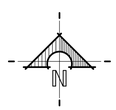
TOWN of GENOLA

PUBLIC WORKS BUILDING

78 WEST 800 SOUTH GENOLA, UTAH 84655

PROJECT LOCATION

VICINITY MAP



DRAWING INDEX

ADDITIVE BID ALTERNATE SCHEDULE

NO.	ALTERNATE DESCRIPTION	BASE BID SCOPE
1	FURNISH AND INSTALL FIRE HYDRANT ON WEST SIDE OF THE BUILDING	PROVIDE AND CAP WATER SERVICE LINE TO HYDRANT LOCATION SHOWN ON UTILITY PLAN

PROJECT DATA

SITE ADDRESS:	78 WEST 800 SOUTH GENOLA, UTAH 84655
PARCEL #:	29:034:0021
ZONING:	A-1 AGRICULTURE
EXISTING USE:	VACANT
PROPOSED USE:	PUBLIC WORKS BUILDING
LAND AREA (ACRES):	14.991916

GENERAL NOTES

A. ALL EXIT ACCESS DOORS AND EXITS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. USE OF MANUAL FLUSH BOLTS, EDGE BOLTS, TOP OR BOTTOM BOLTS, ETC. IS PROHIBITED.

B. GLAZING IN DOORS OR IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE IS WITHIN A 24 INCH ARC OF THE DOOR AND WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE MUST BE TEMPERED.

C. TANK TYPE WATER CLOSETS SHALL HAVE A MAXIMUM WATER USE OF 1.6 GALLONS PER FLUSH. SHOWERS SHALL HAVE A MAXIMUM FLOW OF 2.5 GALLONS PER MINUTE.

D. BURNING OF CONSTRUCTION WASTE MATERIALS IS PROHIBITED AT ALL TIMES.

E. PROVIDE ONE RECESSED 2-A FIRE EXTINGUISHER FOR EVERY 3,000 SQ. FT. OF FLOOR AREA WITH A MAXIMUM TRAVEL DISTANCE OF 75 FEET TO AN EXTINGUISHER.

F. STORAGE OF EQUIPMENT, SOILS, CONSTRUCTION MATERIALS ON PUBLIC RIGHT-OF-WAY (STREETS/SIDEWALKS) OR EASEMENT IS EXPRESSLY PROHIBITED.

G. GENERAL CONTRACTOR TO PROCURE ALL REQUIRED PERMITS FROM AUTHORITY HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO BUILDING, ENGINEERING, RIGHT OF WAY, AND OTHER PERMITS REQUIRED FOR SUB-CONTRACTOR WORK.

H. GENERAL CONTRACTOR TO PROVIDE REQUIRED FIRE EXTINGUISHERS TO BE PRESENT DURING CONSTRUCTION.

I. DIMENSIONS ARE SHOWN TO FACE OF STUD, UNLESS NOTED OTHERWISE

PROJECT TEAM

OWNER
TOWN OF GENOLA
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TOWN of GENOLA

PUBLIC WORKS BUILDING

78 WEST 800 SOUTH
GENOLA, UTAH 84655

client info

REGISTERED ARCHITECT
DAVID B. EDWARDS
LICENSE
7627957-0301
DECEMBER 17
2025
STATE OF UTAH

design professional stamp

revision information

no.	date	description

milestone issue date
JANUARY 12, 2026

milestone issue description
BID DRAWINGS

latest revision date

latest revision description

COVER SHEET

G1.1

sheet number

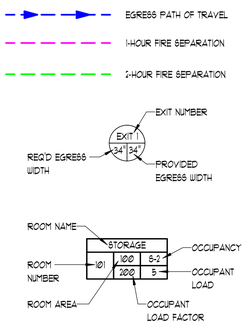
OCCUPANT LOAD CALCULATIONS

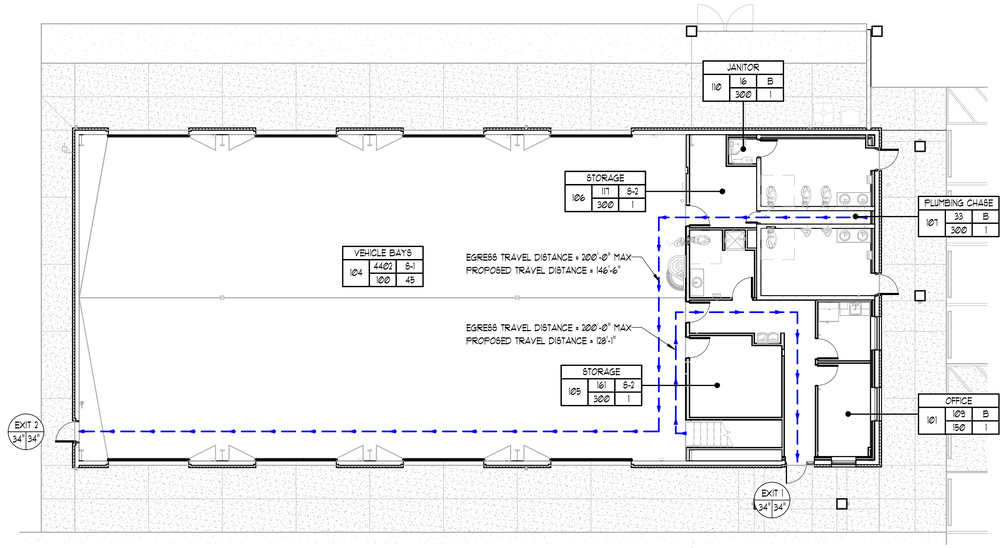
(IBC TABLE 1004.5)

ROOM NUM.	ROOM NAME	OCCUPANT LOAD FACTOR: OCCUPANCY LOAD	OCCUPANT LOAD FACTOR: GROSS or NET	AREA	NUM. OF OCCUPANTS
100	CORRIDOR	0			
101	OFFICE	150	GROSS	1018.741	1
102	BREAK ROOM	0			
103	TOILET ROOM	0			
104	VEHICLE BAYS	100	GROSS	4401.113	45
105	STORAGE	300	GROSS	1611.422	1
106	STORAGE	300	GROSS	1161.957	1
107	PLUMBING CHASE	300	GROSS	32.782	1
108	MENS	0			
109	WOMENS	0			
110	JANITOR	300	GROSS	151.431	1
200	MEZZANINE	300	GROSS	1301.565	5
201	MECHANICAL	300	GROSS	33.285	1
202	ELECTRICAL	300	GROSS	24.870	1
TOTAL NUMBER OF OCCUPANTS					57

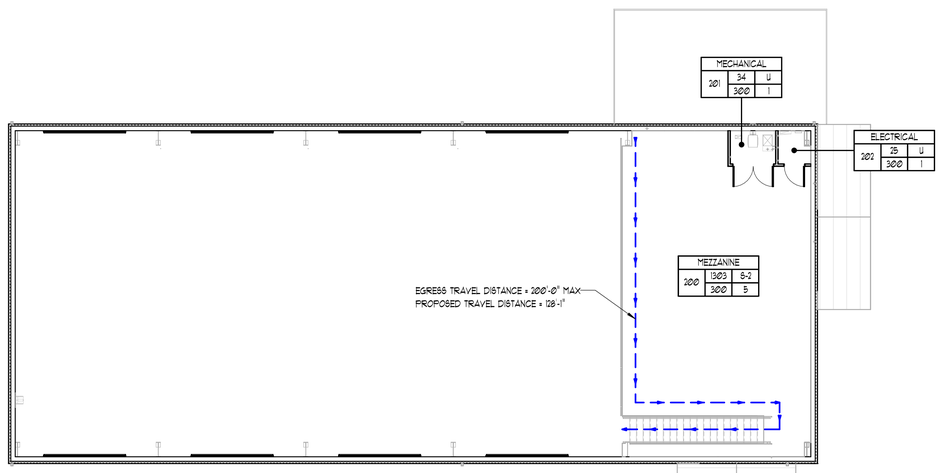
FIRST FLOOR OCCUPANTS: 50
MEZZANINE LEVEL OCCUPANTS: 7

CODE ANALYSIS LEGEND





1 MAIN LEVEL CODE ANALYSIS
3/32" = 1'-0"



2 MEZZANINE LEVEL CODE ANALYSIS
3/32" = 1'-0"

CODE ANALYSIS

APPLICABLE CODES

2021 INTERNATIONAL BUILDING CODE (IBC)
2021 INTERNATIONAL PLUMBING CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2021 INTERNATIONAL FIRE CODE (IFC)
2020 NATIONAL ELECTRICAL CODE (NEC)
2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
AMERICANS WITH DISABILITIES ACT ICC/ANSI 117.1 - 2017

OCCUPANCIES AND TYPE OF CONSTRUCTION (IBC CHAPTERS 3 & 6)

OCCUPANCIES (NON-SEPARATED): B & S-1

CONSTRUCTION TYPE: V-B

AREA OF BUILDING (IBC CHAPTER 5)

ACTUAL AREA BREAKDOWN BY AREA (PER DEFINITION "AREA, BUILDING, IBC CH. 2)

LOCATION	VEHICLE BAYS	OFFICE	STORAGE/RESTROOM/UTILITY	TOTAL FINISHED
MAIN FLOOR	4,650.20 SQ. FT.	454.56 SQ. FT.	1,009.91 SQ. FT.	6,114.67 SQ. FT.
MEZZANINE FLOOR	N/A	N/A	1,476.23 SQ. FT.	1,476.23 SQ. FT.
SUB-TOTALS:	4,650.20 SQ. FT.	454.56 SQ. FT.	2,486.14 SQ. FT.	7,590.90 SQ. FT.

ALLOWABLE BUILDING AREA (IBC TABLE 506.2)

B & S-1 OCCUPANCY, NS: B OCCUPANCY: 9,000 SQ. FT. PER FLOOR; S-1 OCCUPANCY: 9,000 SQ. FT. (ALLOWABLE AREA PER

AREA CALCULATIONS

AREA MODIFICATIONS BY OCCUPANCY

NO INCREASE REQUIRED AS SIZE OF BUILDING WITHIN ALLOWABLE BUILDING AREA FOR OCCUPANCY

HEIGHT OF BUILDING (TABLES 504.3 AND 504.4, SECTION 504)

	TOTAL ALLOWABLE HEIGHT	ACTUAL HEIGHT
HEIGHT IN STORIES	2	1
HEIGHT IN FEET	40'-0"	32'-2"

NOTE: THE BUILDING WILL NOT BE FIRE SPRINKLED

FIRE-RESISTANCE OF EXTERIOR WALLS AND OPENINGS (SECTIONS 601 AND 704.8)

FIRE-RESISTANCE RATING FOR EXTERIOR WALLS

EXTERIOR BEARING WALL (TABLE 601)
NORTH, EAST, SOUTH & WEST EXTERIOR WALLS — NOT REQUIRED

EXTERIOR NON-BEARING WALL (TABLE 601 AND 602)

NOTE: FIRE SEPARATION DISTANCE IS GREATER THAN 10 FEET ON ALL SIDES

PROTECTION OF EXTERIOR WALL OPENINGS

NO PROTECTION IS REQUIRED OF EXTERIOR WALL OPENINGS AS ALL FIRE SEPARATION DISTANCE ARE GREATER THAN 20 FEET AS SHOWN ON IBC TABLE 705.8

OCCUPANCY SEPARATIONS (TABLE 508.4)

NOT REQUIRED

FIRE RATED CONSTRUCTION (IBC TABLE 601)

BUILDING ELEMENT	RATING	CODE REFERENCE
HORIZONTAL SEPARATION (R OCCUPANCY ONLY)	NON-RATED	SECTION 420.3
OCCUPANCY SEPARATION (FIRE PARTITIONS)	NOT REQUIRED	SECTION 508
MECHANICAL ROOM SEPARATION	NOT REQUIRED	TABLE 509
PRIMARY STRUCTURAL FRAME PROTECTION	NON-RATED	TABLE 601
BEARING WALLS - EXTERIOR	NON-RATED	TABLE 601
BEARING WALLS - INTERIOR	NON-RATED	TABLE 601
FLOOR CONSTRUCTION	NON-RATED	TABLE 601
ROOF CONSTRUCTION	NON-RATED	TABLE 601
NON-BEARING WALLS - EXTERIOR	NON-RATED	TABLE 602
NON-BEARING WALLS - INTERIOR	NON-RATED	TABLE 602
PROTECTION OF EXTERIOR OPENINGS	NOT REQUIRED	SECTION 7 / TABLE 705.8
FIRE WALLS	NOT REQUIRED	TABLE 706.4
FIRE BARRIERS	NON-RATED	SECTION 707
FIRE PARTITIONS	NOT REQUIRED	SECTION 708
HORIZONTAL ASSEMBLIES	NON-RATED	SECTION 711.2
VERITCAL OPENINGS (FIRE BARRIER)	NOT REQUIRED	SECTION 712
SHAFT ENCLOSURES (FIRE BARRIER)	NOT REQUIRED	SECTION 713
AUTOMATIC SPRINKLER SYSTEM	NOT REQUIRED	SECTION 903
FIRE RATED CORRIDORS (FIRE PARTITIONS)	NOT REQUIRED	TABLE 1020.1
INTERIOR EXIT STAIRWAYS (FIRE BARRIER)	NOT REQUIRED	SECTION 1023

OCCUPANT LOAD & EGRESS (IBC CHAPTER 10)

DESIGN OCCUPANT LOAD: 57 — MAIN LEVEL: 50 OCCUPANTS — MEZZANINE LEVEL: 7 OCCUPANTS

EXIT DOOR WIDTH REQUIRED: 34" — EXIT DOOR WIDTH PROVIDED: 68"

EXIT STAIR WIDTH REQUIRED: 44" — EXIT STAIR WIDTH PROVIDED: 48"

PLUMBING FIXTURES (IBC CHAPTER 29)

TOTAL NUMBER OF OCCUPANTS: 57 — MALE: 29 — FEMALE: 28

WATER CLOSETS		LAVATORIES		BATHTUB	DRINKING FOUNTAIN	OTHER
MALE	FEMALE	MALE	FEMALE			
1 per 25 for first 50	1 per 25 for first 50	1 per 40 for first 80	1 per 40 for first 80	-	1 per 100	1 service sink
1	1	1	1			
1 per 50 for remaining	1 per 50 for remaining	1 per 80 for remaining	1 per 80 for remaining			
1	1	0	0			
REQ'D	REQ'D	REQ'D	REQ'D	REQ'D	REQ'D	REQ'D
2	2	1	1	0	1	1
PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED	PROVIDED
4	3	3	2	0	2	1

DEFERRED SUBMITTALS

CERTAIN ITEMS REQUIRE APPROVAL OF THE AHJ (AUTHORITY HAVING JURISDICTION) BUILDING DEPARTMENT PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION. SUBMITTALS, INCLUDING SHOP DRAWINGS, PRODUCT INFORMATION, PRODUCT CERTIFICATES, PRODUCT TEST REPORTS, ETC. SHALL BE SUBMITTED TO THE ARCHITECT. AFTER REVIEW BY THE ARCHITECT AND/OR ARCHITECTURAL CONSULTANTS, THE ARCHITECT WILL FORWARD THE SUBMITTALS TO THE BUILDING DEPARTMENT. THE CONTRACTOR SHALL PROVIDE THE SUBMITTALS IN A TIMELY MANNER AND ALLOW SUFFICIENT TIME FOR REVIEW BY THE ARCHITECT AND AHJ.

DEFERRED ITEMS:

A. PRE-ENGINEERED METAL BUILDING
B. FIRE ALARM SYSTEM

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TOWN of GENOLA

PUBLIC WORKS BUILDING

78 WEST 800 SOUTH
GENOLA, UTAH 84655

client info

REGISTERED ARCHITECT — BRENT B. EDWARDS — 7627957-0130 — DECEMBER 17, 2025 — STATE OF UTAH

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revision information

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latest revision description

CODE ANALYSIS

G2.1

sheet number

ACCESSIBILITY CLEARANCE NOTES

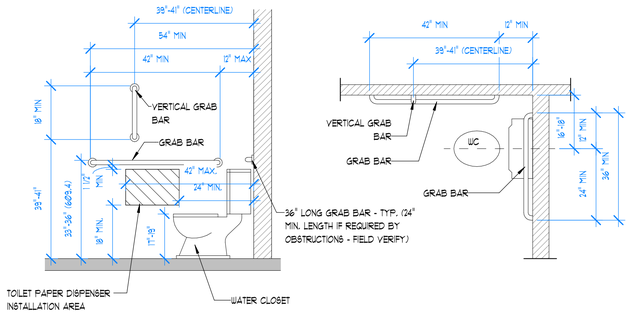
(ICC/ANSI A117.1-2017)

1. 61" DIAMETER WHEELCHAIR TURNING SPACE (304.3.1.1)
2. 30" x 52" CLEAR FLOOR SPACE FOR FORWARD APPROACH TO SINK / WORK / SPACE / APPLIANCE (305.3.1)
3. 30" x 52" CLEAR FLOOR SPACE FOR PARALLEL/ADJACENT APPROACH TO SINK / APPLIANCE (305.3.1)
4. CLEAR FLOOR SPACE BEYOND SWING OF DOOR FOR INDIVIDUAL USE (603.2.2 EXCEPTION #2
5. 56" X 60" CLEARANCE FOR WATER CLOSET (604.3.1)

ADA REFERENCES

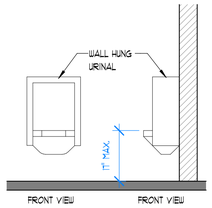
ICC/ANSI 117.1-2017

1. DRINKING FOUNTAIN - 602
2. RESTROOM - 603-606
3. MIRROR - 603.3
4. WATER CLOSET & TOILET COMPARTMENT - 604
5. GRAB BARS - 604.5
6. DISPENSER - 604.7
7. URINALS - 605
8. LAVATORY & SINKS - 606



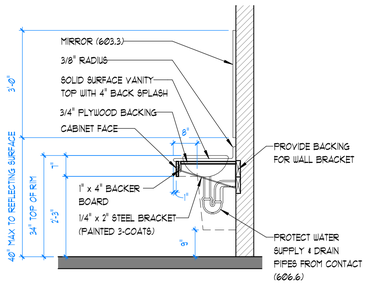
1 ACCESSIBILE TOILET CLEARANCES

1/2" = 1'-0" — ICC/ANSI 117.1-2017 SECTION 604



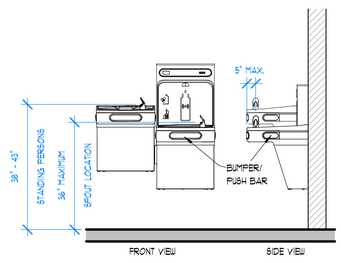
2 TYPICAL ADA URINAL

1/2" = 1'-0" — ICC/ANSI 117.1-2017 SECTION 605



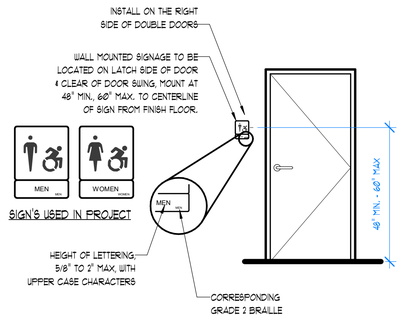
3 VANITY DETAIL

1/2" = 1'-0" — ICC/ANSI 117.1-2017 SECTION 606



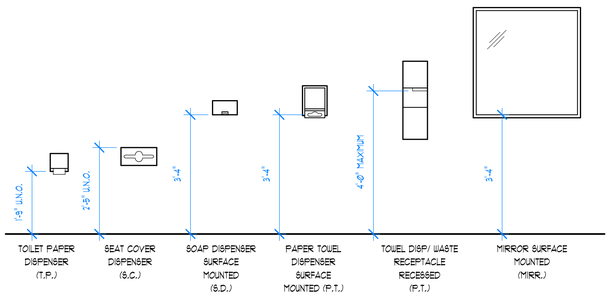
4 ACCESSIBILE DRINKING FOUNTAIN

1/2" = 1'-0" — ICC/ANSI 117.1-2017 SECTION 602



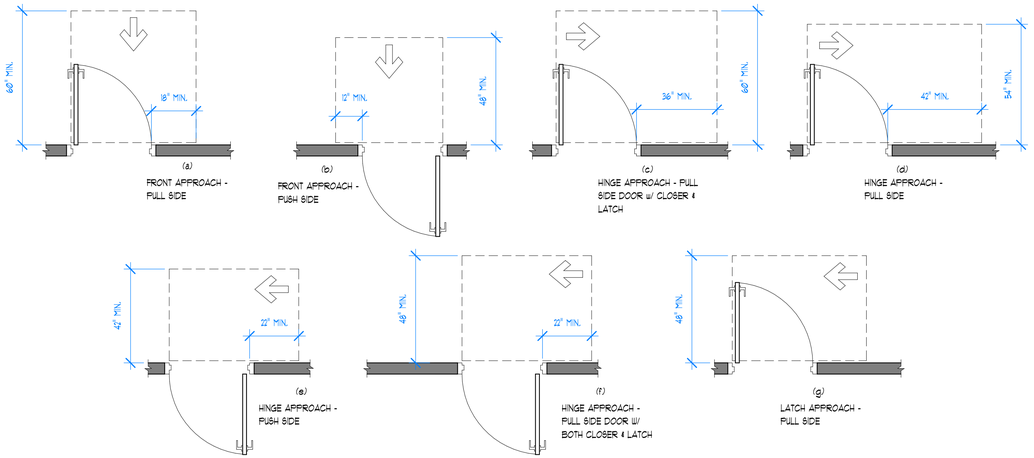
5 SIGN MOUNTING DETAIL

3/8" = 1'-0"



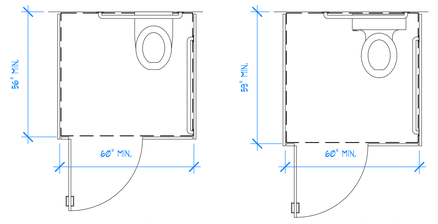
6 ACCESSORY MOUNTING HEIGHTS

1/2" = 1'-0"



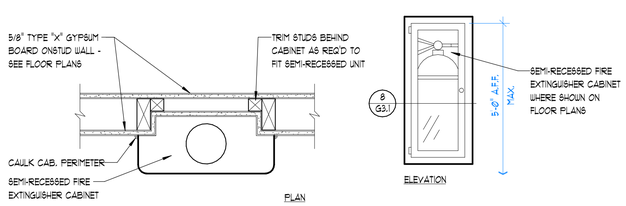
7 ACCESSIBILE DOOR CLEARANCES

3/8" = 1'-0" — ICC/ANSI 117.1-2017 SECTION 404.2.3.2



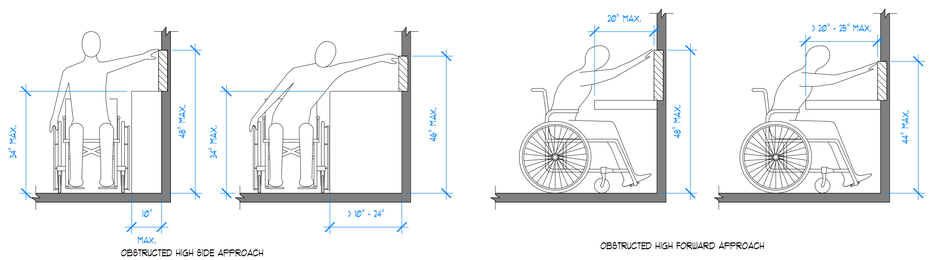
8 ACCESSIBILE TOILET COMPARTMENT

3/8" = 1'-0" — ICC/ANSI 117.1-2017 SECTION 604.9.2



9 FIRE EXTINGUISHER DETAIL

1 1/2" = 1'-0"



10 RANGE REACH DIAGRAMS

1/2" = 1'-0" — ICC/ANSI 117.1-2017 SECTION 308

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TOWN of GENOLA

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ACCESSIBILITY REQUIREMENTS

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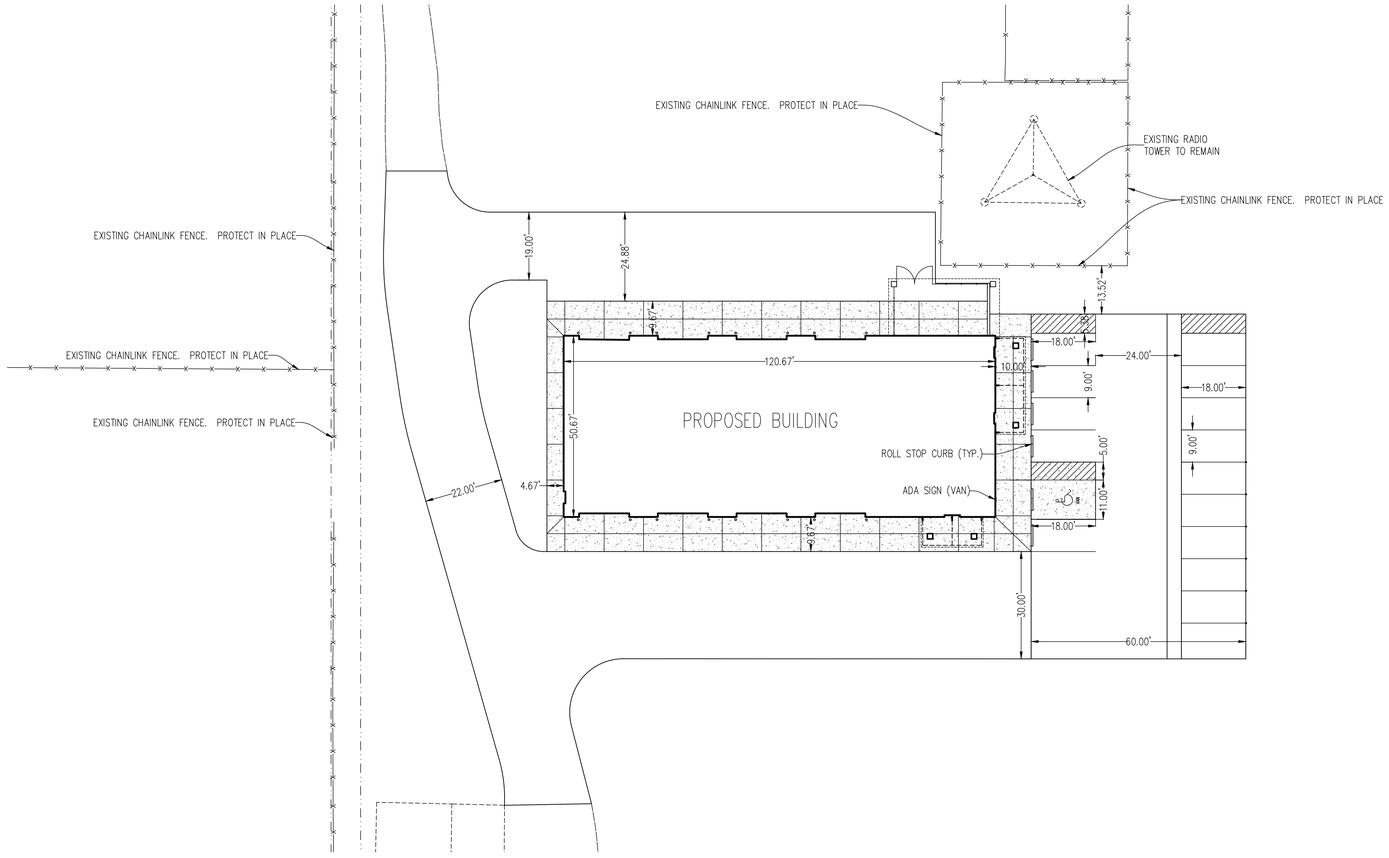

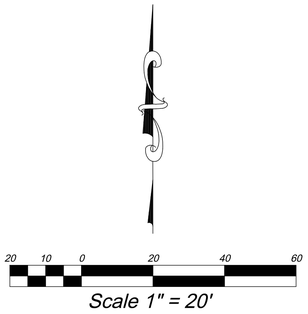

SHEET INDEX

GENERAL NOTE

1. CONSTRUCTION TO COMPLY WITH THE TOWN OF GENOLA STANDARDS AND SPECIFICATIONS OR APWA STANDARDS AND SPECIFICATIONS.

REGISTERED PROFESSIONAL ENGINEER
11/21/25
No. 270393
DAVID W. PETERSON
STATE OF UTAH

BENCH MARK

SOUTHEAST CORNER, SECTION 32, TOWNSHIP 9 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 4611.77

REVISIONS

Rev.	Date	Description

The Town of Genola

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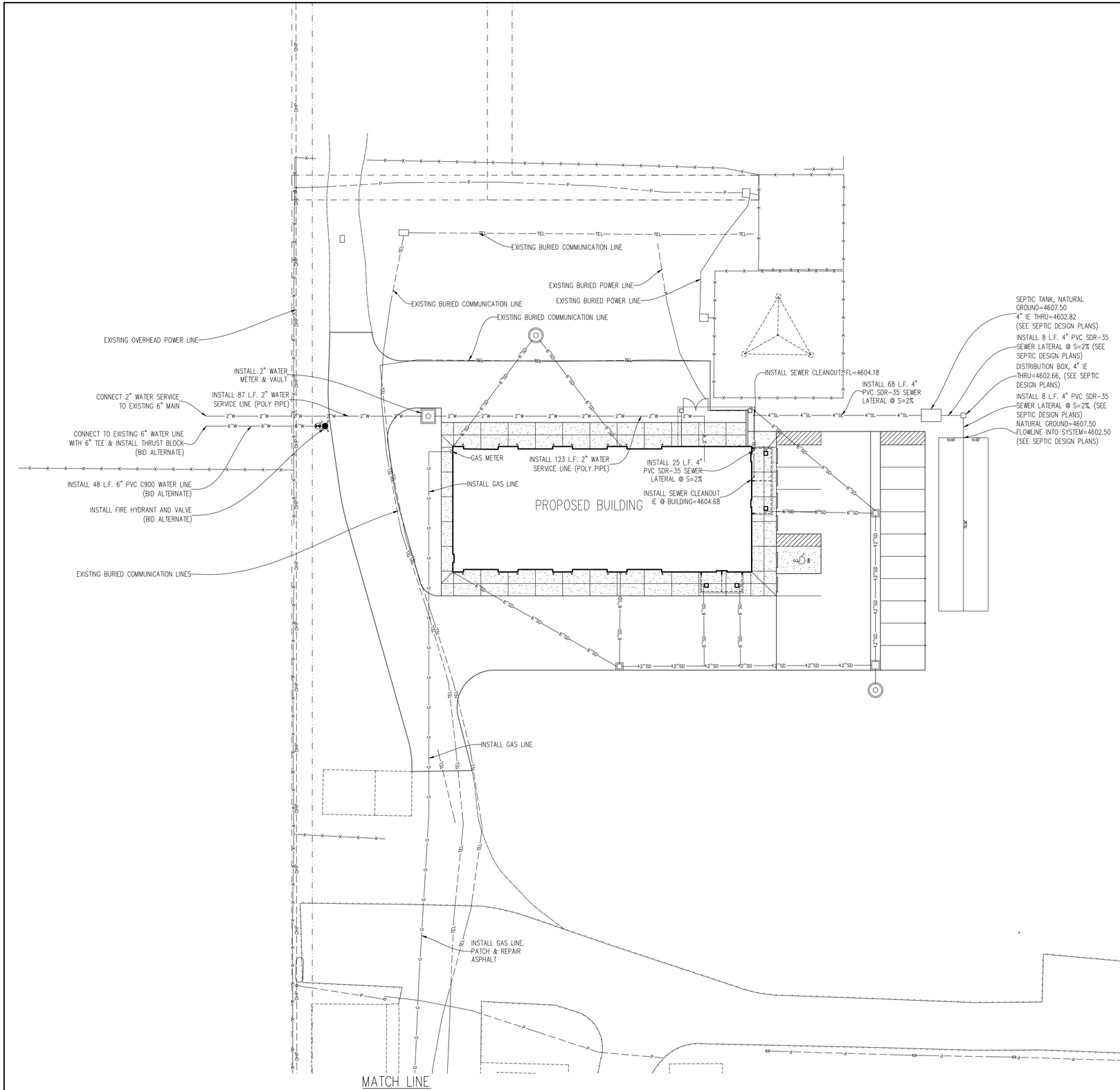
GENOLA PUBLIC WORKS BUILDING

GENOLA — 78 West 800 South — UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

SITE PLAN

Scale: 1"=20'
Date: 11/21/25
C1



NOTES TO CONTRACTOR

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CURB & GUTTER, STORM DRAIN, & SEWER ELEVATIONS OR INVERTS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER WHEN ELEVATIONS OR INVERTS DO NOT MATCH PLANS.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THESE PLANS.

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER — 11/21/25 — No. 270393 — DAVID W. PETERSON — STATE OF UTAH

BENCH MARK

SOUTHEAST CORNER, SECTION 32, TOWNSHIP 9 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 4611.77

REVISIONS

Rev.	Date	Description

The Town of Genola

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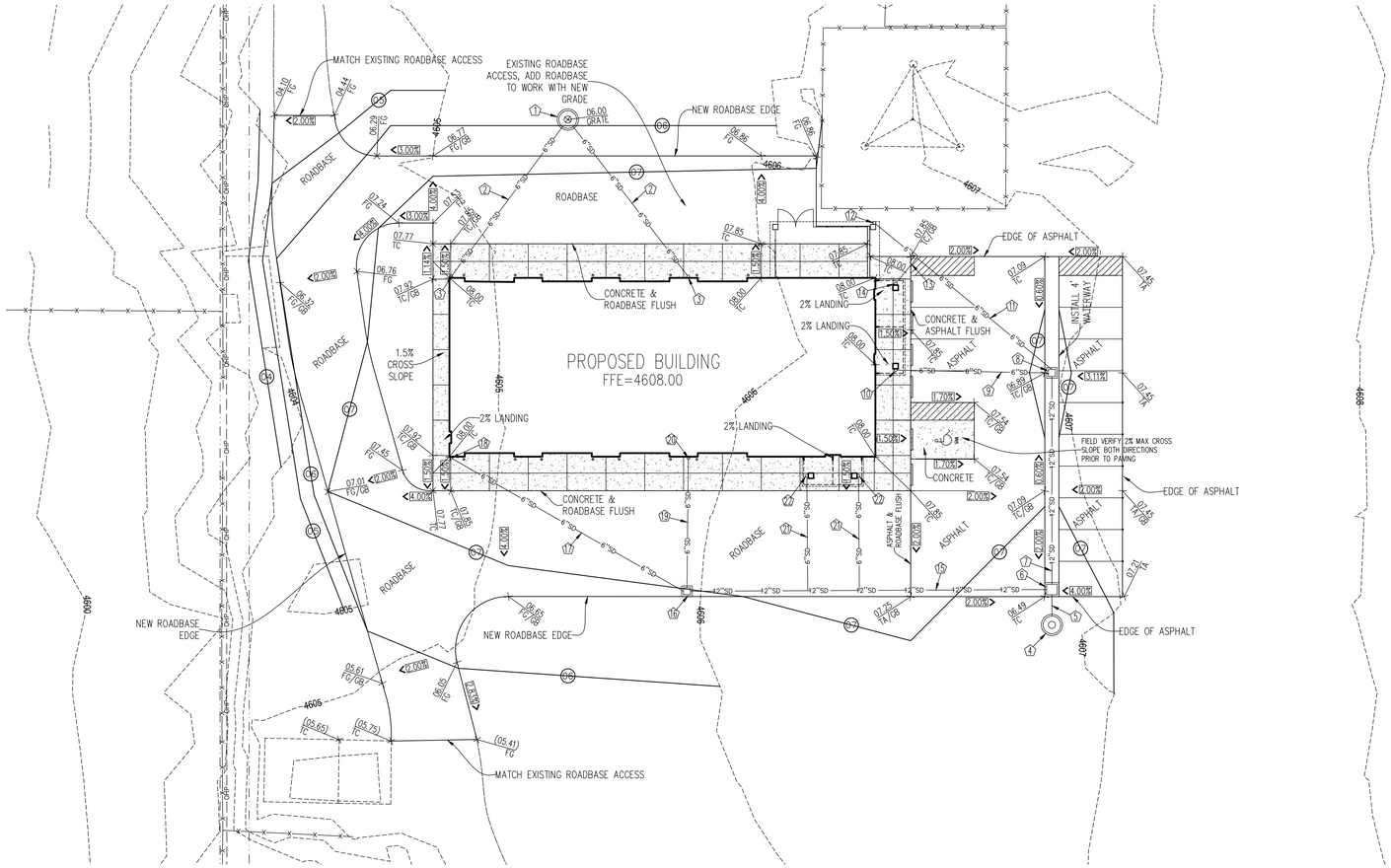
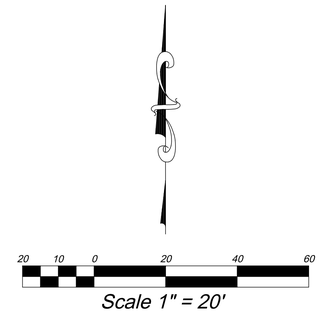
GENOLA PUBLIC WORKS BUILDING

GENOLA — 78 West 800 South — UTAH

UTILITY PLAN

Drawn by:	D.W.P.
Designed by:	D.W.P.
Checked by:	D.W.P.
Scale:	1"=20'
Date:	11/21/25
	C2





STORM DRAIN KEYED NOTES:

1. INSTALL 5' INSIDE DIAMETER SUMP (SEE DETAIL), GRATE=4606.00, 6" IE IN=4603.00, BOTTOM MANHOLE=4598.50, BOTTOM GRAVEL=4596.50, INSTALL FLEXSTORM PURE INLET FILTER UNDER GRATE
2. INSTALL 53 L.F. 6" ADS PIPE @ S=3.77%
3. INSTALL 10" DIAMETER NYLOPLAST BASIN WITH PEDESTRIAN GRATE. DOWNSPOUT TO DISCHARGE INTO THIS GRATE. MATCH DOWNSPOUT LOCATION. GRATE=4608.00, 6" IE OUT=4605.00
4. INSTALL 5' INSIDE DIAMETER SUMP (SEE DETAIL), 2' DIA. SOLID LID=4606.70, 12" IE IN=4603.06, BOTTOM MANHOLE=4596.20, BOTTOM GRAVEL=4594.20
5. INSTALL 6 L.F. 12" ADS N-12 @ S=2%
6. INSTALL 3'X3' INLET BOX, GRATE=4606.36, 12" IE THRU=4603.18, IE BOX=4599.36, INSTALL SNOUT TYPE 18F OVER OUTLET PIPE.
7. INSTALL 58 L.F. 12" ADS N-12 @ S=1%
8. INSTALL 2'X2' INLET BOX WITH GRATE, GRATE=4606.76, 6" IE IN=4604.39, 12" IE OUT=4603.76, IE BOX=4602.76
9. INSTALL 42 L.F. 6" ADS PIPE @ S=2%
10. INSTALL 10" DIAMETER NYLOPLAST BASIN WITH PEDESTRIAN GRATE. DOWNSPOUT TO DISCHARGE INTO THIS GRATE. MATCH DOWNSPOUT LOCATION. GRATE=4607.91, 6" IE OUT=4605.23
11. INSTALL 65 L.F. 6" ADS PIPE @ S=2.12%
12. INSTALL 10" DIAMETER NYLOPLAST BASIN WITH PEDESTRIAN GRATE. DOWNSPOUT TO DISCHARGE INTO THIS GRATE. MATCH DOWNSPOUT LOCATION. GRATE=4607.77, 6" IE OUT=4605.77
13. INSTALL 9 L.F. 6" ADS PIPE @ S=2%, CONNECT TO 6" PIPE WITH 6" ADS TEE., FL=4605.45
14. INSTALL 10" DIAMETER NYLOPLAST BASIN WITH PEDESTRIAN GRATE. DOWNSPOUT TO DISCHARGE INTO THIS GRATE. MATCH DOWNSPOUT LOCATION. GRATE=4607.91, 6" IE OUT=4605.63
15. INSTALL 101 L.F. 12" ADS N-12 @ S=0.81%
16. INSTALL 2'X2' INLET BOX WITH GRATE, GRATE=4607.00, 6" IE IN=4604.50, 12" IE OUT=4604.00, IE BOX=4603.00
17. INSTALL 76 L.F. 6" ADS PIPE @ S=1%
18. INSTALL 10" DIAMETER NYLOPLAST BASIN WITH PEDESTRIAN GRATE. DOWNSPOUT TO DISCHARGE INTO THIS GRATE. MATCH DOWNSPOUT LOCATION. GRATE=4608.00, 6" IE OUT=4605.26
19. INSTALL 36 L.F. 6" ADS PIPE @ S=2%
20. INSTALL 10" DIAMETER NYLOPLAST BASIN WITH PEDESTRIAN GRATE. DOWNSPOUT TO DISCHARGE INTO THIS GRATE. MATCH DOWNSPOUT LOCATION. GRATE=4608.00, 6" IE OUT=4605.22
21. INSTALL 32 L.F. 6" ADS PIPE @ S=2% MIN., CONNECT TO 12" PIPE WITH INSERT-TEE
22. INSTALL 10" DIAMETER NYLOPLAST BASIN WITH PEDESTRIAN GRATE. DOWNSPOUT TO DISCHARGE INTO THIS GRATE. MATCH DOWNSPOUT LOCATION. GRATE=4607.91, 6" IE OUT=4605.41

PAVEMENT DESIGN

ASPHALT PAVEMENT
3" ASPHALT
6" COMPACTED AGGREGATE BASE
STABILIZE SOIL UNDER BASE AS REQUIRED.

SIDEWALK IN FRONT OF BUILDING (WEST & EAST SIDES)
4" CONCRETE
6" UNTREATED GRANULAR BASE

CONCRETE APRON (NORTH/SOUTH) & ADS STALL CONCRETE
6" CONCRETE
4" UNTREATED GRANULAR BASE

GRADING LEGEND

FFE	FINISHED FLOOR ELEV.	FG	FINISHED GRADE
BOW	BACK OF WALK	TW	TOP OF WALL
GB	GRADE BREAK	BW	BOTTOM OF WALL
TC	TOP OF CONCRETE	IE	INVERT ELEVATION
TBC	TOP BACK OF CURB	<0.00%>	DIRECTION OF DRAINAGE
TA	TOP OF ASPHALT	(00.00) TBC	EXISTING ELEVATION
RIM	RIM ELEVATION	00.00 TBC	PROPOSED ELEVATION
FL	FLOWLINE	4808	EXISTING CONTOUR
EG	EXIST GROUND	04	PROPOSED CONTOUR
TF	TOP OF FOOTING	10	STORM DRAIN KEYED NOTE

GEOTECHNICAL NOTE

CONTRACTOR TO FOLLOW ALL RECOMMENDATIONS FOR SITE CONSTRUCTION AS CONTAINED IN THE GEOTECHNICAL EVALUATION REPORT BY EARTHTEC ENGINEERING DATED AUGUST 25, 2025.

REGISTERED PROFESSIONAL ENGINEER
11/21/25
No. 270393
DAVID W. PETERSON
STATE OF UTAH

BENCH MARK

SOUTHEAST CORNER, SECTION 32, TOWNSHIP 9 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 4611.77

REVISIONS

Rev.	Date	Description

The Town of Genola

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

GENOLA PUBLIC WORKS BUILDING

GENOLA — 78 West 800 South — UTAH

Drawn by: D.W.P.	GRADING PLAN	Scale: 1"=20'
Designed by: D.W.P.		Date: 11/21/25
Checked by: D.W.P.		C3

FlexStorm Pure™ Inlet Filter

FlexStorm Pure inlet filters are the preferred choice for permanent inlet protection and stormwater runoff control. Constructed of stainless steel, FlexStorm Pure inlet filters will fit any drainage structure and are available with site-specific filter bags providing various levels of filtration.

Applications

- Car washes
- Commercial
- Loading ramps
- Industrial
- Gas stations
- Parking lots
- Dock drains
- Maintenance

Features

- Custom stainless steel frames are configured to fit into any drainage structure
- Flow and bypass rates meet specific inlet requirements
- Works below grade with bypass to drain area if bag is full
- Installed and maintained by one worker, without additional equipment

Benefits

- Stainless steel frame provides extended service life
- Easily replaceable filter bags
- Meets stringent removal requirements:
  - All bags rated >84% removal efficiency
  - Bag styles available to remove hydrocarbon oils when required

FlexStorm Pure Inlet Filters Specification

Material and Performance

The filter is comprised of a stainless steel frame and a replaceable geotextile filter bag attached to the frame with a stainless steel locking band. The filter bag hangs suspended below the grate that shall allow full bypass flow into the drainage structure if the bag is completely filled with sediment. The standard "FX" filter bags are rated for 200 gpm/sqft (21.44 liters/minute/cubic meter) with a removal efficiency of 85%. The post construction "PCP" filter bags are rated for 137 gpm/sqft (14.69 liters/minute/cubic meter) and have a removal efficiency of 97%.

Installation

1. Remove the grate from the inlet.
2. Clean debris from the ledges of the inlet.
3. Place the inlet filter onto the load bearing ledges of the structure.
4. Replace the grate and confirm it is not elevated more than ½" (3 mm).

Frequency of Inspections

1. Inspection should occur following rain events greater than ½" (13 mm).
2. Filter inspections should occur a minimum of three times per year, and in snowfall affected regions, inspections prior to and after snowfall season.
3. Industrial application site inspections (loading ramps, wash racks & maintenance facilities) to be scheduled on a recurring basis no less than four times per year or as needed.

Maintenance Guidelines

1. Empty the filter bag manually or by industrial vacuum taking care not to damage the geotextile bag when more than half filled or during scheduled inspection period.
2. Remove compacted silt from sediment bag and flush with medium spray.
3. "PCP" style bags should be pressed or wrung to recover retained oils.
4. Oil skimmer pouches solidify and darken when saturated, indicating time for replacement.
5. Dispose of all oil-contaminated products and recovered oils in accordance with EPA guidelines. Oil skimmer pouches, since a solidifier, will not leach and can be disposed of directly.
6. Inspect and replace bag if torn or punctured.

Filter Bag Replacement

1. Remove the bag by loosening or cutting off clamping band.
2. Take the new correctly sized sediment bag and secure hose clamping band to the frame channel as previously removed.
3. Ensure bag is secure and there is no slack around perimeter.

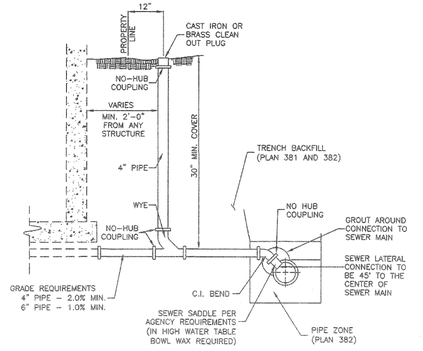
Build America, Buy America (BABA)

For any questions related to Build America, Buy America (BABA) Act compliance contact an ADS representative.

adspipe.com
800-821-6710

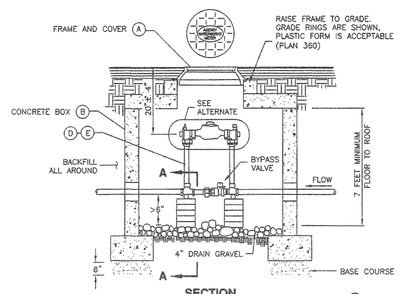
Sewer lateral connection

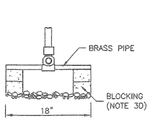
1. **GENERAL**
   - A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.
   - B. Before backfilling, secure inspection of installation by ENGINEER. Give at least 24 hours notice.
   - C. Verify if CONTRACTOR or agency is to install the wye.
2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Provide agency approved wye or tee with appropriate donut.
   - D. Stainless steel straps required.
3. **EXECUTION**
   - A. Tape wrap pipe as required by soil conditions.
   - B. Remove core plug from sewer main. Do not break into sewer main to make connection.
   - C. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

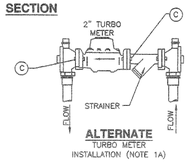


1 1/2" and 2" meter

1. **GENERAL**
   - A. Turbine meters are required on all systems used exclusively for irrigation or fire protection.
   - B. Where domestic use is applicable, use a standard meter.
   - C. Before backfilling, secure inspection of installation by ENGINEER.
2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Castings: Grey iron class 35 minimum per ASTM A48, coated with asphalt based paint or better.
3. **EXECUTION**
   - A. Meter Placement:
     1) All meters are to be installed in the park strip or within 7 feet of the property line (street side).
     2) Do not install meters under driveway approaches, sidewalks, or curb and gutter.
     3) In new construction, install meter at center of lot or per agency requirements.
   - B. Meter Box: Set box so grade of the frame and cover matches the grade of the surrounding surface.
   - C. Bypass Valve: Lock in off position.
   - D. Blocking: Use clay brick or concrete block.
   - E. Concrete Box:
     1) Center frame and cover over water meter.
     2) Allow 1-inch clearance around waterline where water line passes through concrete box wall. Seal opening with compressible seal.
   - F. Pipe Outside of Right-of-Way: Coordinate with utility agency or adjacent property owner for type of pipe to be used outside of right-of-way.
   - G. Base Course and Backfill Placement: Maximum lift thickness before compaction is 8-inches. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.







LEGEND			
No.	*	ITEM	DESCRIPTION
A		27" FRAME AND COVER	PLAN 502
B		CONCRETE BOX	PLAN 505
C		STAINLESS STEEL METER BOLTS	5/8" x 2 3/4" BRASS
D		1 1/2" CUSTOM SETTER WITH BYPASS	
E		2" CUSTOM SETTER WITH BYPASS	

* FURNISHED BY UTILITY AGENCY

REGISTERED PROFESSIONAL ENGINEER
11/21/25
No. 270393
DAVID W. PETERSON
STATE OF UTAH

REVISIONS		
Rev.	Date	Description

The Town of Genola

GENOLA PUBLIC WORKS BUILDING
GENOLA 78 West 800 South UTAH

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

SITE DETAILS

Scale: NTS
Date: 11/21/25
C4

Midblock curb cut assembly

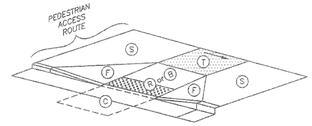
1. **GENERAL**
   - A. Where existing elements or spaces are altered to receive an assembly; slopes and dimensions shall comply with slopes and dimensions shown on the drawing, or to the maximum extent feasible permitted by the ENGINEER. Final configuration of the assembly may be different than shown.
   - B. Installation of flares or curb returns is ENGINEER's choice.
   - C. Definitions and supplemental requirements are specified in APWA Section 32 16 14.

2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73..
   - C. Detectable Warning Surface: Paver, ribbed composite panel, or tile. Provide a color that contrasts with adjacent walking surface, either light-on-dark or dark-on-light. ENGINEER to select type and color unless indicated elsewhere.
   - D. Concrete: Class 4000, APWA Section 03 30 04.
   - E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

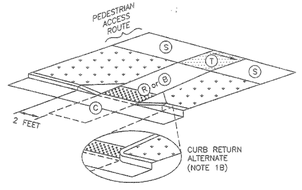
3. **EXECUTION**
   - A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   - B. Curb Modifications:
     1) The sloped surface created to accommodate a flare area shall be perpendicular to the back of curb.
     2) No grade break shall exist between the flow-line and the foot of the curb ramp or blended transition. Length of the curb modification abutting the curb ramp or transition is 4 feet minimum.
   - C. Curb Ramp: Length not required to exceed 15 feet. Grade breaks are perpendicular to the direction of ramp run and are not permitted on the ramp or turning space surface. Sides are parallel to each other and perpendicular to the ends.
   - D. Concrete Placement: APWA Section 03 30 10.
     1) Maximum length to width ratio for rectangular panel joints is 1.5 to 1. Joint spacing measured in feet not to exceed twice slab thickness measured in inches or a maximum of 15 feet.
     2) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install contraction joints vertical, 1/8-inch wide, and 1/4 of the depth of the concrete flatwork.
     3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   - E. Clear Space: No trip hazards in the clear space.

TURNING SPACE AT SIDEWALK LEVEL

THE LOCATION OF THE PEDESTRIAN ACCESS ROUTE AFFECTS FLARE SLOPE CONSTRUCTION



EXAMPLE 1

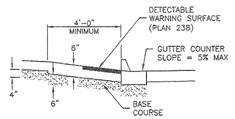


EXAMPLE 2

ELEMENT	DIMENSION
(R) (B)	4 FEET WIDE MINIMUM
(C) (T)	4 FEET SQUARE MINIMUM

WHERE TURNING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

TABLE OF DIMENSIONS



MATERIALS

		RUNNING SLOPE (%) MAXIMUM	CROSS SLOPE (%) MAXIMUM
TURNING SPACE	(T)	STREET GRADE	2
CURB RAMP	(R)	8.33	2 (c)
BLENDED TRANSITION	(B)	5	2 (c)
CLEAR SPACE	(C)	5	2 (c)
SIDEWALK	(S)	STREET GRADE	2
FLARE	(F)	10	--

(a) RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. RUNNING SLOPE OF FLARE IS PARALLEL TO BACK OF CURB
(b) CROSS SLOPE IS PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL.

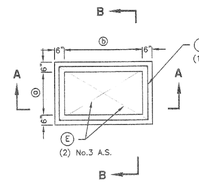
SLOPE TABLE

Precast box

1. **GENERAL**
   - A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
   - B. This drawing is acceptable where the water table elevation is less than 3 feet above the floor of the box. If elevation of water table is higher, engineering calculations and drawings must be submitted to and approved by the ENGINEER.
   - C. Submit bar design detail for ENGINEER's review.

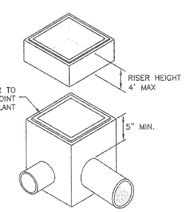
2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Precast Concrete: Class 4000 precast, APWA Section 03 40 00.
   - D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615. Coated steel is not required for small drainage structures shown on this drawing.
   - E. Frame and Cover (or Grate): Use the appropriate unit indicated in the Contract Documents.
   - F. Joint Sealant: Rubber-based, compressible.

3. **EXECUTION**
   - A. Concrete Placement: Provide 2-inches of concrete cover over reinforcing steel.
   - B. Lifting Points: Provide at least 2 lifting points per section that avoid interference with the reinforcing steel and that are designed according to PCI (Prestressed Concrete Institute) design handbook. Lift only from the engineered lifting points.
   - C. Depth: Drainage boxes and riser combinations that exceed 8-feet from finished grade to the bottom of the box requires ENGINEER's approval. Submit design calculations and shop drawings.
   - D. Core Holes:
     1) Provide core holes that are at least 4" larger than attaching outer pipe diameter. Cut core holes at the manufacturing plant unless ENGINEER permits field core holes.
     2) Center core holes to leave 2" of concrete measured horizontally from inside wall of the box to core hole. Locate core hole vertically so bottom of core hole will be at or above floor elevation with at least 5-inches of concrete directly above the core hole to the top of the box.
     3) Deviations from core hole tolerances require shop drawings. Shop drawings will identify lifting point number and location.
   - E. Precast Top: Design precast top for AASHTO HL-93 live loads and submit rebar detail and stamped design drawings to ENGINEER. Show connection detail for frame and grate or cover.

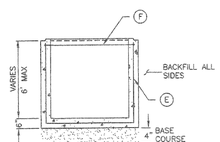


PLAN

RISERS: ON BOXES DEEPER THAN 4 FEET, PROVIDE AN UNREINFORCED PRECAST CONCRETE RISER MATCHING THE DRAINAGE BOX SIZE



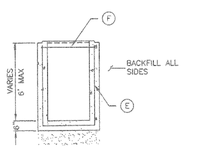
OBLIQUE



SECTION A-A

TABLE OF DIMENSIONS		
BOX SIZE	a	b
1.5 x 4	18"	48"
2 x 2	24"	24"
2 x 3	24"	36"
2.5 x 4	30"	48"
3 x 3	36"	36"
3 x 3.5	36"	42"
4 x 4	48"	48"

NOTE: OTHER BOX SIZES (LESS THAN 48") WITH DIFFERENT a AND b DIMENSIONS ARE ACCEPTABLE



SECTION B-B

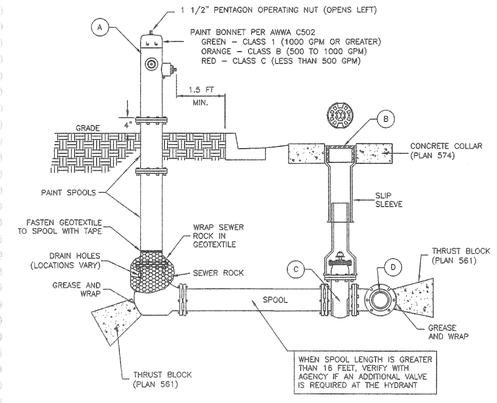
REINFORCING STEEL LAYOUT	
PROVIDE 2" MIN. COVER ON ALL BARS	
BAR (E)	BAR (F)
	12"

Fire hydrant with valve

1. **GENERAL**
   - A. Before backfilling, secure inspection of installation by ENGINEER.
   - B. Additional requirements are specified in APWA Section 33 11 00.

2. **PRODUCTS**
   - A. Hydrant: Dry barrel, AWWA C502.
   - B. Thrust Bocks: Concrete Class 4000, APWA Section 03 30 04.
   - C. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
   - D. Backfill: APWA Section 31 05 13. Maximum particle size 2-inches.
     1) Sewer Rock: ASTM Size No. 3 (2" to 1") or larger.
     2) Other Type of Common Fill: CONTRACTOR's choice,.
   - E. Geotextile: Stabilization-separation fabric, APWA Section 31 05 19.

3. **EXECUTION**
   - A. Installation:
     1) Provide at least 1 cubic yard of sewer rock around drain hole at base of hydrant spool. Wrap geotextile around sewer rock and tape geotextile to hydrant spool to prevent silting of sewer rock.
     2) Paint fire hydrant to agency's fire hydrant paint code.
     3) Apply non-oxide grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
     4) Notify fire department as soon as hydrant is placed in service.
   - B. Thrust Blocks:
     1) Before pouring concrete, wrap pipe system with polyethylene sheet to prevent bonding of concrete to pipe system.
     2) Not required for flange or welded pipe systems.
   - C. Backfill: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.



LEGEND			
No.	*	ITEM	DESCRIPTION
(A)		FIRE HYDRANT	AWWA C502
(B)		VALVE BOX WITH LID	2-PIECE CAST IRON
(C)		GATE VALVE WITH 2" X 2" NUT	AWWA C509
(D)		TEE WITH 125 # FLANGE	AWWA C110

* FURNISHED BY UTILITY AGENCY

SECTION

REGISTERED PROFESSIONAL ENGINEER
11/21/25
No. 270393
DAVID W. PETERSON
STATE OF UTAH

REVISIONS		
Rev.	Date	Description

The Town of Genola

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

GENOLA PUBLIC WORKS BUILDING

GENOLA 78 West 800 South UTAH

SITE DETAILS

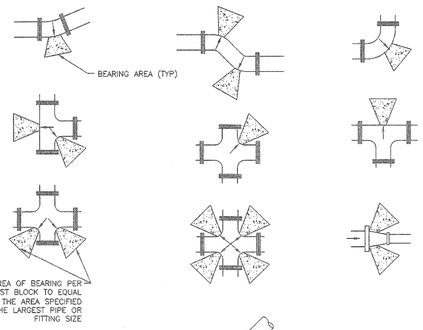
Drawn by:	D.W.P.
Designed by:	D.W.P.
Checked by:	D.W.P.
Scale:	NTS
Date:	11/21/25
	C5

Direct bearing thrust block

1. **GENERAL**
   - A. Thrust design for pipe sizes or configurations not shown require special design.
   - B. Bearing areas, volumes, and special thrust blocking details shown on Drawings take precedence over this plan.
   - C. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing strength of 2,000 psf. Operating pressures in excess of 150 psi or soils with less than 2,000 pound bearing strength will require special design.
   - D. Before backfilling around thrust block, secure inspection of installation by ENGINEER.

2. **PRODUCTS**
   - A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   - B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   - C. Thrust Bocks: Concrete Class 4000, APWA Section 03 30 04.
   - D. Grease: Non-oxide poly-FM.

3. **EXECUTION**
   - A. Pour concrete against undisturbed soil.
   - B. Pipe Joints: Do not cover with concrete. Leave completely accessible.
   - C. Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
   - D. Locking restraint devices may be used in conjunction with concrete thrust blocking (at discretion of ENGINEER).
   - E. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

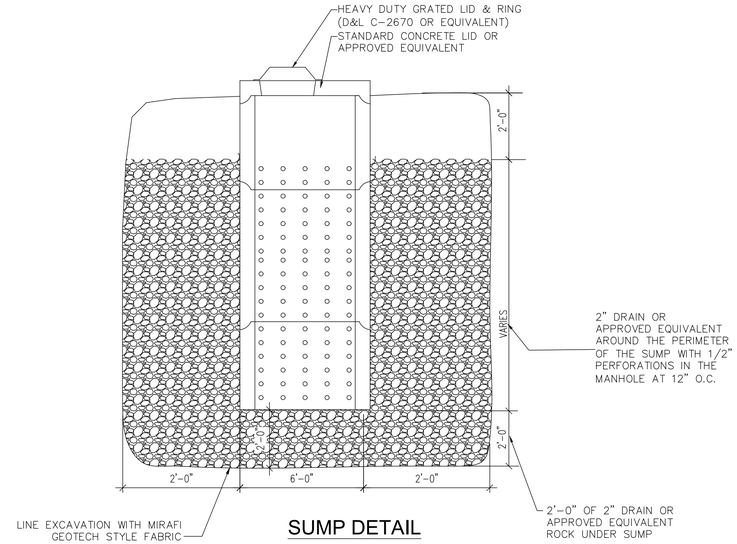


SIZE OF PIPE	MINIMUM BEARING AREA IN SQ. FT.				
	TEES, VALVES DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2	3	2	2	2
6"	4	5.5	3	2.5	2
8"	6.5	9.5	5	2.75	2.5
12"	14	20	11	5.5	3
14"	19	26.5	14.5	7.5	4
16"	24	34	18.5	9.5	6
20"	27	52	28.5	14.5	9
24"	53	74	41	21	12
30"	81	114	62	32	16

APWA Utah Chapter

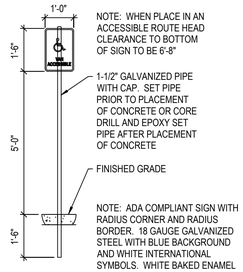
Direct bearing thrust block

Plan 561 August 2010

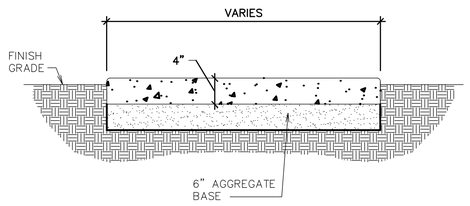


SUMP DETAIL

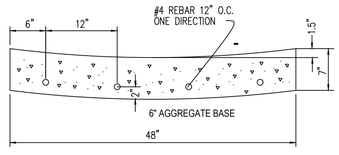
SUMP GENERAL NOTES
1. IF USING CONCRETE MANHOLE, MANHOLE BASE AND ALL SECTIONS SHALL BE PRECAST TO CONFORM TO ASTM C478.
2. THE SUMP SHALL BE 6'-0" CONCRETE



ADA VAN SIGN DETAIL

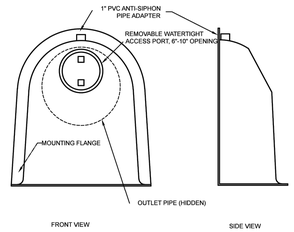


SIDEWALK DETAIL



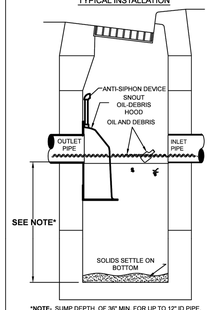
48" CONCRETE CROSS GUTTER

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION



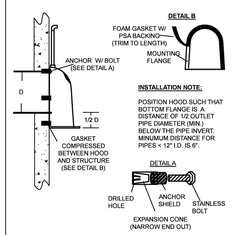
*NOTE- SUMP DEPTH OF 36" MIN. FOR UP TO 12" ID PIPE OUTLET. FOR PIPES 15" ID AND ABOVE SUMP DEPTH OF 2.5 TO 3 TIMES PIPE ID RECOMMENDED (E.G. 5' DEEP for 24" PIPE)

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   9 MATHEWS DRIVE, UNIT A1-A2.
   EAST HADDAM, CT 06423
   TOLL FREE: (800) 504-8008 OR (888) 434-0277, FAX: (877) 434-3197
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. ALL STRUCTURE JOINTS SHALL BE WATERTIGHT.
9. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH ⅜" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
    INSTALLATION KIT SHALL INCLUDE:
    A. INSTALLATION INSTRUCTIONS
    B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
    C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
    D. 3/8" STAINLESS STEEL BOLTS
    E. ANCHOR SHIELDS

US Patent # 6126817, 7951294, 7857966, 8512556
Canada Patent # 2285146, 2690156, 2690156 others pending

INSTALLATION DETAIL



INSTALLATION NOTE:

POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/18	NONE
	DRAWING NUMBER	SP-SN

REGISTERED PROFESSIONAL ENGINEER
11/21/25
No. 270393
DAVID W. PETERSON
STATE OF UTAH

REVISIONS		
Rev.	Date	Description

The Town of Genola

EXCEL ENGINEERING
David W. Peterson, P.E. License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

GENOLA PUBLIC WORKS BUILDING

GENOLA 78 West 800 South UTAH

Drawn by: D.W.P.
Designed by: D.W.P.
Checked by: D.W.P.

