JOHNSON COUNTY EMA STORAGE

2000 BAILEY WAY, TIFFIN IA 52340

CONSTRUCTION DOCUMENTS 10-10-25

PROJECT LOCATION

LOCATION MAP

SHEET INDEX

SHEET INDEX

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered Architect under the laws of the State of Iowa.

Luke Leyden
Printed or typed name

Signature
Date: 3-13-20
06-30-27
Registration expires
Date issued

Pages or sheets covered by this seal:
"A","G" SHEETS

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered Engineer under the laws of the State of Iowa.

Kyle Faille
Printed or typed name

Signature
Date: 12-07-17
12-31-25
Registration expires
Date issued

Pages or sheets covered by this seal:
"M", "E", "P", "T" SHEETS

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered Engineer under the laws of the State of Iowa.

Erik Danielson
Printed or typed name

Signature
Date: 6-01-12
12-31-25
Registration expires
Date issued

Pages or sheets covered by this seal:
"S" SHEETS

ENCITE architecture + design

ENCITE architecture + design LLC
105 S Ave H, Washington, IA 52353
319.331.7424
lukel@encitearchitecture.com

CONSTRUCTION DOCUMENTS 10-10-25

No.	Description	Date

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JOHNSON COUNTY EMA STORAGE

COVER SHEET

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL

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Scale

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CODE REVIEW

Johnson County EMA Storage - Tiffin, Iowa
Applicable Codes:
2018 International Building Code
2021 International Fire Code
2021 International Mechanical Code
2021 Fuel Gas Code
2015 Uniform Plumbing Code
2020 National Electrical Code
2012 International Energy Conservation Code
ICC A117.1-2009

Construction Description:
Total New Building – 10,413 SF

Use and Occupancy Classification:
Sec. 311.2: Storage S-1

General Building Heights and Areas
Table 504.3
New Building - Type V-B, Group S-1, Sprinkled : Allowed - Area = 36,000 SF/floor; Height Two Story; 60 feet
Sec. 506.3 Buildings with at least 25 percent of perimeter on an open space may increase their allowable area. - Not Needed
Sec 508.4 Building Occupancy Separation: No Separation Required
Table 509 Incidental rooms requiring separation:
- Furnace Room over 400,000 BTU / hr
- Boiler Room over 15 psi and 10 hp
- Laundry rooms over 100 SF
- Waste/ linen rooms over 100 SF
Sec. 509.4.1 No listed incidental rooms require fire separation.

Types of Construction:
Sec. 602.2 (Table 601 and 602): Construction Type V-B
Structural Frame 0-hour
Bearing Walls – exterior, interior 0-hour
Non-bearing walls, partitions - interior 0-hour
Non-bearing walls - exterior
X <0-5 2-hour
X <5-10 1-hour
X ≥ 10 0-hour
Floor Construction 0-hour
Roof Construction 0-hour

Code Review:
Sec 705.2 Projections on a Type V-B shall be of any approved material.
Sec 706.1 Each portion of a building separated by one or more fire walls that comply with the provisions of this section shall be considered a separate building.
Table 707 Fire Barrier Rating – 3 Hours
Sec. 709 Smoke barriers are not required.
Sec. 710 Smoke partitions are not required.
Sec. 720.2 Flame spread index of not more than 25 and a smoke-developed index of not more than 450.

Interior Finishes
Sec. 803 - Class C: Flame spread 76-200; smoke-developed 0-450

Fire Protection Systems
Sec. 903.2.9.1 Automatic sprinklers are required for S-1 occupancy where:

- A Group S-1 fire area exceeds 12,000 square feet
- A Group S-1 fire area is located more than stories above grade plane.
- The combined area of all Group S-1 fire areas on all floors exceeds 24,000 sf.
- A Group S-1 fire area used for the storge of commercial motor vehicles where the fire area exceeds 5,000 sf.
- A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 sf.

Sec. 906.3 – Portable fire extinguishers, maximum 1,500 sf floor area per unit of A, maximum travel distance 75 feet, with a maximum of one fire extinguisher per 11,250 sf.

Field locate fire extinguishers to comply with code requirements.

Means of Egress
Occupant Load Factor Table 1004.1.2
Warehouse - 500 Gross 10,413 / 500 = 21 Occupants
TOTAL OCCUPANT LOAD THIS BUILDING - 21
Sec. 1006.2.1 Maximum Occupant Load with one exit – 29. Common Path of egress = Max. 75'.
Sec 1006.3.1 Two exits are required from any story with an occupant load of 1-500
Sec 1007.1.1 Where two exits are required: exit doors shall be placed not less than one-half the length of the overall diagonal dimension of the building or of the space exiting.
Sec. 1010.1.1: 32" min. clear doors required.
Sec. 1016.2 Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit.
Sec 1024.1 36" min. required width if serving an occupant load of 50 or less, 44" min. required for occupant loads over 50, and 48" min. required between handrails (accessible egress stair).
Mechanical Rooms > 500 S. F. require two exits @ 1/2 the room diagonal – not applicable
Table 1017.2 Exit travel distance: Group S-1 Maximum = 250' with sprinklers
Table 1020.1 Corridors require 1 hour fire rating in Groups S-1 if occupant load is greater than 30 without sprinkler system.
Table 1020.2 44" min. corridor required
Sec. 1020.4 Corridor dead-end maximum for Group S = 50'
Sec. 1030.1 No emergency escape and rescue provisions required.

Accessibility
Sec 1101.2 Entire Building to be ICC A117.1 / 2010 ADAAG Accessible.

Interior Environment
Sec 1208.1 Habitable spaces shall not be less than 7 feet in any plan dimension.
Sec 1208.2 Occupiable spaces, habitable spaces and corridors shall have a ceiling height of not less than 7 feet 6 inches. Bathrooms, toilet rooms, kitchens, storage and laundry rooms shall be permitted to be not less than 7 feet. Furred ceilings of not less than 7 feet high are permitted for 1/3 of the ceiling area.
Sec 1210.2 Floors and walls in bathrooms to have a smooth, hard nonabsorbent surface.

Roof Assemblies and Rooftop Structures
Table 1505.1 Type V-B = Class C Assembly
Sec. 1505.4 Class C roof assemblies are those that are effective against light fire-test exposure.

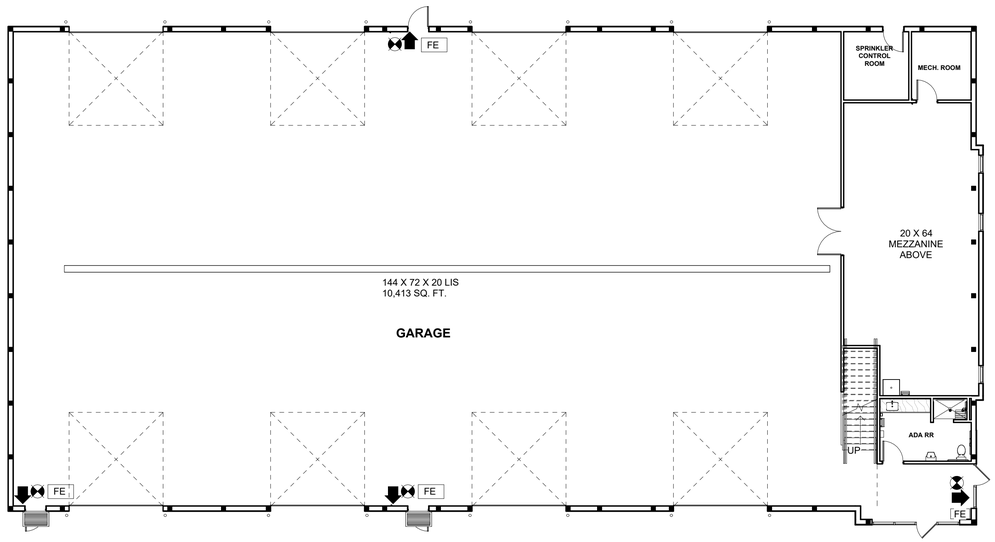
Plumbing Fixture Count

Storage - Toilet 1 per 100, Lavatory 1 per 100 - Occupant Load - 21 - 1 Toilet and 1 Lavatory Provided

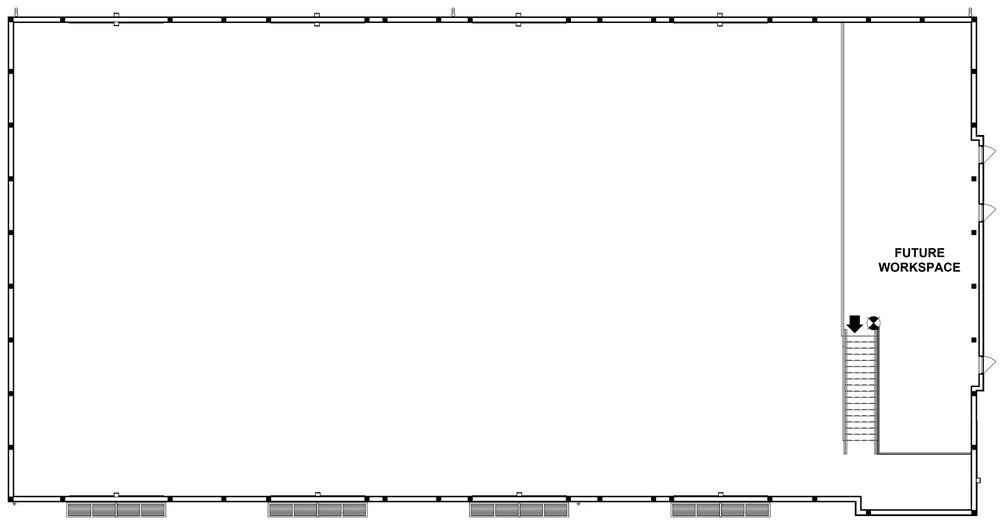
Service Sink - 1 Required, 1 Provided

LIFE SAFETY LEGEND:

- EXIT
- EXIT SIGNS (EDGE LIT TYPE UNLESS OTHERWISE NOTED)
- FE — FIRE EXTINGUISHER
- SMOKE PARTITION
- SMOKE BARRIER (1HR)
- 1-HR FIRE RESISTANT CONSTRUCTION
- 2-HR FIRE RESISTANT CONSTRUCTION
- 3-HR FIRE RESISTANT CONSTRUCTION
- 4-HR FIRE RESISTANT CONSTRUCTION



1 LEVEL 1 LIFE AND SAFETY PLAN
3/32" = 1'-0"



3 MEZZANINE LIFE AND SAFETY PLAN
3/32" = 1'-0"

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ENCITE architecture + design
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CONSTRUCTION DOCUMENTS
10-10-25

No.	Description	Date

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JOHNSON COUNTY EMA STORAGE

CODE REVIEW AND LIFE AND SAFETY

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	G0.01
Scale	As indicated

SITE PLAN
LOT 1, PARK PLACE CITY CENTER - PART 3
TIFFIN, JOHNSON COUNTY, IOWA

PLAT PREPARED BY:
MMS CONSULTANTS INC.
1917 S. GILBERT STREET
IOWA CITY, IA 52240

OWNER/APPLICANT:
JOHNSON COUNTY
913 S DUBUQUE ST
IOWA CITY, IA 52240

APPLICANT'S ATTORNEY

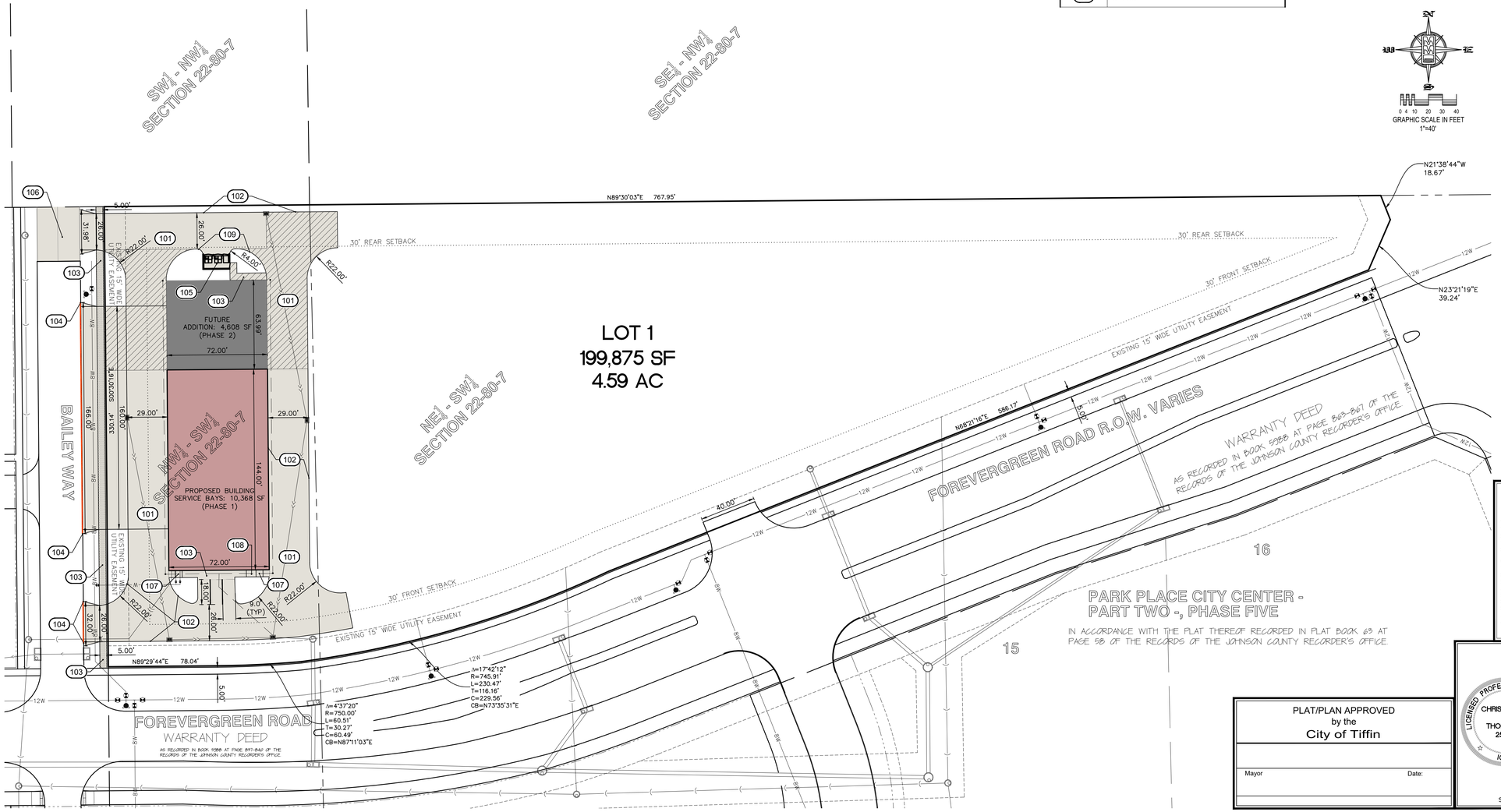
PAVING LEGEND

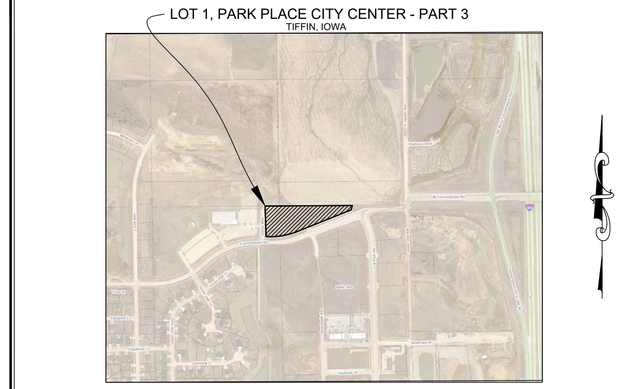
- PROPOSED 6" PCC PAVING (21,367 SF) (PHASE 1)
- PROPOSED 4" PCC SIDEWALK (1,247 SF) (PHASE 1)
- PROPOSED 6" PCC PAVING (7,498 SF) (PHASE 2)
- PROPOSED 4" PCC SIDEWALK (169 SF) (PHASE 2)

*SIZE OF PATTERN MAY VARY BASED ON SCALE OF SHEET.
*TOTALS LISTED ARE CALCULATED FOR THE ENTIRE SITE AREA

KEYNOTES

NUMBER	KEYNOTE
101	INSTALL DRIVE/PARKING PER DETAIL ON SHEET C500 (THICKNESS AND MATERIAL AS NOTED)
102	INSTALL 6" CURB PER DETAIL ON SHEET C500
103	INSTALL P.C.C. SIDEWALK PER TIFFIN STANDARDS
104	GRIND EXISTING CURB AND GUTTER AT PROPOSED DRIVE LOCATION
105	INSTALL DUMPSTER ENCLOSURE, PROVIDE WEEP HOLE AT BASE OF SOUTH WALL.
106	PUBLIC STREET AND UTILITY EXTENSION, BY OTHERS
107	5'x5' CONCRETE STOOP
108	7'x5' CONCRETE TRANSFORMER PAD
109	NO CURB.





LOCATION MAP
NOT TO SCALE

4.59 AC

CIVIL ENGINEERS
LAND PLANNERS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
ENVIRONMENTAL SPECIALISTS

1917 S. GILBERT ST.
IOWA CITY, IOWA 52240
(319) 351-8282
www.mmsconsultants.net

Date	Revision
02-10-2025	PER CITY COMMENTS
02-19-2025	PER CITY COMMENTS
03-01-2025	PER BID COMMENTS - CAT
04-04-2025	SANITARY SERVICE - CAT
06-11-2025	MOVED INTAKE TO AVOID CONFLICT - CAT
07-03-2025	ADDED PHASING - CAT

LEGAL DESCRIPTION
LOT 1, PARK PLACE CITY CENTER -- PART THREE, TIFFIN, IOWA, ACCORDING TO THE PLAT THEREOF RECORDED IN BOOK 65, PAGE 337, PLAT RECORDS OF JOHNSON COUNTY, IOWA.

LOT CHARACTERISTICS:

UNDERLYING ZONING: C-1B (4.59 AC)

DEVELOPMENT CONSISTS OF 1 BUILDING TO BE USED AS SERVICE BAYS.(PUBLIC, EDUCATION & UTILITY USES)

SETBACK REQUIREMENTS FOR C-1B:
MINIMUM LOT AREA: N/A
MINIMUM LOT WIDTH: N/A
FRONT YARD SETBACK: 30 FT
INTERIOR SIDE YARD SETBACK: 15 FT
CORNER YARD SETBACK: 30 FT
REAR YARD SETBACK: 30 FT
FLOOR AREA RATIO: 0.4
MAXIMUM HEIGHT OF PRINCIPAL BUILDING: 35 FT

PARKING REQUIREMENTS:

PROVIDED PARKING:

SITE AREA	199,875 SF (100%)
BUILDING AREA	14,976 SF (7.5%)
PAVING AREA	25,923 SF (13.0%)
GREEN SPACE	158,876 SF (79.5%)

THE DEVELOPED LOT IS LOCATED WITHIN FEMA ZONE X, AN AREA OF MINIMAL FLOOD HAZARD, AND IS LOCATED ABOVE THE 500 YEAR FLOOD EVENT ELEVATION

N
W E
S
0 4 10 20 30 40
GRAPHIC SCALE IN FEET
1"=40'

STANDARD LEGEND AND NOTES

- PROPERTY &/or BOUNDARY LINES
- CONGRESSIONAL SECTION LINES
- RIGHT-OF-WAY LINES
- EXISTING RIGHT-OF-WAY LINES
- CENTER LINES
- EXISTING CENTER LINES
- LOT LINES, INTERNAL
- LOT LINES, PLATTED OR BY DEED
- PROPOSED EASEMENT LINES
- EXISTING EASEMENT LINES
- BENCHMARK
- RECORDED DIMENSIONS
- CURVE SEGMENT NUMBER

-EXIST-	-PROP-	
		POWER POLE
		POWER POLE W/DROP
		POWER POLE W/TRANS
		POWER POLE W/LIGHT
		GUY POLE
		LIGHT POLE
		SANITARY MANHOLE
		FIRE HYDRANT
		WATER VALVE
		DRAINAGE MANHOLE
		CURB INLET
X	X	FENCE LINE
S	S	EXISTING SANITARY SEWER
S	S	PROPOSED SANITARY SEWER
S	S	EXISTING STORM SEWER
S	S	PROPOSED STORM SEWER
W	W	WATER LINES
E	E	ELECTRICAL LINES
T	T	TELEPHONE LINES
G	G	GAS LINES

- CONTOUR LINES (1' INTERVAL)
- PROPOSED GROUND
- EXISTING GROUND
- EXISTING TREE LINE
- EXISTING DECIDUOUS TREE & SHRUB
- EXISTING EVERGREEN TREES & SHRUBS

THE ACTUAL SIZE AND LOCATION OF ALL PROPOSED FACILITIES SHALL BE VERIFIED WITH CONSTRUCTION DOCUMENTS, WHICH ARE TO BE PREPARED AND SUBMITTED SUBSEQUENT TO THE APPROVAL OF THIS DOCUMENT.

UTILITIES

THE CONTRACTOR SHALL NOTIFY IOWA ONE CALL AT 811 OR 800/292-8989 NO LESS THAN 48 HRS. IN ADVANCE OF ANY DIGGING OR EXCAVATION.

IOWA 811 ONE CALL SM

WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

PLAT/PLAN APPROVED
by the
City of Tiffin

Mayor Date:

LICENSED PROFESSIONAL ENGINEER
CHRISTOPHER A. THOMPSON
25323
IOWA
SEAL

I hereby certify that this engineering document was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

07-03-2025

CHRISTOPHER A. THOMPSON, P.E. Iowa Lic. No. 25323

My license renewal date is December 31, 20 26.

Pages or sheets covered by this seal:
all sheets

DETAILED SITE LAYOUT AND DIMENSION PLAN

LOT 1,
PARK PLACE CITY CENTER - PART 3
TIFFIN
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	01-22-2025
Designed by: CAT	Field Book No:
Drawn by: ADP	Scale: 1"= 40'
Checked by: CAT	Sheet No: C120
Project No: 0147-017	of: 6

SITE PLAN

LOT 1, PARK PLACE CITY CENTER - PART 3

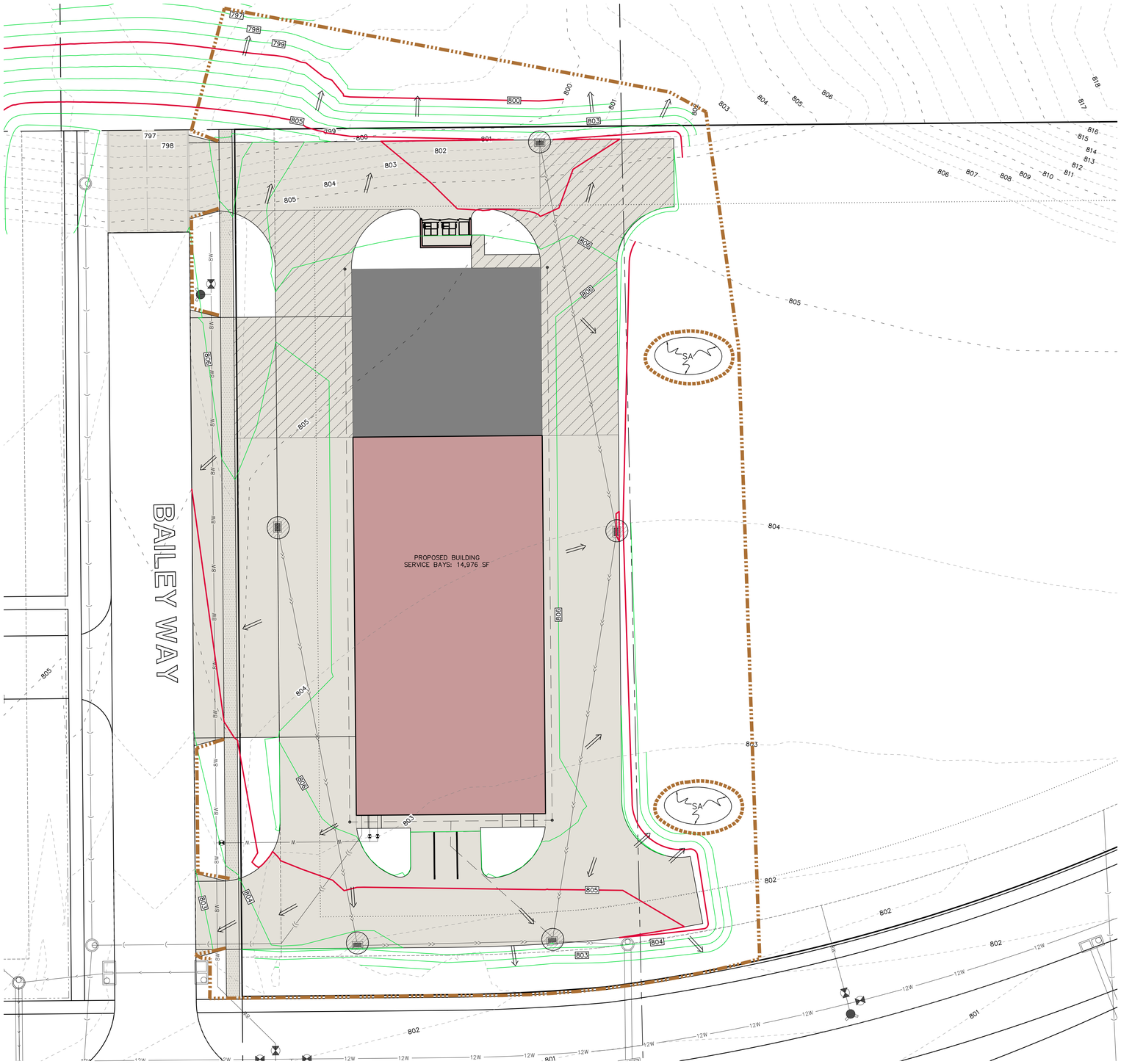
TIFFIN, JOHNSON COUNTY, IOWA

PLAT PREPARED BY:
MMS CONSULTANTS INC.
1917 S. GILBERT STREET
IOWA CITY, IA 52240

OWNER/APPLICANT:
JOHNSON COUNTY
913 S DUBUQUE ST
IOWA CITY, IA 52240

APPLICANT'S ATTORNEY

GRAPHIC SCALE IN FEET
1"=20'



EROSION CONTROL LEGEND

- SILT FENCE/FILTER SOCK
- LIMITS OF DISTURBED AREA
- TEMPORARY ROCK CONSTRUCTION ENTRANCE/EXIT
- TEMPORARY PARKING AND STORAGE
- CW — CONCRETE TRUCK/EQUIPMENT WASHOUT
- PR — PORTABLE RESTROOM
- DL — DOCUMENT LOCATION (PERMITS, SWPPP, INSPECTION FORMS, ETC.)
- FILTER SOCK INLET PROTECTION
- FILTER SOCK BEHIND CURB AT CURB RAMP
- EROSION CONTROL MATTING
- PERIMETER SILT FENCE
- SA — TEMPORARY SOIL STOCKPILE AREA
- DIRECTION OF OVERLAND FLOW
- D — DUMPSTER FOR CONSTRUCTION WASTE
- RIP RAP OUTLET PROTECTION
- 01 — OTHER MEASURE: _____
- 02 — OTHER MEASURE: _____
- 03 — OTHER MEASURE: _____

THE ABOVE LISTED ITEMS ARE SHOWN IN THEIR RECOMMENDED LOCATIONS. IF A CONTROL MEASURE IS ADDED OR MOVED TO A MORE SUITABLE LOCATION, INDICATE THE REVISION ON THIS SHEET. THE BLANKS LEFT FOR OTHER MEASURES SHOULD BE USED IF AN ITEM NOT SHOWN ABOVE IS IMPLEMENTED ON SITE. ADDITIONAL PRACTICES FOR EROSION PREVENTION AND SEDIMENT CONTROL CAN BE FOUND IN APPENDIX D OF THE SWPPP.

STABILIZATION SEEDING

STABILIZATION SEEDING SHALL BE IN ACCORDANCE WITH SUDAS SECTION 9010.2.02 SEED MIXTURES AND SEEDING DATES.

TABLE 9010.06: TYPE 4 SEED MIXTURE

COMMON NAME	APPLICATION RATE lb/acre
SPRING – MARCH 1 – MAY 20	
ANNUAL RYEGRASS	40
OATS*	65
SUMMER – MAY 21 – AUGUST 14	
ANNUAL RYEGRASS	50
OATS*	95
FALL – AUGUST 15 – SEPTEMBER 30	
ANNUAL RYEGRASS	40
GRAIN RYE	65

* ENGINEER MAY DELETE FOR PREVIOUSLY ESTABLISHED URBAN AREAS.

FERTILIZER SHALL BE APPLIED AT A RATE OF 300 LBS PER ACRE USING CHEMICALLY COMBINED COMMERCIAL 13–13–13 FERTILIZER (SUDAS SECTION 9010.2.03 A.2)

PERMANENT SEEDING OF URBAN AREAS

THE FOLLOWING SEED MIXTURE SHALL BE USED FOR PERMANENT SEEDING OF URBAN AREAS, INCLUDING ANY AREAS PREVIOUSLY MAINTAINED AS A LAWN. THE APPLICATION RATE SHALL BE 4 POUNDS PER 1,000 SQUARE FEET (2 kg per 100 m²).

BLUEGRASS, KENTUCKY	70%
RYEGRASS, PERENNIAL (FINELEAF VARIETY)	10%
FESCUE, CREEPING RED	20%

GRADING AND EROSION CONTROL NOTES

TOTAL SITE AREA: 4.59 ACRES
TOTAL AREA TO BE DISTURBED: 4.59 ACRES

EROSION CONTROL MEASURES SHOWN SHALL BE USED DURING FILL ACTIVITIES. EROSION CONTROL MEASURES SHALL BE RE-EVALUATED AND MODIFIED, IF NECESSARY, AT THE TIME OF SITE DEVELOPMENT.

ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES THAT COULD BE USED ON SITE, IF NEEDED, CAN BE FOUND IN APPENDIX D OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) BINDER PREPARED FOR THE SITE. IF ADDITIONAL MEASURES ARE USED, INDICATE THE TYPE AND LOCATION OF SAID MEASURE ON THIS PLAN.

CONTRACTOR SHALL INSTALL A ROCK ENTRANCE AND PERFORM REGULAR CLEANING OF VEHICLES THAT LEAVE THE SITE.

FOLLOWING INSTALLATION OF PERIMETER SILT FENCE AND TEMPORARY CONSTRUCTION ENTRANCE THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR TO SCHEDULE A SITE INSPECTION PRIOR TO ANY SOIL DISTURBING ACTIVITIES.

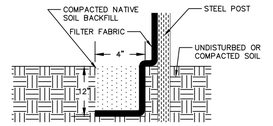
THE CONTRACTOR SHALL FOLLOW THE NPDES PERMIT, SWPPP, AND THE CITY CSR REGULATIONS.

THE EROSION CONTROL CONTRACTOR SHALL INSTALL FILTER SOCKS OR OTHER APPROVED FORM OF INLET PROTECTION AT EACH STREET INTAKE ADJACENT TO THE SITE.

EROSION CONTROL MEASURES, INCLUDING, BUT NOT LIMITED TO, TEMPORARY ROCK CONSTRUCTION ENTRANCE, CONCRETE WASHOUT AND TEMPORARY PARKING ARE STORAGE AREAS, SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9040 SUDAS STANDARD SPECIFICATIONS.

SILT FENCE DETAIL

N.T.S.



INSTALLATION

1. POSTS SHALL BE 1.33 POUNDS PER LINEAL FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
2. SILT FENCE FABRIC SHALL CONFORM TO I.D.O.T. STANDARD SPECIFICATION SECTION 4196.01.A. SILT FENCING SHALL BE A MINIMUM OF 24" AND A MAXIMUM OF 36" HIGH WHEN COMPLETE.
3. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE FENCE TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, THE FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6" OVERLAP, AND SECURELY SEALED.
4. POSTS SHALL BE SPACED A MAXIMUM OF 8 FEET APART AND DRIVEN SECURELY INTO THE GROUND ALONG THE FENCE ALIGNMENT. POSTS SHALL BE DRIVEN INTO THE GROUND A MINIMUM OF 28".
5. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4" WIDE BY 12" DEEP ALONG THE UPSLOPE SIDE OF THE POSTS.
6. FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE POSTS SUCH THAT THE FABRIC EXTENDS INTO THE TRENCH AS SHOWN ABOVE. THE FABRIC SHALL BE FASTENED A MINIMUM OF THREE PLACES ON EACH POST.
7. THE TRENCH SHALL BE BACK FILLED WITH EXCAVATED MATERIAL AND THOROUGHLY COMPACTED.

MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAIN–FALL EVENT PRODUCING RUN–OFF. DURING PERIODS OF PROLONGED RAIN INSPECTIONS SHALL BE AT LEAST DAILY. ANY REPAIRS NEEDED TO MAINTAIN THE SILT FENCE'S EFFECTIVENESS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO STABILIZING THE UPSLOPE AREAS THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN THE DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE FENCE. SILTS REMOVED SHALL BE PLACED IN A PROTECTED PLACE THAT WILL PREVENT THEIR ESCAPE FROM THE CONSTRUCTION SITE.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER NEEDED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
5. SILT FENCE SHALL REMAIN IN PLACE UNTIL IT IS NO LONGER NEEDED AS DIRECTED BY THE POLLUTION PREVENTION PLAN. GENERALLY SILT FENCES SHALL REMAIN UNTIL THE UPSLOPE AREAS ARE STABILIZED WITH AN ESTABLISHED GRASS COVER AS A MINIMUM.

STANDARD LEGEND AND NOTES

- PROPERTY &/or BOUNDARY LINES
- CONGRESSIONAL SECTION LINES
- RIGHT–OF–WAY LINES
- EXISTING RIGHT–OF–WAY LINES
- CENTER LINES
- EXISTING CENTER LINES
- LOT LINES, INTERNAL
- LOT LINES, PLATTED OR BY DEED
- PROPOSED EASEMENT LINES
- EXISTING EASEMENT LINES
- BENCHMARK
- (R) — RECORDED DIMENSIONS
- 22–1 — CURVE SEGMENT NUMBER

–EXIST–	–PROP–	
		POWER POLE
		POWER POLE W/DROP
		POWER POLE W/TRANS
		POWER POLE W/LIGHT
		GUY POLE
		LIGHT POLE
		SANITARY MANHOLE
		FIRE HYDRANT
		WATER VALVE
		DRAINAGE MANHOLE
		CURB INLET
X	X	FENCE LINE
S	S	EXISTING SANITARY SEWER
S	S	PROPOSED SANITARY SEWER
ST	ST	EXISTING STORM SEWER
ST	ST	PROPOSED STORM SEWER
W	W	WATER LINES
E	E	ELECTRICAL LINES
T	T	TELEPHONE LINES
G	G	GAS LINES

- CONTOUR LINES (1' INTERVAL)
- PROPOSED GROUND
- EXISTING GROUND
- EXISTING TREE LINE
- EXISTING DECIDUOUS TREE & SHRUB
- EXISTING EVERGREEN TREES & SHRUBS

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IOWA ONE CALL SM

4.59 AC

MMS
CIVIL ENGINEERS
LAND PLANNERS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
ENVIRONMENTAL SPECIALISTS
1917 S. GILBERT ST.
IOWA CITY, IOWA 52240
(319) 351-8282
www.mmsconsultants.net

Date	Revision
02-10-2025	PER CITY COMMENTS
02-19-2025	PER CITY COMMENTS
03-01-2025	PER BID COMMENTS - CAT
04-04-2025	SANITARY SERVICE - CAT
06-11-2025	MOVED INTAKE TO AVOID CONFLICT - CAT
07-03-2025	ADDED PHASING - CAT

OVERALL SITE GRADING
EROSION CONTROL
AND SWPPP

LOT 1,
PARK PLACE CITY
CENTER - PART 3
TIFFIN
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	01-22-2025
Designed by: CAT	Field Book No:
Drawn by: ADP	Scale: 1"=20'
Checked by: CAT	Sheet No: C140
Project No: 0147-017	of: 6

SITE PLAN

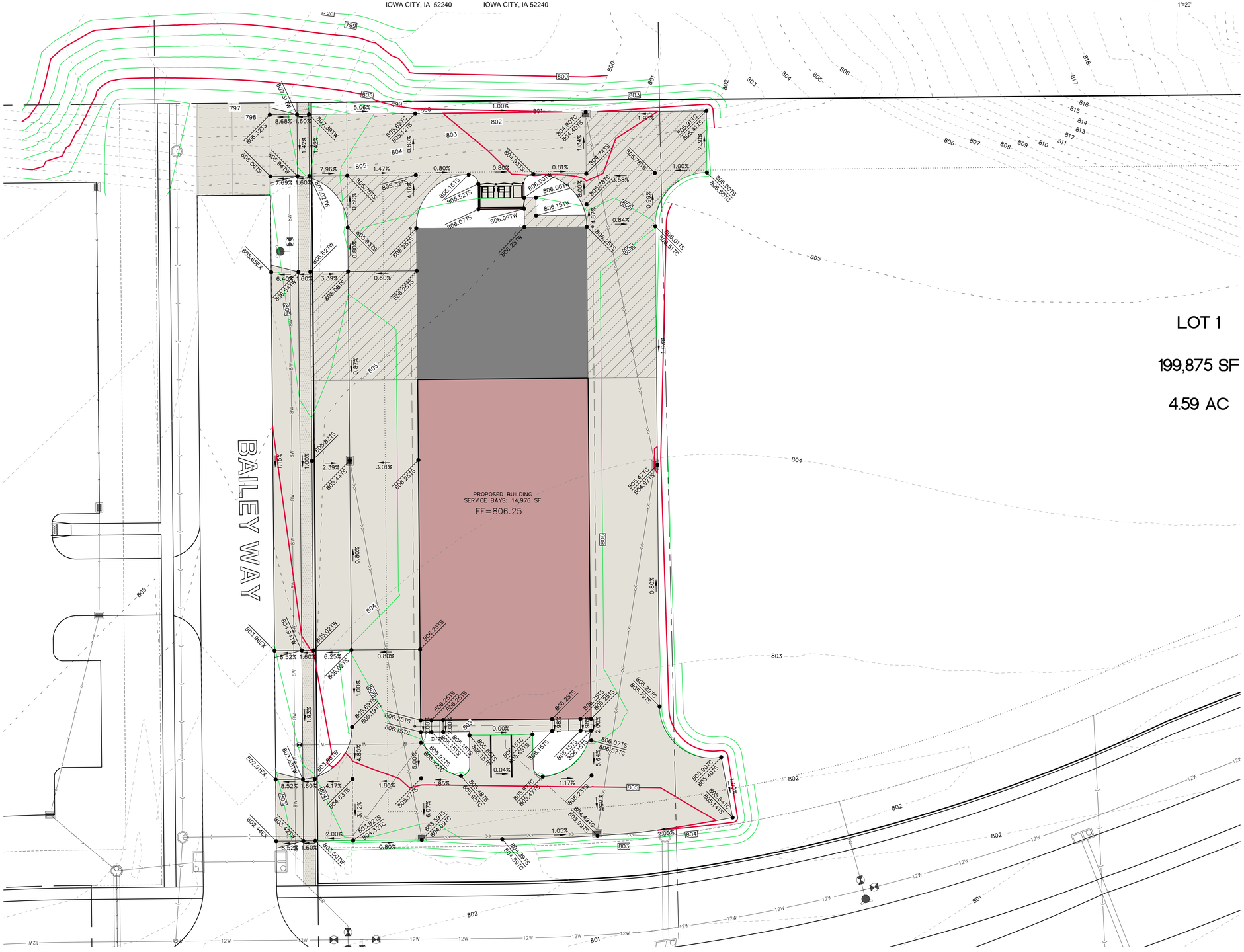
LOT 1, PARK PLACE CITY CENTER - PART 3

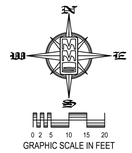
TIFFIN, JOHNSON COUNTY, IOWA

PLAT PREPARED BY:
MMS CONSULTANTS INC.
1917 S. GILBERT STREET
IOWA CITY, IA 52240

OWNER/APPLICANT:
JOHNSON COUNTY
913 S DUBUQUE ST
IOWA CITY, IA 52240

APPLICANT'S ATTORNEY





C120	OVERALL SITE LAYOUT AND DIMENSION PLAN
C140	OVERALL SITE GRADING AND EROSION CONTROL AND SWPPP
C141	DETAILED SITE GRADING PLAN
C160	SITE UTILITY PLAN
C500	GENERAL NOTES AND DETAILS
L100	SITE LANDSCAPE PLAN

LOT 1

199,875 SF

4.59 AC

GRADING LEGEND

000.00EX	= EXISTING SURFACE
000.00FG	= FINISH GRADE
000.00TS	= TOP SLAB
000.00TW	= TOP WALK
000.00TC	= TOP CURB
000.00TR	= TOP RIM
000.00WT	= FG AT TOP WALL
000.00WB	= FG AT BOTTOM WALL

STANDARD LEGEND AND NOTES

- PROPERTY &/or BOUNDARY LINES
- CONGRESSIONAL SECTION LINES
- RIGHT-OF-WAY LINES
- EXISTING RIGHT-OF-WAY LINES
- CENTER LINES
- EXISTING CENTER LINES
- LOT LINES, INTERNAL
- LOT LINES, PLATTED OR BY DEED
- PROPOSED EASEMENT LINES
- EXISTING EASEMENT LINES
- BENCHMARK
- RECORDED DIMENSIONS
- CURVE SEGMENT NUMBER (R) 22-1

–EXIST–	–PROP–	
		POWER POLE
		POWER POLE W/DROP
		POWER POLE W/TRANS
		POWER POLE W/LIGHT
		GUY POLE
		LIGHT POLE
		SANITARY MANHOLE
		FIRE HYDRANT
		WATER VALVE
		DRAINAGE MANHOLE
		CURB INLET
X	X	FENCE LINE
		EXISTING SANITARY SEWER
		PROPOSED SANITARY SEWER
		EXISTING STORM SEWER
		PROPOSED STORM SEWER
W	W	WATER LINES
E	E	ELECTRICAL LINES
T	T	TELEPHONE LINES
G	G	GAS LINES

- CONTOUR LINES (1' INTERVAL)
- PROPOSED GROUND
- EXISTING GROUND
- EXISTING TREE LINE
- EXISTING DECIDUOUS TREE & SHRUB
- EXISTING EVERGREEN TREES & SHRUBS

THE ACTUAL SIZE AND LOCATION OF ALL PROPOSED FACILITIES SHALL BE VERIFIED WITH CONSTRUCTION DOCUMENTS, WHICH ARE TO BE PREPARED AND SUBMITTED SUBSEQUENT TO THE APPROVAL OF THIS DOCUMENT.

4.59 AC

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DETAILED SITE GRADING PLAN

LOT 1,
PARK PLACE CITY CENTER - PART 3
TIFFIN
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	01-22-2025
Designed by: CAT	Field Book No:
Drawn by: ADP	Scale: 1"=20'
Checked by: CAT	Sheet No: C141
Project No: 0147-017	of: 6

SITE PLAN
LOT 1, PARK PLACE CITY CENTER - PART 3
TIFFIN, JOHNSON COUNTY, IOWA

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1917 S. GILBERT STREET
IOWA CITY, IA 52240

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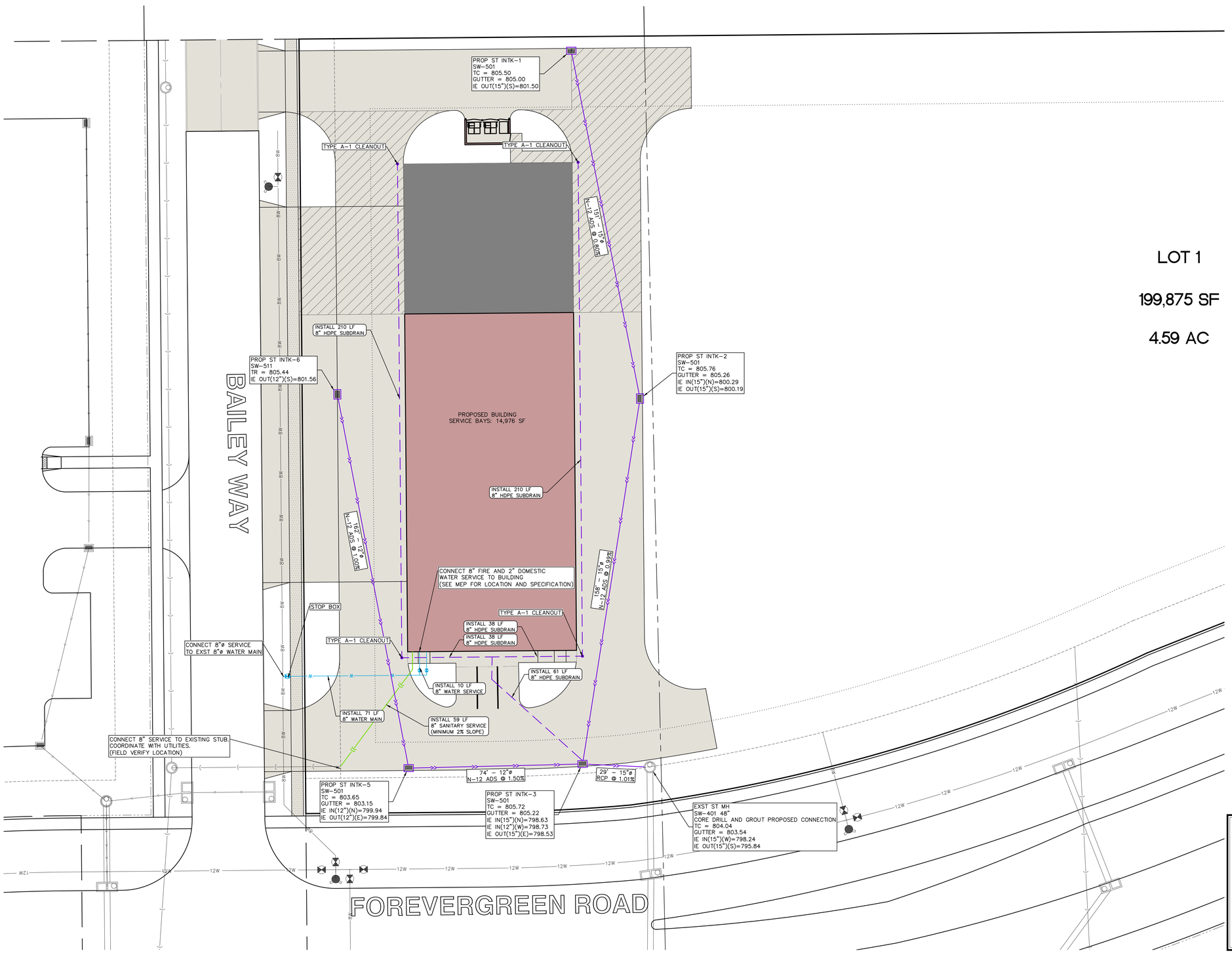

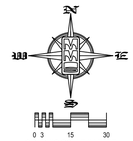

NOTE: ALL PROPOSED STORM SEWER IS PRIVATE UNLESS OTHERWISE NOTED.

ALL PROPOSED WATERMAIN IS PRIVATE.

SEWER SERVICES TAPPED INTO EXISTING PVC SANITARY SEWER SHALL USE CB STYLE SEWER SADDLE WITH STAINLESS STEEL CLAMPS.

LOT 1

199,875 SF

4.59 AC

4.59 AC

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STANDARD LEGEND AND NOTES

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- (R) RECORDED DIMENSIONS
- 22-1 CURVE SEGMENT NUMBER

-EXIST-	-PROP-	
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		POWER POLE W/DROP
		POWER POLE W/TRANS
		POWER POLE W/LIGHT
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X	X	FENCE LINE
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IOWA ONE CALL SM

SITE UTILITY PLAN

LOT 1,
PARK PLACE CITY CENTER - PART 3
TIFFIN
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	01-22-2025
Designed by: CAT	Field Book No:
Drawn by: ADP	Scale: 1"=30'
Checked by: CAT	Sheet No: C160
Project No: 0147-017	of: 6

SANITARY SEWER AND WATER MAIN CONSTRUCTION NOTES

1) SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SUDAS STANDARD SPECIFICATIONS. CITY OF TIFFIN DESIGN AND CONSTRUCTION STANDARDS AND PROCEDURES SHALL PREVAIL.

