HOGAN

CONSTRUCTION MANAGER • GENERAL CONTRACTOR

MILLCREEK CITY

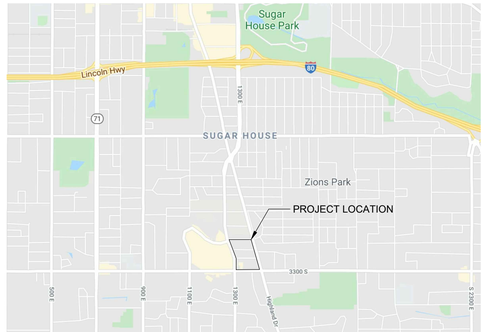
MILLCREEK COMMON

1353 EAST 3300 SOUTH, MILLCREEK, UTAH 84106

CONSTRUCTION DOCUMENTS

JANUARY 15, 2020

VICINITY MAP



LOCATION MAP

DESCRIPTION

Work includes, but is not limited to installation of new paving, seat walls, site furniture, site lighting, landscape drains, planting and irrigation system, walls, ice ribbon, and fire pits. Subconsultant drawings for landscape architecture are included herein - Landscape Architecture, Civil Engineering, Architecture, Site Electrical, and Water Feature Design. Specification are complementary to the drawings herein and implied as a requirement for successful implemention of the project.

Contractor shall provide construction management plan and submit to Owner's Representative prior to construction for review and approval.

PROJECT TEAM

OWNERS INFORMATION

Millcreek City
3330 South 1300 East
Millcreek, UT 84106

Owners Contact Information:
Francis Lilly
flilly@millcreek.us

Phone: 801.214.2752

LANDSCAPE ARCHITECT

Environmental Planning Group
6949 S. High Tech Drive #100
Midvale, Utah 84047

Contact Information:
Dave Harris
dharris@epgllc.co

Phone: 801.746.4457

CIVIL ENGINEER

Horrocks Engineering
1265 East Ft. Union Blvd., Suite 200
Cottonwood Heights, Ut 84047

Contact Information:
Name
Email

Phone: 801.256.2700

ELECTRICAL

BNA
208 East 800 South
Salt Lake City, Utah 84111

Contact Information:
Dave Harris
dharris@epgllc.co

Phone: 801.746.4457

ARCHITECT

WPA Architecture
475 Freedom Blvd 200 W
Provo, Ut 84601

Contact Information:
Bruce Fallon
bfallon@wpa-architecture.com

Phone: 801.374.0800

WATER FEATURE

Cloward H2O
2696 North University Avenue, Suite 290
Provo, Utah 84604

Contact Information:
Dan Aldred
daldred@clowardh2o.com

Phone: 801.913.4504

MEP ENGINEER

WHW Engineering
8619 South Sandy Parkway, #101
Sandy, Utah 84070

Contact Information:
Brad Lash
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Phone: 801.870.6987

STRUCTURAL ENGINEER

Dynamic Structures
1887 North 1200 West
Provo, Utah 84604

Contact Information:
Jay Adams
jay@dstructures.com

Phone: 801.356.1140

INDEX OF DRAWINGS

PROFESSIONAL SEAL

SEWER

EXISTING		PROPOSED
ss	UNKNOWN	SS
4" ss	4 INCH	4" SS
6" ss	6 INCH	6" SS
8" ss	8 INCH	8" SS
	SERVICE LATERAL	

STORM

EXISTING		PROPOSED
sd	UNKNOWN	SD
4" sd	4 INCH	4" SD
6" sd	6 INCH	6" SD
8" sd	8 INCH	8" SD
12" sd	12 INCH	12" SD
18" sd	18 INCH	18" SD

WATER

EXISTING		PROPOSED
w	UNKNOWN	W
3/4" w	3/4 INCH	3/4" W
1" w	1 INCH	1" W
1-1/2" w	1-1/2 INCH	1-1/2" W
2" w	2 INCH	2" W
3" w	3 INCH	3" W
4" w	4 INCH	4" W
6" w	6 INCH	6" W
8" w	8 INCH	8" W

IRRIGATION

EXISTING		PROPOSED
Irr	UNKNOWN	IRR
12" Irr	12 INCH	12" IRR

POWER

EXISTING		PROPOSED
ohp	OVERHEAD	OHP
bel	UNDERGROUND	BEL

GAS

EXISTING		PROPOSED
g	UNKNOWN	G

COMMUNICATIONS

EXISTING		PROPOSED
ctv	OVERHEAD CABLE TV	CTV
bctv	UNDERGROUND CABLE TV	BCTV
fo	OVERHEAD FIBER OPTIC	FO
bfo	UNDERGROUNG FIBER OPTIC	BFO
tel	OVERHEAD TELEPHONE	TEL
btel	UNDERGROUND TELEPHONE	BTEL

MISCELLANEOUS

EXISTING		PROPOSED
	DIRECTIONAL FLOWLINE	
	EDGE OF PAVEMENT	
4000	CONTOUR - MAJOR	4000
4002	CONTOUR - MINOR	4002

HATCH PATTERNS

- BUILDING / PAD
- CONCRETE SIDEWALK / FLATWORK
- LANDSCAPE AREAS / GRASS
- ASPHALT PAVEMENT SECTION

SURFACE FEATURES

EXISTING/PROPOSED

- LOD — LIMITS OF DISTURBANCE
- GB — GRADE BREAK
- X — FENCE - BARBED
- FENCE - CHAIN LINK
- FENCE - DECORATIVE
- FENCE - WOOD
- WALL - BLOCK
- WALL - CONCRETE
- WALL - ROCK
- R/W — RIGHT OF WAY
- CENTERLINE (ROAD/ENTITY)
- CURB & GUTTER
- PARCEL LINE
- PROPERTY BOUNDARY

CONSTRUCTION KEYNOTE TAGS

- D00 OR D99 — DEMO PLAN
- G1 OR G9 — GRADING PLAN
- 01 OR 35 — SITE PLAN
- 36 OR 50 — WATER
- 51 OR 65 — SEWER
- 66 OR 80 — STORM DRAIN
- A OR Z — MISCELLANEOUS

CALLOUTS

- FF:2752.84 — FINISHED FLOOR ELEVATION
- TBC:2752.85 — TBC & TBDC SPOT ELEVATION
- FL:2752.86 — FL & TG SPOT ELEVATION
- # — PARKING STALL COUNT

STANDARD SYMBOLS

EXISTING		PROPOSED
e	ELECTRICAL MANHOLE	E
fo	FIBER OPTIC MANHOLE	FO
t	TELEPHONE MANHOLE	T
tv	CABLE TV MANHOLE	TV
pp	ELECTRICAL POWER POLE	PP
	SIGNAL POLE	
e	ELECTRICAL BOX	E
fo	FIBER OPTIC BOX	FO
jb	JUNCTION BOX	JB
tb	TELEPHONE BOX	T
t	TELEPHONE PEDESTAL	T
tv	CABLE TV BOX	TV
	LIGHT POLE	
	LIGHT POLE OPT 2	
	LIGHT POLE OPT 3	
g	GAS MANHOLE	G
g	GAS METER	G
co	CLEANOUT	CO
s	SEWER MANHOLE	S
ir	IRRIGATION MANHOLE	IR
ir	IRRIGATION BOX	IR
w	WATER MANHOLE	W
w	WATER METER	W
	WATER METER OPT 2	WM
	BLOW-OFF	BO
	FIRE HYDRANT	
	FIRE HYDRANT OPT 2	
	GATE VALVE	
	GATE VALVE OPT 2	
	CROSS	
	TEE	
	90° BEND	
	45° BEND	
	22.5° BEND	
	11.25° BEND	
	WYE	
	REDUCER	
	CAP & PLUG	
sd	STORM DRAIN MANHOLE	SD
	AREA DRAIN ROUND	
	AREA DRAIN SQUARE	
	DROP INLET	
	CURB INLET	
	CURB INLET OPT 2	
	CURB INLET OPT 3	
	CURB DOUBLE INLET	
	CURB DOUBLE INLET OPT 2	
SD	COMBO BOX	SD
	OIL/WATER SAND/GREASE	
	OIL/WATER SAND/GREASE OPT 2	
	FLARED END LARGE	
	FLARED END SMALL	
	SIGN	
	BOLLARD	
BH	BORE HOLE	BH
TP	TEST PIT	TP

ABBREVIATIONS

A	ALGEBRAIC GRADE CHANGE
ABC	AGGREGATE BASE COURSE
AC	ASPHALTIC CEMENT OR CONCRETE
BC	BUILDING CORNER
BCR	BACK OF CURB RETURN
BFE	BASE FLOOD ELEVATION
BFF	BASEMENT FINISH FLOOR
BLDG	BUILDING
BM	BENCHMARK
BP	BEGIN POINT
BV	BUTTERFLY VALVE
BVC	BEGIN VERTICAL CURVE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
BVP	BEGIN VERTICAL PROFILE
BVW	BOTTOM OF VISIBLE WALL
C&G	CURB & GUTTER
CB	CATCH BASIN
CL	CENTERLINE
CLR	CLEAR
CO	CLEANOUT
CONC	CONCRETE
Cu	COPPER
C.Y.	CUBIC YARD
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
E	EAST OR EASTING
EA	EACH
EG	EXISTING GRADE/ GROUND
ELEV	ELEVATION
EOC	EDGE OF CONCRETE
EOP	EDGE OF PAVEMENT
EP	END POINT
ESMT	EASEMENT
EVC	END VERTICAL CURVE
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EVP	END VERTICAL PROFILE
EX	EXISTING
FE	FLANGE END
FF	FINISHED FLOOR
FG	FINISHED GRADE
FJ	FLANGE JOINT
FL	FLOW LINE
FM	FORCE MAIN
FPS	FEET PER SECOND
FT	FOOT OR FEET
FUT	FUTURE
G	GAS LINE
GB	GRADE BREAK
GFF	GARAGE FINISHED FLOOR
GV	GATE VALVE
HGL	HYDRAULIC GRADE LINE
HP	HIGH POINT
HRZ	HORIZONTAL
HWM	HIGH WATER MARK
ID	INSIDE DIAMETER
IN	INCH(ES)
IRR	IRRIGATION (PRESSURIZED)/ NON-POTABLE
K	VERTICAL CURVE COEFFICIENT
L	LENGTH
LF	LINEAR FEET
LP	LOW POINT
L/S	LANDSCAPE
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAX	MAXIMUM
ME	MATCH EXISTING
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MID	MIDDLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH OR NORTHING, FRICTION FACTOR
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OVHP	OVERALL HIGH POINT
OVLP	OVERALL LOW POINT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PH	PHASE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
Q	RATE OF FLOW
R	RADIUS
REV	REVISION
RT	RIGHT
R/W	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SEC	SECTION
SF	SQUARE FOOT/ FOOTAGE
S/L	STREETLIGHT
SPEC	SPECIFICATIONS
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SVE	SIGHT VISIBILITY EASEMENT
S/W	SIDEWALK
TA	TOP OF ASPHALT
TBC	TOP BACK OF CURB
TBDC	TOP BACK OF DEPRESSED CURB
TBM	TEMPORARY BENCH MARK
TC	TOP OF CONCRETE
TEMP	TEMPORARY
TF	TOP OF FOOTING
TG	TOP OF GRATE
TRW	TOP OF RETAINING WALL
TW	TOP OF WALL
TYP	TYPICAL
UTC	UNTREATED BASE COURSE
V	VELOCITY
VC	VERTICAL CURVE
VRT	VERTICAL
W/	WITH
WMH	WATER MANHOLE
WTR	WATER

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH THE STANDARD DRAWINGS AND SPECIFICATIONS OF THE GOVERNING JURISDICTIONAL ENTITY(IES) FOR THIS PROJECT, UNLESS OTHERWISE NOTED. SEE PROJECT SPECIFICATIONS AND STANDARDS SECTION ON THIS SHEET FOR MORE INFORMATION.
2. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES A COPY OF THE APPROVED AND STAMPED CONSTRUCTION PLANS ON WHICH IS RECORDED THE ACTUAL LOCATIONS OF THE CONSTRUCTED UTILITIES AND ANY OTHER UTILITIES ENCOUNTERED. THE CONTRACTOR SHALL PROVIDE THESE LOCATIONS TO THE DESIGN ENGINEER.
3. THE CONTRACTOR(S) SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE AND BELOW GROUND, AS REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE CLEARING AND GRUBBING WHICH CONSISTS OF CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS OR WEEDS, FENCES, STRUCTURES, DEBRIS, RUBBISH, AND SUCH MATERIAL WHICH IN THE OPINION OF THE ENGINEER, IS UNSUITABLE FOR THE FOUNDATION OF PAVEMENTS. ALL MATERIAL NOT SUITABLE FOR FUTURE USE ON SITE SHALL BE DISPOSED OF OFF SITE.
4. OWNER/DEVELOPER/CONTRACTOR IS REQUIRED TO CALL LOCAL UNDERGROUND UTILITY LOCATING SERVICES IN A SUFFICIENT AMOUNT OF TIME SO AS TO PROPERLY DETERMINE THE LOCATION OF ALL UNDERGROUND UTILITIES AND TO AVOID DELAYS TO THE CONSTRUCTION SCHEDULE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL RECOMMENDATIONS WITHIN THE PROJECT GEOTECHNICAL REPORT. SEE PROJECT SPECIFICATIONS AND STANDARDS SECTION ON THIS SHEET FOR MORE INFORMATION.
6. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF WORK AND BETWEEN TRADES. SUB-CONTRACTORS ARE ALSO RESPONSIBLE FOR COORDINATION WITH OTHER TRADES AND DISCIPLINES INCLUDED IN THE CONTRACT DOCUMENTS. IF ANY DISCREPANCIES ARE FOUND, THE GENERAL CONTRACTOR IS TO NOTIFY ENGINEER IMMEDIATELY BEFORE COMMENCEMENT OF WORK. NO EXTRA COSTS TO THE PROJECT WILL BE INCURRED DUE TO FAILURE OF GENERAL CONTRACTOR AND/OR SUB-CONTRACTORS TO REVIEW CONTRACT DOCUMENTS AND COORDINATE WITH OTHER TRADES.
7. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND LOCAL CITY STANDARDS.
8. THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE BUILDING DEPARTMENT FOR ANY WALLS GREATER THAN 4' IN HEIGHT CONSTRUCTED WITHIN THE PROJECT. ALL ROCK WALLS CONSTRUCTED WITHIN THE PROJECT MUST BE CERTIFIED AND INSPECTED BY A LICENSED STRUCTURAL ENGINEER PRIOR TO THE CITY'S FINAL ACCEPTANCE.

UTILITY NOTES

WATER

1. ALL EXISTING UNUSED WATER LATERALS MUST BE CAPPED AND KILLED AT THE MAIN PER SALT LAKE CITY PUBLIC UTILITY STANDARDS.
2. WATER METER SETTER BOXES MAY BE RE-USED OR SALVAGED.
3. EXISTING WATER LATERALS MAY BE ABANDONED IN PLACE UNLESS SPECIFICALLY FORBIDDEN BY JURISDICTIONAL ENTITY.
4. PROPOSED WATER LATERALS SHALL BE ALL NEW PIPE OF THE MATERIAL TYPE SHOWN ON PLANS AND/OR REQUIRED BY THE JURISDICTIONAL ENTITY.
5. WATER VALVES MAY BE RE-USED AS APPROVED BY THE JURISDICTIONAL ENTITY.
6. FIRE HYDRANTS MAY BE RE-USED AS APPROVED BY THE JURISDICTIONAL ENTITY.
7. RAISE ALL UTILITIES, SUCH AS MANHOLES, METER SETTERS, FIRE HYDRANTS, WATER VALVE LIDS, ETC. TO ROADWAY OR PROJECT FINISHED GRADE AS MAY BE APPLICABLE.
8. ALL BACKFLOW ASSEMBLY INSTALLATION AND TESTING SHALL COMPLY WITH THE BACKFLOW REQUIREMENTS OF THE JURISDICTIONAL ENTITY.
9. 12 GAUGE COPPER LOCATE WIRE SHALL BE TAPED TO ALL WATER LINES FOR LOCATION PURPOSES. THE WIRE SHALL BE BROUGHT UP AT EACH VALVE BOX AND HYDRANT.
10. ALL REMOVED EXISTING WATER UTILITIES SHALL EITHER BE SALVAGED OR PROPERLY DISPOSED OF ACCORDING TO GOVERNING REGULATIONS.

SEWER

1. ALL NEW SEWER SYSTEMS WILL BE MANDREL AND AIR TESTED.
2. SEWER LENGTHS AND SLOPES ON THE PROFILE VIEWS ARE MEASURED FROM CENTER-CENTER OF MANHOLES.
3. ALL REMOVED EXISTING SEWER UTILITIES SHALL EITHER BE SALVAGED OR PROPERLY DISPOSED OF ACCORDING TO GOVERNING REGULATIONS.
4. ALL ABANDONED OR UNUSED SEWER MANHOLES SHALL BE COMPLETELY REMOVED AND REPLACED WITH SUITABLE BACKFILL MATERIAL THAT MEETS PROJECT SPECIFICATIONS.
5. SEWER MANHOLES MAY BE RE-USED IF APPROVED BY THE JURISDICTIONAL ENTITY.
6. SEWER MAINS ABANDONED IN PLACE SHALL BE CUT AT EACH END, AND SHALL EITHER BE PLUGGED OR CAPPED WITH A PLASTIC OR CONCRETE CAP.
7. SEWER LATERALS TO BE REMOVED SHALL BE CUT AT THE MAIN AND CAPPED ON BOTH ENDS AS INDICATED IN NOTE 6 ABOVE.

IRRIGATION

1. RAISE ALL UTILITIES, SUCH AS MANHOLES, METER SETTERS, WATER VALVE LIDS, ETC. TO ROADWAY OR PROJECT FINISHED GRADE AS MAY BE APPLICABLE.
2. ALL IRRIGATION PIPE SHALL BE INSTALLED AND AIR TESTED IN THE SAME MANNER AS THE CULINARY WATER SYSTEM PER THE JURISDICTIONAL ENTITY.
3. METER SETTERS MUST BE INSTALLED WITHIN METER BOX CLEARLY MARKED "IRRIGATION".
4. ALL IRRIGATION PIPING INCLUDING SERVICE MATERIALS MUST BE PURPLE IN COLOR AND CLEARLY MARKED "IRRIGATION".
5. ALL IRRIGATION MATERIALS, SPECIFICATIONS, AND INSTALLATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE JURISDICTIONAL ENTITY.
6. 12 GAUGE PURPLE LOCATE WIRE SHALL BE TAPED TO ALL IRRIGATION MAINS FOR LOCATING PURPOSES. THE WIRE SHALL BE BROUGHT UP AT EACH VALVE BOX.
7. ALL REMOVED EXISTING IRRIGATION UTILITIES SHALL EITHER BE SALVAGED OR PROPERLY DISPOSED OF ACCORDING TO GOVERNING REGULATIONS.

REVISIONS

REV No.	SHEET No.	DATE OF REV	DESCRIPTION
1			

UTILITY NOTES

POWER

1. CONTRACTOR TO FOLLOW ALL BLUE STAKES PROTOCOLS
2. ALL POWER CONNECTIONS AND DESIGN SHALL BE PERFORMED BY THE LOCAL ENERGY SERVICES. SEE UTILITY CONTACTS SECTION ON THIS SHEET FOR MORE INFORMATION.
3. ANY WORK BEING PERFORMED AT THE REQUEST OF THE LOCAL ENERGY SERVICES SHALL BE PERFORMED TO THE REQUIREMENTS AND SPECIFICATIONS OF SAID ENERGY SERVICE.
4. ANY ELECTRICAL DESIGN WORK REQUIRED SHALL BE PERFORMED BY A LICENSED ELECTRICAL ENGINEER UNLESS OTHERWISE CONVEYED AS NOT REQUIRED BY THE LOCAL ENERGY SERVICES.
5. ACCESS TO EXISTING ELECTRICAL EQUIPMENT MUST BE MAINTAINED THROUGHOUT THE PROJECT.
6. CONTACT LOCAL ENERGY SERVICES FOR ANY REQUIRED CHANGES OR CONFLICTS WITH EXISTING ELECTRICAL INFRASTRUCTURE.
7. CHANGES MADE TO EXISTING INFRASTRUCTURE WILL BE DONE TO THE LOCAL ENERGY SERVICES STANDARDS AND COMPLETED BY A PRE-QUALIFIED CONTRACTOR OR ENERGY SERVICES.

DOMINION ENERGY GAS

1. CONTRACTOR NEEDS TO CONTACT DOMINION ENERGY GAS MARKETING DEPARTMENT, PRIOR TO BREAKING GROUND, FOR GAS SIGN UP. SEE UTILITY CONTACTS SECTION ON THIS SHEET FOR MORE INFORMATION.
2. CONTRACTOR WILL BE RESPONSIBLE TO GET ALL COMPACTION TESTS DONE AT DEVELOPERS EXPENSE.
3. IF CASINGS/CONDUITS ARE NEEDED, THEY ARE TO BE INSTALLED BY AND PAID FOR BY THE PROJECT. A MAP WILL BE AVAILABLE AT DOMINION ENERGY GAS FOR CASING LOCATIONS.
4. ALL OF THE 10 FOOT UTILITY EASEMENTS BACK OF SIDEWALK WILL BE GRADED TO WITHIN 6 INCHES OF TOP BACK OF CURB BEFORE GAS LINES WILL BE INSTALLED.
5. ALL TRENCHES SHALL BE BACKFILLED AND ALL DEBRIS, CONSTRUCTION MATERIALS AND EXCESS DIRT PILES SHALL BE CLEARED AWAY.
6. PROPERTY LOT LINES, BACK OF CURB AND GRADE MUST BE STAKED BY DEVELOPER BEFORE GAS WILL BE INSTALLED.
7. WATER AND SEWER LINES, CULVERTS OR OTHER HAZARDS NOT CLEARLY NOTICEABLE SHALL BE STAKED BY DEVELOPER.
8. FAILURE TO COMPLY WITH THE ABOVE NOTES WILL RESULT IN DELAY OF GAS SERVICE TO THIS PROJECT.
9. CONTRACTOR WILL CONTACT DOMINION ENERGY GAS AT LEAST TWO WEEKS PRIOR TO BEING READY, FOR SCHEDULING OF INSTALLATION.
10. *****IMPORTANT NOTICE***** GAS WILL BE PUT ON THE SCHEDULE FOR INSTALLATION WHEN POWER TRENCH IS BURIED, STREETS ARE WITHIN 6 INCHES OF SUB-GRADE AND THE 10 FOOT UTILITY EASEMENT IS GRADED TO TOP BACK OF CURB.
11. HIGH PRESSURE GAS NOTE: IF HIGH PRESSURE GAS LINES ARE LOCATED IN OR NEAR THE DIGGING AREA: BEFORE DIGGING THE CONTRACTOR WILL CALL THE LOCAL DOMINION ENERGY GAS REPRESENTATIVE.

GRADING & DRAINAGE NOTES

1. HORROCKS ENGINEERS HAS PREPARED GRADING PLANS AND SIZED DRAINAGE FACILITY SHOWN ON THIS PLAN TO CONTAIN THE RUNOFF AS REQUIRED BY THE JURISDICTIONAL ENTITY. SEE PROJECT SPECIFICATIONS AND STANDARDS SECTION ON THIS SHEET FOR MORE INFORMATION.
1. THESE PLANS HAVE BEEN PREPARED BASED ON A GEOTECHNICAL REPORT PERFORMED BY THE ENTITY AS OUTLINED IN THE PROJECT SPECIFICATIONS AND STANDARDS SECTION ON THIS SHEET.
2. IT IS THE PROPERTY OWNER'S RESPONSIBILITY (DEVELOPER, HOMEOWNER, HOMEOWNERS ASSOC. ETC.) TO COMPLETE AND MAINTAIN THE FINAL GRADING ON THEIR PROPERTY IN ACCORDANCE WITH THE DRAINAGE CONCEPT IDENTIFIED IN THE GRADING AND DRAINAGE PLAN AND GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. THE PROPERTY OWNER IS RESPONSIBLE, IN PERPETUITY, FOR INSPECTING AND MAINTAINING PROPER DRAINAGE DURING CONSTRUCTION AND WHEN RE-GRADING OR MAKING MODIFICATIONS TO DRAINAGE FACILITIES THAT AFFECTS THEIR PROPERTY.
3. ALL IMPORTED STRUCTURAL FILL, IF REQUIRED, SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO DELIVERY TO THE SITE.
4. THE GRADING AND DRAINAGE PLANS DO NOT IDENTIFY THE CONSTRUCTION METHODS, EQUIPMENT, PROCEDURES, AND OR SEQUENCING TO BE EMPLOYED BY THE CONTRACTOR. ALL GRADING OPERATIONS INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SCARIFICATION, EXCAVATION, OVER-EXCAVATION, PLACEMENT, OF FILLS, AND COMPACTION OF FILLS, SHALL BE PERFORMED BY THE CONTRACTOR IN CONFORMANCE WITH THE GEOTECHNICAL REPORT DESCRIBED IN THE PROJECT SPECIFICATIONS AND STANDARDS SECTION ON THIS SHEET AND ONSITE FIELD OBSERVATIONS AS REQUIRED BY THE GEOTECHNICAL FIRM.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY HORROCKS ENGINEERS IMMEDIATELY IF THERE ARE ANY CONFLICTS BETWEEN THE REQUIREMENTS OF THE GRADING AND DRAINAGE PLANS AND THE REQUIREMENTS OF THE GEOTECHNICAL REPORT OR GEOTECHNICAL FIELD OBSERVATIONS.
6. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONAL.
7. ALL EXCAVATION, GRADING, AND FILL OPERATIONS WITHIN THE BUILDING AREA SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER TO VERIFY SUBSOIL CONDITIONS AND DETERMINE ADEQUACY OF SITE PREPARATION, SUITABILITY OF FILL MATERIALS AND COMPLIANCE WITH COMPACTION REQUIREMENTS.
8. THE CONTRACTOR SHALL PROVIDE SUITABLE METHODS & EQUIPMENT TO CONTROL DUST AND AIR POLLUTION CAUSED BY CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL ALSO PROVIDE SUITABLE MUD AND DIRT CONTAINMENT TO MAINTAIN THE WORK SITE. ACCESS ROADWAYS AND ADJACENT PROPERTIES IN A CLEAN CONDITION.
9. ALL EXCAVATION AND GRADING SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE JURISDICTIONAL ENTITY, UNIFORM BUILDING CODES, AND THE GEOTECHNICAL INVESTIGATION STUDY.
10. THE GEOTECHNICAL ENGINEER SHALL PROVIDE A FINAL GRADING REPORT TO CONFIRM WORK HAS BEEN PERFORMED IN CONFORMANCE WITH THEIR RECOMMENDATIONS.
11. PRIOR TO CONSTRUCTION, AN EROSION AND SEDIMENT CONTROL PLAN WILL BE SUBMITTED TO THE PUBLIC WORKS DIRECTOR FOR APPROVAL.

PROJECT SPECIFICATIONS AND STANDARDS

1. MILLCREEK CITY MUNICIPAL CODE AND ENGINEERING STANDARDS
2. GEOTECHNICAL EVALUATION MILLCREEK COMMONS, NINYO & MOORE, DATED JUNE 18, 2020 GEOTECHNICAL ADDENDUM - PAVER RECOMMENDATIONS - REVISED, NINYO & MOORE, DATED DECEMBER 15, 2020"
3. MOUNT OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS AND SPECIFICATIONS
4. APWA MANUAL OF STANDARD SPECIFICATIONS, 2012 ed.
5. APWA MANUAL OF STANDARD DRAWINGS, 2012 ed.

UTILITY CONTACTS

WATER
SALT LAKE CITY PUBLIC UTILITIES
1530 S. WEST TEMPLE
SALT LAKE CITY, UTAH 84115
801-483-6900

SEWER
MT. OLYMPUS IMPROVEMENT DISTRICT
3932 S 500 E
SALT LAKE CITY UTAH, 84107
801-262-2904

POWER
ROCKY MOUNTAIN POWER
560 WEST GLEN CARTER DR
LEHI, UTAH 84043
(385) 201-1040
BRENT THOMAS

NATURAL GAS
DOMINION ENERGY
1640 NORTH MOUNTAIN SPRINGS PKWY
SPRINGVILLE, UTAH 84663
(801) 853-6521
DON PERO: (801) 652-3834

TELEPHONE
CENTURY LINK
151 WEST WINCHESTER ST
SALT LAKE CITY, UTAH 84107
(801) 967-4180
ARLENE DENNEY: (801) 974-8130

CATV SERVICE
COMCAST
12179 SOUTH STATE ST
DRAPER, UT 84095
(800) 934-0489
PAUL CABIBI: (801) 401-3041

ENGINEER'S NOTICE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE DRAWINGS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN AND WE ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THEIR DEPICTED LOCATION ON THESE DRAWINGS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN, AND ALL OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE DRAWINGS BY VERIFICATION OF THEIR LOCATION IN THE FIELD PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL NOTIFY HORROCKS ENGINEERS OF ANY FOUND CONFLICTS PRIOR TO ANY WORK BEING DONE RELATED TO THE ISSUE.

LEGAL NOTICE TO CONTRACTOR

USE OF THE INFORMATION CONTAINED IN THIS INSTRUMENT FOR OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS INTENDED AND FOR OTHER THAN THE CLIENT FOR WHOM IT WAS PREPARED IS FORBIDDEN UNLESS EXPRESSLY PERMITTED IN WRITING IN ADVANCE TO HORROCKS ENGINEERS, AND HORROCKS ENGINEERS SHALL HAVE NO LIABILITY TO ANY USE OF THIS INFORMATION WITHOUT THEIR WRITTEN CONSENT.

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MILLCREEK COMMON

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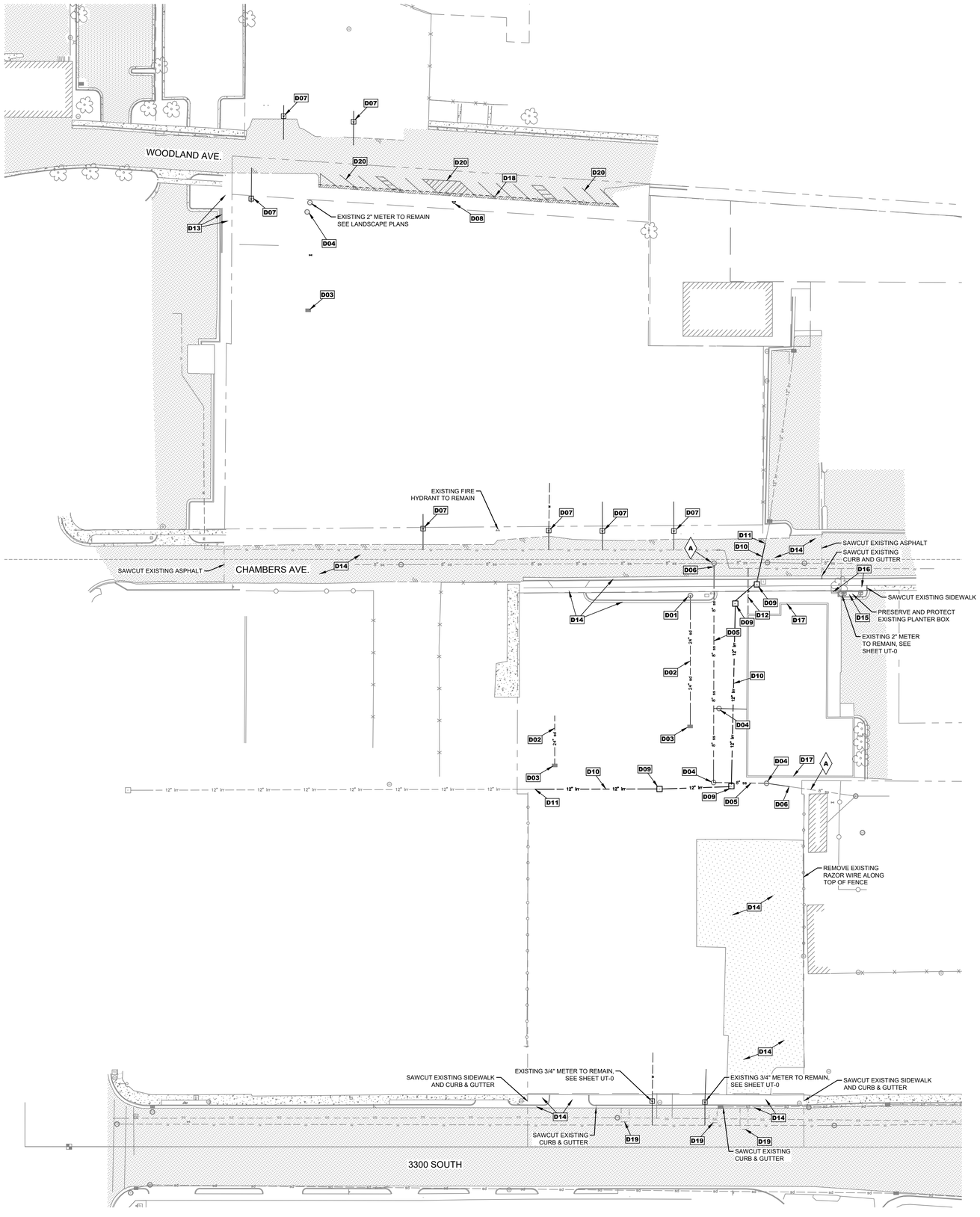
PROJ #: MILLCREEK 0001

Sheet Name:
GENERAL NOTES

Sheet Number:
GN-1



0 40' 80'

SCALE: 1" = 40'

DEMOLITION KEYNOTES

D01	REMOVE AND PROPERLY DISPOSE OF EXISTING STORM DRAIN CATCH BASIN / MANHOLE
D02	REMOVE AND PROPERLY DISPOSE OF EXISTING STORM DRAIN PIPE
D03	ABANDON IN PLACE AND FILL EXISTING STORM DRAIN SUMP
D04	REMOVE AND PROPERLY DISPOSE OF EXISTING SANITARY SEWER MANHOLE
D05	REMOVE AND PROPERLY DISPOSE OF EXISTING SANITARY SEWER PIPE
D06	CUT EXISTING 8" SEWER MAIN AT MANHOLE, SEE SHEET UT-0 FOR PROPOSED CONNECTION
D07	REMOVE AND PROPERLY DISPOSE OF EXISTING WATER METER AND LATERAL AND CAP AT EXISTING WATER MAIN PER SLC PUBLIC UTILITY STANDARDS (PATCH EXISTING ASPHALT AS NEEDED PER MILLCREEK CITY STANDARDS)
D08	REMOVE AND RELOCATE EXISTING FIRE HYDRANT, SEE UT-2 FOR NEW LOCATION
D09	REMOVE AND PROPERLY DISPOSE OF EXISTING IRRIGATION JUNCTION STRUCTURE
D10	REMOVE AND PROPERLY DISPOSE OF EXISTING 12" IRRIGATION PIPE
D11	CUT EXISTING IRRIGATION PIPE AND INSTALL MANHOLE, SEE SHEET UT-0
D12	REMOVE AND PROPERLY DISPOSE OF EXISTING 6" FIRE LINE AND CAP AT EXISTING WATER MAIN PER SLC PUBLIC UTILITY STANDARDS
D13	REMOVE EXISTING LANDSCAPING AND WALL, PRESERVE AND PROTECT EXISTING TREES
D14	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, SIDEWALK, AND ASPHALT, REMOVE EXISTING LANDSCAPING AND TREES
D15	REMOVE EXISTING LANDSCAPING WITHIN PLANTER BOX AND REPLACE WITH DECORATIVE ROCK
D16	REMOVE EXISTING CONCRETE STAIRS AND SIDEWALK
D17	REMOVE REMAINING FOUNDATION TO 1 FOOT BELOW FINISH GRADE, BACKFILL AND BURY REMAINING FOUNDATION
D18	SAWCUT EXISTING ASPHALT 2' MIN. OR AS NECESSARY FOR A CLEAN EDGE
D19	SAWCUT AND PATCH EXISTING ASPHALT FOR NEW UTILITY CONNECTIONS
D20	REMOVE EXISTING STRIPING

MISCELLANEOUS KEYNOTES

A	EXISTING SEWER IS AN ACTIVE SERVICE MAIN AND WILL REMAIN OPERATIONAL DURING DEMOLITION ACTIVITIES. COORDINATE ALL SEWER WORK WITH MT. OLYMPUS IMPROVEMENT DISTRICT STANDARDS

NOTES:

1. ALL DEMOLITION WORK ALONG 3300 SOUTH, 3205 SOUTH AND WOODLAND AVE TO BE COORDINATED WITH PROPOSED MILLCREEK COMMON PLANS.

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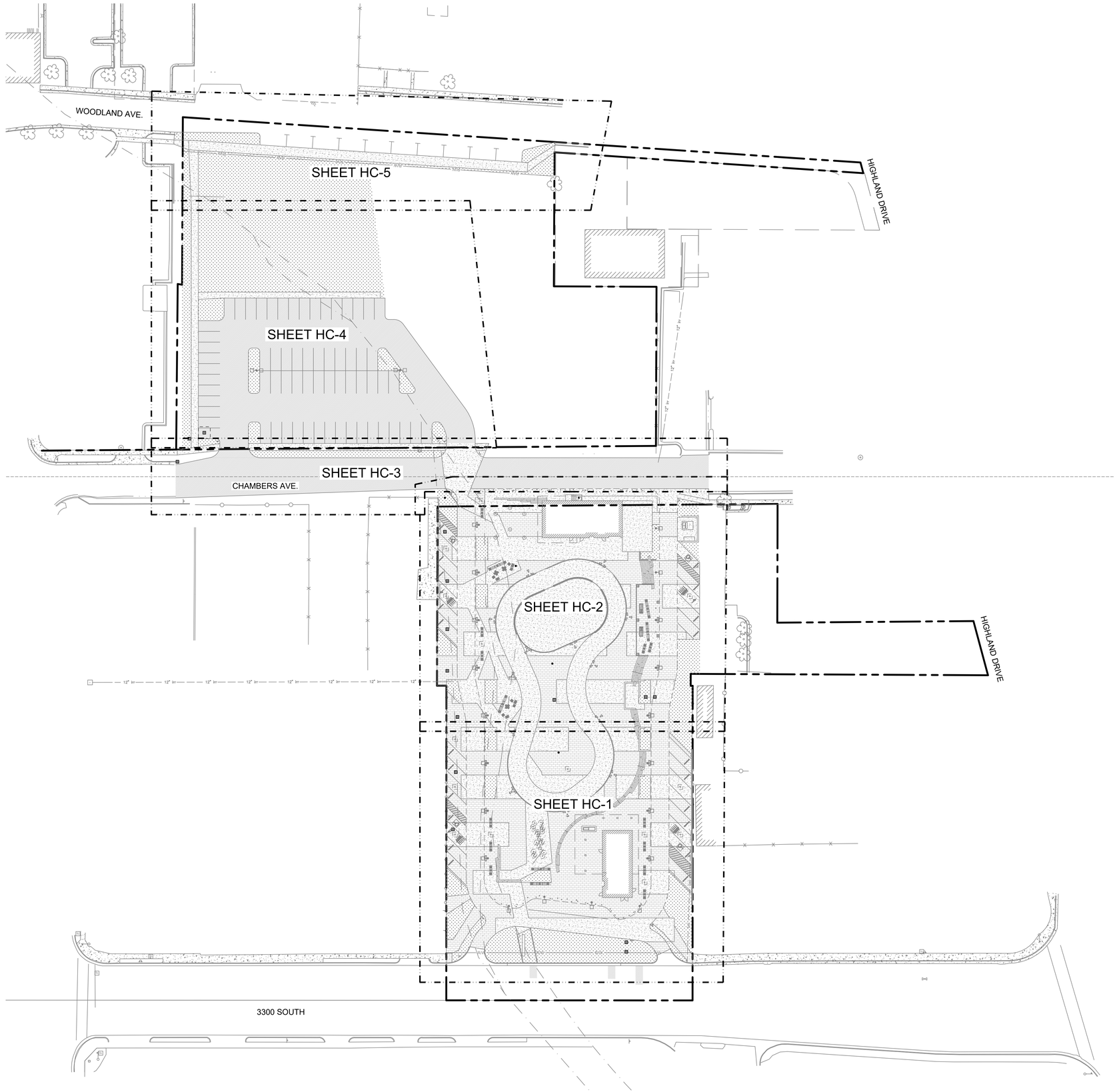

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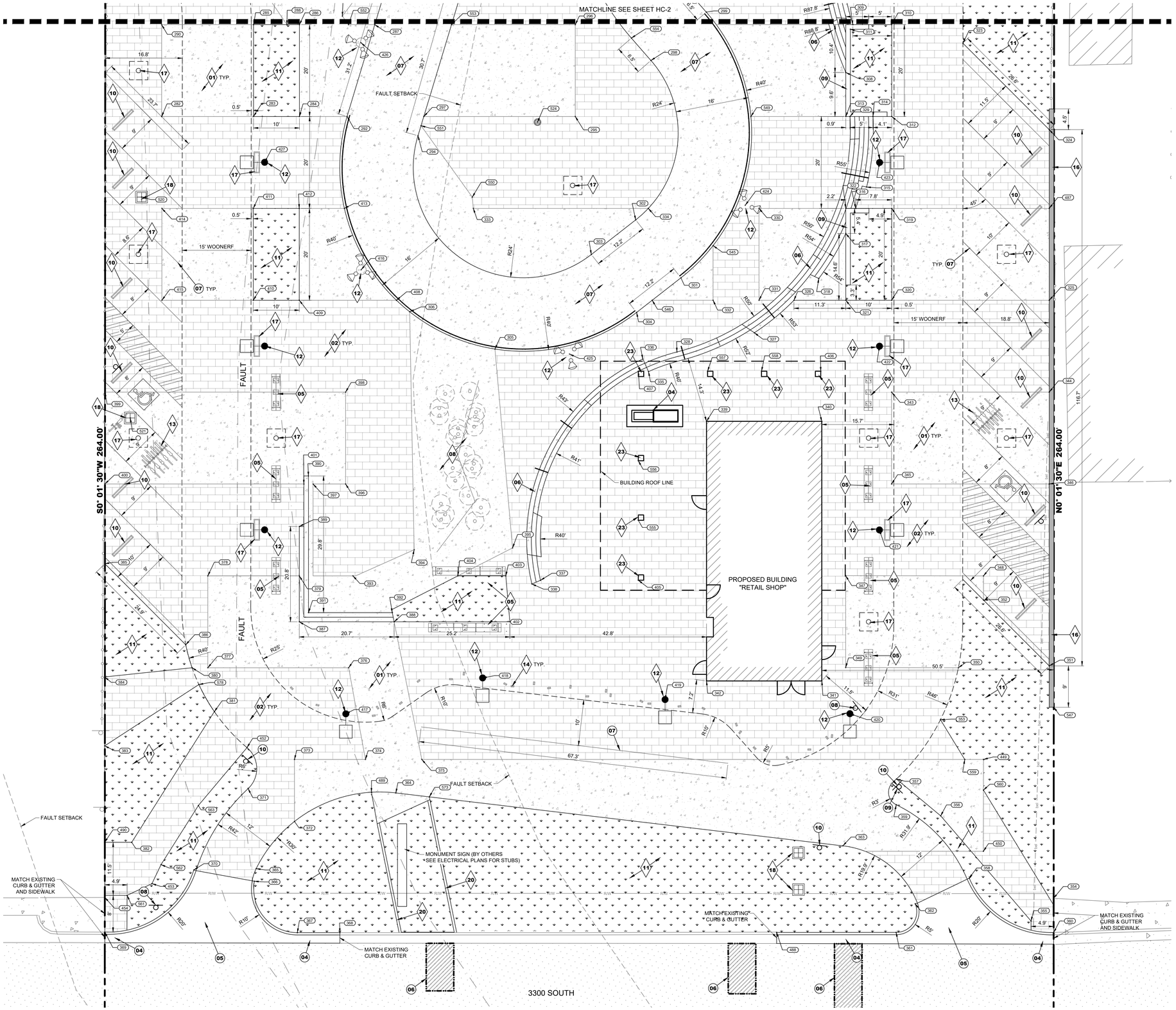

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24 PATIO HEATER (SEE ARCHITECTURAL PLANS)

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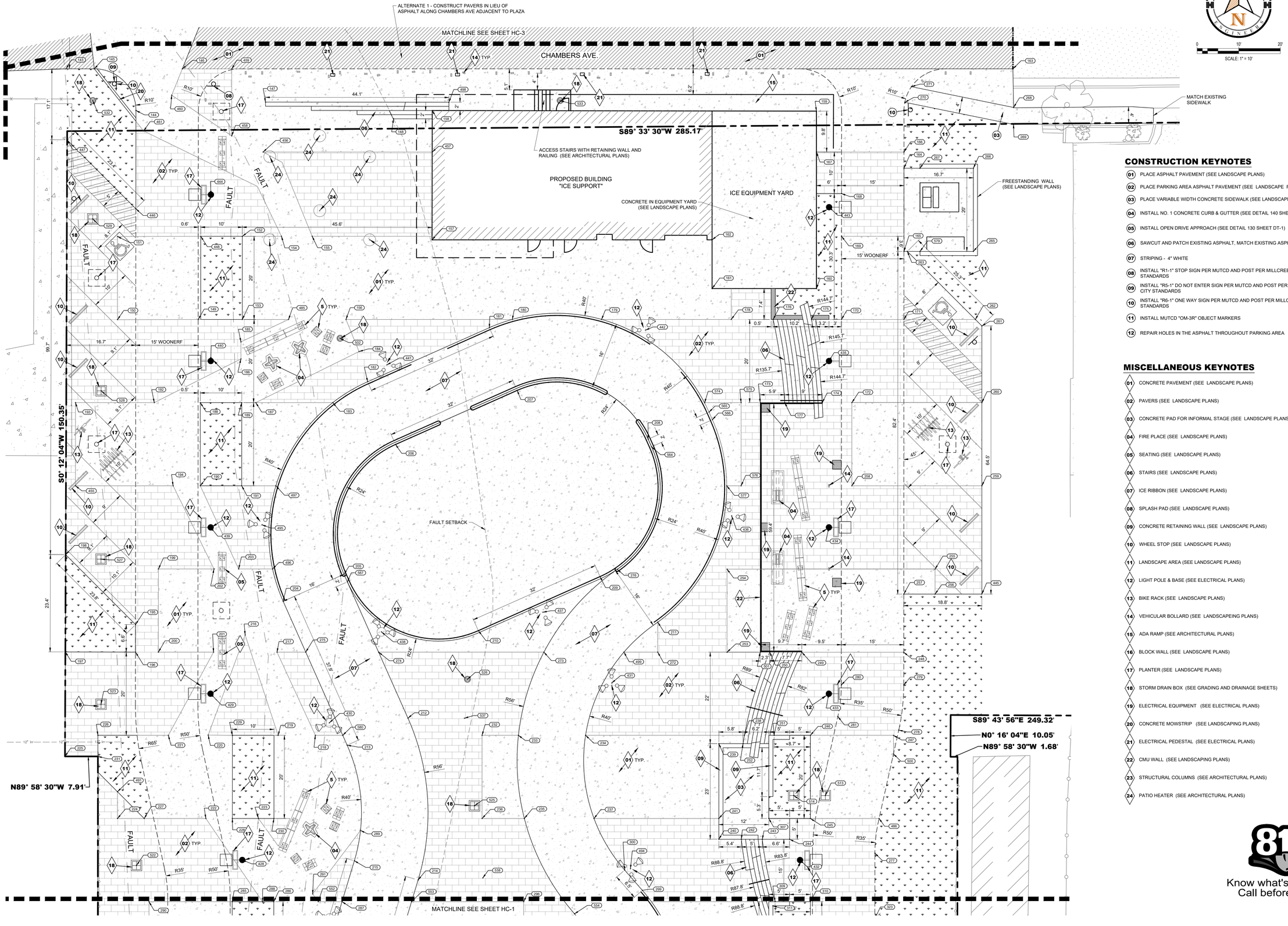

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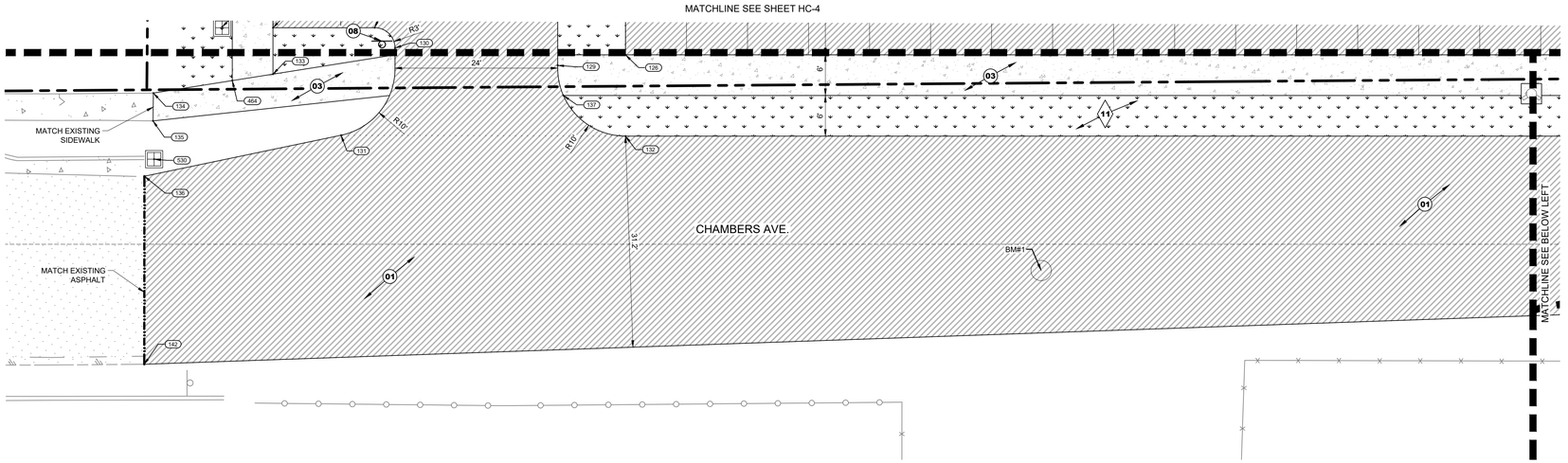

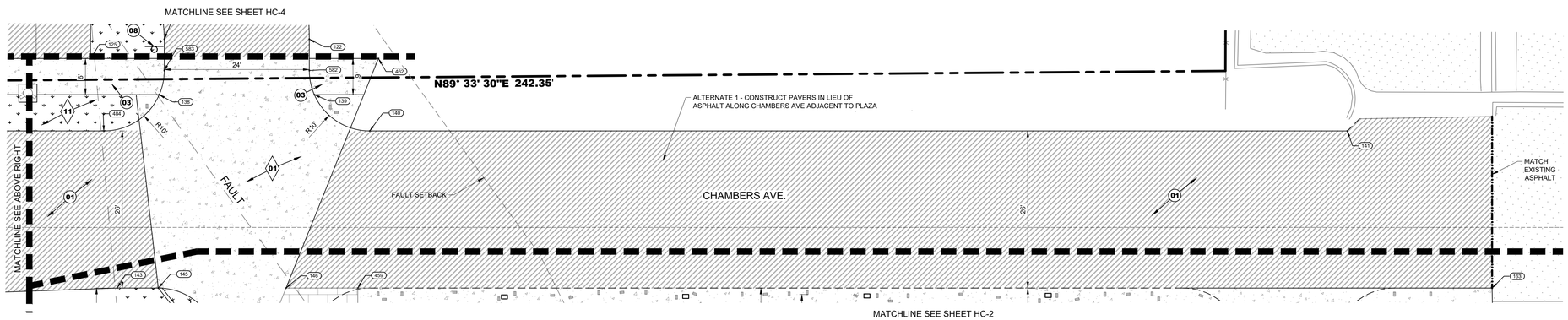

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BENCHMARK:

BM#1
ELEV: 4400.79
N: 7425764.7970'
E: 1542805.0140'
EXISTING SANITARY SEWER MANHOLE

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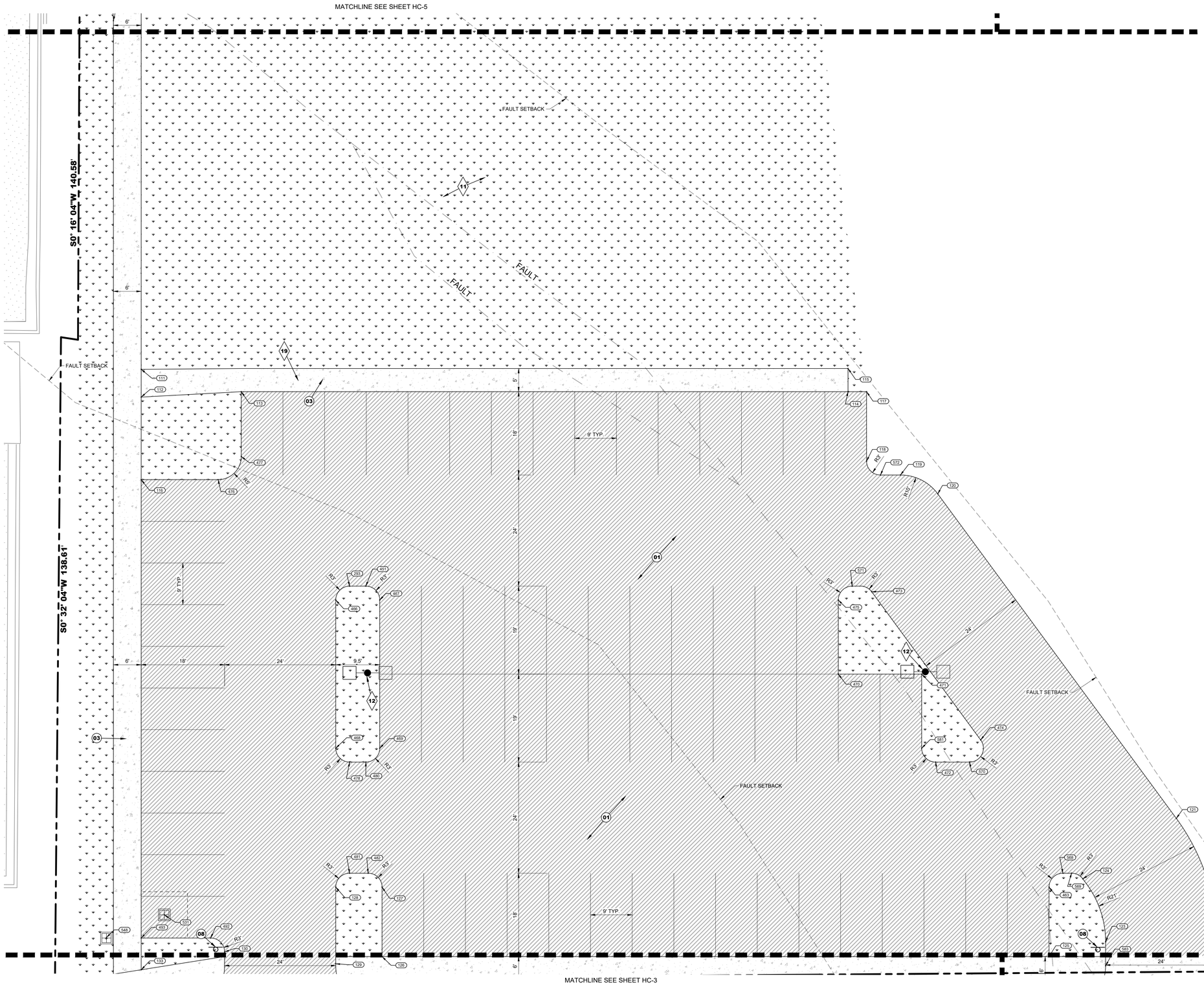

0 10' 20'

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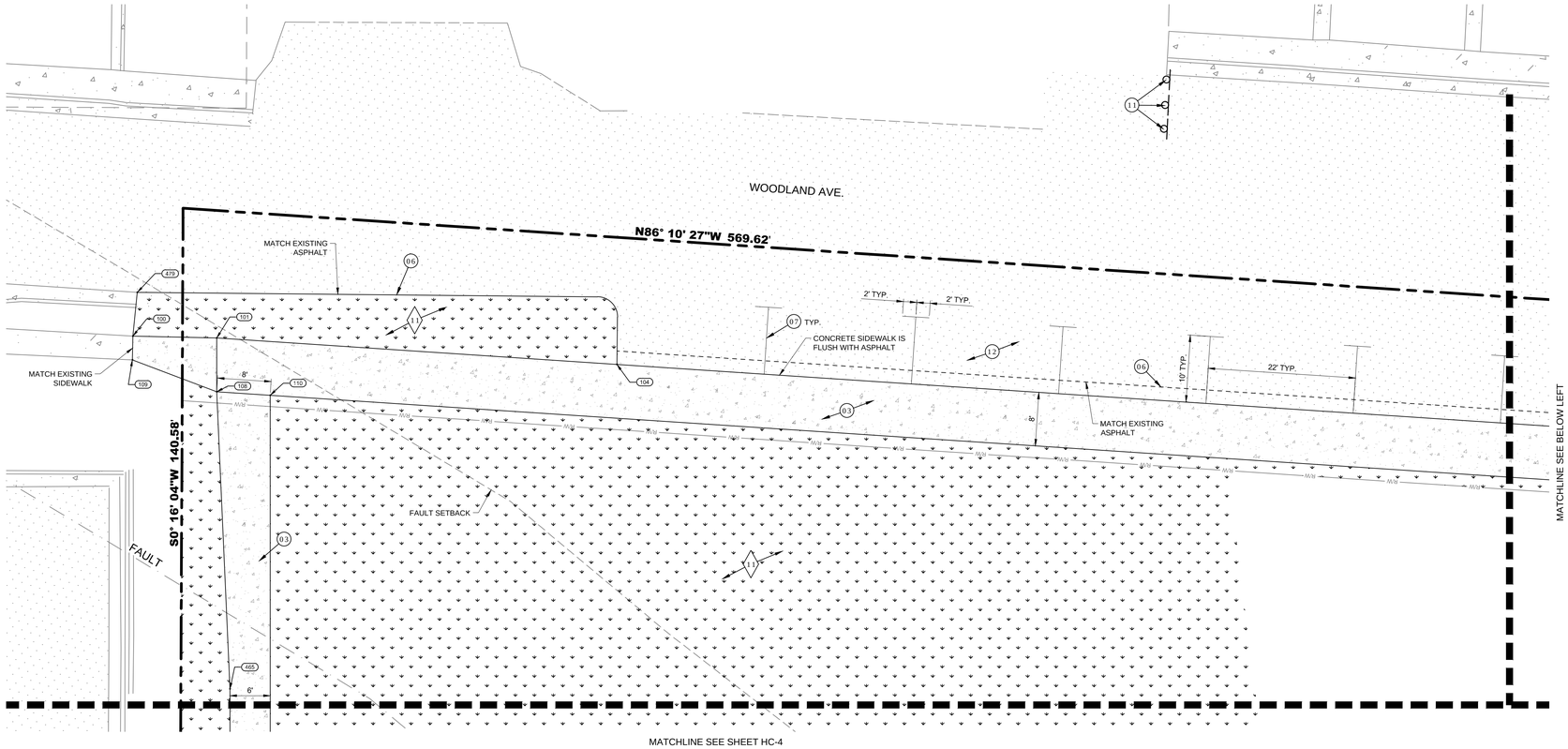

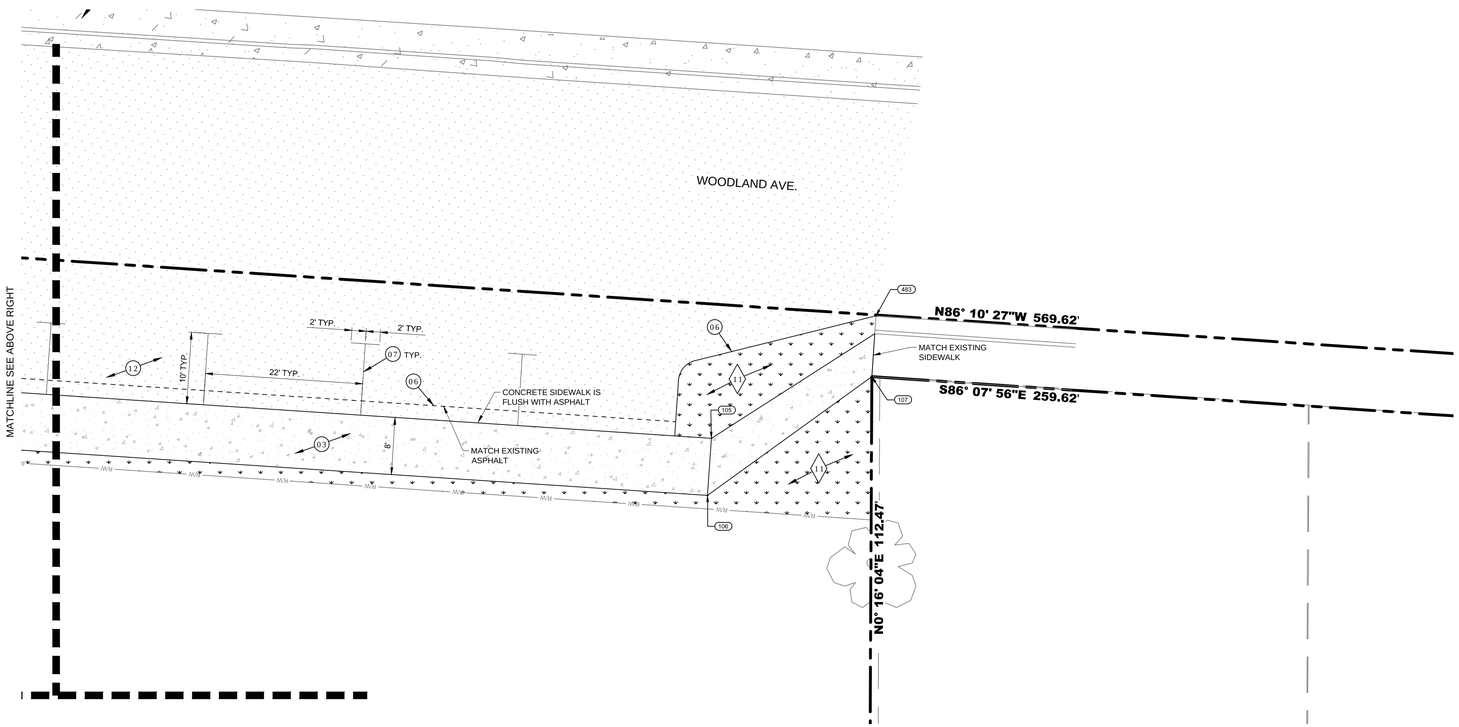

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11 LANDSCAPE AREA (SEE LANDSCAPE PLANS)
12 LIGHT POLE & BASE (SEE ELECTRICAL PLANS)
13 BIKE RACK (SEE LANDSCAPE PLANS)
14 VEHICULAR BOLLARD (SEE LANDSCAPEING PLANS)
15 ADA RAMP (SEE ARCHITECTURAL PLANS)
16 BLOCK WALL (SEE LANDSCAPE PLANS)
17 PLANTER (SEE LANDSCAPE PLANS)
18 STORM DRAIN BOX (SEE GRADING AND DRAINAGE SHEETS)
19 ELECTRICAL EQUIPMENT (SEE ELECTRICAL PLANS)
20 CONCRETE MOWSTRIP (SEE LANDSCAPING PLANS)
21 ELECTRICAL PEDESTAL (SEE ELECTRICAL PLANS)
22 CMU WALL (SEE LANDSCAPING PLANS)
23 STRUCTURAL COLUMNS (SEE ARCHITECTURAL PLANS)
24 PATIENT HEATER (SEE ARCHITECTURAL PLANS)

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Millcreek UT 84106
Owner's Representative:
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Planning Director
801.214.2752
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1353 EAST 3300 SOUTH
MILLCREEK, UT 84106

REV	DATE	DESCRIPTION

DESIGNED BY: JKS
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HORIZONTAL CONTROL

Sheet Number:
HC-5

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Point Table

Point #	Northing	Easting	Description
100	7426051.35	1542671.23	FOW
101	7426051.08	1542683.72	FOW
104	7426047.14	1542743.39	FOW
105	7426032.29	1542968.02	FOW
106	7426024.31	1542967.49	BOW
107	7426040.93	1542990.44	BOW
108	7426043.07	1542683.72	BOW
109	7426047.81	1542671.15	BOW
110	7426042.54	1542691.70	BOW
111	7425923.48	1542691.70	BOW
112	7425917.48	1542691.70	BOW
113	7425918.64	1542713.31	BOW
114	7425918.64	1542844.31	FOW
115	7425923.64	1542844.31	BOW
116	7425899.64	1542691.70	FOW
117	7425918.64	1542848.31	EOA
118	7425903.64	1542848.31	EOA
119	7425900.64	1542855.62	EOA
120	7425896.56	1542863.67	EOA
121	7425826.48	1542915.17	EOA
122	7425799.83	1542923.91	EOA
123	7425799.83	1542899.91	EOA
124	7425813.42	1542894.99	EOA
125	7425796.64	1542887.70	EOA
126	7425796.64	1542743.70	EOA
127	7425811.64	1542743.70	EOA
128	7425811.64	1542733.70	EOA
129	7425795.08	1542733.70	EOA
130	7425797.64	1542709.70	EOA
131	7425784.77	1542701.74	EOA
132	7425784.64	1542743.70	EOA
133	7425793.79	1542691.70	FOW
134	7425790.99	1542674.06	BOW
135	7425786.88	1542674.00	FOW
136	7425778.72	1542672.74	EOA
137	7425790.64	1542734.54	FOW
138	7425790.64	1542899.08	FOW
139	7425790.64	1542924.75	FOW
140	7425784.64	1542933.91	EOA
141	7425784.64	1543095.70	EOA
142	7425750.96	1542672.72	EOA
143	7425758.64	1542892.10	EOA
144	7425748.63	1542908.92	EOC
145	7425758.64	1542898.92	EOC
146	7425758.64	1542920.06	EOC
147	7425750.65	1542940.05	TOS
148	7425746.62	1542970.83	BOS
149	7425698.38	1542923.87	TOC
150	7425698.34	1542904.48	TOC
151	7425718.34	1542904.48	TOC
152	7425718.38	1542934.48	TOC
153	7425698.38	1542934.48	TOC
154	7425718.38	1542943.89	TOC
155	7425718.38	1542951.26	TOC
156	7425698.38	1542959.39	TOC
157	7425717.53	1542980.08	BLD
158	7425748.62	1542980.12	BLD
159	7425748.48	1543072.46	BLD
160	7425705.81	1543072.46	BLD
161	7425705.81	1543047.37	BLD

Point Table

Point #	Northing	Easting	Description
162	7425717.53	1543047.37	BLD
163	7425758.64	1543119.67	TOC
164	7425734.75	1543093.49	TOC
165	7425714.75	1543093.49	PVR
166	7425738.64	1543093.49	PVR
167	7425738.64	1543072.46	PVR
168	7425728.64	1543078.49	PVR
169	7425718.38	1543078.48	PVR
170	7425698.38	1543078.48	PVR
171	7425698.38	1543093.48	PVR
172	7425678.38	1543080.96	TOC
173	7425678.38	1543058.94	TOC
174	7425678.38	1543073.85	TOC
175	7425698.38	1543071.26	TST
176	7425698.38	1543062.06	BST
177	7425678.38	1543064.84	BST
178	7425698.38	1543051.97	TOC
179	7425698.38	1543020.81	TOC
180	7425698.38	1542999.36	TOC
181	7425696.40	1542993.84	CPC
182	7425683.40	1542964.60	CPC
183	7425678.38	1542956.23	PVR
184	7425690.66	1542962.53	TOC
185	7425692.99	1542934.14	TOC
186	7425688.88	1542934.14	TOC
187	7425678.38	1542937.72	TOC
188	7425678.38	1542924.38	LSP
189	7425678.38	1542934.35	LSP
190	7425658.38	1542924.38	LSP
191	7425658.38	1542934.34	LSP
192	7425678.38	1542913.32	TC
193	7425678.38	1542894.38	TC
194	7425658.38	1542917.85	TOC
195	7425625.02	1542908.81	LSC
196	7425618.38	1542908.81	LCP
197	7425618.44	1542891.95	LCP
198	7425641.84	1542892.01	LSC
199	7425638.39	1542914.32	TOC
200	7425618.39	1542914.30	TOC
201	7425618.39	1542927.57	TOC
202	7425638.39	1542927.67	TOC
203	7425638.39	1542933.59	TOC
204	7425630.61	1542944.29	CPC
205	7425637.10	1542958.91	CPC
206	7425668.33	1542971.30	CPC
207	7425681.32	1543000.54	CPC
208	7425669.59	1543032.02	CPC
209	7425636.54	1543020.44	CPC
210	7425623.55	1542991.20	CPC
211	7425625.59	1543034.31	CPC
212	7425602.51	1542974.29	CPC
213	7425596.01	1542959.66	CPC
214	7425563.59	1542976.72	CPC
215	7425568.21	1542961.41	CPC
216	7425622.53	1542935.16	TOC
217	7425618.39	1542942.81	TOC
218	7425598.38	1542952.03	TOC
219	7425598.38	1542943.08	TOC
220	7425598.44	1542926.27	TOC
221	7425598.38	1542916.70	TOC
222	7425578.38	1542925.71	TOC
223	7425578.38	1542938.36	TOC
224	7425578.38	1542904.47	TOC
225	7425593.31	1542891.86	PVR

Point Table

Point #	Northing	Easting	Description
226	7425598.38	1542899.77	PVR
227	7425578.38	1542910.89	LSC
228	7425578.38	1542932.07	LSC
229	7425598.36	1542932.09	LSC
230	7425578.38	1542942.07	LSC
231	7425593.31	1542899.77	TOC
232	7425598.38	1542992.10	TOC
233	7425598.38	1543000.83	TOC
234	7425598.38	1543016.96	TOC
235	7425578.38	1543002.25	TOC
236	7425578.38	1542992.10	TOC
237	7425578.38	1543018.99	TOC
238	7425598.38	1543055.16	TOC
239	7425596.38	1543049.00	TOC
240	7425573.38	1543049.00	TOC
241	7425578.38	1543049.00	TOC
242	7425573.38	1543054.42	BST
243	7425573.38	1543059.44	TST
244	7425573.38	1543066.01	TOC
245	7425578.38	1543071.00	TOC
246	7425598.38	1543071.00	TOC
247	7425598.38	1543090.96	TOC
248	7425618.35	1543093.44	TOC
249	7425618.36	1543068.94	TST
250	7425618.38	1543061.23	BST
251	7425598.38	1543062.28	TST
252	7425596.38	1543054.82	BST
253	7425618.36	1543050.96	TOC
254	7425638.34	1543050.96	TOC
255	7425638.35	1543100.96	TOC
256	7425632.34	1543100.96	TOC
257	7425632.34	1543093.45	TOC
258	7425658.38	1543080.96	TOC
259	7425658.38	1543112.21	TOC
260	7425678.38	1543112.21	TOC
261	7425696.82	1543112.21	PVR
262	7425698.38	1543110.65	TOC
263	7425714.75	1543094.30	LSC
265	7425714.75	1543110.17	TOC
266	7425734.75	1543110.17	TOC
267	7425734.75	1543097.34	TOC
268	7425749.36	1543119.83	TOC
269	7425745.28	1543119.81	TOC
270	7425750.60	1543093.69	TOC
271	7425754.35	1543095.29	TOC
272	7425618.39	1543034.31	TOC
273	7425618.39	1543006.95	TOC
274	7425618.39	1542967.23	TOC
275	7425618.39	1542949.72	TOC
276	7425638.30	1543024.58	TOC
277	7425570.04	1543086.51	PVR
278	7425599.63	1543092.24	PVR
279	7425610.48	1543093.44	PVR
280	7425610.48	1543078.44	PVR
281	7425602.89	1543077.60	PVR
282	7425538.38	1542912.04	TOC
283	7425538.38	1542932.04	LSC
284	7425538.38	1542942.04	LSC
285	7425558.38	1542932.04	LSC
286	7425558.38	1542942.04	LSC
287	7425558.38	1542958.44	TOC
288	7425558.38	1542939.32	TOC
289	7425575.51	1542962.88	TOC
290	7425558.38	1542912.04	TOC

Point Table

Point #	Northing	Easting	Description
291	7425560.24	1542951.39	TOC
292	7425538.38	1542952.41	TOC
293	7425876.64	1542736.70	LSC
294	7425534.20	1542967.86	TOC
295	7425538.38	1543002.10	TOC
296	7425558.38	1543002.10	TOC
297	7425538.38	1542969.12	TOC
298	7425550.58	1543018.56	CPC
299	7425561.11	1543030.62	CPC
300	7425565.98	1543026.36	CPC
301	7425503.27	1543025.10	CPC
302	7425515.88	1543015.25	CPC
303	7425508.34	1543005.60	CPC
304	7425495.73	1543015.44	CPC
305	7425487.75	1542984.61	TOC
306	7425495.87	1542966.04	TOC
307	7425578.38	1543061.00	TOC
308	7425547.97	1543060.99	BST
309	7425558.38	1543062.53	TST
310	7425558.38	1543070.99	LSC
311	7425557.38	1543061.99	LSC
312	7425538.38	1543070.99	LSC
313	7425538.38	1543060.99	TOC
314	7425538.38	1543066.91	TOC
315	7425523.03	1543065.52	TST
316	7425518.38	1543063.16	TST
317	7425512.93	1543060.99	TST
318	7425503.12	1543055.12	TST
319	7425518.38	1543070.99	LSC
320	7425498.38	1543070.99	LSC
321	7425498.38	1543060.99	LSC
322	7425518.38	1543060.99	TOC
323	7425554.33	1543086.50	TOC
324	7425535.54	1543105.28	TOC
325	7425498.38	1543105.28	TOC
326	7425498.38	1543049.71	TOC
327	7425491.31	1543041.08	TST
328	7425487.13	1543024.23	BST
329	7425538.38	1543061.90	BST
330	7425518.38	1543042.10	TOC
331	7425498.38	1543042.10	TOC
332	7425498.38	1543032.10	TOC
333	7425518.38	1542979.89	TOC
334	7425518.38	1543017.99	TOC
335	7425482.85	1543018.04	TST
336	7425485.59	1543016.80	BST
337	7425437.42	1542994.52	TST
338	7425436.62	1542992.65	BST
339	7425472.02	1543030.67	BLD
340	7425472.02	1543055.77	BLD
341	7425415.51	1543055.77	BLD
342	7425415.51	1543030.67	BLD
343	7425478.39	1543070.97	TOC
344	7425478.39	1543105.28	TOC
345	7425458.39	1543070.96	TOC
346	7425458.39	1543105.28	TOC
347	7425438.44	1543060.96	TOC
348	7425438.38	1543090.96	TOC
349	7425418.44	1543060.96	TOC
350	7425418.39	1543085.51	TOC
351	7425418.80	1543105.28	TOC
352	7425433.12	1543090.96	TOC
353	7425407.08	1543081.61	LSC
354	7425368.20	1543106.22	LSC

Point Table

Point #	Northing	Easting	Description
355	7425363.25	1543101.32	LSC
356	7425386.14	1543081.65	LSC
357	7425394.16	1543072.02	LSC
358	7425372.57	1543087.86	TBC
359	7425388.55	1543071.98	TOC
360	7425360.73	1543106.25	TBC
361	7425360.77	1543071.95	TBC
362	7425366.99	1543076.10	TBC
363	7425379.61	1543060.35	TOC
364	7425391.14	1542963.04	TOC
365	7425374.65	1542932.62	TOC
366	7425371.91	1542932.24	TBC
367	7425360.72	1542941.59	TBC
368	7425360.72	1542950.86	TBC
369	7425360.85	1542899.67	TBC
370	7425374.37	1542919.06	TBC
371	7425392.06	1542930.87	TOC
372	7425384.92	1542940.96	TOC
373	7425398.42	1542940.96	TOC
374	7425398.42	1542956.41	TOC
375	7425398.42	1542968.69	TOC
376	7425418.39	1542952.76	TOC
377	7425418.39	1542922.10	TOC
378	7425438.39	1542922.10	TOC
379	7425438.39	1542942.01	TOC
380	7425418.38	1542918.67	LSC
381	7425408.83	1542923.52	LSC
382	7425380.38	1542905.52	LSC
383	7425401.38	1542899.64	LSC
384	7425416.38	1542899.65	LSC
385	7425441.03	1542899.67	LSC
386	7425423.38	1542917.29	LSC
387	7425428.38	1542942.01	TST
388	7425428.38	1542962.66	TST
389	7425449.14	1542942.01	TST
390	7425460.14	1542944.01	BST
391	7425430.38	1542944.01	BST
392	7425430.38	1542962.26	BST
393	7425438.39	1542953.70	TOC
394	7425444.06	1542967.02	TOC
395	7425444.47	1542988.44	TOC
396	7425458.39	1542952.10	TOC
397	7425458.39	1542945.01	TOC
398	7425478.39	1542952.10	TOC
399	7425478.39	1542899.69	TOC
400	7425458.39	1542899.68	TOC
401	7425458.39	1542943.01	TOC
402	7425428.38	1542987.85	PVR
403	7425438.38	1542986.97	PVR
404	7425438.38	1542976.53	PVR
405	7425437.44	1543015.82	BLD
406	7425482.94	1543055.54	BLD
407	7425482.94	1543015.82	BLD
408	7425498.38	1542963.16	TOC
409	7425498.38	1542942.01	LSC
410	7425498.38	1542932.01	LSC
411	7425518.38	1542932.01	LSC
412	7425518.38	1542942.01	LSC
413	7425518.38	1542951.83	TOC
414	7425518.38	1542912.10	TOC
415	7425498.38	1542912.10	TOC
416	7425505.02	1542955.47	LP
417	7425408.35	1542952.14	LP
418	7425416.17	1542981.93	LP

Point Table

Point #	Northing	Easting	Description
419	7425411.46	1543021.65	LP
420	7425408.38	1543061.88	LP
421	7425448.39	1543068.32	LP
422	7425488.39	1543068.33	LP
423	7425528.38	1543068.35	LP
424	7425519.07	1543039.10	LP
425	7425486.67	1543000.86	LP
426	7425554.45	1542955.43	LP
427	7425528.41	1542934.46	LP
428	7425568.41	1542934.46	LP
429	7425608.38	1542926.84	LP
430	7425601.38	1542955.37	LP
431	7425610.97	1543023.26	LP
432	7425568.39	1543068.51	LP
433	7425608.38	1543075.44	LP
434	7425648.39	1543075.45	LP
435	7425688.39	1543075.47	LP
436	7425651.16	1543052.08	LP
437	7425627.98	1543006.70	LP
438	7425623.26	1542967.91	LP
439	7425648.39	1542926.87	LP
440	7425688.39	1542926.90	LP
441	7425687.46	1542969.21	LP
442	7425695.83	1543031.38	LP
443	7425725.39	1543075.49	LP
444	7425728.38	1542926.93	LP
445	7425632.34	1543112.21	LSC
446	7425725.01	1542908.90	LSC
447	7425741.58	1542892.36	LSC
448	7425718.38	1542924.48	LSC
449	7425398.42	1543090.97	TOC
450	7425378.42	1543090.95	TOC
451	7425876.64	1542740.20	LSC
452	7425401.00	1542930.62	TOC
453	7425371.38	1542909.93	TOC
454	7425368.39	1542899.67	TOC
455	7425658.38	1542894.38	TOC
456	7425738.64	1542939.47	TOC
457	7425738.64	1542980.12	TOC
458	7425742.53	1542931.93	TOC
459	7425758.64	1542931.93	TOC
460	7425752.31	1542917.51	TOC
461	7425743.70	1542910.76	TOC
462	7425796.64	1542935.35	TOC
463	7425811.64	1542887.70	TOC
464	7425792.84	1542685.70	BOW
465	7425998.76	1542685.70	BOW
466	7425873.64	1542733.70	LSC
467	7425873.64	1542743.20	LSC
468	7425841.64	1542733.70	LSC
469	7425841.64	1542743.20	LSC
470	7425857.64	1542842.20	LSC
471	7425857.64	1542860.20	LSC
472	7425838.64	1542863.20	LSC
473	7425875.42	1542849.43	LSC
474	7425843.42	1542872.94	LSC
475	7425873.64	1542842.20	LSC
476	7425899.64	1542708.31	LSC
477	7425904.64	1542713.31	LSC
478	7425838.64	1542736.70	LSC
479	7426057.89	1542671.89	EOA
480	7425838.64	1542740.20	LSC
481	7425814.64	1542736.70	LSC
482	7425814.64	1542740.70	LSC

Point Table

Point #	Northing	Easting	Description
483	7426049.41	1542991.01	EOA
484	7425784.64	1542889.91	EOA
485	7425698.38	1542945.59	TOC
486	7425578.38	1543087.51	TOC
487	7425518.38	1543105.28	TOC
488	7425360.76	1543045.94	TBC
489	7425391.29	1542957.71	TOC
490	7425380.38	1542899.63	LSC
491	7425584.82	1542904.47	TOC
492	7425800.64	1542706.70	EOA
493	7425800.64	1542691.70	EOA
494	7425566.31	1543027.76	LP
495	7425649.02	1542939.21	LP
496	7425638.39	1542941.75	TOC
497	7425658.38	1542942.54	TOC
498	7425750.61	1542984.12	TOS
499	7425618.39	1543026.19	TOC
500	7425593.91	1543090.96	TOC
501	7425618.38	1543058.94	TOC
502	7425693.84	1542957.95	HP
513	7425583.89	1543074.60	GRT
514	7425583.89	1543066.99	GRT
520	7425520.85	1542907.68	GRT
521	7425472.76	1542905.21	GRT
522	7425567.09	1542909.04	GRT
523	7425605.86	1542900.52	GRT
524	7425537.15	1542993.87	GRT
525	7425581.45	1542990.27	GRT
526	7425611.85	1542988.57	GRT
527	7425640.74	1542900.52	GRT
528	7425681.22	1542900.54	GRT
529	7425722.55	1542898.54	GRT
530	7425781.23	1542674.17	GRT
531	7425805.64	1542696.70	GRT
532	7425751.02	1542898.54	GRT
533	7425751.02	1543010.85	GRT
537	7425602.50	1542987.86	HP
538	7425564.09	1542992.27	HP
545	7425510.29	1543032.10	TOC
546	7425498.38	1543018.84	TOC
547	7425409.80	1543106.28	TOC
548	7425800.76	1542684.20	GRT
549	7425538.38	1543040.33	PVR
550	7425520.84	1542979.68	TOC
551	7425536.39	1542968.52	TOC
552	7425558.38	1542952.72	TOC
553	7425558.38	1542975.15	TOC
554	7425555.46	1543014.31	CPC
555	7425450.49	1543015.82	BLD
556	7425463.44	1543015.82	BLD
557	7425482.94	1543030.90	BLD
558	7425482.94	1543042.64	BLD
559	7425398.42	1543086.89	LSC
560	7425391.75	1543090.96	LSC
561	7425368.83	1542904.53	TOC
562	7425375.53	1542911.92	TOC
563	7425388.38	1542920.04	TOC
564	7425667.77	1543032.83	CPC
565	7425676.09	1543046.64	CPC
566	7425674.26	1543047.45	CPC
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569	7425814.64	1542892.57	TOC
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572	7425900.64	1542851.31	TOC
573	7425390.27	1542970.33	TOC
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577	7425658.38	1543050.90	TOC
578	7425414.73	1542920.15	LSC
579	7425714.75	1543097.34	TOC
580	7425598.38	1542958.61	TOC
581	7425841.64	1542860.20	LSC
582	7425794.64	1542923.91	FOW
583	7425794.64	1542899.91	FOW

