
	RECEPT RM 110 & ESWE-1	9	20/1		540			360		20/1	10	RECEPT ROOF	
	RECEPT RM 112	11	20/1			900			565	20/1	12	EF-1, EF-4 & SF-1	
	RECEPT RM 112	13	20/1	540			805			20/2	14	ACCU-1	
	ACCU-1	15	20/2		1,375			805		|	16	|	
	|	17	|		1,375				750	20/1	18	CASH VAULTS & PODIUM RECEPT	
	SPARE	19	20/1	0			800			20/1	20	FLUSH & FAUCET SENSORS	
	SPARE	21	20/1		0			900		20/1	22	RECEPT	
	SPARE	23	20/1			0			0	20/1	24	SPARE	
	SPARE	25	20/1	0			805			20/2	26	ACCU-3	
	SPACE	27			0			805		|	28	|	
	SPACE	29				0			370	20/1	30	HAND DRYER	
	SPACE	31		0			0			20/1	32	SPARE	
	SPACE	33			0			0		20/1	34	SPARE	
	SPACE	35				0			0		36	SPACE	
	SPACE	37		0			0				38	SPACE	
	SPACE	39			0			0			40	SPACE	
	SPACE	41				0			0		42	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GRD S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING E=EXISTING

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON
METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
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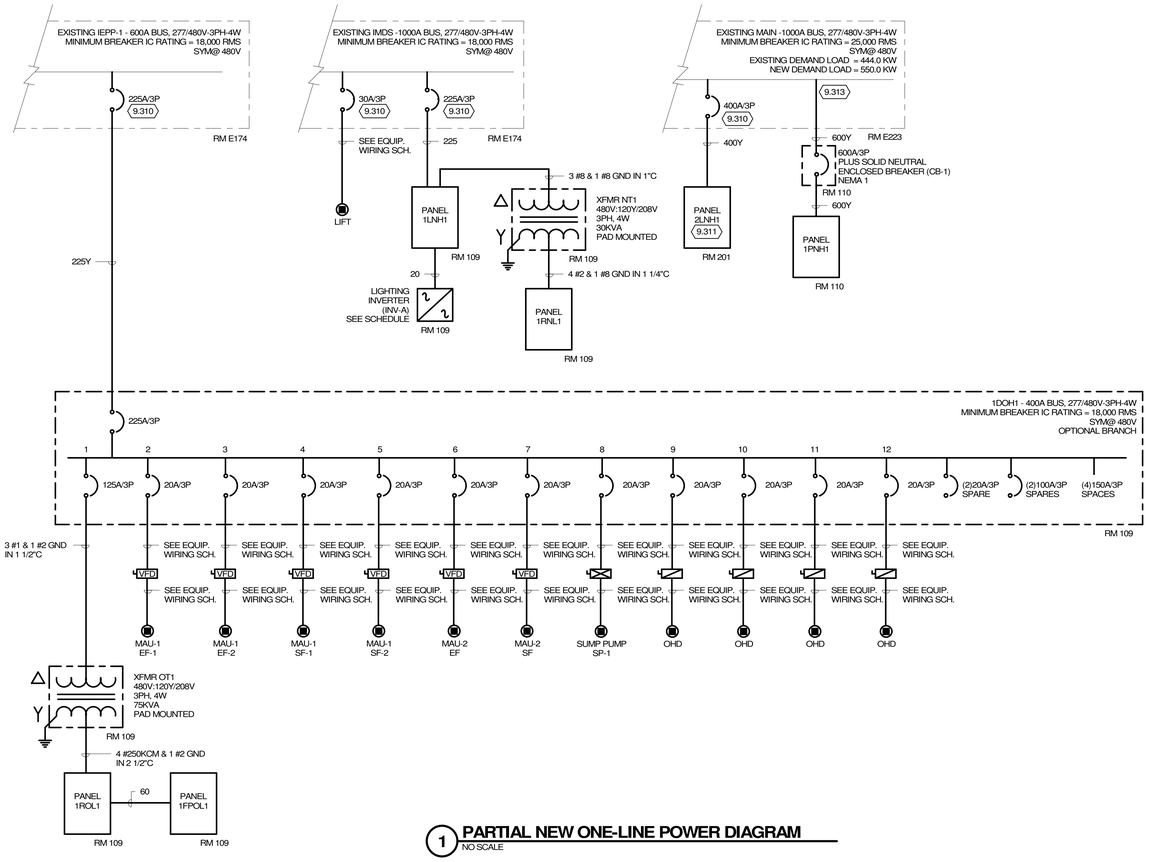
DO NOT SCALE DRAWINGS.