2) CONTRACTOR SHALL PROVIDE CRUSHED STONE ENCASEMENT BEDDING FOR ALL SANITARY SEWER UNLESS NOTED OTHERWISE ON THE PLANS.

3) SANITARY SEWERS TO BE PVC TRUSS PIPE UNLESS NOTED OTHERWISE. SANITARY SEWER SERVICE LINES SHALL BE PVC, SDR 23.5 WITH GASKETED JOINTS. SANITARY SEWER SERVICE LINES SHALL BE 4" DIAMETER UNLESS NOTED OTHERWISE.

4) CONTRACTOR TO PROVIDE CLOW "BAND-SEAL" COUPLINGS FOR DISSIMILAR PIPE CONNECTIONS.

5) 8" AND 12" DIAMETER WATER MAINS SHALL BE DR-18 PVC PIPE. ALL WATER MAIN FITTINGS SHALL BE DUCTILE IRON WITH RETAINING GLANDS AND MEGALUGS. ALL FITTINGS FOR WATER MAIN SHALL BE RESTRAINED WITH THRUST BLOCKS. ALL WATER MAINS AND SERVICE LINES SHALL HAVE CLASS P-1 BEDDING PER IOWA DOT STANDARD ROAD PLAN SW-104. FOR ALL WATER LINE VALVES: THE VALVE BOX AND GATE VALVE UNDER AWWA SHOULD BE INCLUDED ALONG WITH A VALVE BOX CENTERING ADAPTOR.

6) SANITARY SEWER TRENCHES SHADED ON THE PROFILE VIEW SHALL BE BACKFILLED WITH EITHER OF THE FOLLOWING COMPACTED TO 95% STANDARD PROCTOR DENSITY:
   A. SUITABLE EXCAVATED MATERIAL. IF EXCAVATED MATERIAL IS NOT SUITABLE, THEN
   B. CRUSHED STONE AS SPECIFIED FOR GRANULAR TRENCH BACKFILL SHALL BE USED.

7) GRANULAR TRENCH BACKFILL SHALL BE CLASS A CRUSHED STONE CONFORMING TO I.D.O.T. STANDARD SPECIFICATION 4120.04 WITH 1" MAXIMUM AGGREGATE SIZE. COMPACT TO 95% STANDARD PROCTOR DENSITY.

8) ALL SANITARY SEWER SERVICE LINES CROSSING STREET RIGHT-OF-WAY SHALL BE BACKFILLED IN ACCORDANCE WITH THE PRECEDING NOTE.

9) WATER MAINS AND SERVICE LINES WITHIN STREET RIGHT OF WAYS OR WITHIN EASEMENTS ADJACENT TO THE STREET RIGHT OF WAYS SHALL BE BACKFILLED WITH EITHER OF THE FOLLOWING COMPACTED TO 95% STANDARD PROCTOR DENSITY:
   A. SUITABLE EXCAVATED MATERIAL. IF EXCAVATED MATERIAL IS NOT SUITABLE, THEN
   B. CRUSHED STONE AS SPECIFIED FOR GRANULAR TRENCH BACKFILL SHALL BE USED.

10) ALL SANITARY SEWER SERVICE LINES SHALL BE EXTENDED :
   A. TO THE UTILITY EASEMENT LINE FOR THOSE LOCATIONS WHERE THE LOTS BEING SERVED ARE ON THE OPPOSITE SIDE OF THE STREET FROM THE SEWER MAIN.
   B. TO THE UTILITY EASEMENT LINE FOR THOSE LOCATIONS WHERE THE LOTS BEING SERVED ARE ADJACENT TO THE SEWER MAIN.

THE FOLLOWING MINIMUM CLEARANCES MUST BE MAINTAINED :

11) WATER MAIN SHALL BE LOCATED 10 FEET HORIZONTALLY DISTANT FROM ALL SANITARY SEWER AND STORM SEWER.

12) WATER MAIN SHALL NOT PASS THROUGH NOR CONTACT A SEWER OR A SEWER MANHOLE. A MINIMUM HORIZONTAL SEPARATION OF 3 FEET SHALL BE MAINTAINED.

13) VERTICAL SEPARATION OF WATER MAINS CROSSING OVER ANY SANITARY SEWER SHOULD BE A MINIMUM OF 18-INCHES, MEASURED OUTSIDE TO OUTSIDE FROM THE CLOSEST EDGE OF EACH PIPE. IF PHYSICAL CONDITIONS PROHIBIT THIS SEPARATION, THE WATER MAIN SHALL NOT BE PLACED CLOSER THAN 6-INCHES ABOVE A SEWER OR 18-INCHES BELOW A SEWER. THE SEPARATION DISTANCE SHALL BE THE MAXIMUM FEASIBLE IN ALL CASES. WHERE THE SEWER CROSSES OVER OR LESS THAN 18 INCHES BELOW A WATER MAIN ONE FULL LENGTH OF SEWER PIPE OF WATER MAIN MATERIAL SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE WATER MAIN. THE SEWER AND WATER PIPES MUST BE ADEQUATELY SUPPORTED AND HAVE WATERTIGHT JOINTS. A LOW PERMEABILITY SOIL SHALL BE USED FOR BACKFILL MATERIAL WITHIN 10 FEET OF THE POINT OF CROSSING.

14) WHERE THE WATER MAIN CROSSES SEWER, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR AS POSSIBLE FROM THE SEWER. THE WATER AND SEWER PIPES MUST BE ADEQUATELY SUPPORTED AND HAVE WATER TIGHT JOINTS. A LOW PERMEABILITY SOIL SHALL BE USED FOR BACKFILL MATERIAL WITHIN 10-FEET OF THE POINT OF CROSSING.

15) NOMINAL DEPTH OF WATER MAIN = 5.5 FEET TO TOP OF PIPE.

16) WATER MAIN SHADED ON PLAN VIEW SHALL BE INSTALLED PRIOR TO PAVING.

17) ALL SANITARY SEWER AND SERVICE LINES SHALL BE AIR TESTED TO PASS THE FOLLOWING TEST:

AIR TESTING

   A. PERFORM FROM MANHOLE-TO-MANHOLE AFTER BACKFILL.
   B. PLACE PNEUMATIC PLUGS: (1) SEALING LENGTH: EQUAL TO OR GREATER THAN PIPE DIAMETER, (2) CAPABLE OF RESISTING INTERNAL TEST PRESSURE WITHOUT EXTERNAL BRACING OR BLOCKING.
   C. INTRODUCE LOW-PRESSURE AIR INTO SEALED LINE AND ACHIEVE INTERNAL AIR PRESSURE 4 PSIG GREATER THAN MAXIMUM PRESSURE EXERTED BY GROUNDWATER ABOVE PIPE INVERT.
   D. LIMIT INTERNAL PRESSURE IN SEALED LINE BELOW 8 PSIG.
   E. ALLOW 2 MINUTES MINIMUM FOR AIR PRESSURE TO STABILIZE. DISCONNECT LOW-PRESSURE AIR HOSE FROM CONTROL PANEL.
   F. MINIMUM TIME FOR PRESSURE TO DROP FROM 3.5 TO 2.5 PSIG GREATER THAN MAXIMUM PRESSURE EXERTED BY GROUNDWATER ABOVE PIPE INVERT:

PIPE DIAMETER, INCHES	MINIMUM TIME, min:s	LENGTH FOR MINIMUM TIME, ft	TIME FOR LONGER LENGTH, S
4	3:46	597	0.380 L
6	5:40	398	0.854 L
8	7:34	298	1.520 L
10	9:26	239	2.374 L
12	11:20	199	3.418 L
15	14:10	159	5.342 L
18	17:00	133	7.692 L
21	19:50	114	10.470 L
24	22:40	99	13.674 L
27	25:30	88	17.306 L
30	28:20	80	21.366 L
33	31:10	72	25.852 L
36	34:00	66	30.768 L

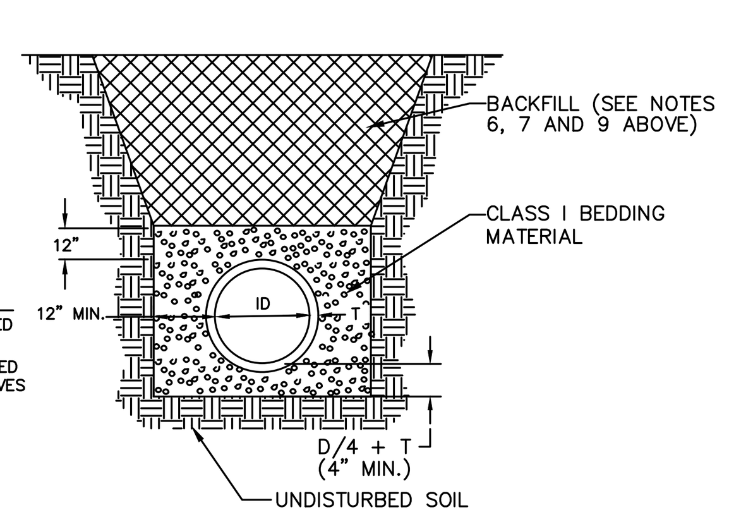
   G. IN AREAS WHERE GROUND WATER IS KNOWN TO EXIST, THE HEIGHT OF WATER ABOVE THE TOP OF THE PIPE BEING TESTED, IN FEET, SHALL BE DETERMINED AND THAT HEIGHT DIVIDED BY 2.3 TO ESTABLISH THE PRESSURE THAT WILL BE ADDED TO ALL READINGS ABOVE. ALTERNATIVELY, THE ENGINEER MAY ALLOW THE CONTRACTOR TO MEASURE INFILTRATION INTO THE SEWER BY USING A V-NOTCH WEIR OR OTHER SUITABLE DEVICE.
   H. LOCATE, REPAIR AND RETEST LEAKS.
   I. AIR TESTING SHALL BE CONSIDERED INCIDENTAL TO SANITARY SEWER CONSTRUCTION.

18) ALL PVC TRUSS SEWERS SHALL HAVE A DEFLECTION TEST PERFORMED AS FOLLOWS:
   A. DEFLECTION TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.
   B. DEFLECTION TEST TO BE CONDUCTED USING A RIGID BALL OR MANDREL WITH A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. NO MECHANICAL PULLING DEVICES ALLOWED.
   C. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.

19) MANHOLE FRAME AND LID TO BE NEENAH R-1642 SELF SEALING OR APPROVED EQUAL. ALL SANITARY MANHOLES SHALL HAVE INTERIOR CHIMNEY SEALS.

ID INCHES	Bd FEET & INCHES
4	2-0
6	2-0
8	2-3
10	2-3
12	2-3
15	2-9
18	3-0
21	3-3
24	3-6

NOTES:
1. PIPE SHALL BE PLACED ON CRUSHED STONE MATERIAL.
2. BELL HOLES SHALL BE HAND SHAPED SO THAT ONLY PIPE BARREL RECEIVES BEARING PRESSURE.
3. PLACE BEDDING TO ENSURE THAT THERE ARE NO VOIDS UNDER OR ALONGSIDE THE LENGTH OF PIPE.
4. BACKFILL SHALL BE HAND TAMPED UP TO 12" ABOVE TOP OF PIPE.
5. SEE TABLE FOR ALLOWABLE TRENCH WIDTH Bd.



CRUSHED STONE ENCASEMENT FOR PVC TRUSS PIPE

NTS

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STORM SEWER CONSTRUCTION NOTES

1) STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SUDAS STANDARD SPECIFICATIONS. CITY OF TIFFIN DESIGN AND CONSTRUCTION STANDARDS AND PROCEDURES SHALL PREVAIL.

2) ALL STORM SEWERS SHALL BE CLASS 3 RCP WITH CLASS R-2 BEDDING OR ADS N-12 WITH CLASS F-3 BEDDING PER SUDAS.

3) RCP STORM SEWERS SHALL BE TONGUE & GROOVE WITH ALL JOINTS WRAPPED WITH FILTER FABRIC A MINIMUM OF 24" WIDE UNLESS NOTED OTHERWISE ON THE PLANS.

4) GRANULAR TRENCH BACKFILL SHALL BE CRUSHED STONE CONFORMING TO I.D.O.T. STANDARD SPECIFICATION 4120.04 WITH 1" MAXIMUM AGGREGATE SIZE. COMPACT TO 95% STANDARD PROCTOR DENSITY.

5) ALL PIPE SHALL BE CERTIFIED.

6) ALL STORM INTAKES SHALL BE A MINIMUM OF 48 INCHES FROM THE TOP OF CURB/RIM TO SUBGRADE. IF INVERT ELEVATIONS ARE INSUFFICIENT TO PROVIDE THE REQUIRED DEPTH, THE CONTRACTOR IS TO PROVIDE A DEEPER STRUCTURE AND POUR CONCRETE FILLET IN INTAKE TO MAKE INTAKE PIPES DRAIN AT ELEVATIONS LISTED.

7) LIFT HOLES IN STORM SEWER WILL NOT BE ALLOWED.

8) PROVIDE CONCRETE FILLETS IN ALL NEW & EXISTING DRAINAGE STRUCTURES PER REFERENCED DETAILS.

9) ALL STORM MANHOLES SHALL HAVE INTERIOR CHIMNEY SEALS.

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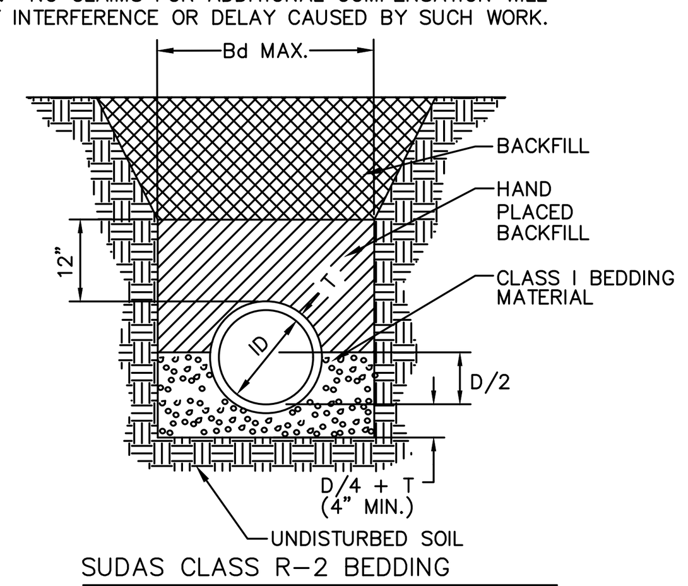
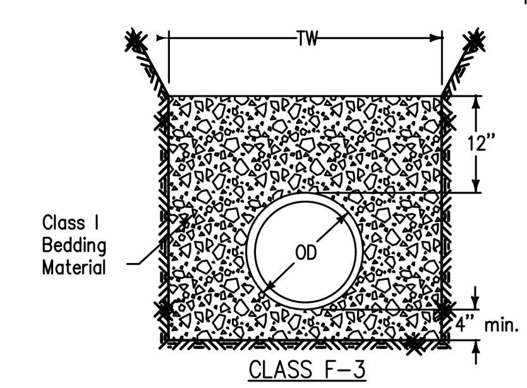
ID INCHES	Bd FEET & INCHES
12	2-3
15	2-9
18	3-0
21	3-3
24	3-6
27	4-0
30	4-3
36	4-9
42	5-6



SUDAS CLASS R-2 BEDDING

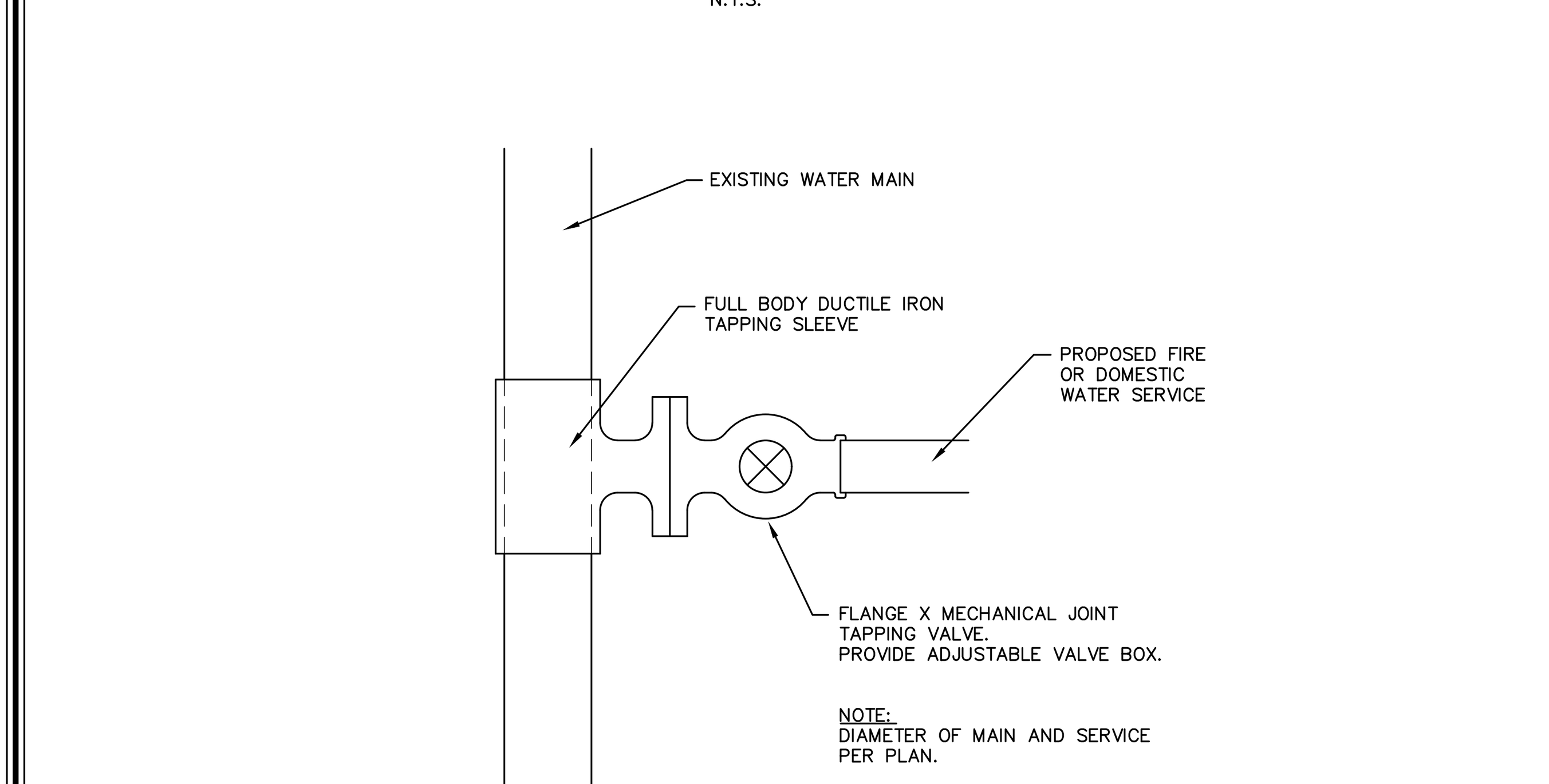
NTS



CLASS F-3

LIVE TAP DETAIL

N.T.S.



NOTE:
DIAMETER OF MAIN AND SERVICE PER PLAN.

PAVING CONSTRUCTION NOTES

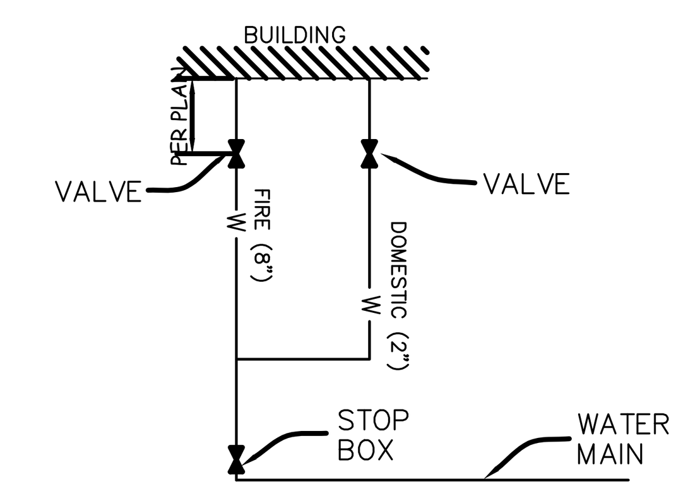
1) I.D.O.T. CLASS C-3 CONCRETE SHALL BE USED, UNLESS NOTED OTHERWISE.

2) CITY OF TIFFIN DESIGN AND CONSTRUCTION STANDARDS AND PROCEDURES SHALL PREVAIL.

3) PAVEMENT JOINTS SHALL CONFORM TO I.D.O.T. STANDARD ROAD PLANS PV-1 CURRENT REVISION.

4) ALL SAWED PAVEMENT JOINTS SHALL BE SEALED.

5) INSTALL "CD" TRANSVERSE CONTRACTION JOINTS FOR 8" PCC PAVEMENT. "C" TRANSVERSE CONTRACTION JOINTS SHALL BE USED FOR 7" PCC PAVEMENT.



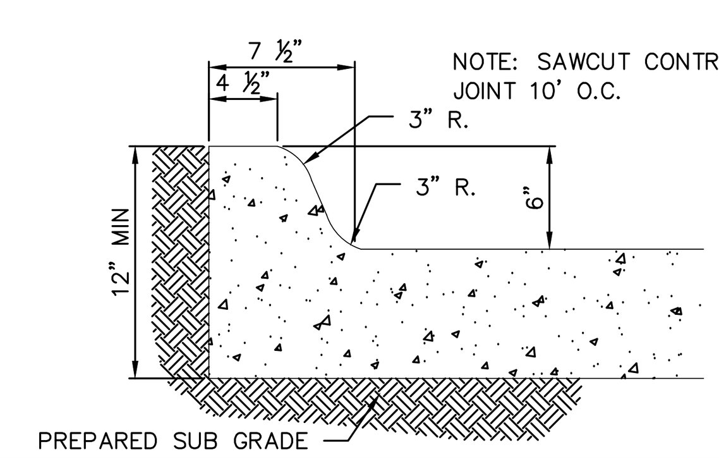
**SIZES PER MECHANICAL CONTRACTOR
**METER FOR THE DOMESTIC LINE IS INTERNAL TO THE BUILDING – FIRE LINE IS NOT METERED.
** 4-INCH SERVICE TO BE TYPE K COPPER.
** 8-INCH FIRE TO BE C900 PVC.

WATER SERVICE DETAIL

NO SCALE

STANDARD CURB DETAIL

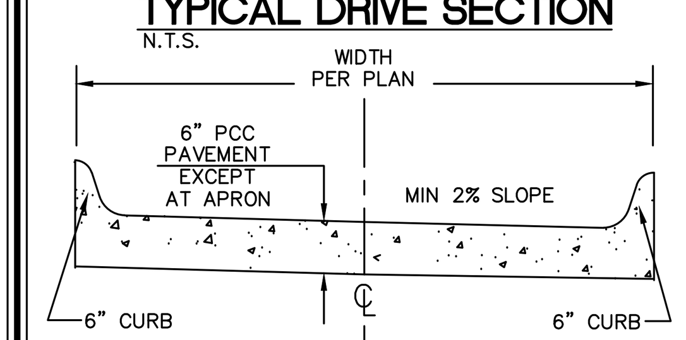
N.T.S.



NOTE: SAWCUT CONTROL JOINT 10' O.C.

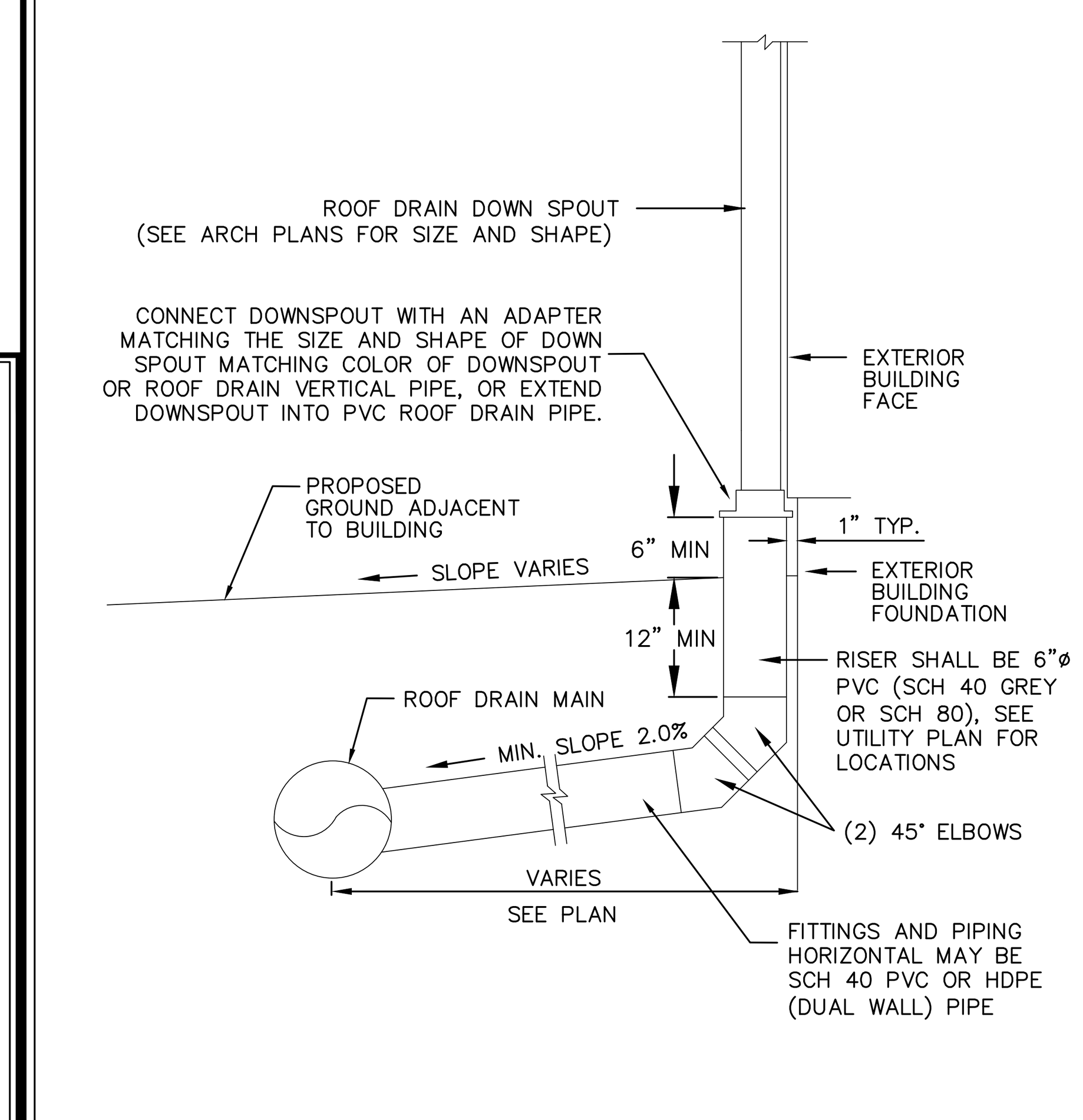
TYPICAL DRIVE SECTION

N.T.S.



DOWNSPOUT TO ROOF DRAIN SEWER CONNECTION DETAIL

N.T.S.

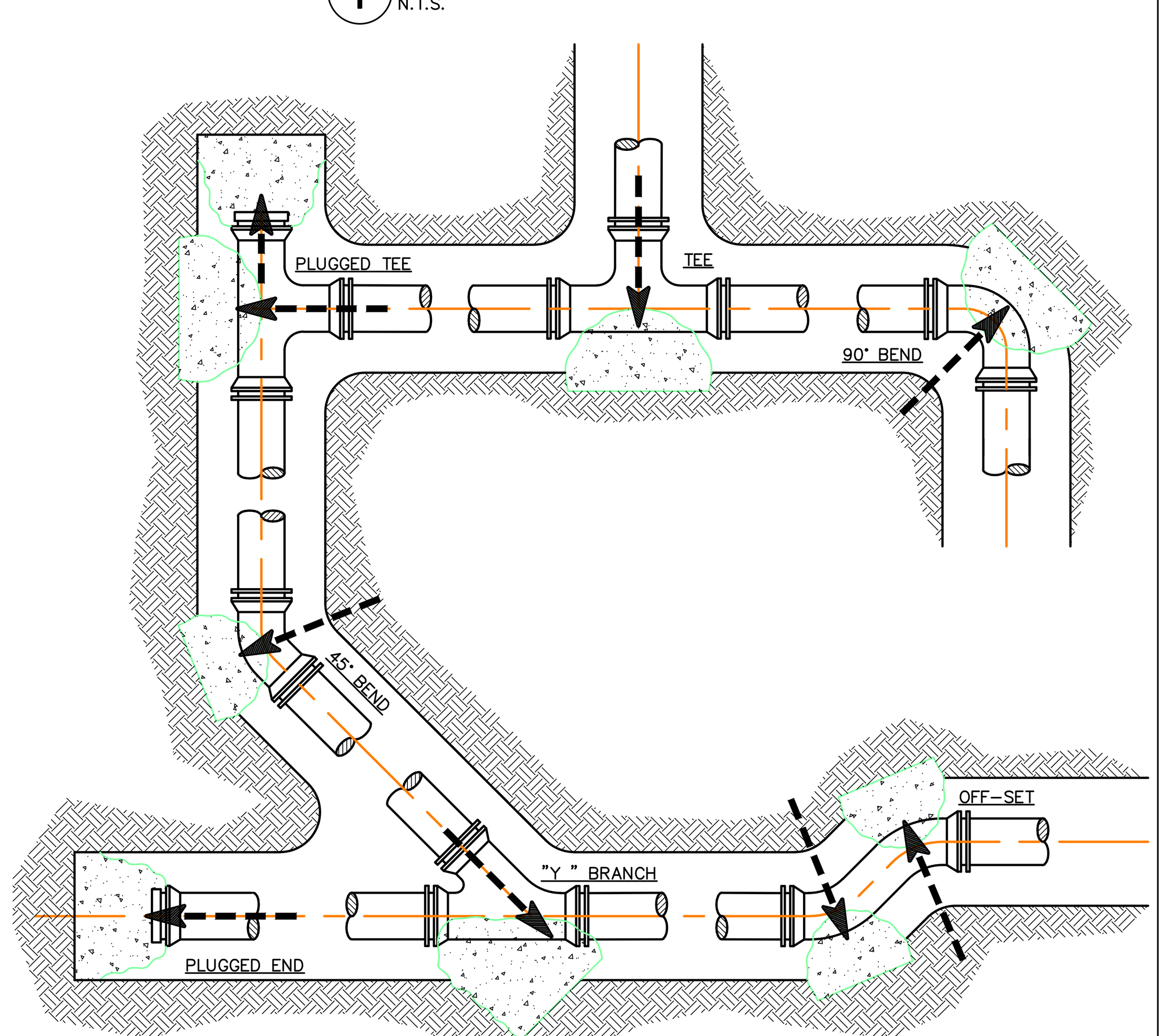


FIRE INSPECTION NOTES

1) FIRE LINE THRUST BLOCKS SHALL BE INSPECTED BY THE FIRE MARSHAL PRIOR TO BURIAL.
2) NEPA 24 UNDERGROUND HIGH VELOCITY FLUSH SHALL BE CONDUCTED PRIOR TO THE SPRINKLER CONTRACTOR CONNECTING TO THE FIRE LINE.
3) FIRE SPRINKLER SYSTEM SHALL BE FLOW TESTED WITHIN 90-DAY SUBMITTAL OF FIRE SPRINKLER PLANS.

1 THRUST BLOCK DETAIL

N.T.S.

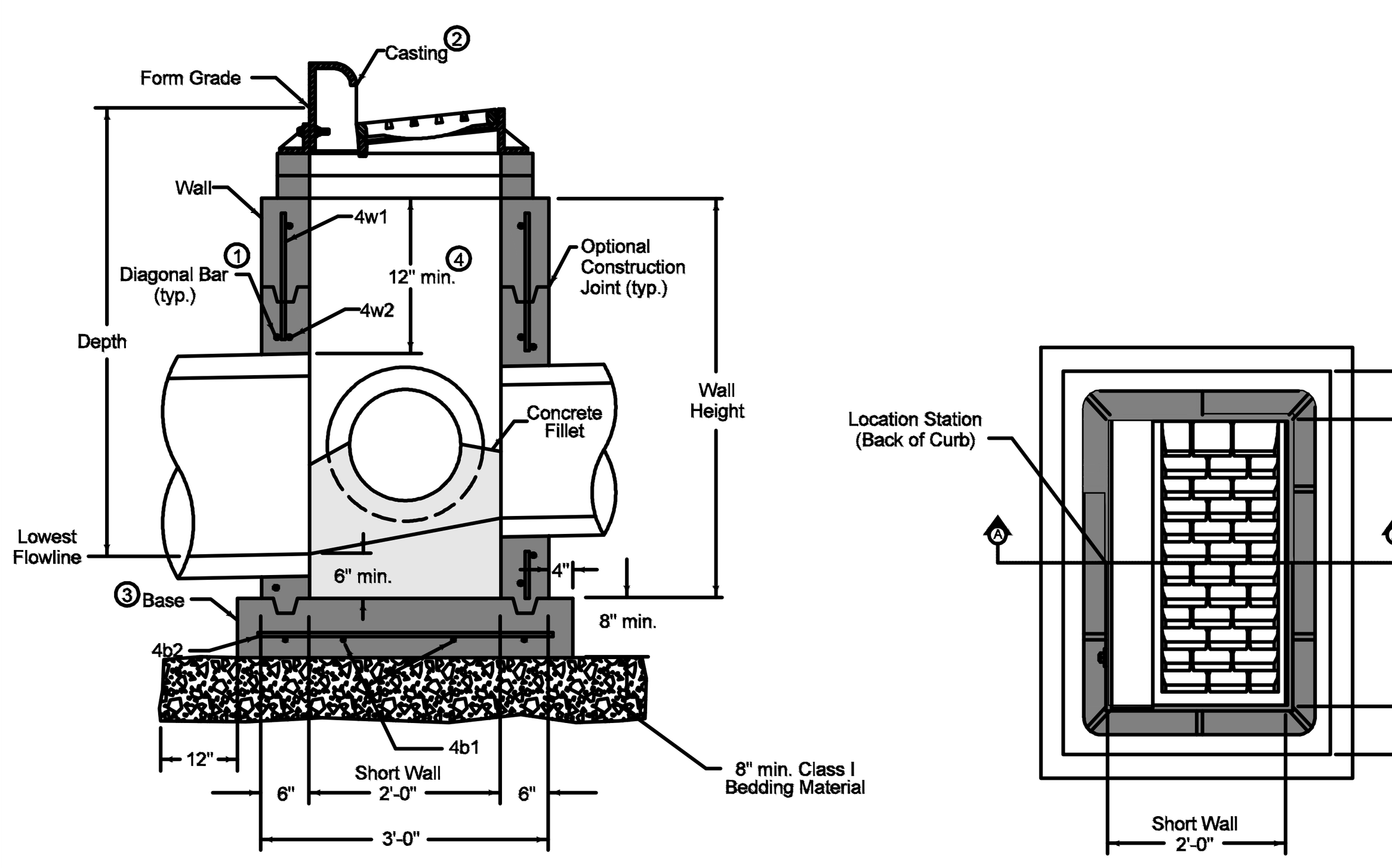


THRUST BLOCKS ARE REQUIRED AT PIPING DIRECTION CHANGES, AT DEAD ENDS, AND AT FIRE HYDRANTS. THRUST BLOCKS MAY BE PRECAST MASONRY UNITS, CAST IN PLACE CONCRETE OR TREATED HARDWOOD. CAST-IN-PLACE CONCRETE SHALL NOT BE USED AT FIRE HYDRANTS.

POURED-IN-PLACE CONCRETE SHALL BE 2000 P.S.I. MINIMUM STRENGTH, A MINIMUM OF 18 INCHES THICK, AND SHALL BE CAST AGAINST A SOLID, UNDISTURBED EDGE OF TRENCH FOR BEARING. NO BOLTS, JOINTS OR DRAIN HOLES SHALL COME INTO CONTACT WITH THE CONCRETE THRUST BLOCK AND THE PIPE SHALL BE WRAPPED WITH A PLASTIC SHEET AT THE CONCRETE BEARING SURFACES.

THRUST BLOCK MINIMUM BEARING AREA (IN SQUARE FEET)

PIPE SIZE	DEAD END OR TEE	90° BEND	45° BEND	11-1/4 BEND	22-1/2 BEND
4"	1.4	1.9	1.0	1.0	1.0
6"	2.8	4.0	2.1	1.1	1.0
8"	4.8	6.8	3.7	1.9	1.0
10"	7.3	10.3	5.8	2.8	1.4
12"	10.3	14.5	7.9	4.0	2.0
16"	17.8	25.2	13.6	7.0	3.5
20"	27.5	38.9	21.0	10.7	5.4
24"	39.2	55.5	30.0	15.3	7.7



Refer to SW-514 for boxout details.

① Install four #4 diagonal bars at all pipe openings.
② SW-603 Type R unless Type Q is specified in the contract documents.
③ Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
④ 12 inch minimum wall height above all pipes.

REINFORCING BAR LIST

Mark	Size	Location	Shape	Length	Count	Spacing
4w1	4	Walls	——	Wall Height minus 4"	14	12"
4w2	4	Long Walls	——	3'-8"	Varies	12"
4w3	4	Short Walls	——	2'-8"	Varies	12"
4b1	4	Base	——	4'-2"	4	10"
4b2	4	Base	——	3'-2"	5	10"

MAXIMUM PIPE DIAMETERS

Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	24"	30"

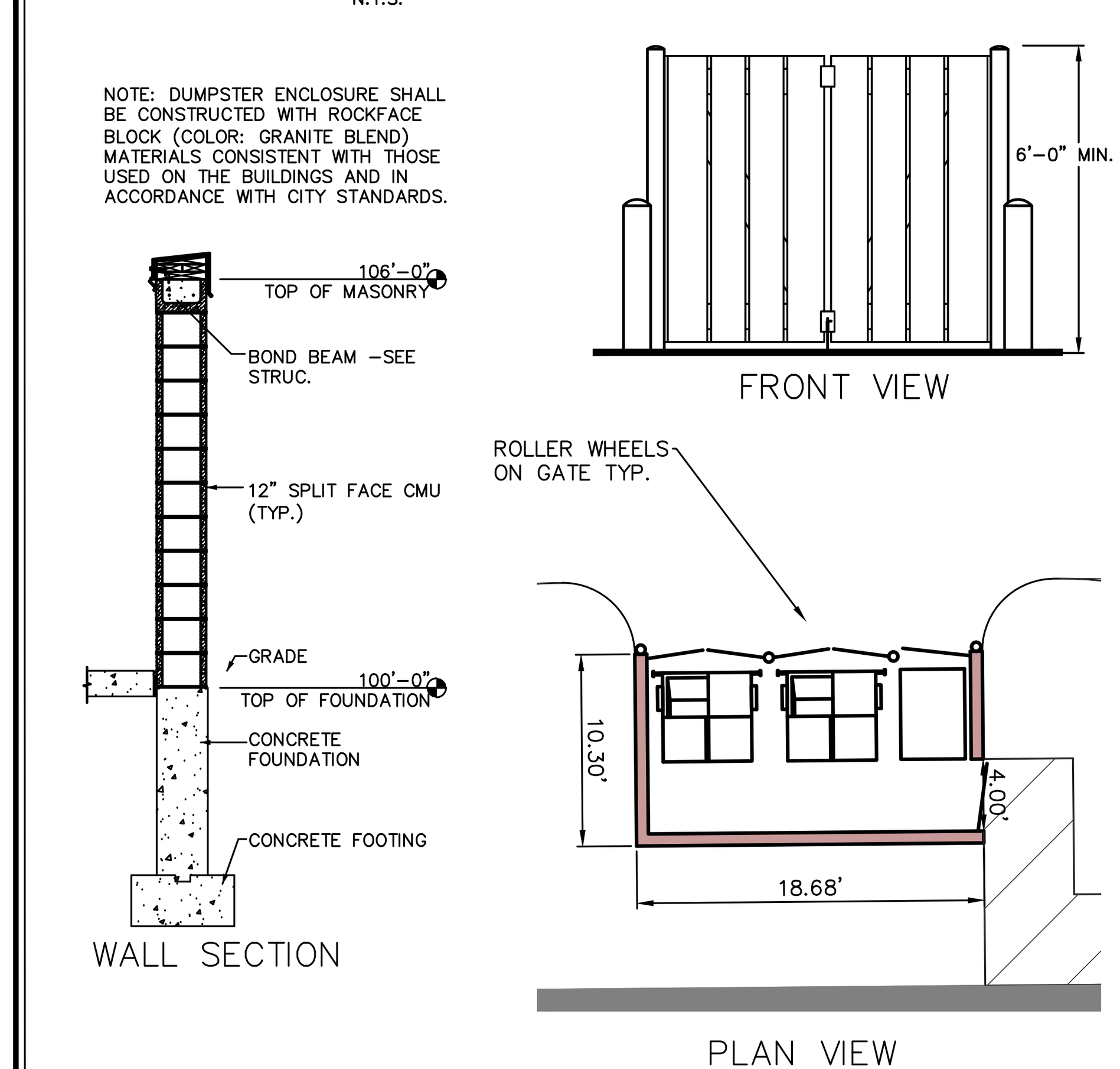
SUDAS | IOWADOT | REVISION 3 04-21-20
FIGURE 6010.501 | STANDARD ROAD PLAN | SW-501 | SHEET 1 of 1
REVISIONS: Added Class I Bedding Material.
SUDAS DIRECTOR | DESIGN METHODS ENGINEER
SINGLE GRATE INTAKE

FIGURE 6010.501 | SHEET 1 OF 1

TRASH ENCLOSURE DETAIL

N.T.S.

NOTE: DUMPSTER ENCLOSURE SHALL BE CONSTRUCTED WITH ROCKFACE BLOCK (COLOR: GRANITE BLEND) MATERIALS CONSISTENT WITH THOSE USED ON THE BUILDINGS AND IN ACCORDANCE WITH CITY STANDARDS.



C120	OVERALL SITE LAYOUT AND DIMENSION PLAN
C121	DETAILED SITE LAYOUT AND DIMENSION PLAN
C140	OVERALL SITE GRADING AND EROSION CONTROL AND SWPPP
C141	DETAILED SITE GRADING PLAN
C160	SITE UTILITY PLAN
C500	GENERAL NOTES AND DETAILS
L100	SITE LANDSCAPE PLAN

4.59 AC

CIVIL ENGINEERS
LAND PLANNERS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
ENVIRONMENTAL SPECIALISTS
1917 S. GILBERT ST.
IOWA CITY, IOWA 52240
(319) 351-8282
www.mmsconsultants.net

Date	Revision
02-10-2025	PER CITY COMMENTS
02-19-2025	PER CITY COMMENTS
03-01-2025	PER BID COMMENTS - CAT
04-04-2025	SANITARY SERVICE - CAT
06-11-2025	MOVED INTAKE TO AVOID CONFLICT - CAT
07-03-2025	ADDED PHASING - CAT

GENERAL NOTES AND DETAILS

LOT 1, PARK PLACE CITY CENTER - PART 3
TIFFIN
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date: 01-22-2025	
Designed by: CAT	Field Book No:
Drawn by: ADP	Scale:
Checked by: CAT	Sheet No: C500
Project No: 0147-017	of: 6

SITE PLAN
LOT 1, PARK PLACE CITY CENTER - PART 3
TIFFIN, JOHNSON COUNTY, IOWA

PLAT PREPARED BY:
MMS CONSULTANTS INC.
1917 S. GILBERT STREET
IOWA CITY, IA 52240

OWNER/APPLICANT:
JOHNSON COUNTY
913 S DUBUQUE ST
IOWA CITY, IA 52240

APPLICANT'S ATTORNEY

GRAPHIC SCALE IN FEET
1"=30'

LANDSCAPE REQUIREMENTS

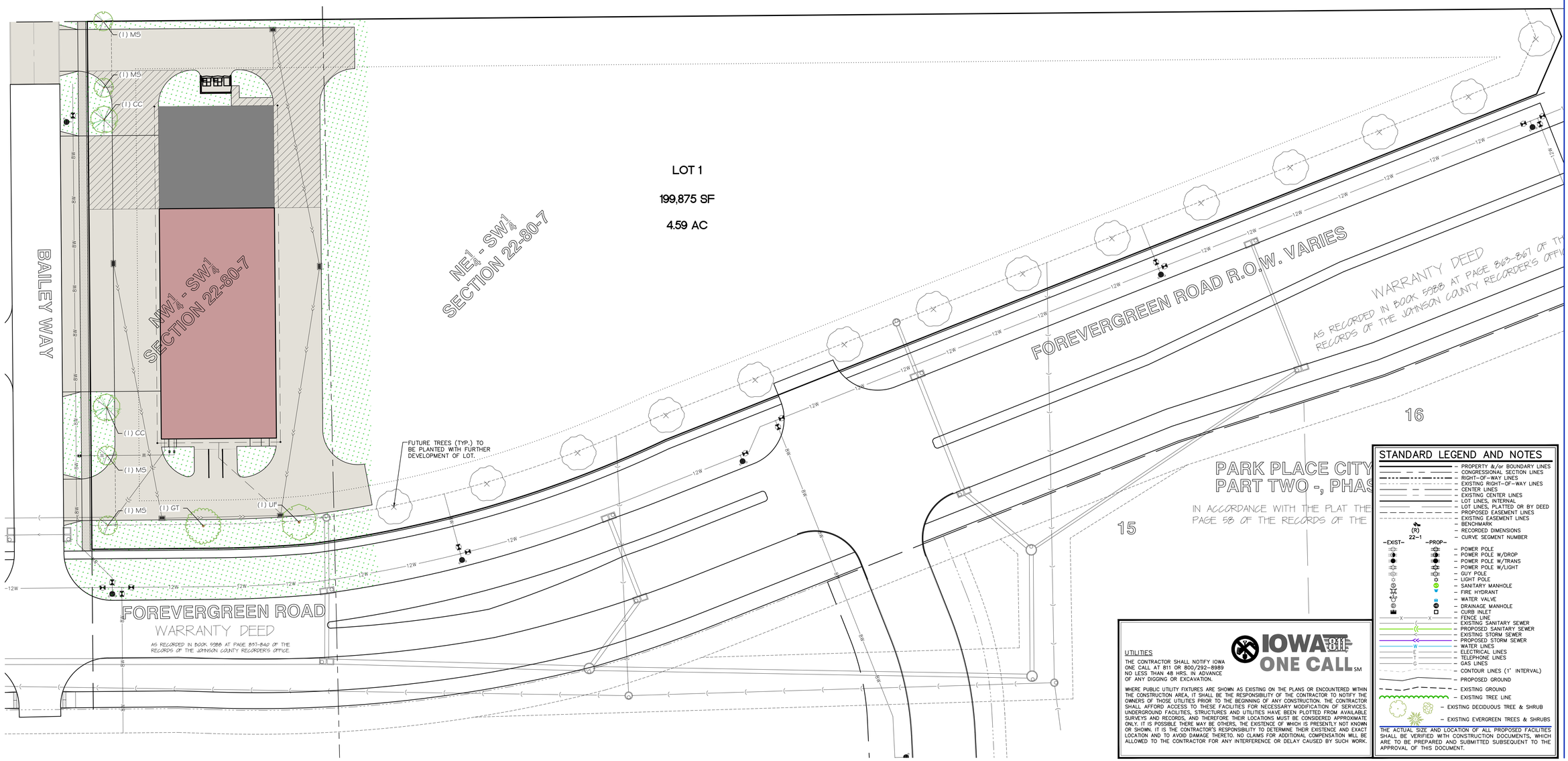
1 STREET TREE FOR EVERY 60 LF OF FRONTAGE ON LOTS WITH MORE THAN ONE FRONTAGE
- 1,343.24 / 60 = 22 TREES REQ.
  8 TREES PROPOSED (14 FUTURE TREES)

LANDSCAPE LEGEND

- TURF GRASS (22,264 SF)

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	COMMENT	MATURE H. X W.
TREES							
	CC	2	Cercis canadensis	Eastern Redbud	1.5" Cal.	B&B	30' x 25'
	GT	1	Gleditsia triacanthos inermis 'Skycole' TM	Skyline Thornless Honey Locust	2" Cal.	B&B	45' x 35'
	MS	4	Malus x 'Sargentii'	Sargent Crabapple	1.5" Cal.	B&B	15' x 15'
	UF	1	Ulmus x 'Frontier'	Frontier Hybrid Elm	2" Cal.	B&B	40' x 30'



STANDARD LEGEND AND NOTES

- PROPERTY &/or BOUNDARY LINES
- CONGRESSIONAL SECTION LINES
- RIGHT-OF-WAY LINES
- EXISTING RIGHT-OF-WAY LINES
- CENTER LINES
- EXISTING CENTER LINES
- LOT LINES, INTERNAL
- LOT LINES, PLATTED OR BY DEED
- PROPOSED EASEMENT LINES
- EXISTING EASEMENT LINES
- BENCHMARK
- RECORDED DIMENSIONS
- CURVE SEGMENT NUMBER

–EXIST–	–PROP–	
		POWER POLE
		POWER POLE W/DROP
		POWER POLE W/TRANS
		POWER POLE W/LIGHT
		GUY POLE
		LIGHT POLE
		SANITARY MANHOLE
		FIRE HYDRANT
		WATER VALVE
		DRAINAGE MANHOLE
		CURB INLET
		FENCE LINE
		EXISTING SANITARY SEWER
		PROPOSED SANITARY SEWER
		EXISTING STORM SEWER
		PROPOSED STORM SEWER
		WATER LINES
		ELECTRICAL LINES
		TELEPHONE LINES
		GAS LINES

- CONTOUR LINES (1' INTERVAL)
- PROPOSED GROUND
- EXISTING GROUND
- EXISTING TREE LINE
- EXISTING DECIDUOUS TREE & SHRUB
- EXISTING EVERGREEN TREES & SHRUBS

THE ACTUAL SIZE AND LOCATION OF ALL PROPOSED FACILITIES SHALL BE VERIFIED WITH CONSTRUCTION DOCUMENTS, WHICH ARE TO BE PREPARED AND SUBMITTED SUBSEQUENT TO THE APPROVAL OF THIS DOCUMENT.