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Sheet Number:
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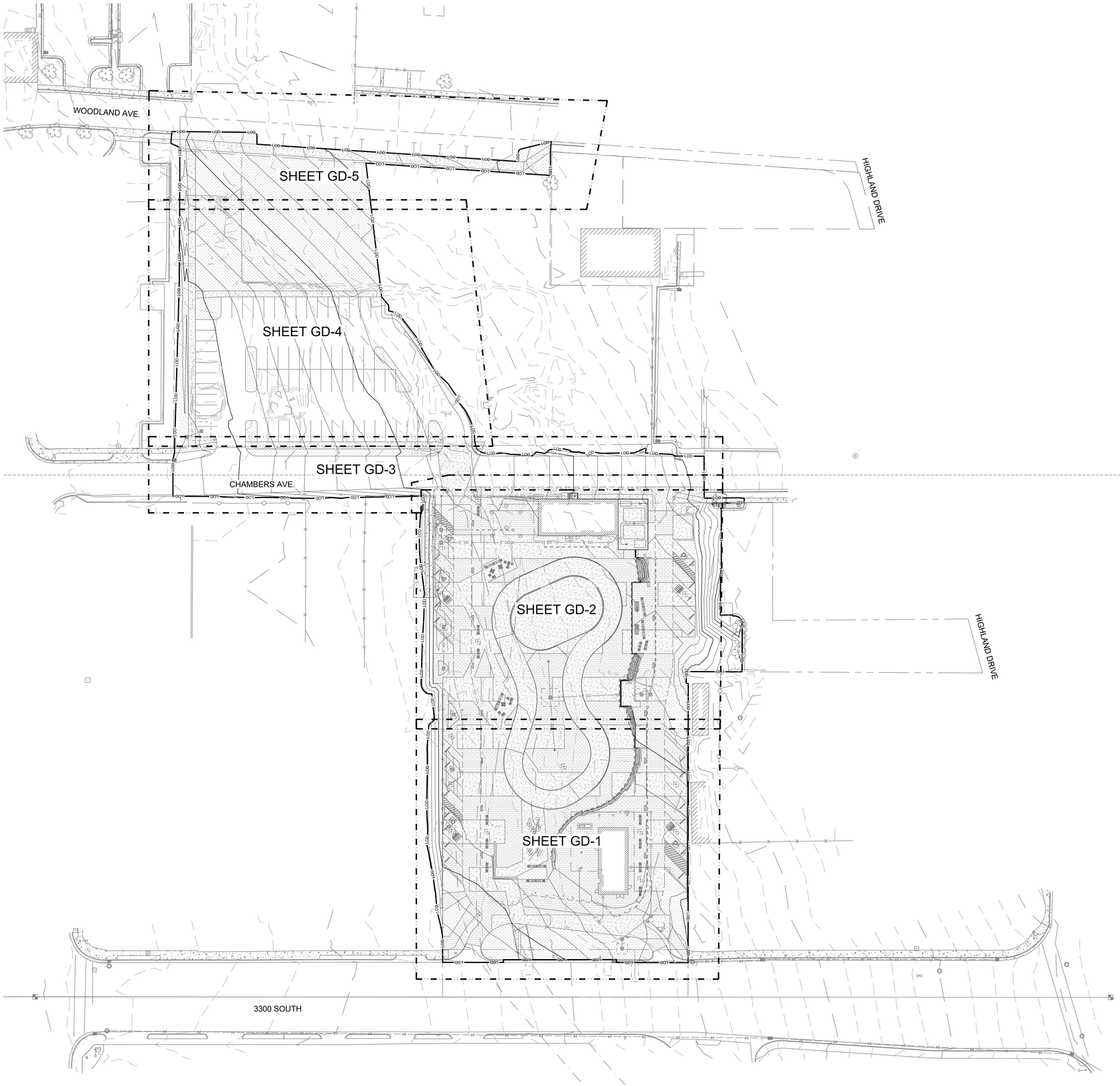

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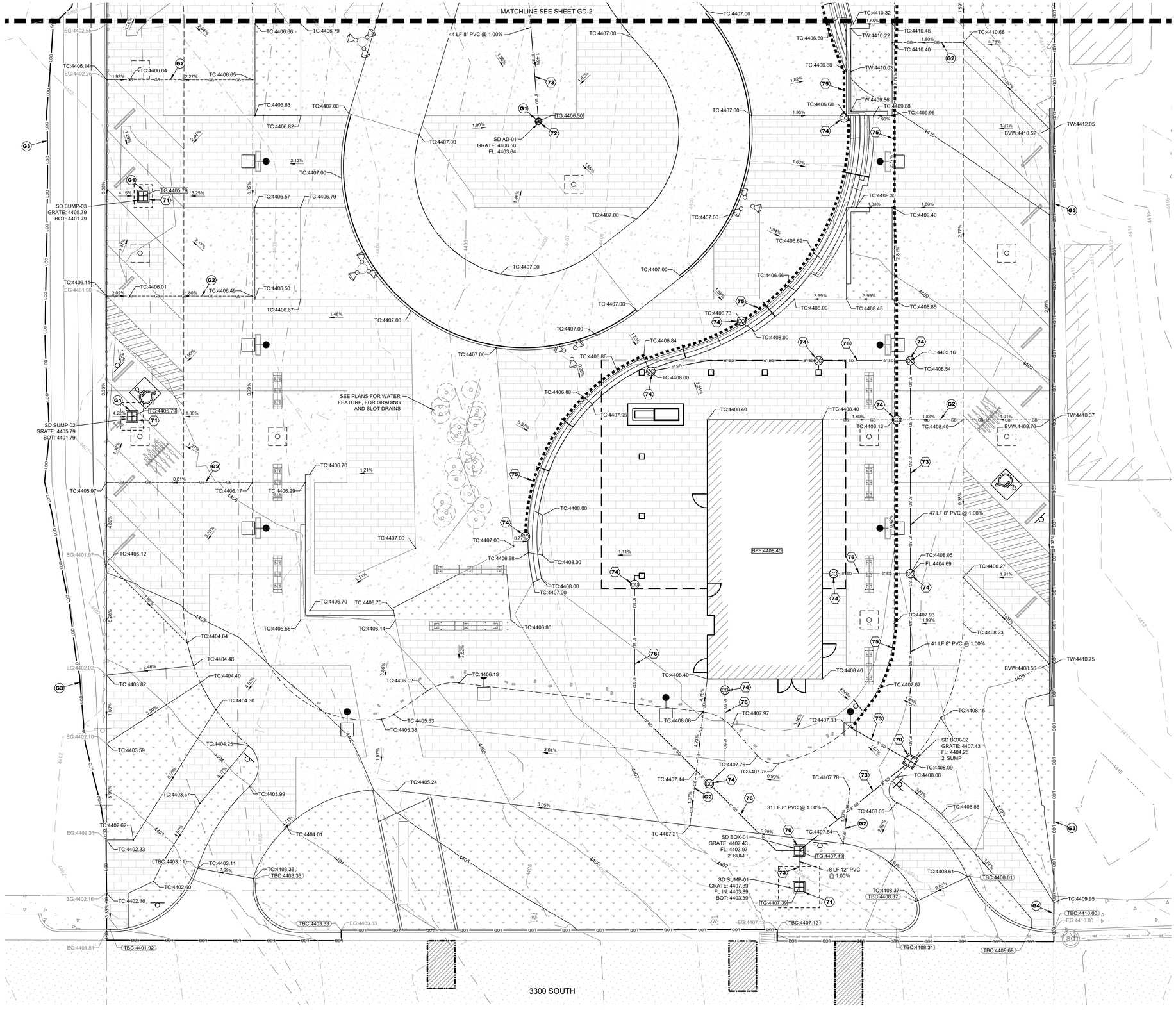

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GRADING & STORM DRAIN NOTES:

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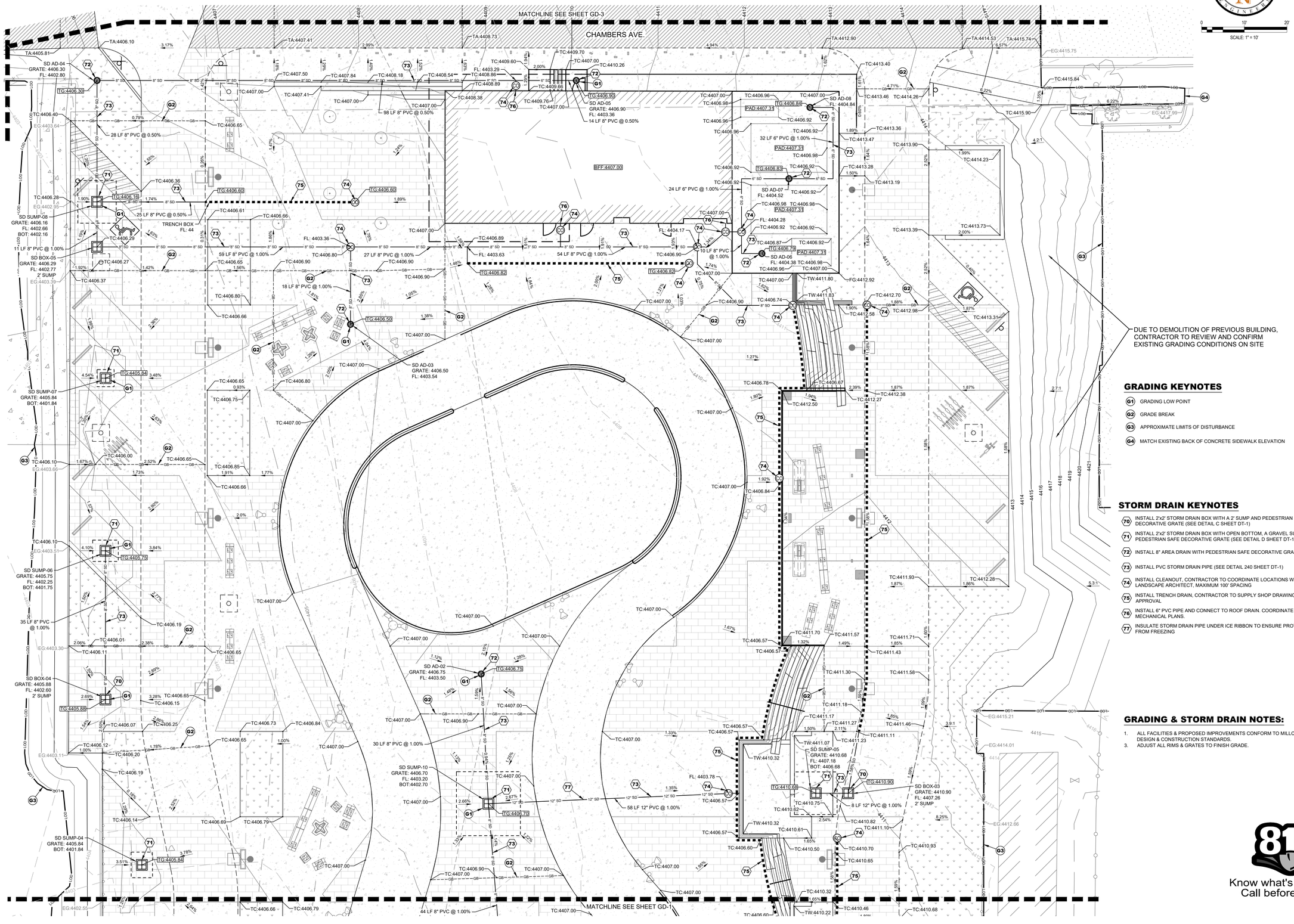

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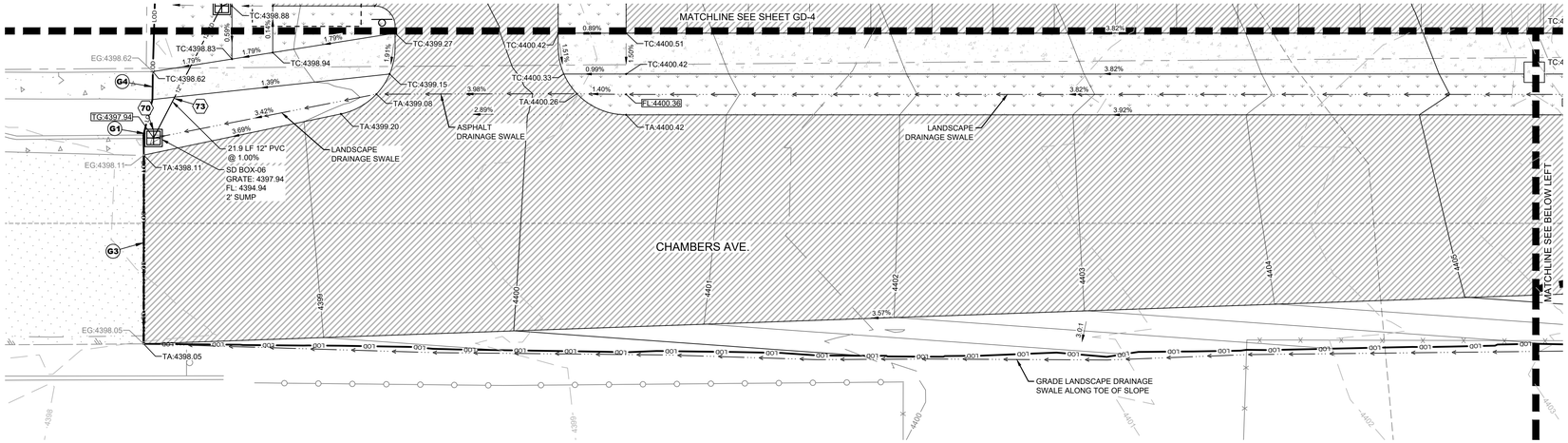

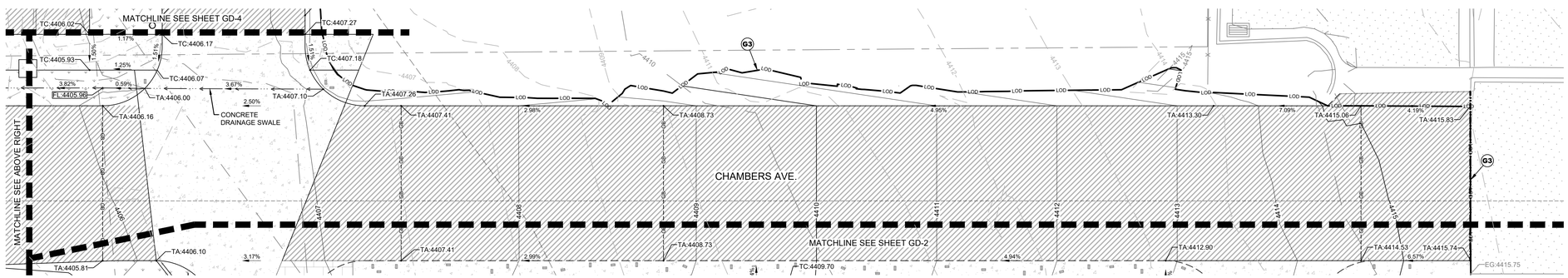

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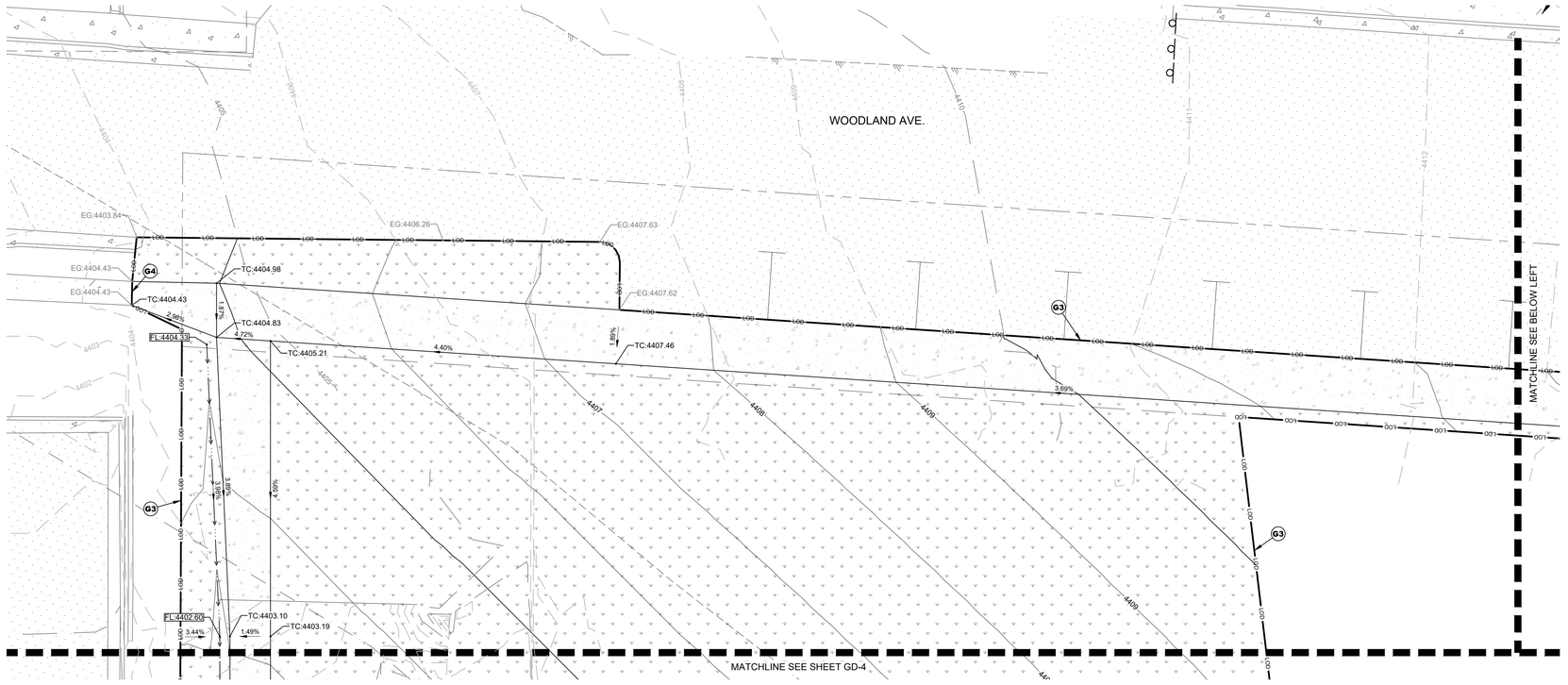

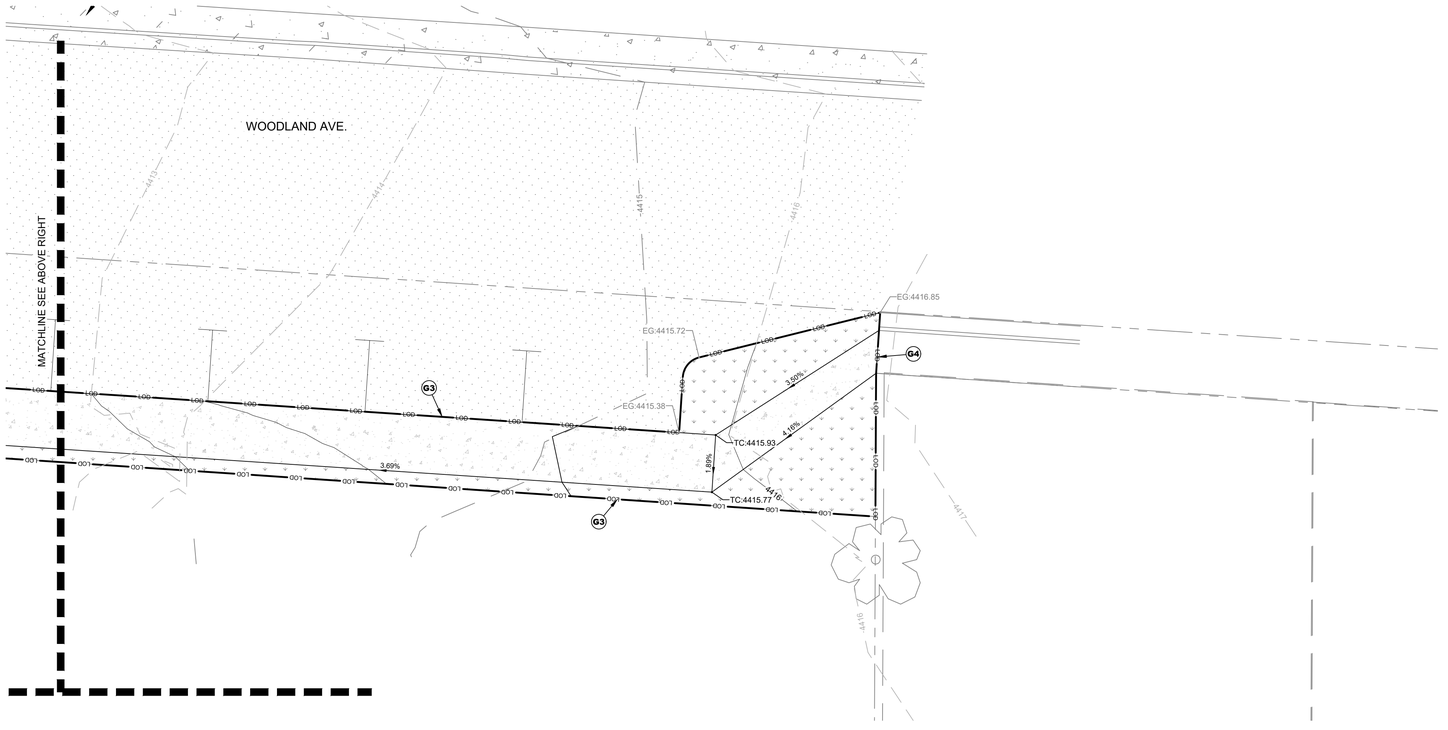

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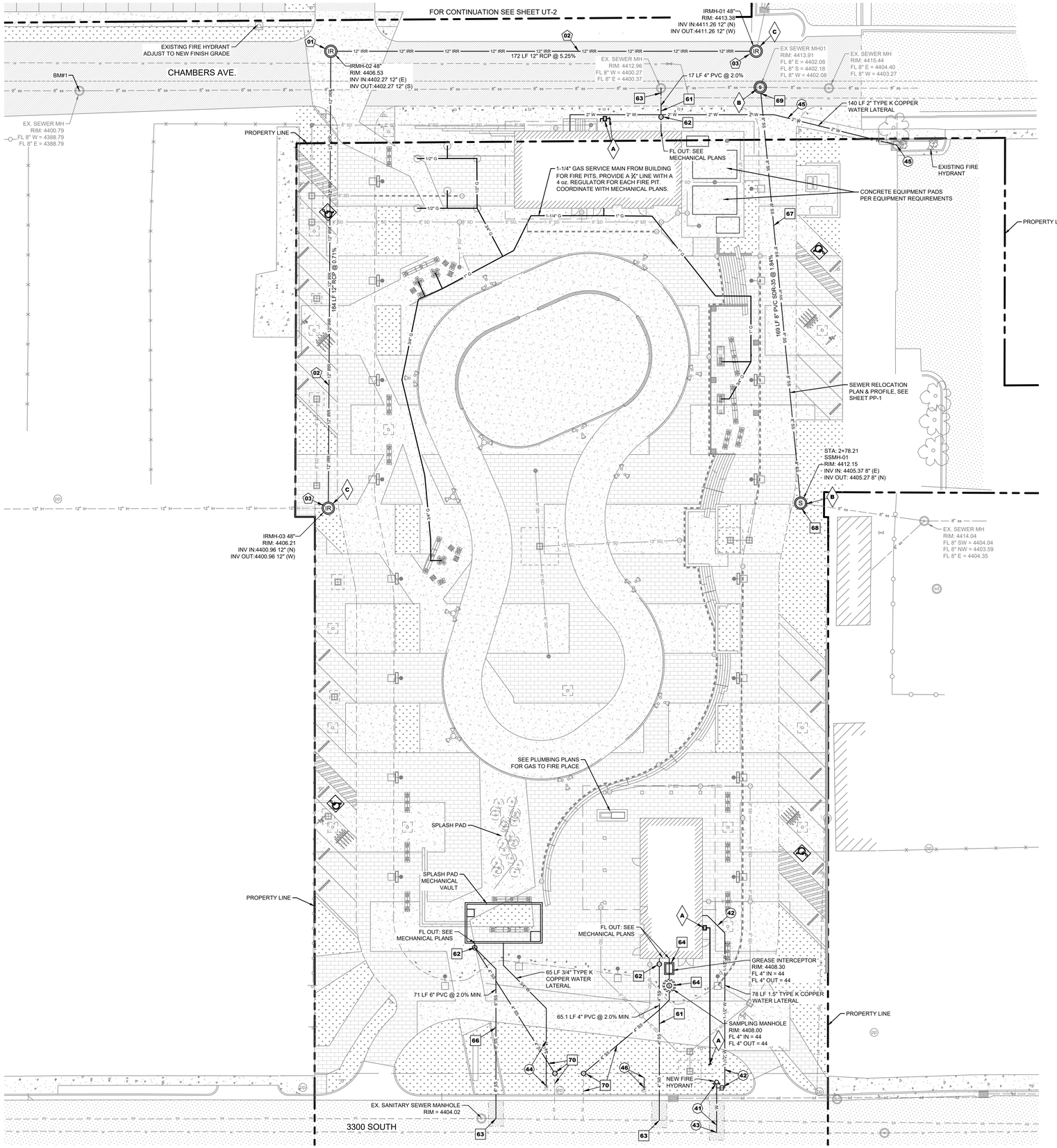

WATER KEYNOTES

41 INSTALL FIRE HYDRANT WITH 6" PVC PIPE (PER SALT LAKE CITY PUBLIC UTILITY STANDARDS)

42 INSTALL 1.5" METER AND TYPE K COPPER LATERAL (PER SALT LAKE CITY PUBLIC UTILITY STANDARDS)

43 HOT TAP CONNECT TO EXISTING WATER MAIN

44 INSTALL 3/4" TYPE K COPPER LATERAL, CONNECT TO EXISTING 3/4" METER

45 INSTALL 2" TYPE K COPPER LATERAL, CONNECT TO EXISTING 2" METER

46 INSTALL 3/4" TYPE K COPPER LATERAL FOR IRRIGATION CONNECTION, CONNECT TO EXISTING 3/4" METER, COORDINATE WITH LANDSCAPE PLANS

47 RELOCATE EXISTING FIRE HYDRANT BEHIND PROPOSED SIDEWALK (PER SALT LAKE CITY PUBLIC UTILITY STANDARDS)

SEWER KEYNOTES

61 INSTALL 4" SEWER LATERAL AT A MINIMUM 2.0% SLOPE, COORDINATE FL OUT WITH BUILDING MECHANICAL PLANS (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

62 INSTALL SANITARY SEWER CLEANOUT (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

63 CONNECT 4" LATERAL TO EXISTING 8" SEWER MAIN , INSTALL 8" X 4" REDUCER, CONTRACTOR TO VERIFY LOCATION AND DEPTH PRIOR TO STARTING CONSTRUCTION (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

64 INSTALL 125 GAL GREASE INTERCEPTOR (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

65 INSTALL 4" DIA. SAMPLING MANHOLE (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

66 INSTALL 6" SEWER LATERAL AT A MINIMUM 2.0% SLOPE, COORDINATE FL OUT WITH BUILDING MECHANICAL PLANS (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

67 INSTALL 8" PVC SEWER PIPE PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARDS

68 INSTALL 48" SANITARY SEWER MANHOLE, CUT AND CONNECT EXISTING PIPE (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

69 CORE EXISTING SEWER MANHOLE FOR NEW 8" SEWER PIPE AND REBUILD CONCRETE CHANNELS, IF SEWER MANHOLE IS NOT STRUCTURALLY CAPABLE OF BEING CORED, CONTRACTOR IS TO REPLACE MANHOLE PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARDS

70 ALTERNATE SEWER CONNECTION- CONTRACTOR TO LOCATE EXISTING SEWER LATERALS AND CAMERA THEM TO ENSURE THEY ARE USABLE PRIOR TO STARTING CONSTRUCTION ON NEW SEWER LATERALS. CONTRACTOR TO COORDINATE WITH ARCHITECT AND ENGINEER.

IRRIGATION KEYNOTES

01 FURNISH AND INSTALL IRRIGATION JUNCTION BOX

02 FURNISH AND INSTALL 12" RCP PIPE

03 CUT EXISTING RCP IRRIGATION PIPE AND INSTALL JUNCTION BOX

MISCELLANEOUS KEYNOTES

A INSTALL GAS METER AND LINE, COORDINATE SIZE AND LOCATION WITH MECHANICAL PLANS, COORDINATE EXISTING GAS LINE LOCATION WITH DOMINION PRIOR TO STARTING CONSTRUCTION

B EXISTING SEWER IS AN ACTIVE SERVICE MAIN AND WILL REMAIN OPERATIONAL DURING DEMOLITION ACTIVITIES. COORDINATE ALL SEWER WORK WITH MT. OLYMPUS IMPROVEMENT DISTRICT STANDARDS

C EXISTING IRRIGATION FLOW LINE ELEVATION IS APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD AND CONTACT ENGINEER WITH ACCURATE FLOW LINE INFORMATION FOR POSSIBLE REDESIGN.

BENCHMARK:

BM#1
ELEV: 4400.79
N: 7425764.7970'
E: 1542805.0140'
EXISTING SANITARY SEWER MANHOLE

UTILITY NOTES:

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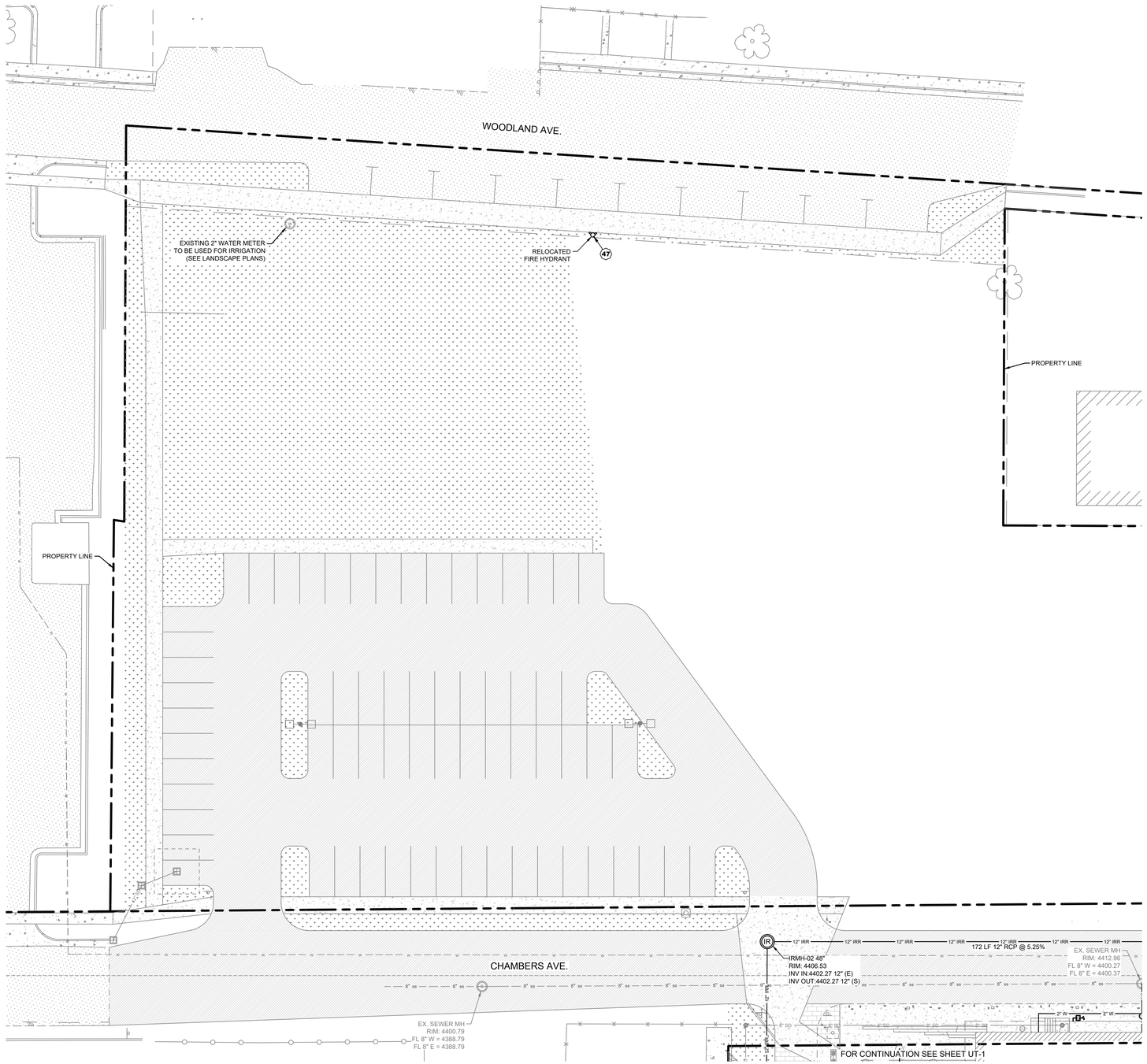

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SCALE: 1" = 20'

WATER KEYNOTES

41 INSTALL FIRE HYDRANT WITH 6" PVC PIPE (PER SALT LAKE CITY PUBLIC UTILITY STANDARDS)

42 INSTALL 1.5" METER AND TYPE K COPPER LATERAL (PER SALT LAKE CITY PUBLIC UTILITY STANDARDS)

43 HOT TAP CONNECT TO EXISTING WATER MAIN

44 INSTALL 3/4" TYPE K COPPER LATERAL, CONNECT TO EXISTING 3/4" METER

45 INSTALL 2" TYPE K COPPER LATERAL, CONNECT TO EXISTING 2" METER

46 INSTALL 3/4" TYPE K COPPER LATERAL FOR IRRIGATION CONNECTION, CONNECT TO EXISTING 3/4" METER, COORDINATE WITH LANDSCAPE PLANS

47 RELOCATE EXISTING FIRE HYDRANT BEHIND PROPOSED SIDEWALK (PER SALT LAKE CITY PUBLIC UTILITY STANDARDS)

SEWER KEYNOTES

61 INSTALL 4" SEWER LATERAL AT A MINIMUM 2.0% SLOPE, COORDINATE FL OUT WITH BUILDING MECHANICAL PLANS (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

62 INSTALL SANITARY SEWER CLEANOUT (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

63 CONNECT 4" LATERAL TO EXISTING 8" SEWER MAIN , INSTALL 8" X 4" REDUCER, CONTRACTOR TO VERIFY LOCATION AND DEPTH PRIOR TO STARTING CONSTRUCTION (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

64 INSTALL 125 GAL GREASE INTERCEPTOR (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

65 INSTALL 4' DIA. SAMPLING MANHOLE (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

66 INSTALL 6" SEWER LATERAL AT A MINIMUM 2.0% SLOPE, COORDINATE FL OUT WITH BUILDING MECHANICAL PLANS (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

67 INSTALL 8" PVC SEWER PIPE PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARDS

68 INSTALL 48" SANITARY SEWER MANHOLE, CUT AND CONNECT EXISTING PIPE (PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS)

69 CORE EXISTING SEWER MANHOLE FOR NEW 8" SEWER PIPE AND REBUILD CONCRETE CHANNELS, IF SEWER MANHOLE IS NOT STRUCTURALLY CAPABLE OF BEING CORED, CONTRACTOR IS TO REPLACE MANHOLE PER MT. OLYMPUS IMPROVEMENT DISTRICT STANDARDS

70 ALTERNATE SEWER CONNECTION: CONTRACTOR TO LOCATE EXISTING SEWER LATERALS AND CAMERA THEM TO ENSURE THEY ARE USABLE PRIOR TO STARTING CONSTRUCTION ON NEW SEWER LATERALS. CONTRACTOR TO COORDINATE WITH ARCHITECT AND ENGINEER.

IRRIGATION KEYNOTES

01 FURNISH AND INSTALL IRRIGATION JUNCTION BOX

02 FURNISH AND INSTALL 12" RCP PIPE

03 CUT EXISTING RCP IRRIGATION PIPE AND INSTALL JUNCTION BOX

MISCELLANEOUS KEYNOTES

A INSTALL GAS METER AND LINE, COORDINATE SIZE AND LOCATION WITH MECHANICAL PLANS, COORDINATE EXISTING GAS LINE LOCATION WITH DOMINION PRIOR TO STARTING CONSTRUCTION

B EXISTING SEWER IS AN ACTIVE SERVICE MAIN AND WILL REMAIN OPERATIONAL DURING DEMOLITION ACTIVITIES. COORDINATE ALL SEWER WORK WITH MT. OLYMPUS IMPROVEMENT DISTRICT STANDARDS

C EXISTING IRRIGATION FLOW LINE ELEVATION IS APPROXIMATE. CONTRACTOR TO VERIFY IN FIELD AND CONTACT ENGINEER WITH ACCURATE FLOW LINE INFORMATION FOR POSSIBLE REDESIGN.

BENCHMARK:

BM#1
ELEV: 4400.79
N: 7425764.7970'
E: 1542805.0140'
EXISTING SANITARY SEWER MANHOLE

UTILITY NOTES:

1. ALL FACILITIES & PROPOSED IMPROVEMENTS CONFORM TO MILLCREEK CITY STANDARDS.
2. ADJUST ALL RIMS & GRATES TO FINISH GRADE.
3. ALL SEWER IMPROVEMENTS TO CONFORM TO MT. OLYMPUS IMPROVEMENT DISTRICT STANDARD DETAILS.

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REV	DATE	DESCRIPTION

DESIGNED BY: JKS
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PROJ #: MILLCREEK 0001

Sheet Name:
UTILITY PLAN

Sheet Number:
UT-2

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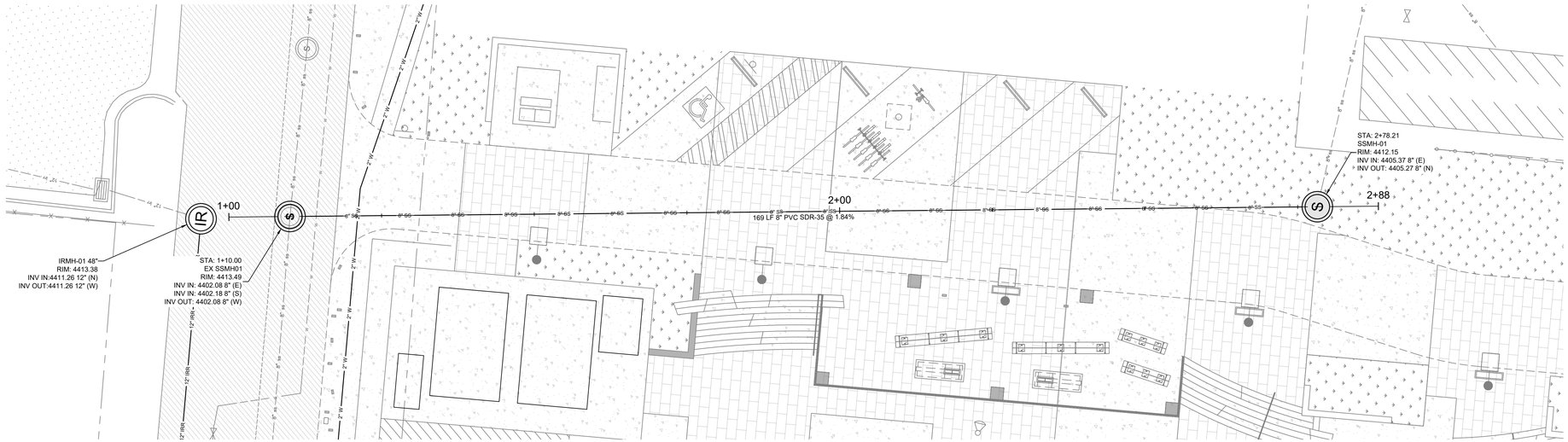

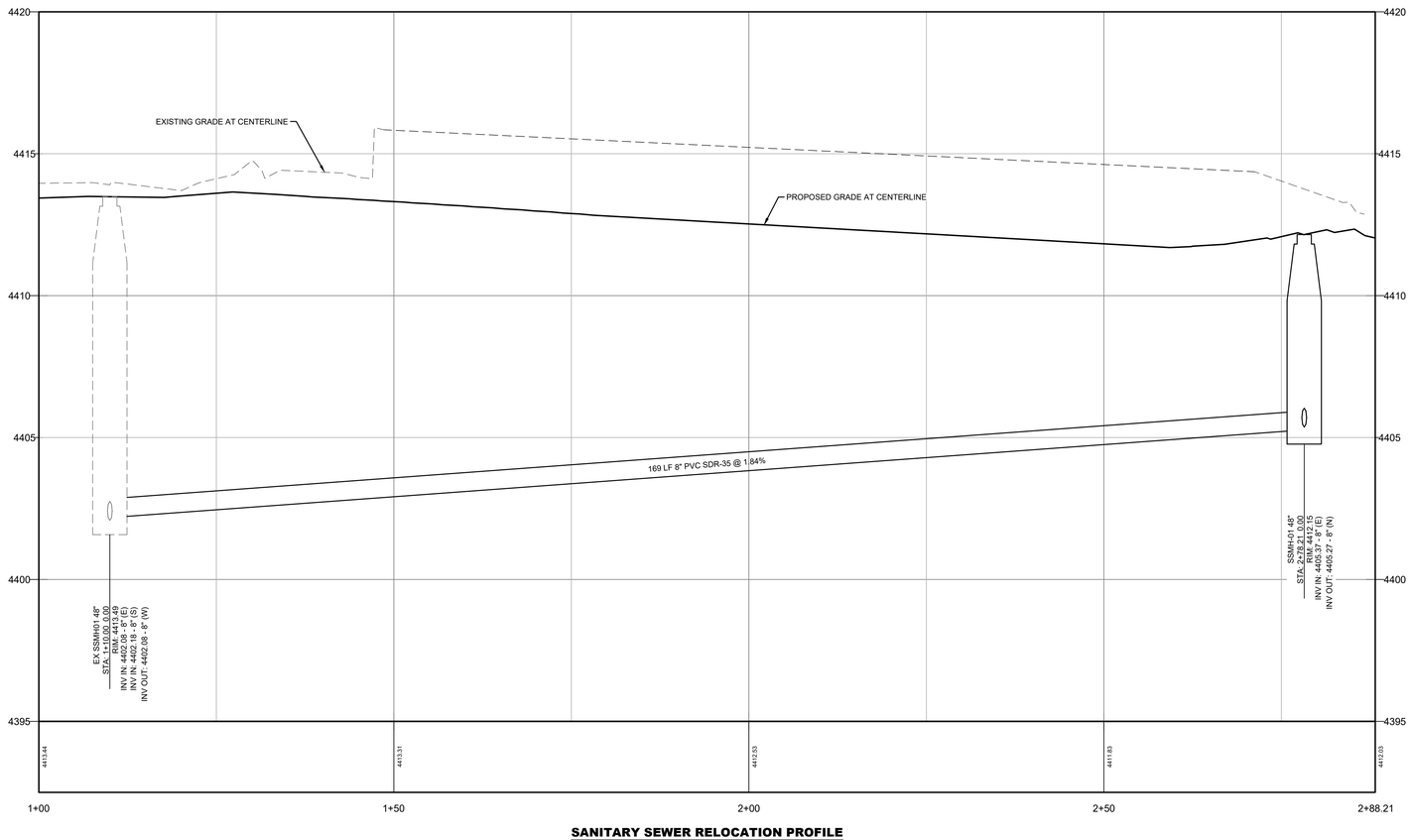

SANITARY SEWER RELOCATION PROFILE
1+00.00 to 2+88.21

0 10' 20'
SCALE: 1" = 10'

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SEWER RELOCATION
PLAN AND PROFILE

Sheet Number:
PP-1

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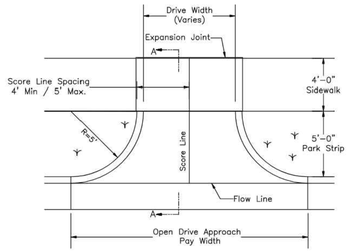
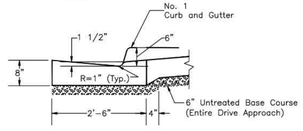


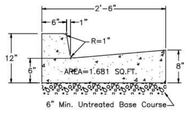
PLAN

SECTION A–A

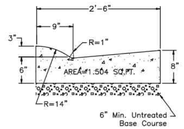


DETAIL A

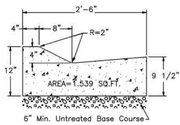
MILLCREEK	OPEN DRIVE APPROACH (FOR REPLACEMENT ONLY)	STANDARD PLAN 130 SHEET 2 OF 2



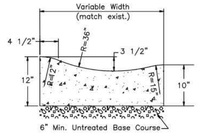
NO. 1 CURB AND GUTTER



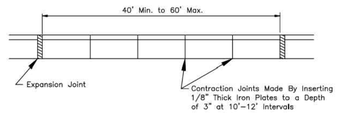
NO. 2 CURB AND GUTTER



NO. 3 CURB AND GUTTER



NO. 4 CURB AND GUTTER
(ROLL GUTTER REPLACEMENT ONLY)



CURB AND GUTTER JOINT DETAIL

MILLCREEK	CURB AND GUTTER	STANDARD PLAN 140 SHEET 2 OF 2

NOTES:

Materials, construction, and workmanship shall be in accordance with the current edition of "APWA Manual of Standard Specifications 2017 Edition", including addendum and modifications thereto, and as instructed by the Millcreek Public Works Director. Reference to specific sections of APWA does not limit requirements to that section.

PIPE: Pipe sizes and locations are as shown on plan and profile sheets, including flow-line elevations.

BACKFILLING TRENCHES: Granular backfill borrow (Common Fill) in accordance with APWA Section 33 05 20 (Backfilling Trenches) and meeting AASHTO M 145 A-1-a requirement

1. Non-plastic and well graded material.
2. Maximum aggregate size is 1 ½ inches for plastic pipe, 2 inches for all other pipes.
3. Compacted to 95% required all sides.

PIPE COVER: Pipe cover for all pipes shall be 2 feet minimum, as per APWA Section 33 41 00 (Storm Drainage Systems). Cover for Reinforced Concrete Pipe may be reduced to 1 foot with approval of the Millcreek Public Works Director.

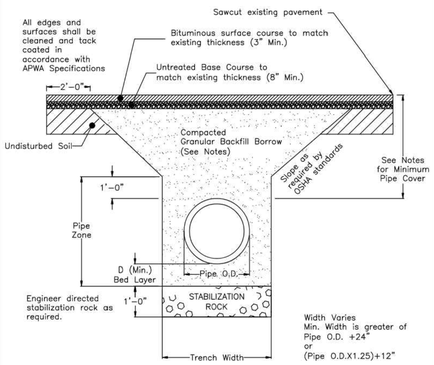
PEA GRAVEL: Pea gravel is not allowed in any part of the trench.

SLOPES AND SHORING: All aspects of trench excavation shall conform to current OSHA requirements.

STABILIZATION ROCK: Stabilization rock shall shall conform follows gradation:

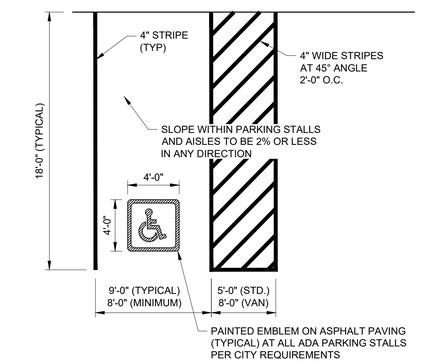
Sieve Size	% Passing
2"	95–100
1–1/2"	60–70
1"	40–50
1/2"	4–6

MILLCREEK	TRENCH SECTION	STANDARD PLAN 240 SHEET 1 OF 2

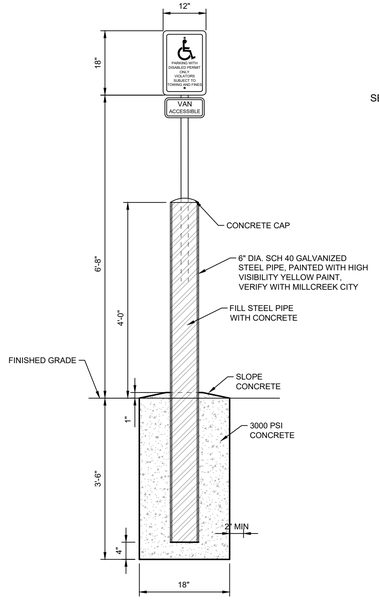


DEPTH OF BEDDING MATERIAL BELOW PIPE	
INSIDE DIA. OF PIPE	D (MIN.)
60" OR SMALLER	4"
66" AND LARGER	6"

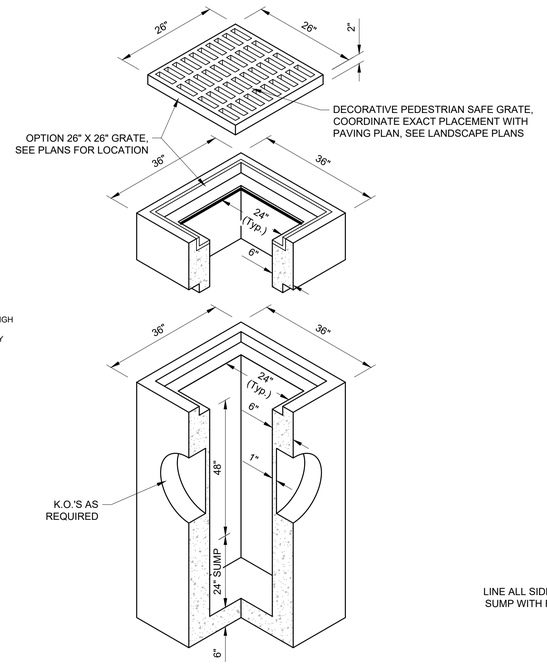
MILLCREEK	TRENCH SECTION	STANDARD PLAN 240 SHEET 2 OF 2



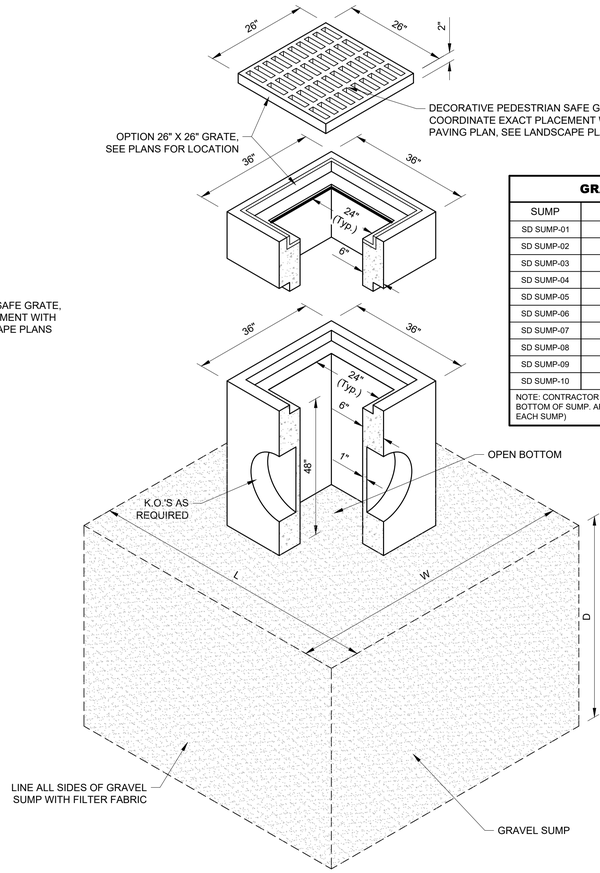
A — DISABLED PARKING STRIPING
SCALE: NONE



B — BOLLARD WITH EMBEDDED DISABLED PARKING SIGN
SCALE: NONE



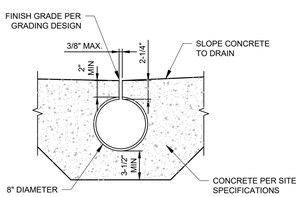
C — 2'X2' BOX WITH 2' SUMP
SCALE: NONE



GRAVEL SUMP TABLE			
SUMP	L (FT)	W (FT)	D (FT)
SD SUMP-01	9	9	10
SD SUMP-02	6	5	10
SD SUMP-03	5	4	10
SD SUMP-04	6	5	10
SD SUMP-05	11	11	10
SD SUMP-06	6	6	10
SD SUMP-07	4	4	10
SD SUMP-08	10	10	10
SD SUMP-09	18	17	10
SD SUMP-10	16	16	10

NOTE: CONTRACTOR TO EXCAVATE TO GRAVEL LAYER FOR BOTTOM OF SUMP. APPROXIMATELY 10 TO 12 FEET (FIELD VERIFY EACH SUMP)

D — 2'X2' BOX WITH GRAVEL SUMP
SCALE: NONE



NOTES:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF TRENCH DRAIN DESIGN TO ENGINEER FOR APPROVAL.
2. INSTALL CLEANOUTS AT A MINIMUM OF EVERY 100 FEET.

E — TRENCH DRAIN
SCALE: NONE

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Sheet Number:
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GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK AND SHALL NOTIFY THE ARCHITECT/ STRUCTURAL ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK SO AFFECTED.

2. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS ON THIS SHEET IN CASE OF CONFLICT.

3. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE BUILDING CODE, AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

4. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS. WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ARCHITECT/ENGINEER SHALL BE CONSULTED FOR CLARIFICATION.

5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED, PRIOR TO BEGINNING EXCAVATIONS.

6. PIPES, DUCTS, SLEEVES, CHASES, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, DUCTS, ETC., UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

7. TEMPORARY BRACING SHALL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING WIND. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE COMPLETE.

8. DURING AND AFTER CONSTRUCTION THE CONTRACTOR AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOAD.

9. NEITHER THE OWNER NOR THE ARCHITECT/STRUCTURAL ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

10. ANY OPTIONS OR SUBSTITUTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE, NO STRUCTURAL CHANGES OR SUBSTITUTIONS SHALL BE MADE IN THE FIELD FROM THE APPROVED CONSTRUCTION DOCUMENTS UNLESS WRITTEN APPROVAL OF SUCH CHANGES OR SUBSTITUTIONS IS OBTAINED FROM THE STRUCTURAL ENGINEER. IF CHANGES ARE MADE WITHOUT WRITTEN APPROVAL, SUCH CHANGES, ALONG WITH ANY ADDITIONAL COSTS, REPAIRS AND COORDINATION WITH OTHER AFFECTED ITEMS SHALL BE THE LEGAL AND FINANCIAL RESPONSIBILITY OF THE CONTRACTOR AND/OR SUBCONTRACTORS INVOLVED.

11. A REGISTERED CIVIL ENGINEER SHALL DESIGN AND BE RESPONSIBLE FOR ANY SUPPLEMENTAL FABRICATION DESIGNS OF BUILDING COMPONENTS. IT SHALL BE THE RESPONSIBILITY OF THE COMPONENT FABRICATOR TO COMPLY WITH ALL APPLICABLE REGULATIONS AND TO OBTAIN APPROVAL FROM THE NECESSARY GOVERNING AGENCIES ON SUCH DESIGNS. PRIOR TO CONSTRUCTION AND/OR FABRICATION OF THE ALTERNATE COMPONENTS, THE DESIGN SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD FOR CONFORMANCE WITH THE STRUCTURAL DESIGN AS APPROVED FOR BUILDING PERMIT.

FOUNDATION

1. SOIL TYPE - SEE SOILS REPORT, PROJECT NO. 800055001, PREPARED BY NINYO & MOORE, DATED JUNE 18, 2020.

2. THE SOILS REPORT IS TO BE CONSIDERED A PART OF THESE PLANS AND SHALL BE COMPLIED WITH BY THE CONTRACTOR.

3. IN THE EVENT THAT THE FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN THAT REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR THAT FOOTING AT NO ADDL EXPENSE TO THE OWNER.

4. THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.

5. UNLESS NOTED OTHERWISE BY THE SOILS REPORT, ALL REQUIRED BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF THE MAXIMUM DENSITY OBTAINABLE BY THE A.S.T.M. DESIGNATION D-1557 (LATEST EDITION) METHOD OF COMPACTION.

6. A COMPACTION REPORT MUST BE SUBMITTED TO AND APPROVED BY THE GOVERNING JURISDICTION PRIOR TO PLACEMENT OF ANY CONCRETE ON FILL.

7. UNLESS NOTED OTHERWISE BY THE SOILS REPORT, ALL UTILITY TRENCHES SHALL BE COMPACTED TO A MINIMUM OF 90% RELATIVE DENSITY.

8. THE SOILS ENGINEER SHALL SUBMIT VERIFICATION TO THE GOVERNING JURISDICTION THAT FOUNDATION CONSTRUCTION IS IN ACCORDANCE WITH THE RECOMMENDATIONS AND CONCLUSIONS OF HIS REPORT.

REINFORCING STEEL

1. REINFORCING STEEL - A.S.T.M. A-615 WITH GRADES AS LISTED BELOW:

MATERIAL	SIZE	GRADE
CONCRETE	ALL SIZES	60
MASONRY	ALL SIZES	60

2. ALL WELDED REINFORCING BARS SHALL BE A.S.T.M. A-706. USE LOW HYDROGEN ELECTRODES AS FOLLOWS:

WELDED MEMBER	ELECTRODE
REBAR TO REBAR	E80XX
REBAR TO A36 BASE METAL	E70XX

3. UNLESS NOTED OTHERWISE, MINIMUM PROTECTIVE COVER AS FOLLOWS:

CONDITION	CLEAR DISTANCE
ON EARTH SIDE - PLACED AGAINST EARTH	3"
ON EARTH SIDE WHEN FORMED	3"
STEEL IN SLAB ON GRADE	¢ SLAB

4. CONCRETE REINFORCING LAP SPLICES SHALL BE AS FOLLOWS:

LOCATION	f'c (PSI)	BAR SIZE (1)						
		#3	#4	#5	#6	#7	#8	#9
REBAR WITH A MIN 2" CLR COVER: FOUNDATION, SLAB-ON-GRADE, BEAMS, COLUMNS AND WALLS (2)	2,500	19	25	31	37	54	61	76
	3,000	17	23	28	34	49	56	69
	4,000	15	20	25	29	43	49	60
	4,500	14	19	23	28	40	46	56

NOTES:
(1) LENGTHS ARE IN INCHES
(2) BAR SPACING SHALL BE GREATER THAN 4 INCHES PLUS ONE BAR DIAMETER.
(3) BAR SPACING SHALL BE GREATER THAN 1.50 INCHES PLUS ONE BAR DIAMETER.

5. REINFORCING DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S MANUAL OF STANDARD PRACTICE, LATEST EDITION AND A.C.I. 315.

INDICATES A BAR WITH A BEND TURNED TOWARDS THE OBSERVER
INDICATES A BAR WITH A BEND TURNED AWAY FROM THE OBSERVER
INDICATES A LAPPED SPLICE IN THE SAME PLANE, NOT A BEND IN THE

6. ALL REINFORCING STEEL, WELDED WIRE FABRIC, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO AND WHILE PLACING CONCRETE OR GROUT.

7. UNLESS OTHERWISE NOTED OR SHOWN, SPACER TIES SHALL BE #3 TIES AT 72 IN. IN ALL BEAMS AND REINFORCED FOOTINGS.

REINFORCED CONCRETE

1. UNLESS NOTED OTHERWISE, THE SPECIFIED CONCRETE STRENGTH SHOWN IN THE FOLLOWING TABLE IS THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. THE AGGREGATE SHOWN IS THE MAXIMUM SIZE. THE SLUMP SHOWN IS THE MAXIMUM IN INCHES (REGULAR WEIGHT - 145 PSF).

CONSTRUCTION	STRENGTH (PSI)	AGGREGATE	H_2O/CEMENT RATIO	SLUMP
C.I.P. RETAINING WALL & RETAINING WALL FDN CONC.	4000 U.N.O.	1"	0.50	4

2. DRY PACK SHALL BE COMPOSED OF 1 PART PORTLAND CEMENT AND NO MORE THAN 3 PARTS SAND.

3. PORTLAND CEMENT SHALL CONFORM TO A.S.T.M. C 150 TYPE II. STRUCTURAL CONCRETE AGGREGATE SHALL CONFORM TO A.S.T.M. C 33 FOR STANDARD WEIGHT OR C 330 FOR LIGHTWEIGHT.

4. UNLESS NOTED OTHERWISE, CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR ALL STRUCTURAL CONCRETE WITH A DESIGN STRENGTH IN EXCESS OF 2,500 PSI.

5. ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT (CALCIUM CHLORIDE SHALL NOT BE USED). CONCRETE SHALL NOT COME IN CONTACT WITH ALUMINUM.

6. TIE ALL INSERTS, ANCHOR BOLTS OR OTHER EMBEDDED ELEMENTS SECURELY IN PLACE PRIOR TO PLACEMENT OF CONCRETE.

7. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.

8. CONCRETE MIXES SHALL COMPLY WITH THE STRUCTURAL REQUIREMENTS OF THE PLANS. MIXES SHALL BE DESIGNED BY A RECOGNIZED TESTING LABORATORY, AND SHALL BE SIGNED AND STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA. STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

STATEMENT OF SPECIAL INSPECTION

1. PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH THE APPROPRIATE SECTIONS OF CHAPTER 17 OF THE BUILDING CODE FOR THE ITEMS SHOWN IN THE TABLE BELOW ALONG WITH ANY ADDITIONAL INSPECTIONS AS REQUIRED BY THE OWNER, BUILDING OFFICIAL, ENGINEER OR ARCHITECT AS THEY SEE FIT.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.

3. WHERE SPECIAL INSPECTION IS REQUIRED, IT MUST BE PERFORMED BY A CERTIFIED SPECIAL INSPECTOR EMPLOYED BY THE OWNER & APPROVED BY THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL DEMONSTRATE COMPETENCE FOR THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION TO THE BUILDING OFFICIAL AND STRUCTURAL ENGINEER, PER SECTION 1704 OF THE BUILDING CODE. PROVIDE SPECIAL INSPECTION REPORTS TO THE STRUCTURAL ENGINEER WITHIN 7 DAYS FROM THE DAY OF INSPECTION.

4. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL FURNISH COPIES OF INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO HORROCKS ENGINEERS FOR REVIEW WITHIN SEVEN (7) DAYS OF THE WORK. EACH REPORT SHALL BE SIGNED BY A LICENSED ENGINEER OR ARCHITECT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED TO THE BUILDING OFFICIAL AND HORROCKS ENGINEERS. HORROCKS ENGINEERS SHALL BE NOTIFIED IMMEDIATELY OF ANY TEST WHICH INDICATES NON-COMPLIANCE WITH APPLICABLE CODES OR REQUIREMENTS OF THESE PLANS, PER SECTION 1704.2.4 OF THE BUILDING CODE.

5. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTORS KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE, TO THE BUILDING OFFICIAL AND TO R2H ENGINEERING, INC, PER SECTION 1704.2.4 OF THE BUILDING CODE.

6. FABRICATOR SHALL SUBMIT AN 'APPLICATION TO PERFORM OFF-SITE FABRICATION' TO THE INSPECTION SERVICES DIVISION FOR APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION.

7. FABRICATOR SHALL SUBMIT A 'CERTIFICATE OF COMPLIANCE' FOR OFF-SITE FABRICATION' TO THE INSPECTION SERVICES DIVISION PRIOR TO ERECTION OF FABRICATED ITEMS AND ASSEMBLIES. SPECIAL INSPECTION REQUIRED PER SECTION 1704.2 OF THE BUILDING CODE.

8. FABRICATION OF MEMBERS AND ASSEMBLIES DONE IN A FABRICATOR'S SHOP APPROVED BY INSPECTION SERVICES NEED NOT HAVE CONTINUOUS OR PERIODIC SPECIAL INSPECTION. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT THE 'CERTIFICATE OF COMPLIANCE' FORM TO INSPECTION SERVICES.

9. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE, IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PREFORMED BY A CITY'S BUILDING INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT APPROVAL OF THE CITY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.

10. FABRICATOR MUST BE REGISTERED AND APPROVED FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATOR'S SHOP.

11. SPECIAL INSPECTION IS REQUIRED FOR FABRICATION OF MEMBERS AND ASSEMBLIES DONE IN A SHOP OF A FABRICATOR WHICH IS NOT APPROVED BY INSPECTION SERVICES. AN APPLICATION TO PERFORM OFF-SITE FABRICATION MUST BE SUBMITTED TO AND APPROVED BY INSPECTION SERVICES.

12. SPECIAL INSPECTOR SHALL VERIFY THAT FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR FABRICATOR'S SCOPE OF WORK.

13. CONTRACTOR MUST PROVIDE A COMPREHENSIVE SCHEDULE FOR INSPECTIONS TO BE PREFORMED ON A PERIODIC BASIS. THE SPECIAL INSPECTOR MUST INSPECT THE MATERIALS AND VERIFY WELDING PROCEDURES AND QUALIFICATIONS OF WELDERS PRIOR TO THE START OF WORK.

14. SOILS SPECIAL INSPECTIONS SHALL BE PERFORMED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (SOILS ENGINEER OR GEOTECHNICAL ENGINEER OF RECORD), WHO HAS PREPARED THE APPROVED GEOTECHNICAL REPORT.

15. A GEOTECHNICAL INSPECTION REPORT (SIGNED, STAMPED AND DATED BY THE SOILS ENGINEER OR GEOTECHNICAL ENGINEER OF RECORD) SHALL BE SUBMITTED TO, AND APPROVED BY THE CITY'S BUILDING INSPECTOR PRIOR TO CONCRETE PLACEMENT.

16. SPECIAL INSPECTION (INSP) AND MATERIAL TESTING (TEST) MATRIX:

SPECIAL INSPECTOR:		FREQUENCY		SPECIAL INSPECT OR APPROVE D (INITIAL & DATE)
PHONE NUMBER:				
MATERIAL	TASK	CONTINUOUS	PERIODIC	
SOIL	VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	TEST	
	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	INSP	
	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS	-	TEST	
	VERIFY PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	INSP	-	
	PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUB-GRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	INSP	
CAST-IN-PLACE AND SITE PRE-CAST CONCRETE	REINFORCING STEEL AND PLACEMENT	-	INSP	
	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	INSP	
	VERIFY USE OF REQUIRED DESIGN MIX	-	INSP	
	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENTS TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TEST	-	
	CONCRETE AND/OR SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	INSP	-	
	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	INSP	
MASONRY LEVEL 1	VERIFICATION OF CERTIFICATION OF COMPLIANCE FOR MASONRY CONSTRUCTION REQUIRED.	-	INSP	
	VERIFY PROPORTIONS OF SITE-PREPARED MORTAR AND GROUT.	-	INSP	
	PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	-	INSP	
	VERIFY f'm AND f'AAC PRIOR TO CONSTRUCTION.	-	TEST	
	VERIFY PROTECTION OF MASONRY IN COLD WEATHER (BELOW 40°F) OR HOT WEATHER (ABOVE 90°F)	-	INSP	
	VERIFY SPECIFIED SIZE, GRADE AND TYPE OF REINFORCING.	-	INSP	
	VERIFY SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	INSP	
	VERIFY TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	-	INSP	
	PLACEMENT OF REINFORCEMENT AND CONNECTORS.	-	INSP	
	WELDING OF REINFORCING BARS	INSP	-	
	VERIFY CONSTRUCTION OF MORTAR JOINTS.	-	INSP	
	GROUT SPACE PRIOR TO GROUTING.	-	INSP	
	PLACEMENT OF GROUT.	INSP	-	

MASONRY:

1. CONCRETE MASONRY SHALL BE A.S.T.M. C-90 HOLLOW, LOAD BEARING UNITS, MEDIUM WEIGHT RUNNING BOND GROUTED WALL CONSTRUCTION CONFORMING TO THE REQUIREMENTS OF THE QUALITY ASSURANCE STANDARDS OF SECTION 2105 OF THE BUILDING CODE. UNLESS NOTED OTHERWISE, SPECIFIED CONCRETE MASONRY STRENGTH SHALL BE AS FOLLOWS:

MATERIAL	STRENGTH
MORTAR TYPE S	1800 PSI
GROUT	2000 PSI
CONTRETE BLOCK (CMU)	f'm = 1500 PSI

2. MORTAR MIX PROPORTIONS SHALL BE PER TABLE 2103.2(1) OF THE BUILDING CODE.

3. GROUT MIX PROPORTIONS SHALL BE PER TABLE 2103.3 OF THE BUILDING CODE OR ASTM C476.

4. ALL REINFORCING SHALL CONFORM TO THE REQUIREMENTS OF STANDARD SPECIFICATIONS A.S.T.M. A615 GRADE 60 AND SHALL LAP 56 BAR DIAMETERS (24" MINIMUM) IN ALL CASES. ALL BARS SHALL CONTINUE AROUND CORNERS AND INTERSECTIONS. ALL REINFORCING SHALL BE SUPPORTED OR INSTALLED TO ENSURE A MIN GROUT COVER OF 1-1/4 IN.

5. SEE PLANS AND DETAILS FOR TYPICAL SIZE AND SPACING OF VERTICAL AND HORIZONTAL REINFORCING AND REINFORCING AT OPENINGS. UNLESS DETAILED OTHERWISE, ALL STEEL SHALL BE CENTERED ON THE WALL. REINFORCING SHALL BE DOWELED TO THE SUPPORTING MEMBERS WITH THE SAME SIZE AND SPACING REINFORCING AS THAT CALLED FOR IN THE DRAWINGS OR THE STANDARD NOTES, UNLESS DETAILED OTHERWISE.

6. CLEAN VERTICAL GROUT CELLS AS MASONRY IS LAID AND BEFORE GROUTING.

7. BOLTS SHALL BE ACCURATELY SET WITH TEMPLATES PRIOR TO PLACING GROUT AND HELD IN PLACE TO PREVENT DISLOCATION DURING GROUTING.

8. ALL WALLS SHALL BE GROUTED SOLID. (U.N.O.)

9. GROUT SHALL TYPICALLY BE POURED IN LIFTS OF 4 FT. ALL GROUT SHALL BE CONSOLIDATED AT TIME OF POURING BY MECHANICAL VIBRATION AND THEN RECONSOLIDATED BY AGAIN VIBRATING BEFORE PLASTICITY IS LOST. WHERE GROUT LIFTS EXCEED 4 FT. IN HEIGHT, CLEANOUTS SHALL BE PROVIDED IN THE BOTTOM COURSE AT EVERY VERTICAL BAR AND NOT MORE THAN 32 IN O.C. LIFTS SHALL NOT EXCEED 8 FT.

10. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZ CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1 1/2 IN. BELOW THE TOP OF THE UPPERMOST UNIT.

11. PROVIDE VERTICAL FULL HEIGHT BARS AT THE SIDES OF WALL OPENINGS, CORNER, INTERSECTIONS, CONTROL JOINTS & WALL ENDS. HORIZONTAL BARS SHALL EXTEND 24 IN. MIN BEYOND THE CORNERS OF OPENINGS. USE THE FOLLOWING TYPICAL SIZES OF REINFORCING U.N.O.:

WALL	VERTICAL	HORIZONTAL
8"	2-#5	2-#4
12"	2-#5	2-#5

NOTES:
(1) TOP BARS ARE HORIZ BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW.
(2) LENGTHS ARE IN INCHES
(3) BAR SPACING SHALL BE GREATER THAN 4 INCHES PLUS ONE BAR DIAMETER.

REINFORCING DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S MANUAL OF STANDARD PRACTICE, LATEST EDITION AND A.C.I. 315.

ALL REINFORCING STEEL, WELDED WIRE FABRIC, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO AND WHILE PLACING CONCRETE OR GROUT. UNLESS OTHERWISE NOTED OR SHOWN, SPACER TIES SHALL BE #3 TIES AT 72 IN.

DESIGN CRITERIA

GOVERNING CODE	2018 INTERNATIONAL BUILDING CODE
STATE OF REGISTERED ENGINEER STAMP	UT
OCCUPANCY CATEGORY	II
WIND DESIGN DATA	103MPH EXPOSURE C
SEISMIC DESIGN INFO	Soil Site Class D Ss = 1.405 and S1 = 0.519 Fa = 1.0 and Fv = Null Sds = 0.937 and Sd1 = Null
SOILS DESIGN DATA	MINIMUM EMBED DEPTH = 30 in ALLOWABLE PASSIVE PRESSURE = 290 PCF ACTIVE EQUIVALENT FLUID PRESSURE = 38 PCF ACTIVE EQUIVALENT FLUID PRESSURE = 58 PCF ALLOWABLE BEARING PRESSURE = 1500 PSF ⅓ INCREASE FOR SHORT DURATION LOADS
SOILS REPORT	PROJECT NO. 800055001 BY NINYO & MOORE, DATED JUNE 18, 2020

epg design
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STRUCTURAL GENERAL NOTES

Sheet Number:
DT-2

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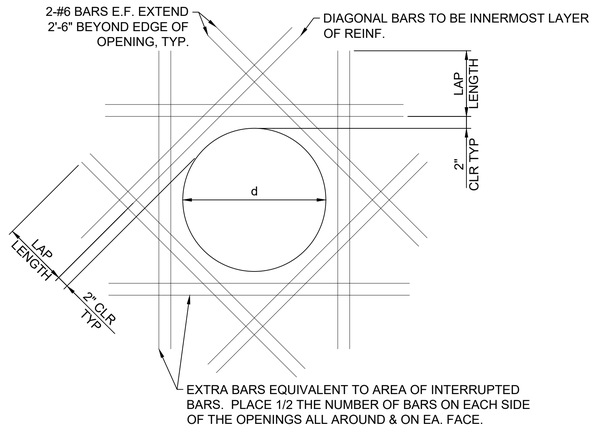
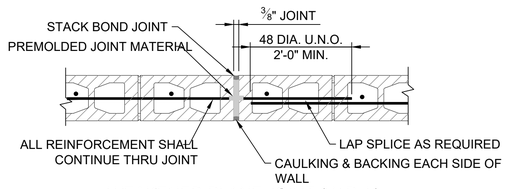


TYP REINF. AT CIRCULAR OPENINGS IN CONC

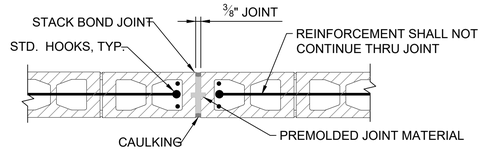
NTS

1 DT-3



WEAKENED PLANE JOINT (W.P.J.)

(NOTE: PROVIDE W.P.J. AT 25' MAXIMUM SPACING)



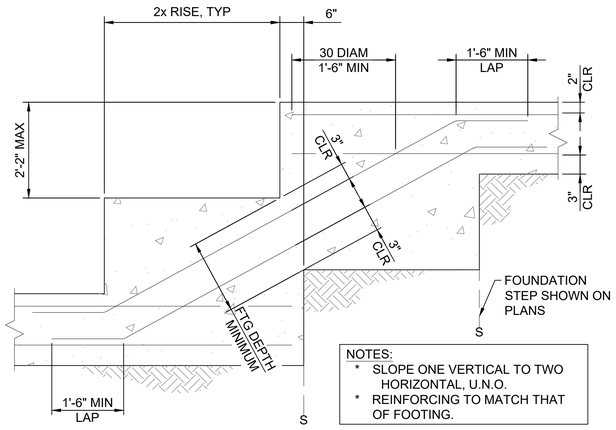
EXPANSION JOINT (E.J.)

(NOTE: PROVIDE E.J. AT EVERY THIRD W.P.J.)

TYPICAL MASONRY WALL JOINTS

NTS

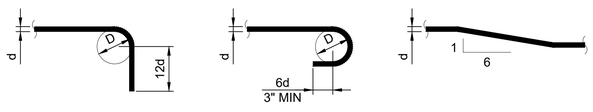
2 DT-3



TYP STEPPED FTG @ TOP & BOT

NTS

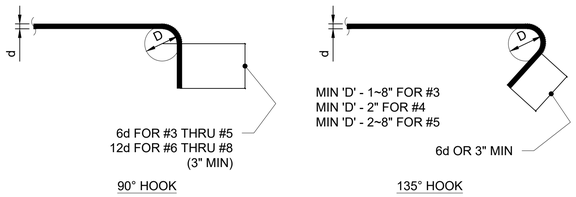
3 DT-3



D - 6d FOR #3 THRU #8
D - 8d FOR #9 THRU #11
D - 10d FOR #14 THRU #18

NOTE:
ALL BENDS SHALL BE MADE COLD

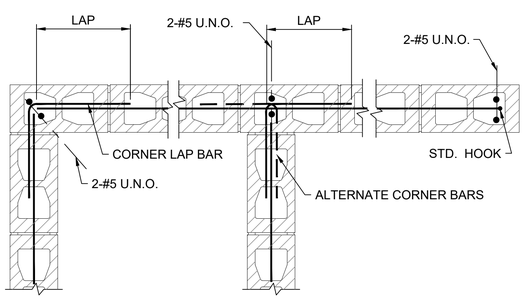
REBAR BENDS & END HOOKS



TIE & STIRRUPS END HOOKS

NTS

4 DT-3

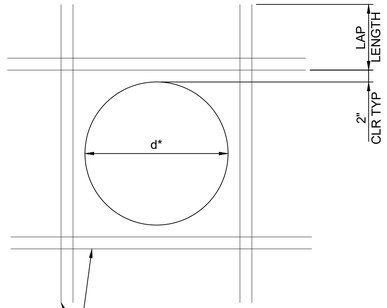


TYPICAL MASONRY REINFORCEMENT

NTS

5 DT-3

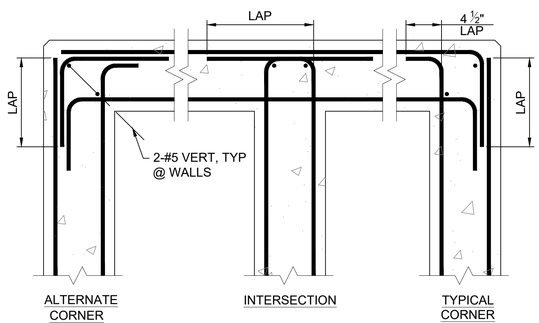
d* OPENING DIAMETER 12" MAX



TYP REINF. AT CIRCULAR OPENINGS IN MASONRY

NTS

6 DT-3



LAP: FOR CONCRETE: PER TABLE IN REINF STEEL NOTES ON THIS SHEET.

NOTE:
WHERE SINGLE LAYER OF REINFORCING OCCURS, BEND STEEL AS SHOWN FOR OUTSIDE BARS.