SHEET CONTENTS
SCHEDULES

SHEET NO.:
E-603

ONE-LINE SYMBOLS

- LOW VOLTAGE CIRCUIT BREAKER
- # — CURRENT TRANSFORMER (# DENOTES QUANTITY)
- DPM — DIGITAL POWER METER
- EARTH GROUND
- N — NEUTRAL BOND
- PANELBOARD (ELEVATION VIEW)
- TRANSFORMER
- UNINTERRUPTIBLE POWER SUPPLY (UPS)



1 **PARTIAL NEW ONE-LINE POWER DIAGRAM**
NO SCALE

COPPER FEEDER SCHEDULE

MARK	AMPACITY	NO. OF SETS	CONDUCTOR SIZES (AWG or KCMIL)				CONDUIT SIZE
			PHASE	NEUTRAL	EQ GND	ISO GND	
20	20	1	3 - # 12	-	1 - # 12	-	1/2"
20Y	20	1	3 - # 12	1 - # 12	1 - # 12	-	1/2"
20N	20	1	3 - # 12	1 - # 8	1 - # 12	1 - # 12	3/4"
25	25	1	3 - # 10	-	1 - # 10	-	1/2"
25Y	25	1	3 - # 10	1 - # 10	1 - # 10	-	1/2"
25N	25	1	3 - # 10	1 - # 10	1 - # 10	1 - # 10	1/2"
30	30	1	3 - # 10	-	1 - # 10	-	3/4"
30Y	30	1	3 - # 10	1 - # 10	1 - # 10	-	3/4"
30N	30	1	3 - # 10	1 - # 6	1 - # 10	1 - # 10	1"
35	35	1	3 - # 8	-	1 - # 10	-	3/4"
35Y	35	1	3 - # 8	1 - # 8	1 - # 10	-	3/4"
35N	35	1	3 - # 8	1 - # 8	1 - # 10	1 - # 10	3/4"
40	40	1	3 - # 8	-	1 - # 10	-	3/4"
40Y	40	1	3 - # 8	1 - # 8	1 - # 10	-	1"
40N	40	1	3 - # 8	1 - # 4	1 - # 10	1 - # 10	1"
45	45	1	3 - # 6	-	1 - # 10	-	3/4"
45Y	45	1	3 - # 6	1 - # 6	1 - # 10	-	1"
45N	45	1	3 - # 6	1 - # 6	1 - # 10	1 - # 10	1"
50	50	1	3 - # 6	-	1 - # 10	-	1"
50Y	50	1	3 - # 6	1 - # 6	1 - # 10	-	1-1/4"
50N	50	1	3 - # 6	1 - # 3	1 - # 10	1 - # 10	1-1/4"
60	60	1	3 - # 4	-	1 - # 10	-	1"
60Y	60	1	3 - # 4	1 - # 4	1 - # 10	-	1-1/4"
60N	60	1	3 - # 4	1 - # 2	1 - # 10	1 - # 10	1-1/2"
70	70	1	3 - # 4	-	1 - # 8	-	1-1/4"
70Y	70	1	3 - # 4	1 - # 4	1 - # 8	-	1-1/4"
70N	70	1	3 - # 4	1 - # 1/0	1 - # 8	1 - # 8	1-1/2"
80	80	1	3 - # 3	-	1 - # 8	-	1-1/4"
80Y	80	1	3 - # 3	1 - # 3	1 - # 8	-	1-1/4"
80N	80	1	3 - # 3	1 - # 2/0	1 - # 8	1 - # 8	1-1/2"
100	100	1	3 - # 1	-	1 - # 8	-	1-1/2"
100Y	100	1	3 - # 1	1 - # 1	1 - # 8	-	1-1/2"
100N	100	1	3 - # 1	1 - # 3/0	1 - # 8	1 - # 8	2"
110	110	1	3 - # 1	-	1 - # 6	-	1-1/2"
110Y	110	1	3 - # 1	1 - # 1	1 - # 6	-	2"
110N	110	1	3 - # 1	1 - # 4/0	1 - # 6	1 - # 6	2"
125	125	1	3 - # 1/0	-	1 - # 6	-	1-1/2"
125Y	125	1	3 - # 1/0	1 - # 1/0	1 - # 6	-	2"
125N	125	1	3 - # 1/0	1 - 250	1 - # 6	1 - # 6	2-1/2"
150	150	1	3 - # 1/0	-	1 - # 6	-	1-1/2"
150Y	150	1	3 - # 1/0	1 - # 1/0	1 - # 6	-	2"
150N	150	1	3 - # 2/0	1 - 350	1 - # 4	1 - # 4	2-1/2"
175	175	1	3 - # 2/0	-	1 - # 6	-	2"
175Y	175	1	3 - # 2/0	1 - # 2/0	1 - # 6	-	2"
175N	175	1	3 - # 3/0	2 - # 2/0	1 - # 4	1 - # 4	2-1/2"
200	200	1	3 - # 3/0	-	1 - # 6	-	2"
200Y	200	1	3 - # 3/0	1 - # 3/0	1 - # 6	-	2-1/2"
200N	200	1	3 - # 4/0	2 - # 3/0	1 - # 4	1 - # 4	3"
225	225	1	3 - # 4/0	-	1 - # 4	-	2"
225Y	225	1	3 - # 4/0	1 - # 4/0	1 - # 4	-	2-1/2"
225N	225	1	3 - 250	2 - # 4/0	1 - # 3	1 - # 3	3"
250	250	1	3 - 250	-	1 - #4	-	2-1/2"
250Y	250	1	3 - 250	1 - 250	1 - #4	-	3"
250N	250	1	3 - 300	2 - 250	1 - # 3	1 - # 3	3-1/2"
400	400	1	3 - 500	-	1 - # 3	-	3"
400Y	400	1	3 - 500	1 - 500	1 - # 3	-	3-1/2"
400N	400	2	3 - # 4/0	2 - # 3/0	1 - # 1/0	1 - # 1/0	3"
600	600	2	3 - 350	-	1 - # 1	-	3"
600Y	600	2	3 - 350	1 - 350	1 - # 1	-	3"
600N	600	2	3 - 400	2 - 350	1 - # 1/0	1 - # 1/0	3 - 1/2"