UTILITIES

THE CONTRACTOR SHALL NOTIFY IOWA ONE CALL AT 811 OR 800/292-8989 NO LESS THAN 48 HRS. IN ADVANCE OF ANY DIGGING OR EXCAVATION.

IOWA 811 ONE CALL SM

WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

4.59 AC

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SITE LANDSCAPE PLAN

LOT 1,
PARK PLACE CITY CENTER - PART 3
TIFFIN
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	01-22-2025
Designed by: CAT	Field Book No:
Drawn by: ADP	Scale: 1"=30'
Checked by: CAT	Sheet No: L100
Project No: 0147-017	of: 6

0 – DESIGN PARAMETERS AND GOVERNING CODES

0.1 DESIGN BASIS:

GOVERNING BUILDING CODE	2021 IBC
AMENDMENTS AS REQUIRED BY	JOHNSON COUNTY, IA
LOAD SPECIFICATION	ASCE 7-16 [WITH IBC AMENDMENTS]

0.1.1 MATERIAL CODES [WITH IBC AMENDMENTS]:

CONCRETE	ACI 318, ACI 301, ACI 305R, ACI 306R
WOOD AND TIMBER	NDS; SDPWS

0.2 DESIGN LOADS:

0.2.1 ROOF LOADS:

DEAD LOAD: TOTAL	15 PSF
DEAD LOAD: TOP CHORD	10 PSF
(5 PSF PURLINS & ROOFING, 2 PSF TRUSS SELF WEIGHT, 3 PSF SOLAR PANELS)	
DEAD LOAD: BOTTOM CHORD	5 PSF
LIVE LOAD	20 PSF
GROUND SNOW LOAD	30 PSF
FLAT-ROOF SNOW LOADS (PF)	22 PSF
SNOW EXPOSURE FACTOR (CE)	1.0
SNOW LOAD IMPORTANCE FACTOR (IS)	1.1
THERMAL FACTOR (CT)	1.1
SLOPE FACTOR (SOLAR PANELS)	1.0
ROOF SNOW LOAD	25 PSF

0.2.2 FLOOR LOADS:

DEAD LOAD: TOTAL [MEZZANINE]	10 PSF
DEAD LOAD: TOP CHORD	5 PSF
DEAD LOAD: BOTTOM CHORD	5 PSF
LIVE LOAD [MEZZANINE] "CLIENT SPECIFIED"	100 PSF

0.2.3 WIND LOADS:

ULTIMATE DESIGN WIND SPEED (VULT)	115 MPH [3-SECOND GUST]
NOMINAL DESIGN WIND SPEED (VASD)	90 MPH
RISK CATEGORY	III
WIND EXPOSURE CATEGORY	C
ENCLOSURE CLASSIFICATION	**ENCLOSED**/PARTIAL/OPEN
MWFRS PRESSURE	34.5 PSF
COMPONENT AND CLADDING PRESSURE	41.5 PSF

0.2.4 EARTHQUAKE LOADS:

RISK CATEGORY	III
SEISMIC IMPORTANCE FACTOR (IE)	1.1
MAPPED SPECTRAL RESPONSE ACCELERATION	
SS	0.073
S1	0.058
SITE CLASS	D
DESIGN SPECTRAL RESPONSE ACCELERATION	
SDS	0.078
SD1	0.093
SEISMIC DESIGN CATEGORY	B
BASIC SEISMIC FORCE-RESISTING SYSTEM(S)	LIGHT FRAMED WALLS W/ SHEAR PANELS
DESIGN BASE SHEAR(S)	6 KIPS
SEISMIC RESPONSE COEFFICIENTS(S) (CS)	0.039
RESPONSE MODIFICATION COEFFICIENTS (R)	2
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE

0.2.5 GEOTECHNICAL INFORMATION:

DESIGN LOAD ALLOWABLE BEARING CAPACITY	1500 PSF PER IBC TABLE 1806.2: **YES**/NO
SITE FROST DEPTH	42 IN

0.2.6 FLOOD DESIGN DATA:

STRUCTURE LOCATED IN FLOOD HAZARD AREA	YES/**NO**

0.2.7 SPECIAL LOADS:

0.2.7.1 HANDRAIL AND GUARDRAIL SYSTEMS

UNIFORM LIVE LOAD	50 PLF
CONCENTRATED LIVE LOAD	200 LBS
INTERMEDIATE RAIL LIVE LOAD	50 LBS APPLIED OVER 1 SQ. FT. OF AREA

0.3 SERVICEABILITY REQUIREMENTS:

DEFLECTION LIMITS PROVIDED BELOW SHALL NOT EXCEED THOSE SPECIFIED IN THE MATERIAL SPECIFIC CODES LISTED IN SECTION 0.1.1

ROOF MEMBERS:
- LL, SL, OR WL DEFLECTION SHALL NOT EXCEED L/240
- TOTAL LOAD DEFLECTION SHALL NOT EXCEED L/180

FLOOR MEMBERS:
- LIVE LOAD DEFLECTION SHALL NOT EXCEED L/360
- TOTAL LOAD DEFLECTION SHALL NOT EXCEED L/240

WALL MEMBERS:
- WIND LOAD DEFLECTION SHALL NOT EXCEED L/240

0.4 GENERAL NOTES:

0.4.1 REFER TO ARCHITECTURAL PLANS FOR LOCATION OF NON-BEARING PARTITION WALLS, DOOR AND WINDOW LOCATIONS, AND DIMENSIONS NOT SHOWN ON THE STRUCTURAL PLANS.

0.4.2 ELEVATIONS INDICATED ON STRUCTURAL PLANS/DETAILS ARE TO THE TOP OF BEAMS, FOOTINGS, SLABS, ETC., UNO.

0.4.3 BUILDING DRAINAGE, INSULATION, FLASHING, VAPOR/MOISTURE PROTECTION, FIREPROOFING, AND OTHER NON-STRUCTURAL COMPONENTS ARE NOT SHOWN ON THE STRUCTURAL PLANS. REFER TO THE ARCHITECTURAL/MECHANICAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.

0.4.4 ALL SECTIONS, DETAILS AND NOTES SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS, UNO.

0.4.5 THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO THE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH ALL TEMPORARY BRACING AND/OR SHORING SUPPORT REQUIRED AS A RESULT OF CONSTRUCTION METHODS AND SEQUENCES.

0.4.6 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IN WRITING OF ANY DISCREPANCIES.

0.4.7 DO NOT SCALE DIMENSIONS FROM THE PLANS, SECTIONS, OR DETAILS.

0.4.8 ANY OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND RESOLVED BEFORE PROCEEDING WITH ANY WORK INVOLVED.

0.4.9 THE STRUCTURAL ENGINEER OF RECORD IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE PRIMARY STRUCTURE IN ITS COMPLETED FORM. THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY. THE CONTRACTOR,AT HIS DISCRETION, SHALL EMPLOY HIS OWN SPECIALTY STRUCTURAL ENGINEER HAVING EXPERIENCE IN TEMPORARY BRACING AND SHORING.

0.4.10 THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND THE METHODS OF CONSTRUCTION AND FOR JOB SITE CONDITIONS, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. CONTRACTOR TO FOLLOW ALL JOB SITE SAFETY STANDARDS, SUCH AS OSHA.

0.4.11 DO NOT CUT OR MODIFY IN ANY OTHER WAY ANY STRUCTURAL MEMBER FOR PLACEMENT OF PIPES, DUCTS, ETC.

0.4.12 ANY DIFFERENCES IN DIMENSIONS BETWEEN STRUCTURAL PLANS AND ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IMMEDIATELY.

0.4.13 ALL HOLES THROUGH EXISTING CONSTRUCTION SHALL BE CORE DRILLED OR SAW CUT AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

1 – SOIL AND GEOTECHNICAL NOTES

1.1 FOUNDATION DESIGN BEARING PRESSURES ARE BASED UPON 1500 PSF PER IBC TABLE 1806.2

1.2 SELECT STRUCTURAL ENGINEERING RECOMMENDS SOIL CONDITIONS BE VERIFIED BY QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO FOOTING PLACEMENT.

1.3 FOUNDATIONS SHALL BEAR ON SUITABLE NATIVE SOILS OR COMPACTED STRUCTURAL FILL EXTENDING TO SUITABLE NATIVE SOILS AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

1.4 EXISTING UNSUITABLE FILL MATERIAL ENCOUNTERED BELOW FLOOR SLABS AND FOUNDATIONS, AS DETERMINED BY THE GEOTECHNICAL ENGINEER, SHALL BE REMOVED AND REPLACED WITH PROPERLY PLACED AND COMPACTED STRUCTURAL FILL MATERIAL.

1.5 EXCAVATIONS SHALL BE FREE OF WATER, FROST, ICE, LOOSE SOIL, AND OTHER DELETERIOUS MATERIALS PRIOR TO CONCRETE PLACEMENT. ANY UNSUITABLE MATERIAL IS TO BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL FILL MATERIAL.

1.6 ANY FILL MATERIAL REQUIRED TO BRING THE SUBGRADE TO BEARING ELEVATION IS TO BE TESTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT (8) INCHES IN THICKNESS WHEN HEAVY, SELF-PROPELLED COMPACTION EQUIPMENT IS UTILIZED, SIX (6) INCHES IN THICKNESS WHEN HAND-HELD COMPACTION EQUIPMENT IS UTILIZED.

1.6.1 FILL MATERIAL SHALL BE COMPACTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER AND SOILS REPORT, OR:

UNDER SLABS: MATERIAL SHOULD BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM STANDARD PROCTOR DRY DENSITY (ASTM D-698).

UNDER FOOTINGS: MATERIAL SHOULD BE COMPACTED TO AT LEAST 98% OF ITS MAXIMUM STANDARD PROCTOR DRY DENSITY (ASTM D-698).

THE HIGHER DEGREE OF FILL COMPACTION BELOW FOOTINGS SHALL EXTEND LATERALLY BEYOND THE EXTERIOR EDGES OF THE ELEMENT AT LEAST EIGHT (8) INCHES PER FOOT OF THICKNESS BELOW THE ELEMENT'S BASE ELEVATION.

1.7 THE CONTRACTOR IS RESPONSIBLE TO LOCATE, VERIFY AND MARK THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION FOR FOOTINGS/FOUNDATIONS.

2 – CONCRETE NOTES

2.1 EXCEPT WHERE MODIFIED BY THESE PLANS AND SPECIFICATIONS, ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MATERIAL CODES LISTED IN SECTION 0.1.1

2.2 REINFORCING IS TO BE DETAILED IN ACCORDANCE WITH ACI 315-LATEST, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".

2.3 CONCRETE SHALL BE TYPE I/II FOR NON-WINTER CONSTRUCTION AND TYPE III FOR WINTER CONSTRUCTION, CONFORMING TO ASTM C150, AND HAVE 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS, UNO:

FOOTINGS	3000 PSI
FOUNDATION WALLS, PIERS	3000 PSI
SLABS-ON-GRADE	4000 PSI

2.4 CONCRETE SHALL BE NORMAL WEIGHT CONCRETE UNLESS NOTED OTHERWISE. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C33 FOR NORMAL WEIGHT CONCRETE MIXES.

2.5 CONCRETE REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

REINFORCING BARS	ASTM A615, GRADE 60
WELDED WIRE FABRIC	ASTM A1064
REBAR TO BE WELDED	ASTM A706, GRADE 60

2.6LAP-SPLICES SHALL BE CLASS A, UNO AND FOLLOW LAP SCHEDULE SHALL APPLY TO CONCRETE FOUNDATION:

#4 REBAR	17 INCHES
#5 REBAR	22 INCHES
#6 REBAR	27 INCHES
WELDED WIRE FABRIC	8 INCHES

2.7 WELDED WIRE FABRIC MAY BE REPLACED WITH FIBER REINFORCING, SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

2.8 STANDARD HOOKS SHALL BE PROVIDED AS NOTED AND CONFORM TO TYPICAL DETAILS.

2.9 MAINTAIN THE MINIMUM CONCRETE COVERAGE FOR REINFORCING AS INDICATED ON THE DRAWINGS, UNO.

CONCRETE CAST DIRECTLY AGAINST EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER:	
BARS #6 AND LARGER	2 INCHES
BARS #5 AND SMALLER	1-1/2 INCHES

PLACE REINFORCING BARS AS NEAR TO THE SURFACE AS THESE MINIMUMS PERMIT, UNO.

2.10 SHIFT REINFORCING TO CLEAR ANCHOR BOLTS AND EMBEDDED ITEMS, CUTTING OF REINFORCING BARS IS NOT PERMITTED.

2.11 REINFORCING SHALL RUN CONTINUOUS THROUGH CONSTRUCTION JOINTS, UNO.

2.12 VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL HAVE KEYWAYS 1-1/2 INCHES DEEP BY ONE THIRD THE WALL THICKNESS.

2.13 PROVIDE HORIZONTAL REINFORCING CONTINUOUS AROUND ALL CORNERS, UNO. PROVIDE CORNER BARS WITH 48 BAR DIAMETER LENGTH LAP SPLICE AT ALL INTERSECTIONS OF FOOTINGS, AND WALLS, SAME SIZE AND SPACING AS HORIZONTAL REINFORCING, UNO.

2.14 HOT WEATHER CONCRETE OPERATIONS SHALL BE IN ACCORDANCE WITH ACI 305. COLD WEATHER CONCRETE OPERATIONS SHALL BE IN ACCORDANCE WITH ACI 306.

2.15 AIR ENTRAINMENT SHALL BE EMPLOYED TO REACH 5 - 7% TOTAL AIR CONTENT IN CONCRETE USED FOR EXTERIOR CONSTRUCTION.

2.16 FLY ASH IN CONFORMANCE WITH ASTM C618 MAY BE USED TO REPLACE UP TO 25% OF THE REQUIRED CEMENTITIOUS MATERIAL.

2.17 ADMIXTURES ARE PERMITTED AS FOLLOWS, SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD:

WATER REDUCING	ASTM C494
FLOWING AGENTS	ASTM C1017
AIR-ENTRAINING	ASTM C260

2.18 CHLORIDE BASED ACCELERANT'S ARE NOT PERMITTED.

5 – WOOD AND TIMBER NOTES

5.1 EXCEPT WHERE MODIFIED BY THESE PLANS AND SPECIFICATIONS, ALL WOOD AND TIMBER WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MATERIAL CODES LISTED IN SECTION 0.1.1

5.2 ALL STRUCTURAL FRAMING LUMBER SHALL BE CLEARLY MARKED WITH THE GRADE, INSPECTION AGENCY AND GRADING RULES.

5.3 DIMENSIONAL LUMBER SHALL BE SPF #1/#2 FOR 2X6 AND SMALLER MEMBERS AND DF-LARCH #2 FOR 2X8 AND LARGER MEMBERS, AND MEET THE MATERIAL PROPERTIES LISTED BELOW, UNO.

MINIMUM DIMENSIONAL LUMBER PROPERTIES

TYPE	GRADE	FB (PSI)	FT (PSI)	FV (PSI)	FC (PSI)	E (KSI)	GRADING RULES
SPF	#1/#2	875	450	135	1150	1400	NLGA
DF-LARCH	#2	900	575	180	1350	1600	WCLIB/WWPA
SYP	#2	VARIES	VARIES	175	VARIES	1600	SPIB

5.4 ENGINEERED LUMBER SHALL MEET THE MATERIAL PROPERTIES LISTED BELOW, UNO.

MINIMUM ENGINEERED LUMBER PROPERTIES

TYPE	GRADE	FB (PSI)	FT (PSI)	FV (PSI)	FC (PSI)	E (KSI)
LVL	1.9E	2600	1555	285	2510	1900

5.4.1 STRUCTURAL COMPOSITE LUMBER (LVL AND PSL) SHALL CONFORM TO ASTM D5456.

5.5 WOOD STRUCTURAL PANELS (INCLUDING OSB AND PLY-WOOD) SHALL MEET THE REQUIREMENTS OF USDOC PS1 AND PS2 OR ANSI/APA PRP 210.

5.6 WOOD SHEATHING AND NAILING REQUIREMENTS SHALL BE AS NOTED ON PLANS AND DETAILS. FOR SHEATHING NOT NOTED ON DRAWINGS THE FOLLOWING MINIMUMS SHALL APPLY:

5.6.1 FLOOR SHEATHING SHALL BE A MINIMUM 23/32" APA RATED PANEL ATTACHED WITH 8D NAILS AT 6" OC EDGE AND 12" OC FIELD.

5.6.2 EXTERIOR WALL SHEATHING SHALL BE A MINIMUM 7/16" ATA RATED PANEL ATTACHED WITH 8D NAILS AT 6" OC EDGE AND 12" OC FIELD.

5.7 ALL WOOD IN CONTACT WITH CONCRETE, MASONRY, OR SOIL, OR WOOD THAT IS EXPOSED TO THE WEATHER SHALL BE PRESSURE TREATED PRESERVATIVE LUMBER. ALL STEEL NAILS, BOLTS AND CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE GALVANIZED TO G185 THICKNESS SPECIFICATIONS, TRIPLE COATED, OR STAINLESS STEEL.

6 – ANCHORAGE, FASTENERS, WELDING, AND OTHER CONNECTING MEDIUMS

6.1 CAST-IN-PLACE CONCRETE ANCHORS SHALL BE 3/4" DIAMETER ASTM F1554 GRADE 55 ANCHORS OR ASTM A193 GRADE B7, UNO. APPLICABLE ANCHOR TYPES AND INSTALLATION REQUIREMENTS SHALL BE PER THE TYPICAL CONCRETE ANCHORAGE DETAIL.

6.2 POST INSTALLED CONCRETE ANCHORS SHALL CONFORM TO THE REQUIREMENTS OF APPENDIX D OF ACI 318. WEDGE/SLEEVE BOLTS, UNDERCUT BOLTS, EPOXY/ADHESIVE ANCHORS, AND SCREW ANCHORS ARE PERMISSIBLE IN ACCORDANCE WITH THE TYPICAL CONCRETE ANCHORAGE DETAIL WHERE EXPLICIT ANCHORS ARE NOT SPECIFIED ON THE PLANS OR DETAILS.

6.3 POWDER-ACTUATED FASTENERS SHALL BE PROVIDED PER PLANS AND DETAILS. PINS SPECIFIED ON PLANS ARE HILTI X-U, HILTI X-HSN24, OR HILTI X-ENP19, UNO. STEEL DECK FASTENING SHALL BE HILTI X-HSN24 WHEN ATTACHED TO BAR JOIST WITH A METAL THICKNESS NOT EXCEEDING 3/8"; HILTI X-ENP19 SHALL BE USED FOR BASE MATERIAL THICKNESSES EXCEEDING 3/8". DECK SIDELAP CONNECTORS SHALL BE HILTI SLC FASTENERS, UNO.

6.4 WOOD FASTENERS SHALL CONFORM TO THE FOLLOWING:

6.4.1 STEEL NAIL FASTENERS SHALL CONFORM TO ASTM F1667. WHERE NAIL PENNY WEIGHT DESIGNATION IS USED ON PLANS AND DETAILS THE FOLLOWING MINIMUM DIMENSIONS SHALL BE MET FOR AN ALTERNATIVE FASTENER TO BE DEEMED EQUIVALENT.

TYPICAL PENNYWEIGHT NAIL PROPERTIES

TYPE	COMMON		BOX		SINKER	
PENNYWEIGHT	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	DIAMETER
6D	2"	.113"	2"	.099"	1-7/8"	.092"
8D	2-1/2"	.131"	2-1/2"	.113"	2-3/8"	.113"
10D	3"	.148"	3"	.128"	2-7/8"	.12"
12D	3-1/4"	.148"	3-1/4"	.128"	3-1/8"	.135"
16D	3-1/2"	.162"	3-1/2"	.135"	3-1/4"	.148"
20D	4"	.192"	4"	.148"	3-1/4"	.177"

6.4.2 STANDARD WOOD SCREWS SHALL CONFORM TO ANSI/ASME B18.6.1.

6.4.3 STANDARD HEX LAG SCREWS SHALL CONFORM TO ANSI/ASME B18.2.1.

6.4.4 STANDARD DOWELS (BOLTS) AND NUTS SHALL CONFORM TO ANSI/ASME B18.2.1. STANDARD CUT WASHERS SHALL CONFORM TO ANSI/ASME B18.22.1.

6.5 WOOD STRUCTURAL CONNECTORS (INCLUDING JOIST HANGERS, HOLD DOWNS, TIES, STRAPS, CLIPS, ETC) SHALL BE PROVIDED AS SPECIFIED ON THE PLANS AND DETAILS. SUBSTITUTION OF THE BRAND AND TYPE OF CONNECTOR IS PERMITTED WHEN THE CONTRACTOR PROVIDES DOCUMENTATION INDICATING LOAD CAPACITIES OF REPLACEMENT IS EQUAL OR GREATER THAN THE ORIGINALLY SPECIFIED HARDWARE AND WITH PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

6.6 COLD-FORMED STRUCTURAL CONNECTORS (INCLUDING CLIPS, HANGERS, BRACING, HOLD DOWNS, STRAPS, SHEAR BOOTS, ETC) SHALL BE PROVIDED AS SPECIFIED ON THE PLANS AND DETAILS. CONNECTORS WILL BE SPECIFIED FROM ONE MANUFACTURER CLARKDIETRICH, TSN, SIMPSON STRONG-TIE, ETC); HOWEVER, SUBSTITUTIONS ARE PERMITTED WHEN THE CONTRACTOR PROVIDES DOCUMENTATION INDICATING LOAD CAPACITIES OF REPLACEMENTS ARE EQUAL OR GREATER THAN THE ORIGINALLY SPECIFIED HARDWARE AND WITH PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

10 – WOOD TRUSSES

10.1 EXCEPT WHERE MODIFIED BY THESE PLANS AND SPECIFICATIONS, ALL WOOD TRUSS WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MATERIAL CODES LISTED IN SECTION 0.1.1

10.2 TRUSS FABRICATOR SHALL PROVIDE THE FOLLOWING INFORMATION IN THEIR TRUSS SUBMITTAL PACKAGE TO BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD:

10.2.1 INDIVIDUAL TRUSS CUT SHEETS CONTAINING:

- SLOPE, DEPTH, SPAN, AND SPACING
- LOCATION OF ALL JOINTS AND SUPPORTS
- NUMBER OF TRUSS PLIES
- REQUIRED BEARING WIDTH
- DESIGN LOADS USED, ADJUSTMENT FACTORS, MAXIMUM REACTIONS
- SIZE, SPECIES AND GRADE OF EACH MEMBER
- TRUSS DEFLECTION LIMITS
- AXIAL TENSION AND COMPRESSION OF EACH MEMBER
- REQUIRED PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT LOCATION AND METHOD.

10.2.2 TRUSS PLACEMENT PLAN

10.3 TEMPORARY AND PERMANENT TRUSS LATERAL BRACING IN CLEAR SPANS 60' AND GREATER ARE REQUIRED TO BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL. THE OWNER IS TO CONTRACT WITH A REGISTERED DESIGN PROFESSIONAL FOR THE DESIGN OF THE FOLLOWING BRACING REQUIREMENTS:

10.3.1 TEMPORARY AND PERMANENT TRUSS LATERAL BRACING FOR ALL LENGTHS SHALL CONFORM AS A MINIMUM TO THOSE REQUIRED IN THE BCSI AND TPI REQUIREMENTS.

10.3.2 INSTALLATION OF TEMPORARY BRACING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE BCSI AND TPI STANDARDS.

10.4 LOADS ON TRUSSES DURING CONSTRUCTION SHALL BE MAINTAINED BELOW THOSE LISTED IN SECTION 0.2.1 AND 0.2.2. MATERIAL SHALL NOT BE STACKED ON INADEQUATELY BRACED TRUSSES.

10.5 DO NOT CUT OR ALTER TRUSSES WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE TRUSS FABRICATOR.

10.6 TRUSS FABRICATOR TO PROVIDE CALCULATIONS AND SHOP DRAWINGS SHALL BE STAMPED BY AN ENGINEER HAVING JURISDICTION AT PROJECT LOCATION.

SHEET LIST

SHEET NUMBER	SHEET NAME
S001	GENERAL NOTES
S100	FOUNDATION PLAN
S101	FRAMING PLAN
S102	ROOF FRAMING PLAN
S103	TRASH ENCLOSURE PLAN AND DETAIL
S300	FOUNDATION DETAILS
S500	FRAMING DETAILS
S501	FRAMING DETAILS
S502	FRAMING DETAILS

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GENERAL NOTES

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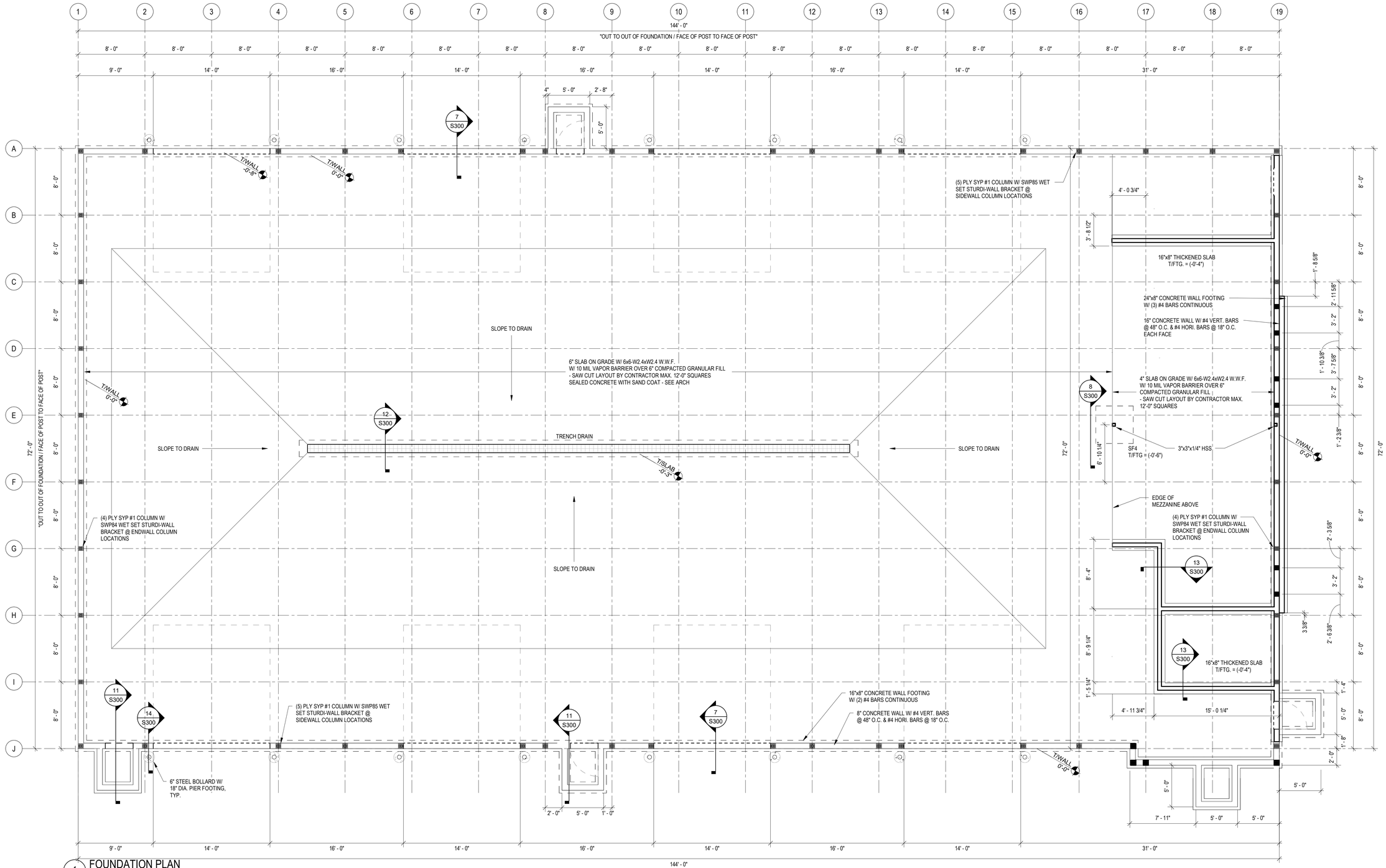
JOB NO: 25-370

PAGE NO.
S001



1 FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

SPREAD FOOTING SCHEDULE				
MARK	LENGTH	WIDTH	THICKNESS	REINFORCING
SF4	4' - 6"	4' - 6"	8"	(6) #4 BARS @ 10" OC, EACH WAY

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S100

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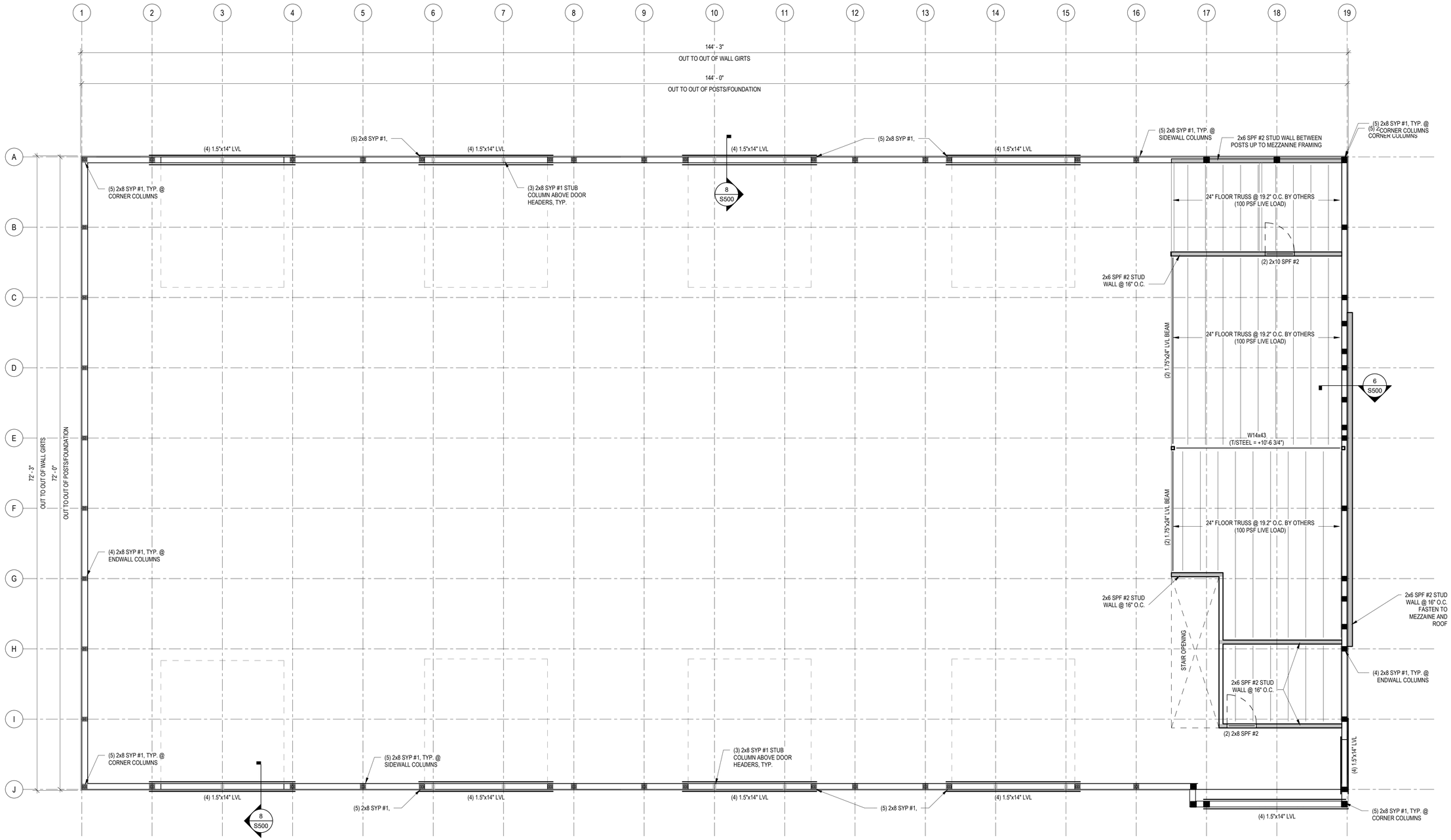

1 FRAMING PLAN
SCALE: 3/16" = 1'-0"

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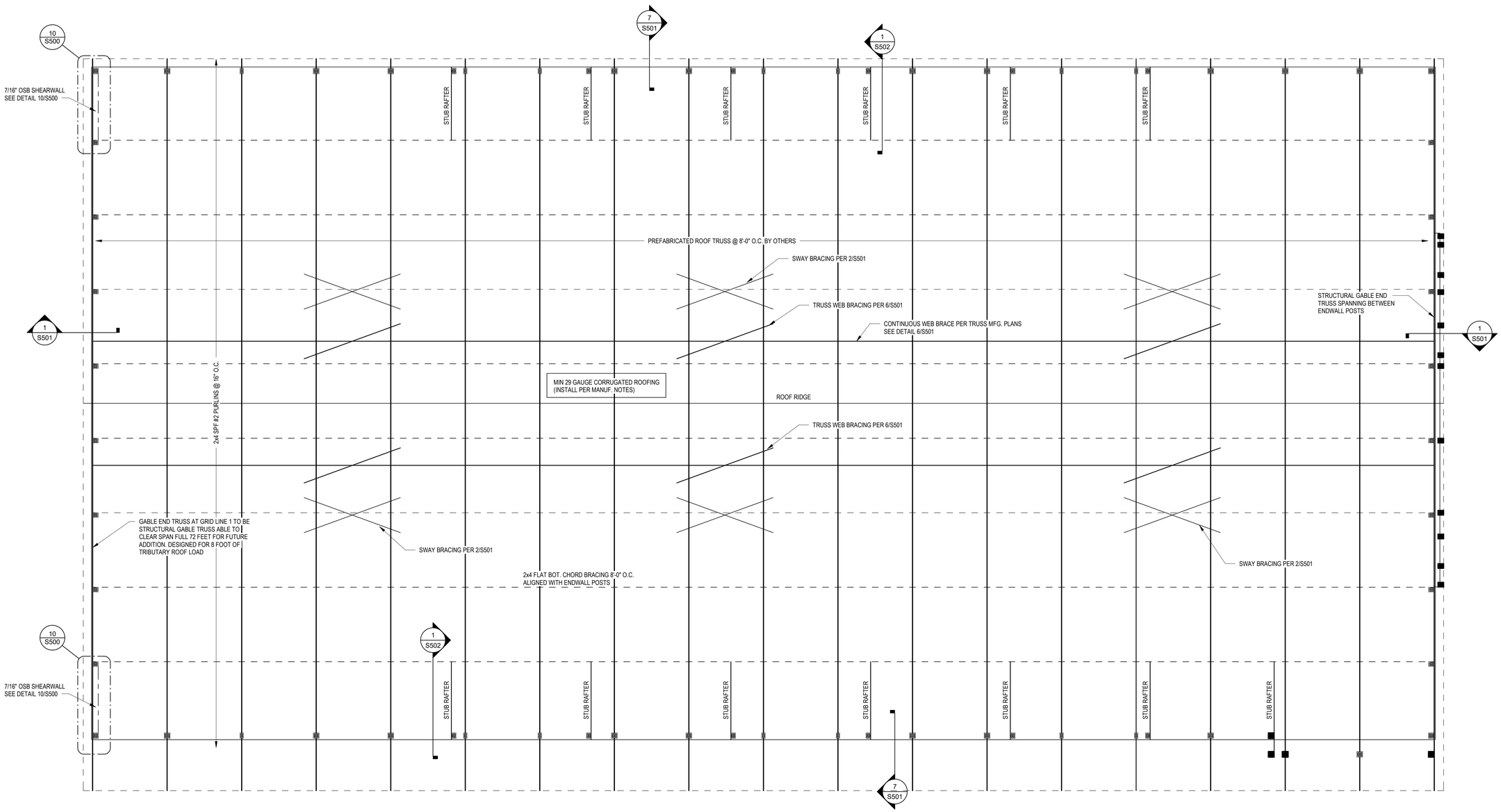
S101



1 ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

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ROOF FRAMING PLAN

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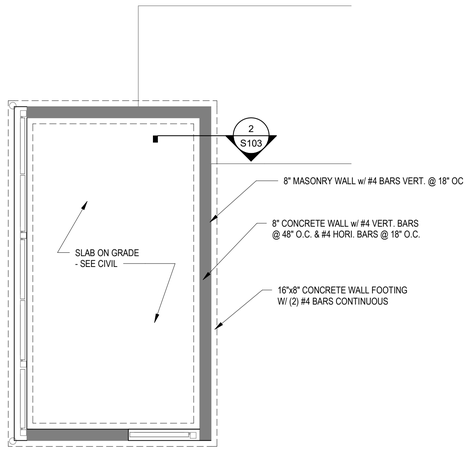
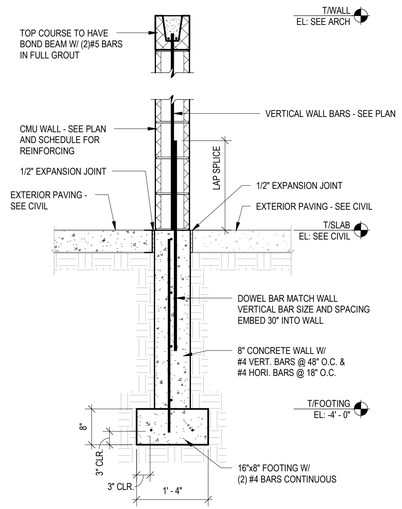
S102



1 TRASH ENCLOSURE PLAN
SCALE: 1/4" = 1'-0"



2 TRASH ENCLOSURE FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"

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TRASH ENCLOSURE PLAN AND DETAIL

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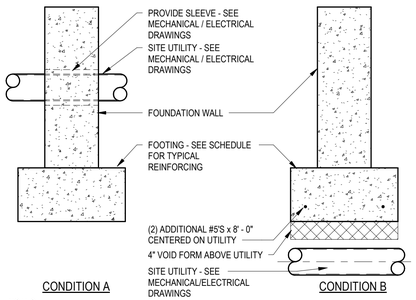
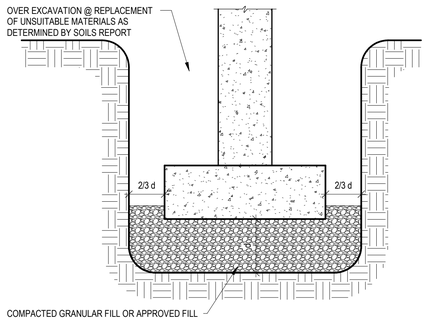
S103

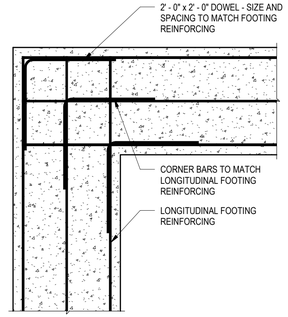


NOTES:
1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS, ELEVATIONS, ETC., OF SITE UTILITIES
2. DETAIL REQUIRED AT ALL UTILITIES HAVING A PLAN WIDTH UP TO 3' - 0". FOR WIDTHS
3. GREATER THAN 3' - 0", SEE PLAN FOR REQUIRED DETAIL
4. CONDITION B DOES NOT APPLY AT SPREAD FOOTING SITUATIONS. GENERAL CONTRACTOR SHALL NOTIFY ENGINEER SHOULD SUCH A CONDITION ARISE AND AWAIT FURTHER INSTRUCTIONS.

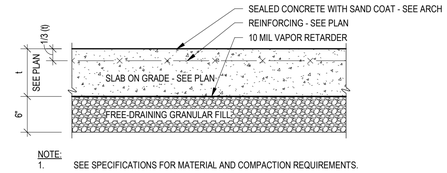
1 CONCRETE FOUNDATION DETAILS AT SITE UTILITIES
SCALE: 3/4" = 1'-0"



2 TYPICAL OVEREXCAVATION & BACKFILL DETAIL
SCALE: 3/4" = 1'-0"

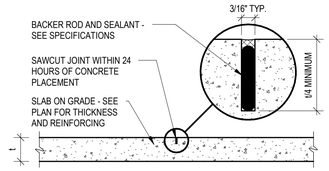


3 CONCRETE FOOTING CORNER BARS
SCALE: 3/4" = 1'-0"

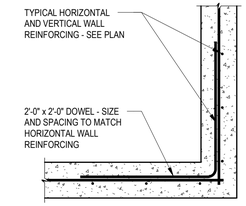


NOTE:
1. SEE SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.