SITE DETAILS

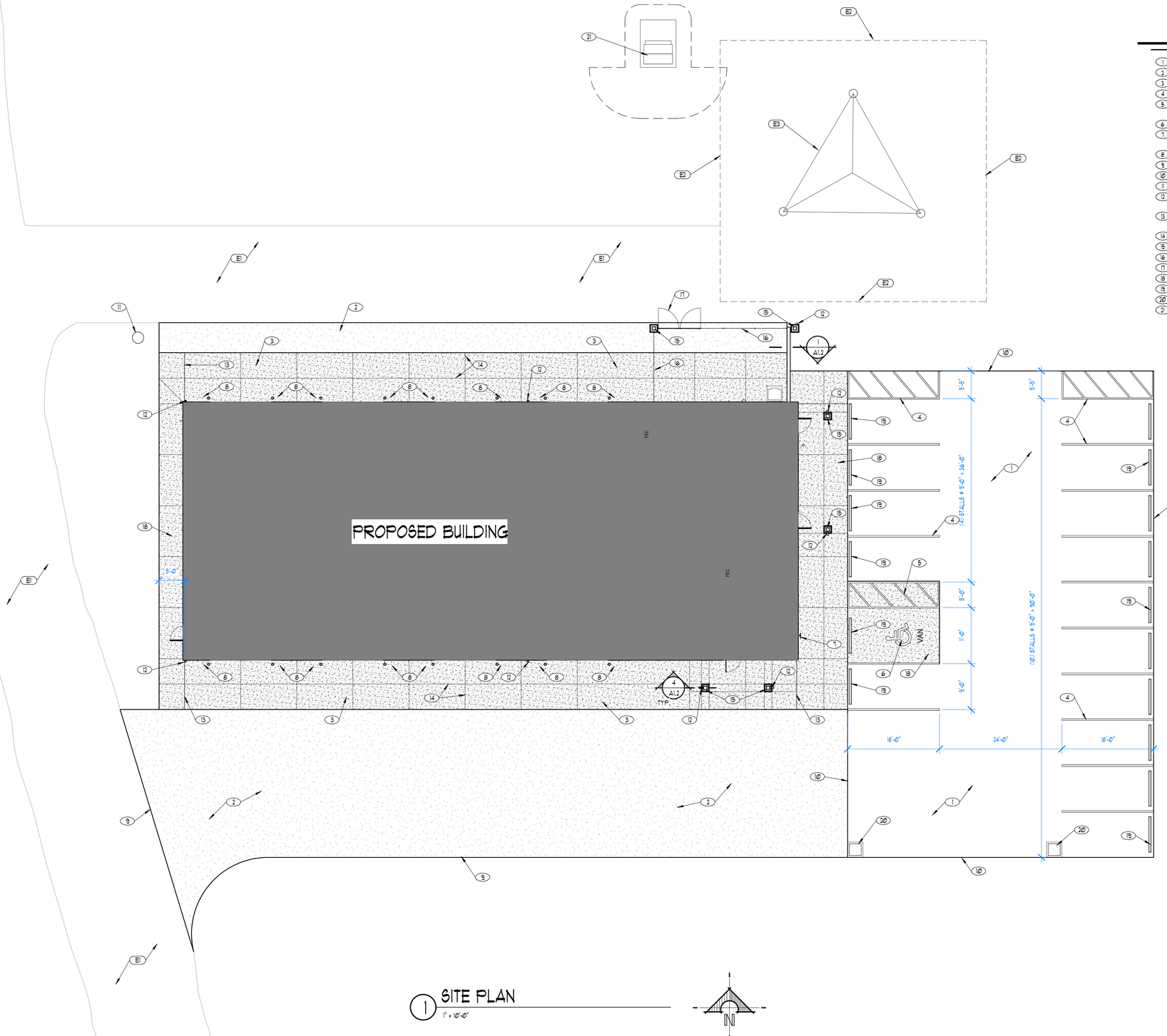
Scale: NTS
Date: 11/21/25
C6

EXISTING NOTES

E1 REGRADE EXISTING GRAVEL ROAD - SEE CIVIL DWG'S
E2 EXISTING CHAIN LINK FENCE TO REMAIN
E3 EXISTING RADIO TOWER TO REMAIN

SHEET NOTES

1 ASPHALT PAVING - SEE CIVIL DWG'S
2 ROAD BASE - SEE CIVIL DWG'S
3 CONCRETE APRON OVER GRAVEL BASE - SEE CIVIL DWG'S
4 4" PARKING STRIPE
5 ACCESSIBLE ACCESS AISLE - PROVIDE DIAGONAL STRIPING @ 36" O.C.
6 INTERNATIONAL SYMBOL OF ACCESSIBILITY
7 ACCESSIBLE PARKING SIGN AND CONCRETE FILLED BOLLARD - SEE CIVIL DWG'S
8 CONCRETE FILLED PIPE BOLLARD - SEE DETAIL 3/A1.2
9 EDGE OF ROAD BASE
10 EDGE OF ASPHALT
11 WATER METER & VAULT - SEE CIVIL DWG'S
12 PRE-FINISH METAL DOWNSPOUT - SEE CIVIL DWG'S FOR STORM DRAIN CONNECTIONS
13 CONCRETE EXPANSION JOINT, PROVIDE BACKER ROD AND SEALANT
14 SAW CUT CONCRETE CONTROL JOINTS, TYP.
15 CONCRETE PIER & STEEL COLUMN - SEE DETAIL 4/A1.2
16 6' TALL CHAIN LINK FENCE
17 6' H X 6' W CHAIN LINK GATE
18 CONCRETE SIDEWALK OVER GRAVEL BASE - SEE CIVIL DWGS.
19 WHEEL STOP - SEE CIVIL DWG'S
20 CATCH BASIN - SEE CIVIL DWG'S
21 ELECTRICAL EQUIPMENT - SEE ELECTRICAL DWG'S



1 SITE PLAN
1" = 10'-0"

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801.374.0800 | wpa-architecture.com

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TOWN of GENOLA

PUBLIC WORKS BUILDING

78 WEST 800 SOUTH
GENOLA, UTAH 84655
client info

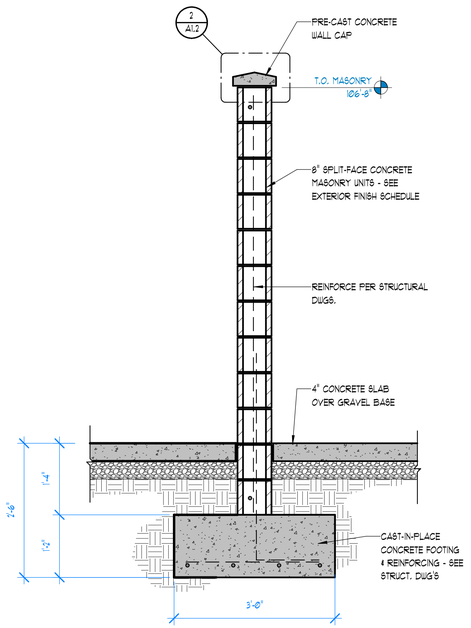
REGISTERED ARCHITECT
JACOB B. EDWARDS
7827957-0130
DECEMBER 17, 2025
STATE OF UTAH
design professional stamp

revision information
no. date description

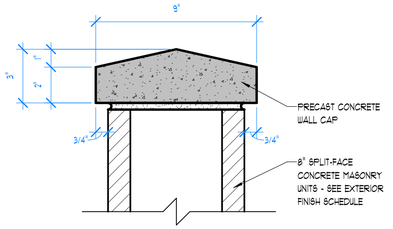
milestone issue date
JANUARY 12, 2026
milestone issue description
BID DRAWINGS
latest revision date
latest revision description

SITE PLAN

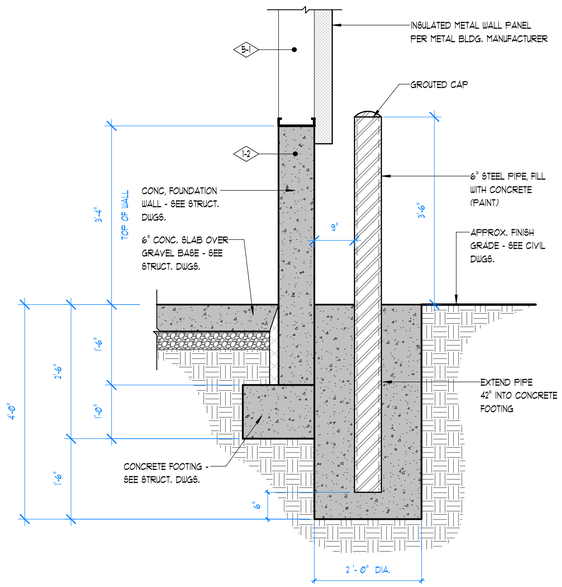
A1.1
sheet number



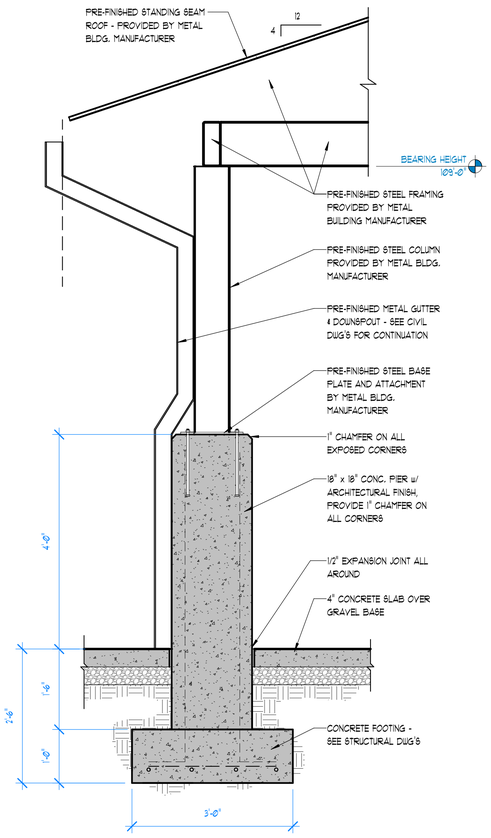
1 CMU WALL SECTION
3/4" = 1'-0"



2 WALL CAP DETAIL
3" = 1'-0"



3 BOLLARD DETAIL
3/4" = 1'-0"



4 PIER DETAIL
3/4" = 1'-0"

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TOWN of GENOLA

PUBLIC WORKS BUILDING

78 WEST 800 SOUTH
GENOLA, UTAH 84655

client info

REGISTERED ARCHITECT
JOHN B. EDWARDS
(262795-0501)
DECEMBER 17, 2025
STATE OF UTAH

design professional stamp

revision information

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milestone issue description
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latest revision description

SITE DETAILS

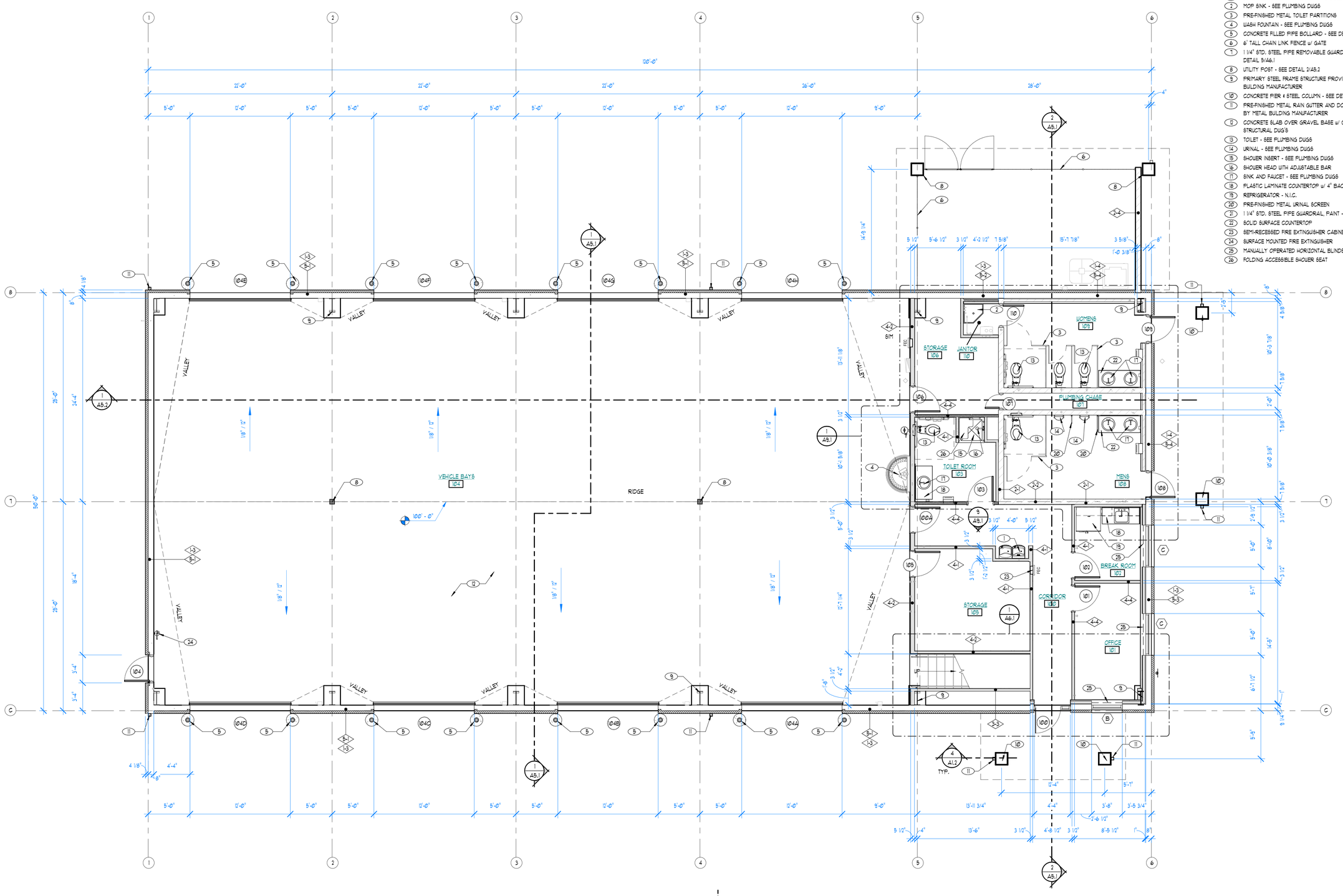
A1.2

sheet number

SHEET NOTES

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.2
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.2

1. DRINKING FOUNTAIN - SEE PLUMBING DWGS & DETAIL 4/G3.1
2. MOP SINK - SEE PLUMBING DWGS
3. PRE-FINISHED METAL TOILET PARTITIONS
4. WASH FOUNTAIN - SEE PLUMBING DWGS
5. CONCRETE FILLED PIPE BOLLARD - SEE DETAIL 3/A1.2
6. 6' TALL CHAIN LINK FENCE w/ GATE
7. 1 1/4" STD. STEEL PIPE REMOVABLE GUARDRAIL, PAINT - SEE DETAIL 5/A6.1
8. UTILITY POST - SEE DETAIL 2/A5.2
9. PRIMARY STEEL FRAME STRUCTURE PROVIDED BY METAL BUILDING MANUFACTURER
10. CONCRETE PIER & STEEL COLUMN - SEE DETAIL 4/A1.2
11. PRE-FINISHED METAL RAIN GUTTER AND DOWNSPOUT PROVIDED BY METAL BUILDING MANUFACTURER
12. CONCRETE SLAB OVER GRAVEL BASE w/ CLEAR SEALER - SEE STRUCTURAL DWG'S
13. TOILET - SEE PLUMBING DWGS
14. URINAL - SEE PLUMBING DWGS
15. SHOWER INSERT - SEE PLUMBING DWGS
16. SHOWER HEAD WITH ADJUSTABLE BAR
17. SINK AND FAUCET - SEE PLUMBING DWGS
18. PLASTIC LAMINATE COUNTERTOP w/ 4" BACKSPLASH
19. REFRIGERATOR - N.I.C.
20. PRE-FINISHED METAL URINAL SCREEN
21. 1 1/4" STD. STEEL PIPE GUARDRAIL, PAINT - SEE DETAIL 5/A6.1
22. SOLID SURFACE COUNTERTOP
23. SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE DETAIL 8/G3.1
24. SURFACE MOUNTED FIRE EXTINGUISHER
25. MANUALLY OPERATED HORIZONTAL BLINDS
26. FOLDING ACCESSIBLE SHOWER SEAT



1 MAIN LEVEL FLOOR PLAN

3/16" = 1'-0"

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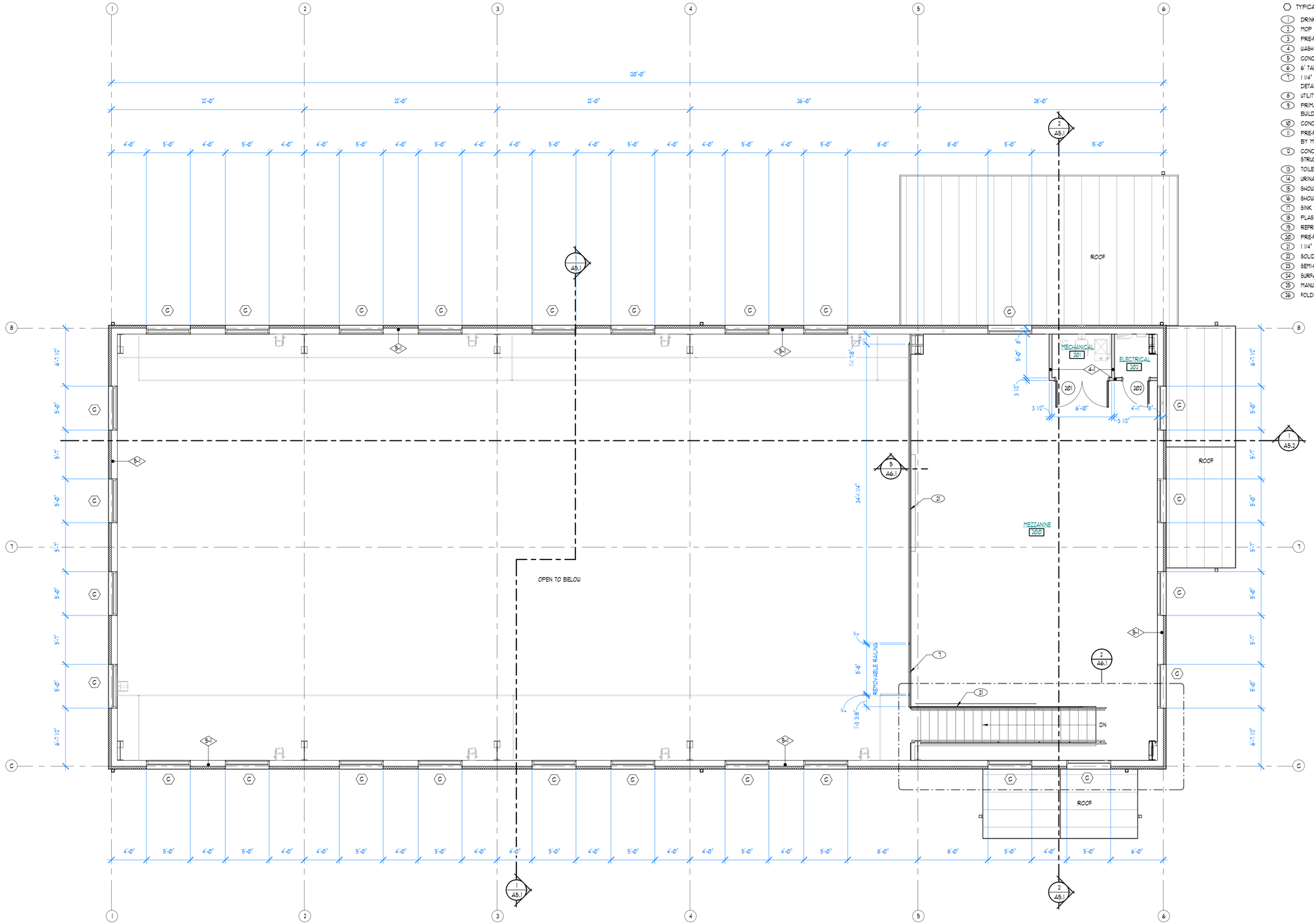
latest revision description

FLOOR PLAN

A2.1

sheet number



SHEET NOTES

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1. DRINKING FOUNTAIN - SEE PLUMBING DWGS & DETAIL 4/G3.1
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25. MANUALLY OPERATED HORIZONTAL BLINDS
26. FOLDING ACCESSIBLE SHOWER SEAT

1 MEZZANINE LEVEL FLOOR PLAN

3/16" = 1'-0"

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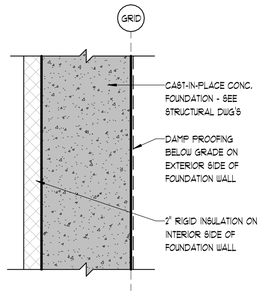
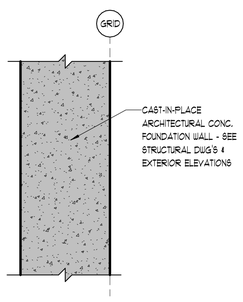
MEZZANINE FLOOR PLAN

A2.2

sheet number



1-1 CONSTRUCTION TYPE 1-1
1 1/2" = 1'-0"



1-2 CONSTRUCTION TYPE 1-2
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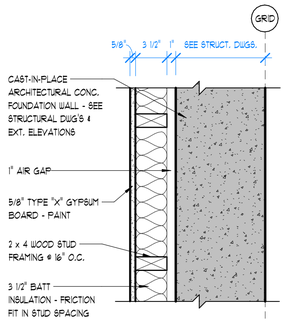

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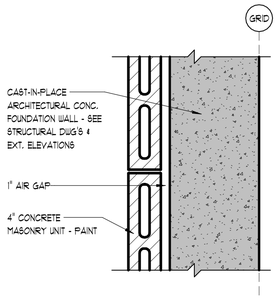

1-4 CONSTRUCTION TYPE 1-4
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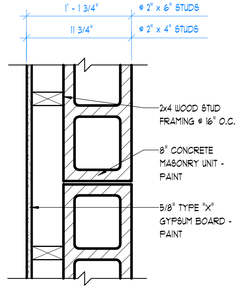
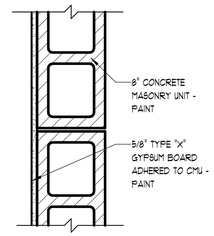
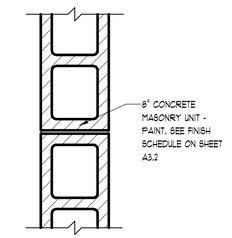


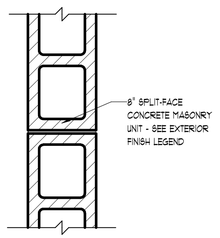
2-1 CONSTRUCTION TYPE 2-1
1 1/2" = 1'-0"



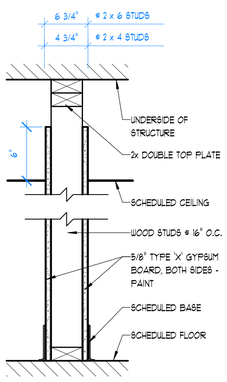
2-2 CONSTRUCTION TYPE 2-2
1 1/2" = 1'-0"



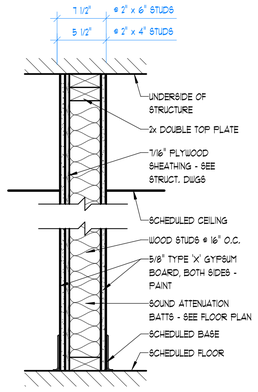
2-3 CONSTRUCTION TYPE 2-3
1 1/2" = 1'-0"



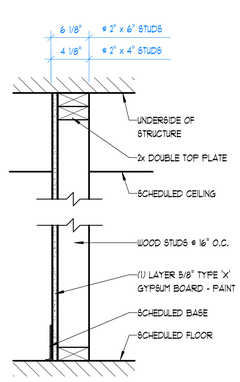
2-4 CONSTRUCTION TYPE 2-4
1 1/2" = 1'-0"



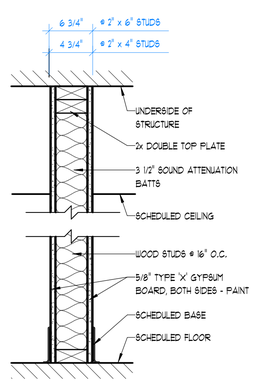
4-1 CONSTRUCTION TYPE 4-1
1 1/2" = 1'-0"



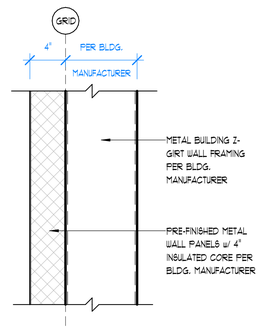
4-2 CONSTRUCTION TYPE 4-2
1 1/2" = 1'-0"



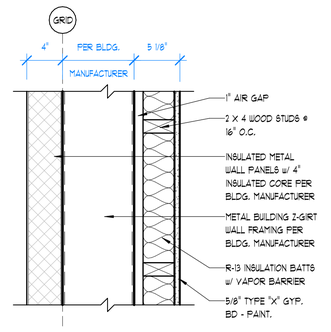
4-3 CONSTRUCTION TYPE 4-3
1 1/2" = 1'-0"



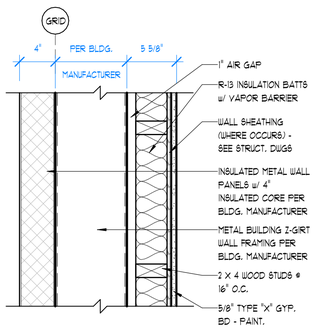
4-4 CONSTRUCTION TYPE 4-4
1 1/2" = 1'-0"



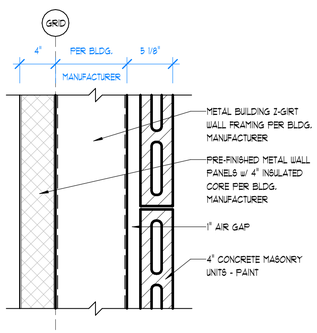
5-1 CONSTRUCTION TYPE 5-1
1 1/2" = 1'-0"



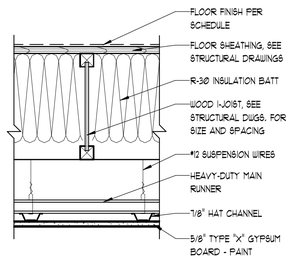
5-2 CONSTRUCTION TYPE 5-2
1 1/2" = 1'-0"



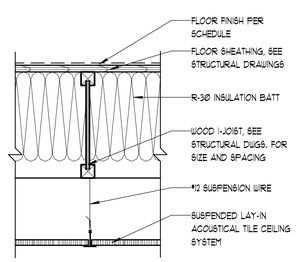
5-3 CONSTRUCTION TYPE 5-3
1 1/2" = 1'-0"



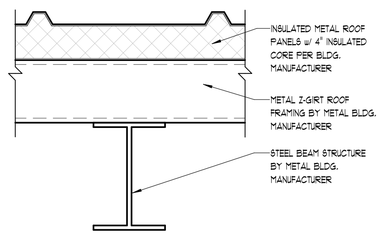
5-4 CONSTRUCTION TYPE 5-4
1 1/2" = 1'-0"



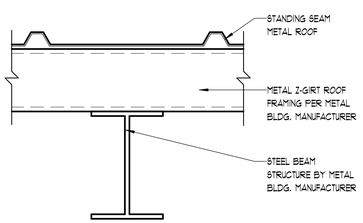
8-1 CONSTRUCTION TYPE 8-1
1 1/2" = 1'-0"



8-2 CONSTRUCTION TYPE 8-2
1 1/2" = 1'-0"



9-1 CONSTRUCTION TYPE 9-1
1 1/2" = 1'-0"



9-2 CONSTRUCTION TYPE 9-2
1 1/2" = 1'-0"

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client info

REGISTERED ARCHITECT
JOHN P. EDWARDS
12627957-0130
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STATE OF UTAH

design professional stamp

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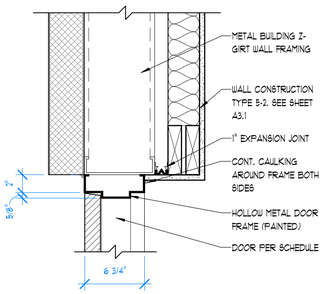
CONSTRUCTION TYPES

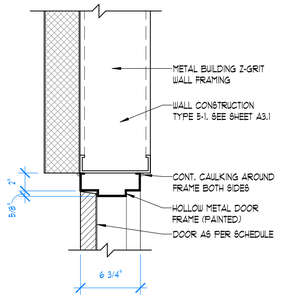
A3.1

sheet number



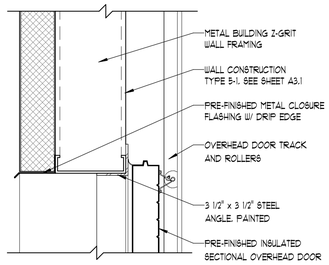
1 DOOR HEAD DETAIL

1 1/2" = 1'-0"



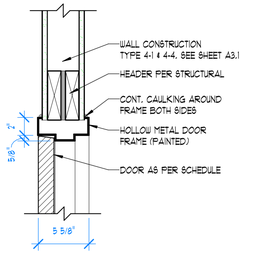
2 DOOR HEAD DETAIL

1 1/2" = 1'-0"



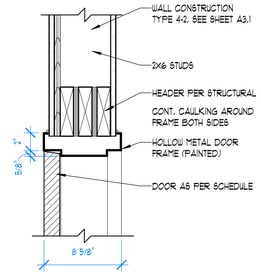
3 DOOR HEAD DETAIL

1 1/2" = 1'-0"



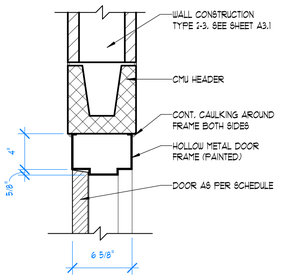
4 DOOR HEAD DETAIL

1 1/2" = 1'-0"



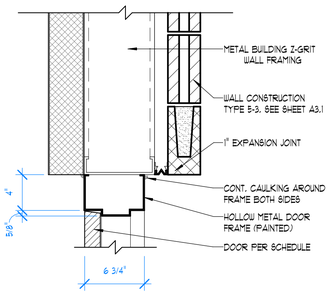
5 DOOR HEAD DETAIL

1 1/2" = 1'-0"



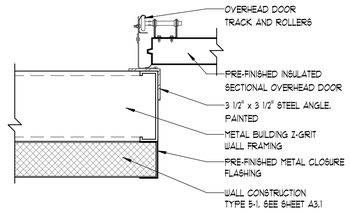
6 DOOR HEAD DETAIL

1 1/2" = 1'-0"



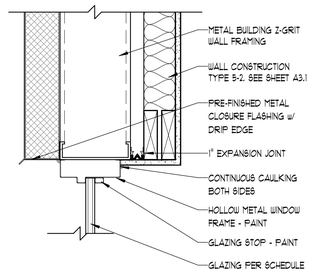
7 DOOR HEAD DETAIL

1 1/2" = 1'-0"



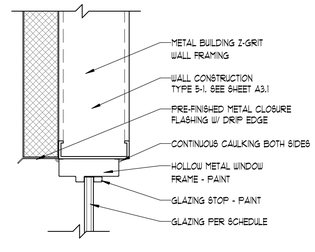
8 DOOR JAMB DETAIL

1 1/2" = 1'-0"



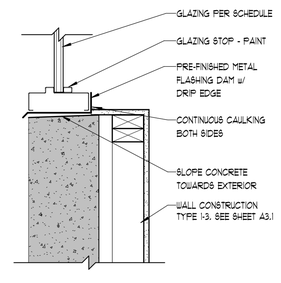
9 WINDOW HEAD DETAIL

1 1/2" = 1'-0"



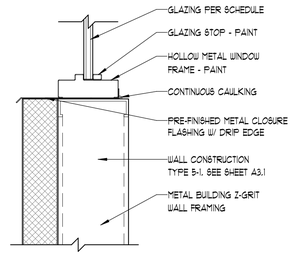
10 WINDOW HEAD DETAIL

1 1/2" = 1'-0"



11 WINDOW SILL DETAIL

1 1/2" = 1'-0"



12 WINDOW SILL DETAIL

1 1/2" = 1'-0"

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DOOR & WINDOW DETAILS

A3.3

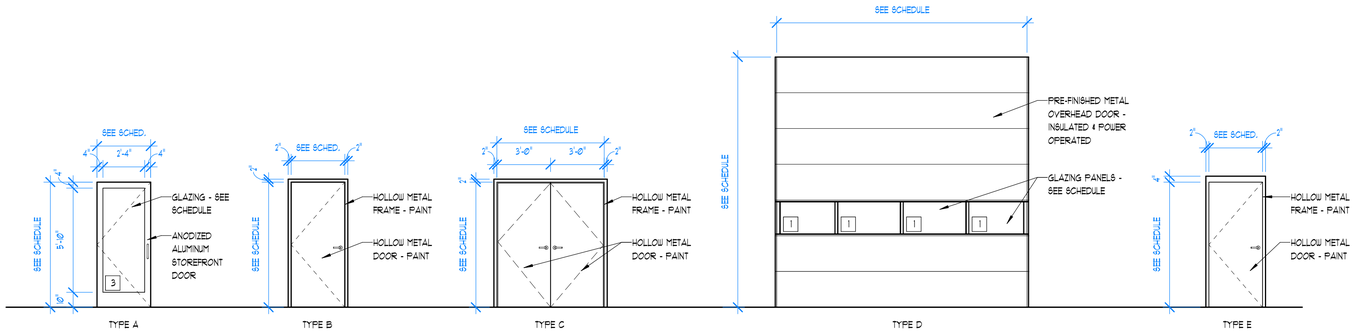
sheet number

DOOR SCHEDULE

DR. NUM.	RM. NUM.	DOOR TYPE	ROOM NAME	DOOR SIZE			DETAILS		HDWE SET	FIRE RATING	COMMENTS
				WIDTH	HEIGHT	THICK	HEAD	JAMB			
100	100	A	CORRIDOR	3'-0"	7'-0"	1 3/4"	2/A3.3	2/A3.3	01	-	INSULATED DOOR
100A	100	B	CORRIDOR	3'-0"	7'-0"	1 3/4"	5/A3.3	5/A3.3	03	-	
101	101	B	OFFICE	3'-0"	7'-0"	1 3/4"	4/A3.3	4/A3.3	04	-	
102	102	B	BREAK ROOM	3'-0"	7'-0"	1 3/4"	4/A3.3	4/A3.3	04	-	
103	103	B	TOILET ROOM	3'-0"	7'-0"	1 3/4"	4/A3.3	4/A3.3	05	-	
104	104	B	VEHICLE BAYS	3'-0"	7'-0"	1 3/4"	2/A3.3	2/A3.3	06	-	POWER OPERATED INSULATED DOOR
104A	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
104B	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
104C	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
104D	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
104E	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
104F	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
104G	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
104H	104	R	VEHICLE BAYS	12'-0"	14'-0"	2"	3/A3.3	7/A3.3	02		POWER OPERATED INSULATED DOOR
105	105	B	STORAGE	3'-0"	7'-0"	1 3/4"	5/A3.3	5/A3.3	07	-	
106	106	B	STORAGE	3'-0"	7'-0"	1 3/4"	5/A3.3	5/A3.3	07	-	
107	107	E	PLUMBING CHASE	1'-8"	7'-0"	1 3/4"	6/A3.3	6/A3.3	08		
108	108	E	MENS	3'-0"	7'-0"	1 3/4"	1/A3.3	1/A3.3	09	-	INSULATED DOOR
109	109	E	WOMENS	3'-0"	7'-0"	1 3/4"	1/A3.3	1/A3.3	09	-	INSULATED DOOR
110	110	E	JANITOR	2'-6"	7'-0"	1 3/4"	6/A3.3	6/A3.3	08		
201	201	C	MECHANICAL	6'-0"	7'-0"	1 3/4"	4/A3.3	4/A3.3	10	-	
202	202	B	ELECTRICAL	3'-0"	7'-0"	1 3/4"	4/A3.3	4/A3.3	11	-	

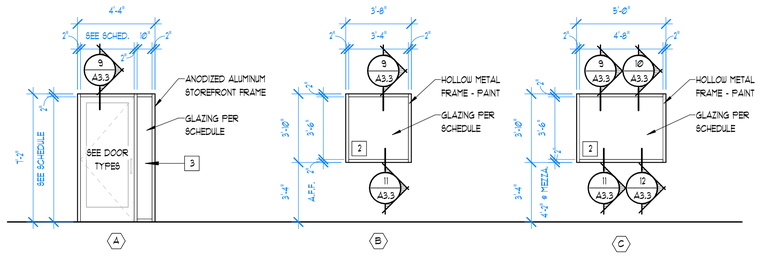
FINISH SCHEDULE

RM. NUM.	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH				CEILING FINISH	COMMENTS
				NORTH	EAST	SOUTH	WEST		
100	CORRIDOR	CONC-2	RUB-B	PTDW-1	PTDW-1	PTDW-1	PTDW-1	ACT	
101	OFFICE	CONC-2	RUB-B	PTDW-1	PTDW-1	PTDW-1	PTDW-1	ACT	
102	BREAK ROOM	CONC-2	RUB-B	PTDW-1	PTDW-1	PTDW-1	PTDW-1	ACT	
103	TOILET ROOM	CONC-2	RUB-B	CTW/PTDW-2	CTW/PTDW-2	CTW/PTDW-2	CTW/PTDW-2	PTDC-2	
104	VEHICLE BAYS	CONC-1	EXP	EXP	PTDW-1	EXP	EXP	EXP	
105	STORAGE	CONC-1	RUB-B	PTDW-1	PTDW-1	PTDW-1	PTDW-1	EXP	
106	STORAGE	CONC-1	RUB-B	PTDW-1	PTDW-1	PTDW-1	PTDW-1	EXP	
107	PLUMBING CHASE	CONC-1	NONE	CMU	EXP	CMU	CMU	EXP	
108	MENS	CONC-2	NONE	CMU	CMU	CMU	CMU	PTDC-2	
109	WOMENS	CONC-2	NONE	CMU	CMU	CMU	CMU	PTDC-2	
110	JANITOR	CONC-1	RUB-B	PTDW-1/FRP	CMU	PTDW-1	PTDW-1/FRP	PTDC-1	
200	MEZZANINE	EXP-W	NONE	EXP	EXP	EXP	-	EXP	
201	MECHANICAL	EXP-W	RUB-B	EXP	PTDW-1	PTDW-1	PTDW-1	EXP	
202	ELECTRICAL	EXP-W	RUB-B	EXP	EXP	PTDW-1	PTDW-1	EXP	



1 DOOR TYPES

1/4" = 1'-0"



2 WINDOW TYPES

1/4" = 1'-0"

GLAZING SCHEDULE

1	1" INSULATED CLEAR TEMPERED GLAZING WITH LOW-E COATING
2	1" INSULATED CLEAR GLAZING WITH LOW-E COATING
3	1" INSULATED TEMPERED GLAZING "SOLAR BRONZE" GLASS WITH LOW-E COATING

FINISH LEGEND

MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
BASE					
NONE	NO BASE	N/A	N/A	--	--
EXP	EXPOSED CONC. FOUNDATION	N/A	--	--	--
RUB-B	TOPSET RUBBER BASE	SEE SPECIFICATIONS	SEE SPECIFICATIONS	4"	APPLY SEALANT ALONG BOTTOM EDGE OF GYPSUM BOARD PRIOR TO INSTALLATION OF BASE.
RUB-S	RUBBER STAIR SKIRTING	SEE SPECIFICATIONS	SEE SPECIFICATIONS	--	--
FLOORS					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
CONC-1	CONCRETE SLAB W/ HARDENER & CLEAR SEALER	SEE SPECIFICATIONS	SEE SPECIFICATIONS	--	--
CONC-2	CONCRETE SLAB W/ POLISHED & STAINED FINISH	SEE SPECIFICATIONS	SEE SPECIFICATIONS	--	--
RUB-TR	RUBBER TREADS & RISERS	SEE SPECIFICATIONS	AS SELECTED BY OWNER / ARCHITECT	--	--
EXP-W	EXPOSED WOOD DECK	N/A	N/A	--	--
WALLS					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
EXP-M	EXPOSED METAL BUILDING STRUCTURE	N/A	N/A	N/A	--
PTDW-1	TEXTURED & PAINTED GYP. BD.	SHERWIN WILLIAMS	AS SELECTED BY OWNER / ARCHITECT	N/A	--
PTDW-2	TEXTURED & EPOXY PAINTED GYP. BD.	SHERWIN WILLIAMS	AS SELECTED BY OWNER / ARCHITECT	N/A	--
FRP	FIBER REINFORCED PLASTIC PANELS	SEE SPECIFICATIONS	AS SELECTED BY OWNER / ARCHITECT	8'-0" HIGH, TYP. WAINSCOT 5'-0" HIGH	--
CTW	CERAMIC TILE WALL	DALTILE - SEE SPECIFICATIONS	AS SELECTED BY OWNER / ARCHITECT	8" x 8" w/ 4" ACCENT BAND OF 2" x 2" TILES	--
CMU	CONCRETE MASONRY UNIT	N/A	AS SELECTED BY OWNER / ARCHITECT	8" x 8" x 16"	EPOXY PAINT
CEILING					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
EXP	EXPOSED METAL BUILDING STRUCTURE	N/A	N/A	N/A	--
ACT	ACOUSTICAL CEILING TILE GRID	USG	RADAR 2110 - WHITE	24" x 24"	--
PTDC-1	TEXTURED & PAINTED GYP. BD.	SHERWIN WILLIAMS	AS SELECTED BY OWNER / ARCHITECT	N/A	--
PTDC-2	TEXTURED & EPOXY PAINTED GYP. BD.	SHERWIN WILLIAMS	AS SELECTED BY OWNER / ARCHITECT	N/A	--
MISC.					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
P-LAM	PLASTIC LAMINATE COUNTERS	WILSON ART	AS SELECTED BY OWNER / ARCHITECT	N/A	--
SS	SOLID SURFACE COUNTERS	CORIAN	AS SELECTED BY OWNER / ARCHITECT	N/A	--

NOTE: FINISHES SHOWN IN THIS SCHEDULE SHALL BE THE BASIS OF DESIGN. REFER TO THE PROJECT MANUAL FOR OTHER ACCEPTABLE MANUFACTURERS

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DOOR, WINDOW TYPES & SCHEDULES

A3.2

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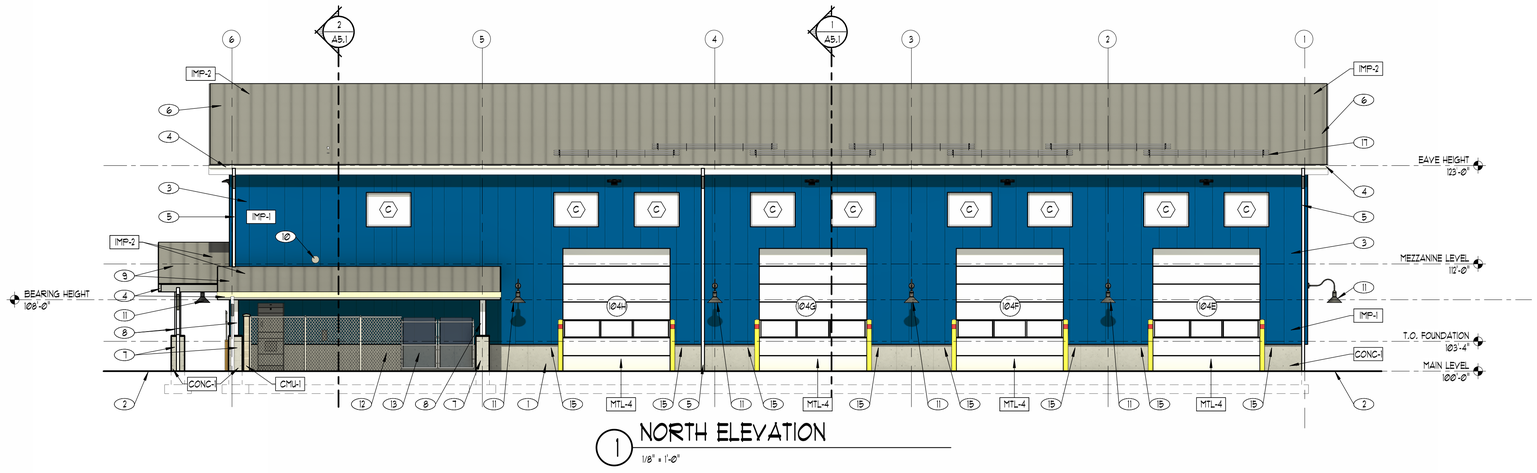
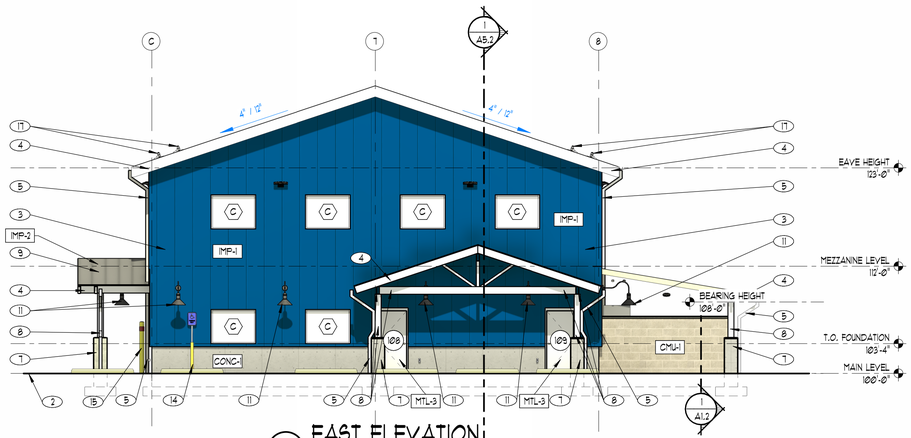
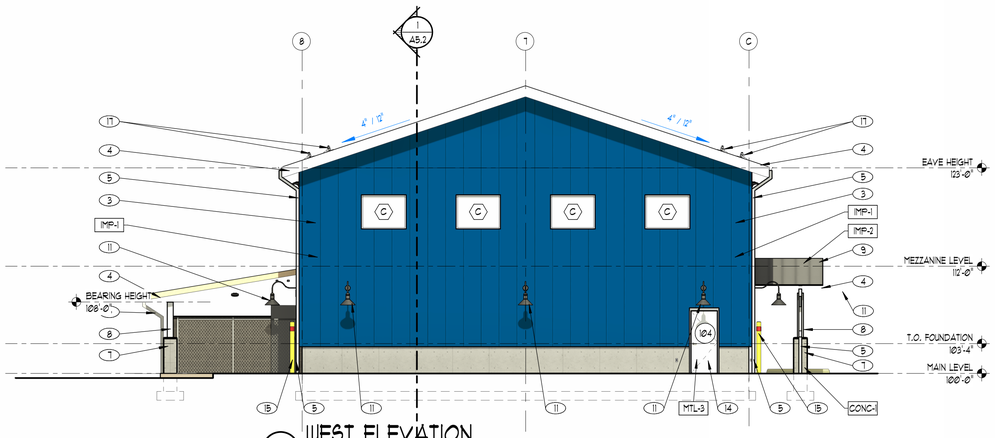


1 NORTH ELEVATION
1/8" = 1'-0"



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



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

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

SHEET NOTES

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.2
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.2

1. ARCHITECTURAL CONCRETE FOUNDATION WALL, SEE STRUCTURAL DWGS.
2. APPROX. FINISH GRADE, SLOPE AWAY FROM STRUCTURE, SEE CIVIL DWGS.
3. PRE-FINISHED METAL WALL PANELS W/ 4" THICK INSULATIED CORE PROVIDED BY METAL BUILDING MANUFACTURER
4. PRE-FINISHED METAL FASCIA AND SOFFIT PROVIDED BY METAL BUILDING MANUFACTURER
5. PRE-FINISHED METAL RAIN GUTTER AND DOWNSPOUT PROVIDED BY METAL BUILDING MANUFACTURER
6. PRE-FINISHED METAL ROOF PANELS W/ 4" THICK INSULATED CORE PROVIDED BY METAL BUILDING MANUFACTURER
7. CONCRETE COLUMN BASE, SEE STRUCTURAL DWGS.
8. STEEL COLUMNS PROVIDED BY METAL BUILDING MANUFACTURER
9. PRE-FINISHED METAL ROOF PANELS OVER METAL ROOF STRUCTURE PROVIDED BY METAL BUILDING MANUFACTURER
10. PRE-FINISHED INTAKE LOUVER, SEE MECHANICAL DWGS.
11. LIGHT FIXTURE, SEE ELECTRICAL DWGS.
12. 6' TALL CHAIN LINK FENCE
13. 6' H X 8' W CHAIN LINK GATE - SEE DETAIL X.XX
14. ACCESSIBLE PARKING SIGN AND CONCRETE FILLED BOLLARD - SEE CIVIL DWG'S
15. CONCRETE FILLED PIPE BOLLARD, SEE DETAIL3/A1.2 - PAINT
16. CONCRETE CURB & GUTTER - SEE CIVIL DWG'S
17. SNOW GUARD SYSTEM W/ ROOF CLAMPS PROVIDED BY METAL BUILDING MANUFACTURER

EXTERIOR FINISH SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	STYLE / COLOR	SIZE	COMMENTS
CMU-1	CONCRETE MASONRY UNITS		SPLIT FACE / GRAY	8" X 8" X 16"	
CONC-1	ARCHITECTURAL CONCRETE	N/A	EXPOSED V-GROOVED & FORM TIES	N/A	
IMP-1	INSULATED METAL PANELS	ALL WEATHER INSULATED PANELS	HEAVY EMBOSSED (HE40) / SLATE BLUE	40" WIDE	
IMP-2	INSULATED METAL ROOF PANELS	ALL WEATHER INSULATED PANELS	STANDING SEAM / SLATE GRAY	40" WIDE	
MTL-1	PRE-FINISHED METAL FASCIA, SOFFITS, GUTTERS, DOWNSPOUTS	N/A	WHITE	N/A	
MTL-2	PAINTED STRUCTURAL STEEL	N/A	SW 7005 PURE WHITE	N/A	
MTL-3	PAINTED HOLLOW METAL FRAMES, DOORS, WINDOWS	N/A	SW 7005 PURE WHITE	N/A	
MTL-4	PRE-FINISHED METAL SECTIONAL DOOR	N/A	WHITE	12' x 14'	

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EXTERIOR ELEVATIONS

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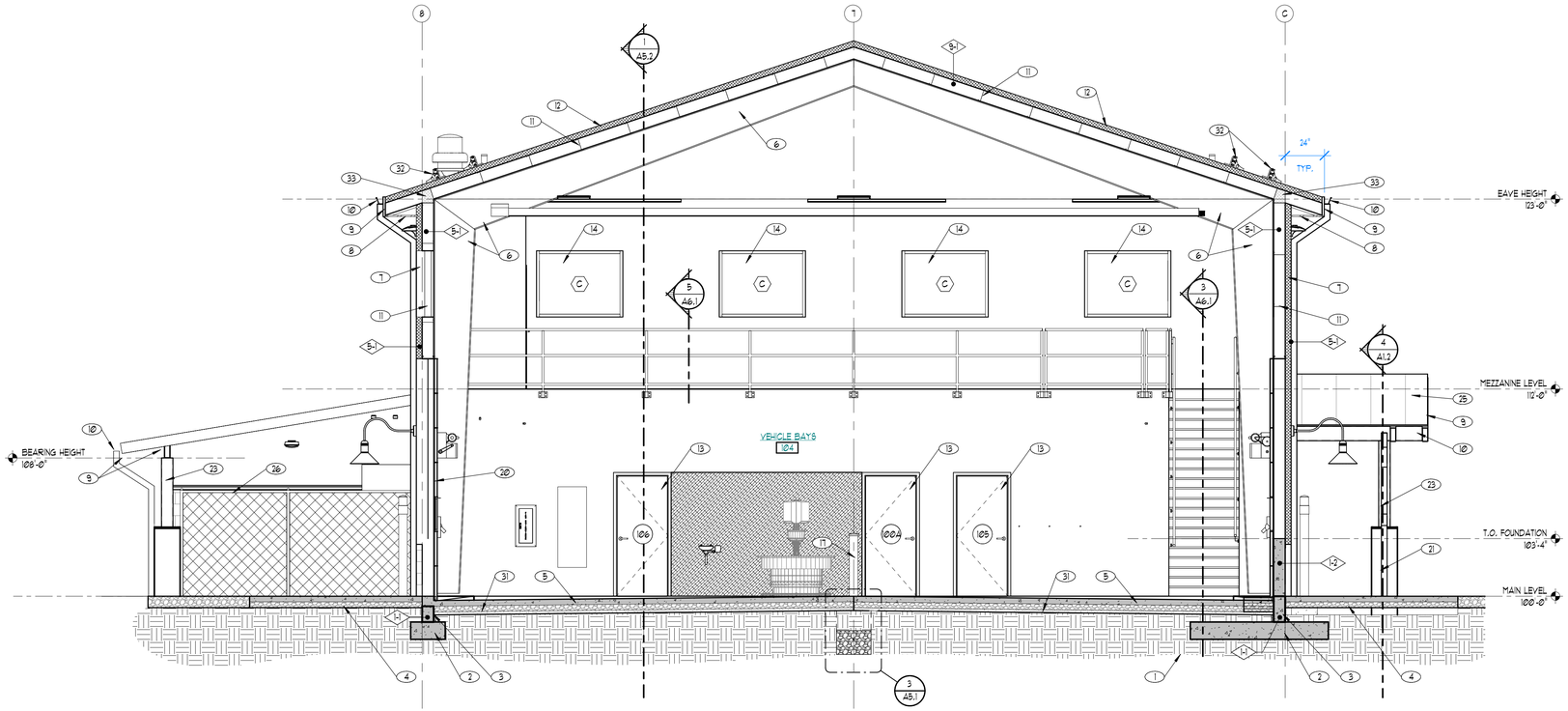
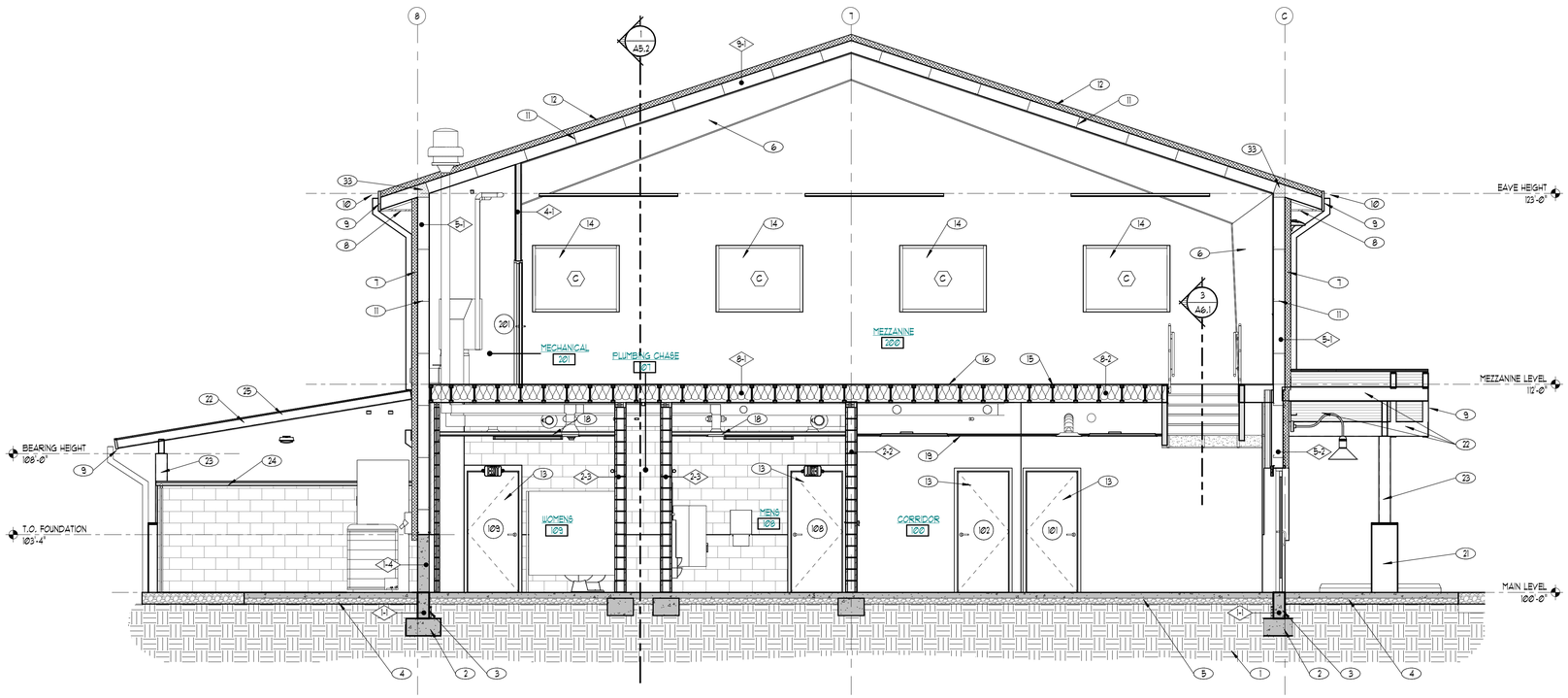


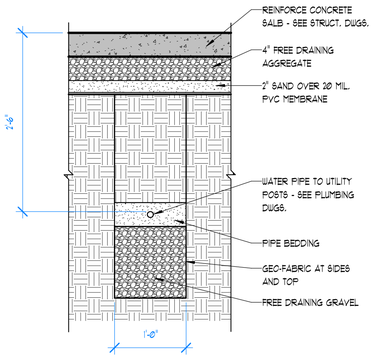
1 BUILDING SECTION

1/4" = 1'-0"



2 BUILDING SECTION

1/4" = 1'-0"



3 WATER PIPE TENCH DETAIL

1" = 1'-0"

SHEET NOTES

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A9.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A9.2
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A9.2

1. SUB-GRADE EARTH WORK IN COMPLIANCE w/ REQUIREMENTS OF GEOTECHNICAL ENGINEER
2. CONCRETE FOOTING - SEE STRUCTURAL DWG's
3. CONCRETE FOUNDATION WALL - SEE STRUCTURAL DWG's
4. 6" REINFORCED CONCRETE SLAB OVER 6" COMPACTED GRAVEL BASE - SEE CIVIL DWG's
5. REINFORCED CONCRETE SLAB OVER 4" FREE DRAINING AGGREGATE - SEE STRUCTURAL DWG's
6. PRIMARY STEEL FRAME STRUCTURE PROVIDED BY METAL BUILDING MANUFACTURER
7. PRE-FINISHED METAL WALL PANELS w/ 4" THICK INSULATED CORE PROVIDED BY METAL BUILDING MANUFACTURER
8. PRE-FINISHED METAL SOFFIT BY METAL BUILDING MANUFACTURER
9. PRE-FINISHED METAL FASCIA BY METAL BUILDING MANUFACTURER
10. PRE-FINISHED METAL RAIN GUTTER & DOWNSPOUTS BY METAL BUILDING MAUFACTURER
11. Z-GIRT FRAMING PROVIDED BY METAL BUILDING MANUFACTURER
12. PRE-FINISHED METAL ROOF PANELS w/ 4" THICK INSULATED CORE PROVIDED BY METAL BUILDING MANUFACTURER
13. DOOR - SEE DOOR SCHEDULE
14. WINDOW - SEE WINDOW SCHEDULE
15. TJI WOOD FLOOR JOISTS - SEE STRUCTURAL DWG's
16. FLOOR SHEATHING - SEE STRUCTURAL DWG's
17. UTILITY POST - SEE DETAIL 2/A5.2
18. SUSPENDED 5/8" GYP. BOARD SYSTEM (PAINT) - SEE SHEET A8.1
19. SUSPENDED ACOUSTICAL TILE SYSTEM - SEE SHEET A8.1
20. OVERHEAD SECTIONAL DOOR - SEE SCHEDULE
21. 18" x 18" CONCRETE PIER - SEE STRUCTURAL DWG's
22. METAL ROOF FRAMING - SEE STRUCTURAL DWG's
23. STEEL COLUMN - SEE STRUCTURAL DWGS
24. PRE-CAST CONCRETE WALL CAP
25. PRE-FINISHED METAL FIBR ROOF PANELS FURNISHED BY METAL BUILDING MANUFACTURER
26. CHAIN LINK FENCE
27. WOOD ROOF JOISTS - SEE STRUCTURAL DWGS
28. ROOF SHEATHING - SEE STRUCTURAL DWGS
29. PRE-FINISHED METAL FASCIA TO MATCH METAL ROOFING
30. PRE-FINISHED METAL SOFFIT TO MATCH METAL ROOFING
31. 2" SAND OVER 20 MIL. PVC MEMBRANE
32. SNOW GUARD SYSTEM w/ ROOF CLAMPS PROVIDED BY METAL BUILDING MANUFACTURER
33. FILL ALL VOIDS w/ EXPANDING SPRAY FOAM

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BUILDING SECTIONS

A5.1

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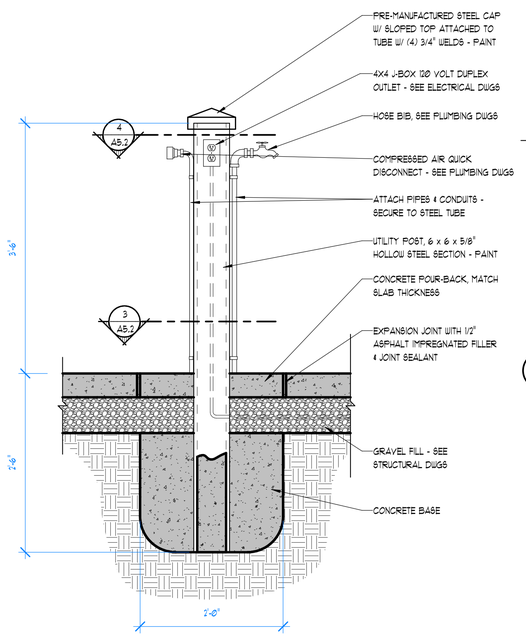
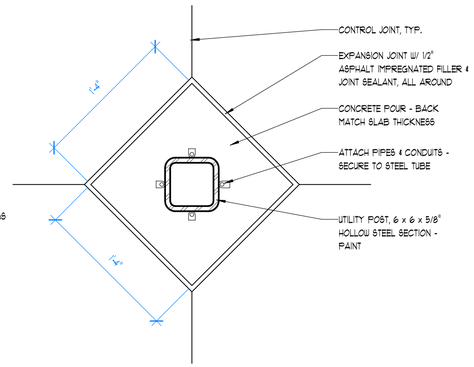


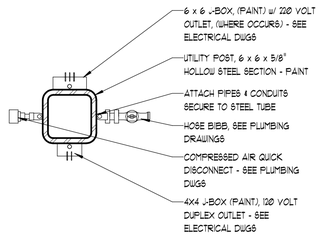
2 UTILITY POST DETAIL

1" = 1'-0"



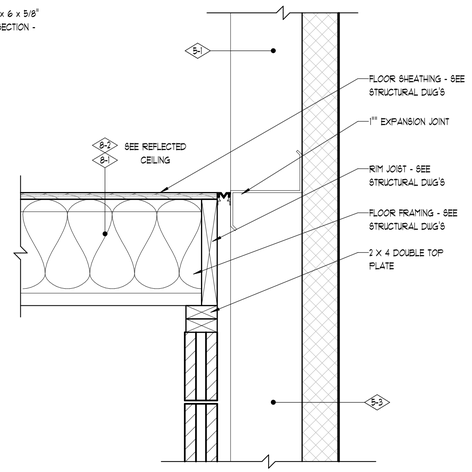
3 UTILITY POST - SLAB VIEW

1 1/2" = 1'-0"



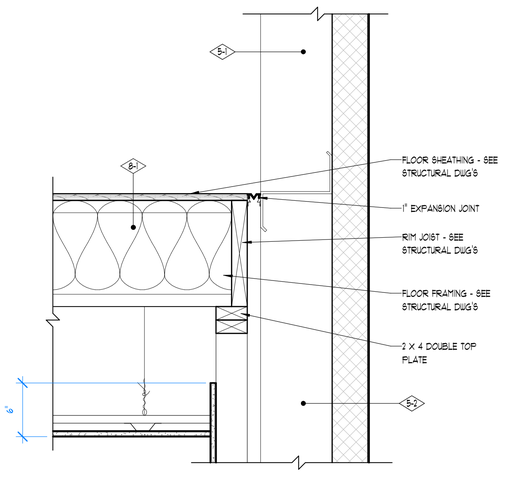
4 UTILITY POST - PLAN VIEW

1 1/2" = 1'-0"



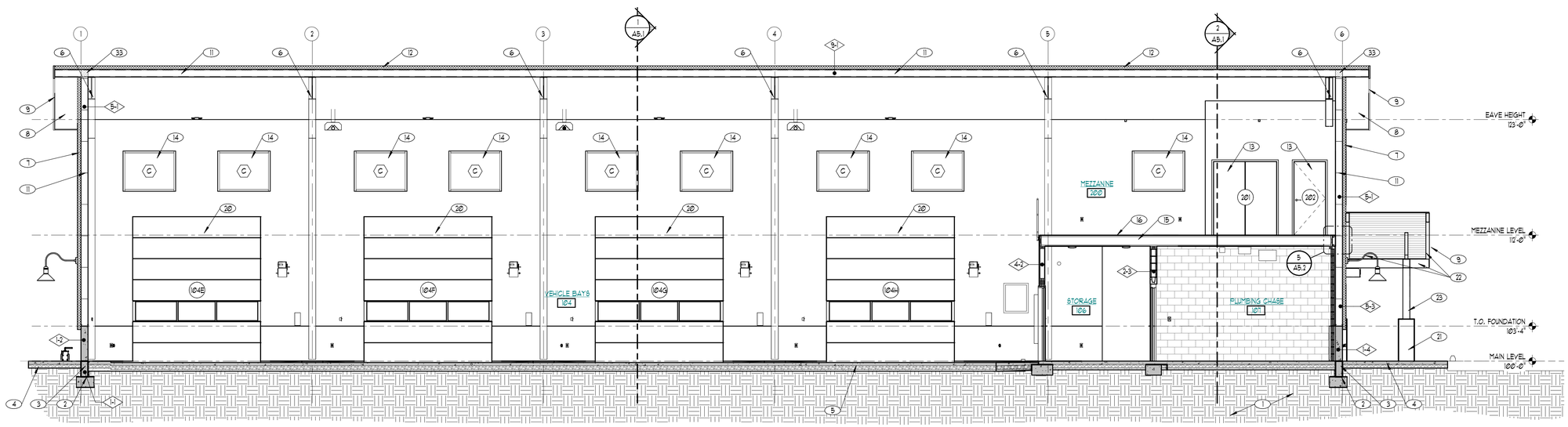
5 EXPANSION JOINT DETAIL

1 1/2" = 1'-0"



6 EXPANSION JOINT

1 1/2" = 1'-0"



1 BUILDING SECTION

3/16" = 1'-0"

SHEET NOTES

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.2
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.2

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10. PRE-FINISHED METAL RAIN GUTTER & DOWNSPOUTS BY METAL BUILDING MAUFACTURER
11. Z-GIRT FRAMING PROVIDED BY METAL BUILDING MANUFACTURER
12. PRE-FINISHED METAL ROOF PANELS W/ 4" THICK INSULATED CORE PROVIDED BY METAL BUILDING MANUFACTURER
13. DOOR - SEE DOOR SCHEDULE
14. WINDOW - SEE WINDOW SCHEDULE
15. TJI WOOD FLOOR JOISTS - SEE STRUCTURAL DWG's
16. FLOOR SHEATHING - SEE STRUCTURAL DWG's
17. UTILITY POST - SEE DETAIL 2/A5.2
18. SUSPENDED 5/8" GYP. BOARD SYSTEM (PAINT) - SEE SHEET A8.1
19. SUSPENDED ACOUSTICAL TILE SYSTEM - SEE SHEET A8.1
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26. CHAIN LINK FENCE
27. WOOD ROOF JOISTS - SEE STRUCTURAL DWGS
28. ROOF SHEATHING - SEE STRUCTURAL DWGS
29. PRE-FINISHED METAL FASCIA TO MATCH METAL ROOFING
30. PRE-FINISHED METAL SOFFIT TO MATCH METAL ROOFING
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BUILDING SECTIONS

A5.2

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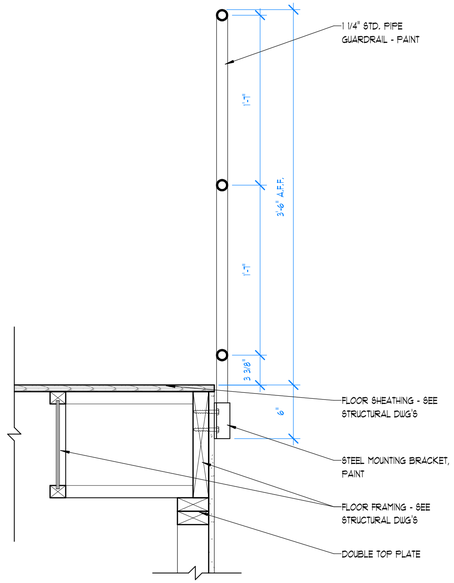
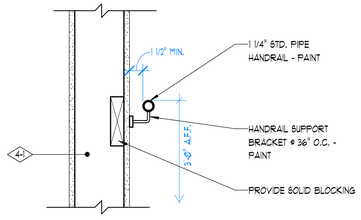
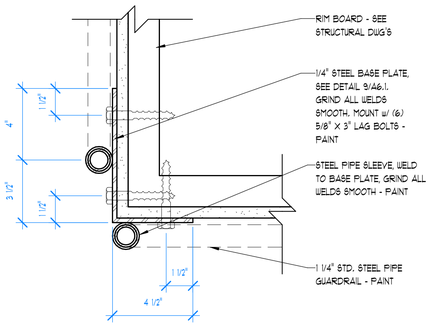


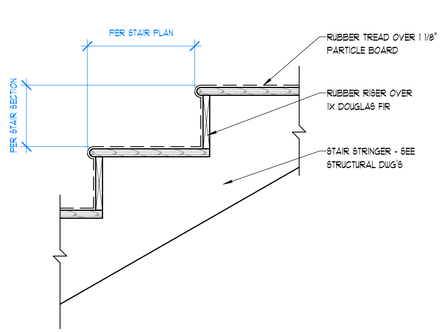
5 GUARDRAIL DETAIL
1 1/2" = 1'-0"



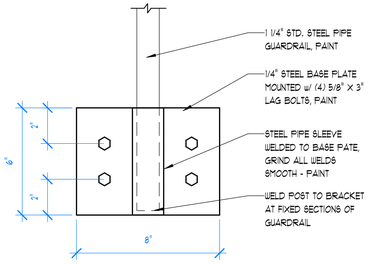
6 HANDRAIL DETAIL
1 1/2" = 1'-0"



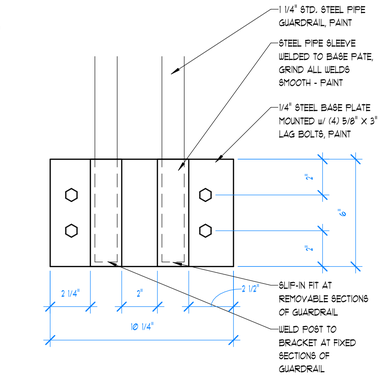
7 MOUNTING BRACKET @ CORNER
3" = 1'-0"