REINF AT INTERSECTION OF CONC. WALLS, FTGS, & BMS

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7 DT-3

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Owner's Representative:
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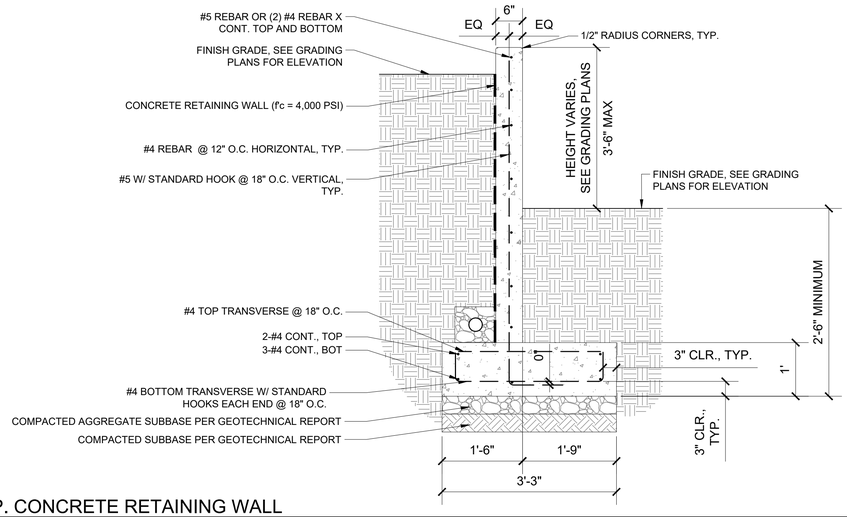
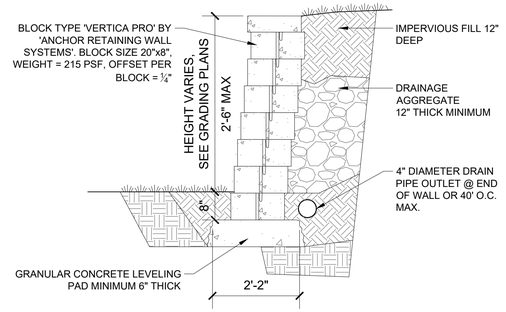


C.I.P. CONCRETE RETAINING WALL

3/4" = 1'-0"

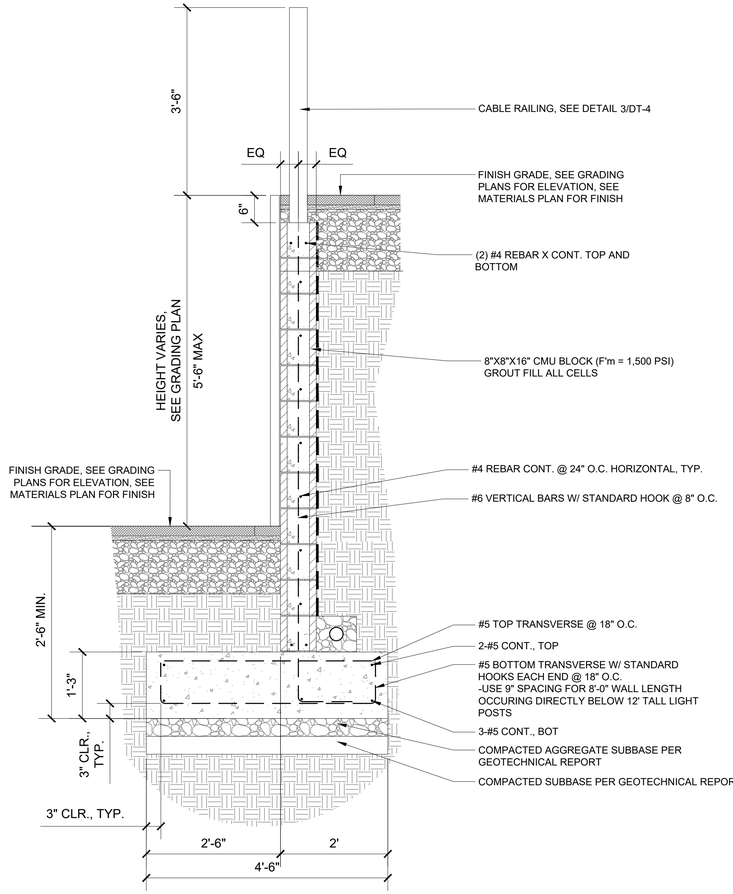
1 DT-4



TEMPORARY GRAVITY RETAINING WALL

NTS

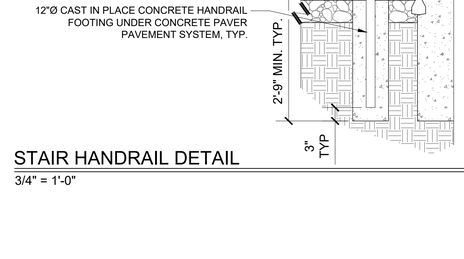
2 DT-4

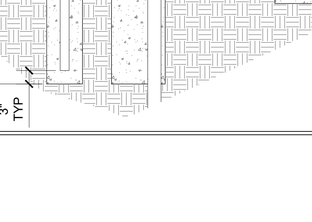


CMU BLOCK RETAINING WALL WITH STONE VENEER

3/4" = 1'-0"

5 DT-4





OVERLOOK RAILING

3/4" = 1'-0"

3 DT-4

EMBEDDED I-BEAM BOLLARDS

NTS

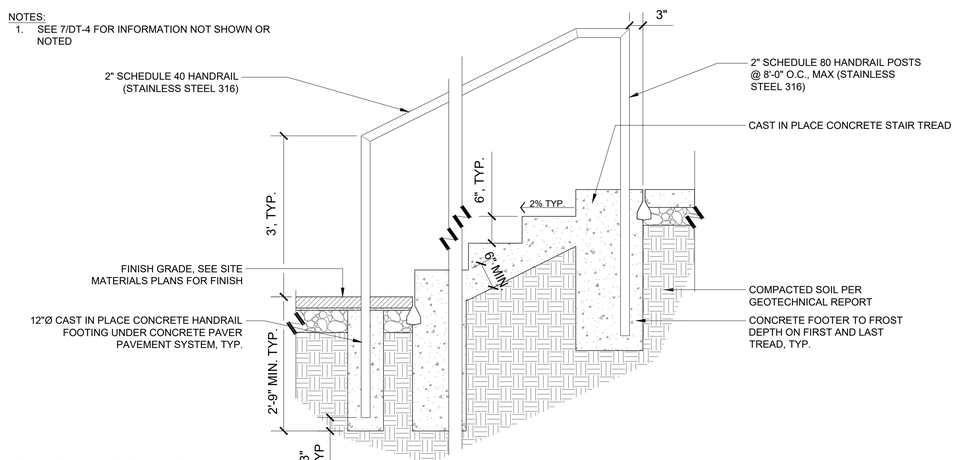
4 DT-4

CMU BLOCK RETAINING WALL WITH STONE VENEER

3/4" = 1'-0"

5 DT-4

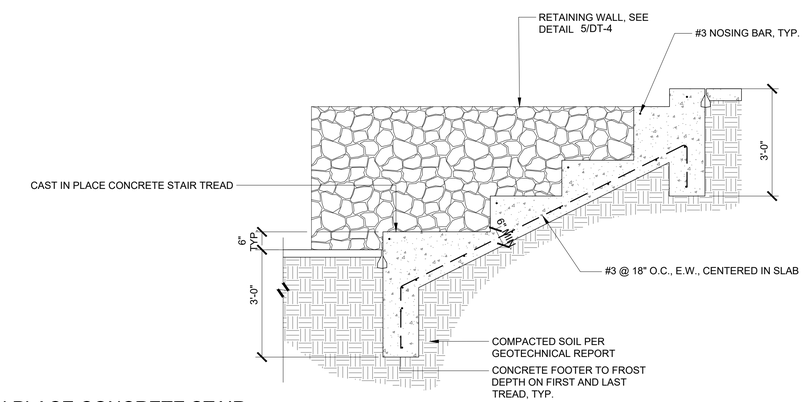
NOTES:
1. SEE 7/DT-4 FOR INFORMATION NOT SHOWN OR NOTED



STAIR HANDRAIL DETAIL

3/4" = 1'-0"

6 DT-4



CAST IN PLACE CONCRETE STAIR

1/2" = 1'-0"

7 DT-4

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Sheet Name:
SITE STRUCTURAL DETAILS

Sheet Number:
DT-4

1 ICE SUPPORT BUILDING 3D VIEW

WPA architecture

ARCHITECT
FALLON
5403169-0301
10.12.2018
date
STATE of UTAH

MILLCREEK CITY
3330 Soiuth 1300 East
Millcreek UT 84106

Owner's Representative:
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CANYON RIM • MT. OLYMPUS

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XXXXX
MILLCREEK, UT 84005

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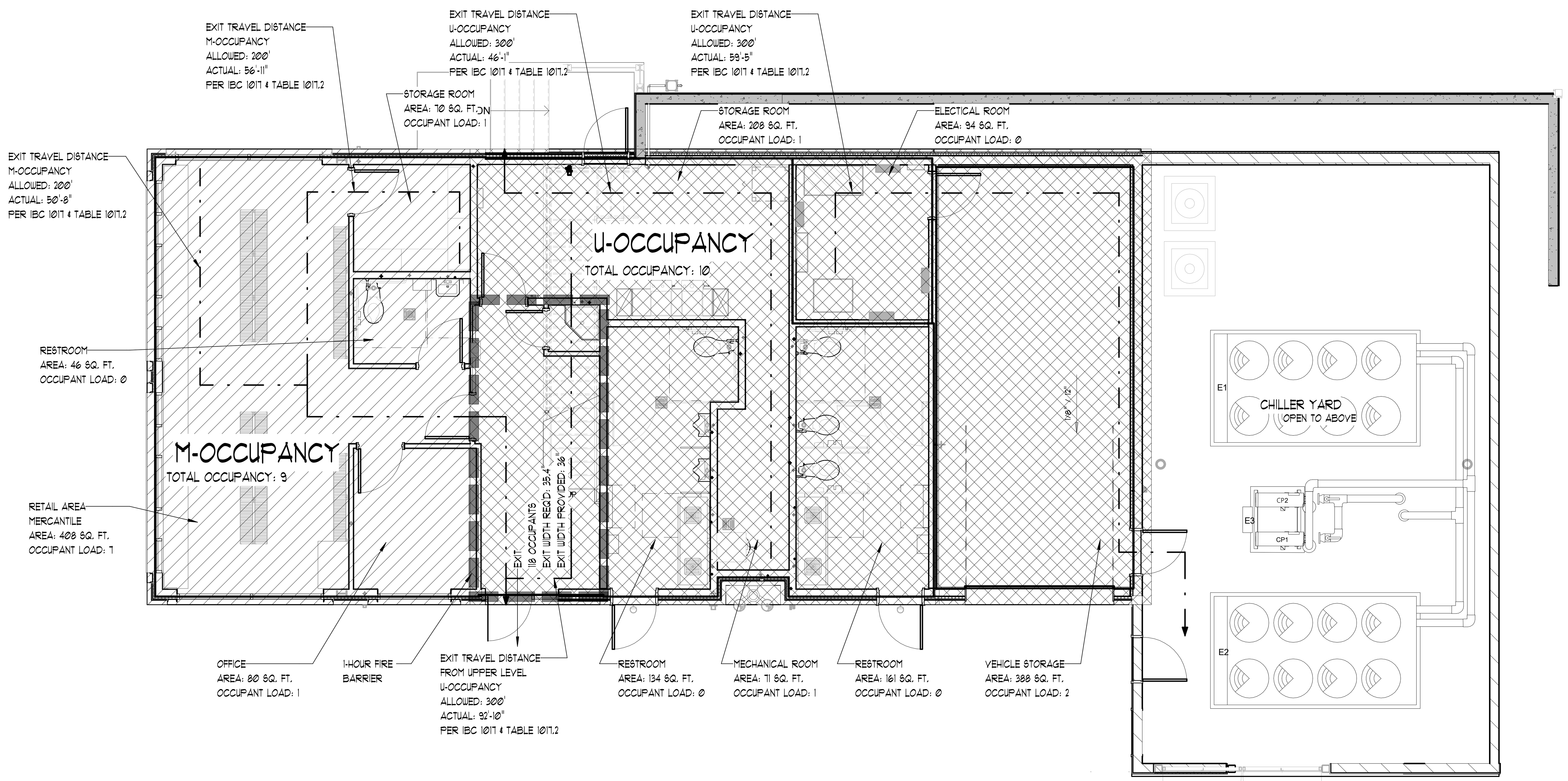
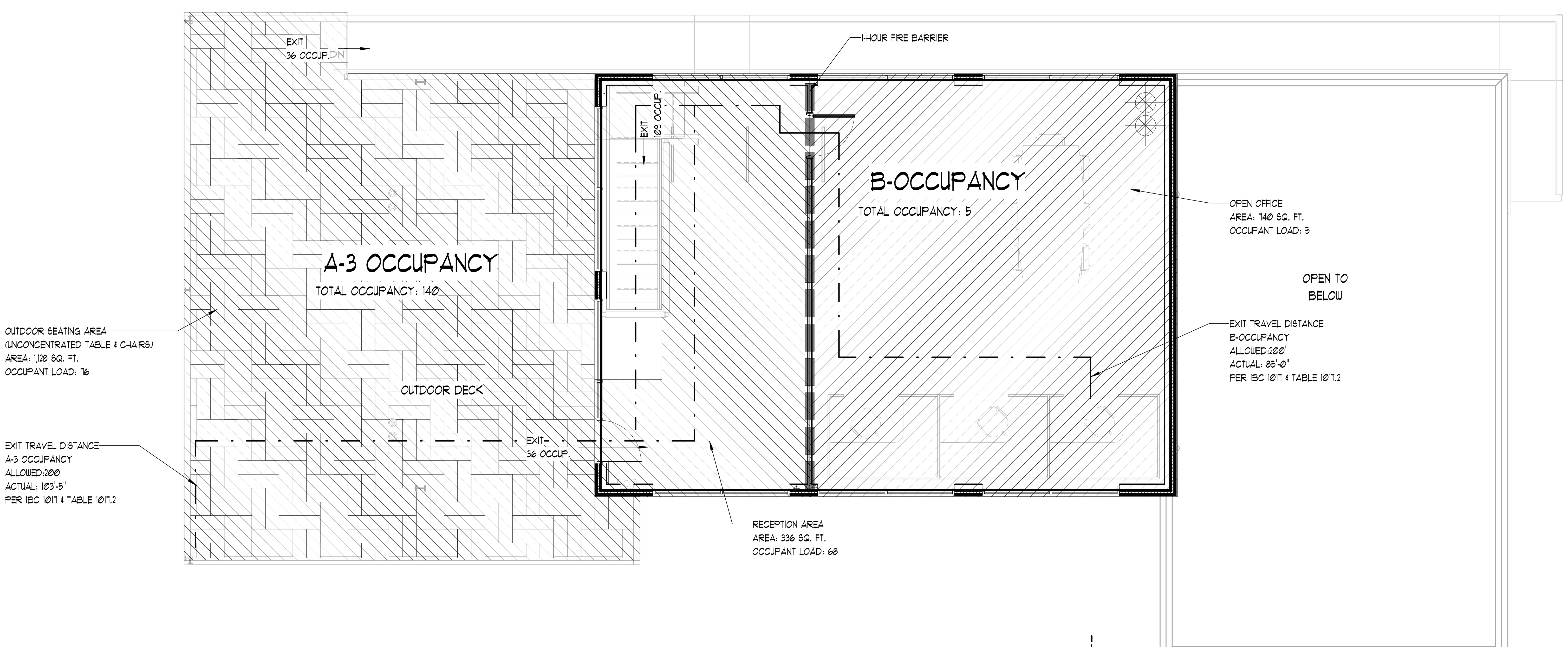
Sheet Name: ICE SUPPORT BUILDING 3D VIEW

Sheet Number: G1.1



1 CODE ANALYSIS - MAIN LEVEL
3/16" = 1'-0"



2 CODE ANALYSIS - UPPER LEVEL
3/16" = 1'-0"

CODE ANALYSIS

APPLICABLE CODES

2018 INTERNATIONAL BUILDING CODE (IBC)	2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL PLUMBING CODE	2017 NATIONAL ELECTRICAL CODE (NEC)
2018 INTERNATIONAL MECHANCIAL CODE	AMERICAN'S WITH DISABILITIES ACT
2018 INTERNATIONAL ENERGY CONSERVATION CODE	ICC/ANSI A117.1 - 2009

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

OCCUPANCIES (NON-SEPARATED) A-3, B, M, S-2, U

CONSTRUCTION TYPE: V-B

AREA OF BUILDING (IBC CHAPTER 5)

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

LOCATION:	RETAIL	OFFICE	STOR/MECH/REST	TOTAL FINISHED:
MAIN FLOOR	660 SQ. FT.	95 SQ. FT.	1,379 SQ. FT.	2,134 SQ. FT.
UPPER FLOOR	0 SQ. FT.	1,307 SQ. FT.	0 SQ. FT.	1,307 SQ. FT.
SUB-TOTALS:	660 SQ. FT.	1,402 SQ. FT.	1,379 SQ. FT.	3,441 SQ. FT.

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

LOCATION:	A	B	M	U	TOTAL FINISHED:
MAIN LEVEL	0 SQ. FT.	0 SQ. FT.	686 SQ. FT.	1,447 SQ. FT.	2,133 SQ. FT.
UPPER LEVEL	1,128 SQ. FT.	1,307 SQ. FT.	0 SQ. FT.	0 SQ. FT.	2,435 SQ. FT.
SUB-TOTALS:	1,128 SQ. FT.	1,307 SQ. FT.	686 SQ. FT.	1,447 SQ. FT.	4,568 SQ. FT.

ALLOWABLE BUILDING AREA (IBC SECTION 506)

B OCCUPANCY, NS: 9,000 SQ. FT. (ALLOWABLE AREA PER FLOOR)

AREA CALCULATIONS

AREA MODFICATIONS 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 STORIES	2 STORY
HEIGHT IN FEET	40' - 0"	25'-3"

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 (TABLES 601 AND 602) NOT REQUIRED

NOTE: FIRE SPARATION 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 DISTANCES ARE GREATER THAN 20 FEET AS SHOWN ON IBC TABLE 705.8.

OCCUPANCY SEPARATIONS (TABLE 508.4)

NONE REQUIRED

FIRE RATED CONSTRUCTION (IBC TABLE 601)

BUILDING ELEMENT	RATING	CODE REFERENCE
HORIZONTAL SEPARATION (R OCCUPANCY ONLY)	NON-RATED	SECTION 420.3
OCUPANCY 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 / TABLE 705.8
FIRE WALLS	NOT REQUIRED	TABLE 706.4
FIRE BARRIERS	1-HOUR	SECTION 707
FIRE PARTITIONS	NOT REQUIRED	SECTION 708
HORIZONTAL ASSEMBLIES	NON-RATED	SECTION 711.2
VERTICAL OPENINGS (FIRE BARRIER)	NOT REQUIRED	SECTION 712
SHAFT ENCLOSURES (FIRE BARRIER)	NOT REQUIRED	SECTION 713
AUTOMATC SPRINKLER SYSTEM	NOI	SECTION 903
FIRE RATED CORRIDORS (FIRE PARTITIONS)	NOT REQUIRED	TABLE 1020.1
INTERIOR EXIT STAIRWAYS (FIRE BARRIER)	NOT REQUIRED	SECTION 1023

DEFERRED SUBMITTALS

CERTAIN ITEMS REQUIRE APPROVAL OF THE AUTHORITY HAVING JURISDICTION 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 MANNERAND ALLOW SUFFICIENT TIME FOR REVIEW BY THE ARCHITECT AND CITY.

DEFERRED ITEMS:

A. PRE-ENGINEERED ROOF TRUSSES
B. FIRE ALARM SYSTEM

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DESIGNED BY: BF
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Sheet Name:
CODE ANALYSIS

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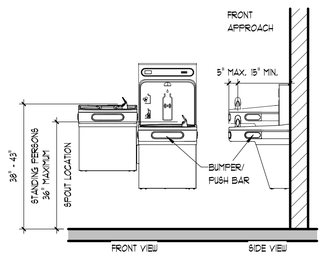
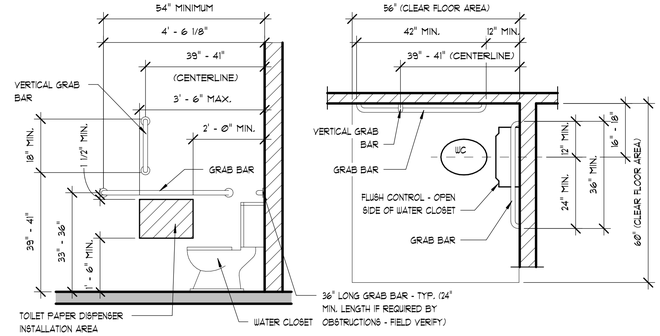
G1.2



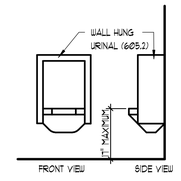
1 TYP. ACCESSIBILE DRINKING FOUNTAIN

1/2" = 1'-0"



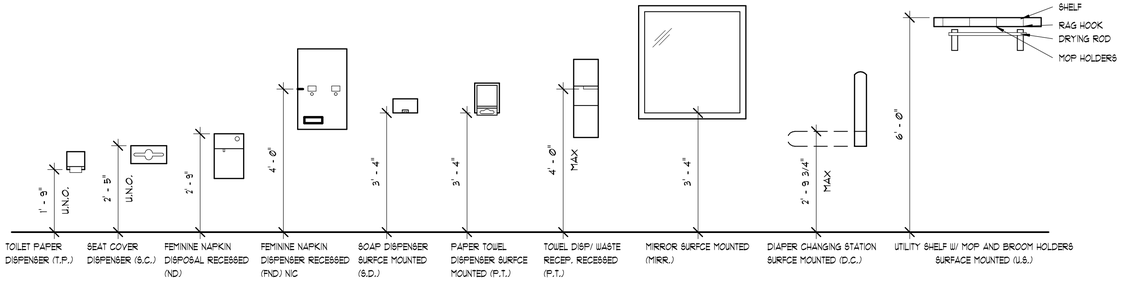
2 TYP. ACCESSIBILE TOILET

1/2" = 1'-0"



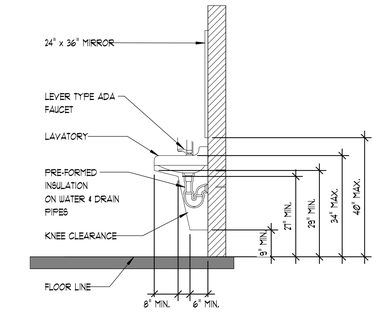
3 ACCESSIBLE URINAL

1/2" = 1'-0"



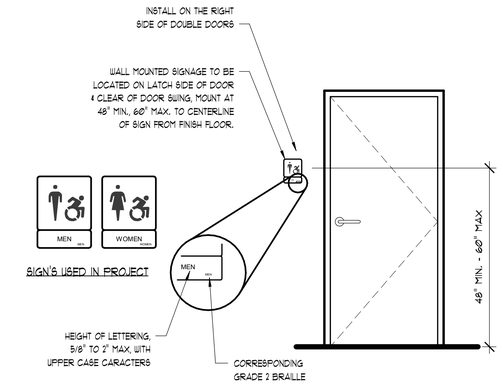
4 ACCESSORY MOUNTING HEIGHTS

1/2" = 1'-0"



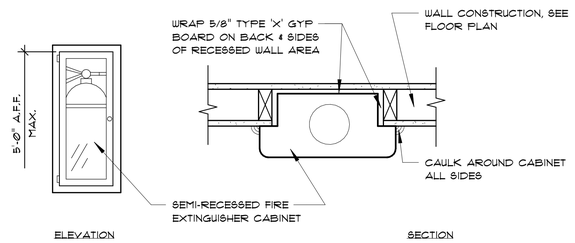
5 TYP. ACCESSIBILE VANITY

1/2" = 1'-0"



6 RESTROOM SIGNAGE

1/2" = 1'-0"



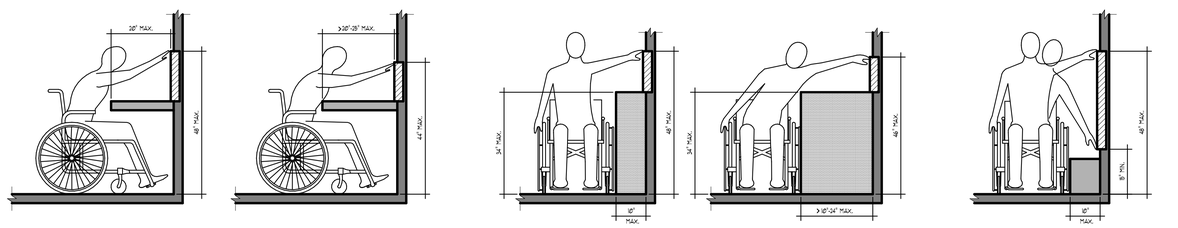
7 FIRE EXTINGUISHER CABINET

1 1/2" = 1'-0"

ADA REFERENCES

(ICC/ANSI A117.1-2009)

1. DRINKING FOUNAIN - 602
2. RESTROOM - 603-606
   MIRROR - 603.3
   WATER CLOSET - 604
   GRAB BARS - 604.5
   DISPENSER - 604.7
   LAVORATORY - 606



OBSTRUCTED HIGH FORWARD APPROACH

OBSTRUCTED HIGH SIDE APPROACH

UNOBSTRUCTED SIDE REACH

8 OBSTRUCTED HIGH FORWARD APPROACH

1/2" = 1'-0"

ACCESSIBILITY CLEARANCE NOTES

1. 60" DIAMETER WHEELCHAIR TURNING SPACE (304.3.1)
2. 30" X 48" CLEARANCE FOR WATER CLOSET (1004.11.3.1.2.2.1 & 1004.11.3.1.2.2.2)
3. 30" X 48" CLEAR FLOOR SPACE FOR FORWARD APPROACH TO SINK/WORK SPACE/APPLIANCE (305.3, 606.2, 1003.12.3.1, 1003.12.4.1, 1003.12.5.2)
4. 30" X 48" CLEAR FLOOR SPACE FOR PARALLEL/ADJACENT APPROACH TO SINK/APPLIANCE (305.3, 1004.10.1, 1004.11.1.1, 1004.12.2)
5. 30" X 48" CLEAR FLOOR SPACE BEYOND SWING OF DOOR FOR INDIVIDUAL USE (603.2.2 EXCEPTION, 1003.11.2 EXCEPTION)

(ICC/ANSI A117.1-2009)

6. 56" X 60" CLEARANCE FOR WATER CLOSET (604.3.1)
7. 66" X 60" CLEARANCE FOR WATER CLOSET (1003.11.2.4.4)

NOTE: CLEAR FLOOR OR GROUND SPACES, CLEARANCE AT FIXTURES, AND WHEELCHAIR TURNING SPACES SHALL BE PERMITTED TO OVERLAP (603.2.2, 1003.11.2.4.4, & 1004.11.3.1.2.2.4)

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ACCESSIBILITY REQUIREMENTS

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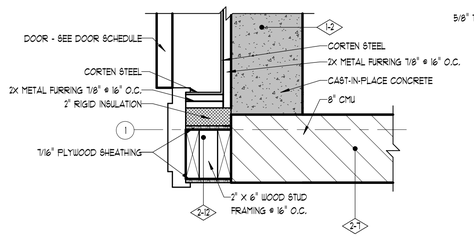
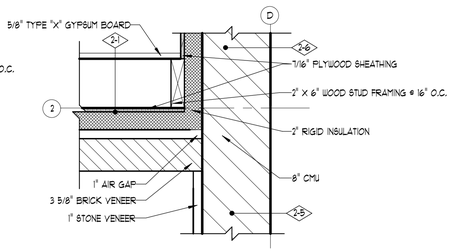


3 WALL DETAIL 2

1 1/2" = 1'-0"

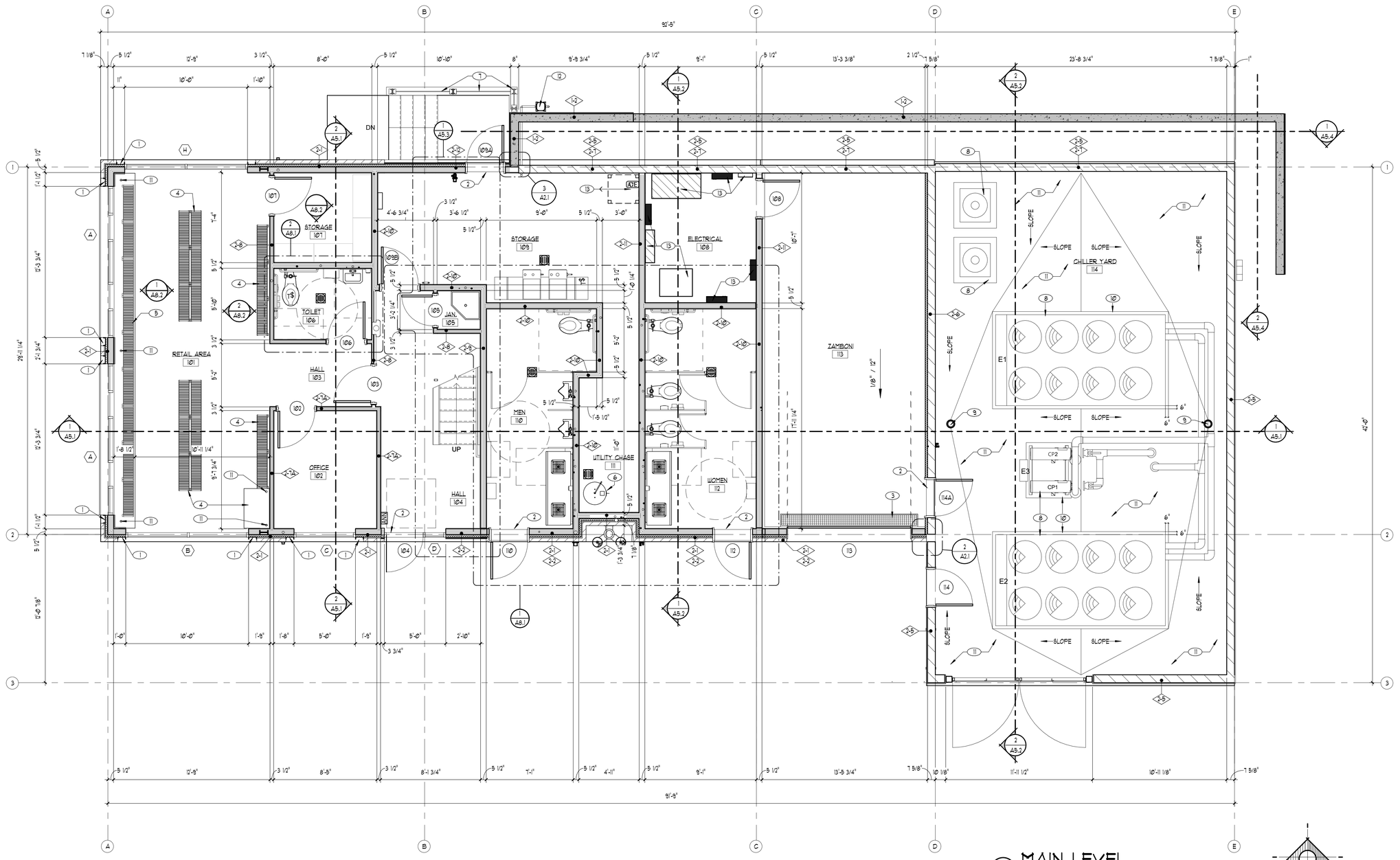


2 WALL DETAIL 1

1 1/2" = 1'-0"

SHEETNOTES:

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4
- (1) STRUCTURAL SUPPORT COLUMNS PAINTED, SEE STRUCTURAL DRAWINGS
- (2) METAL THRESHOLD
- (3) FLOOR DRAIN - SEE PLUMBING DWG'S
- (4) CASEWORK SKATE RACKS - SEE INTERIOR ELEVATIONS
- (5) CASEWORK RENTAL COUNTER - SEE INTERIOR ELEVATIONS
- (6) WATER HEATER, SEE MECHANICAL DRAWINGS
- (7) 42" GUARD RAIL- SEE DETAIL 8/A4.3
- (8) MECHANICAL SYSTEM - SEE MECHANICAL DRAWINGS
- (9) FLOOR DRAIN - SLOPE SURROUNDING CONCRETE TO DRAIN
- (10) THICKENED CONCRETE SLAB- SEE CHILLER EQUIPMENT SPECIFICATIONS
- (11) 2" GROMMET
- (12) GAS METER - SEE CIVIL + MECHANICAL DRAWINGS
- (13) ELECTRICAL FIXTURES - SEE ELECTRICAL DRAWINGS



1 MAIN LEVEL

1/4" = 1'-0"

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MAIN LEVEL FLOOR PLAN

Sheet Number:
A2.1

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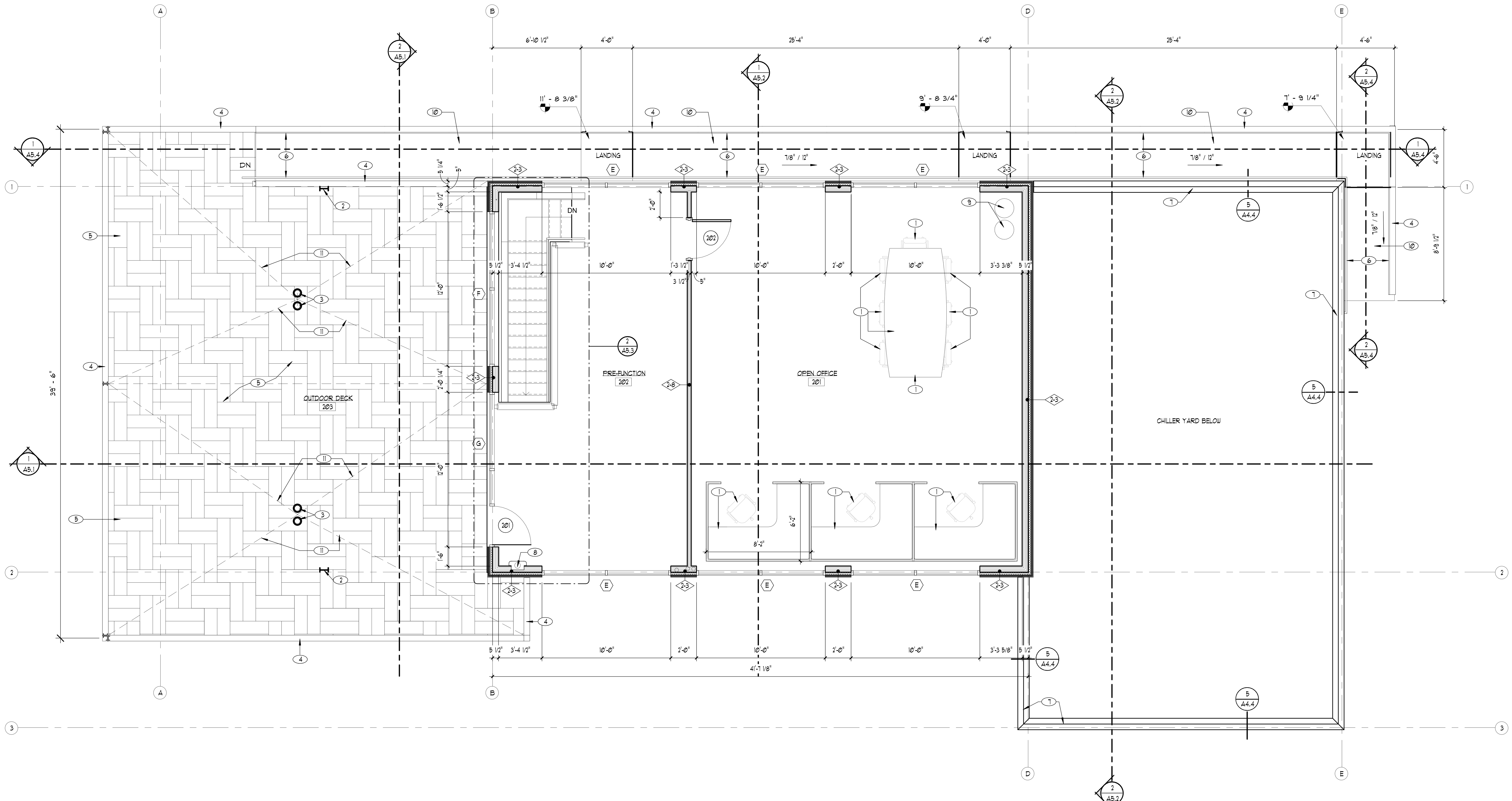
SHEETNOTES:

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4
- (1) FURNITURE, N.I.C.
- (2) STRUCTURAL SUPPORT COLUMNS PAINTED, SEE STRUCTURAL DRAWINGS
- (3) DRAINAGE IS BELOW THE PRE-CAST SYSTEM, SEE MECHANICAL DRAWINGS
- (4) 42" GUARD RAIL - SEE DETAIL 8/A4.3
- (5) 24" X 36" PRECAST CONCRETE ROOF PAVERS
- (6) 1 1/2" STAINLESS STEEL HANDRAIL
- (7) PRE-CAST CONCRETE WALL CAP - SEE DETAIL 5/A4.4
- (8) SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE DETAIL 7/G1.3
- (9) MECHANICAL DUCT - SEE MECHANICAL DRAWINGS
- (10) CAST-IN-PLACE CONCRETE RAMP
- (11) DASHED LINES INDICATES APPROXIMATE LOCATION OF SLOPING DECK BELOW PAVER SYSTEM



(1) UPPER LEVEL
1/4" = 1'-0"

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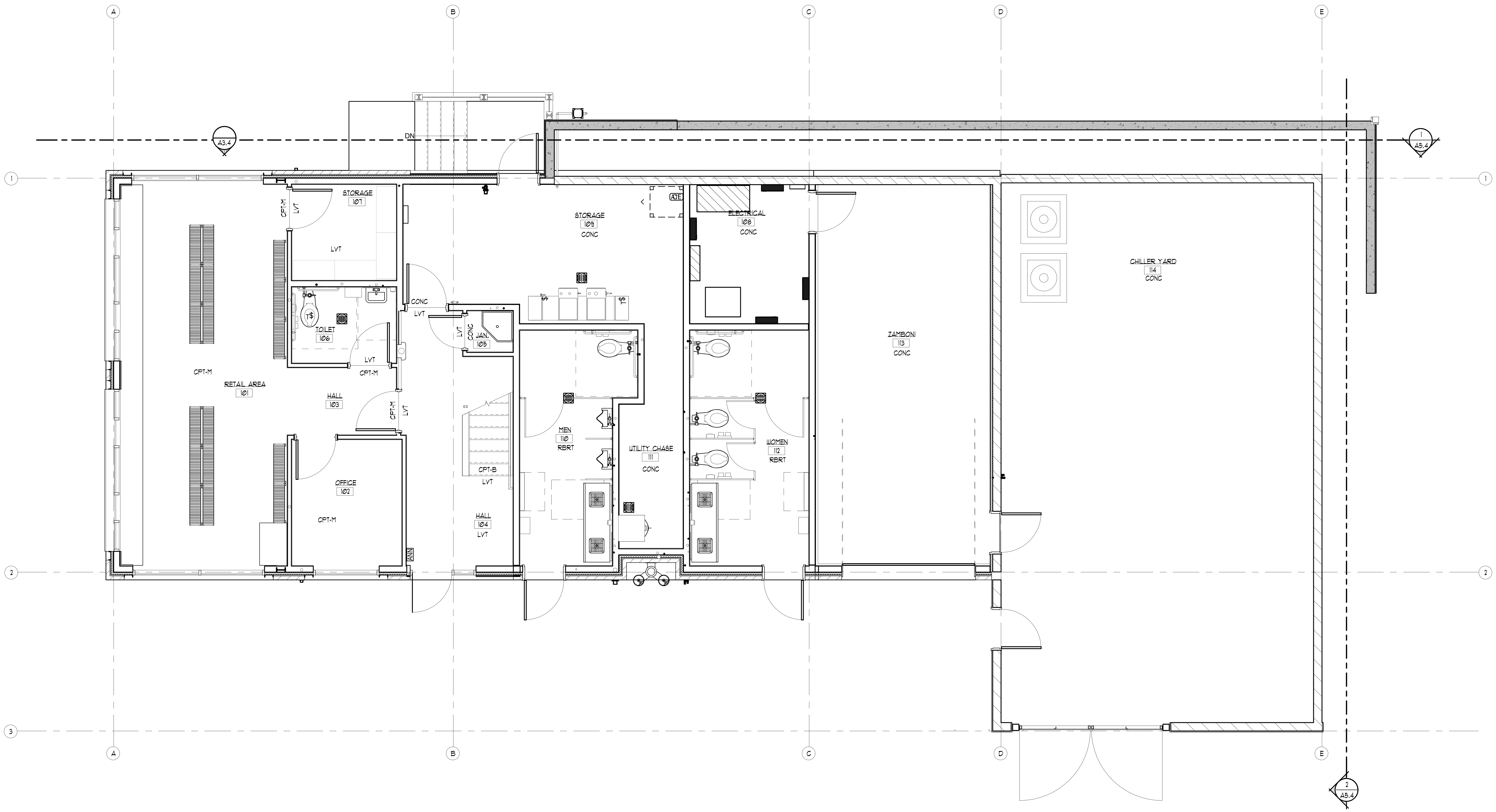
UPPER LEVEL FLOOR PLAN

Sheet Number:
A2.2



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

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10.12.2018
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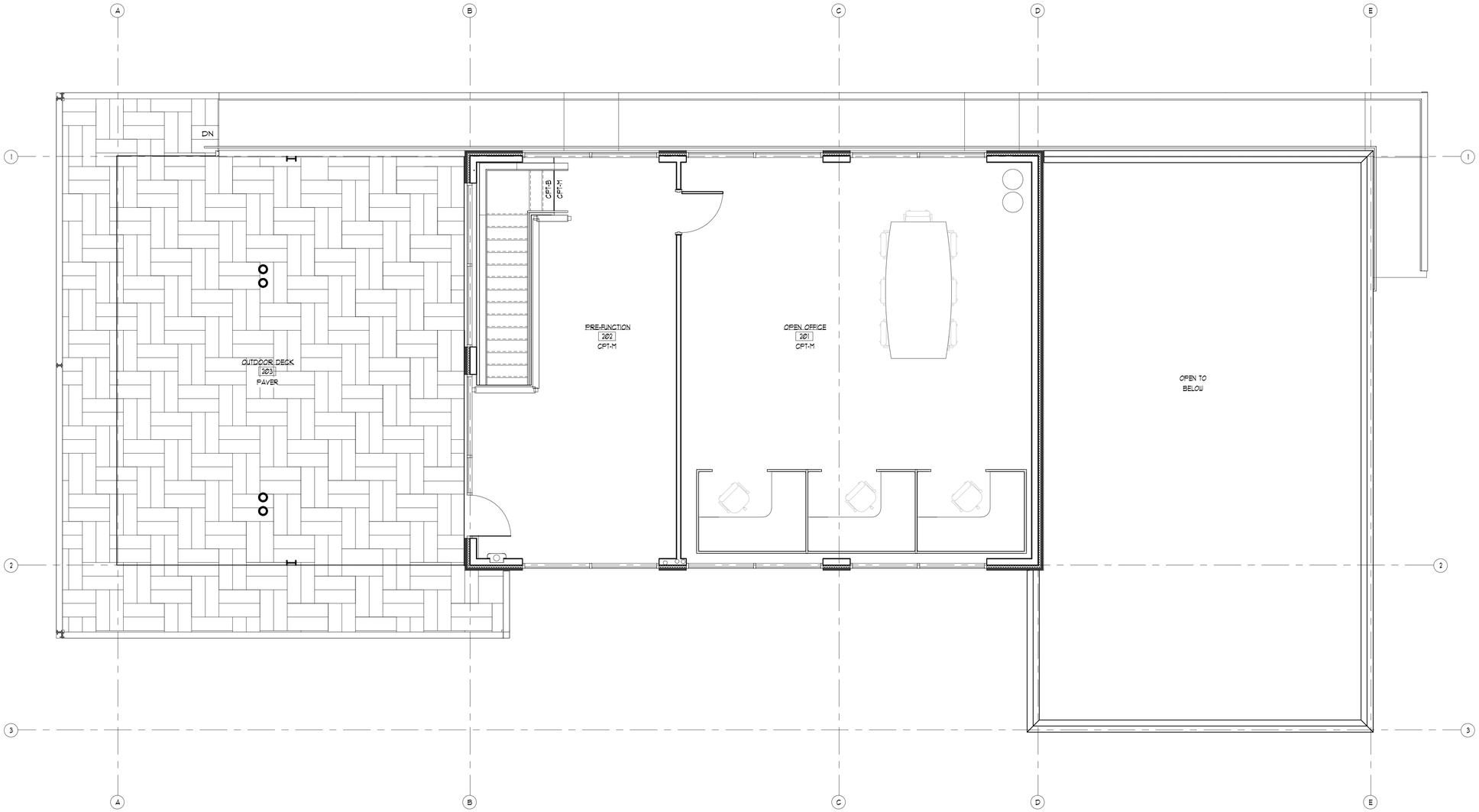
Sheet Name:
MAIN LEVEL FINISH FLOOR PLAN

Sheet Number:
A2.3



1 UPPER LEVEL FINISH PLAN

1/4" = 1'-0"

N

WPA architecture

LICENSED ARCHITECT
FRANCIS T. LILLY
5403169-0301
10.12.2018
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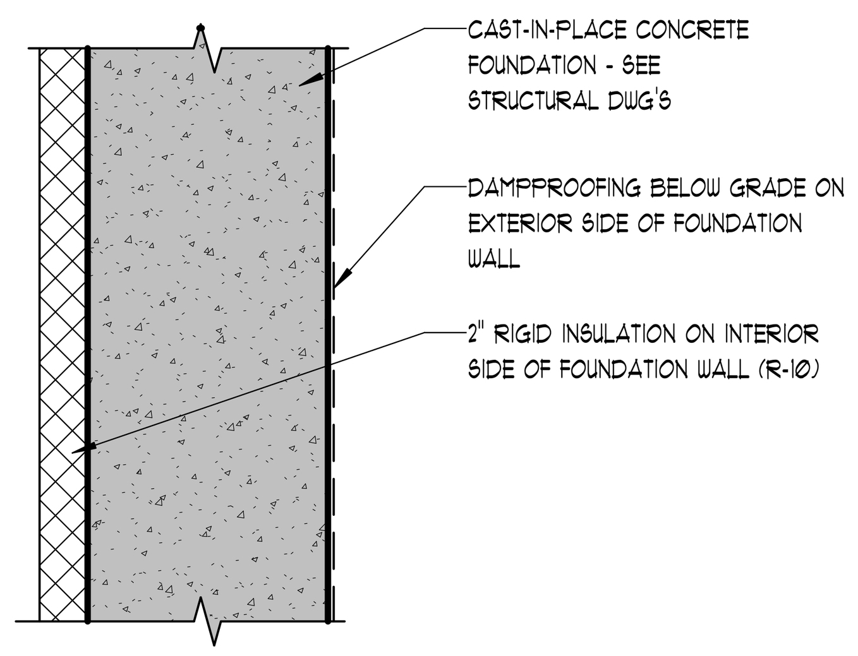
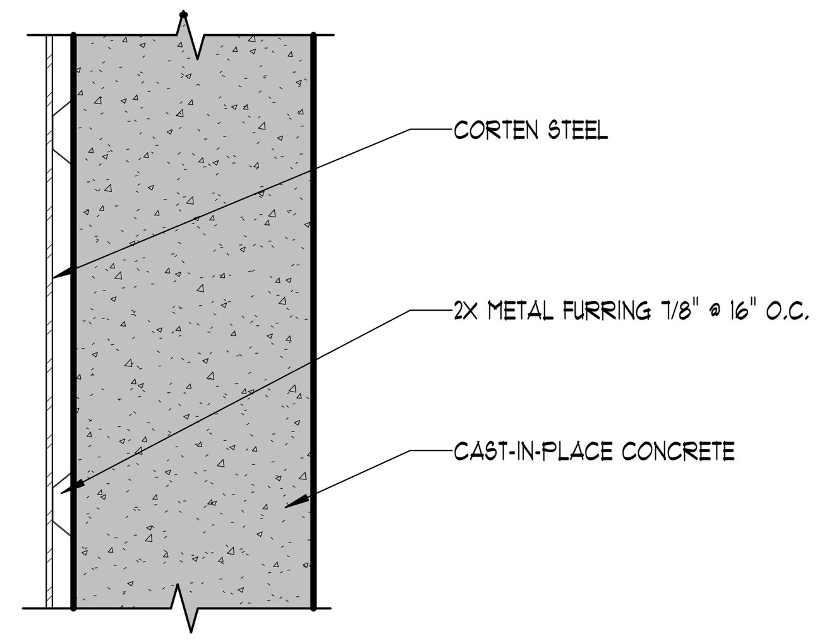
Sheet Name:
UPPER LEVEL FINISH FLOOR PLAN

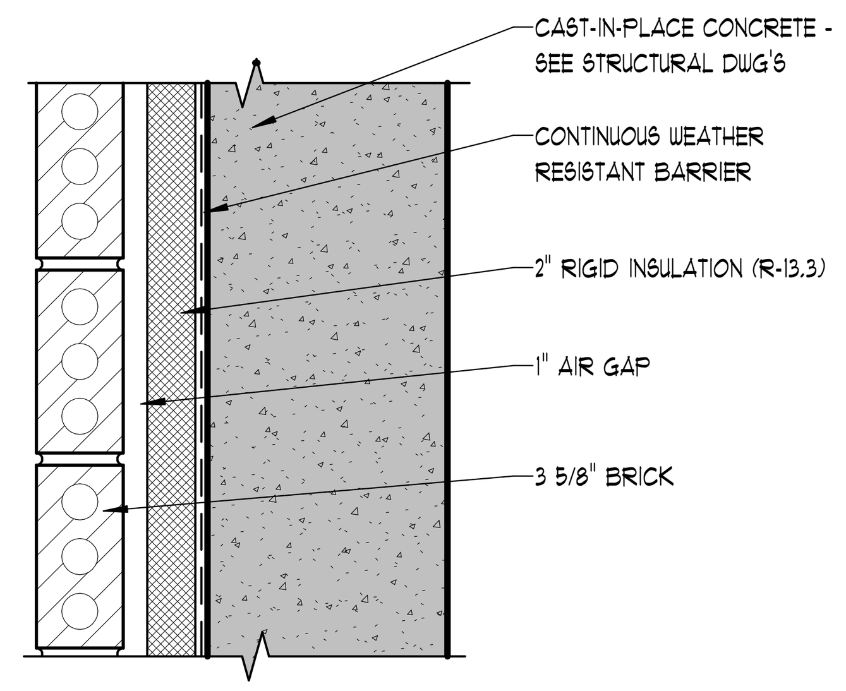
Sheet Number:
A2.4



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



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



1-3 WALL CONSTRUCTION
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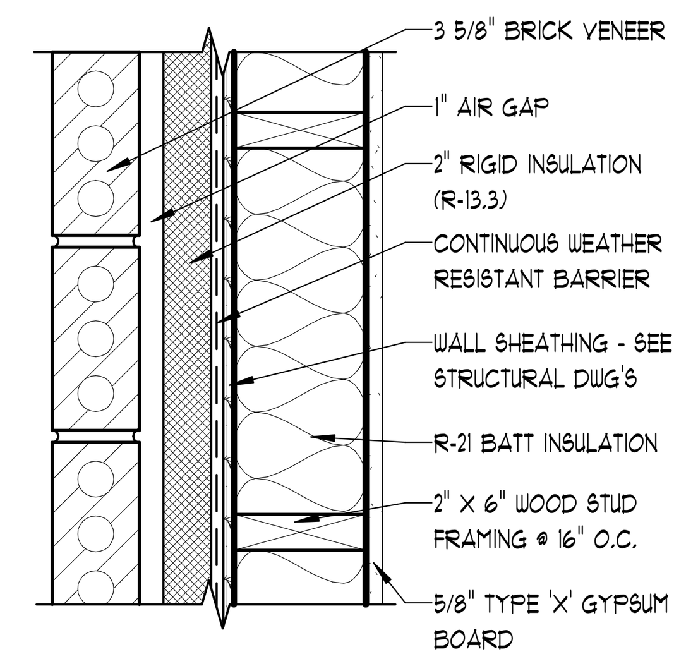

2-1 WALL CONSTRUCTION
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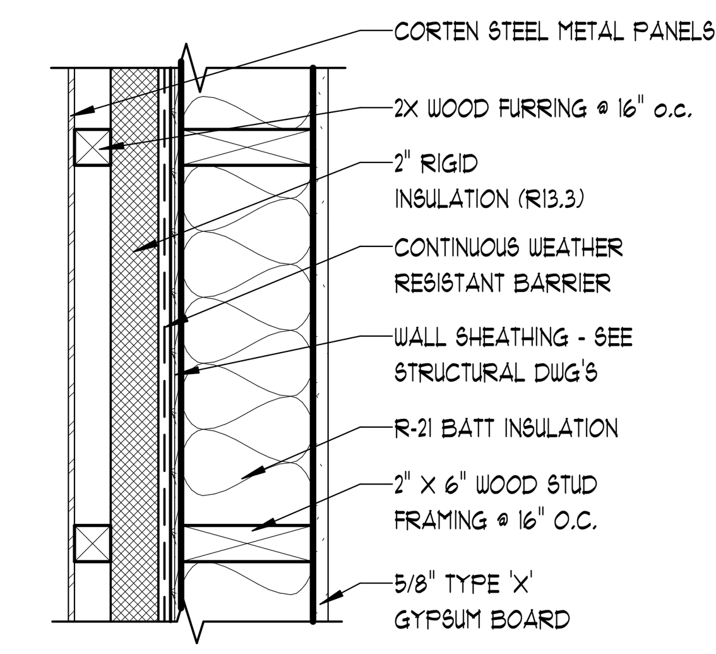

2-2 WALL CONSTRUCTION
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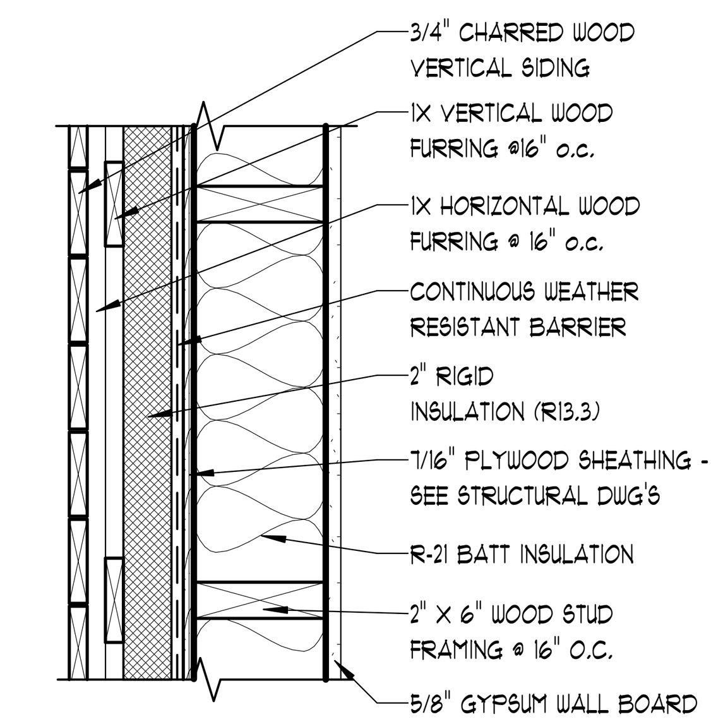

2-3 WALL CONSTRUCTION
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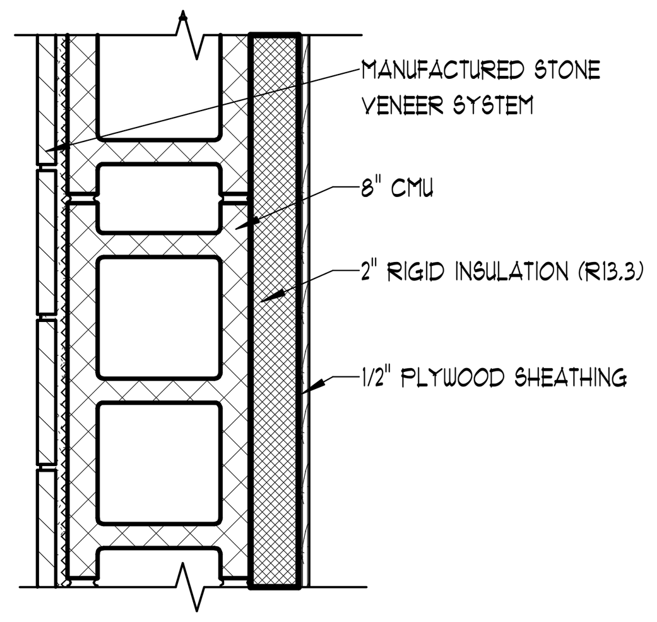

2-4 WALL CONSTRUCTION
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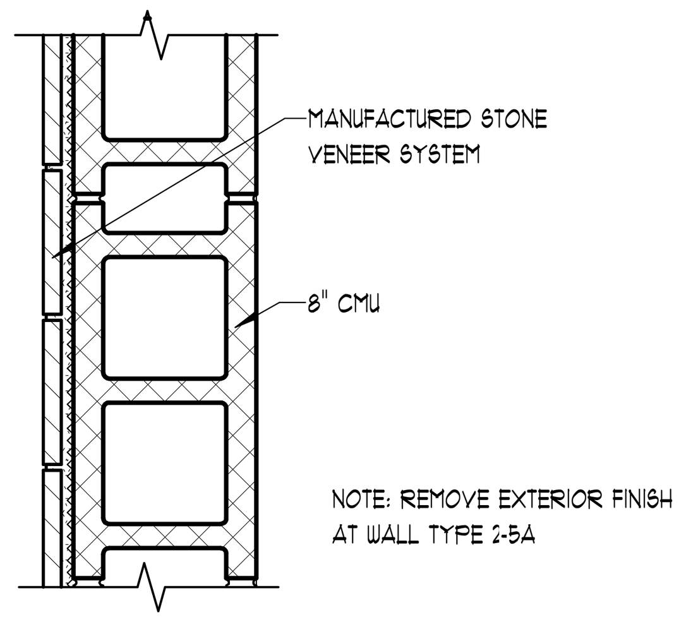

2-5 WALL CONSTRUCTION
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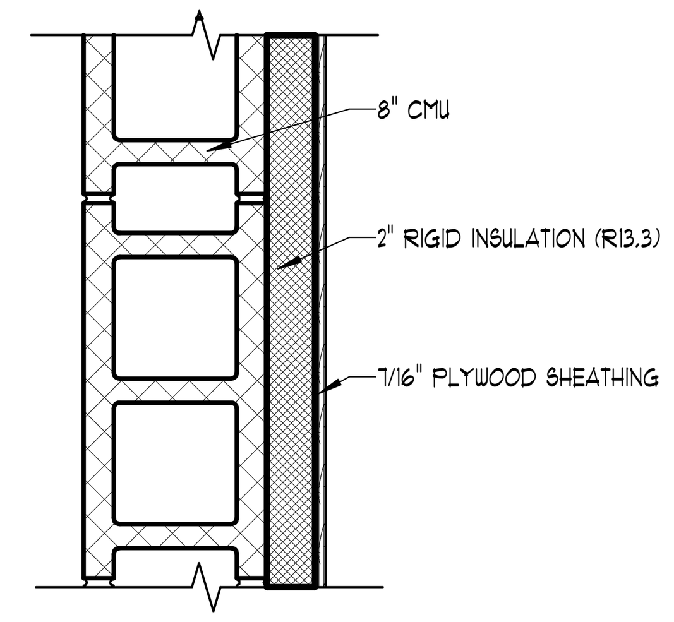
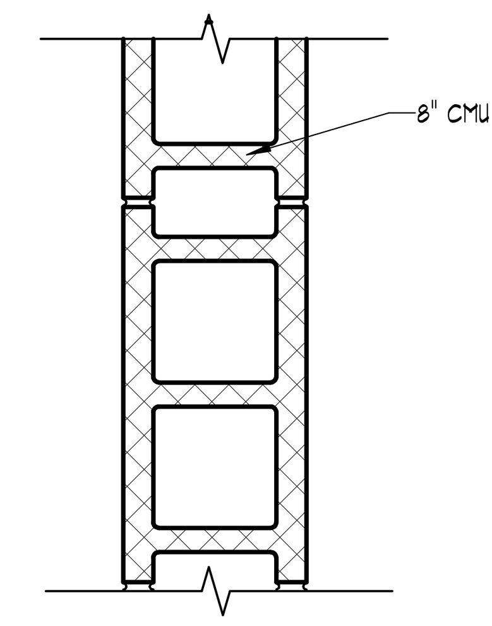


2-6 WALL CONSTRUCTION
1 1/2" = 1'-0"



2-7 WALL CONSTRUCTION
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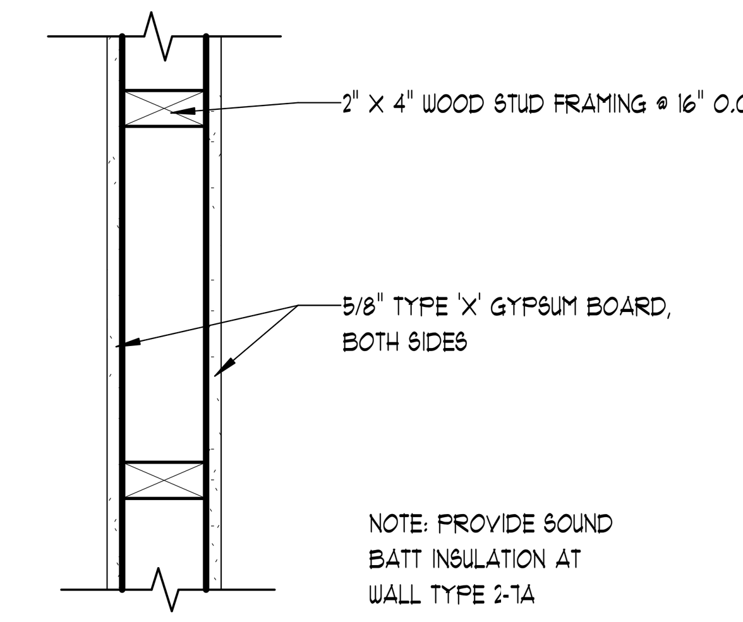

2-8 WALL CONSTRUCTION
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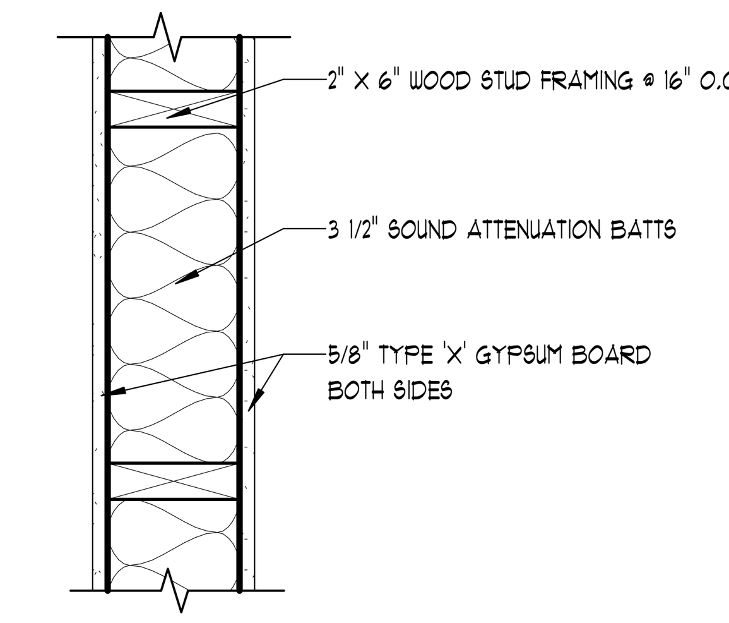

2-9 WALL CONSTRUCTION
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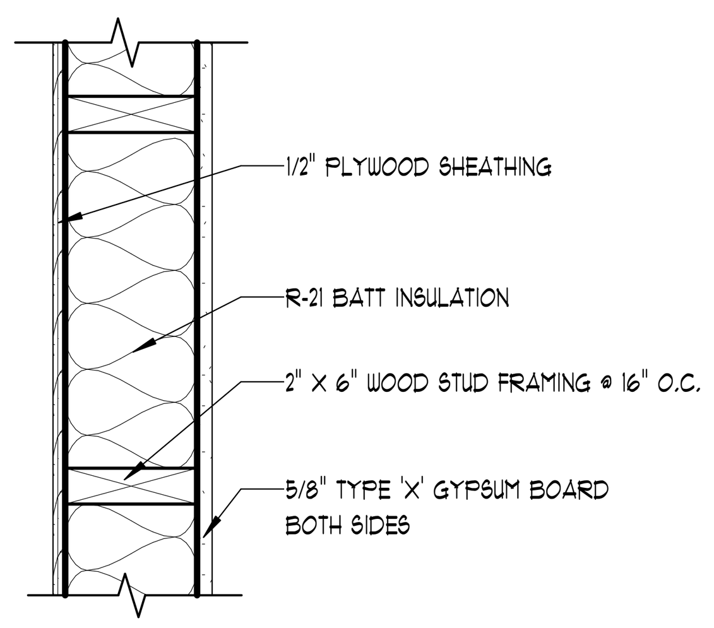
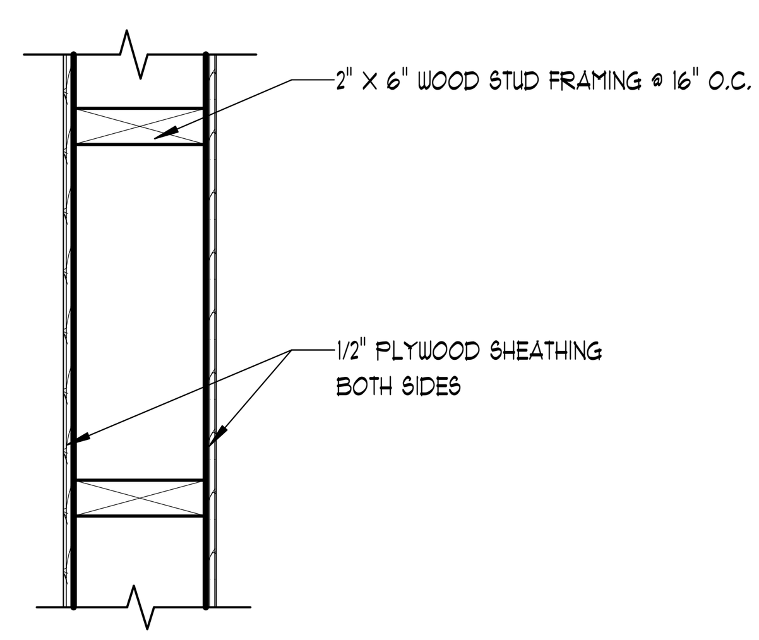


2-10 WALL CONSTRUCTION
1 1/2" = 1'-0"



2-11 WALL CONSTRUCTION
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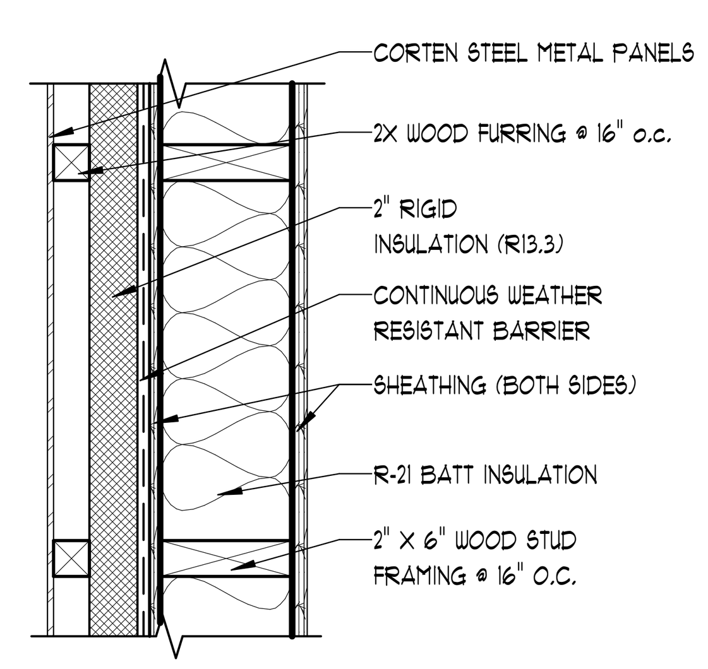
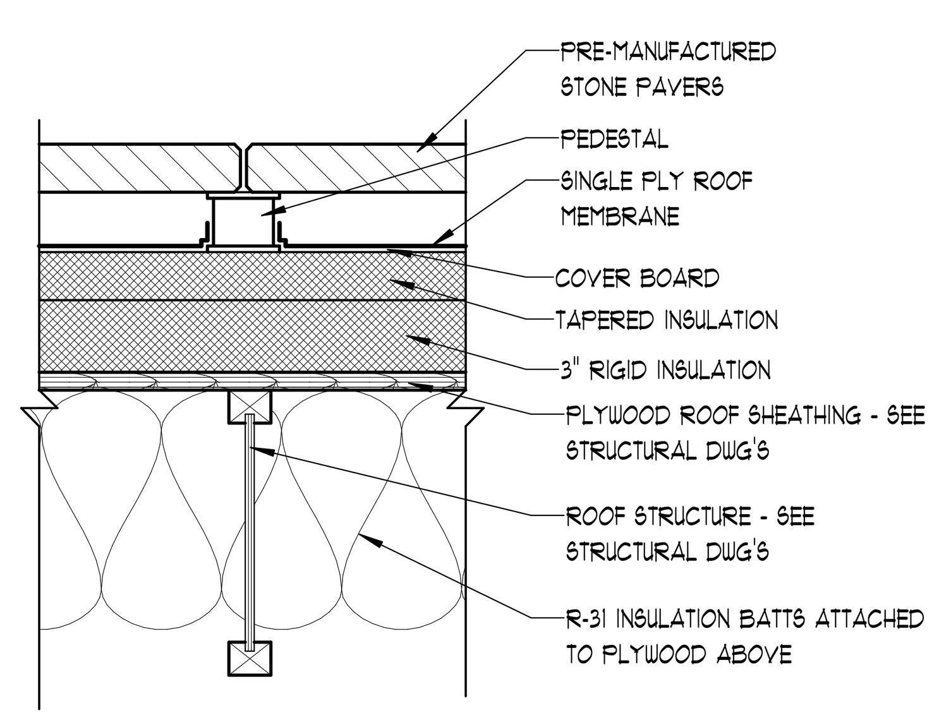
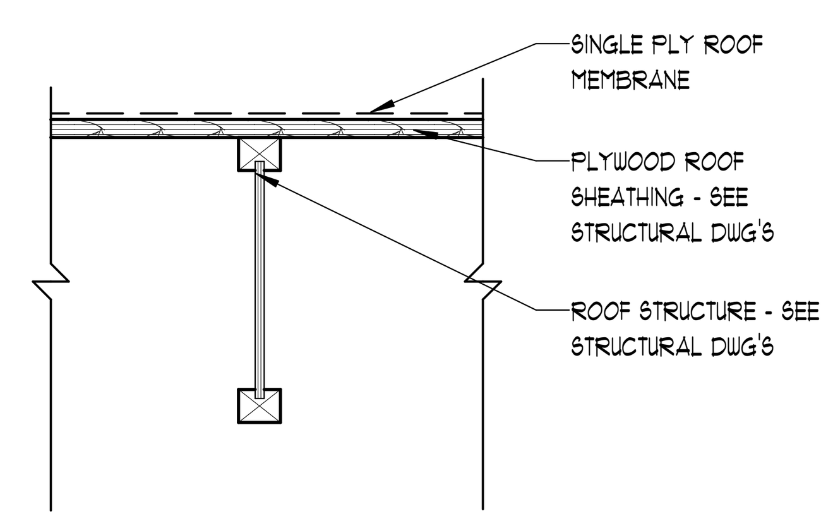


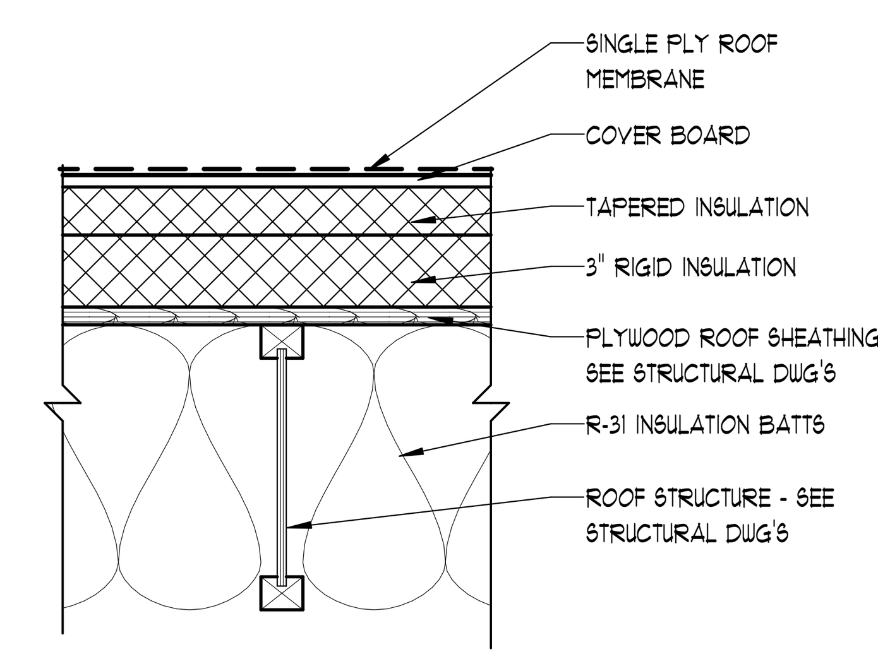
2-12 WALL CONSTRUCTION
1 1/2" = 1'-0"



4-1 ROOF/CEILING CONSTRUCTION
1 1/2" = 1'-0"



4-2 ROOF/CEILING CONSTRUCTION
1 1/2" = 1'-0"



4-3 ROOF/CEILING CONSTRUCTION
1 1/2" = 1'-0"

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Sheet Name:
CONSTRUCTION TYPES

Sheet Number:
A3.1

ROOM FINISH SCHEDULE

	ROOM NAME	FLOOR FINISH	BASE FINISH	DOOR FRAME	WALL FINISH				CEILING FINISH	MILLWORK	COUNTER	COMMENTS
					NORTH	EAST	SOUTH	WEST				
101	RETAIL AREA	CPT-M	RB	FRM	PTDW-1	PTDW-1	PTDW-1	PTDW-1	OPEN-1	PLAM-1	PLAM-2	
102	OFFICE	CPT-M	RB	FRM	PTDW-1	PTDW-1	PTDW-1	PTDW-1	OPEN-1			
103	HALL	CPT-M	RB	FRM	PTDW-1	PTDW-1	PTDW-1	PTDW-1	OPEN-1			
104	HALL	LVT/CPT-B	RB	FRM	PTDW-1	PTDW-1	PTDW-1	PTDW-1	PTDC-1			
105	JAN.	CONC	RB	FRM	PTDW-1 / CTW-2	PTDW-1 / CTW-2	PTDW-1 / CTW-2	PTDW-1 / CTW-2	PTDC-1			
106	TOILET	LVT	CTB	FRM	PTDW-1 / CTW-2	PTDW-1 / CTW-2	PTDW-1 / CTW-2	PTDW-1 / CTW-2	PTDC-1			
107	STORAGE	CONC	RB	FRM	PTDW-2	PTDW-2	PTDW-2	PTDW-2	OPEN-2			
108	ELECTRICAL	CONC	RB	FRM	PTDW-2	PTDW-2	PTDW-2	PTDW-2	OPEN-1			
109	STORAGE	CONC	RB	FRM	PTDW-2	PTDW-2	PTDW-2	PTDW-2	OPEN-2			
110	MEN	RBRT	CTB	FRM	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDC-1		QC	USE CTW-1 FOR ACCENT TILE
111	UTILITY CHASE	CONC	RB	FRM	PTDW-2	PTDW-2	PTDW-2	PTDW-2	OPEN-2			
112	WOMEN	RBRT	CTB	FRM	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDC-1		QC	USE CTW-1 FOR ACCENT TILE
113	JANBONI	CONC	RB	FRM	PTDW-2	PTDW-2	PTDW-2	PTDW-2	OPEN-2			
201	OPEN OFFICE	CPT-M	RB	FRM	PTDW-1	PTDW-1	PTDW-1	PTDW-1	OPEN-2			
202	FREE-FUNCTION	CPT-M/CPT-B	RB	FRM	PTDW-1	PTDW-1	PTDW-1	PTDW-1	OPEN-2			
203	OUTDOOR DECK	PAVER	NONE	FRM	N/A	N/A	N/A	N/A	WOOD			

FINISH LEGEND

BASE

MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
CTB	PORCELAIN TILE COVE BASE	CROSSVILLE	STYLE: MATCH CTW-1 COLOR: MATCH CTW-1	4 X 8	GROUT: MAPEI, COLOR: TBD USE WALL BULLNOSE WHERE NO TILE SHOWN ABOVE BASE
RB	RUBBER BASE	ROPPE	700 SERIES - STANDARD TOE COLOR: TBD	4"	--

FLOORS

MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
CPT-M	CARPET TILE	MANNINGTON	STYLE: MEDIA COLLECTION: COMMUNITY COLOR: TBD	24" X 24" MONOLITHIC INSTALL	PROVIDE 10 PERCENT ACCENT CARPET TILE USING MANNINGTON, COLOR ANCHOR, 12" X 48", COLOR: TBD
CPT-B	CARPET	MANNINGTON	STYLE: ALIGN COLLECTION: QUADRANT COLOR: TBD	12'-6"	--
RBRT	MULTILAYER VULCANIZED RUBBER TILE	NORTHWEST RUBBER	STYLE: WOODGRAINS COLOR: TBD	8" x 48"	USE 10 mm THICKNESS
LVT	LVT	INTERFACE	STYLE: LEVEL SET COLOR: ANTIQUE LIGHT OAK (AD0406)	25 cm x 1 m	--
CONC	CONCRETE	-	CLEAR SEALED	N/A	--
PAVER	CONCRETE PAVERS	STEPSTONE, INC.	STYLE: LARGE SCLAE CALARC PAVER COLOR: TBD	24" X 36"	PROVIDE FALSE JOINT SEE FLOOR PLAN FOR PATTERN

WALLS

MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE/FINISH	NOTES
PTDW-1	PAINTED GYPSUM BOARD	SHERWIN WILLIAMS	NATURAL CHOICE (SW7011)	SEMI-GLOSS	--
PTDW-2	PAINTED PLYWOOD	SHERWIN WILLIAMS	NATURAL CHOICE (SW7011)	SEMI-GLOSS	--
CTW-1	ACCENT CERAMIC TILE	DALTILE	STYLE: COLOR WAVE COLOR: TBD	3 X 6	GROUT: MAPEI, COLOR: TBD BASKETWEAVE PATTERN
CTW-2	CERAMIC TILE	CROSSVILLE	STYLE: SWATCHES COLOR: TBD	3 X 12 GLOSS	GROUT: MAPEI, COLOR: TBD USE SCHLUTER METAL TRIM AT TOP OF WAINSCOT

CEILING

MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE/FINISH	NOTES
OPEN-1	PAINTED STRUCTURE	SHERWIN WILLIAMS	IRON ORE (SW7069)	FLAT	EXPOSED CEILINGS DO NOT PAINT MECHANICAL DUCTWORK
OPEN-2	PAINTED STRUCTURE	N/A	N/A	FLAT	--
PTDC	PAINTED GYPSUM BOARD	SHERWIN WILLIAMS	NATURAL CHOICE (SW7011)	FLAT	--
WOOD	CHARRED WOOD SIDING	NAKAMOTO FORESTRY	GENDAI NM1801, ARMSTRONG AMBER	6"	--

MILLWORK

MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE / FINISH	NOTES
PLAM-1	MILLWORK	TBD	TBD	N/A	---
PLAM-2	COUNTERTOP	TBD	TBD	N/A	---
QC	QUARTZ	TILE TRADITIONS	TRUEQUARTZ, WHITE ICE (T0303)	30 mm / 1.25"	COUNTERTOP

DOORS, WINDOWS and DOOR TRIM

MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE / FINISH	NOTES
FRM	PAINTED DOOR FRAMES	SHERWIN WILLIAMS	MINDFUL GRAY (SW7016)	SEMI-GLOSS	--
DR	SOLID CORE WOOD DOOR	VT INDUSTRIES	SPECIES: WHITE OAK COLOR: TBD	N/A	---

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

WPA architecture

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REV	DATE	DESCRIPTION

DESIGNED BY: BF
DRAWN: RS / MR
CHECKED: BF
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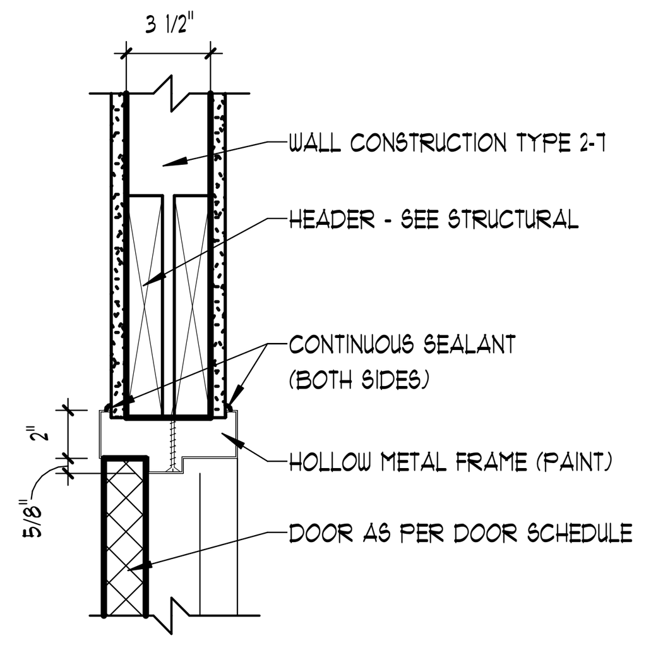
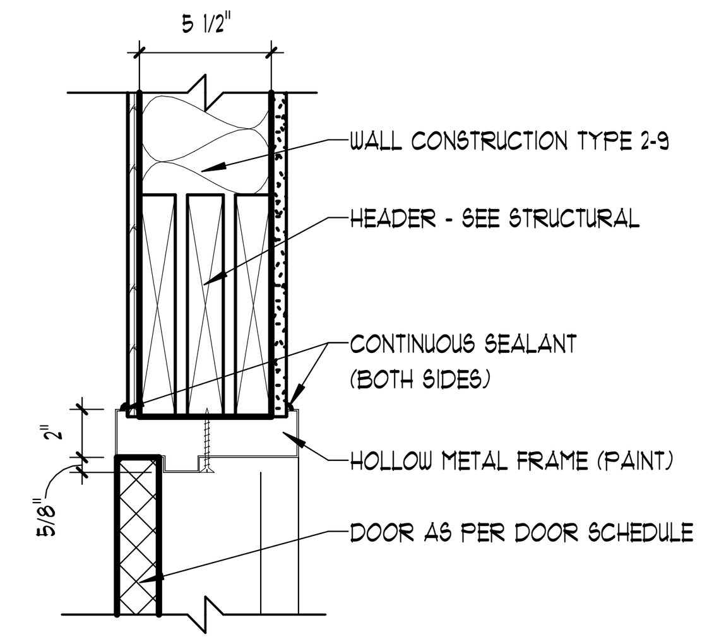
Sheet Name:
FINISH SCHEDULE