4 CONCRETE SLAB ON GRADE SECTION
SCALE: 1" = 1'-0"

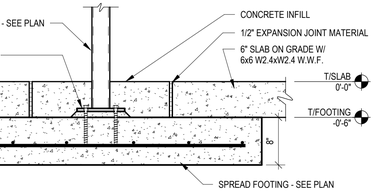


5 CONCRETE SLAB ON GRADE CONTROL JOINT
SCALE: 1" = 1'-0"

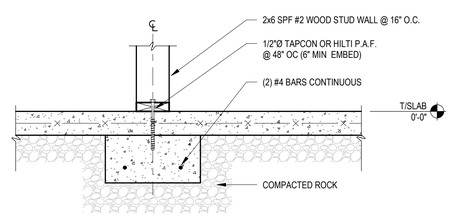


6 CONCRETE WALL CORNER DETAIL
SCALE: 3/4" = 1'-0"

7 CONCRETE FOUNDATION WALL DETAIL @ OVERHEAD DOOR
SCALE: 1" = 1'-0"



8 CONCRETE SPREAD FOOTING @ INTERIOR HSS COLUMN
SCALE: 1" = 1'-0"



13 CONCRETE THICKENED SLAB DETAIL @ WOOD WALL
SCALE: 1" = 1'-0"

NOTE:
1. SOLVENT CLEAN BOLLARDS BEFORE INSTALLATION
2. PROVIDE POLYETHYLENE COVERS OVER BOLLARDS

14 TYPICAL PIPE BOLLARD DETAIL
SCALE: 1" = 1'-0"

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

12 CONCRETE TRENCH DRAIN DETAIL
SCALE: 1" = 1'-0"

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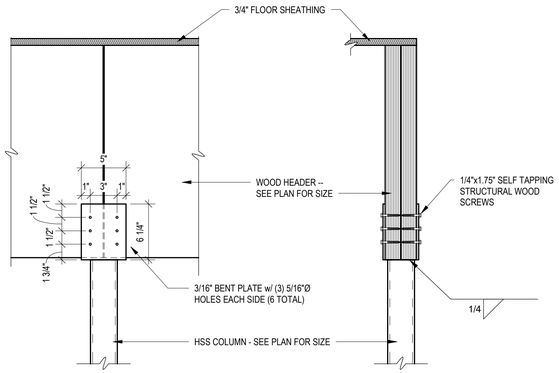

1 HSS COLUMN & WOOD BEAM CONNECTION
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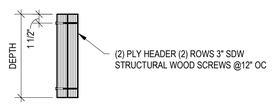
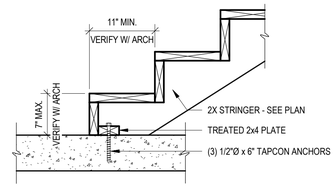
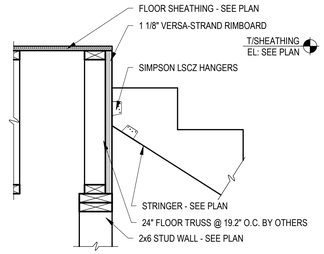


2 WOOD LVL HEADER FASTENING DETAIL
SCALE: 1" = 1'-0"



3 WOOD STAIR DETAIL @ FOOTING
SCALE: 1" = 1'-0"



4 WOOD STAIR DETAIL @ STRINGER CONNECTION
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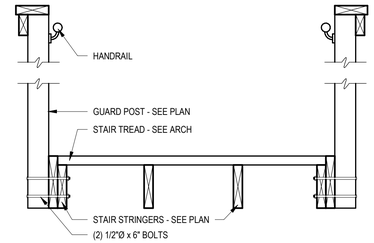

5 WOOD STAIR SECTION
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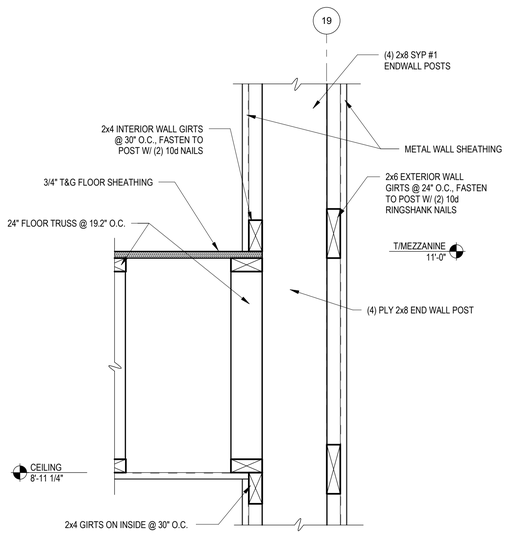
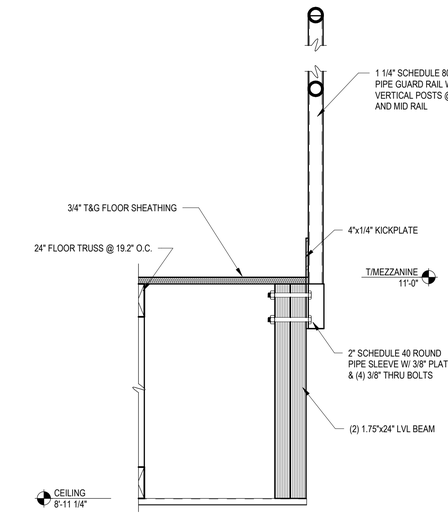


6 MEZZANINE FRAMING DETAIL @ EXTERIOR LEDGER
SCALE: 1 1/2" = 1'-0"



7 MEZZANINE FRAMING DETAIL @ BEAM
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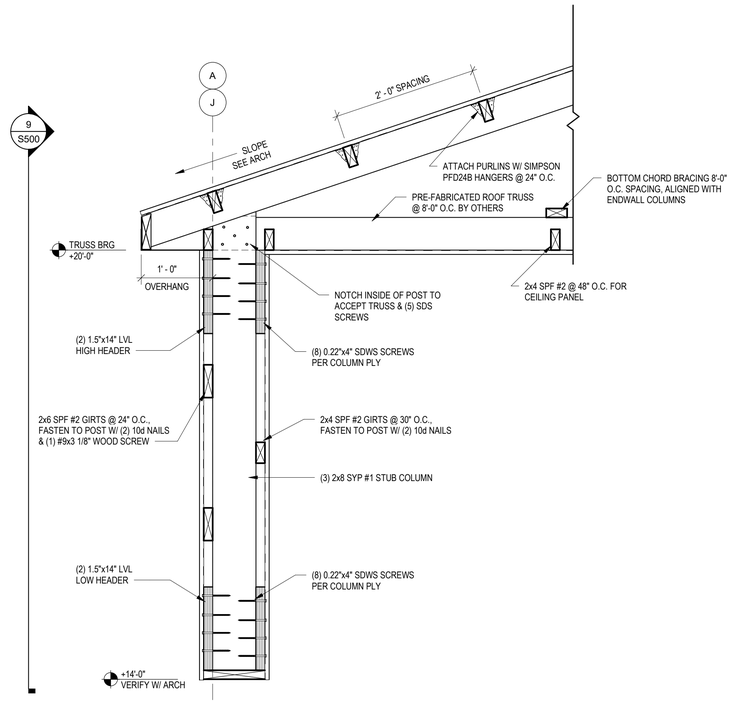
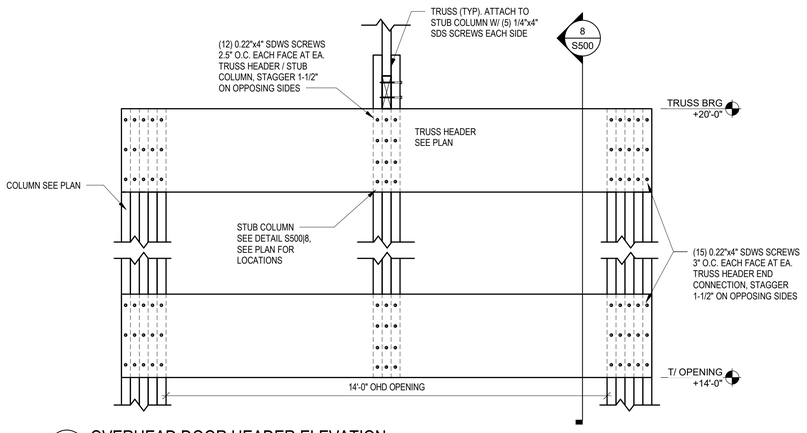
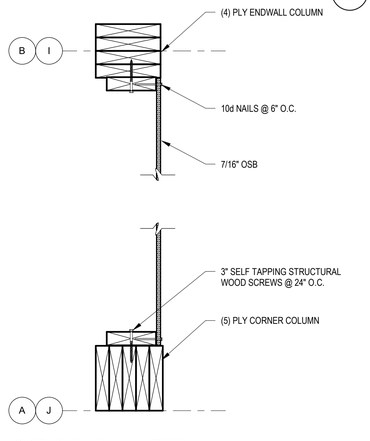


8 OVERHEAD DOOR OPENING HEADER SECTION
SCALE: 1" = 1'-0"



9 OVERHEAD DOOR HEADER ELEVATION
SCALE: 1" = 1'-0"



10 OSB SHEARWALL DETAIL
SCALE: 1 1/2" = 1'-0"

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REVISIONS

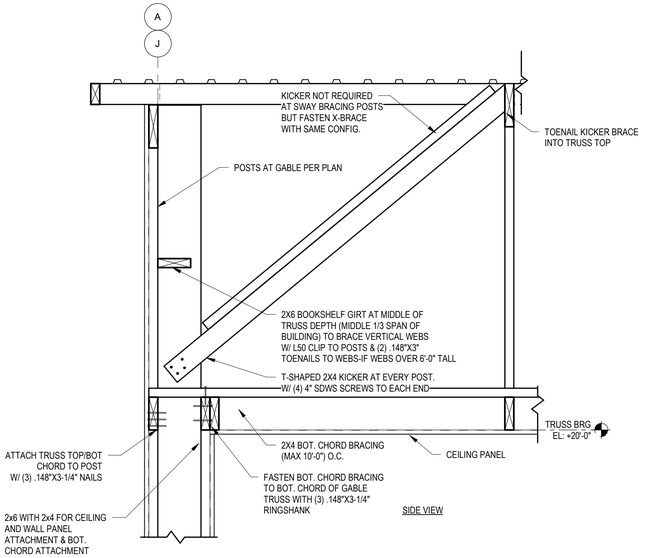
JOHNSON COUNTY EMA STORAGE
2000 BAILEY WAY
TIFFIN, IA 52340

ENCITE ARCHITECTURE & DESIGN, LLC

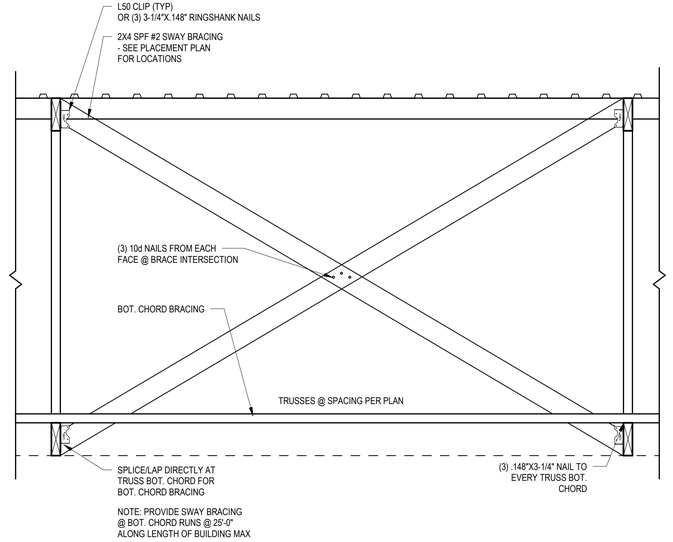
SHEET TITLE
FRAMING DETAILS

DRAWN BY: BTS
CHECKED BY: MDM
APPROVED BY: EPD
JOB DATE: 9.30.25
JOB NO: 25-370

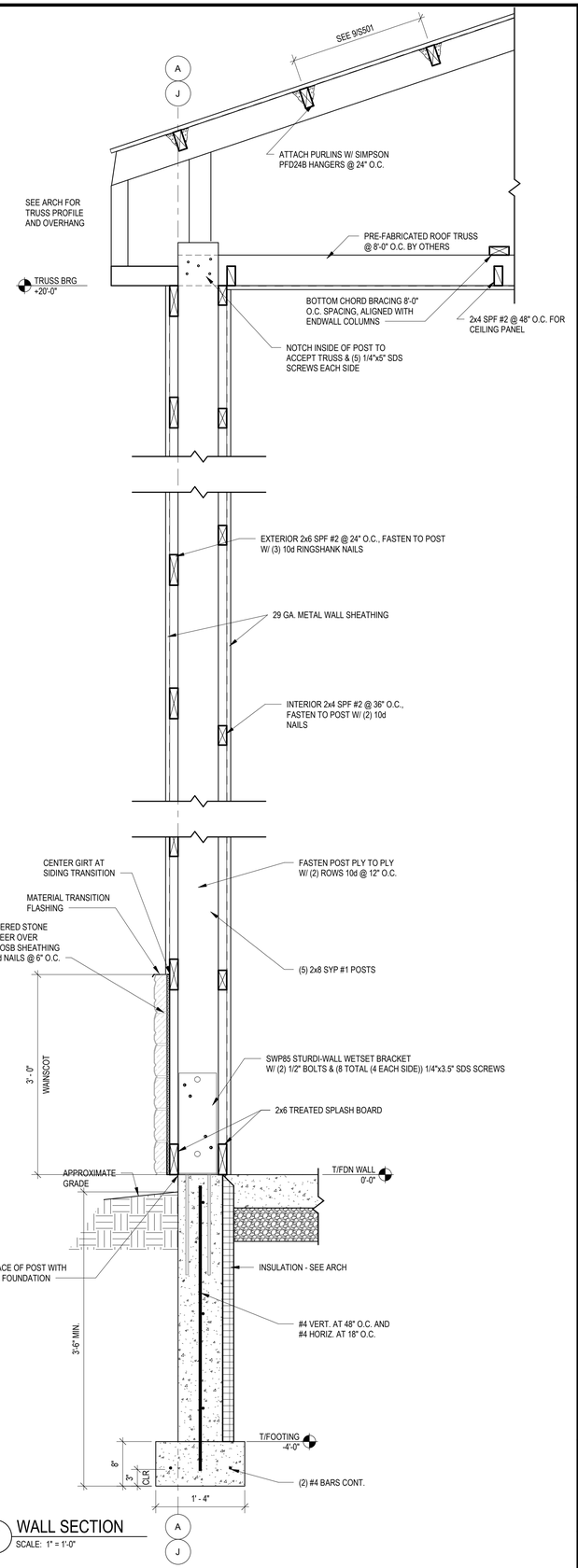
PAGE NO.
S500



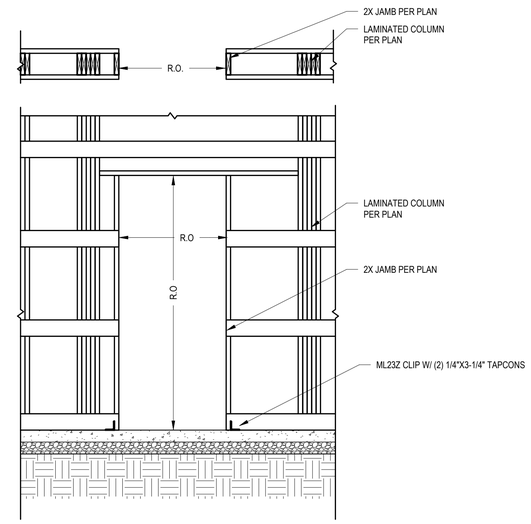
1 GABLE END DETAIL
SCALE: 1" = 1'-0"



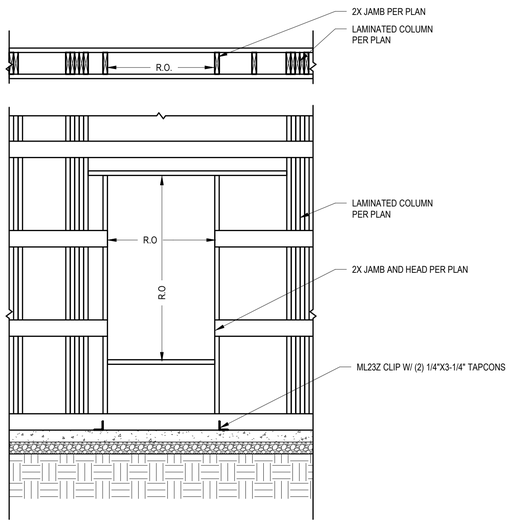
2 SWAY BRACING
SCALE: 1" = 1'-0"



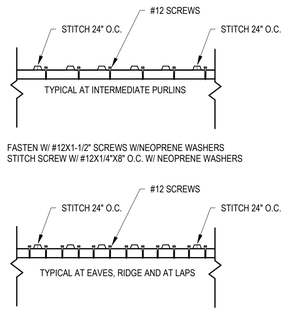
7 WALL SECTION
SCALE: 1" = 1'-0"



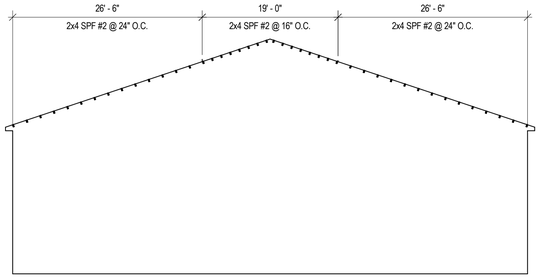
3 MAN DOOR R.O.
SCALE: 1/2" = 1'-0"



4 WINDOW R.O.
SCALE: 1/2" = 1'-0"



5 SHEATHING DETAIL
SCALE: 1" = 1'-0"



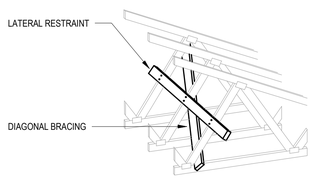
9 PURLIN SPACING DIAGRAM
SCALE: 1" = 10'-0"

PERMANENT LATERAL RESTRAINT AND DIAGONAL BRACE CONFIGURATION

TRUSS MEMBER BRACING CONFIGURATION

SEE TRUSS DESIGN DRAWING (SUPPLIED BY MFG) FOR LATERAL RESTRAINT LOCATIONS

LATERAL RESTRAINT AND DIAGONAL BRACING NEED TO CROSS AT THE SAME LOCATION ON THE WEB



6 WOOD ROOF TRUSS BRACING DETAIL
SCALE: 1" = 1'-0"

NOTES:

TEMPORARY BRACING:
CONTRACTOR SHALL BE RESPONSIBLE FOR AND INSTALL TEMPORARY BRACING ON TRUSSES, WALLS AND SUPPORTS AS REQUIRED DURING BUILDING CONSTRUCTION.

PERMANENT TRUSS BRACING:
PERMANENT TRUSS BRACING IS ALWAYS REQUIRED. THIS SET OF STRUCTURAL DRAWINGS DOES NOT SPECIFY SPECIFIC PERMANENT TRUSS BRACING CONFIGURATIONS.

BRACING INFORMATION:
REFERENCE SBCA/TPI BUILDING COMPONENT SAFETY INFORMATION (BCSI) BOOKLET IN CONJUNCTION WITH THE BRACING INFORMATION DEPICTED IN THE MANUFACTURED TRUSS DRAWINGS FOR REQUIRED PERMANENT TRUSS BRACING CONFIGURATIONS.

606 14TH AVE. SW
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DRAWN BY: BTS
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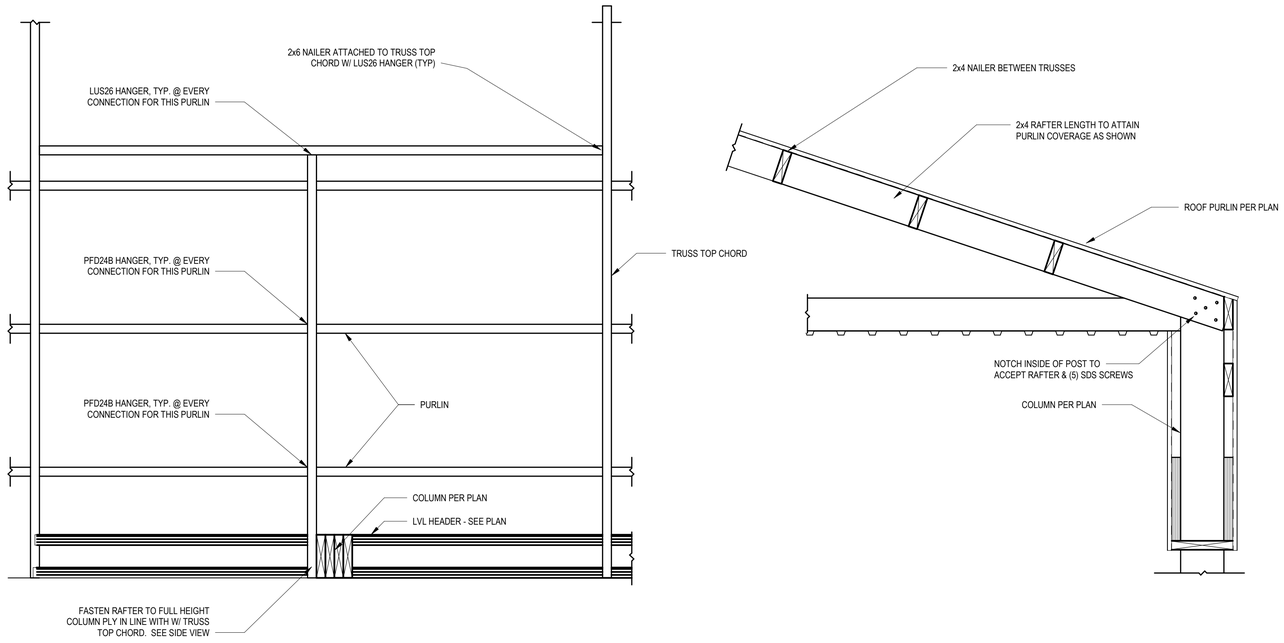
JOB DATE: 9.30.25
JOB NO: 25-370

PAGE NO.
S501



TOP VIEW **SIDE VIEW**

1 STUB RAFTER TOP OF COLUMN SUPPORT
SCALE: 1" = 1'-0"

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SHEET TITLE
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DRAWN BY: BTS
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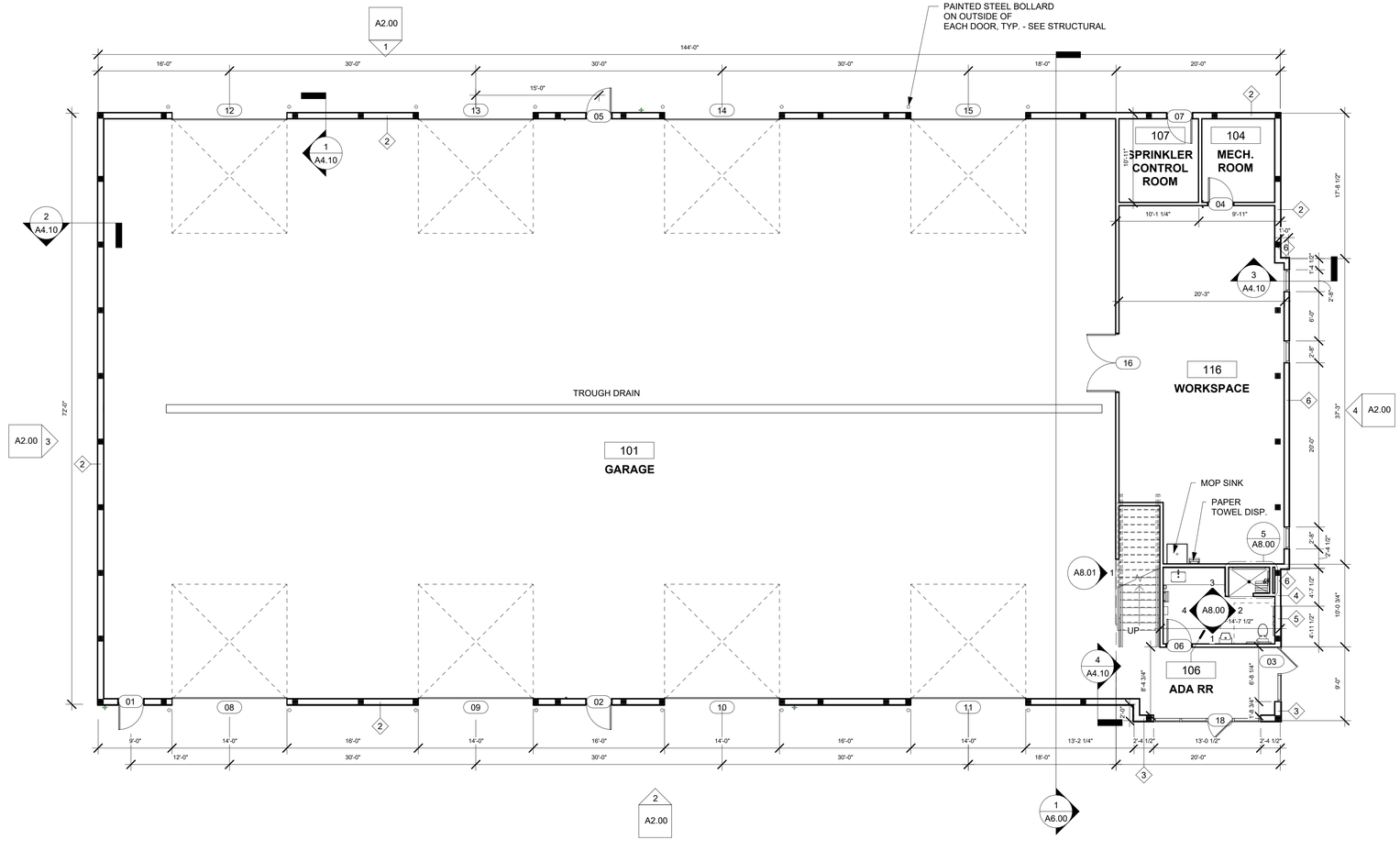
JOB NO: 25-370

PAGE NO.
S502



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

FLOOR PLAN GENERAL NOTES

1. SOLID LINES INDICATE NEW CONSTRUCTION.
2. CONTRACTORS SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
3. ALL INTERIOR WALLS TO BE TYPE 1 UNLESS NOTED OTHERWISE
4. WHEN TWO DIFFERENT WALL TYPES APPEAR ADJACENT TO EACH OTHER, THE FINISHED WALL SURFACES MUST ALIGN.
5. PARTITION HEIGHTS - ALL STRUCTURAL WALLS & PARTITIONS SHALL EXTEND TO THE ROOF OR FLOOR DECK ABOVE.
6. CONSTRUCTION & PENETRATIONS TO BE GOVERNED BY MOST STRINGENT SEPARATION REQUIREMENT AS INDICATED IN DOCUMENTS.
7. RATED SEPARATIONS SHALL BE CONTINUOUS WITHOUT INTERRUPTION. WHERE ABUTTED BY NON-RATED CONSTRUCTION, RATED ASSEMBLIES SHALL BE CONSTRUCTED CONTINUOUS PRIOR TO INSTALLATION OF NON-RATED CONSTRUCTION.
8. PROVIDE CONTINUOUS SEALANT BOTH SIDES OF PARTITIONS AT TOP, BOTTOM, & CONNECTIONS TO OTHER MATERIALS. PROVIDE SOUND INSULATION TO FILL VOIDS & ACOUSTICAL SEALANT. AT FIRE RATED ASSEMBLIES, PROVIDE UL TESTED SYSTEMS TO MAINTAIN RATINGS.
9. ALL EXPOSED CONCRETE SHALL BE KEPT CLEAN AND FREE OF DEBRIS THROUGHOUT CONSTRUCTION PROCESS. INTERIOR CONCRETE TO BE SMOOTH FINISH UNLESS NOTED OTHERWISE.
10. FLOORING MATERIAL CHANGES SHALL OCCUR AT CENTERLINE OF DOOR OR OPENING, UNLESS NOTED OTHERWISE.
11. FLOORING MATERIAL AND PATTERN TO CONTINUE UNDER ALL OPEN MILLWORK AND WORK SURFACES, EXTENDING TO WALL OR BASE CABINET.
12. UNDERCOUNTER SUPPORT BRACKETS TO BE PAINTED TO MATCH ADJACENT WALL SURFACE, UNLESS OTHERWISE NOTED.
13. GYP BD CEILING TO BE PAINTED, UNLESS OTHERWISE NOTED. SEE REFLECTED CEILING PLANS AND ELEVATIONS FOR ACCENT PAINT LOCATIONS.
14. PAINTED WALLS IN RESTROOMS, HOUSEKEEPING, AND UTILITY ROOMS, TO RECEIVE EPOXY PAINT.
15. MOISTURE RESISTANT GYP BD - PROVIDE MOISTURE RESISTANT GYP BD AT ALL WET LOCATIONS.
16. PROVIDE IN WALL BLOCKING FOR SURFACE MOUNTED CONSTRUCTION & EQUIPMENT INDICATED IN THE DOCUMENTS, WHETHER IN CONTRACT OR OWNER SUPPLIED.

(A) WINDOW TYPE - SEE SCHEDULE

(101) INDICATES DOOR TYPE - SEE SCHEDULE

(5) INDICATES WALL TYPE - SEE SHEET A4.10

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CONSTRUCTION DOCUMENTS
10-10-25

No.	Description	Date

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JOHNSON COUNTY EMA STORAGE

MAIN FLOOR PLAN

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	A1.10
Scale	1/8" = 1'-0"

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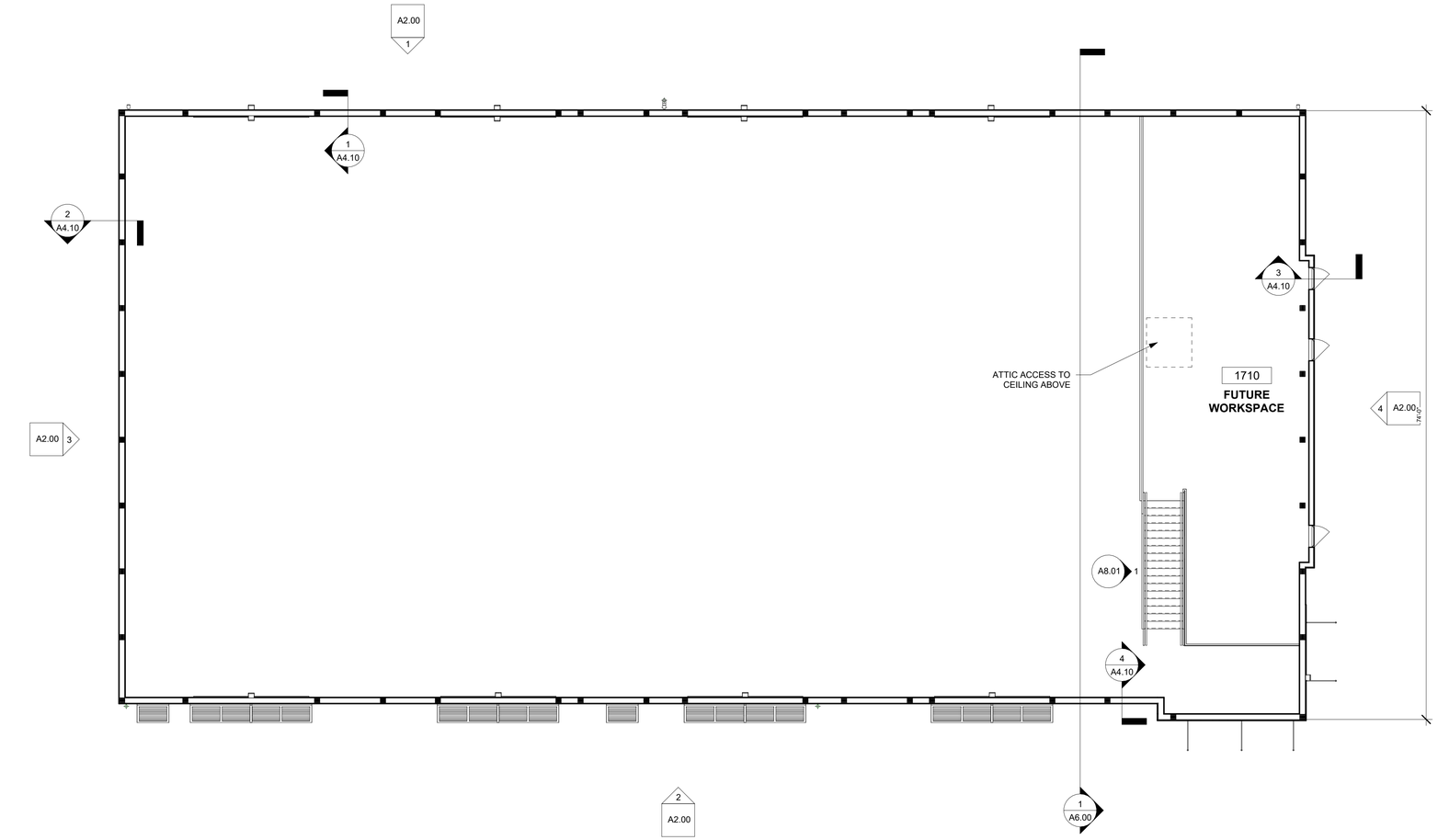

1 ATTIC SPACE
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. SOLID LINES INDICATE NEW CONSTRUCTION.
2. CONTRACTORS SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
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4. WHEN TWO DIFFERENT WALL TYPES APPEAR ADJACENT TO EACH OTHER, THE FINISHED WALL SURFACES MUST ALIGN.
5. PARTITION HEIGHTS - ALL STRUCTURAL WALLS & PARTITIONS SHALL EXTEND TO THE ROOF OR FLOOR DECK ABOVE.
6. CONSTRUCTION & PENETRATIONS TO BE GOVERNED BY MOST STRINGENT SEPARATION REQUIREMENT AS INDICATED IN DOCUMENTS.
7. RATED SEPARATIONS SHALL BE CONTINUOUS WITHOUT INTERRUPTION. WHERE ABUTTED BY NON-RATED CONSTRUCTION, RATED ASSEMBLIES SHALL BE CONSTRUCTED CONTINUOUS PRIOR TO INSTALLATION OF NON-RATED CONSTRUCTION.
8. PROVIDE CONTINUOUS SEALANT BOTH SIDES OF PARTITIONS AT TOP, BOTTOM, & CONNECTIONS TO OTHER MATERIALS. PROVIDE SOUND INSULATION TO FILL VOIDS & ACOUSTICAL SEALANT. AT FIRE RATED ASSEMBLIES, PROVIDE UL TESTED SYSTEMS TO MAINTAIN RATINGS.
9. ALL EXPOSED CONCRETE SHALL BE KEPT CLEAN AND FREE OF DEBRIS THROUGHOUT CONSTRUCTION PROCESS. INTERIOR CONCRETE TO BE SMOOTH FINISH UNLESS NOTED OTHERWISE.
10. FLOORING MATERIAL CHANGES SHALL OCCUR AT CENTERLINE OF DOOR OR OPENING, UNLESS NOTED OTHERWISE.
11. FLOORING MATERIAL AND PATTERN TO CONTINUE UNDER ALL OPEN MILLWORK AND WORK SURFACES, EXTENDING TO WALL OR BASE CABINET.
12. UNDERCOUNTER SUPPORT BRACKETS TO BE PAINTED TO MATCH ADJACENT WALL SURFACE, UNLESS OTHERWISE NOTED.
13. GYP BD CEILING TO BE PAINTED, UNLESS OTHERWISE NOTED. SEE REFLECTED CEILING PLANS AND ELEVATIONS FOR ACCENT PAINT LOCATIONS.
14. PAINTED WALLS IN RESTROOMS, HOUSEKEEPING, AND UTILITY ROOMS, TO RECEIVE EPOXY PAINT.
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16. PROVIDE IN WALL BLOCKING FOR SURFACE MOUNTED CONSTRUCTION & EQUIPMENT INDICATED IN THE DOCUMENTS, WHETHER IN CONTRACT OR OWNER SUPPLIED.

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CONSTRUCTION
DOCUMENTS
10-10-25

No.	Description	Date

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JOHNSON
COUNTY EMA
STORAGE

MEZZANINE
FLOOR PLAN

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	A1.20
Scale	1/8" = 1'-0"

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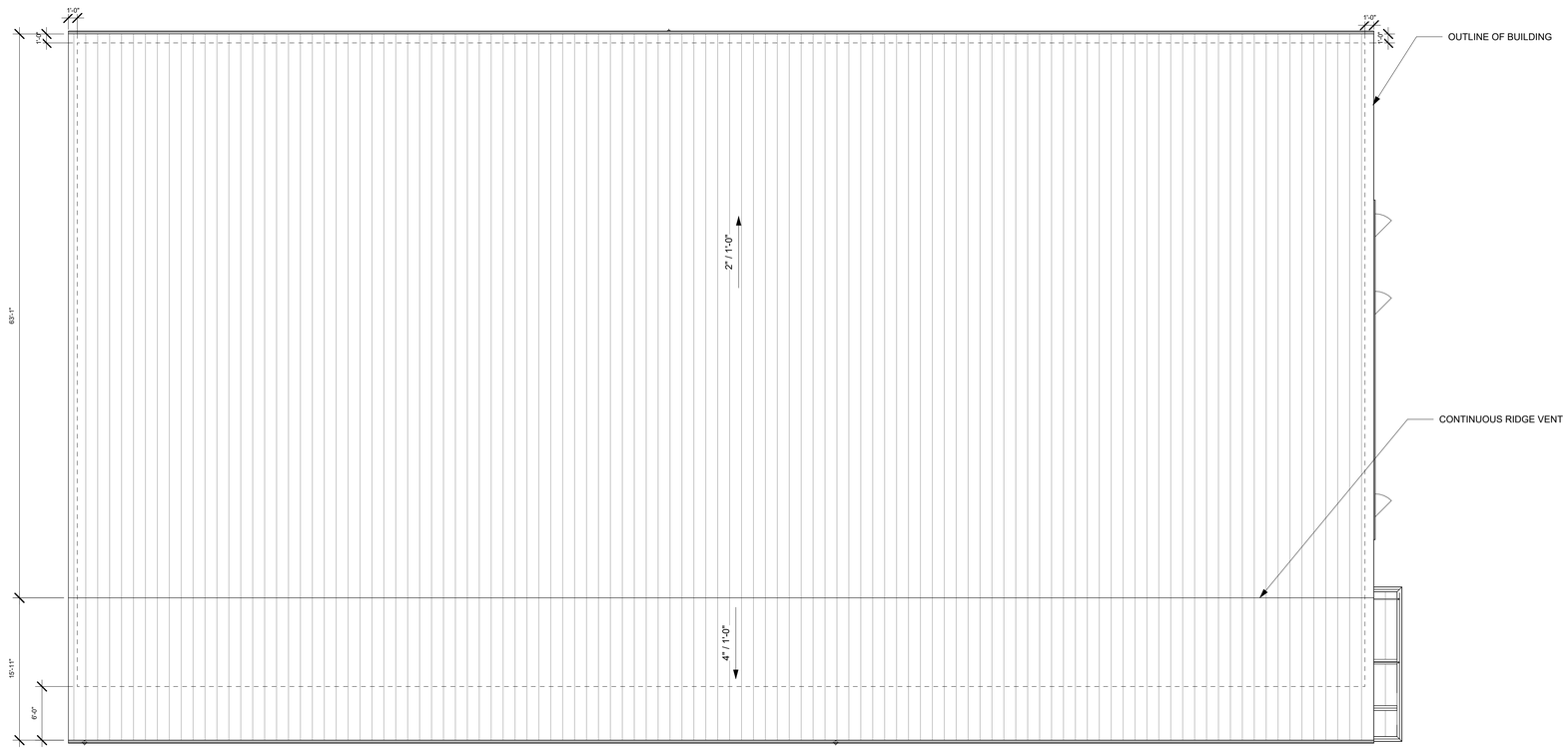

1 ROOF
1/8" = 1'-0"

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10-10-25

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JOHNSON
COUNTY EMA
STORAGE

ROOF PLAN

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	A1.30
Scale	1/8" = 1'-0"

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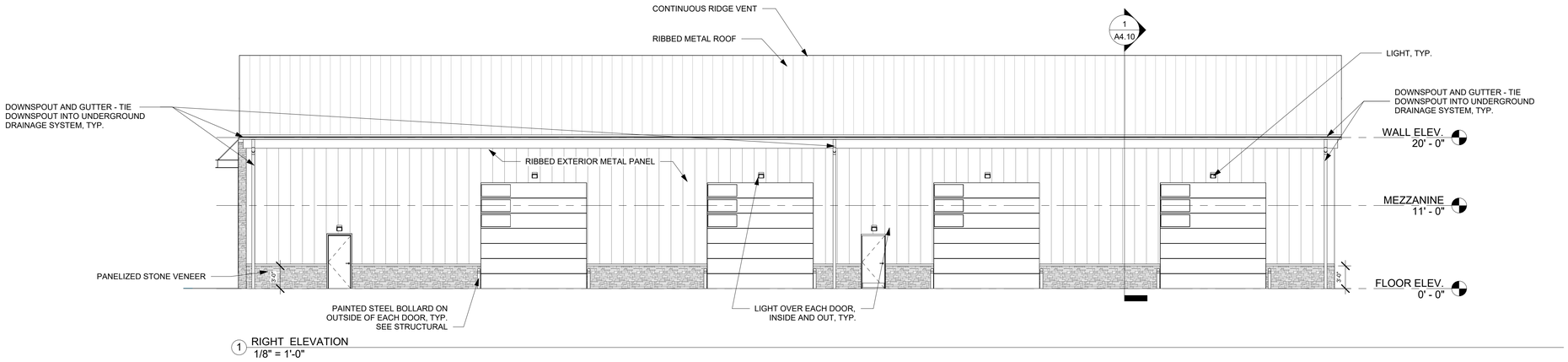
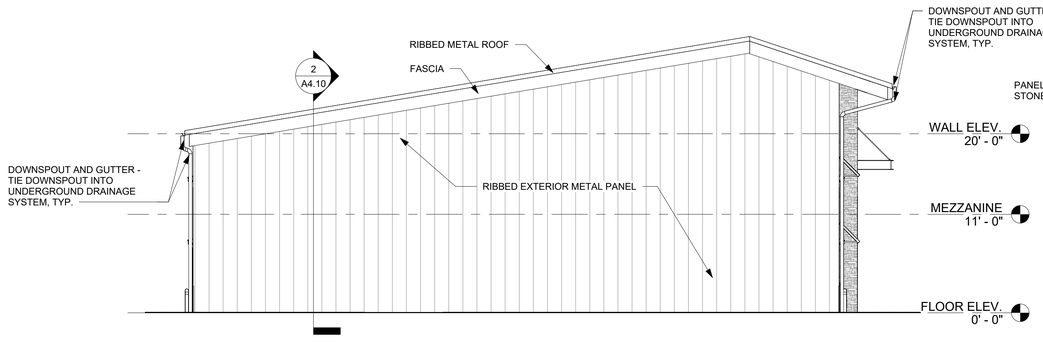
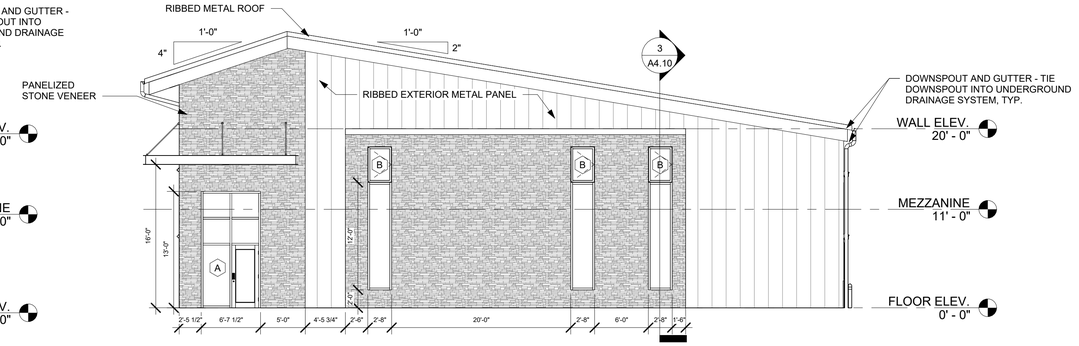


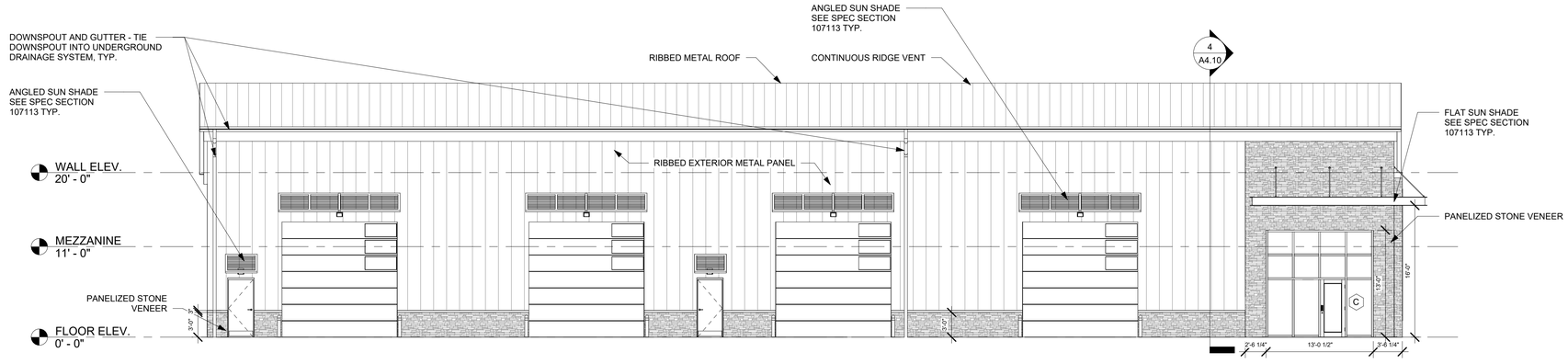
1 RIGHT ELEVATION
1/8" = 1'-0"



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



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



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

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CONSTRUCTION DOCUMENTS
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JOHNSON COUNTY EMA STORAGE

BUILDING ELEVATIONS

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL

A2.00

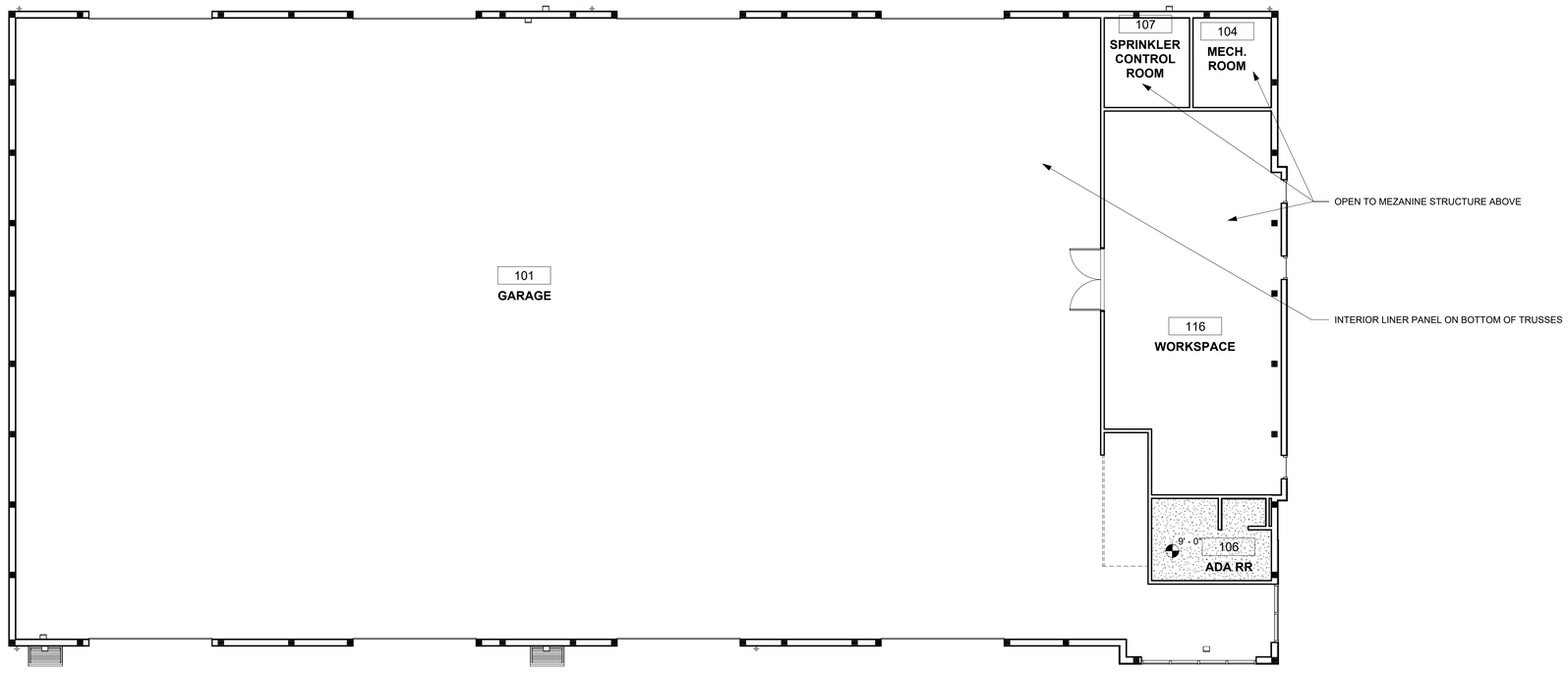
Scale: As indicated

RCP GENERAL NOTES

1. SOLID LINES INDICATE NEW CONSTRUCTION WHILE BROKEN LINES (SCREENED LINES) INDICATE EXISTING CONSTRUCTION OR NEW CONSTRUCTION COVERED IN A PREVIOUS DIVISION.
2. CONTRACTORS SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION AND RELATED CONDITIONS PRIOR TO FABRICATION OR STARTING NEW CONSTRUCTION.
3. ALL CEILING EXPANSION JOINTS TO BE CONTINUOUS FROM WALL JOINT TO WALL JOINT.
4. REFER TO FLOOR PLANS FOR WALL TYPES AND WALL LOCATIONS.
5. SEE DIVISION I DRAWINGS (FINISH SCHEDULE) FOR REQUIRED CEILING MATERIALS FOR EACH AREA. IN ROOMS AND AREAS HAVING VARYING HEIGHTS, THE INDIVIDUAL MULTIPLE CEILING HEIGHTS ARE INDICATED IN PARENTHESES. FOR EXAMPLE: (8'-6") INDICATES THE PLANE IS 8'-6" ABOVE FINISHED FLOOR.
6. SEE DIVISIONS A3.00, A8.00, A9.00 AND EQUIPMENT DRAWINGS FOR COORDINATION OF SOFFITS WITH WALL MOUNTED CASEWORK. SOFFITS SHOULD EXTEND 1" BEYOND CASEWORK AT BOTH FRONT & SIDES, UNLESS OTHERWISE NOTED. SEE REFERENCED DETAILS.
7. SEE INTERIOR ELEVATIONS / SECTIONS / DETAILS FOR ADDITIONAL INFORMATION ON FINISHED SOFFIT, BULKHEAD, CEILING, ETC. WHERE NOT INDICATED ON REFLECTED CEILING PLAN
8. SEE DIVISIONS P, M, E, AND F FOR COORDINATION OF ALL ITEMS.
9. CENTER RECESSED LIGHTS IN CEILING TILES, AND/OR SOFFIT, UNLESS NOTED OTHERWISE.