8 TREAD DETAIL
1 1/2" = 1'-0"



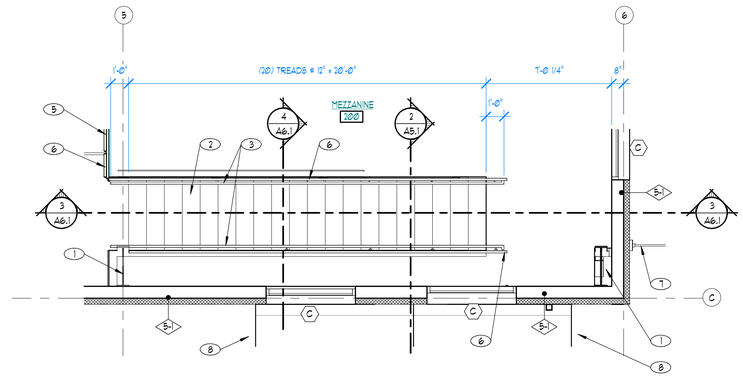
9 MOUNTING BRACKET DETAIL
3" = 1'-0"



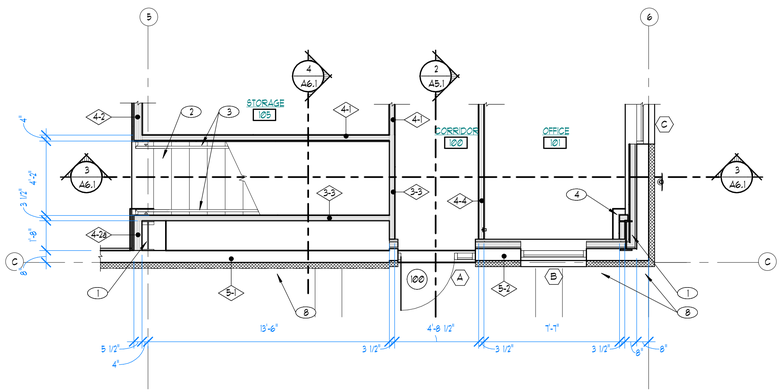
10 MOUNTING BRACKET DETAIL
3" = 1'-0"

SHEET NOTES

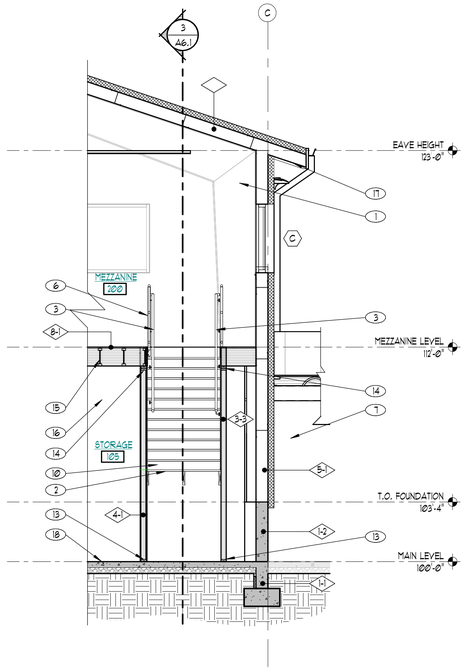
- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.2
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.2
- (1) PRIMARY STEEL FRAME STRUCTURE PROVIDED BY METAL BUILDING MANUFACTURER
- (2) RUBBER TREAD OVER 1 1/8" PARTICLE BOARD
- (3) 1 1/4" STD. STEEL PIPE HANDRAIL, PAINTED - SEE DETAIL 6/A6.1
- (4) CONCRETE PIER - SEE STRUCTURAL DWG'S
- (5) 1 1/4" STD. STEEL PIPE REMOVABLE GUARDRAIL, PAINT - SEE DETAIL 5/A6.1
- (6) 1 1/4" STD. STEEL PIPE GUARDRAIL, PAINT - SEE DETAIL 5/A6.1
- (7) LIGHT FIXTURE, SEE ELECTRICAL DWGS.
- (8) PRE-FINISHED METAL RAIN GUTTER & DOWNSPOUTS BY METAL BUILDING MAUFACTURER
- (9) HANDRAIL SUPPORTS @ 36" O.C. PROVIDE SOLID BLOCKING
- (10) RUBBER STAIR RISER OVER 1X DOUGLAS FIR RISER
- (11) 2X PRESSURE TREATED KICKPLATE
- (12) PRESSURE TREATED SILL PLATE w/ ANCHOR BOLT - SEE STRUCTURAL DWG'S
- (13) PRESSURE TREATED SILL PLATE
- (14) 2X DOUBLE TOP PLATE
- (15) MEZZANINE FLOOR FRAMING - SEE STRUCTURAL DWG'S
- (16) SUSPENDED CEILING SYSTEM - SEE REFLECTED CEILING PLAN
- (17) PRE-FINISHED METAL SOFFIT BY METAL BUILDING MANUFACTURER
- (18) 4" CONCRETE SLAB OVER GRAVEL BASE
- (19) WALL MOUNTED GUARDRAIL BRACKET, PAINT



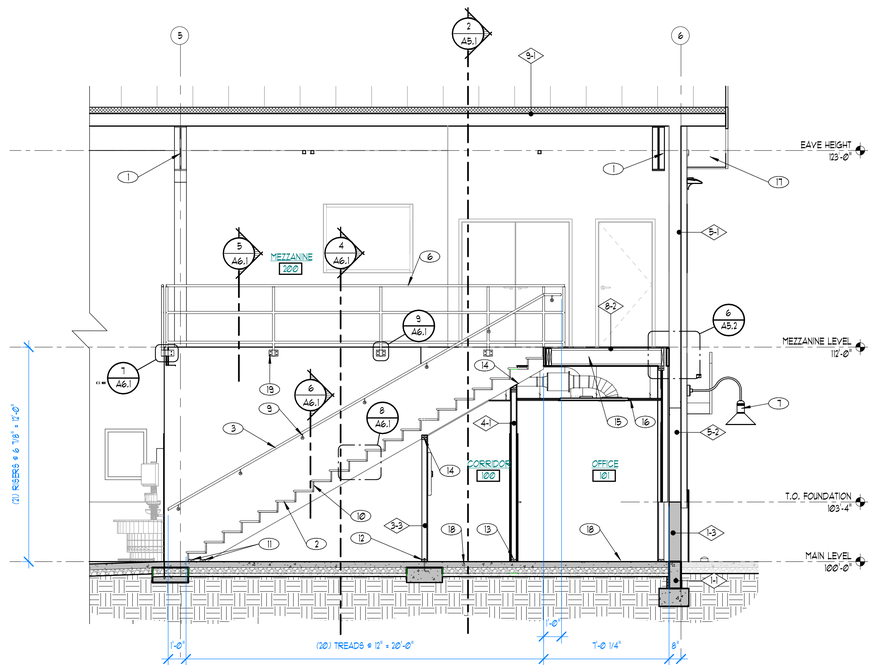
2 MEZZANINE LEVEL STAIR PLAN
1/4" = 1'-0"



1 MAIN LEVEL STAIR PLAN
1/4" = 1'-0"



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



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

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STATE OF UTAH

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ENLARGED STAIR PLANS & SECTIONS

A6.1

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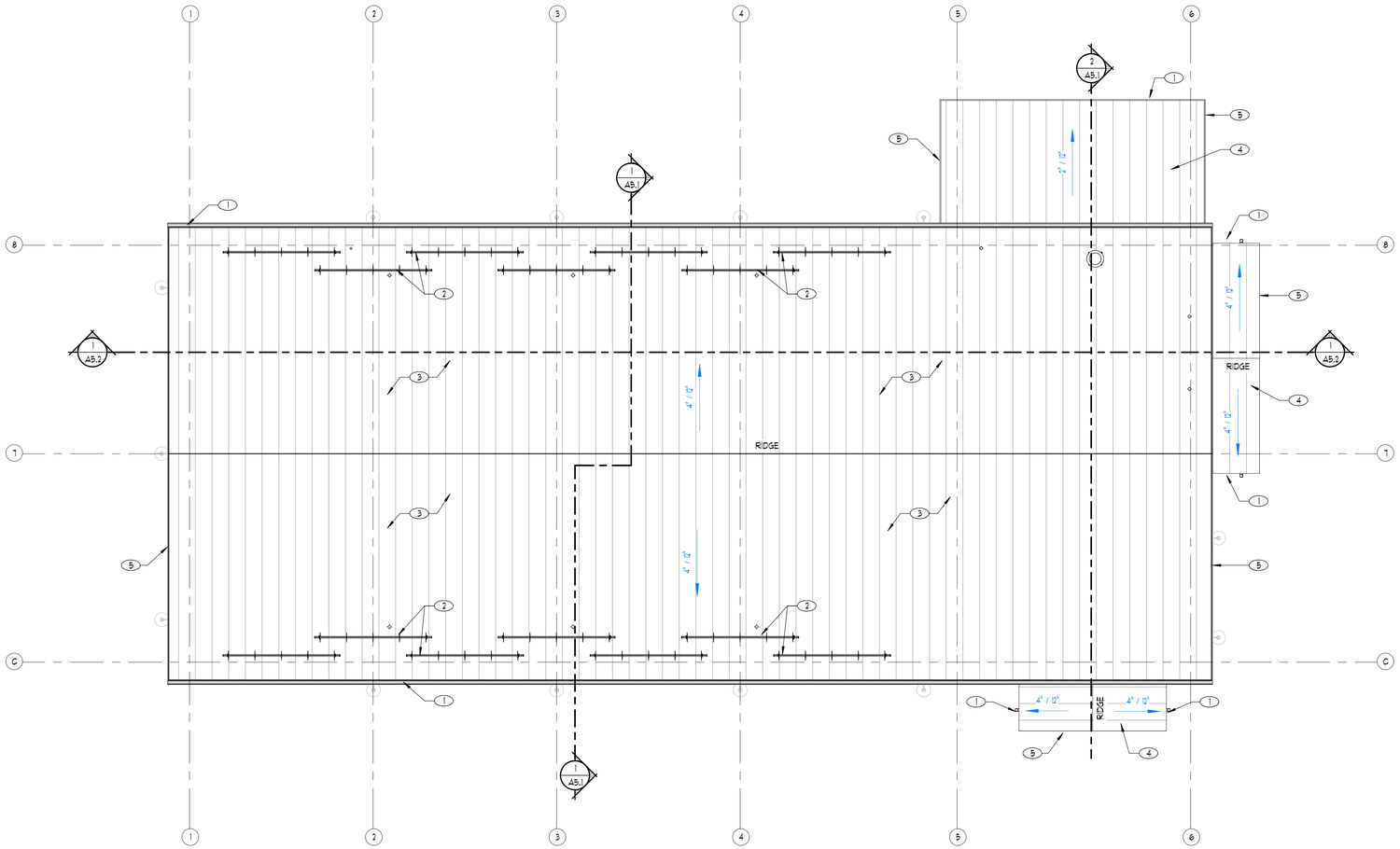
SHEET NOTES

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.2
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.2
- (1) PRE-FINISHED METAL RAIN GUTTER
- (2) SNOW GUARD SYSTEM w/ ROOF CLAMPS PROVIDED BY METAL BUILDING MANUFACTURER
- (3) PRE-FINISHED METAL ROOF PANELS W/ 4" THICK INSULATED CORE PROVIDED BY METAL BUILDING MANUFACTURER
- (4) PRE-FINISHED METAL ROOF PANELS PROVIDED BY METAL BUILDING MANUFACTURER
- (5) PRE-FINISHED METAL FASCIA BY METAL BUILDING MANUFACTURER



1 ROOF DRAINAGE PLAN

1/8" = 1'-0"

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ROOF PLAN

A7.1

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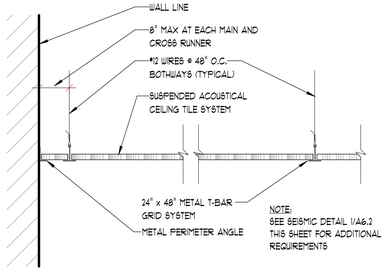
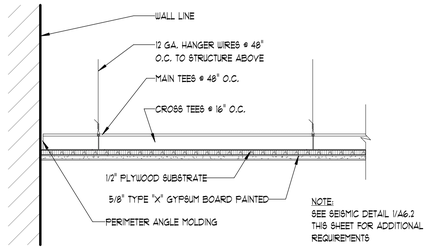


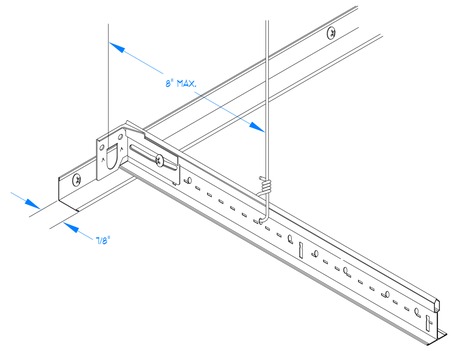
2 SUSPENDED LAY-IN CEILING DETAIL

1 1/2" = 1'-0"



3 SUSPENDED GYP. BD CEILING DETAIL

1 1/2" = 1'-0"



4 PERIMETER CLIP DETAIL @ ATTACHED WALL

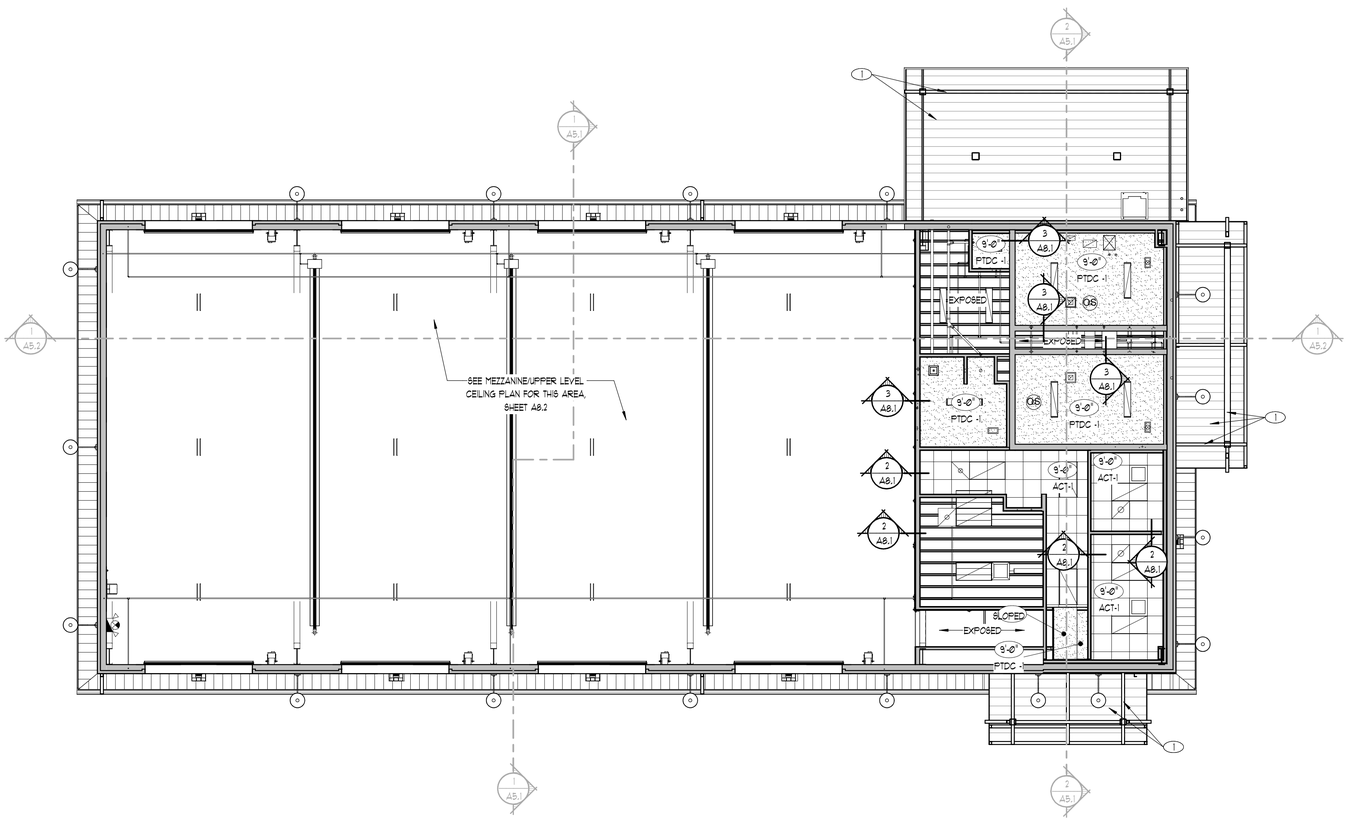
1 1/2" = 1'-0"

CEILING LEGEND

- GYPSUM BOARD
- 2 x 2 ACOUSTICAL LAY-IN CEILING TILE
- PRE-FINISHED METAL SOFFIT
- EXPOSED STEEL STRUCTURE
- TROFFER TYPE LIGHT - SEE ELEC. DWGS.
- RECESSED CAN LIGHT - SEE ELEC. DWGS.
- RETURN AIR VENT - SEE MECH. DWGS.
- SUPPLY AIR VENT - SEE MECH. DWGS.

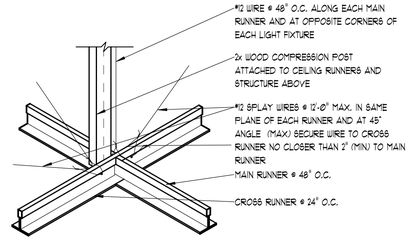
SHEET NOTES

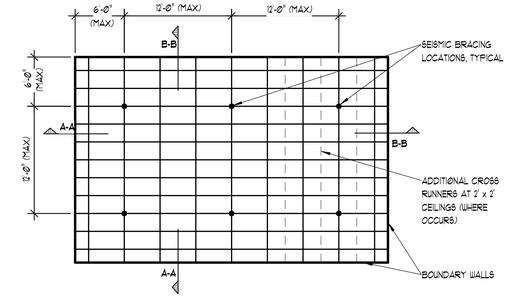
1. EXPOSED STEEL STRUCTURE - SEE METAL BUILDING DRAWINGS
2. OVERHEAD SECTIONAL DOORS IN RAISED POSITION
3. OVERHEAD SECTIONAL DOOR TRACKS & SUPPORTS
4. PRE-FINISHED METAL SOFFIT BY METAL BUILDING MANUFACTURER
5. PRE-FINISHED METAL FASCIA BY METAL BUILDING MANUFACTURER
6. PRE-FINISHED METAL RAIN GUTTER & DOUNSPOUTS BY METAL BUILDING MAUFACTURER
7. RADIANT TUBE HEATER - SEE MECHANICAL DWGS
8. LIGHT FIXTURE, SEE ELECTRICAL DWGS.

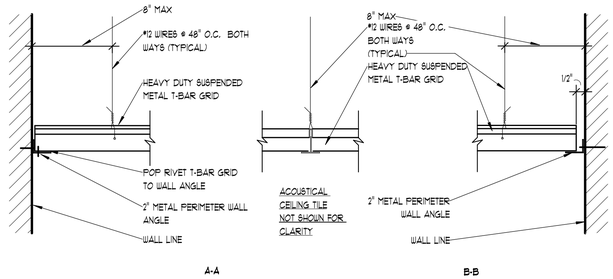


1 MAIN LEVEL REFLECTED CEILING PLAN

1/8" = 1'-0"







5 SEISMIC DETAIL

1 1/2" = 1'-0"

SEISMIC CEILING NOTES

1. SUSPENDED CEILINGS SHALL BE INSTALLED IN COMPLIANCE WITH 2012 IBC SECTION 808.1.1.1 AND WITH ASTM C 635/636.
2. T-BAR GRID SYSTEM SHALL BE HEAVY-DUTY AND SHALL INCLUDE A 2" PERIMETER WALL ANGLE AS SHOWN ON THE DETAILS.
3. CEILINGS WITH AN AREA EXCEEDING 1,000 SQ. FT. SHALL BE PROVIDED WITH HORIZONTAL RESTRAINT IN COMPLIANCE WITH THE APPLICABLE STANDARDS.
4. CEILING AREAS EXCEEDING 2500 SQ. FT. WILL REQUIRE A SEISMIC SEPARATION JOINT. SEE REFLECTED CEILING PLAN FOR LOCATIONS IF APPLICABLE AND DETAILS.
5. EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTIONS, SPRINKLER HEADS AND OTHER PENETRATIONS SHALL HAVE A 2" OVERSIZE RING, SLEEVE OR ADAPTOR THROUGH THE CEILING TILE TO ALLOW FOR FREE MOVEMENT OF AT LEAST 1" IN ALL HORIZONTAL DIRECTIONS.
6. CHANGES IN CEILING PLANE ELEVATION SHALL BE PROVIDED WITH POSITIVE BRACING. SEE REFLECTED CEILING PLAN AND DETAILS WHERE APPLICABLE.
7. CABLE TRAYS AND ELECTRICAL CONDUITS SHALL BE INDEPENDENTLY SUPPORTED AND BRACED INDEPENDENTLY OF THE CEILING.
8. THE SUSPENDED CEILINGS SHALL BE SUBJECT TO SPECIAL INSPECTION REQUIREMENTS OF IBC SECTION 1704.

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MAIN LEVEL REFLECTED CEILING PLAN

A8.1

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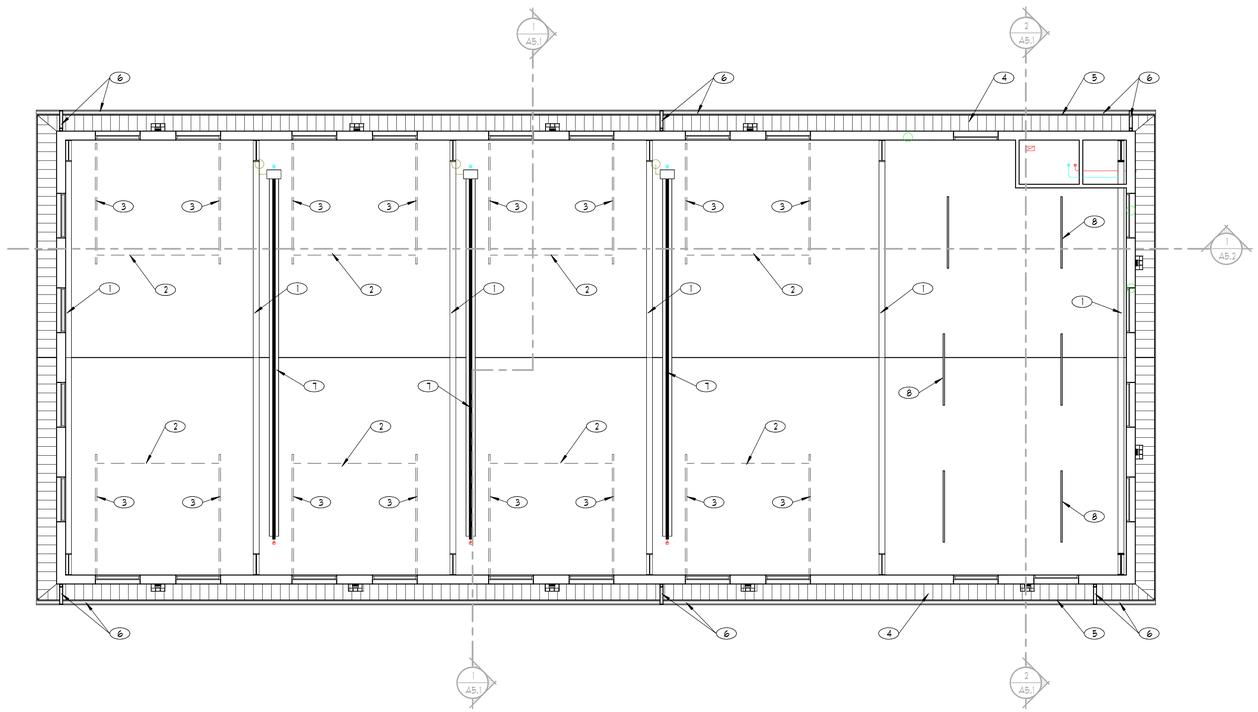
CEILING LEGEND

- GYPSUM BOARD
- 2 x 2 ACOUSTICAL LAY-IN CEILING TILE
- PRE-FINISHED METAL SOFFIT
- EXPOSED STEEL STRUCTURE
- TROFFER TYPE LIGHT - SEE ELEC. DWGS.
- RECESSED CAN LIGHT - SEE ELEC. DWGS.
- RETURN AIR VENT - SEE MECH. DWGS.
- SUPPLY AIR VENT - SEE MECH. DWGS.

SHEET NOTES

1. EXPOSED STEEL STRUCTURE - SEE METAL BUILDING DRAWINGS
2. OVERHEAD SECTIONAL DOORS IN RAISED POSITION
3. OVERHEAD SECTIONAL DOOR TRACKS & SUPPORTS
4. PRE-FINISHED METAL SOFFIT BY METAL BUILDING MANUFACTURER
5. PRE-FINISHED METAL FASCIA BY METAL BUILDING MANUFACTURER
6. PRE-FINISHED METAL RAIN GUTTER & DOWNSPOUTS BY METAL BUILDING MANUFACTURER
7. RADIANT TUBE HEATER - SEE MECHANICAL DWGS
8. LIGHT FIXTURE, SEE ELECTRICAL DWGS.



1 MEZZANINE LEVEL REFLECTED CEILING PLAN

1/8" = 1'-0"

N

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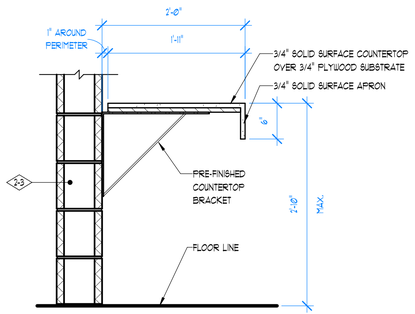
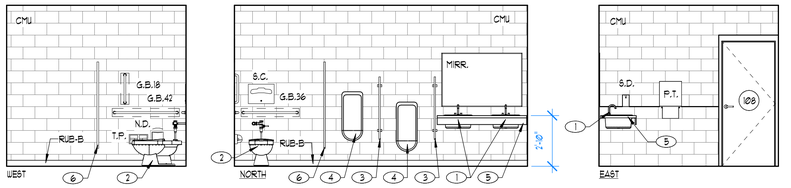
MEZZANINE LEVEL
REFLECTED CEILING PLAN

A8.2

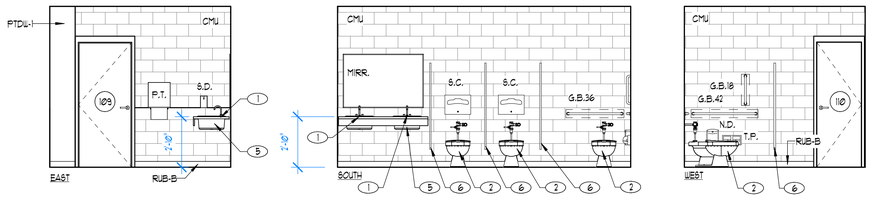
sheet number



7 TYP. VANITY DETAIL
1" = 1'-0"



8 MENS #108
1/4" = 1'-0"



6 WOMENS #109
1/4" = 1'-0"

FINISH LEGEND

PTD-1	TEXTURED & PAINTED GYPSUM BOARD
CMU	CONCRETE MASONRY UNIT
RUB-B	TORSET RUBBER BASE
CTW	CERAMIC TILE
FRP	FIBER REINFORCED PANEL

ACCESSORY ABBREVIATIONS

MIRR.	54" x 36" MIRROR
S.D.	SOAP DISPENSER +48" AFF.
T.P.	TOILET PAPER DISPENSER +48" AFF.
G.B.18	18" GRAB BAR
G.B.36	36" GRAB BAR
G.B.42	42" GRAB BAR
P.T.	PAPER TOWEL DISPENSER
S.C.	SEAT COVER DISPENSER
D.C.	DIAPER CHANGING STATION
N.D.	FEMININE NAPKIN DISPENSOR
MB	MOP AND BROOM HANGER

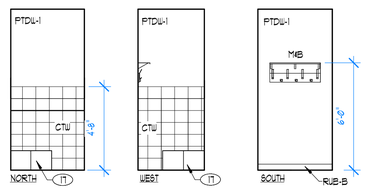
CLEARANCE LEGEND

- A — 60" DIAMETER WHEELCHAIR TURNING SPACE (304.3.1)
- B — 56" X 60" CLEARANCE FOR WATER CLOSET (604.3.1)
- C — 30" X 52" CLEAR FLOOR SPACE FOR FORWARD APPROACH TO SINK / WORK / SPACE / APPLIANCE (305.3.1)

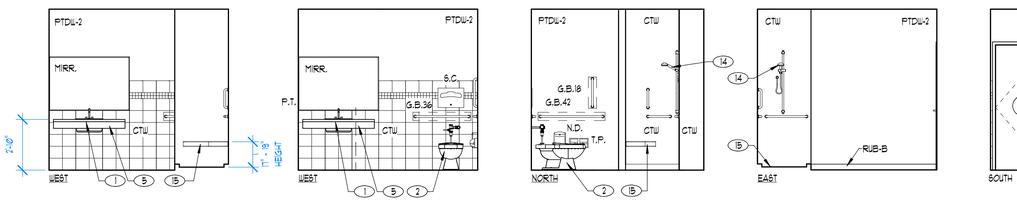
SHEET NOTES

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.2
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.2

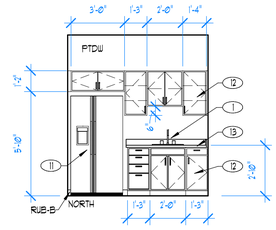
1. SINK AND FAUCET - SEE PLUMBING DWGS
2. TOILET - SEE PLUMBING DWGS
3. URINAL SCREEN
4. URINAL - SEE PLUMBING DWGS
5. PLASTIC LAMINATE COUNTERTOP w/ 4" BACKSPLASH - SEE DETAIL 8/A9.1
6. PRE-FINISHED METAL TOILET PARTITION
7. HAND WASH FOUNTAIN - SEE PLUMBING DWGS
8. EYEWASH STATION - SEE PLUMBING DWGS
9. 1 1/4" STD. STEEL PIPE GUARDRAIL, PAINT - SEE DETAIL 5/A6.1
10. WALL MOUNTED GUARDRAIL BRACKET - SEE DETAIL 9/6.1
11. REFRIGERATOR - N.I.C.
12. PLASTIC LAMINATE FACED CABINETS
13. SOLID SURFACE COUNTERTOP AND 4" BACKSPLASH
14. SHOWER HEAD WITH ADJUSTABLE BAR
15. WALL MOUNTED, FOLDING SHOWER SEAT
16. PRIMARY STEEL FRAME STRUCTURE PROVIDED BY METAL BUILDING MANUFACTURER
17. MOP SINK - SEE PLUMBING DWGS
18. WOOD FRAMED STAIR - SEE SHEET A6.1
19. SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE DETAIL 8/G3.1
20. DRINKING FOUNTAIN - SEE DETAIL 4/G3.1
21. INSTALL TILE AT INTERIOR SIDE OF WALL



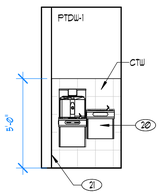
5 JANITOR #110
1/4" = 1'-0"



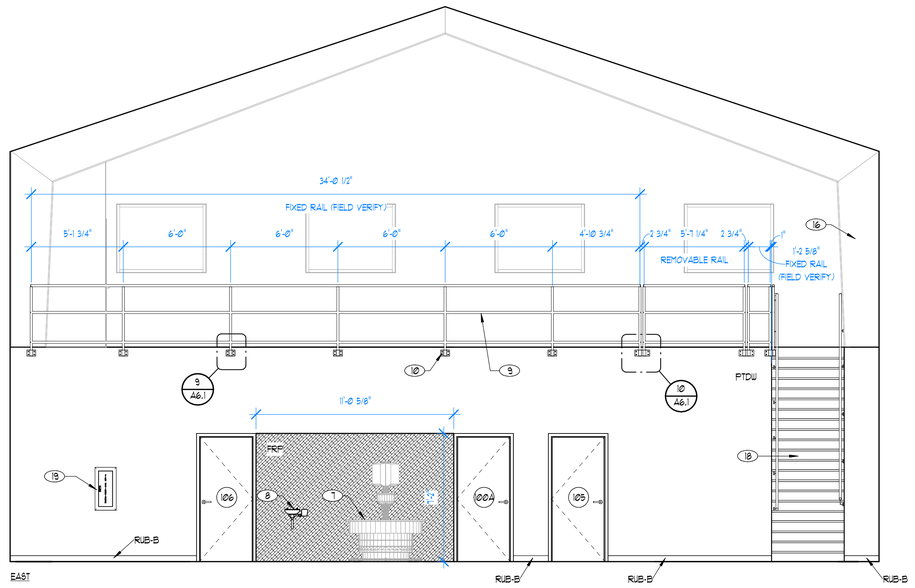
4 TOILET ROOM #103
1/4" = 1'-0"



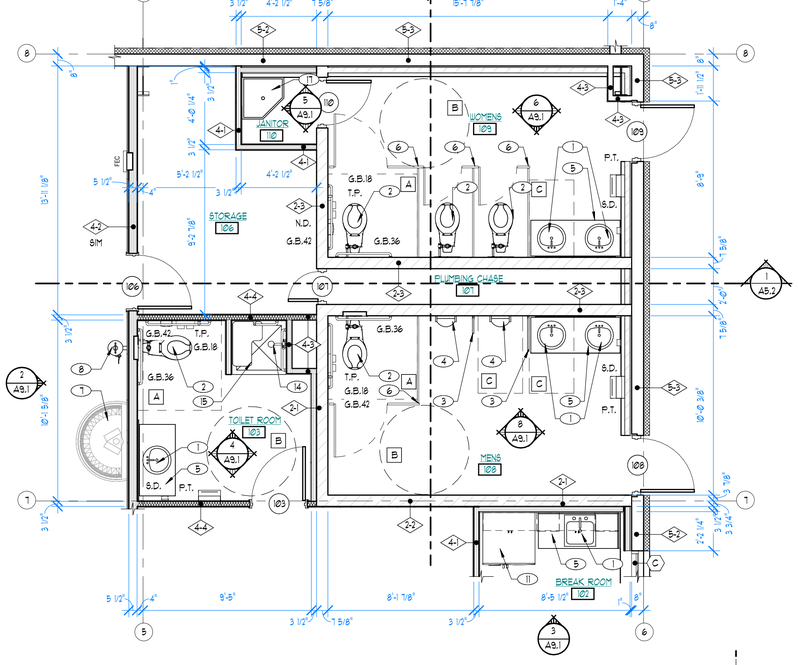
3 BREAK ROOM #102
1/4" = 1'-0"



9 DRINKING FOUNTAIN
1/4" = 1'-0"



2 VEHICLE BAYS 104
1/4" = 1'-0"



1 ENLARGED RESTROOMS & JANITOR'S CLOSET PLAN
1/4" = 1'-0"

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LARGE SCALE FLOOR PLAN & INT. ELEVATIONS

A9.1
sheet number

GENERAL STRUCTURAL NOTES

1. IN ALL CASES, "CONTRACTOR" SHALL REFER TO THE CONTRACTOR OR SUB-CONTRACTOR RESPONSIBLE FOR THE TRADE SPECIFICALLY REFERRED TO IN THE NOTES (i.e. STEEL, CONCRETE, MASONRY), THE "CONTRACTOR" SHALL MEET ALL NOTE REQUIREMENTS AND SHALL INCLUDE THE COSTS ASSOCIATED WITH THESE REQUIREMENTS IN HIS/HER BID. THE GENERAL CONTRACTOR, OR CONSTRUCTION MANAGER, IS ULTIMATELY RESPONSIBLE FOR COMPLIANCE WITH ALL NOTE REQUIREMENTS.
2. THE CONTRACTOR SHALL PERFORM HIS/HER TRADE AND DUTIES IN A MANNER CONFORMING TO THE PROCEDURES AND REQUIREMENTS AS STATED IN THE 2021 INTERNATIONAL BUILDING CODE (IBC), AND/OR LATEST CODE ADOPTED BY THE LOCAL BUILDING OFFICIAL, AND ALL LOCAL ORDINANCES.
3. THE GENERAL CONTRACTOR, OR PROJECT MANAGER, SHALL COORDINATE THE WORK PERFORMED BY ALL TRADES.
4. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR ARCHITECT OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR THE SPECIFICATIONS BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN ALL CASES, UNLESS OTHERWISE DIRECTED, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN AND BE PERFORMED.
5. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, SLOPES AND ELEVATIONS, ETC., AT THE JOB SITE AND SHALL COORDINATE THESE WITH THE ARCHITECT AND WITH ALL TRADES. CONSTRUCTION DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
6. VISITS TO THE JOB SITE BY REPRESENTATIVES OF THE ENGINEER DO NOT CONSTITUTE APPROVAL OF THE WORK PERFORMED BY THE CONTRACTOR OR HIS SUBCONTRACTORS; THEY ARE MERELY FOR THE PURPOSE OF OBSERVATION.
7. SHOP DRAWINGS FOR ANY FABRICATED COMPONENTS OR COMPONENTS DESIGNED-BY-MANUFACTURER SHALL BE APPROVED BY THE ENGINEER AND ARCHITECT PRIOR TO FABRICATION AND ERECTION. SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT.
8. THE CONTRACTOR SHALL VERIFY SIZES, LOCATIONS, LOADS, AND EQUIPMENT ANCHORAGE IN THE FIELD WITH THE EQUIPMENT MANUFACTURER (OR SUPPLIER) PRIOR TO FABRICATION OR INSTALLATION OF SUPPORTING STRUCTURES.
9. TEMPORARY SHORING (BRACING) SHALL BE PROVIDED WHERE NECESSARY. SHORING SHALL SUPPORT ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED (i.e. WIND). SHORING SHALL REMAIN IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE COMPLETED. ALL SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR
10. DURING AND AFTER CONSTRUCTION, THE CONTRACTOR AND OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOADS FOR THE OCCUPANCY. SEE STRUCTURAL PLANS AND CALCULATIONS FOR STRUCTURAL DESIGN LOADINGS AND CRITERIA.
11. ANY SPECIAL INSPECTION REQUIRED BY THE CONSTRUCTION DOCUMENTS, OR BY THE BUILDING OFFICIAL, OR BY THE IBC, IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ON BEHALF OF THE OWNER.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.
13. PRIOR APPROVAL, IN WRITING, FROM THE ENGINEER IS REQUIRED FOR ANY DEVIATION FROM THE STRUCTURAL PLANS AND/OR CONSTRUCTION DOCUMENTS. OPTIONAL MEMBER SIZES AND VARIATIONS IN THE FRAMING REQUIRE PRIOR APPROVAL OF THE ENGINEER, ARCHITECT AND OWNER. FAILURE TO FOLLOW PLANS AND CONSTRUCTION DOCUMENTS CONSTITUTES CHANGE IN PROJECT SCOPE.
14. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL NOTES AND REQUIREMENTS.
15. THE ENGINEER RESERVES THE RIGHT TO REQUEST REPLACEMENT OF ANY PORTION OF THE STRUCTURE DEVIATING FROM THE PLANS WHERE WRITTEN PRIOR APPROVAL HAS NOT BEEN OBTAINED AND WHERE INSPECTION BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE CHANGED PORTION HAS NOT HAPPENED.
16. ALL SITE WORK, GRADING, COMPACTION AND BACKFILL, ETC. SHALL BE DONE IN COMPLIANCE WITH A GEOTECHNICAL REPORT SPECIFIC TO THE SITE. IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO OBTAIN A GEOTECHNICAL REPORT, IF ONE HAS NOT ALREADY BEEN OBTAINED, AND SUBMIT A COPY TO THE ENGINEER FOR VERIFICATION.
17. ALL ANCHORING ADHESIVE SHALL BE SIMPSON SET-3G EPOXY OR HILTI HIT HY-200V3 ADHESIVE. ANCHORS SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS. EPOXIED ANCHORS SHALL NOT BE INSTALLED IN CONCRETE LESS THAN 21 DAYS OLD
18. ALL NON-EPOXIED POST-INSTALLED ANCHORS TO BE SIMPSON STRONG-BOLT 2 WEDGE ANCHORS, TITEN HD SCREW ANCHORS, HILTI KWIK HUS-EZ SCREW ANCHORS, OR HILTI KWIK BOLT TZ2 ANCHORS. MECHANICAL ANCHORS SHALL NOT BE INSTALLED IN CONCRETE LESS THAN 7 DAYS OLD
19. FASTENERS AND ANCHOR BOLTS USED IN PRESERVATIVE-TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL. THE COATING WEIGHTS SHALL BE IN ACCORDANCE WITH ASTM A 153.

GENERAL CONCRETE NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2021 IBC, ACI 318, AND LOCAL ORDINANCES.
3. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO PLACING CONCRETE.
4. CONTRACTOR SHALL COORDINATE WITH MECHANICAL, ELECTRICAL, AND ARCHITECTURAL PRIOR TO PLACING CONCRETE. PROVIDE SLEEVES, BLOCK OUTS, ETC... AS REQUIRED.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PLACEMENT OF ALL ANCHOR BOLTS, SEISMIC ANCHORS OR STRAPS, ETC.. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FORM WORK, POUR STOPS, ETC. REQUIRED TO CONSTRUCT ALL CONCRETE WORK. SUCH FORM WORK IS NOT NECESSARILY SHOWN ON THE STRUCTURAL PLANS OR DETAILS. THE CONTRACTOR SHALL SPECIFY ALL FORM WORK AND SHALL INCLUDE THE COST FOR SUCH IN HIS/HER ORIGINAL BID.
7. CONTRACTOR SHALL PROVIDE ALL SHORING AS REQUIRED.
8. SEE FOUNDATION PLAN FOR ADDITIONAL NOTES AND REQUIREMENTS.

CONCRETE & REINFORCEMENT

9. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS. UNLESS NOTED OTHERWISE. FOOTINGS MAY HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
10. SEE PROJECT SPECIFICATIONS FOR CONCRETE DESIGN REQUIREMENTS.
11. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO THE STANDARD SPECIFICATIONS ASTM A615 GRADE 60. REINFORCING STEEL SHALL BE PROPERLY TIED INTO PLACE PRIOR TO PLACING CONCRETE.
12. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI DETAILING MANUAL AND ACI STANDARDS (LATEST EDITION).
13. ALL SPLICES IN CONTINUOUS CONCRETE REINFORCING BARS SHALL LAP A MINIMUM OF 40 BARdiaS. ALL SPLICES SHALL BE MADE IN A COMPRESSION ZONE UNLESS NOTED. ALL CONTINUOUS REINFORCING SHALL TERMINATE WITH A 90 DEG. BEND OR WITH SEPARATE CORNER BARS.

FOUNDATION WALLS

14. SEE FOUNDATION WALL SCHEDULE, OR FOUNDATION PLAN, FOR SPECIFICATION OF FOUNDATION WALL REINFORCEMENT. SEE RETAINING WALL SCHEDULE, OR FOUNDATION PLAN, FOR SPECIFICATION OF RETAINING WALL REINFORCEMENT.
15. BRACE WALLS AS REQUIRED UNTIL FLOOR SLABS AND/OR FLOOR FRAMING ARE IN PLACE, AND UNTIL WALLS HAVE PROPERLY CURED.
16. FOUNDATION WALLS HAVE BEEN DESIGNED USING AN EQUIVALENT FLUID PRESSURE. A GEOTECHNICAL REPORT SHALL BE PROVIDED TO THE ENGINEER TO VERIFY PRESSURES USED FOR DESIGN. SEE STRUCTURAL PLANS AND CALCULATIONS FOR ACTUAL FLUID PRESSURE USED.
17. BACKFILL ADJACENT TO FOUNDATION WALLS OR IN LANDSCAPED AREAS SHALL BE PLACED IN LOOSE LIFTS A MAXIMUM OF EIGHT INCHES (8"). FILL SHALL HAVE A MOISTURE CONTENT WITHIN 2% OF OPTIMUM AND SHALL BE COMPACTED TO AT LEAST 90% MAXIMUM DENSITY (ASTM D 1557). HEAVY EQUIPMENT SHALL NOT BE USED TO BACKFILL WITHOUT PRIOR CONSENT OF THE ENGINEER.
18. CONTRACTOR SHALL PROVIDE DRAINAGE BEHIND ALL FOUNDATION AND RETAINING WALLS. CONTRACTOR SHALL RETAIN CONSULTANTS AS NECESSARY TO ACCOMPLISH THIS WORK.
19. CONSTRUCTION JOINTS (COLD JOINTS) IN WALLS SHALL BE WATERPROOFED TO PREVENT LEAKS.
20. WHERE WALLS OR FOOTINGS SUPPORT MASONRY, PROVIDE MATCHING DOWELS OF SAME SIZE AND SPACING AS VERTICAL WALL STEEL.
21. WHERE WALLS SUPPORT WOOD FRAMING, PROVIDE 5/8"dia x 10" LONG ANCHOR BOLTS AT 32" O.C UNLESS NOTED OTHERWISE ON THE FOUNDATION PLAN. ANCHOR BOLTS SHALL BE EMBEDDED A MINIMUM OF 7". ANCHOR BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. ALL ANCHOR BOLTS SHALL HAVE 3" x 3" x 1/4" PLATE WASHERS. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE. IF A DIAGONAL SLOT IS USED IN THE SQUARE WASHER, A STANDARD CUT WASHER SHALL BE PLACED BETWEEN THE PLATE WASHER AND NUT.
22. THE CONTRACTOR SHALL COORDINATE STEPS IN WALLS WITH THE ARCHITECT, AND SHALL VERIFY WITH THE ENGINEER.

SLABS

23. REINFORCE ALL SLABS ON GRADE w/ № 4 BARS AT 18" O.C. EACH WAY
24. RECESS FOUNDATION AND POUR SLABS THROUGH, TYPICAL AT ALL EXTERIOR DOORS AND STORE FRONT TYPE WINDOWS. SEE FOUNDATION DETAILS.
25. DEPRESS SLABS AS REQUIRED IN AREAS OF CERAMIC TILE, SPECIAL ENTRY MATS, HARDWOOD FLOORS, ETC. COORDINATE LOCATION AND DEPTH WITH THE ARCHITECT.
26. PROVIDE ISOLATION JOINTS AROUND COLUMNS/SPREAD FOOTINGS, AND CONTROL JOINTS AS REQUIRED, PARTICULARLY WHERE SLABS TRANSITION IN SIZE.
27. THE CONTRACTOR SHALL TAKE CARE THAT HEAVY EQUIPMENT, AND AREAS USED FOR STAGING, DOES NOT CRACK AND DAMAGE SLABS ON GRADE. DAMAGED SLABS SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.
28. REFER TO THE CIVIL PLANS FOR SPECIFICATION OF ALL EXTERIOR FLAT WORK.

FOOTINGS

29. SEE FOOTING SCHEDULE FOR FOOTING SIZES AND REINFORCING REQUIREMENTS.
30. FOOTINGS HAVE BEEN DESIGNED USING AN ALLOWABLE BEARING PRESSURE. SEE STRUCTURAL PLANS AND CALCULATIONS FOR ACTUAL BEARING PRESSURE USED.
31. ALL EXTERIOR FOOTINGS SHALL BEAR BELOW FROST DEPTH. CONTRACTOR TO VERIFY.
32. THE CONTRACTOR SHALL COORDINATE STEPS IN FOOTINGS WITH THE ARCHITECT, AND SHALL VERIFY WITH THE ENGINEER.

STRUCTURAL FILL

33. STRUCTURAL FILL SHALL BE SPECIFIED AND APPROVED BY THE SOILS ENGINEER OF RECORD, BY WAY OF A GEOTECHNICAL REPORT, AS BEING APPROPRIATE FOR THE APPLICATION. STRUCTURAL FILL SHALL BE PROVIDED IN THE BUILDING PAD AND PAVEMENT AREAS AS NECESSARY.
34. STRUCTURAL FILL SHOULD BE PLACED IN LOOSE LIFTS A MAXIMUM OF FOUR INCHES (4") FOR HAND OPERATED EQUIPMENT, SIX INCHES (6") FOR MOST "TRENCH COMPACTORS" AND EIGHT INCHES (8") FOR LARGER ROLLERS. FILL SHALL HAVE A MOISTURE CONTENT WITHIN 2% OF OPTIMUM AND SHALL BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY (ASTM D 1557).
35. FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED NATIVE SOILS OR 18" MINIMUM OF PROPERLY PLACED AND COMPACTED STRUCTURAL FILL. ALL STRUCTURAL FILL SHALL EXTEND 12" MIN. BEYOND EDGES OF FOOTINGS. SEE SITE PLAN FOR ADDITIONAL FILL REQUIRED TO RAISE THE BUILDING PAD TO REQUIRED ELEVATIONS.
36. SLABS ON GRADE SHALL BE SUPPORTED ON UNDISTURBED NATIVE SOILS OR 12" MINIMUM OF PROPERLY PLACED AND COMPACTED STRUCTURAL FILL. SLABS ON GRADE SHALL ALSO BE CONSTRUCTED OVER 4" FREE DRAINING BASE PLACED OVER THE STRUCTURAL FILL.
37. CONTRACTOR SHALL EMPLOY THE GEOTECHNICAL ENGINEER TO OBSERVE AND APPROVE THE EXCAVATION PRIOR TO PLACING STRUCTURAL FILL OR FORMING FOOTINGS.

GENERAL MASONRY NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE, CURRENT ACI 530, AND LOCAL ORDINANCES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING AS REQUIRED.
4. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR WALL TYPES AND LOCATIONS.
5. SEE FRAMING PLANS FOR ADDITIONAL NOTES AND REQUIREMENTS.

WALLS & REINFORCEMENT

6. CONCRETE MASONRY UNIT (CMU) TO HAVE f'm = 2000 PSI MIN. AND MEET APPROVAL OF OWNER, ARCHITECT AND PROJECT SPECIFICATIONS.
7. REINFORCE MASONRY IN BOTH DIRECTIONS. GROUT FULL ALL BLOCK CELLS WITH REINFORCING. ALIGN CELLS TO PRESERVE UNOBSTRUCTED VERTICAL CELLS OF 2" X 3" MINIMUM. GROUT IN 4 FOOT LIFTS MAXIMUM WITHOUT PRIOR APPROVAL.
8. REINFORCE WALLS AS PER THE PROVIDED MASONRY WALL SCHEDULE.
9. ALL REINFORCING STEEL TO BE GRADE 60. REINFORCING TO CONFORM TO ASTM A615 OR A706. FOR WELDING REBAR USE GRADE 60W OR A706.
10. DOWEL REINFORCING IN COLUMNS AND WALLS INTO THE FOOTING OR STRUCTURE BELOW WITH REBAR OF THE SAME SIZE AND SPACING AS REQUIRED ABOVE. PROVIDE 40 BAR DIAMETERS FOR SPLICE INTO CONCRETE AND 50 BAR DIAMETERS INTO MASONRY.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ACTUAL LAYOUT AND PLACEMENT OF REINFORCING STEEL. COORDINATE WITH MASONRY MANUFACTURER / SUPPLIER AS REQ'D.
12. ALL NON-BEARING PARTITION WALLS SHALL EXTEND TO THE ROOF DECK AS PER STRUCTURAL PLANS, OR SHALL HAVE BRACING PROVIDED PER THE STRUCTURAL MASONRY DETAILS.

LINTELS

13. ALL STANDARD WALL REINFORCING SHALL CONTINUE THROUGH THE LINTEL SECTION.
14. ALL HORIZONTAL REINFORCING IN HEADERS AND LINTELS SHALL EXTEND 24" MIN. BEYOND EDGE OF OPENING, INTO SUPPORT. IF HORIZONTAL REINFORCING CAN NOT EXTEND 24" BEYOND EDGE OF OPENING, PROVIDE STANDARD 90 deg. HOOK AT ENDS.
15. ALL LINTELS, AND 24" MIN. OF ADJACENT WALLS, SHALL BE GROUTED SOLID.
16. DO NOT LAP BOTTOM STEEL AT CENTER SPAN, NOT TOP STEEL NEAR INTERIOR OR EXTERIOR SUPPORTS, TYPICAL ALL BEAMS AND LINTELS. ALL LAPS SHALL BE MADE IN THE SECTION OF THE WALL, AND NOT IN THE LINTEL.
17. USE "U" BLOCK SAME THICKNESS AS THE WALL, AS THE BOTTOM BLOCK OF THE LINTEL.
18. PENETRATIONS THROUGH LINTELS FOR MECHANICAL, ELECTRICAL SYSTEMS, ETC. ARE NOT PERMITTED WITHOUT APPROVAL OF THE ENGINEER.

EMBED BOLTS & PLATES

19. MASON TO INSTALL EMBED ANCHOR BOLTS, EMBED PLATES, BEARING PLATES, ETC. AS REQUIRED (TO BE FURNISHED BY STRUCTURAL STEEL SUPPLIER) COORDINATE WITH GENERAL CONTRACTOR
20. ALL EMBEDDED OR POST INSTALLED ANCHORS TO HAVE A MINIMUM OF 3" GROUT COVER.

GENERAL WOOD FRAMING NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK TO BE IN STRICT ACCORDANCE WITH THE 2021 IBC, NDS, AND LOCAL ORDINANCES.

DIMENSIONAL LUMBER

3. DIMENSIONAL LUMBER USED AS STRUCTURAL FRAMING (i.e. JOISTS, RAFTERS, HEADERS) SHALL BE DOUGLAS FIR-LARCH № 2 OR EQUAL
4. DIMENSIONAL LUMBER USED FOR STUD WALLS SHALL BE STUD GRADE UNLESS NOTED OTHERWISE. STUDS SHALL BE SPACED AT 16" O.C. MINIMUM, WITH A DOUBLE TOP PLATE. SPLICES IN THE DOUBLE TOP PLATE SHALL ALTERNATE TOP & BOTTOM AND SHALL LAP 48" MIN.
5. ROUGH CUT TIMBER USED AS STRUCTURAL FRAMING SHALL BE AS SPECIFIED IN THE CONSTRUCTION DOCUMENTS.

ENGINEERED LUMBER

6. GLU-LAMINATED BEAMS FOR SIMPLE SPANS SHALL BE 24F-V4 DF/DF. GLU-LAMINATED BEAMS FOR CONTINUOUS SPANS AND CANTILEVERS SHALL BE 24F-V8 DF/DF. DO NOT INSTALL GLU-LAMINATED BEAMS UPSIDE DOWN. USE EXTERIOR GRADE GLU-LAMS FOR LACATIONS OUTSIDE BUILDING
7. LAMINATED VENEER LUMBER AND THE LIKE SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. LVL BEAMS SHALL BE BUILT UP w/ 1 3/4" MEMBERS. SEE FRAMING PLANS FOR NUMBER OF MEMBERS REQUIRED.
8. I-JOISTS SHALL BE TJI OR EQUIVALENT, AND SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
9. ENGINEERED LUMBER, WITH THE EXCEPTION OF EXTERIOR GRADE GLU-LAMINATED LUMBER, SHALL NOT BE USED IN EXTERIOR APPLICATIONS.
10. USE PRESSURE TREATED LUMBER FOR ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY IN CONTACT WITH EARTH (i.e. MUD SILL). IN SOME SITUATIONS, 26 GAUGE GALVANIZED SHEET METAL MAY BE PROVIDED AS AN APPROVED MOISTURE BARRIER. SEE ENGINEER FOR APPROVAL OF THIS OPTION.

BLOCKING, BRIDGING & MISCELLANEOUS

11. DIMENSIONAL JOISTS AND RAFTERS SHALL HAVE FULL-HEIGHT SOLID BLOCKING AT THEIR BEARING POINTS. EACH RAFTER AND/OR ROOF TRUSS SHALL BE ANCHORED WITH SIMPSON H1 ANCHORS AT EACH END.
12. I-JOISTS AND RAFTERS SHALL HAVE FULL-HEIGHT SOLID BLOCKING AT THEIR BEARING POINTS.
13. WOOD MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY DETAILED
14. BIRDS MOUTHS AND/OR NOTCHING OF STRUCTURAL MEMBERS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS IS NOT PERMITTED WITHOUT PRIOR APPROVAL.

COLUMNS & STUDS

15. ALL COLUMNS SHALL EXTEND DOWN THROUGH THE STRUCTURE TO THE FOUNDATION. COLUMNS SHALL BE BRACED AT EACH FLOOR LEVEL. COLUMNS SHALL BE AS WIDE AND DEEP AS THE MEMBER THEY SUPPORT IN ORDER TO PROVIDE FULL BEARING.
16. STAND ALONE POSTS SHALL BE DOUGLAS FIR-LARCH № 1OR EQUAL.
17. ALL INTERIOR BEARING WALLS SHALL BE 2 x 6'S AT 16" O.C. UNLESS NOTED OTHER-WISE ON PLANS. IN NO CASE SHALL 2 x 4 BEARING WALLS BE USED UNLESS NOTED ON STRUCTURAL PLANS

FLOOR, ROOF & WALL SHEATHING

18. ALL FLOOR SHEATHING TO BE 3/4" THICK T&G SHEATHING GLUED AND NAILED WITH 10d COMMON NAILS OR EQUAL AT 6" O.C. PERIMETER, 6" O.C. PANEL EDGES AND AT 12" O.C. IN THE FIELD. PANEL EDGES ARE UNBLOCKED UNLESS NOTED OTHERWISE ON THE STRUCTURAL PLANS.

STRUCTURAL CONNECTIONS

19. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE TO PROVIDE ADEQUATE STRUCTURAL CONNECTIONS. CONNECTIONS MUST CARRY THE BEARING CAPACITY OF THE MEMBER AND ANY UPLIFT OR SEISMIC FORCES GENERATED IN THE MEMBER. SPECIAL CONSIDERATION SHALL BE GIVEN TO PREVENT CRUSHING OF THE MEMBER AT BEARING, SPLITTING AND/OR CRACKING OF THE WOOD, AND THE LIKE.
20. THE CONTRACTOR SHALL STRICTLY ADHERE TO THE CONNECTION DETAILS SPECIFIED ON THE PLANS OR INCLUDED WITH THE CONSTRUCTION DOCUMENTS. PRIOR APPROVAL IS REQUIRED FOR ANY DEVIATION FROM THE CONSTRUCTION DOCUMENTS.
21. SUBSTITUTION OF CONNECTIONS OTHER THAN THOSE SPECIFIED ON THE PLANS REQUIRES PRIOR APPROVAL. THE ENGINEER IS NOT RESPONSIBLE FOR CONNECTIONS NOT APPROVED PRIOR TO CONSTRUCTION OR INSTALLATION.
22. IF CONNECTION DETAILS, APPROVED BY THE ENGINEER, HAVE NOT BEEN PROVIDED IN THE CONSTRUCTION DOCUMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SPECIFY AND PROVIDE ALL STRUCTURAL CONNECTIONS. IF OTHER THAN STANDARD CONNECTIONS ARE REQUIRED, SEE ENGINEER FOR ADDITIONAL ASSISTANCE.
23. USE SIMPSON CONNECTIONS OR EQUIVALENT. INSTALL PER MANUFACTURERS SPECIFICATIONS.
24. SHOP DRAWINGS FOR ALL FABRICATED STEEL CONNECTIONS SHALL BE SUBMITTED FOR REVIEW & APPROVAL PRIOR TO FABRICATION AND INSTALLATION. SEE GENERAL STEEL NOTES.
25. SEE GENERAL CONCRETE NOTES FOR SPECIFICATION OF ANCHOR BOLTS, ETC. IN NO CASE SHALL THE MUD SILL BE NOTCHED FOR THE INSTALLATION OF PLATE WASHERS, OR FOR ANY OTHER REASON.
26. ALL STRUCTURAL MEMBERS SHALL HAVE 1 3/4" MINIMUM BEARING.
27. FOR ADDITIONAL NAILING PATTERN, SEE SCHEDULES IN THE INTERNATIONAL BUILDING CODE (IBC).

STAIR FRAMING

28. STAIR STRINGERS SHALL BE 11 7/8" LVL's AT 16" O.C. (MAX.) w/ A MAXIMUM HORIZONTAL RUN OF 12'-0". USE 14" LVL UP TO 16'-0" RUN

DESIGN CRITERIA

1. GOVERNING BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE (IBC)
2. FLOOR LIVE LOADING:
   a. STORAGE (LIGHT) . . . . . 125 PSF
3. ROOF LIVE LOADING:
   a. REFER TO PRE-ENGINEERED METAL BUILDING DESIGN CRITERIA
4. FLOOR DEAD LOADS:
   a. WOOD FLOOR SYSTEM . . . . . 15 PSF
5. ROOF DEAD LOADS:
   a. REFER TO PRE-ENGINEERED METAL BUILDING DESIGN CRITERIA
6. EARTHQUAKE:
   a. RISK CATEGORY II
   b. SEISMIC DESIGN CATEGORY . . . . . D
   c. SPECTRAL RESPONSE ACCELERATIONS:
      S_S = 1.611g
      S_{DS} = 1.074g
      S_1 = 0.572g
      S_{D1} = 0.659g
   d. SOIL SITE CLASS: . . . . . D
      F_A = 1.0
      F_V = 1.7
   e. IMPORTANCE FACTOR, I_E 1.0
   f. ANALYSIS PROCEDURE . . . . . EQUIV. LATERAL FORCE
   g. BASIC SEISMIC FORCE RESISTING SYSTEM
      LIGHT FRAMED WOOD WALLS w/ WOOD SHEATHING
      R = 6.5 C_S = 0.165 V = 20.4 K
      SPECIAL REINFORCED MASONRY WALLS
      R = 5 C_S = 0.215 V = 26.5 K
7. WIND:
   a. REFER TO PRE-ENGINEERED METAL BUILDING DESIGN CRITERIA
8. FOUNDATION:
   a. SOILS REPORT BY. . . . . EARTHTEC ENGINEERING
      DATED . . . . . AUG 25, 2025
   b. SOIL BEARING PRESSURE. . . . . 2,000 PSF
   c. LATERAL SOIL PRESSURE FLUID EQUIVALENT DENSITY
      1. ACTIVE. . . . . 45 PCF (RETAINING WALLS)
      2. AT REST . . . . . 60 PCF (FOUNDATION WALLS)
      3. PASSIVE. . . . . 100 PCF
      4. INCREASE FOR SEISMIC 33%
   d. COEFFICIENT OF FRICTION. 0.35

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milestone issue description
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latest revision date

latest revision description

GENERAL STRUCTURAL NOTES

S0.1

sheet number

SPECIAL INSPECTION SCHEDULE

SOILS (IBC1705.6)

REQ'D	TASK	INSPECTION FREQUENCY CONT.	INSPECTION FREQUENCY PERIODIC	COMMENTS:
X	VERIFY ADEQUATE MATERIALS BELOW FOOTINGS		♦	PRIOR TO PLACEMENT OF CONCRETE.
X	EXCAVATION EXTEND TO PROPER DEPTH AND MATERIALS		♦	PRIOR TO PLACEMENT OF COMPACTED FILL OR CONCRETE.
X	CLASSIFICATION AND TESTING OF FILL MATERIALS		♦	CHECK CLASSIFICATION AND GRADATIONS AT EACH LIFT, BUT NOT LESS THAN ONCE FOR EACH 10,000 FT^2 OF SURFACE AREA.
X	VERIFY PROPER FILL MATERIALS, LIFT THICKNESSES AND IN-PLACE DENSITIES	♦		
X	VERIFY PROPERLY PREPARED SITE AND SUBGRADE		♦	PRIOR TO PLACEMENT OF CONCRETE.

CONCRETE CONSTRUCTION (IBC1705.3)

REQ'D	TASK	INSPECTION FREQUENCY CONT.	INSPECTION FREQUENCY PERIODIC	COMMENTS:
X	REINFORCING STEEL PLACEMENT		♦	VERIFY SIZE, CLEARANCES, SPLICES AND PROPER TIES.
X	REINFORCING BAR WELDING a. WELDABILTY OF NON ASTM A706 BARS b. SINGLE PASS FILLED WELDS < 5/16" c. ALL OTHER WELDS	 ♦	♦ ♦	
X	CAST IN ANCHORS		♦	VERIFY MIX DESIGN MEETS STRENGTH AND EXPOSURE REQUIREMENTS LISTED ON APPROVED PLANS.
X	POST-INSTALLED ANCHORS a. ADHESIVE ANCHORS INSTALLED HORIZ. or UPWARDLY INCLINED RESISTING SUSTAINED TENSION LOADS b. POST INSTALLED ANCHORS NOT DEFINED IN a.	♦	 ♦	IN ACCORDANCE WITH APPROVED ICC-ES REPORT. PERIODIC INSPECTIONS ALLOWED IF STATED IN ES REPORT.
X	VERIFY REQUIRED DESIGN MIX		♦	VERIFY MIX DESIGN MEETS STRENGTH AND EXPOSURE REQUIREMENTS LISTED ON APPROVED PLANS.
X	SLUMP, AIR + TEMPERATURE TESTS. PREPARE STRENGTH TEST SAMPLES	♦		
X	CONCRETE PLACEMENT	♦		INCLUDES SAMPLING FOR AIR, SLUMP, STRENGTH AND TEMPERATURE TECHNIQUES.
X	CURING TEMPERATURE MAINTENANCE		♦	
	PRESTRESSED CONCRETE a. PRESTRESSING FORCES b. GROUTING OF BONDED TENDONS	♦ ♦		
	ERECTION OF PRECAST MEMBERS		♦	
	POST-TENSIONED CONCRETE STRENGTH		♦	
X	INSPECT FORMWORK		♦	

COLD-FORMED STEEL CONSTRUCTION (IBC1705.11.2&1705.12.3)

REQ'D	TASK	INSPECTION FREQUENCY CONT.	INSPECTION FREQUENCY PERIODIC	COMMENTS:
	COMPONENTS OF WIND AND SEISMIC-FORCE RESISTING SYSTEMS		♦	VERIFY PROPER SCREW ATTACHMENT, BOLTING AND ANCHORING OF SHEAR WALLS, BRACES AND HOLDOWNS HAVING A FASTENER SPACING ≤ 4" O.C.
	FIELD WELDING OF ELEMENTS OF MAIN LATERAL FORCE RESISTING SYSTEM.		♦	

OTHER THAN STRUCTURAL STEEL (IBC1705.2.2)

REQ'D	TASK	INSPECTION FREQUENCY CONT.	INSPECTION FREQUENCY PERIODIC	COMMENTS:
	STEEL ROOF & FLOOR DECK:			
	MATERIAL VERIFICATION OF STEEL DECK		♦	IDENTIFICATION MARKINGS PER APPLICABLE ASTM STANDARD
	ROOF AND DECK WELDS		♦	VERIFY THAT WELDS CONFORM TO AWS D1.3.
	WELDING OF REINFORCING STEEL:			
	VERIFICATION OF WELDABILITY (EXCEPT A706 BAR)		♦	VERIFY MATERIAL IS ABLE TO CONFORM TO AWS D1.4.