Sheet Number:
A3.2



1 DOOR HEAD DETAIL

1 1/2" = 1'-0" JAMB SIMILAR

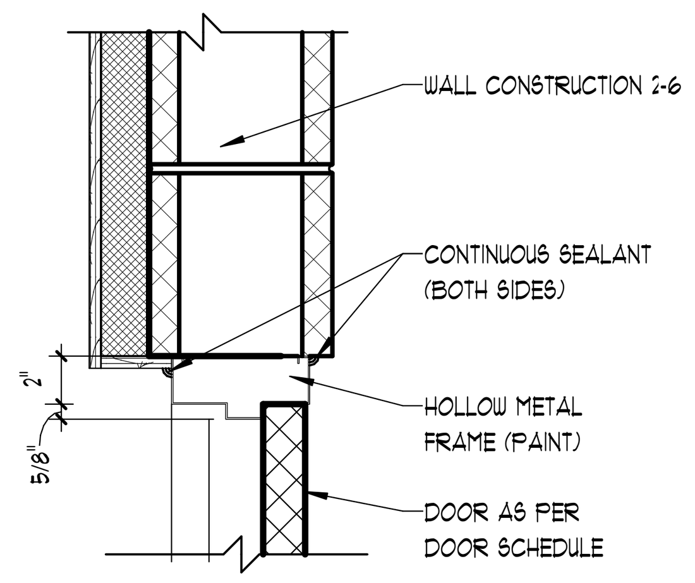


2 DOOR HEAD DETAIL

1 1/2" = 1'-0" JAMB SIMILAR

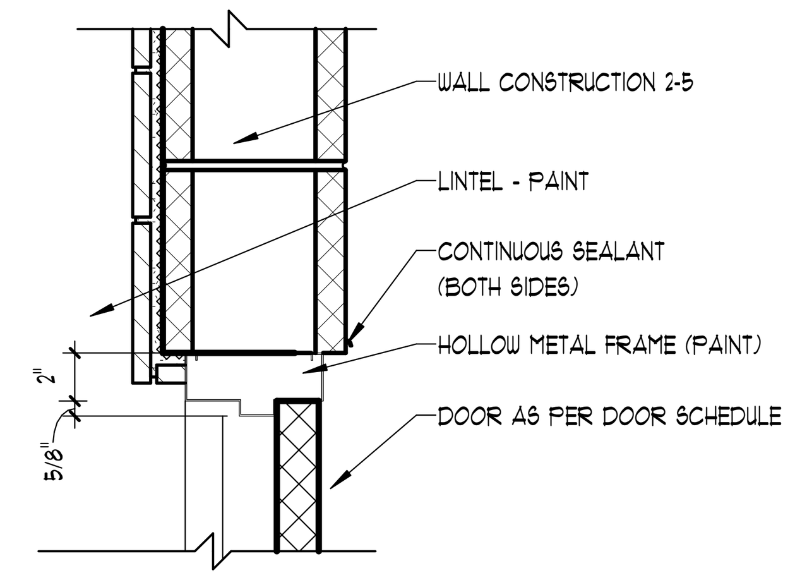
DOOR SCHEDULE

DR. NUMBER	ROOM NAME	DOOR TYPE	DOOR SIZE HEIGHT	DOOR SIZE WIDTH	DOOR SIZE THICK	DETAILS HEAD	DETAILS JAMB	FIRE RATING	HW SET	COMMENTS
102	OFFICE	A	7'-0"	3'-0"	1 3/4"	1/A3.3	1/A3.3		10	
103	HALL	D	7'-0"	3'-0"	1 3/4"	1/A3.3	1/A3.3	60 MIN	06	
104	HALL	B	7'-0"	3'-0"	1 3/4"	2/A3.4	2/A3.4, 11/A3.3		AL-01	
105	JAN.	D	7'-0"	2'-6"	1 3/4"	1/A3.3	1/A3.3		09	
106	TOILET	D	7'-0"	3'-0"	1 3/4"	1/A3.3	1/A3.3		11	
107	STORAGE	D	7'-0"	3'-0"	1 3/4"	1/A3.3	1/A3.3		08	
108	ELECTRICAL	C	7'-0"	3'-0"	1 3/4"	7/A3.3	7/A3.3		08	
109A	STORAGE	C	7'-0"	3'-0"	1 3/4"	6/A3.3	6/A3.3		02	
109B	STORAGE	D	7'-0"	3'-0"	1 3/4"	2/A3.3	2/A3.3	60 MIN	07	
110	MEN	C	7'-0"	3'-0"	1 3/4"	5/A3.3	5/A3.3		04	COORDINATE CLEARANCE AT BOTTOM OF DOOR WITH FLOOR FINISHES
112	WOMEN	C	7'-0"	3'-0"	1 3/4"	5/A3.3	5/A3.3		04	COORDINATE CLEARANCE AT BOTTOM OF DOOR WITH FLOOR FINISHES
113	ZAMBONI	E	10'-0"	10'-0"	1 1/2"	9/A3.3	12/A3.3		RU-01	
114	CHILLER YARD	C	7'-0"	3'-0"	1 3/4"	4/A3.3	10/A3.3		03	
114A	CHILLER YARD	C	7'-0"	3'-0"	1 3/4"	3/A3.3	3/A3.3		02	
201	PRE-FUNCTION	B	7'-0"	3'-0"	1 3/4"	8/A3.3	8/A3.3		AL-02	
202	OPEN OFFICE	D	7'-0"	3'-0"	1 3/4"	1/A3.3	1/A3.3	60 MIN	06	



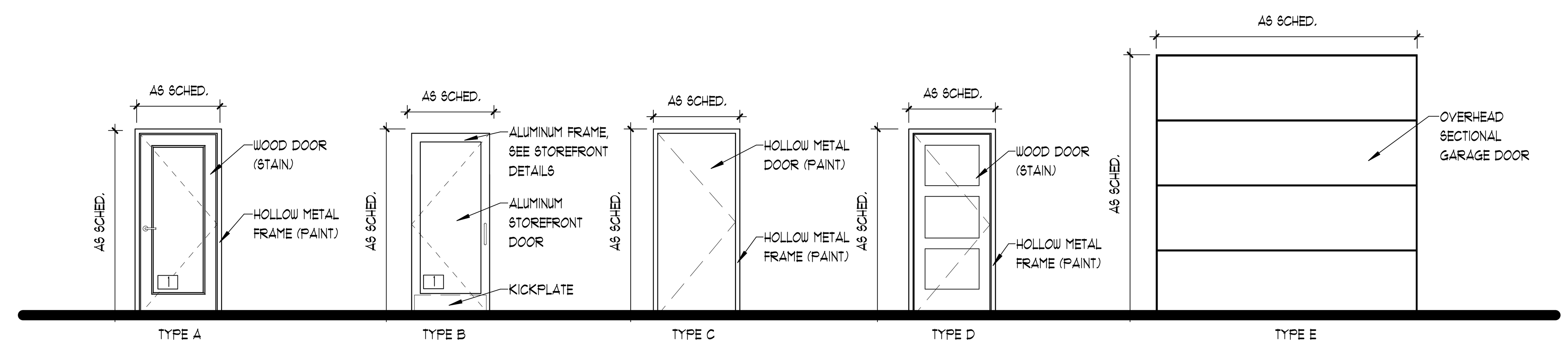
3 DOOR HEAD DETAIL

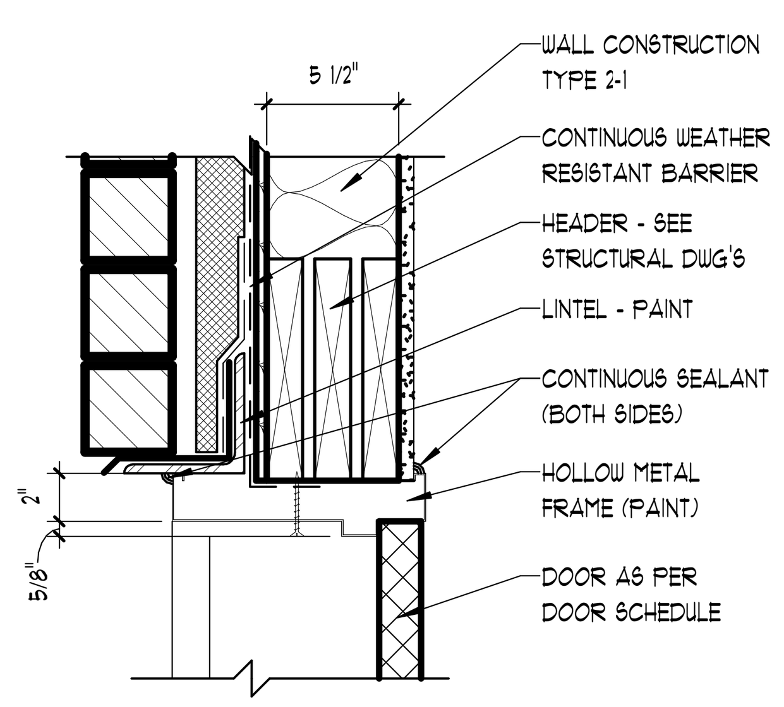
1 1/2" = 1'-0" JAMB SIMILAR



4 DOOR HEAD DETAIL

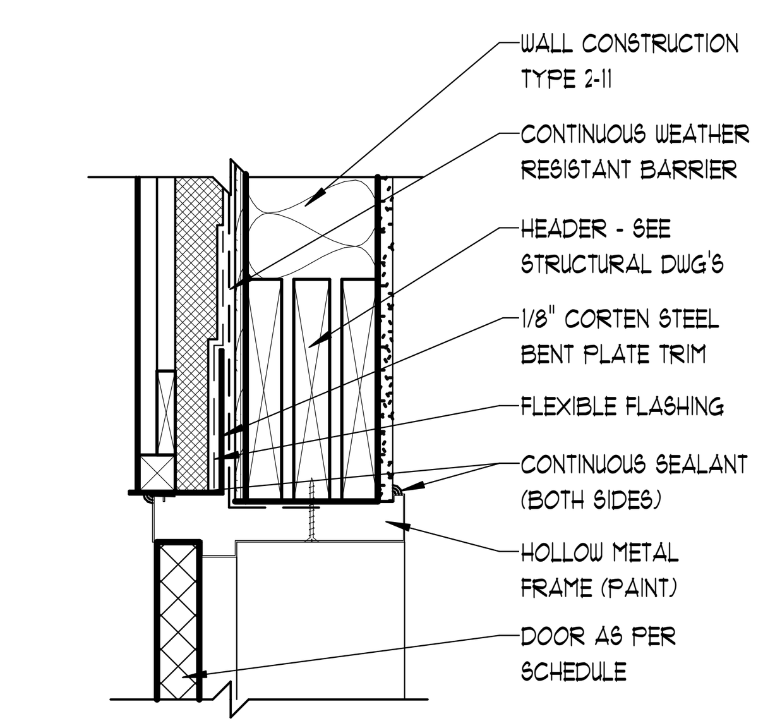
1 1/2" = 1'-0" JAMB SIMILAR





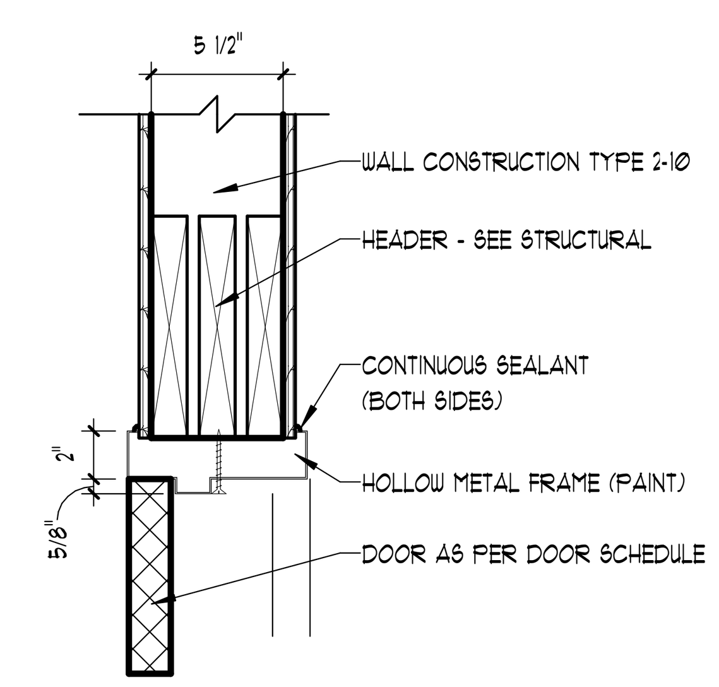
5 DOOR HEAD DETAIL

1 1/2" = 1'-0" JAMB SIMILAR



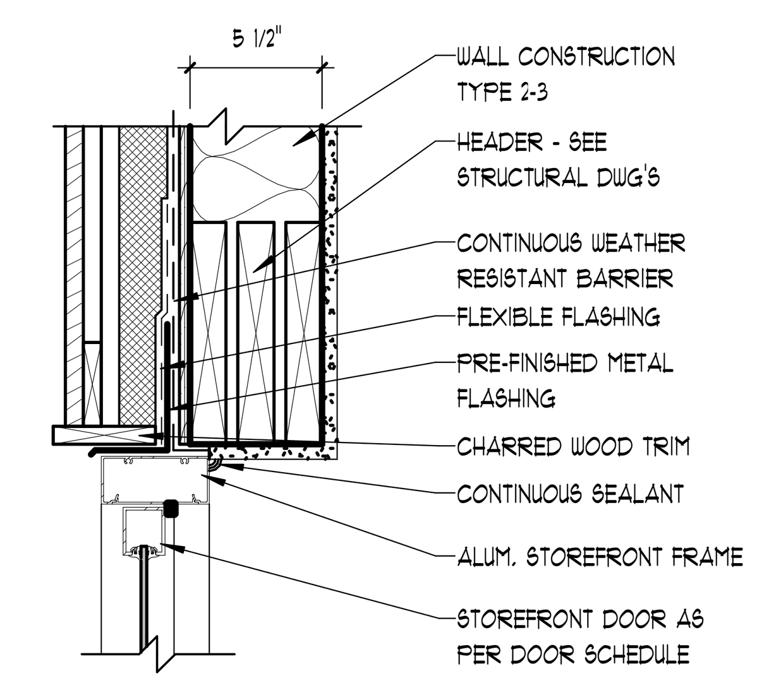
6 DOOR HEAD DETAIL

1 1/2" = 1'-0"



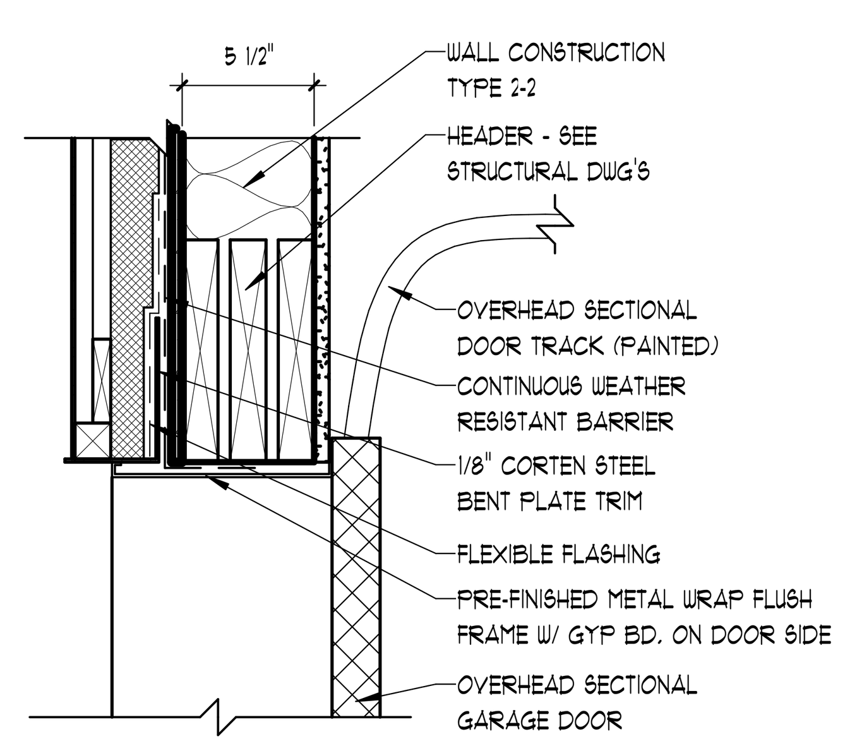
7 DOOR HEAD DETAIL

1 1/2" = 1'-0"



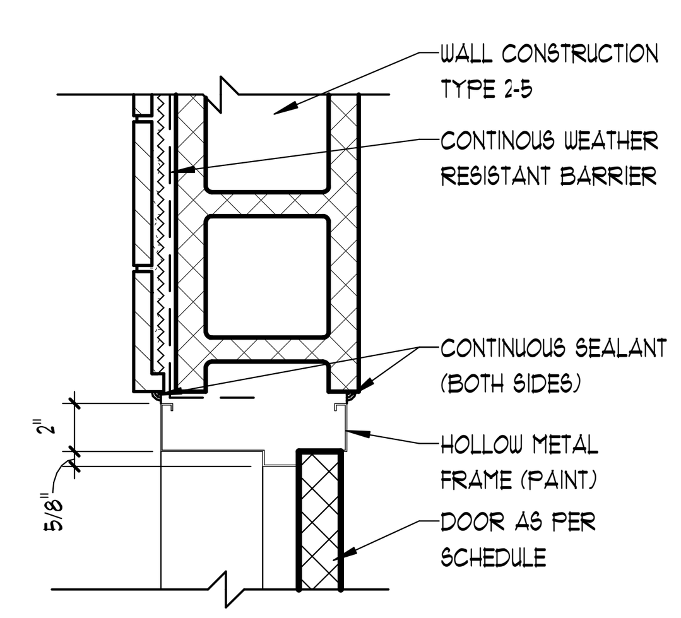
8 DOOR HEAD DETAIL

1 1/2" = 1'-0" JAMB SIMILAR



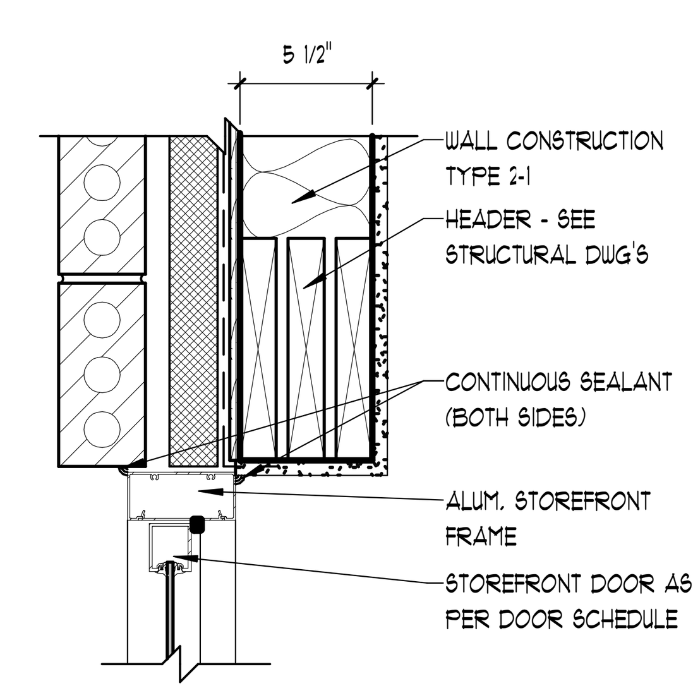
9 DOOR HEAD DETAIL

1 1/2" = 1'-0"



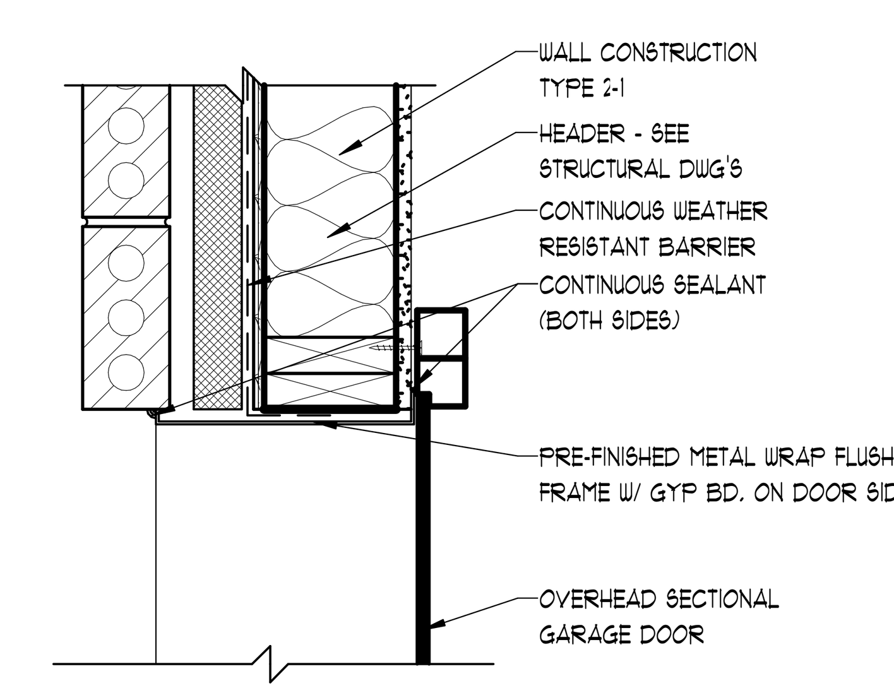
10 DOOR JAMB DETAIL

1 1/2" = 1'-0"



11 DOOR HEAD DETAIL

1 1/2" = 1'-0" JAMB SIMILAR



12 DOOR JAMB DETAIL

1 1/2" = 1'-0"

GLAZING SCHEDULE

1	1" INSULATED FULLY TEMPERED GLASS W/ LOW-E
2	1" INSULATED GLASS W/ LOW-E

WPA architecture

10.12.2018
date
STATE of UTAH
5403169-0301

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REV	DATE	DESCRIPTION

DESIGNED BY: BF
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PROJ #: MILLCREEK 0001

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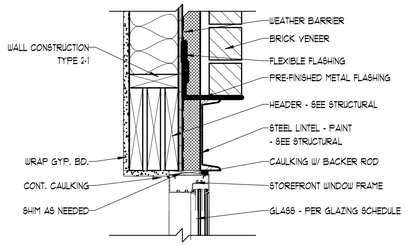
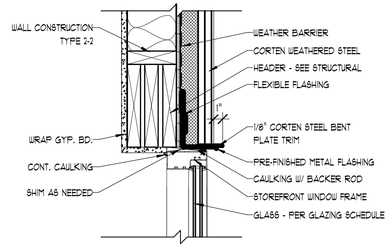
DOOR SCHEDULE + DETAILS

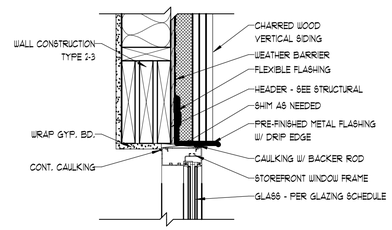
Sheet Number:
A3.3



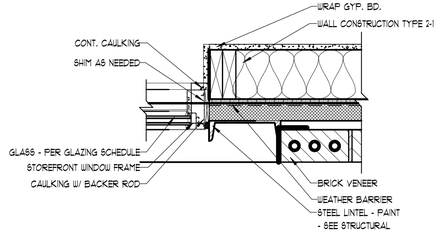
1 BRICK WINDOW HEADER
1 1/2" = 1'-0"



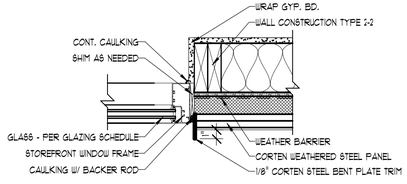
2 CORTEN WINDOW HEADER
1 1/2" = 1'-0"
JAMB SIMILAR



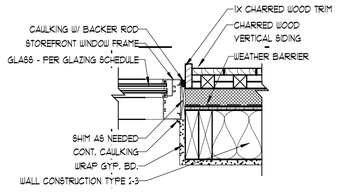
3 SIDING WINDOW HEADER
1 1/2" = 1'-0"



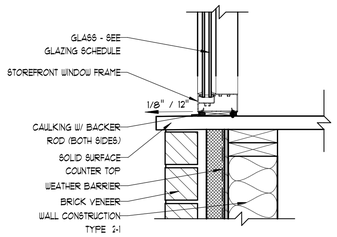
4 BRICK WINDOW JAMB
1 1/2" = 1'-0"



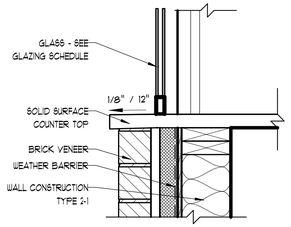
5 CORTEN WINDOW JAMB
1 1/2" = 1'-0"



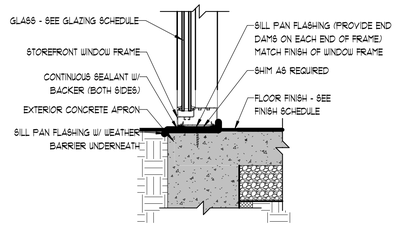
6 SIDING WINDOW JAMB
1 1/2" = 1'-0"



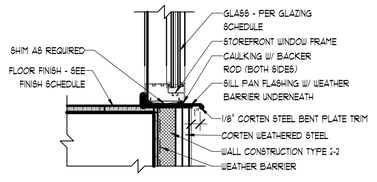
7 BRICK WINDOW SILL
1 1/2" = 1'-0"



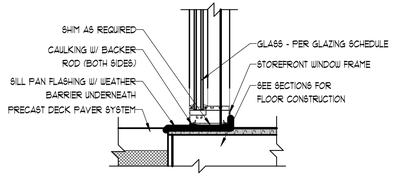
8 SERVE WINDOW SILL
1 1/2" = 1'-0"



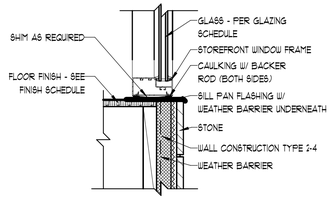
9 CONCRETE WINDOW SILL
1 1/2" = 1'-0"



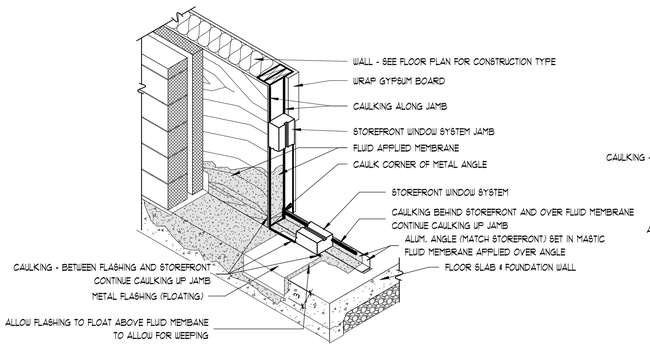
10 CORTEN WINDOW SILL
1 1/2" = 1'-0"



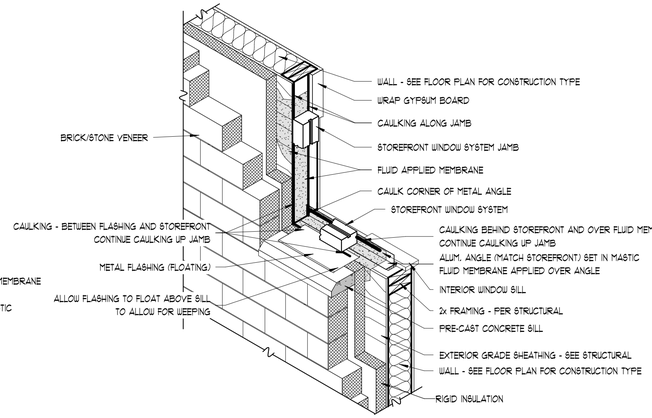
11 DECK SILL DETAIL
1 1/2" = 1'-0"



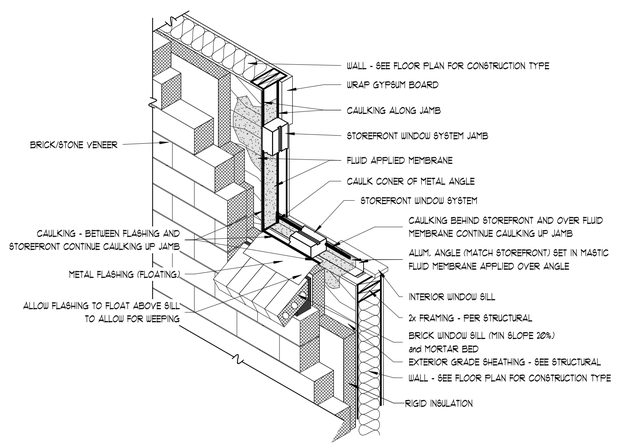
12 STONE WINDOW SILL
1 1/2" = 1'-0"



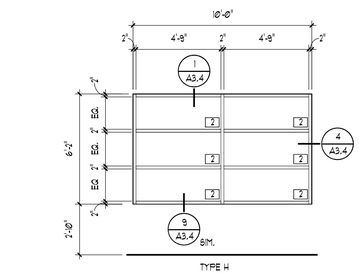
13 WINDOW SILL PAN DETAIL
1" = 1'-0"



14 WINDOW PRECAST DETAIL
1" = 1'-0"



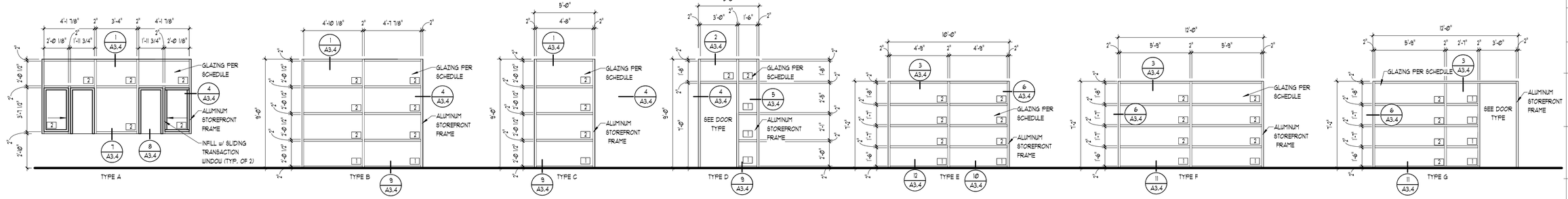
15 WINDOW BRICK SILL DETAIL
1" = 1'-0"



TYPE H

GLAZING SCHEDULE

1	1" INSULATED FULLY TEMPERED GLASS W/ LOW-E
2	1" INSULATED GLASS W/ LOW-E



WPA architecture

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REV	DATE	DESCRIPTION

DESIGNED BY: BF
DRAWN: RS
CHECKED: BF
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
WINDOW SCHEDULE

Sheet Number:
A3.4

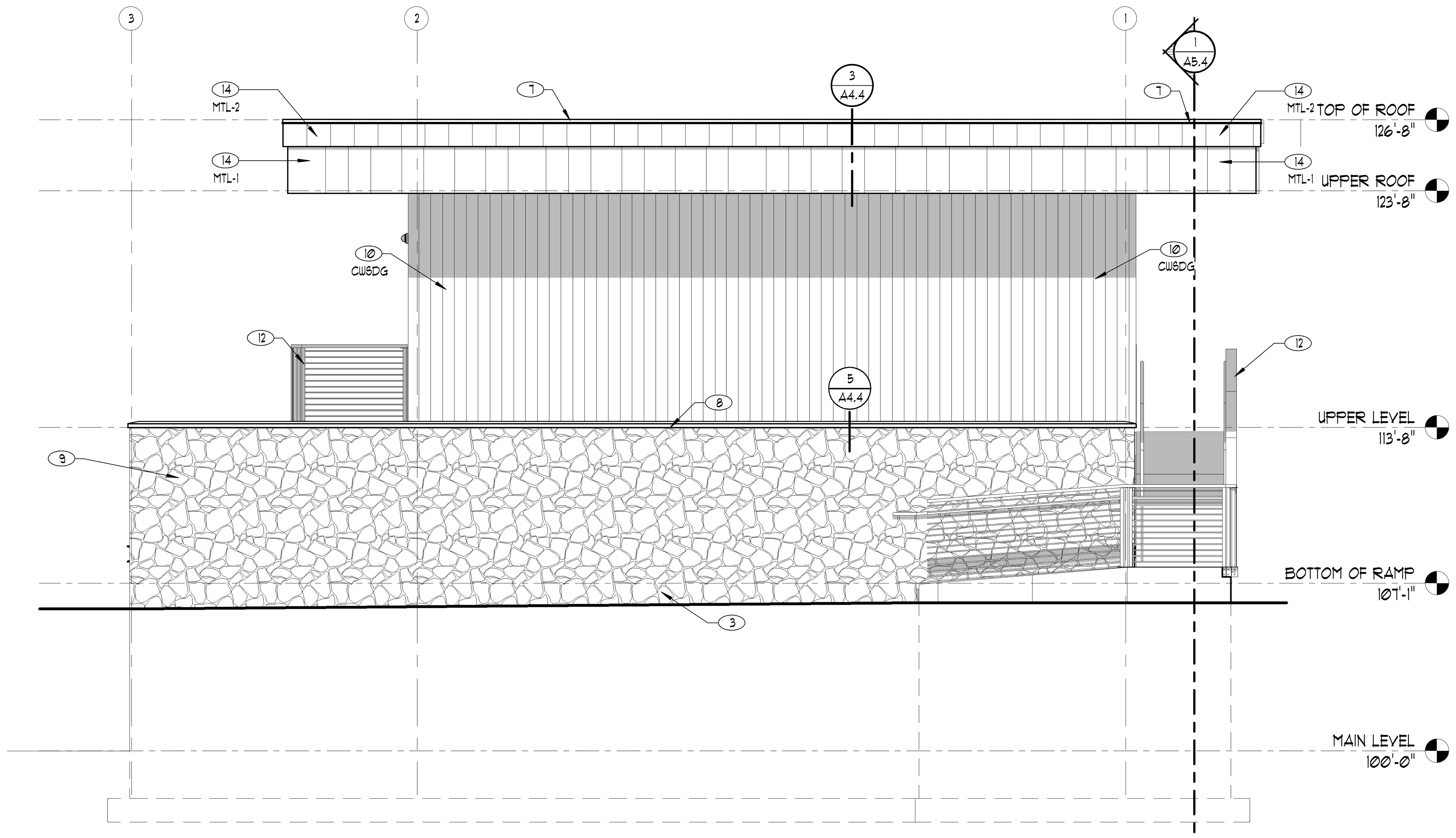
SHEETNOTES:

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4

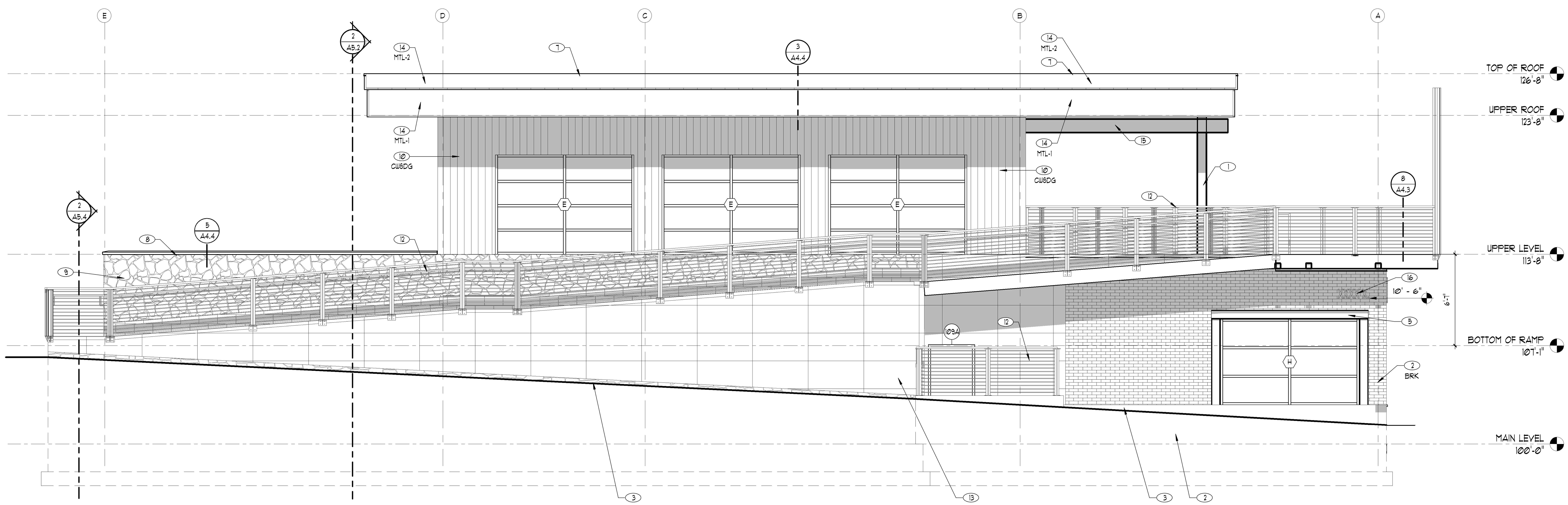
1. STRUCTURAL STEEL COLUMN PER STRUCTURAL DWGS - PAINT
2. BRICK VENEER
3. APPROX. FINISH GRADE - SEE CIVIL DWGS FOR CONTINUATION
4. BUILDING SIGNAGE BY OWNER, PROVIDE BACKING AS REQUIRED FOR SIGN
5. STRUCTURAL STEEL LINTEL PER STRUCTURAL DWGS - PAINT
6. STEEL CANOPY STRUCTURE
7. PRE-FINISHED METAL DRIP EDGE
8. PRE-CAST CONCRETE WALL CAP - SEE DETAIL 5/A4.4
9. MANUFACTURED STONE VENEER (CMV-1)
10. PRE-FINISHED WOOD VERTICAL SIDING - PROVIDE 1 X 4 CHARRED WOOD TRIM AT CORNERS (CWSDG)
11. DRINKING FOUNTAIN - SEE PLUMBING DRAWINGS
12. GUARDRAIL - SEE DETAIL 8/A4.3
13. CORTEN WEATHERED STEEL PANELS (MTLWP)
14. PRE-FINISHED METAL FASICA - RUN VERTICALLY IN PATTERN SHOWN
15. STRUCTURAL STEEL BEAM PER STRUCTURAL DWGS - PAINT
16. BUILDING ADDRESS SIGNAGE BY OWNER, 8" TALL, 1/2" STROKE WIDTH MINIMUM, PROVIDE BACKING AS REQUIRED FOR SIGN
17. RESTROOM SIGNAGE - SEE 8/G1.3
18. 2" X 3" TUBE STEEL GATE w/ COMPOSITE FENCING FACE.

EXTERIOR FINISH SCHEDULE

MARK	ITEM DESCRIPTION	MANUFACTURER	COLOR / FINISH
BRK	BRICK VENEER	INTERSTATE BRICK	L-4, BRONZESTONE BRICK
CMV-1	ADHERED CONCRETE MASONRY VENEER	CREATIVE MINES	CRAFT ORCHARD LIMESTONE PROVIDE MIX OF BUTTERNUT (20 PERCENT,) ALPACA (60 PERCENT), & WHITEGOLD (20 PERCENT)
CWSDG	CHARRED WOOD SIDING	NAKAMOTO FORESTRY	GENDAI NM1901, ARMSTRONG AMBER
CWSFT	CHARRED WOOD SOFFIT	NAKAMOTO FORESTRY	GENDAI NM1901, ARMSTRONG AMBER
MTLWP	FORMED METAL WALL PANELS	WESTERN STATES METAL	RUSTWALL - A606 TYPE 4 (AKA CORETEN)
MTL-1	PRE-FINISHED METAL FASCIA	MAC	MS1, MS1.1 & MS1.2 IN PATTERN SHOWN COLOR: TBD
MTL-2	PRE-FINISHED METAL FASCIA	MAC	VERSA IN VERTICAL ORIENTATION COLOR: TBD
	ALUM. STOREFRONT ENTRANCES & WINDOWS	SEE SPEC.	BLACK ANODIZED ALUMINUM
	METAL DOORS & FRAMES	TBD	TBD
	PRE-MANUF METAL CANOPIES	TBD	POWDER COAT COLOR TBD
	PRE-FINISHED METAL FASCIA & DRIP EDGE	SEE SPEC.	TBD



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



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

WPA architecture

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MILLCREEK, UT 84005

REV	DATE	DESCRIPTION

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DRAWN: BF / RS
CHECKED: BF
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PROJ #: MILLCREEK 0001

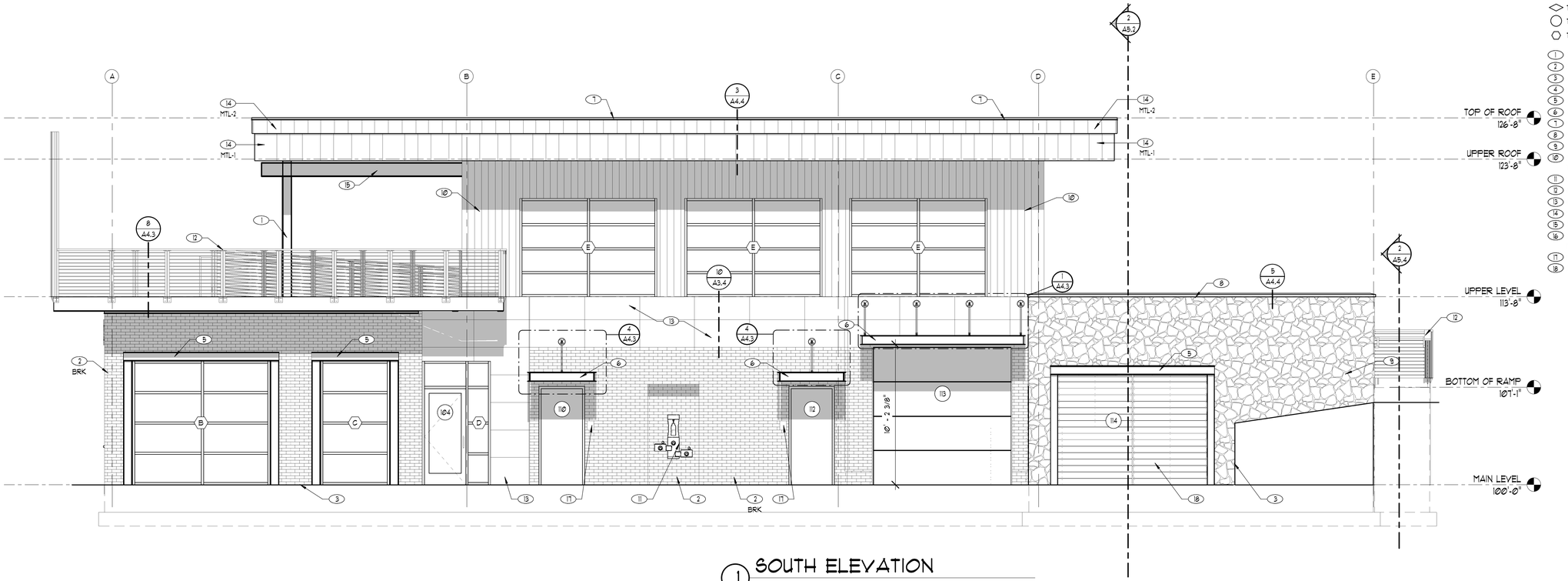
Sheet Name:
EXTERIOR ELEVATIONS

Sheet Number:
A4.1

SHEETNOTES:

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4

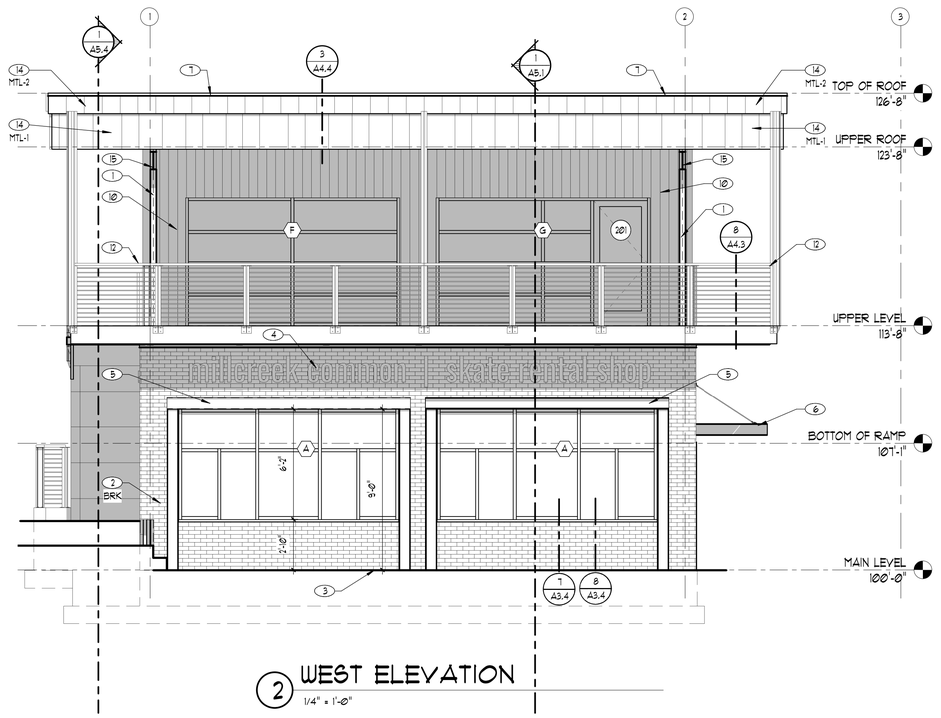
1. STRUCTURAL STEEL COLUMN PER STRUCTURAL DWGS - PAINT
2. BRICK VENEER
3. APPROX. FINISH GRADE - SEE CIVIL DWGS FOR CONTINUATION
4. BUILDING SIGNAGE BY OWNER, PROVIDE BACKING AS REQUIRED FOR SIGN
5. STRUCTURAL STEEL LINTEL PER STRUCTURAL DWGS - PAINT
6. STEEL CANOPY STRUCTURE
7. PRE-FINISHED METAL DRIP EDGE
8. PRE-CAST CONCRETE WALL CAP - SEE DETAIL 9/A4.4
9. MANUFACTURED STONE VENEER (CMV-1)
10. PRE-FINISHED WOOD VERTICAL SIDING - PROVIDE 1 X 4 CHARRED WOOD TRIM AT CORNERS (CWSDG)
11. DRINKING FOUNTAIN - SEE PLUMBING DRAWINGS
12. GUARDRAIL - SEE DETAIL 8/A4.3
13. CORTEN WEATHERED STEEL PANELS (MTLWP)
14. PRE-FINISHED METAL FASICA - RUN VERTICALLY IN PATTERN SHOWN
15. STRUCTURAL STEEL BEAM PER STRUCTURAL DWGS - PAINT
16. BUILDING ADDRESS SIGNAGE BY OWNER, 8" TALL, 1/2" STROKE WIDTH MINIMUM, PROVIDE BACKING AS REQUIRED FOR SIGN
17. RESTROOM SIGNAGE - SEE 8/G1.3
18. 2" X 3" TUBE STEEL GATE w/ COMPOSITE FENCING FACE.



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

EXTERIOR FINISH SCHEDULE

MARK	ITEM DESCRIPTION	MANUFACTURER	COLOR / FINISH
BRK	BRICK VENEER	INTERSTATE BRICK	L-4, BRONZESTONE BRICK
CMV-1	ADHERED CONCRETE MASONRY VENEER	CREATIVE MINES	CRAFT ORCHARD LIMESTONE PROVIDE MIX OF BUTTERNUT (20 PERCENT,) ALPACA (60 PERCENT), & WHITEGOLD (20 PERCENT)
CWSDG	CHARRED WOOD SIDING	NAKAMOTO FORESTRY	GENDAI NM180I, ARMSTRONG AMBER
CWSFT	CHARRED WOOD SOFFIT	NAKAMOTO FORESTRY	GENDAI NM180I, ARMSTRONG AMBER
MTLWP	FORMED METAL WALL PANELS	WESTERN STATES METAL	RUSTWALL - A606 TYPE 4 (AKA CORETEN)
MTL-1	PRE-FINISHED METAL FASCIA	MAC	M81, M81.1 & M81.2 IN PATTERN SHOWN COLOR: TBD
MTL-2	PRE-FINISHED METAL FASCIA	MAC	VERSA IN VERTICAL ORIENTATION COLOR: TBD
	ALUM. STOREFRONT ENTRANCES & WINDOWS	SEE SPEC.	BLACK ANODIZED ALUMINUM
	METAL DOORS & FRAMES	TBD	TBD
	PRE-MANUF METAL CANOPIES	TBD	POWDER COAT COLOR TBD
	PRE-FINISHED METAL FASCIA & DRIP EDGE	SEE SPEC.	TBD



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

WPA architecture

5403169-0301
10.12.2018
STATE OF UTAH

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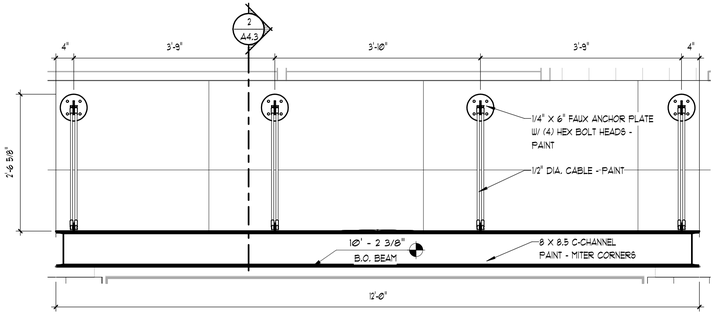
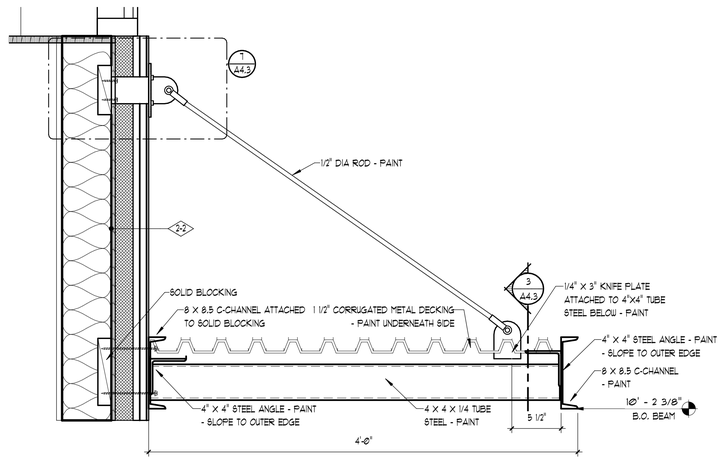


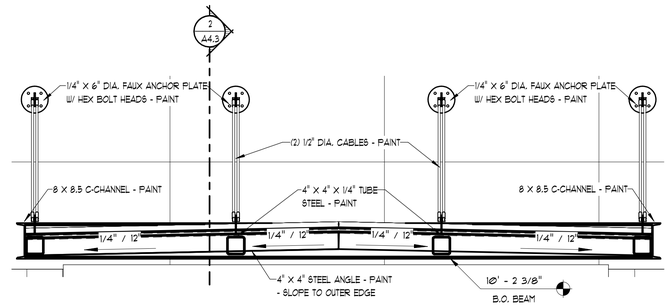
1 AWNING ELEVATION

3/4" = 1'-0"



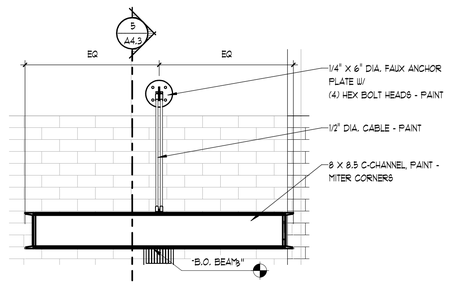
2 AWNING DETAIL

1 1/2" = 1'-0"



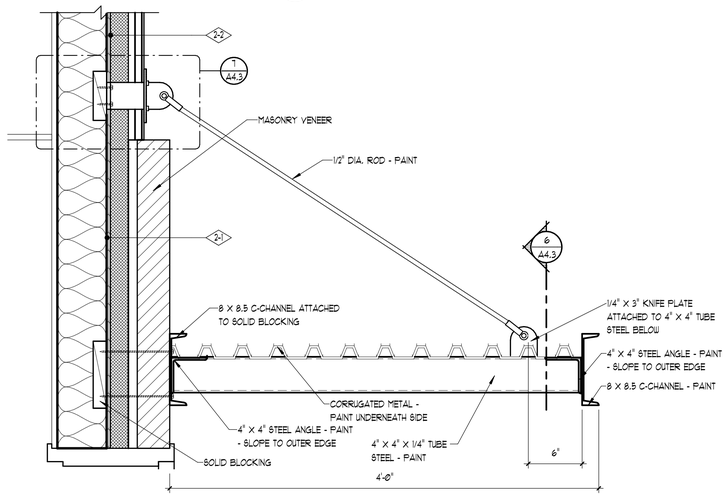
3 AWNING SECTION

3/4" = 1'-0"



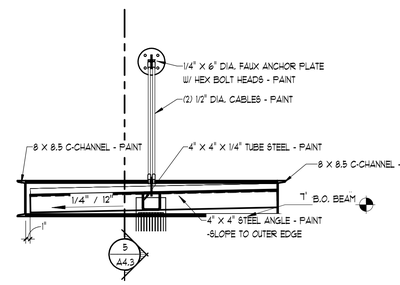
4 AWNING ELEVATION

3/4" = 1'-0"



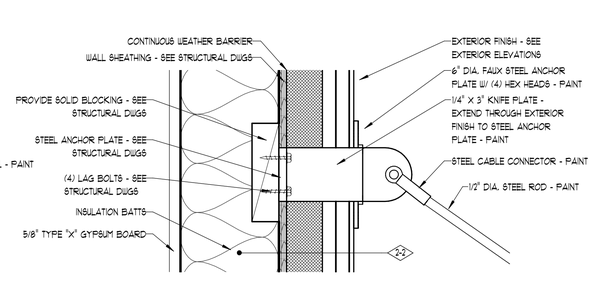
5 AWNING 2 DETAIL

1 1/2" = 1'-0"



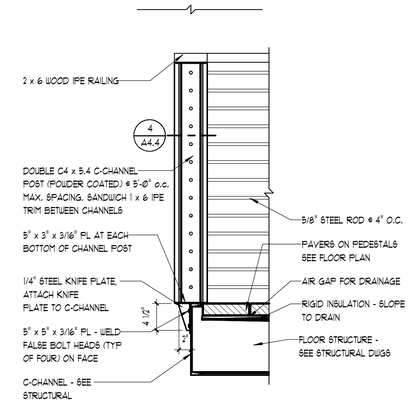
6 AWNING 2 SECTION

3/4" = 1'-0"



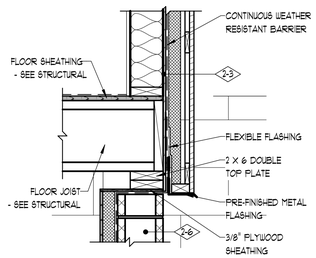
7 AWNING CONNECTION DETAIL

3" = 1'-0"



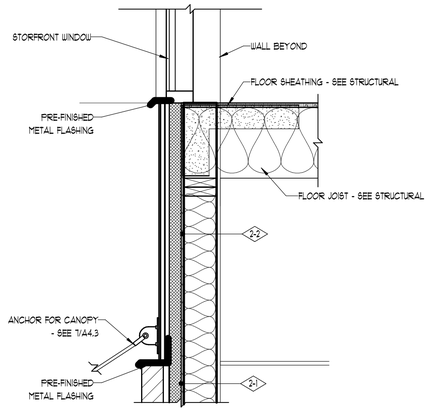
8 RAILING MOUNT

1" = 1'-0"



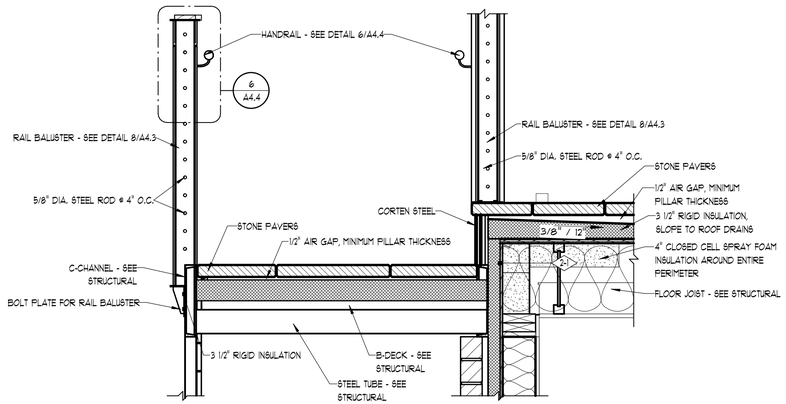
9 CMU TO WOOD TRANSITION

1" = 1'-0"



10 EXTERIOR DETAIL

1" = 1'-0"



11 RAMP @ DECK

1" = 1'-0"

WPA architecture

LICENSED ARCHITECT
FRANCIS T. LILLY
6403169-0301
10.12.2018
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WASATCH BLVD - MT. OLYMPUS
MILLCREEK
EAST MILL CREEK - MILLCREEK

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MILLCREEK, UT 84005

REV	DATE	DESCRIPTION

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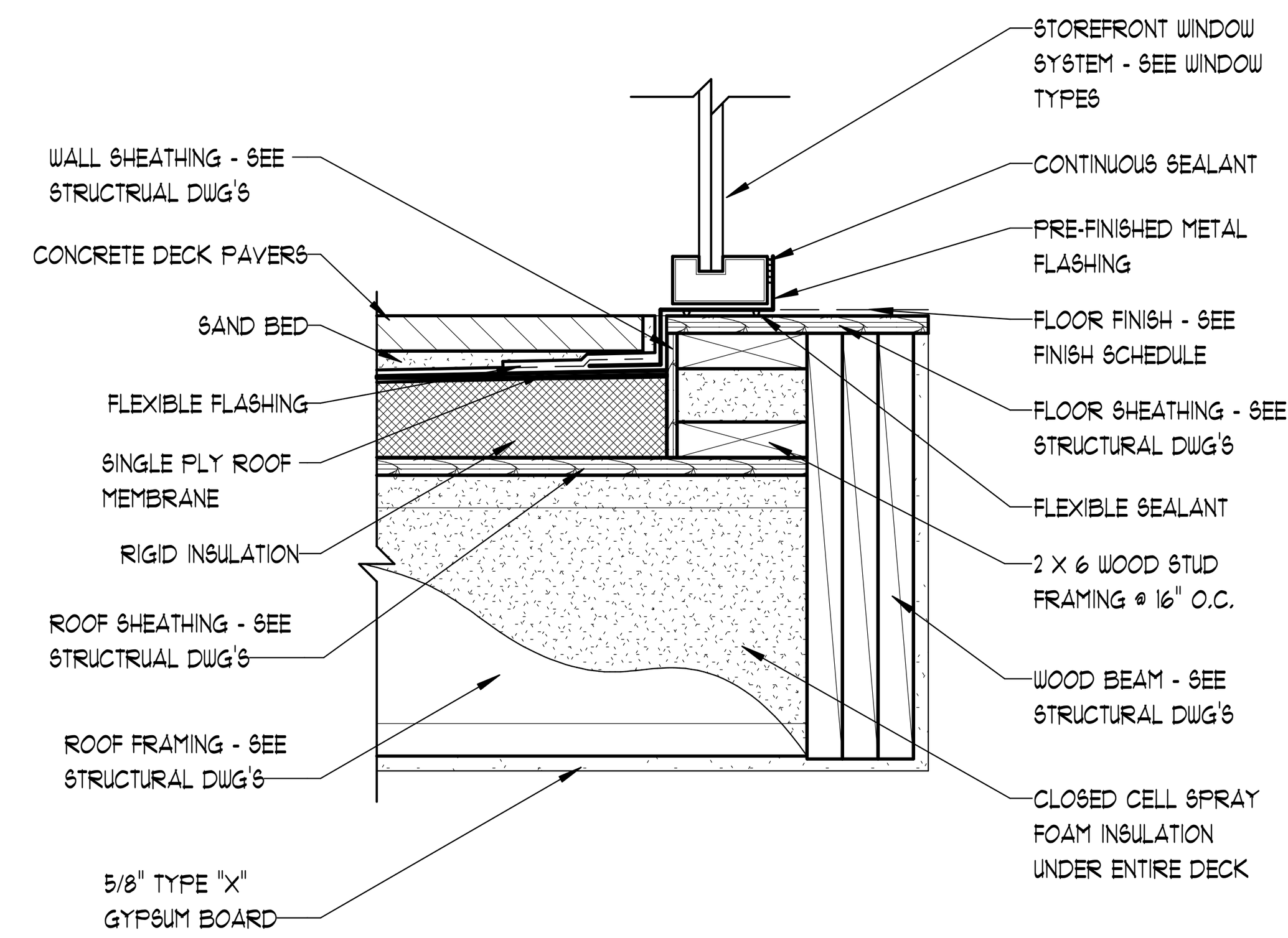
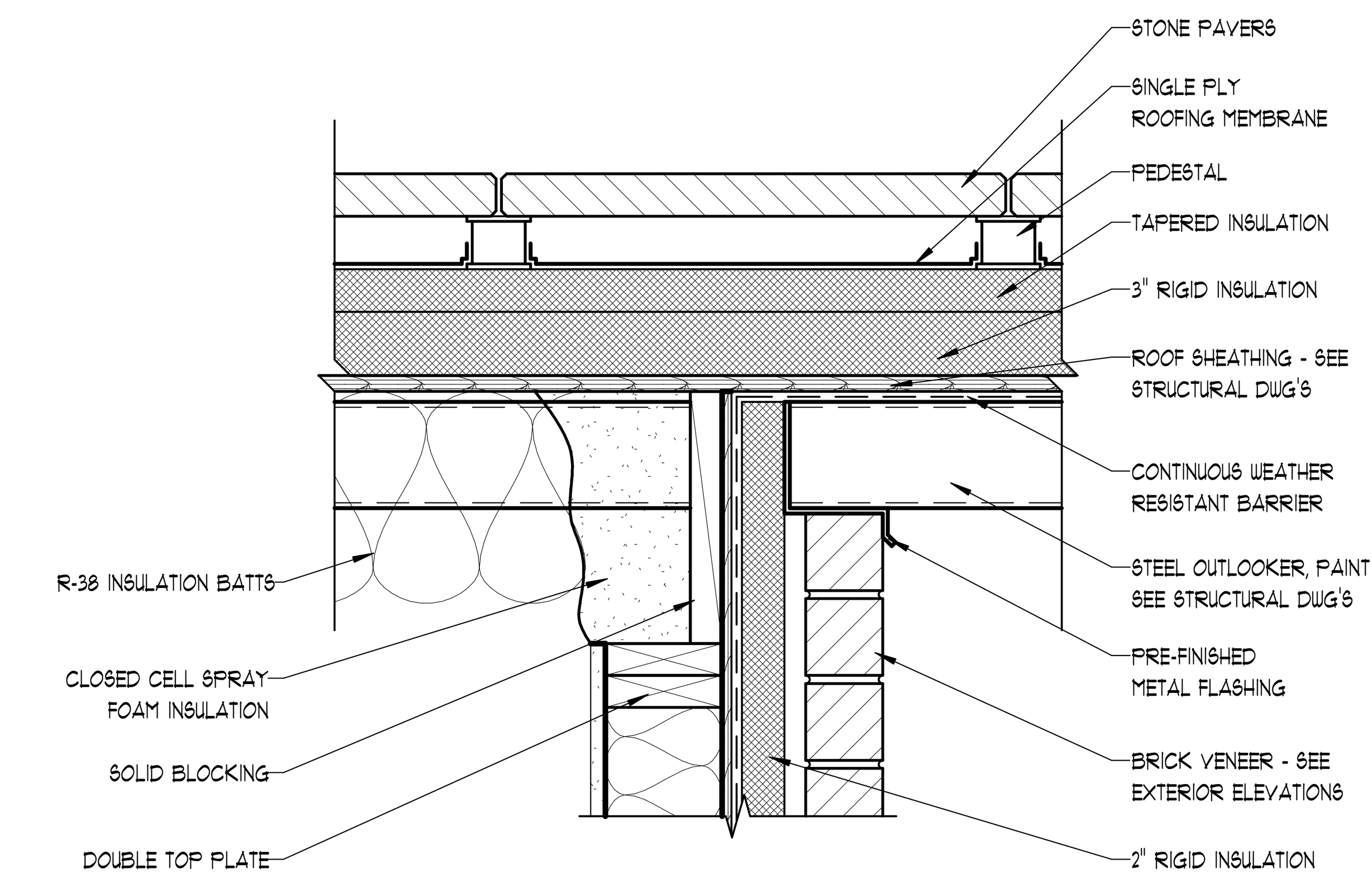
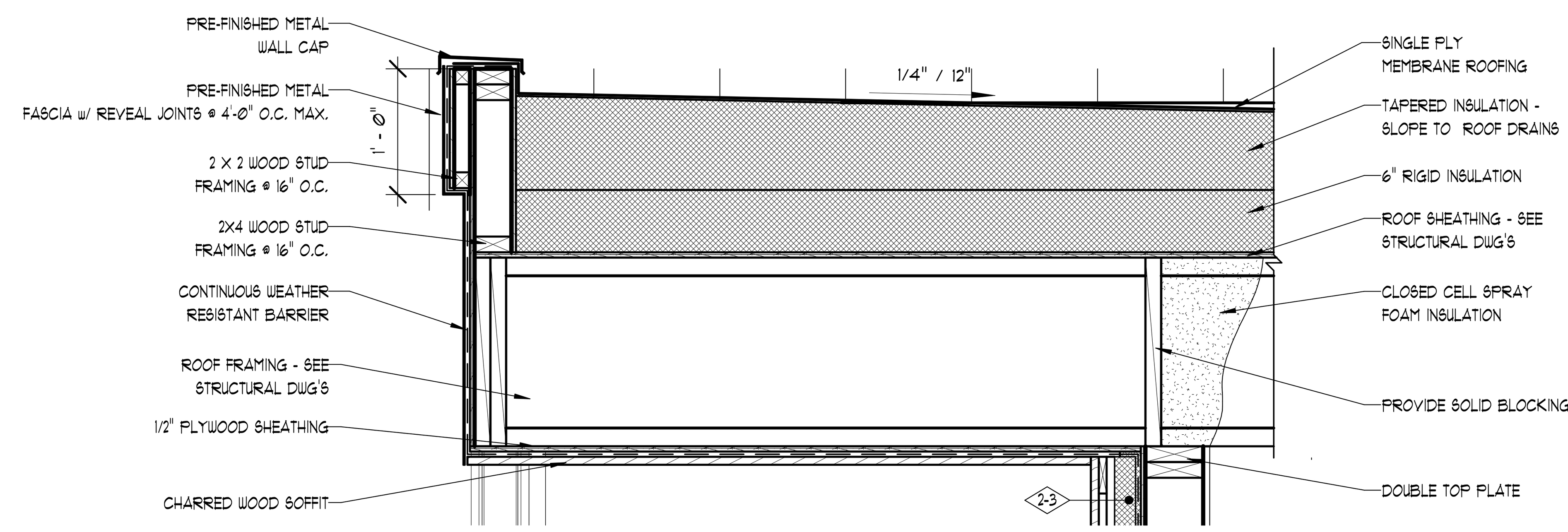


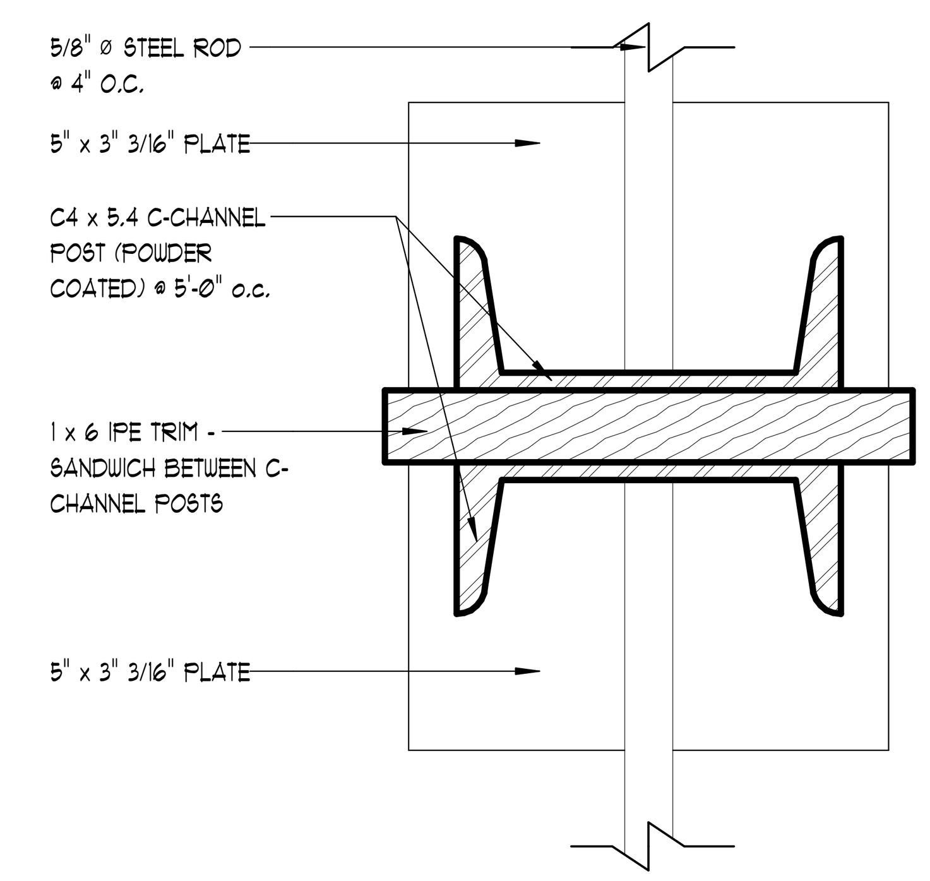
1 DECK DETAIL
1 1/2" = 1'-0"



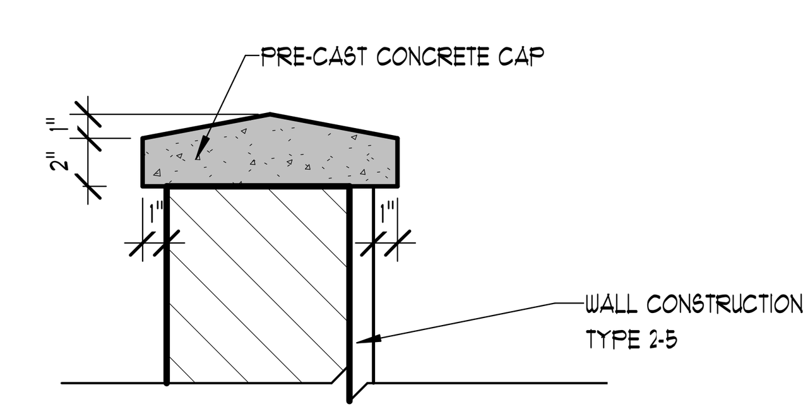
2 DECK DETAIL
1 1/2" = 1'-0"



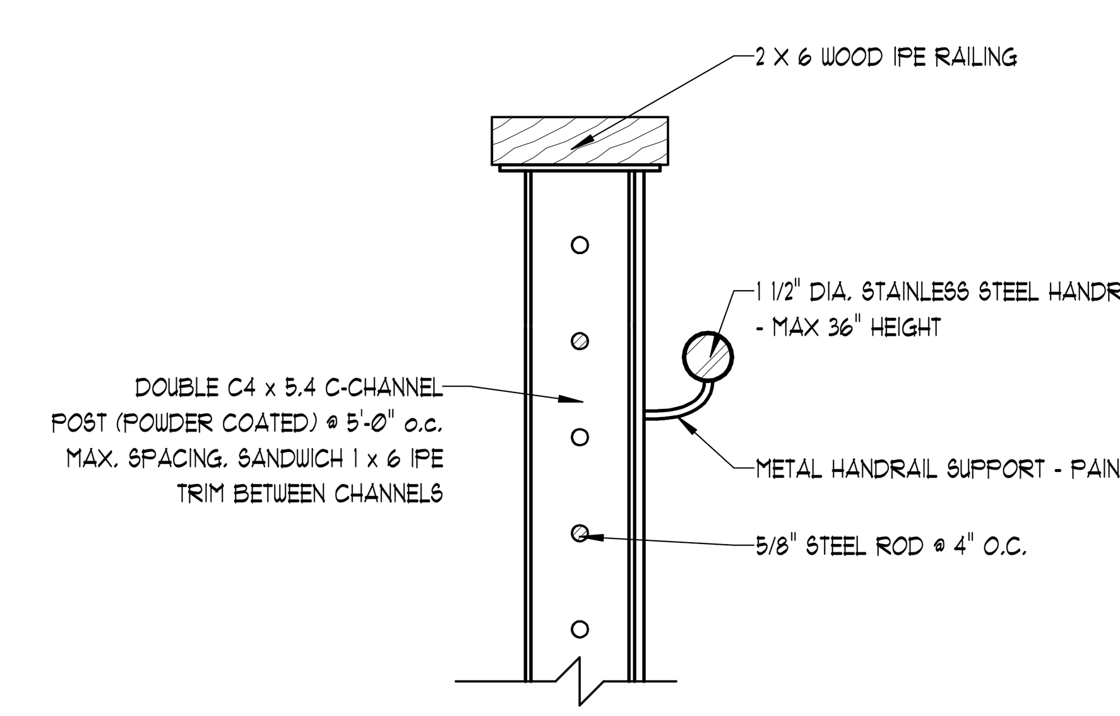
3 PARAPET DETAIL
1" = 1'-0"



4 RAIL BALUSTER
6" = 1'-0"



5 WALL CAP DETAIL
1 1/2" = 1'-0"



6 HANDRAIL DETAIL
1 : 6

WPA architecture

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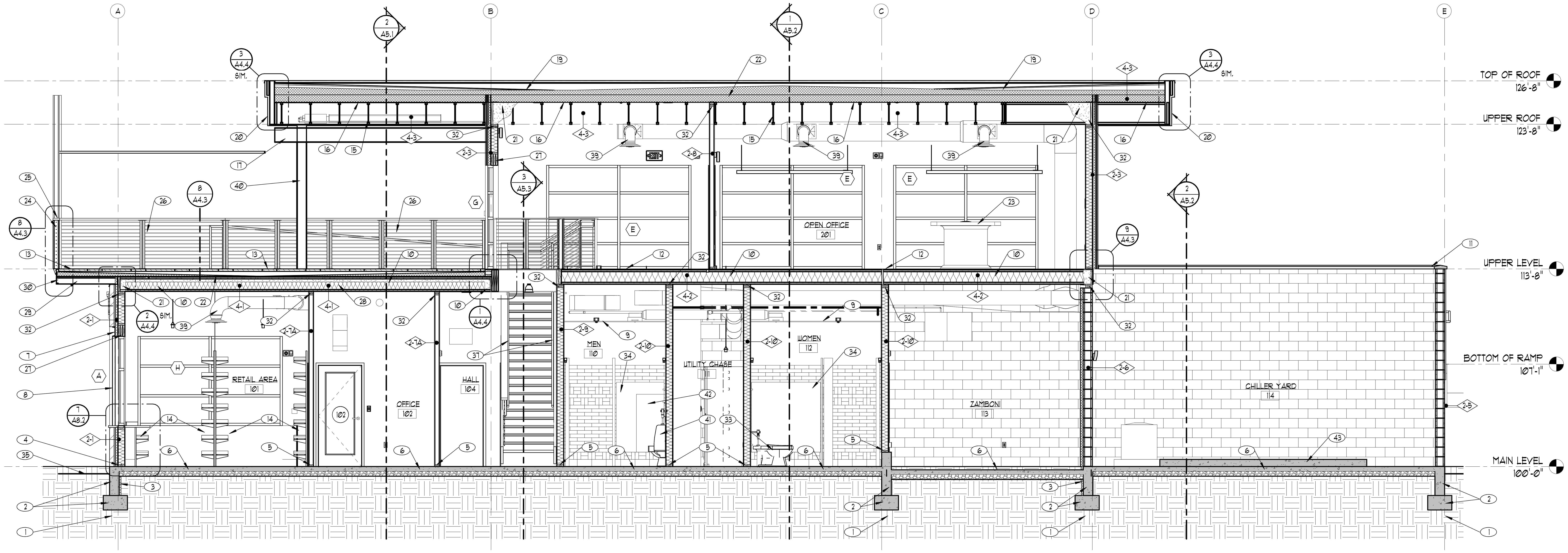
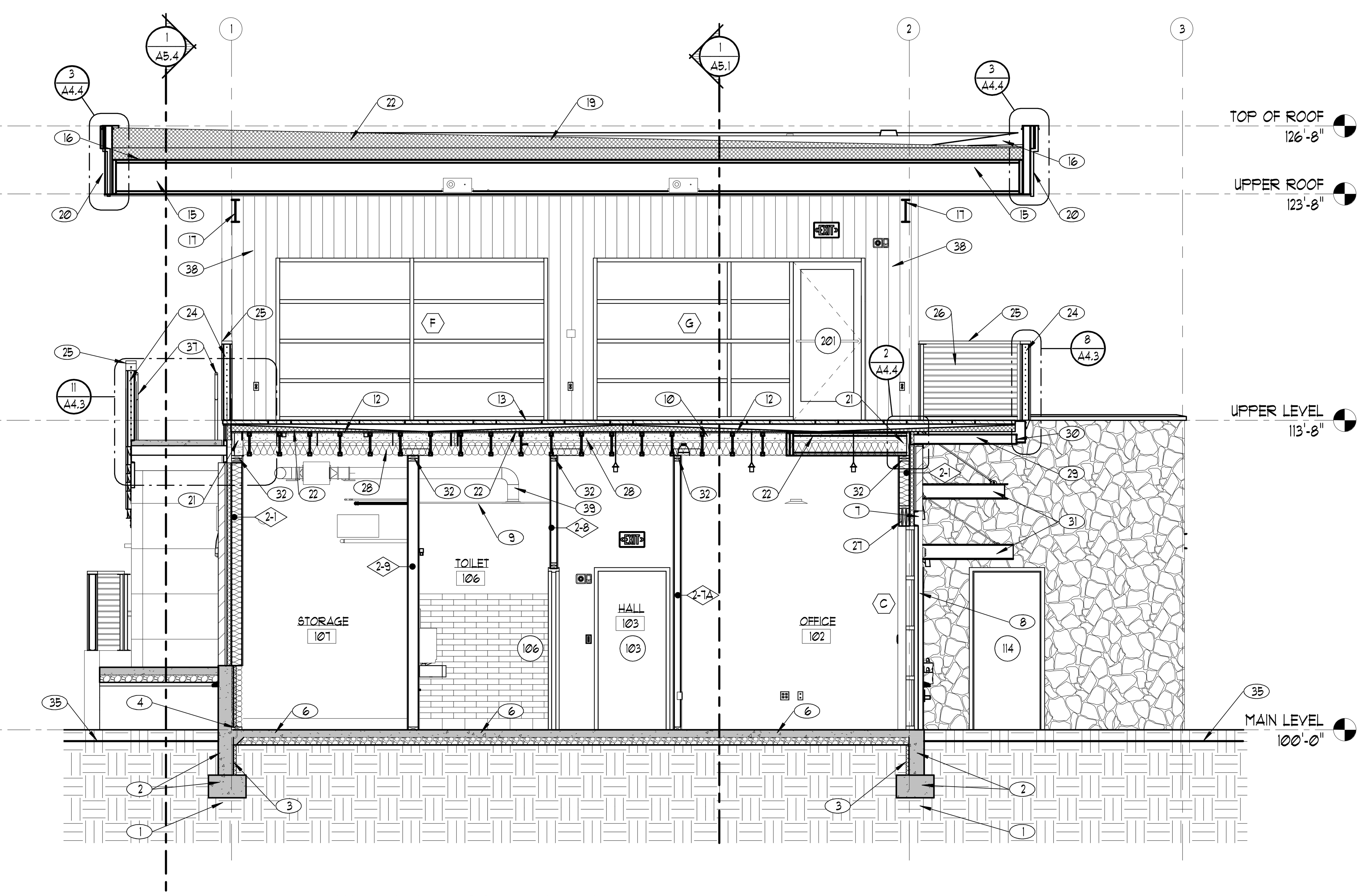


① BUILDING SECTION
1/4" = 1'-0"



② BUILDING SECTION
1/4" = 1'-0"

SHEETNOTES:

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4

1. UNDISTURBED EARTH OR PRE-ENGINEERED FILL
2. CONCRETE FOOTING AND FOUNDATION - SEE STRUCTURAL DWG'S
3. 2" RIGID INSULATION ATTACHED TO CONCRETE FOUNDATION
4. PRESSURE TREATED SILL PLATE w/ ANCHOR BOLT - SEE STRUCTUAL DWG'S
5. PRESSURE TREATED SILL PLATE
6. CONCRETE SLAB OVER GRAVEL BASE - SEE STRUCTURAL DWG'S
7. C-CHANNEL HEADER - PAINT
8. C-CHANNEL COLUMN - PAINT
9. GYPSUM BOARD CEILING - SEE REFLECTED CEILING PLAN
10. FLOOR FRAMING - SEE STRUCTURAL DWG'S
11. PRE-CAST CONCRETE WALL CAP - SEE DETAIL 3/A4.2
12. FLOOR SHEATHING - SEE STRUCTURAL DWG'S
13. PRECAST CONCRETE PAVERS OVER PEDESTAL SYSTEM
14. PRE-MANUFACTURED SKATE RACK
15. ROOF FRAMING - SEE STRUCTURAL DWG'S
16. ROOF SHEATHING - SEE STRUCTURAL DWG'S
17. STEEL BEAM - SEE STRUCTURAL DWG'S, PAINT
18. NOT USED
19. SINGLE PLY MEMBRANE OVER 6" RIGID INSULATION (R-30 MIN.)
20. PRE-FINISHED METAL FASCIA, TYP
21. CLOSED CELL SPRAY FOAM INSULATION AROUND ENTIRE PERIMETER
22. TAPERED INSULATION - SLOPE TO DRAINS
23. OFFICE FURNITURE, N.I.C.
24. IPE & STEEL BALUSTER - SEE DETAIL 8/A4.3
25. 2 X 6 IPE TOP RAIL
26. 1/2" DIA. ROD @ 4" o.c.
27. WOOD HEADER - SEE STRUCTURAL DWG'S
28. R-38 INSULATION BATTS
29. PAINT STEEL OUTLOOKERS - SEE STRUCTURAL DWG'S
30. PAINT C-CHANNEL FASCIA - SEE STRUCTURAL DWG'S
31. PAINT STEEL CANOPY - SEE DETAIL 1/A4.3 & 4/A4.3
32. DOUBLE TOP PLATE
33. TOILET - SEE PLUMBING DWG'S
34. TOILET PARTITION
35. APPROX. FINISH GRADE - SEE CIVIL DWGS
36. CONCRETE RAMP OVER 4" GRAVEL BASE
37. 1 1/2" STAINLESS STEEL HANDRAIL
38. CHARRED WOOD VERTICAL SIDING
39. MECHANICAL EQUIPMENT - SEE MECHANICAL DWG'S
40. STEEL COLUMN - SEE STRUCTURAL DWG'S, PAINT
41. URINAL - SEE PLUMBING DWG'S
42. URINAL - SEE PLUMBING DWG'S
43. THICKENED CONCRETE SLAB- SEE CHILLER EQUIPMENT SPECIFICATIONS