LEGEND

GWB CEILING



1 LEVEL 1 REFLECTED CEILING PLAN
1/8" = 1'-0"

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CONSTRUCTION DOCUMENTS
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JOHNSON COUNTY EMA STORAGE

REFLECTED CEILING PLAN

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	A2.10
Scale	1/8" = 1'-0"

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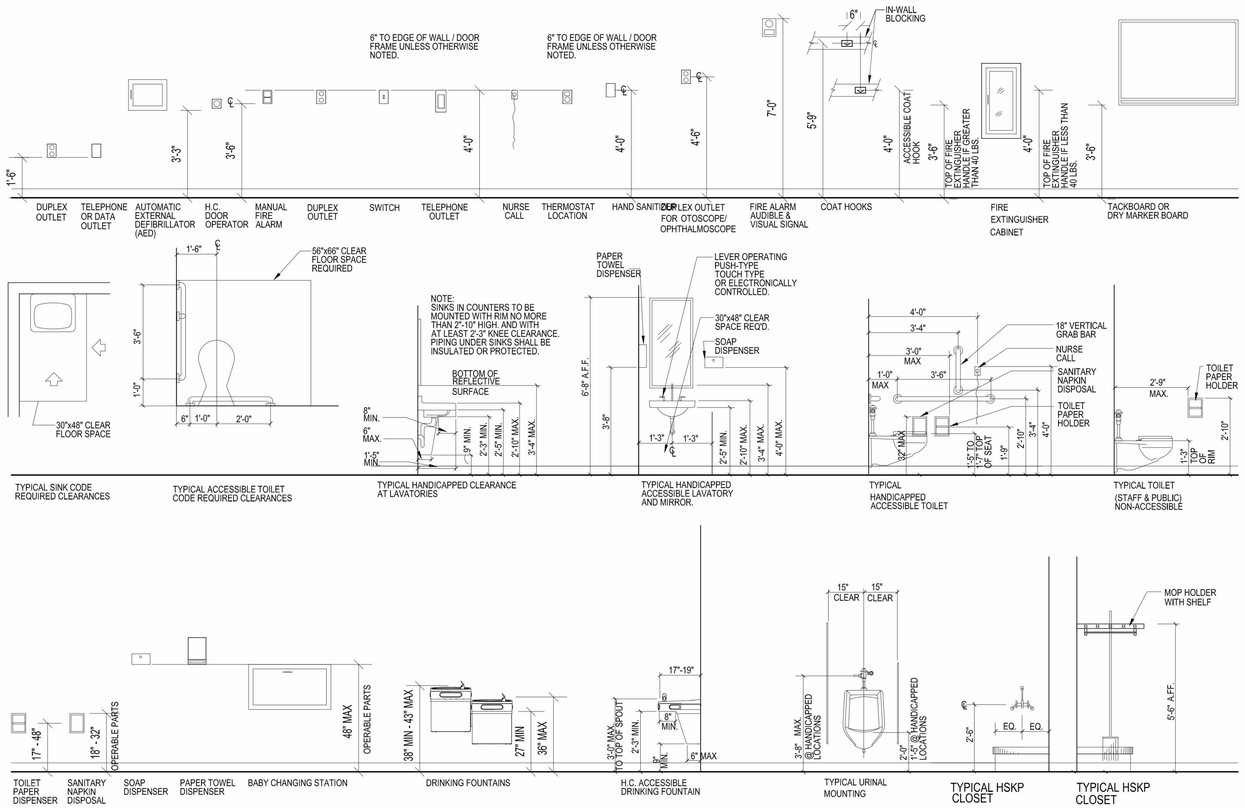

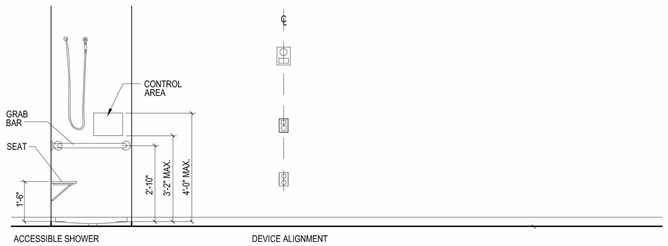

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CONSTRUCTION DOCUMENTS
10-10-25

No.	Description	Date

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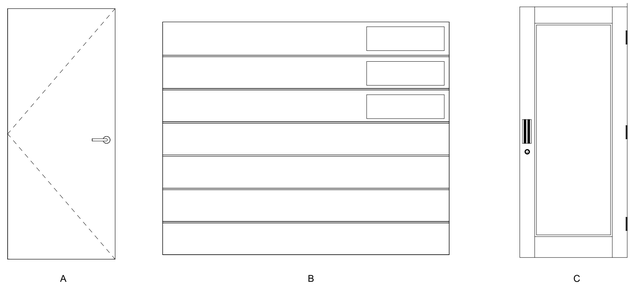
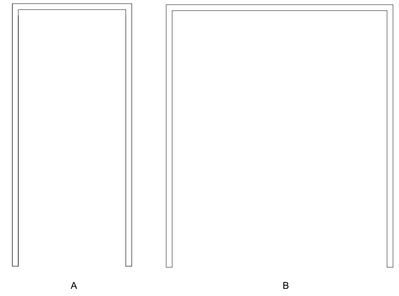
JOHNSON COUNTY EMA STORAGE

ARCHITECTURAL EQUIPMENT SCHEDULE & MOUNTING HEIGHTS

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	A3.00
Scale	



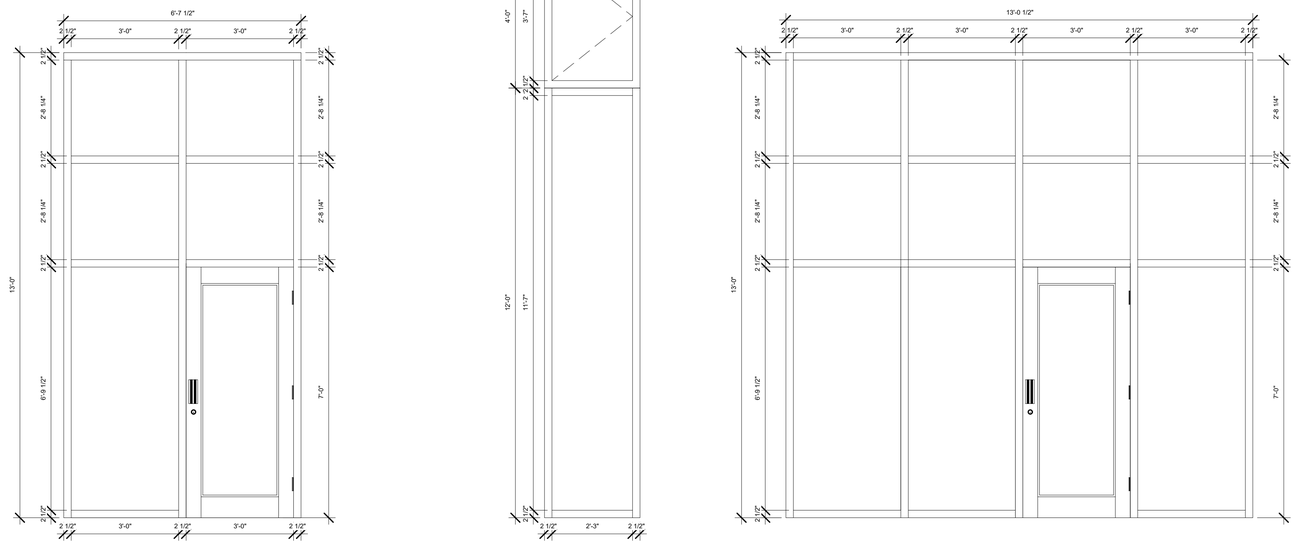
DOOR TYPES
1/2" = 1'-0"



FRAME TYPES
1/2" = 1'-0"

DOOR SCHEDULE

NUMBER	FROM: ROOM NAME	DOOR TYPE	DOOR MATERIAL	DOOR WIDTH	DOOR HEIGHT	DOOR FINISH	HARDWARE TYPE	FRAME TYPE	FRAME MATERIAL	FIRE RATING	COMMENTS
01	GARAGE	A	HM	3' - 0"	7' - 0"	PAINT	3	A	HM	- -	
02	GARAGE	A	HM	3' - 0"	7' - 0"	PAINT	3	A	HM	- -	
03	GARAGE	C	ALUM	3' - 0"	7' - 0"	ALUM	4		ALUM	- -	DOOR IN ALUMINUM STOREFRONT SYSTEM
04	MECH. ROOM	A	HM	3' - 0"	7' - 0"	PAINT	2	A	HM	- -	
05	GARAGE	A	HM	3' - 0"	7' - 0"	PAINT	4	A	HM	- -	
06	ADA RR	A	HM	3' - 0"	7' - 0"	PAINT	1	A	HM	- -	
07	SPRINKLER CONTROL ROOM	A	HM	3' - 0"	7' - 0"	PAINT	4	A	HM	- -	
08	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
09	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
10	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
11	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
12	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
13	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
14	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
15	GARAGE	B	ALUM	14' - 0"	14' - 0"	ALUM	- -	- -	- -	- -	OVERHEAD GARAGE DOOR
16	WORKSPACE	A	HM	7' - 0"	8' - 6"	PAINT	5	B	HM	- -	PAIR OF 3'-6" DOORS
18	GARAGE	C	ALUM	3' - 0"	7' - 0"	ALUM	- -		ALUM	- -	DOOR IN ALUMINUM STOREFRONT SYSTEM



CURTIAN WALL TYPES
1/2" = 1'-0"

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CONSTRUCTION
DOCUMENTS
10-10-25

No.	Description	Date

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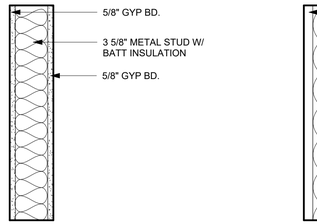
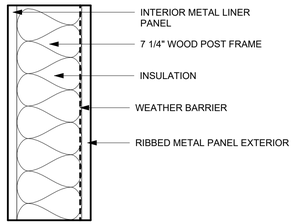
JOHNSON
COUNTY EMA
STORAGE

DOOR/WINDOW
SCHEDULES

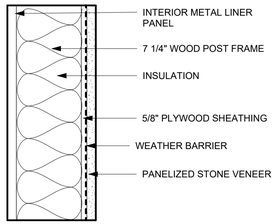
Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	A4.00
Scale	1/2" = 1'-0"



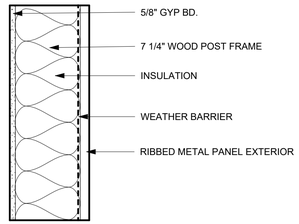
1 INTERIOR WALL - TYP. INTERIOR WALL



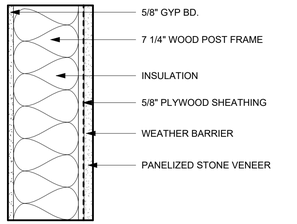
2 EXTERIOR WALL - METAL PANEL



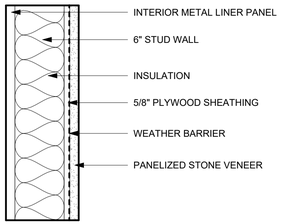
3 EXTERIOR WALL - STONE VENEER



4 EXTERIOR WALL - METAL PANEL GYP BD. ONE SIDE

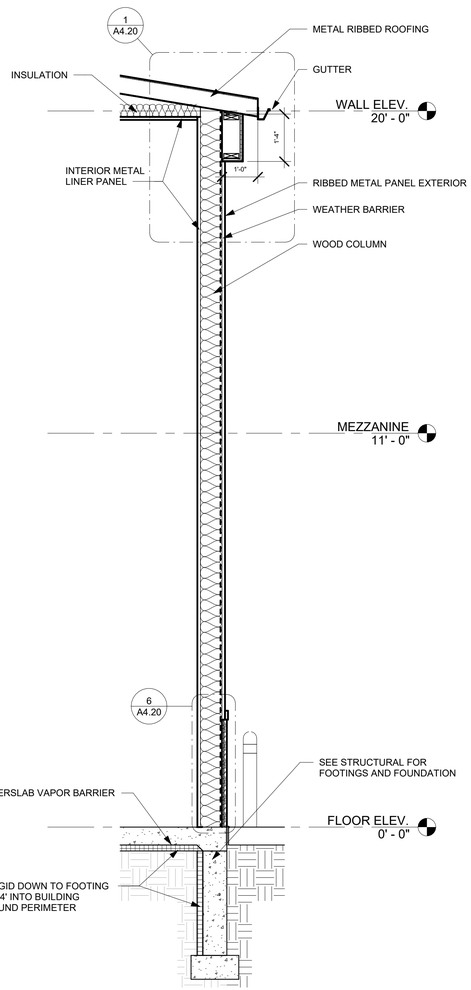


5 EXTERIOR WALL - STONE VENEER GYP BD. ONE SIDE

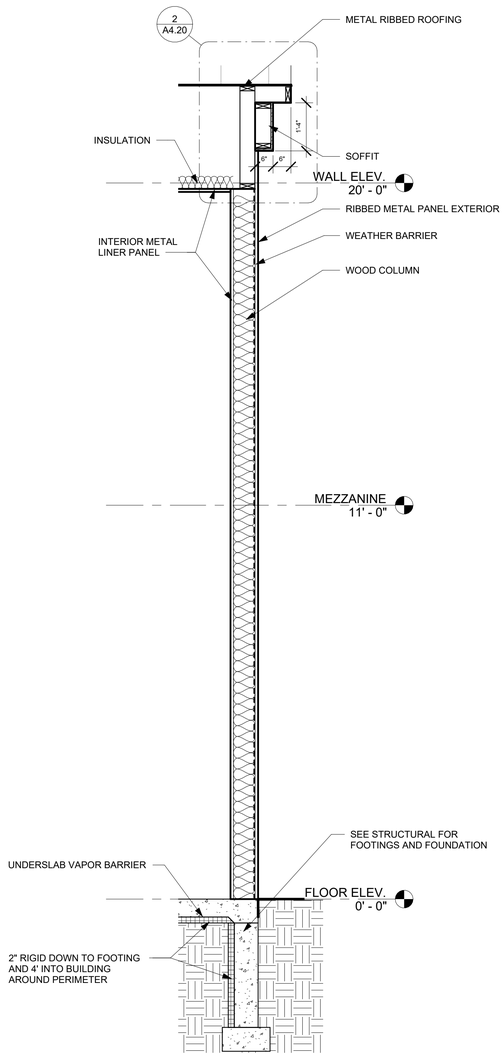


6 EXTERIOR WALL - 6" WOOD STUD STONE VENEER

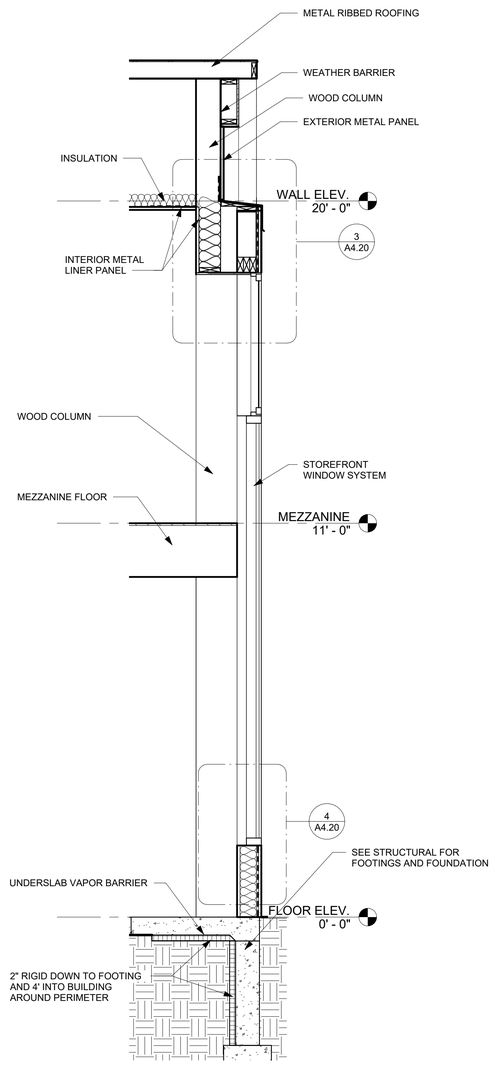
WALL TYPES
1 1/2" = 1'-0"



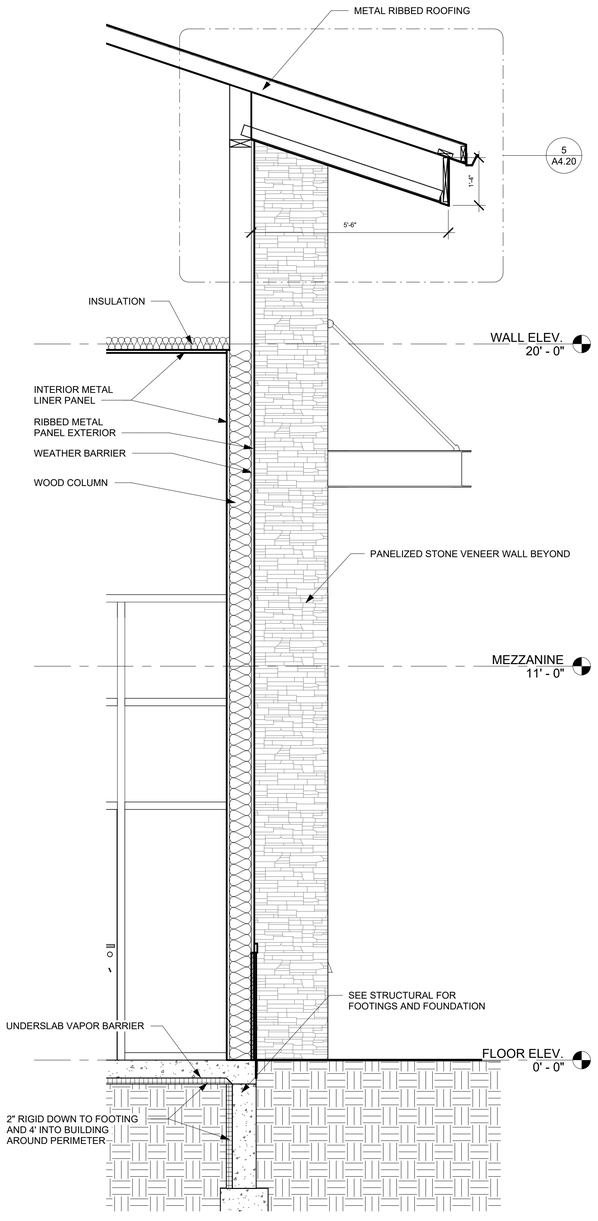
1 WALL SECTION
1/2" = 1'-0"



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



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



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

10/10/2025 6:25:43 PM

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CONSTRUCTION DOCUMENTS
10-10-25

No.	Description	Date

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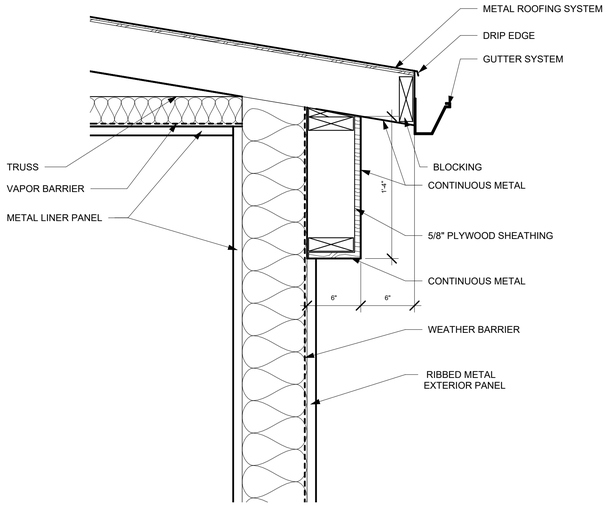
JOHNSON COUNTY EMA STORAGE

WALL TYPES & ARCHITECTURAL DETAILS

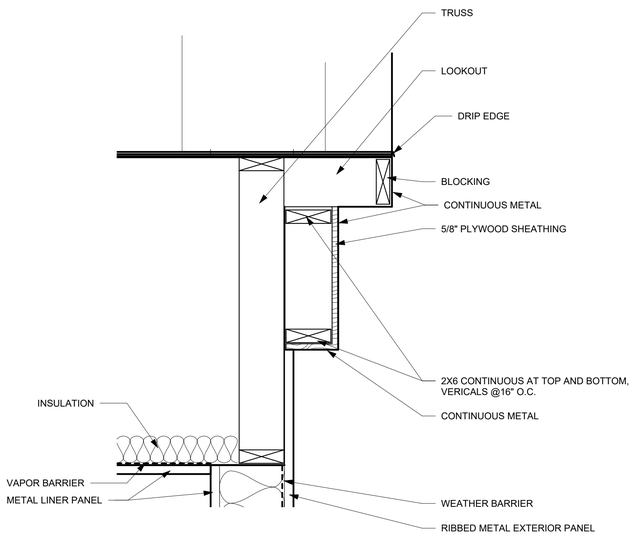
Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL

A4.10

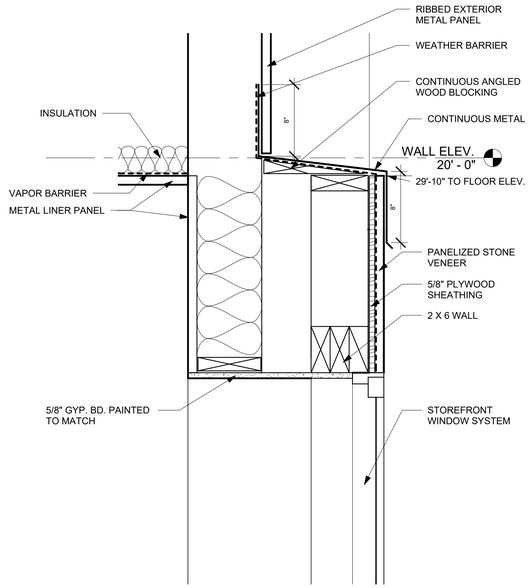
Scale: As indicated



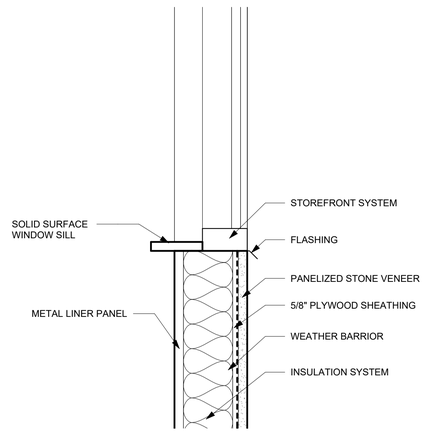
1 ROOF DETAIL
1 1/2" = 1'-0"



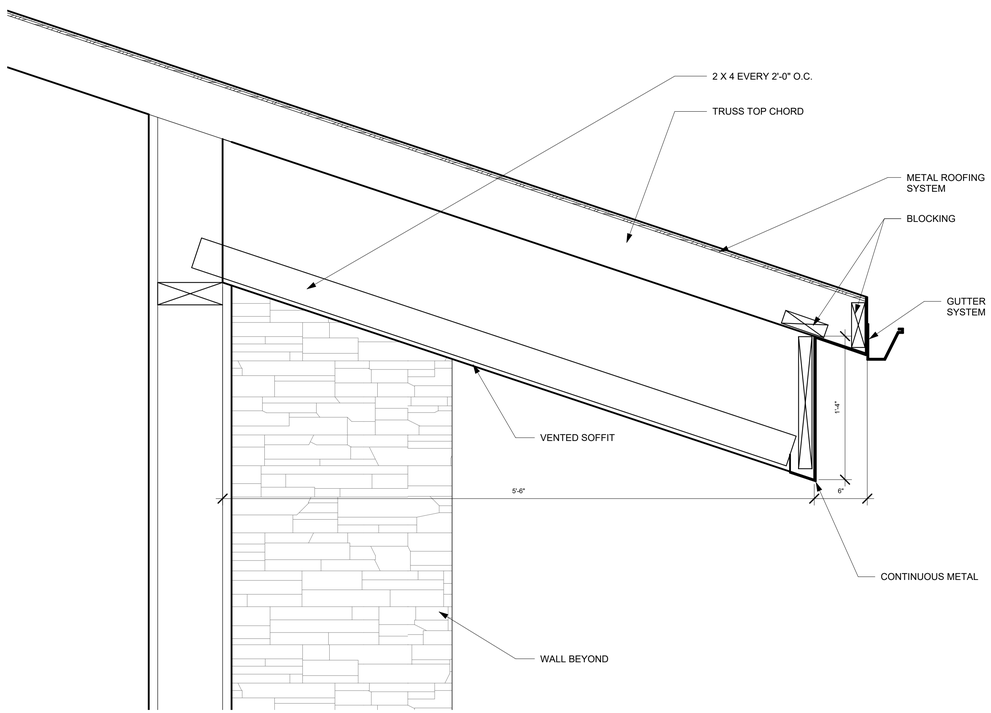
2 ROOF DETAIL
1 1/2" = 1'-0"



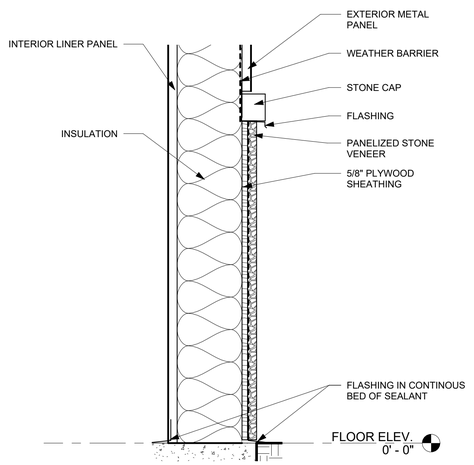
3 ROOF DETAIL
1 1/2" = 1'-0"



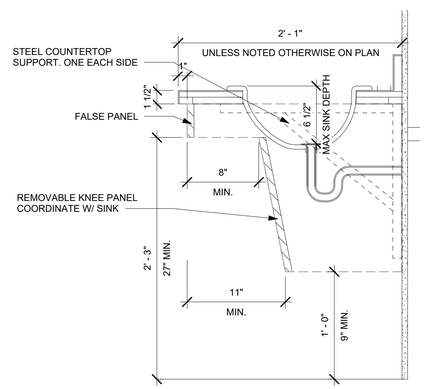
4 WALL DETAIL AT WINDOW
1 1/2" = 1'-0"



5 ROOF DETAIL
1 1/2" = 1'-0"



6 WALL DETAIL AT STONE
1 1/2" = 1'-0"



7 ADA BASE DETAIL AT SINK
1 1/2" = 1'-0"

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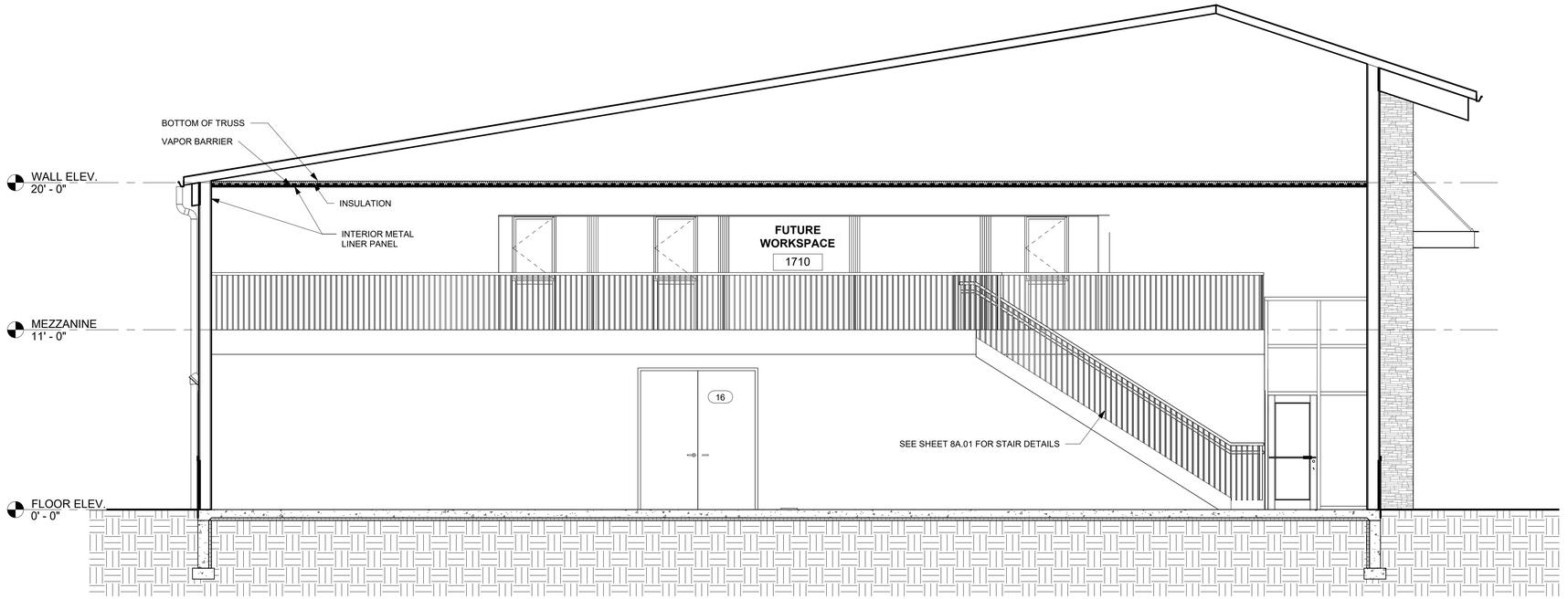
JOHNSON COUNTY EMA STORAGE

ARCHITECTURAL DETAILS

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
	A4.20
Scale	1 1/2" = 1'-0"



1 BUILDING SECTION
1/4" = 1'-0"

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JOHNSON
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STORAGE

BUILDING
SECTIONS

Project number	24-060
Date	10-10-25
Drawn by	AL / LL
Checked by	LL

A6.00

Scale	1/4" = 1'-0"

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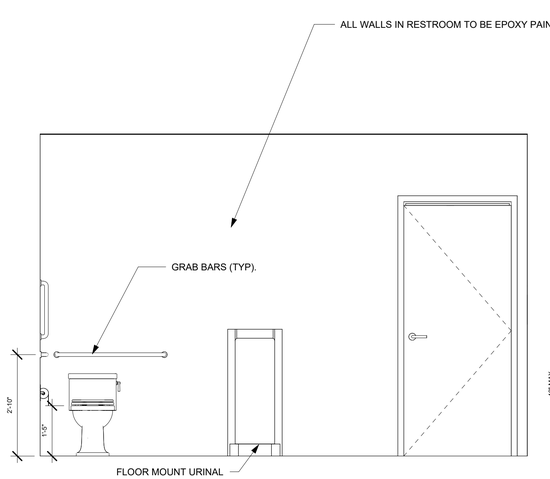
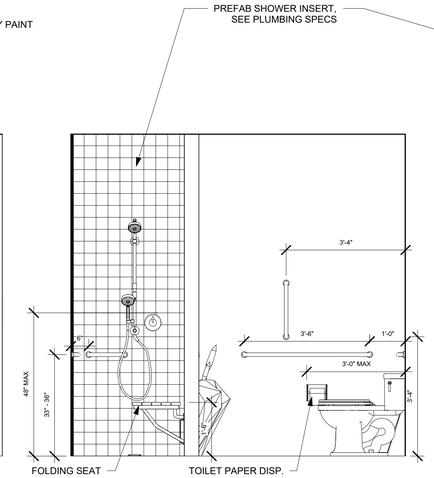
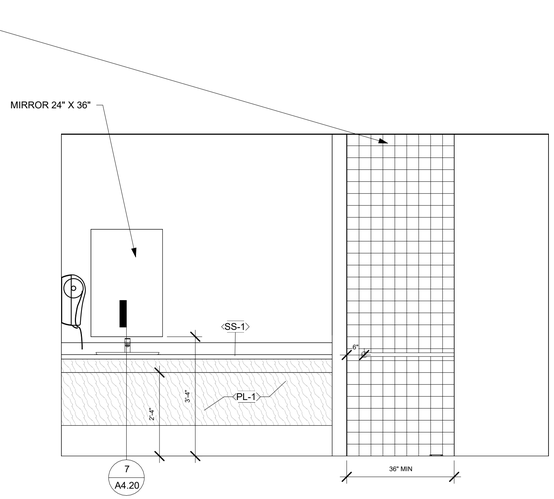


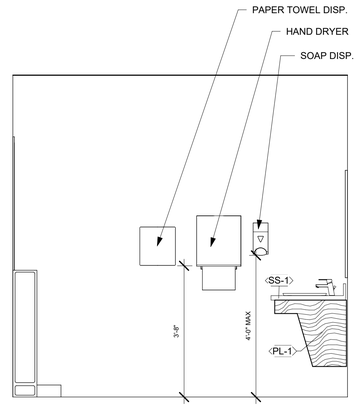
1 ADA BATHROOM ELEVATIONS
1/2" = 1'-0"



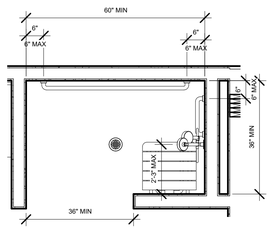
2 ADA BATHROOM ELEVATIONS
1/2" = 1'-0"



3 ADA BATHROOM ELEVATIONS
1/2" = 1'-0"



4 ADA BATHROOM ELEVATIONS
1/2" = 1'-0"



5 ADA SHOWER DETAIL
1/2" = 1'-0"

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JOHNSON COUNTY EMA STORAGE

INTERIOR ELEVATIONS

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
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	A8.00
Scale	1/2" = 1'-0"

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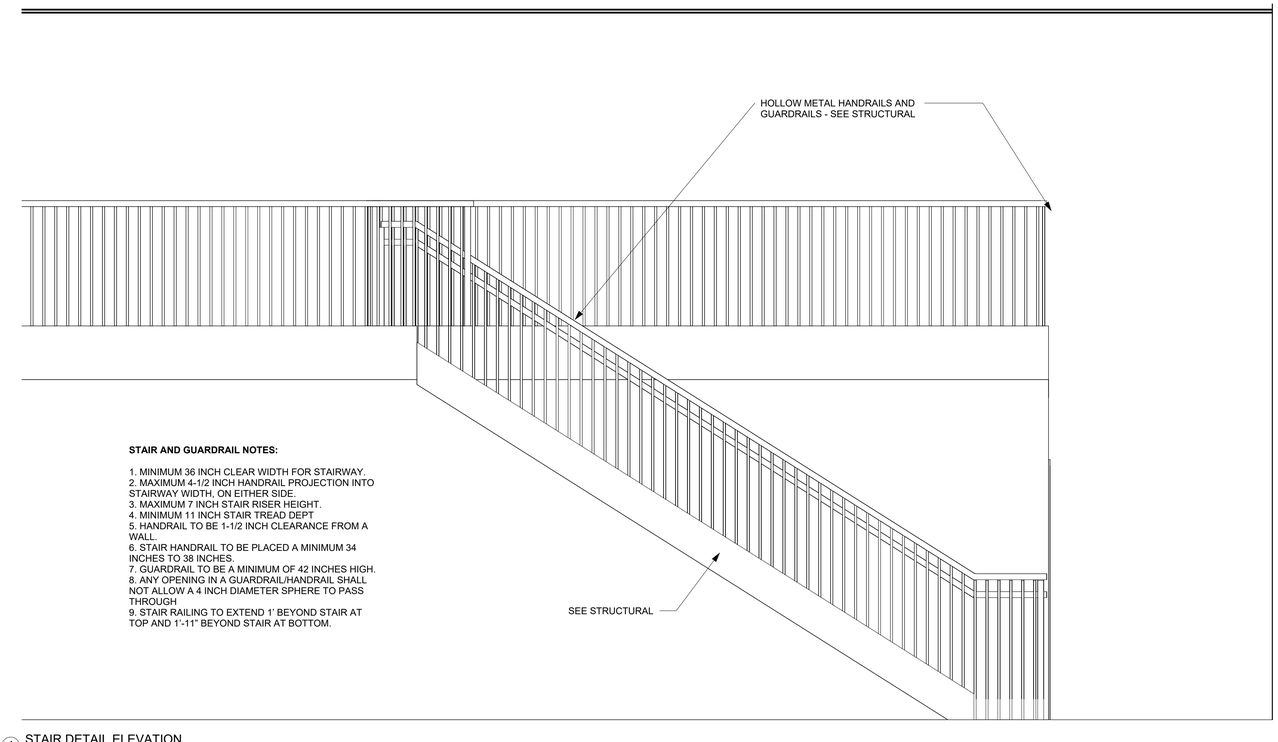
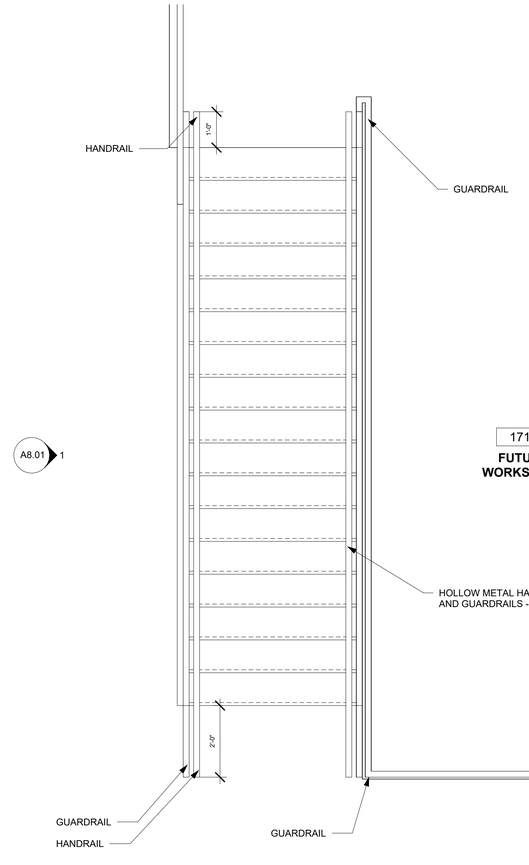


STAIR AND GUARDRAIL NOTES:

1. MINIMUM 36 INCH CLEAR WIDTH FOR STAIRWAY.
2. MAXIMUM 4-1/2 INCH HANDRAIL PROJECTION INTO STAIRWAY WIDTH, ON EITHER SIDE.
3. MAXIMUM 7 INCH STAIR RISER HEIGHT.
4. MINIMUM 11 INCH STAIR TREAD DEPT
5. HANDRAIL TO BE 1-1/2 INCH CLEARANCE FROM A WALL.
6. STAIR HANDRAIL TO BE PLACED A MINIMUM 34 INCHES TO 38 INCHES.
7. GUARDRAIL TO BE A MINIMUM OF 42 INCHES HIGH.
8. ANY OPENING IN A GUARDRAIL/HANDRAIL SHALL NOT ALLOW A 4 INCH DIAMETER SPHERE TO PASS THROUGH.
9. STAIR RAILING TO EXTEND 1' BEYOND STAIR AT TOP AND 1'-11" BEYOND STAIR AT BOTTOM.

1 STAIR DETAIL ELEVATION
1/2" = 1'-0"



2 STAIR DETAIL
1/2" = 1'-0"

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JOHNSON
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STORAGE

STAIR DETAILS

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
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	A8.01
Scale	1/2" = 1'-0"

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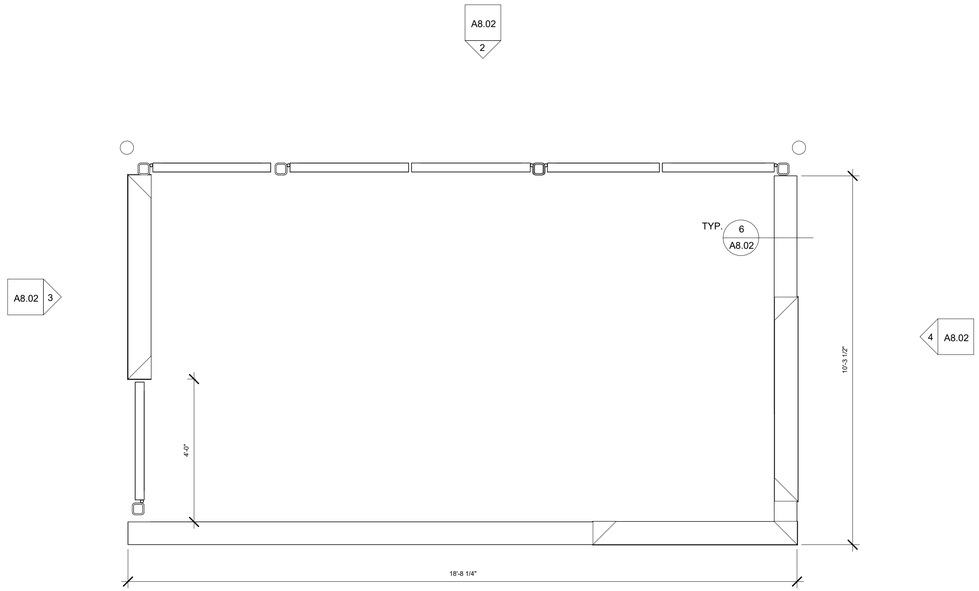
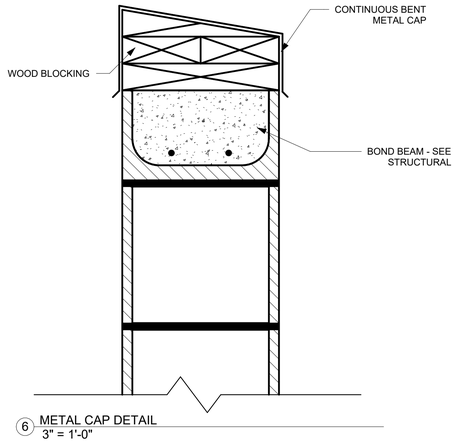
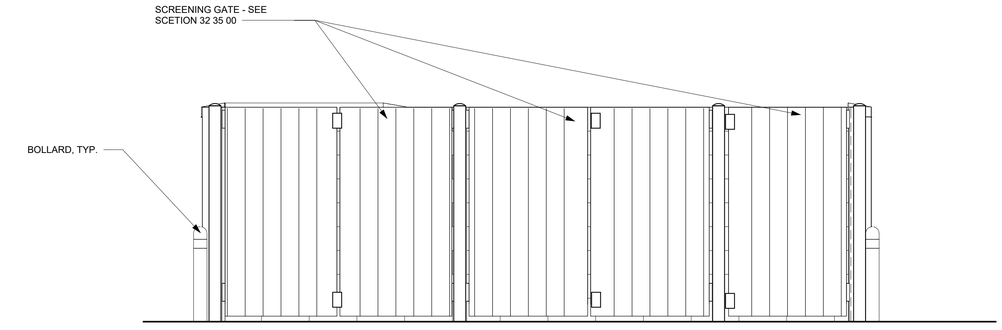


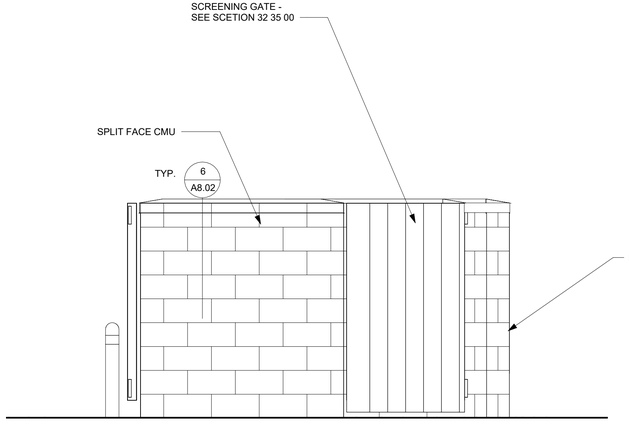
1 TRASH ENCLOSURE PLAN VIEW
1/2" = 1'-0"



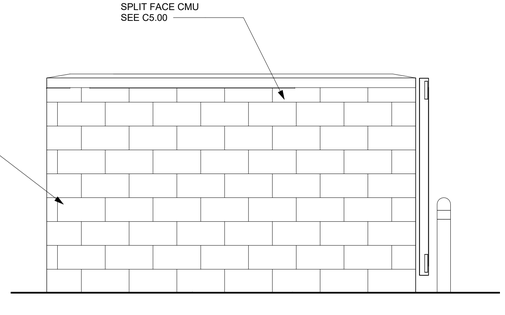
6 METAL CAP DETAIL
3" = 1'-0"



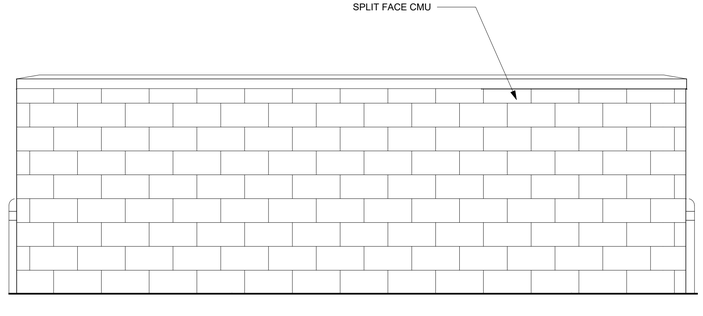
2 DUMPSTER ENCLOSURE FRONT VIEW
1/2" = 1'-0"



3 DUMPSTER ENCLOSURE LEFT VIEW
1/2" = 1'-0"



4 DUMPSTER ENCLOSURE RIGHT VIEW
1/2" = 1'-0"



5 DUMPSTER ENCLOSURE BACK VIEW
1/2" = 1'-0"

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JOHNSON COUNTY EMA STORAGE

TRASH ENCLOSURE DETAILS

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
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	A8.02
Scale	As indicated

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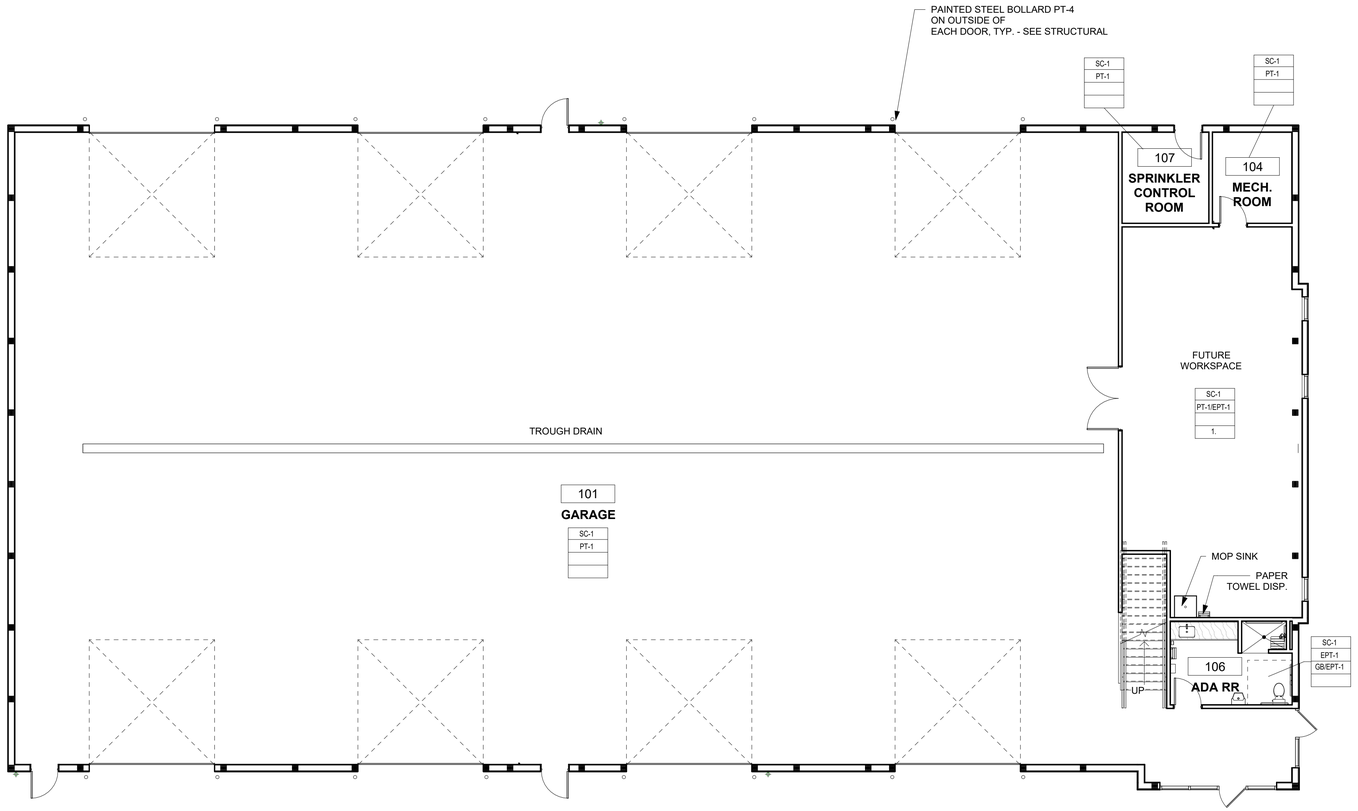

1 INTERIOR FINISH PLAN
1/8" = 1'-0"

INTERIOR FINISH SCHEDULE

TAG	MANUFACTURER	STYLE	COLOR	SIZE	COMMENTS
BASE					
RB-1	ROPPE	VINYL - STANDARD TOE	123-CHARCOAL	4"	ON GWB WALLS ONLY
CEILING					
GB	--	GYPSUM BD		--	PAINT TO BE EPT-1
FLOORING					
SC-1		SEALED CONCRETE		--	SEE SPEC SECTION 033500
MILLWORK					
PL-1	FORMICA	PLASTIC LAMINATE	SMOKEY BROWN PEAR 5488-26	SHEET	CASEWORK VERTICAL SURFACES
SS-1	WILSONART	SOLID SURFACE	DUSK ICE 9203CE		COUNTER TOP
WALLS					
PT-1	SHERWIN WILLIAMS	SATIN FINISH PAINT	LIGHT FRENCH GRAY SW 0055		WALLS
PT-2	SHERWIN WILLIAMS	SEMI-GLOSS	LIGHT FRENCH GRAY SW 0055		H.M. DOORS
PT-3	SHERWIN WILLIAMS	SEMI-GLOSS	PEPPERCORN SW 7674		H.M. FRAMES
PT-4	SHERWIN WILLIAMS	SATIN FINISH PAINT	SAFETY YELLOW SW 4084		BOLLARDS
EPT-1	SHERWIN WILLIAMS	EPOXY FINISH PAINT	LIGHT FRENCH GRAY SW 0055		WET LOCATIONS

FINISH PLAN GENERAL NOTES

1. ALL EXPOSED CONCRETE, SHALL BE KEPT CLEAN AND FREE OF DEBRIS THROUGHOUT CONSTRUCTION PROCESS.
2. INTERIOR CONCRETE TO BE SMOOTH FINISH UNLESS OTHERWISE NOTED.
3. CAULKS OR SEALANTS TO MATCH ADJACENT MATERIAL COLOR, REVEAL COLORS OR GROUT COLORS.
4. FLOORING MATERIAL CHANGES SHALL OCCUR AT CENTERLINE OF DOOR OR OPENING, UNLESS NOTED OTHERWISE.
5. FLOORING MATERIAL TO CONTINUE UNDER ALL OPEN CASEWORK & WORKSURFACES, EXTENDING TO WALL OR BASE CABINET.
6. FLOORING TRANSISTIONS TO BE SMOOTH WITH NO TRANSITION STRIP UNLESS NOTED OTHERWISE.
7. ACCENT PAINT COLORS PAINTED CORNER TO CORNER OF NOTED WALL IN PLAN UNLESS NOTED OTHERWISE.
8. PAINT EXPOSED EDGES OF CEILING TILE TO MATCH ADJACENT MATERIAL COLOR.
9. EXPOSED CEILING STRUCTURE, INCLUDING BUT NOT LIMITED TO PIPING, DUCTWORK, BEAMS, TRUSSES, CABLING, SUPPORTS, DECKING AND SIMILAR TO BE PAINTED, UNLESS NOTED OTHERWISE.
10. PAINTED WALLS IN TOILETS & ENVIRONMENTAL SERVICES TO BE EPOXY PAINT.
11. REFERENCE INTERIOR ELEVATIONS FOR CASEWORK & OTHER VERTICAL SURFACE FINISHES.
12. UNDERCOUNTER SUPPORT BRACKETS TO BE PAINTED TO MATCH ADJACENT WALL SURFACE, UNLESS NOTED OTHERWISE.
13. SOFFIT SHALL HAVE VERTICAL SURFACES PAINTED TO MATCH WALLS AND HORIZONTAL SURFACES SHALL BE PT-1.
14. ALL HOLLOW METAL DOORS, HOLLOW METAL DOOR FRAMES & HOLLOW METAL WINDOW FRAMES TO BE PAINTED, UNLESS NOTED OTHERWISE.
15. ALL STEEL DOORS, WINDOWS AND FRAMES TO BE PT-1 UNLESS NOTED OTHERWISE.
16. ACCESS PANELS TO BE PAINTED TO MATCH ADJACENT WALL OR CEILING COLOR.
17. PAINT ALL EXPOSED COLUMNS PT-1.
18. PROVIDE 5% ATTIC STOCK OF ALL MATERIALS.