INSTALLATION OF OPEN-WEB STEEL JOISTS AND GIRDERS (IBC 1705.2.3)

REQ'D	TASK	INSPECTION FREQUENCY CONT.	INSPECTION FREQUENCY PERIODIC	COMMENTS:
	END CONNECTIONS		♦	SJI 2207.1
	BRIDGING - HORIZONTAL OR DIAGONAL a. STANDARD BRIDGING b. NON-STANDARD BRIDGING		♦ ♦	SJI 2207.1

MASONRY CONSTRUCTION (IBC1705.4)

REQ'D	TASK	INSPECTION FREQUENCY CONT.	INSPECTION FREQUENCY PERIODIC	COMMENTS:
	MINIMUM TESTING (TABLE 1.19.2, TMS - 402/ACI 530-11):			
X	VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) FOR SELF-CONSOLIDATING GROUT.		♦	COMPRESSIVE STRENGTH TESTS PER ASTM C 1019 FOR SLUMP FLOW AND ASTM C 1611 FOR VSI.
X	VERIFICATION OF F'_M		♦	DETERMINE COMPRESSIVE STRENGTH PER "UNIT STRENGTH" OR "PRISM TEST" AS SPECIFIED IN ARTICLE 1.4.B OF ACI 530.1 PRIOR TO CONSTRUCTION.
	PRIOR TO CONSTRUCTION (ARTICLE 1.15, TMS-602/ACI 530.1-11):			
X	REVIEW MATERIAL CERTIFICATES, MIX DESIGNS, TEST RESULTS AND CONSTRUCTION PROCEDURES		♦	VERIFY MATERIALS CONFORM TO APPROVED CONSTRUCTION DOCUMENTS. MIX DESIGN, TEST RESULTS, MATERIAL CERTIFICATES, AND CONSTRUCTION PROCEDURES SHOULD BE SUBMITTED FOR REVIEW. MORTAR MIX DESIGNS SHALL CONFORM TO ASTM C 270 WHILE GROUT SHALL CONFORM TO ASTM C 476. MATERIAL CERTIFICATES SHALL BE PROVIDED FOR THE FOLLOWING: REINFORCEMENT; ANCHORS, TIES, FASTENERS, AND METAL ACCESSORIES; MASONRY UNITS; MORTAR AND GROUT MATERIALS. REVIEW COLD-WEATHER OR HOT-WEATHER CONSTRUCTION PROCEDURES.
	AS CONSTRUCTION BEGINS (TABLE 1.19.2, TMS-402/ACI 530-11):			
X	PROPORTIONS OF SITE-PREPARED MORTAR		♦	VERIFY THAT MORTAR IS TYPE AND COLOR SPECIFIED ON APPROVED PLANS, IT CONFORMS TO ASTM C 270, AND IS MIXED PER ARTICLE 2.6.A OF ACI 530.1.
X	CONSTRUCTION OF MORTAR JOINTS		♦	VERIFY MORTAR JOINTS MEET ARTICLE 3.3.B OF ACI 530.1.1
	GRADE AND SIZE OF PRE-STRESSING TENDONS AND ANCHORAGES		♦	VERIFY THAT PRE-STRESSING TENDONS CONFORM TO REQUIREMENTS OF ARTICLE 2.4B AND 2.4H OF ACI530.1
X	LOCATION OF REINFORCEMENT, CONNECTORS AND ANCHORAGES.		♦	VERIFY REINFORCEMENT IS PLACED IN ACCORDANCE WITH ARTICLE 3.4 OF 530.1.
	PRE-STRESSING TECHNIQUE		♦	VERIFY PRE-STRESSING TECHNIQUE CONFORMS TO ARTICLE 3.6B OR ACI 530.1
X	PROPERTIES OF THIN BED MORTAR FOR AAC MASONRY	♦	♦	VERIFY REINFORCEMENT IS PLACED IN ACCORDANCE WITH ARTICLE 3.4 OF 530.1.
	PRIOR TO GROUTING (TABLE 1.19.2, TMS-402/ACI 530-11):			
X	GROUT SPACE		♦	VERIFY GROUT SPACE IS FREE OF MORTAR DROPPINGS, DEBRIS, LOOSE AGGREGATE, AND OTHER DELETERIOUS MATERIALS AND THAT CLEANOUTS ARE PROVIDED PER ARTICLE 3.2D AND 3.2F OF ACI 530.1
X	GRADE, TYPE AND SIZE OF REINFORCEMENT, ANCHOR BOLTS AND ANCHORAGES.		♦	VERIFY REINFORCEMENT, JOINT REINFORCEMENT, ANCHOR BOLTS AND VENEER ANCHORS COMPLY WITH APPROVED PLANS AND SECTIONS 1.6 OF ACI 530.
X	PLACEMENT OF REINFORCEMENT, CONNECTORS AND ANCHORAGES.		♦	VERIFY REINFORCEMENT, JOINT REINFORCEMENT, ANCHOR BOLTS AND VENEER ANCHORS ARE INSTALLED PER APPROVED PLANS AND ARTICLES 3.2.E, 3.4, AND 3.6.A OF ACI 530.1.
X	PROPORTIONS OF SITE-PREPARED GROUT.		♦	VERIFY GROUT PROPORTIONS MEET ASTM C 476 AND A SLUMP BETWEEN 8-11 INCHES. SELF-CONSOLIDATED GROUT SHALL NOT BE PROPORTIONED ONSITE.
X	CONSTRUCTION OF MORTAR JOINTS		♦	VERIFY MORTAR JOINTS PLACED IN ACCORDANCE WITH ARTICLE 3.3.B OF ACI 530.1.
	DURING CONSTRUCTION (TABLE 1.19.2, TMS-402/ACI 530-11):			
X	SIZE AND LOCATION OF STRUCTURAL ELEMENTS		♦	VERIFY LOCATIONS OF STRUCTURAL ELEMENTS PER APPROVED PLANS AND CONFIRM TOLERANCES MEET ARTICLE 3.3.F OF ACI 530.1.
X	TYPE, SIZE AND LOCATION OF ANCHORS, FRAMES, ETC.		♦	VERIFY CORRECT ANCHORAGES AND CONNECTIONS ARE PROVIDED PER APPROVED PLANS AND SECTIONS 1.16.4.3 AND 1.17.1 OF ACI 530.
X	WELDING OF REINFORCEMENT	♦		VERIFY CONFORMANCE WITH SECTIONS 2.1.7.7.2, 3.3.3.4 (c) AND 8.3.3.4 (b) OF ACI 530
	APPLICATION AND MEASUREMENT OF PRE-STRESSING FORCE	♦		VERIFY CONFORMANCE WITH ARTICLE 3.6B OF ACI 530.1
X	PLACEMENT OF GROUT	♦		
X	PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (<40˚F) OR HOT WEATHER (>90˚F).		♦	VERIFY COLD-WEATHER CONSTRUCTION COMPLIES WITH ARTICLE 1.8.C OF ACI 530.1 AND HOT WEATHER CONSTRUCTION PER ARTICLE 1.8.D OF ACI 530.1.
	PLACEMENT OF GROUT AND PRE-STRESSING GROUT FOR BONDED TENDONS	♦		VERIFY COMPLIANCE WITH ARTICLE 3.5, 3.6C OF ACI 530.1
X	OBSERVATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND / OR PRISMS.		♦	CONFIRM SPECIMENS/ PRISMS ARE PERFORMED AS REQUIRED BY ARTICLE 1.4 OF ACI 530.1.

WOOD CONSTRUCTION (IBC1705.11.2)

REQ'D	TASK	INSPECTION FREQUENCY CONT.	INSPECTION FREQUENCY PERIODIC	COMMENTS:
X	COMPONENTS OF WIND AND SEISMIC-FORCE RESISTING SYSTEMS		♦	VERIFY PROPER SCREW ATTACHMENT, BOLTING AND ANCHORING OF SHEAR WALLS, BRACES AND HOLDOWNS HAVING A FASTENER SPACING ≤ 4" O.C.
	FIELD GLUING OF MAIN LATERAL FORCE RESISTING SYSTEM	♦		

STRUCTURAL STEEL CONSTRUCTION (IBC 1705.2, 1705.11, 1705.12)

REQ'D	TASK	INSPECTION TYPE Q.C.	INSPECTION TYPE Q.A.	COMMENTS:
	PRIOR TO WELDING (TABLE N5.4-1, AISC 360-10):			
	VERIFY WELDING PROCEDURES	P	P	
	MANUFACTURER CERTIFICATIONS	P	P	
	MATERIAL IDENTIFICATION	O	O	VERIFY TYPE AND GRADE OF MATERIAL.
	WELDER IDENTIFICATION	O	O	VERIFY THERE IS A SYSTEM IN PLACE TO IDENTIFY THE WELDER WHO HAS WELDED A JOINT OR MEMBER.
	FIT-UP GROOVE WELDS	O	O	VERIFY JOINT PREPARATION, DIMENSIONS, CLEANLINESS, TACKING AND BACKING.
	ACCESS HOLES	O	O	VERIFY CONFIGURATION AND FINISH.
	FIT-UP FILLET WELDS	O	O	VERIFY ALIGNMENT, GAPS AT ROOT, CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY AND LOCATION.
	CHECK WELDING EQUIPMENT	O	O	
	DURING WELDING (TABLE N5.4-2, AISC 360-10):			
	USE OF QUALIFIED WELDERS	O	O	VERIFY THAT WELDERS ARE APPROPRIATELY QUALIFIED.
	CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	VERIFY PACKAGING AND EXPOSURE CONTROL.
	CRACKED TACK WELDS	O	O	VERIFY WELDING IS NOT OVER A CRACKED TACK WELD.
	ENVIRONMENTAL CONDITIONS	O	O	VERIFY WIND SPEED IS WITHIN LIMITS AS WELL AS PRECIPITATION AND TEMPERATURE.
	WPS FOLLOWED	O	O	VERIFY ITEMS SUCH AS WELDING EQUIPMENT SETTINGS, TRAVEL SPEED, WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED, AND PROPER POSTITION.
	WELDING TECHNIQUES	O	O	VERIFY INTERPASS AND FINAL CLEANING, EACH PASS IS WITHIN PROFILE LIMITATIONS, AND QUALITY OF EACH PASS.
	AFTER WELDING (TABLE N5.4-3, AISC 360-10):			
	WELDS CLEANED	O	O	VERIFY THAT WELDS HAVE BEEN PROPERLY CLEANED.
	SIZE, LENGTH AND LOCATION OF WELDS	P	P	
	WELDS MEET VISUAL ACCEPTANCE CRITERIA	P	P	
	ARC STRIKES	P	P	
	PRIOR TO BOLTING (TABLE N5.6-1 AISC 360-10):			
	MANUFACTURERS CERTIFICATIONS FOR FASTENERS	O	P	
	FASTENERS MARKED w/ ASTM REQUIREMENTS	O	O	
	PROPER FASTENERS SELECTED FOR DETAIL	O	O	
	PROPER PROCEDURE FOR DETAIL	O	O	
	CONNECTING ELEMENTS	O	O	
	PRE-INSTALLATION VERIFICATION TESTING	P	O	
	PROPER STORAGE OF FASTENERS	O	O	
	DURING BOLTING (TABLE N5.6-2 AISC 360-10):			
	FASTENER ASSEMBLIES	O	O	
	JOINTS SNUG TIGHT PRIOR TO PRETENSIONING	O	O	
	PROPER WRENCH USAGE	O	O	
	FASTENERS PRETENSIONED	O	O	
	AFTER BOLTING (TABLE N5.6-3, AISC 360-10):			
	STRUCTURAL STEEL DETAILS	P	P	

O- OBSERVE THESE ITEMS ON A RANDOM BASIS.

P- PERFORM THESE TASKS FOR EACH WELDED / BOLTED JOINT OR MEMBER (AISC 360-10 N5.4)

STATEMENT OF SPECIAL INSPECTIONS

1. THE PROJECT OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED ABOVE. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS REQUIRED BY THE BUILDING DEPARTMENT OF THE LOCAL JURISDICTION.
2. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE WITH APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALE BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT A PHASE OF THE WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON BY THE PERMIT APPLICANT AND THE BUILDING OFFICIAL PRIOR TO THE START OF WORK.
3. SPECIAL INSPECTIONS FOR EACH TASK SHALL BE CARRIED OUT IN COMPLIANCE WITH REQUIREMENTS PER THE CURRENT IBC AND OTHER MATERIAL STANDARDS.

FABRICATION SHOP REQUIREMENTS

4. WHERE FABRICATION OF STRUCTURAL LOAD BEARING MEMBERS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATORS SHOP, SPECIAL INSPECTIONS REQUIRED BELOW SHALL BE PROVIDED IN THE SHOP DURING THE FABRICATION PROCESS. THIS REQUIREMENT MAY BE EXCEPTED IF THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. A CERTIFICATE SHALL BE REQUIRED TO VERIFY SUCH APPROVAL. AT COMPLETION OF THE FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS.

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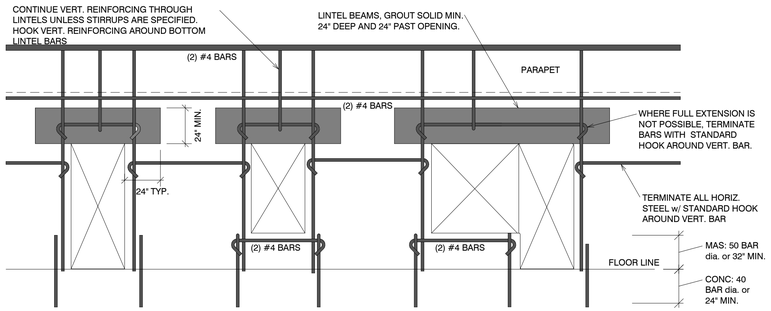
SPECIAL INSPECTION NOTES

S0.2

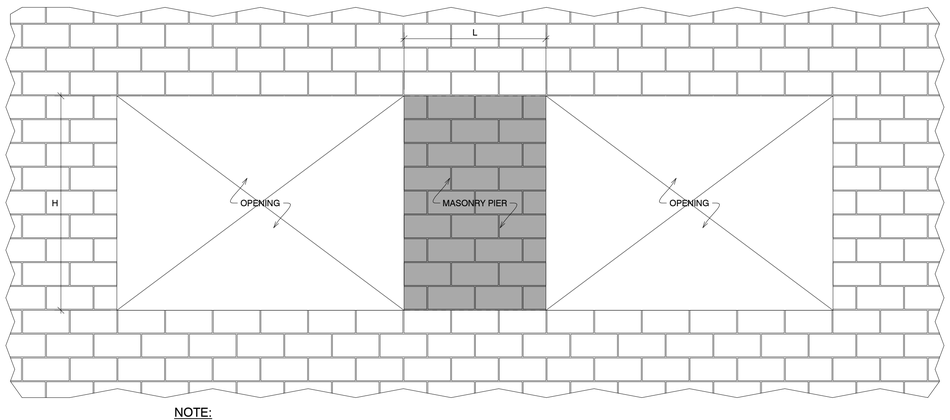
sheet number



NOTES:

1. SEE PLAN AND BEAM SCHEDULE FOR SIZE AND REINFORCING REQUIRED
2. AT ALL JAMBS, PROVIDE (2) TYP. VERT. BARS OR (2) #5 VERT. BARS, WHICHEVER IS GREATER

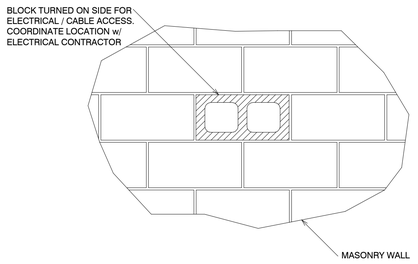
6 S0.3 CONSTRUCTION DETAIL
NO SCALE



NOTE:

1. THE MAXIMUM SPACING OF VERTICAL AND HORIZONTAL REINFORCING IN THE SHADED PIER SHALL BE THE SMALLEST OF ONE-THIRD THE LENGTH OF THE PIER, ONE-THIRD THE HEIGHT OF THE PIER OR PER THE MASONRY WALL SCHEDULE

7 S0.3 CONSTRUCTION DETAIL
NO SCALE



4 S0.3 CONSTRUCTION DETAIL
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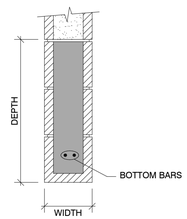
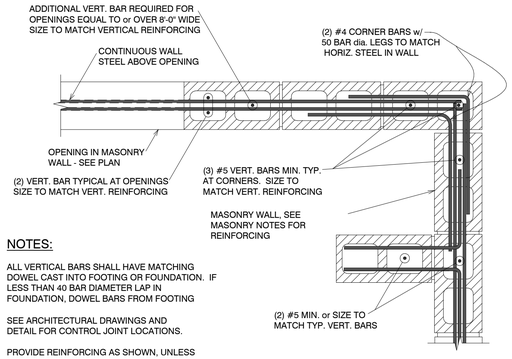


MB-1

MASONRY BEAM

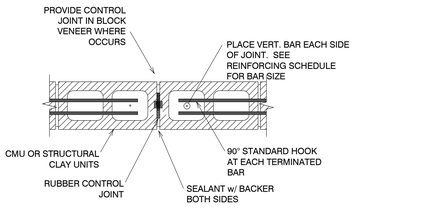
5 S0.3 CONSTRUCTION DETAIL
NO SCALE



NOTES:

1. ALL VERTICAL BARS SHALL HAVE MATCHING DOWEL CAST INTO FOOTING OR FOUNDATION. IF LESS THAN 40 BAR DIAMETER LAP IN FOUNDATION, DOWEL BARS FROM FOOTING
2. SEE ARCHITECTURAL DRAWINGS AND DETAIL FOR CONTROL JOINT LOCATIONS.
3. PROVIDE REINFORCING AS SHOWN, UNLESS NOTED OTHERWISE ON PLANS OR SECTION.
4. CONTINUE WALL REINFORCING THROUGH LINTEL BEAM ABOVE OPENING, TYPICAL.

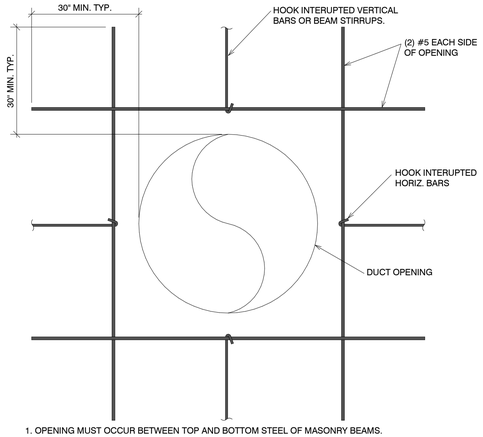
1 S0.3 CONSTRUCTION DETAIL
NO SCALE



NOTES:

1. DISCONTINUE HORIZ. BARS AT CONTROL JOINT EXCEPT FOR ROOF or FLOOR DIAPHRAGM BOND BEAM BARS
2. SEE ARCHL ELEVATIONS FOR JOINT LOCATIONS PROVIDE JOINTS AT MAX. OF 30' O.C.

2 S0.3 CONSTRUCTION DETAIL
NO SCALE



1. OPENING MUST OCCUR BETWEEN TOP AND BOTTOM STEEL OF MASONRY BEAMS.
2. DETAIL APPLIES TO RECTANGULAR AND CIRCULAR DUCT OPENINGS THROUGH MASONRY.
3. PROVIDE A MASONRY BEAM MB-1 MIN. OVER ALL OPENINGS WIDER THAN 36" U.NO. ON MASONRY PLANS. BOTTOM STEEL OF BEAM TO TAKE THE PLACE OF (2) #5 SHOWN OVER TOP OF OPENING

3 S0.3 CONSTRUCTION DETAIL
NO SCALE

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CONSTRUCTION DETAILS

S0.3

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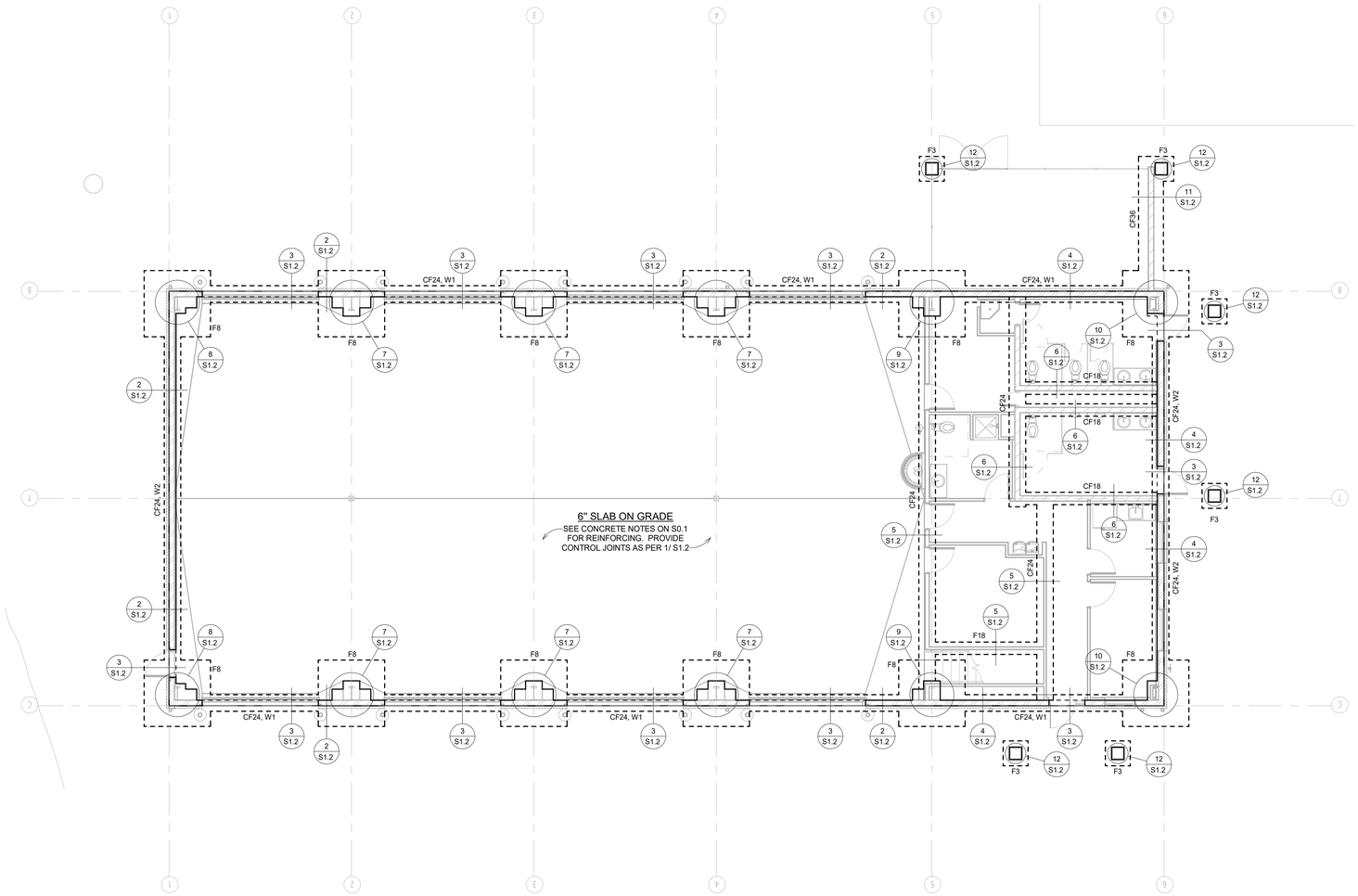

1 FOUNDATION PLAN

1/8" = 1'-0"

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSS-WISE				REINFORCING LENGTH-WISE			
				No.	SIZE	LENGTH	SPACING	No.	SIZE	LENGTH	SPACING
CF18	18"	CONT.	12"	-	-	-	-	(3)	#4	CONT.	EQUAL
CF24	24"	CONT.	12"	-	-	-	-	(2)	#4	CONT.	EQUAL
CF36	36"	CONT.	14"	(8)	#4	2'-6"	EQUAL	(8)	#4	2'-6"	EQUAL
F3	3'-0"	3'-0"	12"	(4)	#4	2'-6"	EQUAL	(4)	#4	2'-6"	EQUAL
F8	8'-0"	8'-0"	16"	(9)	#5	7'-6"	EQUAL	(9)	#5	7'-6"	EQUAL

★ THESE FOOTINGS ARE TO GET (2) MATS OF STEEL
(1) TOP and (1) BOTTOM AS SHOWN IN SCHEDULE

FOUNDATION WALL SCHEDULE

MARK	WALL WIDTH	WALL HEIGHT	VERT. REINFORCING		HORIZ. REINFORCING	
			SIZE	SPACING	SIZE	SPACING
W1	8"	4'-0" MAX	#4	18" O.C.	#4	18" O.C.
W2	10"	4'-0" MAX	#4	18" O.C.	#4	12" O.C.

RECESS TOP OF WALL AT OPENINGS and POUR SLAB THROUGH, SEE DETAILS

FOUNDATION DESIGN BELOW PRE-ENGINEERED METAL BUILDING COLUMNS IS PRELIMINARY and SUBJECT TO APPROVAL AFTER REVIEW OF COLUMN REACTIONS SUPPLIED BY THE METAL BUILDING DESIGNER

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FOUNDATION PLAN

S1.1

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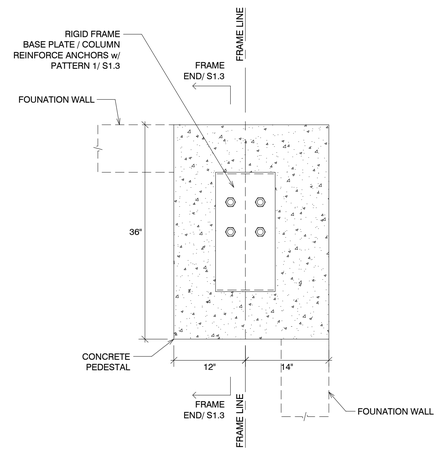

10 S1.2 CONSTRUCTION DETAIL
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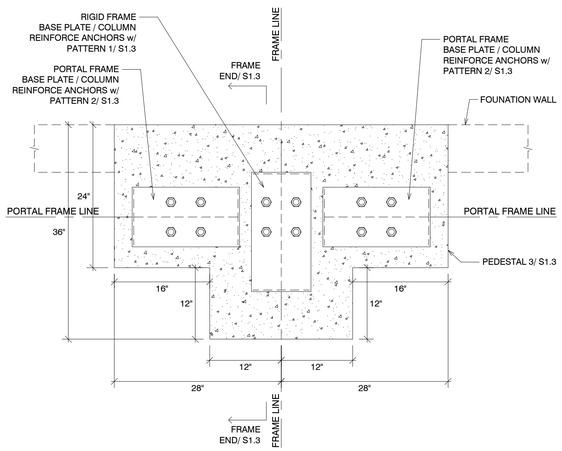

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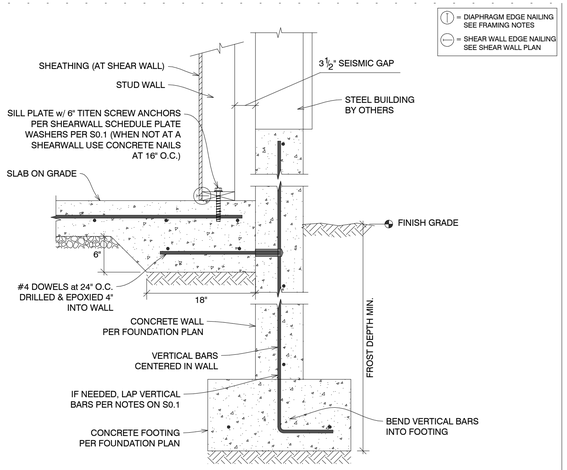

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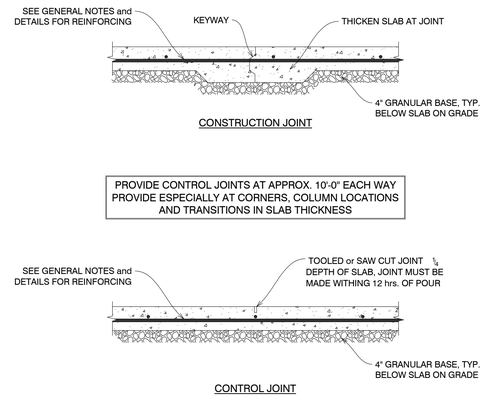

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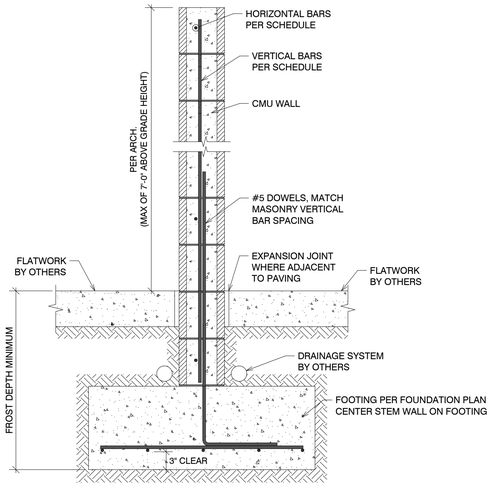

11 S1.2 CONSTRUCTION DETAIL
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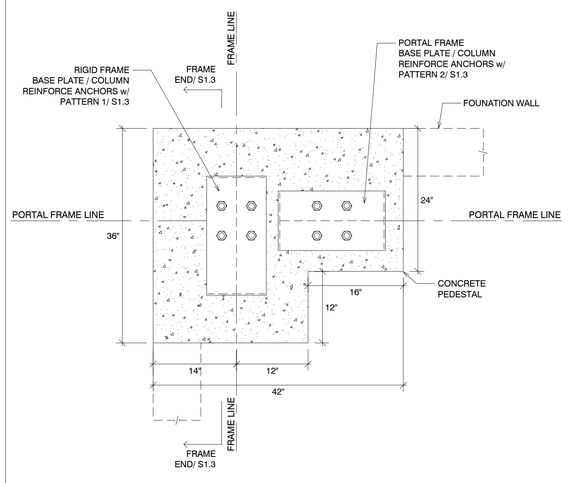

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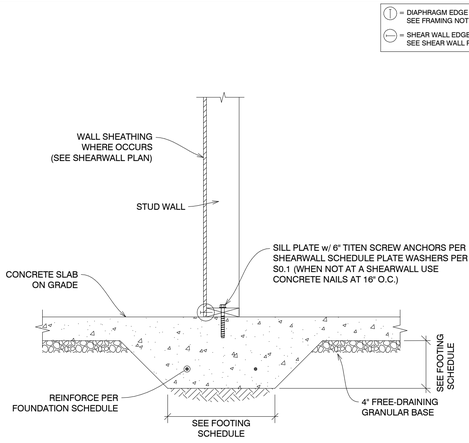

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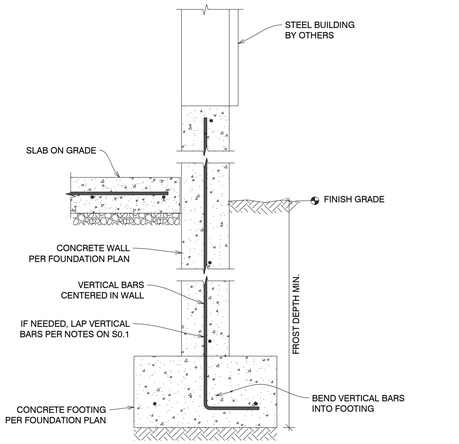

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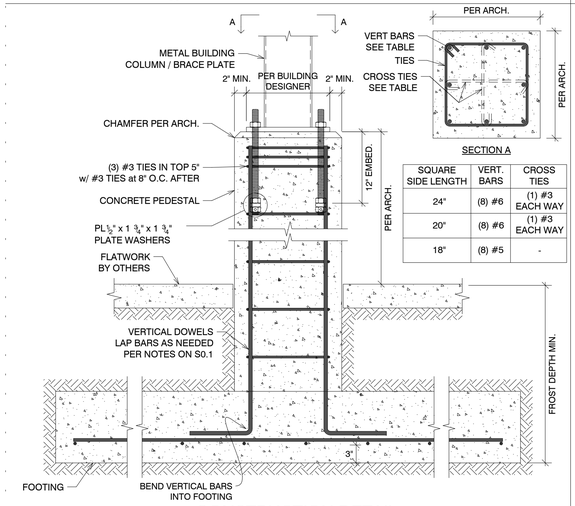
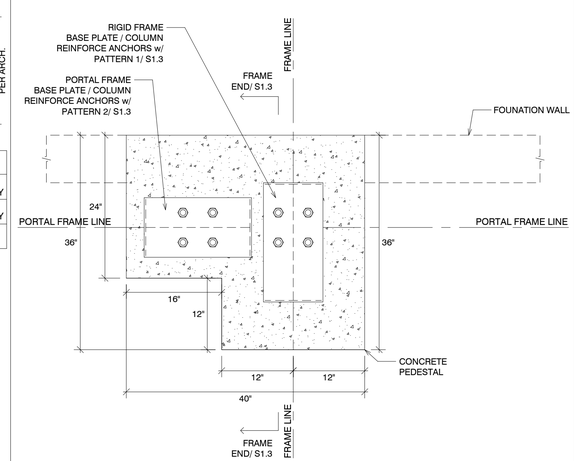


SQUARE SIDE LENGTH	VERT. BARS	CROSS TIES
24"	(8) #6	(1) #3 EACH WAY
20"	(8) #6	(1) #3 EACH WAY
18"	(8) #5	-

12 S1.2 CONSTRUCTION DETAIL
NO SCALE



9 S1.2 CONSTRUCTION DETAIL
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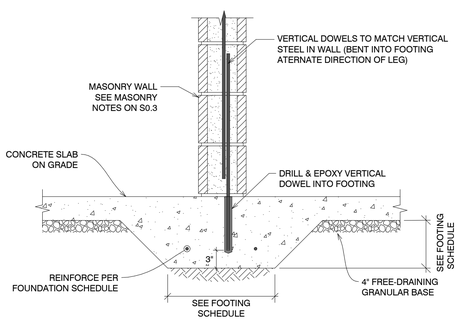

6 S1.2 CONSTRUCTION DETAIL
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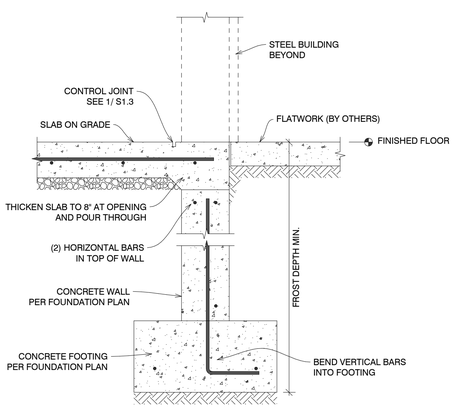

3 S1.2 CONSTRUCTION DETAIL
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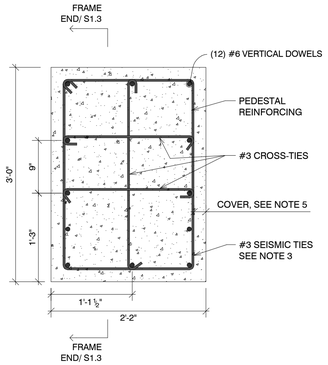

PEDESTAL 1
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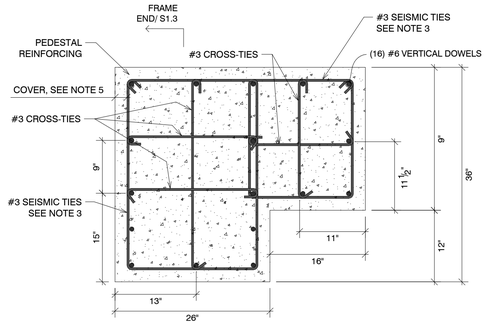

PEDESTAL 2
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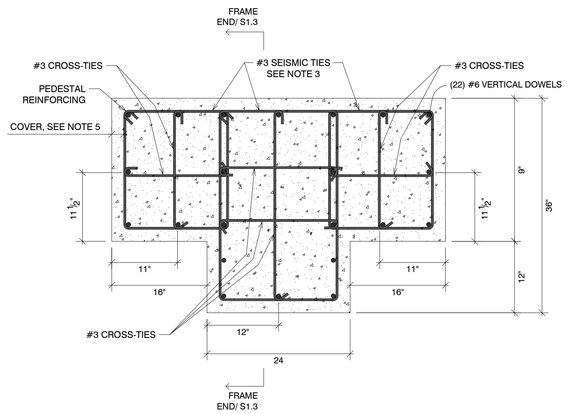
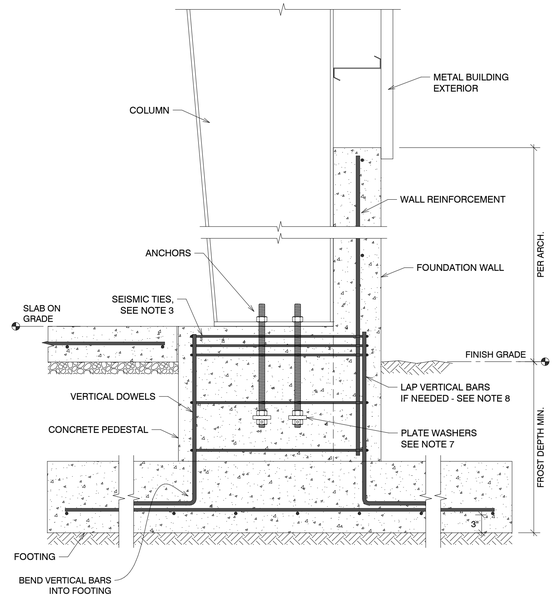


PEDESTAL 3
NO SCALE

CONCRETE PEDESTAL NOTES:

1. COLUMN, BASE PLATE DESIGN and ANCHOR DIA. IS BY PRE-ENGINEERED METAL BUILDING DESIGNER.
2. REFER TO PRE-ENGINEERED METAL BUILDING DRAWINGS FOR ANCHOR GRADE.
3. ALL CONCRETE PEDESTALS TO HAVE #3 SEISMIC TIES AROUND PEDESTAL PEREMITER, WITH (3) TIES IN TOP 5" and TIES at 8" O.C. AFTER. ALTERNATE HOOK LOCATION FOR SUBSEQUENT TIES.
4. WHEN ANCHOR REINFORCEMENT IS SPECIFIED, IT IS REQUIRED IN ADDITION TO TYPICAL PEDESTAL REINFORCEMENT. ANCHOR REINFORCEMENT SHOULD BE PLACED INSIDE OR ABOVE TOP SEISMIC TIES, UNLESS NOTED OTHERWISE.
5. PEDESTAL CONCRETE COVER: 2" UNLESS NOTED OTHERWISE.
6. WHERE PEDESTALS ARE INTEGRATED INTO FOUNDATION WALLS, FOUNDATION WALL REINFORCEMENT IS TO CONTINUE THROUGH PEDESTAL.
7. THREADED ROD ANCHORS TO HAVE (2) HEAVY HEX NUTS AND PL ½" x 2 ¼" x 2 ¼" MINIMUN PLATE WASHER ON ANCHOR END.
8. ALL VERTICAL BARS AND VERTICALLY ORIENTED U-BARS IN CONCRETE PEDESTALS TO HAVE LEGS BEND INTO FOOTINGS. LAP VERTICAL BARS AS NEEDED PER GENERAL STRUCTURAL NOTES.
9. SLIGHT SPACING ADJUSTMENT OF ANCHOR REINFORCEMENT IS ALLOWED FOR ANCHOR INSTALLATION IN CONCRETE PEDESTAL. FOR LARGE DEVIATIONS FROM DETAILS CONCTACT E.O.R. FOR ALTERNATIVE DETAILING.
10. CROSS-TIES ARE TO BE CONTINUE DOWN PEDESTAL AT SAME SPACING AS SEISMIC TIES.



FRAME END - SECTION
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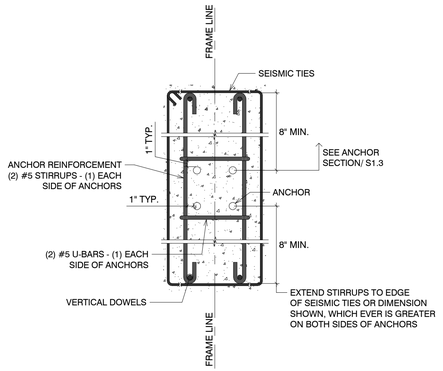

PATTERN 1
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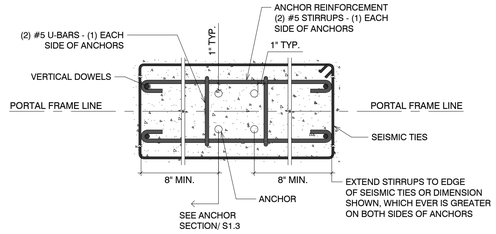
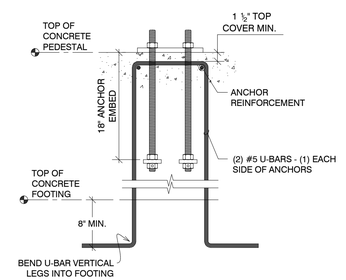


PATTERN 2
NO SCALE

ANCHOR REINFORCEMENT NOTES:

1. SEISMIC TIES, SHOWN ARE FOR REFERENCE ONLY SEE PEDESTAL REINFORCEMENT DIAGRAM FOR SPECIFIC PLACEMENT
2. ALL HORIZONTAL BARS USED ARE ANCHOR REINFORCEMENT TO END IN STANDARD HOOK AROUND VERTICAL BAR
3. ALL BARS USED FOR ANCHOR REINFORCEMENT SHOULD BE PLACED AS CLOSE AS PRACTICAL TO ANCHORS IN A SYMETTRICAL PATTERN EXCEPT WHERE INDICATED
4. WHERE ANCHOR REINFORCEMENT and CROSS-TIE PLACEMENT COINCIDE USE THE LARGER BAR
5. ANCHOR REINFORCEMENT SPECIFIED MUST BE ADDED TO PEDESTAL REINFORCING PER PLANS
6. FRAME LINE OR PORTAL FRAME LINE HAS BEEN SHOWN TO ORIENT ANCHOR REINFORCING
7. ANCHOR SIZE, SPACING, and GRADE IS PER PRE-ENGINEERED METAL BUILDING DESIGNER, UNLESS NOTED OTHERWISE



ANCHOR SECTION
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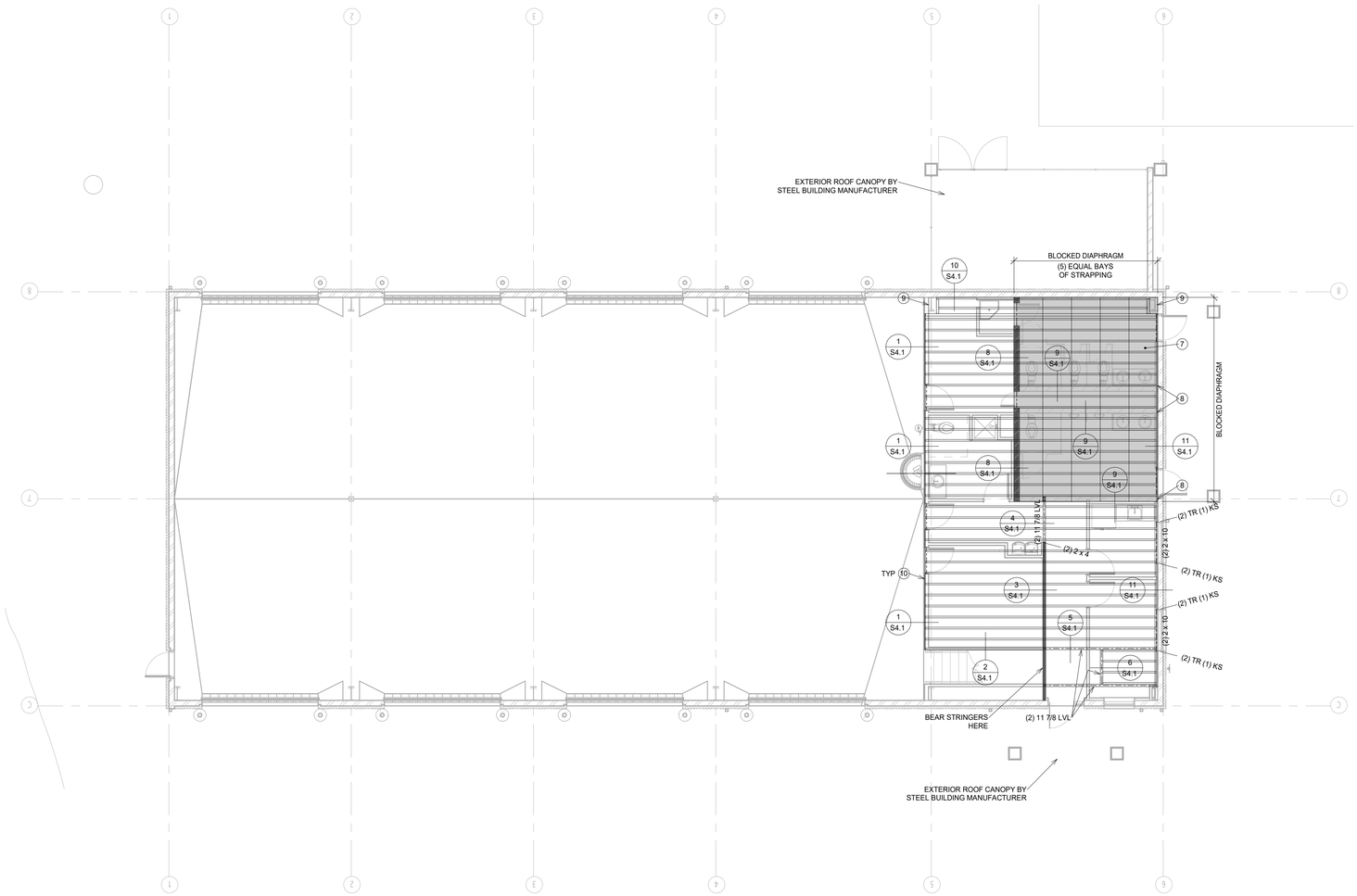

1 MEZZANINE FRAMING PLAN

1/8" = 1'-0"

FLOOR FRAMING NOTES

1. FRAME FLOOR w/ 11 7/8" TJI 360 JOISTS AT 16" O.C.
2. SEE S0.1 WOOD FRAMING NOTES FOR FLOOR SHEATHING REQUIREMENTS
3. ALL HEADERS TO BE (2) 2 x 8's UNLESS NOTED OTHERWISE
4. ALL HEADERS TO HAVE MINIMUM (1) TRIMMER and (1) KING STUD. SEE DETAIL 12/ S4.1
5. SEE WOOD FRAMING NOTES FOR STAIR STRINGER REQUIREMENTS
6. INDICATES INTERIOR BEARING WALL
7. BLOCKED DIAPHRAGM: 3/4" T & G SHEATHING w/ ALL PANEL EDGES BLOCKED w/ 2x BLOCKING and 10d COMMON NAILS at 6" O.C. and 12" O.C. IN PANEL FIELD SEE DETAIL 4/ S3.2
8. STRAP ACROSS BREAK IN TOP PLATE w/ (2) SIMPSON CS16 STRAPS w/ 12" MIN. END LENGTHS. SEE DETAIL 5/ S3.2
9. BOX AROUND METAL BUILDING COLUMNS TO ACCOMMODATE SEISMIC GAP: 3 1/2" MIN. SEPERATION
10. DOUBLE TOP PLATE TO BE ASSEMBLED PER DETAIL 3/ S3.2

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MEZZANINE FRAMING PLAN

S2.1

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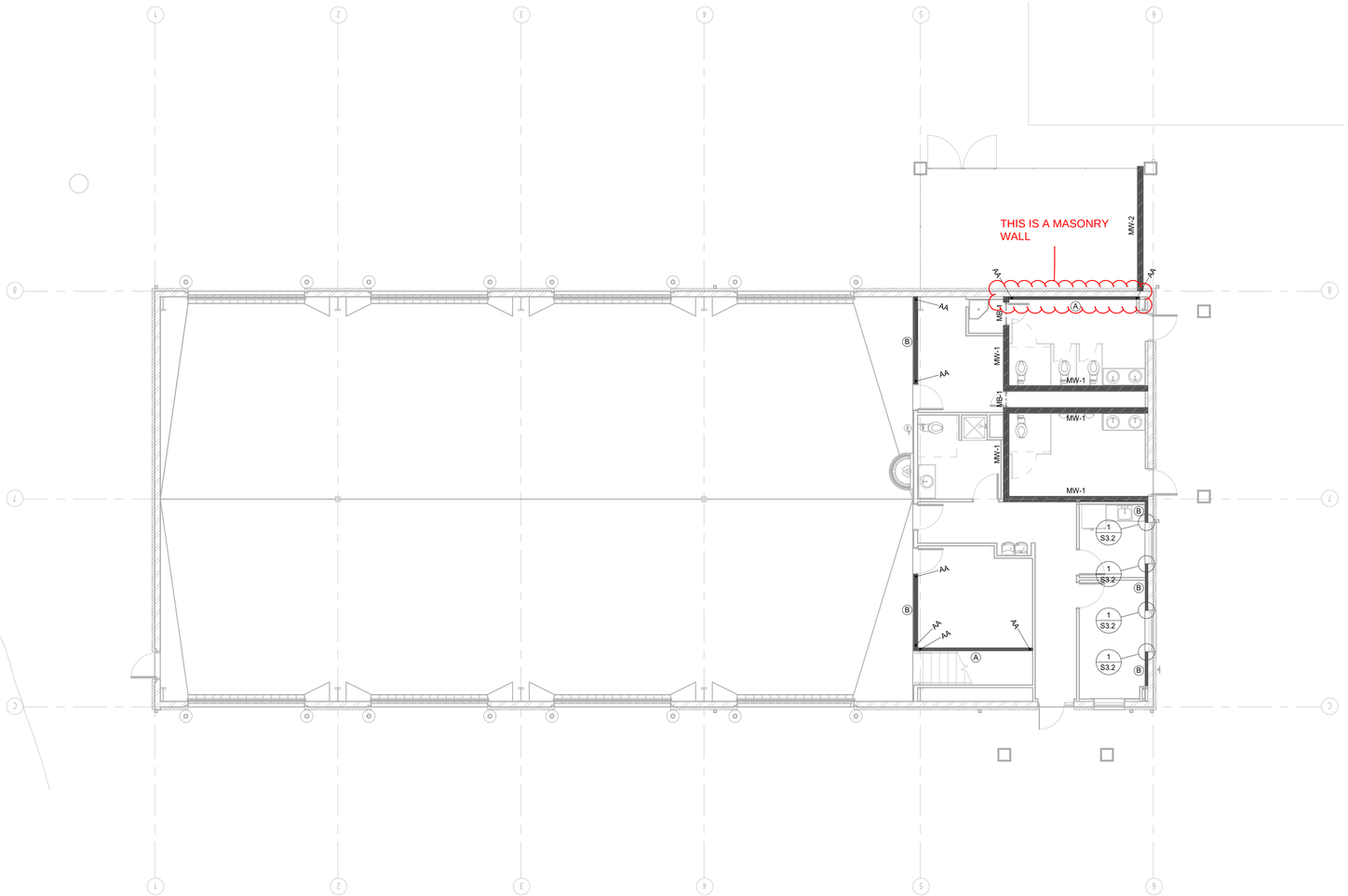

1 MEZZANINE LATERAL PLAN

1/8" = 1'-0"

MASONRY NOTES

1. SEE S0.3 FOR MASONRY BEAM and WALL DETAILS
2. SEE 1/ S0.3 FOR TYPICAL WALL CORNER and WALL INTERSECTION DETAIL
3. SEE 7/ S0.3 FOR REINFORCING OF NARROW PIERS BETWEEN OPENINGS
4. SEE 3/ S0.3 FOR REINFORCING AROUND MECHANICAL OPENINGS THROUGH MASONRY WALLS and BEAMS
5. FOR ELECTRICAL WIRES and CABLES, BLOCKS MAY BE TURNED PER 4/ S0.3. COORDINATE LOCATIONS w/ ELECTRICAL CONTRACTOR

MASONRY WALL SCHEDULE

MARK	WALL WIDTH	WALL HEIGHT	VERT. REINFORCING		HORIZ. REINFORCING		
			SIZE	SPACING	No.	SIZE	SPACING
MW-1	8"	-	#5	40" O.C.	(2)	#4	40" O.C.
MW-2	8"	-	#5	8" O.C.	(1)	#4	32" O.C.

1. SOLID GROUT ALL REINFORCED CELLS

MASONRY BEAM SCHEDULE

MARK	BEAM WIDTH	BEAM DEPTH	TOP BARS		BOTTOM BARS		STIRRUPS		REMARKS
			No.	SIZE	No.	SIZE	SIZE	SPACING	
MB-1	8"	4'-0" MAX	-	-	(2)	#4	-	-	GROUT SOLID

SEE DETAIL 5/ S0.3 FOR BEAM SECTIONS

SHEARWALL SCHEDULE

MARK	PANEL GRADE	PANEL THICKNESS	PANEL EDGE NAILING	PANEL FIELD NAILING	STUDS AT ADJOINING PANEL EDGES	ANCHOR BOLTS AT FOUNDATIO LEVLEL	SILL PLATE AT FOUNDATION
Ⓐ	APA EXP. 1	7/16"	8d AT 6" O.C.	8d AT 12" O.C.	2x	5/8"dia x 10" AT 32" O.C.	2x TREATED
Ⓑ	APA EXP. 1	7/16"	8d AT 4" O.C.	8d AT 12" O.C.	2x	5/8"dia x 10" AT 32" O.C.	2x TREATED
Ⓒ	APA EXP. 1	7/16"	8d AT 3" O.C.	8d AT 12" O.C.	3x or (2) 2x	5/8"dia x 10" AT 32" O.C.	2x TREATED
Ⓓ	APA EXP. 1	7/16"	8d AT 2" O.C.	8d AT 12" O.C.	3x or (2) 2x	5/8"dia x 10" AT 16" O.C.	2x TREATED

1. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION
2. PLYWOOD, ORIENTED STRAND BOARD and COMPOSITE BOARD (BUT NOT STRUCTURAL PARTICLE BOARD) ARE ACCEPTED AS EQUALS
3. ALL PANEL EDGES AT SHEARWALLS TO BE BACKED w/ 2" NOMINAL FRAMING. EXCEPT WHERE INDICATED TO BE 3" NOMINAL ON SCHEDULE. 3x MATERIAL MAY BE REPLACED w/ (2) 2x or 4x MATERIAL.
4. ALL ANCHOR BOLTS TO HAVE A 3" x 3" x 1/4" PLATE WASHER (SEE SHEARWALL SCHEDULE ABOVE FOR SPACING
5. ALL STUDS IN SHEARWALLS SHALL BE DOUGLAS FIR-LARCH
6. SHEARWALL PANELS INDICATED ON SCHEDULE TO BE SHEATHED FULL HEIGHT OF WALL
7. SEE SPECIAL INSPECTION PAGE FOR ADDITIONAL REQUIREMENTS
8. WHERE PANELS ARE APPLIED ON BOTH FACES OF A SHEARWALL, and NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. ALTERNATIVELY, THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS SHALL BE 3" NOMINAL or GREATER AT ADJOINING PANEL EDGES and NAILS AT ALL PANEL EDGES SHALL STAGGERED.

HOLD DOWN SCHEDULE

MARK	HOLDOWN	ATTACHMENT TO STUDS	FOUNDATION ANCHORS	MINIMUM STUDS	REMARKS
AA	SIMPSON HDU2	(6) 1/4" x 2 1/2" SDS SCREWS	5/8"dia EPOXIED THREADED ROD	(2) 2x	DETAIL 2/ S3.2

1. ALL ANCHORS ARE SIMPSON STRONG-TIE (OR EQUAL)
2. INSTALLATION OF ALL HOLDOWN ANCHORS and STRAPS SHALL BE PER MANUFACTURERS RECOMMENDATIONS and SPECIFICATIONS
3. PROVIDE EDGE NAILING ALONG STUDS CONNECTED TO HOLDOWN ANCHORS and STRAPS
4. SEE SPECIAL INSPECTION PAGE FOR ADDITIONAL REQUIREMENTS

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milestone issue description
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latest revision date

latest revision description

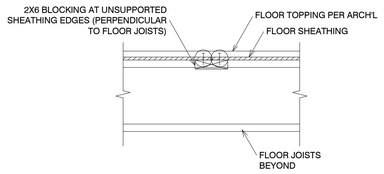
MEZZANINE LATERAL PLAN

S3.1

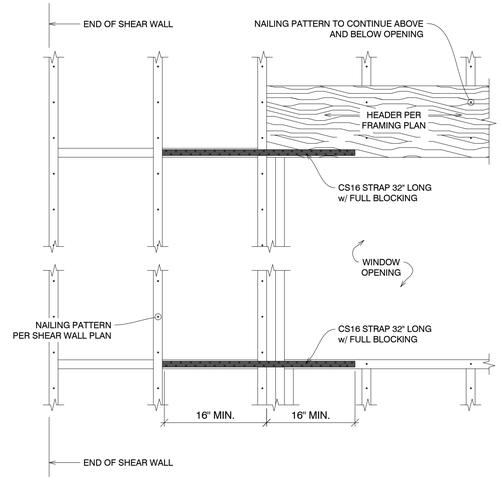
sheet number

= DIAPHRAGM EDGE NAILING SEE FRAMING NOTES

= SHEAR WALL EDGE NAILING SEE SHEAR WALL PLAN



4 S3.2 CONSTRUCTION DETAIL
NO SCALE



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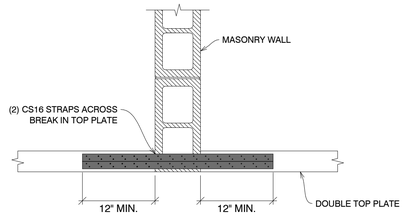

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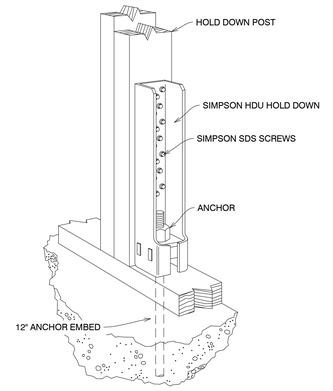

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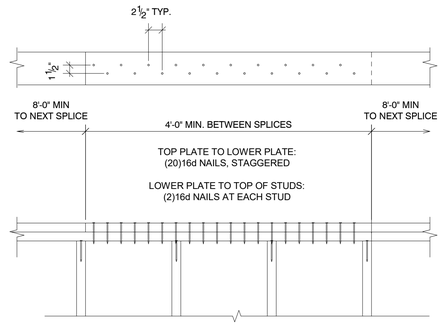

NOTE: WHERE DOUBLE TOP PLATE IS CUT DUE TO INTERSECTING BEAMS, WALLS, ETC. PROVIDE (2) CS16 STRAPS ACROSS CUT WITH 12" END LENGTHS

3 S3.2 CONSTRUCTION DETAIL
NO SCALE

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PROJECT #: 9501025

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GENOLA PUBLIC WORKS

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client info

PROFESSIONAL ENGINEER NO. 8362777 BRADLEY R. ELLIS 11/17/2025 STATE OF UTAH

design professional stamp

revision information

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CONSTRUCTION DETAILS

S3.2

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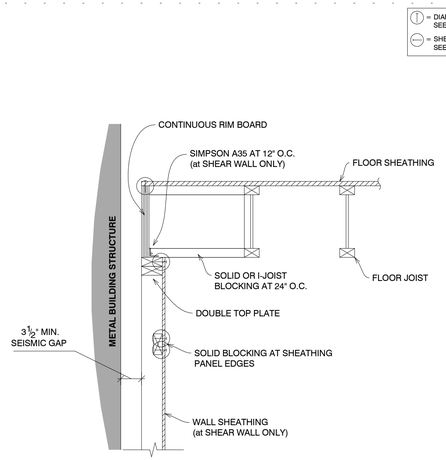

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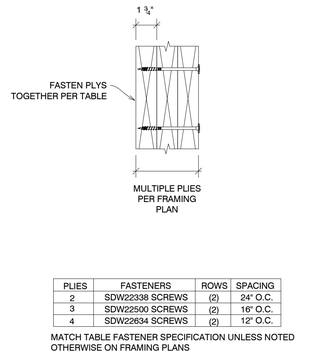
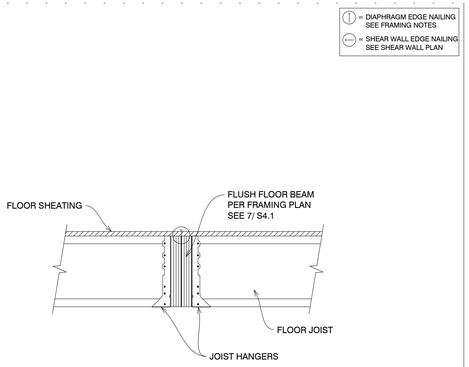


PLIES	FASTENERS	ROWS	SPACING
2	SDW22338 SCREWS	(2)	24" O.C.
3	SDW22500 SCREWS	(2)	16" O.C.
4	SDW22634 SCREWS	(2)	12" O.C.

MATCH TABLE FASTENER SPECIFICATION UNLESS NOTED OTHERWISE ON FRAMING PLANS

7 S4.1 CONSTRUCTION DETAIL
NO SCALE



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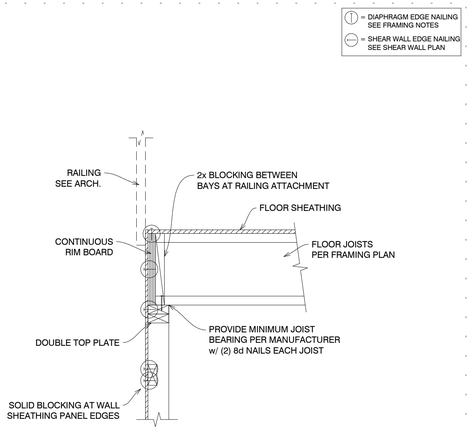

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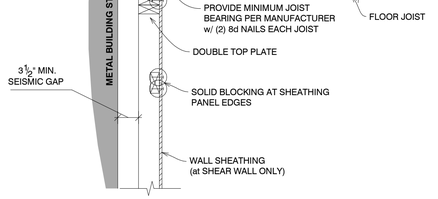

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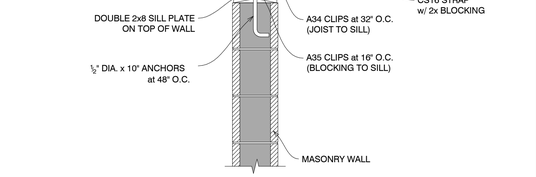

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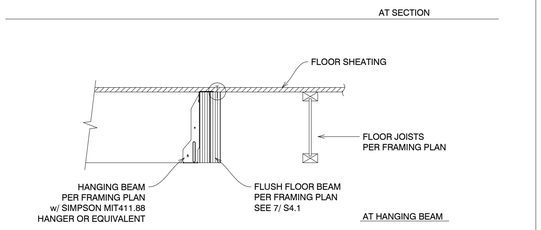

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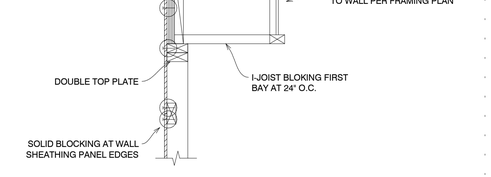

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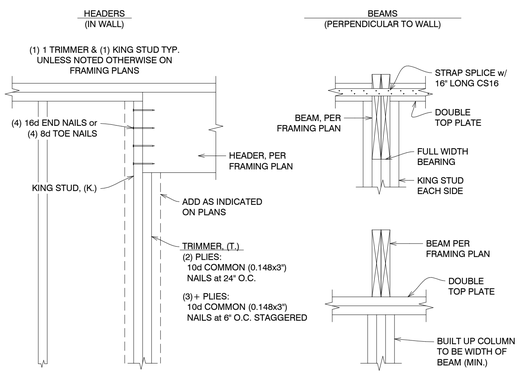

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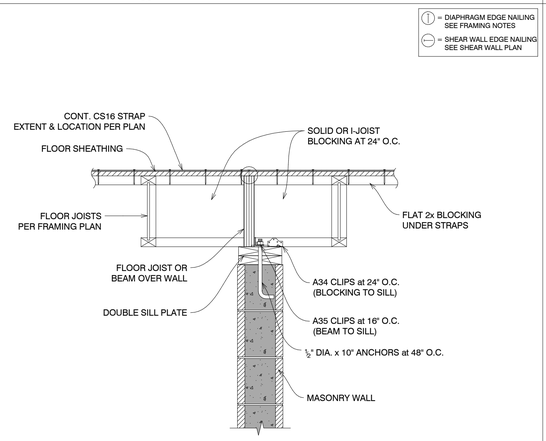
NO SCALE



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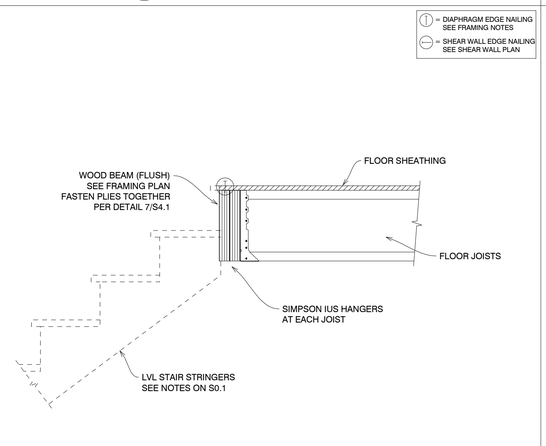

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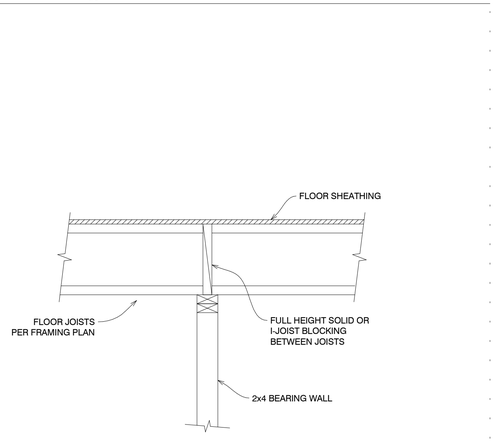

3 S4.1 CONSTRUCTION DETAIL
NO SCALE

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client info

PROFESSIONAL ENGINEER
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BRANDON R. ELLIS
11/17/2025
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CONSTRUCTION DETAILS

S4.1

sheet number

MECHANICAL SHEET INDEX

MECHANICAL SYMBOLS

SD# / ### — SUPPLY DIFFUSER, SD#, ### CFM ARROWS INDICATE DIRECTION OF THROUGH

SD# / ### — SUPPLY DIFFUSER (4-WAY)

RG# / ### — RETURN OR EXHAUST REGISTER TYPE 'RG# ### CFM

EG# / ### — EXHAUST REGISTER TYPE 'EG# ### CFM

/ ### — SIDEWALL SUPPLY, RETURN, OR EXHAUST REGISTER TYPE ### , ### CFM

SUPPLY DUCT UP

SUPPLY DUCT DOWN

RETURN DUCT UP

RETURN DUCT DOWN

EXHAUST DUCT UP

EXHAUST DUCT DOWN

AIRFLOW / SA — SUPPLY AIR BRANCH CONNECTION WITH VOLUME DAMPER

AIRFLOW / RA/EA — RETURN AIR/EXHAUST AIR BRANCH CONNECTION WITH VOLUME DAMPER

HORIZONTAL FIRE DAMPER

VERTICAL FIRE DAMPER

FS — COMBINATION FIRE/SMOKE HORIZONTAL FIRE DAMPER

FS — COMBINATION FIRE/SMOKE VERTICAL FIRE DAMPER

MECHANICAL PHASING

(SINGLE LINES SHOWN SIMILAR FOR DOUBLE LINED WORK)

MECHANICAL PROPOSED

MECHANICAL EXISTING TO REMAIN

MECHANICAL FOR DEMOLITION

POINT OF CONNECTION BETWEEN NEW AND EXISTING

EXTENT OF DEMOLITION

MECH. ABREVIATIONS

EXISTING	(E)
ABOVE FINISHED FLOOR	AFF
AIR HANDLING UNIT	AHU
BRITISH THERMAL UNIT	BTU
COMBUSTION AIR	CA
CUBIT FEET PER MINUTE	CFM
CONDENSING UNIT	CU
CABINET UNIT HEATER	CUH
DOWN	DN
EXHAUST AIR	EA
EXHAUST VENTILATOR	EV
FAN COIL UNIT	FCU
HORSEPOWER	HP
KILOWATT	KW
1,000 BTU'S	MBH
NATURAL GAS	NG
OUTSIDE AIR	OA
PACKAGED TERMINAL AIR CONDITIONER	PTAC
RETURN AIR	RA
REFRIGERANT	REF
RETURN GRILLE	RG
RADIANT HEATER	RH
ROOF TOP UNIT	RTU
SUPPLY AIR	SA
SUPPLY DIFFUSER	SD
SUPPLY GRILLE	SG
TRANSFER GRILLE	TG
12,000 BTU'S	TON
TYPICAL	TYP
UNIT HEATER	UH
WATTS	W

01 33 00 - SUBMITTAL PROCEDURES

1. BY DESCRIPTION, CATALOG NUMBER AND SPECIFIC DESIGNATION, STANDARDS ARE ESTABLISHED FOR MANUFACTURED ITEMS SUCH AS SPECIALTIES, FIXTURES AND EQUIPMENT WHICH THE CONTRACTOR SHALL FURNISH AS REQUIRED BY THIS SECTION. PRIOR TO APPROVAL IS REQUIRED FOR SUBSTITUTION OF EQUIPMENT AND MATERIALS PRIOR TO BID. SUBSTITUTION OF PRODUCTS SHOWN SHALL BE SUBMITTED TO THE ENGINEER FOR WRITTEN APPROVAL.
   a. ACCEPTABLE HVAC EQUIPMENT MANUFACTURERS ARE: YORK, CARRIER, LENNOX AND TRANE.
2. SHOP DRAWINGS AND UP-TO-DATE ENGINEERING DATA SHEETS AND CATALOG INFORMATION SHALL BE FURNISHED ON THE FOLLOWING ITEMS OF EQUIPMENT. PROVIDE (6) COPIES FOR REVIEW.
   a. HVAC EQUIPMENT
   b. AUTOMATIC TEMPERATURE CONTROLS.
   c. ALL DIFFUSERS, GRILLES, ETC.
   d. DUCTWORK FABRICATION METHODS.
   e. EXHAUST FANS.