WPA architecture

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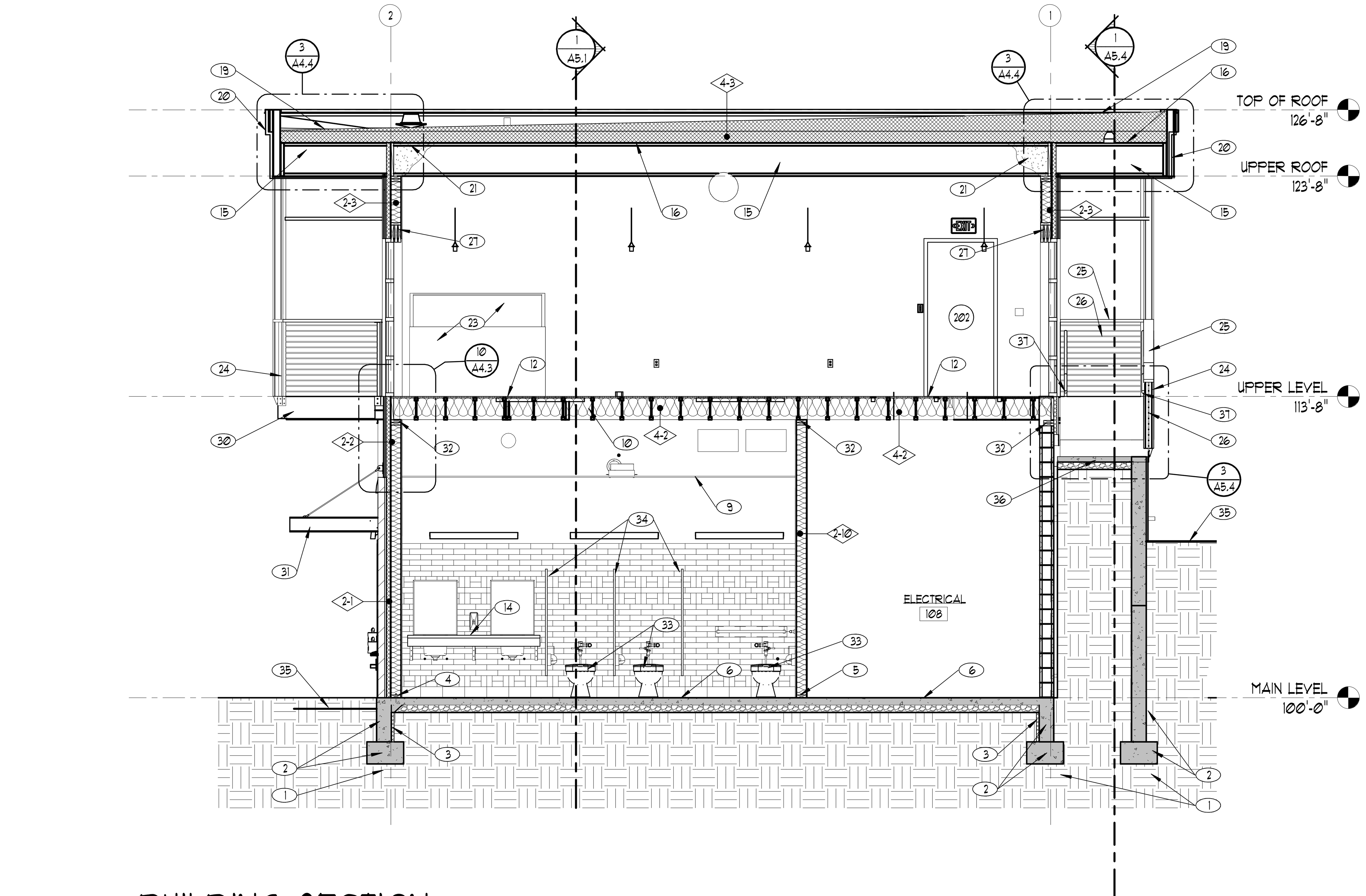
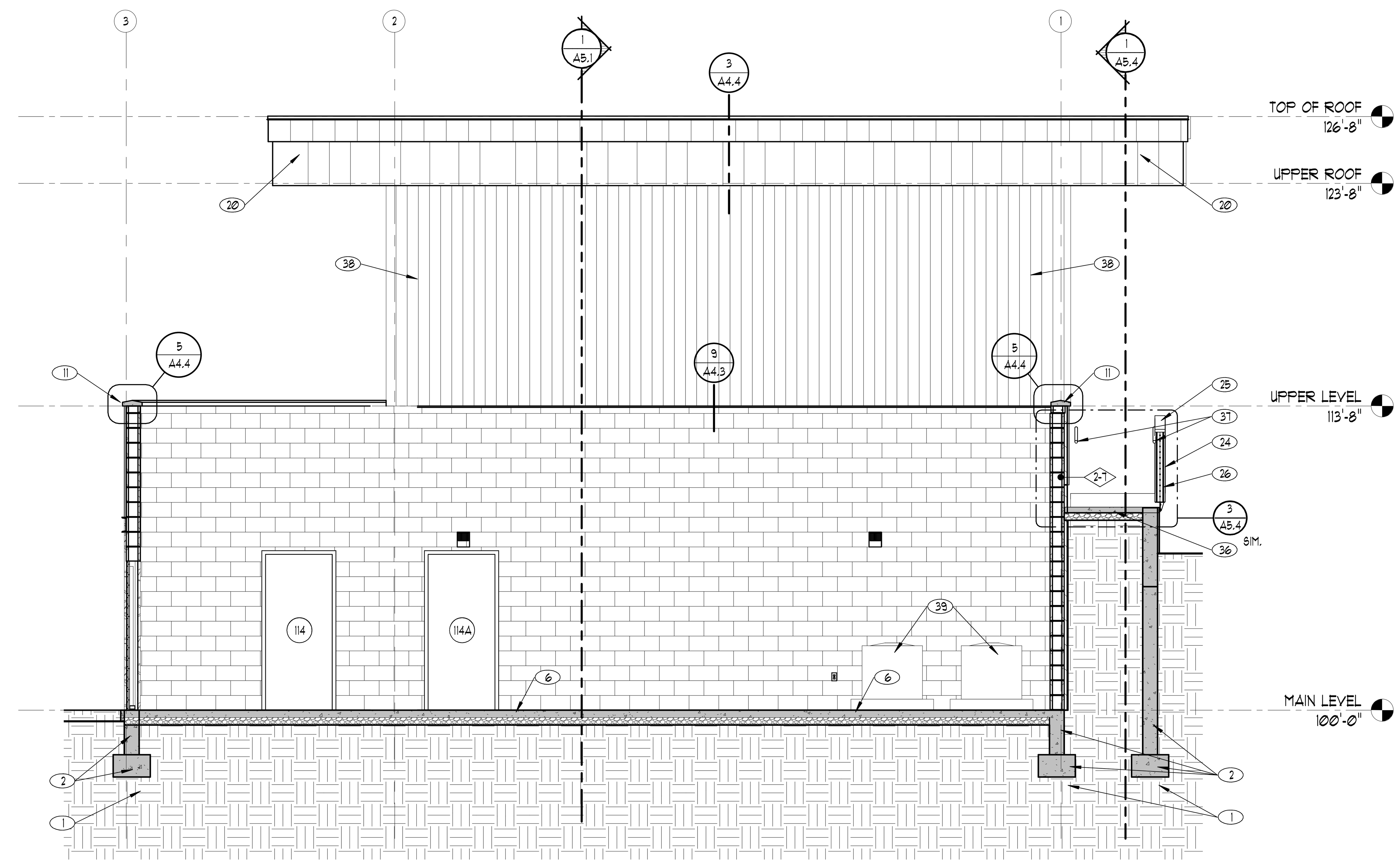


1 BUILDING SECTION
1/4" = 1'-0"



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

SHEETNOTES:

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4
- (1) UNDISTURBED EARTH OR PRE-ENGINEERED FILL
- (2) CONCRETE FOOTING AND FOUNDATION - SEE STRUCTURAL DWG'S
- (3) 2" RIGID INSULATION ATTACHED TO CONCRETE FOUNDATION
- (4) PRESSURE TREATED SILL PLATE w/ ANCHOR BOLT - SEE STRUCTUAL DWG'S
- (5) PRESSURE TREATED SILL PLATE
- (6) CONCRETE SLAB OVER GRAVEL BASE - SEE STRUCTURAL DWG'S
- (7) C-CHANNEL HEADER - PAINT
- (8) C-CHANNEL COLUMN - PAINT
- (9) GYPSUM BOARD CEILING - SEE REFLECTED CEILING PLAN
- (10) FLOOR FRAMING - SEE STRUCTURAL DWG'S
- (11) PRE-CAST CONCRETE WALL CAP - SEE DETAIL 3/A4.2
- (12) FLOOR SHEATHING - SEE STRUCTURAL DWG'S
- (13) PRECAST CONCRETE PAVERS OVER PEDESTAL SYSTEM
- (14) PRE-MANUFACTURED SKATE RACK
- (15) ROOF FRAMING - SEE STRUCTURAL DWG'S
- (16) ROOF SHEATHING - SEE STRUCTURAL DWG'S
- (17) STEEL BEAM - SEE STRUCTURAL DWG'S, PAINT
- (18) NOT USED
- (19) SINGLE PLY MEMBRANE OVER 6" RIGID INSULATION (R-30 MIN.)
- (20) PRE-FINISHED METAL FASCIA, TYP
- (21) CLOSED CELL SPRAY FOAM INSULATION AROUND ENTIRE PERIMETER
- (22) TAPERED INSULATION - SLOPE TO DRAINS
- (23) OFFICE FURNITURE, N.I.C.
- (24) IPE & STEEL BALUSTER - SEE DETAIL 8/A4.3
- (25) 2 X 6 IPE TOP RAIL
- (26) 1/2" DIA. ROD @ 4" o.c.
- (27) WOOD HEADER - SEE STRUCTURAL DWG'S
- (28) R-38 INSULATION BATTS
- (29) PAINT STEEL OUTLOOKERS - SEE STRUCTURAL DWG'S
- (30) PAINT C-CHANNEL FASCIA - SEE STRUCTURAL DWG'S
- (31) PAINT STEEL CANOPY - SEE DETAIL 1/A4.3 & 4/A4.3
- (32) DOUBLE TOP PLATE
- (33) TOILET - SEE PLUMBING DWG'S
- (34) TOILET PARTITION
- (35) APPROX. FINISH GRADE - SEE CIVIL DWGS
- (36) CONCRETE RAMP OVER 4" GRAVEL BASE
- (37) 1 1/2" STAINLESS STEEL HANDRAIL
- (38) CHARRED WOOD VERTICAL SIDING
- (39) MECHANICAL EQUIPMENT - SEE MECHANICAL DWG'S
- (40) STEEL COLUMN - SEE STRUCTURAL DWG'S, PAINT
- (41) URINAL - SEE PLUMBING DWG'S
- (42) URINAL - SEE PLUMBING DWG'S
- (43) THICKENED CONCRETE SLAB- SEE CHILLER EQUIPMENT SPECIFICATIONS

WPA architecture

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MILLCREEK, UT 84005

REV	DATE	DESCRIPTION

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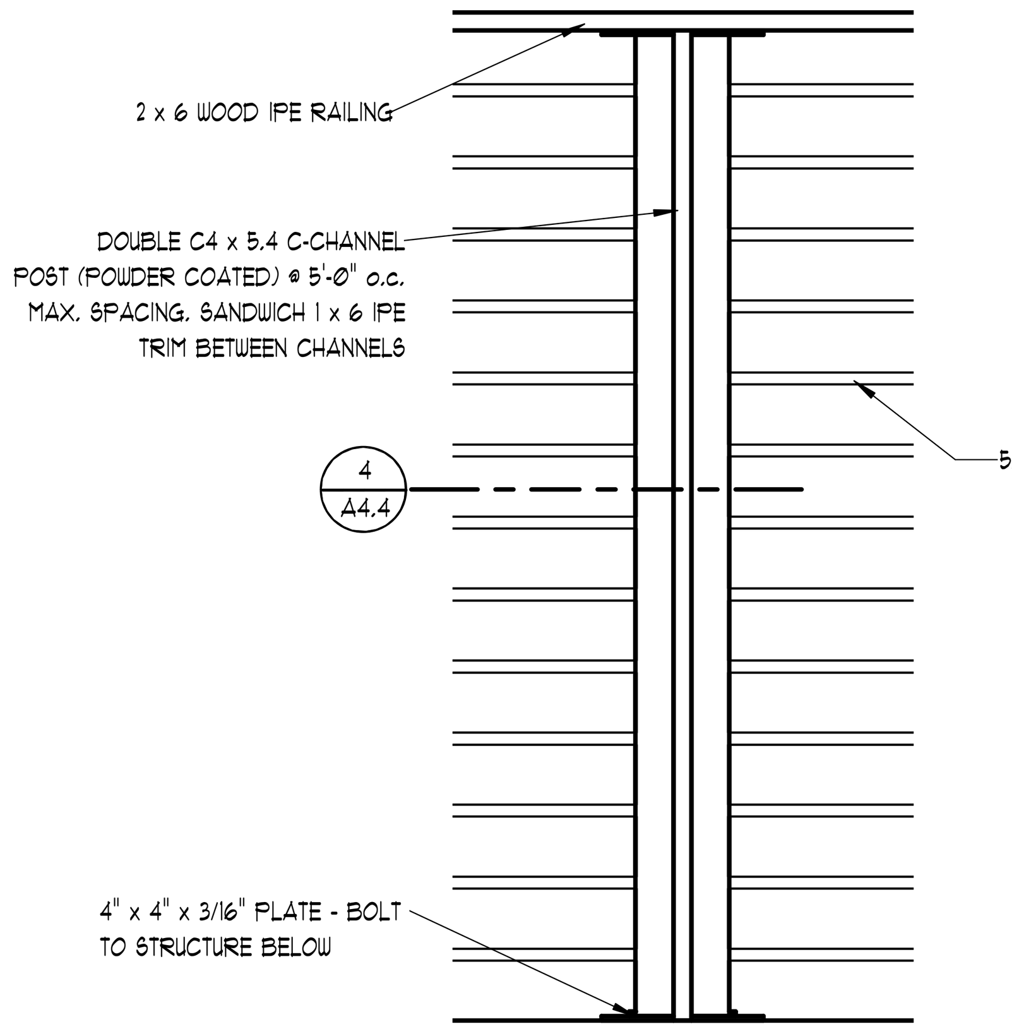
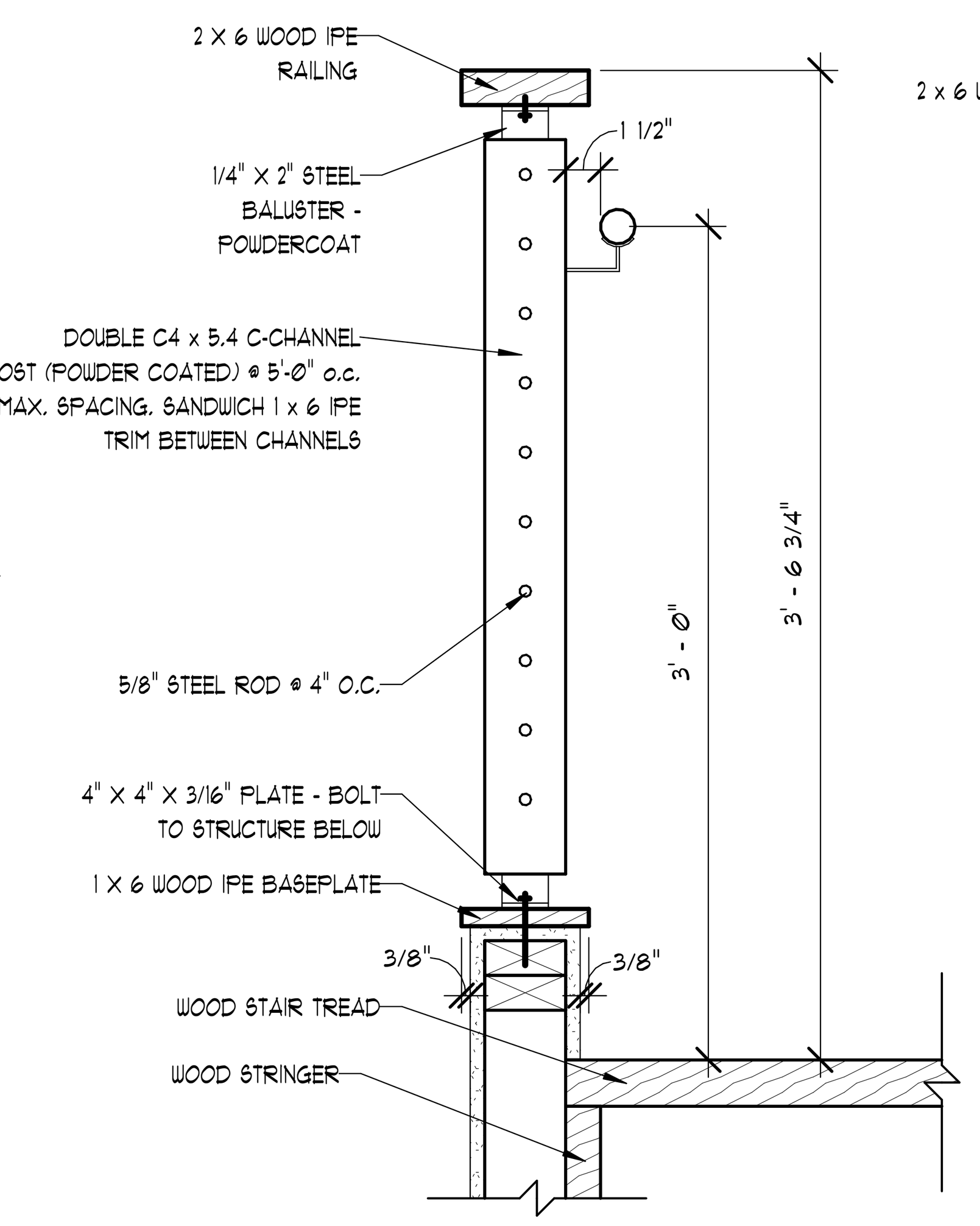


4 BALUSTER DETAIL

1 1/2" = 1'-0"

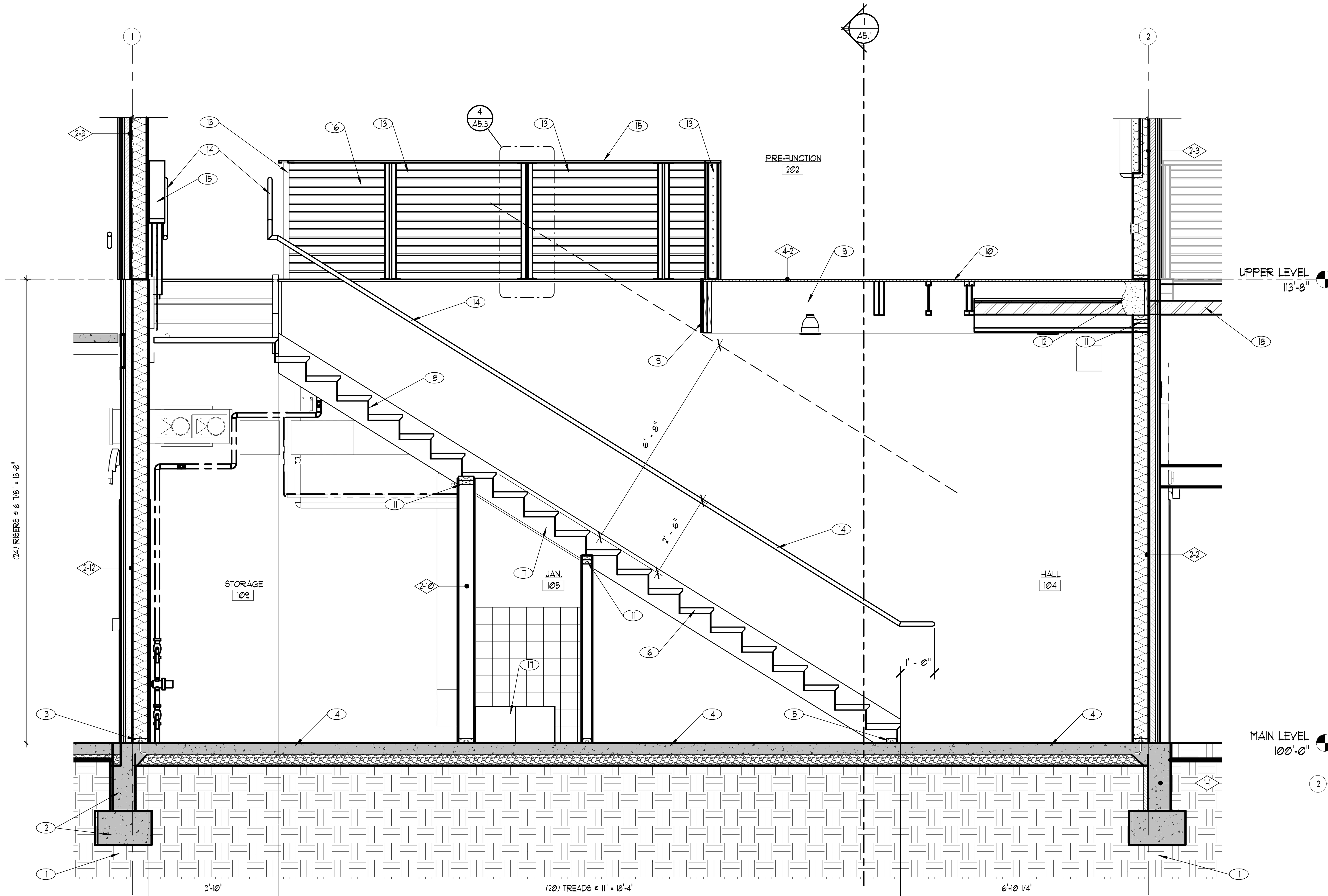


5 STAIR RAILING DETAIL

1 1/2" = 1'-0"

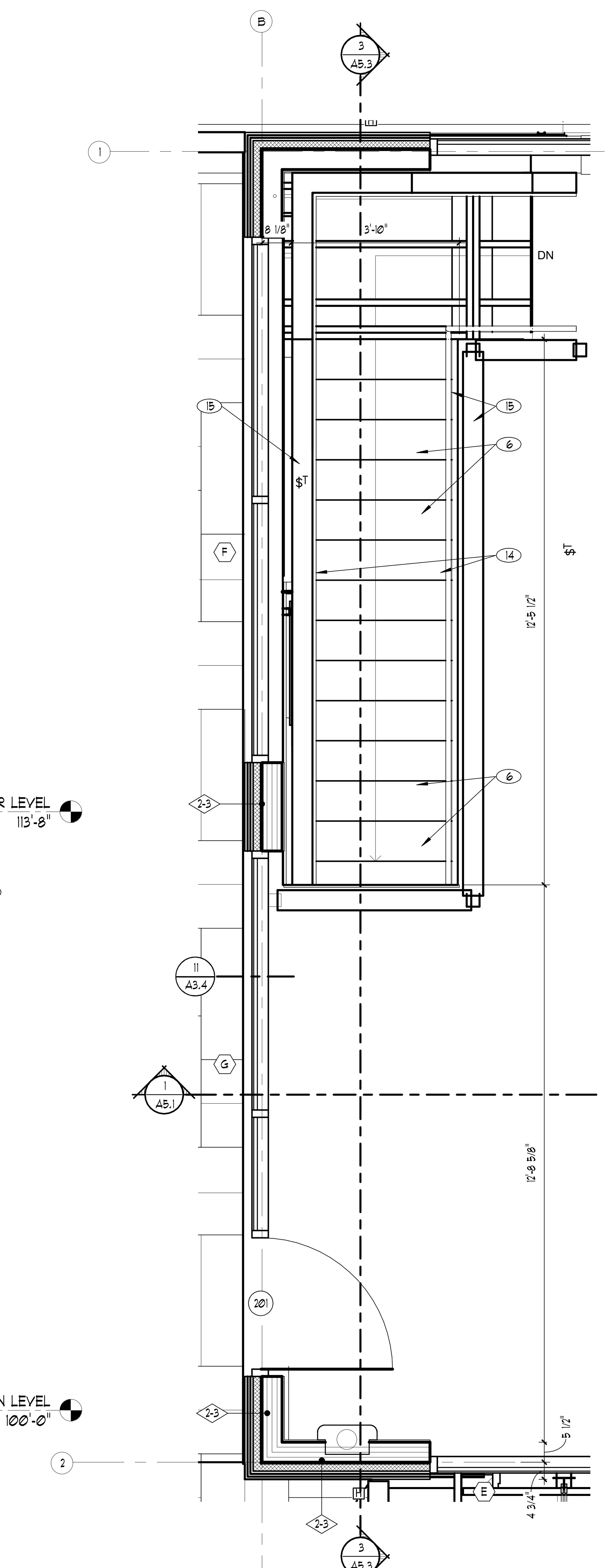
SHEETNOTES:

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4
- (1) UNDISTURBED EARTH OR PRE-ENGINEERED FILL
- (2) CONCRETE FOOTING AND FOUNDATION - SEE STRUCTURAL DWG'S
- (3) PRESSURE TREATED SILL PLATE w/ ANCHOR BOLT - SEE STRUCTUAL DWG'S
- (4) CONCRETE SLAB OVER GRAVEL BASE - SEE STRUCTURAL DWG'S
- (5) 2 X 4 KICK PLATE
- (6) 12" WOOD STAIR TREAD
- (7) STAIR STRINGER - SEE STRUCTURAL DWG'S
- (8) WOOD RISER
- (9) FLOOR FRAMING - SEE STRUCTURAL DWG'S
- (10) FLOOR SHEATHING - SEE STRUCTURAL DWG'S
- (11) DOUBLE TOP PLATE
- (12) CLOSED CELL SPRAY FOAM INSULATION
- (13) IPE & STEEL BALUSTER - SEE DETAIL ---
- (14) STAINLESS STEEL HAND RAIL
- (15) 2 X 6 IPE TOP RAIL
- (16) 1/2" DIA. ROD @ 4" o.c.
- (17) MOP SINK - SEE PLUMBING DWG'S
- (18) STEEL FLOOR FRAMING - SEE STRUCTURAL DWG'S



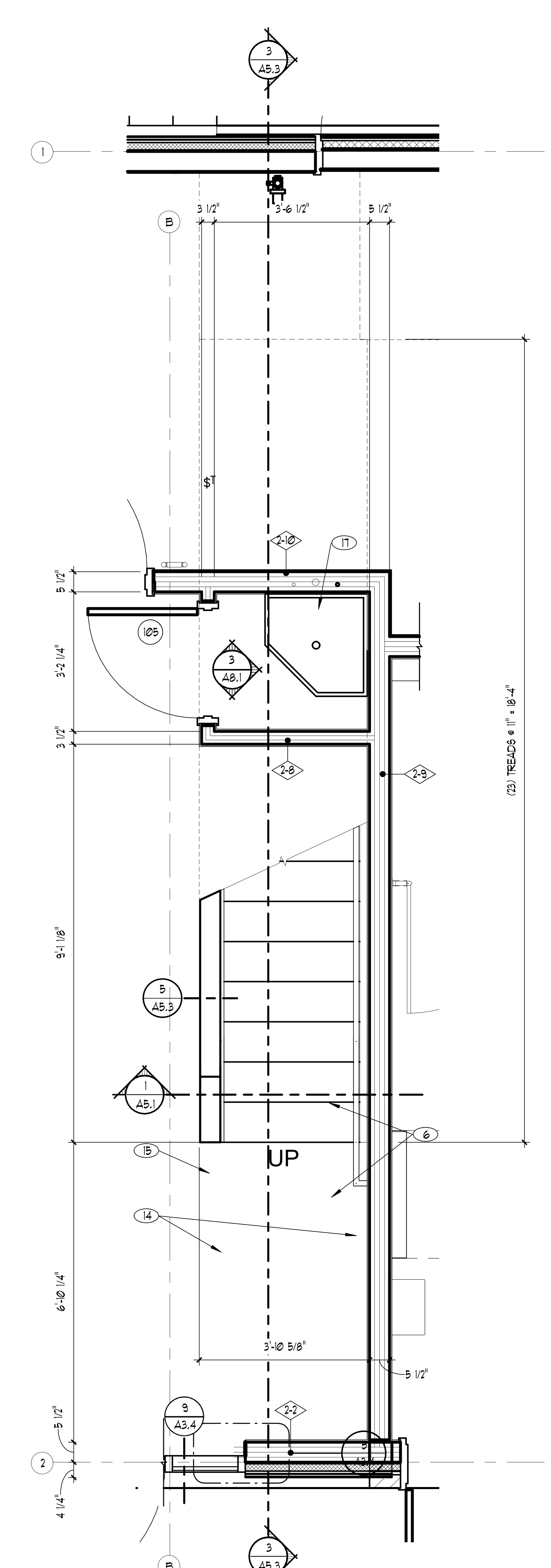
3 STAIR SECTION

1/2" = 1'-0"



2 ENLARGED STAIR PLAN

1/2" = 1'-0"



1 ENLARGED STAIR PLAN

1/2" = 1'-0"

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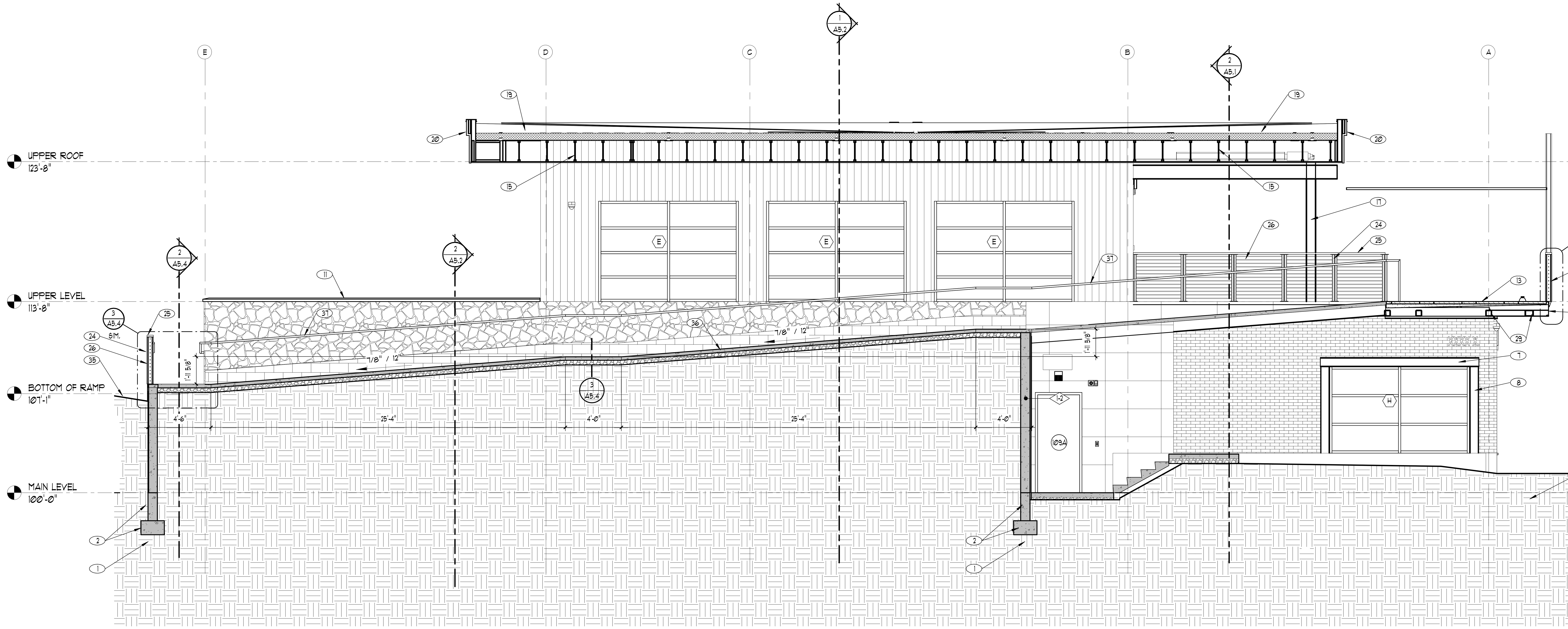
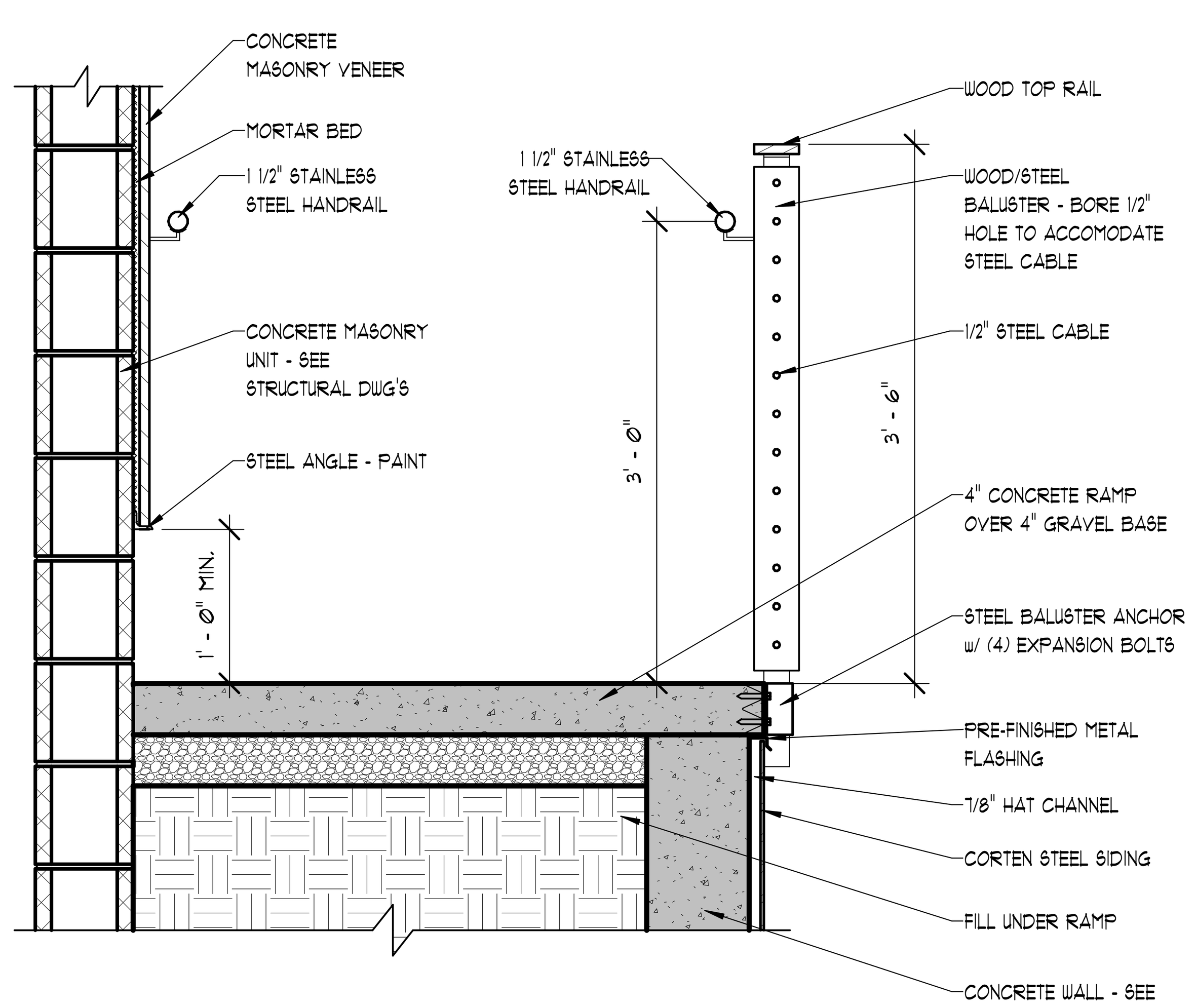
A5.3



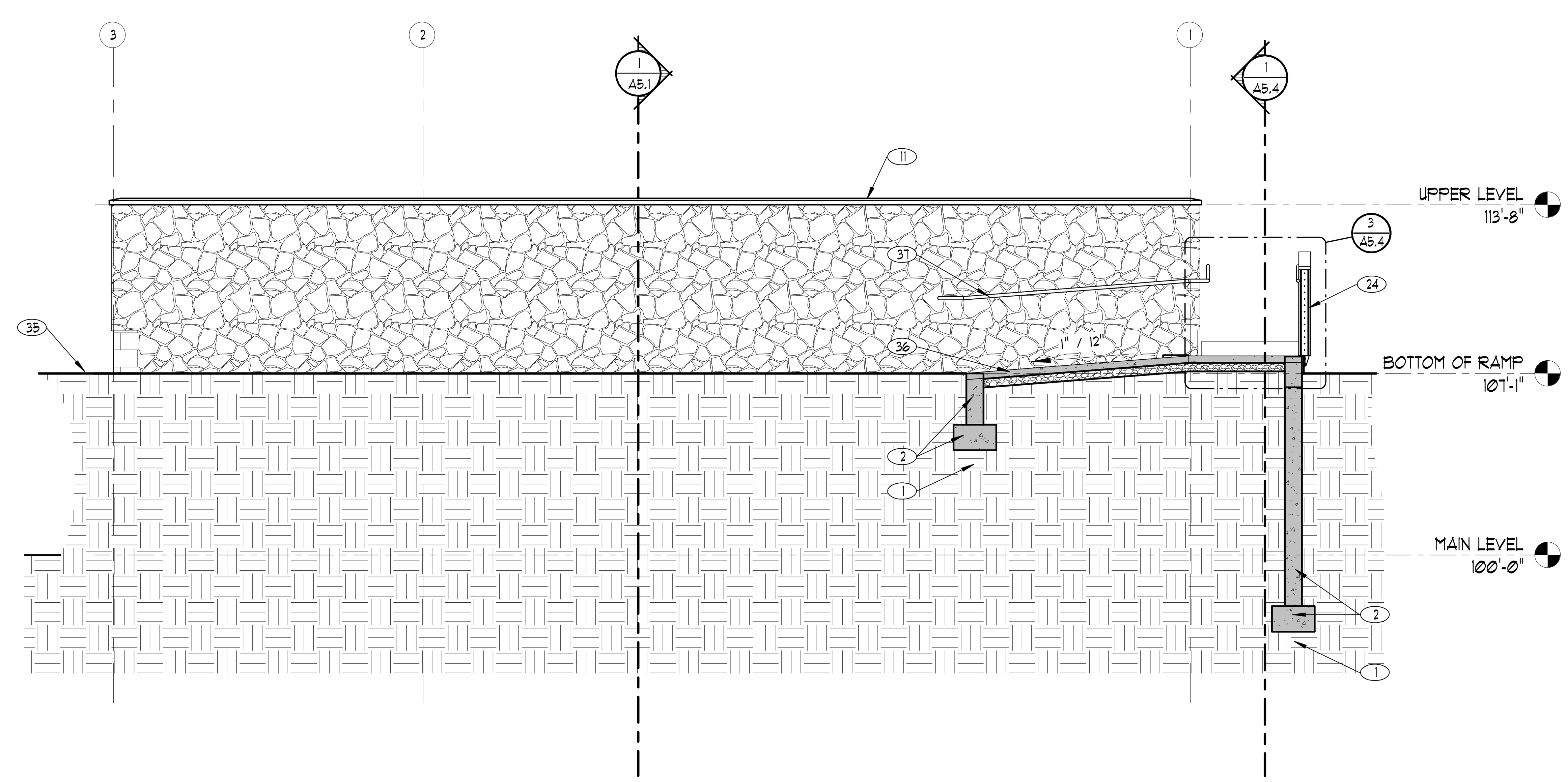
1 BUILDING SECTION

1/4" = 1'-0"



3 RAMP DETAIL

1" = 1'-0"



2 BUILDING SECTION

1/4" = 1'-0"

SHEETNOTES:

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4

1. UNDISTURBED EARTH OR PRE-ENGINEERED FILL
2. CONCRETE FOOTING AND FOUNDATION - SEE STRUCTURAL DWG'S
3. 2" RIGID INSULATION ATTACHED TO CONCRETE FOUNDATION
4. PRESSURE TREATED SILL PLATE w/ ANCHOR BOLT - SEE STRUCTUAL DWG'S
5. PRESSURE TREATED SILL PLATE
6. CONCRETE SLAB OVER GRAVEL BASE - SEE STRUCTURAL DWG'S
7. C-CHANNEL HEADER - PAINT
8. C-CHANNEL COLUMN - PAINT
9. GYPSUM BOARD CEILING - SEE REFLECTED CEILING PLAN
10. FLOOR FRAMING - SEE STRUCTURAL DWG'S
11. PRE-CAST CONCRETE WALL CAP - SEE DETAIL 3/A4.2
12. FLOOR SHEATHING - SEE STRUCTURAL DWG'S
13. PRECAST CONCRETE PAVERS OVER PEDESTAL SYSTEM
14. PRE-MANUFACTURED SKATE RACK
15. ROOF FRAMING - SEE STRUCTURAL DWG'S
16. ROOF SHEATHING - SEE STRUCTURAL DWG'S
17. STEEL BEAM - SEE STRUCTURAL DWG'S, PAINT
18. NOT USED
19. SINGLE PLY MEMBRANE OVER 6" RIGID INSULATION (R-30 MIN.)
20. PRE-FINISHED METAL FASCIA, TYP
21. CLOSED CELL SPRAY FOAM INSULATION AROUND ENTIRE PERIMETER
22. TAPERED INSULATION - SLOPE TO DRAINS
23. OFFICE FURNITURE, N.I.C.
24. IPE & STEEL BALUSTER - SEE DETAIL 8/A4.3
25. 2 X 6 IPE TOP RAIL
26. 1/2" DIA. ROD @ 4" o.c.
27. WOOD HEADER - SEE STRUCTURAL DWG'S
28. R-38 INSULATION BATTS
29. PAINT STEEL OUTLOOKERS - SEE STRUCTURAL DWG'S
30. PAINT C-CHANNEL FASCIA - SEE STRUCTURAL DWG'S
31. PAINT STEEL CANOPY - SEE DETAIL 1/A4.3 & 4/A4.3
32. DOUBLE TOP PLATE
33. TOILET - SEE PLUMBING DWG'S
34. TOILET PARTITION
35. APPROX. FINISH GRADE - SEE CIVIL DWGS
36. CONCRETE RAMP OVER 4" GRAVEL BASE
37. 1 1/2" STAINLESS STEEL HANDRAIL
38. CHARRED WOOD VERTICAL SIDING
39. MECHANICAL EQUIPMENT - SEE MECHANICAL DWG'S
40. STEEL COLUMN - SEE STRUCTURAL DWG'S, PAINT
41. URINAL - SEE PLUMBING DWG'S
42. URINAL - SEE PLUMBING DWG'S
43. THICKENED CONCRETE SLAB- SEE CHILLER EQUIPMENT SPECIFICATIONS

WPA architecture

LICENSED ARCHITECT BRUCE T. FALLON 5403169-0301 10.12.2018 date STATE of UTAH

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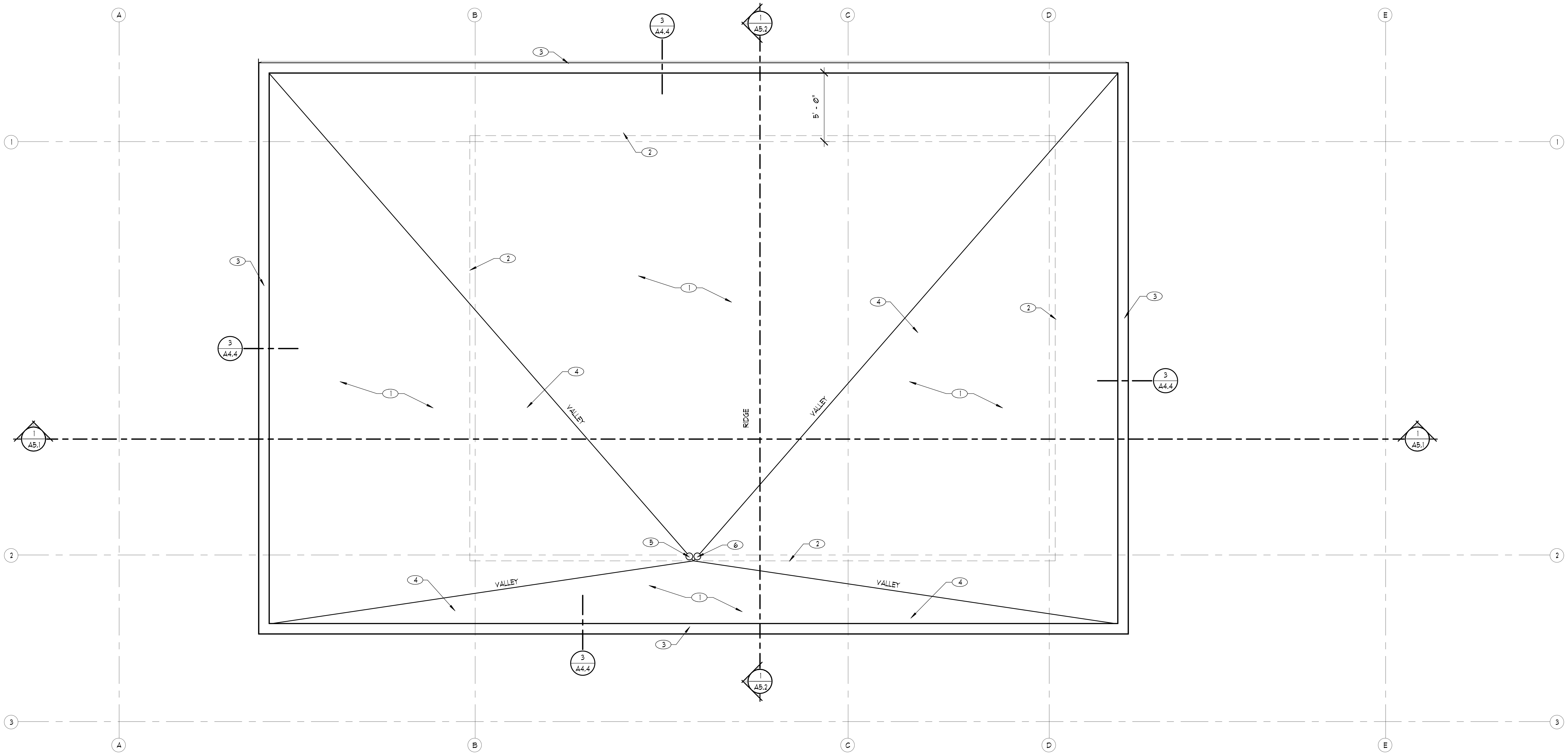
RAMP SECTION

Sheet Number:
A5.4

SHEETNOTES:

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4

1. SINGLE-PLY MEMBRANE ROOFING OVER 6" RIGID INSULATION
2. WALL BELOW
3. PRE-FINISHED METAL FASCIA, TYP
4. SINGLE-PLY MEMBRANE ROOF CRICKET
5. PRIMARY ROOF DRAIN - SEE PLUMBING DWGS
6. SECONDARY ROOF DRAIN - SEE PLUMBING DWGS



1 UPPER ROOF
1/4" = 1'-0"

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5403169-0301
10.12.2018
date
STATE of UTAH

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Sheet Name:
ROOF PLAN

Sheet Number:
A6.1

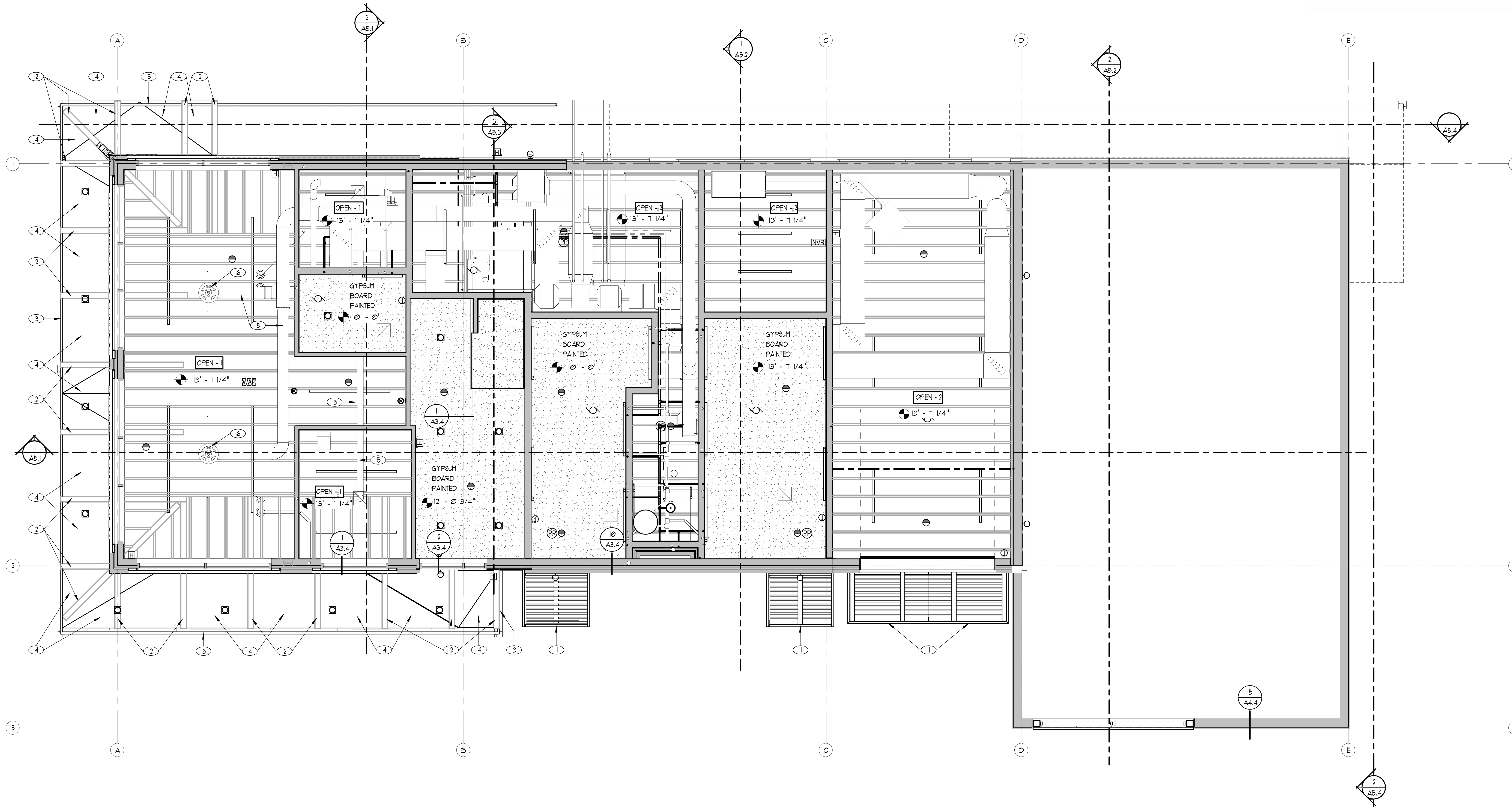
SHEETNOTES:

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4

1. STEEL CANOPY STRUCTURE
2. STRUCTURAL SUPPORT COLUMNS PAINTED, SEE STRUCTURAL DRAWINGS
3. 1/2" CABLE RAILING
4. GALVANIZED STEEL DECKING - PAINT
5. EXPOSED MECHANICAL DUCTWORK - DO NOT PAINT
6. PREFINISHED MECHANICAL GRILLE - SEE MECHANICAL DRAWINGS

CEILING LEGEND

- GYPSUM BOARD - PAINT
- PRE-FINISHED CHARRED WOOD SOFFIT
- METAL B-DECK - PAINTED
- OPEN CEILING 1 - PAINT SW BLACK IRON ORE
- OPEN CEILING 2 - OPEN TO STRUCTURE
- 2x2 LAY-IN LIGHT
- RECESSED CAN LIGHT
- RETURN VENT
- SUPPLY VENT
- LED DOWNLIGHT
- LED CYLINDER DOWNLIGHT
- LED STRIP LIGHT
- LIGHT TRACK



1 REFLECTED CEILING PLAN
1/4" = 1'-0"

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Sheet Name:
REFLECTED CEILING PLAN

Sheet Number:
A7.1

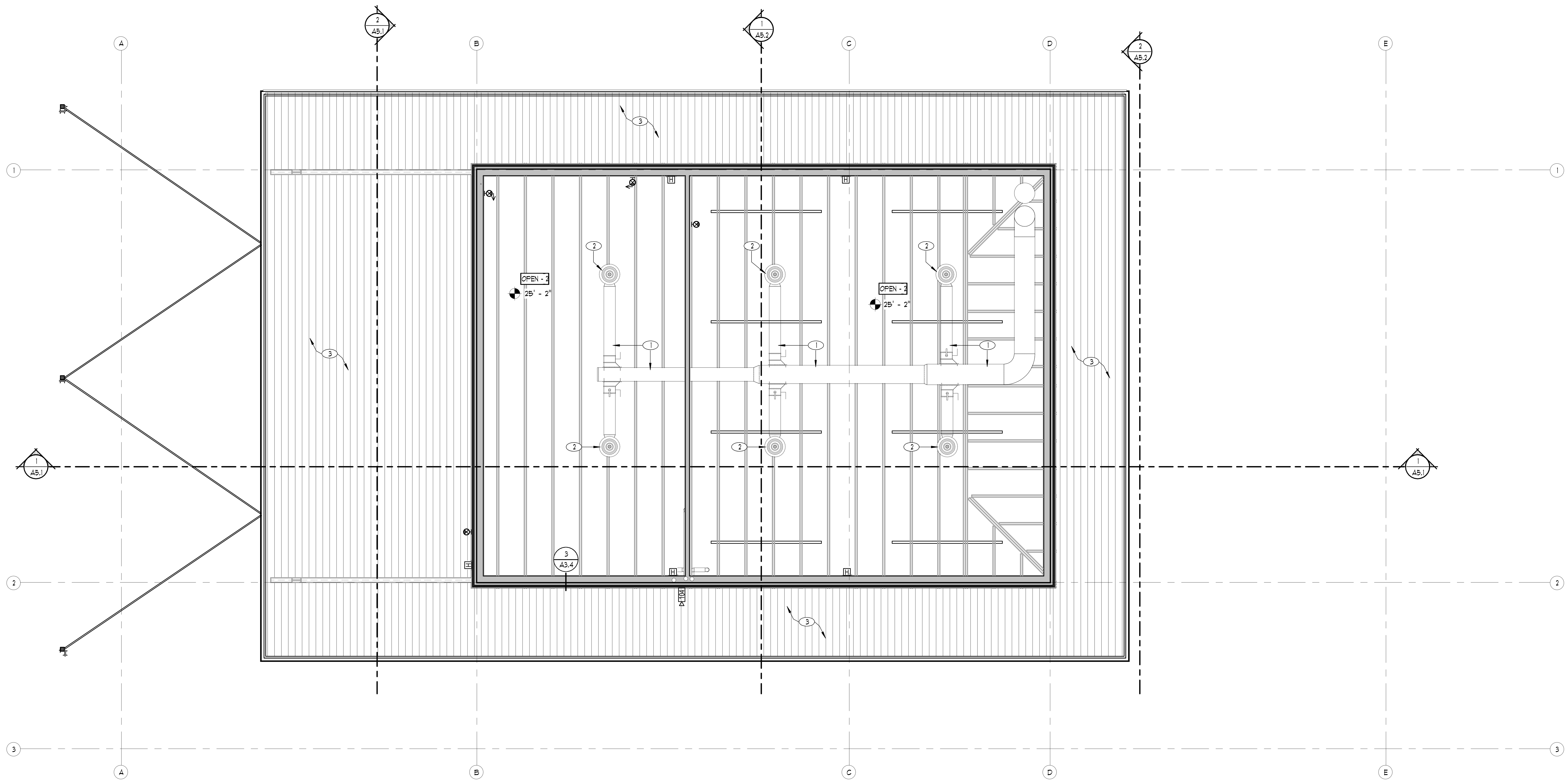
SHEETNOTES:

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4

1. EXPOSED MECHANICAL DUCTWORK- DO NOT PAINT
2. PREFINISHED MECHANICAL GRILLE- SEE MECHANICAL DRAWINGS
3. CHARRED WOOD SOFFIT, SEE FINISH SCHEDULE

CEILING LEGEND

- GYPSUM BOARD - PAINT
- PRE-FINISHED CHARRED WOOD SOFFIT
- METAL B-DECK - PAINTED
- OPEN CEILING 1 - PAINT SW BLACK IRON ORE
- OPEN CEILING 2 - OPEN TO STRUCTURE
- 2x2 LAY-IN LIGHT
- RECESSED CAN LIGHT
- RETURN VENT
- SUPPLY VENT
- LED DOWNLIGHT
- LED CYLINDER DOWNLIGHT
- LED STRIP LIGHT
- LIGHT TRACK



1 UPPER LEVEL REFLECTED CEILING PLAN
1/4" = 1'-0"

N

WPA architecture

LICENSED ARCHITECT
BRUCE T. FALLON
5403169-0301
10.12.2018
date
STATE of UTAH

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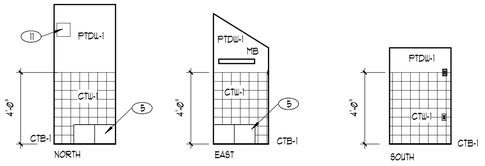
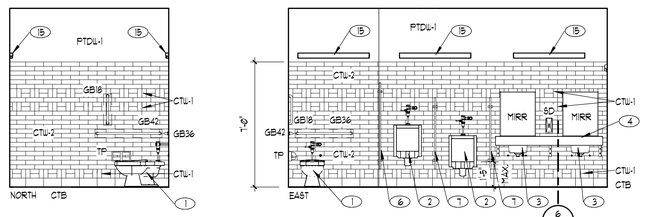
Sheet Name: UPPER REFLECTED CEILING PLAN

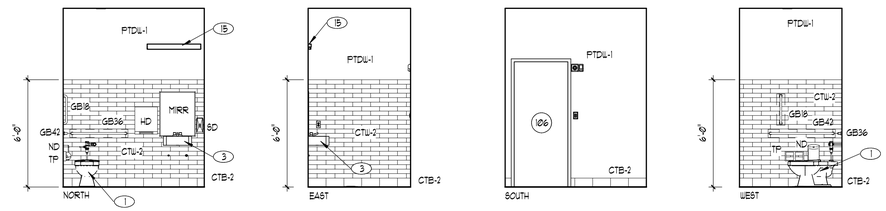
Sheet Number: A7.2



3 JANITOR 105

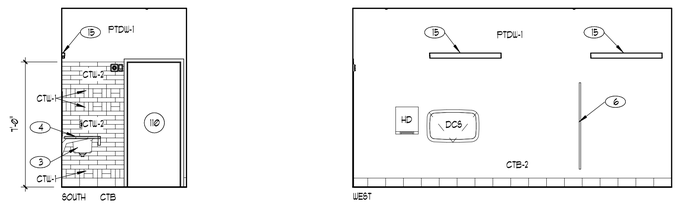
1/4" = 1'-0"





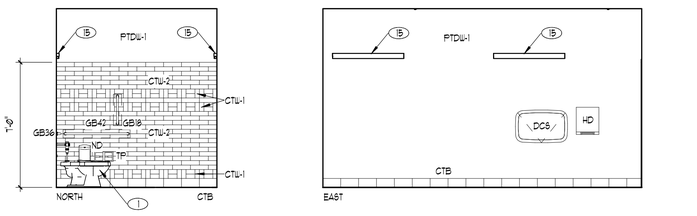
4 TOILET 106

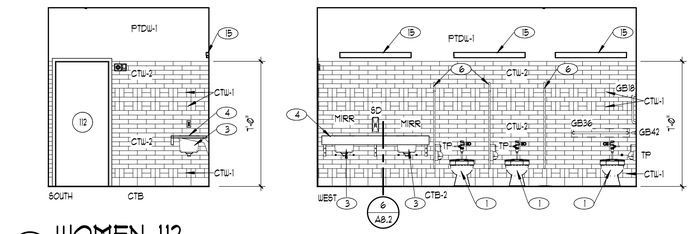
1/4" = 1'-0"



5 MEN 110

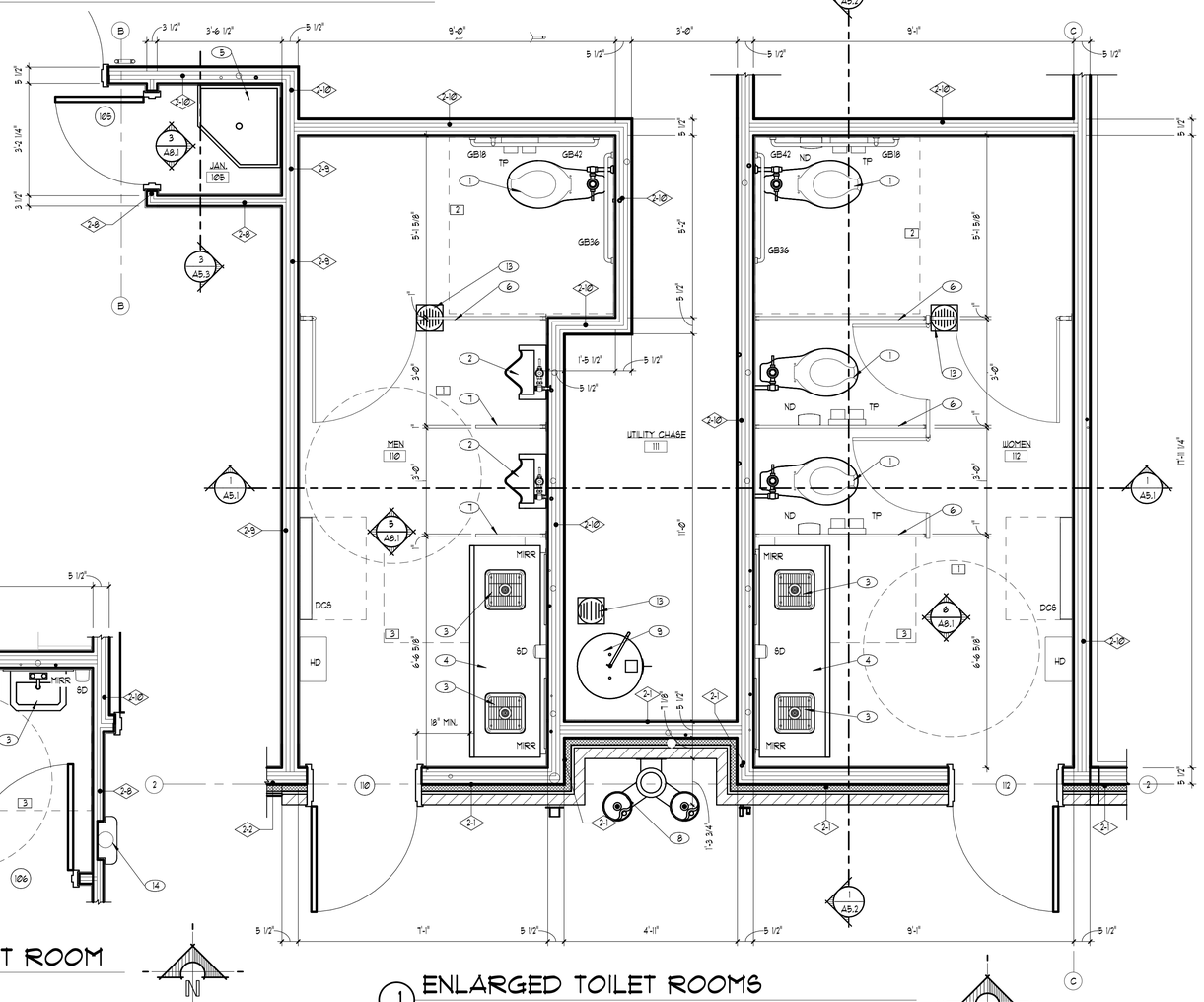
1/4" = 1'-0"





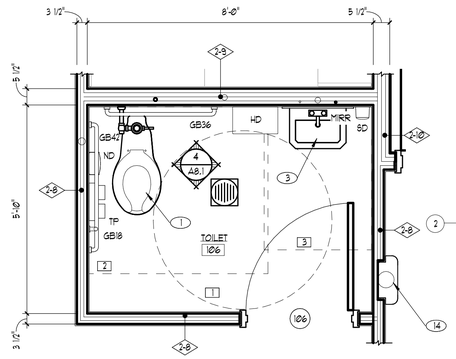
6 WOMEN 112

1/4" = 1'-0"



1 ENLARGED TOILET ROOMS

1/2" = 1'-0"



2 ENLARGED TOILET ROOM

1/2" = 1'-0"

ABBREVIATIONS:

MIRR	24"W X 36"H MIRROR
SD	SOAP DISPENSER +36" AFF.
TP	TOILET PAPER DISPENSER +36" AFF.
GB18	18" GRAB BAR - PROVIDE SOLID BACKING
GB36	36" GRAB BAR - PROVIDE SOLID BACKING
GB42	42" GRAB BAR - PROVIDE SOLID BACKING
HD	HAND DRYER
DC	DIAPER CHANGING STATION
ND	FEMININE NAPKIN DISPENSOR
MB	MOP AND BROOM HANGER

SHEETNOTES:

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4
1. WATER CLOSET - SEE PLUMBING DUG'S
2. URINAL - SEE PLUMBING DUG'S
3. LAVATORY - SEE PLUMBING DUG'S
4. PRE-CAST CONCRETE COUNTERTOP - SEE DETAIL 6/A8.2
5. MOP SINK - SEE PLUMBING DUG'S
6. TOILET PARTITION
7. 24" URINAL SCREEN
8. DRINKING FOUNTAIN w/ BOTTLE FILLING STATION - SEE PLUMBING DUG'S
9. WATER HEATER -SEE PLUMBING DUG'S
10. PRE-MANUFACTURED SKATE RACK
11. MECHANICAL EQUIPMENT - SEE MECHANICAL DUG'S
12. PLASTIC LAMINATE COUNTERTOP
13. FLOOR DRAIN - SEE PLUMBING DUG'S
14. SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE DETAIL 7/G1.3
15. LIGHTING FIXTURE - SEE ELECTRIAL DUG'S
16. PRE-MANUFACTURED 18" DEEP WIRE SHELVING

WPA architecture

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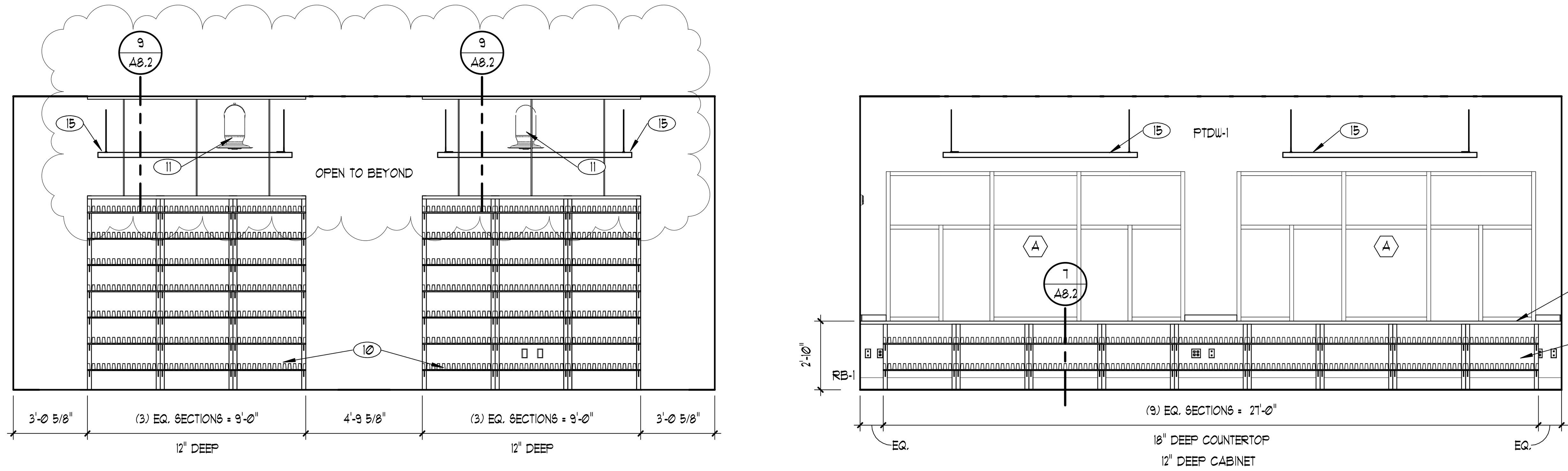
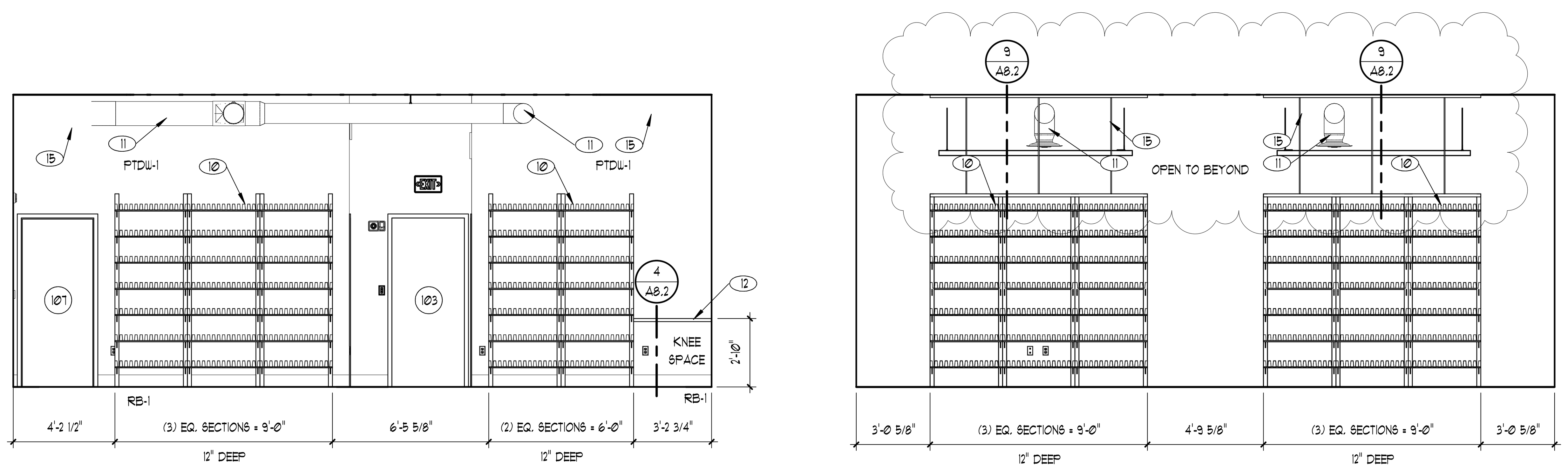
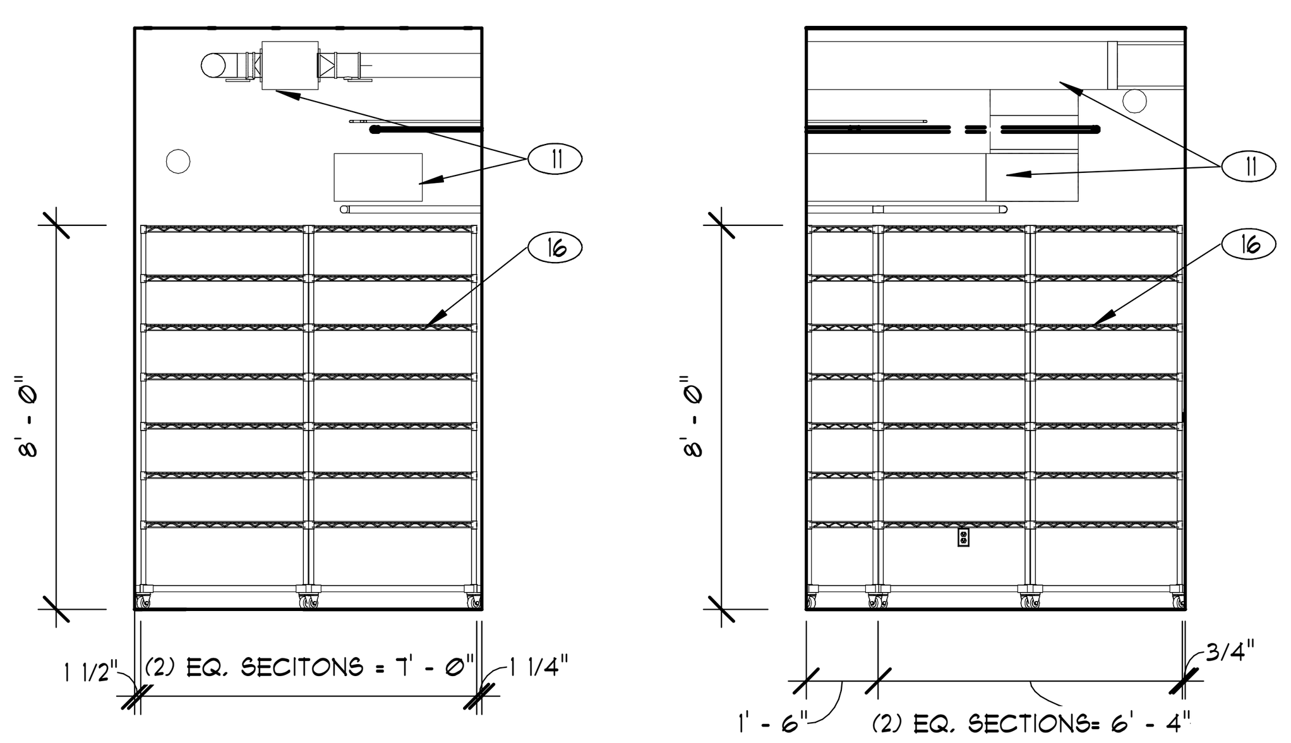


1 RETAIL AREA
1/4" = 1'-0"



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



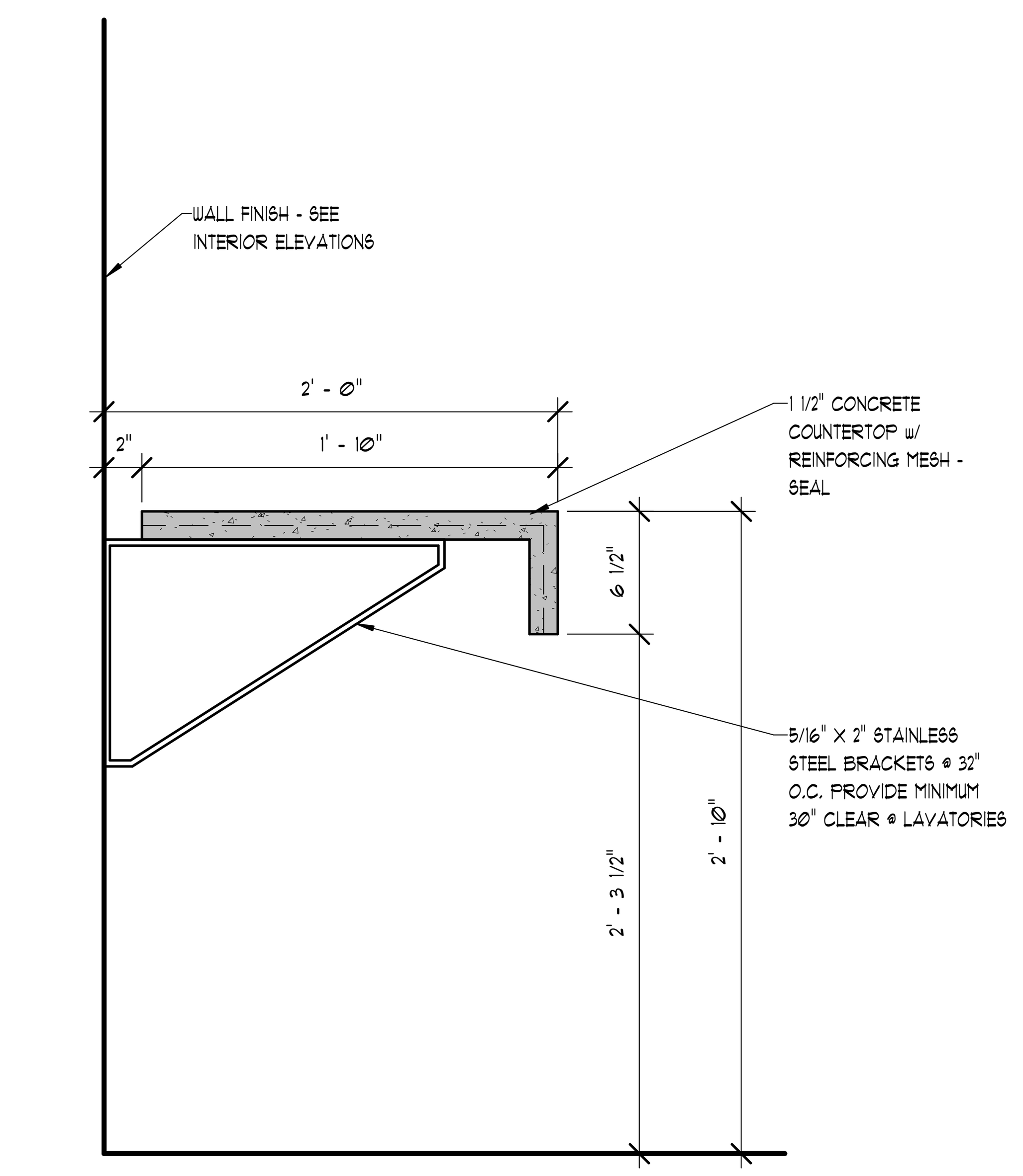
5 STORAGE 107
1/4" = 1'-0"

ABBREVIATIONS:

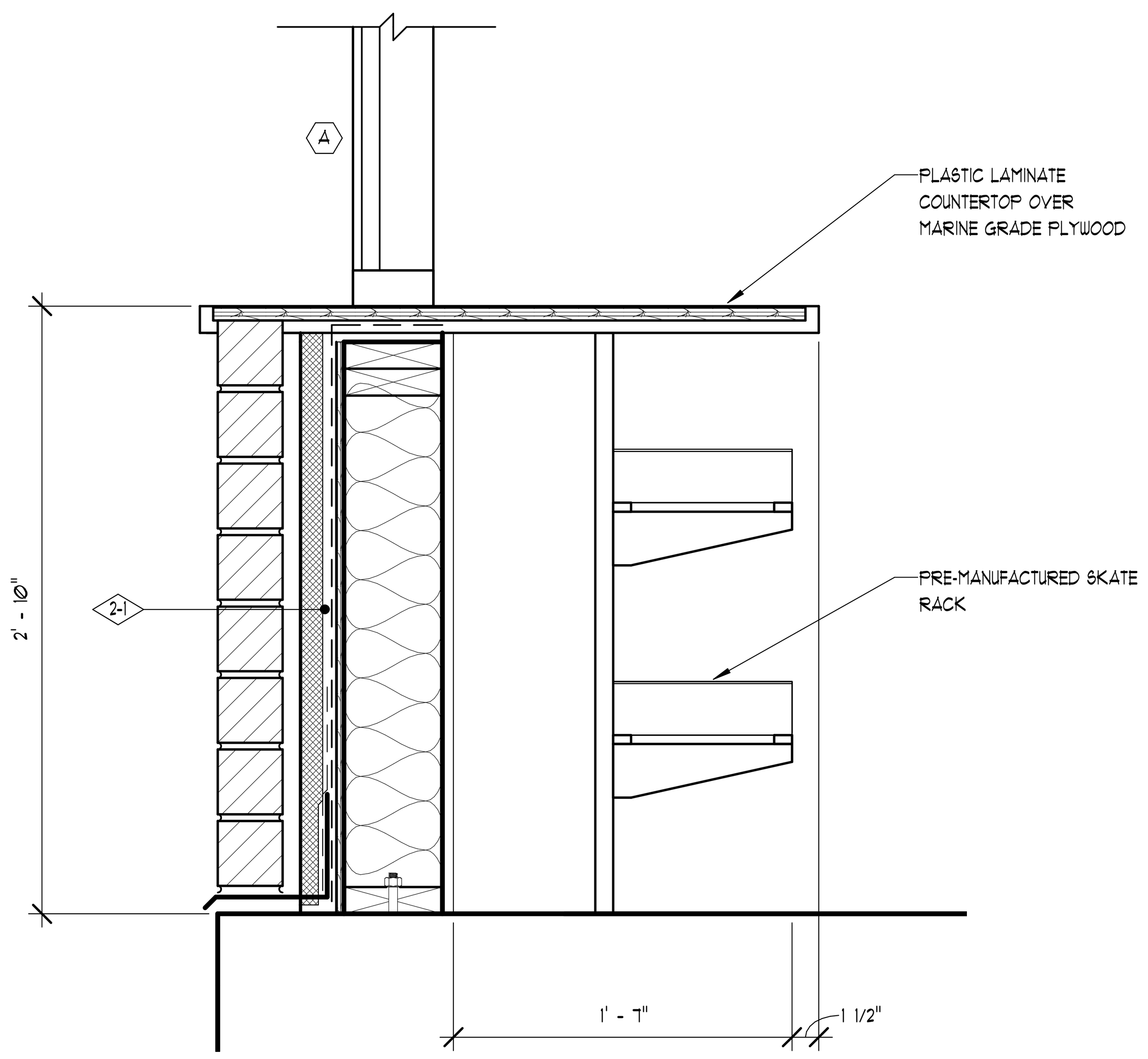
MIRR	24"W X 36"H MIRROR
SD	SOAP DISPENSER +36" AFF.
TP	TOILET PAPER DISPENSER +36" AFF.
GB18	18" GRAB BAR - PROVIDE SOLID BACKING
GB36	36" GRAB BAR - PROVIDE SOLID BACKING
GB42	42" GRAB BAR - PROVIDE SOLID BACKING
HD	HAND DRYER
DC	DIAPER CHANGING STATION
ND	FEMININE NAPKIN DISPENSOR
MB	MOP AND BROOM HANGER

SHEETNOTES:

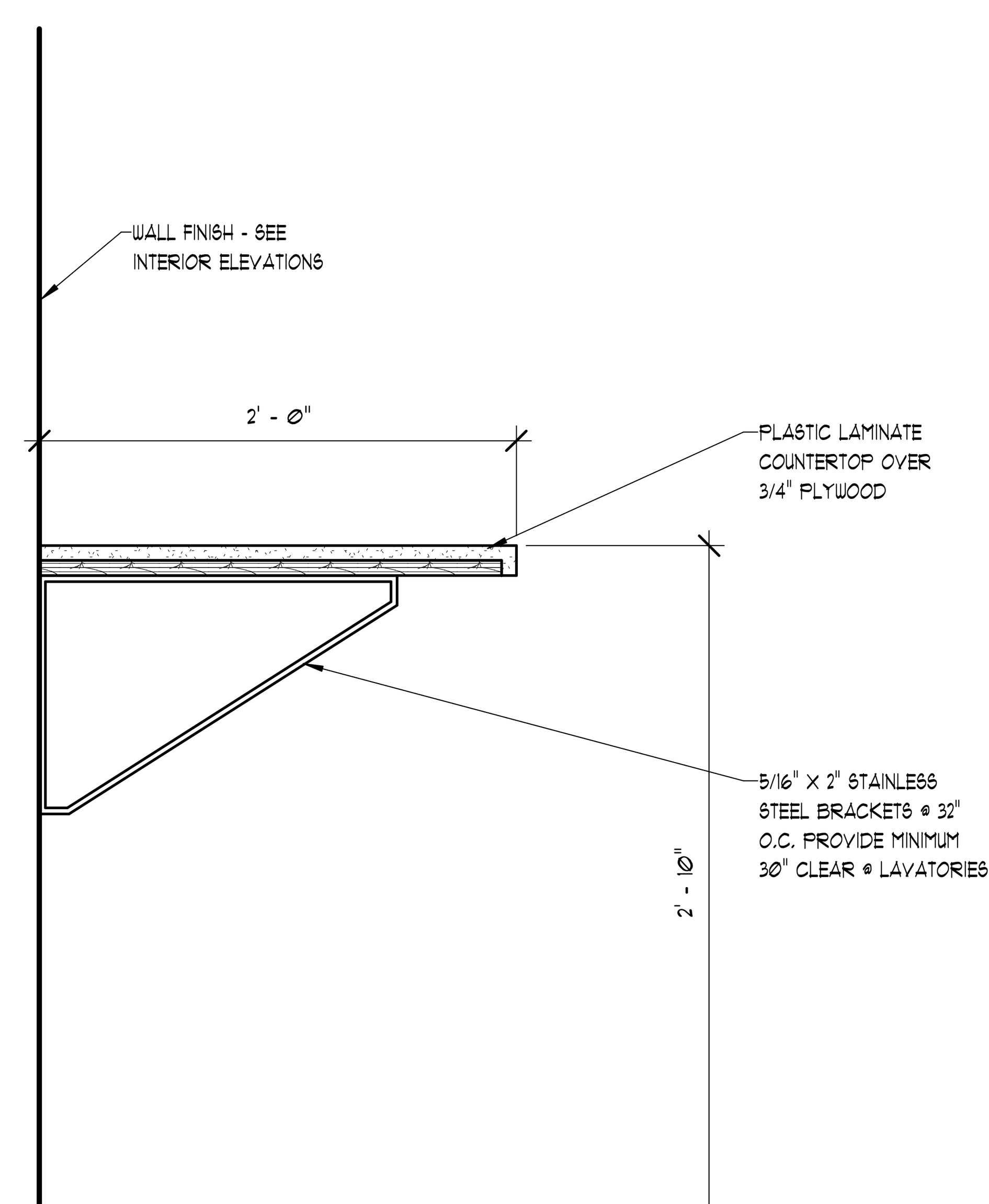
- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4
- 1 WATER CLOSET - SEE PLUMBING DWG'S
- 2 URINAL - SEE PLUMBING DWG'S
- 3 LAVATORY - SEE PLUMBING DWG'S
- 4 PRE-CAST CONCRETE COUNTERTOP - SEE DETAIL 6/A8.2
- 5 MOP SINK - SEE PLUMBING DWG'S
- 6 TOILET PARTITION
- 7 24" URINAL SCREEN
- 8 DRINKING FOUNTAIN w/ BOTTLE FILLING STATION - SEE PLUMBING DWG'S
- 9 WATER HEATER -SEE PLUMBING DWG'S
- 10 PRE-MANUFACTURED SKATE RACK
- 11 MECHANICAL EQUIPMENT - SEE MECHANICAL DWG'S
- 12 PLASTIC LAMINATE COUNTERTOP
- 13 FLOOR DRAIN - SEE PLUMBING DWG'S
- 14 SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE DETAIL 7/G1.3
- 15 LIGHTING FIXTURE - SEE ELECTRIAL DWG'S
- 16 PRE-MANUFACTURED 18" DEEP WIRE SHELVING



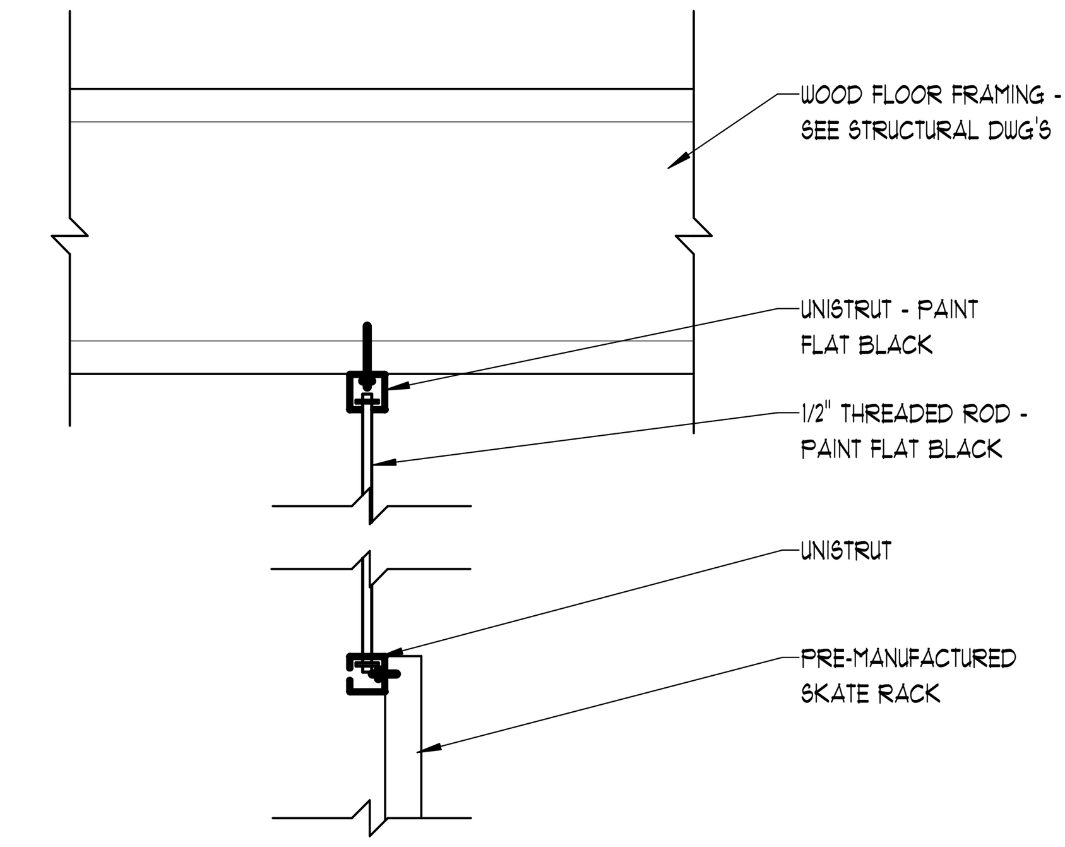
6 COUNTER DETAIL
1 1/2" = 1'-0"



7 MILLWORK DETAIL
1 1/2" = 1'-0"



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



9 SHELF RACK SUPPORT
1 1/2" = 1'-0"

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Sheet Number:
A8.2

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 2018 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-XP EPOXY OR HILTI HIT-HY200 MAX-SD ADHESIVE. ANCHORS SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
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 TZ ANCHORS.
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 2018 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. REQ'D 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 3,000 PSI IN 28 DAYS. FLAT SLABS, FOUNDATION WALLS, AND CONCRETE RETAINING WALLS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 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 BAR DIAMETERS. 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.