FINISH KEY NOTES

1. WET WALL TO BE EPT-1

LEGEND

FLOOR/BASE
WALLS
CEILING
NOTES

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JOHNSON
COUNTY EMA
STORAGE

INTERIOR
FINSHES

Project number	24-060
Date	10-10-25
Drawn by	AL/LL
Checked by	LL
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Scale	1/8" = 1'-0"

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PLUMBING LEGEND

SYMBOL	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
V	VENT PIPING ABOVE OR BELOW GRADE (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
TW	TEMPERED WATER (TW)
TP	TRAP PRIMER LINE (TP)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	GAS PLUG VALVE (GPV)
	HORIZONTAL SWING CHECK
	UNION
	Y-STRAINER
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPZ)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
1	REFER TO KEYED NOTE
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	HUB DRAIN (HD)
(E)	EXISTING
	CONNECT NEW TO EXISTING
1	DELTA CHANGE SYMBOL

NOTE: NOT ALL SYMBOLS MAY APPLY TO THIS PROJECT.

PLUMBING SCOPE & SPECIFICATION

THE WORK OF THIS SECTION SHALL INCLUDE, BUT NOT BE LIMITED TO:

A. A DOMESTIC HOT AND COLD WATER DISTRIBUTION SYSTEM TO SERVE ALL FIXTURES, AND EQUIPMENT.
B. SANITARY SOIL WASTE AND VENT SYSTEMS TO SERVE ALL FIXTURES AND EQUIPMENT.

DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD, ADVISE OF MAJOR DISCREPANCIES.
GUARANTEE LABOR AND MATERIALS FOR ONE YEAR.
ADHERE TO ALL APPLICABLE LOCAL CODES AND REGULATIONS.
CONTRACTOR SHALL OBTAIN REQUIRED PERMITS AND PAY ALL FEES.

VALVES

VALVES SHALL BE MANUFACTURED BY NIBCO, HAMMOND, POWELL, STOCKHAM, WATTS OR EQUIVALENT APPROVED BY THE ENGINEER.
BALL VALVES SHALL HAVE CAST BRONZE BODY, BLOWOUT PROOF STEMS, FULL SIZE PORT, 316 STAINLESS STEEL TRIM, TEFLON SEAT AND SEAL AND THRUST WASHERS. VALVES 2" AND SMALLER SHALL BE NIBCO T-585-70-66 OR APPROVED EQUIVALENT.

UNIONS

UNIONS IN COPPER OR BRASS LINES SHALL BE BRASS, THREADED PATTERN UNIONS.

EXCAVATION

EXCAVATE TRENCHES FOR UNDERGROUND PIPING TO THE REQUIRED DEPTH.
CUT THE BOTTOM OF THE TRENCH OR EXCAVATION TO UNIFORM GRADE.
EXCAVATE 6" BELOW GRADE, FILL WITH BEDDING MATERIAL (SAND) AND TAMP WELL.
LAY OUT ALIGNMENT OF PIPE TRENCHES TO AVOID OBSTRUCTIONS. PROVIDE ASSURANCE THAT PROPOSED ROUTE OF PIPE WILL NOT INTERFERE WITH BUILDING FOUNDATION BEFORE ANY CUTTING IS BEGUN. SHOULD INTERFERENCE BE FOUND, CONTACT THE ARCHITECT/ENGINEER BEFORE PROCEEDING.

BACKFILL

BACKFILL SHALL NOT BE PLACED UNTIL THE WORK HAS BEEN INSPECTED, TESTED AND APPROVED. USE SUITABLE FRIABLE SOILS AS BACKFILL MATERIAL. DO NOT USE PEAT, SILT, MUCK, DEBRIS OR OTHER ORGANIC MATERIALS. DEPOSIT BACKFILL IN UNIFORM LAYERS. PLACE BACKFILL MATERIAL IN UNIFORM LAYERS, 8" MAXIMUM LOOSE MEASURE. COMPACT TO NOT LESS THAN 95% OF MAXIMUM SOIL DENSITY AS DETERMINED BY ASTM D698 STANDARD PROCTOR.

PLUMBING PIPING HANGER SPACING

MAXIMUM SPACING SHALL BE 10 FOOT.

CLEANING, TESTING AND ADJUSTING

THIS CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, INSTRUCTIONS, AND SUPERVISION REQUIRED FOR THE PERFORMANCE OF ALL TESTS, CLEANING, AND MAKING NECESSARY ADJUSTMENTS TO OPERATION OF ALL FIXTURES AND EQUIPMENT.

PIPING INSULATION

ALL COLD & HOT WATER PIPING, FITTINGS AND VALVES SHALL BE INSULATED WITH NOMINAL 1-1/2" WALL THICKNESS FIBERGLASS PIPE INSULATION, OR AN APPROVED EQUAL HAVING FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DENSITY OF 50 OR LESS WHEN TESTED BY ASTM E-84 METHOD.

PIPE INSULATION SHALL BE INSTALLED ACCORDING TO THE PROCEDURES OUTLINED BY THE MANUFACTURE.

FITTING COVER INSULATION SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDED PROCEDURES. SWEAT FITTINGS SHALL BE INSULATED WITH MITER CUT PIECES OF FIBERGLASS PIPE INSULATION THE SAME SIZE AS ON ADJACENT PIPING. THREADED FITTINGS SHALL BE INSULATED WITH SLEEVED FITTING COVERS FABRICATED FROM MITER CUT PIECES OF FIBERGLASS PIPE INSULATION ACCORDING TO THE MANUFACTURER'S SLEEVING SIZE RECOMMENDATIONS AND SHALL BE OVERLAPPED 2" AND SEALED TO THE ADJACENT PIPE INSULATION. ALL VALVES SHALL BE INSULATED WITH CUT PIECES OF FIBERGLASS PIPE INSULATIONS. ALL JOINTS AND MITER CUT PIECES ARE TO BE SEALED PER MANUFACTURER'S RECOMMENDATIONS.

SUPPORTING HANGERS SHALL BE DESIGNED TO RESIST COMPRESSION; SUPPORTING DEVICES SUCH AS SHORT WOOD DOWELS OR WOOD BLOCKS SHALL BE USED IN COMBINATION WITH GALVANIZED SHEET METAL HANGER SHIELDS. THE WOOD SUPPORTING DEVICES SHALL BE THE SAME THICKNESS AS THE INSULATION AND SEALED TO THE INSULATION WITH FACTORY APPROVED CONTACT ADHESIVE.

INSTALL THERMAL INSULATION ON CLEAN, DRY SURFACES AFTER ALL TESTING AND INSPECTION IS COMPLETED. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS AND WITH MANUFACTURER'S INSTRUCTIONS.

PIPE MATERIAL LIST

DOMESTIC WATER PIPING

ABOVE SLAB INSIDE THE BUILDING SHALL BE SEAMLESS ASTM B 88 TYPE L COPPER WATER TUBE WITH WROUGHT COPPER FITTINGS, ANSI B16.22. SOLDER MATERIAL SHALL BE 99.8% LEAD LEAD FREE AND COMPLIANT WITH THE "SAFE WATER DRINKING ACT". THE USE OF DRILLED-T CONNECTIONS IS NOT PERMITTED. PEX TUBING, CONFORMING TO ALL STANDARD APPLICABLE CODE REQUIREMENTS FOR COMMERCIAL APPLICATIONS IS APPROVED AS ALTERNATE TO COPPER.

BELOW SLAB SHALL BE ASTM B 88 TYPE K COPPER WATER TUBE WITH WROUGHT COPPER FITTINGS, ANSI B16.22. ALL JOINTS SHALL BE BRAZED.

CONDENSATE AND INDIRECT DRAIN PIPING SHALL BE

TYPE M COPPER TUBING UP TO 1" ID, TYPE DWV TUBING AND COPPER FITTINGS FOR 1-1/4" AND LARGER SIZES, AND 95-5 SOLDER JOINTS. PEX TUBING CONFORMING TO ALL STANDARD APPLICABLE CODE REQUIREMENTS FOR COMMERCIAL APPLICATIONS IS APPROVED AS ALTERNATE.

SANITARY SOIL WASTE AND VENT PIPING SHALL BE

ABOVE SLAB INSIDE BUILDING SHALL BE SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM D-1784-82 WITH SOLVENT WELDED JOINTS.
IN AIR SUPPLY OR RETURN PLENUMS, AND/OR WHERE FIRE RATED WALLS, PARTITIONS, OR FLOORS ARE PENETRATED, CONTRACTOR SHALL PROVIDE NO-HUB CAST IRON SYSTEM CONFORMING TO CISPI STANDARD NO. 301-75. NEOPRENE GASKETS SHALL CONFORM TO ASTM STANDARD C564-75.

BELOW SLAB SHALL BE SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM D-1784-82 WITH SOLVENT WELDED JOINTS.

TANKLESS GAS WATER HEATER

ITEM NO.	TOTAL BTUH INPUT (NATURAL GAS)	MAXIMUM GPM DELIVERED AT 45°F RISE	MINIMUM FLOW RATE (GPM)	ELECTRICAL REQUIRED	TEMPERATURE SETTING (°F)	AIR INTAKE, EX. GAS VENT, HW, GAS, HWR, COND., CW.	MANUFACTURER COMMENT
TGWH-1	199,000 (3.5-10.5 I.W.C.)	8.7	0.5	120V/1ø/60HZ (350W)	120°	2" 2" 3/4", 3/4" 3/4", 3/4" 3/4"	NAVIEN #NPE-240A2 OUTDOOR, WALL MOUNTED, POWER VENTED TANKLESS GAS WATER HEATER

NOTES:
1. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS. CONTRACTOR SHALL FOLLOW ALL APPLICABLE CODE REQUIREMENTS.
2. PROVIDE HOT WATER EXPANSION TANK DOWNSTREAM OF CHECK VALVE ON COLD WATER SUPPLY. (THERM-X-TROL ST-5).
3. WATER HEATERS ARE PROVIDED WITH INTEGRAL HOT WATER RECIRCULATION PUMPS. PUMPS SHALL CIRCULATE HOT WATER INTERNALLY DURING OCCUPIED HOURS.

THERMOSTATIC MIXING VALVES

ITEM NO.	INLET HOT WATER TEMP (°F)	OUTLET MIXED WATER TEMP (°F)	MINIMUM FLOW (GPM)	DESIGN FLOW (GPM)	PRESSURE DROP @ DESIGN FLOW (PSI)	VALVE FINISH	MANUFACTURER / MODEL NO.
TMV-1	140°	110°	0.5	0.5-2.5	5.0	ROUGH BRONZE	WATTS USG-B-M1

NOTES:
1. MAKE WATER CONNECTIONS TO THERMOSTATIC MIXING VALVE(S) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE PIPE INCREASERS AND/OR VALVES AS REQUIRED.

SHOCK ARRESTORS

P.D.I. SYMBOL	FIXTURE UNITS	CHAMBER LENGTH	SWEAT CONNECTION
A	1-11	9-5/8"	1/2"
B	12-32	11-3/4"	3/4"
C	33-60	14-11/18"	1"
D	61-113	12-3/8"	1"
E	114-154	15-3/8"	1"
F	155-330	17-3/8"	1"

PLUMBING GENERAL NOTES

1. SAWCUT AND REMOVE EXISTING FLOOR SLAB/PAVING AS REQUIRED TO PROVIDE NEW FIXTURES, GREASE TRAP, SAMPLE WELL, CLEANOUTS, AND UNDER-SLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR/PAVING TO MATCH EXISTING. ALL SUCH WORK IS TO BE DONE IN ACCORDANCE WITH THE LANDLORD'S REQUIREMENTS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A COPY OF THE LANDLORD'S MOST RECENT RULES AND REGULATIONS FOR TENANT FINISH-OUT. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH SUCH RULES AND REGULATIONS.
3. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING FINISHED FLOOR ELEVATION.
4. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING DOMESTIC WATER, AND SANITARY WASTE & VENT PIPING PRIOR TO BEGINNING CONSTRUCTION TO ENSURE THAT PROPER CONNECTIONS TO AND EXTENSIONS OF SUCH UTILITIES CAN BE MADE.
5. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE PLUMBING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL CODE AUTHORITY AND PROVIDE AS DIRECTED.
6. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
8. MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES.
9. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
10. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
11. CONTRACTOR TO COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
12. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE AND INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
13. UPON COMPLETION OF WORK, THOROUGHLY ROD OUT AND FLUSH ALL SANITARY WASTE PIPING TO ENSURE IT IS FREE FROM BLOCKAGES.

PLUMBING FIXTURE SPECIFICATION

TYPE: WC-1 (T.A.S. COMPLIANT FOR ADULTS)
DESCRIPTION: WATER CLOSET, FLOOR MOUNTED - CHINA, 1.6 GALLON PER FLUSH FLUSHOMETER ELONGATED CLOSET BOWL WITH CLOSE-COUPLED TANK AND BOLT COVERS. TANK TO BE CONFIGURED WITH TRIP LEVER LOCATED ON LEFT SIDE OR ON RIGHT SIDE IN ORDER TO MEET T.A.S. REQUIREMENT THAT FLUSH CONTROLS BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREA. KOHLER K-P96057-T5D-NA
SEAT: ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF-SUSTAINING CHECK HINGES.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISER. MCGUIRE 2166LK.
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: UR-1 (T.A.S. COMPLIANT FOR ADULTS)
DESCRIPTION: URINAL, FLOOR MOUNT, WHITE VITREOUS CHINA, 0.5 GALLON PER FLUSH SIPHON JET ACTION, EXTERNAL TRAPWAY. KOHLER K-25039-T-0 BRANHAM FULL STALL WASHOUT URINAL WITH TOP SPUD IN
FLUSH VALVE: SLOAN ROYAL G2 8186-0.5 GPF FLUSH VALVE.
CARRIER: REFER TO URINAL MANUFACTURER'S REQUIREMENTS.
ROUGH-IN: 2" WASTE, 2" VENT, 3/4" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

DESCRIPTION: L-1 (T.A.S. COMPLIANT FOR ADULTS) LAVATORY, UNDER COUNTER MOUNT, WHITE VITREOUS CHINA, 19-1/4" X 16-1/4" WITH FRONT OVERFLOW, FAUCET HOLES ON 4" CENTERS. KOHLER CAXTON K-2210-0.
FAUCET: TOUCHLESS FAUCET WITH KINESIS SENSOR TECHNOLOGY, AC-POWERED IN POLISHED CHROME RESISTANT 0.5 GPM AERATOR. KOHLER K-103K36-SANA-CP KUMIN
STRAINER: CHROME PLATED BRASS GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE WITH LOCK NUT.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVES WITH ESCUTCHEONS AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: WH-1
DESCRIPTION: WALL HYDRANT, CONCEALED BOX TYPE, NON-FREEZE, 3/4" MALE HOSE THREAD OUTLET, SELF-DRAINING WITH ANTI-SIPHON VACUUM BREAKER. CHROME PLATED BRONZE CONSTRUCTION WITH CAST STAINLESS STEEL HYDRANT BOX. LOCKING HINGED COVER. LOOSE TEE OPERATING KEY. MIFAB MHY-20-3.
ROUGH-IN: 3/4" COLD WATER. INSTALL WITH OUTLET AT 24" A.F.F. OR AS DIRECTED BY ARCHITECT/OWNER.

TYPE: WH-2
DESCRIPTION: WALL HYDRANT, NON-FREEZE, TWO-3/4" MALE - (HW & CW), HOSE THREAD OUTLET, SELF-DRAINING WITH ANTI-SIPHON VACUUM BREAKER. CHROME PLATED BRONZE CONSTRUCTION WITH CAST STAINLESS STEEL HYDRANT BOX. LOOSE TEE OPERATING KEY. MIFAB MHY-40
ROUGH-IN: 3/4" COLD WATER. INSTALL WITH OUTLET AT 24" A.F.F. OR AS DIRECTED BY ARCHITECT/OWNER.

TYPE: SH-1
DESCRIPTION: SHOWER STALL, BASE, AND ENCLOSURE SPECIFIED BY ARCHITECTURAL DIVISION AND INSTALLED DIVISION AND INSTALLED BY PLUMBING CONTRACTOR. COORDINATE INSTALLATION AND ORIENTATION WITH ARCHITECTURAL DRAWINGS.
FAUCET: SHOWER FAUCET SELECTED BY OWNER, PROVIDED AND INSTALLED BY CONTRACTOR.
ROUGH-IN: 3" WASTE, 2" VENT, 3/4" HOT AND COLD WATER.
SHOWER FLOOR DRAIN: MIFAB FD212TC-49 OR APPROVED EQUAL

TYPE: FD-1
DESCRIPTION: FLOOR DRAIN, BOTTOM OUTLET CAST IRON BODY, ADJUSTABLE 6" DIAMETER NICKEL BRONZE STRAINER WITH VANDAL PROOF SCREWS. PROVIDE CLAMPING DEVICE FOR DRAINS IN MEMBRANE FLOOR AREAS. MI-FAB F1100-1-6.
TRAP PRIMER: PROVIDE WITH 1/2" TRAP PRIMER CONNECTION.
ROUGH-IN: 3" WASTE, 2" VENT, 1/2" TRAP PRIMER FROM LAVATORY TRAP PRIMER COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.

DESCRIPTION: TD-1 TRENCH DRAIN CHANNEL SHALL BE SLOPED (0.75%) OR NEUTRAL AND AND SEAMLESSLY MOLDED FROM LIGHTWEIGHT, DURABLE, CHEMICAL RESISTANT MATERIAL. CHANNEL SHALL INCLUDE CONSTRUCTION COVERS (2), STAINLESS STEEL. GRATE ANCHORS (6), AND INTEGRAL BOTTOM OUTLET FOR OPTIONAL CONNECTION. CHANNEL SHALL BE DESIGNED WITH STRUCTURE-REINFORCING RIBS AND SIDE ANCHORS (12 PER CHANNEL) FOR SECURING CHANNEL TO RE-BAR (½" #4). CHANNELS SHALL CONNECT END-TO-END, IN PROPER SEQUENCE, WITH MECHANICAL, TONGUE-IN-GROOVE STYLE JOINT. CHANNEL SHALL HAVE A MODIFIED BOTTOM RADIUS TO IMPROVE FLOW RATE AND REDUCE SEDIMENT BUILDUP. DESIGNED IN ACCORDANCE WITH ASME A112.6.3-01
TYPE: TRENCH DRAIN: SIOUX CHIEF 865

DESCRIPTION: WCO WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH BRONZE RAISED HEAD PLUG AND ROUND STAINLESS STEEL COVER PLATE WITH CENTER SECURING SCREW. MIFAB C1440-RD6. PROVIDE MIFAB C1460 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.

DESCRIPTION: FCO FLOOR CLEANOUT, CAST IRON BODY WITH SECONDARY O-RING TEST SEAL AND ADJUSTABLE COMBINED ACCESS COVER/PLUG TOP ASSEMBLY WITH PRIMARY GASKET SEAL, AND ROUND SCORIATED NICKEL BRONZE COVER. MIFAB C1100-R-1. FOR CARPETED FLOORS PROVIDE MIFAB C1100-RC-1.

GENERAL NOTES: ALL LAVATORIES AND SINKS SHALL BE SUPPLIED WITH HOT AND COLD WATER TO FAUCETS AS INDICATED ON PLANS AND FIXTURE SCHEDULE. PROVIDE CHROME PLATED BRASS SUPPLY STOPS WITH LOOSE KEYS AND WALL ESCUTCHEONS. PROVIDE CHROME PLATED FLEXIBLE RISERS OF SIZE REQUIRED TO PROPERLY CONNECT FIXTURES. PROVIDE 17 GAUGE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. REFER TO FIXTURE SCHEDULE FOR MINIMUM SIZES OF PLUMBING FIXTURE ROUGH-INS.
TYPE: PROVIDE MCGUIRE "PROWRAP" INSULATION KITS ON ALL LAVATORIES AND SINKS REQUIRED TO BE T.A.S. ACCESSIBLE. ALL SUCH FIXTURES AND FINAL INSTALLATIONS SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS REQUIREMENTS.

NOTE:
1. ALL FIXTURES FOR CONNECTION BASIS OF DESIGN ONLY. CONTRACTOR SHALL COORDINATE FINAL SELECTIONS OF ALL PLUMBING FIXTURES WITH ARCHITECT/OWNERS REP PRIOR TO PURCHASE AND INSTALLATION.

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

PLUMBING GENERAL INFORMATION

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	MBP
Checked by	KSF

P000

Scale 1/8" = 1'-0"

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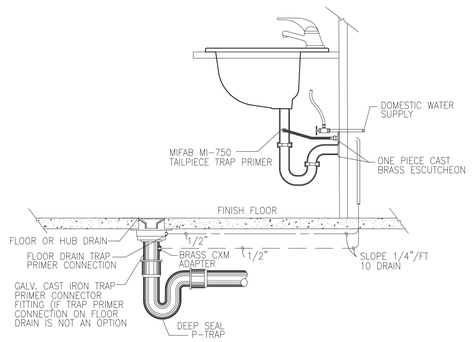
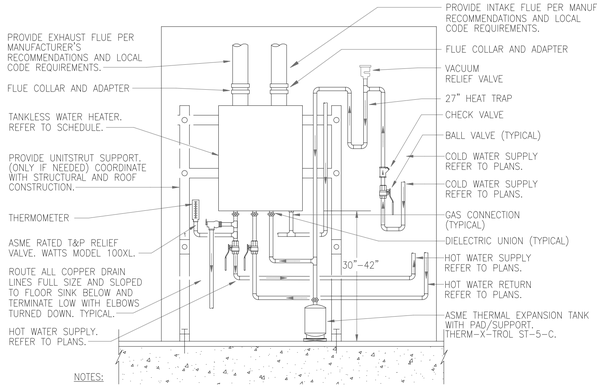


1 LAV/SINK TRAP PRIMER

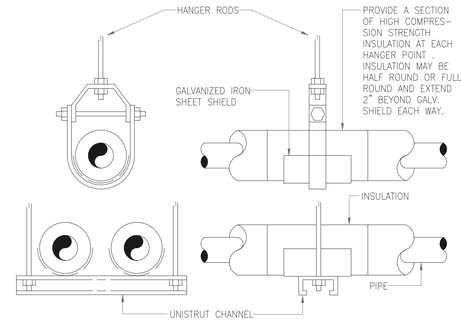


NOTES:

1. PROVIDE UNIT IN READILY ACCESSIBLE LOCATION, IN COMPLIANCE WITH LOCAL CODES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECT AND/OR OWNER.
2. PROVIDE 1" PIPE INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.28 BTU PER INCH/HR x S.F. x °F ON ALL DOMESTIC WATER PIPING. PROVIDE JACKETING FOR ALL EXPOSED PIPING.

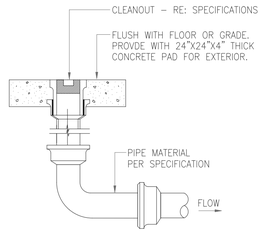
2 WATER HEATER TYPICAL WATER PIPING

SCALE: NONE

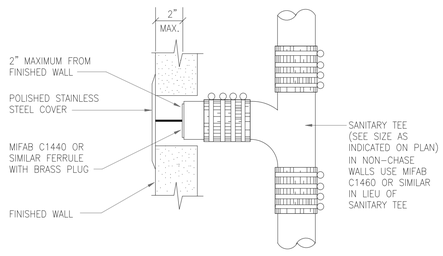


MINIMUM DIMENSIONS OF GALVANIZED SHEETMETAL PROTECTION SHIELDS AT PIPE HANGERS		
NOMINAL SIZE PIPE	SHIELD LENGTH MIN. (IN.)	GAUGE THICKNESS
1/2" & 3/4"	12	18
1" - 2-1/2"	12	18
3" - 4"	12	18
6"	12	16

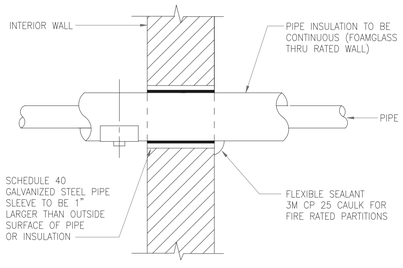
3 HANGER FOR WATER PIPING



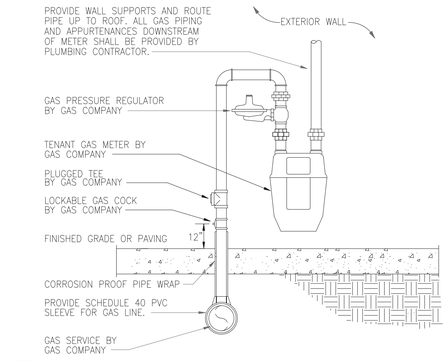
4 FLOOR INT./EXT. CLEANOUT



5 WALL CLEANOUT

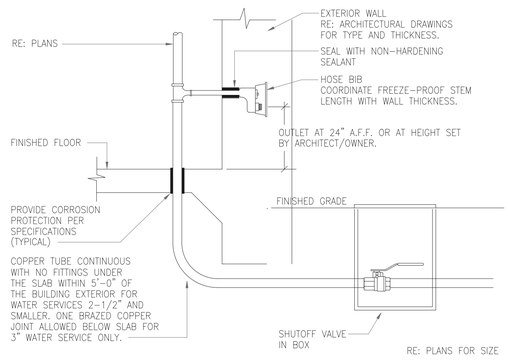


6 INTERIOR WALL PENETRATION

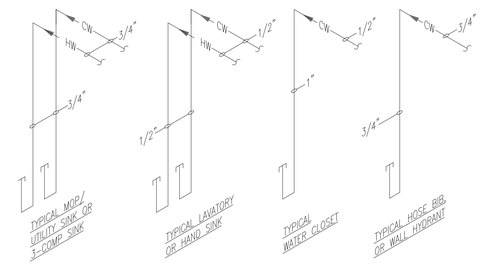


7 TYPICAL GAS METER AND PIPING

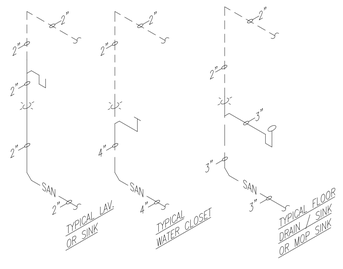
SCALE: NONE



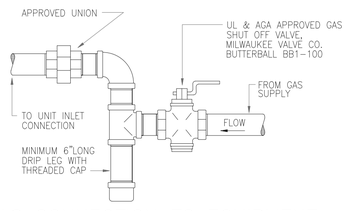
8 DOMESTIC WATER SERVICE ENTRY



9 TYPICAL DOMESTIC WATER RISER



10 TYPICAL WASTE AND VENT RISER



11 GAS CONNECTION TO EQUIPMENT

SCALE: NONE

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

PLUMBING DETAILS PLAN

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	MBP
Checked by	KSF

P001

Scale 1/8" = 1'-0"

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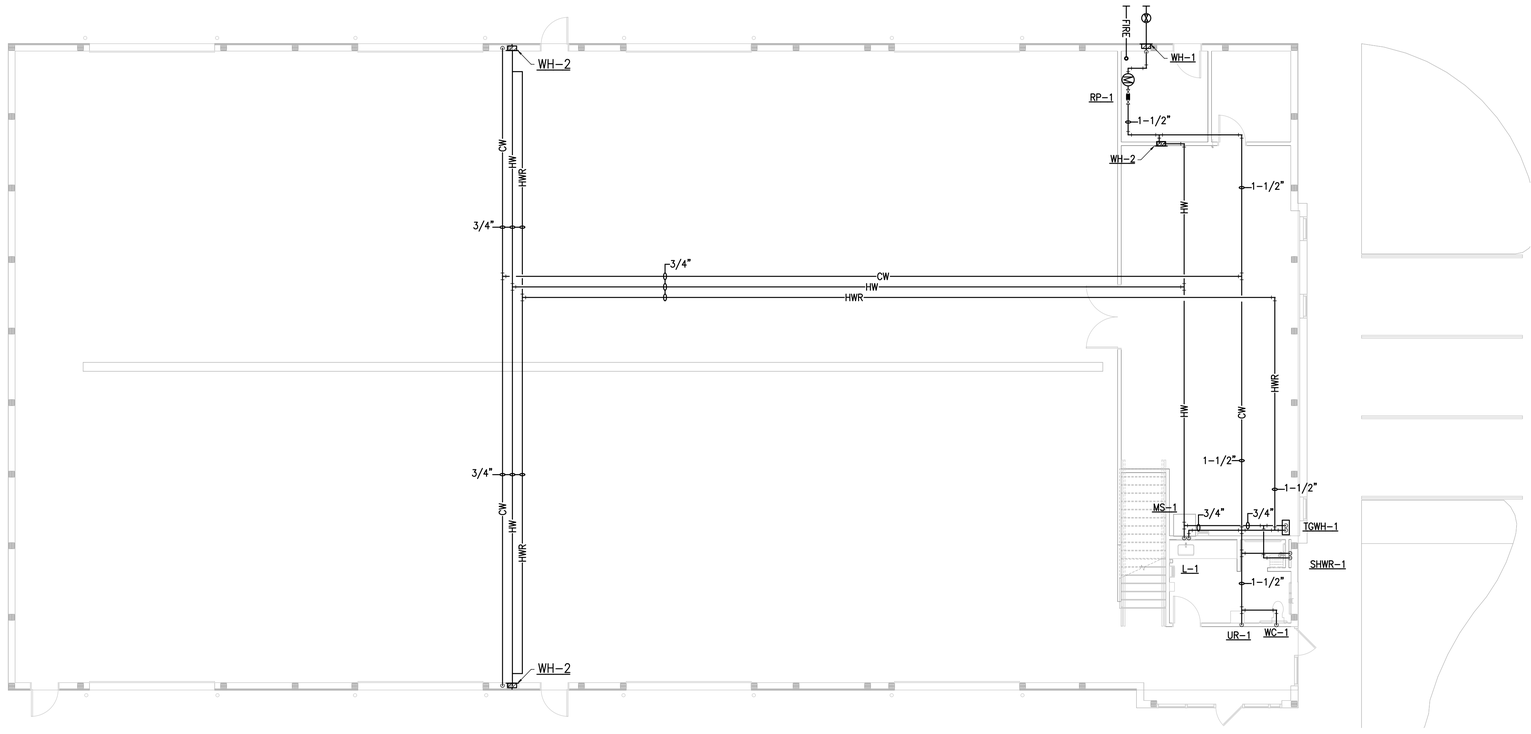

1 PLUMBING DOMESTIC WATER PLAN
1/8" = 1'-0"

0' 4' 8' 16'

PLUMBING GENERAL NOTES

1. SAWCUT AND REMOVE EXISTING FLOOR SLAB/PAVING AS REQUIRED TO PROVIDE NEW FIXTURES, GREASE TRAP, SAMPLE WELL, CLEANOUTS, AND UNDER-SLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR/PAVING TO MATCH EXISTING. ALL SUCH WORK IS TO BE DONE IN ACCORDANCE WITH THE LANDLORD'S REQUIREMENTS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A COPY OF THE LANDLORD'S MOST RECENT RULES AND REGULATIONS FOR TENANT FINISH-OUT. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH SUCH RULES AND REGULATIONS.
3. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING FINISHED FLOOR ELEVATION.
4. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING DOMESTIC WATER, AND SANITARY WASTE & VENT PIPING PRIOR TO BEGINNING CONSTRUCTION TO ENSURE THAT PROPER CONNECTIONS TO AND EXTENSIONS OF SUCH UTILITIES CAN BE MADE.
5. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE PLUMBING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL CODE AUTHORITY AND PROVIDE AS DIRECTED.
6. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
8. MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES.
9. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
10. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
11. CONTRACTOR TO COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
12. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE AND INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
13. UPON COMPLETION OF WORK, THOROUGHLY ROD OUT AND FLUSH ALL SANITARY WASTE PIPING TO ENSURE IT IS FREE FROM BLOCKAGES.

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

PLUMBING DOMESTIC WATER PLAN

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	MBP
Checked by	KSF

P101

Scale 1/8" = 1'-0"

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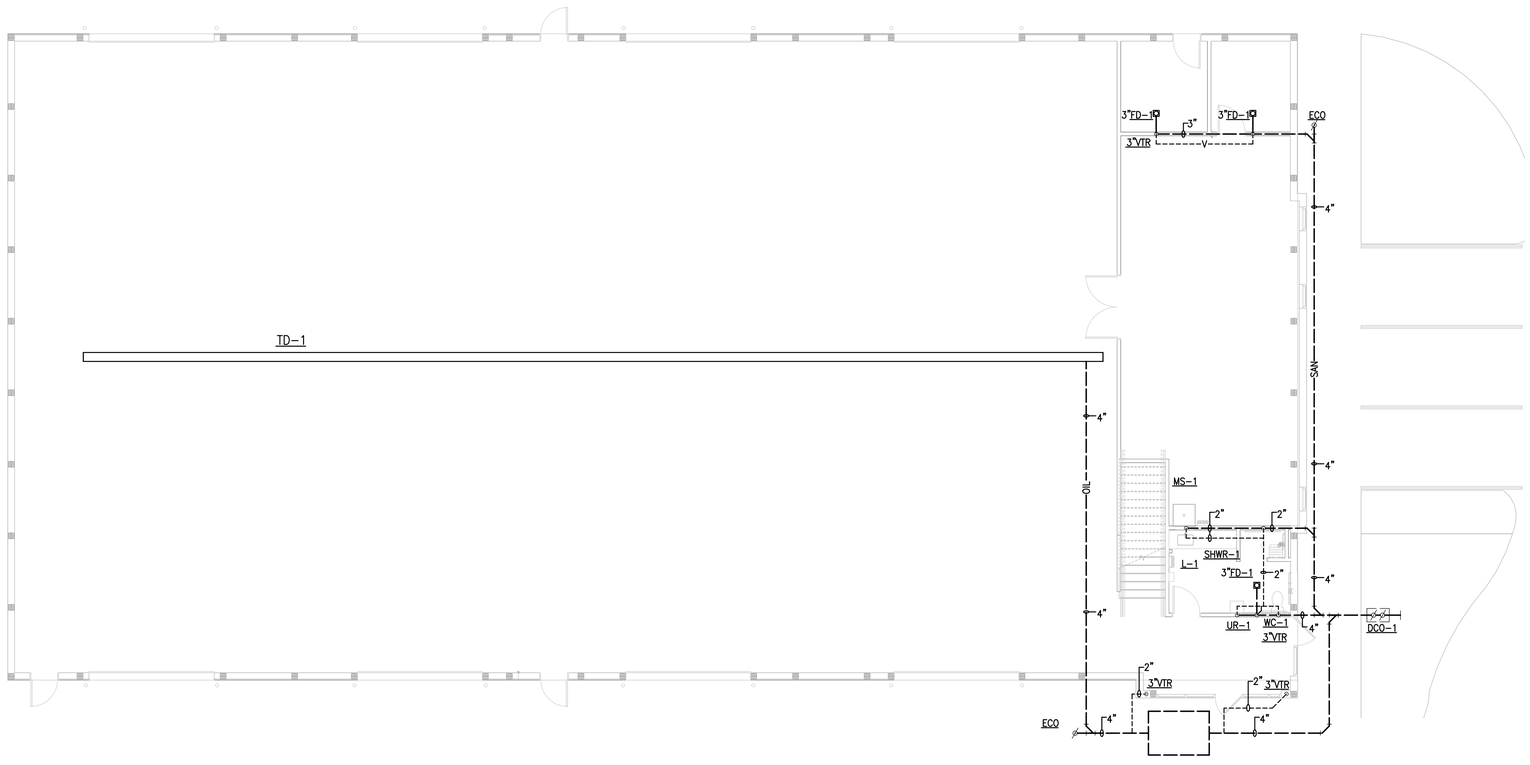

SAND OIL SEPERATOR

1 PLUMBING SANITARY SEWER PLAN

1/8" = 1'-0"

0' 4' 8' 16'

PLUMBING GENERAL NOTES

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13. UPON COMPLETION OF WORK, THOROUGHLY ROD OUT AND FLUSH ALL SANITARY WASTE PIPING TO ENSURE IT IS FREE FROM BLOCKAGES.

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JOHNSON CONUTY EMA STORAGE

PLUMBING SANITARY SEWER PLAN

KFE Project number	25041
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P102

Scale 1/8" = 1'-0"

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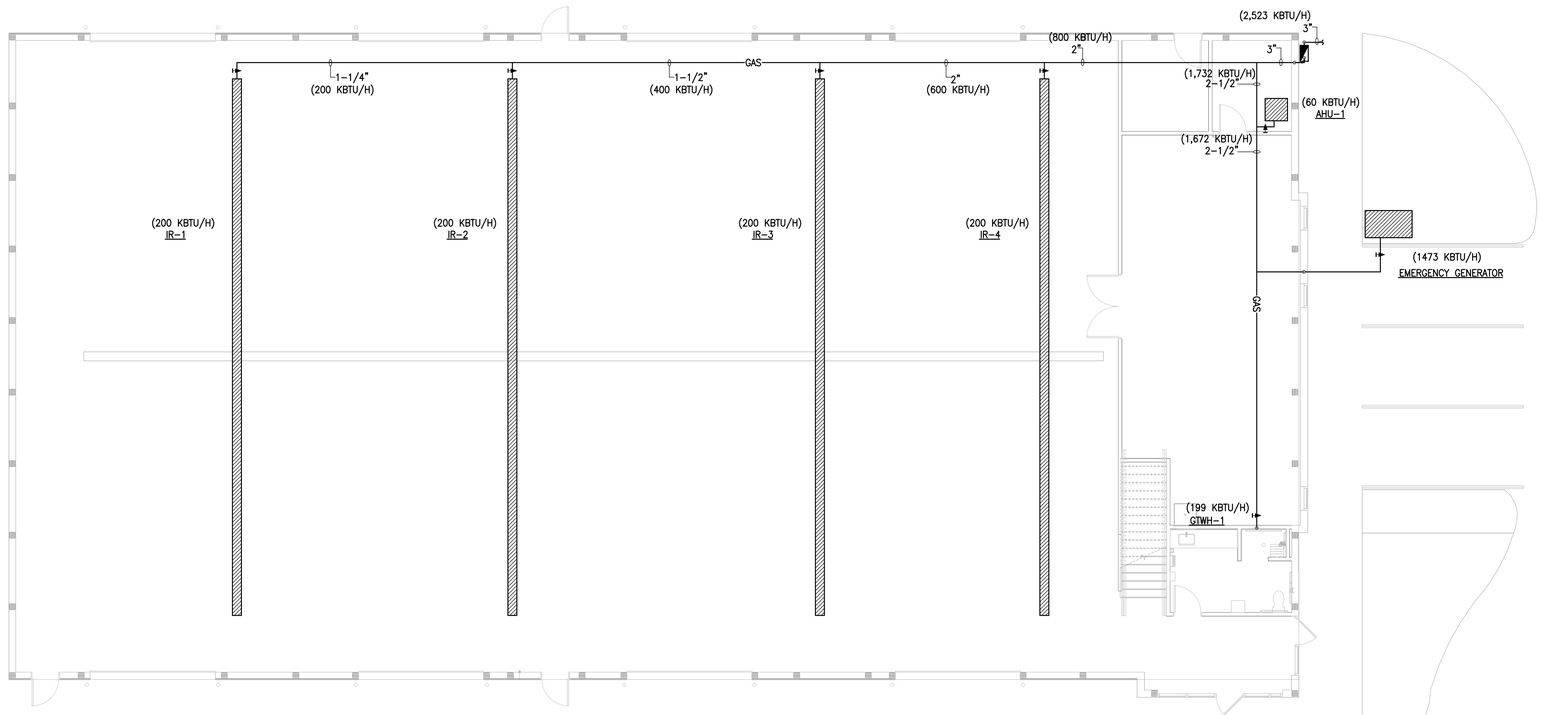

1 PLUMBING PIPING PLAN

1/8" = 1'-0"

0' 4' 8' 16'

PLUMBING GENERAL NOTES

1. SAWCUT AND REMOVE EXISTING FLOOR SLAB/PAVING AS REQUIRED TO PROVIDE NEW FIXTURES, GREASE TRAP, SAMPLE WELL, CLEANOUTS, AND UNDER-SLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR/PAVING TO MATCH EXISTING. ALL SUCH WORK IS TO BE DONE IN ACCORDANCE WITH THE LANDLORD'S REQUIREMENTS.
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12. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE AND INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
13. UPON COMPLETION OF WORK, THOROUGHLY ROD OUT AND FLUSH ALL SANITARY WASTE PIPING TO ENSURE IT IS FREE FROM BLOCKAGES.

PLUMBING KEYED NOTES

1. NATURAL GAS SERVICE LINE TO METER BY LOCAL UTILITY PROVIDER.
2. ROUTE 3" GAS LINE UP THROUGH WALL TO GAS EQUIPMENT AS SHOWN. COORDINATE PENETRATION POINT AND ROUTING WITH OWNER PRIOR TO CONSTRUCTION.
3. NEW NATURAL GAS SERVICE, METER, AND REGULATOR SET. COORDINATE METER LOCATION AND INSTALLATION IN ADVANCE WITH LOCAL GAS PROVIDER. MAKE ADJUSTMENTS AS REQUIRED. TOTAL CONNECTED LOAD: (2,523 BTU/H) AT 2 PSI OUTLET PRESSURE.
4. COORDINATE FINAL LOCATION AND POINT OF GAS CONNECTION WITH PLUMBING CONTRACTOR. PROVIDE SHUT-OFF VALVE.

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

PLUMBING NATURAL GAS PLAN

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	MBP
Checked by	KSF
	P103
Scale	1/8" = 1'-0"

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GAS UNIT HEATER SCHEDULE

MARK	MFG.	MODEL	SERVICE	HTG. CAPACITY (MBh)		TEMP. RISE	LENGTH	V/PH/HZ	TOTAL UNIT AMPS
				INPUT (MBH)	OUTPUT (MBH)	(°F)			
IR-1- IR-4	MODINE	IPOT200S01	SHOP	200.0	160.0	47.0	60'-0"	120/1/60	4.8

1) PROVIDE EACH UNIT HEATER WITH THE MANUFACTURER'S CONCENTRIC VENTING KIT.
2) PROVIDE UNIT HEATER(S) WITH WALL MOUNTED LINE VOLTAGE THERMOSTATS.
3) INSTALL PER MANUFACTURER'S RECOMMENDATIONS. FOLLOW ALL APPLICABLE CODES.

EXHAUST FAN SCHEDULE

MARK	MFG.	MODEL	TYPE	SERVICE	AIRFLOW (CFM)	ESP (IN WC)	MTR. POWER (AMPS)	V/PH/HZ	NOTES
EF-1	COOK	GCVF-150	CEILING	SEE PLANS	120	0.25	0.44	115/1/60	1,2,3
EF-2	COOK	GCVF-100	CEILING	SEE PLANS	50	0.25	0.26	115/1/60	2,3,4
WEF-1	COOK	XWHD	WALL	SEE PLANS	2500 /6550	0.20	1-1/2 HP	208/3/60	5,6,7
WEF-2	COOK	XWHD	WALL	SEE PLANS	2500 / 6550	0.20	1-1/2 HP	208/3/60	5,6,7

NOTES:

1) FAN SHALL BE INTERLOCKED WITH LOCAL LIGHT SWITCH.
2) PROVIDE SPEED CONTROLLER FOR FAN SPEED ADJUSTMENT.
3) EXHAUST FANS SHALL BE PROVIDED WITH MANUFACTURER'S INSTALLED DISCHARGE BACKDRAFT DAMPER.
4) FAN SHALL BE PROVIDED WITH DEDICATED WALL SWITCH.
5) FAN SHALL BE INTERLOCKED WITH CO2 AND NO SYSTEM AS WELL AS GRAVITY INTAKE LOW VOLTAGE DAMPER ACTUATORS.
6) UPON CO2 AND OR NO ALARM FAN SHALL ENGAGE HIGH/MAX AIR FLOW UNTIL LEVELS ARE SATISFIED. MINIMUM AIRFLOW SHALL BE NORMAL OPERATION.
7) PROVIDE FAN WITH 2.00 HP VFD.

AIR DEVICE SCHEDULE

MARK	MFG.	MODEL	SERVES	MATERIAL	DESCRIPTION	FACTORY FINISH	BLOW PATTERN	NOTES
A	TITUS	TMS	SEE PLANS	STEEL	SUPPLY DIFFUSER	ARCH TO SPEC.	4-WAY	24x24
B	TITUS	TMS	SEE PLANS	STEEL	SUPPLY DIFFUSER	ARCH TO SPEC.	4-WAY	12x12
C	TITUS	300RL	SEE PLANS	STEEL	SIDE WALL DIFFUSER	ARCH TO SPEC.	DOUBLE DEFL.	10x6
D	TITUS	350RL	SEE PLANS	STEEL	RETURN GRILLE	ARCH TO SPEC.	NA	24x24

NOTES:
1. AIR DEVICES A,B & C SHALL BE PROVIDED WITH OPTIONAL ASD (AIR SCOOP DAMPER).