01 73 29 - CUTTING AND PATCHING

1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED CUTTING, AND PATCHING INCIDENT TO WORK FOR THIS DIVISION, THE COST OF WHICH SHALL BE PAID FOR BY THE MECHANICAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL MAKE THE REQUIRED REPAIRS AFTERWARDS TO SATISFACTION OF ARCHITECT AND/OR OWNER'S REPRESENTATIVE. CUT CAREFULLY TO MINIMIZE THE NECESSITY FOR REPAIRS TO EXISTING WORK. DO NOT CUT BEAMS, COLUMNS OR TRUSSES. PATCH AND REPAIR WALLS, FLOORS, CEILING, AND ROOFS WITH MATERIALS OF SAME QUALITY AND APPEARANCE AS ADJACENT SURFACES UNLESS OTHERWISE SHOWN. SURFACE FINISHES SHALL EXACTLY MATCH EXISTING FINISHES OF SAME MATERIALS.
2. THE MECHANICAL CONTRACTOR SHALL BEAR THE EXPENSE OF CUTTING, PATCHING, REPAIRING, AND REPLACING OF WORK OF OTHER CONTRACTORS REQUIRED BECAUSE OF ITS FAULT, ERROR, TARDINESS, OR BECAUSE OF DAMAGE DONE BY MECHANICAL CONTRACTOR.

01 78 23 - OPERATION AND MAINTENANCE DATA

1. PROVIDE THREE (3) SETS OF BOUND OPERATION AND MAINTENANCE MANUALS COVERING ALL NEW HVAC EQUIPMENT FOR THE OWNER'S USE. O&M MANUALS SHALL HAVE THE FOLLOWING FORMAT:
   a. SIZE: 8-1/2"X 11"
   b. PAPER: MANUFACTURER'S PRINTED DATA OR NEATLY TYPE WRITTEN.
   c. PROVIDE REINFORCED PUNCHED BINDER TAB, BIND IN WITH TEXT.
   d. PROVIDE FLYLEAF FOR EACH SEPARATE PRODUCT, OR EACH PIECE OF OPERATING EQUIPMENT. PROVIDE TYPED DESCRIPTION OF PRODUCT, AND MAJOR COMPONENT PARTS OF EQUIPMENT, PROVIDE INDEXED TABS.
   e. COVER: IDENTIFY EACH VOLUME WITH TYPED OR PRINTED TITLE: "OPERATION AND MAINTENANCE INSTRUCTION". LIST TITLE OF PROJECT, IDENTITY OF GENERAL SUBJECT MATTER COVERED IN THE MANUAL.
   f. BRS: COMMERCIAL QUALITY THREE-RING BINDERS WITH DURABLE AND CLEANABLE PLASTIC COVERS.
   g. PROVIDE A NEATLY TYPEWRITTEN TABLE OF CONTENTS, LIST CONTRACTOR NAME, ADDRESS AND PHONE NUMBER. LIST EACH PRODUCT-BY-PRODUCT NAME AND OTHER IDENTIFYING SYMBOLS AS SET FORTH IN CONTRACT DOCUMENTS.
   h. INCLUDE COPY OF EACH WARRANTY, BOND AND SERVICE CHART WITH MAINTENANCE SCHEDULE, TEMPERATURE CONTROL DIAGRAMS, SEQUENCE OF OPERATION AND PROVIDE LOGICAL SEQUENCE OF INSTRUCTION FOR EACH PROCEDURE.

01 78 36 - WARRANTIES

1. THE MECHANICAL CONTRACTOR SHALL PROVIDE ONE (1) YEAR PARTS AND LABOR WARRANTY FOR HIS INSTALLED WORK AND HVAC EQUIPMENT AFTER EQUIPMENT START-UP AND THE OWNER'S REPRESENTATIVES' ACCEPTANCE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR AND MATERIALS TO CORRECT THE TROUBLE WITHOUT ANY ADDITIONAL COST. ANY MATERIALS FOUND TO BE DEFECTIVE DURING THE GUARANTEE PERIOD SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE OWNER.

01 78 39 - PROJECT RECORD DOCUMENTS

1. THE MECHANICAL CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS NEATLY MARKED WITH ALL CHANGES FROM THE ORIGINAL DESIGN AND DRAWINGS. THESE DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE AT THE COMPLETION OF THE PROJECT AND PRIOR TO RECEIVING FINAL PAYMENT.

01 79 00 - DEMONSTRATION AND TRAINING

1. PRIOR TO FINAL INSPECTION OR ACCEPTANCE, FULLY INSTRUCT THE OWNER'S DESIGNATED OPERATION AND MAINTENANCE PERSONNEL IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF PRODUCTS, EQUIPMENT AND SYSTEMS. (MINIMUM 2-HOURS INSTRUCTION REQUIRED OR MORE IF REQUESTED BY THE OWNER'S REPRESENTATIVE).

07 84 00 - FIRESTOPPING

1. COORDINATE REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR, ARCHITECT, THE OWNER'S REPRESENTATIVE AND THE LOCAL AUTHORITIES HAVING JURISDICTION.
2. PROVIDE UL FIRE PENETRATION SYSTEM NUMBER WL1002, FC1002, FC2008, FC3001 OR FC1001 FOR COMBUSTIBLE CONSTRUCTION OR SYSTEM NUMBER WL1002, WL2002, FA5001, OR FA8001 FOR NON-COMBUSTIBLE CONSTRUCTION OF THE UL BUILDING MATERIALS DIRECTORY AND AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
3. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL COMPLY WITH THE UL FIRE RESISTANCE DIRECTORY, LATEST ADOPTED EDITION.
4. PRIDE UL LISTED FIRE DAMPERS WITH FUSIBLE LINKS CONSTRUCTED TO UL STANDARD 33 AND UL LISTED FIRE/SMOKE DAMPERS WITH SMOKE DETECTORS CONFORMING TO NFPA 90A AND MEETING UL555 REQUIREMENTS AS REQUIRED BY STATE AND LOCAL CODES, INCLUDING ANY ADDITIONAL FIRE DAMPERS AND/OR FIRE/SMOKE DAMPERS WITH SMOKE DETECTORS THAT MAY BE REQUIRED, EVEN IF NOT SHOWN ON THE MECHANICAL DRAWINGS. PROVIDE A FIRESTOP SYSTEM AS REQUIRED BY LOCAL CODES AND ORDINANCES.
5. PROVIDE SMOKE DETECTORS AND WIRING CONTROL AS REQUIRED FOR THE OPERATION OF FIRE/SMOKE DAMPERS.

13 48 00 - SEISMIC PROTECTION

1. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED SEISMIC BRACING, RESTRAINTS, EQUIPMENT ISOLATORS, ETC. FOR HIS INSTALLED EQUIPMENT. ALL OF WHICH SHALL COMPLY WITH PPIC AND SMACNA GUIDELINES FOR THE LOCAL SEISMIC ZONE REQUIREMENTS AND IN ACCORDANCE WITH THE AUTHORITIES HAVING JURISDICTION.

23 05 00 - COMMON WORK RESULTS FOR HVAC

1. THE MECHANICAL CONTRACTOR SHALL BE AN EXPERIENCED FIRM REGULARLY ENGAGED IN THE INSTALLATION OF COMMERCIAL MECHANICAL SYSTEMS IN ACCORDANCE WITH LOCAL CODES. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PROPOSED CONTRACTOR WHO CANNOT SHOW EVIDENCE OF SUCH QUALIFICATIONS
2. VISIT THE JOBSITE PRIOR TO BIDDING, PRIOR TO MATERIAL FABRICATION AND PRIOR TO EQUIPMENT PROCUREMENT TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS, INTERFERENCES AND ANY DISCREPANCIES.
3. THE MECHANICAL CONTRACTOR SHALL PROVED ALL LABOR, MATERIAL, EQUIPMENT, EQUIPMENT, SUPPORTS, DIFFUSERS AND GRILLES FOR THE HVAC SYSTEMS FINISH AS REQUIRED TO ENSURE A COMPLETE AND OPERABLE HVAC SYSTEM. FURNISH ALL PAINT, LABOR, EQUIPMENT, APPLIANCES AND MATERIALS, AND PERFORM ALL OPERATIONS IN CONNECTION WITH THE INSTALLATION OF THE HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS IN STRICT ACCORDANCE WITH THE DRAWINGS. SUCCESSFUL, TROUBLE-FREE OPERATION OF VIBRATION-FREE SYSTEM IS A PERQUISITE.
4. THE MECHANICAL CONTRACTOR SHALL SCHEDULE ALL WORK SO AS NOT TO INTERFERE AND/OR DISRUPT THE DAILY ACTIVITIES AND/OR OPERATING HOURS OR NEARBY BUILDINGS. COORDINATE AS REQUIRED WITH THE GENERAL CONTRACTOR AND THE OWNER'S REPRESENTATIVE.
5. THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL FEES AND PERMITS RELATING TO HIS WORK.
6. THE NEW HVAC SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH STATE AND LOCAL CODES, OSHA, NFPA, SMACNA AND ASHRAE GUIDELINES.
7. COORDINATE THE NEW HVAC EQUIPMENT LOCATIONS WITH THE BUILDING STRUCTURE, THE OWNER'S REPRESENTATIVE, ARCHITECT, STRUCTURAL ENGINEER, AND THE GENERAL CONTRACTOR AS REQUIRED PRIOR TO INSTALLATION
8. COORDINATE THE EQUIPMENT, CONTROLS AND CUTWORK INSTALLATIONS WITH THE OTHER TRADES, PLUMBING PIPING, CONDUIT, ETC., COORDINATE THE CEILING DIFFUSER RETURN AIR GRILLES AND EXHAUST GRILLE LOCATIONS, WITH THE ELECTRICAL DRAWINGS AND THE ARCHITECTURAL REFLECTED CEILING PLAN. ROUTE THE DUCTWORK SO AS NOT TO INTERFERE WITH THE STRUCTURE OR THE REMOVING AND SERVICES OF LIGHT FIXTURES. CHANGES REQUIRED AS A RESULT OF NEGLECT TO COORDINATE INTERFERENCES WILL BE MADE AT THE MECHANICAL CONTRACTOR'S EXPENSE.
9. RUN ALL NEW DUCTWORK AS TIGHT AS POSSIBLE TO THE BOTTOM OF THE STRUCTURE IN THE DROPPED CEILING SPACE IN ORDER TO MAINTAIN THE FINISHED CEILING HEIGHTS AS SCHEDULES ON THE ARCHITECTURAL DRAWINGS. VERIFY THE DUCT HEIGHT DIMENSIONS WITH AVAILABLE CEILING SPACE AND MODIFY THE DUCT SIZES IF NECESSARY (KEEPING THE SAME DUCT AREA AS SHOWN ON THE MECHANICAL DRAWINGS – DUCT HEIGHT DIMENSION SHALL NOT BE LESS THAN 8") TO ACCOMMODATE ANY INTERFERENCES. COORDINATE THE NEW DUCTWORK IN THE SPACE WITH CONDUIT AND PIPING. FIELD VERIFY THE ROUTING OF DUCTWORK AND EQUIPMENT AND PIPING.
10. LOCATE ALL EXHAUST AIR OUTLETS AND FLUE VENTS 10'-0" MINIMUM DISTANCE FROM MECHANICAL EQUIPMENT OUTSIDE AIR INTAKES.
11. IT IS UNDERSTOOD THAT WHILE DRAWINGS ARE TO BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES PERMIT. THE MECHANICAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF CONTRACT DOCUMENTS. ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING AN APPLICATION TO ARCHITECT. SHOULD CONDITIONS ARISE WHERE CERTAIN CHANGES WOULD BE ADVISABLE TO SECURE APPROVAL OF THOSE CHANGES BEFORE PROCEEDING WITH WORK.
12. ARRANGE DUCTS AND EQUIPMENT TO PERMIT READY ACCESS TO VALVES, UNIONS, TRAPS, STARTERS, MOTORS, CONTROL COMPONENTS, AND TO CLEAR OPENING OF DOORS AND ACCESS PANELS.
13. FURNISH AND INSTALL HANGERS AND SUPPORTS REQUIRED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED. FURNISH SLEEVES, SUPPORTS, AND EQUIPMENT THAT ARE INTEGRAL PART OF OTHER CONTRACTORS' WORK IN SUFFICIENT TIME TO BE BUILT INTO CONSTRUCTION AS THE WORK PROCEEDS. LOCATE THESE ITEMS AND SEE THAT THEY ARE PROPERLY INSTALLED. EXPENSE RESULTING FROM IMPROPER LOCATION OR INSTALLATION OF ITEMS ABOVE SHALL BE BORNE BY THE MECHANICAL CONTRACTOR.
14. ADJUST THE LOCATION OF THE FINISH DUCTS, EQUIPMENT, ETC., TO ELIMINATE INTERFERENCE ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF DUCTWORK PRIOR TO FABRICATIONS. MAKE OFFSETS, TRANSITIONS, AND CHANGES IN DIRECTION OF DUCTS AS REQUIRED TO MAINTAIN PROPER CLEARANCES WHETHER OR NOT INDICATED ON THE DRAWINGS. FURNISH AND INSTALL FITTINGS AS REQUIRED TO AFFECT THESE OFFSETS, TRANSITIONS, AND CHANGES IN DIRECTION.
15. ENSURE THE NEW HVAC EQUIPMENT TO BE FURNISHED ALONG WITH THE DUCTWORK FIT IN SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN AND SPACE REQUIREMENTS INCLUDING THOSE FOR CONNECTIONS AND FURNISH AND INSTALL EQUIPMENT OF SIZE AND SHAPE SO THAT FINAL INSTALLATION REFLECTS TRUE INTENT AND MEANING OF CONTRACT DOCUMENTS.
16. FOLLOW MANUFACTURER'S DIRECTION IN DELIVERY, STORAGE, PROTECTION, AND INSTALLATION OF EQUIPMENT AND MATERIALS. PROMPTLY NOTIFY ARCHITECT AND/OR OWNER'S REPRESENTATIVE IN WRITING OF CONFLICTS BETWEEN REQUIREMENTS OF CONTRACT DOCUMENTS AND MANUFACTURER'S DIRECTIONS AND OBTAIN ARCHITECT'S AND/OR OWNER'S REPRESENTATIVE WRITTEN INSTRUCTION BEFORE PROCEEDING WITH WORK. BEAR EXPENSES FOR CORRECTING DEFICIENCIES OF WORK THAT DO NOT COMPLY WITH MANUFACTURER'S DIRECTIONS OR WRITTEN INSTRUCTIONS.
17. DELIVER EQUIPMENT AND MATERIAL TO SITE AND TIGHTLY COVER AND PROTECT AGAINST DIRT, WATER, AND CHEMICAL OR MECHANICAL INJURY. EQUIPMENT AND MATERIAL SHALL BE READILY ACCESSIBLE FOR INSPECTION. STORE ITEMS SUBJECT TO MOISTURE DAMAGE (SUCH AS CONTROLS) IN A DRY HEATED SPACE.
18. ALL MECHANICAL EQUIPMENT SHALL BE ISOLATED FROM THE STRUCTURE WITH EITHER VIBRATION ISOLATION PADS OR SPRING TYPE ISOLATORS AS APPLICABLE TO THE INSTALLATION, WHETHER THE MOTOR IS INTERNALLY ISOLATED OR NOT.
19. CONTRACTOR TO VERIFY AND PROVIDE MECHANICAL PIPING FOR HEATING AND COOLING SYSTEMS TO BE THERMALLY INSULATED PER IECC C403.2.10. MECHANICAL CONTRACTOR TO VERIFY MAXIMUM AND MINIMUM TEMPERATURES OF THE MECHANICAL PIPING SO MINIMUM INSULATIONS REQUIREMENTS CAN BE MET.

23 05 53 - IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

1. EQUIPMENT IDENTIFICATION: SIGNS MADE OF LAMINATED PLASTIC WITH 1/8" OR LARGER ENGRAVED LETTERS. SIGNS SHALL BE SECURELY ATTACHED BY RUST PROOF SCREWS OR SOME OTHER PERMANENT MEANS.
2. ALL HVAC EQUIPMENT SHALL HAVE EQUIPMENT IDENTIFICATION. INFORMATION ON THE SIGNS SHALL INCLUDE: MECHANICAL EQUIPMENT SCHEDULE SYMBOL, NAME OF EQUIPMENT, RATING, ELECTRICAL CHARACTERISTICS AND ANY OTHER IMPORTANT DATA.

23 05 93 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

1. THE MECHANICAL CONTRACTOR SHALL PROVIDE MATERIAL AND LABOR REQUIRED TO PERFORM START-UP OF EACH RESPECTIVE ITEM OF EQUIPMENT AND SYSTEM PRIOR TO THE BEGINNING OF TEST, ADJUST AND BALANCE PROCEDURES. SUBMIT START-UP REPORT TO THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE.
2. THE MECHANICAL CONTRACTORS SHALL PAY FOR THE SERVICES OF AN INDEPENDENT AIR BALANCING CONTRACTOR WHO IS CERTIFIED AND APPROVED BY THE ARCHITECT AND/OR THE OWNER'S REPRESENTATIVE PRIOR TO BIDDING TO PERFORM TESTING ADJUSTING AND BALANCING OF NEW HVAC SYSTEMS SUBMIT AIR BALANCE REPORT AND AABC STANDARDS FOR FIELD MEASUREMENT & INSTRUCTION, LATEST ADOPTED EDITION.
3. THE MECHANICAL CONTRACTOR SHALL MAKE CHANGES TO PULLEYS, BELTS AND DAMPERS AS RECOMMENDED BY THE BALANCING CONTACTOR.

23 07 13 - DUCT INSULATION

1. ALL RECTANGULAR SUPPLY AND RETURN DUCTWORK IN THE CEILING SPACE SHALL HAVE ACOUSTIC DUCT LINER INSULATION. ALL ROUND RIGID METAL TAKE-OFF DUCTWORK IN THE CEILING SPACE SHALL HAVE 1" THICK EXTERNAL DUCT-WRAP INSULATION WITH VAPOR BARRIER.
2. THE FINISH DUCT LINING SHALL BE 1" THICK FIBERGLASS, 1-1/2 POUNDS PER CUBIC FOOT DENSITY, NOISE ATTENUATION FACTOR OF NRC =0.10 WITH THE AIR STREAM SURFACE FACED WITH A BLACK COATED MATTE.
3. THE DUCT-WRAP INSULATION SHALL BE 1" THICK FIBERGLASS 1-1/2 POUNDS PER CUBIC FOOT DENSITY, NOISE ATTENUATION FACTO OF NRC = 0.70.
4. THE DUCT-WRAP INSULATION SHALL HAVE A THERMAL CONDUCTANCE OF 0.24 BTUH PER SQFT/°F. AT A MEAN TEMPERATURE OF 50°F.
5. THE REQUIRED FIRE HAZARD CLASSIFICATION IS: FLAME SPREAD NOT OVER 25, FUEL CONTRIBUTED NOT OVER 50°F, SMOKE DEVELOPED NOT OVER 50°F WHEN TESTED IN ACCORDANCE WITH ASTM E84.
6. INSULATED FLEXIBLE DUCTWORK MEETING CLASS 1 REQUIREMENTS OF NFPA 90A AND UL LABELED MAY BE USED ONLY AT THE CEILING DIFFUSER CONNECTIONS IN THE CONCEALED CEILING SPACE AREAS AND SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION WITH VAPOR BARRIER WITH A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM E84, AND SHALL BE LIMITED TO 5-FEET IN LENGTH.
7. APPROVED ACOUSTIC DUCT LINER MANUFACTURERS ARE:
   a. JOHNS-MANVILLE "LINACOUSTIC"
8. APPROVED EXTERNAL INSULATION MANUFACTURERS ARE:
   a. MANVILLE MICROLITE FSK
   b. CSG TYPE IV STANDARD DUCT INSULATION
   c. OWENS CORNING FRK
   d. KNAUF (DUCT WRAP FSK)
9. INSTALL INSULATION IN A NEAT AND WORKMANLIKE MANNER WITH NO FISHTAILS. FINISH SHALL BE SMOOTH WITH ALL JOINTS PROPERLY TAPED; INSULATION SHALL BE FULL THICKNESS UNCOMPRESSED EXCEPT WHERE REQUIRED TO PASS STRUCTURAL INTERFERENCES.

23 09 00 - INSTRUMENTATION AND CONTROL FOR HVAC

1. AUTOMATIC TEMPERATURE CONTROLS AND ASSOCIATED CONDUIT AND CONTROL WIRING SHALL BE BY THE MECHANICAL CONTRACTOR PROVIDE ALL DEVICES, COMPONENTS, CONDUIT, CONTROL WIRING AS REQUIRED TO ENSURE COMPLETE OPERABLE AUTOMATIC TEMPERATURE CONTROL SYSTEMS. NEW FURNACE UNIT SHALL HAVE NEW PROGRAMMABLE THERMOSTATS WITH AUTOMATIC CHANGEOVER AND NIGHT SET-BACK CONTROL. NEW UNIT HEATERS SHALL HAVE HEATING THERMOSTATS WITH SUMMER FAN SWITCH CONTROL.
2. VERIFY THERMOSTAT ROUGH-IN LOCATIONS AS SHOWN ON THE MECHANICAL PLAN DRAWING WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN INSTALLATION.
3. ALL TEMPERATURE CONTROLS ARE TO BE TESTED, ADJUSTED AND CALIBRATED FOR PROPER OPERATION
4. REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL TEMPERATURE CONTROL REQUIREMENTS.

23 31 00 - HVAC DUCTS AND CASINGS

1. ALL DUCTS SHALL BE FABRICATED FROM GALVANIZED STEEL IN ACCORDANCE WITH SMANCA STANDARDS AND REQUIREMENTS. NONMETALLIC DUCTWORK SHALL NOT BE USED. CONCEALED SUPPLY AND RETURN DUCTWORK SHALL BE GALVANIZED STEEL.
2. PROVIDE FLEXIBLE CONTRACTORS BETWEEN DUCTWORK AND HVAC EQUIPMENT (AIR HANDLING EQUIPMENT).
3. ALL NEW RECTANGULAR SUPPLY AND RETURN AIR DUCTWORK SHALL HAVE 1" THICK ACOUSTIC DUCT LINER INSULATION. DUCT DIMENSIONS SHOWN ON THE DRAWINGS REPRESENT INSIDE DUCT SIZE.
4. MANUAL BALANCING DAMPERS SHALL BE OPPOSED BLADE TYPE, GALVANIZED STEEL, AND SHALL HAVE LOCKING QUADRANT OPERATORS OR EXTENDED CONCEALED CEILING OPERATORS WHERE ACCESS IS LIMITED AND/OR AT GYPSUM BOARD CEILINGS.
5. PROVIDE TURNING VANES IN ALL NEW RECTANGULAR SUPPLY AND RETURN AIR DUCTWORK ELBOWS. PROVED VOLUME DAMPERS WITH LOCKING QUADRANTS AT EACH NEW SUPPLY AIR BRANCH TAKE-OFF, SEAL ALL DUCT JOINTS. WHERE THE VOLUME DAMPER IS NOT ACCESSIBLE, PROVIDE YOUNG NO. 817A OR 617B, CONSISTING OF AN 3/8" SQUARE SHAFT, AND A 3/8" REGULATOR (LENGTH AS REQUIRED) FOR OPERATING THE VOLUME DAMPER FROM SUSPENDED CEILING.
6. THE NEW DUCT LINING SHALL BE 1" THICK FIBERGLASS, 1-1/2 POUNDS PER CUBIC FOOT DENSITY, NOISE ATTENUATION FACTOR OF NRC = 0.70 WITH AIR STREAM SURFACE FACED WITH A BLACK COATED MATTE.
7. THE REQUIRED FIRE HAZARD CLASSIFICATION IS: FLAME SPREAD NOT OVER 25, FUEL CONTRIBUTED NOT OVER 50, SMOKE DEVELOPED NOT OVER 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84

DUCT SIZE:	GAUGE:	SUPPORT:	SPACING:
12" AND UNDER	26 GA.	(2) 1"X 22 GA. STRAPS	EVERY 10 FT.
13" TO 30"	24 GA.	(2) 1"X 18 GA. STRAPS	EVERY 10 FT.
31" TO 40"	22 GA.	(2) 1"X 18 GA. STRAPS	EVERY 10 FT.
40" AND OVER	20 GA.	(2) 1"X 18 GA. STRAPS	EVERY 10 FT.

23 40 00 - HVAC AIR CLEANING DEVICES

1. INSTALL THROW-AWAY FILTERS AT THE NEW FURNACE HEATING AND COOLING UNIT AFTER SYSTEM START-UP. INSTALL 30% EFFICIENT 2" THICK PLEATED FILTERS – SIZE AND QUALITY SHALL BE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS.

26 05 00 - COMMON WORK RESULTS FOR ELECTRICAL

1. LINE VOLTAGE WIRING AND CONDUIT IS BY THE ELECTRICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL FURNISH AND DISCONNECT SWITCHES THAT ARE NOT PROVIDED WITH THE MECHANICAL EQUIPMENT AS REQUIRED FOR THE HVAC EQUIPMENT. COORDINATE AS REQUIRED WITH THE ELECTRICAL CONTRACTOR AND THE GENERAL CONTRACTOR.

ENGINEER

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REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
No. 12019574
ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**

DRAWN BY: **JPD**

CHECKED BY: **ZLL**

ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

290340021

SHEET TITLE

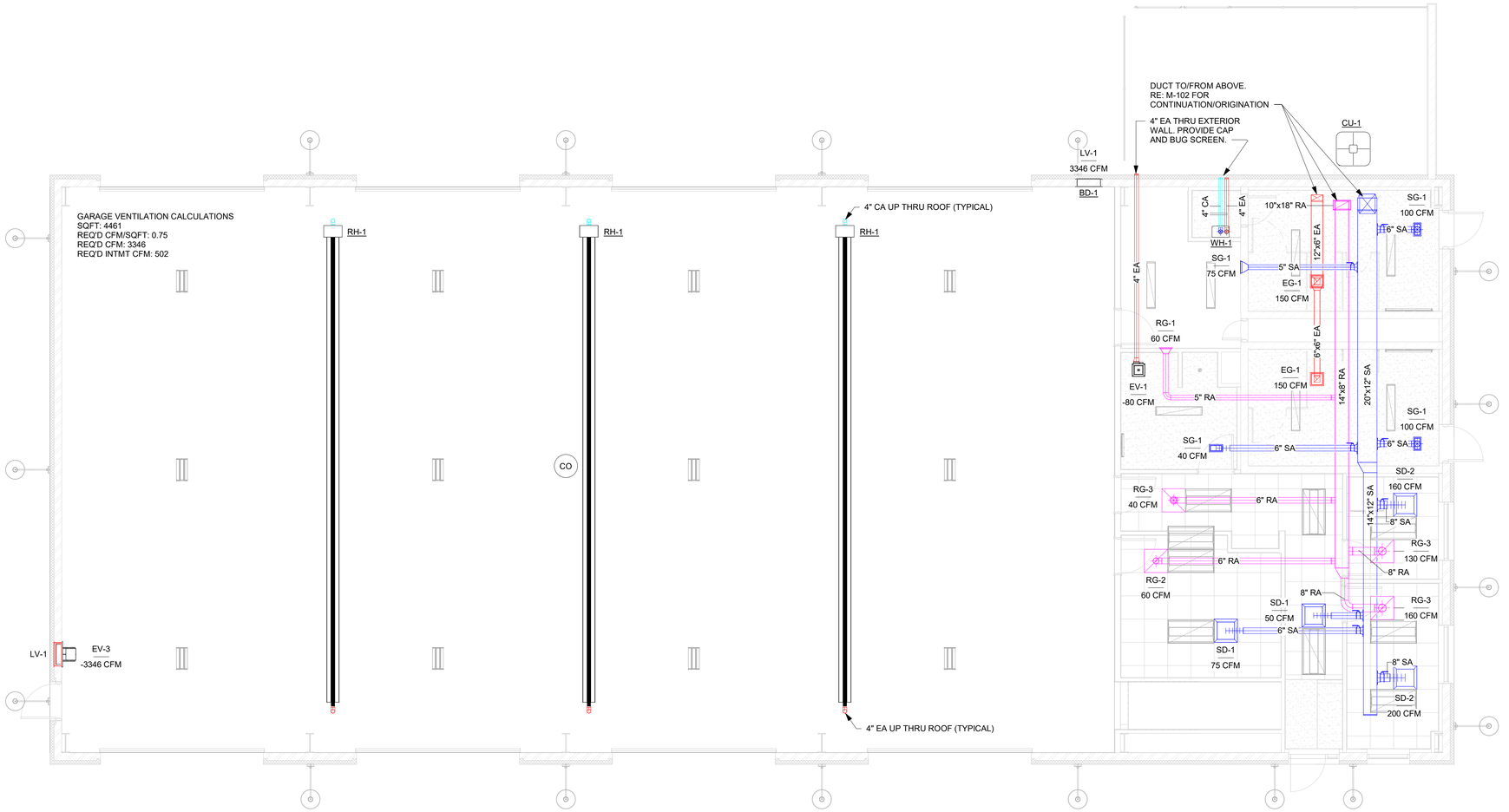
MECHANICAL GENERAL INFO

SHEET NUMBER

M-001

MECHANICAL GENERAL NOTES

1. ALL DRAWINGS SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL ASPECTS OF THE CONTRACT DOCUMENTS PRIOR TO SUBMITTING PRICING. ANY AND ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO AN INSTALLATION SUCH THAT CLARIFICATIONS CAN BE ISSUED.
2. ANY WORK PERFORMED OR MATERIAL USED WHICH IS SHOWN TO BE IN CONFLICT WITH THE CONTRACT DRAWINGS, SPECIFICATIONS OR ANY APPLICABLE CODE OR GOVERNING REGULATION SHALL BE REMOVED AND REPLACED OR CORRECTED AT THE CONTRACTOR'S EXPENSE.
3. ALL SYMBOLS AND ABBREVIATIONS USED ON THE CONTRACT DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH ANY WORK.
4. DO NO SCALE THE DRAWINGS. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO FABRICATION OF MATERIALS OR ERECTION OF ASSEMBLIES. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
5. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR AND EQUIPMENT, TRANSPORTATION AND SERVICES REQUIRED FOR COMPLETION OF THE WORK. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE DONE IN STRICT COMPLIANCE WITH ALL LOCAL CODES AND GOVERNING REGULATIONS.
6. ALL PERMITS AND FEES WHICH ARE REQUIRED FOR THIS WORK SHALL BE SECURED AND PAID FOR BY THE MECHANICAL CONTRACTOR.
7. ALL PLUMBING AND MECHANICAL INSTALLATIONS SHALL ADHERE TO THE 2015 IECC.
8. PROVIDE OPERATION AND MAINTENANCE MANUALS TO OWNER OR ALL NEWLY INSTALLED EQUIPMENT PER 2015 IECC. O&M MANUALS SHALL BE BOUND IN THREE RING BINDER UTILIZING LABELED TABS TO SEPARATE EQUIPMENT SECTIONS.
9. UNLESS NOTED OTHERWISE, ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND MECHANICAL ACCESSORIES SHALL REMAIN. NO CHANGES UNLESS NOTED.
10. CONTRACTOR SHALL BE RESPONSIBLE TO CLEAN THE SURFACE OF ALL SUPPLY, RETURN, EXHAUST, AND TRANSFER DIFFUSERS/GRILLES AT COMPLETION OF PROJECT.
11. DUCTWORK SHALL BE FABRICATED TO NFPA 90A STANDARDS. TYPICAL LOW PRESSURE DUCTWORK SHALL BE ASTM A653M GALVANIZED STEEL SHEET, LOCK FORMING QUALITY, HAVING ZINC COATING OF 1.25 OUNCES/SF FOR EACH SIDE PER ASTM A90.
12. FABRICATE AND SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS AND ASHRAE HANDBOOKS.
13. ALL BRANCH DUCTWORK SHALL MATCH CONNECTION SIZE OF DIFFUSERS UNLESS NOTED OTHERWISE.
14. ROUTE EXPOSED SPIRAL DUCTWORK AS HIGH AS POSSIBLE TO BOTTOM OF STRUCTURE.



1 MECHANICAL PLAN - LEVEL 1

3/16" = 1'-0"

0 4" 8" 16'

ENGINEER

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11/21/2025
No. 12019574
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APPLICANT

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CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**
APPLICATION TYPE:

PERMIT

APN #

290340021

SHEET TITLE

MECHANICAL PLAN

SHEET NUMBER

M-101

MECHANICAL GENERAL NOTES

1. ALL DRAWINGS SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL ASPECTS OF THE CONTRACT DOCUMENTS PRIOR TO SUBMITTING PRICING. ANY AND ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO AN INSTALLATION SUCH THAT CLARIFICATIONS CAN BE ISSUED.
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6. ALL PERMITS AND FEES WHICH ARE REQUIRED FOR THIS WORK SHALL BE SECURED AND PAID FOR BY THE MECHANICAL CONTRACTOR.
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8. PROVIDE OPERATION AND MAINTENANCE MANUALS TO OWNER OR ALL NEWLY INSTALLED EQUIPMENT PER 2015 IECC. O&M MANUALS SHALL BE BOUND IN THREE RING BINDER UTILIZING LABELED TABS TO SEPARATE EQUIPMENT SECTIONS.
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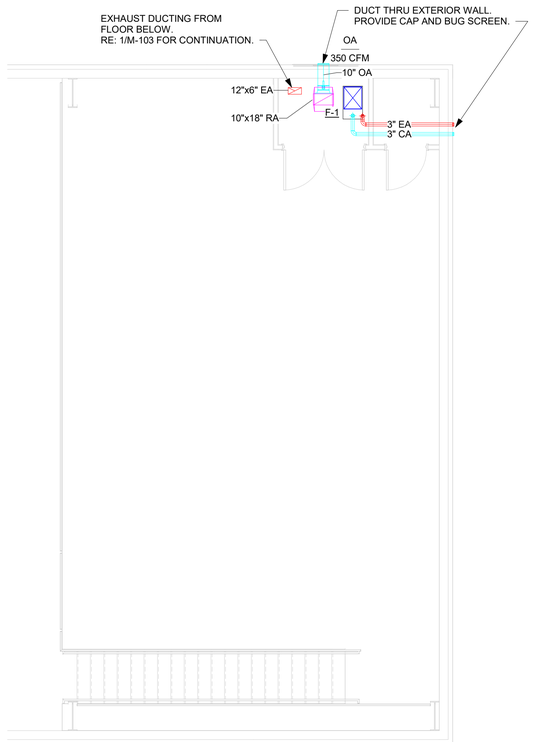

1 MECHANICAL PLAN - LEVEL 2

3/16" = 1'-0"

0 4' 8' 16'

N

ENGINEER

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REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
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STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

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MARK	DATE	DESCRIPTION

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CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**
APPLICATION TYPE:

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APN #

290340021

SHEET TITLE

MECHANICAL PLAN - MEZZANINE

SHEET NUMBER

M-102

Autodesk Docs://Genola Public Works Building/Genola Public Works Building.rvt

MECHANICAL GENERAL NOTES

1. ALL DRAWINGS SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL ASPECTS OF THE CONTRACT DOCUMENTS PRIOR TO SUBMITTING PRICING. ANY AND ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO AN INSTALLATION SUCH THAT CLARIFICATIONS CAN BE ISSUED.
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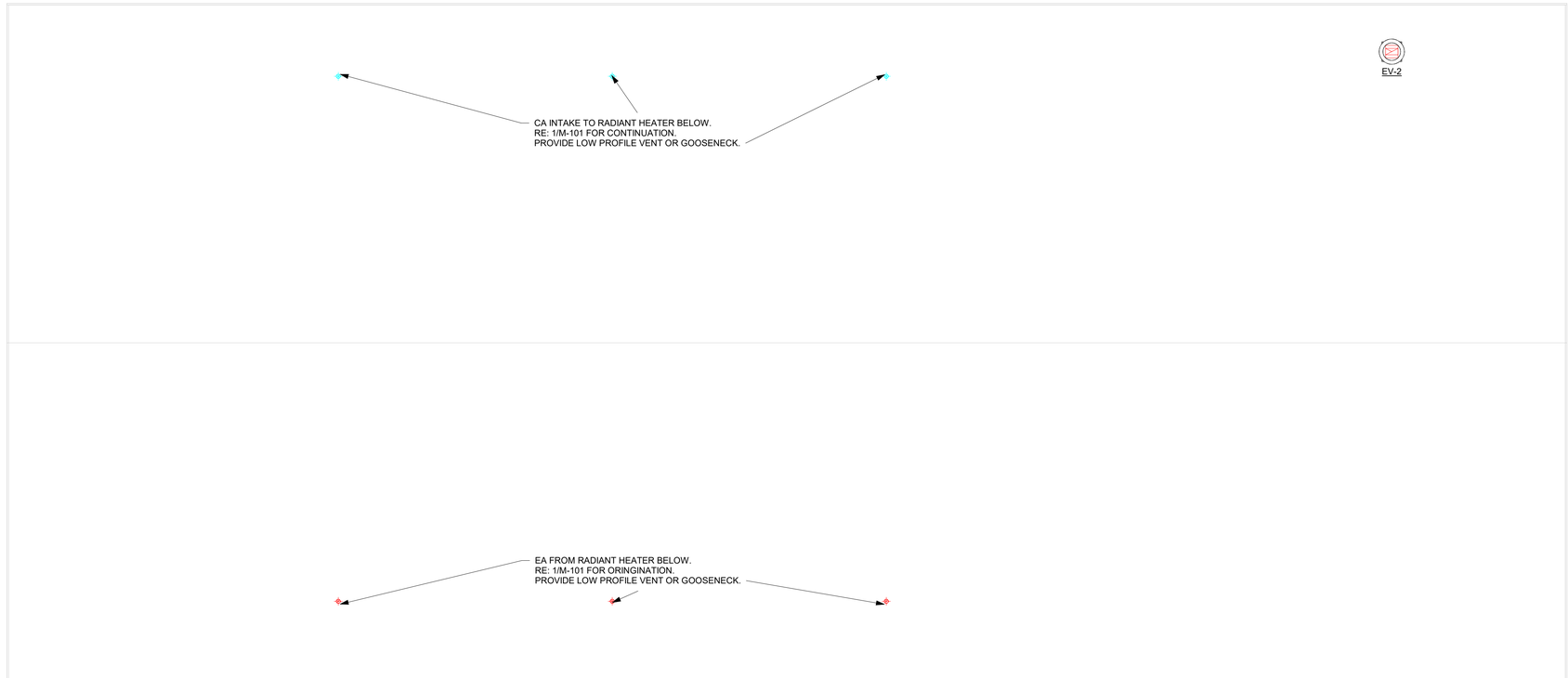
13. ALL BRANCH DUCTWORK SHALL MATCH CONNECTION SIZE OF DIFFUSERS UNLESS NOTED OTHERWISE.
14. ROUTE EXPOSED SPIRAL DUCTWORK AS HIGH AS POSSIBLE TO BOTTOM OF STRUCTURE.



1 MECHANICAL PLAN - ROOF

3/16" = 1'-0"

0 4' 8' 16'

N

ENGINEER

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(208) 403-8903

REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
No. 12019574
ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
DRAWN BY: **JPD**
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ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

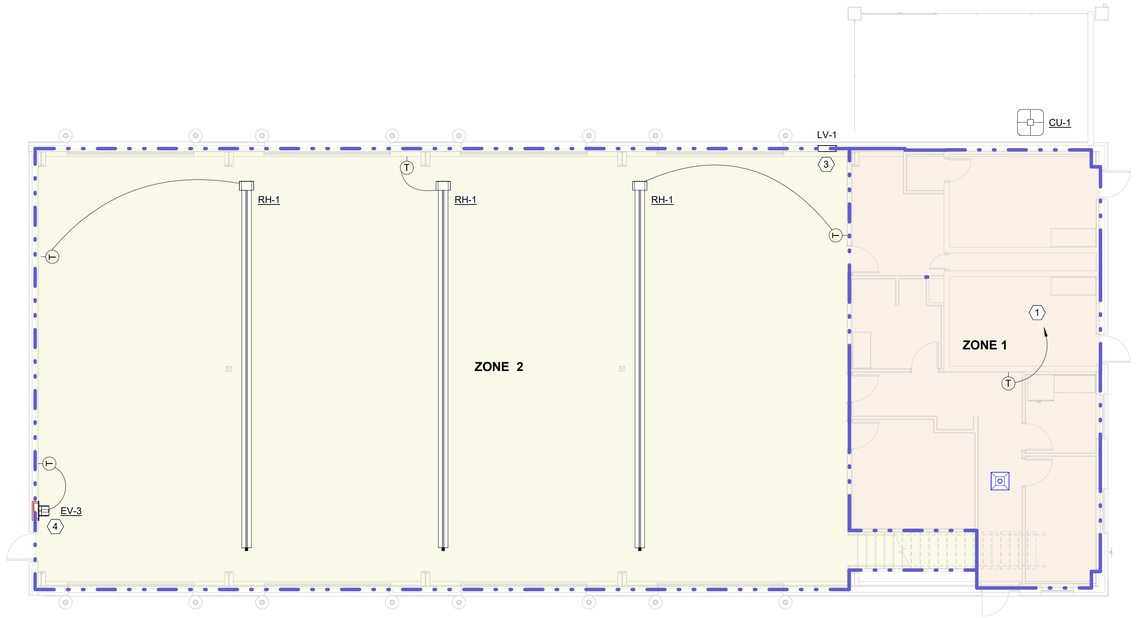
290340021

SHEET TITLE

MECHANICAL PLAN - ROOF

SHEET NUMBER

M-103

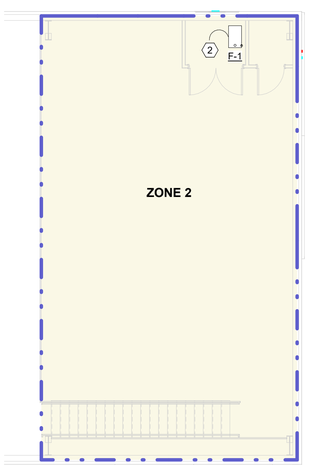


1 ENERGY ANALYSIS PLAN

1/8" = 1'-0"

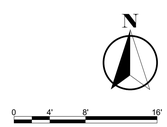
KEY NOTES:

1. TO/FROM F-1 ON MEZZANINE ABOVE. RE: 2/M-201 FOR CONTINUATION.
2. TO/FROM ZONE 1 THERMOSTAT BELOW. RE: 1/M-201 FOR CONTINUATION.
3. INTERCONNECT TO EV-3.
4. FAN TO BE CONTROLLED BY HOA SWITCH WITH THERMOSTAT FOR AUTOMATIC OPERATION.



2 ENERGY ANALYSIS PLAN - MEZZANINE

1/8" = 1'-0"



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APPLICATION TYPE:

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APN #

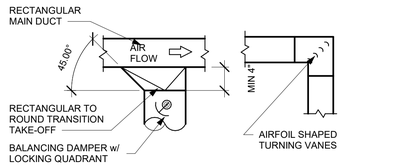
290340021

SHEET TITLE

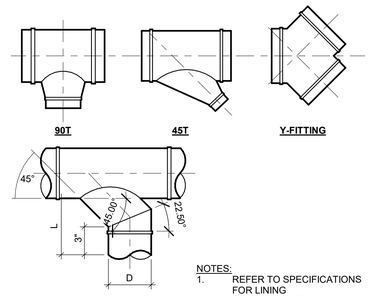
HVAC ZONING

SHEET NUMBER

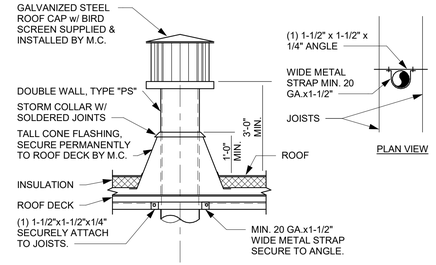
M-201



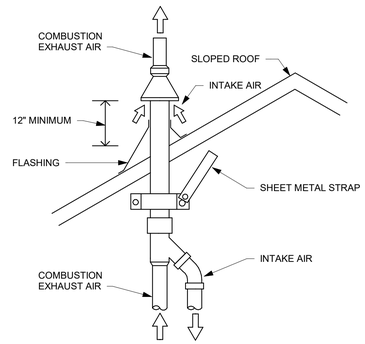
1 LOW PRESSURE RETANGULAR DUCT FITTINGS
NTS



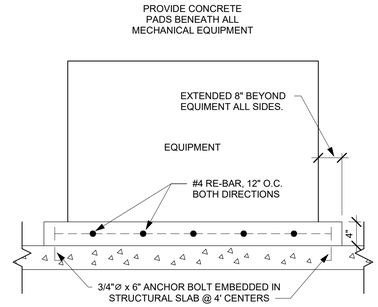
2 TYPICAL SPIRAL DUCT FITTINGS
NTS



3 CONCENTRIC FLUE DETAIL (FLAT ROOF)
NTS



4 CONCENTRIC FLUE DETAIL (SLOPED ROOF)
NTS



5 HOUSEKEEPING PAD DETAIL
NTS

6 ROUND DUCTWORK SUPPORT DETAIL
NTS

7 DUCTWORK SUPPORT DETAIL
NTS

8 TYPICAL DUCT TAKE-OFF DETAIL
NTS

9 RADIANT TUBE HEATER DETAIL
NTS

10 FURNACE/CONDENSING UNIT DETAIL (VERTICAL)
NTS

11 BATHROOM EXHAUST FAN DUCTING (WALL) DETAIL
NTS

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PERMIT
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290340021
SHEET TITLE
MECHANICAL DETAILS
SHEET NUMBER
M-501

CONDENSING UNIT SCHEDULE

1. PROVIDE MANUFACTURER EQUIPMENT PAD.
2. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES ON ALL SIDES.

IDENTIFICATION				COOLING INFORMATION				ELECTRICAL				PHYSICAL		
MARK	MANUFACTURER	MODEL	SERVES	NOMINAL SIZE	COOLING CAPACITY	EER/SEER	COOLING STAGES	POWER	MCA	MOP	RLA	WEIGHT	L / W / H	NOTES
CU-1	CARRIER	26SCA524W003	OFFICE	2 ton	24,000 Btu/h	15/23	1 STAGE	208/1/60	14 A	20 A	10 A	299 lb	35" / 35" / 47"	1,2

FURNACE SCHEDULE

1. ROUTE 3/4" CONDENSATE TO FLOOR DRAIN.

IDENTIFICATION			COOLING INFORMATION			HEATING INFORMATION					AIRFLOW & FANS						ELECTRICAL				PHYSICAL			
MARK	MANUFACTURER	MODEL	COOLING STAGES	NOMINAL SIZE	COOLING CAPACITY	HEAT SOURCE	HEATING STAGES	BTU INPUT	EFFICIENCY	BTU OUTPUT	SUPPLY AIR	E.S.P.	HP	RETURN AIR	ECONOMIZER	OUTSIDE AIR	POWER	MCA	MOP	FLA	ORIENTATION	WEIGHT	L / W / H	NOTES
F-1	CARRIER	59SC6A-040M17--12	1 STAGE	2 ton	24,000 Btu/h	NATURAL GAS	1 STAGE	40,000 Btu/h	95%	39,000 Btu/h	800 CFM	0.50 in-wg	0.5 hp	800 CFM	NO ECONOMIZER	119 CFM	120/1/60	7 A	15 A	7 A	DOWNFLOW	130 lb	18" / 30" / 35"	

GRILLE AND DIFFUSER SCHEDULE

IDENTIFICATION				PHYSICAL						
TYPE MARK	MANUFACTURER	MODEL	TYPE	FACE SIZE	NECK SIZE	MOUNTING	COLOR	MATERIAL	COUNT	NOTES
EG-1	TITUS	350RL	EXHAUST GRILLE	13 3/4" x 13 3/4"	12"x12"	WALL	WHITE	STEEL	2	
RG-2	TITUS	PAR-06-24x24	RETURN DIFFUSER	24" x 24"	6"	CEILING	WHITE	STEEL	1	
RG-3	TITUS	PAR-08-24x24	RETURN DIFFUSER	24" x 24"	8"	CEILING	WHITE	STEEL	3	
RG-1	TITUS	350RL	RETURN GRILLE	13 3/4" x 7 3/4"	6"x12"	WALL	WHITE	STEEL	1	
SD-1	TITUS	OMNI	SUPPLY DIFFUSER	24" x 3 3/4"	6"	CEILING	WHITE	STEEL	2	
SD-2	TITUS	OMNI	SUPPLY DIFFUSER	24" x 3 3/4"	8"	CEILING	WHITE	STEEL	2	
SG-1	TITUS	300RS	SUPPLY GRILLE	13 3/4" x 7 3/4"	12"x6"	CEILING	WHITE	STEEL	4	

RADIANT TUBE HEATER SCHEDULE

IDENTIFICATION			HEATING INFORMATION					ELECTRICAL				PHYSICAL							
TYPE MARK	MANUFACTURER	MODEL	FUEL TYPE	HEATING STAGES	BTU INPUT	BTU OUTPUT	EFFICIENCY	POWER	MCA	MOP	FLA	WEIGHT	LENGTH	MOUNTING HEIGHT	CLR - TOP	CLR - SIDE	CLR - DN	COUNT	NOTES
RH-1	SUPERIOR RADIANT	AM-115-40	NATURAL GAS	MODULATING	115,000 Btu/h	92,000 Btu/h	80%	120/1/60	1 A	15 A	1 A	216 lb	40'	22' - 22'	2'	4'	31'	3	

EXHAUST FAN SCHEDULE

1. CONTROL FAN ON BATHROOM LIGHT SWITCH

IDENTIFICATION			AIRFLOW & FANS			ELECTRICAL		PHYSICAL			
TYPE MARK	MANUFACTURER	MODEL	AIR FLOW	E.S.P.	RPM	POWER	WATTS	MOUNTING	DUCT SIZE	COUNT	NOTES
EV-1	PANASONIC	FV-11-15VK1	80 CFM	0.25 in-wg	814	120/1/60	6 W	CEILING	6"	1	1
EV-2	GREENHECK	G-090-E	300 CFM	0.20 in-wg	1050	120/1/60	124 W	ROOF		1	
EV-3	GREENHECK	AER-20-03-0320-VG	3346 CFM		1550	120/1/60	373 W			1	

WATER HEATER SCHEDULE

IDENTIFICATION			HEATING INFORMATION				PLUMBING			ELECTRICAL				PHYSICAL				
TYPE MARK	MANUFACTURER	MODEL	HEAT SOURCE	BTU INPUT	BTU OUTPUT	EFFICIENCY	CW	HW	NG	POWER	WATTS	MCA	MOP	VOLUME	WEIGHT	(D) L / W / H	COUNT	NOTES
WH-1	A.O. SMITH	ACT-199I-N	NATURAL GAS	199,000 Btu/h	191,040 Btu/h	96%	3/4"	3/4"	3/4"	120/1/60	178 W	1 A	15 A	0 gal	70 lb	18" / 11" / 24"	1	

VENTILATION RATES SCHEDULE

SPACE NAME	SPACE NUMBER	SPACE TYPE	AREA	SF / PERSON	# OF PEOPLE	CFM / SF	CFM / PERSON	VENTILATION CFM
CORRIDOR	100	Public spaces - Corridors	191 SF	0 SF	0.0	0.06 CFM/SF	0 CFM	11 CFM
OFFICE	101	Offices - Office spaces	111 SF	200 SF	0.6	0.06 CFM/SF	5 CFM	9 CFM
BREAK ROOM	102	Food services - Dining rooms	69 SF	14 SF	4.9	0.18 CFM/SF	8 CFM	52 CFM
TOILET ROOM	103	Public spaces - Restrooms - Public	94 SF	0 SF	0.0	0.00 CFM/SF	0 CFM	0 CFM
VEHICLE BAYS	104	Storage - Repair garages	4462 SF	558 SF	8.0	0.75 CFM/SF	0 CFM	3346 CFM
STORAGE	105	Public spaces - Storage	161 SF	359 SF	0.4	0.12 CFM/SF	0 CFM	19 CFM
STORAGE	106	Public spaces - Storage	121 SF	359 SF	0.3	0.12 CFM/SF	0 CFM	15 CFM
PLUMBING CHASE	107	Plenum	33 SF	0 SF	0.0	0.00 CFM/SF	0 CFM	0 CFM
MENS	108	Public spaces - Restrooms - Public	164 SF	0 SF	0.0	0.00 CFM/SF	0 CFM	0 CFM
WOMENS	109	Public spaces - Restrooms - Public	169 SF	0 SF	0.0	0.00 CFM/SF	0 CFM	0 CFM
JANITOR	110	Public spaces - Storage	17 SF	359 SF	0.0	0.12 CFM/SF	0 CFM	2 CFM
MEZZANINE	200	Storage - Warehouses	1303 SF	108 SF	12.1	0.06 CFM/SF	10 CFM	199 CFM
MECHANICAL	201	Public spaces - Storage	33 SF	359 SF	0.1	0.12 CFM/SF	0 CFM	4 CFM
ELECTRICAL	202	Public spaces - Storage	24 SF	359 SF	0.1	0.12 CFM/SF	0 CFM	3 CFM
TOILET ROOM	203	<Building>	5 SF	308 SF	0.0	0.06 CFM/SF	5 CFM	0 CFM

LOUVER SCHEDULE

IDENTIFICATION			PHYSICAL				
TYPE MARK	MANUFACTURER	MODEL	W / H / D	COLOR	MATERIAL	COUNT	NOTES
LV-1	RUSKIN	ELF6375DX	42" x 24"	PER OWNER	ALUMINUM	1	

BACKDRAFT DAMPER SCHEDULE

1. EVAPORATIVE COOLERS AND MOTORIZED DAMPER SHALL BE ELECTRONICALLY INTERLOCKED

IDENTIFICATION			PHYSICAL			
MARK	MANUFACTURER	MODEL	W / H / D	MATERIAL	COUNT	NOTES
BD-1	GREENHECK	HCD-120	24" / 30" / 8"	STEEL	1	1

COMcheck Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	Genola Public Works Building
Location:	Genola, Utah
Climate Zone:	5b
Project Type:	New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)
Credits: 10.0 Required 14.3 Proposed
Reduced lighting power, 14.3 credit

Mechanical Systems List

Quantity System Type & Description

1 HVAC System (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 39 kBtu/h
Proposed Efficiency = 95.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Split System, Capacity = 24 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 14.50 SEER2, Required Efficiency = 13.40 SEER2
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 800 CFM, 0.5 motor nameplate hp, 1.00 fan energy index

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jake Davis - EI — Name - Title
Signature
25-10-28 — Date

Project Title: Genola Public Works Building
Data filename:
Report date: 11/21/25
Page 5 of 13

SCOPE	PEAK TIME	AREA	VOLUME	SENSIBLE GAIN	LATENT GAIN	CTAL GAIN	TONS	SENSIBLE LOSS	COOLING AIRFLOW	HEATING AIRFLOW	PEOPLE	VENTILATION CFM	VENTILATION SENSIBLE GAIN	VENTILATION LATENT GAIN
SYSTEM 1	AUGUST 9PM	1130	10179	19930	-4427	14403	1.2	31802	714	329	6	300	7948	-5169
ZONE 1	AUGUST 9PM	1130	10179	11157	737	11894		5459	714	329	6	300		
9-JANITOR - 110	AUGUST 4PM	17	153	139	-3	136		306	8	17	0	4		
10-MEZZANINE - 200	AUGUST 4PM	1303	11727	2135	372	2506		4811	108	108	0	199		
5-OFFICE - 101	AUGUST 4PM	111	999	2135	372	2506		4811	108	108	1	9		
6-BREAK ROOM - 102	AUGUST 9PM	69	621	1618	147	1765		1913	220	93	1	108		
8-TOILET ROOM - 103	AUGUST 9PM	94	846	52	-21	31		39	2	2	0	1		
11-STORAGE - 105	AUGUST 4PM	161	1449	720	122	842		153	44	3	1	21		
12-STORAGE - 106	AUGUST 4PM	121	1089	666	92	757		117	41	28	1	15		
13-MENS - 108	AUGUST 4PM	164	1475	1004	-34	971		1004	41	41	0	20		
14-WOMENS - 109	AUGUST 4PM	169	1521	954	-35	919		955	42	41	0	20		
SYSTEM 2	AUGUST 5PM	3668	117162	0	0	0	0	146372	0	4391	0	4333	0	0
ZONE 2	AUGUST 5PM	3668	117162	0	0	0		146372	0	4391	0	4333		
1-VEHICLE BAYS	AUGUST 5PM	4462	142622	0	0	0		89800	0	3700	0	3346		
2-MEZZANINE	AUGUST 5PM	1303	14322	0	0	0		19121	0	554	0	940		
3-MECHANICAL	AUGUST 5PM	33	287	0	0	0		438	0	24	0	5		
4-ELECTRICAL	AUGUST 5PM	24	215	0	0	0		315	0	24	0	5		

ENGINEER

REDBRICK ENGINEERING

1052 S 1350 E
SPANISH FORK, UT 84660
(208) 403-8903

REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
NO. 12019574
ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
DRAWN BY: **JPD**
CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

290340021

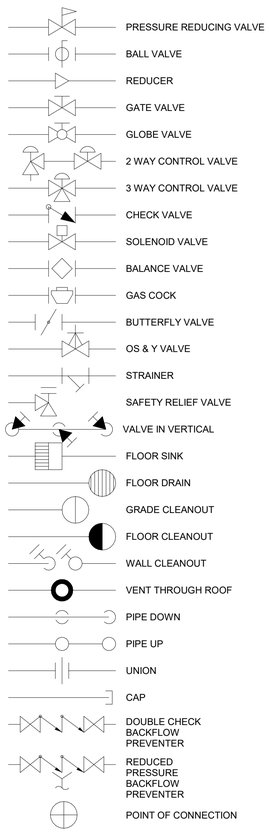
SHEET TITLE

MECHANICAL SCHEDULES

SHEET NUMBER

M-601

PLUMBING SHEET INDEX



PLUMB. ABREVIATIONS

A.A.V.	AIR ADMITTANCE VALVE
A.F.F.	ABOVE FINISHED FLOOR
COND	CONDENSATE
CW	COLD WATER
DOM	DOMESTIC
(E)	EXISTING
FCO	FLOOR CLEAN OUT
HW	HOT WATER
HWR	HOT WATER RETURN
NG	NATURAL GAS
REF	REFRIGERANT
SAN	SANITARY
TW	TEMPERED WATER
V	VENT
VTR	VENT THRU ROOF
WCO	WALL CLEAN OUT

22 00 00 – COMMON WORK RESULTS FOR PLUMBING

1. THE PLUMBING SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL, STATE, AND REGIONAL PLUMBING CODES, STATE AND LOCAL HEALTH DEPARTMENT REGULATIONS, AND OSHA REGULATIONS.
2. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO PAY FOR ALL FEES AND PERMITS RELATING TO HIS WORK.
   a. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE LOCAL GAS COMPANY AND SHALL ARRANGE FOR THE INSTALLATION OF THE NEW GAS METERS. THE NEW GAS PIPING SUPPLYING THE GAS-FIRED HVAC EQUIPMENT IS SIZED FOR 4-OZ GAS PRESSURE.
   b. THE PLUMBING CONTRACTOR SHALL BE AN EXPERIENCED FIRM REGULARLY ENGAGED IN THE INSTALLATION OF COMMERCIAL PLUMBING SYSTEMS IN ACCORDANCE WITH LOCAL CODES. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PLUMBING CONTRACTOR WHO CANNOT SHOW EVIDENCE OF SUCH QUALIFICATIONS
   c. VISIT THE JOBSITE PRIOR TO BIDDING THE PROJECT TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND ANY INTERFERENCE. SHOULD A CONDITION ARISE WHERE A CHANGE WOULD BE ADVISABLE, SECURE APPROVAL OF CHANGE BEFORE PROCEEDING WITH WORK.

22 05 10 – PLUMBING INSTALLATION REQUIREMENTS

1. NEW HORIZONTAL WASTE PIPE SHALL BE GIVEN A GRADE OF 1/4" PER FOOT. 1/8" PER FOOT SLOPE MUST BE APPROVED BY THE AUTHORITY HAVING JURISDICTION. ROOF DRAIN PIPING SHALL BE GIVEN A GRADE OF 1/8" PER FOOT.
2. VENT INLETS ON THE FLOOR DRAINS AND FLOOR SINKS SHALL BE ABOVE THE WEIR OF THE TRAPS THEY SERVE.
3. ALL PLUMBING FIXTURE SUPPLIES WITH STOPS, P-TRAPS, AND TRAP ARMS SHALL BE CHROME PLATED.
4. VERIFY THE LOCATIONS AND SIZES OF THE EXISTING DOMESTIC WATER, GAS, AND WASTE AND MAKE NECESSARY NEW CONNECTIONS AS REQUIRED. REFER TO THE CIVIL ENGINEERING DRAWINGS AND COORDINATE WITH THE GENERAL CONTRACTOR THE OWNER'S REPRESENTATIVE.
5. THE PLUMBING CONTRACTOR SHALL PERIODICALLY REMOVE ALL DEBRIS AND WASTE RELATED TO HIS WORK IN ORDER TO MAINTAIN SAFE WORKING AND OPERATING CONDITIONS, AND SHALL DISPOSE OF THE SAME IN A APPROVED MANNER AT THE COMPLETION OF WORK. HE SHALL REMOVE ALL HIS RUBBISH, TOOLS, AND SURPLUS MATERIAL FROM AND ABOUT THE SITE, LEAVING HIS WORK CLEAN AND THE AREA READY FOR OCCUPANCY.
6. CLEANOUTS SHALL BE THE SAME SIZE AS THE PIPE. WHERE CLEANOUTS IN CONNECTION WITH THREADED PIPE ARE ACCESSIBLE, THEY SHALL BE CAST IRON DRAINAGE T-PATTER 90-DEGREE BRANCH FITTING WITH EXTRA HEAVY BRASS SCREW PLUGS OF THE SAME SIZE AS THE PIPE (4" CLEANOUT MAXIMUM).
7. ALL CLEANOUTS SHALL BE FLUSH WITH WALL OR COLOR COMPLETE WITH STAINLESS STEEL COVER PLATE FOR WALL CLEANOUTS AND NICKEL BRONZE FOR FLOOR CLEANOUTS.
8. ARRANGE NEW PIPING TO PERMIT READY ACCESS TO VALVES, UNIONS, TRAPS, AND TO CLEAR OPENING OF DOORS AND ACCESS PANELS.
9. ADJUST LOCATION OF PIPES, ETC., TO ACCOMMODATE WORK FROM INTERFERENCE ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH PIPE PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITION, AND CHANGES IN DIRECTION OF PIPES AS REQUIRED TO MAINTAIN PROPER HEAD ROOM AND PITCH OF SLOPING LINES WHETHER OR NOT INDICATED ON DRAWINGS.
10. INSURE THAT ITEMS TO BE FURNISHED FIT IN SPACE AVAILABLE. MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS INCLUDING THOSE FOR CONNECTIONS. INSTALL EQUIPMENT OF SIZE AND SHAPE SO FINAL INSTALLATION SHALL SUIT TRUE INTENT AND MEANING OF CONTRACT DOCUMENTS.
11. FOLLOW MANUFACTURER'S DIRECTIONS IN DELIVERY, STORAGE, PROTECTION, AND INSTALLATION OF MATERIALS. PROMPTLY NOTIFY ARCHITECT IN WRITING OF CONFLICTS BETWEEN REQUIREMENTS OF CONTRACT DOCUMENTS AND MANUFACTURER'S DIRECTIONS AND OBTAIN ARCHITECTS WRITTEN INSTRUCTION BEFORE PROCEEDING WITH WORK. BEAR EXPENSES ARISING FROM CORRECTING DEFICIENCIES OF WORK THAT DO NOT COMPLY WITH MANUFACTURER'S DIRECTION OR SUCH WRITTEN INSTRUCTION FROM ARCHITECT AND/OR OWNER'S REPRESENTATIVE.
12. DELIVER MATERIAL TO SITE AND TIGHTLY COVER AND PROTECT AGAINST DIRT, WATER, AND CHEMICAL OR MECHANICAL INJURY BUT HAVE READILY ACCESSIBLE FOR INSPECTION. STORE ITEMS SUBJECT TO MOISTURE DAMAGE IN A DRY HEATED SPACE.
13. VERTICAL PIPING SHALL BE SECURED AT SUFFICIENTLY CLOSE INTERVALS TO KEEP PIPE ALIGNMENT AND CARRY THE WEIGHT OF THE PIPE AND CONTENTS. STACKS SHALL BE SUPPORTED AT THEIR BASES WITH APPROVED METAL CLAMPS OR HANGERS.
14. SUPPORT HORIZONTAL PIPING AT SUFFICIENTLY CLOSE INTERVALS TO MAINTAIN ALIGNMENT AND PREVENT SAGGING OR GRADE REVERSALS IN ACCORDANCE WITH LOCAL PLUMBING CODE. SUPPORT EACH LENGTH OF PIPE BY AN APPROVED HANGER LOCATED NOT MORE THAN 18" FROM THE JOINT. APPROVED MANUFACTURERS ARE ITT GRINNELL FEE & MASON MFG. CO., B-LINE, OR KIN-LINE, INC.
15. SUPPORT TERMINAL ENDS OF ALL HORIZONTAL RUNS OR BRANCHES AND EACH CHANGE OF DIRECTION OR ALIGNMENT BY AN APPROVED HANGER.
16. ALL EXTERIOR GAS PIPING EXPOSED TO WEATHER SHALL BE PAINTED WITH A GRAY COLOR ENAMEL PAINT WITH RUST INHIBITOR.
17. CHANGES IN DIRECTION OF HORIZONTAL WASTE AND VENT SHALL BE MADE WITH THE APPROPRIATE USE 45-DEGREE WYES, HALF WYES, LONG SWEEP 1/4/ BENDS, 1/6, 1/8, OR 1/16 BENDS, EXCEPT THAT SANITARY TEES MAY BE USED ON WASTE LINES WHERE CHANGE IN DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
18. COMPLETE THE INSTALLATION OF EACH PLUMBING FIXTURE INCLUDING CHROME-PLATED TRAP AND ACCESSORIES WITH ACCESSIBLE CHROME-PLATE TRAP AND ACCESSORIES WITH ACCESSIBLE CHROME-PLATED STOP OR CONTROL VALVE IN EACH HOT AND A COLD-WATER BRANCH SUPPLY LINE. MAKE JOINT BETWEEN WATER CLOSET AND FLOOR FLANGE TIGHT WITH AN APPROVED FIXTURE SETTING COMPOUND OR GASKET. INTERIOR EXPOSED PIPE, VALVES, AND COMPLETION OF PROJECT. CAULK BETWEEN FIXTURES AND WALL AND COMPOUND, POINT ALL EDGES. INSTALL FIXTURE AS PER LOCAL CODES AND MANUFACTURER'S INSTRUCTIONS. DO NOT USE FLEXIBLE WATER PIPING.
19. ACCESS PANELS SHALL BE PROVIDED IN WALLS OR GWB CEILINGS WHERE REQUIRED TO ACCESS VALVES OR CONCEALED EQUIPMENT ACCESS DOORS SHALL BE HINGED AND CONSTRUCTED OF METAL WITH A SCREWDRIVER LATCH. ALL ACCESS PANELS SHALL BE 18" X 18", UNLESS OTHERWISE NOTED ON THE DRAWINGS. FIRE-RATED ACCESS PANELS SHALL BE INSTALLED IN FIRE-RATED ASSEMBLIES. INSTALLATION SHALL BE NEAT IN FINAL APPEARANCE.

22 05 20 – PLUMBING SUBMITTALS

1. BY DESCRIPTION, CATALOG NUMBER AND SPECIFIC DESIGNATION, STANDARDS ARE ESTABLISHED FOR MANUFACTURED ITEMS WHICH THE CONTRACTOR SHALL FURNISH AS REQUIRED BY THIS SECTION. SUBSTITUTIONS OF PRODUCTS SHOWN SHALL BE SUBMITTED TO THE ENGINEER FOR WRITTEN APPROVAL.
2. SHOP DRAWINGS AND UP-TO-DATE ENGINEERING DATA SHEETS AND CATALOG INFORMATION SHALL BE FURNISHED ON THE FOLLOWING ITEMS OF EQUIPMENT. PROVIDE (6) COPIES FOR REVIEW.
   a. FIXTURES AND TRIM
   b. WATER HEATER
   c. PLUMBING EQUIPMENT AND SPECIALTIES
   d. VALVES, STRAINERS, ETC.