CONCRETE & REINFORCEMENT

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. 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 EIGHT INCHES (8"). FILL SHALL HAVE A MOISTURE CONTENT WITHIN 2% OF OPTIMUM AND SHALL BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY (ASTM D 1557).
35. ALL FILL MATERIAL MUST BE COMPLETELY REMOVED FROM UNDER THE PROPOSED STRUCTURE AND IMPROVEMENT AREAS. THIS HAS BEEN FOUND TO BE UP TO 16.5' DEEP AND POSSIBLY DEEPER. SUPPORT FOOTINGS AND SLABS ON PROPERLY PLACED AND COMPACTED STRUCTURAL FILL. REMOVED FILL MAY BE PROCESSED AND STOCK PILED FOR LATER USE AS STRUCTURAL FILL OR PLACED IN OTHER AREAS OF THE SITE WITH PROPER PLACEMENT, COMPACTION AND TESTING WITH APPROVAL OF GEOTECHNICAL ENGINEER.
36. CONTRACTOR SHALL EMPLOY THE GEOTECHNICAL ENGINEER TO OBSERVE AND APPROVE THE EXCAVATION PRIOR TO PLACING STRUCTURAL FILL OR FORMING FOOTINGS.

GENERAL STEEL NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK TO BE IN STRICT ACCORDANCE WITH THE 2018 IBC, AISC, AND LOCAL ORDINANCES.
3. ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND ERECTION.
4. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. SEE ARCHITECTURAL SHEETS FOR DECK BEARING ELEVATIONS. STRUCTURAL STEEL DETAILER SHALL DETERMINE ALL BEARING PLATE ELEVATIONS FROM ARCHITECTURAL DECK ELEVATIONS.
6. SEE ARCHITECTURAL SHEETS FOR ADDITIONAL DIMENSIONS.
7. SEE ARCHITECTURAL FOR ACCESS HATCHES, DRAFT STOPS, ETC.
8. SUBMIT SHOP DRAWINGS OF ALL STRUCTURAL STEEL, STEEL JOISTS, STEEL DECKING & MISCELLANEOUS STEEL TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
9. SEE FRAMING PLANS FOR ADDITIONAL NOTES AND REQUIREMENTS.
10. AT COMPLETION OF MANUFACTURE, THE STEEL JOIST MANUFACTURER SHALL SUBMIT A CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH 2018 18C SECTION 1704.2.5.2 STATING THAT WORK WAS PERFORMED IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND WITH SJI STANDARD SPECIFICATIONS.

STRUCTURAL STEEL

11. ALL WIDE FLANGE MEMBERS TO BE MANUFACTURED UNDER ASTM A992.
12. ALL STRUCTURAL PLATES, CHANNELS & ANGLES TO BE MANUFACTURED UNDER ASTM A36.
13. ALL HSS MEMBERS TO BE MANUFACTURED UNDER ASTM A500 GRADE B.
14. ALL PIPE COLUMNS TO BE MANUFACTURED UNDER ASTM A53 GRADE B.
15. ALL BOLTS FOR STEEL TO STEEL CONNECTIONS TO BE 3/4" DIA. MIN. A325-N HIGH STRENGTH BOLTS, UNLESS NOTED OTHERWISE. BOLTS EMBEDDED IN CONCRETE OR MASONRY SHALL BE F1554 GRADE 36 UNLESS NOTED OTHERWISE.
16. ALL JOIST WELDS TO BE E7024. ALL DECK WELDS TO BE E6022. ALL WELDS FOR SEISMIC SPECIFIC CONNECTIONS TO BE E7018. ALL OTHER WELDS TO BE 70 KSI MIN. ALL WELDS SHALL BE BY A CERTIFIED WELDER.
17. ALL WELDS AND BOLTING TO MEET APPROVAL OF SPECIAL INSPECTOR AS REQUIRED BY BUILDING OFFICIAL.
18. ALL STEEL SHALL BE PROPERLY PRIMED EXCEPT AREAS THAT REQUIRE FIELD WELDING (i.e. TOP OF BEAMS).
19. STEEL DETAILER SHALL PROVIDE STANDARD STAIR DETAILING INCORPORATING HSS12 x 2 x 1/4 STRINGERS OR APPROVED EQUAL. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
20. SEE ARCHITECTURAL, MECHANICAL & ELECTRICAL FOR ADDITIONAL STEEL MEMBERS (BRACKETS, ANGLES, ETC...) REQUIRED.
21. STEEL MEMBERS SHALL NOT BE CUT, DRILLED OR TORCHED FOR PIPES, ETC. UNLESS SPECIFICALLY DETAILED.
22. ANY MODIFICATION OF STRUCTURAL MEMBERS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS IS NOT PERMITTED WITHOUT PRIOR APPROVAL.
23. ANY CONNECTIONS NOT DETAILED ON STRUCTURAL PLANS SHALL BE PROVIDED BY THE STEEL DETAILER. SHOP DRAWINGS FOR ALL FABRICATED STEEL CONNECTIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

STEEL DECKING

24 STEEL DECK TO MEET REQUIREMENTS OF STEEL DECK INSTITUTE. ALL DECK SHALL BE PROVIDED TO SPAN A MINIMUM OF THREE SUPPORTS.

25. SEE SHEET NOTES ON S2.1-I FOR PATIO DECK SPECIFICATIONS.

VENEER

BRICK VENEER

1. PROVIDE CONTINUOUS SINGLE WIRE JOINT REINFORCEMENT OF WIRE SIZE W1. 7 AT A MAXIMUM SPACING OF 16" O.C. VERTICALLY. MECHANICALLY ATTACH ANCHORS TO THE JOINT REINFORCEMENT WITH CLIPS OR HOOKS.
2. PERMITTED ANCHOR TYPES SHALL BE CORRUGATED SHEET METAL ANCHORS, WIRE ANCHORS OR ADJUSTABLE ANCHORS. ANCHORS SHALL COMPLY WITH ACI 530-11 6. 2. 2. 5
3. FOR WOOD BACKING, ATTACH EACH ANCHOR TO WOOD STUDS OR FRAMING WITH A CORROSION RESISTANT 8d COMMON NAIL. FOR CORRUGATED SHEET METAL ANCHORS, LOCATE THE NAIL OR FASTENER WITHIN 1/2" OF THE 90 deg. BEND IN THE ANCHOR.
4. FOR STEEL BACKING, ATTACH VENEER WITH ADJUSTABLE ANCHORS ONLY. ATTACH EACH ANCHOR TO STEEL FRAMING WITH CORROSION RESISTANT SCREWS THAT HAVE A MINIMUM NOMINAL SHANKdia OF 0. 190 in. COLD FORMED STEEL FRAMING SHALL BE CORROSION RESISTANT AND SHALL BE 18ga MIN. THICKNESS.
5. ATTACH VENEER TO MASONRY BACKING WITH WIRE ANCHORS OR ADJUSTABLE ANCHORS.. ATTACH VENEER TO CONCRETE BACKING WITH ADJUSTABLE ANCHORS ONLY.
6. PROVIDE A 1" MINIMUM AIR SPACE BETWEEN THE BACK OF VENEER AND THE FACE OF SHEATHED FRAMED BACKING OR FACE OF MASONRY OR CONCRETE.
7. ALL VENEER LINTELS SHALL BE PROVIDED FOLLOWING THE SCHEDULE BELOW:
    - UP TO 5'-0" IN LENGTH SHALL BE L 3 1/2" x 3 1/2" x 1/4" AND SUPPORTED ON VENEER MIN. OF 6" EACH SIDE OF OPENING
    - OVER 5'-0" IN LENGTH SHALL BE L6" x 6" x 5/16" ATTACHED TO SUPPORTING MEMBER WITH 5/8"dia THRU-BOLTS AT 32" O.C. WITH A MIN. OF (3) PER HEADER. BOLTS NEED TO BE PLACED 3" FROM BOTTOM OF HEADER MIN.
    - SEE DETAIL 9/ S4.2-I FOR LOCATIONS WHERE BRICK IS SUPPORTED BY CHANNEL

GENERAL MASONRY NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2018 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 = 1500 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.

DESIGN CRITERIA

1. GOVERNING BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC)
2. FLOOR LIVE LOADING:
    a. SECOND LEVEL .... 100 PSF
3. ROOF LIVE LOADING:
    a. ROOF LIVE LOAD. .... 20 PSF
    b. ROOF SNOW LOAD. .... 30 PSF
        1. GROUND SNOW LOAD, P_G .... 43 PSF
        2. SNOW EXPOSURE FACTOR, C_E 1.0
        3. IMPORTANCE FACTOR, I_S 1.0
        3. THERMAL FACTOR, C_T 1.0
4. FLOOR DEAD LOADS:
    a. INTERIOR .... 30 PSF
    b. EXTERIOR DECK .... 60 PSF
5. ROOF DEAD LOADS:
    a. FLAT ROOF. .... 25 PSF
6. EARTHQUAKE:
    a. RISK CATEGORY II
    b. SEISMIC DESIGN CATEGORY .... D
    c. SPECTRAL RESPONSE ACCELERATIONS:
        S_S = 1.41g
        S_{DS} = 1.12g
        S_1 = 0.52g
        S_{D1} = 0.62g
    d. SOIL SITE CLASS: .... D
        F_A = 1.2
        F_V = 1.8
    e. IMPORTANCE FACTOR, I_E 1.0
    f. DESIGN BASE SHEAR .... 30 K (ASD)
    g. SEISMIC RESPONSE COEFFICIENT, C_S 0.172
    h. ANALYSIS PROCEDURE .... EQUIV. LATERAL FORCE
    i. BASIC SEISMIC FORCE RESISTING SYSTEM .... WOOD SHEARWALLS
    j. RESPONSE MODIFICATION FACTOR, R 6.5
7. WIND:
    a. BASIC WIND SPEED (3 SECOND GUST) .... 115 MPH (ULTIMATE)
    b. EXPOSURE .... 90 MPH (NOMINAL)
    c. INTERNAL PRESSURE COEFFICIANT, GC_{PI} 0.18
    d. COMPONENTS AND CLADDING PRESSURE .... VARIES
8. FOUNDATION:
    a. SOILS REPORT BY .... NINYO & MOORE
        DATED. .... JUNE 18, 2020
    b. SOIL BEARING PRESSURE .... 1,750 PSF
    c. LATERAL SOIL PRESSURE FLUID EQUIVALENT DENSITY
        1. ACTIVE .... 38 PCF (RETAINING WALLS)
        2. AT REST .... 58 PCF (FOUNDATION WALLS)
        3. PASSIVE .... 290 PCF
    d. COEFFICIENT OF FRICTION 0.53

GENERAL WOOD FRAMING NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK TO BE IN STRICT ACCORDANCE WITH THE 2018 IBC, AISC, 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. MIN. w/ 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. CONNECT EACH BLOCK TO TOP OF EXTERIOR WALLS WITH SIMPSON A34 CLIPS EACH JOIST OR RAFTER SHALL BE ANCHORED WITH SIMPSON H2.5 ANCHORS AT EACH END.
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 EXTERIOR WALLS SHALL BE 2 x 6's AT 16" O.C.
18. ALL INTERIOR BEARING WALLS SHALL BE 2 x 6's AT 16" O.C. UNLESS NOTED OTHERWISE ON PLANS. IN NO CASE SHALL 2 x 4 BEARING WALLS BE USED UNLESS NOTED ON STRUCTURAL PLANS.

FLOOR, ROOF & WALL SHEATHING

19. ALL ROOF SHEATHING SHALL BE 7/16" APA EXP. 1 RATED SHEATHING OR EQUAL WITH 8d COMMON NAILS 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.
20. 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 10" O.C. IN THE FIELD. PANEL EDGES ARE UNBLOCKED UNLESS NOTED OTHERWISE ON THE STRUCTURAL PLANS.
21. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" APA EXP. 1 RATED SHEATHING OR EQUAL WITH 8d COMMON NAILS AT 6" O.C. EDGES AND AT 12" O.C. IN THE FIELD - FLAT BLOCKED AT ALL PANEL EDGES, UNLESS NOTED OTHERWISE IN SHEAR WALL SCHEDULE.

STRUCTURAL CONNECTIONS

22. 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.
23. 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.
25. 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.
26. USE SIMPSON CONNECTIONS OR EQUIVALENT. INSTALL PER MANUFACTURERS SPECIFICATIONS.
27. SHOP DRAWINGS FOR ALL FABRICATED STEEL CONNECTIONS SHALL BE SUBMITTED FOR REVIEW & APPROVAL PRIOR TO FABRICATION AND INSTALLATION. SEE GENERAL STEEL NOTES.
28. 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.
29. ALL STRUCTURAL MEMBERS SHALL HAVE 1 3/4" MINIMUM BEARING.
30. FOR ADDITIONAL NAILING PATTERN, SEE SCHEDULES IN THE INTERNATIONAL BUILDING CODE (IBC).

DEFERRED SUBMITTALS

1. THE CONTRACTOR SHALL SUBMIT THE FOLLOWING DOCUMENTS TO THE ARCHITECT AND ENGINEER OF RECORD FOR REVIEW AND APPROVAL. THE DOCUMENTS MUST BE PREPARED AND STAMPED BY AN ENGINEER LICENSED IN THE STATE OF UTAH. THE DOCUMENTS MAY BE SUBMITTED AFTER THE BUILDING PERMIT IS ISSUED, BUT MUST BE SUBMITTED AND APPROVED PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION OF THE COMPONENTS.
    a. STAIR AND RAILING ASSEMBLIES
    b. SEISMIC BRACING OF SUSPENDED CEILINGS AND SOFFITS

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
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MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South MILL CREEK UTAH, 84005

PROFESSIONAL STRUCTURAL ENGINEER
NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2020
JOB No.	20-105

GENERAL
NOTE SHEET

SHEET No.
S0.1-I

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.
	REINFORCING BAR WELDING a. WELDABILTY OF NON ASTM A706 BARS b. SINGLE PASS FILLED WELDS < $\frac{5}{16}$" 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	♦ ♦		
X	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
	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 (<4°0 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):			
X	VERIFY WELDING PROCEDURES	P	P	
X	MANUFACTURER CERTIFICATIONS	P	P	
X	MATERIAL IDENTIFICATION	O	O	VERIFY TYPE AND GRADE OF MATERIAL.
X	WELDER IDENTIFICATION	O	O	VERIFY THERE IS A SYSTEM IN PLACE TO IDENTIFY THE WELDER WHO HAS WELDED A JOINT OR MEMBER.
X	FIT-UP GROOVE WELDS	O	O	VERIFY JOINT PREPARATION, DIMENSIONS, CLEANLINESS, TACKING AND BACKING.
X	ACCESS HOLES	O	O	VERIFY CONFIGURATION AND FINISH.
X	FIT-UP FILLET WELDS	O	O	VERIFY ALIGNMENT, GAPS AT ROOT, CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY AND LOCATION.
X	CHECK WELDING EQUIPMENT	O	O	
	DURING WELDING (TABLE N5.4-2, AISC 360-10):			
X	USE OF QUALIFIED WELDERS	O	O	VERIFY THAT WELDERS ARE APPROPRIATELY QUALIFIED.
X	CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	VERIFY PACKAGING AND EXPOSURE CONTROL.
X	CRACKED TACK WELDS	O	O	VERIFY WELDING IS NOT OVER A CRACKED TACK WELD.
X	ENVIRONMENTAL CONDITIONS	O	O	VERIFY WIND SPEED IS WITHIN LIMITS AS WELL AS PRECIPITATION AND TEMPERATURE.
X	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.
X	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):			
X	WELDS CLEANED	O	O	VERIFY THAT WELDS HAVE BEEN PROPERLY CLEANED.
X	SIZE, LENGTH AND LOCATION OF WELDS	P	P	
X	WELDS MEET VISUAL ACCEPTANCE CRITERIA	P	P	
X	ARC STRIKES	P	P	
	PRIOR TO BOLTING (TABLE N5.6-1 AISC 360-10):			
X	MANUFACTURERS CERTIFICATIONS FOR FASTENERS	O	P	
X	FASTENERS MARKED w/ ASTM REQUIREMENTS	O	O	
X	PROPER FASTENERS SELECTED FOR DETAIL	O	O	
X	PROPER PROCEDURE FOR DETAIL	O	O	
X	CONNECTING ELEMENTS	O	O	
X	PRE-INSTALLATION VERIFICATION TESTING	P	O	
X	PROPER STORAGE OF FASTENERS	O	O	
	DURING BOLTING (TABLE N5.6-2 AISC 360-10):			
X	FASTENER ASSEMBLIES	O	O	
X	JOINTS SNUG TIGHT PRIOR TO PRETENSIONING	O	O	
X	PROPER WRENCH USAGE	O	O	
X	FASTENERS PRETENSIONED	O	O	
	AFTER BOLTING (TABLE N5.6-3, AISC 360-10):			
X	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 BELOW. 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.

DYNAMIC STRUCTURES
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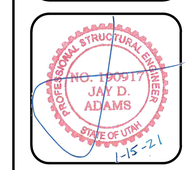
MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
1300 East 3300 South
MILLCREEK CITY
MILL CREEK UTAH, 84005

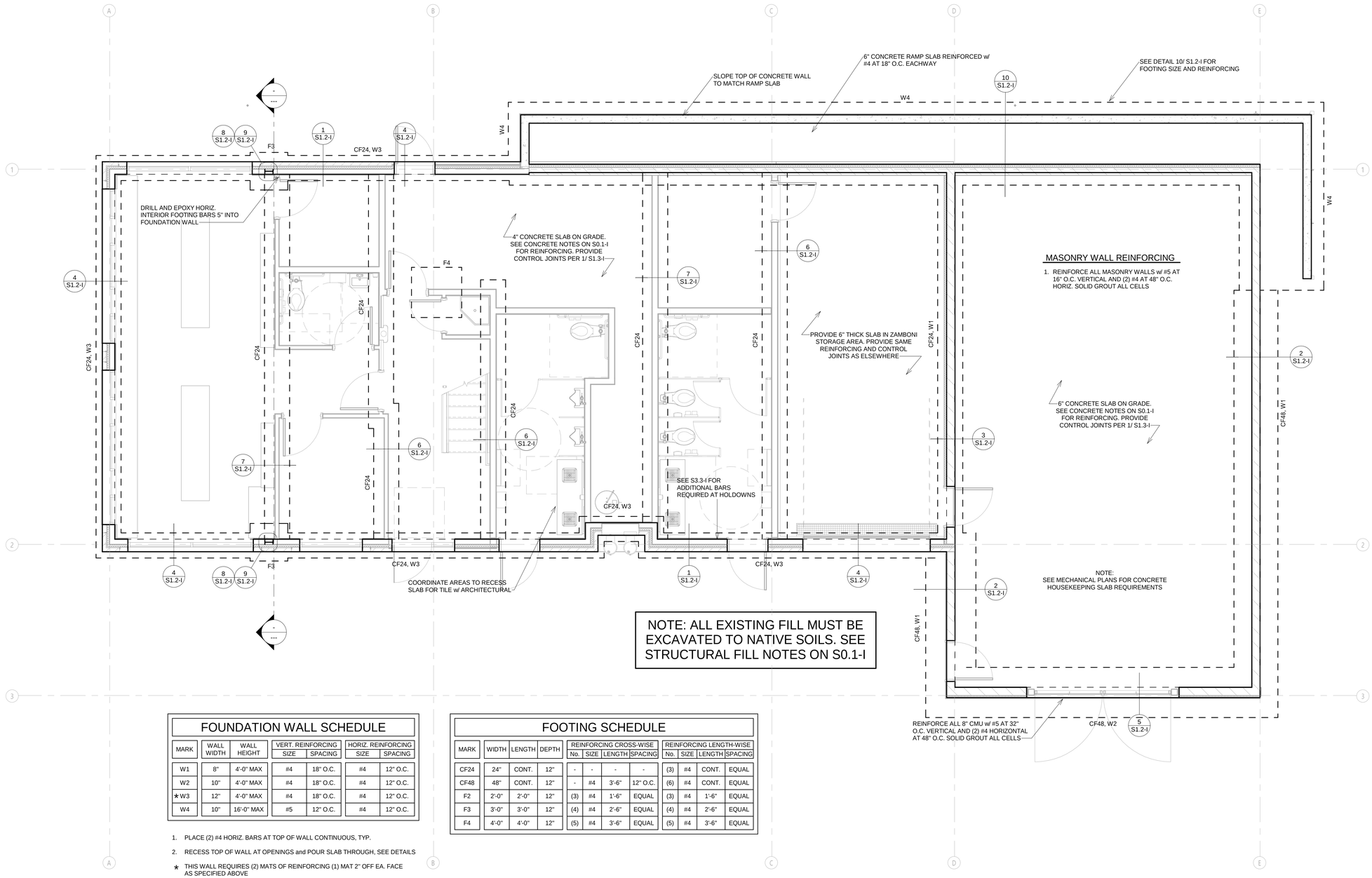


DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2020
JOB No.	20-105

SPECIAL INSPECTION SHEET

SHEET No.

S0.2-I



NOTE: ALL EXISTING FILL MUST BE EXCAVATED TO NATIVE SOILS. SEE STRUCTURAL FILL NOTES ON S0.1-I

FOUNDATION WALL SCHEDULE

MARK	WALL WIDTH	WALL HEIGHT	VERT. REINFORCING SIZE	VERT. REINFORCING SPACING	HORIZ. REINFORCING SIZE	HORIZ. REINFORCING SPACING
W1	8"	4'-0" MAX	#4	18" O.C.	#4	12" O.C.
W2	10"	4'-0" MAX	#4	18" O.C.	#4	12" O.C.
✶W3	12"	4'-0" MAX	#4	18" O.C.	#4	12" O.C.
W4	10"	16'-0" MAX	#5	12" O.C.	#4	12" O.C.

1. PLACE (2) #4 HORIZ. BARS AT TOP OF WALL CONTINUOUS, TYP.
2. RECESS TOP OF WALL AT OPENINGS and POUR SLAB THROUGH, SEE DETAILS

✶ THIS WALL REQUIRES (2) MATS OF REINFORCING (1) MAT 2" OFF EA. FACE AS SPECIFIED ABOVE

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSS-WISE No.	SIZE	LENGTH	SPACING	REINFORCING LENGTH-WISE No.	SIZE	LENGTH	SPACING
CF24	24"	CONT.	12"	-	-	-	-	(3)	#4	CONT.	EQUAL
CF48	48"	CONT.	12"	-	#4	3'-6"	12" O.C.	(6)	#4	CONT.	EQUAL
F2	2'-0"	2'-0"	12"	(3)	#4	1'-6"	EQUAL	(3)	#4	1'-6"	EQUAL
F3	3'-0"	3'-0"	12"	(4)	#4	2'-6"	EQUAL	(4)	#4	2'-6"	EQUAL
F4	4'-0"	4'-0"	12"	(5)	#4	3'-6"	EQUAL	(5)	#4	3'-6"	EQUAL

DYNAMIC STRUCTURES
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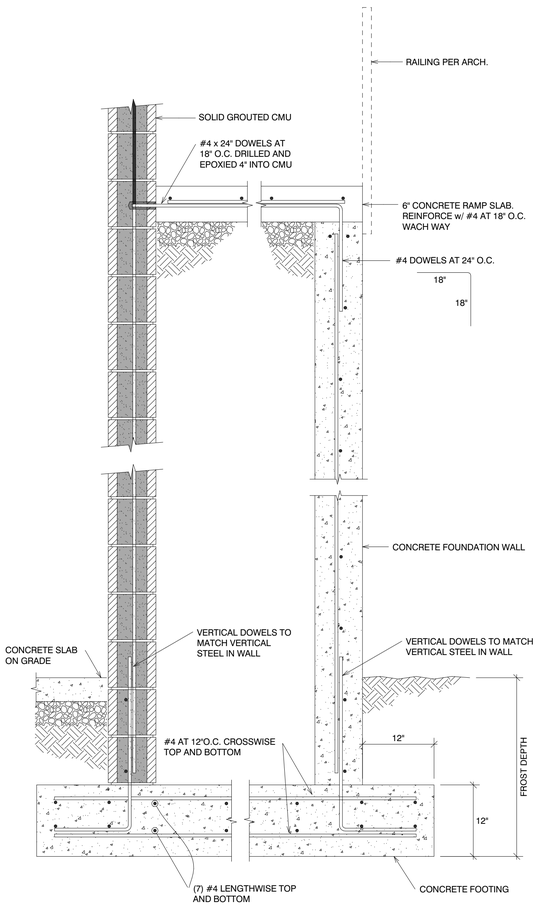
MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South
MILL CREEK UTAH, 84005

PROFESSIONAL STRUCTURAL ENGINEER
LIC. NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2020
JOB No.	20-105

ICE BUILDING FOUNDATION PLAN

SHEET No.
S1.1-I



10 S1.2-I CONSTRUCTION DETAIL
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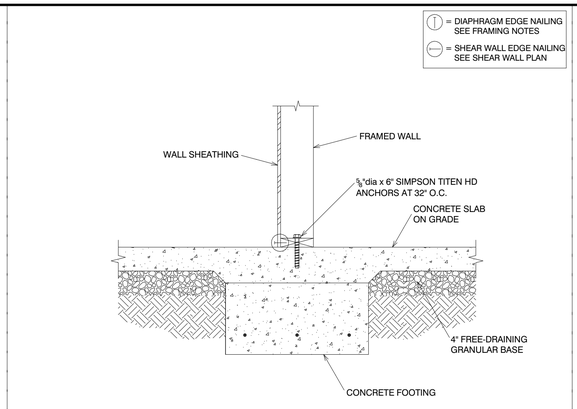

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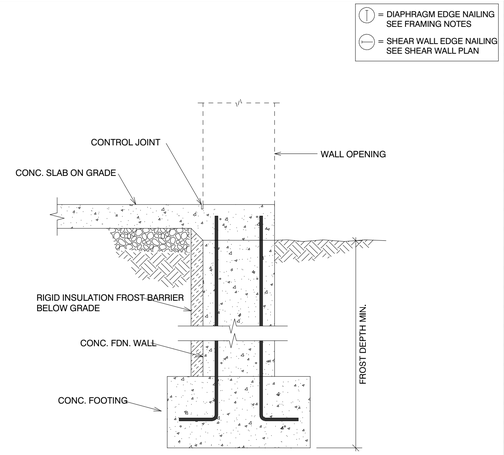

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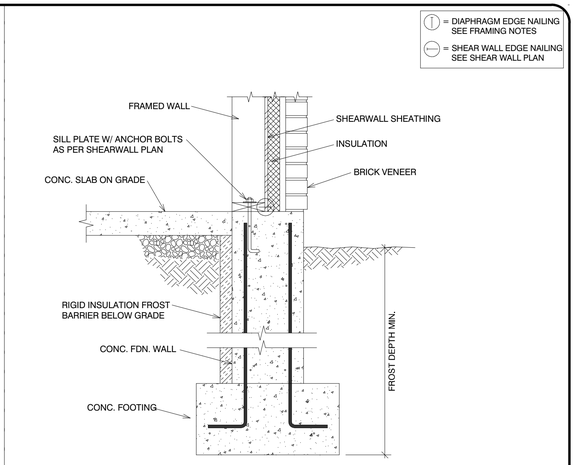

1 S1.2-I CONSTRUCTION DETAIL
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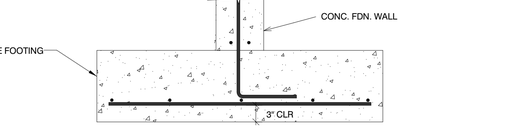
8 S1.2-I CONSTRUCTION DETAIL
NO SCALE



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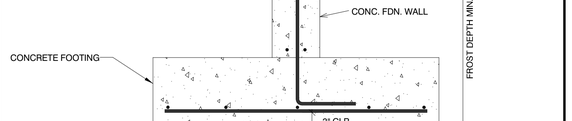

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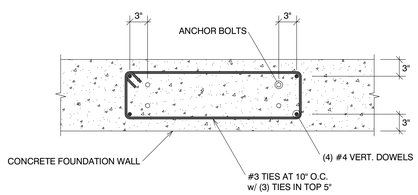

9 S1.2-I CONSTRUCTION DETAIL
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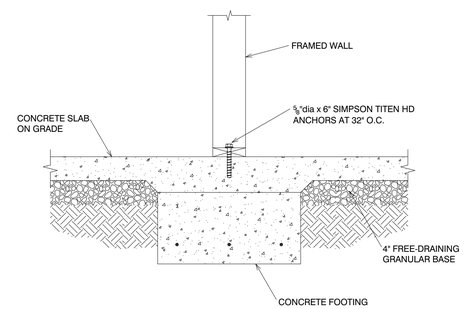
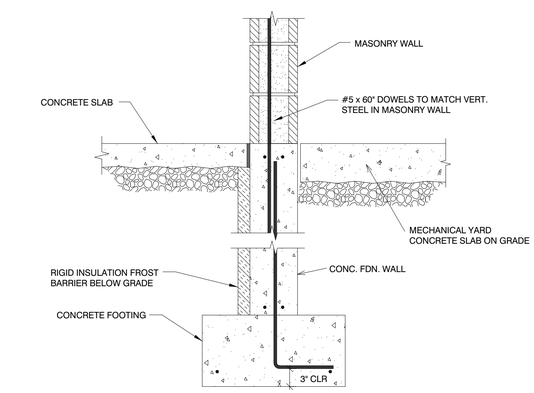


6 S1.2-I CONSTRUCTION DETAIL
NO SCALE



3 S1.2-I CONSTRUCTION DETAIL
NO SCALE

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS

MILLCREEK CITY
MILL CREEK UTAH, 84005

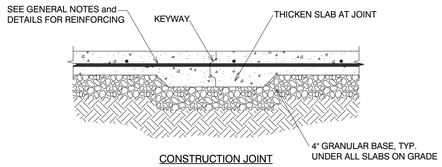
1300 East 3300 South

PROFESSIONAL STRUCTURAL ENGINEER
NO. 10091747
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2020
JOB No.	20-105

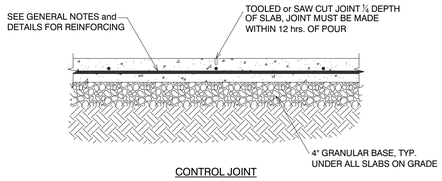
CONSTRUCTION DETAILS

SHEET No.
S1.2-I



CONSTRUCTION JOINT

PROVIDE CONTROL JOINTS AT APPROX. 10'-0" EACH WAY
PROVIDE ESPECIALLY AT CORNERS, COLUMN
LOCATIONS AND TRANSITIONS IN SLAB THICKNESS



CONTROL JOINT

1 / S1.3-I CONSTRUCTION DETAIL
NO SCALE

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

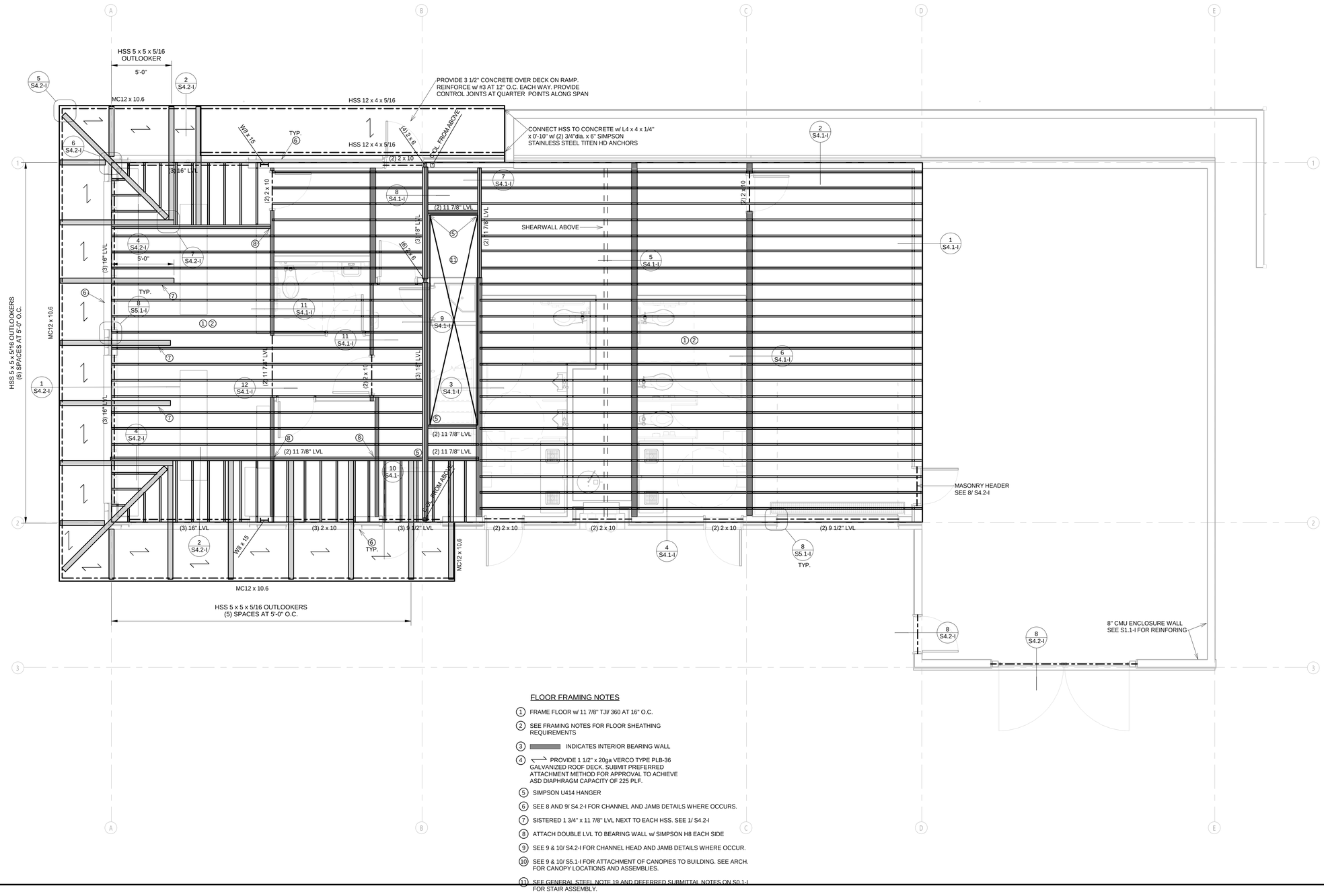
MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South
MILL CREEK UTAH, 84005

PROFESSIONAL STRUCTURAL ENGINEER
NO. 180917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2020
JOB No.	20-105

CONSTRUCTION DETAILS

SHEET No.
S1.3-I



FLOOR FRAMING NOTES

1. FRAME FLOOR w/ 11 7/8" TJI/ 360 AT 16" O.C.
2. SEE FRAMING NOTES FOR FLOOR SHEATHING REQUIREMENTS
3. INDICATES INTERIOR BEARING WALL
4. PROVIDE 1 1/2" x 20ga VERCO TYPE PLB-36 GALVANIZED ROOF DECK. SUBMIT PREFERRED ATTACHMENT METHOD FOR APPROVAL TO ACHIEVE ASD DIAPHRAGM CAPACITY OF 225 PLF.
5. SIMPSON U414 HANGER
6. SEE 8 AND 9/ S4.2-I FOR CHANNEL AND JAMB DETAILS WHERE OCCURS.
7. SISTERED 1 3/4" x 11 7/8" LVL NEXT TO EACH HSS. SEE 1/ S4.2-I
8. ATTACH DOUBLE LVL TO BEARING WALL w/ SIMPSON H8 EACH SIDE
9. SEE 9 & 10/ S4.2-I FOR CHANNEL HEAD AND JAMB DETAILS WHERE OCCUR.
10. SEE 9 & 10/ S5.1-I FOR ATTACHMENT OF CANOPIES TO BUILDING. SEE ARCH. FOR CANOPY LOCATIONS AND ASSEMBLIES.
11. SEE GENERAL STEEL NOTE 19 AND DEFERRED SUBMITTAL NOTES ON S0.1-I FOR STAIR ASSEMBLY.

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS

MILLCREEK CITY
MILL CREEK UTAH, 84005

1300 East 3300 South

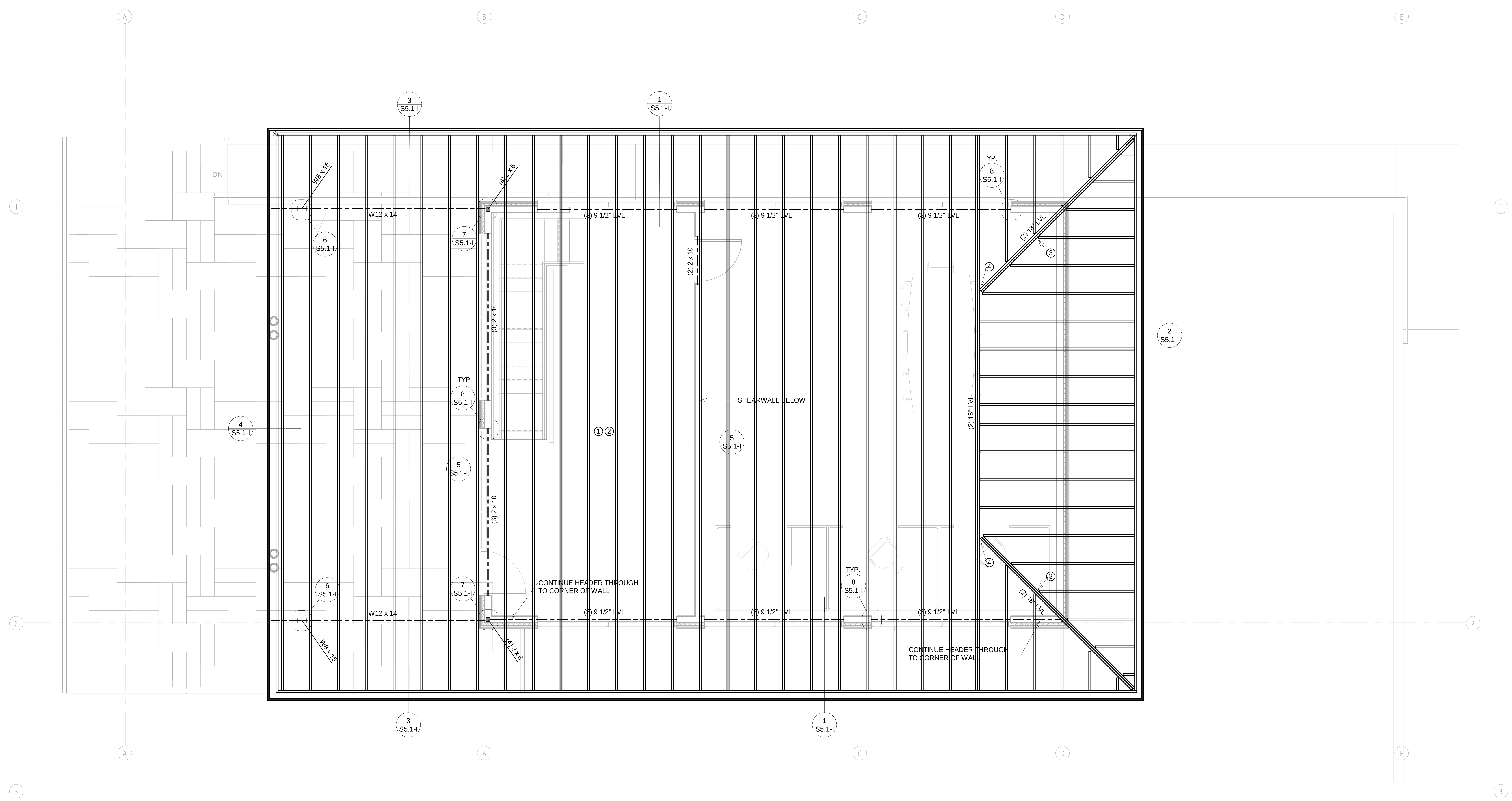
PROFESSIONAL STRUCTURAL ENGINEER
NO. 180917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2020
JOB No.	20-105

LOW ROOF & FLOOR FRAMING PLAN

SHEET No.

S2.1-I



ROOF FRAMING NOTES

1. FRAME ROOF w/ 18" TJI/ 560 AT 24" O.C.
2. SEE FRAMING NOTES ON S0.1-I FOR ROOF SHEATHING REQUIREMENTS
3. CONNECT EACH SKEWED OUTLOOKER w/ SIMPSON LSSR410Z HANGER. PROVIDE 4" WIDE WEB STIFFENERS EACH SIDE OF OUTLOOKER
4. CONNECT DIAGONAL LVL'S w/ SIMPSON LSSR410Z HANGER

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

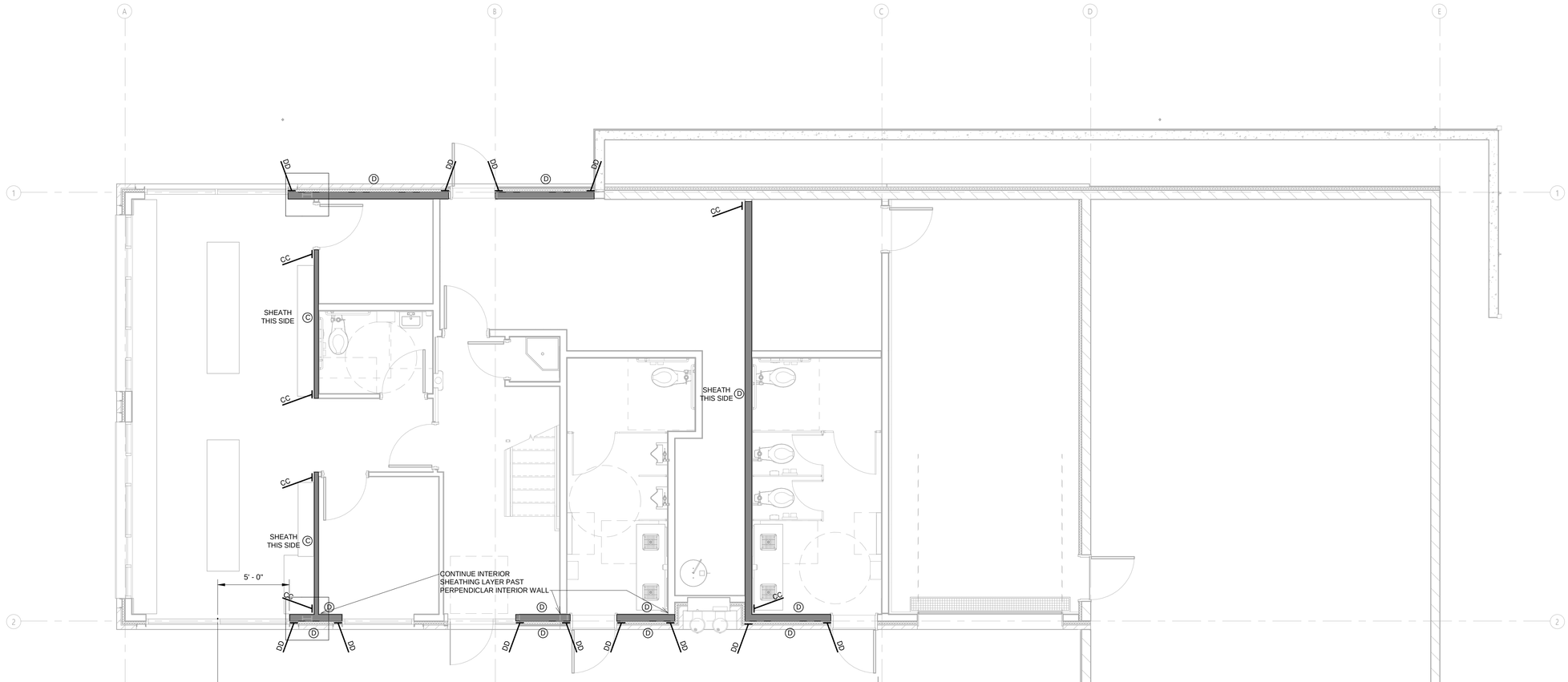
MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South
MILL CREEK UTAH, 84005

PROFESSIONAL STRUCTURAL ENGINEER
NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2020
JOB No.	20-105

HIGH ROOF FRAMING PLAN

SHEET No.
S2.2-I



PROVIDE DOUBLE CS16 x CONT. STRAP AT TOP OF MAN DOOR HEIGHT.
FILL EVERY OTHER HOLE w/ 0.131" x 2 1/2" NAILS. PROVIDE FLAT 2 x 6 BLOCKING BETWEEN STUDS

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
A	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
B	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
C	APA EXP. 1	7/16"	8d AT 3" O.C.	8d AT 12" O.C.	(2) 2x	5/8"dia x 10" AT 32" O.C.	2x TREATED
D	APA EXP. 1	7/16"	8d AT 2" O.C.	8d AT 12" O.C.	2x	5/8"dia x 10" AT 16" O.C.	2x TREATED
E	GYPBOARD	5/8"	#6 DRYWALL SCREW AT 6" O.C.	#6 DRYWALL SCREW AT 12" O.C.	2x	5/8"dia x 10" AT 32" 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/ 4x MATERIAL. MULTIPLE LAYERS OF 2x FRAMING SHALL NOT BE USED WHERE 3x FRAMING IS INDICATED
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 STHD14	(24) 0.148" x 3 1/4"	N.A.	(2) 2x	DETAIL 2/ S3.3-I
BB	SIMPSON MST48	(34) 0.162" x 2 1/2"	N.A.	(2) 2x	DETAIL 1/ S3.3-I
CC	SIMPSON HDU5	(14) 1/4" x 2 1/2" SDS SCREWS	5/8"dia. EPOXIED THREADED ROD	(2) 2x	DETAIL 3/ S3.3-I
DD	SIMPSON HDU8	(20) 1/4" x 2 1/2" SDS SCREWS	7/8"dia. THREADED ROD	(3) 2x6	DETAIL 4/ S3.3-I

1. ALL ANCHORS ARE SIMPSON STRONG-TIE (OR EQUAL)
2. INSTALLATION OF ALL HODOWN 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

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY

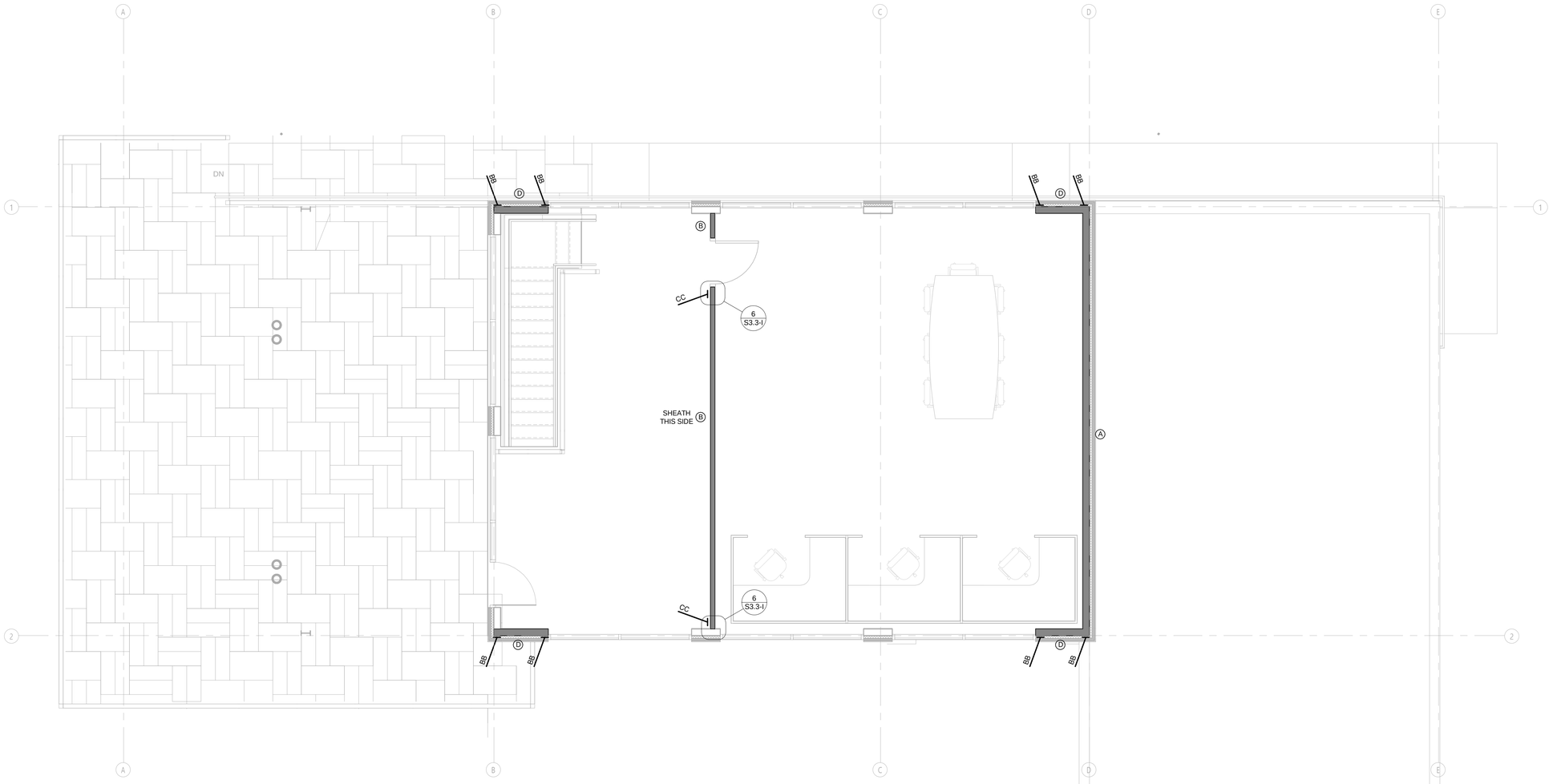
1300 East 3300 South
Millcreek, Utah 84106

PROFESSIONAL STRUCTURAL ENGINEER
NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2020
JOB No.	20-105

MAIN LEVEL SHEARWALL PLAN

SHEET No.
S3.1-I



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
A	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
B	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
C	APA EXP. 1	7/16"	8d AT 3" O.C.	8d AT 12" O.C.	(2) 2x	5/8"dia x 10" AT 32" O.C.	2x TREATED
D	APA EXP. 1	7/16"	8d AT 2" O.C.	8d AT 12" O.C.	2x	5/8"dia x 10" AT 16" O.C.	2x TREATED
E	GYPBOARD	5/8"	#6 DRYWALL SCREW AT 6" O.C.	#6 DRYWALL SCREW AT 12" O.C.	2x	5/8"dia x 10" AT 32" 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/ 4x MATERIAL. MULTIPLE LAYERS OF 2x FRAMING SHALL NOT BE USED WHERE 3x FRAMING IS INDICATED
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 STHD14	(24) 0.148" x 3 1/4"	N.A.	(2) 2x	DETAIL 2/ S3.3-I
BB	SIMPSON MST48	(34) 0.162" x 2 1/2"	N.A.	(2) 2x	DETAIL 1/ S3.3-I
CC	SIMPSON HDU5	(14) 1/4" x 2 1/2" SDS SCREWS	5/8"dia. EPOXIED THREADED ROD	(2) 2x	DETAIL 3/ S3.3-I
DD	SIMPSON HDU8	(20) 1/4" x 2 1/2" SDS SCREWS	7/8"dia. THREADED ROD	(3) 2x6	DETAIL 4/ S3.3-I

1. ALL ANCHORS ARE SIMPSON STRONG-TIE (OR EQUAL)
2. INSTALLATION OF ALL HODOWN 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

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COMMUNITY BUILDINGS
MILLCREEK CITY
1300 East 3300 South
MILL CREEK UTAH, 84005

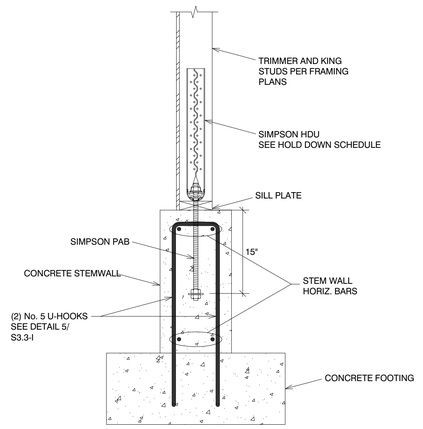
PROFESSIONAL STRUCTURAL ENGINEER
NO. 10031756
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2020
JOB No.	20-105

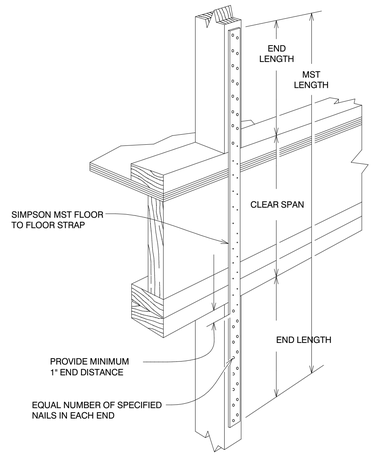
SECOND LEVEL SHEARWALL PLAN

SHEET No.

S3.2-I



4/S3.3-I CONSTRUCTION DETAIL
NO SCALE



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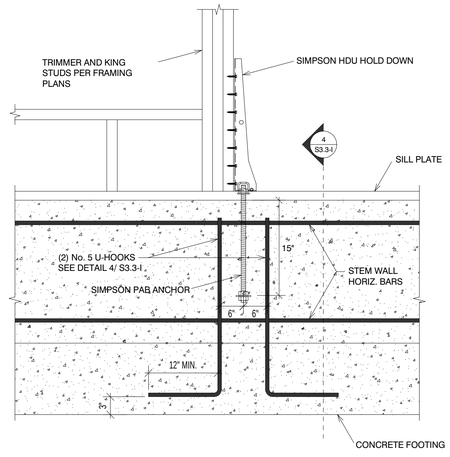

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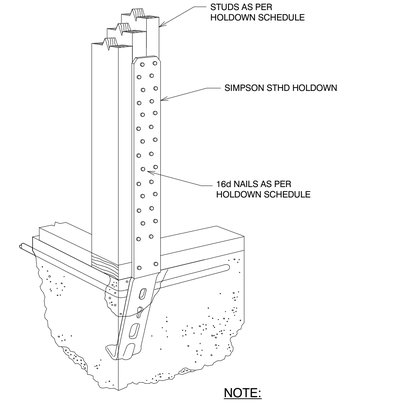
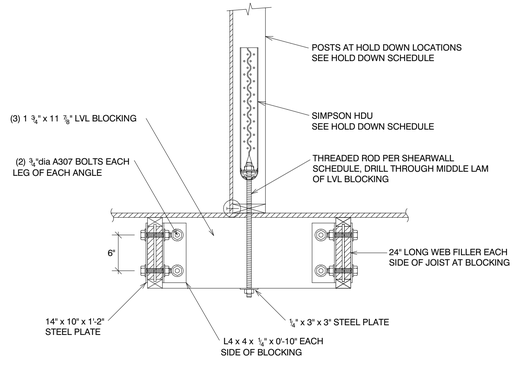


NOTE:
SET STRAP BACK FROM LEDGE AS NEEDED TO ACCOUNT FOR EXTERIOR FINISHES

2/S3.3-I CONSTRUCTION DETAIL
NO SCALE



6/S3.3-I CONSTRUCTION DETAIL
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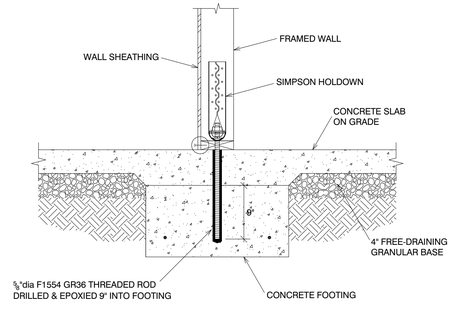


3/S3.3-I CONSTRUCTION DETAIL
NO SCALE

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South

Checker

PROFESSIONAL STRUCTURAL ENGINEER
NO. 10091705
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	Author
SCALE:	Approver
DATE:	JAN. 15, 2020
JOB No.	20-105

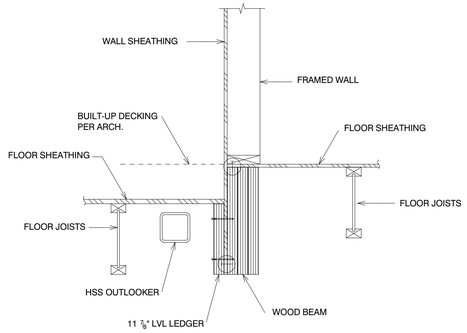
CONSTRUCTION DETAILS

SHEET No.

S3.3-I

= DIAPHRAGM EDGE NAILING SEE FRAMING NOTES

= SHEAR WALL EDGE NAILING SEE SHEAR WALL PLAN



10 S4.1-I CONSTRUCTION DETAIL
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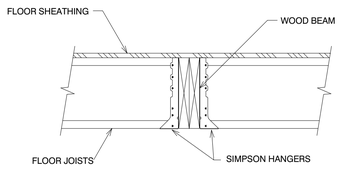
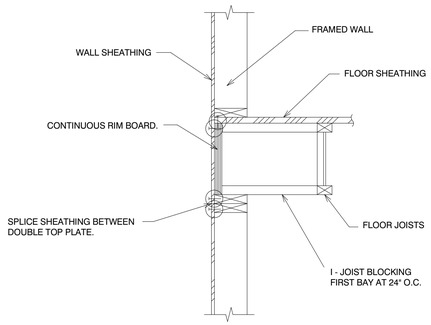
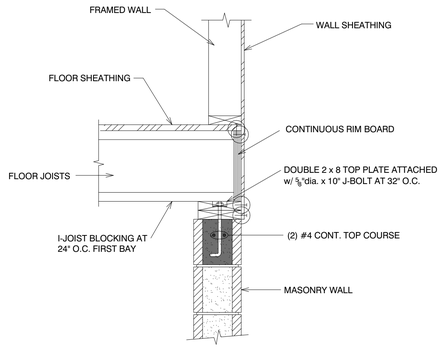


7 S4.1-I CONSTRUCTION DETAIL
NO SCALE



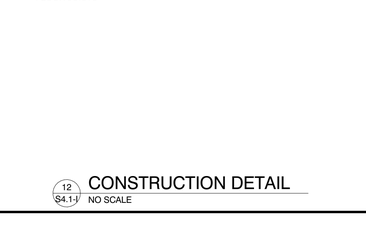
4 S4.1-I CONSTRUCTION DETAIL
NO SCALE



1 S4.1-I CONSTRUCTION DETAIL
NO SCALE

= DIAPHRAGM EDGE NAILING SEE FRAMING NOTES

= SHEAR WALL EDGE NAILING SEE SHEAR WALL PLAN



11 S4.1-I CONSTRUCTION DETAIL
NO SCALE

8 S4.1-I CONSTRUCTION DETAIL
NO SCALE

5 S4.1 CONSTRUCTION DETAIL
NO SCALE

2 S4.1-I CONSTRUCTION DETAIL
NO SCALE

= DIAPHRAGM EDGE NAILING SEE FRAMING NOTES

= SHEAR WALL EDGE NAILING SEE SHEAR WALL PLAN

12 S4.1-I CONSTRUCTION DETAIL
NO SCALE

9 S4.1-I CONSTRUCTION DETAIL
NO SCALE

6 S4.1-I CONSTRUCTION DETAIL
NO SCALE

3 S4.1-I CONSTRUCTION DETAIL
NO SCALE

= DIAPHRAGM EDGE NAILING SEE FRAMING NOTES

= SHEAR WALL EDGE NAILING SEE SHEAR WALL PLAN

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS

MILLCREEK CITY

1300 East 3300 South MILLCREEK UTAH, 84005

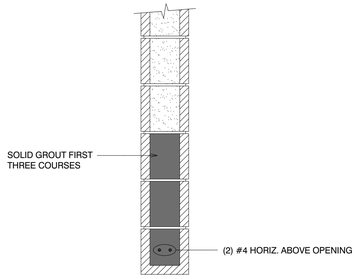
PROFESSIONAL STRUCTURAL ENGINEER
NO. 10509177
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2020
JOB No.	20-105

CONSTRUCTION DETAILS

SHEET No.

S4.1-I



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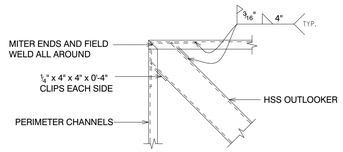

5 S4.2-I CONSTRUCTION DETAIL
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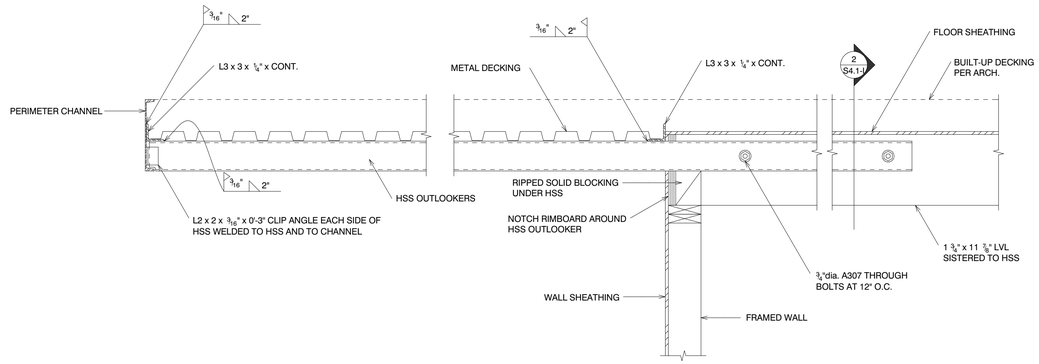

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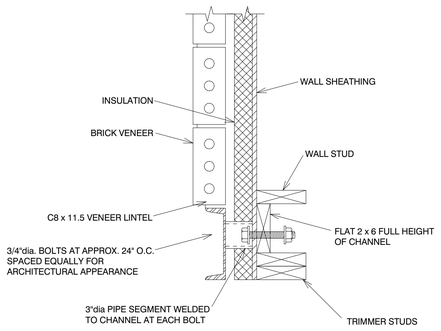
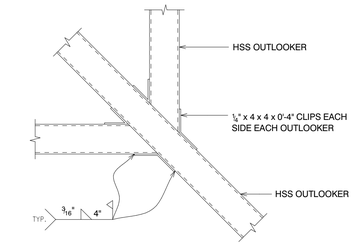
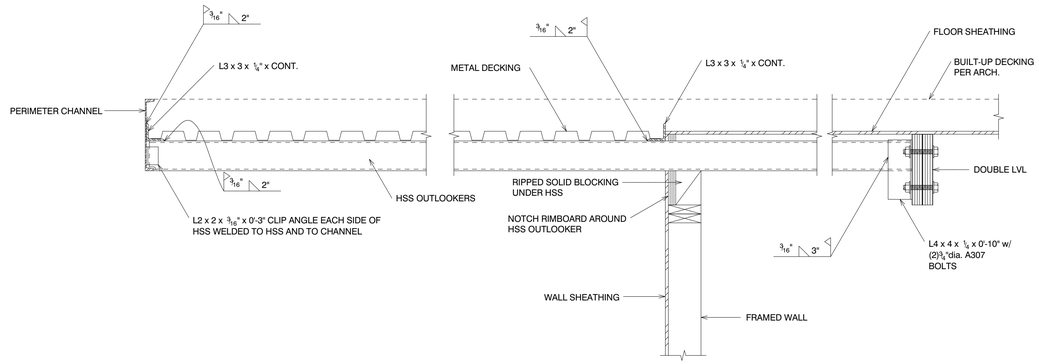


OPENING JAMB

9 S4.2-I CONSTRUCTION DETAIL
NO SCALE



6 S4.2-I CONSTRUCTION DETAIL
NO SCALE



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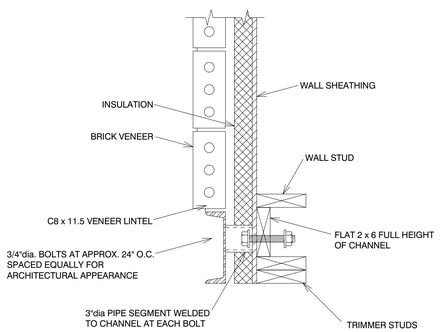

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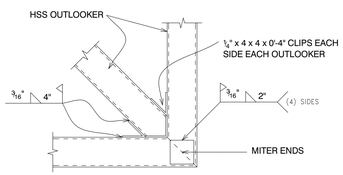

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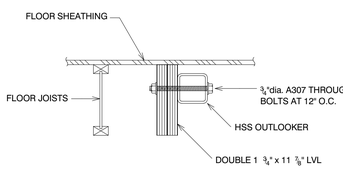

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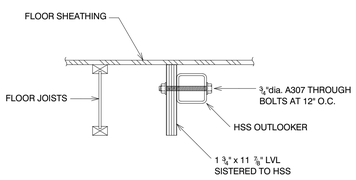


3 S4.2-I CONSTRUCTION DETAIL
NO SCALE

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

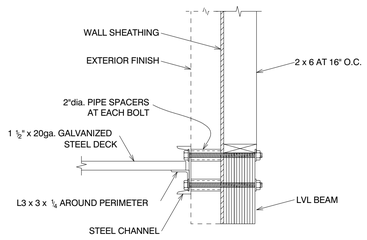
MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South
MILL CREEK UTAH, 84005

PROFESSIONAL STRUCTURAL ENGINEER
NO. 190517
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2020
JOB No.	20-105

CONSTRUCTION DETAILS

SHEET No.
S4.2-I



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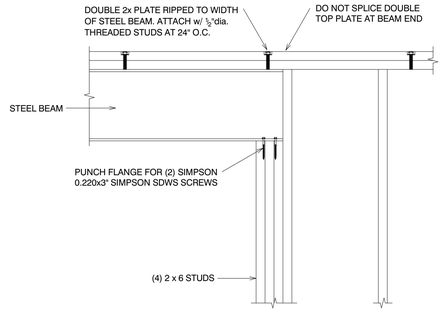

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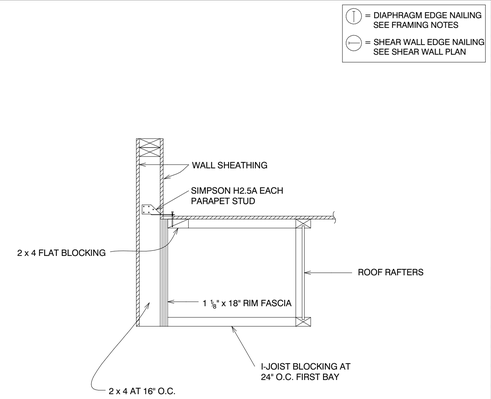

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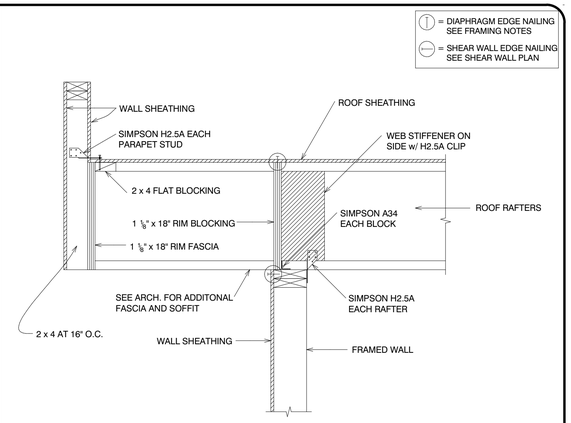

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NO SCALE

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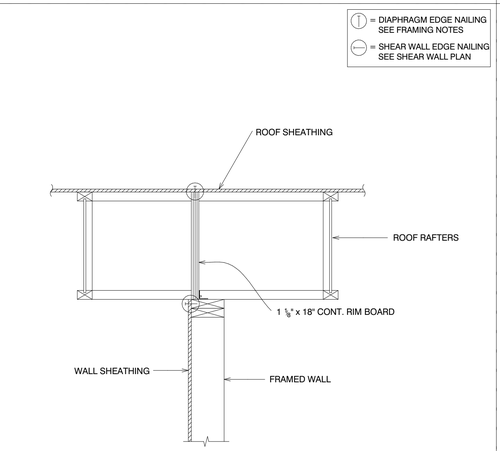
NO SCALE



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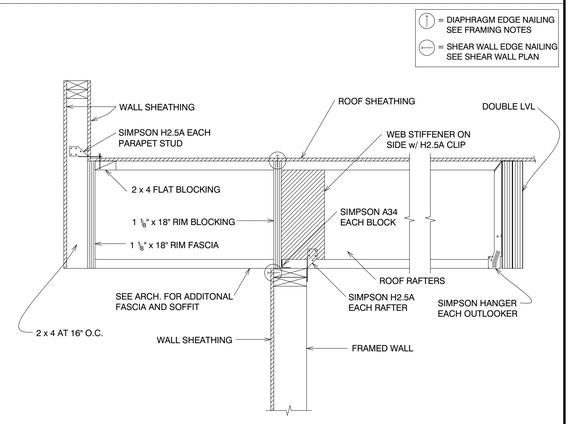

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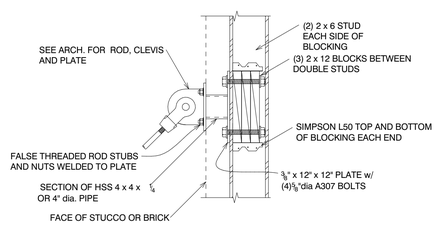

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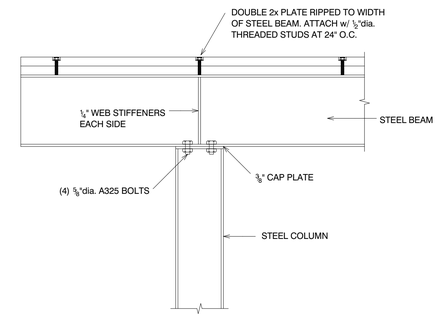

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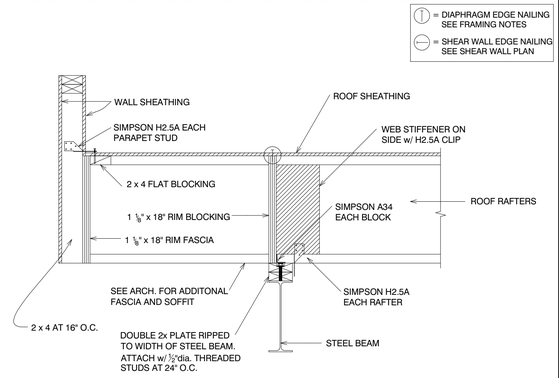

3 S5.1-I CONSTRUCTION DETAIL
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1300 East 3300 South

PROFESSIONAL STRUCTURAL ENGINEER
NO. 180917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2020
JOB No.	20-105

CONSTRUCTION DETAILS

SHEET No.

S5.1-I

MECHANICAL LEGEND

SYMBOL	ABR,	DESCRIPTION
GENERAL TERMINOLOGY		
A		SECTION LETTER DESIGNATION
ME101		SECTION DRAWN ON THIS SHEET
A2		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION
AH		MECHANICAL EQUIPMENT DESIGNATION
1		EQUIPMENT ITEM DESIGNATION
D-1 CFM		REGISTER, GRILLE OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW
R-1		GRILLE OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRED
1		REVISION DESIGNATOR AND NUMBER
1		KEY NOTE DESIGNATOR AND NUMBER
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
AFF		ABOVE FINISHED FLOOR
AP		ACCESS PANEL
C EL.		CENTERLINE ELEVATION
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
ATC		CONTROLS CONTRACTOR
EC		ELECTRICAL CONTRACTOR
FPC		FIRE PROTECTION CONTRACTOR
NIC		NOT IN CONTRACT
NTS		NOT TO SCALE
VCP		VITRIFIED CLAY PIPE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

SYMBOL	ABR,	DESCRIPTION
AIR SIDE		
		EXISTING AIR DUCT TO BE REMOVED
		EXISTING AIR DUCT TO REMAIN
		NEW AIR DUCT
		RECT TO RECT AIR DUCT TAKE-OFF
		RECT TO RND AIR DUCT TAKE-OFF
		RND TO RND AIR DUCT TAKE-OFF
		MEDIUM PRESSURE TAKE-OFF
		FLEXIBLE AIR DUCT
		LINED DUCT
		RADIUS ELBOW
		ECCENTRIC DUCT TRANSITION
		CONCENTRIC DUCT TRANSITION
		VOLUME DAMPER
		SUPPLY AIR DIFFUSER
		RETURN & TRANSFER AIR GRILLE
		EXHAUST GRILLE OR CEILING EXH. FAN
		RETURN & OUTSIDE AIR DUCT UP/DN
		RETURN & OA ROUND DUCT UP/DN
		SUPPLY AIR DUCT UP/DN
		SUPPLY AIR ROUND DUCT UP/DN
		EXHAUST AIR DUCT UP/DN
		EXHAUST AIR ROUND DUCT UP/DN
	AP	ACCESS PANEL
		EXISTING EQUIPMENT TO BE REMOVED
		EXISTING EQUIPMENT TO REMAIN
		NEW EQUIPMENT
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR
MA		MIXED AIR
RF		RELIEF AIR
FO		FLAT OVAL
M	MVD	MOTORIZED VOLUME DAMPER
BD	BD	BACKDRAFT DAMPER
F	FD	FIRE DAMPER
S	SD	SMOKE DAMPER
FS	FS	FIRE & SMOKE DAMPER
T	T-STAT	WALL MOUNTED THERMOSTAT
S		WALL MOUNTED TEMP. SENSOR
H	H-STAT	WALL MOUNTED HUMIDISTAT
F	F-STAT	WALL MOUNTED FIRESTAT

SYMBOL	ABR,	DESCRIPTION
WET SIDE		
		PUMP
R		REGULATOR
		UNION
		MANUAL ACTUATOR
		PNUEMATIC DIAPHRAM ACTUATOR
M		ELECTRIC MOTOR ACTUATOR
S		SOLENOID ACTUATOR
		BUTTERFLY VALVE
		GATE VALVE
		GLOBE VALVE - STRAIGHT PATTERN
		GLOBE VALVE - ANGLE PATTERN
M		MOTORIZED 2-WAY CONTROL VALVE
M		MOTORIZED 3-WAY CONTROL VALVE
	PRV	PRESSURE REDUCING VALVE
		CHECK VALVE
		CIRCUIT BALANCING VALVE
		BALL VALVE
P		PRESSURE RELIEF VALVE
T		THERMAL RELIEF VALVE
S		SAFETY RELIEF VALVE
		PLUG VALVE
		NEEDLE VALVE
		TRIPLE DUTY VALVE
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		STRAINER
		STRAINER W/ PLUG BLOW OFF
		VENTURI
		PRESSURE GAUGE W/ COCK - WATER
		PRESSURE GAUGE W/ COCK - STEAM
		THERMOMETER & THERMOWELL
S		WATER TEMP SENSOR & THERMOWELL
F		FLOW SWITCH
PS		PRESSURE SWITCH
		THERMOWELL
		PRESSURE & TEMP TAP
T IBT		INVERTED BUCKET STEAM TRAP
TT		THERMOSTATIC STEAM TRAP
F&T		FLOAT & THERMOSTATIC STEAM TRAP
		DIRECTION OF FLOW
		BACKFLOW PREVENTING VALVE

SYMBOL	ABR,	DESCRIPTION
WET SIDE		
		PITCH DOWN
		ELBOW UP/DN
		TEE UP/DN
		EXISTING PIPING TO BE REMOVED
		EXISTING PIPING TO REMAIN
		NEW PIPING
		PIPE CAP OR PLUG
		REDUCER - CONCENTRIC / ECCENTRIC
		EXPANSION JOINT
		FLEXIBLE CONNECTION
		ANCHOR POINT
	CD	CONDENSATE DRAIN
	G	NATURAL GAS PIPING
	CF	CHEMICAL FEED LINE
	GF	GLYCOL FILL LINE
	MU	MAKE-UP WATER LINE
	CW	CULINARY COLD WATER
	HW	CULINARY HOT WATER
	HWREC	CULINARY HOT WATER RECIRC
	HWS	HEATING WATER SUPPLY
	HWR	HEATING WATER RETURN
	CHWS	CHILLED WATER SUPPLY
	CHWR	CHILLED WATER RETURN
	HTWS	HIGH TEMP HEATING WATER SUPPLY
	HTWR	HIGH TEMP HEATING WATER RETURN
	LPS	LOW PRESSURE STEAM
	LPR	LOW PRESSURE STEAM RETURN
	HPS	HIGH PRESSURE STEAM
	HPR	HIGH PRESSURE STEAM RETURN
	CS	CONDENSER SUPPLY
	CR	CONDENSER RETURN
	PC	PUMPED CONDENSATE
	L	REFRIGERANT LIQUID
	S	REFRIGERANT SUCTION
	HG	REFRIGERANT HOT GAS
	FOS	FUEL OIL SUPPLY
	FOR	FUEL OIL RETURN
	FOV	FUEL OIL VENT

GENERAL NOTES

G-1 - MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION OF THE EXISTING BUILDING AND SITE CONDITIONS, EXISTING PIPING, EXISTING ELECTRICAL, AND EXISTING SUPPORTS.