FEEDER SCHEDULE NOTES:

1. THE SCHEDULE IS A SCHEDULE OF TYPICAL FEEDERS AND SOME OF THE SIZES MAY NOT APPLY TO THIS PROJECT.
2. ALL THE CONDUCTOR AMPACITIES ARE BASED ON TABLE 310-16 OF THE NEC FOR COPPER CONDUCTOR TYPE THHN/THWN-2
3. FEEDER SIZES SHOWN ON THE RISER DIAGRAM INDICATE FEEDER AMPACITIES AND DO NOT NECESSARILY CORRESPOND TO THE CIRCUIT BREAKER AMPACITIES. CERTAIN FEEDERS MAY BE SIZED FOR DERATION FACTORS AND/OR OVERSIZED FOR VOLTAGE DROP PER NEC REQUIREMENTS.

KEYED NOTES

9.310 EC TO PROVIDE NEW BREAKER IN EXISTING SPACES. PROVIDE REQUIRED MOUNTING HARDWARE AND MOUNTING PLATES.

9.311 PANEL TO SERVE FUTURE E-BUS CHARGERS UNDER SEPARATE PROJECT.

9.313 DRILL & TAP EXISTING BUS TO ALLOW NEW FEEDER. TAP CONDUCTORS AS SHOWN. FEEDER NOT TO EXCEED 25'-0" PER NEC 240.21.

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KUENY ARCHITECTS, LLC

metro transit

CITY OF MADISON WISCONSIN

CITY OF MADISON METRO TRANSIT - SERVICE LANE ADDITION - PHASE 1

1101 EAST WASHINGTON AVE.
MADISON, WI 53703

ISSUED
01/17/19 BID SET

CONTRACT NO.: 8238
M&H NO.: 4503500-170148.02
DATE: January 17, 2019
DESIGNED BY: KAF
DRAWN BY: KAF
CHECKED BY: ARG/MAM
DO NOT SCALE DRAWINGS

SHEET CONTENTS
ONE-LINE DIAGRAM

SHEET NO.:
E-701