SPLIT SYSTEM SCHEDULE

MARK (INDOOR)	MFG. (INDOOR)	COIL	FURNACE	MARK (OUTDOOR)	MFG. (OUTDOOR)	MODEL # (OUTDOOR)	MIN EFF. (SEER 2)	NOMINAL TONNAGE	EVAPORATOR FAN DATA						COOLING DATA					GAS HEATING			ELECTRICAL DATA - AHU			ELECTRICAL DATA - CU		
									SUPPLY AIRFLOW	OSA AIRFLOW	ESP (IN. WC.)	MAX FAN HP	FAN TYPE	RPM	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	OSA (DB/WB) (°F)	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	AFUE	V/PH/HZ	MCA (AMPS)	MOP (AMPS)	V/PH/HZ	MCA (AMPS)	MOP (AMPS)
AHU-1	DAIKIN	CAPEA2422B	DC80VC0603B	ACCU-1	DAIKIN	DC6VSA241	14.3	2.0	700	65	0.50	1	EC	1,050	22.3	15.6	79.0 / 65.2	58.4 / 57.5	89.0 / 76.0	60.0	48.0	80.0	1201/60	7.8	15.0	208/1/60	16.8	20.0

NOTES
1. PROVIDE ALL CONDENSING UNITS WITH LOUVERED HAIL GUARDS. WIRE MESH NOT ACCEPTABLE.
2. PROVIDE D4272C 7 DAY PROGRAMMABLE THERMOSTAT WITH HUMIDITY CONTROL
3. AHU SHALL BE PROVIDED WITH 2-SPEED FAN, DEFAULTING TO LOW SPEED. CONSTANT VOLUME OPERATION IS NOT ACCEPTABLE
4. PROVIDE 2-STAGE COOLING
5. PROVIDE GLOBAL PLASMA SOLUTIONS MODEL FC-48 BIPOLAR IONIZATION WITH SELF-CLEANING, INSIDE FCU. DUCT MOUNT NOT ACCEPTABLE. BIPOLAR IONIZATION SHALL BE INSTALLED BY FACTORY CERTIFIED TECHNICIAN, NO EXCEPTIONS
6. PROVIDE DIRECT DEHUMIDIFICATION RH CONTROL AND INVERTER COMPRESSOR, OR PROVIDE RAWAL APR MODULATING CAPACITY CONTROL VALVE. RAWAL VALVE SHALL BE INSTALLED BY FACTORY AUTHORIZED REPRESENTATIVE
7. CONTACT DERRICK VANWESTAT HVAC DIRECT HUB FOR PRICING ASSISTANCE. derrick.vanwest@hvacdh.com - 214-846-8668

HVLS FAN SCHEDULE

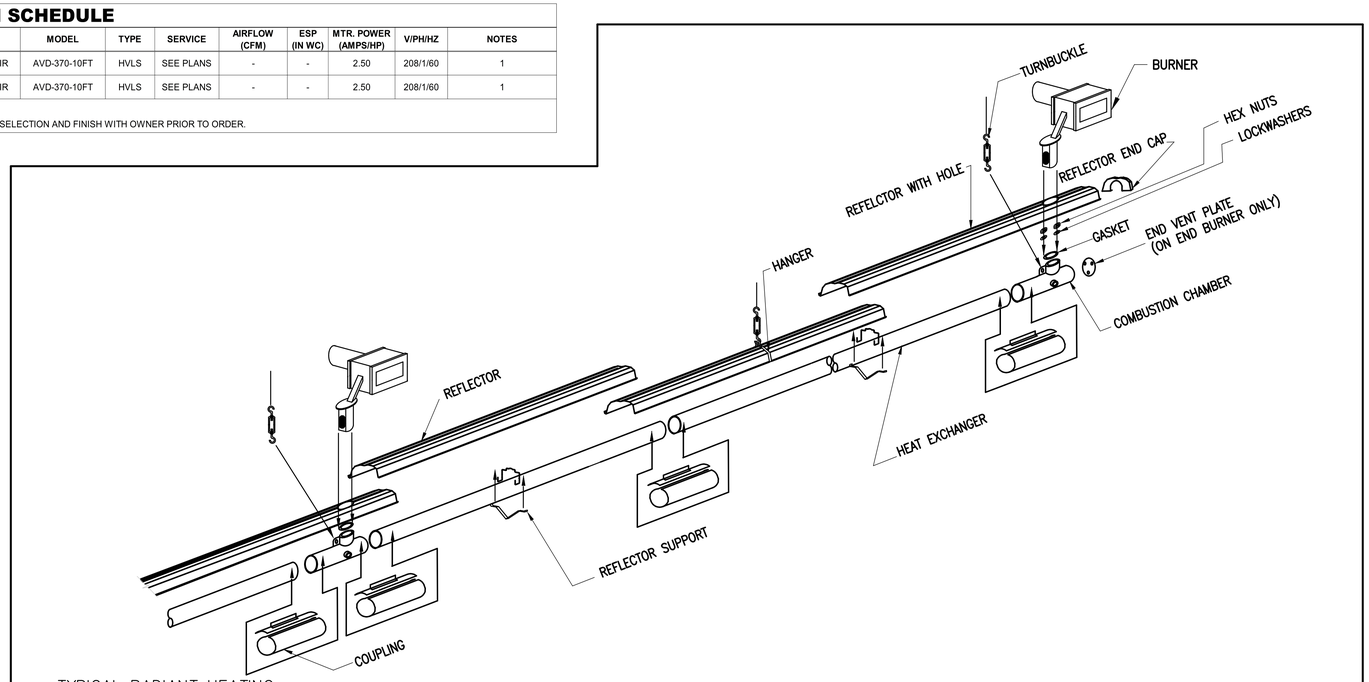
MARK	MFG.	MODEL	TYPE	SERVICE	AIRFLOW (CFM)	ESP (IN WC)	MTR. POWER (AMPS/HP)	V/PH/HZ	NOTES
HVLS-01	MACROAIR	AVD-370-10FT	HVLS	SEE PLANS	-	-	2.50	208/1/60	1
HVLS-02	MACROAIR	AVD-370-10FT	HVLS	SEE PLANS	-	-	2.50	208/1/60	1

NOTES:

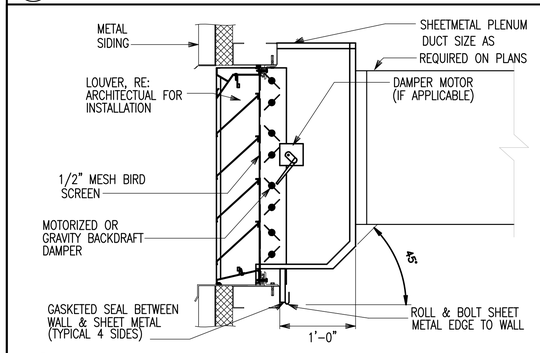
1. COORDINATE FINAL SELECTION AND FINISH WITH OWNER PRIOR TO ORDER.

MECHANICAL GENERAL NOTES:

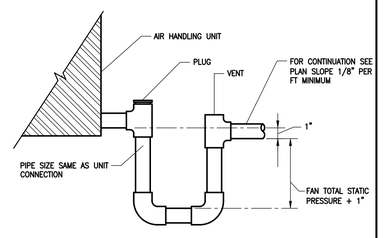
1. CODES, RULES AND REGULATIONS – DESIGN OF SYSTEM
   A) ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES.
   B) WHEN THE DRAWINGS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED CODES AND RULES, WORK SHALL BE AS SPECIFIED OR SHOWN RATHER THAN AS REQUIRED BY CODE. ALL ITEMS OR FEATURES OF THE MECHANICAL SYSTEMS REQUIRED BY CODE SHALL BE INCLUDED, EVEN THOUGH NOT SPECIFIED HEREIN.
   C) INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORDANCE WITH THE ABOVE MENTIONED CODES AND REGULATIONS AND ALSO SHALL CONFORM TO GOOD, ACCEPTED MECHANICAL PRACTICES.
2. PROVIDE AND INSTALL VOLUME DAMPERS IN ALL BRANCH DUCTS.
3. FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN AIR OPENINGS OF ALL AIR CONDITIONING UNITS.
4. FLEXIBLE DUCTS TO BE R-8 GLASS-FLEX 6'-0" MAXIMUM IN LENGTH,
5. COORDINATE EXACT LOCATION OF ALL AIR OUTLETS AND INLETS (DIFFUSERS, REGISTERS AND GRILLES) WITH APPROPRIATE ARCHITECTURAL PLAN, AND VERIFY THEIR LOCATION WITH ARCHITECT ON THE JOB SITE BEFORE INSTALLATION. COLOR AS DIRECTED BY ARCHITECT & OWNER.
6. AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE CAPABLE OF BEING SET FROM 55 TO 85°F, AND HAVE THE ABILITY TO OPERATE THE HEATING AND COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 5°F BETWEEN FULL HEATING AND FULL COOLING.
7. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED IN PLACE.
8. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR OWNERS USE.
9. PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & YOUNG REGULATORS OR ACCESS PANEL FOR VOLUME DAMPERS.
10. PROVIDE MIN. 10'-0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY FRESH AIR INTAKE, OR A/C UNIT OUTSIDE AIR INTAKE.
11. PROVIDE FIRE DAMPERS OR SMOKE/FIRE DAMPERS WHERE DUCT PENETRATES FIRE RATED CEILING OR WALL IF APPLICABLE.
12. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON-BENEFICIAL TO THE OCCUPIED AREA, TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC OR TAPE.
13. ALL DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL ENLARGE DUCT SIZE IN ORDER TO ACCOMMODATE LINING INSIDE OF DUCT.
14. THE MECHANICAL CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND FEES.
15. SHOP PRIME ALL MISCELLANEOUS INTERIOR BRACKETS AND HANGERS UNLESS GALVANIZED OR STAINLESS STEEL.
16. ENERGY CONSERVATION STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND DESIGN SUBSTANTIALLY CONFORMS TO THEM.
17. EACH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2,000 CFM SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT-OFF. THE SMOKE DETECTOR SHALL BE INSTALLED IN THE RETURN AIR DUCT AHEAD OF THE OSA INTAKE. SEE CODE FOR EXEMPTIONS AND LOCAL AUTHORITY FOR CODE INTERPRETATION, OR AS INDICATED ON PLAN.
18. ALL EQUIPMENT AND APPLIANCES ARE LISTED PRODUCTS, AND WILL BE INSTALLED ACCORDING TO THEIR LISTING, AND ALL LISTING INFORMATION WILL BE AVAILABLE FOR INSPECTION.
19. REFER TO DETAILS OR GUIDELINES FOR MECHANICAL CONSTRUCTION REQUIRMENTS. INSTALL IN FULL ACCORDANCE WITH PROPER CODES AND GUIDELINES.
20. COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECTUAL) REFLECTED CEILING PLAN.
21. ALL EXTERIOR BRACKETS, CLAMPS, AND HANGERS SHALL BE HOT DIPPED GALVANIZED. COAT ALL CUT ENDS AND WELDS WITH "ZRC" COLD GALVANIZING COMPOUND.



6 TYPICAL RADIANT HEATING SYSTEM ASSEMBLY
SCALE: NONE



3 INTAKE / DISCHARGE LOUVER DETAIL
SCALE: NONE



4 CONDENSATE TRAP DETAIL
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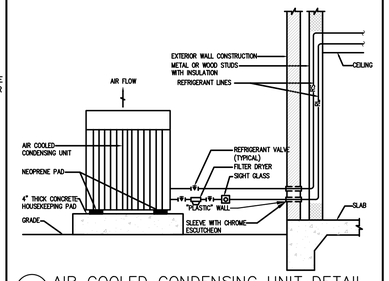

5 AIR COOLED CONDENSING UNIT DETAIL
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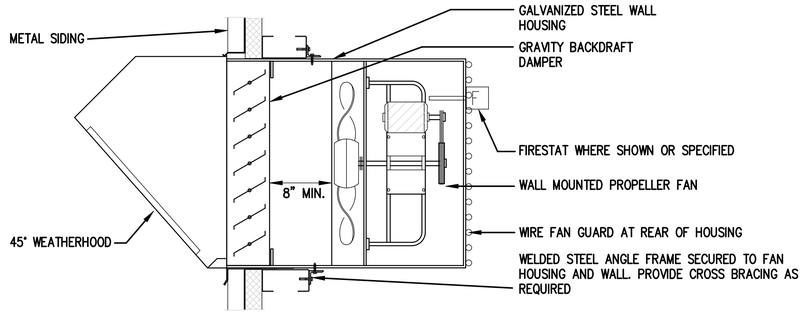
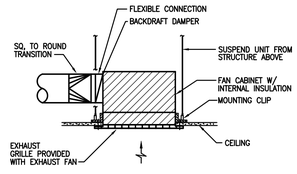


1 TYPICAL PROPELLER FAN DETAIL
SCALE: NONE



2 CENTRIFUGAL CEILING MOUNTED EXHAUST FAN DETAIL
SCALE: NONE

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GENERAL MECHANICAL REQUIREMENTS

1.1 SCOPE
A. THE WORK OF THIS DIVISION CONSISTS OF PROVIDING LABOR, MATERIALS, PRODUCTS, AND IN PERFORMING ALL OPERATIONS REQUIRED FOR THE COMPLETE OPERATING INSTALLATION OF ALL MECHANICAL AND PLUMBING SYSTEMS IN ACCORDANCE WITH THE SPECIFICATIONS AS WELL AS APPLICABLE DRAWINGS, TERMS, CONDITIONS OF THE CONTRACT AND ALL APPLICABLE CODES AND ORDINANCES GOVERNING THE INSTALLATION OF THE VARIOUS MECHANICAL AND PLUMBING SYSTEMS. ALL WORK SHALL BE FULLY CORRELATED WITH THE WORK OF OTHER CRAFTS.
B. EACH CONTRACTOR SHALL STUDY THE CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF WORK PROVIDED UNDER THIS CONTRACT AS WELL AS ASCERTAIN THE DIFFICULTY TO BE ENCOUNTERED IN PERFORMING THE WORK ON THE DRAWINGS AND OUTLINED HEREINAFTER AND IN MAKING CONNECTIONS TO EXISTING UTILITIES, INSTALLING NEW EQUIPMENT AND SYSTEMS AND COORDINATING THE WORK WITH THE OTHER TRADES.
C. EXAMINATION OF THE SITE: THE CONTRACTOR SHALL THOROUGHLY EXAMINE SITE AND SATISFY HIMSELF AS THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY, AT THE SITE, ALL MEASUREMENTS AFFECTING HIS WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS NEGLECT TO EXAMINE OR FAILURE TO DISCOVER CONDITIONS WHICH AFFECT HIS WORK. NO EXTRA COMPENSATION WILL BE ALLOWED ON ACCOUNT OF DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS.

1.2 REGULATORY REQUIREMENTS
A. CODES AND ORDINANCES/PERMIT AND FEES: PERFORM ALL WORK IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINATES, THE CURRENT EDITION OF NFPA, THE INTERNATIONAL BUILDING CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, AND ALL CURRENT SUPPLEMENTS THERETO, AND ANY OTHER AUTHORITIES HAVING JURISDICTION OVER THE WORK. PROCURE AND PAY FOR ALL PERMITS, LICENSES, FEES AND CHARGES, AND GIVE ALL NOTICES NECESSARY.
B. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND REQUIREMENTS OF ANY CODE OR AUTHORITIES HAVING JURISDICTION, THE MOST STRINGENT REQUIREMENTS OF THE AFOREMENTIONED SHALL BE GOVERNED.
C. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODES, STATE LAWS, AND LOCAL ORDINANCES AND INDUSTRY STANDARDS, HE SHALL BEAR ALL COSTS ARISING IN CORRECTING THE DEFICIENCIES, AS APPROVED BY THE ARCHITECT.
D. INTENT: THE DRAWINGS SHOW GENERAL ARRANGEMENTS AND THE EXTENT OF THE WORK. THE DRAWINGS DO NOT SHOW, IN MINUTE DETAIL, ALL FEATURES OF THE INSTALLATION. FOLLOW THE DRAWINGS AS CLOSELY AS ACTUAL CONSTRUCTION WILL PERMIT. ALL MATERIAL AND LABOR NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGE. THE JOB SHALL BE BID AND INSTALLED COMPLETE AND CONSISTENT IN EVERY REQUEST.

1.3 COORDINATION OF WORK
A. EACH CONTRACTOR SHALL COMPARE HIS DRAWINGS AND SPECIFICATIONS WITH THOSE OF OTHER TRADES. ALL WORK SHALL BE INSTALLED IN COOPERATION WITH ALL OTHER TRADES INSTALLING INTERRELATED WORK. BEFORE INSTALLATION, ALL TRADES SHALL MAKE PROPER PROVISIONS TO AVOID INTERFERENCES.
B. EACH CONTRACTOR SHALL COORDINATE THE LOCATION OF HIS SYSTEMS TO THAT ALL OUTSIDE AIR INTAKES, PLUMBING VENTS, AND EXHAUST FANS ARE LOCATED IN SUCH A WAY AS TO PREVENT CROSS-CONTAMINATION. SUCH A DISTANCE SHALL BE NOT LESS THAN 10'-0"FT.
C. LOCATIONS OF CONDUIT, DUCTS, PIPING, SPRINKLER HEADS AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE THE WORK WITH INTERFERENCES ANTICIPATED AND ENCOUNTERED. EXACT ROUTING AND LOCATION OF SYSTEMS SHALL BE DETERMINED PRIOR TO FABRICATION OR INSTALLATION.
D. OFFSETS AND CHANGES OF DIRECTION IN ALL CONDUIT, DUCTS AND PIPING SYSTEMS SHALL BE MADE AS REQUIRED TO MAINTAIN PROPER HEADROOM AND PITCH OF SLOPING LINES.

1.4 REGULATORY REQUIREMENTS
A. COMPLY WITH ALL CURRENT LOCAL, STATE, AND NATIONAL CODES, INCLUDING THE AMERICANS WITH DISABILITIES ACT (MOST CURRENT EDITION) AND SECURE AND PAY FOR ALL APPLICABLE COSTS, FEES, PERMITS AND LICENSES. NO ADDITIONAL COSTS SHALL BE PAID BY THE OWNER FOR THESE ITEMS.

B. PERFORM ALL WORK WITH HIGHEST REGARD TO SAFETY. EXCAVATE BY HAND AND WITH CAUTION TO LOCATE ALL UTILITIES IN THE BOUNDS OF THE AREA TO BE EXCAVATED PRIOR TO MACHINE EXCAVATING. PROCEED WITH SAFETY AND CAUTION SO THAT NO UTILITY IS DAMAGED OR INTERRUPTED.
C. PRIOR TO BID, VERIFY AND COORDINATE ALL REQUIRED CONNECTIONS AND/OR RELOCATIONS OF UTILITIES WITH UTILITY COMPANIES. PERFORM SUCH WORK IN ACCORDANCE WITH UTILITY COMPANY REGULATIONS. PAY ALL APPLICABLE FEES AND COSTS INCLUDING THOSE FOR ANY EXTENSIONS, RELOCATIONS AND/OR CONNECTIONS.
D. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ABOVE GROUND AND MARKED UTILITIES.

1.5 SUBMITTALS
A. SUBMITTALS SHALL BE COMPLETE FOR SYSTEM(S) INVOLVED. PROVIDE SUBMITTALS FOR ALL HVAC EQUIPMENT.
B. WHERE EQUIPMENT OF THE ACCEPTABLE MANUFACTURERS REQUIRE DIFFERENT ARRANGEMENT OR CONNECTIONS FROM THOSE SHOWN, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE EQUIPMENT TO OPERATE PROPERLY AND IN HARMONY WITH THE ORIGINAL INTENT OF THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL MAKE ALL NECESSARY CHANGES IN ALL AFFECTED RELATED WORK PROVIDED UNDER OTHER SECTIONS INCLUDING LOCATIONS OF ROUGH-IN CONNECTIONS BY OTHER TRADES, CONDUIT SUPPORTS, INSULATION, ETC. ALL CHANGES SHALL BE MADE AT NO INCREASE IN THE CONTRACT AMOUNT OR ADDITIONAL COSTS TO THE OTHER TRADES AND/OR OWNER.

1.6 GUARANTEE
A. ALL EQUIPMENT AND WORK SHALL BE GUARANTEED FOR A PERIOD OF 12 MONTHS AFTER ACCEPTANCE. ANY DEFECTS IN EQUIPMENT OR WORKMANSHIP SHALL BE PROMPTLY REPAIRED OR REPLACED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. THE GUARANTEE PERIOD OF ANY PART OF THE REPAIRED ITEMS SHALL BE EXTENDED FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUCH REPAIR OR REPLACEMENT.

1.7 COMPLETION
A. UPON COMPLETION OF THE MECHANICAL INSTALLATION, DEMONSTRATE TO THE OWNER'S SATISFACTION THAT THE SYSTEMS HAVE BEEN INSTALLED IN A SATISFACTORY MANNER IN ACCORDANCE WITH THE PLANS AND APPLICABLE CODES. SHOW THAT ALL CONTROLS ARE OPERABLE AND ARE PROPERLY ADJUSTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FINAL SYSTEMS BALANCE, THAT ALL SYSTEMS ARE PROPERLY BALANCED, THAT ALL EQUIPMENT OPERATES PROPERLY, THAT FILTERS AND STRAINERS ARE CLEAN, AND THAT ALL COMPONENTS OF ALL SYSTEMS ARE INSTALLED AND ADJUSTED FOR PROPER OPERATION.

PRODUCTS
2.1 GENERAL
A. ALL MATERIALS SHALL BE NEW AND OF THE QUALITY SPECIFIED. MATERIALS SHALL BE FREE FROM DEFECTS. MANUFACTURERS SHALL BE AS SPECIFIED HEREIN, OR BY ADDENDA. ALL PIPING EQUIPMENT, ETC., WHICH NEEDS TO BE INSULATED TO CONSERVE HEAT OR COLD, OR TO PREVENT FREEZING OR CONDENSATION, SHALL BE INSULATED. ALL MATERIALS SHALL HAVE THE UNDERWRITERS LABORATORIES, INC. LABEL.

BASIC MECHANICAL METHODS

1.1 DIMENSION AND FIT
A. CUT MATERIALS ACCURATELY FROM MEASUREMENTS TAKEN ON THE JOB SITE.
B. DO NOT SPRING OR BEND PIPE TO FIT CONDITIONS OR MAKE UP JOINTS

1.2 SERVICEABILITY OF PRODUCTS
A. FURNISH ALL PRODUCTS TO PROVIDE THE PROPER ORIENTATION OF SERVICEABLE COMPONENTS TO ACCESS SPACE PROVIDED.
B. COORDINATE INSTALLATION OF PIPING, DUCTWORK, EQUIPMENT, SYSTEM COMPONENTS, AND OTHER PRODUCTS TO ALLOW PROPER SERVICE OF ALL ITEMS REQUIRING PERIODIC MAINTENANCE OR REPLACEMENT.
C. REPLACE OR RELOCATE ALL PRODUCTS INCORRECTLY ORDERED OR INSTALLED TO PROVIDE PROPER SERVICEABILITY.
D. PROVIDE ACCESS DOORS AND ACCESS PANELS IN CEILINGS, WALLS, FLOORS, ETC. FOR ACCESS TO TRAPS, VALVES, PRIMERS, DAMPERS, AUTOMATIC DEVICES, AND ALL SERVICEABLE OR OPERABLE EQUIPMENT IN CONCEALED SPACES.
E. PROVIDE VIBRATION ISOLATORS ON ALL EQUIPMENT HAVING MOTORS AND SUPPORTED BY THE BUILDINGS STRUCTURE.

1.3 ROUTING
A. ROUTE ALL PIPELINES AND DUCTWORK PARALLEL WITH BUILDINGS LINES AND AS HIGH AS POSSIBLE.
B. ROUTE PIPING AND DUCTS TO CLEAR ALL DOORS, WINDOWS, AND OTHER OPENINGS AND TO AVOID ALL OTHER PIPES AND DUCTS, LIGHT FIXTURES AND SIMILAR PRODUCTS.
C. PROVIDE UNIONS ADJACENT TO ALL EQUIPMENT AND WHERE REQUIRED FOR DISCONNECT AND MAINTENANCE OF EQUIPMENT.
D. SECURELY FASTEN ALL MECHANICAL/PLUMBING WORK TO THE STRUCTURE TO PREVENT HAZARD HUMAN LIFE AND LIMB, AND TO PREVENT DAMAGE TO PRODUCTS OF CONSTRUCTION UNDER ALL CONDITIONS OF OPERATION.
E. DO ALL SLEEVING, CUTTING, AND PATCHING OF ROUGH CONSTRUCTION FOR PIPING. ALL CUTTING, REPAIRING AND REQUIRED STRUCTURAL REINFORCING FOR INSTALLATION OF THIS WORK SHALL BE DONE IN CONFORMANCE WITH ARCHITECT'S DIRECTIONS AND ANY DAMAGE CAUSED BY CUTTING SHALL BE REPAIRED EQUAL TO ORIGINAL CONDITIONS. NO CUTTING WITHOUT ARCHITECT'S APPROVAL.
F. PLACE ANY SLEEVES, CHASES, CONCRETE INSERTS, ANCHOR BOLTS, ETC., BEFORE CONCRETE IS POURED, AND BE RESPONSIBLE FOR CORRECT LOCATION AND INSTALLATION OF THESE ITEMS.

VIBRATION AND SEISMIC CONTROL FOR HVAC PIPING AND EQUIPMENT

1.1 PERFORMANCE REQUIREMENTS
A. SEISMIC-RESTRAINT LOADING:
a. SITE CLASS AS DEFINED IN THE IBC: AS REQUIRED BY LOCAL JURISDICTION.
b. ASSIGNED SEISMIC USE GROUP OR BUILDING CATEGORY AS DEFINED IN THE IBC: AS REQUIRED BY LOCAL JURISDICTION.
c. DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS (0.2 SECOND).
d. DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-SECOND PERIOD.

1.2 COMPONENTS:
A. VIBRATION ISOLATORS:
a. ISOLATOR PADS: NEOPRENE.
b. MOUNTS: DOUBLE-DEFLECTION TYPE.
c. RESTRAINED MOUNTS: ALL DIRECTIONAL MOUNTINGS WITH SEISMIC RESTRAINT; CAST-DUCTILE-IRON HOUSING.
d. SPRING ISOLATORS: FREESTANDING, LATERALLY STABLE, OPEN-SPRING TYPE.
e. RESTRAINED SPRING ISOLATORS: FREESTANDING, STEEL, OPEN-SPRING TYPE WITH SEISMIC RESTRAINT.
f. HOUSED SPRING MOUNTS: DUCTILE-IRON OR STEEL HOUSING, WITH INTEGRAL, VERTICALLY ADJUSTABLE SEISMIC SNUBBERS.
g. ELASTOMERIC HANGERS: DOUBLE-DEFLECTION TYPE.
h. SPRING HANGERS: COMBINATION COIL-SPRING AND ELASTOMERIC-INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION.
i. SPRING HANGERS WITH VERTICAL-LIMIT STOP: COMBINATION COIL-SPRING AND ELASTOMERIC-INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION AND WITH VERTICAL-LIMIT STOP.
j. PIPE RISER RESILIENT SUPPORT: ALL-DIRECTIONAL, ACOUSTICAL PIPE ANCHOR.
k. RESILIENT PIPE GUIDES.
B. AIR-MOUNTING SYSTEMS:
a. AIR MOUNTS: FREESTANDING, SINGLE OR MULTIPLE, COMPRESSED-AIR BELLOWS.
b. RESTRAINED AIR MOUNTS: HOUSED COMPRESSED-AIR BELLOWS.
C. RESTRAINED VIBRATION ISOLATION ROOF-CURB RAILS: FACTORY-ASSEMBLED, FULLY ENCLOSED, INSULATED, AIR- AND WATERTIGHT CURB RAIL; WITH SPRING ISOLATORS MOUNTED ON ELASTOMERIC ISOLATION PADS, AND SNUBBER BUSHINGS.
D. VIBRATION ISOLATION EQUIPMENT BASES:
a. STEEL BASE: FACTORY-FABRICATED, WELDED, STRUCTURAL-STEEL BASES AND RAILS.
b. INERTIA BASE: FACTORY-FABRICATED, WELDED, STRUCTURAL-STEEL BASES AND RAILS READY FOR FIELD-APPLIED, CAST-IN-PLACE CONCRETE.
E. SEISMIC-RESTRAINT DEVICES:
a. SNUBBERS: WELDED STRUCTURAL-STEEL SHAPES AND REPLACEABLE RESILIENT ISOLATION WASHERS AND BUSHINGS.
b. CHANNEL SUPPORT SYSTEM: MFMA-3 SLOTTED STEEL CHANNELS.
c. RESTRAINT CABLES: STAINLESS-STEEL CABLES.
d. ANCHOR BOLTS: MECHANICAL TYPE, SEISMIC RATED.
e. RESILIENT ISOLATION WASHERS AND BUSHINGS: MOLDED NEOPRENE.

1.3 FIELD QUALITY CONTROL
A. TESTING: BY CONTRACTOR.

AIR DISTRIBUTION

1.1 FILTERS
A. MANUFACTURERS: AAF OR APPROVED EQUIVALENT.
a. PLEATED FILTERS MERV-8, OR AS NOTED ON THE DRAWINGS.

1.2 DUCTWORK

A. MATERIALS:
a. STEEL DUCTS: GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY, MINIMUM GAUGE PER SMACNA STANDARDS.
b. INSULATED FLEXIBLE DUCTS: FLEXIBLE DUCT WRAPPED WITH FLEXIBLE GLASS FIBER INSULATION, ENCLOSED BY METALIZED VAPOR BARRIER JACKET.
c. SEALANT: NON-HARDENING, WATER RESISTANT, FIRE RESISTIVE, USED ALONE OR WITH TAPE.
B. METAL DUCTWORK:
a. FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE EXCEPT AS INDICATED.
b. CONSTRUCT T'S, BENDS, AND ELBOWS WITH RADIUS OF 1-1/2 TIMES WIDTH OF DUCT ON CENTER LINE. WHERE NOT POSSIBLE PROVIDE TURNING VANES.
c. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 30 DEGREES DIVERGENCE AND 45 DEGREES CONVERGENCE.
d. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH DRAW BANDS
e. USE CRIMP JOINTS WITH OR WITHOUT BEAD FOR JOINING ROUND DUCT SIZES 8 INCHES AND SMALLER WITH CRIMP IN DIRECTION OF AIR FLOW.
f. DUCT SCHEDULE:
f.a. SUPPLY DUCTS CONNECTED TO CONSTANT-VOLUME AIR-HANDLING UNITS, SINGLE ZONE VARIABLE-VOLUME AIR-HANDELING UNITS, AND SECONDARY DUCTWORK AFTER TERMINAL UNITS:
f.a.a. PRESSURE CLASS: POSITIVE 2-INCH WG.
f.a.b. MINIMUM SMACNA SEAL CLASS: B
f.a.c. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
f.a.d. SMACNA LEAKAGE CLASS FOR ROUND: 12
f.b. SUPPLY DUCTS CONNECTED TO VARIABLE-VOLUME AIR-HANDLING UNITS:
f.b.a. PRESSURE CLASS: POSITIVE 4-INCH WG.
f.b.b. MINIMUM SMACNA SEAL CLASS: B
f.b.c. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 6
f.b.d. SMACNA LEAKAGE CLASS FOR ROUND: 6
f.c. RETURN DUCTS CONNECTED TO VARIABLE AND CONSTANT-VOLUME AIR-HANDLING UNITS:
f.c.a. PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG.
f.c.b. MINIMUM SMACNA SEAL CLASS: B
f.c.c. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
f.c.d. SMACNA LEAKAGE CLASS FOR ROUND: 12
f.d. EXHAUST DUCTS
f.d.a. PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG.
f.d.b. MINIMUM SMACNA SEAL CLASS: B IF NEGATIVE, A IF POSITIVE
f.d.c. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
f.d.d. SMACNA LEAKAGE CLASS FOR ROUND: 6
f.e. OUTSIDE AIR DUCTS:
f.e.a. PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG.
f.e.b. MINIMUM SMACNA SEAL CLASS: B
f.e.c. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12
f.e.d. SMACNA LEAKAGE CLASS FOR ROUND: 12
g. SEISMIC-RESTRAINT DEVICES
1. CHANNEL SUPPORT SYSTEM.
2. GALVANIZED STEEL RESTRAINT CABLES.
3. HANGER ROD STIFFENER: STEEL TUBE OR STEEL SLOTTED-SUPPORT-SYSTEM SLEEVE WITH INTERNALLY BOLTED CONNECTIONS OR REINFORCING STEEL ANGLE CLAMPED TO HANGER ROD.

1.3 VOLUME CONTROL DAMPERS
C. PROVIDE ALL BRANCHES AND DUCT TAKE-OFFS, FABRICATE IN ACCORDANCE WITH SMACNCA HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE, AND AS INDICATED.
D. FABRICATE SPLITTER DAMPERS OF MATERIAL SAME GAGE AS DUCT TO 24 INCHES SIZE IN EITHER DIRECTION, OR TWO GAGES HEAVIER FOR LARGER SIZES. SECURE WITH CONTINUOUS HINGE OR ROD. OPERATE WITH MINIMUM ¼ INCH DIAMETER ROD.
E. FABRICATE SINGLE BLADE DAMPERS FOR DUCT SIZES TO 12X30 INCH.
F. EXCEPT IN ROUND DUCTWORK 12 INCHES AND SMALLER, PROVIDE END BEARINGS.
G. PROVIDE LOCKING, INDICATING QUADRANT REGULATORS ON SINGLE AND MULTI-BLADE DAMPERS. WHERE WIDTH EXCEEDS 30 INCHES PROVIDE REGULATOR AT BOTH ENDS.

1.4 FLEXIBLE DUCT CONNECTIONS
A. UL LISTED FIRE-RETARDANT NEOPRENE COATED WOVEN GLASS FIBER FABRIC TO NFPA 90, APPROXIMATELY 3 INCHES (75 MM) WIDE, CRIMPED INTO METAL EDGING STRIP.

1.5 AIR OUTLETS
A. MANUFACTURERS: PRICE, TITUS, TUTTLE AND BAILEY, KRUEGER, OR APPROVED EQUIVALENT.
B. DIFFUSERS/REGISTERS/GRILLES: PROVIDE AIR DEVICE TYPE, OPERATION, COLOR, ETC. AS SCHEDULED.

2.1 INSTALLATION
A. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. INSTALL FLEXIBLE CONNECTIONS SPECIFIED BETWEEN FAN INLET AND DISCHARGE DUCTWORK. FLEXIBLE CONNECTORS SHALL NOT BE IN TENSION WHILE RUNNING.
C. PROVIDE BACK DRAFT DAMPERS ON DISCHARGE OF EXHAUST FANS AND AS INDICATED.
D. PREVENT PASSAGE OF UNFILTERED AIR AROUND FILTERS WITH FELT, RUBBER, OR NEOPRENE GASKETS.
E. LOCATE DUCTS WITH SUFFICIENT SPACE AROUND EQUIPMENT TO ALLOW NORMAL OPERATING AND MAINTENANCE ACTIVITIES.
F. PROVIDE FLEXIBLE CONNECTIONS IMMEDIATELY ADJACENT TO EQUIPMENT IN DUCTS ASSOCIATED WITH FANS AND MOTORIZED EQUIPMENT.
G. CHECK LOCATION OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM TO ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENTS.
H. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, AND GRILLES AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, OR GRILLE AND REGISTER ASSEMBLY.

MECHANICAL INSULATION

1.1 SCOPE
A. GENERAL: FURNISH ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETE INSTALLATION OF THERMAL INSULATION ON ALL HOT AND COLD PIPING SURFACE AND DUCTWORK INSTALLED UNDER THIS CONTRACT WHICH REQUIRE INSULATIONS FOR HEAT OR COLD CONSERVATION: FREEZE PROTECTION, PREVENTION OF CONDENSATION OR DRIPPINGS; COMFORT FOR OCCUPANTS; EFFICIENCY OR

BASE OF OPERATION. MECHANICAL INSULATION SHALL BE COMPLETE AND EFFECTIVE THROUGHOUT THE PROJECT.
B. SYSTEMS TO RECEIVE INSTALLATION INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO:
a. HYDRONIC WATER LINES (SUPPLY AND RETURN).
b. CONDENSATE DRAINAGE.
c. HORIZONTAL RAIN LEADERS AND ROOF DRAINS.
d. REFRIGERANT LINES (BOTH HIGH AND LOW PRESSURES).
e. PIPING ACCESSORIES AND SPECIALTIES.
f. DUCTWORK

1.2 PIPE INSULATION
A. ALL ABOVE GRADE INSULATION SHALL HAVE COMPOSITE (INSULATION, JACKET OR FACING, ALL ADHESIVE OR CEMENT USED TO ADHERE THE JACKET TO THE INSULATION) FIRE AND SMOKE HAZARD RATINGS AS TESTED UNDER PROCEDURE ASTM E-84 AND NFPA 225.
B. APPROVED MANUFACTURERS: CERTAINEED, OWENS/CORNING, JOHNS-MANVILLE, UPJOHN, ARMSTRONG, OR APPROVED EQUIVALENT.
C. LOCATE INSULATION AND COVER SEAMS IN LEAST VISIBLE LOCATIONS.
D. NEATLY FINISH INSULATION AT SUPPORTS, PROTRUSIONS, AND INTERRUPTIONS.
E. PROVIDE INSULATED DUAL TEMPERATURE PIPES OR COLD PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE WITH VAPOR BARRIER JACKETS. FINISH WITH GLASS CLOTH AND VAPOR BARRIER ADHESIVE. INSULATE COMPLETE SYSTEM.
F. FOR INSULATED PIPES CONVEYING FLUIDS ABOVE AMBIENT TEMPERATURE, PROVIDE STANDARD JACKETS. BEVEL AND SEAL ENDS OF INSULATION AT EQUIPMENT, FLANGES, AND UNIONS.
G. PROVIDE INSERT BETWEEN SUPPORT SHIELD AND PIPING ON PIPING 2 INCHES (50 MM) DIAMETER OR LARGER. FABRICATE OF CORK OR OTHER HEAVY DENSITY INSULATING MATERIAL SUITABLE FOR TEMPERATURE, NOT LESS THAN 6INCHES (150 MM) LONG.
H. SCHEDULE:
a. CONDENSATE DRAINS: 1" FLEXIBLE ELASTOMERIC. PROVIDE ALUMINUM JACKETING ON PIPING EXPOSED TO WEATHER.
b. REFRIGERANT LINES; 1" FLEXIBLE ELASTOMERIC, PROVIDE ALUMINUM JACKETING ON PIPING EXPOSED TO WEATHER.

1.3 DUCTWORK INSULATION
A. MANUFACTURERS: KNAUF, OR APPROVED EQUIVALENT.
B. FIBERGLASS BLANKET INSULATION: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 553, TYPE II AND ASTM C 1290, TYPE III WITH FACTORY-APPLIED FSK JACKET. FACTORY-APPLIED JACKET REQUIREMENTS ARE SPECIFIED IN "FACTORY-APPLIED JACKETS" ARTICLE.
a. 'K' (KSI) VALUE: 0.29 AT 75 DEGREES F (0.042 AT 24 DEGREES C).
b. DENSITY: 0.75 LB/CU FT (24 KG/CU M).
c. VAPOR BARRIER JACKET: ALUMINUM-FOIL, FIBERGLASS-REINFORCED SCRIM WITH KRAFT-PAPER BACKING; COMPLYING WITH ASTM C 1136, TYPE II.
C. INSULATION PINS AND HANGERS:
a. METAL, ADHESIVELY ATTACHED, PERFORATED-BASE INSULATION HANGERS: BASEPLATE WELDED TO PROJECTING SPINDLE THAT IS CAPABLE OF HOLDING INSULATION, OF THICKNESS INDICATED, SECURELY IN POSITION INDICATED WHEN SELF-LOCKING WASHER IS IN PLACE. COMPLY WITH THE FOLLOWING REQUIREMENTS:
D. GLASS FIBER BLANKET INSULATION SCHEDULE (UNLESS SPECIFIED ON PLANS):
i. EXHAUST DUCTS EXPOSED TO OUTDOOR AIR: 1-1/2"
ii. VENTILATION DUCTS: 2"
iii. SUPPLY DUCTS: 2"
iv. RETURN DUCTS IN UNCONDITIONED SPACES: 1-1/2"

1.4 INSTALLATION
A. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. CONTINUE INSULATION VAPOR BARRIER THROUGH PENETRATIONS.
C. MASTICS
a. MATERIALS SHALL BE COMPATIBLE WITH INSULATION MATERIALS, JACKETS, AND SUBSTRATES; COMPLY WITH MIL-PRF-19565C, TYPE II.
i. FOR INDOOR APPLICATIONS, USE MASTICS THAT HAVE A VOC CONTENT OF 50 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24).

SYSTEM TESTING, ADJUSTING, AND BALANCING

A. TESTING, ADJUSTING AND BALANCING OF ALL WORK SHALL BE MADE BY AN INDEPENDENT NEBB, OR AABC CONTRACTOR WHO IS CURRENTLY LICENSED. THE HVAC CONTRACTOR SHALL INSTALL NEW FILTERS IN ALL UNITS PRIOR TO THE AIR BALANCE. THE COMPLETE AIR BALANCE SHALL TAKE PLACE WITH OUTSIDE AIR DAMPERS IN MINIMUM POSITION.

B. BALANCE AIR AND WATER QUANTITIES TO WITHIN +/- 5% OF THAT INDICATED ON THE DRAWINGS. ANY REQUIRED CHANGES IN SHEAVES, BELTS, PULLEYS, OR THE ADDITION OF DAMPERS REQUIRED TO ACHIEVE SPECIFIED FLOW RATES SHALL BE PERFORMED BY THE HVAC CONTRACTOR WITH NO ADDITIONAL COST.
C. THE BALANCE REPORT SHALL INCLUDE AS A MINIMUM THE FOLLOWING INFORMATION:
A. CERTIFICATION NUMBER AND SIGNATURE OF BALANCING CONTRACTOR.
B. INSTRUMENTATION LIST WITH LAST CALIBRATION DATES.
C. MAKE AND MODEL NUMBERS OF ALL HVAC EQUIPMENT.
D. AIR CFM AND STATIC PRESSURE READINGS (DISCHARGE AND SUCTION) AS MEASURED BY PITOT TUBE DUCT TRAVERSE AT THE UNIT.
E. MOTOR NAMEPLATE DATA WITH ACTUAL FIELD VOLTAGE AND AMPERAGE READINGS FOR EACH LEG.
F. MOTOR AND FAN RPMS, SHEAVE SIZES AND BELT SIZES.
G. OUTSIDE, RETURN, MIXED AND SUPPLY AIR TEMPERATURES AT FULL COOLING AND HEATING.
H. WATER BALANCE DATA INCLUDING GPM WITH INLET AND OUTLET TEMPERATURE AND PRESSURE READINGS (WHERE APPLICABLE)
I. MAKE AND MODEL NUMBERS OF ALL AIR DISTRIBUTION EQUIPMENT.
J. FINAL BALANCED AIR VOLUMES AT ALL OUTLETS (INCLUDING RETURNS WHERE DUCTED).
K. INDEXED PLAN WITH DIFFUSER AND RETURN LOCATIONS.
E. ALL CONTROL SEQUENCES SHALL BE TESTED (INTERLOCKED EQUIPMENT, SMOKE DETECTORS, SMOKE EVACUATION, ECONOMIZER, ETC.) AND OPERATING STATUS RECORDED IN THE REPORT.
F. THREE COPIES OF THE BALANCE REPORT SHALL BE SUBMITTED THROUGH THE GENERAL CONTRACTOR TO THE TENANT'S CONSTRUCTION MANAGER FOR APPROVAL.
G. THE BALANCING CONTRACTOR SHALL PERFORM ALL APPLICABLE TESTING AND BALANCING FUNCTIONS AS REQUIRED FOR THE SYSTEM DESIGNED IN THESE DRAWINGS. THE BALANCING CONTRACTOR SHALL RECHECK ANY ITEMS THAT THE TENANT DEEMS NECESSARY AT NO ADDITIONAL COST TO THE TENANT.
H. CONTROLS CONTRACTOR SHALL PROVIDE, AT NO COST, ALL NECESSARY SOFTWARE AND HARDWARE REQUIRED FOR SYSTEM BALANCE AND VERIFICATION OF CONTROLS. CONTROLS CONTRACTOR SHALL BE PRESENT AND ASSIST TEST & BALANCE CONTRACTOR DURING CONTROLS VERIFICATION. PRIOR TO START OF TEST & BALANCE, THE CONTROLS CONTRACTOR SHALL VERIFY ALL CONTROLS ARE OPERATIONAL AND ALL INPUT VALUES HAVE BEEN ENTERED PER DESIGN DOCUMENTATION. CONTROLS CONTRACTOR SHALL PROVIDE CONTROL SYSTEM START-UP SHEETS VERIFYING CONTROLS OPERATION PRIOR TO THE START OF TEST & BALANCE.
I. FINAL BALANCE REPORT SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUALS.

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

MECHANICAL SPECIFICATIONS

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	MBP
Checked by	KSF

M001

Scale 1/8" = 1'-0"

MECHANICAL KEYED NOTES:

1. REFRIGERANT LIQUID AND SUCTION LINES SIZED PER MANUFACTURERS RECOMMENDATIONS.
2. PROVIDE WALL MOUNTED SEVEN DAY PROGRAMMABLE THERMOSTAT. COORDINATE FINAL LOCATION AND HEIGHT WITH OWNER AND ARCHITECT.
3. 6"ø OUTSIDE AIR DUCT WITH MOTORIZED DAMPER AND ROUTE EXTERIOR 12X12 WALL LOUVER.
4. PROVIDE AND INSTALL PIPE SUPPORT ON 4'-0" CENTERS AND IN EVERY CHANGE OF DIRECTION. SLOPE PIPE TO PROVIDE PROPER DRAINAGE. REFER TO DETAIL SHEET FOR CONDENSATE DRAIN SUPPORT & INSULATION DETAIL. PROVIDE CONDENSATE PUMP AS NEEDED.
5. PROVIDE CONDENSING UNIT WITH ALL PROPER CLEARANCES FOR MAINTENANCE AND OPERATION. REFER TO MANUFACTURER FOR RECOMMENDATIONS. PROVIDE CONDENSING UNIT WITH VIBRATION ISOLATION PADS. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO ANY WORK BEING DONE.
6. PROVIDE MANUFACTURER'S SUGGESTED SIDE WALL CONCENTRIC FLUE EXHAUST KIT. INSTALL PER MANUFACTURER'S RECOMMENDATION. MOUNTING HEIGHT AND EXTERIOR PENETRATION LOCATION SHALL BE COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
7. PROVIDE MACURCO DVP CONTROLS OR APPROVED EQUIVELENT FOR CO2 AND NO DETECTION NAD VENTILATION ACTIVATION. INSTALL PER MANUAFCTURER RECOMMENDATOINS.
8. WALL MOUNTED EXHAUST FANS SHALL INTERLOCK WITH LOW VOLTAGE VENTILATION LOUVER ACTUATORS. PROVIDE SELECTOR SWITCH FOR ON/AUTO FUNCTION. COORDINATE WITH ELECTRICIAN TO INSTALL PER MANUFACTURER'S RECOMMENDATIONS. FINAL LOCATION SHALL BE COORDINATED WITH ARCHITECT PRIOR TO CONSTRUCTION.
9. PROVIDE 120W X 54H RUSKIN EME5625 OR APPROVED EQUIVALENT. LOUVER SHALL BE PAIRED WITH MOTORIZED INTERLOCKED LOW VOLTAGE MODULATING DAMPER AS DESCRIBED IN KEYED NOTE 8 THIS SHEET.
10. PROVIDE LINE VOLTAGE THERMOSTAT PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH ELECTRICIAN TO INSTALL PER MANUFACTURER'S RECOMMENDATIONS. VERIFY FINAL LOCATION WITH OWNER PRIOR TO CONSTRUCTION.
11. BOTTOM OF FANS SHALL BE MOUNTED AT SAME HEIGHT AS SHOP BAY LIGHTS. COORDINATE FINAL MOUNTING HEIGHT WITH ARCHITECT AND ELECTRICAL PLANS PRIOR TO CONSTRUCTION.

CO2&NO CONTROLS

THE CONTROL PANEL SHALL INCLUDE (3) SPDT 10 RELAYS FOR DEVICE CONTROL. INTERLOCK BOTH OF THE FANS TO A SINGLE RELAY. THE CONTROL DRAW SHALL NOT EXCEED 10A. IN THE EVENT 10A IS EXCEEDED, A ROBUST RELAY WILL NEED TO BE UTILIZED TO CONTROL THE FANS & USE SPECIFIED OR EQUAL CONTROL AS A SUPERVISORY CONTROL RELAY. THE PANEL IS DIGITAL AND THE DETECTORS SHALL BE INSTALLED IN A DAISY CHAIN CONFIGURATION BACK TO THE PANEL. THE PANEL IT SHALL OFFER BACNET (MS/TP) FOR OUTSIDE COMMUNICATION IF THAT FEATURE WAS NEEDED.