A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.

B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

G-2 - ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CHANGES FOR APPROVAL. CONTRACTOR SHALL NOT START ANY CHANGES UNTIL NOTIFIED IN WRITING. IF CHANGES ARE MADE PRIOR TO APPROVAL CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE CHANGES MADE AND ALL COSTS RELATING TO FAILURE OR REPLACEMENT OF ALTERATIONS.

G-3 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

G-4 - THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.

G-5 - THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.

G-6 - MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE AND FIRE DAMPERS AS REQUIRED BY LOCAL CODES AND AUTHORITIES.

G-7 - SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.

G-8 - PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.

G-9 - SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS AND GRILLES.

G-10 - PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.

G-11 - THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

G-12 - THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.

G-13 - C.F.M. LISTED IS ACTUAL AIR.

G-14 - SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

G-15 - CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

G-16 - ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE IMC AND IPC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-17 - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.

G-18 - ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.

WPA architecture

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING

PROFESSIONAL ENGINEER
01.15.2021
BRADLEY D. LASH
No. 8681468

MILLLCREEK CITY
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Owner's Representative
Francis Lilly
Planning Director
801.214.2752
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MILLCREEK COMMON - PHASE ONE
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REV	DATE	DESCRIPTION

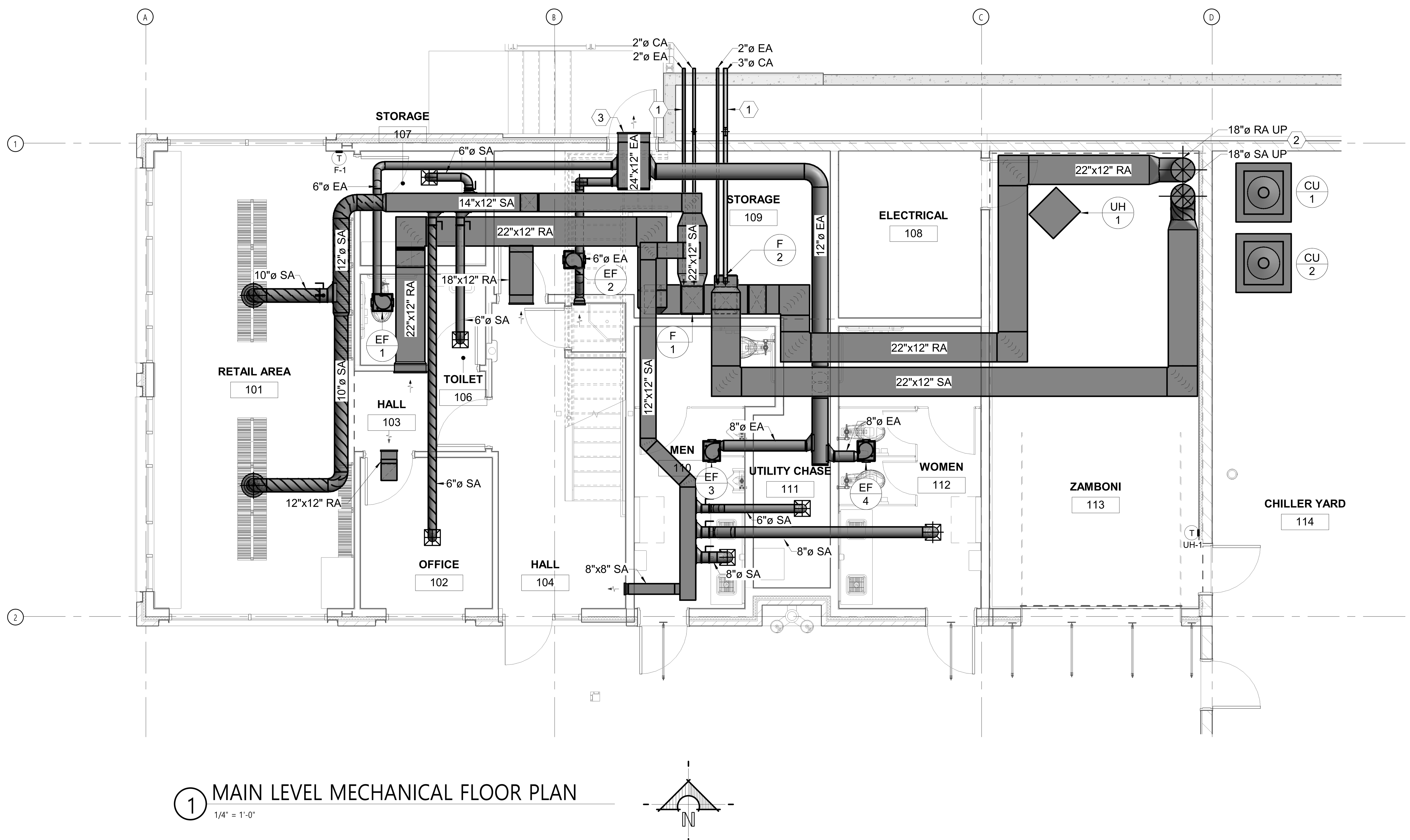
DESIGNED BY: Miah R
DRAWN: Miah R
CHECKED: Brad L
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
MECHANICAL SYMBOLS AND NOTES

Sheet Number:
M0.1-I

SHEET NOTES

1. PROVIDE FLUE AND COMBUSTION AIR. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
2. SEE SHEET M2.2-I - UPPER LEVEL MECHANICAL FLOOR PLAN FOR CONTINUATION OF DUCT.
3. PROVIDE WALL MOUNTED LOUVER IN THIS APPROXIMATE LOCATION. PROVIDE WITH BACKDRAFT DAMPER.



1 MAIN LEVEL MECHANICAL FLOOR PLAN

1/4" = 1'-0"

WPA architecture

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MILLCREEK

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REV	DATE	DESCRIPTION

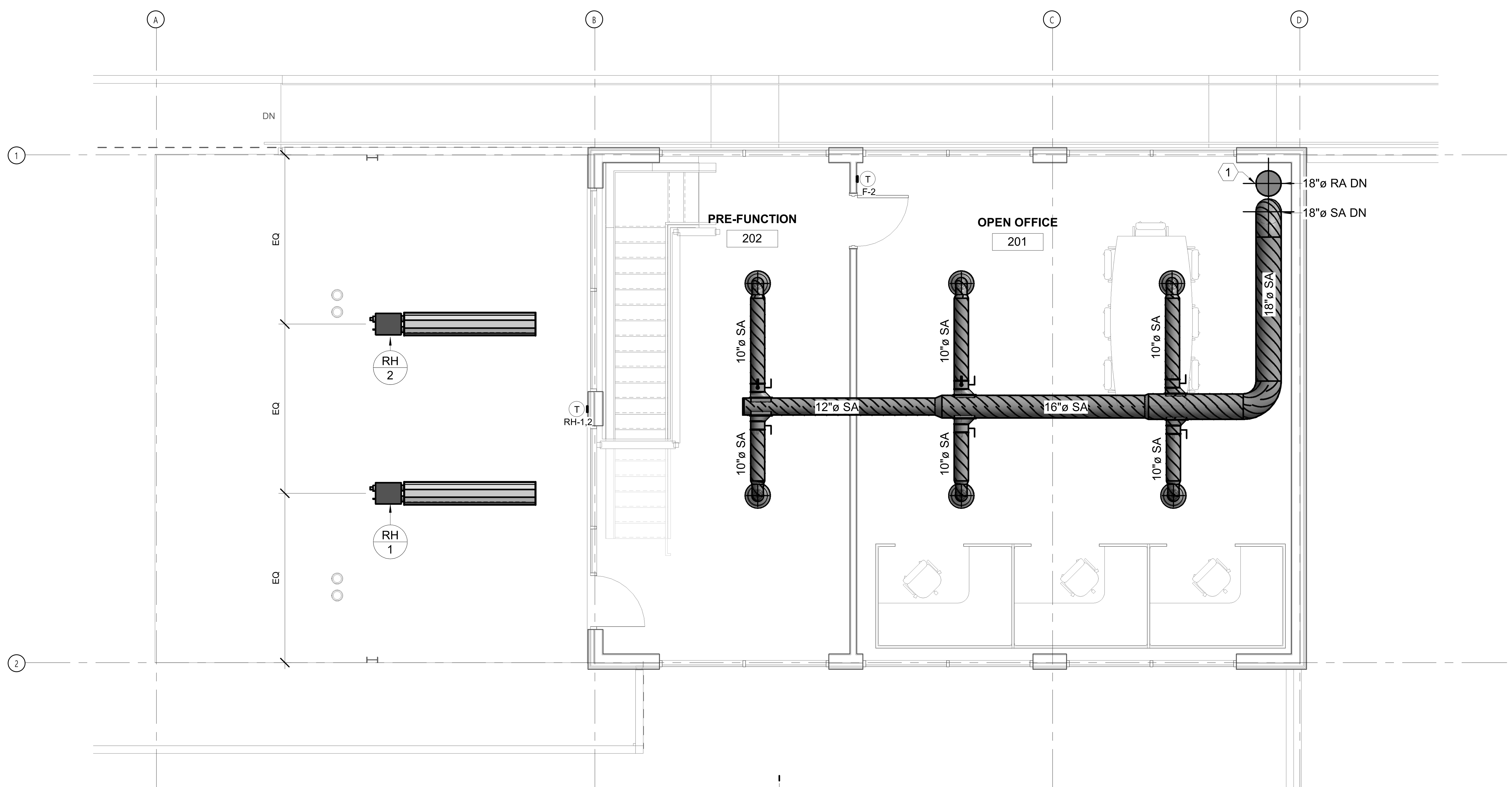
DESIGNED BY: Miah R
DRAWN: Miah R
CHECKED: Brad L
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
MAIN LEVEL MECHANICAL FLOOR PLAN

Sheet Number:
M2.1-I

SHEET NOTES

1 EXTEND RETURN AIR DUCT UP TO 12" FROM STRUCTURE AND TERMINATE.



1 UPPER LEVEL MECHANICAL FLOOR PLAN

1/4" = 1'-0"

N

WPA architecture

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PROJ #: MILLCREEK 0001

Sheet Name:
UPPER LEVEL MECHANICAL FLOOR PLAN

Sheet Number:
M2.2-I

FURNACE SCHEDULE

TAG		AREA SERVED	CFM	CFM (OUTSIDE AIR)	ESP	HEATING		HEATING EFFICIENCY	ELECTRICAL					DIMENSIONS			OPERATING WEIGHT	CONDENSING UNIT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#					INPUT (BTU/HR)	OUTPUT (BTU/HR)		VOLTAGE	PHASE	FREQUENCY	HP	RPM	LENGTH	WIDTH	HEIGHT				
F	1	1ST FLOOR	1,600 CFM	400 CFM	0.5 in-wg	100,000 Btu/h	92,000 Btu/h	80	115 V	1	60 Hz	0.5 hp	1075	2' - 5"	1' - 5 1/2"	2' - 9"	200 lb	CU-1	TRANE TUH1C100	1,2,3,4
F	2	2ND FLOOR	1,600 CFM	400 CFM	0.5 in-wg	100,000 Btu/h	92,000 Btu/h	80	115 V	1	60 Hz	0.5 hp	1075	2' - 5"	1' - 5 1/2"	2' - 9"	200 lb	CU-2	TRANE TUH1C100	1,2,3,4

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. RATED AT SEA LEVEL.
3. FURNACE SYMBOL CORRESPONDS WITH CONDENSING UNIT AND COOLING COIL UNLESS OTHERWISE NOTED. COOLING COIL CAPACITIES SHALL MATCH CONDENSING UNIT.
4. 2 STAGE HEATING.

RADIANT HEATER SCHEDULE

TAG		AREA SERVED	HIGH FIRE HEAT INPUT (BTU/HR)	LOW FIRE HEAT INPUT (BTU/HR)	ELECTRICAL			LENGTH	MOUNTING HEIGHT	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#				VOLTAGE	PHASE	FREQUENCY					
RH	1	PATIO	50,000 Btu/h	35,000 Btu/h	120 V	1	60 Hz	116.26 in	10' - 0"	95 lb	IR ENERGY EVEN TUBE ETS50	1,2,3,4
RH	2	PATIO	50,000 Btu/h	35,000 Btu/h	120 V	1	60 Hz	116.25 in	10' - 0"	95 lb	IR ENERGY EVEN TUBE ETS50	1,2,3,4

1. PROVIDE WITH WALL MOUNTED CONTROLLER.
2. PROVIDE WITH INDICATOR LIGHT THAT SHOWS WHEN THE HEATER IS EVERGIZED.
3. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
4. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

CONDENSING UNIT SCHEDULE

TAG		INDOOR UNIT SERVED	COOLING (BTU/HR)	ELECTRICAL					SEER	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#			VOLTAGE	PHASE	FREQUENCY	MCA	MOCP				
CU	1	F-1	48,000 Btu/h	460 V	3	60 Hz	8 A	15 A	14	250 lb	TRANE 4TTA404824ABC	1,2,3,4
CU	2	F-2	48,000 Btu/h	460 V	3	60 Hz	8 A	15 A	14	250 lb	TRANE 4TTA404824ABC	1,2,3,4

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. RATED AT SEA LEVEL.
3. CONDENSING UNIT SYMBOL CORRESPONDS WITH FURNACE UNIT AND COOLING COIL UNLESS OTHERWISE NOTED. COOLING COIL CAPACITIES SHALL MATCH CONDENSING UNIT.
4. PROVIDE 6" CONCRETE PAD.

LOUVER SCHEDULE

TAG	AREA SERVED	MAX FLOW	FACE SIZE		MIN FREE AREA	MAX VELOCITY	MAX NC	MANUF & MODEL	SCHEDULE NOTES
			HEIGHT	WIDTH					
L-1	RESTROOMS	425 CFM	12"	24"	0.8 ft²	541 ft/min	25	RUSKIN ELF811	1,2,3,4

1. SHALL BE RUSKIN811 OR APPROVED EQUAL.
3. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
4. FINISH SHALL BE STANDARD WHITE.
5. FINISH SHALL BE SPECIFIED BY ARCHITECT.

DIFFUSER AND GRILLE SCHEDULE

TAG	MAX FLOW	FACE SIZE		NECK SIZE		CEILING TYPE	BLOW PATTERN	THROW @ 50 FPM	MAX NC	MANUF & MODEL	SCHEDULE NOTES
		LENGTH	WIDTH	LENGTH/ DIAMETER	WIDTH						
D-1	350 CFM	22"	0"	10"	0"	DUCT MTD	4 WAY	9'	25	PRICE RCG	4,5,6,7
D-2	180 CFM	12"	12"	6"	0"	HARD	4 WAY	10'	25	PRICE SPD	1,5,6,7
D-3	260 CFM	12"	12"	8"	0"	HARD	4 WAY	13'	25	PRICE SPD	1,5,6,7
D-4	300 CFM	8"	8"	8"	8"	SIDEWALL	1 WAY	15'	25	PRICE 510	3,5,6,7
EG-1	50 CFM	8"	8"	8"	8"	SIDEWALL	1 WAY	0'	25	PRICE 510	3,5,6,7
R-1	375 CFM	12"	12"	12"	12"	HARD	N/A	0'	25	PRICE 535	2,5,6,7
R-2	300 CFM	8"	8"	8"	8"	SIDEWALL	N/A	0'	25	PRICE 535	2,5,6,7
R-3	650 CFM	18"	12"	18"	12"	SIDEWALL	N/A	0'	25	PRICE 535	2,5,6,7
R-4	800 CFM	24"	14"	24"	14"	SIDEWALL	N/A	0'	25	PRICE 535	2,5,6,7

1. SHALL BE PRICE SPD OR APPROVED EQUAL.
2. SHALL BE PRICE 535 OR APPROVED EQUAL.
3. SHALL BE PRICE 510 OR APPROVED EQUAL.
4. SHALL BE PRICE RCG OR APPROVED EQUAL.
5. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
6. FINISH SHALL BE STANDARD WHITE.
7. FINISH SHALL BE SPECIFIED BY ARCHITECT.

UNIT HEATER SCHEDULE

TAG		AREA SERVED	CFM	HEAT INPUT (BTU/HR)	HEAT OUTPUT (BTU/HR)	ELECTRICAL			MOUNTING HEIGHT	FLUE	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#					VOLTAGE	PHASE	FREQUENCY					
UH	1	ZAMBONI ROOM	629 CFM	45,000 Btu/h	37,350 Btu/h	120 V	1	60 Hz	9' - 6"	4"	60 lb	REZNOR UDAP 45	1,2,3

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. PROVIDE WITH HANGER RODS C/W VIBRATION ISOLATERS SEISMICALLY BRACED UNITS.
3. PROVIDE COMBUSTION AND VENT PER MANUFACTURERS RECOMMENDATIONS.

EXHAUST FAN SCHEDULE

TAG		AREA SERVED	CFM	ESP	ELECTRICAL			RPM	HP	SONES	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#				VOLTAGE	PHASE	FREQUENCY						
EF	1	TOILET 106	75 CFM	0.10 in-wg	120 V	1	60 Hz	750	0.04 hp	1	11 lb	COOK GC	1,2,3
EF	2	JANITORS CLOSET	125 CFM	0.10 in-wg	120 V	1	60 Hz	1075	0.06 hp	2.5	12 lb	COOK GN-146	1,2,3
EF	3	MEN 110	175 CFM	0.10 in-wg	120 V	1	60 Hz	1160	0.07 hp	3.5	12 lb	COOK GC	1,2,3
EF	4	WOMEN 112	175 CFM	0.10 in-wg	120 V	1	60 Hz	1160	0.07 hp	3.5	12 lb	COOK GC	1,2,3

1. RUN CONTINUOUSLY DURING OCCUPIED HOURS.
2. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

WPA architecture

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PROFESSIONAL MECHANICAL ENGINEERING

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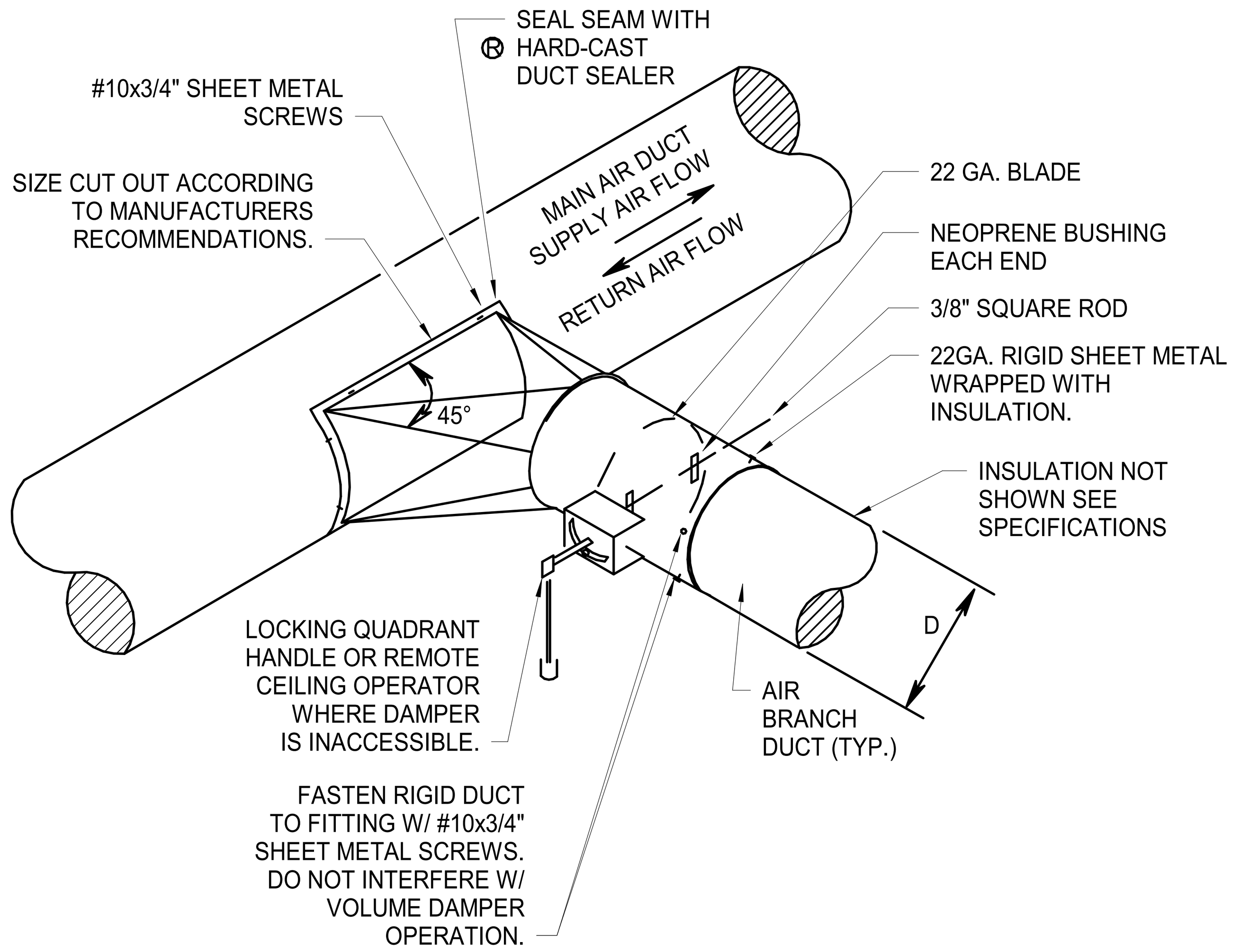
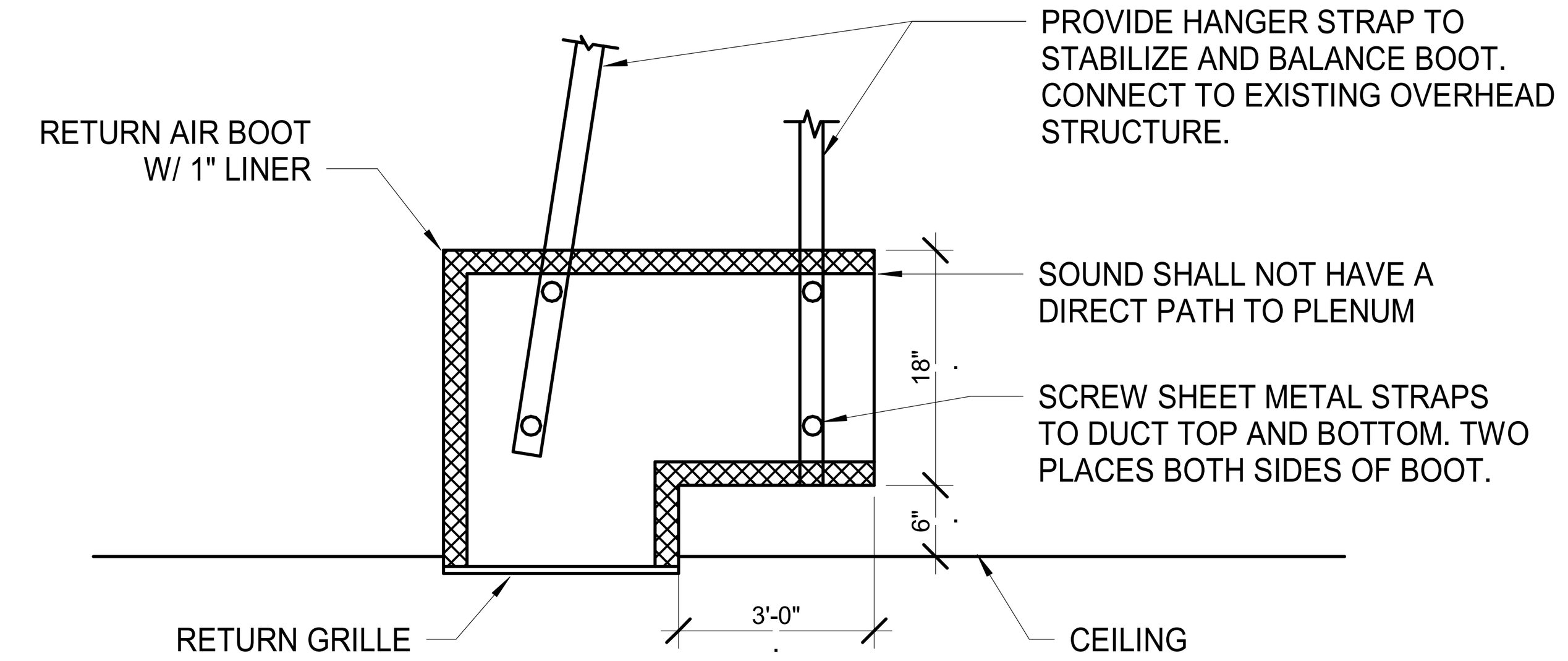
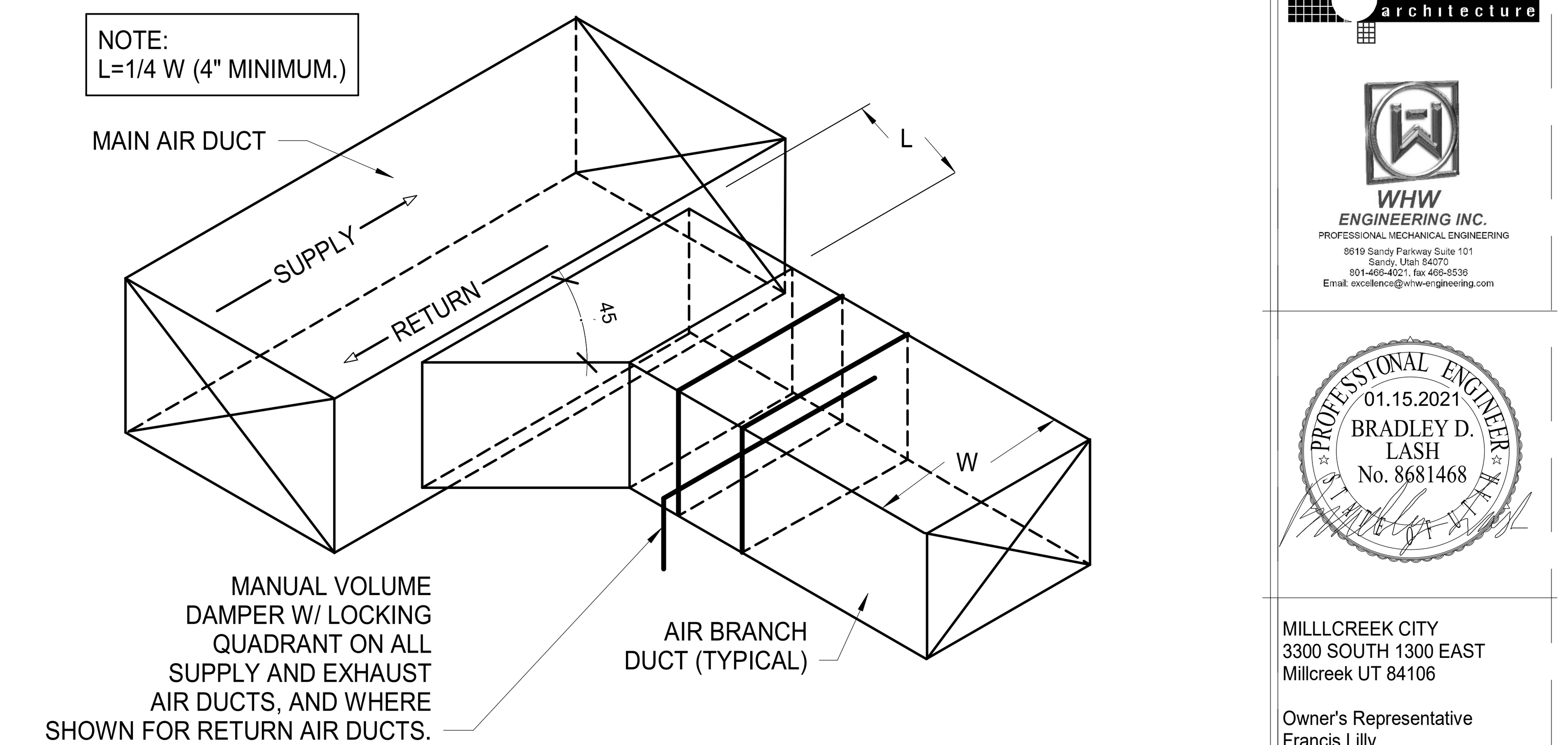
M3.1-I



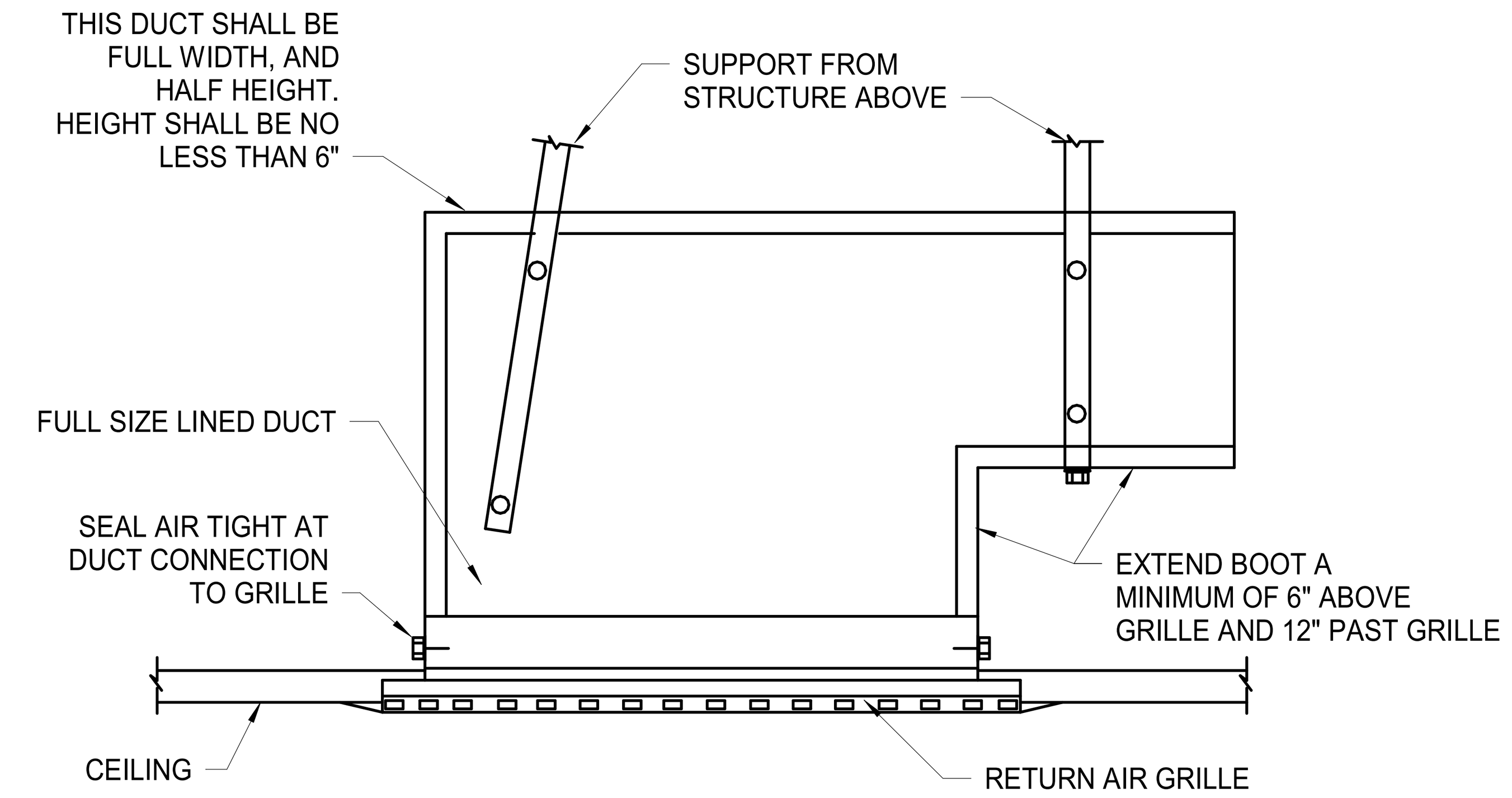
8 ROUND-TO-ROUND DUCT CONSTRUCTION DETAIL
12" = 1'-0"



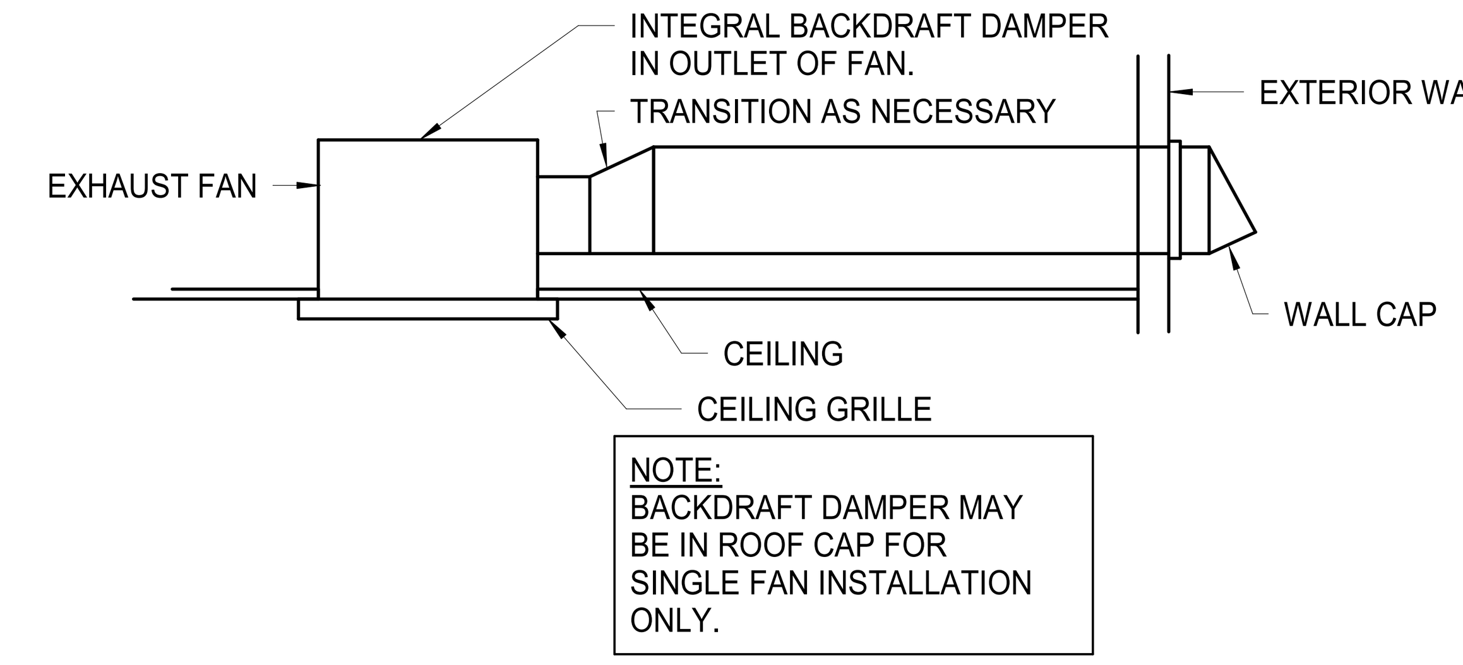
4 RETURN AIR BOOT DETAIL
12" = 1'-0"



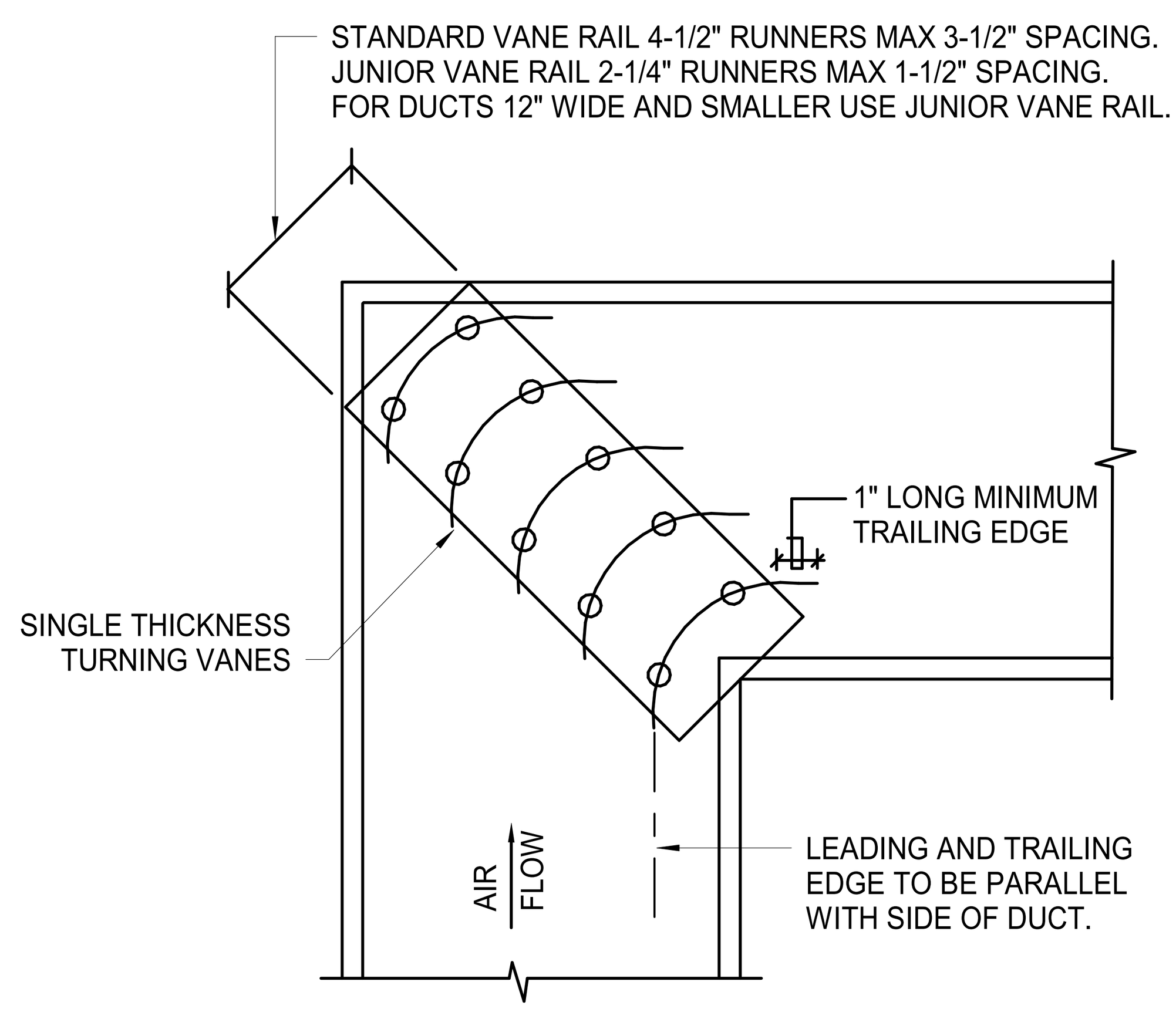
1 BRANCH DUCT TAKE-OFF & DAMPER DETAIL
12" = 1'-0"



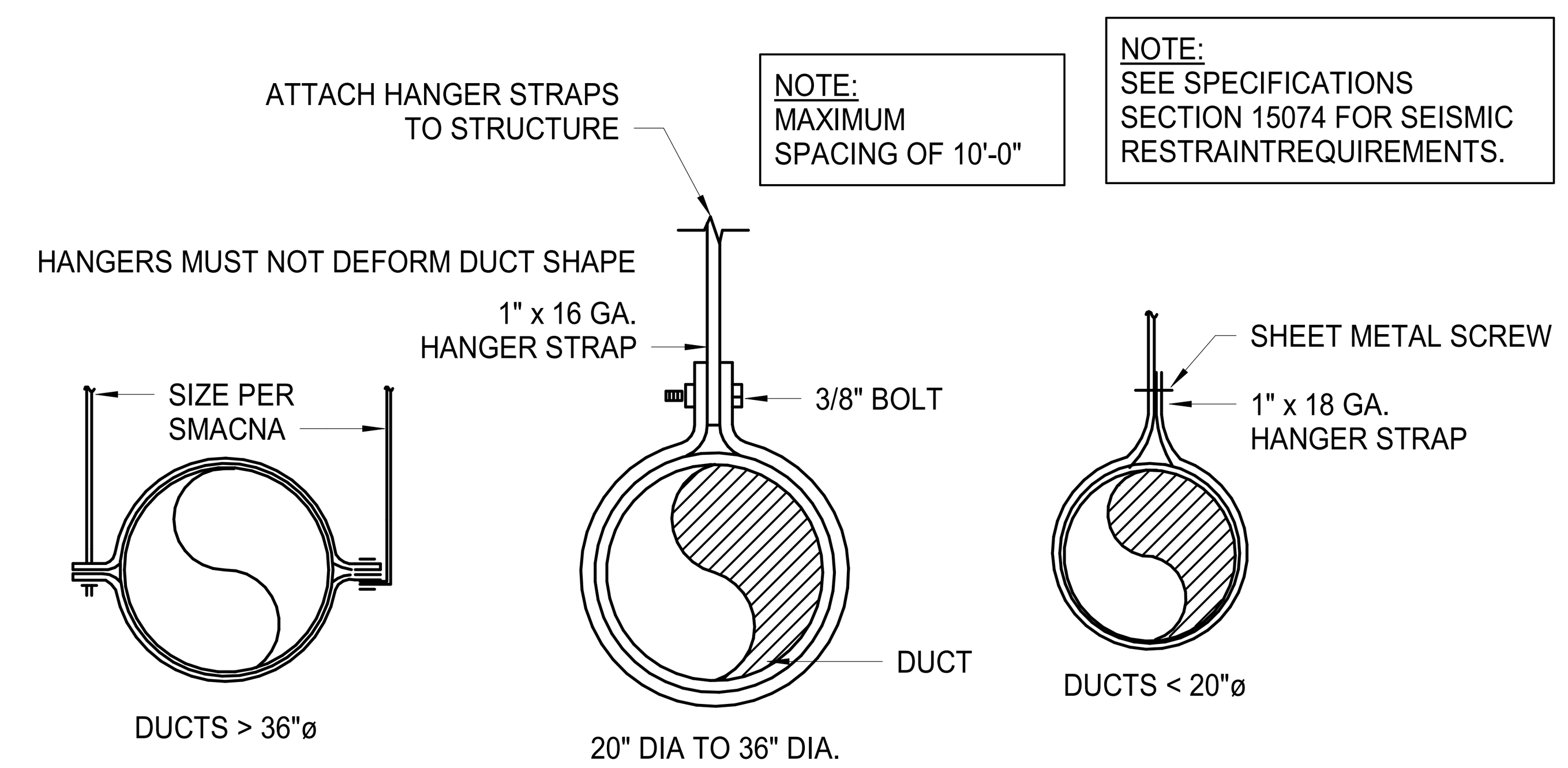
5 RETURN AIR GRILLE MOUNTING DETAIL
12" = 1'-0"



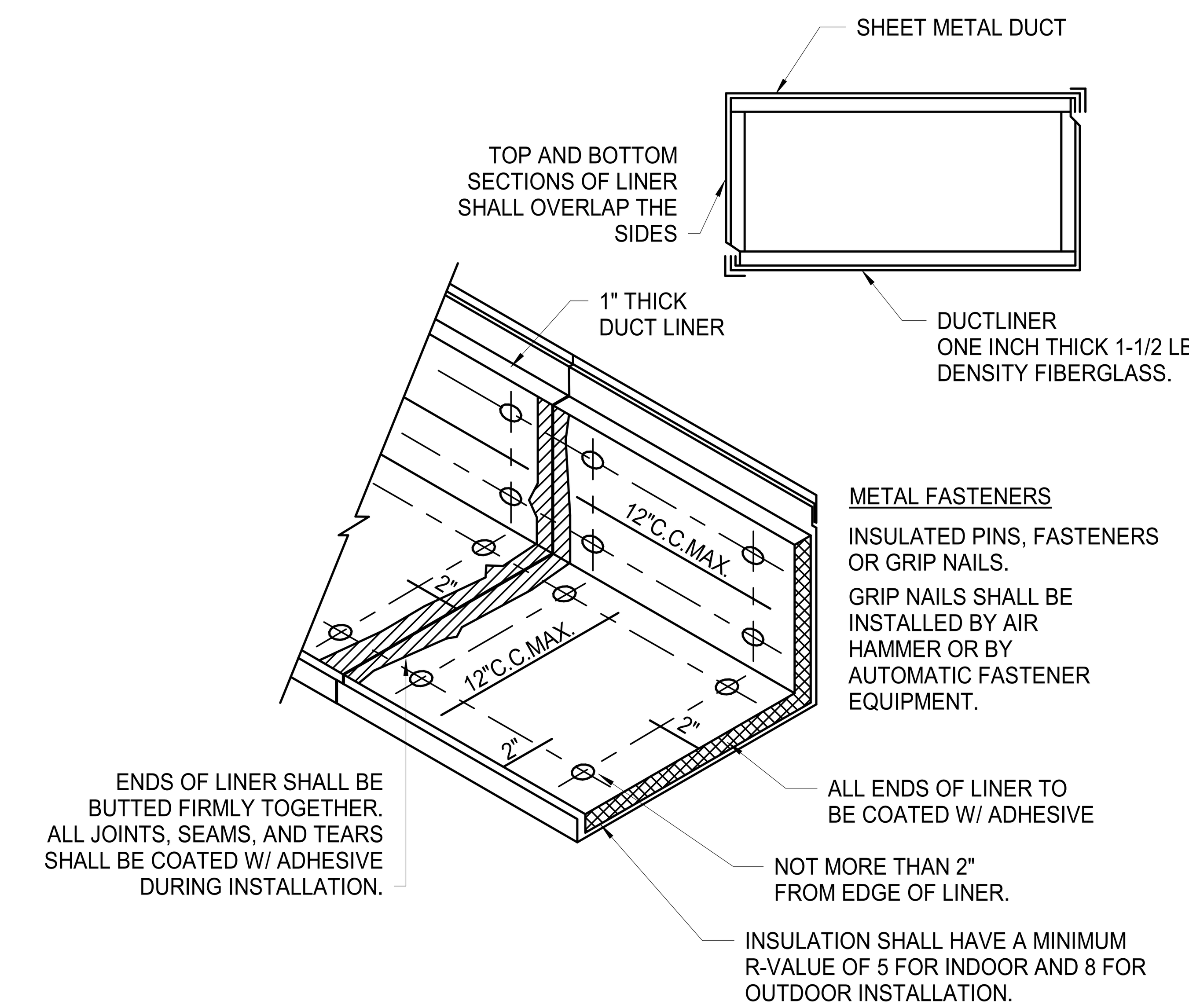
2 CEILING EXHAUST FAN WALL TERMINATION DETAIL
12" = 1'-0"



9 SINGLE THICKNESS TURNING VANE DETAIL
12" = 1'-0"

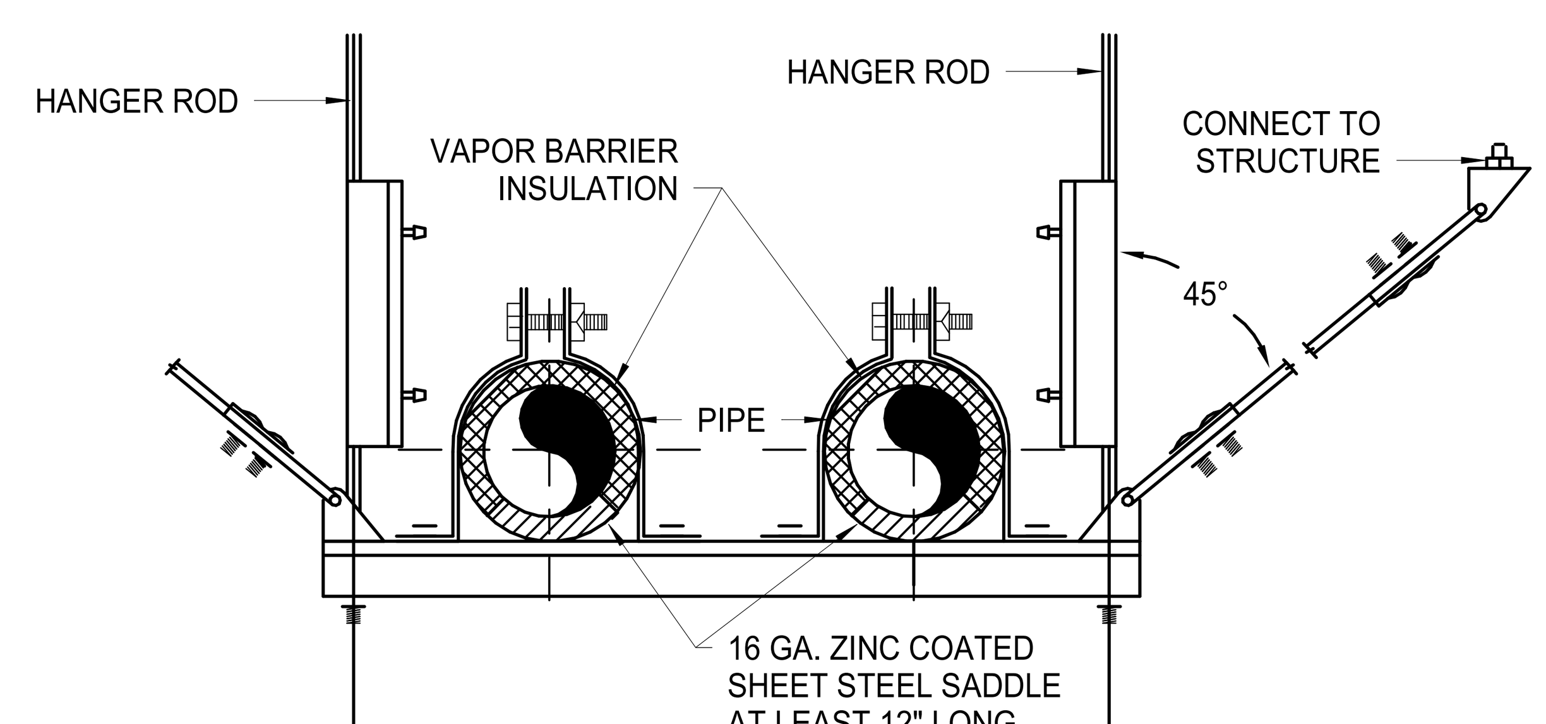


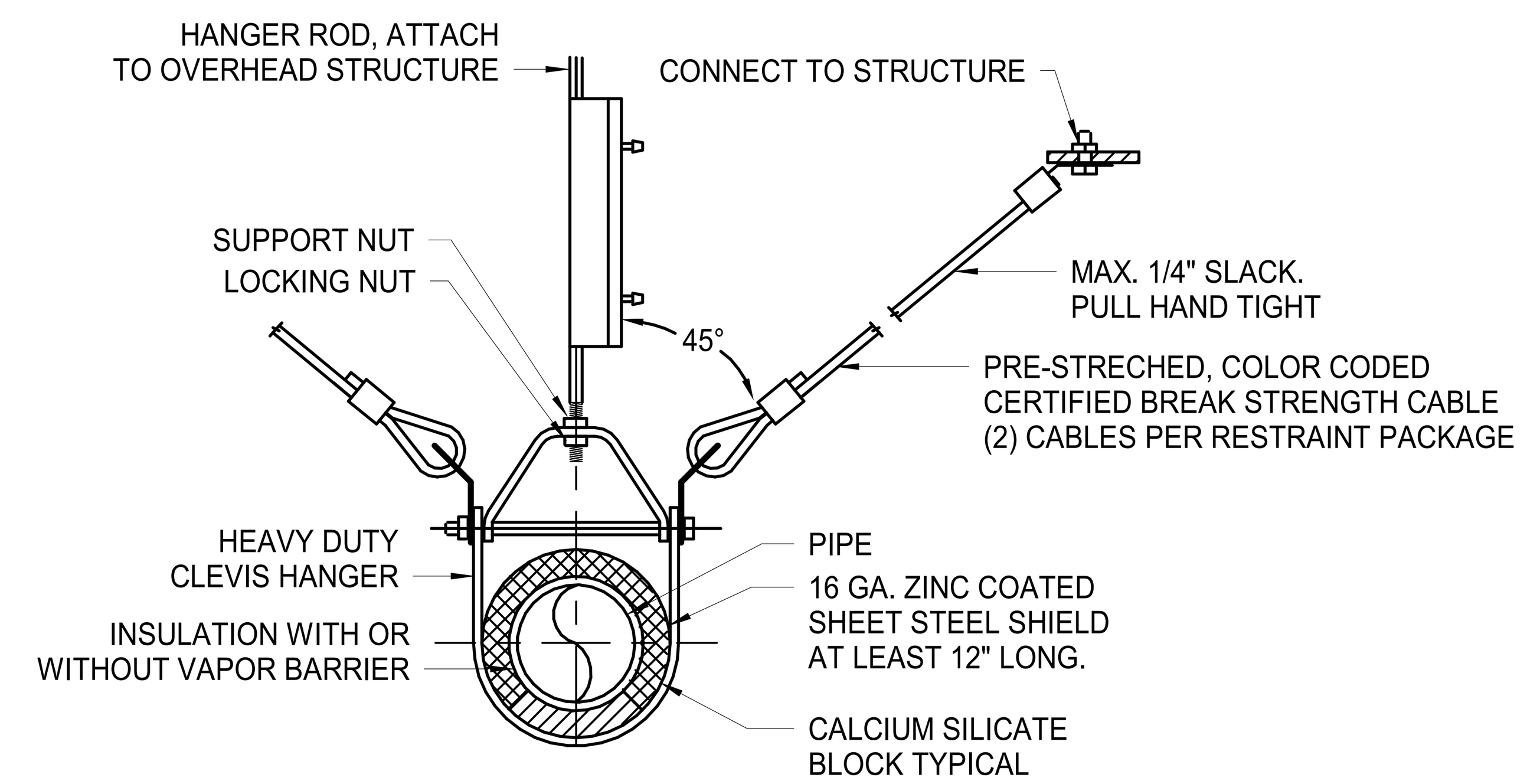
6 ROUND DUCT SUPPORT DETAIL
12" = 1'-0"



3 DUCT LINER DETAIL
12" = 1'-0"

DETAIL NOTES:
1.SEE SPECIFICATION SECTION 15074 FOR SEISMIC BRACING REQUIREMENTS.





7 SEISMIC SWAY BRACING DETAILS
12" = 1'-0"

WPA architecture

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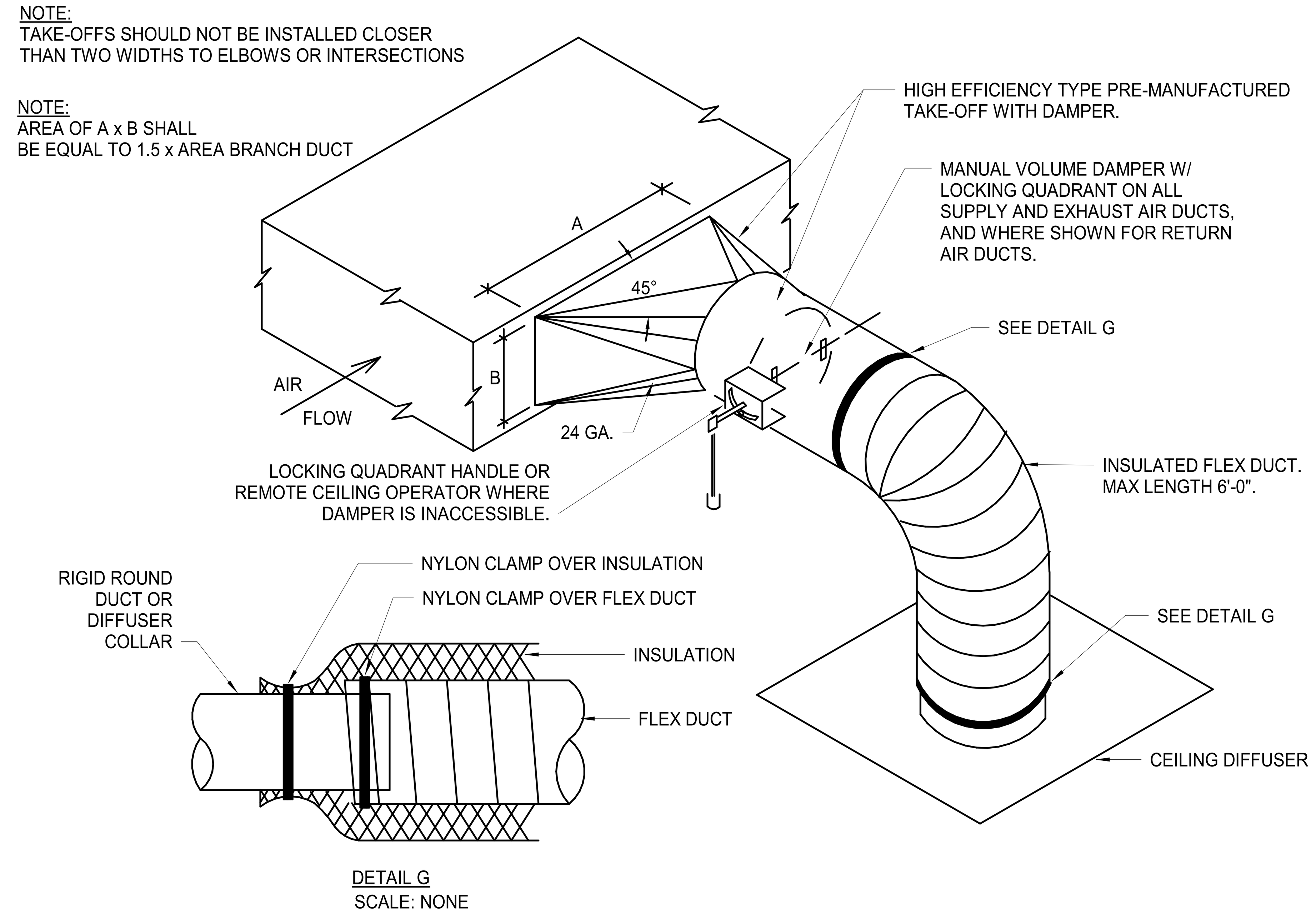
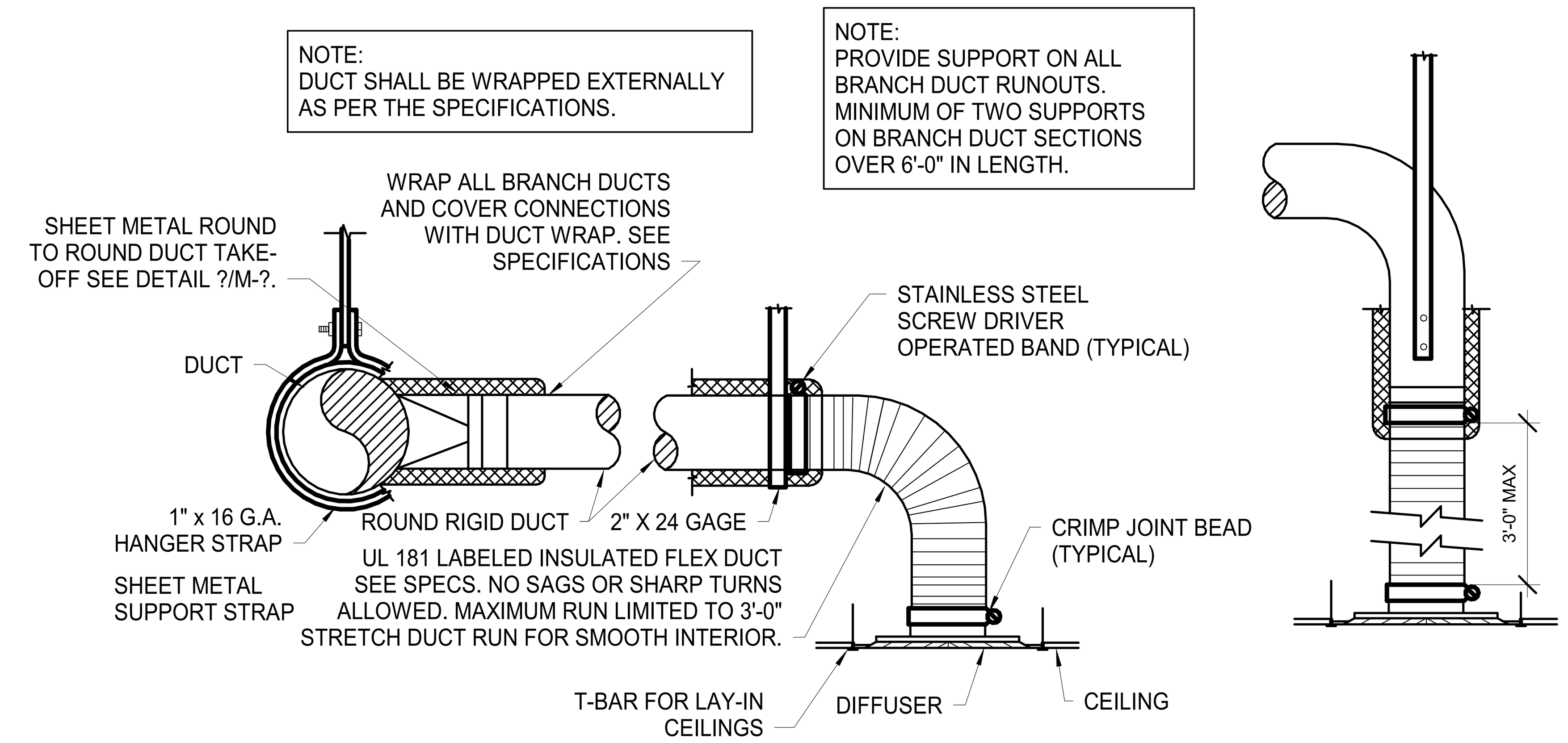


1 SQUARE-TO-ROUND TAKE-OFF DETAIL

12" = 1'-0"



2 TYPICAL DIFFUSER CONNECTION DETAIL

12" = 1'-0"

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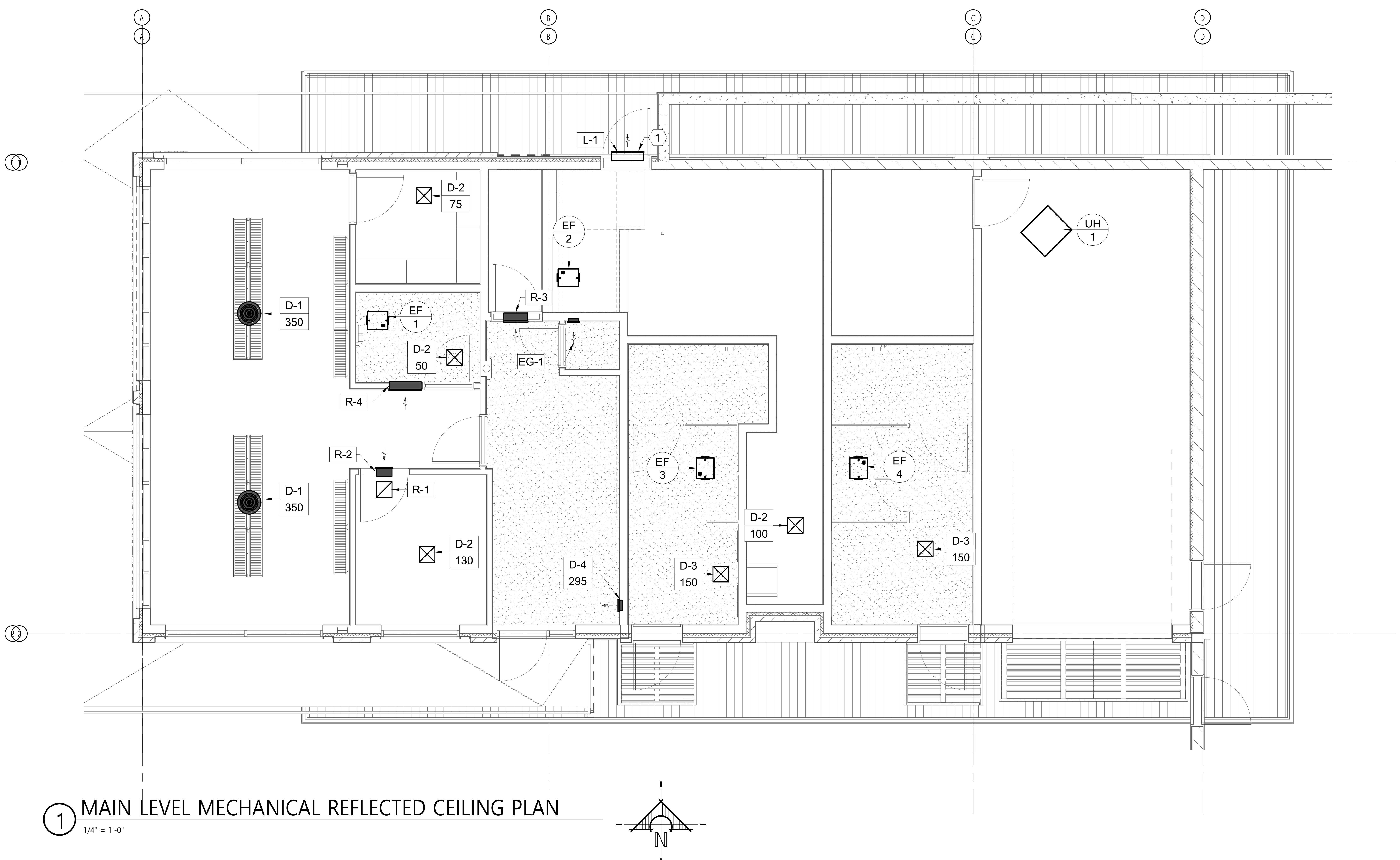
M5.2-I

SHEET NOTES

1. PROVIDE WALL MOUNTED LOUVER IN THIS APPROXIMATE LOCATION. PROVIDE WITH BACKDRAFT DAMPER.



1 MAIN LEVEL MECHANICAL REFLECTED CEILING PLAN

1/4" = 1'-0"

WPA architecture

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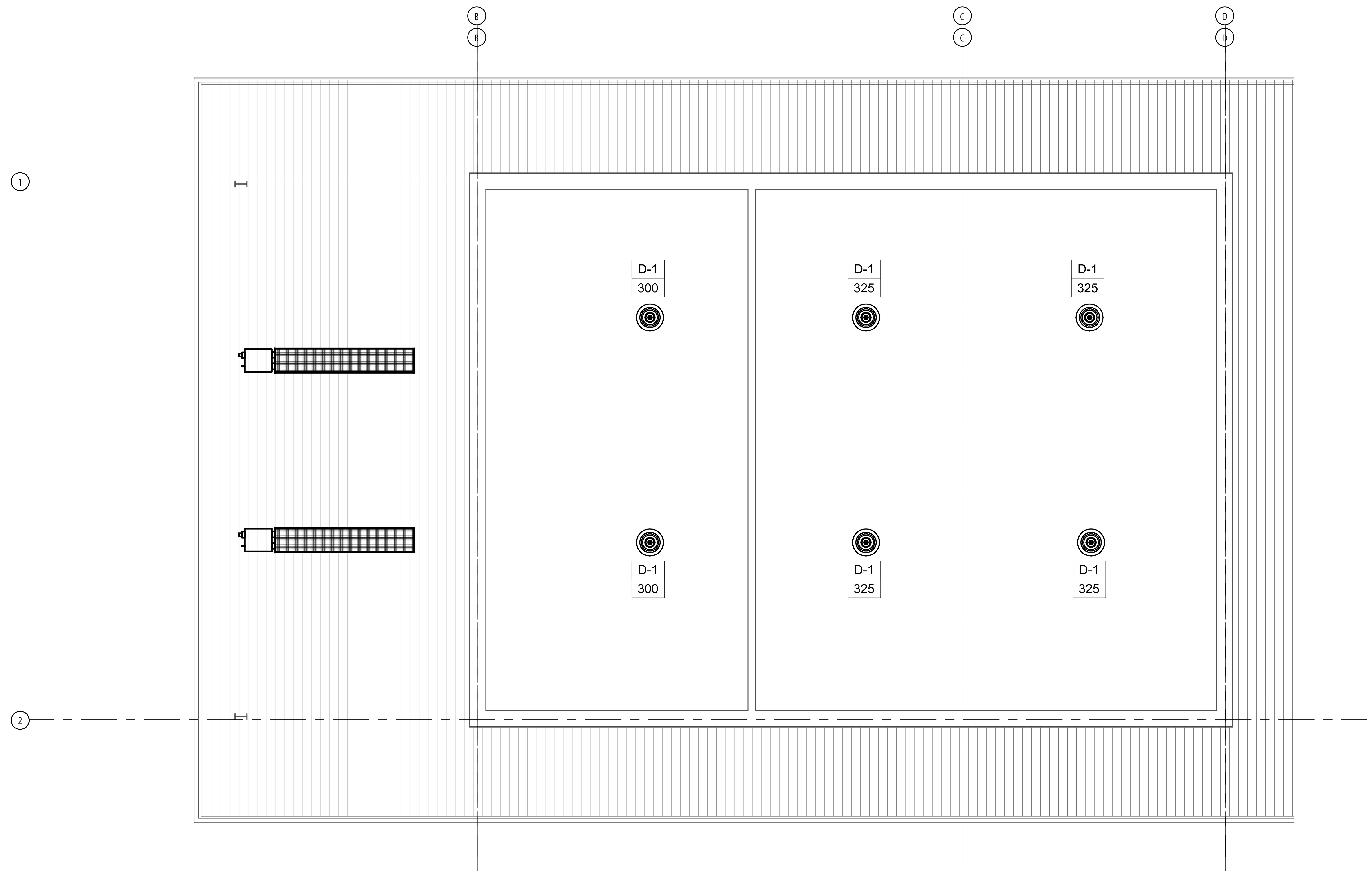
MAIN LEVEL REFLECTED CEILING PLAN

Sheet Number:
M7.1-I

SHEET NOTES



1 UPPER LEVEL REFLECTED CEILING PLAN
1/4" = 1'-0"

N

WPA architecture

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UPPER LEVEL REFLECTED CEILING PLAN

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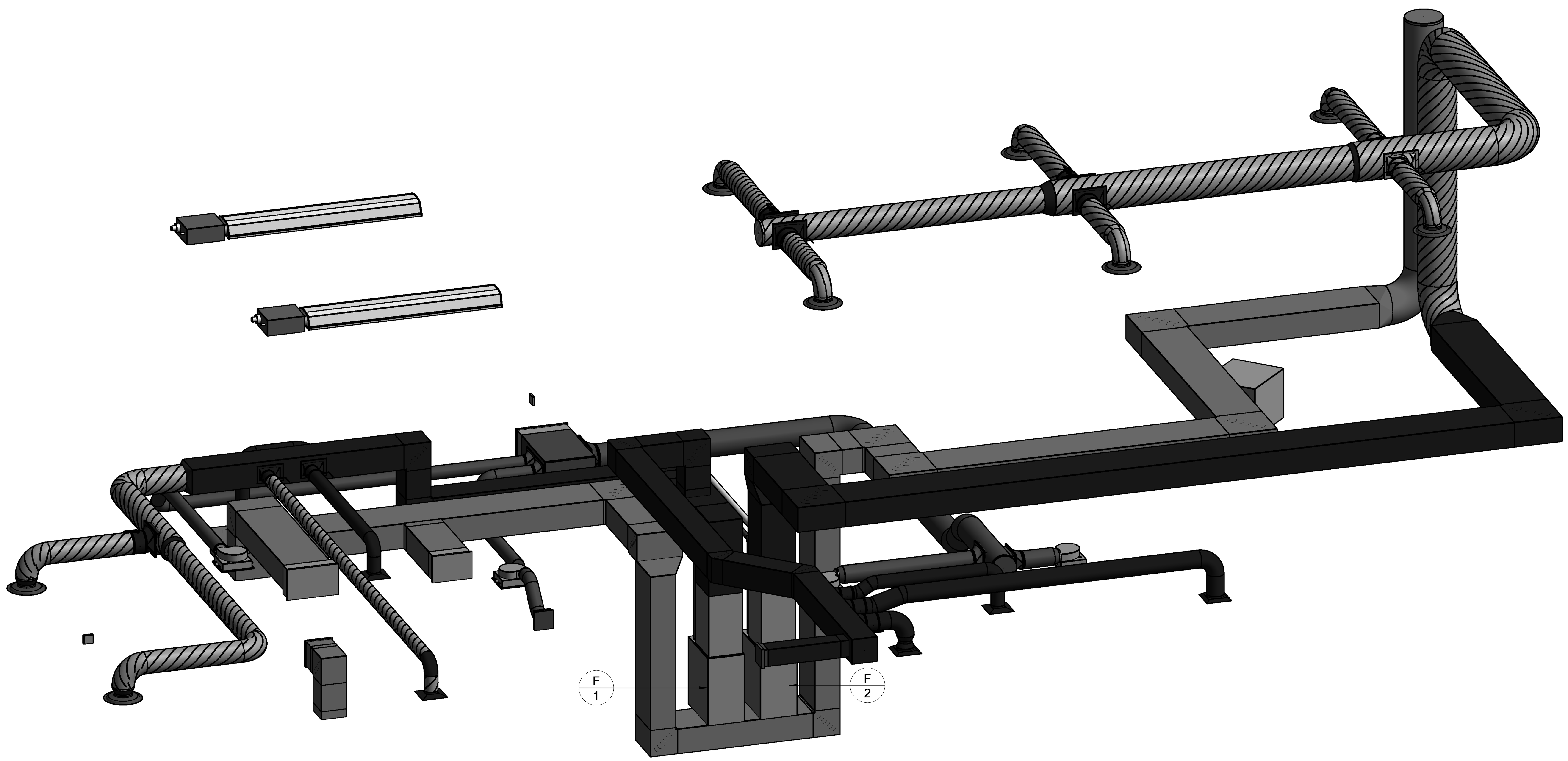
M7.2-I



1 MECHANICAL ISOMETRIC

GENERAL NOTES

1. ISOMETRIC ARE FOR GENERAL LAYOUT ROUTING AND NOT FOR PART COUNT OR BIDDING PURPOSE. CONTRACTOR REQUIRED TO PROVIDE ALL DUCT, ELBOWS, OFFSETS AS NEEDED FOR THE PROJECT.

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Sheet Name:
MECHANICAL ISOMETRICS

Sheet Number:
M8.1-I

PLUMBING LEGEND

MEANING	SYMBOL OR ABBREVIATION	MEANING	SYMBOL OR ABBREVIATION
HOT WATER LINE	HW (line symbol)	WALL CLEANOUT	WCO
COLD WATER LINE	CW (line symbol)	CLEANOUT	CO
HOT WATER RECIRCULATING LINE	HWREC (dashed line symbol)	CLEANOUT TO GRADE	COTG
VENT LINE	V (dashed line symbol)	FLOOR CLEANOUT	FCO
WASTE LINE	SS (dashed line symbol)	BALL VALVE	(symbol)
GAS LINE	G	UNION	(symbol)
VENT THRU ROOF	VTR	CONNECTION TO EXISTING PIPING	(symbol)
UNDER FLOOR	UF	REGULATOR	Ⓡ
SANITARY SEWER	SS	SOFT WATER	SW
PRIMARY ROOF DRAIN	PRD	SECONDARY ROOF DRAIN	SRD
FIXTURE CALLOUT	(WC-1)	FIXTURE CALLOUT ABOVE	WC

PLUMBING GENERAL NOTES

G-1 - ALL PLUMBING SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE INTERNATIONAL PLUMBING CODE (IPC) WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-2 - ALL PIPING MATERIALS SHALL MEET ALL REQUIREMENTS OF IPC AND LOCAL AUTHORITY. PLASTIC PIPING SHALL BE ALLOWED ONLY WHERE ALLOWED BY CODE. PLASTIC PIPING SHALL NOT BE ROUTED THROUGH RETURN AIR PLENUMS OR OTHER AREAS PROHIBITED BY THE IMC, IPC, OR NFPA CODES OR BY LOCAL AUTHORITY.

G-3 - GAS PIPING INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH GAS COMPANY REGULATIONS, NFPA CODE REQUIREMENTS, AND LOCAL AUTHORITY.

G-4 - ALL MATERIALS SHALL BE NEW AND SHALL BE DOMESTIC MADE UNLESS SPECIFICALLY APPROVED OTHERWISE IN WRITING BY ARCHITECT OR OWNER.

G-5 - PROVIDE VACUUM BREAKERS AND BACK FLOW PREVENTERS WHERE REQUIRED BY CODE OR WHERE THERE MAY BE ANY POSSIBLE CHANCE FOR CROSS CONTAMINATION. PREVENTERS SHALL BE INSTALLED IN ACCORDANCE WITH UTAH CODE.

G-6 - ALL PLUMBING INFORMATION IS NOT LIMITED TO THE PLUMBING DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING SPECIFICATIONS, ARCHITECTURAL DRAWING, STRUCTURAL DRAWINGS, MECHANICAL DRAWINGS, AND ELECTRICAL DRAWINGS.

G-7 - THE WORKING DRAWINGS ARE DIAGRAMMATIC. BECAUSE OF THE SMALL SCALE OF THE DRAWING, THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL PIPING SHALL BE CHECKED AND COORDINATED WITH THE SPECIFICATIONS, ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

G-8 - COORDINATE ALL PIPING AND PLUMBING EQUIPMENT WITH ALL OTHER TRADES AND/OR CONTRACTORS PRIOR TO INSTALLATION.

G-9 - ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARCHITECT/ENGINEER SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.

G-10 - GAS LINE FITTINGS SHALL BE STANDARD WELD FITTINGS WITH TAPERED REDUCERS. DO NOT USE VALVES, UNIONS, OR AUTO CONTROLS IN GAS LINES ROUTED IN INACCESSIBLE CONCEALED SPACES.

G-11 - ALL WATER SYSTEMS SHALL MEET THE REQUIREMENTS OF ANSI/NSF STANDARD 61 SECTION 9 (1998), CONCERNING METAL CONTAMINANTS IN THE WATER SYSTEM.

G-12 - WATER PIPING SHALL NOT BE ROUTED IN OUTSIDE WALLS OR ON EXTERIOR SIDE OF BUILDING INSULATION ENVELOPE.

G-13 - WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ALL WATER LINES WITH QUICK OPEN OR QUICK CLOSE VALVES.

WATER HAMMER ARRESTOR SCHEDULE:

TYPE A	1-11 FIXTURE UNITS
TYPE B	12-32 FIXTURE UNITS
TYPE C	33-60 FIXTURE UNITS
TYPE D	61-113 FIXTURE UNITS

G-14 - ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.