22 05 30 – PLUMBING CUTTING AND PATCHING

1. CUTTING AND PATCHING OF FLOORS, ROOF AND WALLS TO FACILITATE THE PLUMBING SYSTEM INSTALLATION SHALL BE BY THE GENERAL CONTRACTOR, THE COST OF WHICH SHALL BE PAID FOR BY THE PLUMBING CONTRACTOR THE PLUMBING CONTRACTOR SHALL COORDINATE ALL CUTTING AND PATCHING WITH THE GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE.
2. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED DIGGING, BACKFILLING AND COMPACTION.
3. THE GENERAL CONTRACTOR SHALL PERFORM THE REQUIRED CUTTING AND PATCHING INCIDENT TO THIS WORK AND MAKE REQUIRED REPAIRS AFTERWARD TO THE SATISFACTION OF THE ARCHITECT AND THE OWNER'S REPRESENTATIVE. CUT CAREFULLY TO MINIMIZE THE NECESSITY FOR REPAIRS TO EXISTING WORK. DO NOT CUT BEAMS, COLUMNS, OR TRUSSES. PATCH AND REPAIR WALLS, FLOORS, CEILING AND ROOFS WITH MATERIALS OF THE SAME QUALITY AND APPEARANCE AS ADJACENT SURFACES UNLESS OTHERWISE SHOWN. SURFACE FINISHES SHALL EXACTLY MATCH EXISTING FINISHES OF SAME MATERIALS. THE PLUMBING CONTRACTOR SHALL BEAR THE EXPENSE OF CUTTING, PATCHING, REPAIRING, AND REPLACING OF WORK OF OTHER CONTRACTORS REQUIRED BECAUSE OF HIS FAULT, ERROR, TARDINESS, OR BECAUSE OF DAMAGE DONE BY THE PLUMBING.
4. SCHEDULE ALL WORK SO AS NOT TO INTERFERE AND/OR DISRUPT THE DAILY ACTIVITIES AND/OR OPERATING HOURS OF NEARBY BUILDINGS OR OPERATIONS. COORDINATE AS REQUIRED WITH THE GENERAL CONTRACTOR AND THE OWNER'S REPRESENTATIVE.

22 05 33 – PLUMBING FIRESTOPPING

1. COORDINATE THE REQUIREMENTS WITH OTHER TRADES, GENERAL CONTRACTOR, ARCHITECT, THE OWNER'S REPRESENTATIVE AND THE LOCAL AUTHORITIES HAVING JURISDICTION
2. PROVIDE SLEEVES AT ALL FLOOR PIPING PENETRATIONS. PROVIDE U.L. FIRE PENETRATION SYSTEM NUMBER FC1002, FC2008, FC3007, FC7001, WL002 OR WL2002 FOR COMBUSTIBLE CONSTRUCTION OR SYSTEM NUMBER FA5001, FA8001, WL1002 OR WL2002 FOR NON-COMBUSTIBLE CONSTRUCTION OF THE U.L. BUILDING MATERIALS DIRECTORY AND AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
3. ALL PENETRATIONS THROUGH FIRE-RELATED ASSEMBLIES SHALL COMPLY WITH U.L. FIRE RESISTANCE DIRECTORY, LATEST EDITION.
4. ACCESS PANELS SHALL BE PROVIDED IN WALLS OR GWB CEILINGS WHERE REQUIRED TO ACCESS DAMPERS OR CONCEALED EQUIPMENT. ACCESS DOORS SHALL BE HINGED AND CONSTRUCTED OF METAL WITH A SCREWDRIVER LATCH. ALL ACCESS PANELS SHALL BE MINIMUM OF 18" X 18" UNLESS OTHERWISE NOTED ON DRAWINGS, OR LARGER IF REQUIRED FOR THE REMOVAL OF EQUIPMENT. FIRE-RATED ACCESS PANELS SHALL BE INSTALLED IN FIRE-RATED ASSEMBLIES. INSTALLATION SHALL BE NEAT IN FINAL APPEARANCE.

22 05 48 – VIBRATION AND SEISMIC CONTROLS FOR PLUMBING PIPING

1. THE PLUMBING CONTRACTORS SHALL FURNISH AND INSTALL REQUIRED SEISMIC BRACING, RESTRAINTS, EQUIPMENT ISOLATORS, ETC. FOR HIS INSTALLED EQUIPMENT, PIPING, ETC. ALL OF WHICH SHALL COMPLY WITH PPIC AND SMACNA GUIDELINES FOR THE LOCAL SEISMIC ZONE REQUIREMENTS AND IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION.

22 07 00 – PLUMBING INSULATION

1. PIPING INSULATION SHALL CONFORM TO THE CURRENT ENERGY CODE AS ADOPTED BY THE STATE. NO INSULATION SHALL BE APPLIED UNTIL ALL PRESSURE TESTS ARE COMPLETE, LEAKS REPAIRED, AND THE SYSTEM IS SUCCESSFULLY RETESTED. INSULATION SHALL BE ASTM C547, CLASS 1 FIBERGLASS ONE-PIECE PREFORMED PIPE INSULATION WITH AN ASTM C921 ALL PURPOSE (FASJ) FIRE RETARDANT JACKET. IN LIEU OF FIBERGLASS INSULATION, ASTM 3552, TYPE II, CLASS 2 FOAM GLASS OR ASTM C534, TYPE 1 THERMACELL OR EXPANDED POLYURETHANE MAY BE USED. FIRE AND SMOKE HAZARD FOR THE COMPLETE INSULATION SYSTEM SHALL NOT EXCEED: FLAME SPREAD – 25, FUEL CONTRIBUTION – 50, SMOKE DEVELOPMENT – 450 IN ACCORDANCE WITH ASTM E84 TEST METHODS.
2. PIPING INSULATION THICKNESS FOR NEW PIPING SHALL BE AS FOLLOWS:

		PIPE SIZES	
PIPE TYPE	BRANCH	UP TO 2"	2-1/2" & UP
DOM. HOT	--	1.0"	1.5"
DOM. COLD	--	0.5"	0.5"

3. INSULATION PROTECTION SHIELDS EQUAL TO GRINNELL FIGURE 167 SHALL BE INSTALLED ON ALL INSULATED PIPE 1" AND LARGER. HANGERS SHALL NOT CONTACT THE PIPE WHERE INSULATION IS SPECIFIED. INSERT INSULATION SHALL BE THE SAME THICKNESS AS THE ADJOINING PIPE INSULATION.

22 08 10 – AS-BUILT DOCUMENTATION

1. THE PLUMBING CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS NEATLY MARKED WITH CHANGES FROM THE ORIGINAL DESIGN AND DRAWINGS. THESE DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE AT THE COMPLETION OF THE PROJECT AND PRIOR TO RECEIVING FINAL PAYMENT.

22 08 20 – PLUMBING SYSTEM TESTING AND START-UP

1. ALL NEW, ALTERED, EXTENDED OR REPLACED PLUMBING SHALL BE LEFT UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED OR APPROVED, WHERE SUCH WORK HAS BEEN COVERED OR CONCEALED BEFORE IT IS TESTED AND APPROVED, IT SHALL BE EXPOSED AT THE PLUMBING CONTRACTOR'S EXPENSE FOR TESTING AND APPROVAL.
2. EACH SYSTEM SHALL BE ADJUSTED TO INSURE PROPER FUNCTIONING AND SHALL BE LEFT IN FIRST CLASS OPERATING CONDITION. CONTRACTOR SHALL PERFORM ALL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
   a. HYDROSTATICALLY TEST THE NEW WASTE AND VENT SYSTEM INDOORS TO HOLD NOT LESS THAN 5 PSIG OR 10 FEET OF HEAD PRESSURE FOR 2 HOURS WITH NO DECREASE IN PRESSURE.
   b. TEST THE NEW DOMESTIC WATER SYSTEMS TO HOLD NOT LESS THAN 100 PSIG (OR 1-1/2 TIMES THE WORKING PRESSURE IN THE PIPE, WHICHEVER IS GREATER) AIR PRESSURE (OR HYDROSTATIC) FOR 4 HOURS WITH NO DECREASE IN PRESSURE.
   c. GAS PIPING SHALL BE TEST AT 60 PSIG FOR NO LESS THAN 30 MINUTES IN ACCORDANCE WITH THE LOCAL GAS COMPANY'S GOOD PRACTICES. ALL TESTS SHALL BE MAINTAINED WITHOUT LEAKS OR PRESSURE LOSS FOR THE SPECIFIED TIME, WITH ALLOWANCE FOR THE TEMPERATURE CHANGES. REPAIR ALL LEAKS AND REPEAT TESTS WHERE REQUIRED.
3. THE PLUMBING CONTRACTOR SHALL PROVIDE MATERIAL AND LABOR REQUIRED TO PERFORM START-UP OF EACH RESPECTIVE ITEM OF EQUIPMENT, FIXTURES AND SYSTEMS. SUBMIT TEST AND START-UP REPORT TO THE ARCHITECT AND/OR THE OWNER'S REPRESENTATIVE AS APPLICABLE.
4. CLEAN ALL PIPING, EQUIPMENT, ETC. REMOVE ALL GREASE, DIRT AND STAINS THAT HAVE ACCUMULATED DURING THE CONSTRUCTION PERIOD.

22 08 30 – STERILIZATION OF DOMESTIC WATER SYSTEM

1. STERILIZE DOMESTIC WATER SYSTEM WITH SOLUTION CONTAINING 250 PARTS PER MILLION MINIMUM OF AVAILABLE CHLORINE. INTRODUCE CHLORINATING MATERIAL INTO A SYSTEM IN A MANNER APPROVED BY THE ARCHITECT AND LOCAL DEPARTMENT OF HEALTH. ALLOW STERILIZATION SOLUTION TO REMAIN FOR 24 HOURS AND OPEN AND CLOSE VALVES AND FAUCETS SEVERAL TIMES DURING THAT TIME. AFTER STERILIZATION, FLUSH SOLUTION FROM SYSTEM WITH CLEAN WATER UNTIL RESIDUAL CHLORINE CONTENT IS LESS THAN 0.2 PARTS PER MILLION. WATER SYSTEM WILL NOT BE ACCEPTED UNTIL NEGATIVE BACTERIOLOGICAL TESTS ARE MADE ON WATER TAKEN FROM SYSTEM. REPEAT DOSING AS NECESSARY UNTIL SUCH NEGATIVE TEST IS ACCOMPLISHED AND IS ACCEPTABLE TO THE LOCAL DEPARTMENT OF HEALTH. PROVIDE REPORT TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

22 08 40 – OPERATION AND MAINTENANCE DATA

1. PROVIDE THREE (3) SETS OF O&M MANUALS COVERING ALL NEW VALVES, EQUIPMENT AND APPURTENANCES FOR THE OWNER'S USE AS APPLICABLE. THE FORMAT SHALL BE AS FOLLOWS:
   a. SIZE: 8 1/2X11 INCHES
   b. PAPER: MANUFACTURER'S PRINTED DATA, OR NEATLY TYPE-WRITTEN
   c. PROVIDE REINFORCED PUNCHED BINDER TABS, BOUND IN WITH TEXT.
   d. PROVIDE FLYLEAF FOR EACH SEPARATE PRODUCT, OR EACH PIECE OF OPERATING EQUIPMENT. PROVIDE TYPED DESCRIPTION OF PRODUCT, AND MAJOR COMPONENT PARTS OF EQUIPMENT. PROVIDE INDEXED TABS.
   e. COVER: IDENTIFY EACH VOLUME WITH TYPED OR PRINTED TITLE: "OPERATION AND MAINTENANCE INSTRUCTION". LIST TITLE OF PROJECT, IDENTITY OF GENERAL SUBJECT MATTER COVER IN THE MANUAL.
   f. BINDERS: COMMERCIAL QUALITY THREE-RING BINDERS WITH DURABLE AND CLEANABLE PLASTIC COVERS
   g. PROVIDE NEATLY TYPE WRITTEN TABLE OF CONTENTS. LIST PRODUCT BY PRODUCT NAME AND OTHER IDENTIFYING SYMBOLS AS SET FOR IN CONTRACT DOCUMENTS.
   h. INCLUDE COPY OF EACH WARRANTY, BOND AND SERVICE CONTRACT ISSUED. INCLUDE PARTS LISTS, LUBRICATION CHART WITH MAINTENANCE SCHEDULE.

22 08 50 – TRAINING FOR PLUMBING SYSTEMS

1. PRIOR TO FINAL INSPECTION OR ACCEPTANCE, FULLY INSTRUCT THE OWNER'S DESIGNATED OPERATION AND MAINTENANCE PERSONNEL IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF PRODUCTS, EQUIPMENT AND SYSTEMS. (MINIMUM 2-HOURS INSTRUCTION PERIOD REQUIRED OR MORE IF REQUESTED BY THE OWNER'S REPRESENTATIVE).

22 08 60 – PLUMBING WARRANTY AND GUARANTEE

1. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE NEW PLUMBING SYSTEMS INSTALLATION AND SHALL PROVIDE A ONE (1) YEAR PARTS AND LABOR WARRANTY FOR HIS PERFORMED WORK AFTER EQUIPMENT START-UP AND THE OWNER'S REPRESENTATIVE'S ACCEPTANCE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR AND MATERIALS TO CORRECT THE TROUBLE WITHOUT ANY COST TO THE OWNER. ANY MATERIALS FOUND TO BE DEFECTIVE DURING THE GUARANTEE PERIOD SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE OWNER.
2. THE CONTRACT SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSED BY LEAK OR BREAKS IN PIPE OR EQUIPMENT FURNISHED AND/OR INSTALLED BY THIS CONTRACTOR FOR A PERIOD OF (1) YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS TO THE OWNER'S REPRESENTATIVE'S SATISFACTION AND AT NO ADDITIONAL COST.

22 10 00 – PLUMBING PIPING

1. PIPING MATERIALS AND FITTINGS SHALL BE AS FOLLOWS:
   a. NEW DOMESTIC WATER PIPING SHALL BE ASTM B88 TYPE L HARD DRAWN COPPER WITH ANSI B16.22 WROUGHT COPPER FITTINGS AND 95-5 SOLDER ABOVEGROUND, AND TYPE K SOFT COPPER BELOWGROUND.
   b. NEW WASTE AND VENT PIPING 1-1/2" AND SMALLER SHALL BE ASTM A120 GRADE A SCHEDULE GALVANIZED STEEL PIPE WITH THREADED CAST IRON DRAINAGE FITTINGS, 2" AND LARGER SHALL BE CAST IRON, ASTM A-888 'NO-HUB' WITH ASTM C-1277 STANDARD NEOPRENE GASKETS AND TYPE 304 STAINLESS STEEL CONNECTOR BANDS ABOVEGROUND OR FM 1680 CLASS I HEAVY DUTY TYPE 304 STAINLESS STEEL CONNECTOR BANDS CAPABLE OF WITHSTANDING 125 IN-LBS OF TORQUE BELOWGROUND.
   c. ALTERNATE WASTE AND VENT PIPING SHALL BE EITHER ASTM D2661 OR ASTM D2665 PVC PIPING OR FITTING. THE INSTALLATION SHALL COMPLY WITH IAPMO IS9. UNDERGROUND ABS OR PVC PIPING SHALL BE LAID IN 6-INCH DEEP BED OF SAND.
   d. NEW GAS PIPING SHALL BE ASTM A53 SCHEDULE 40 BLACK STEEL PIPE WITH ANSI 16 .3 150 LB. MALLEABLE IRON FITTINGS ABOVEGROUND AND POLYETHYLENE AS APPROVED BY THE LOCAL GAS UTILITY COMPANY FOR BELOW GROUND INSTALLATION.
2. VALVES:
   ALL VALVES MUST BE ACCESSIBLE. VALVES LOCATED ABOVE A HARD CEILING OR IN A WALL SHALL HAVE AN APPROVED ACCESS DOOR. VALVE STEMS SHALL BE INSTALLED HORIZONTAL OR HIGHER THAN THE VALVE. ALL VALVES SHALL BE OF THE SAME MANUFACTURER.
   a. BALL VALVES: 2" AND SMALLER SHALL BE RATED FOR 125 PSIG WOG AT 220°F, BRONZE CONSTRUCTION CONFORMING TO ASTM B62, SOLDER ENDS, BUBBLE TIGHT TEFLON SEAT (AT 100 PSIG UNDER WATER), WITH A HARD CHROME PLATED BRASS OR STAINLESS-STEEL BALL. THE VALVE SHALL OPERATE WITH FLOW IN EITHER DIRECTION AND SHALL BE SUITABLE FOR THROTTLING AND TIGHT SHUT OFF. PROVIDE WATTS B-6001.

22 40 00 – PLUMBING FIXTURES AND EQUIPMENT

1. APPROVED MANUFACTURERS FOR FIXTURES AND TRIM:
   a. FIXTURES: AMERICAN STANDARD, KOHLER, ELJER, AND ELKAY
   b. CARRIERS, ETC,: J.R. SMITH, JOSAM, WADE, AND ZURN.
   c. TRIM: AMERICAN STANDARD, CHICAGO FAUCETS, ELKAY, KOHLER AND T&S BRASS
   d. FLUSH VALVES: SLOAN, DELANEY, AND ZURN Z6000 SERIES.
2. ALL WATER FAUCETS SHALL MEET N.S.F STANDARD SECTION 9 FOR DRINKING WATER FAUCETS AND SHALL BE CERTIFIED BY UNDERWRITERS LABORATORY. THE PRODUCT SHALL BE MANUFACTURED FROM BRASS CONSTRUCTION, BRASS COMPONENTS WHICH CONTACT WITHIN THE FAUCET SHALL BE FROM BRASS WHICH CONTAINS NO MORE THAN 3% LEAD BY DRY WEIGHT.
3. WATER HEATERS SHALL BE SHOWN ON THE PLUMBING DRAWINGS.

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(208) 403-8903

REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
NO. 12019574
ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
DRAWN BY: **JPD**
CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

290340021

SHEET TITLE

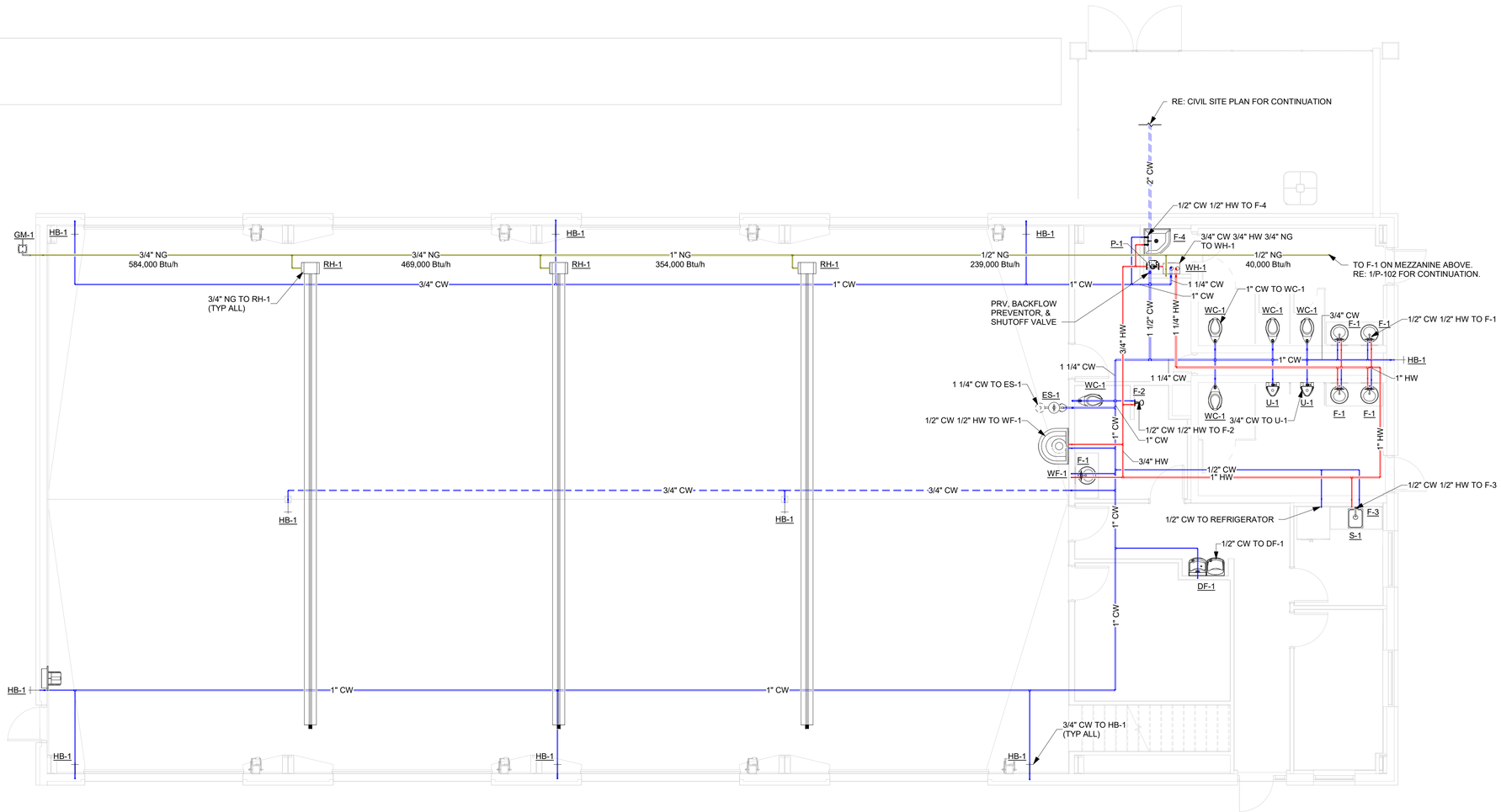
PLUMBING GENERAL INFO

SHEET NUMBER

P-001

PLUMBING GENERAL NOTES

1. VERIFY EXISTING SIZES AND LOCATIONS OF ALL PIPING BEFORE BEGINING CONSTRUCTION. NOTIFY OWNER/ENGINEER OF ANY DISCREPANCIES.
2. ALL HORIZONTAL SANITARY PIPING SHOWN IS LOCATED BELOW FLOOR OF ASSOCIATED LEVEL UNLESS NOTED OTHERWISE.
3. ALL HORIZONTAL DOMESTIC, GAS, REFRIGERANT, AND VENT PIPING SHOWN IS LOCATED IN CEILING SPACE OF ASSOCIATED LEVEL UNLESS NOTED OTHERWISE.
4. BRANCH PIPE SIZE SHALL MATCH FIXTURE CONNECTION SIZE UNLESS NOTED OTHERWISE. SEE PLUMBING FIXTURE SCHEDULE FOR DETAIL.
5. PROVIDE ISOLATION VALVES ON ALL PLUMBING FIXTURES AND EQUIPMENT FOR SERVICE.



1 PLUMBING PLAN - LEVEL 1

3/16" = 1'-0"

0 4' 8' 16'

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290340021

SHEET TITLE

PLUMBING PLAN

SHEET NUMBER

P-101

Autodesk Docs://Genola Public Works Building/Genola Public Works Building.rvt

PLUMBING GENERAL NOTES

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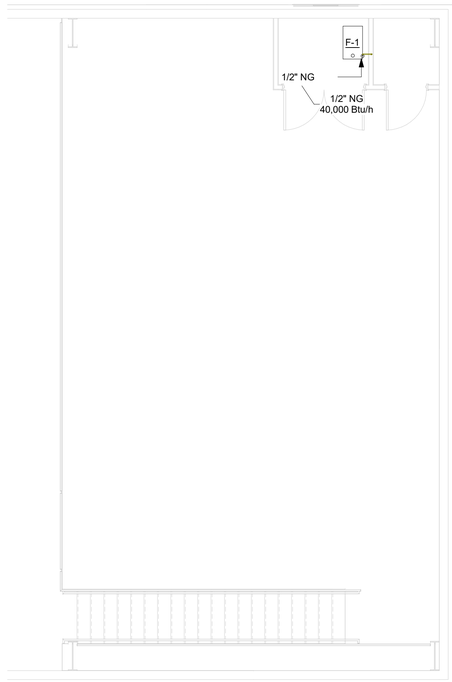
5. PROVIDE ISOLATION VALVES ON ALL PLUMBING FIXTURES AND EQUIPMENT FOR SERVICE.



1 PLUMBING PLAN - LEVEL 2

3/16" = 1'-0"

0 4' 8' 16'

ENGINEER

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APN #

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SHEET TITLE

PLUMBING PLAN - MEZZANINE

SHEET NUMBER

P-102

PLUMBING GENERAL NOTES

1. VERIFY EXISTING SIZES AND LOCATIONS OF ALL PIPING BEFORE BEGINING CONSTRUCTION. NOTIFY OWNER/ENGINEER OF ANY DISCREPANCIES.
2. ALL HORIZONTAL SANITARY PIPING SHOWN IS LOCATED BELOW FLOOR OF ASSOCIATED LEVEL UNLESS NOTED OTHERWISE.
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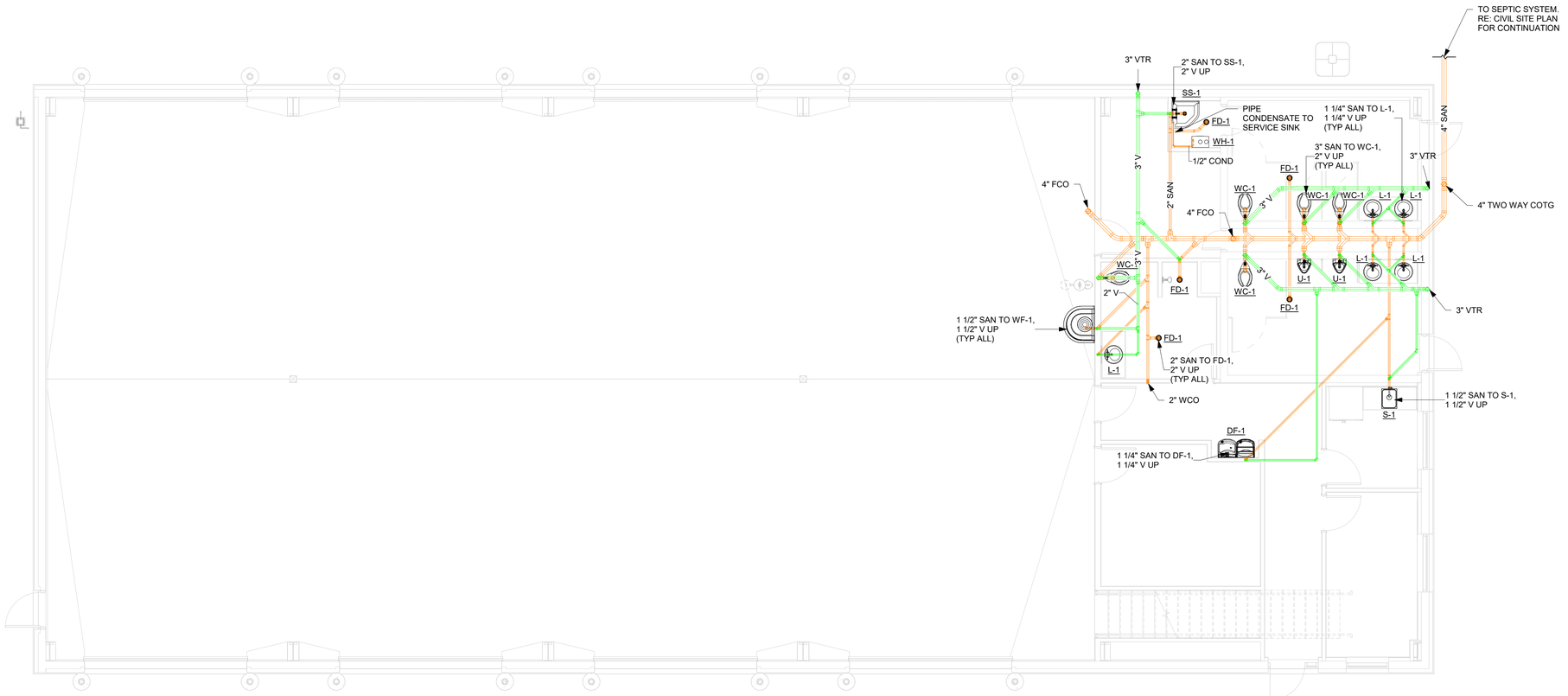

1 SANITARY PLAN - LEVEL 1

3/16" = 1'-0"

0 4' 8' 16'

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APN #

290340021

SHEET TITLE

SANITARY PLAN

SHEET NUMBER

P-201

PLUMBING GENERAL NOTES

1. VERIFY EXISTING SIZES AND LOCATIONS OF ALL PIPING BEFORE BEGINING CONSTRUCTION. NOTIFY OWNER/ENGINEER OF ANY DISCREPANCIES.
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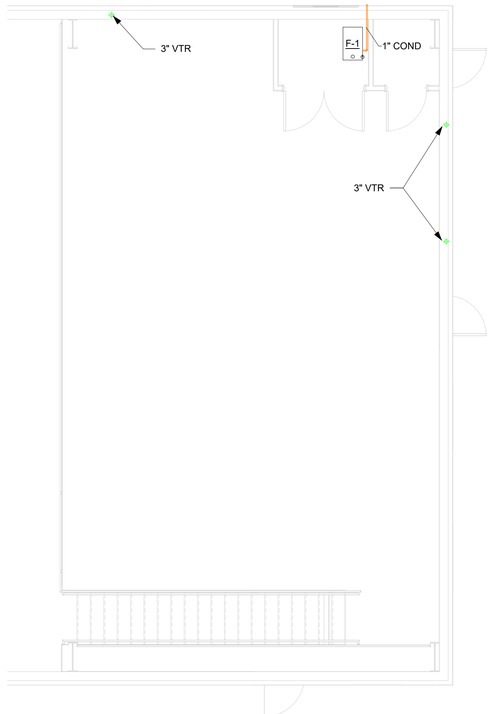
5. PROVIDE ISOLATION VALVES ON ALL PLUMBING FIXTURES AND EQUIPMENT FOR SERVICE.



1 SANITARY PLAN - LEVEL 2

3/16" = 1'-0"

0 4' 8' 16'

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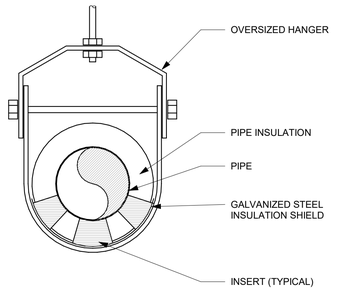
SHEET TITLE

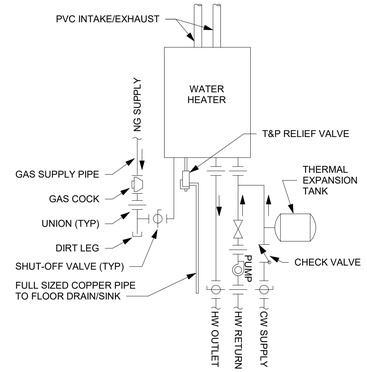
SANITARY PLAN - MEZZANINE

SHEET NUMBER

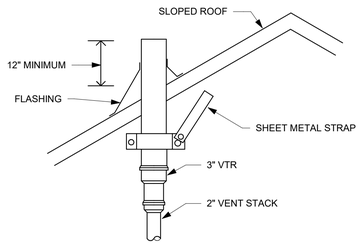
P-202



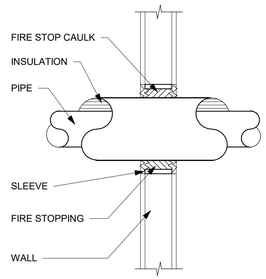
1 PIPE HANGER DETAIL
NTS



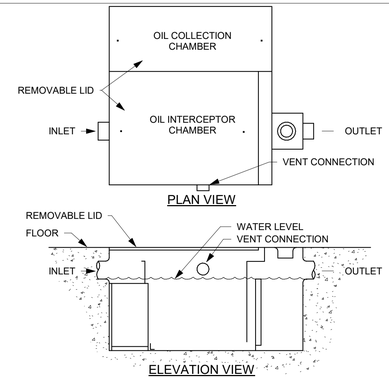
2 WATER HEATER PIPING (TANKLESS)(RECIRCULATION)
NTS



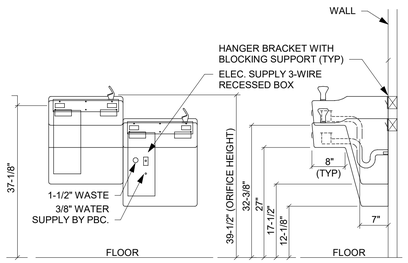
3 VENT THROUGH SLOPED ROOF DETAIL
NTS



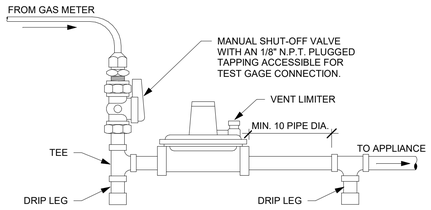
4 PIPE WALL PENETRATION DETAIL
NTS



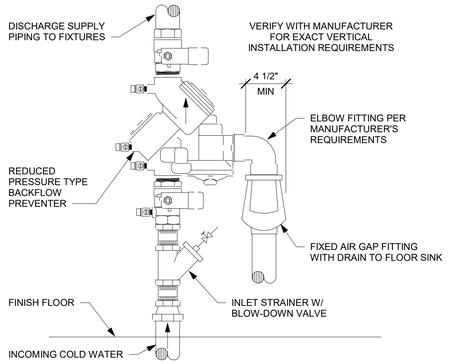
5 OIL INTERCEPTOR WITH STORAGE DETAIL
12" = 1'-0"



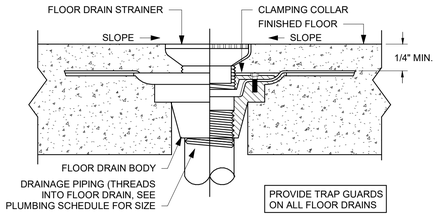
6 ADA BI-LEVEL WATER COOLER DETAIL
NTS



7 GAS REGULATOR CONNECTION
NTS



8 REDUCED PRESSURE BACKFLOW PREVENTOR
NTS



9 FLOOR DRAIN DETAIL
NTS

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APPLICATION TYPE:

PERMIT

APN #

290340021

SHEET TITLE

PLUMBING DETAILS

SHEET NUMBER

P-501

PLUMBING FIXTURE SCHEDULE

GENERGAL FIXTURE NOTES:

1. THE PLUMBING CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF ALL PLUMBING EQUIPMENT AND THE RELATED ROUGH IN LOCATIONS WITH THE MECHANICAL AND ARCHITECTURAL PLANS AND SPECIFICATIONS. PROVIDE ALL ACCESSORIES AND OPTIONS REQUIRED TO PROVIDE THE OWNER A COMPLETELY FUNCTIONAL PLUMBING SYSTEM.
2. ALL WALL HUNG PLUMBING FIXTURES SHALL BE SUPPORTED BY FLOOR MOUNTED CARRIERS BY WADE, SMITH, JOSHAM, MIFAB, OR WATTS. CARRIERS SHALL BE CONSTRUCTED UTILIZING ALL METAL COMPONENTS WITH SUPPORT FEET SECURELY ANCHORED TO THE FLOOR STRUCTURE FIXTURES ARMS SHALL SUPPORT FIXTURE INDEPENDENT FROM WALL STRUCTURE.
3. EACH INDIVIDUAL FIXTURE SUPPLY SHALL BE PROVIDED WITH A CHROME-PLATED QUARTER TURN STOP VALVE BRASSCRAFT MODEL KTCR OR ENGINEER APPROVED EQUAL.
4. FIXTURES AND ACCESSORIES SHALL BE AS SCHEDULED. EACH ITEM SHALL BE COMPLETE WITH CHROME-PLATED BRASS TRIM.
5. ADA COMPLIANT FIXTURES SHALL BE INSTALLED WITH PRE-FORMED INSULATION AND PROTECTIVE COVERS ON P-TRAPS AND STOPS, COVERS TO BE MANUFACTURED BY BUCKAROOS OR TRUEBRO.
6. CAULK ALL FIXTURES TO THE WALL OR FLOOR WITH APPLICABLE SILICONE COMPOUND. UTILIZE MULTIPLE BEADS TO FILL GAPS AND FINISH TO SMOOTH, FILLETED EDGE. USE APPROPRIATE TOOLS TO PROVIDE PROFESSIONAL APPEARANCE.
7. ALL PLUMBING SHALL BE INSTALLED TO CONFORM TO THE LATEST ADOPTED EDITION OF THE INTERNATIONAL PLUMBING CODE INCLUDING LOCAL AMENDMENTS. CONSULT AUTHORITIES HAVING JURISDICTION.
8. PROVIDE TEMPORARY TOILET FACILITIES DURING CONSTRUCTION PER IPC SECTION 311.1 AND ANSI Z4.3.

IDENTIFICATION				PLUMBING							
TYPE MARK	MANUFACTURER	MODEL	DESCRIPTION	CW	HW	SAN	VENT	CWFU	HWFU	WFU	COUNT
DF-1	ELKAY	LZSTL8WSSP	BOTTLE FILLING STATION, & VERSATILE BI-LEVEL ADA COOLER, FILTERED 8 GPH STAINLESS	1/2"		1 1/4"	1 1/4"	0.5		1	1
ES-1	GUARDIAN EQUIP.	G1902PCC	SAFETY STATION WITH EYEWASH, POLISHED CHROME CONSTRUCTION	1 1/4"				0		0	1
F-1	KOHLER	K-R78046-4D-CP	CENTERSET BATHROOM SINK FAUCET	1/2"	1/2"			1.5	1.5		5
F-2	KOHLER	K-TS395-4SG-CP	RITE-TEMP BATH AND SHOWER TRIM WITH NPT SPOUT AND 2.5 GPM SHOWERHEAD	1/2"	1/2"			1	1		1
F-3	KOHLER	K-72218-VS	TOUCHLESS KITCHEN FAUCET WITH 15-1/2INCH PULL-DOWN SPOUT, DOCKNETIK MAGNETIC DOCKING SYSTEM	1/2"	1/2"			1.5	1.5		1
F-4	KOHLER	K-8928-CP	DOUBLE LEVER HANDLE SERVICE SINK FAUCET WITH LOOSE-KEY STOPS, RUBBER HOSE, WALL HOOK AND LEVER HANDLES	1/2"	1/2"			0	0		1
FD-1	ZURN	Z415-BZ1-2	FLOOR AND SHOWER DRAIN WITH CAST IRON BODY			2"	2"			2	5
HB-1	ZURN	Z1345	ANTI-SIPHON WALL FAUCET	3/4"				2.5			10
L-1	KOHLER	K-2202-4-0	DROP-IN OVAL LAVATORY			1 1/4"	1 1/4"			2	5
S-1	KOHLER	K-3163	15-3/4" X 20 3/8" X 9 1/2" UNDERMOUNT BAR SINK			1 1/2"	1 1/2"			2	1
SS-1	KOHLER	K-6710	FLOOR-MOUNTED CORNER SERVICE SINK			2"	2"	2.25	2.25	3	1
U-1	KOHLER	K-5452-ET-0	WALL MOUNTED URINAL WITH TOP SPUD	3/4"		2"	2"	5		5	2
WC-1	KOHLER	K-96057	FLOOR MOUNT FLUSHOMETER TOILET WITH TOP SPUD	1"		3"	2"	10		10	5
WF-1	KOHLER	3544-2-F-VPB-MXTP	WASH STATION	1/2"	1/2"	1 1/2"	1 1/2"	2	2	2	1

WATER HEATER SCHEDULE

IDENTIFICATION			HEATING INFORMATION				PLUMBING			ELECTRICAL				PHYSICAL				
TYPE MARK	MANUFACTURER	MODEL	HEAT SOURCE	BTU INPUT	BTU OUTPUT	EFFICIENCY	CW	HW	NG	POWER	WATTS	MCA	MOP	VOLUME	WEIGHT	(D) L / W / H	COUNT	NOTES
WH-1	A.O. SMITH	ACT-199I-N	NATURAL GAS	199,000 Btu/h	191,040 Btu/h	96%	3/4"	3/4"	3/4"	120/1/60	178 W	1 A	15 A	0 gal	70 lb	18" / 11" / 24"	1	

PUMP SCHEDULE

IDENTIFICATION				PLUMBING					ELECTRICAL					
TYPE MARK	MANUFACTURER	MODEL	TYPE	CAPACITY	HEAD	HP	RPM	PIPE SIZE	POWER	MCA	MOP	FLA	COUNT	NOTES
P-1	GRUNDFOS	UPS 26-99 SFC	INLINE	18 GPM	16 FT	0.26 hp	3380	3/4"	120/1/60	6 A	15 A	2 A	1	

PIPE SIZING TABLE

NOMINAL SIZE	MAX WSFU
1/2"	3.5
3/4"	10
1"	20
1 1/4"	33
1 1/2"	50
2"	110

DOMESTIC WATER PIPE SIZING CRITERIA

MIN WATER PRESSURE: 80.2 PSI
STREET PRESSURE: 105 PSI
PRV SET PRESSURE: 80 PSI
MAX DEV. LENGTH: 175'
METER SIZE: 2"
MAX HEIGHT ABOVE METER: 8'
PRESSURE LOSS - FRICTION: 20.2 PSI
PRESSURE LOSS - METER: 1.6 PSI
PRESSURE LOSS - HEAD: 3.0 PSI
PRESSURE LOSS - TOTAL: 27.4 PSI
TOTAL WSFU: 111
TOTAL GPM: 71 GPM
MAX CW VELOCITY: 8 FPS
MAX HW VELOCITY: 5 FPS

WATER LINE CALCULATIONS

WATER LINE PIPING SIZED IN ACCORDANCE WITH 2018 IPC TABLE E201.1 WITH THE FOLLOWING CRITERIA:

DEVELOPED LENGTH: 175 FT

INLET PRESSURE: <60 PSI

TYPE MARK	CWFU	HWFU	COUNT	CWFU TOTAL	HWFU TOTAL
DF-1	0.5		1	0.5	0
ES-1	0		1	0	0
F-1	1.5	1.5	5	7.5	7.5
F-2	1	1	1	1	1
F-3	1.5	1.5	1	1.5	1.5
F-4	0	0	1	0	0
HB-1	2.5		10	25	0
SS-1	2.25	2.25	1	2.25	2.25
U-1	5		2	10	0
WC-1	10		5	50	0
WF-1	2	2	1	2	2
			29	99.75	14.25

GAS SCHEDULE

GAS PIPING SIZED IN ACCORDANCE WITH 2015 IFGC TABLE 402.4(7) WITH THE FOLLOWING CRITERIA:

DEVELOPED LENGTH: 150 FT

INLET PRESSURE: 2 PSI

PRESSURE DROP: 1 PSI

SPECIFIC GRAVITY: 0.60

TYPE MARK	DESCRIPTION	RATED BTU	COUNT	TOTAL BTU	GAS CFH
	FURNACE	40,000 Btu/h	1	40,000 Btu/h	40 CFH
RH-1	RADIANT TUBE HEATER	115,000 Btu/h	3	345,000 Btu/h	345 CFH
WH-1	WATER HEATER - GAS - TANKLESS	199,000 Btu/h	1	199,000 Btu/h	199 CFH
				584,000 Btu/h	584 CFH

ENGINEER

REDBRICK ENGINEERING

1052 S 1350 E
SPANISH FORK, UT 84660
(208) 403-8903

REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
NO. 12019574
ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
DRAWN BY: **JPD**
CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**
APPLICATION TYPE:

PERMIT

APN #

290340021

SHEET TITLE

PLUMBING SCHEDULES

SHEET NUMBER

P-601

Pipe Pressure Loss Report

Project Name	GENOLA PUBLIC WORKS BUILDING
Project Issue Date	ISSUE DATE
Project Status	PERMIT
Client Name	
Project Address	74 W 800 S GENOLA, UTAH 84655
Project Number	250000
Organization Name	
Organization Description	
Building Name	
Author	
IfcSite GUID	
IfcBuilding GUID	
IfcProject GUID	
APN	290340021
Workset	Project Info
Edited by	
Run Time	11/4/2025 7:26:12 AM

CW 2

System Information	
System Classification	Domestic Cold Water
System Type	Domestic Cold Water
System Name	CW 2
Abbreviation	CW
Fluid Type	Water
Fluid Temperature	60 °F
Fluid Dynamic Viscosity	1.12 cP
Fluid Density	62.3600 lb/ft³

Total Pressure Loss Calculations by Sections

Section	Element	Flow	Size	Velocity	Velocity Pressure	Length	K Coefficient	Friction	Total Pressure Loss	Section Pressure Loss
2	Pipe	15 GPM	1"	5 FPS	-	9'-0 27/32"	-	26.16 FT/100ft	1.03 psi	1.03 psi
	Fittings	15 GPM	-	5 FPS	0.20 psi	-	0	-	0.00 psi	
	Plumbing Fixture	15 GPM	-	-	-	-	-	-	0.00 psi	
3	Pipe	21 GPM	1"	8 FPS	-	2'-10"	-	53.45 FT/100ft	0.66 psi	0.66 psi
	Fittings	21 GPM	-	8 FPS	0.41 psi	-	0	-	0.00 psi	
4	Pipe	26 GPM	1 1/4"	6 FPS	-	4'-10 25/32"	-	18.81 FT/100ft	0.40 psi	0.40 psi
	Fittings	26 GPM	-	6 FPS	0.21 psi	-	0	-	0.00 psi	
5	Pipe	32 GPM	1 1/4"	7 FPS	-	5'-6 13/32"	-	27.89 FT/100ft	0.67 psi	0.67 psi
	Fittings	32 GPM	-	7 FPS	0.31 psi	-	0	-	0.00 psi	
6	Pipe	41 GPM	1 1/2"	6 FPS	-	6'-5 19/32"	-	20.48 FT/100ft	0.57 psi	0.57 psi
	Fittings	41 GPM	-	6 FPS	0.28 psi	-	0	-	0.00 psi	
7	Fittings	46 GPM	-	0 FPS	0.35 psi	-	0	-	0.00 psi	0.00 psi
8	Pipe	15 GPM	1"	5 FPS	-	9'-0 3/8"	-	26.16 FT/100ft	1.02 psi	1.02 psi
	Fittings	15 GPM	-	5 FPS	0.20 psi	-	0	-	0.00 psi	
	Plumbing Fixture	15 GPM	-	-	-	-	-	-	0.00 psi	
9	Fittings	15 GPM	-	0 FPS	0.07 psi	-	0	-	0.00 psi	0.00 psi
10	Pipe	15 GPM	1"	5 FPS	-	9'-0 3/8"	-	26.16 FT/100ft	1.02 psi	1.02 psi
	Fittings	15 GPM	-	5 FPS	0.20 psi	-	0	-	0.00 psi	
	Plumbing Fixture	15 GPM	-	-	-	-	-	-	0.00 psi	
11	Fittings	15 GPM	-	0 FPS	0.07 psi	-	0	-	0.00 psi	0.00 psi
12	Pipe	4 GPM	1/2"	4 FPS	-	8'-10 21/32"	-	33.30 FT/100ft	1.28 psi	1.28 psi
	Fittings	4 GPM	-	4 FPS	0.12 psi	-	0	-	0.00 psi	
	Plumbing Fixture	4 GPM	-	-	-	-	-	-	0.00 psi	
13	Fittings	4 GPM	-	0 FPS	0.04 psi	-	0	-	0.00 psi	0.00 psi
14	Pipe	13 GPM	3/4"	8 FPS	-	2'-6 3/32"	-	78.77 FT/100ft	0.86 psi	0.86 psi
	Fittings	13 GPM	-	8 FPS	0.43 psi	-	0	-	0.00 psi	
16	Pipe	4 GPM	1/2"	4 FPS	-	8'-10 21/32"	-	33.30 FT/100ft	1.28 psi	1.28 psi
	Fittings	4 GPM	-	4 FPS	0.12 psi	-	0	-	0.00 psi	
	Plumbing Fixture	4 GPM	-	-	-	-	-	-	0.00 psi	
17	Fittings	4 GPM	-	0 FPS	0.04 psi	-	0	-	0.00 psi	0.00 psi
18	Pipe	10 GPM	3/4"	6 FPS	-	2'-2 1/8"	-	45.50 FT/100ft	0.43 psi	0.43 psi
	Fittings	10 GPM	-	6 FPS	0.25 psi	-	0	-	0.00 psi	
19	Pipe	12 GPM	3/4"	7 FPS	-	0'-2 1/8"	-	62.57 FT/100ft	0.05 psi	0.05 psi
	Fittings	12 GPM	-	7 FPS	0.34 psi	-	0	-	0.00 psi	
20	Pipe	15 GPM	1"	5 FPS	-	9'-9 13/32"	-	26.16 FT/100ft	1.11 psi	1.11 psi
	Fittings	15 GPM	-	5 FPS	0.20 psi	-	0	-	0.00 psi	
	Plumbing Fixture	15 GPM	-	-	-	-	-	-	0.00 psi	
21	Fittings	15 GPM	-	0 FPS	0.07 psi	-	0	-	0.00 psi	0.00 psi
22	Pipe	9 GPM	3/4"	6 FPS	-	6'-10 3/4"	-	39.85 FT/100ft	1.19 psi	1.19 psi
	Fittings	9 GPM	-	6 FPS	0.22 psi	-	0	-	0.00 psi	
	Plumbing Fixture	9 GPM	-	-	-	-	-	-	0.00 psi	
23	Fittings	9 GPM	-	0 FPS	0.03 psi	-	0	-	0.00 psi	0.00 psi
24	Pipe	9 GPM	3/4"	6 FPS	-	6'-10 15/16"	-	39.85 FT/100ft	1.19 psi	1.19 psi
	Fittings	9 GPM	-	6 FPS	0.22 psi	-	0	-	0.00 psi	
	Plumbing Fixture	9 GPM	-	-	-	-	-	-	0.00 psi	
25	Fittings	9 GPM	-	0 FPS	0.08 psi	-	0	-	0.00 psi	0.00 psi
26	Pipe	4 GPM	1/2"	4 FPS	-	9'-7 25/32"	-	33.30 FT/100ft	1.39 psi	1.39 psi
	Fittings	4 GPM	-	4 FPS	0.12 psi	-	0	-	0.00 psi	
	Plumbing Fixture	4 GPM	-	-	-	-	-	-	0.00 psi	
27	Fittings	4 GPM	-	0 FPS	0.04 psi	-	0	-	0.00 psi	0.00 psi
28	Pipe	4 GPM	1/2"	4 FPS	-	9'-7 25/32"	-	33.30 FT/100ft	1.39 psi	1.39 psi
	Fittings	4 GPM	-	4 FPS	0.12 psi	-	0	-	0.00 psi	
	Plumbing Fixture	4 GPM	-	-	-	-	-	-	0.00 psi	
29	Fittings	4 GPM	-	0 FPS	0.04 psi	-	0	-	0.00 psi	0.00 psi
30	Pipe	8 GPM	3/4"	5 FPS	-	0'-2 1/8"	-	28.96 FT/100ft	0.02 psi	0.02 psi
	Fittings	8 GPM	-	5 FPS	0.16 psi	-	0	-	0.00 psi	
31	Pipe	15 GPM	1"	5 FPS	-	11'-10 3/32"	-	26.16 FT/100ft	1.34 psi	1.34 psi
	Fittings	15 GPM	-	5 FPS	0.20 psi	-	0	-	0.00 psi	
	Plumbing Fixture	15 GPM	-	-	-	-	-	-	0.00 psi	
32	Fittings	15 GPM	-	0 FPS	0.07 psi	-	0	-	0.00 psi	0.00 psi
33	Fittings	23 GPM	-	0 FPS	0.09 psi	-	0	-	0.00 psi	0.00 psi
34	Pipe	4 GPM	1/2"	4 FPS	-	12'-0 25/32"	-	33.30 FT/100ft	1.74 psi	1.74 psi
	Fittings	4 GPM	-	4 FPS	0.12 psi	-	0	-	0.00 psi	
	Plumbing Fixture	4 GPM	-	-	-	-	-	-	0.00 psi	
35	Fittings	4 GPM	-	0 FPS	0.01 psi	-	0	-	0.00 psi	0.00 psi
36	Pipe	18 GPM	1"	7 FPS	-	1'-3 5/16"	-	38.54 FT/100ft	0.21 psi	0.21 psi
	Fittings	18 GPM	-	7 FPS	0.29 psi	-	0	-	0.00 psi	
37	Pipe	19 GPM	1"	7 FPS	-	3'-10 1/2"	-	45.04 FT/100ft	0.76 psi	0.76 psi
	Fittings	19 GPM	-	7 FPS	0.34 psi	-	0	-	0.00 psi	
38	Fittings	19 GPM	-	0 FPS	0.12 psi	-	0	-	0.00 psi	0.00 psi
39	Fittings	3 GPM	-	0 FPS	0.01 psi	-	0	-	0.00 psi	0.00 psi
40	Pipe	15 GPM	1"	6 FPS	-	6'-6 7/32"	-	27.60 FT/100ft	0.78 psi	0.78 psi
	Fittings	15 GPM	-	6 FPS	0.21 psi	-	0	-	0.00 psi	
42	Pipe	4 GPM	1/2"	4 FPS	-	13'-5 11/16"	-	33.30 FT/100ft	1.95 psi	1.95 psi
	Fittings	4 GPM	-	4 FPS	0.12 psi	-	0	-	0.00 psi	
	Plumbing Fixture	4 GPM	-	-	-	-	-	-	0.00 psi	
43	Pipe	5 GPM	1/2"	5 FPS	-	18'-1"	-	51.79 FT/100ft	4.06 psi	4.06 psi
	Fittings	5 GPM	-	5 FPS	0.19 psi	-	0	-	0.00 psi	
44	Fittings	5 GPM	-	0 FPS	0.02 psi	-	0	-	0.00 psi	0.00 psi
45	Pipe	3 GPM	1/2"	3 FPS	-	9'-4 5/8"	-	18.88 FT/100ft	0.77 psi	0.77 psi
	Fittings	3 GPM	-	3 FPS	0.07 psi	-	0	-	0.00 psi	
	Plumbing Fixture	3 GPM	-	-	-	-	-	-	0.00 psi	
46	Fittings	3 GPM	-	0 FPS	0.00 psi	-	0	-	0.00 psi	0.00 psi
47	Pipe	0 GPM	1/2"	0 FPS	-	11'-11"	-	0.00 FT/100ft	0.00 psi	0.00 psi
	Fittings	0 GPM	-	0 FPS	0.00 psi	-	0	-	0.00 psi	
	Plumbing Fixture	0 GPM	-	-	-	-	-	-	0.00 psi	
48	Fittings	0 GPM	-	0 FPS	0.00 psi	-	0	-	0.00 psi	0.00 psi
49	Pipe	12 GPM	3/4"	7 FPS	-	1'-4 27/32"	-	67.94 FT/100ft	0.41 psi	0.41 psi
	Fittings	12 GPM	-	7 FPS	0.37 psi	-	0	-	0.00 psi	
51	Fittings	17 GPM	-	0 FPS	0.05 psi	-	0	-	0.00 psi	0.00 psi
53	Pipe	6 GPM	3/4"	3 FPS	-	14'-1 23/32"	-	15.08 FT/100ft	0.92 psi	0.92 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
54	Pipe	12 GPM	3/4"	7 FPS	-	9'-2 1/4"	-	67.94 FT/100ft	2.71 psi	2.71 psi
	Fittings	12 GPM	-	7 FPS	0.37 psi	-	0	-	0.00 psi	
55	Pipe	6 GPM	3/4"	3 FPS	-	13'-10 15/16"	-	15.08 FT/100ft	0.91 psi	0.91 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
57	Pipe	15 GPM	1"	5 FPS	-	22'-8 9/16"	-	26.16 FT/100ft	2.58 psi	2.58 psi
	Fittings	15 GPM	-	5 FPS	0.20 psi	-	0	-	0.00 psi	
58	Pipe	6 GPM	3/4"	3 FPS	-	13'-10"	-	15.08 FT/100ft	0.90 psi	0.90 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
61	Pipe	9 GPM	1"	3 FPS	-	42'-6 3/4"	-	10.96 FT/100ft	2.02 psi	2.02 psi
	Fittings	9 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
62	Pipe	12 GPM	1"	5 FPS	-	41'-8 5/8"	-	18.63 FT/100ft	3.37 psi	3.37 psi
	Fittings	12 GPM	-	5 FPS	0.14 psi	-	0	-	0.00 psi	
66	Pipe	6 GPM	3/4"	3 FPS	-	10'-2 9/16"	-	15.08 FT/100ft	0.67 psi	0.67 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
68	Pipe	6 GPM	3/4"	3 FPS	-	14'-3 23/32"	-	15.08 FT/100ft	0.94 psi	0.94 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
69	Pipe	9 GPM	3/4"	6 FPS	-	41'-6 9/32"	-	39.85 FT/100ft	7.17 psi	7.17 psi
	Fittings	9 GPM	-	6 FPS	0.22 psi	-	0	-	0.00 psi	
70	Pipe	6 GPM	3/4"	3 FPS	-	14'-3 3/16"	-	15.08 FT/100ft	0.93 psi	0.93 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
72	Pipe	6 GPM	3/4"	3 FPS	-	56'-7 9/16"	-	15.08 FT/100ft	3.70 psi	3.70 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
80	Pipe	7 GPM	1"	2 FPS	-	12'-9 13/32"	-	5.30 FT/100ft	0.29 psi	0.29 psi
	Fittings	7 GPM	-	2 FPS	0.04 psi	-	0	-	0.00 psi	
	Plumbing Fixture	7 GPM	-	-	-	-	-	-	0.00 psi	
81	Pipe	1 GPM	1/2"	1 FPS	-	2'-5 9/16"	-	2.22 FT/100ft	0.02 psi	0.02 psi
	Fittings	1 GPM	-	1 FPS	0.01 psi	-	0	-	0.00 psi	
82	Pipe	0 GPM	1/2"	0 FPS	-	9'-6 13/16"	-	0.00 FT/100ft	0.00 psi	0.00 psi
	Fittings	0 GPM	-	0 FPS	0.00 psi	-	0	-	0.00 psi	
83	Pipe	3 GPM	1/2"	3 FPS	-	18'-0 1/2"	-	18.88 FT/100ft	1.48 psi	1.48 psi
	Fittings	3 GPM	-	3 FPS	0.07 psi	-	0	-	0.00 psi	
	Plumbing Fixture	3 GPM	-	-	-	-	-	-	0.00 psi	
84	Fittings	6 GPM	-	0 FPS	0.03 psi	-	0	-	0.00 psi	0.00 psi
85	Pipe	19 GPM	1"	7 FPS	-	0'-4 25/32"	-	45.50 FT/100ft	0.08 psi	0.08 psi
	Fittings	19 GPM	-	7 FPS	0.35 psi	-	0	-	0.00 psi	
86	Pipe	23 GPM	1 1/4"	5 FPS	-	6'-3 21/32"	-	15.53 FT/100ft	0.42 psi	0.42 psi
	Fittings	23 GPM	-	5 FPS	0.17 psi	-	0	-	0.00 psi	
87	Fittings	32 GPM	-	0 FPS	0.17 psi	-	0	-	0.00 psi	0.00 psi
88	Fittings	21 GPM	-	0 FPS	0.14 psi	-	0	-	0.00 psi	0.00 psi
89	Fittings	13 GPM	-	0 FPS	0.16 psi	-	0	-	0.00 psi	0.00 psi
90	Fittings	12 GPM	-	0 FPS	0.03 psi	-	0	-	0.00 psi	0.00 psi
91	Pipe	17 GPM	1 1/4"	4 FPS	-	9'-4 17/32"	-	7.73 FT/100ft	0.31 psi	0.31 psi
	Fittings	17 GPM	-	4 FPS	0.08 psi	-	0	-	0.00 psi	
93	Fittings	17 GPM	-	0 FPS	0.66 psi	-	0	-	0.00 psi	0.00 psi
	Equipment	17 GPM	-	-	-	-	-	-	0.00 psi	
94	Pipe	3 GPM	1/2"	3 FPS	-	11'-6 9/16"	-	18.88 FT/100ft	0.95 psi	0.95 psi
	Fittings	3 GPM	-	3 FPS	0.07 psi	-	0	-	0.00 psi	
	Plumbing Fixture	3 GPM	-	-	-	-	-	-	0.00 psi	
96	Fittings	3 GPM	-	0 FPS	0.01 psi	-	0	-	0.00 psi	0.00 psi
98	Pipe	6 GPM	1"	2 FPS	-	0'-4 1/8"	-	4.17 FT/100ft	0.01 psi	0.01 psi
	Fittings	6 GPM	-	2 FPS	0.03 psi	-	0	-	0.00 psi	
99	Fittings	6 GPM	-	0 FPS	0.03 psi	-	0	-	0.00 psi	0.00 psi
100	Fittings	6 GPM	-	0 FPS	0.03 psi	-	0	-	0.00 psi	0.00 psi
101	Pipe	6 GPM	3/4"	3 FPS	-	13'-8 15/16"	-	15.08 FT/100ft	0.90 psi	0.90 psi
	Fittings	6 GPM	-	3 FPS	0.08 psi	-	0	-	0.00 psi	
	Plumbing Fixture	6 GPM	-	-	-	-	-	-	0.00 psi	
102	Pipe	46 GPM	2"	4 FPS	-	208'-0 3/16"	-	6.87 FT/100ft	6.20 psi	6.20 psi
	Fittings	46 GPM	-	4 FPS	0.13 psi	-	0	-	0.00 psi	

Critical Path : 102-7-90-49-54-69-72 ; Total Pressure Loss : 20.19 psi

ENGINEER

REDBRICK ENGINEERING

1052 S 1350 E
SPANISH FORK, UT 84660
(208) 403-8903

REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
No. 12019574
ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

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SHEET TITLE

PIPING PRESSURE LOSS REPORT

SHEET NUMBER

P-701

ELECTRICAL SHEET INDEX

SHEET NUMBER	SHEET NAME
E-001	ELECTRICAL SYMBOLS & NOTES
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ES-101	SITE ELECTRICAL PLAN
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ELECTRICAL SYMBOL LEGEND

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.