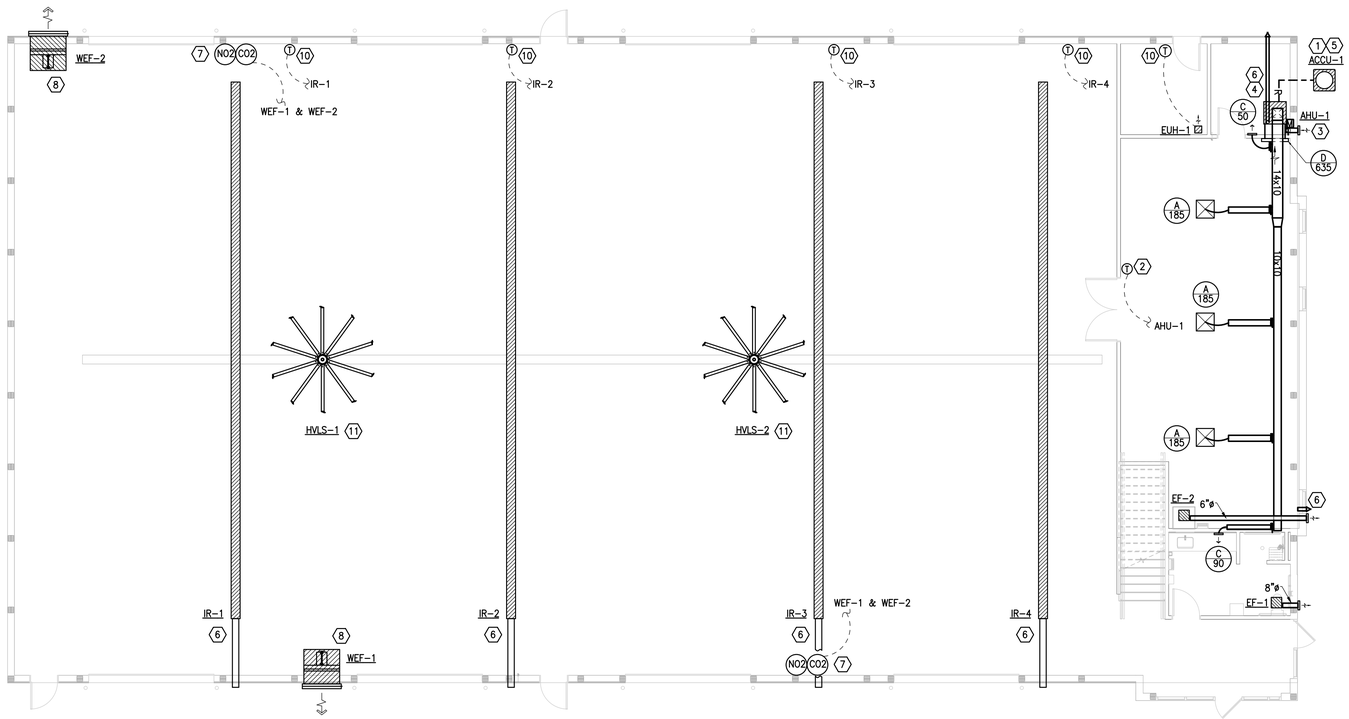
MECHANICAL CONTRACTOR NOTES

CONTRACTOR TO BE AWARE OF OBSTRUCTIONS AND BE PREPARED TO OFFSET DUCT AND PIPING BOTH VERTICALLY AND HORIZONTALLY TO ROUTE MECHANICAL SYSTEM.
CONTRACTOR SHALL MAINTAIN FREE AREA OF DUCTWORK.
CONTRACTOR SHALL SUBMIT RFI'S FOR ALL CHANGES PRIOR TO INSTALLATION. CONTRACTOR SHALL REFER TO DETAILS FOR DETAILED INSTALLATION INSTRUCTION.

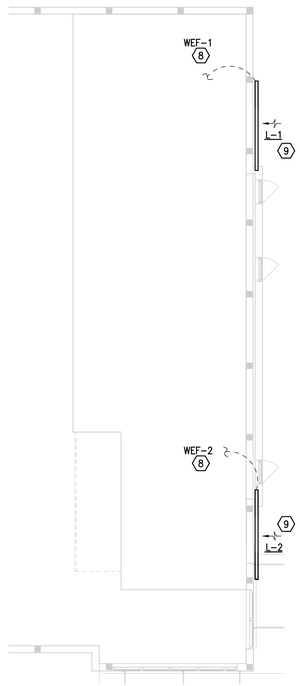
MECHANICAL CONTRACTOR NOTES

PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE EQUIPMENT.

PROVIDE YOUNG REGULATORS OR ACCESS PANEL FOR INACCESSIBLE VOLUME DAMPERS.



1 MECHANICAL FLOOR PLAN
1/8" = 1'-0"
0' 4' 8' 16'

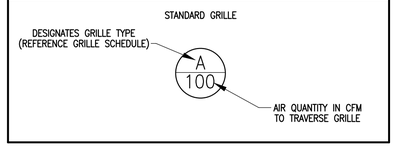


2 MECHANICAL FLOOR PLAN
1/8" = 1'-0"
0' 4' 8' 16'

MECHANICAL GENERAL NOTES:

1. CODES, RULES AND REGULATIONS – DESIGN OF SYSTEM
   A) ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND CODES.
   B) WHEN THE DRAWINGS CALL FOR MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED CODES AND RULES, WORK SHALL BE AS SPECIFIED OR SHOWN RATHER THAN AS REQUIRED BY CODE. ALL ITEMS OR FEATURES OF THE MECHANICAL SYSTEMS REQUIRED BY CODE SHALL BE INCLUDED, EVEN THOUGH NOT SPECIFIED HEREIN.
   C) INSTALLATION OF THE SYSTEMS SHALL BE IN ACCORDANCE WITH THE ABOVE MENTIONED CODES AND REGULATIONS AND ALSO SHALL CONFORM TO GOOD, ACCEPTED MECHANICAL PRACTICES.
2. PROVIDE AND INSTALL VOLUME DAMPERS IN ALL BRANCH DUCTS.
3. FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN AIR OPENINGS OF ALL AIR CONDITIONING UNITS.
4. FLEXIBLE DUCTS TO BE R–8 GLASS–FLEX 6'–0" MAXIMUM IN LENGTH,
5. COORDINATE EXACT LOCATION OF ALL AIR OUTLETS AND INLETS (DIFFUSERS, REGISTERS AND GRILLES) WITH APPROPRIATE ARCHITECTURAL PLAN, AND VERIFY THEIR LOCATION WITH ARCHITECT ON THE JOB SITE BEFORE INSTALLATION. COLOR AS DIRECTED BY ARCHITECT & OWNER.
6. AUTOMATIC TEMPERATURE CONTROL DEVICE FOR REGULATION OF SPACE TEMPERATURE SHALL BE CAPABLE OF BEING SET FROM 55 TO 85°F, AND HAVE THE ABILITY TO OPERATE THE HEATING AND COOLING IN SEQUENCE. CONTROL SHALL BE ADJUSTABLE TO PROVIDE A RANGE OF UP TO 5°F BETWEEN FULL HEATING AND FULL COOLING.
7. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED IN PLACE.
8. A MAINTENANCE LABEL SHALL BE AFFIXED TO MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE.
9. PROVIDE ACCESS PANEL FOR ALL CEILING MOUNTED EQUIPMENT & YOUNG REGULATORS OR ACCESS PANEL FOR VOLUME DAMPERS.
10. PROVIDE MIN. 10'–0" SEPARATION BETWEEN POINT OF EXHAUST AND ANY FRESH AIR INTAKE, OR A/C UNIT OUTSIDE AIR INTAKE.
11. PROVIDE FIRE DAMPERS OR SMOKE/FIRE DAMPERS WHERE DUCT PENETRATES FIRE RATED CEILING OR WALL IF APPLICABLE.
12. TRANSVERSE JOINTS FOR ALL AIR SUPPLY DUCTS INSTALLED WHERE AIR LEAKAGE WOULD BE NON–BENEFICIAL TO THE OCCUPIED AREA, TEMPERATURE REQUIREMENTS SHALL BE SEALED WITH APPROVED MASTIC OR TAPE.
13. ALL DUCT SIZES SHOWN ON THE FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR SHALL ENLARGE DUCT SIZE IN ORDER TO ACCOMMODATE LINING INSIDE OF DUCT.
14. THE MECHANICAL CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND FEES.
15. SHOP PRIME ALL MISCELLANEOUS INTERIOR BRACKETS AND HANGERS UNLESS GALVANIZED OR STAINLESS STEEL.
16. ENERGY CONSERVATION STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS HAVE BEEN REVIEWED AND DESIGN SUBSTANTIALLY CONFORMS TO THEM.
17. EACH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2,000 CFM SHALL BE EQUIPPED WITH AN AUTOMATIC SHUT–OFF. THE SMOKE DETECTOR SHALL BE INSTALLED IN THE RETURN AIR DUCT AHEAD OF THE OSA INTAKE. SEE CODE FOR EXEMPTIONS AND LOCAL AUTHORITY FOR CODE INTERPRETATION, OR AS INDICATED ON PLAN.
18. ALL EQUIPMENT AND APPLIANCES ARE LISTED PRODUCTS, AND WILL BE INSTALLED ACCORDING TO THEIR LISTING, AND ALL LISTING INFORMATION WILL BE AVAILABLE FOR INSPECTION.
19. REFER TO DETAILS OR GUIDELINES FOR MECHANICAL CONSTRUCTION REQUIRMENTS. INSTALL IN FULL ACCORDANCE WITH PROPER CODES AND GUIDELINES.
20. COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECTUAL) REFLECTED CEILING PLAN.
21. ALL EXTERIOR BRACKETS, CLAMPS, AND HANGERS SHALL BE HOT DIPPED GALVANIZED. COAT ALL CUT ENDS AND WELDS WITH "ZRC" COLD GALVANIZING COMPOUND.

GRILLE SIZING SCHEDULE



SUPPLY DIFFUSER NECK SIZING SCHEDULE

SIZE	AIRFLOW (CFM)
4"ø	0 – 50
6"ø	50 – 100
8"ø	100 – 210
10"ø	210 – 380
12"ø	380 – 500
14"ø	500 – 700

RETURN FLEX DUCT SIZING SCHEDULE

SIZE	AIRFLOW (CFM)
4"ø	0 – 50
6"ø	50 – 100
8"ø	100 – 200
10"ø	200 – 300
12"ø	300 – 400
14"ø	400 – 500

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

MECHANICAL PLAN

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	MBP
Checked by	KSF

M100

Scale 1/8" = 1'-0"

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POWER SYMBOLS LIST

XX" OR AC	DUPLEX RECEPTACLE 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
XX", AC, OR UC GFI	DUPLEX RECEPTACLE GFCI 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER UC - UNDER COUNTER
XX" GFI WP	DUPLEX RECEPTACLE GFCI WEATHERPROOF 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
XX" OR AC USB	DUPLEX USB CHARGING RECEPTACLE 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
XX" OR AC	DOUBLE DUPLEX RECEPTACLE 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
XX" OR AC GFI	DOUBLE DUPLEX GFCI RECEPTACLE 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
XX"OR AC	SIMPLEX RECEPTACLE 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
XX"OR AC	SPLIT WIRED DUPLEX RECEPTACLE 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
XX"OR AC	SPLIT WIRED DUPLEX RECEPTACLE W/ EACH RECEPTACLE SWITCHED 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER
30	SINGLE RECEPTACLE , 30 AMP REFER TO PLAN NOTES FOR MOUNTING LOCATION INFORMATION
40	SINGLE RECEPTACLE , 40 AMP REFER TO PLAN NOTES FOR MOUNTING LOCATION INFORMATION
	SPECIAL PURPOSE OUTLET REFER TO PLAN NOTES FOR MOUNTING LOCATION INFORMATION
/XX#	BRANCH PANELBOARD, SURFACE MOUNTED. REFER TO PANLE SCHEDULE FOR MORE INFORMATION DASHED LINE INDICATES REQUIRED WORKING CLEARANCE
TX-PP#	TRANSFORMER DASHED LINE INDICATES REQUIRED WORKING CLEARANCE
PCO	PUSH BUTTON PROVIDED BY GC.REFER TO PLAN NOTES FOR MOUNTING LOCATION INFORMATION.

LIGHTING CONTROL SYMBOLS LIST

S	SINGLE POLE SWITCH
3 S	THREE WAY SWITCH
4 S	FOUR WAY SWITCH
K S	KEY OPERATED SWITCH
LV S	LOW VOLTAGE SWITCH
D S	LOW VOLTAGE DIMMING SWITCH
OS	OCCUPANCY SENSOR, WALL MOUNTED SWITCH
MX/1 S	MANUAL MOTOR STARTER SWITCH WITH MELTING ALLOY TYPE THERMAL OVERLOAD RELAY, TOGGLE OPERATED, SINGLE POLE, SINGLE THROW, RATED 1 HP MAXIMUM AT 120V, NEMA 1 ENCLOSURE, UL LISTED
MX/2 S	MANUAL MOTOR STARTER SWITCH WITH MELTING ALLOY TYPE THERMAL OVERLOAD RELAY, TOGGLE OPERATED, SINGLE POLE, SINGLE THROW, RATED 1 HP MAXIMUM AT 120V, NEMA 1 ENCLOSURE, UL LISTED
OS	OCCUPANCY SENSOR IF ARROW IS SHOWN, OCCUPANCY SENSOR SHALL BE WALL MOUNTED IN CORNER AT THE SAME ELEVATION AS LIGHT FIXTURES
PO	PHOTO SENSOR
DL	DAYLIGHT SENSOR, CEILING MOUNTED
LCP	PROGRAMMABLE LIGHTING CONTROL PANEL

SYSTEMS SYMBOLS LIST

T	THERMOSTAT
XX"	TELECOMMUNICATION OULTET ROUGH-IN, FLUSH MOUNT ON WALL OR AS NOTED IN PLANS. 18" - STANDARD MOUNTING HEIGHT XX" - INDICATED MOUNTING HEIGHT AC - ABOVE COUNTER TV - INDICATES WALL MOUNTED DATA FOR TV. COORDINATE HEIGHT WITH OWNER CLG.TV - INDICATES CEILING MOUNTED DATA FOR TV
TV	TELECOMMUNICATION OULTET ROUGH-IN FOR CABLE TV, FLUSH MOUNT ON WALL OR AS NOTED IN PLANS. COORDINATE HEIGHT WITH OWNER PRIOR TO ROUGH-IN CLG.TV - INDICATES CEILING MOUNTED DATA FOR TV
	EXIT SIGN

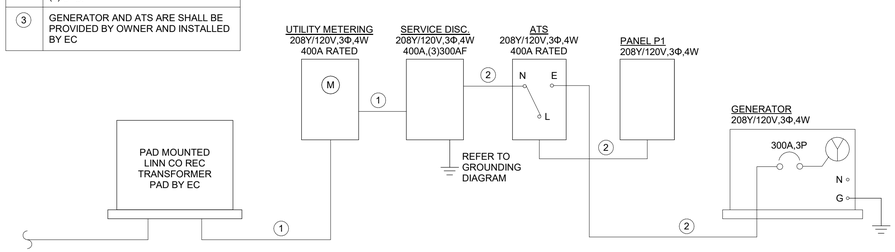
LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	MOUNTNG	LAMP	VOLTAGE	WATTAGE
EM1	EMERGENCY	LITHONIA	ELM2L M12	WALL	LED	120 V	5 W
EX1	EMERGENCY EXIT W/ REMOTE HEADS	LITHONIA	ECRG H0 RD M6; REMOTE HEAD: ERE GY SGL WP RD	WALL	LED	120 V	5 W
EX2	EMERGENCY EXIT	LITHONIA	ECRG RD M6	WALL	LED	120 V	5 W
H1	HIGH BAY W/OCC SENSOR	LITHONIA	IBG 15000LM SEF AFL GND MVOLT GZ10 40K 80CRI LSXR6	LAY-IN	LED	120 V	140 W
R1	DOWNLIGHT	JUNO	WF6 - AL0, 40K	RECESSED	LED	120 V	15 W
R2	DOWNLIGHT	JUNO	WF6 - AL0, 40K	RECESSED	LED	120 V	15 W
S1	STRIP	LITHONIA	CCS L48 ALO3 MVOLT SWW3 80CRI	SURFACE	LED	120 V	32 W
W1	WALL PACK	LITHONIA	WPX3 LED 40K MVOLT DDBXD	WALL	LED	120 V	69 W
W2	WALL PACK	LITHONIA	WPX0 LED ALO(40K) SWW2 MVOLT PE DDBXD M2	WALL	LED	120 V	69 W

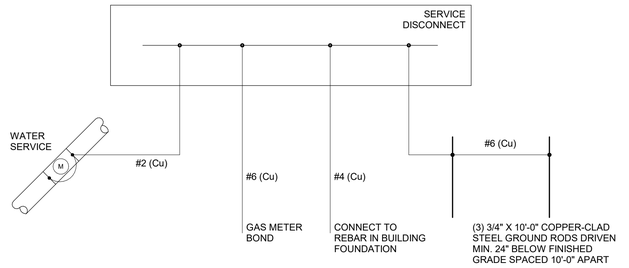
BRANCH PANEL NAME	VOLTAGE	PHASE	WIRE	BUS SIZE	MAIN OCP	AIC RATING
P1	208Y/120V	3	4	400 A	MLO	22 kAIC
	CODE: L=LIGHTING, R=RECEPTACLES, M=MOTORS, K=KITCHEN, E=EQUIPMENT					MOUNTING: SURFACE
ROOM:						ENCLOSURE: NEMA 1
FED FROM:						FEED: BOTTOM

LOAD	CODE	POLE	BKR	CKT #	A	B	C	CKT #	BKR	POLE	CODE	LOAD
EMERGENCY LTS	L	1	20 A	1	34 VA / 360 VA			2	20 A	1	R	GARAGE CONV. RCPTS
MEZZANINE LTS	L	1	20 A	3		131 VA / 540 VA		4	20 A	1	R	GARAGE CONV. RCPTS
CO/NO2 SYSTEM	E	1	20 A	5			0 VA / 720 VA	6	20 A	1	R	GARAGE CONV. RCPTS
EXTERIOR LTS	L	1	20 A	7	1150 VA / 720 VA			8	20 A	1	M	OVERHEAD DOOR
GENERAL LTS	L	1	20 A	9		592 VA / 1500 VA		10	20 A	1	M	AHU-1
HIGH BAYS	L	1	20 A	11			1680 VA / 4160 VA	12	30 A	2	E	DROP CORD REEL PWR
RESTROOM RCPTS	R	1	20 A	13	360 VA / 4160 VA			14	--	--	--	--
MEZZANINE RCPTS	R	1	20 A	15		1500 VA / 1747 VA		16	20 A	2	E	CU-1
WORKSPACE RCPTS	R	1	20 A	17			360 VA / 1747 VA	18	--	--	--	--
DROP CORD REEL PWR	E	2	50 A	19	2496 VA / 540 VA			20	20 A	1	R	CONV. RCPT
--	--	--	--	21		2496 VA / 360 VA		22	20 A	1	R	WORKSPACE RCPTS
WORKSPACE RCPTS	R	1	20 A	23			540 VA / 696 VA	24	20 A	1	E	DROP CORD REEL PWR
DROP CORD REEL PWR	E	1	20 A	25	696 VA / 696 VA			26	20 A	1	E	DROP CORD REEL PWR
GARAGE CONV. RCPTS	R	1	20 A	27		540 VA / 696 VA		28	20 A	1	E	DROP CORD REEL PWR
DROP CORD REEL PWR	E	1	20 A	29			696 VA / 1200 VA	30	20 A	1	M	OVERHEAD DOOR
OVERHEAD DOOR	M	1	20 A	31	1200 VA / 1200 VA			32	20 A	1	M	OVERHEAD DOOR
DROP CORD REEL PWR	E	1	20 A	33		696 VA / 1200 VA		34	20 A	1	M	OVERHEAD DOOR
OVERHEAD DOOR	M	1	20 A	35			1200 VA / 1200 VA	36	20 A	1	M	OVERHEAD DOOR
IR-3 & IR-4	M	1	20 A	37	1200 VA / 1200 VA			38	20 A	1	M	OVERHEAD DOOR
OVERHEAD DOOR	M	1	20 A	39		1200 VA / 828 VA		40	20 A	3	M	WEF-1
IR-1 & IR-2	M	1	20 A	41			1200 VA / 828 VA	42	--	--	--	--
BIG - FAN#1	M	1	20 A	43	1200 VA / 828 VA			44	--	--	--	--
BIG - FAN #2	M	1	20 A	45		1200 VA / 828 VA		46	20 A	3	M	WEF-2
GENSET CIRCUIT	--	1	--	47			0 VA / 828 VA	48	--	--	--	--
GENSET CIRCUIT	--	1	--	49	0 VA / 828 VA			50	--	--	--	--
GENSET CIRCUIT	--	1	--	51		0 VA / 0 VA		52	20 A	1	--	Spare
GENSET CIRCUIT	--	1	--	53			0 VA / 0 VA	54	20 A	1	--	Spare
Spare	--	1	20 A	55	0 VA / 0 VA			56	20 A	1	--	Spare
Spare	--	1	20 A	57		0 VA / 0 VA		58	20 A	1	--	Spare
Spare	--	1	20 A	59			0 VA / 0 VA	60	20 A	1	--	Spare
Spare	--	1	20 A	61	0 VA / 0 VA			62	20 A	1	--	Spare
				63				64				
				65				66				
				67				68				
				69				70				
				71				72				
				73				74				
				75				76				
				77				78				
				79				80				
				81				82				
				83				84				
			TOTAL LOAD:		18547 VA	15662 VA	16654 VA					
			TOTAL AMPS:		156 A	131 A	140 A					

ONE-LINE NOTES	
1	4-500MCM (Al) (1) 3" C.
2	4-500MCM+1-#2GND (Al) (1) 3" C.
3	GENERATOR AND ATS ARE SHALL BE PROVIDED BY OWNER AND INSTALLED BY EC



1 ELECTRICAL ONE-LINE DIAGRAM



2 GROUNDING DIAGRAM

FIRE ALARM PROVIDED UNDER SEPARATE CONTRACT

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

ELECTRICAL GENERAL INFORMATION

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	KSF
Checked by	KSF
	E000
Scale	1/8" = 1'-0"

9/17/2025 10:26:34 AM

(1) REFERENCE

1. GENERAL CONTRACT PROVISIONS APPLY TO THE WORK OF THIS SECTION
2. CODE: COMPLY WITH THE REQUIREMENTS OF THE GOVERNING BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION.
3. PROVIDE ALL NECESSARY PERMITS AND APPROVALS AND PAYING ALL REQUIRED FEES IN CONNECTION WITH THE WORK OF THIS CONTRACT.
4. SUBMITTALS: WITH MANUFACTURER'S STANDARD DATA, INSTALLATION INSTRUCTIONS AND SPECIFICATIONS, SUBMIT SAMPLES FOR EACH ITEM AS REQUIRED.
5. ALL ELECTRICAL MATERIALS AND APPLIANCES SHALL HAVE THE LISTING OF THE UNDERWRITER'S LABORATORIES, INC., AND TYPES APPROVED BY LOCAL AUTHORITIES HAVING JURISDICTION.
6. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE CONTRACTOR FOR GENERAL CONSTRUCTION AND WITH THE CONTRACTORS FOR THE OTHER MECHANICAL TRADES.
7. AT THE END OF EACH WORKING DAY, THIS CONTRACTOR SHALL DEPOSIT ALL DEBRIS PERTAINING TO HIS TRADE AT A SPOT ON EACH FLOOR, DESIGNATED BY THE GENERAL CONTRACTOR WHO WILL DISPOSE OF SAID DEBRIS.

(2) WORK INCLUDED

1. THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS ARE INTENDED TO SECURE THE PROVISIONS OF ALL MATERIAL AND LABOR NECESSARY FOR THE COMPLETE INSTALLATIONS, TESTED AND READY FOR SERVICE, TOGETHER WITH COMPLETE ELECTRICAL WORK AS CALLED FOR HEREIN AND AS INDICATED ON THE DRAWINGS. WHEN CONFLICTS OCCUR IN THE SPECIFICATIONS OR ON THE DRAWINGS, OR BETWEEN EITHER, THE ITEMS OF GREATER QUANTITY OR HIGHER COST SHALL BE PROVIDED.
2. COMPLETE WIRING SYSTEMS FOR LIGHTING AND POWER INSTALLATION, HVAC, PLUMBING AND SPRINKLER SYSTEMS AND MISCELLANEOUS DEVICES.
3. GENERAL DESCRIPTION OF THE ELECTRICAL WORK IS AS FOLLOWS:
   - A. ELECTRICAL SERVICE INSTALLATION.
   - B. LIGHTING FIXTURES AND LAMPS.
   - C. POWER WIRING TO MECHANICAL EQUIPMENT.
   - D. CUTTING AND ROUGH PATCHING
   - E. FURNISHING AND SETTING OF ALL SLEEVES THROUGH FLOORS, WALLS, WHERE REQUIRED, INCLUDING WATERPROOF AND FIREPROOF SEALING.
   - F. CORE DRILLING ASSOCIATED WITH THE ELECTRICAL WORK.
   - G. TESTS AND INSPECTIONS OF ALL SYSTEMS UNDER THIS SECTION.
   - H. TEMPORARY LIGHT AND POWER FOR CONSTRUCTION PURPOSES.
   - I. PAYING ALL FEES AND PERFORMING ALL TESTING AND ADJUSTING, AND FURNISHING ALL CERTIFICATES OF APPROVAL.
   - J. POWER AND LIGHT DISTRIBUTION SYSTEM
   - K. PANELBOARDS.
   - L. SAFETY DISCONNECT SWITCHES WHERE REQUIRED, UNLESS FURNISHED WITH STARTERS OR ON EQUIPMENT.
   - M. GROUNDING AS REQUIRED BY CODE.
   - N. IDENTIFICATION OF EQUIPMENT.
   - O. PRIME PAINTING ELECTRICAL EQUIPMENT AND INSTALLATION COMPONENTS.
   - P. CABLE SUPPORT AND PULLBOXES.
   - Q. INSTALLATION OF EQUIPMENT FURNISHED BY OTHERS.
   - R. HANGERS, ANCHORS, INSERTS, SUPPORTS, SLEEVES, CHASES.
   - S. RIGGING, SCAFFOLDING AND HANDLING OF ALL MATERIALS AND EQUIPMENT.
   - T. AS-BUILT DRAWINGS.

(3) RELATED WORK SPECIFIED IN OTHER SECTIONS

1. THE FOLLOWING WORK, RELATED TO THIS SECTION, WILL BE FURNISHED AND/OR PERFORMED UNDER OTHER SECTIONS OF THE SPECIFICATIONS, OR BY OTHERS, AND SHALL NOT BE CONSIDERED AS PART OF THE WORK OF THIS SECTION:
   - A. FURNISHING MOTOR STARTERS AND ALL CONTROL DEVICES FOR MOTORS AND EQUIPMENT SPECIFIED UNDER OTHER CONTRACTS.
   - B. OPENINGS FOR SLEEVES IN WALLS AND FLOOR SLABS.
   - C. FINISH PAINTING.
   - D. FINISH PAINTING OF EXPOSED CONDUITS, BOXES, HANGERS, APPARATUS, ETC.
   - E. TEMPERATURE AND MOTOR CONTROL WIRING,UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

(4) SUBMITTALS

1. SUBMIT SHOP DRAWINGS COMPLETE IN EVERY DETAIL COVERING THE FOLLOWING ITEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS OR AS MAY BE REQUIRED BY THE ARCHITECT:
   - A. LIGHTING FIXTURES.
   - B. PANELBOARDS.
   - C. AFTER FINAL TESTS AND ADJUSTMENTS, FULLY INSTRUCT OWNER'S PERSONNEL IN ALL DETAILS OF OPERATION FOR EQUIPMENT INSTALLED. PROVIDE MULTIPLE COPIES OF OPERATION AND MAINTENANCE MANUALS PER SYSTEM AS REQUIRED.

(5) EXAMINATION OF EXISTING CONDITIONS

1. BEFORE SUBMITTING THE BID, THIS CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AFFECTING THE WORK. NO EXTRA PAYMENTS WILL BE ALLOWED ON ACCOUNT OF EXTRA WORK MADE NECESSARY BY FAILURE TO DO SO.
2. EXAMINE ALL WORK PREPARED BY OTHERS TO RECEIVE THE WORK OF THIS SECTION AND REPORT ANY DEFECTS AFFECTING INSTALLATION TO THE GENERAL CONTRACTOR FOR CORRECTION. COMMENCEMENT OF WORK WILL BE CONSTRUED AS COMPLETE ACCEPTANCE OF PREPARATORY WORK BY OTHERS.
3. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. SUBMIT FOR APPROVAL, DATE SCHEDULE OF NECESSARY TEMPORARY SHUTDOWNS OF EXISTING SERVICES. MAKE THESE WITHOUT ADDITIONAL CHARGE AT SUCH TIME AS WILL NOT INTERFERE WITH REGULAR OPERATION OF EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL OF OWNER. TO INSURE CONTINUOUS OPERATION, MAKE NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK WHEN SO REQUIRED.

(6) COORDINATION OF WORK WITH OTHER TRADES

1. THE WORK OF THIS SECTION SHALL BE COORDINATED WITH THE WORK OF ALL OTHER CONTRACTS, THE UTILITY COMPANY, AND OF THE TELECOMMUNICATIONS COMPANY, AND SHALL BE SO ARRANGED THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF ANY PART OR PARTS OF EACH RESPECTIVE WORK WHEREIN IT MAY BE INTERRELATED WITH THAT OF THIS CONTRACT SO THAT GENERALLY ALL CONSTRUCTION WORK CAN PROCEED IN ITS NATURAL SEQUENCE WITHOUT UNNECESSARY DELAY.

(7) MATERIAL AND WORKMANSHIP

1. ALL MATERIAL SHALL BE NEW AND OF THE BEST QUALITY AND SHALL HAVE THE APPROVED UNDERWRITER'S LABEL ATTACHED. THE LABEL OF APPROVAL SHALL BE OF THE TYPE FOR THE INTENDED APPLICATION. THE WORK THROUGHOUT SHALL BE EXECUTED IN THE BEST AND MOST THOROUGH MANNER UNDER THE DIRECTION OF, AND TO THE SATISFACTION OF, THE OWNER WHO WILL INTERPRET THE MEANINGS OF THE DRAWINGS AND SPECIFICATIONS, AND THE OWNER SHALL HAVE THE POWER TO REJECT ANY WORK AND MATERIALS WHICH, IN THEIR OPINION, IS NOT IN FULL CONFORMANCE THEREWITH.
2. IF, AFTER INSTALLATION, OPERATION OF THE EQUIPMENT PROVES TO BE UNSATISFACTORY TO THE OWNER BY REASONS OF DEFECTS, ERRORS OR OMISSIONS, THE OWNER RESERVES THE RIGHT TO OPERATE THE EQUIPMENT UNTIL IT CAN BE REMOVED FROM SERVICE FOR CORRECTION BY THE CONTRACTOR. THE CONTRACTOR SHALL PAY FOR ALL DAMAGES TO WORK OF OTHER TRADES CAUSED BY THIS DEFECTIVE EQUIPMENT AND ITS REPLACEMENT.

(8) INSPECTION AND TESTS

1. AT THE TIME OF THE FINAL INSPECTION AND TESTS, ALL CONNECTIONS AT PANELS AND ALL SPLICES, ETC., MUST BE MADE. ALL FUSES MUST BE IN PLACE AND THE CIRCUITS CONTINUOUS FROM SERVICE SWITCHES TO ALL PANELS, RECEPTACLES, OUTLETS, MOTORS, ETC. EACH ENTIRE WIRING SYSTEM MUST TEST FREE FROM ALL SHORT CIRCUITS AND FROM GROUNDS AS REQUIRED BY THE N.E.C.

(9) LIGHTING

1. FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED ON THE DRAWINGS.

(10) ELECTRIC SERVICE

1. CONTRACTOR SHALL COORDINATE NEW SERVICE WITH THE UTILITY CO., AS FOLLOWS:
   - A. SERVICE WIRING.
   - B. SUPPLY AND INSTALL METERING.
   - C. FINAL CONNECTIONS TO METERING EQUIPMENT
   - D. ARRANGE WITH THE UTILITY CO FOR SERVICE FACILITIES AND PAY ALL CHARGES.
   - E. EXTEND SERVICE FROM UTILITY CO TERMINATIONS.
   - F. INSTALLATION OF UTILITY CO. CURRENT TRANSFORMERS.
   - G. PROVIDE METERING ENCLOSURES AND METER PANS.
   - H. METER WIRING EXCEPT FINAL CONNECTIONS.
   - I. OBTAIN UTILITY CO APPROVAL FOR ALL ELECTRIC SERVICE WORK AND SERVICE EQUIPMENT SHOP DRAWINGS.
   - J. PROVIDE ALL ASSOCIATED INSTALLATION.
2. COMPONENTS AND ACCESSORIES.
   - A. CONTRACTOR SHALL EXAMINE THE LOCATION WHERE SERVICE EQUIPMENT AND RACEWAYS ARE TO BE INSTALLED, DETERMINE SPACE REQUIREMENTS AND NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF THE CONDITIONS DETRIMENTAL TO PROPER AND TIMELY COMPLETION OF THE WORK.
   - B. INSTALL THE EQUIPMENT WHERE SHOWN IN ACCORDANCE WITH UTILITY COMPANY'S INSTRUCTIONS, AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT EQUIPMENT COMPLIES WITH REQUIREMENTS AND SERVES THE INTENDED PURPOSES.

(11) PANELBOARDS

1. ELECTRICAL PANELS SHALL BE DEAD - FRONT TYPE CONSTRUCTION AND EQUIPPED WITH OVERCURRENT PROTECTIVE DEVICES, AS SCHEDULED ON THE DRAWINGS. THEY SHALL BE COMPLETE WITH CABINET, TRIM, HINGED DOOR, LOCKS (WITH TWO KEYS), AND TYPEWRITTEN DIRECTORY AND SUCH ADDITIONAL FEATURES AND COMPONENTS AS HEREIN SPECIFIED OR SHOWN ON THE DRAWINGS. CONSTRUCTION OF PANELBOARDS SHALL BE IN ALL WAYS SATISFACTORY TO THE ARCHITECT AND/OR ENGINEER AND SUBJECT TO THEIR APPROVAL
2. PANEL CIRCUIT BREAKERS SHALL TYPE RATED FOR 10,000 RMS (120/208V) SYMMETRICAL AMPERES MINIMUM INTERRUPTING RATING AT THE SYSTEM VOLTAGE.
3. CABINETS SHALL BE (SURFACE - MOUNTED), AS SHOWN ON THE DRAWINGS. BACK BOX SHALL BE OF SUFFICIENT SIZE TO PROVIDE MINIMUM GUTTER SPACE ON ALL FOUR SIDES, BASED ON THE PANELS MAXIMUM CIRCUIT OVERCURRENT PROTECTIVE DEVICE, AS FOLLOWS: UP TO 225A - 6 INCH GUTTER
4. PANEL BACK BOXES SHALL BE MANUFACTURER'S STANDARD WIDTH BUT NOT LESS THAN 20 INCHES. BACK BOXES SHALL BE FABRICATED OF CODE GAUGE HOT GALVANIZED STEEL WITH CORNERS LAPPED AND RIVETED OR WELDED, CONFORMING TO UNDERWRITER'S LABORATORIES REQUIREMENTS. IN GENERAL, #12 GAUGE STEEL WILL BE REQUIRED IN BOXES 36" IN ANY DIMENSION AND #10 GAUGE STEEL IN LARGER BOXES.
5. A DIRECTORY SHALL BE PROVIDED INSIDE EACH CABINET DOOR. FURNISH AND INSTALL A TYPEWRITTEN CIRCUIT DIRECTORY, NOT LESS THAN 5" X 8" WITH A METAL RETAINER AND GLASS OR SUBSTANTIAL PLASTIC COVER.

(12) MOLDED CASE CIRCUIT BREAKERS

1. SINGLE, 2 OR 3 POLE AS NOTED.
2. THERMAL - MAGNETIC TYPE.
3. AUTOMATIC TRIPPING: CLEARLY INDICATED BY HANDLE AUTOMATICALLY ASSUMING POSITION DISTINCTIVE FROM NORMAL "ON" AND "OFF" POSITIONS.
4. INVERSE TIME - LIMIT CHARACTERISTICS - TO PREVENT TRIPPING OR MOMENTARY OVERLOADS, BUT TRIP BEFORE DANGEROUS VALUES ARE REACHED.
5. INTERRUPTING CAPACITIES REFERRED TO ARE ASYMMETRICAL VALUES.
6. BOLTED TYPE CONSTRUCTION.
7. ENCLOSURE COMPENSATED.
8. "E" FRAME, SINGLE, 2 OR 3 POLE, 10,000 AMPERE INTERRUPTING CAPACITY AT 208 VOLTS UNLESS OTHERWISE NOTED.

(13) SAFETY SWITCHES

1. TYPE A, 250 VOLT, SINGLE THROW, FUSED OR UNFUSED IN APPROVED NEMA ENCLOSURE.
2. SWITCHES SHALL BE HORSEPOWER RATED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK.

(14) RACEWAYS AND CONDUCTORS

1. RACEWAY AND CONDUCTOR WORK SHALL CONSIST OF THE VARIOUS TYPES OF CONDUITS, SUPPORTS AND FITTINGS AS SPECIFIED AND REQUIRED FOR AN APPROVED INSTALLATION IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
   - A. TYPE EMT SHALL BE USED FOR ALL INDOOR CONDUIT AND TYPE PVC CONDUIT SHALL BE USED FOR ALL EXTERIOR AND UNDERGROUND CONDUIT, AS APPROVED BY AUTHORITY HAVING JURISDICTION.
   - B. MECHANICALLY JOIN ALL METAL RACEWAYS, ENCLOSURES AND RACEWAYS FOR CONDUCTORS TO FORM A CONTINUOUS ELECTRICAL CONDUCTOR. CONNECT ALL ELECTRICAL BOXES, FITTINGS AND CABINETS SO AS TO PROVIDE AN EFFECTIVE ELECTRICAL CONTINUITY AND A FIRM MECHANICAL ASSEMBLY.
   - C. INSTALL RACEWAYS SO THAT REQUIRED CONDUCTORS MAY BE DRAWN IN WITHOUT INJURY OR EXCESSIVE STRAIN TO THE RACEWAY OR CABLE.
   - D. DO NOT CROSS PIPE SHAFTS OR VENT DUCT OPENINGS WITH RACEWAYS. ROUTE RACEWAYS TO AVOID PRESENT OR FUTURE OPENINGS IN FLOORS, WALLS, OR CEILING CONSTRUCTION, WHEN SO INDICATED ON THE DRAWINGS.
   - E. INSTALL RACEWAYS TO AVOID PROXIMITY TO STEAM AND HOT WATER PIPES. KEEP RACEWAYS A MINIMUM OF 3" FROM SUCH PIPES.
   - F. KEEP ENDS OF RACEWAYS PLUGGED OR CAPPED DURING CONSTRUCTION.
   - G. PROVIDE EXPANSION - DEFLECTION FITTINGS IN ALL RACEWAYS PASSING THROUGH STRUCTURAL EXPANSION JOINTS.
   - H. FEEDERS TO PANELS SHALL BE IN CONDUIT.
2. BRANCH WIRING SHALL BE AS FOLLOWS:
   - A. ALL BRANCH CIRCUIT WIRING SHALL BE INSULATED COPPER CONDUCTORS (MINIMUM #12 AWG). TYPE THHN-THWN and XHHW-2. XHHW-2. ALUMINUM EQUIVALENT FEEDERS MAY BE USED FOR SIZES OVER #8 AWG.
   - B. TYPE MC CABLE MAY BE USED AS APPROVED AUTHORITY HAVING JURISDICTION.

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CONSTRUCTION DOCUMENTS
09-19-2025

No.	Description	Date

JOHNSON CONUTY EMA STORAGE

ELECTRICAL PLAN SPECS

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	KSF
Checked by	KSF

E001

Scale

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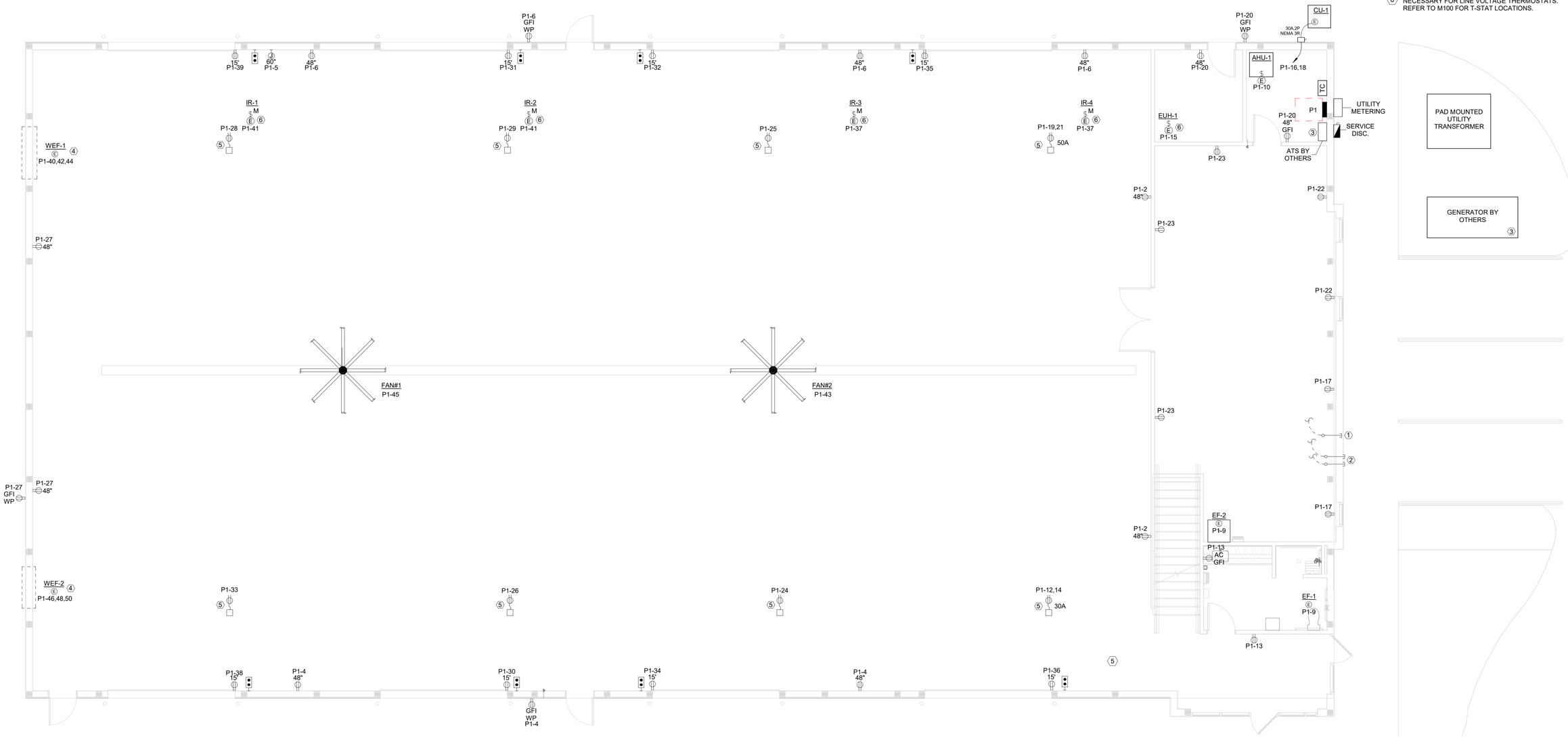
ELECTRICAL KEYNOTES

1. E.C TO ADD A 2" CONDUIT AT PEAK UP TO THE ROOF FOR COMMUNICATION ANTENNA. ROUTE BACK TO PANEL LOCATION.
2. E.C TO ROUTE (2) SETS OF 2"C. FROM PANELBOARD TO THIS LOCATION FOR FUTURE SOLAR POWER CONNECTIONS.
3. GENSET AND ATS ARE PROVIDED BY OWNER WITH E.C. PROVIDING ALL WIRING. E.C. SHALL ALSO PROVIDE GENSET PAD. COORDINATE WITH OWNER FOR MANUFACTURER RECOMMENDED SIZE AND CONSTRUCTION. E.C. SHALL ALSO PROVIDE ALLOWANCE FOR (4) 20A, 1-POLE CIRCUITS FROM PANEL P1 TO GENSET AND (1) SPARE 1"C. FROM GENSET TO LOCATION CHOSEN BY OWNER FOR GENSET CONTROL PANEL.
4. REFER TO MECHANICAL PLANS FOR FUTHER DETAILS. E.C TO COORDINATE WITH ARCHITECT FINAL LOCATION. M.C. SHALL PROVIDE VDF. E.C. SHALL PROVIDE WIRING FOR CO/NO2 SYSTEM INCLUDING ALL REQUIRED CONDUIT AND CONDUCTORS.
5. COORDINATE REEL LOCATION WITH OWNER PRIOR TO ROUGH-IN. TYPICAL ALL REELS.
6. E.C. SHALL PROVIDE CONDUIT AND CONDUCTORS NECESSARY FOR LINE VOLTAGE THERMOSTATS. REFER TO M100 FOR T-STAT LOCATIONS.



1 ELECTRICAL POWER & DATA PLAN

3/16" = 1'-0" 0' 4' 8' 16'

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JOHNSON CONUTY EMA STORAGE

ELECTRICAL POWER & DATA PLAN

KFE Project number	25041
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Drawn by	KSF
Checked by	KSF
Scale	3/16" = 1'-0"

E100

1 ELECTRICAL LIGHTING PLAN

3/16" = 1'-0"

0' 4' 8' 16'

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CONSTRUCTION
DOCUMENTS
09-19-2025

No.	Description	Date

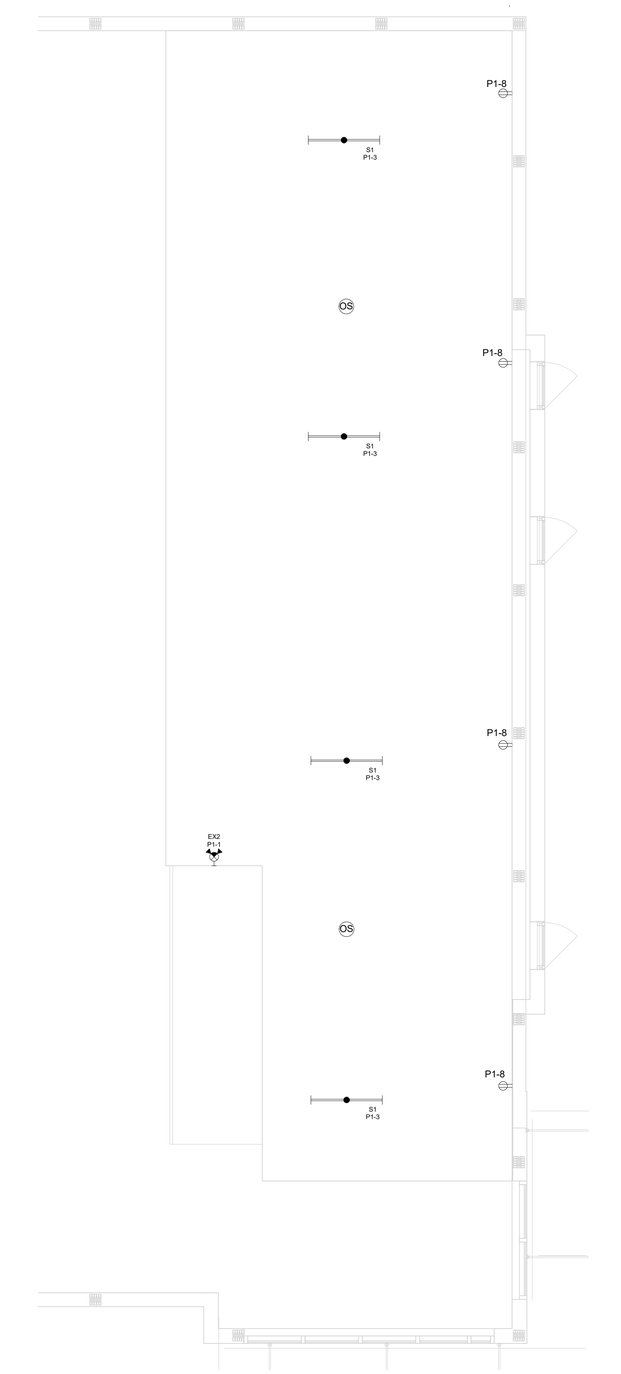
JOHNSON
CONUTY EMA
STORAGE

ELECTRICAL
LIGHTING PLAN

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
Drawn by	IAL
Checked by	KLF

E200

Scale 3/16" = 1'-0"



1 ELECTRICAL MEZZ PLAN
1/4" = 1'-0"
0' 4' 8' 16'

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CONSTRUCTION DOCUMENTS
09-19-2025

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JOHNSON CONUTY EMA STORAGE

ELECTRICAL MEZZ PLAN

KFE Project number	25041
Encite Project number	24-060
Date	09-19-2025
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Checked by	KSF
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Scale	1/4" = 1'-0"