CONDUIT & CIRCUITRY

HOMERUN TO PANELBOARD
"X" DENOTES PANELBOARD NAME - "#" DENOTES CIRCUIT NUMBER
UNDERGROUND HOMERUN TO PANELBOARD
"X" DENOTES PANELBOARD NAME - "#" DENOTES CIRCUIT NUMBER
PARTIAL HOMERUN TO PANELBOARD
"X" DENOTES PANELBOARD NAME - "#" DENOTES CIRCUIT NUMBER

ABOVE / UNDERGROUND CONDUIT WITH WIRE COUNT
LINE (HOT OR SWITCH LEG)
NEUTRAL
EQUIPMENT GROUND
ISOLATED GROUND

CONDUIT STUB-UP TO LEVEL ABOVE
CONDUIT STUB-UP FROM BELOW GRADE

EQUIPMENT

277/480 VOLT PANELBOARD - NORMAL POWER (EXISTING - NEW - DEMOLITION)
120/208 VOLT PANELBOARD - NORMAL POWER (EXISTING - NEW - DEMOLITION)
277/480 VOLT PANELBOARD - EMERGENCY POWER (EXISTING - NEW - DEMOLITION)
120/208 VOLT PANELBOARD - EMERGENCY POWER (EXISTING - NEW - DEMOLITION)
DISTRIBUTION SWITCHGEAR/SWITCHBOARD (EXISTING - NEW - DEMOLITION)

NON-FUSED DISCONNECT SWITCH (EXISTING - NEW - DEMOLITION)
SWITCH SIZE/# OF POLES/NEMA ENCLSURE
FUSED DISCONNECT SWITCH (EXISTING - NEW - DEMOLITION)
SWITCH SIZE/# OF POLES/FUSE SIZE/NEMA ENCOLURE

MAGNETIC MOTO STARTER (EXISTING - NEW - DEMOLITION)
NEMA STARTER SIZE/NEMA ENCOLURE
COMBO STARTER/DISCONNECT (EXISTING - NEW - DEMOLITION)
SWITCH SIZE/NEMA STARTER SIZE/NEMA ENCLOSURE

LIGHTING CONTACTOR CABINET (EXISTING - NEW - DEMOLITION)
ELECTRICITY METER (UTILITY OF OWNER / KWH OR DEMAND) (EXISTING - NEW - DEMOLITION)
METER CT CABINET (EXISTING - NEW - DEMOLITION)

WIRING DEVICES

(REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS)

5-20R SIMPLEX RECEPTACLE (EXISTING - NEW - DEMOLITION)
5-20R DUPLEX RECEPTACLE (EXISTING - NEW - DEMOLITION)
5-20R QUADPLEX RECEPTACLE (EXISTING - NEW - DEMOLITION)
6-X0R RECEPTACLE (EXISTING - NEW - DEMOLITION)
SPECIAL RECEPTACLE (EXISTING - NEW - DEMOLITION)

"XX" DENOTES CONFIGURATION TYPE, OR MOUNTING HEIGHT.
GFCI - GROUND FAULT CIRCUIT INTERRUPTOR
WP - WEATHERPROOF
IG - ISOLATED GROUND

5-20R SIMPLEX FLOOR RECEPTACLE / POKE-THROUGH (EXISTING - NEW - DEMOLITION)
5-20R DUPLEX FLOOR RECEPTACLE / POKE-THROUGH (EXISTING - NEW - DEMOLITION)
5-20R QUADRAPLEX FLOOR RECEPTACLE / POKE-THROUGH (EXISTING - NEW - DEMOLITION)
6-X0R RECEPTACLE / POKE-THROUGH (EXISTING - NEW - DEMOLITION)
SPECIAL FLOOR RECEPTACLE / POKE-THROUGH (EXISTING - NEW - DEMOLITION)

JUNCTION BOX - FIELD DETERMINE FINAL CONNECTION (EXISTING - NEW - DEMOLITION)
SERVICE POWER POLE - FIELD DETERMINE ACTUAL LENGTH (EXISTING - NEW - DEMOLITION)
DIRECT CONNECTION TO EQUIPMENT
FIELD VERIFY EXACT CONNECTION LOCATION AND SIZE

SINGLE POLE TOGGLE SWITCH - "a" DENOTES SWITCH ZONE (EXISTING - NEW - DEMOLITION)
3-WAY TOGGLE SWITCH (EXISTING - NEW - DEMOLITION)
4-WAY TOGGLE SWITCH (EXISTING - NEW - DEMOLITION)
KEYED SINGLE POLE TOGGLE SWITCH (EXISTING - NEW - DEMOLITION)
DIMMER SWITCH - FIELD VERIFY COMPATIBILITY WITH LOAD TYPE (EXISTING - NEW - DEMOLITION)
WALL-BOX OCCUPANCY SENSOR SWITCH - FIELD ADJUST (EXISTING - NEW - DEMOLITION)
CEILING MOUNTED OCCUPANCY SENSOR - FIELD ADJUST (EXISTING - NEW - DEMOLITION)
LOW-VOLTAGE SWITCHING POWER PACK (EXISTING - NEW - DEMOLITION)

COMMUNICATION

(REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS)

WALL TELEPHONE ROUGH-IN - 1" C. WITH PULLSTRING (EXISTING - NEW - DEMOLITION)
FLOOR TELEPHONE ROUGH-IN - 1" C. WITH PULLSTRING (EXISTING - NEW - DEMOLITION)
WALL DATA ROUGH-IN - 1" C. WITH PULLSTRING (EXISTING - NEW - DEMOLITION)
FLOOR DATA ROUGH-IN - 1" C. WITH PULLSTRING (EXISTING - NEW - DEMOLITION)
WALL DATA/TELEPHONE ROUGH-IN - 1" C. WITH PULLSTRING (EXISTING - NEW - DEMOLITION)
FLOOR DATA/TELEPHONE ROUGH-IN - 1" C. WITH PULLSTRING (EXISTING - NEW - DEMOLITION)

LIGHTING

FLUORESCENT FIXTURE - RECESSED OR SURFACE (EXISTING/NEW - DEMOLITION) (2'x4' SHOWN, OTHERS SIMILAR)
EMERGENCY/NIGHTLIGHT FIXTURE - RECESSED OR SURFACE (EXISTING/NEW - DEMOLITION) (2'x4' SHOWN, OTHERS SIMILAR)
FLOURESCENT STRIP FIXTURE (EXISTING/NEW - DEMOLITION) (2'x4' SHOWN, OTHERS SIMILAR)
DOWNLIGHT - WALL-WASHER - RECESSED OR SURFACE (EXISTING/NEW - DEMOLITION)
EMERGENCY/NIGHTLIGHT DOWNLIGHT / WALL-WASHER (EXISTING/NEW - DEMOLITION) - RECESSED OR SURFACE
DECORATIVE WALL SCONCE - VERIFY MOUNTING HEIGHT (EXISTING/NEW - DEMOLITION)
TRACK SECTION AND HEADS - PROVIDE ALL APPURTENANCES (EXISTING/NEW - DEMOLITION)
EXISTING WALL PACK - VERIFY MOUNTING HEIGHT (EXISTING/NEW - DEMOLITION)
EXTERIOR RECTANGULAR FIXTURE ON POLE - VERIFY CONFIG. (EXISTING/NEW - DEMOLITION)
EXTERIOR ROUND FIXTURE ON POLE - VERIFY CONFIGURATION (EXISTING/NEW - DEMOLITION)
EMERGENCY LIGHTING UNIT (EXISTING - NEW - DEMOLITION)
WALL-MOUNTED EXIT SIGN - SHADING DENOTE FACE (EXISTING - NEW - DEMOLITION) - ARROWS DENOTE CHEVRONS
CEILING-MOUNTED EXIT SIGN - SHADING DENOTE FACE (EXISTING - NEW - DEMOLITION) - ARROWS DENOTE CHEVRONS
COMBO EXIT SIGN / LIGHTING UNIT - SHADING DENOTE FACE (EXISTING - NEW - DEMOLITION) - ARROWS DENOTE CHEVRONS

SECTION 01 00 00 – GENERAL REQUIREMENTS

1. DRAWINGS ARE DIAGRAMMATIC AND SHOULD NOT BE SCALED FOR EXACT DIMENSIONS; EXACT DIMENSIONS AND LOCATIONS SHALL BE DETERMINED BY MEASUREMENTS IN THE FIELD AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO ORDERING EQUIPMENT AND MATERIAL.
2. BEFORE SUBMITTING A BID, IT WILL BE NECESSARY FOR EACH CONTRACTOR TO VISIT THE SITE AND ASCERTAIN FOR HIMSELF/HERSELF THE CONDITIONS TO BE MET IN INSTALLING THE WORK AND MAKING PROVISIONS FOR THE CONDITIONS AT THE FINAL PRICE. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK. BY SUBMITTING A BID, THE CONTRACTOR STATES THAT THE BID COVERS ALL THE WORK NECESSARY TO PROPERLY INSTALL THE SYSTEM INDICATED.
3. IN CASE OF DISAGREEMENT BETWEEN THE DRAWING AND SPECIFICATIONS, OR WITHIN THE DRAWINGS OR SPECIFICATIONS, THE BID SHALL INCLUDE THE GREATER AMOUNT OF WORK, AND THE MATTER SHALL BE REFERRED TO THE ENGINEER.
4. THE CONTRACTOR SHALL SECURE AND PAY ALL FEES ASSOCIATED WITH ANY AND ALL NECESSARY PERMITS, LICENSES, AND INSPECTIONS REQUIRED FOR THE WORK.
5. ALL WORK SHALL COMPLY WITH ALL PERTINENT NATIONAL, STATE AND LOCAL ORDINANCES AND CODES, AND ALL-AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS, AND ANY AMENDMENTS. NOTHING WITHIN THE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED AS WAVING ANY OF THE RULES, REGULATIONS, OR REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION. IN THE EVENT OF A CONFLICT, THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION SHALL GOVERN. THE CONFLICT SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY, AND NECESSARY MODIFICATION SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER OR ENGINEER.
6. IF THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS ARE IN EXCESS OF THOSE REQUIRED BE CODE, THE PROVISIONS OF THE CONSTRUCTION DOCUMENTS SHALL TAKE PRECEDENCE.
7. ALL EQUIPMENT AND MATERIALS FOR WHICH APPROVAL STANDARDS HAVE BEEN ESTABLISHED BY UNDERWRITERS' LABORATORIES, INC (UL), FACTORY MUTUAL (FM), AND AMERICAN STANDARD CODES SHALL BE SO APPROVED AND SHALL BEAR APPROVAL LABELS.
8. ALL WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE SAFETY REGULATIONS.
9. SHOULD ANY DOUBT ARISE AS TO THE TRUE MEANING OF THE DRAWINGS OR SPECIFICATIONS, REFERENCE SHALL BE MADE TO THE ENGINEER, WHOSE DECISION SHALL BE FINAL. THE ENGINEER WILL RESPOND WITHIN 10 BUSINESS DAYS AFTER RECEIPT OF REQUEST FOR INFORMATION. THE CONTRACTOR SHALL CONFORM TO THESE RESPONSES AS PART OF THE CONTRACT WITH NO ADDITIONAL COST TO THE OWNER OR ENGINEER. NO ALLEGED STATEMENT BY THE ARCHITECT/ENGINEER IS ACCEPTABLE EXCUSE FOR INFERIOR WORK.
10. THE LISTING OF PRODUCT MANUFACTURERS, MATERIALS AND METHODS IS INTENDED TO ESTABLISH A STANDARD OF QUALITY. PRODUCTS BY OTHER MANUFACTURERS MAY BE ACCEPTED PROVIDED THEY HAVE EQUIVALENT CAPACITY, CONSTRUCTION, AND PERFORMANCE. THE ENGINEER SHALL BE THE SOLE JUDGE OF QUALITY AND EQUIVALENCE OF EQUIPMENT, MATERIALS, AND METHODS. HOWEVER, UNDER NO CIRCUMSTANCES SHALL ANY SUBSTITUTION BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER PRIOR TO BIDDING.
11. EQUIPMENT HAS BEEN CHOSEN TO FIT WITHIN THE AVAILABLE SPACE. WHERE SUBSTITUTED OR ALTERNATIVE EQUIPMENT IS PROPOSED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE EQUIPMENT WILL FIT WITHIN THE SPACE AVAILABLE, INCLUDING ALL REQUIRED CODE AND MAINTENANCE CLEARANCES, AND TO COORDINATE ALL EQUIPMENT REQUIREMENTS WITH OTHER CONTRACTORS.
12. OBTAIN ALL EQUIPMENT OR MATERIAL OF EACH TYPE THROUGH ONE SOURCE, LOCALLY, WHEN POSSIBLE, FROM A SINGLE MANUFACTURER.
13. SUBSTITUTIONS: PRODUCTS OF EQUAL PERFORMANCE CHARACTERISTICS MAY BE CONSIDERED. CONTRACTORS WISHING TO SUBSTITUTE A PRODUCT OR MATERIAL SHALL SUBMIT EACH REQUEST TO THE ENGINEER IN WRITING AT LEAST 7 DAYS PRIOR TO BIDS BEING DUE. REQUESTS SHALL NOT BE CONSIDERED AFTER THAT TIME. THE ENGINEER SHALL REVIEW THE REQUEST AND IF ACCEPTABLE WILL ISSUE A LETTER ALLOWING THE SUBSTITUTION. ANY ANTICIPATED USE OF A NON-SPECIFIED PRODUCT WITHOUT WRITTEN APPROVAL IS STRICTLY THE RISK OF THE CONTRACTOR. IF A REQUEST IS REJECTED, THE CONTRACTOR SHALL FURNISH THE SPECIFIED PRODUCT OR MATERIAL. EACH CONTRACTOR IS RESPONSIBLE FOR COSTS INCURRED BY OTHER TRADES AS A RESULT OF ANY SUBSTITUTION MADE BY THE CONTRACTOR.
14. SUBMITTALS: SUBMIT THE FOLLOWING IN ACCORDANCE WITH DIVISION 1 SPECIFICATIONS AND THE REQUIREMENTS OF THIS SECTION FOR EACH PIECE OF EQUIPMENT AND EACH TYPE OF COMPONENT AND MATERIAL.
    1. SUBMIT PRODUCT DATA FOR EACH TYPE OF PRODUCT SPECIFIED.
    2. SUBMIT SHOP/COORDINATION DRAWINGS AT A MINIMUM SCALE OF 1/4"=1' -0" DETAILING ALL MAJOR EQUIPMENT, COMPONENT, AND SYSTEMS IN RELATION TO WORK OF OTHER TRADES, INDICATING INSTALLATION, CODE, AND WORKING CLEARANCES AND ACCESS FOR ALL EQUIPMENT AND COMPONENTS.
    3. SUBMIT SAMPLES OF COLOR, LETTERING, AND GRAPHICS FOR EACH IDENTIFICATION PRODUCT.
    4. CONTRACTOR SHALL SEPARATE SUBMITTALS TO CONTAIN NO MORE THAN ONE SPECIFICATION SECTION.
    5. WITHIN 30 DAYS AFTER AWARD OF CONTRACT, THE CONTRACTOR SHALL SUBMIT A MINIMUM OF FOUR (4) COPIES OF EACH SUBMITTAL WITH COVERSHEET TO THE ENGINEER. IF ACCEPTABLE TO THE ARCHITECT/OWNER, AN ELECTRONIC VERSION CONTAINING THE COVERSHEET AND ALL SUBMITTAL DATA WITHIN ONE FILE MAY BE SUBMITTED IN LIEU OF THE 4 COPIES.
    6. EACH SUBMITTAL SHALL INCLUDE THE FOLLOWING INFORMATION. SUBMITTALS THAT DO NOT COMPLY WITH THE FOLLOWING REQUIREMENTS WILL BE MARKED "REJECTED" AND RETURNED.
        1. COVERSHEET: INDICATING THE NAMES AND ADDRESS OF THE PROJECT, ARCHITECT, ENGINEER, AND CONTRACTOR, AND THE SUBMITTAL NAME AND NUMBER. NUMBER SHALL BE BASED ON THE SPECIFICATION SECTION, SUBMITTAL SEQUENCE NUMBER, AND A REVISION SEQUENCE NUMBER IS APPLICABLE. EX: 262726-02-R1 IS THE 1ST VERSION TO THE 2ND SUBMITTAL FOR SECTION 26 27 26.
        2. LIST OF VARIATIONS: THIS PAGE SHALL LIST ALL VARIATIONS INCLUDING FURNISHED/UNFURNISHED OPTIONS AND FEATURES BETWEEN THE SUBMITTED ITEM AND THE SCHEDULED/SPECIFIED ITEM. IF THERE ARE NOT VARIATIONS, THE PAGE SHALL STATE "NO VARIATIONS."
        3. PRODUCT INFORMATION: CLEARLY INDICATE MANUFACTURER'S NAME, DESIGNATION, SIZE, PERFORMANCE AND CAPACITY DATA, DIMENSIONAL DATA, SUFFICIENT PICTORIAL AND DIAGRAMMATIC DATA TO SHOW CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. APPLICABLE INFORMATION SHALL BE CLEARLY INDICATED, AND NON-APPLICABLE INFORMATION SHALL BE STRUCK-OUT.
        4. WARRANTY INFORMATION: MANUFACTURER'S WARRANTY CERTIFICATE THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.
        5. CERTIFICATION BY THE GENERAL AND SUB-CONTRACTOR THAT MATERIAL SUBMITTED IS IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, SIGNED AND DATED.
    7. SUBMITTAL REVIEW TIME IN THE ENGINEER'S OFFICE WILL BE A MINIMUM OF 10 WORKING DAYS PER REVIEW. THE CONTRACTOR SHALL CONSIDER THIS REVIEW TIME WHEN SCHEDULING WORK.
    8. EACH SUBMITTAL WILL BE MARKED WITH ONE OF THE FOLLOWING:
        1. NO EXCEPTIONS TAKEN – SUBMITTAL WAS REVIEWED, AND NO DEVIATIONS WERE FOUND.
        2. EXCEPTIONS NOTED, SUBMIT RESPONSE – SUBMITTAL WAS REVIEWED AND FOUND TO HAVE MINOR DEVIATIONS OR MISSING INFORMATION. A RE-SUBMITTAL IS NOT REQUIRED; HOWEVER, A WRITTEN RESPONSE TO ALL REVIEW COMMENTS SHALL BE SUBMITTED.
        3. EXCEPTIONS NOTED, RESUBMIT – SUBMITTAL WAS REVIEWED, AND MAJOR DEVIATIONS WERE NOTED. THE SUBMITTAL SHALL BE REVISED TO ADDRESS THE NOTED DEVIATIONS AND RESUBMITTED.
        4. REJECTED – SUBMITTAL WAS REVIEWED AND IS NOT IN CONFORMANCE OR IS NOT IN THE CORRECT FORMAT. A REVISED SUBMITTAL THAT IS IN CONFORMANCE SHALL BE RESUBMITTED.
    9. INADEQUATE OR INCOMPLETE SUBMITTALS WILL NOT BE REVIEWED AND WILL BE RETURNED MARKED "REJECTED."
    10. THE /ENGINEER'S REVIEW OF A SUBMITTAL SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ERRORS, OMISSIONS, OVERSIGHTS, OR DEVIATIONS THAT MAY BE CONTAINED WITHIN THE SUBMITTAL. IF THE CONTRACTOR PROCEEDS BASED ON UNDETECTED ERRORS, OMISSIONS, OVERSIGHTS, OR DEVIATIONS, IT IS AT HIS/HER SOLE RESPONSIBILITY. REGARDLESS OF ANY INFORMATION CONTAINED IN THE SUBMITTAL OR THE ENGINEER'S REVIEW THEREOF, THE CONTRACT DOCUMENTS SHALL GOVERN THE WORK AND NEITHER WAIVED NOR SUSPENDED BY THE SUBMITTAL REVIEW.
    11. EQUIPMENT AND MATERIAL PURCHASED WITHOUT A "NO EXCEPTIONS TAKEN" SUBMITTAL REVIEW IS AT THE RISK OF THE CONTRACTOR. THE COST OF REMOVAL AND REPLACEMENT OF SUCH ITEMS, WHICH IS JUDGED UNSATISFACTORY BY THE ENGINEER FOR ANY REASON, SHALL BE AT THE CONTRACTOR'S EXPENSE.
15. OPERATIONS AND MAINTENANCE REQUIREMENTS (PER ENERGY CODE): CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE RECORD DRAWINGS OF THE ACTUAL INSTALLATION BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWING SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.
16. MANUALS. CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING MANUAL AND A MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS (SEE APPENDIX E) AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
    1. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
    2. OPERATIONS MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTING MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
    3. NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY.
    4. HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.
    5. A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET-POINTS.
17. RECORD DRAWINGS: THE CONTRACTOR SHALL MAINTAIN A SET OF CLEARLY MARKED RECORD DRAWING PRINTS AT THE SITE, WHICH INDICATE ALL ALTERATIONS AND CHANGES. WITHIN 30 DAYS AFTER COMPLETION OF WORK, THE CONTRACTOR SHALL PROVIDE A REPRODUCIBLE SET-IN OWNER'S REQUESTED FORMAT (PLOTS, CAD, PDF, ETC.) WITH THE ENGINEER'S SEAL STRUCK-OUT AND EACH DRAWING MARKED WITH THE GENERAL AND ASSOCIATED SUB-CONTRACTORS' NAMES AND DATE.
18. ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED, CONNECTED, AND ADJUSTED PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
19. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES PRIOR TO SYSTEM INSTALLATION. THE CONTRACTOR SHALL REFER TO OTHER TRADE PLANS FOR OTHER WORK THAT MAY IMPACT HIS/HER WORK.
20. WHERE SPACE REQUIREMENTS CONFLICT, THE FOLLOWING ORDER OF PRECEDENCE SHALL BE USED.
    1. BUILDING LINES AND STRUCTURAL MEMBERS.
    2. SOIL, DRAIN, AND CONDENSATE PIPING.
    3. GREASE – RATED DUCTWORK.
    4. REFRIGERANT AND VENT PIPING.
    5. HVAC DUCTWORK.
    6. HVAC AND DOMESTIC WATER PIPING.
    7. FIRE PROTECTION (SPRINKLER & STANDPIPE) PIPING.
    8. ELECTRICAL CONDUIT.
21. THE CONTRACTOR SHALL TAKE CARE DURING WORK TO AVOID DAMAGE TO WORK BY OTHER TRADES.
22. THE CONTRACTOR SHALL KEEP THE PREMISES FREE OF DEBRIS AND RUBBISH CAUSED BY HIS/HER WORK ON A DAILY BASIS. THIS DEBRIS AND RUBBISH SHALL BE REMOVED FROM THE BUILDING AND SITE.
23. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE THE ENTIRE INSTALLATION TO BE IN PROPER WORKING ORDER FOR A PERIOD OF ONE (1) YEAR, UNLESS NOTED OTHERWISE, AFTER FINAL ACCEPTANCE AND SHALL FURNISH FREE OF CHARGE ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THIS GUARANTEE.
24. DEMOLITION: WHERE ACCESSIBLE WORK IS TO BE DEMOLISHED, IT SHALL BE REMOVED IN ITS ENTIRETY TO A POINT OF PERMANENT CONCEALMENT. WHERE WORK TO BE DEMOLISHED IS NOT ACCESSIBLE, REMOVE SYSTEM TO 2" BELOW THE SURFACE, CAP, AND PATCH SURFACE TO MATCH EXISTING. WHERE WORK TO REMAIN IS DAMAGED, REMOVE THE DAMAGED PORTIONS AND INSTALL NEW OF EQUAL CAPACITY, QUALITY, AND FUNCTION.
25. WORK WITHIN EXISTING BUILDING: CONSTRUCTION SHALL BE ARRANGED TO MINIMIZE THE HAZARD AND INTERRUPTION TO THE OCCUPANTS. DO NOT INTERRUPT SERVICES TO THE OCCUPANTS WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT/OWNER/TENANT, A MINIMUM OF 5 WORKING DAYS PRIOR TO THE INTERRUPTION. WHERE DISRUPTION OF A SERVICE BECOMES NECESSARY, PROVISIONS SHALL BE MADE TO PROVIDE TEMPORARY SERVICE THROUGHOUT THE INTERRUPTION OF THE PRIMARY SERVICE.

SECTION 26 00 00 - GENERAL REQUIREMENTS FOR ELECTRICAL SYSTEMS

1. ALL ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
2. PRODUCT SELECTION FOR RESTRICTED SPACE: DRAWINGS INDICATE DIMENSIONS OF SELECTED EQUIPMENT AND ACCESSORIES INCLUDING CLEARANCES BETWEEN EQUIPMENT, ADJACENT SURFACES AND OTHER ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD DIMENSIONS AND NOTIFYING THE ENGINEER IF REQUIRED CLEARANCES CANNOT BE MAINTAINED.
3. DO NOT DELIVER OR INSTALL EQUIPMENT AND DEVICES UNTIL SPACES ARE ENCLOSED AND WEATHERTIGHT, WORK IN SPACES IS COMPLETE AND DRY, AND WORK ABOVE EQUIPMENT IS COMPLETE.
4. INTERRUPTION OF EXISTING ELECTRIC SERVICE: DO NOT INTERRUPT ELECTRIC SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY ELECTRIC SERVICE ACCORDING TO REQUIREMENTS INDICATED:
    1. NOTIFY ARCHITECT AND OWNER NO FEWER THAN FIVE BUSINESS DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF ELECTRIC SERVICE.
    2. DO NOT PROCEED WITH INTERRUPTION OF ELECTRIC SERVICE WITHOUT ARCHITECT'S OR OWNER'S WRITTEN PERMISSION.
    3. COMPLY WITH NFPA 70E.
5. STORE EQUIPMENT, COMPONENTS, AND MATERIALS IN A CLEAN, DRY LOCATION WHICH PROVIDES PROTECTION AGAINST THE WEATHER. ITEMS WHICH BECOME DAMAGED DUE TO WEATHER OR EXPOSURE SHALL BE REPLACED PRIOR TO INSTALLATION.
6. PROVIDE ALL TEMPORARY FACILITIES REQUIRED TO SUPPLY CONSTRUCTION POWER AND LIGHTING. INSTALL AND MAINTAIN FACILITIES IN A MANNER THAT WILL PROTECT THE PUBLIC AND WORKMEN THAT COMPLIES WITH ALL APPLICABLE LAWS AND REGULATIONS. IN GENERAL, PROVIDE ONE (1) 150W INCANDESCENT LIGHT FIXTURE AND ONE (1) DUPLEX RECEPTACLE FOR EVERY 400 SQFT OF AREA (MINIMUM OF ONE EACH PER ROOM.) UPON COMPLETION OF THE WORK, REMOVE ALL TEMPORARY FACILITIES FROM THE SITE.
7. TEST ALL WIRING AND CONNECTIONS FOR PROPER CONFIGURATION PRIOR TO ENERGIZING ANY CIRCUIT.
8. VACUUM DIRT AND DEBRIS FROM WITHIN ENCLOSURES; DO NOT USE COMPRESSED AIR TO ASSIST IN CLEANING.
9. AT COMPLETION OF INSTALLATION, INSPECT EXPOSED FINISHES. REMOVE BURRS, DIRT AND CONSTRUCTION DEBRIS AND REPAIR DAMAGED FINISH, INCLUDING CHIPS, SCRATCHES, AND ABRASIONS BACK TO THE ORIGINAL FINISH.

SECTION 26 05 19 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

1. CONDUCTORS AND CABLES: COPPER SHALL BE SOFT-DRAWN, ANNEALED WITH 98% CONDUCTIVITY OR ALUMINUM WITH THNN/THWN INSULATION.
2. MULTI-CONDUCTOR CABLE: METAL-CLAD CABLE, TYPE MC ONLY. ALL MULTI-CONDUCTOR CABLES SHALL BE PROVIDED WITH AN INTERNAL EQUIPMENT GROUNDING CONDUCTOR. THE CABLE SHEATHING SHALL NOT BE USED AS AN EQUIPMENT GROUND.
3. CONNECTORS AND SPLICES: UL-LISTED, FACTORY-FABRICATED CONNECTORS AND SPLICES OF SIZE, AMPACITY RATING, MATERIAL, TYPE, AND CLASS FOR APPLICATION AND SERVICE INDICATED.
4. CONDUCTOR MATERIAL APPLICATIONS:
    1. FEEDERS: COPPER FOR FEEDERS SMALLER THAN #4 AWG; COPPER OR ALUMINUM FOR FEEDER'S #4 AWG AND LARGER. SOLID FOR #10 AWG AND SMALLER; STRANDED FOR #8 AWG AND LARGER. CONDUCTOR SIZES INDICATED ON DRAWINGS ARE COPPER UNLESS NOTED OTHERWISE.
    2. BRANCH CIRCUITS: COPPER. SOLID FOR #10 AWG AND SMALLER; STRANDED FOR #B AWG AND LARGER.
5. CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS:
    1. FEEDERS (EXPOSED AND CONCEALED) & BRANCH CIRCUIT (EXPOSED): TYPE THNN/THWN, SINGLE CONDUCTORS IN RACEWAY.
    2. BRANCH CIRCUITS - INTERIOR, CONCEALED IN CEILINGS, WALLS, AND PARTITIONS: TYPE THNN/THWN, SINGLE CONDUCTORS IN RACEWAY OR METAL-CLAD CABLE, TYPE MC.
        1. TYPE MC CABLE MAY BE INSTALLED ONLY IN THE FOLLOWING INSTALLATIONS.
            1. SINGLE-PHASE CIRCUITS ONLY.
            2. CONNECTION TO RECESSED LIGHTING FIXTURES WITH A MAXIMUM LENGTH OF 6'.
            3. CONNECTION TO NEMA 5-15R AND 5-20R RECEPTACLES WITH A MAXIMUM LENGTH OF THE DISTANCE BETWEEN THE RECEPTACLE AND THE FINISH CEILING PLUS 8'.
    3. CLASS 1 CONTROL CIRCUITS: TYPE THNN/THWN, IN RACEWAY.
    4. CLASS 2 CONTROL CIRCUITS: TYPE THNN/THWN, IN RACEWAY OR POWER-LIMITED CABLE, CONCEALED IN BUILDING FINISHES OR POWER-LIMITED TRAY CABLE, IN CABLE TRAY.
6. CONCEAL CABLES IN FINISHED WALLS, CEILINGS, AND FLOORS, UNLESS OTHERWISE INDICATED.
7. CONDUCTORS MAY BE RUN IN PARALLEL ON SIZE #1/0 THROUGH 750 KCMIL INCLUSIVE, PROVIDED ALL PARALLEL CONDUCTORS ARE THE SAME SIZE, LENGTH, AND TYPE OF INSULATION, AND THEY SHALL BE SO ARRANGED AND TERMINATED AS TO ENSURE EQUAL DIVISION OF THE TOTAL CURRENT BETWEEN ALL PARALLEL CONDUCTORS INVOLVED.
8. CONDUCTOR SIZES INDICATED IN THE CONSTRUCTION DRAWINGS ARE MINIMUM SIZES. CONTRACTOR SHALL INCREASE CONDUCTOR SIZES ABOVE THOSE INDICATED TO LIMIT THE DROP IN VOLTAGE POTENTIAL FROM THE PANELBOORD TO THE FARTHEST POINT ON THE CIRCUIT FROM EXCEEDING 3% AT MAXIMUM LOAD FOR ALL LIGHTING AND POWER BRANCH CIRCUITS.
9. INSTALL A SEPARATE GROUNDED (NEUTRAL) CONDUCTOR FOR EACH OF THE FOLLOWING BRANCH CIRCUITS SERVING OR ORIGINATING FROM A GFI DEVICE OR BREAKER.
10. KEEP CONNECTIONS AND SPLICES TO A MINIMUM. SPLICES ARE NOT PERMITTED IN FEEDER CONDUCTORS UNLESS SPECIFICALLY INDICATED ON PLAN.
11. ALL CONNECTIONS AND SPLICES SHALL OCCUR WITHIN OUTLET BOXES, JUNCTION BOXES, SPLICE BOXES, OR OTHER DEVICES APPROVED FOR THIS PURPOSE.
12. MAKE SPLICES AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH, CURRENT-CARRYING, AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS. USE OXIDE INHIBITOR IN EACH SPLICE AND TAP CONDUCTOR FOR ALUMINUM CONDUCTORS.

SECTION 26 05 26 - GROUNDING AND BANDING FOR ELECTRICAL SYSTEMS

1. INSULATED CONDUCTORS: COPPER OR TINNED-COPPER WIRE OR CABLE INSULATED FOR 600V UNLESS OTHERWISE REQUIRED BY APPLICABLE CODE. INSTALL SOLID CONDUCTOR FOR #8 AWG AND SMALLER, AND STRANDED CONDUCTORS FOR #6 AWG AND LARGER, UNLESS OTHERWISE INDICATED.
2. BARE COPPER BANDING CABLE: 28 KCMIL, 14 STRANDS OF #17 AWG CONDUCTORS, 1/4" IN DIAMETER.
3. BARE COPPER BANDING CONDUCTOR: #4 OR #6 AWG, STRANDED CONDUCTOR.
4. BOLTED CONNECTORS FOR CONDUCTORS AND PIPES: COPPER OR COPPER ALLOY, BOLTED PRESSURE-TYPE, WITH AT LEAST TWO BOLTS, SIZE FOR CONDUCTOR AND MATERIAL/PIPE THICKNESS.
5. INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH OIL FEEDERS AND BRANCH CIRCUITS.
6. HVAC AND PLUMBING EQUIPMENT: INSTALL A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR TO EACH PIECE OF EQUIPMENT OPERATING AT 120 V AND MORE, INCLUDING AIR CLEANERS, HEATERS, DAMPERS, HUMIDIFIERS, WATER HEATERS, PUMPS, ETC. BAND CONDUCTOR TO EACH UNIT AND TO DUCT AND/OR CONNECTED METALLIC PIPING. INSTALL BANDING JUMPER TO BAND ACROSS FLEXIBLE CONNECTIONS TO ACHIEVE CONTINUITY.
7. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE, UNLESS OTHERWISE INDICATED OR REQUIRED BY CODE. AVOID OBSTRUCTING ACCESS OR PLACING CONDUCTORS WHERE THEY MAY BE SUBJECTED TO STRAIN, IMPACT, OR DAMAGE.
8. BANDING STRAPS AND JUMPERS: COPPER OR TINNED-COPPER TAPE, BRAIDED CONDUCTORS, TERMINATED WITH COPPER FERRULES; 1-5/8" WIDE AND 1/16" THICK, INSTALLED IN LOCATIONS ACCESSIBLE FOR INSPECTION AND MAINTENANCE, EXCEPT WHERE ROUTED THROUGH SHORT LENGTHS OF CONDUIT.
    1. BANDING TO STRUCTURE: BAND STRAPS DIRECTLY TO BASIC STRUCTURE, TAKING CARE NOT TO PENETRATE ANY ADJACENT PARTS.
9. BANDING TO EQUIPMENT MOUNTED ON VIBRATION ISOLATION HANGERS AND SUPPORTS: INSTALL SO VIBRATION IS NOT TRANSMITTED TO RIGIDLY MOUNTED EQUIPMENT

SECTION 26 05 29 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

1. DESIGN SUPPORTS FOR MULTIPLE RACEWAYS AND EQUIPMENT CAPABLE OF SUPPORTING COMBINED WEIGHT OF SUPPORTED SYSTEMS, ITS CONTENTS, AND COMPONENTS; ADEQUATE TO RESIST MAXIMUM LOADS IMPOSED FOR THIS PROJECT, WITH A MINIMUM STRUCTURAL SAFETY FACTOR OF FIVE TIMES THE APPLIED FORCE.
2. STEEL SLOTTED SUPPORT SYSTEMS: HOT-DIP GALVANIZED, FACTORY-FABRICATED COMPONENTS FOR FIELD ASSEMBLY WITH CHANNEL DIMENSIONS SELECTED FOR APPLICABLE LOAD CRITERIA.
3. CONDUIT AND CABLE SUPPORT DEVICES: STEEL AND MALLEABLE-IRON HANGERS, CLAMPS, AND ASSOCIATED FITTINGS, DESIGNED FOR TYPES AND SIZES OF RACEWAY OR CABLE TO BE SUPPORTED.
4. SUPPORT FOR CONDUCTORS IN VERTICAL CONDUIT: FACTORY-FABRICATED ASSEMBLY CONSISTING OF MALLEABLE IRON, THREADED BODY AND INSULATING WEDGING PLUG OR PLUGS FOR NON-ARMORED ELECTRICAL CONDUCTORS OR CABLES IN RISER CONDUITS. PLUGS SHALL HAVE NUMBER, SIZE, AND SHAPE OF CONDUCTOR GRIPPING PIECES AS REQUIRED TO SUIT INDIVIDUAL CONDUCTORS OR CABLES SUPPORTED.
5. POWDER-ACTUATED FASTENERS: THREADED-STEEL STUD, FOR USE IN HARDENED PORTLAND CEMENT CONCRETE, STEEL, OR WOOD, WITH TENSION, SHEAR, AND PULLOUT CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND BUILDING MATERIALS WHERE USED.
6. MECHANICAL-EXPANSION ANCHORS: INSERT-WEDGE-TYPE, ZINC-COATED STEEL, FOR USE IN HARDENED PORTLAND CEMENT CONCRETE WITH TENSION, SHEAR, AND PULLOUT CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND BUILDING MATERIALS IN WHICH USED.
7. MAXIMUM SUPPORT SPACING AND MINIMUM HANGER ROD SIZE FOR RACEWAY: SPACE SUPPORTS FOR EMT, IMC, AND RMC AS NFPA 70. MINIMUM ROD SIZE SHALL BE 1/4" IN DIAMETER.
8. MULTIPLE RACEWAYS OR CABLES: INSTALL TRAPEZE-TYPE SUPPORTS FABRICATED WITH STEEL SLOTTED SUPPORT SYSTEM, SIZED SO CAPACITY CON BE INCREASED BY AT LEAST 25% IN FUTURE WITHOUT EXCEEDING SPECIFIED DESIGN LOAD LIMITS. SECURE RACEWAYS AND CABLES TO THESE SUPPORTS WITH TWO-BOLT CONDUIT CLAMPS OR SINGLE-BOLT CONDUIT CLAMPS USING SPRING FRICTION ACTION FOR RETENTION IN SUPPORT CHANNEL.
9. SPRING-STEEL CLAMPS DESIGNED FOR SUPPORTING SINGLE CONDUITS WITHOUT BOLTS MAY BE USED FOR 1-1 /2" AND SMALLER RACEWAYS SERVING BRANCH CIRCUITS AND COMMUNICATION SYSTEMS ABOVE SUSPENDED CEILINGS AND FOR FASTENING RACEWAYS TO TRAPEZE SUPPORTS.
10. STRENGTH OF SUPPORT ASSEMBLIES: SELECT SIZES OF COMPONENTS SO STRENGTH WILL BE ADEQUATE TO CARRY WEIGHT OF SUPPORTED COMPONENTS PLUS 200 LB, MINIMUM.
11. MOUNTING AND ANCHORAGE OF SURFACE-MOUNTED EQUIPMENT AND COMPONENTS: ANCHOR AND FASTEN ELECTRICAL ITEMS AND THEIR SUPPORTS TO BUILDING STRUCTURAL ELEMENTS BY THE FOLLOWING METHODS UNLESS OTHERWISE INDICATED BY CODE:
    1. TO WOOD: FASTEN WITH LAG SCREWS OR THROUGH BOLTS.
    2. TO EXISTING CONCRETE: EXPANSION ANCHOR FASTENERS OR POWDER-ACTUATED DRIVEN THREADED STUDS PROVIDED WITH LOCK WASHERS AND NUTS MAY BE USED IN EXISTING STANDARD-WEIGHT CONCRETE 4" THICK OR GREATER. DRILL HOLES FOR EXPANSION ANCHORS IN CONCRETE AT LOCATIONS AND TO DEPTHS THAT AVOID REINFORCING BARS.
    3. TO STRUCTURAL STEEL: BEAM CLAMPS COMPLYING WITH MSS SP-69.
    4. TO LIGHT STEEL: SHEET METAL SCREWS.
    5. ITEMS MOUNTED ON HOLLOW WALLS AND NONSTRUCTURAL BUILDING SURFACES: MOUNT EQUIPMENT AND ENCLOSURES ON SLOTTED-CHANNEL RACKS ATTACHED TO SUBSTRATE.
12. CONSTRUCT CONCRETE BASES WITH 3000-PSI, 2B-DAY COMPRESSIVE-STRENGTH CONCRETE WITH DIMENSIONS INDICATED BUT NOT LESS THAN 4" LARGER IN BOTH DIRECTIONS THAN SUPPORTED UNIT.

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PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
DRAWN BY: **JPD**
CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**

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SECTION 26 05 33 - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

1. INDOORS, UNLESS OTHERWISE INDICATED:
    1. EXPOSED, NOT SUBJECT TO PHYSICAL DAMAGE: RIGID STEEL CONDUIT OR EMT.
    2. EXPOSED AND SUBJECT TO PHYSICAL DAMAGE: RIGID STEEL CONDUIT OR IMC. INCLUDES RACEWAYS IN AREAS WITH HEAVY TRAFFIC AND MECHANICAL ROOMS.
    3. CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: RIGID STEEL, IMC, OR EMT. RNC MAY BE USED IN NON-ENVIRONMENTAL AIR PLENUMS.
    4. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID OR MOTOR-DRIVEN EQUIPMENT): FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.
    5. DAMP OR WET LOCATIONS: RIGID STEEL CONDUIT OR IMC.
    6. BOXES: SHEET-METAL, TYPE 1, EXCEPT USE CAST-METAL, TYPE 4, IN DAMP OR WET LOCATIONS.
2. MINIMUM RACEWAY SIZE: RACEWAY SIZE SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
    1. UNDER SLAB AND UNDERGROUND: 1"
    2. HOMERUNS TO PANELBOARDS: 3/4".
    3. ALL OTHER RACEWAY: 1 /2".
3. METAL WIREWAYS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE BUT ARE NOT LIMITED TO; COOPER B-LINE AND HOFFMAN.
    1. DESCRIPTION: SHEET METAL WITH STANDARD ENAMEL FINISH, SIZED AND SHAPED AS INDICATED, TYPE 1 (INTERIOR) OR 3R (EXTERIOR), UNLESS OTHERWISE INDICATED.
    2. FITTINGS AND ACCESSORIES: INCLUDE COUPLINGS, ELBOWS, ADAPTERS, END CAPS, AND OTHER FITTINGS THAT MATCH WIREWAYS AS REQUIRED FOR COMPLETE SYSTEM.
    3. WIREWAY COVERS: SCREW-COVER TYPE, UNLESS OTHERWISE INDICATED.
4. RACEWAY FITTINGS: COMPATIBLE WITH RACEWAYS AND SUITABLE FOR USE AND LOCATION.
    1. RIGID AND INTERMEDIATE STEEL CONDUIT: USE THREADED RIGID STEEL CONDUIT FITTINGS, UNLESS OTHERWISE INDICATED.
    2. PVC EXTERNALLY COATED, RIGID STEEL CONDUITS: USE ONLY FITTINGS LISTED FOR USE WITH THAT MATERIAL. PATCH AND SEAL ALL JOINTS, NICKS, AND SCRAPES IN PVC COATING AFTER INSTALLING CONDUITS AND FITTINGS.
    3. EMT CONDUITS: SET-SCREW TYPE EXCEPT IN DAMP AND WET LOCATIONS, COMPRESSION TYPE.
5. INSTALL RACEWAY LEVEL AND SQUARE AND AT PROPER ELEVATION TO PROVIDE ADEQUATE HEADROOM. KEEP RACEWAYS AT LEAST 6" AWAY FROM PARALLEL RUNS OF FLUES AND STEAM OR HOT-WATER PIPES. INSTALL HORIZONTAL RACEWAY RUNS ABOVE WATER PIPING.
6. INSTALL NO MORE THAN THE EQUIVALENT OF FOUR 90-DEGREE BENDS IN ANY CONDUIT RUN.
7. CONCEAL CONDUIT AND CABLES WITHIN FINISHED WALLS, CEILINGS, AND FLOORS, UNLESS OTHERWISE INDICATED.
8. MAKE BENDS AND OFFSETS SO THE INSIDE DIAMETER IS NOT REDUCED AND FREE FROM DENTS AND FLATTENING. KEEP LEGS OF BENDS IN THE SAME PLAN AND STRAIGHT LEGS OF OFFSETS PARALLEL.
9. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURE, FOLLOWING SURFACE CONTOURS AS MUCH AS PRACTICAL. COMPLETE RACEWAY INSTALLATION BEFORE STARTING CONDUCTOR INSTALLATION.
10. INSTALL PULL WIRES IN EMPTY RACEWAYS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB TENSILE STRENGTH. LEAVE AT LEAST 12" OF SLACK AT EACH END OF PULL WIRE.
11. INSTALL RACEWAY SEALING FITTINGS AT SUITABLE, APPROVED, AND ACCESSIBLE LOCATIONS AND FILL THEM WITH LISTED SEALING COMPOUND. FOR CONCEALED RACEWAYS, INSTALL EACH FITTING IN A FLUSH STEEL BOX WITH A BLANK COVER PLATE HAVING A FINISH SIMILAR TO THAT OF ADJACENT PLATES OR SURFACES. INSTALL RACEWAY SEALING FITTINGS WHERE CONDUITS PASS FROM WARM TO COLD LOCATIONS, SUCH AS BOUNDARIES OF REFRIGERATED SPACES AND WHERE OTHERWISE REQUIRED BY NFPA 70.
12. USE MAXIMUM OF 72" OF FLEXIBLE CONDUIT FOR EQUIPMENT SUBJECT TO VIBRATION. NOISE TRANSMISSION, OR MOVEMENT; AND FOR TRANSFORMERS AND MOTORS.
13. IN INACCESSIBLE CEILING AREAS, POSITION BOXES WITHIN 6" OF RECESSED LUMINAIRE TO BE ACCESSIBLE THROUGH THE LUMINAIRE CEILING OPENING.
14. BOXES: INSTALL JUNCTION AND OUTLET BOXES AS FOLLOWS.
    1. PROVIDE A MINIMUM OF 6" SEPARATION BETWEEN BACK-TO-BACK BOXES IN WALLS.
    2. PROVIDE A MINIMUM OF 24" SEPARATION AND AT LEAST ONE PARTITION STUD BETWEEN BACK-TO-BACK BOXES IN FIRE-RATED PARTITIONS (2-HOURS OR LESS). BOX OPENINGS SHALL NOT EXCEED 16 SQUARE INCHES, WITH A MAXIMUM OF 100 SQUARE INCHES OF OPENING PER 100 SQUARE FEET OF PARTITION AREA.
    3. USE MULTI-GANG BOXES WHERE MULTIPLE WIRING DEVICES ARE TO BE INSTALLED TOGETHER. DO NOT USE SECTIONAL BOXES.
    4. PROVIDE PHYSICAL BARRIERS TO SEPARATE WIRING OF DIFFERENT VOLTAGES.
15. INSTALL TEMPORARY CLOSURES ON ALL RACEWAYS DURING CONSTRUCTION TO AVOID DIRT, WATER, AND DEBRIS FROM ENTERING THE RACEWAY SYSTEM.
16. PROVIDE KNOCKOUT PLUGS IN ALL UNUSED OPENINGS IN BOXES, WIREWAYS, AND ENCLOSURES.
17. INSTALL SLEEVES FOR PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES UNLESS OPENINGS COMPATIBLE WITH FIRESTOP SYSTEM USED ARE FABRICATED DURING CONSTRUCTION OF FLOOR OR WALL. CUT SLEEVES TO LENGTH FOR MOUNTING FLUSH WITH BOTH WALL SURFACES AND EXTEND SLEEVES INSTALLED IN FLOORS 2" ABOVE FINISHED FLOOR LEVEL.
18. MAINTAIN REQUIRED FIRE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT RACEWAY PENETRATIONS.
19. SEAL ROOF PENETRATION OF INDIVIDUAL RACEWAYS WITH FLEXIBLE, BOOT-TYPE FLASHING UNITS APPLIED IN COORDINATION WITH ROOFING WORK.

SECTION 26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

1. VERIFY THE IDENTITY OF EACH ITEM BEFORE INSTALLING IDENTIFICATION PRODUCTS.
2. APPLY IDENTIFICATION DEVICES TO SURFACES THAT REQUIRE FINISH OR CLEANING AFTER COMPLETING WORK.
3. ATTACH SIGNS AND PLASTIC LABELS WITH MECHANICAL FASTENERS APPROPRIATE TO THE LOCATION AND SUBSTRATE.
4. IDENTIFY CONDUCTORS IN ENCLOSURES AND BOXES, USING COLOR-CODING TO IDENTIFY THE PHASE, FACTORY APPLIED OR FIELD APPLIED CONDUCTOR TAPE OR CABLE TIES FOR SIZES LARGER THAN #8 AWG. LOCATE BANDS OF TAPE OF TIES WITHIN 6" FROM TERMINATION AND AVOID OBSCURING FACTORY CABLE MARKINGS.
    1. COLORS FOR 208/120V CIRCUITS:
        1. PHASE A: BLACK.
        2. PHASE B: RED,
        3. PHASE C: BLUE.
        4. NEUTRAL: WHITE.
        5. GROUND: GREEN
    2. COLORS FOR 480/277VVCIRCUITS:
        1. PHASE A: BROWN.
        2. PHASE B: PURPLE.
        3. PHASE C: YELLOW.
        4. NEUTRAL: GRAY.
        5. GROUND: GREEN
5. APPLY SELF-ADHESIVE FACTORY PRINT CIRCUIT NUMBER FOR CIRCUIT DESIGNATION AT EACH ENCLOSURE, BOX, AND DEVICE.
6. IDENTIFY THE COVERS OF EACH JUNCTION AND PULL BOX OF THE FOLLOWING SYSTEMS WITH FIELD-APPLIED PAINT. AFTER PAINT HAS BEEN APPLIED, PROVIDE PERMANENT WRITTEN IDENTIFICATION OF THE SOURCE AND CIRCUIT NUMBER, SIZES OF LETTERS SHALL BE APPROPRIATE FOR VIEWING FROM THE FLOOR. SYSTEM COLOR LEGENDS SHALL BE A FOLLOWS:
    1. GENERAL POWER: NO COLOR
    2. FIRE ALARM AND PROTECTION: RED.
    3. SECURITY SYSTEM: BLUE.
    4. TELECOMMUNICATION: ORANGE.
7. ATTACH MARKER TAPE TO CONDUCTORS TO BE EXTENDED IN THE FUTURE AND LIST THEIR USAGE.
8. INSTALL 2" WIDE PRESSURE-SENSITIVE VINYL FLOOR MARKING TAPE WITH BLACK AND YELLOW' STRIPES TO SHOW WORKING CLEARANCES IN THE DIRECTION OF ACCESS TO LIVE PARTS. WORKSPACE SHALL BE AS REQUIRED BY NFPA 70 AND 29 CFR 1926.403. INSTALL WARNING LABEL ON EQUIPMENT WHICH READS "WARNING - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES." DISTANCE INDICATED SHALL BE AS DEFINED IN NFPA 70. DO NOT INSTALL FLOOR MARKINGS OR WARNING SIGNS IN FINISHED SPACES.
9. INSTALL UNDERGROUND-LINE WARNING TAPE AS RECOMMENDED BY MANUFACTURER FOR THE METHOD OF INSTALLATION AND SUITABLE TO IDENTIFY AND LOCATE UNDERGROUND POWER AND COMMUNICATIONS UTILITY LINES. USE RED-COLOR TAPES FOR ELECTRICAL WITH INSCRIPTION OF "ELECTRICAL LINE - HIGH VOLTAGE" AND ORANGE-COLORED TAPES FOR COMMUNICATION WITH INSCRIPTION OF "TELEPHONE CABLE, CAW CABLE, OR COMMUNICATION CABLE." DURING BACKFILLING OF TRENCHES INSTALL CONTINUOUS UNDERGROUND-LINE WARNING TAPE DIRECTLY ABOVE LINE AT 6"-8" BELOW FINISHED GRADE.
10. INSTALL UNIQUE DESIGNATION ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABEL WITH STAINLESS-STEEL MACHINE SCREWS WITH NUTS ON EACH PIECE OF EQUIPMENT. PROVIDE A SINGLE LINE OF TEXT WITH 1/2" HIGH LETTERS ON 1-1/2" HIGH LABEL; WHERE TWO LINES OF TEXT ARE REQUIRED, USE LABELS 2" HIGH. FOR ELEVATED COMPONENTS, INCREASE SIZES OF LABELS AND LETTERS TO THOSE APPROPRIATE FOR VIEWING FROM THE FLOOR. LABEL SHALL INDICATE EQUIPMENT OR ITEM NAME/DESIGNATION, SERVICE VOLTAGE, SOURCE OF SERVICE, AND FOR SEPARATELY DERIVED SYSTEM, EQUIPMENT SUPPLIED BY SYSTEM. LABEL THE FOLLOWING EQUIPMENT:
    1. SWITCHBOARDS, SWITCHGEAR, MOTOR CONTROL CENTERS, PANELBOARDS, AND OVERCURRENT PROTECTION DEVICES WITHIN THEM.
    2. CONTACTORS, PUSHBUTTONS, ENCLOSURES, CABINETS, ENCLOSED SWITCHES AND CONTROLLERS.
    3. TRANSFORMERS
    4. MONITORING AND CONTROL EQUIPMENT.

SECTION 26 22 00 – LOW-VOLTAGE TRANSFORMERS

1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO; ACME ELECTRIC, EATON CUTLER-HAMMER, GE, SIEMENS, AND SQUARE D.
2. GENERAL TRANSFORMER REQUIREMENTS: FACTORY-ASSEMBLED AND -TESTED, AIR-COOLED UNITS FOR 60-HZ SERVICE, WITH ONE RAIN-ORIENTED, NON-AGING SILICON STEEL CORE PER LEG AND CONTINUOUS WINDINGS WITHOUT SPLICES EXCEPT FOR TAPS. CORES AND COILS SHALL BE ENCAPSULATED WITHIN RESIN COMPOUND, SEALING OUT MOISTURE AND AIR. ENCLOSURE SHALL BE VENTILATED, NEMA TYPE 2, EXCEPT FOR EXTERIOR INSTALLATION SHALL BE TYPE 3R.
3. GENERAL PURPOSE DISTRIBUTION TRANSFORMERS
    1. WINDINGS: ONE COIL PER PHASE IN PRIMARY AND SECONDARY.
    2. TAPS FOR TRANSFORMERS 7.5 TO 24 KVA: ONE 5% ABOVE AND ONE 5% BELOW NORMAL FULL CAPACITY.
    3. TAPS FOR TRANSFORMERS 25 KVA AND LARGER: TWO 2.5% TAPS ABOVE AND TWO 2.5% PS BELOW NORMAL FULL CAPACITY.
    4. INSULATION CLASS: 220°C, UL-COMPONENT-RECOGNIZED INSULATION SYSTEM WITH A MAXIMUM OF 150°C RISE ABOVE 40°C AMBIENT TEMPERATURE.
    5. TRANSFORMERS SHALL HAVE AN EFFICIENCY RATING IN COMPLIANCE WITH NEMA CLASS 1 EFFICIENCY LEVELS.
4. DRAWINGS INDICATE DIMENSIONS FOR SELECTED PANEL BOARDS INCLUDING CLEARANCES. COORDINATE LAYOUT AND INSTALLATION OF TRANSFORMERS WITH OTHER CONSTRUCTIONS THAT PENETRATE WALLS OR IS SUPPORTED BY THEM. MAINTAIN REQUIRED WORKSPACE CLEARANCES AND REQUIRED CLEARANCES FOR EQUIPMENT ACCESS DOORS AND PANELS.
5. INSTALL FLOOR-MOUNTED TRANSFORMERS ON CONCRETE HOUSEKEEPING PAD WITH VIBRATION ISOLATION PADS TO PREVENT TRANSMISSION OF TRANSFORMER VIBRATION.
6. INCOMING AND OUTGOING RACEWAYS SHALL BE FLEXIBLE TO PREVENT TRANSMISSION OF TRANSFORMER VIBRATION. INSTALL BANDING JUMPER ON THE EXTERIOR OF THE FLEXIBLE RACEWAY.
7. GROUND EQUIPMENT ACCORDING TO NFPA 70 FOR A SEPARATELY DERIVED SYSTEM AND DIVISION 26 SECTION "GROUNDING AND BANDING FOR ELECTRICAL SYSTEMS."
8. RECORD TRANSFORMER SECONDARY VOLTAGE AT EACH UNIT FOR AT LEAST 48 HOURS OF TYPICAL OCCUPANCY PERIOD. ADJUST TRANSFORMER TAPS TO PROVIDE OPTIMUM VOLTAGE CONDITIONS AT SECONDARY TERMINALS. OPTIMUM IS DEFINED AS NOT EXCEEDING NAMEPLATE VOLTAGE PLUS 10% AND NOT BEING LOWER THAN NAMEPLATE VOLTAGE MINUS 3% AT MAXIMUM LOAD CONDITIONS. SUBMIT RECORDING AND TAP SETTINGS AS TEST RESULTS.

SECTION 26 24 16 - PANELBOARDS

1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO; EATON, CUTLER-HAMMER, GE, SIEMENS, AND SQUARE D.
2. ENCLOSURES: SURFACE-MOUNTED CABINETS, RATED FOR ENVIRONMENTAL CONDITIONS AT INSTALLED LOCATION. BACK BOX AND TRIM/DOOR SHALL BE GALVANIZED STEEL, WITH MANUFACTURER'S STANDARD BAKED-ON FINISH APPLIED TO THE TRIM/DOOR.
3. TRIM/DOOR: PROVIDE TRIM WITH ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. DOOR SHALL SECURE WITH VAULT-TYPE LATCH WITH TUMBLER LOCK, ALL KEYED ALIKE. PROVIDE METAL FRAMED DIRECTORY CARD WITH TRANSPARENT PROTECTIVE COVER ON INSIDE OF DOOR.
4. BUSSING: HARD-DRAWN, 98% CONDUCTIVITY COPPER OF CAPACITY INDICATED. WHERE INDICATED PROVIDE OVERSIZED NEUTRAL BUSSING. PROVIDE EQUIPMENT GROUND BUS OF ADEQUATE SIZE FOR ALL CONDUCTOR TERMINATIONS, BANDED TO BOX. WHERE INDICATED, PROVIDE ISOLATED GROUND BUS OF ADEQUATE SIZE FOR ALL CONDUCTOR TERMINATIONS, INSULATED FROM BOX.
5. MAINS: CIRCUIT BREAKER OR LUGS ONLY, AS INDICATED. CONDUCTOR CONNECTIONS SHALL BE COMPRESSION TYPE, SUITABLE FOR USE WITH CONDUCTOR MATERIAL AND SIZES. PROVIDE FEED-THROUGH LUGS AT THE OPPOSITE END OF BUS FROM INCOMING MAINS, WHERE INDICATED.
6. INSTALL SERVICE EQUIPMENT LABEL FOR PANELBOARDS WITH ONE OR MORE MAIN SERVICE DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES.
7. PANEL BOARD SHORT-CIRCUIT CURRENT RATING: RATED FOR SERIES-CONNECTED SYSTEM WITH INTEGRAL OR REMOTE UPSTREAM OVERCURRENT PROTECTIVE DEVICES.
8. BRANCH OVERCURRENT PROTECTIVE DEVICES: BOLT-ON MOLDED-CASE CIRCUIT BREAKERS. PANELBOARD SHALL HAVE MOUNTING BRACKETS, BUS CONNECTIONS, FILLER PLATES, AND NECESSARY APPURTENANCES REQUIRED FOR FUTURE INSTALLATION OF DEVICES WITHOUT DISRUPTING EXISTING DEVICES.
9. MOLDED-CASE CIRCUIT BREAKER (MCCB): WITH INTERRUPTING CAPACITY TO MEET AVAILABLE FAULT CURRENTS AND APPLICATION LISTED FOR CONNECT LOAD.
    1. MCCB NOT LARGER THAN 400A: THERMAL-MAGNETIC CIRCUIT BREAKER, INVERSE TIME-CURRENT ELEMENT FOR LOW-LEVEL OVERLOADS, AND INSTANTANEOUS MAGNETIC TRIP ELEMENT FOR SHORT CIRCUITS. ADJUSTABLE MAGNETIC TRIP SETTING FOR CIRCUIT-BREAKER FRAME SIZES 200A AND LARGER.
    2. MCCB 400A AND LARGER: ELECTRONIC TRIP CIRCUIT BREAKER WITH RMS SENSING, FIELD-REPLACEABLE RATING PLUG OR FIELD-REPLICABLE ELECTRONIC TRIP, AND THE FOLLOWING FIELD-ADJUSTABLE INSTANTANEOUS TRIP, LONG- AND SHORT-TIME PICKUP LEVELS, LONG- AND SHORT-TIME ADJUSTMENTS, GROUND-FAULT PICKUP LEVEL, TIME DELAY, AND 12T RESPONSE.
    3. LUGS: MECHANICAL STYLE, SUITABLE FOR NUMBER, SIZE, TRIP RATINGS, AND CONDUCTOR MATERIALS.
    4. MULTI-POLE UNITS ENCLOSED HAVE A SINGLE HOUSING.
    5. GROUND-FAULT CIRCUIT INTERRUPTION (GFI): WHERE INDICATED OR REQUIRED, CLASS A GROUND-FAULT PROTECTION (6-MA TRIP) INTEGRALLY MOUNTED RELAY AND TRIP UNIT WITH ADJUSTABLE PICKUP AND TIME DELAY SETTINGS, PUSH-TO-TEST FEATURE, AND GROUND-FAULT INDICATOR.
    6. SHUNT TRIP: WHERE INDICATED, 120V TRIP COIL ENERGIZED FROM SEPARATE CIRCUIT, SET TO TRIP AT 75% OF RATED VOLTAGE.
    7. KEY INTERLOCK: WHERE INDICATED, EXTERNALLY MOUNTED TO PROHIBIT CIRCUIT-BREAKER OPERATION; KEY SHALL BE REMOVABLE ONLY WHEN CIRCUIT BREAKER IS IN OFF POSITION.
    8. SET FIELD-ADJUSTABLE CIRCUIT-BREAKER TRIP RANGES AS INDICATED.
10. MOUNT PANELBOARD CABINET PLUMB AND RIGID WITHOUT DISTORTION OF BOX WITH TOP OF TRIM 72" AFF.
11. DRAWINGS INDICATE DIMENSIONS FOR SELECTED PANELBOARDS INCLUDING CLEARANCES. COORDINATE LAYOUT AND INSTALLATION OF PANELBOARDS AND COMPONENTS WITH OTHER CONSTRUCTION THAT PENETRATES WALLS OR IS SUPPORTED BY THEM. MAINTAIN REQUIRED WORKSPACE CLEARANCES AND REQUIRED CLEARANCES FOR EQUIPMENT ACCESS DOORS AND PANELS.
12. SURFACE-MOUNTED PANELBOARDS: INSTALL ENCLOSURE WITH 1/4" MINIMUM GAP BETWEEN ENCLOSURE AND WALL SURFACE.
13. INSTALL FILLER PLATES IN UNUSED SPACES.
14. WHEN ADDING NEW OVERCURRENT PROTECTION DEVICES TO EXISTING PANELBOARDS, INSTALL DEVICES OF THE SAME INTERRUPTING RATING, STYLE AND FROM THE SAME MANUFACTURER AS THE REMAINDER OF THE PANELBOARD.
15. CREATE A DIRECTORY TO INDICATE INSTALLED CIRCUIT LOADS AFTER BALANCING PANELBOARD LOADS; INCORPORATE FINAL ROOM DESIGNATIONS. USE A COMPUTER OR TYPEWRITER TO CREATE DIRECTORY.
16. LOAD BALANCING: AFTER SUBSTANTIAL COMPLETION, BUT NOT MORE THAN 60 DAYS AFTER FINAL ACCEPTANCE, MEASURE LOAD BALANCING AND MAKE CIRCUIT CHANGES TO BALANCE PHASE LOADS TO LESS THAN 20% PHASE IMBALANCE. MEASURE DURING THE PERIOD OF NORMAL SYSTEM LOADING. HOWEVER, PERFORM LOAD-BALANCING CIRCUIT CHANGES OUTSIDE NORMAL OCCUPANCY/WORKING SCHEDULE AT TIME DIRECTED. AFTER CIRCUIT CHANGES, RECHECK LOADS DURING NORMAL LOAD PERIOD AND RE-BALANCE AS NEEDED. RECORD ALL LOAD READINGS BEFORE AND AFTER CHANGES AND SUBMIT TEST RECORDS.

SECTION 26 27 26 - WIRING DEVICES

1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO; COOPER, HUBBELL, LEVITON, LUTRON, AND PASS & SEYMOUR. THE FOLLOWING MODEL NUMBERS FOR PASS & SEYMOUR ARE FOR REFERENCE. DEVICE SHALL MATCH EXISTING BUILDING STANDARD, IF APPLICABLE. IF DEVICE STYLE IS NOT INDICATED BY THE ARCHITECT, THEY SHALL BE "DECORATOR" STYLE AS INDICATED BELOW.
2. CONVENIENCE RECEPTACLES, 125V, 20A: NEMA 5-20R, P&S#26361 (SINGLE), P&S#26352 (DUPLEX).
3. GFI RECEPTACLES, 125V, 20A: NEMA 5-20R, P&S#2094. STRAIGHT BLADE, NON-FEED-THROUGH TYPE, INCLUDING INDICATOR LIGHT THAT IS LIGHTED WHEN DEVICE IS TRIPPED.
4. SNAP SWITCHES, 120/277V, 20AF P&S#2621 (SINGLE POLE), P&S2622 (TWO POLE), P&S2623 (THREE WAY), P&S2624 (FOUR WAY).
5. OCCUPANCY SENSORS
    1. WALL-SWITCH SENSORS: HUBBELL #LHMTS1, ADAPTIVE-, DUAL TECHNOLOGY TYPE, 120/277V, ADJUSTABLE TIME DELAY UP TO 30 MINUTES, 100-DEGREE FIELD OF VIEW, WITH A MINIMUM COVERAGE AREA OF 1000 SQFT.
    2. CEILING-MOUNTED SENSORS: HUBBELL #OMNI-DT, ADAPTIVE-, DUAL TECHNOLOGY TYPE, SELF-ADJUSTING TIME DELAY UP TO 30 MINUTES, 360-DEGREE FIELD OF VIEW, WITH A MINIMUM COVERAGE OF 2000 SQFT. PROVIDE HUBBELL #UPI UNIVERSAL VOLTAGE POWER SWITCH PACK TO POWER SENSORS AND CONTROL LIGHTING CIRCUIT. CONNECT MULTIPLE SENSORS TO SINGLE POWER SWITCH PACK AS INDICATED.
6. WALL PLATES: SINGLE AND COMBINATION TYPES TO MATCH CORRESPONDING WIRING DEVICES. DO NOT USE OVERSIZED OR EXTRA-DEEP PLATES. REPAIR WALL FINISHES AND REMOUNT OUTLET BOXES WHEN STANDARD DEVICE PLATES DO NOT FIT FLUSH OR DO NOT COVER ROUGH WALL OPENING.
    1. PLATE-SECURING SCREWS: METAL WITH HEAD COLOR TO MATCH PLATE FINISH.
    2. FINISHED SPACES: SMOOTH, HIGH-IMPACT THERMOPLASTIC.
    3. UNFINISHED SPACES: GALVANIZED STEEL.
    4. DAMP AND WET LOCATIONS: CAST ALUMINUM WITH SPRING-LOADED LIFT COVER AND LISTED AND LABELED FOR USE IN "WET LOCATIONS."
7. DEVICE COLOR: WIRING DEVICE CATALOG NUMBERS IN SECTION TEXT DO NOT DESIGNATE DEVICE COLOR. UNLESS INDICATED OTHERWISE ON ARCHITECTURAL DRAWINGS, PROVIDE THE FOLLOWING COLORS.
    1. DEVICES CONNECTED TO NORMAL POWER: MATCH EXISTING OR WHITE, UNLESS OTHERWISE INDICATED OR REQUIRED BY NFPA 70.
    2. DEDICATED DEVICE CONNECTED TO NORMAL POWER: ORANGE.
8. MOUNTING HEIGHT: UNLESS INDICATED OTHERWISE, INSTALL DEVICES AT THE FOLLOWING HEIGHTS ABOVE FINISH FLOOR TO THE CENTER OF THE BOX. (VERIFY HEIGHTS WITH ARCHITECT PRIOR TO INSTALL.)
    1. GENERAL RECEPTACLES: 18".
    2. LIGHTING SWITCHES AND DIMMERS: 42".
    3. ABOVE-COUNTER RECEPTACLES: 42" OR 6" ABOVE COUNTER HEIGHT, WHICHEVER IS HIGHER.
9. PROTECTION: KEEP OUTLET BOXES FREE OF PLASTER, DRYWALL JOINT COMPOUND, MORTAR, CEMENT, CONCRETE, DUST, PAINT, AND OTHER MATERIAL THAT MAY CONTAMINATE THE RACEWAY SYSTEM, CONDUCTORS, AND CABLES. INSTALL WIRING DEVICES AFTER ALL WALL PREPARATION, INCLUDING PAINTING, IS COMPLETE.
10. REPLACE ALL DEVICES THAT HAVE BEEN IN TEMPORARY USE DURING CONSTRUCTION OR THAT SHOW SIGNS THAT THEY WERE INSTALLED BEFORE BUILDING FINISHING OPERATIONS WERE COMPLETE.
11. WHEN CONDUCTORS LARGER THAN #12 AWG ARE INSTALLED ON 15A OR 20A CIRCUITS, SPLICE #12 AWG PIGTAILS FOR DEVICE CONNECTIONS.
12. WHEN MOUNTING INTO METAL BOXES, REMOVE THE FIBER OR PLASTIC WASHERS USED TO HOLD DEVICE MOUNTING SCREWS IN YOKES, ALLOWING METAL-TO-METAL CONTACT.
13. INSTALL GROUND PIN OF VERTICALLY MOUNTED RECEPTACLES UP, AND ON HORIZONTALLY MOUNTED RECEPTACLES TO THE LEFT.
14. DEVICE PLATES: DO NOT USE OVERSIZED OR EXTRA-DEEP PLATES. REPAIR WALL FINISHES AND REMOUNT OUTLET BOXES WHEN STANDARD DEVICE PLATES DO NOT FIT FLUSH OR DO NOT COVER ROUGH WALL OPENING.
15. ARRANGEMENT OF DEVICES: GROUP ADJACENT SWITCHES UNDER SINGLE, MULTIGANG WALL PLATES.
16. IDENTIFY PANELBOARD AND CIRCUIT NUMBER FROM WHICH SERVED. USE DURABLE WIRE MARKERS OR TAGS INSIDE OUTLET BOXES.
17. TEST CONVENIENCE RECEPTACLES WITH DIGITAL WIRING ANALYZER WITH DIGITAL OR LED INDICATORS.
    1. LINE VOLTAGE: ACCEPTABLE RANGE IS 105V TO 132V.
    2. PERCENT VOLTAGE DROP UNDER 15A LOAD: A VALUE OF 6% OR HIGHER IS NOT ACCEPTABLE.
    3. GFI TRIP: TEST FOR TRIPPING VALUES SPECIFIED IN UL 1436 AND UL 943.
    4. USING THE TEST PLUG, VERIFY THAT THE DEVICE AND ITS OUTLET BOX ARE SECURELY MOUNTED.

SECTION 26 28 13 - FUSES

1. SUBMITTAL: IN ADDITION TO THE REQUIREMENTS OF DIVISION 1 PROVIDE CURRENT-LIMITATION CURVES, TIME-CURRENT COORDINATION CURVES (AVERAGE MELT), CURRENT-LIMITATION CURVES (INSTANTANEOUS PEAK LET-THROUGH CURRENT), AND COORDINATION CHARTS AND TABLES FOR EACH TYPE AND RATING OF FUSE.
2. EXTRA MATERIALS: FURNISH EXTRA FUSES; AT LEAST 10% OF THE QUANTITY INSTALLED FOR EACH TYPE AND SIZE, BUT NOT LESS THAN 3 OF EACH; THAT MATCH PRODUCTS INSTALLED.
3. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE BUT ARE NOT LIMITED TO; BUSSMANN AND LITTELFUSE.
4. CARTRIDGE FUSES: NONRENEWABLE CARTRIDGE FUSES WITH VOLTAGE RATINGS CONSISTENT WITH CIRCUIT VOLTAGES.
    1. SERVICE ENTRANCE: CLASS T, FAST ACTING.
    2. FEEDERS: CLASS RK1, FAST ACTING.
    3. MOTOR BRANCH CIRCUITS: CLASS RK1, TIME DELAY.
    4. OTHER BRANCH CIRCUITS: CLASS RK5, TIME DELAY.
    5. CONTROL CIRCUITS: CLASS CC, FAST ACTING.
5. EXAMINE EQUIPMENT, FUSES, AND HOLDERS BEFORE INSTALLATION FOR CHARACTERISTICS, TOLERANCES, AND DAMAGE. REPLACE FUSES THAT ARE MOISTURE DAMAGED OR PHYSICALLY DAMAGED. INSTALL FUSES OF SIZES AND WITH CHARACTERISTICS APPROPRIATE FOR EACH PIECE OF EQUIPMENT.
6. INSTALL FUSES IN FUSIBLE DEVICES. ARRANGE FUSES SO RATING INFORMATION IS READABLE WITHOUT REMOVING FUSE.
7. INSTALL LABELS INDICATING FUSE REPLACEMENT INFORMATION ON INSIDE DOOR OF EACH FUSED SWITCH AND ADJACENT TO EACH FUSE BLOCK, SOCKET, AND HOLDER.
8. SPARE-FUSE CABINET: WALL-MOUNTED STEEL UNIT WITH FULL-LENGTH, RECESSED PIANO-HINGED DOOR AND KEY-CODED CAM LOCK AND PULL SIZED FOR ADEQUATE STORAGE OF SPARE FUSES SPECIFIED WITH 15% SPARE CAPACITY MINIMUM. PROVIDE 2 FUSE PULLERS FOR EACH SIZE OF FUSE FROM THE FUSE MANUFACTURER.

SECTION 26 28 16 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO; EATON CUTLER-HAMMER, GE, SIEMENS, AND SQUARE D.
2. FUSIBLE / NON-FUSIBLE SWITCHES
    1. FUSIBLE SWITCH - HEAVY DUTY, SINGLE THROW, 600V: UL 98 AND NEMA KS 1, HORSEPOWER RATED, WITH CLIPS OR BOLT PADS TO ACCOMMODATE SPECIFIED FUSES, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT THREE PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.
    2. NON-FUSIBLE SWITCH - HEAVY DUTY, SINGLE THROW, 600V: UL 98 AND NEMA KS 1, HORSEPOWER RATED, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT THREE PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.
    3. EQUIPMENT GROUND KIT: INTERNALLY MOUNTED AND LABELED FOR COPPER AND ALUMINUM GROUND CONDUCTORS.
    4. NEUTRAL KIT: INTERNALLY MOUNTED; INSULATED, CAPABLE OF BEING GROUNDED AND BANDED; LABELED FOR COPPER AND ALUMINUM NEUTRAL CONDUCTORS.
3. SERVICE-RATED SWITCHES: WHERE APPLICABLE, LABELED FOR USE AS SERVICE EQUIPMENT.
4. DRAWINGS INDICATE DIMENSIONS FOR SELECTED PANELBOARDS INCLUDING CLEARANCES. COORDINATE LAYOUT AND INSTALLATION OF SWITCHES AND BREAKERS WITH OTHER CONSTRUCTION THAT PENETRATES WALLS OR IS SUPPORTED BY THEM. MAINTAIN REQUIRED WORKSPACE CLEARANCES AND REQUIRED CLEARANCES FOR EQUIPMENT ACCESS DOORS AND PANELS
5. INSTALL INDIVIDUAL WALL-MOUNTED SWITCHES AND CIRCUIT BREAKERS WITH TOPS AT UNIFORM HEIGHT UNLESS OTHERWISE INDICATED.
6. INSTALL FUSES IN FUSIBLE DEVICES.

SECTION 26 51 00 - INTERIOR LIGHTING

1. SUBMITTAL: IN ADDITION TO THE REQUIREMENTS OF DIVISION 1, PROVIDE FOR EACH TYPE OF LIGHTING FIXTURE, ARRANGED IN ORDER OF FIXTURE DESIGNATION, THE FOLLOWING:
    1. EMERGENCY LIGHTING UNITS INCLUDING BATTERY AND CHARGER.
    2. BALLAST, INCLUDING BF.
    3. LIFE, OUTPUT (LUMENS, CCY, AND CRI), AND ENERGY-EFFICIENCY DATA FOR LAMPS.
    4. PHOTOMETRIC DATA BASED ON LABORATORY TESTS OF EACH LIGHTING FIXTURE TYPE, BY A CERTIFIED MANUFACTURER'S LABORATORY.
    5. SPECIAL WARRANTY.
2. SPECIAL WARRANTY PERIODS: 10 YEARS FOR EMERGENCY LIGHTING UNIT BATTERIES AND 7 YEARS FOR EMERGENCY FLUORESCENT BALLAST AND SELF-POWERED EXIT SIGN BATTERIES. WARRANTIES SHALL BE FROM THE DATE OF FINAL ACCEPTANCE. FULL WARRANTY SHALL APPLY FOR THE FIRST YEAR, AND PRORATED WARRANTY FOR THE REMAINING YEARS.
3. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, PRODUCT(S) INDICATED ON THE LIGHTING FIXTURE SCHEDULE.
4. DIFFUSERS, LENSES AND GLOBES: ACRYLIC SHALL BE 1/8" MINIMUM, 100 % VIRGIN UV STABILIZED ACRYLIC PLASTIC WITH A HIGH RESISTANCE TO YELLOWING AND OTHER CHANGES DUE TO AGING, EXPOSURE TO HEAT, AND UV RADIATION. GLASS SHALL BE ANNEALED CRYSTAL GLASS UNLESS OTHERWISE INDICATED.
5. FACTORY-APPLIED LABELS: INDICATE RECOMMENDED LAMPS AND BALLASTS, INCLUDING LAMP TYPE AND WATTAGE AND BALLAST TYPE. LABELS SHALL BE LOCATED WHERE THEY WILL BE DEADILY VISIBLE TO SERVICE PERSONNEL BUT NOT SEEN FROM NORMAL VIEWING ANGLES WHEN LAMPS ARE IN PLACE.
6. LINEAR FLUORESCENT BALLASTS: ELECTRONIC INSTANT-START TYPE, DESIGNED FOR FULL LIGHT OUTPUT OF THE TYPE AND QUANTITY OF LAMPS SERVED. THE BALLAST FACTOR SHALL BE 0.9 OR HIGHER AND THE POWER FACTOR SHALL BE 0.98 OR HIGHER WITH LESS THAN 10% TOTAL HARMONIC DISTORTION. WHEN SERVING MULTIPLE LAMPS, BALLAST SHALL BE CONNECTED TO MAINTAIN FULL LIGHT OUTPUT ON SURVIVING LAMPS IF ONE OR MORE LAMPS FAIL.
    1. BALLAST FOR OCCUPANCY SENSOR-CONTROLLED FIXTURES: PROGRAMMED-START BALLAST.
    2. BALLASTS FOR LOW-TEMPERATURE ENVIRONMENTS (0 DEG F AND HIGHER): ELECTRONIC TYPE RATED FOR 0 DEG F STARTING AND OPERATING TEMPERATURE WITH INDICATED LAMP TYPES.
7. COMPACT FLUORESCENT BALLASTS: ELECTRONIC-PROGRAMMED RAPID-START TYPE, DESIGNED FOR FULL LIGHT OUTPUT OF THE TYPE AND QUANTITY OF LAMPS SERVED. BALLAST SHALL HAVE LAMP END-OF-LIFE DETECTION AND SHUTDOWN CIRCUIT AND AUTOMATIC LAMP STARTING AFTER LAMP REPLACEMENT. THE BALLAST FACTOR SHALL BE 0.95 OR HIGHER AND THE POWER FACTOR SHALL BE 0.98 OR HIGHER WITH LESS THAN 20% TOTAL HARMONIC DISTORTION.
8. EMERGENCY FLUORESCENT POWER UNIT: INTERNAL, SELF-CONTAINED, MODULAR, BATTERY-INVERTER UNIT, FACTORY MOUNTED WITHIN LIGHTING FIXTURE BODY AND COMPATIBLE WITH BALLAST. NIGHTLIGHT / EMERGENCY OPERATION SHALL BE ONE LAMP CONTINUOUSLY AT O MINIMUM OUTPUT OF 1100 LUMENS. CONNECT UNSWITCHED CIRCUIT TO BATTERY-INVERTER UNIT AND SWITCHED CIRCUIT TO FIXTURE BALLAST. PROVIDE TEST BUTTON AND INDICATOR LIGHT WHERE VISIBLE AND ACCESSIBLE WITHOUT OPENING FIXTURE OR ENTERING CEILING SPACE. TEST BUTTON SHALL SIMULATE LOSS OF NORMAL POWER AND DEMONSTRATES UNIT OPERABILITY. INDICATOR LIGHT SHALL BE LED AND SHALL INDICATE NORMAL POWER "ON." 90 MINUTE BATTERY SHALL BE SEALED, MAINTENANCE-FREE, NICKEL-CADMIUM TYPE WITH FULLY AUTOMATIC, SOLID STATE, CONSTANT-CURRENT TYPE CHARGER WITH SEALED POWER TRANSFER RELAY. PROVIDE FACTORY-INSTALLED INTEGRAL SELF-TEST DEVICE TO AUTOMATICALLY INITIATE CODE-REQUIRED TEST OF UNIT EMERGENCY OPERATION OT REQUIRED INTERVALS. TEST FAILURE IS ANNUNCIATED BY AN INTEGRAL AUDIBLE ALARM AND A FLASHING RED LED. BALLAST SHALL AUTOMATICALLY ENERGIZE LAMP FROM BATTERY WHEN CIRCUIT VOLTAGE DROPS TO 80% OF NOMINAL VOLTAGE OR BELOW. WHEN NORMAL VOLTAGE IS RESTORED, THE BATTERY IS AUTOMATICALLY RECHARGED AND FLOATED ON CHARGER.
9. EXIT SIGNS: SELF-POWERED (BATTERY TYPE) SIGN WITH 50,000 HOURS LAMP LIFE LED SOURCE, AND INTEGRAL AUTOMATIC CHARGER IN A SELF-CONTAINED POWER POCK. 90-MINUTE BATTERY SHALL BE SEALED, MAINTENANCE-FREE, NICKEL-CADMIUM TYPE WITH FULLY AUTOMATIC, SOLID STATE, CONSTANT-CURRENT TYPE CHARGER WITH SEALED POWER TRANSFER RELAY. PROVIDE FACTORY-INSTALLED INTEGRAL SELF-TEST DEVICE TO AUTOMATICALLY INITIATE CODE-REQUIRED TEST OF UNIT EMERGENCY OPERATION AT REQUIRED INTERVALS. TEST FAILURE IS ANNUNCIATED BY AN INTEGRAL AUDIBLE ALARM AND A FLASHING RED LED. SIGNS SHALL AUTOMATICALLY ENERGIZE LAMPS FROM BATTERY WHEN CIRCUIT VOLTAGE DROPS TO 80% OF NOMINAL VOLTAGE OR BELOW. WHEN NORMAL VOLTAGE IS RESTORED, THE BATTERY IS AUTOMATICALLY RECHARGED AND FLOATED ON CHARGER.
10. LAMPS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE GE, PHILIPS, AND OSRAM-SYLVANIA. PROVIDE LAMPS WITH MINIMUM PERFORMANCE AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE. LAMP COLOR, BEAM ANGLE, WATTAGE AND OTHER PERFORMANCE CHARACTERISTICS SHALL BE CONFIRMED WITH BUILDING STANDARDS AND EXISTING FIXTURES IN THE AREA.
11. SET LUMINARIES LEVEL, PLUMB, AND SQUARE WITH CEILINGS AND WALLS UNLESS OTHERWISE INDICATED AND INSTALL LAMPS ONCE LUMINAIRE INSTALLATION IS COMPLETE.
12. LAY-IN CEILING FIXTURES MAY USE THE GRID AS TO SUPPORT ELEMENT. ADDITIONALLY, INSTALL CEILING SUPPORT SYSTEM RODS OR WIRES, INDEPENDENT OF THE CEILING SUSPENSION DEVICES, FOR EACH FIXTURE. LOCATE NOT MORE THAN 6" FROM LIGHTING FIXTURE CORNERS.
13. FIXTURES OF SIZES LESS THAN CEILING GRID: INSTALL AS INDICATED ON REFLECTED CEILING PLANS OR CENTER IN ACOUSTICAL PANEL, AND SUPPORT FIXTURES INDEPENDENTLY.
14. TEMPORARY LIGHTING: IF IT IS NECESSARY, AND APPROVED BY ARCHITECT, TO USE PERMANENT LUMINAIRES FOR TEMPORARY LIGHTING, INSTALL AND ENERGIZE THE MINIMUM NUMBER OF LUMINAIRES NECESSARY. WHEN CONSTRUCTION IS SUFFICIENTLY COMPLETE, REMOVE THE TEMPORARY LUMINAIRES, DISASSEMBLE, CLEAN THOROUGHLY, INSTALL NEW LAMPS, AND REINSTALL.
15. TEST EMERGENCY LIGHTING BY INTERRUPTING POWER SUPPLY TO DEMONSTRATE PROPER OPERATION. VERIFY TRANSFER FROM NORMAL POWER TO BATTERY AND RETRANSFER TO NORMAL.
16. ADJUST ALL AIMABLE LUMINAIRES IN THE PRESENCE OF ARCHITECT/OWNER. ADDITIONALLY, WHEN REQUESTED WITHIN 3 MONTHS OF THE DATE OF FINAL ACCEPTANCE, PROVIDE ON-SITE ASSISTANCE IN ADJUSTING AIMABLE LUMINAIRES TO SUIT ACTUAL OCCUPIED CONDITIONS.

SECTION 28 31 11 – DIGITAL, ADDRESSABLE FIRE ALARM SYSTEM

1. SYSTEM DESCRIPTION: NON-CODED ADDRESSABLE SYSTEM, WITH AUTOMATIC SENSITIVITY CONTROL OF CERTAIN SMOKE DETECTORS AND MULTIPLEXED SIGNAL TRANSMISSION, DEDICATED TO FIRE-ALARM SERVICE ONLY.
2. SUBMITTALS SHALL BE PREPARED BY PERSONS TRAINED AND CERTIFIED BY MANUFACTURER AND LICENSED BY AUTHORITIES HAVING JURISDICTION. PRIOR TO SUBMISSION TO THE ENGINEER, THE SUBMITTALS SHALL BE APPROVED BY AUTHORITIES HAVING JURISDICTION. IN ADDITION TO THE REQUIREMENTS OF DIVISION 1 PROVIDE THE FOLLOWING:
    1. FLOOR PLANS TO INDICATE FINAL DEVICE AND APPLIANCE LOCATIONS SHOWING ADDRESS OF EACH ADDRESSABLE DEVICE.
    2. INSTALLATION DETAILS, VOLTAGE DROP CALCULATIONS FOR NOTIFICATION APPLIANCE CIRCUITS, BATTERY-SIZE CALCULATIONS,
    3. DRAWINGS SHOWING THE LOCATION OF EACH DETECTOR AND RATINGS OF EACH. SPACING AND SENSITIVITY CALCULATION SHALL COMPLY WITH NFPA 72.
    4. COMPLY WITH RECOMMENDATIONS IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS OF FIRE ALARM SYSTEMS" CHAPTER IN NFPA 72.
    5. QUALIFICATION DATA FOR INSTALLER.
3. OBTAIN FIRE-ALARM SYSTEM FROM SINGLE SOURCE TO SINGLE MANUFACTURER.
4. NFPA CERTIFICATION: OBTAIN CERTIFICATION ACCORDING TO NFPA 72 BY ON NRTL.
5. SYSTEMS OPERATIONAL DESCRIPTION
    1. FIRE-ALARM SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES AND SYSTEMS:
        1. MANUAL STATIONS.
        2. DUCT SMOKE DETECTORS.
        3. VERIFIED AUTOMATIC ALARM OPERATION OF SMOKE DETECTORS.
        4. AUTOMATIC SPRINKLER SYSTEM WATER FLOW.
        5. HEAT DETECTORS IN ELEVATOR SHAFT AND PIT.
    2. FIRE-ALARM SIGNAL SHALL INITIATE THE FOLLOWING ACTIONS:
        1. CONTINUOUSLY OPERATE ALARM NOTIFICATION APPLIANCES.
        2. IDENTIFY ALARM AT FIRE-ALARM CONTROL UNIT AND REMOTE ANNUNCIATORS, IF APPLICABLE.
        3. TRANSMIT AN ALARM SIGNAL TO THE REMOTE ALARM RECEIVING STATION.
        4. UNLOCK ELECTRIC DOOR LOCKS IN DESIGNATED EGRESS PATHS.
        5. ACTIVATE VOICE/ALARM COMMUNICATION SYSTEM.
        6. SWITCH HEATING, VENTILATING, AND AIR-CONDITIONING EQUIPMENT CONTROLS TO FIRE-ALARM MODE.
        7. CLOSE SMOKE DAMPERS IN AIR DUCTS OF DESIGNATED AIR-CONDITIONING DUCT SYSTEMS.
        8. ACTIVATE EMERGENCY SHUTOFFS FOR GAS AND FUEL SUPPLIES.
        9. RECORD EVENTS IN THE SYSTEM MEMORY WITH AT LEAST TWO 3/4" METAL CHANNELS SPANNING AND SECURED TO CEILING TEES.
    3. SUPERVISORY SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES AND ACTIONS:
        1. VALVE SUPERVISORY SWITCH.
    4. SYSTEM TROUBLE SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES AND ACTIONS:
        1. OPEN CIRCUITS, SHORTS, AND GROUNDS IN DESIGNATED CIRCUITS.
        2. OPENING, TAMPERING WITH, OR REMOVING ALARM-INITIATING AND SUPERVISORY SIGNAL-INITIATING DEVICES.
        3. LOSS OF PRIMARY POWER AT FIRE-ALARM CONTROL UNIT.
        4. GROUND OR A SINGLE BREAK IN FIRE-ALARM CONTROL UNIT INTERNAL CIRCUITS.
        5. ABNORMAL AC VOLTAGE AT FIRE-ALARM CONTROL UNIT.
        6. BREAK IN STANDBY BATTERY CIRCUITRY.
        7. FAILURE OF BATTERY CHARGING.
        8. ABNORMAL POSITION OF ANY SWITCH AT FIRE-ALARM CONTROL UNIT OR ANNUNCIATOR.
    5. SYSTEM TROUBLE AND SUPERVISORY SIGNAL ACTIONS: INITIATE NOTIFICATION APPLIANCE AND ANNUNCIATE AT FIRE-ALARM CONTROL UNIT AND REMOTE ANNUNCIATORS, IF APPLICABLE. RECORD THE EVENT ON SYSTEM PRINTER.
6. FIRE ALARM CONTROL UNIT: FIELD-PROGRAMMABLE, MICROPROCESSOR-BASED, MODULAR, POWER-LIMITED DESIGN WITH ELECTRONIC MODULES, COMPLYING WITH UL 864 AND LISTED AND LABELED BY AN NRTL. ADDRESSABLE INITIATION DEVICES THAT COMMUNICATE DEVICE IDENTITY AND STATUS AND ADDRESSABLE CONTROL CIRCUITS FOR OPERATION OF MECHANICAL EQUIPMENT. THE FOLLOWING ITEMS SHALL BE INCLUDED AS PART OF THE FIRE ALARM CONTROL UNIT:
    1. ALPHANUMERIC DISPLAY AND SYSTEM CONTROLS: ARRANGED FOR INTERFACE BETWEEN HUMAN OPERATOR AT FIRE-ALARM CONTROL UNIT AND ADDRESSABLE SYSTEM COMPONENTS INCLUDING ANNUNCIATION AND SUPERVISION. DISPLAY ALARM. SUPERVISORY, AND COMPONENT STATUS MESSAGES AND THE PROGRAMMING AND CONTROL MENU.
    2. INITIATING DEVICE, NOTIFICATION APPLIANCE, AND SIGNALING LINE CIRCUITS: PROVIDE STYLE 6 SIGNALING LINE CIRCUITS. INSTALL NO MORE THAN 50 ADDRESSABLE DEVICES ON EACH SIGNALING LINE CIRCUIT.
    3. TRANSMISSION TO REMOTE ALARM RECEIVING STATION: DIGITAL ALARM COMMUNICATOR TRANSMITTER AUTOMATICALLY TRANSMITS ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO REMOTE ALARM STATION. IF SERVICE ON THE LINE IS INTERRUPTED FOR LONGER THAN 45 SECONDS, TRANSMITTER SHALL INITIATE A LOCAL TROUBLE SIGNAL AND TRANSMIT THE SIGNAL INDICATING LOSS OF TELEPHONE LINE TO THE REMOTE ALARM RECEIVING STATION OF THE REMAINING LINE. TRANSMITTER SHALL AUTOMATICALLY REPORT TELEPHONE SERVICE RESTORATION TO THE CENTRAL STATION. THE DIGITAL DATA TRANSMISSION SHALL INCLUDE ADDRESS OF THE ALARM-INITIATING DEVICE, ADDRESS OF THE SUPERVISORY SIGNAL, ADDRESS OF THE TROUBLE-INITIATING DEVICE, LOSS OF AC SUPPLY OR LOSS OF POWER, LOW BATTERY, ABNORMAL TEST SIGNAL, AND COMMUNICATION BUS FAILURE. SECONDARY POWER SHALL BE BY MEANS OF INTEGRAL RECHARGEABLE BATTERY AND AUTOMATIC CHARGER. UNIT SHALL CONDUCT SELF-TESTS EVERY 24 HOURS AND TRANSMIT REPORTS TO CENTRAL STATION.
    4. PRIMARY POWER: 24VDC OBTAINED FROM 120VAC SERVICE AND A POWER-SUPPLY MODULE. INITIATING DEVICES, NOTIFICATION APPLIANCES, SIGNALING LINES, TROUBLE SIGNALS, SUPERVISORY SIGNALS SHALL BE POWERED BY 24VDC SOURCE. ALARM CURRENT DRAW OF ENTIRE FIRE-ALARM SYSTEM SHALL NOT EXCEED 80% OF THE POWER-SUPPLY MODULE RATING.
    5. SECONDARY POWER: 24VDC SUPPLY SYSTEM WITH BATTERIES, AUTOMATIC BATTERY CHARGER, AND AUTOMATIC TRANSFER SWITCH. BATTERIES SHALL BE SEALED LEAD CALCIUM.
7. MANUAL FIRE-ALARM BOXES: COMPLY WITH UL 38. BOXES SHALL BE FINISHED IN RED WITH MOLDED, RAISED-LETTER OPERATING INSTRUCTIONS IN CONTRASTING COLOR: SHALL SHOW VISIBLE INDICATION OF OPERATION; AND SHALL BE MOUNTED ON RECESSED OUTLET BOX. DOUBLE-ACTION MECHANISM REQUIRES TWO ACTIONS TO INITIATE AN ALARM, PULL-LEVER TYPE: WITH INTEGRAL ADDRESSABLE MODULE ARRANGED TO COMMUNICATE MANUAL-STATION STATUS (NORMAL, ALARM, OR TROUBLE) TO FIRE-ALARM CONTROL UNIT. STATION RESET SHALL BE BY KEY OR WRENCH OPERATED SWITCH.
8. VISUAL AND AUDIBLE NOTIFICATION APPLIANCES ARE TO BE CONNECTED TO NOTIFICATION APPLIANCE SIGNAL CIRCUITS, ZONED AS REQUIRED, WITH SCREW TERMINALS FOR SYSTEM CONNECTIONS. WHERE INDICATED PROVIDE FACTORY-INTEGRATED AUDIBLE AND VISIBLE DEVICES IN A SINGLE-MOUNTING ASSEMBLY. UNITS SHALL MATCH THE EXISTING APPLIANCES IN STYLE, FINISH, AND COLOR. FOR UNITS WITH GUARDS TO PREVENT PHYSICAL DAMAGE, LIGHT OUTPUT RATINGS SHALL BE DETERMINED WITH GUARDS IN PLACE.
9. VISIBLE NOTIFICATION APPLIANCES: XENON STROBE LIGHTS COMPLY WITH UL 1971, WITH CLEAR OR NOMINAL WHITE POLYCARBONATE LENS. THE WORD "FIRE" IS ENGRAVED IN MINIMUM 1" HIGH LETTERS ON THE FACEPLATE. STROBES SHALL BE 15/30/75/110 CD, FIELD SELECTABLE. IF NOT INDICATED OTHERWISE, RATED LIGHT OUTPUT SHOULD BE SET TO 110 CD. FLASHING SHALL BE IN A TEMPORAL PATTERN, SYNCHRONIZED WITH OTHER UNITS. INSTALL ON CEILING OR ON WALL ADJACENT TO EACH ALARM HORN AND AT LEAST 6" BELOW THE CEILING.
10. AUDIBLE HORNS: ELECTRIC-VIBRATING-POLARIZED TYPE, 24VDC; WITH PROVISION FOR HOUSING THE OPERATING MECHANISM BEHIND A GRILLE. COMPLY WITH UL 464. HORNS SHALL PRODUCE A SOUND PRESSURE LEVEL OF 90 DBA, MEASURED 10' FROM THE HORN, USING THE CODED SIGNAL PRESCRIBED IN UL 464 TEST PROTOCOL. INSTALL ON CEILING OR ON WALL NOT LESS THAN 6" BELOW THE CEILING. INSTALL BELLS AND HORNS ON FLUSH-MOUNTED BOCK BOXES WITH THE DEVICE-OPERATING MECHANISM CONCEALED BEHIND A GRILLE.
11. REMOTE ANNUNCIATOR: ANNUNCIATOR FUNCTIONS SHALL MATCH THOSE OF FIRE-ALARM CONTROL UNIT FOR ALARM, SUPERVISORY, AND TROUBLE INDICATIONS. MANUAL SWITCHING FUNCTIONS SHALL MATCH THOSE OF FIRE-ALARM CONTROL UNIT, INCLUDING ACKNOWLEDGING, SILENCING, RESETTING, AND TESTING.
12. ADDRESSABLE INTERFACE DEVICE: MICROELECTRONIC MONITOR MODULE, NRTL, LISTED FOR USE IN PROVIDING A SYSTEM ADDRESS FOR ALARM-INITIATING DEVICES FOR WIRED APPLICATIONS WITH NORMALLY OPEN CONTACTS. INTEGRAL RELAY SHALL BE CAPABLE OF PROVIDING A DIRECT SIGNAL TO ELEVATOR CONTROLLER TO INITIATE ELEVATOR RECALL AND/OR TO CIRCUIT-BREAKER SHUNT TRIP FOR POWER SHUTDOWN.
13. WHERE SUBJECT TO DAMAGE OR ABUSE, PROVIDE FACTORY-FABRICATED WELDED WIRE MESH DEVICE GUARDS OF SIZE AND SHAPE FOR THE DEVICE OR APPLIANCE, WITH MATCHING FINISH AND COLOR
14. COMPLY WITH NFPA 72 FOR INSTALLATION OF FIRE ALARM EQUIPMENT.
15. SURFACE-MOUNT CONTROL UNIT(S) AND ANNUNCIATOR(S) WITH TOPS OF CABINETS NOT MORE THAN 72 INCHES ABOVE FINISHED FLOOR.
16. VERIFY THAT HARDWARE AND DEVICES ARE NRTL LISTED FOR USE WITH FIRE-ALARM SYSTEM IN THIS SECTION BEFORE MAKING CONNECTIONS.
17. GROUND FIRE-ALARM CONTROL UNIT AND ASSOCIATED CIRCUITS; COMPLY WITH IEEE 1100. INSTALL A GROUND WIRE FROM MAIN SERVICE GROUND TO FIRE-ALARM CONTROL UNIT.
18. FIELD TESTS SHALL BE WITNESSED BY AUTHORITIES HAVING JURISDICTION AND OWNER'S REPRESENTATIVE.
19. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING.
    1. CONDUCT VISUAL INSPECTION PRIOR TO TESTING.
    2. INSPECTION SHALL BE BASED ON COMPLETED RECORD DRAWINGS AND SYSTEM DOCUMENTATION THAT IS REQUIRED BY NFPA 72 IN ITS "COMPLETION DOCUMENTS, PREPARATION" TABLE IN THE "DOCUMENTATION" SECTION OF THE "FUNDAMENTALS OF FIRE ALARM SYSTEMS" CHAPTER.
    3. COMPLY WITH "VISUAL INSPECTION FREQUENCIES" TABLE IN THE "INSPECTION" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72; RETAIN THE "INITIAL/REACCEPTANCE" COLUMN AND LIST ONLY THE INSTALLED COMPONENTS.
    4. SYSTEM TESTING: COMPLY WITH "TEST METHODS" TABLE IN THE "TESTING" SECTION OF THE "INSPECTION, TESTING AND MAINTENANCE" CHAPTER IN NFPA 72.
    5. TEST VISIBLE APPLIANCES FOR THE PUBLIC OPERATING MODE ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
    6. FIRE-ALARM SYSTEMS WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.
    7. PREPARE TEST AND INSPECTION REPORTS.

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REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
No. 12019574
ZACH LARSON
STATE OF UTAH
Zach Larson

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
DRAWN BY: **JPD**
CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

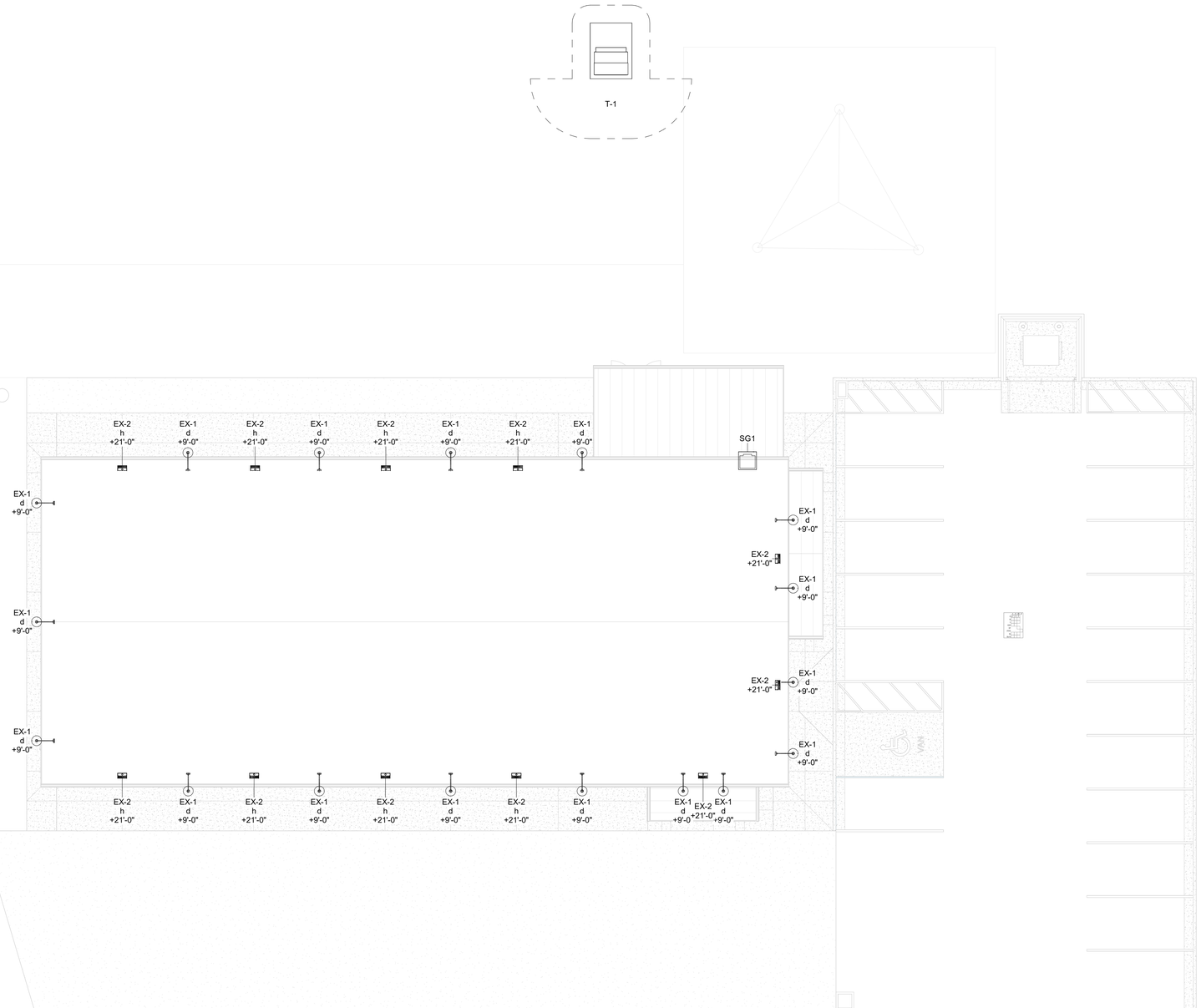
290340021

SHEET TITLE

ELECTRICAL GENERAL NOTES

SHEET NUMBER

E-002



1 SITE ELECTRICAL PLAN

1" = 10'-0"

0 10' 20'

N

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REGISTRATION

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290340021

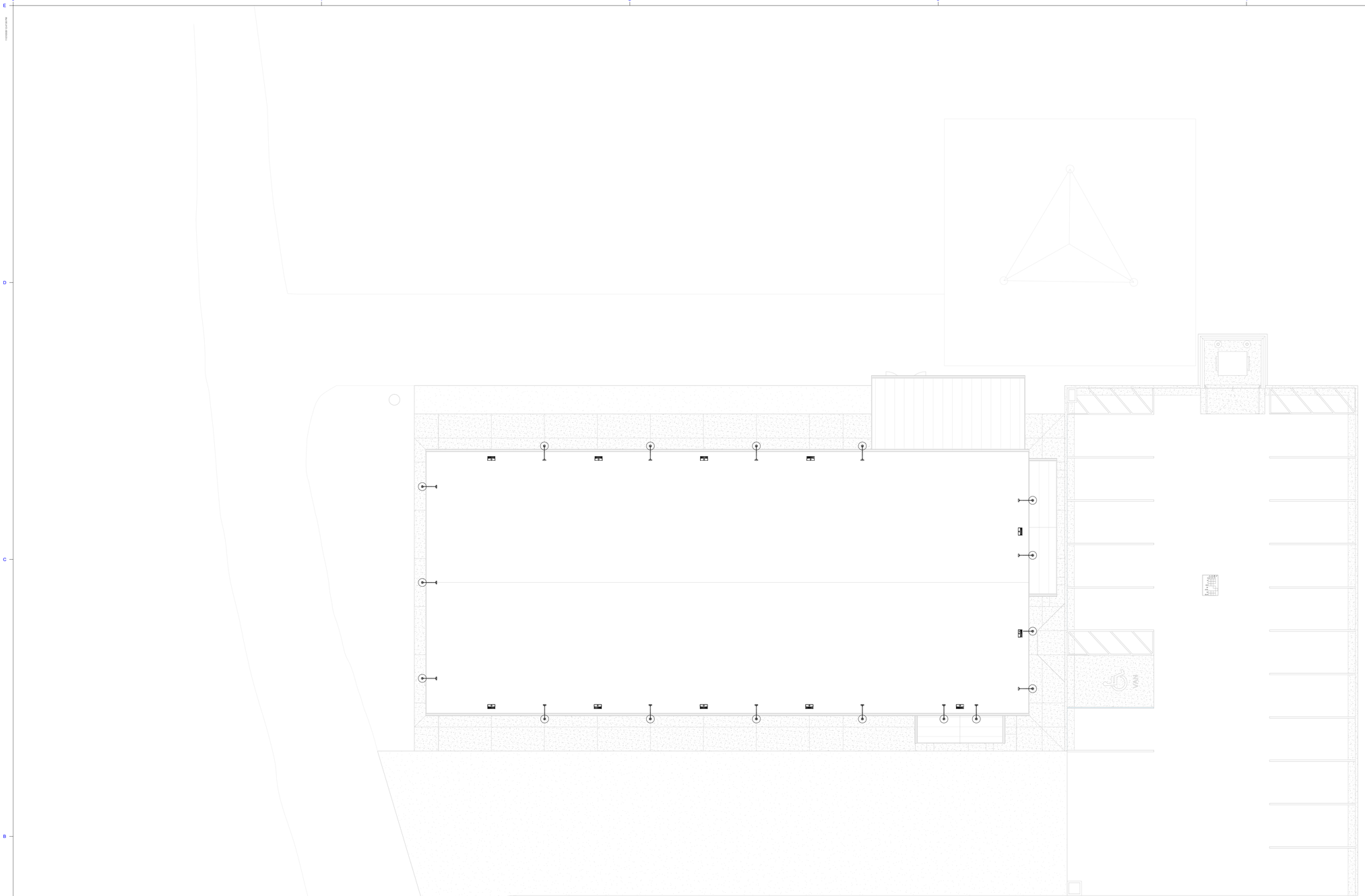
SHEET TITLE

SITE ELECTRICAL PLAN

SHEET NUMBER

ES-101

Autodesk Docs://Genola Public Works Building/Genola Public Works Building.rvt



1 SITE PHOTOMETRIC PLAN
1" = 10'-0"

0 10' 20'

N

ENGINEER

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APPLICANT

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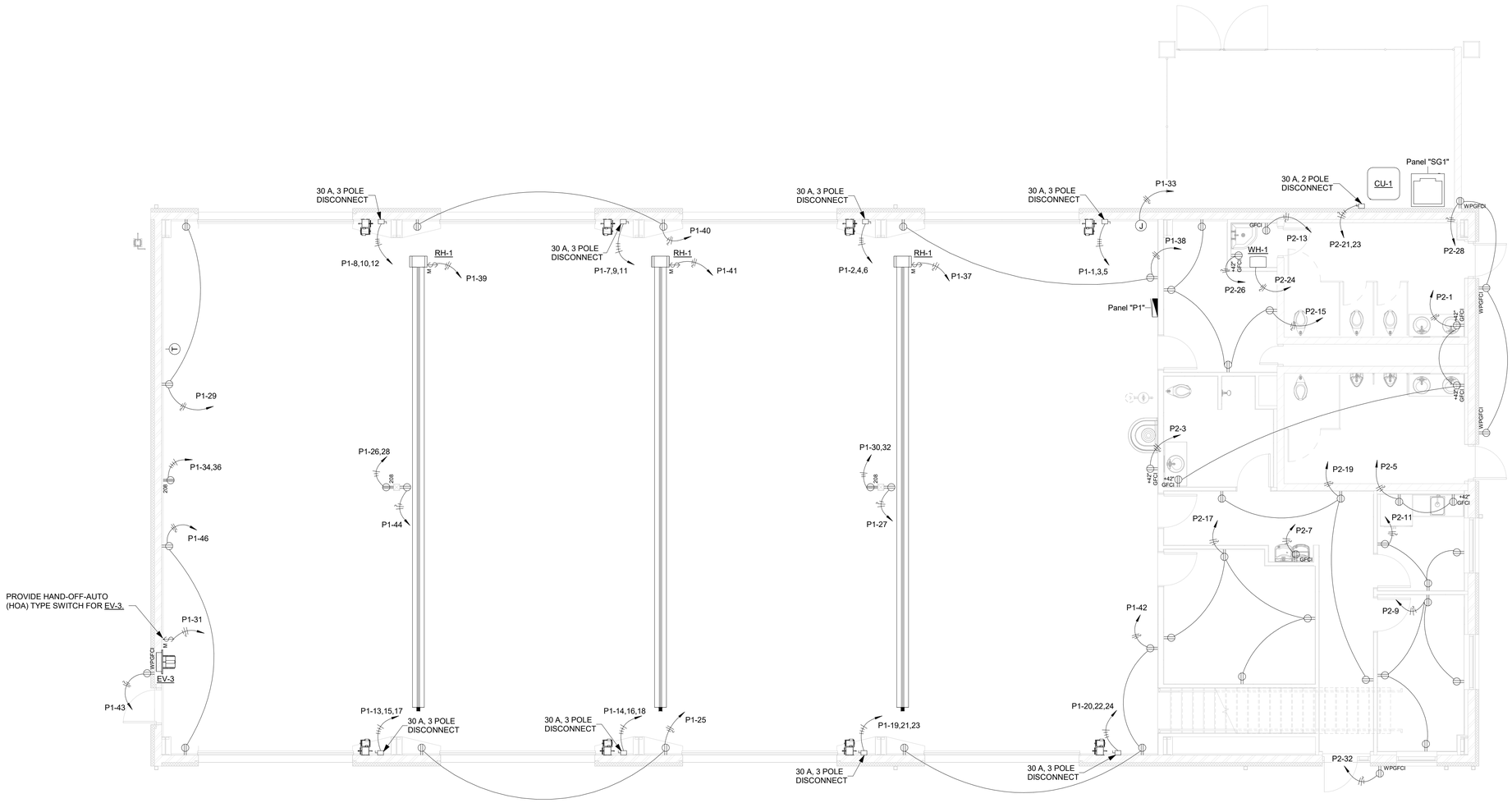
290340021

SHEET TITLE

SITE PHOTOMETRIC PLAN

SHEET NUMBER

ES-102



1 ELECTRICAL PLAN - LEVEL 1

3/16" = 1'-0"

0 4' 8' 16'

N

ENGINEER

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REGISTRATION

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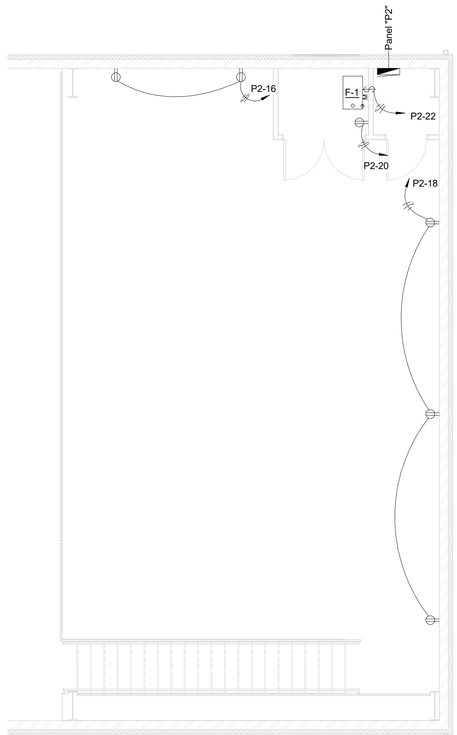
SHEET TITLE

ELECTRICAL PLAN

SHEET NUMBER

E-101

Autodesk Docs://Genola Public Works Building/Genola Public Works Building.rvt



1 ELECTRICAL PLAN - LEVEL 2

3/16" = 1'-0"

0 4' 8' 16'

N

ENGINEER

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APPLICATION TYPE:

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APN #

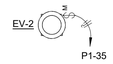
290340021

SHEET TITLE

ELECTRICAL PLAN - MEZZANINE

SHEET NUMBER

E-102



1 ELECTRICAL PLAN - ROOF

3/16" = 1'-0"

0 4' 8' 16'

ENGINEER

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REGISTRATION

PROJECT

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ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

290340021

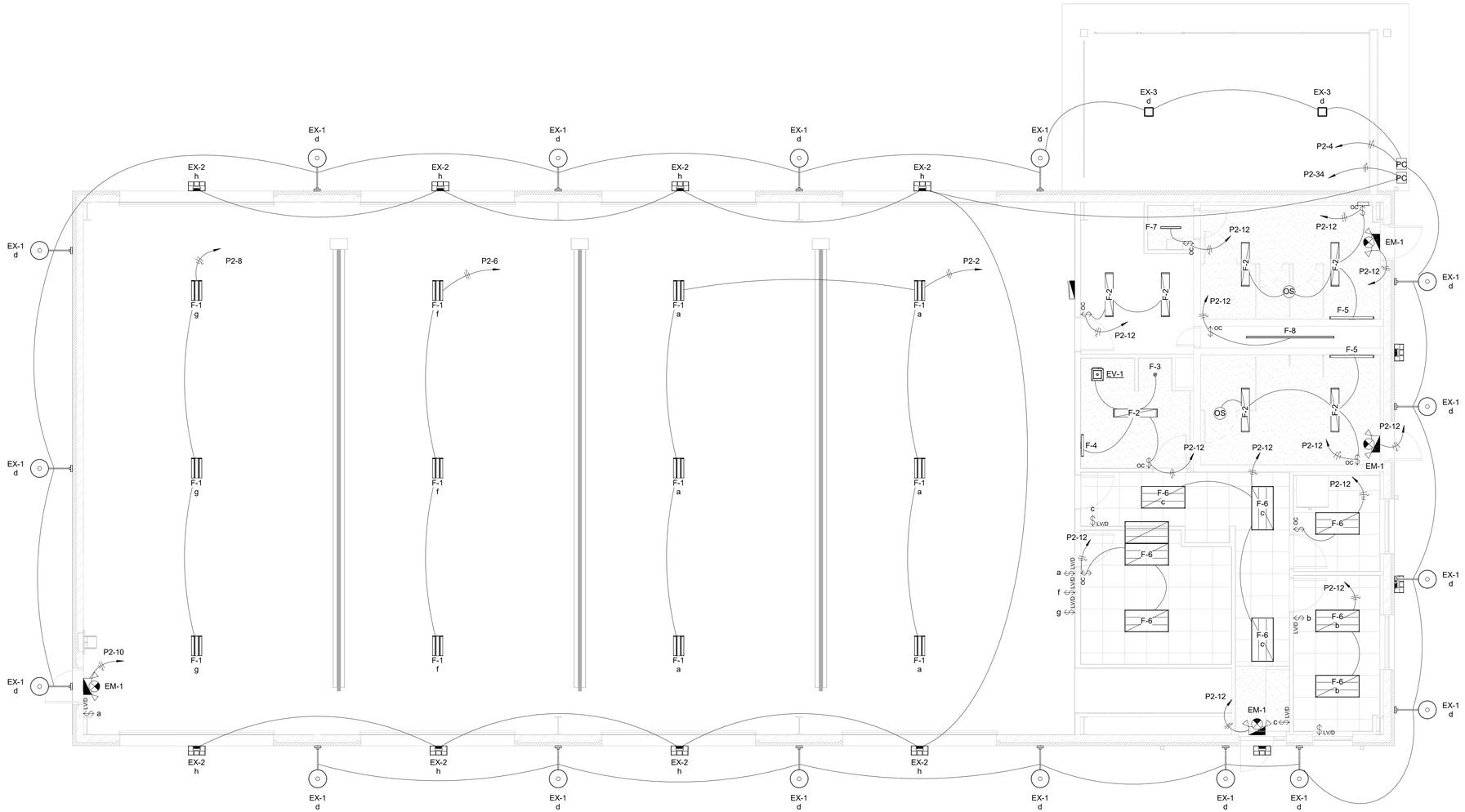
SHEET TITLE

ELECTRICAL PLAN - ROOF

SHEET NUMBER

E-103

CONSTRUCTION NOTES:
1. INSTALL PHOTOCELL AWAY FROM LIT AREAS.
2. ROUTE ALL LIGHTING CIRCUITS NOT CONTROLLED BY OCCUPANCY SENSORS THROUGH LIGHTING CONTROL PANEL FOR AUTOMATIC CONTROL. PROVIDE OVERRIDE SWITCH WHERE SHOWN THAT COMPLIES WITH IECC C405.2.2.1
3. PROVIDE PHOTO SENSOR FOR AUTOMATIC DIMMING OF DAY LIGHTING AREA.
4. ALL OCCUPANCY SENSOR TYPE SWITCHES SHALL BE PROVIDED WITH AUTO-ON/AUTO-OFF AND MANUAL-ON/AUTO-OFF CAPABILITY.



1 LIGHTING PLAN
3/16" = 1'-0"

N

0 4" 8" 16'

ENGINEER

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REGISTRATION

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REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
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ISSUE DATE: **11/21/2025**
APPLICATION TYPE:

PERMIT

APN #

290340021

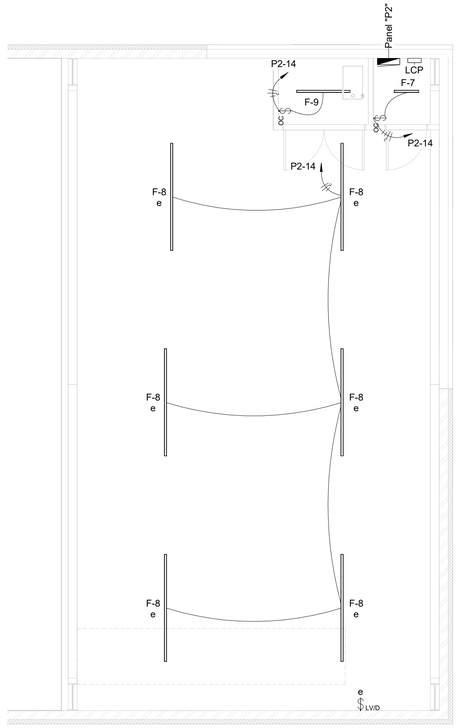
SHEET TITLE

LIGHTING PLAN

SHEET NUMBER

E-201

CONSTRUCTION NOTES:
1. INSTALL PHOTOCELL AWAY FROM LIT AREAS.
2. ROUTE ALL LIGHTING CIRCUITS NOT CONTROLLED BY OCCUPANCY SENSORS THROUGH LIGHTING CONTROL PANEL FOR AUTOMATIC CONTROL. PROVIDE OVERRIDE SWITCH WHERE SHOWN THAT COMPLIES WITH IECC C405.2.2.1
3. PROVIDE PHOTO SENSOR FOR AUTOMATIC DIMMING OF DAY LIGHTING AREA.
4. ALL OCCUPANCY SENSOR TYPE SWITCHES SHALL BE PROVIDED WITH AUTO-ON/AUTO-OFF AND MANUAL-ON/AUTO-OFF CAPABILITY.



1 LIGHTING PLAN - LEVEL 2
3/16" = 1'-0"

N

0 4' 8' 16'

ENGINEER

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REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
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ISSUE DATE: **11/21/2025**
APPLICATION TYPE:

PERMIT

APN #

290340021

SHEET TITLE

LIGHTING PLAN - MEZZANINE

SHEET NUMBER

E-202

Branch Panel: P1

Location: VEHICLE BAYS 104
Supply From: SG1
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000 A
Mains Type: MCB
Mains Rating: 300 A

Notes:

CKT	Circuit Description	Wire Size	Rating	Poles	A		B		C		Poles	Rating	Wire Size	Circuit Description	CKT
1					1,243 VA	1,243 VA									2
3	MOTOR: DOOR OPENER	(3) #12, #12G	15 A	3			1,243 VA	1,243 VA			3	15 A	(3) #12, #12G	MOTOR: DOOR OPENER	4
5									1,243 VA	1,243 VA					6
7					1,243 VA	1,243 VA									8
9	MOTOR: DOOR OPENER	(3) #12, #12G	15 A	3			1,243 VA	1,243 VA			3	15 A	(3) #12, #12G	MOTOR: DOOR OPENER	10
11									1,243 VA	1,243 VA					12
13					1,243 VA	1,243 VA									14
15	MOTOR: DOOR OPENER	(3) #12, #12G	15 A	3			1,243 VA	1,243 VA			3	15 A	(3) #12, #12G	MOTOR: DOOR OPENER	16
17									1,243 VA	1,243 VA					18
19					1,243 VA	1,243 VA									20
21	MOTOR: DOOR OPENER	(3) #12, #12G	15 A	3			1,243 VA	1,243 VA			3	15 A	(3) #12, #12G	MOTOR: DOOR OPENER	22
23									1,243 VA	1,243 VA					24
25	RECEPT: SHOP	#12, #12N, #12G	20 A	1	360 VA	4,160 VA					2	50 A	(2) #6, #8G	RECEPT: WELDER	26
27	RECEPT: SHOP	#12, #12N, #12G	20 A	1			180 VA	4,160 VA							28
29	RECEPT: SHOP	#12, #12N, #12G	20 A	1					360 VA	4,160 VA	2	50 A	(2) #8, #10G	RECEPT: WELDER	30
31	MOTOR: VENTILATOR	#12, #12N, #12G	15 A	1	373 VA	4,160 VA									32
33	MOTOR: LOUVER ACTUATOR	#14, #14N, #14G	15 A	1			180 VA	4,160 VA			2	50 A	(3) #6, #8G	RECEPT: WELDER	34
35	MOTOR: VENTILATOR	#14, #14N, #14G	15 A	1					124 VA	4,160 VA					36
37	HVAC: RADIANT TUBE HEATER	#14, #14N, #14G	15 A	1	144 VA	360 VA					1	20 A	#12, #12N, #12G	RECEPT: SHOP	38
39	HVAC: RADIANT TUBE HEATER	#14, #14N, #14G	15 A	1			144 VA	360 VA			1	20 A	#12, #12N, #12G	RECEPT: SHOP	40
41	HVAC: RADIANT TUBE HEATER	#14, #14N, #14G	15 A	1					144 VA	540 VA	1	20 A	#12, #12N, #12G	RECEPT: SHOP	42
43	RECEPT: EXTERIOR	#12, #12N, #12G	20 A	1	180 VA	180 VA					1	20 A	#12, #12N, #12G	RECEPT: SHOP	44
45								360 VA			1	20 A	#12, #12N, #12G	RECEPT: SHOP	46
47															48
49															50
51															52
53															54
				Total Load:	19860 VA		19487 VA		19431 VA						
				Total Amps:	166 A		162 A		162 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	30325 VA	125.00%	37906 VA		
Power	180 VA	100.00%	180 VA	**Total Conn. Load:**	58777 VA
HVAC	432 VA	100.00%	432 VA	**Total Est. Demand:**	57438 VA
Receptacle	27840 VA	67.96%	18920 VA	**Total Conn. Current:**	163 A
				Total Est. Demand Current:	159 A

Notes:

Switchboard: SG1

Location: EXTERIOR ENCLOSURE
Supply From: T-1
Mounting: FLOOR
Enclosure: NEMA 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 45 kAIC
Mains Type: MCB
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	M1	3	400 A	300 A	58777 VA	
2	P1	3	125 A	100 A	14920 VA	
				Total Conn. Load:	73586 VA	
				Total Amps:	204 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	30522 VA	125.00%	38153 VA		
Power	180 VA	100.00%	180 VA	**Total Conn. Load:**	73586 VA
Lighting - Interior	1580 VA	125.00%	1976 VA	**Total Est. Demand:**	69294 VA
HVAC	3748 VA	100.00%	3748 VA	**Total Conn. Current:**	204 A
Receptacle	35010 VA	64.28%	22505 VA	**Total Est. Demand Current:**	192 A
Water Heater	178 VA	125.00%	222 VA		
Lighting - Exterior	342 VA	125.00%	428 VA		
Lighting	221 VA	125.00%	276 VA		
Lighting - Warehouse	2376 VA	100.00%	2376 VA		

Notes:

Branch Panel: P2

Location: ELECTRICAL 202
Supply From: SG1
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000 A
Mains Type: MCB
Mains Rating: 100 A

Notes:

CKT	Circuit Description	Wire Size	Rating	Poles	A		B		C		Poles	Rating	Wire Size	Circuit Description	CKT
1	RECEPT: RESTROOMS	#12, #12N, #12G	20 A	1	540 VA	1,188 VA					1	20 A	#10, #10N, #10G	LIGHTING: SHOP	2
3	RECEPT: RESTROOM	#12, #12N, #12G	20 A	1			180 VA	275 VA			1	20 A	#10, #10N, #10G	LIGHTING: EXTERIOR	4
5	RECEPT: REFRIGERATOR	#12, #12N, #12G	20 A	1					680 VA	594 VA	1	20 A	#12, #12N, #12G	LIGHTING: SHOP	6
7	RECEPT: DRINKING FOUNTAIN	#12, #12N, #12G	15 A	1	370 VA	594 VA					1	20 A	#12, #12N, #12G	LIGHTING: SHOP	8
9	RECEPT: OFFICE	#12, #12N, #12G	20 A	1			720 VA	2 VA			1	20 A	#10, #10N, #10G	LIGHTING: SHOP	10
11	RECEPT: BREAKROOM	#12, #12N, #12G	20 A	1					540 VA	977 VA	1	20 A	#12, #12N, #12G	LIGHTING: OFFICE	12
13	RECEPT: JANITOR	#12, #12N, #12G	20 A	1	180 VA	608 VA					1	20 A	#12, #12N, #12G	LIGHTING: MEZZANINE	14
15	RECEPT: STORAGE	#12, #12N, #12G	20 A	1			720 VA	360 VA			1	20 A	#12, #12N, #12G	RECEPT: MEZZANINE	16
17	RECEPT: STORAGE	#12, #12N, #12G	20 A	1					720 VA	540 VA	1	20 A	#12, #12N, #12G	RECEPT: MEZZANINE	18
19	RECEPT: COORIDOR	#12, #12N, #12G	20 A	1	540 VA	180 VA					1	20 A	#12, #12N, #12G	RECEPT: MECHANICAL	20
21	HVAC: CONDENSING UNIT	(2) #12, #12N, #12G	20 A	2			1,251 VA	888 VA			1	15 A	#14, #14N, #14G	HVAC: FURNACE	22
23									1,251 VA	178 VA	1	15 A	#14, #14N, #14G	WATER HEATER	24
25						377 VA					1	15 A	#12, #12N, #12G	MOTOR: CIRCULATOR	26
27								540 VA			1	20 A	#12, #12N, #12G	RECEPT: EXTERIOR	28
29															30
31						180 VA					1	20 A	#12, #12N, #12G	RECEPT: EXTERIOR	32
33								288 VA			1	20 A	#10, #10N, #10G	LIGHTING: EXTERIOR	34
35															36
37															38
39															40
41															42
				Total Load:	4757 VA		4964 VA		5282 VA						
				Total Amps:	40 A		42 A		44 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	197 VA	125.00%	246 VA		
Power	0 VA	0.00%	0 VA	**Total Conn. Load:**	14920 VA
Lighting - Interior	1580 VA	125.00%	1976 VA	**Total Est. Demand:**	15544 VA
HVAC	3394 VA	100.00%	3394 VA	**Total Conn. Current:**	41 A
Receptacle	7170 VA	100.00%	7170 VA	**Total Est. Demand Current:**	43 A
Water Heater	178 VA	125.00%	222 VA		
Lighting - Exterior	342 VA	125.00%	428 VA		
Lighting	221 VA	125.00%	276 VA		
Lighting - Warehouse	2376 VA	100.00%	2376 VA		

Notes:

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REGISTRATION

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11/21/2025
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ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

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PROJECT # **250033**
DRAWN BY: **JPD**
CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

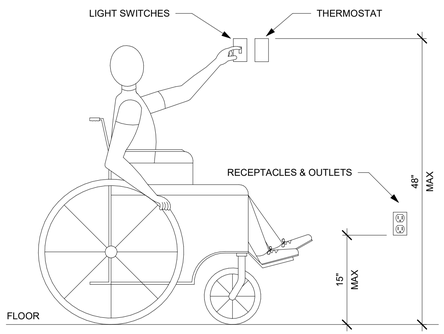
290340021

SHEET TITLE

PANEL SCHEDULES

SHEET NUMBER

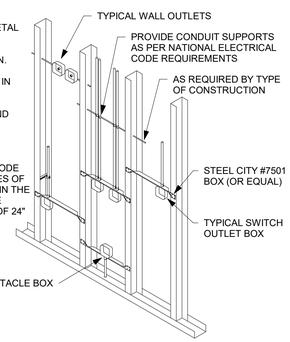
E-301



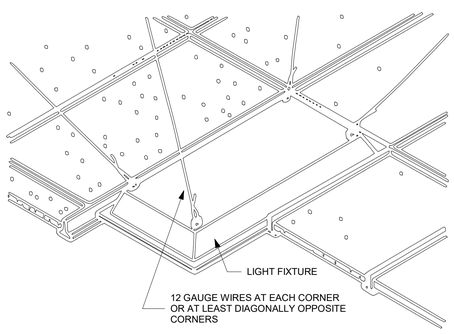
1 MOUNTING HEIGHTS DETAIL
NTS

NOTES:

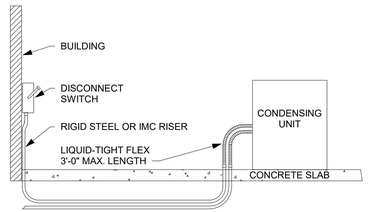
1. TYPICAL FOR WOOD AND METAL STUD ROUGH IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE OUTLETS ON OPPOSITE SIDES OF THE WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPERATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE.



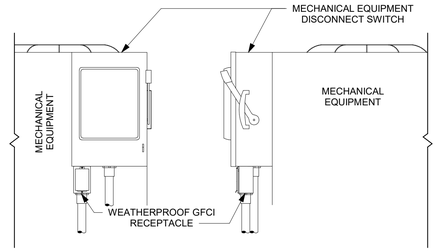
2 TYPICAL ROUGH-IN REQUIREMENTS DETAIL
NTS



3 SUSPENDED CEILING DETAIL
NTS



4 CONDENSING UNIT CONDUIT DETAIL
NTS



5 WEATHER PROOF RECEPTACLE MOUNTING DETAIL
NTS

6 CONCRETE ENCASED GROUND
NTS

7 DIRECT BURY CONDUIT DETAIL
NTS

8 GROUND ROD DETAIL
NTS

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REGISTRATION

PROFESSIONAL ENGINEER
11/21/2025
No. 12019574
ZACH LARSON
STATE OF UTAH

PROJECT

GENOLA PUBLIC WORKS BUILDING

APPLICANT

74 W 800 S
GENOLA, UTAH 84655

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT # **250033**
DRAWN BY: **JPD**
CHECKED BY: **ZLL**
ISSUE DATE: **11/21/2025**

APPLICATION TYPE:

PERMIT

APN #

290340021

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E-501

LIGHTING FIXTURE SCHEDULE

IDENTIFICATION				ELECTRICAL						PHYSICAL			
TYPE MARK	MANUFACTURER	MODEL (OR EQUAL)	FIXTURE TYPE	LAMP	WATTAGE	POWER	CCT	LUMENS	CRI	MOUNTING	FINISH	COUNT	NOTES
Luminaries for Internal Lighting													
F-1	LITHONIA	CPHB ALO16 MVOLT SWW9 80CRI DWH	HIGH BAY	LED	198 W	120/1/60	5000 K	27,000 lm	80	CEILING	BY OWNER	12	
F-2	LITHONIA	TRUM 48 AL06 CMP 8SWW2 ZT MVOLT	WRAP AROUND	LED	53 W	120/1/60	5000 K	5,000 lm	80	CEILING	BY OWNER	7	
F-3	LITHONIA	LDN4 AL01 SWW1 LO4 AR LSS MVOLT UGZ	RECESSED CAN	LED	13 W	120/1/60	4000 K	750 lm	80	CEILING	BY OWNER	1	
F-4	LITHONIA	FMVCCLS 24IN MVOLT 30K35K40K 90CRI MB	VANITY	LED	18 W	120/1/60	4000 K	1,850 lm	90	WALL	BY OWNER	1	
F-5	LITHONIA	FMVCCLS 48IN MVOLT 30K35K40K 90CRI MB	VANITY	LED	35 W	120/1/60	4000 K	3,550 lm	90	WALL	BY OWNER	2	
F-6	LITHONIA	STAKS 2x4 AL06 SWW7	TROFFER	LED	30 W	120/1/60	5000 K	6,000 lm	82	CEILING	BY OWNER	9	
F-7	LITHONIA	CSS L24 AL015 MVOLT SWW3 80CRI	STRIP LIGHT	LED	20 W	120/1/60	5000 K	2,000 lm	80	CEILING	BY OWNER	2	
F-8	LITHONIA	CSS L96 AL04 MVOLT SWW3 80CRI	STRIP LIGHT	LED	91 W	120/1/60	5000 K	8,000 lm	80	CEILING	BY OWNER	7	
F-9	LITHONIA	CSS L48 AL03 MVOLT SWW3 80CRI	STRIP LIGHT	LED	43 W	120/1/60	5000 K	4,000 lm	80	CEILING	BY OWNER	1	
Luminaries for External Lighting													
EX-1	HILITE	H-13115-91 B-12-91 10 LED 440 BCM	GOOSENECK	LED	13 W	120/1/60	3500 K	1,251 lm	80	WALL	BY OWNER	17	
EX-2	LITHONIA	DSXW2 LED 30C 350 50K T3M MVOLT	WALL PACK	LED	36 W	120/1/60	3200 K	4,500 lm	70	CEILING	BY OWNER	11	
EX-3	LITHONIA	CNY LED P0 50K MVOLT DDB	CANOPY	LED	27 W	120/1/60	5000 K	3,500 lm	80	CEILING	BY OWNER	2	
Emergency Lighting													
EM-1	Lithonia	LHQM S W RG MVOLT	EMERGENCY	LED	2 W	120/1/60				WALL		4	

LIGHTING CONTROL PANEL SCHEDULE

RELAY	SWITCH ID	PANEL CIRCUIT	WATTAGE	AREA SERVED	CONTROL METHOD
1	a	P2-2	1188 W	SHOP FLOOR	TIMECLOCK
2	b	P2-12	60 W	OFFICE	TIMECLOCK
3	c	P2-12	90 W	COORIDOR	TIMECLOCK
4	d	P2-4	275 W	EXTERIOR	TIMECLOCK & PHOTOCELL
5	e	P2-14	545 W	MEZZANINE	TIMECLOCK
6	f	P2-6	594 W	SHOP FLOOR	TIMECLOCK
7	g	P2-8	594 W	SHOP FLOOR	TIMECLOCK
8	h	P2-34	288 W	EXTERIOR	TIMECLOCK & PHOTOCELL

PLUMBING EQUIPMENT POWER SCHEDULE

IDENTIFICATION		ELECTRICAL					
TYPE MARK	EQUIPMENT DESCRIPTION	kW	FLA	MOP	POWER	CIRCUIT	NOTES
P-1	CIRCULATION PUMP	0.2 kW	2 A	15 A	120/1/60	P226	

MECHANICAL EQUIPMENT POWER SCHEDULE

IDENTIFICATION		ELECTRICAL					
TYPE MARK	EQUIPMENT DESCRIPTION	KW	FLA	MOP	POWER	CIRCUIT	NOTES
EV-1	EXHAUST VENTILTOR	0.0 kW	0 A	15 A	120/1/60	P2-12	1
RH-1	RADIANT TUBE HEATER	0.1 kW	1 A	15 A	120/1/60	P1-39	
RH-1	RADIANT TUBE HEATER	0.1 kW	1 A	15 A	120/1/60	P1-41	
RH-1	RADIANT TUBE HEATER	0.1 kW	1 A	15 A	120/1/60	P1-37	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-8,10,12	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-13,15,17	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-14,16,18	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-7,9,11	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-19,21,23	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-2,4,6	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-20,22,24	
	OVERHEAD DOOR OPENER	3.7 kW	10 A	15 A	208/3/60	P1-1,3,5	
EV-2	ROOF MOUNTED DOWNBLAST EXHAUST FAN	0.1 kW	1 A	15 A	120/1/60	P1-35	
EV-3	SIDEWALL EXHAUST FAN	0.4 kW	7 A	15 A	120/1/60	P1-31	
CU-1	CONDENSING UNIT (2 TON)	2.5 kW	10 A	20 A	208/1/60	P2-21,23	1,2
F-1	FURNACE (2 TON)	0.9 kW	7 A	15 A	120/1/60	P2-22	

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APN #

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SHEET TITLE

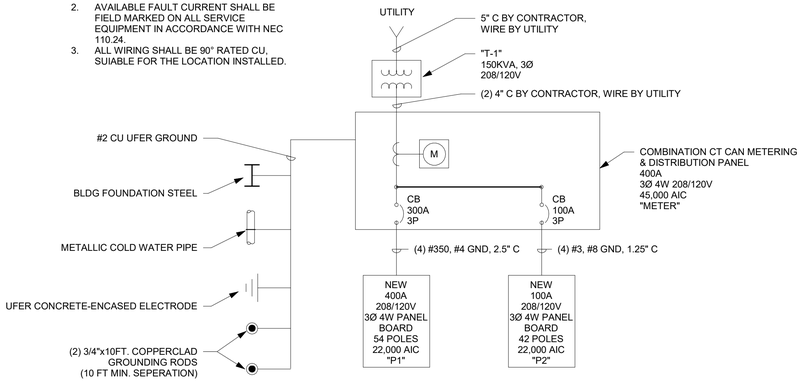
SCHEDULES

SHEET NUMBER

E-601

NOTES:

1. ALL OVERCURRENT PROTECTION DEVICES SHALL HAVE THE SAME FAULT CURRENT RATING AS THAT OF THE PANEL OR SWITCHGEAR THEY ARE LOCATED WITHIN.
2. AVAILABLE FAULT CURRENT SHALL BE FIELD MARKED ON ALL SERVICE EQUIPMENT IN ACCORDANCE WITH NEC 110.24.
3. ALL WIRING SHALL BE 90° RATED CU, SUIABLE FOR THE LOCATION INSTALLED.



1 ONE-LINE DIAGRAM
NTS

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SHEET TITLE

ONE-LINE DIAGRAM

SHEET NUMBER

E-701

TERMINATED	SOURCE	AMPS	VOLTAGE	PHASE	LOAD	CONDUCTOR LENGTH	WIRE SIZE	n	MATERIAL	VD (VOLTS)	%VD	TOTAL %VD
SG1	T-1	400 A	208 V	3 Ø	144,107 VA	105 ft	3/0	2	CU	2.73 V	1.31%	1.31%
M1	SG1	300 A	208 V	3 Ø	108,080 VA	25 ft	350	1	CU	0.47 V	0.22%	1.54%
P1	SG1	100 A	208 V	3 Ø	36,027 VA	25 ft	3	1	CU	1.04 V	0.50%	1.81%

1 VOLTAGE DROP CALCULATIONS
NTS

Power	Transformer kVA	IL-L	IL-N
120/208 3Ø	150	38,912 A	

Name	Source	Length	Size	Conduit	Wire Material	n	IL-L	IL-N
SG1	TRANSFORMER	110 ft	3/0	EMT	CU	2	16,298 A	
M1	SG1	15 ft	350	EMT	CU	1	14,772 A	
P1	SG1	15 ft	3	EMT	CU	1	11,426 A	

2 FAULT CURRENT CALCULATIONS
NTS

COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Genola Public Works Building
Project Type: New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Credits: 10.0 Required 14.3 Proposed
Reduced lighting power, 14.3 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Automotive Shop Floor (Automotive Facility)	4462	0.75	3346
2-Mezzanine Storage (Warehouse)	1360	0.45	612
3-Office (Office)	1360	0.64	870
		Total Allowed Watts =	4829

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Automotive Shop Floor (Automotive Facility)				
LED: F-1: High Bay: Other:	1	12	198	2376
2-Mezzanine Storage (Warehouse)				
LED: F-8: Strip Light: Other:	1	6	91	546
LED: F-9: Strip Light: Other:	1	1	43	43
LED: F-7: Strip Light: Other:	1	1	19	19
3-Office (Office)				
LED: F-2: Wrap: Other:	1	7	53	371
LED: F-5: Vanity: Other:	1	2	35	70
LED: F-6: Troffer: Other:	1	8	48	384
LED: F-8: Strip Light: Other:	1	1	91	91
LED: F-7: Strip Light: Other:	1	1	19	19
LED: F-3: Recessed Can: Other:	1	1	13	13
		Total Proposed Watts =		3932

Interior Lighting PASSES: Design 19% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable

mandatory requirements listed in the Inspection Checklist.

Jake Davis - EI — Name - Title
Signature
25-10-28 — Date

COMcheck Software Version COMcheckWeb

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: Genola Public Works Building
Project Type: New Construction
Exterior Lighting Zone 2 (Light industrial area with limited nighttime use (LZ2))

Construction Site: Owner/Agent: Designer/Contractor:

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Parking area	10885 ft2	0.04	Yes	435
Pedestrian and vehicular entrances and exits	124 ft of	14	Yes	1736
		Total Tradable Watts (a) =		2171
		Total Allowed Watts =		2171
		Total Allowed Supplemental Watts (b) =		400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Parking area (10885 ft2): Tradable Wattage				
LED: EX-1: Gooseneck: Other:	1	17	13	221
LED: EX-3: Other:	1	2	27	54
Pedestrian and vehicular entrances and exits (124 ft of door width): Tradable Wattage				
LED: EX-2: Wall Pack: Other:	1	11	36	396
		Total Tradable Proposed Watts =		671

Exterior Lighting PASSES: Design 74% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jake Davis - EI — Name - Title
Signature
25-10-28 — Date

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ELECTRICAL CALCULATIONS

SHEET NUMBER

E-801