WPA architecture

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PLUMBING SYMBOLS AND NOTES

Sheet Number:
P0.1-I

SHEET NOTES

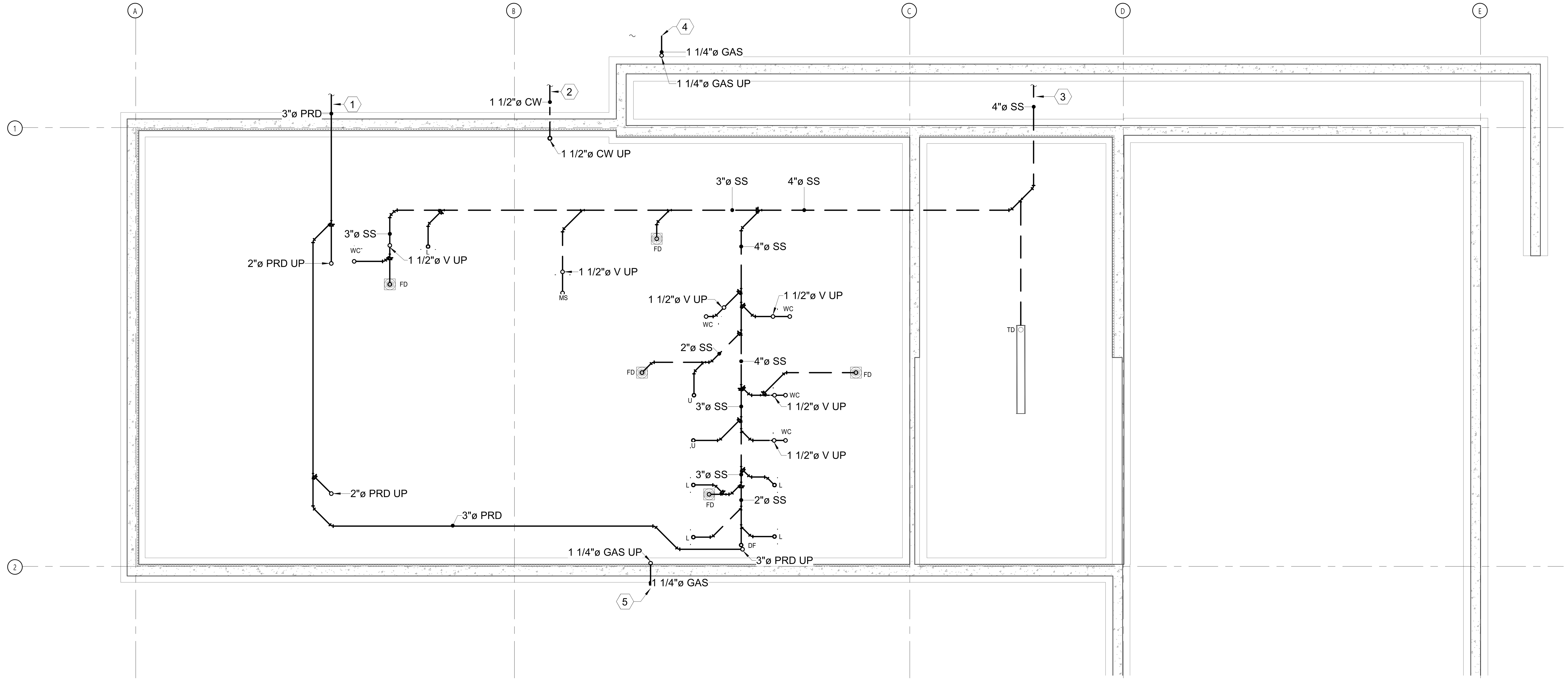
1 REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE PRIMARY ROOF DRAIN PIPING (PRD).

2 REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE DOMESTIC COLD WATER PIPING (CW).

3 REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE SANITARY SEWER PIPING (SS).

4 REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE GAS PIPING (GAS).

5 GAS PIPING SIZED AT 2PSIG AT 450 FEET FOR (5) 90 MBH FIRE PITS, (1) 128 MBH FIRE PIT AROUND THE ICE RIBBON, AND (6) 50 MBH PATIO HEATERS. PROVIDE 2PSIG TO 4OZ GAS REGULATOR AT EACH FIRE PIT. PROVIDE ON/OFF TIMER SWITCH PER FIRE FIRE PIT. SEE CIVIL DRAWINGS FOR CONTINUATION OF PIPING. REFER TO ARCHITECTURAL DRAWINGS FOR CONTROLS.



1 BELOW GRADE PLUMBING PLAN

1/4" = 1'-0"

WPA architecture

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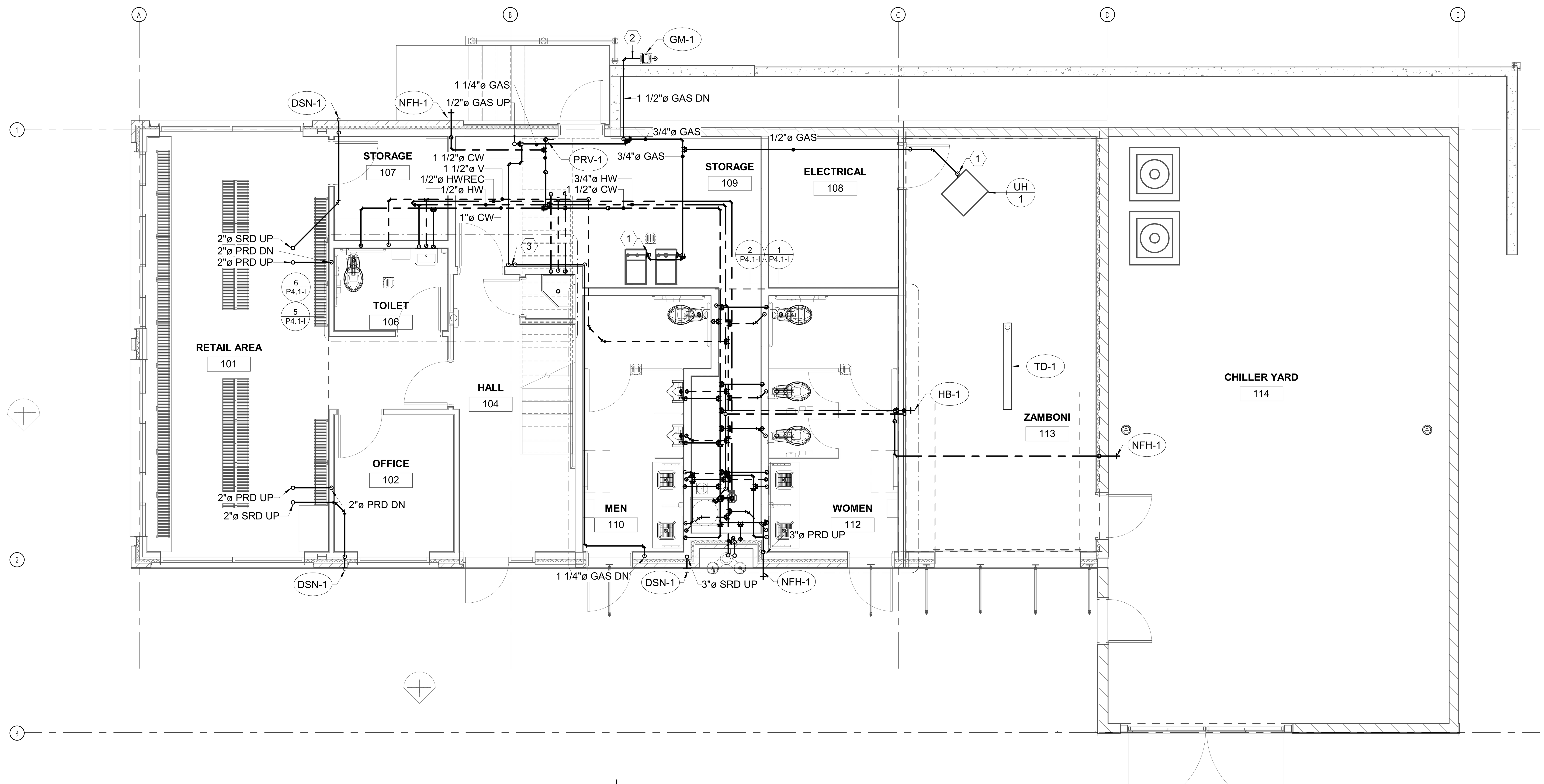
Sheet Name:
BELOW GRADE PLUMBING PLAN

Sheet Number:
P1.1-I

SHEET NOTES

1. PROVIDE 2PSIG TO 4OZ GAS REGULATOR AT EQUIPMENT.
2. CONTRACTOR SHALL INSTALL GAS EARTHQUAKE ISOLATION VALVE AND 2LB GAS REGULATOR ABOVE GROUND IN THIS APPROXIMATE LOCATION.
3. MASTER GAS SHUTOFF SWITCH SERVING ALL EXTERIOR FIRE PITS.



1 MAIN LEVEL PLUMBING FLOOR PLAN

1/4" = 1'-0"

N

WPA architecture

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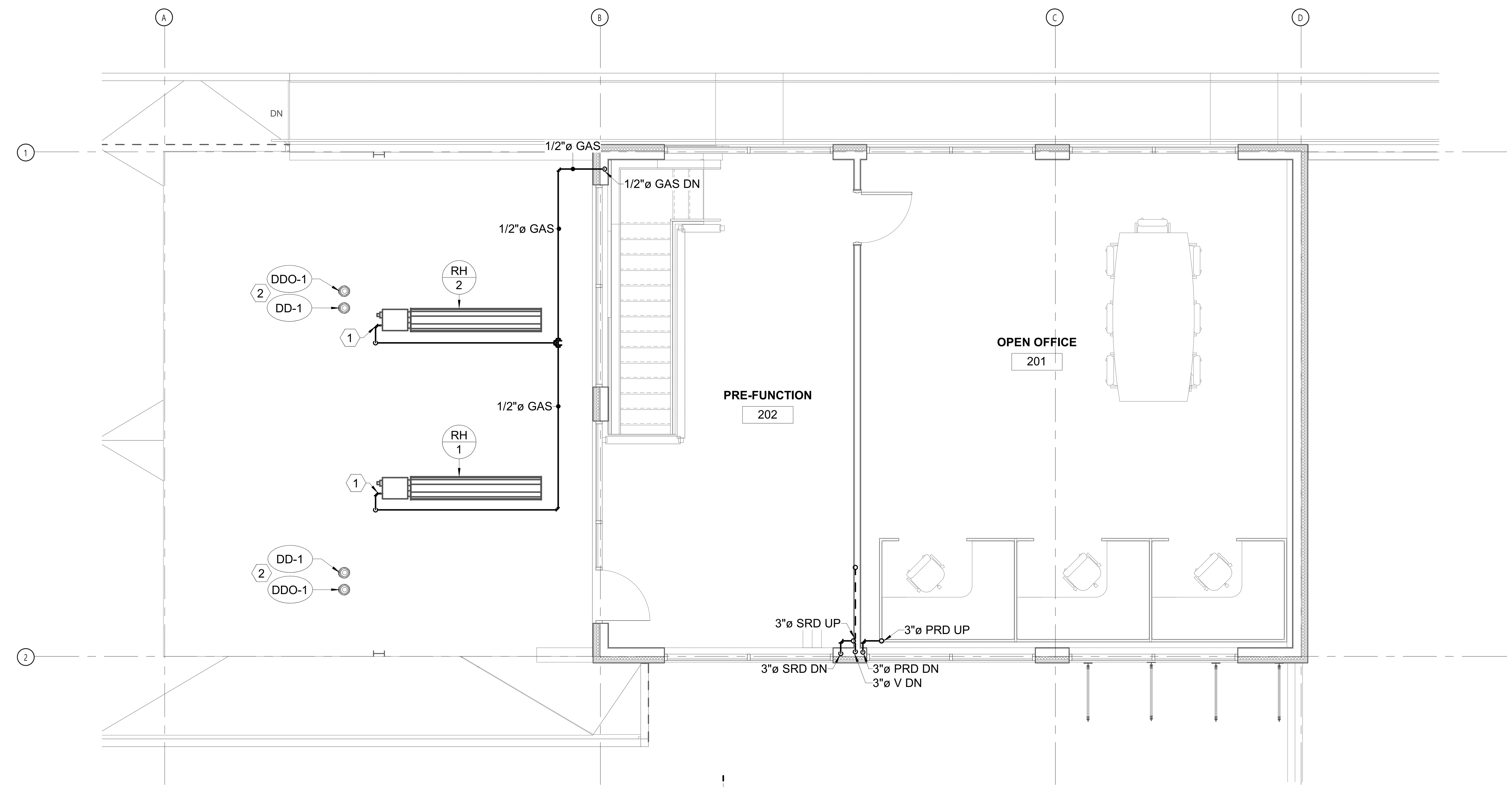
Sheet Name:
MAIN LEVEL PLUMBING FLOOR PLAN

Sheet Number:
P2.1-I

SHEET NOTES

1 PROVIDE 2PSIG TO 4OZ GAS REGULATOR AT EQUIPMENT.

2 PROVIDE DECK DRAINS IN THIS APPROXIMATE LOCATION. REFER TO ARCHITECTURAL DRAWINGS.



1 UPPER LEVEL PLUMBING FLOOR PLAN

1/4" = 1'-0"

WPA architecture

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UPPER LEVEL PLUMBING FLOOR PLAN

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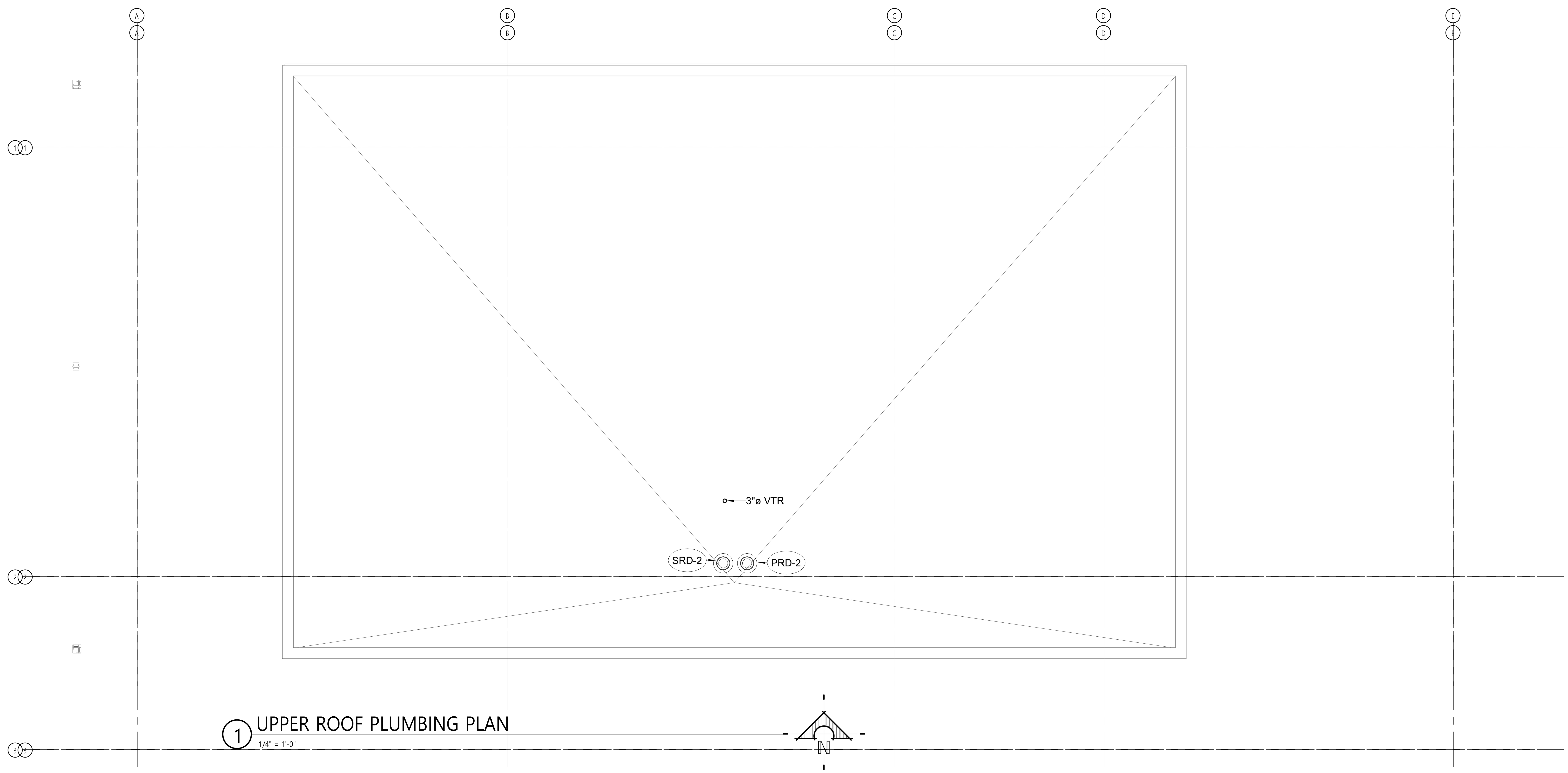
P2.2-I

SHEET NOTES



1 UPPER ROOF PLUMBING PLAN
1/4" = 1'-0"

WPA architecture

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STATE OF UTAH

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3300 SOUTH 1300 EAST
Millcreek UT 84106

Owner's Representative
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CANYON RIM • MT. OLYMPUS
MILLCREEK
EAST MILL CREEK • MILLCREEK

MILLCREEK COMMON - PHASE ONE

1353 EAST 3300 SOUTH
MILCREEK, UT 84106

REV	DATE	DESCRIPTION

DESIGNED BY: Miah R
DRAWN: Miah R
CHECKED: Brad L
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
UPPER ROOF PLUMBING PLAN

Sheet Number:
P2.3-I

PLUMBING FIXTURE SCHEDULE

EQUIPMENT NUMBER	FIXTURE	PLUMBING PIPE SIZES: TRAP	WASTE	VENT	COLD WATER	HOT WATER	POINT OF USE MIXING VALVE?	MAX OUTLET TEMP	REMARKS
DD-1	DECK DRAIN	0"	2"	0"	0"	0"	No		PROVIDE ZURN Z503 OR EQUAL.
DDO-1	DECK DRAIN OVERFLOW	0"	2"	0"	0"	0"	No		PROVIDE ZURN Z503 OR EQUAL.
DSN-1	DOWN SPOUT	0"	3"	0"	0"	0"	No		PROVIDE DOWN SPOUT. TERMINATE APPROXIMATELY 24" ABOVE GRADE. ZURN Z199 OR EQUAL.
EWC-1	ELECTRIC WATER COOLER WITH BOTTLE FILLER	1 1/2"	1 1/2"	1 1/2"	1/2"	0"	No		ELECTRIC BI-LEVEL FOUNTAIN. MURDOCK M-OBR4-GRD OR EQUAL.
FD-1	FLOOR DRAIN	2"	2"	1 1/2"	0"	0"	No		PROVIDE WITH TRAP GUARD. WATTS FD-100-A OR EQUAL.
FD-2	FLOOR DRAIN	3"	3"	1 1/2"	0"	0"	No		PROVIDE WITH TRAP GUARD. WATTS FD-100-A OR EQUAL.
HB-1	HOSE BIB	0"	0"	0"	1/2"	1/2"	No		PROVIDE HOSE BIB WOODFORD H22 OR EQUAL. PROVIDE WITH ANTI SYPHON DEVICE.
L-1	LAVATORY	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	Yes	110 °F	COUNTER MOUNTED DROP IN SINK. PROVIDE WITH THERMOSTATIC AND PRESSURE MIXING VALVE. KOHLER K-2196 WITH SYMMONS SS202IPSFR OR EQUAL.
L-2	LAVATORY	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	Yes	110 °F	WALL MOUNTED. PROVIDE WITH THERMOSTATIC AND PRESSURE MIXING VALVE. PROFLO PF5514WH WITH SYMMONS SS202IPSFR OR EQUAL.
MS-1	MOP SINK	3"	3"	2"	3/4"	3/4"	Yes	120 °F	CORNER MOUNTED SINK. PROVIDE WITH DRAIN FITTING, SERVICE SINK FAUCET WITH VACUUM BREAKER, HOSE, 3 STATION MOP HOLDER, HOSE HANGER, AND STAINLESS STEEL SPLASH GUARD. KOHLER K6710 OR EQUAL.
NFH-1	NON FREEZE WALL HYDRANT	0"	0"	0"	3/4"	0"	No		PROVIDE FREEZE PROOF WALL HYDRANT. WOODFORD 65 OR EQUAL. PROVIDE WITH ANTI SYPHON DEVICE.
PRD-2	PRIMARY ROOF DRAIN	0"	3"	0"	0"	0"	No		PROVIDE ZURN Z100 OR EQUAL WITH DOME STRAINER
SRD-2	SECONDARY ROOF DRAIN	0"	3"	0"	0"	0"	No		ZURN Z100 OR EQUAL WITH DOME STRAINER. INSTALL 2" ABOVE PRIMARY OR WITH 2" RIM.
TD-1	TRENCH DRAIN	4"	4"	2"	0"	0"	No		PROVIDE WITH TRAP GUARD. 6" WIDE WATTS DEAD LEVEL D OR EQUAL WITH VEHICLE TRAFFIC RATED GRATE CLASS E OR GREATER. COORDINATE EXACT LENGTH WITH FLOOR PLANS.
U-1	ADA URINAL	3"	3"	2"	3/4"	0"	No		ADA COMPLIANT WALL MOUNTED FLUSH VALVE. 1.0 GPF. ELJER MODEL 161 WITH ZURN Z6003-WSI OR EQUAL.
U-2	URINAL	3"	3"	2"	3/4"	0"	No		WALL MOUNTED FLUSH VALVE. 1.0 GPF. ELJER MODEL 161 WITH ZURN Z6003-WSI OR EQUAL.
WC-1	ADA WATER CLOSET	3"	3"	2"	1"	0"	No		ADA COMPLIANT. FLOOR MOUNTED FLUSH VALVE WATER CLOSET. 1.6 GPF. AMERICAN STANDARD NEOLO OR EQUAL WITH BATTERY SENSOR FLUSH VALVE. FLUSH CONTROLS SHALL BE INSTALLED ON OPEN SIDE OF WATER CLOSET.
WC-2	WATER CLOSET	3"	3"	2"	1"	0"	No		FLOOR MOUNTED FLUSH VALVE WATER CLOSET. 1.6 GPF. AMERICAN STANDARD NEOLO OR EQUAL WITH BATTERY SENSOR FLUSH VALVE.

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

WATER HEATER (ELECTRIC) SCHEDULE

EQUIPMENT NUMBER	WATTAGE	GPH RECOVERY @ 100 F	STORAGE CAPACITY	RELIEF VALVE BTU / PRESSURE RATING	TANK STORAGE TEMP	MASTER MIXING VALVE REQUIRED?	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
WH-1	1.5 kW	7	20 gal	PER MANUFACTURERS RECOMMENDATIONS	140 °F	No	150 lb	AO SMITH DEL 20	1,2

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. 120/1/60 POWER.

PIPE ACCESSORIES SCHEDULE

EQUIPMENT NUMBER	FIXTURE	SIZE	REMARKS
PRV-1	PRV	1"	PROVIDE WATTS LF25AUB-Z3 OR EQUAL. SIZED FOR MAX 30 GPM AT 15 PSI PRESSURE DROP.

PUMP SCHEDULE

TAG		AREA SERVED	PUMP TYPE	SUCTION SIZE	DISCHARGE SIZE	ELECTRICAL				MANUF & MODEL	SCHEDULE NOTES
TYPE	#					VOLTAGE	PHASE	FREQUENCY	HP		
RP	1	UTILITY CHASE	RECIRC	0.5"	0.5"	120 V	1	60 Hz	0.16 hp	BLG PL-30	1,2

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. PROVIDE REMOVABLE INSULATION KIT AROUND PUMP SUCTION

EXPANSION TANK SCHEDULE

TAG		AREA SERVED	ACCEPTANCE VOLUME	LENGTH	DIAMETER	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#							
ET	1	UTILITY CHASE	3.3 gal	14"	12"	70 lb	B&G PTA-12	1

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

WPA architecture

WHW ENGINEERING INC.

PROFESSIONAL ENGINEER 01.15.2021 BRADLEY D. LASH No. 8681468

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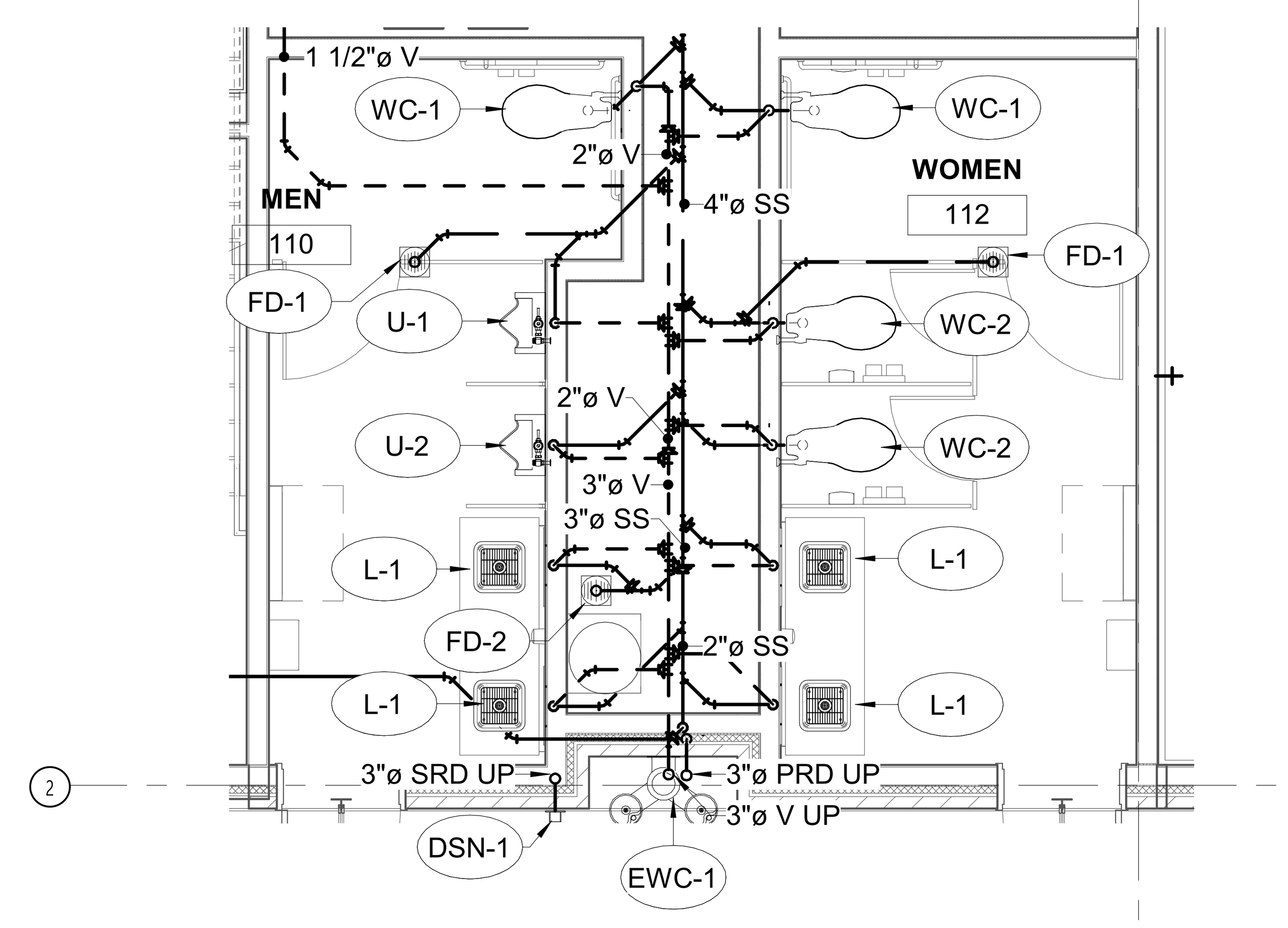
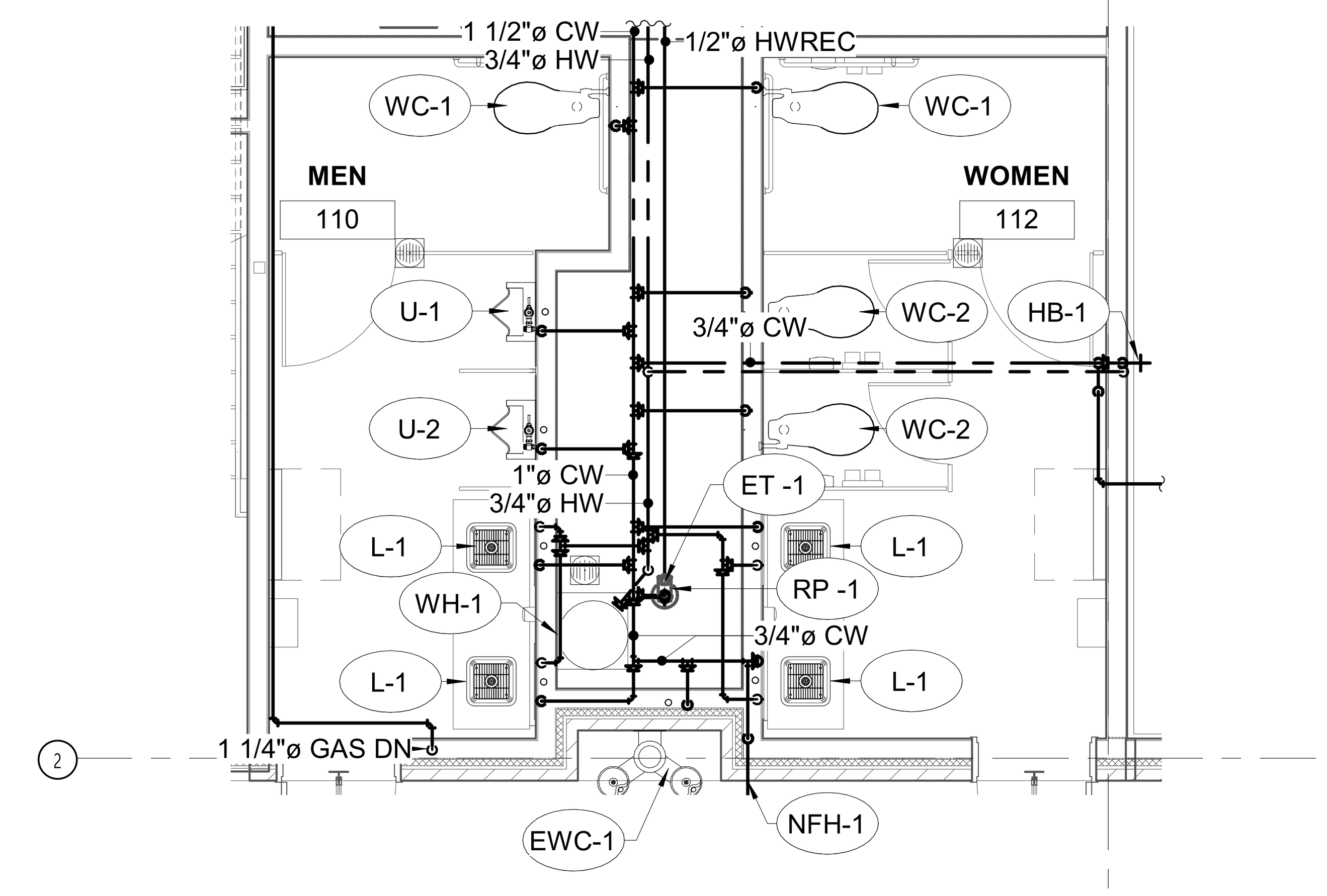
SHEET NOTES



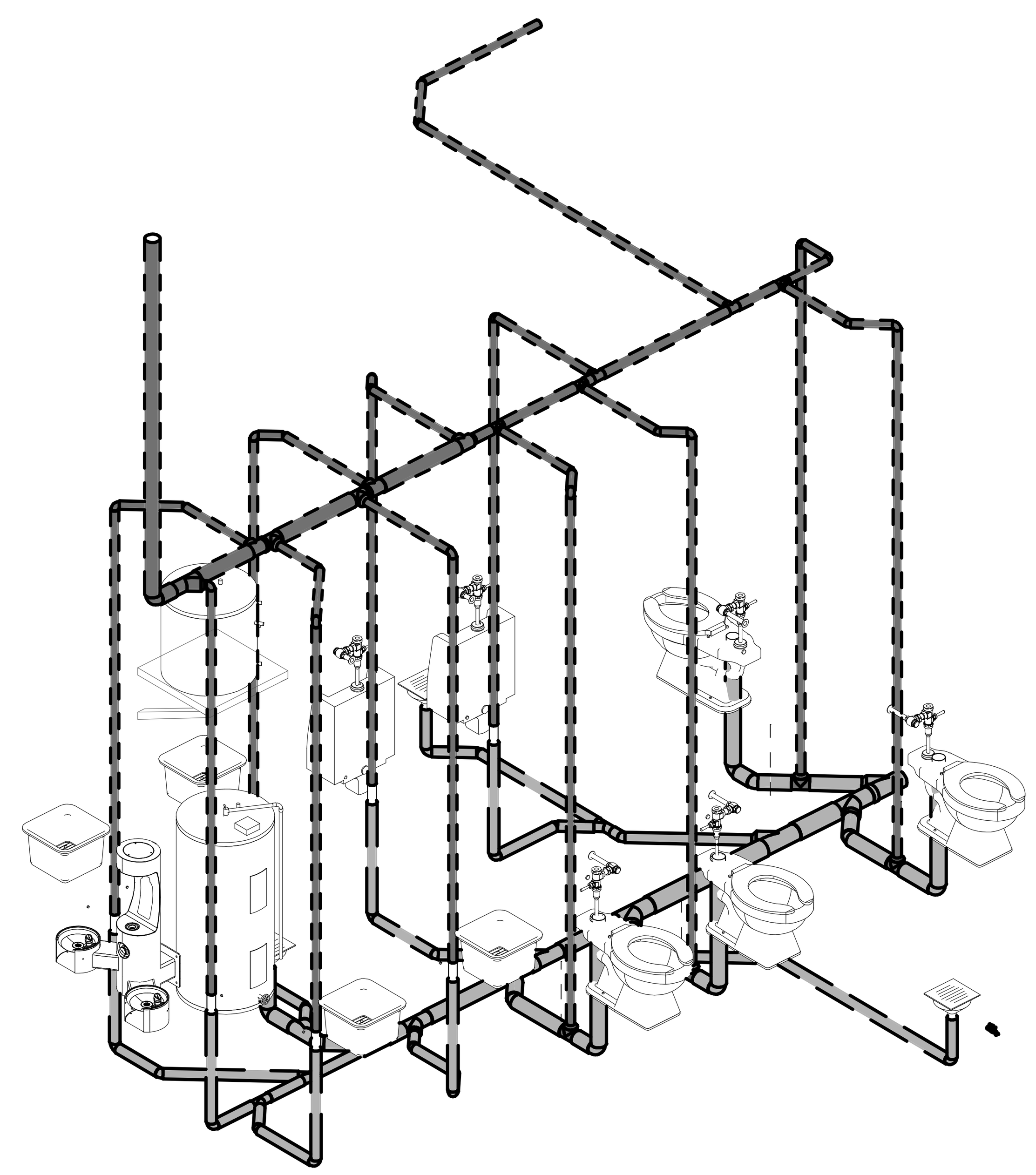
1 ENLARGED DWV MEN AND WOMEN RESTROOMS
1/4" = 1'-0"



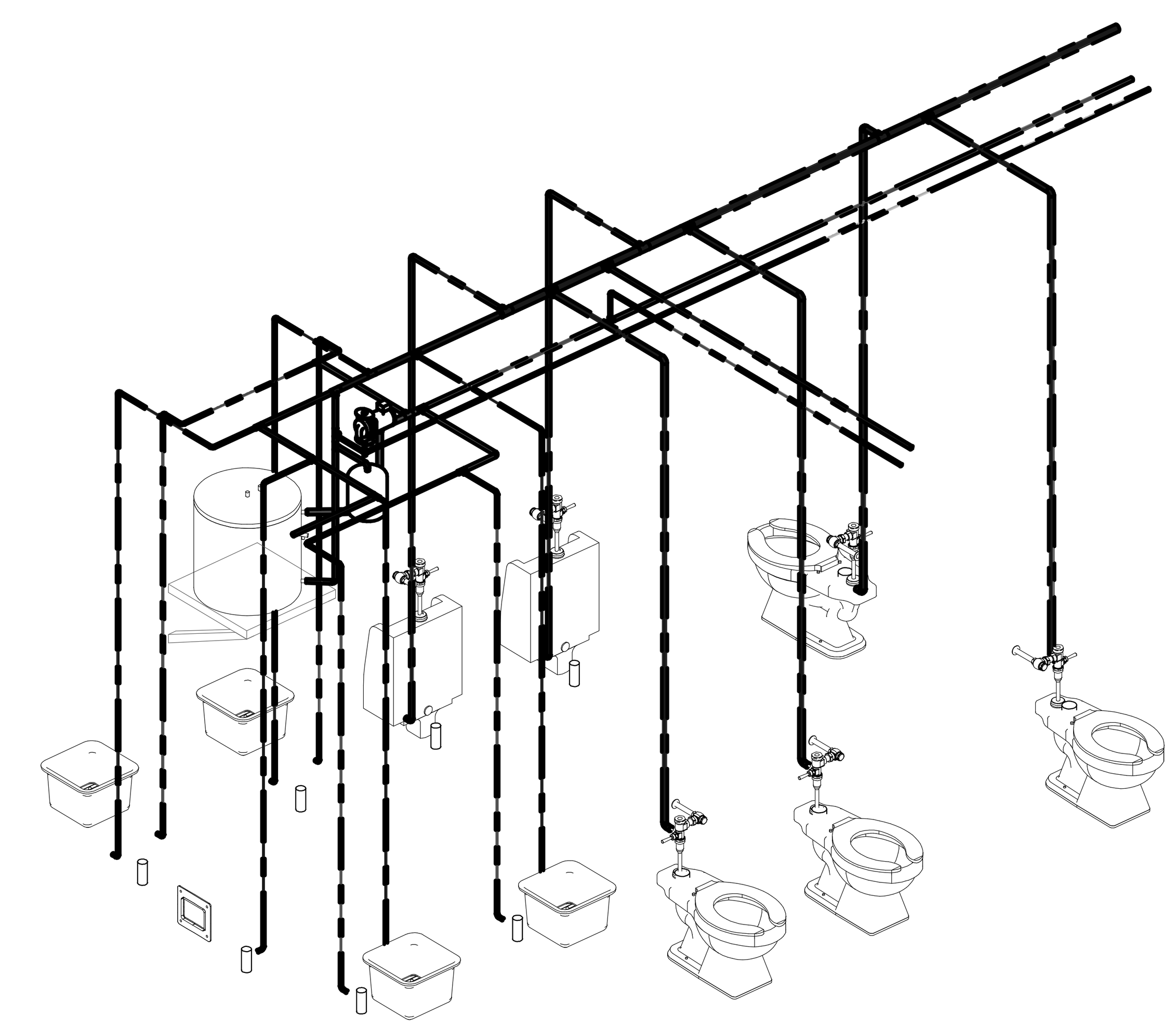
2 ENLARGED DOMESTIC MEN AND WOMEN RESTROOMS
1/4" = 1'-0"

GENERAL NOTES

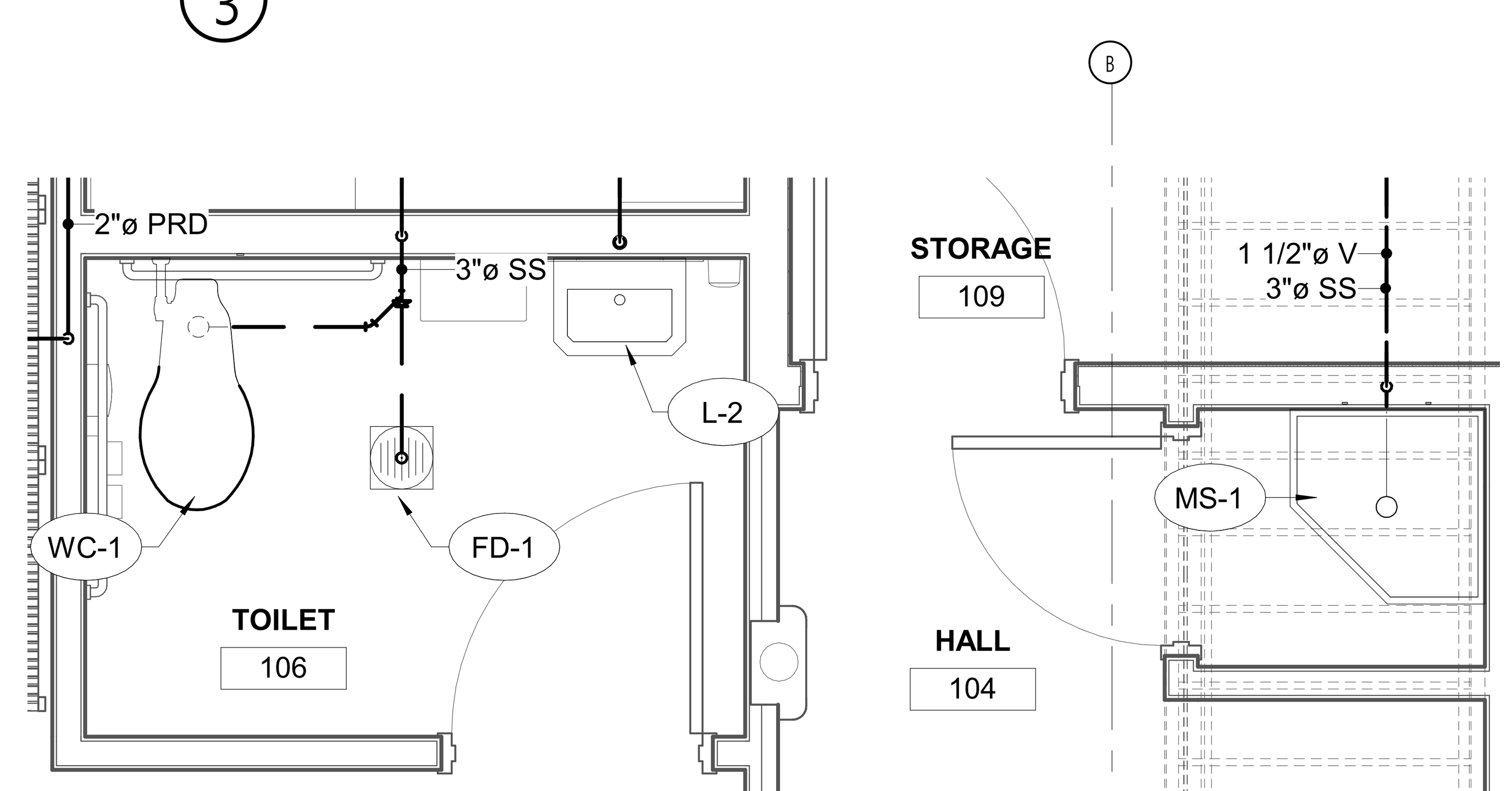
1. ISOMETRIC ARE FOR GENERAL LAYOUT ROUTING AND NOT FOR PART COUNT OR BIDDING PURPOSE. CONTRACTOR REQUIRED TO PROVIDE ALL PIPING, BENDS, OFFSETS AS NEEDED FOR THE PROJECT.



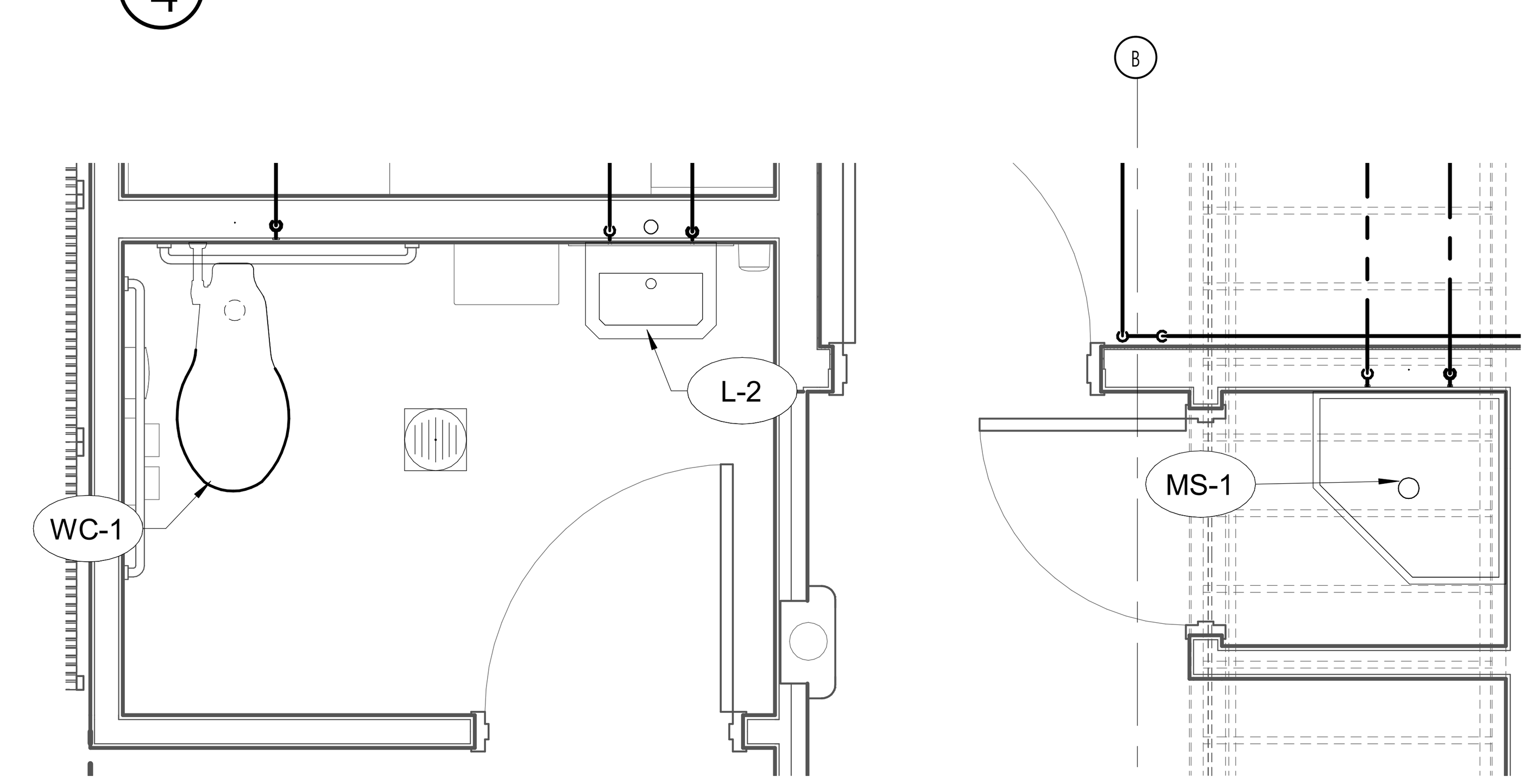
3 WASTE AND VENT ISOMETRIC



4 DOMESTIC WATER ISOMETRIC



5 ENLARGED DWV TOILET ROOM
1/2" = 1'-0"



6 ENLARGED DOMESTIC TOILET ROOM
1/2" = 1'-0"

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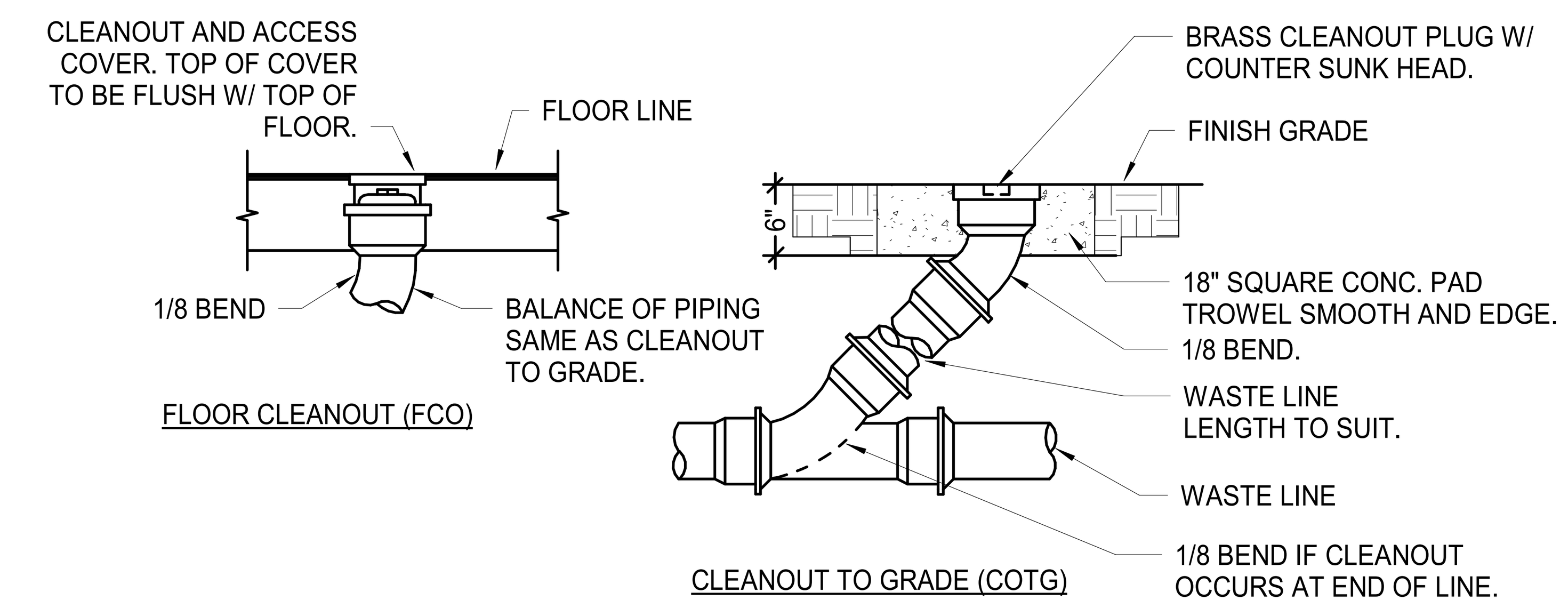
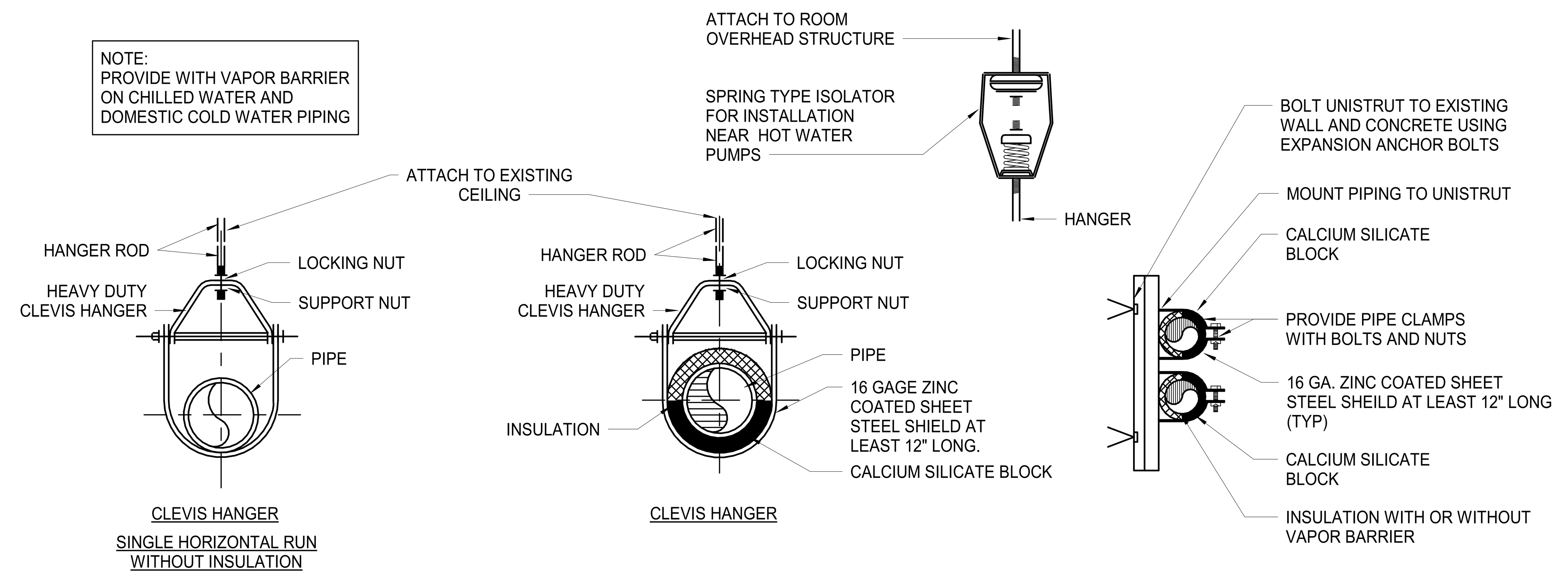


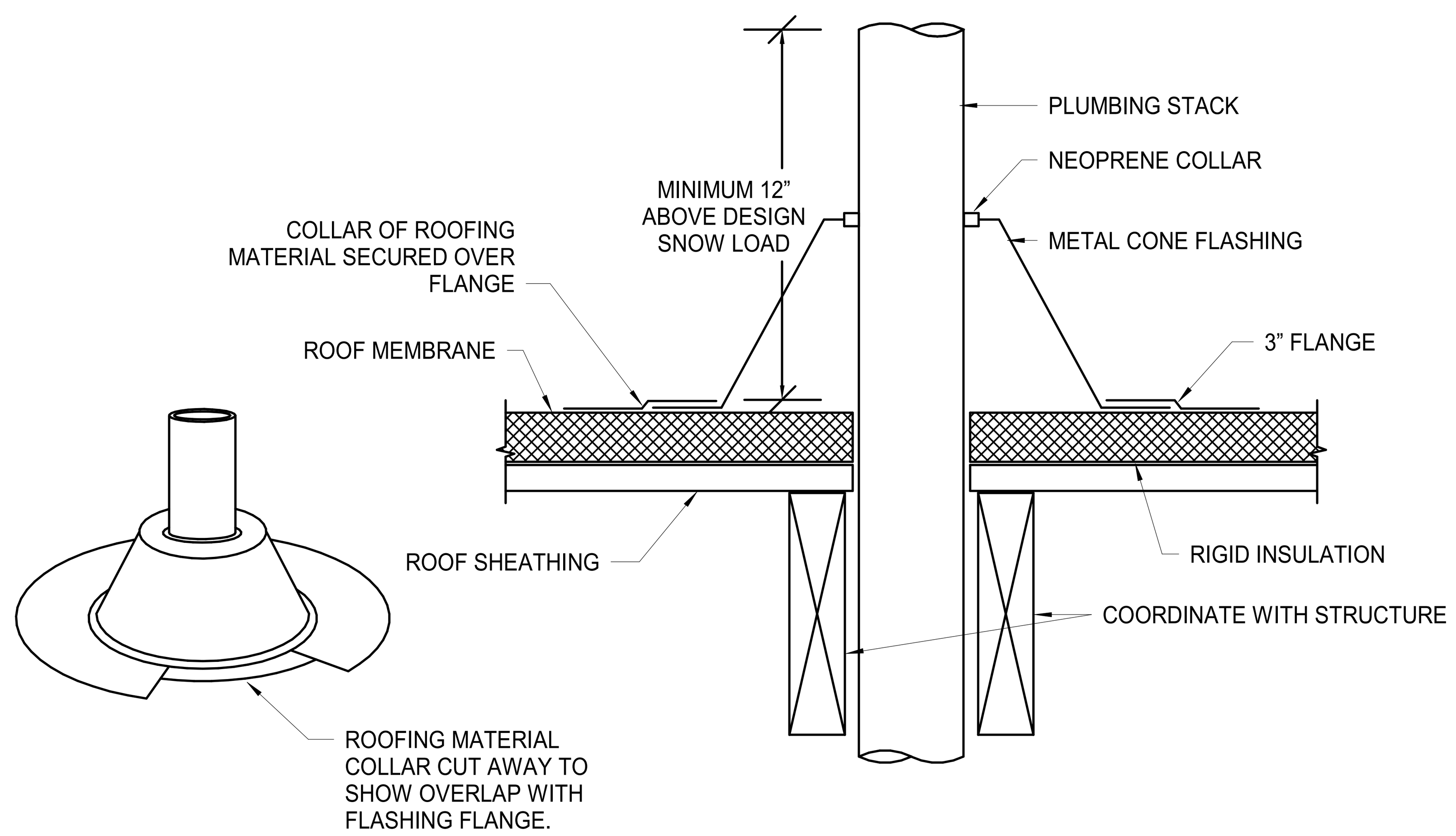
1 CLEAN-OUT DETAILS

12" = 1'-0"



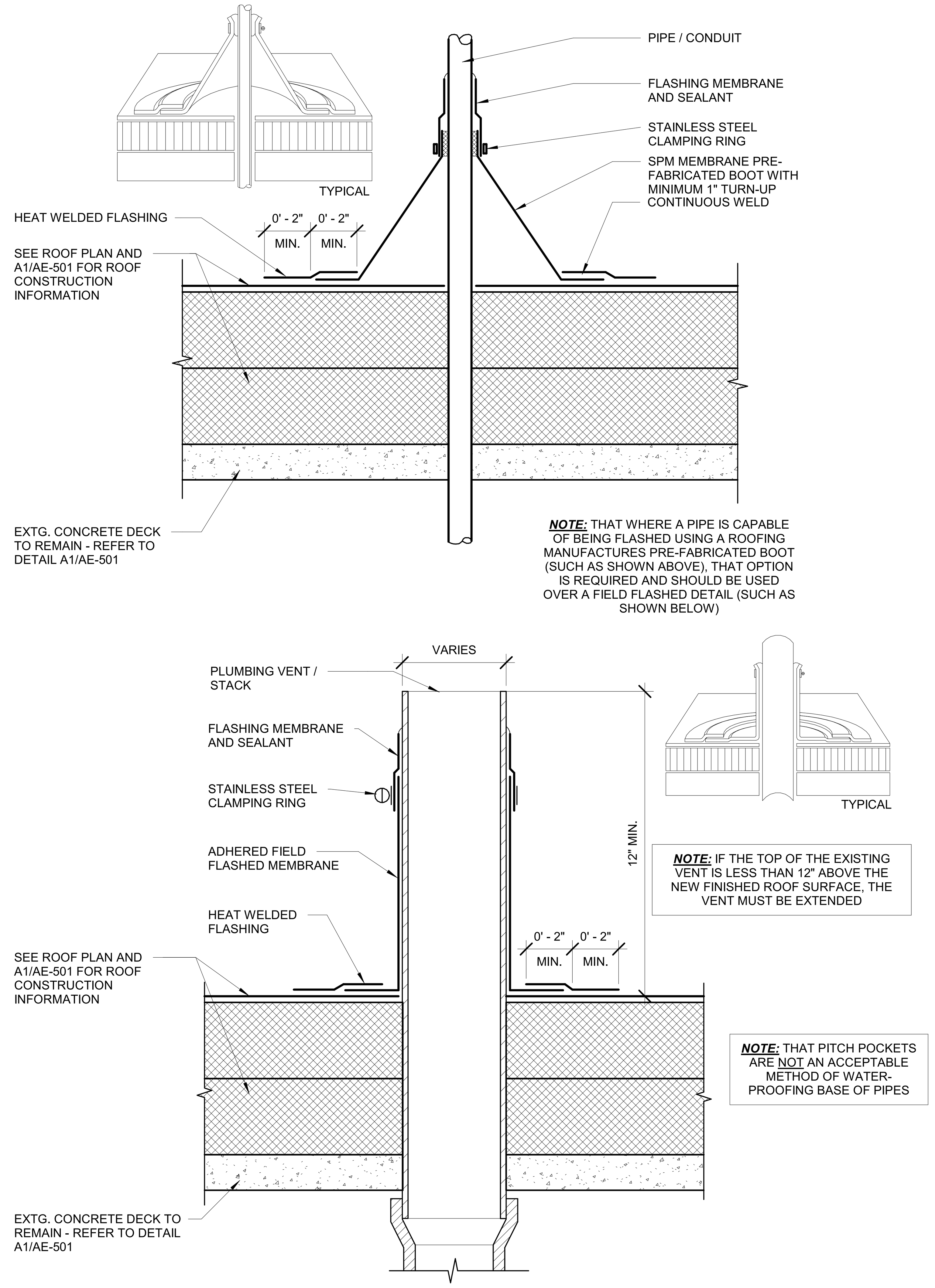
4 PIPE HANGER DETAIL

12" = 1'-0"



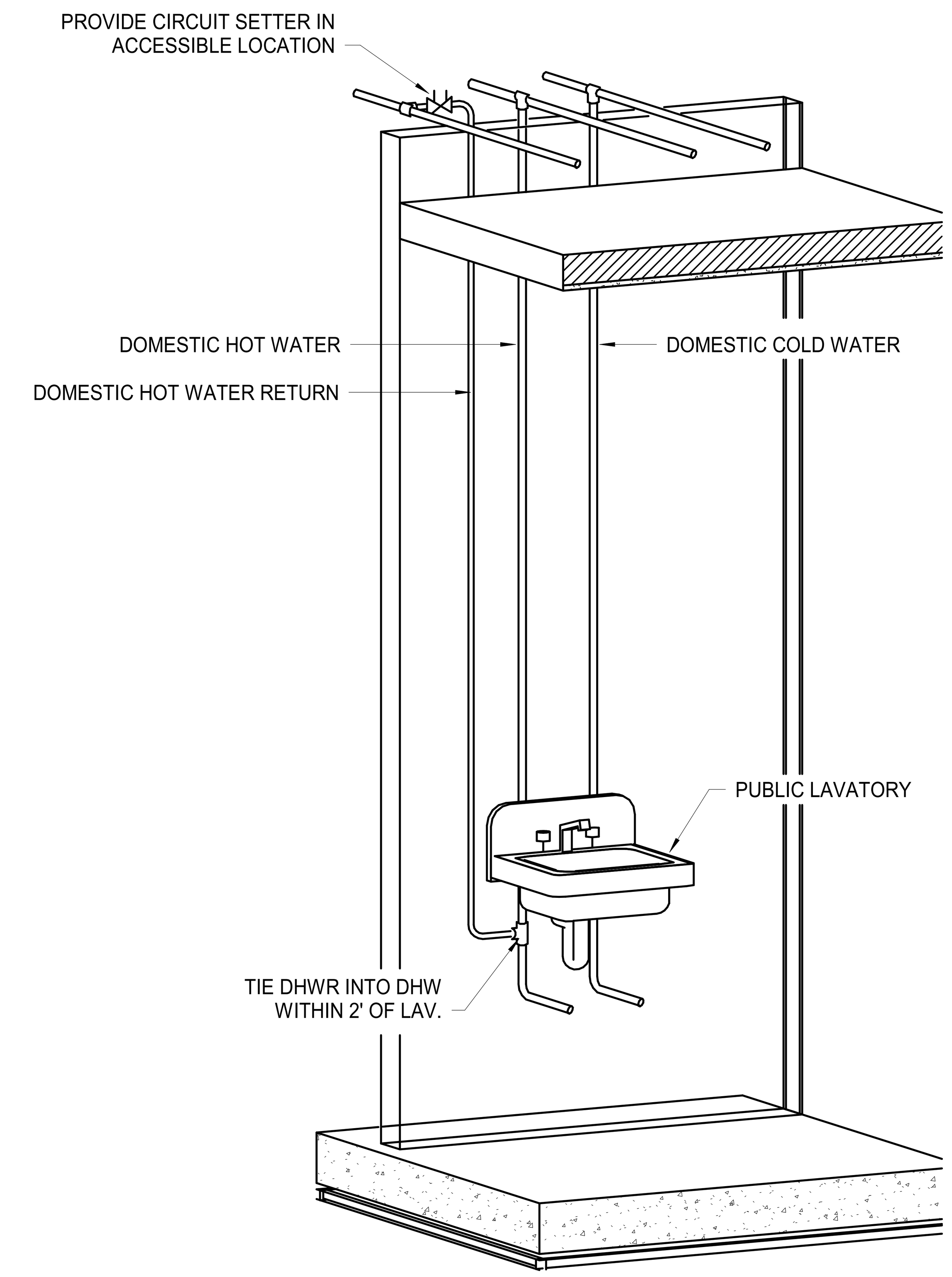
6 VENT THRU ROOF DETAIL

12" = 1'-0"



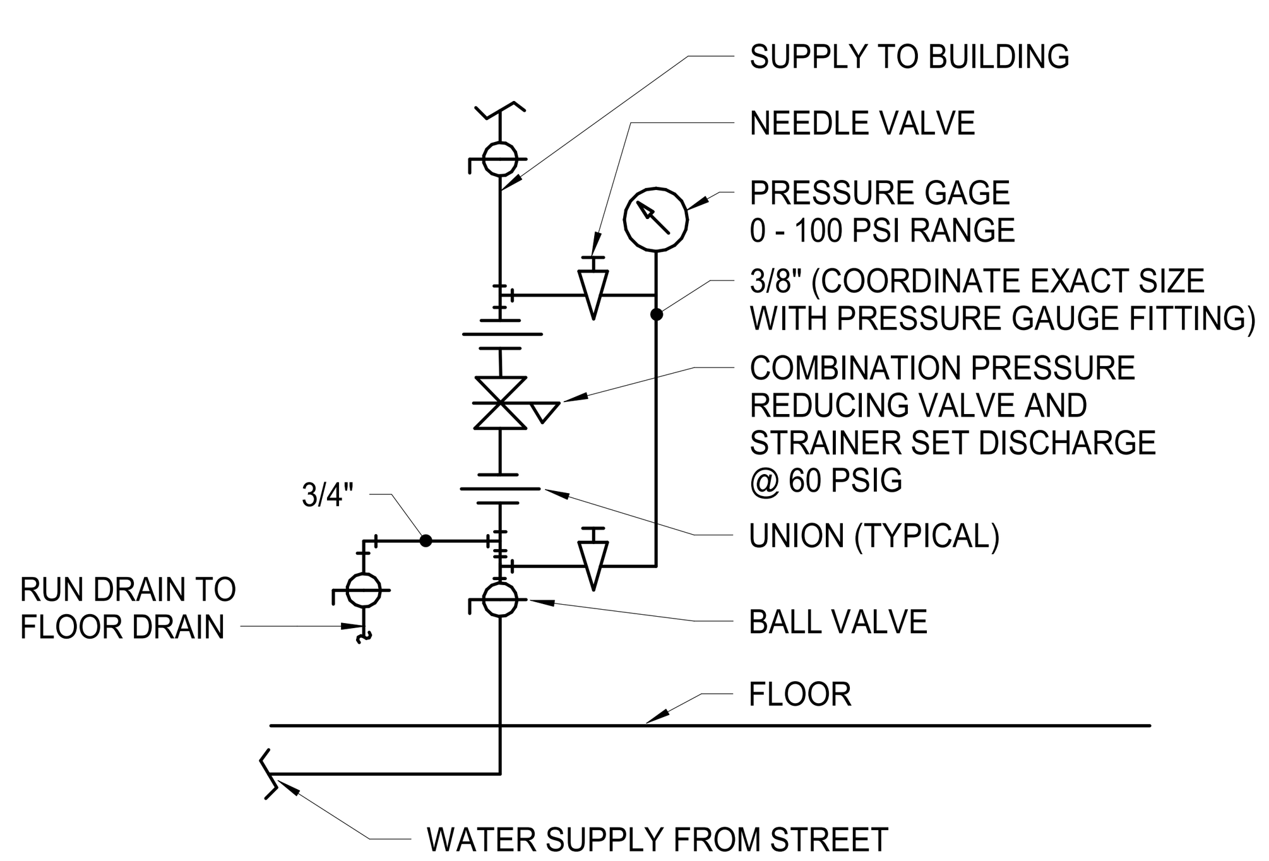
5 PIPE FLASHING DETAIL

3" = 1'-0"



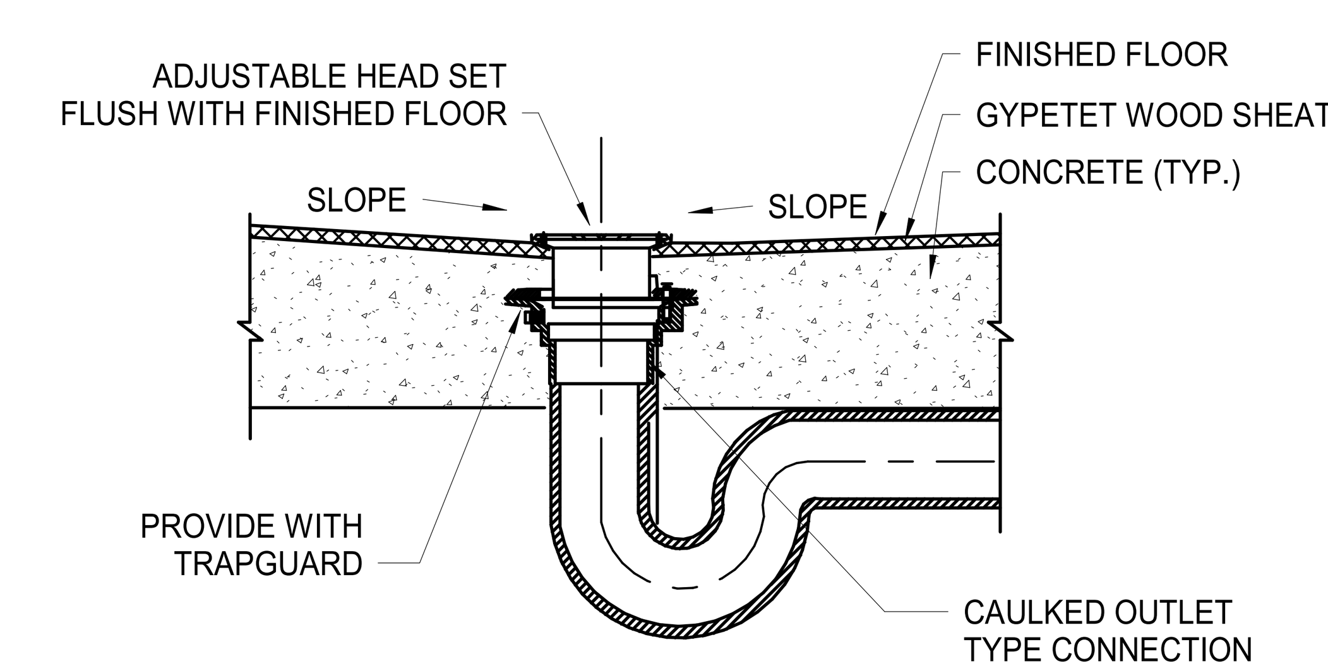
2 DOMESTIC HOT WATER RETURN DETAIL

12" = 1'-0"



7 VERTICAL WATER PRESSURE REDUCING STATION

12" = 1'-0"



3 FLOOR DRAIN DETAIL

12" = 1'-0"

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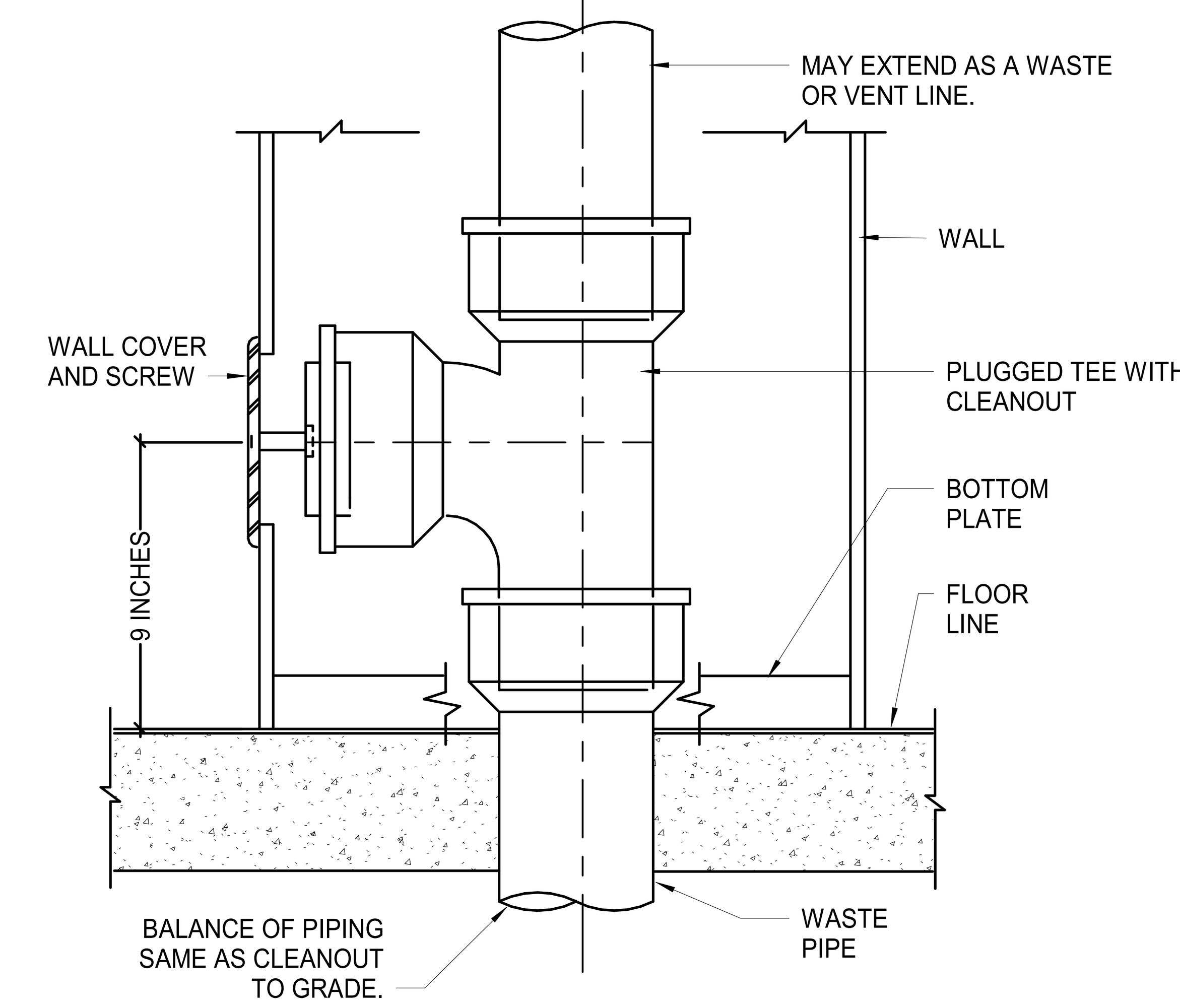
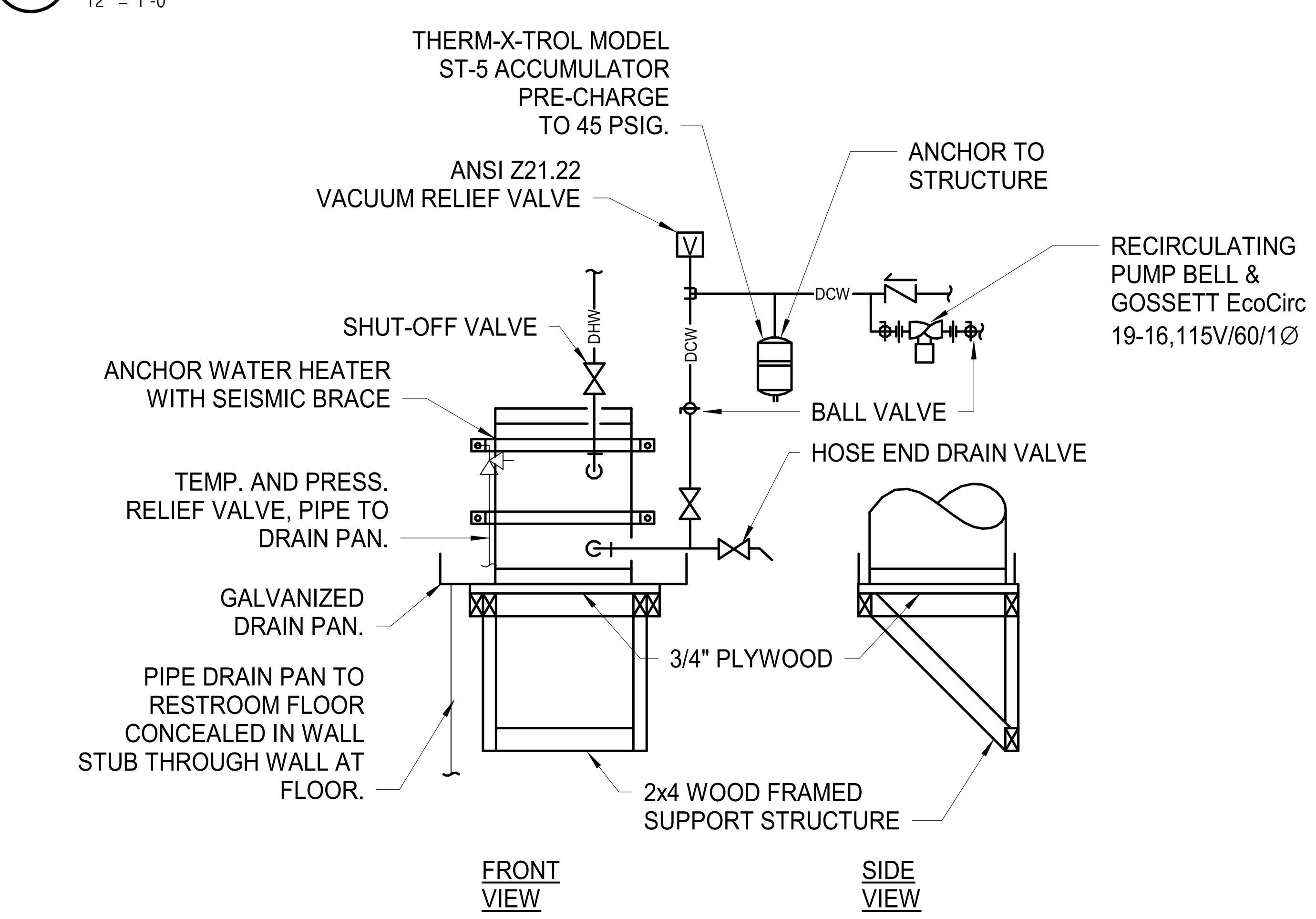


1 WALL CLEAN-OUT DETAIL

12" = 1'-0"



2 WATER HEATER DETAIL

12" = 1'-0"

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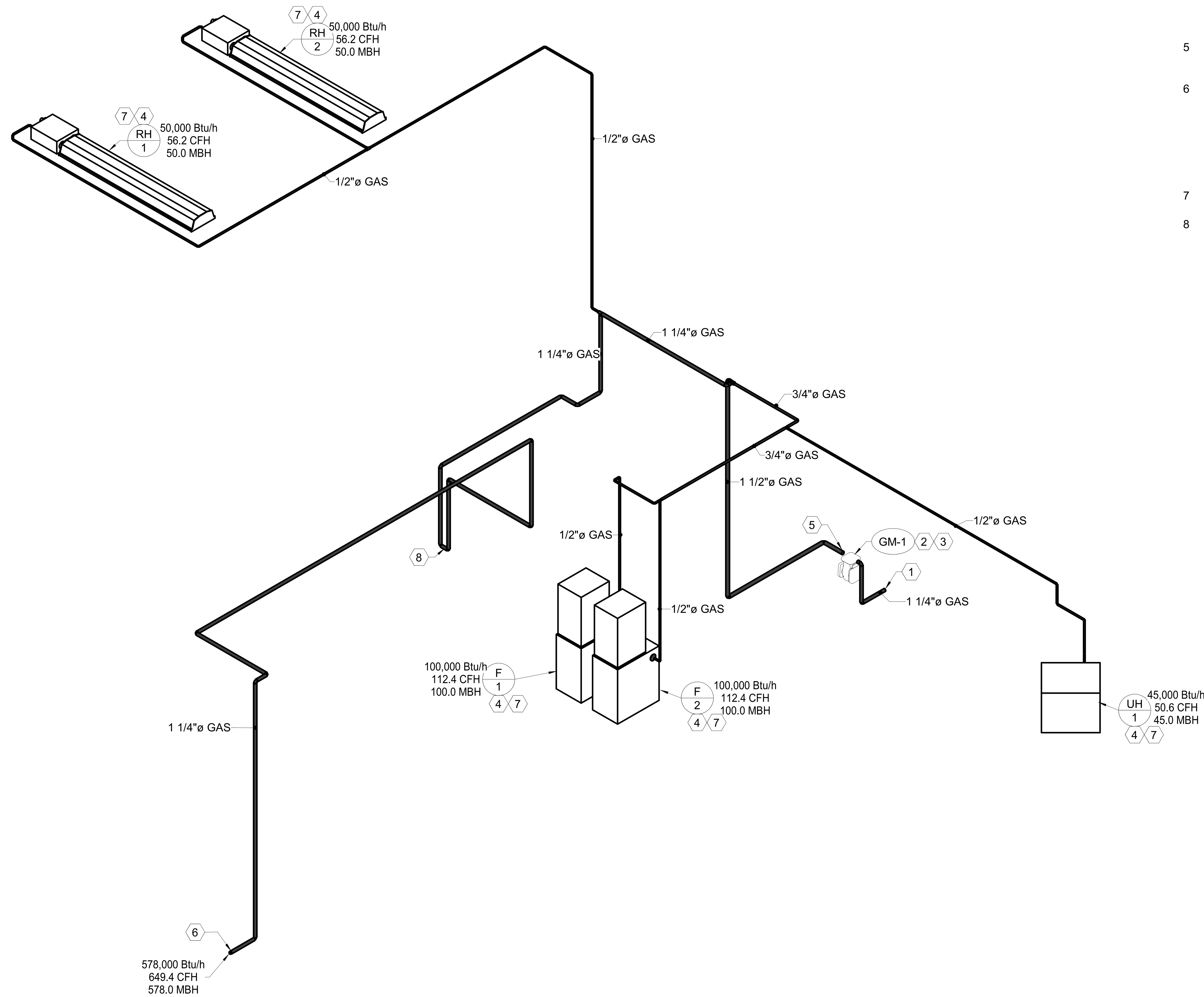

(1) GAS ISOMETRIC

SHEET NOTES (#)

1. REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE GAS PIPING (GAS).
2. GAS METER:
   DESIGN CAPACITY:
   1,222 MBH (1,374 CFH)
   DESIGN LENGTH: 450'
   DESIGN PRESSURE: 2LB
3. CONTRACTOR SHALL CONTACT DOMINION ENERGY FOR SPECIFIC REQUIREMENTS TO PROVIDE NEW GAS METER.
4. CONTRACTOR SHALL CONNECT GAS LINE TO EQUIPMENT PER DETAIL AND MANUFACTURES RECOMMENDATION, TYPICAL OF ALL GAS REQUIRED EQUIPMENT.
5. CONTRACTOR SHALL INSTALL GAS EARTHQUAKE ISOLATION VALVE AND 2LB GAS REGULATOR ABOVE GROUND IN THIS APPROXIMATE LOCATION.
6. GAS PIPING SIZED AT 2PSIG AT 450 FEET FOR (5) 90 MBH FIRE PITS, (1) 128 MBH FIRE PIT AROUND THE ICE RIBBON, AND (6) 50 MBH PATIO HEATERS. PROVIDE 2PSIG TO 4OZ GAS REGULATOR AT EACH FIRE PIT. PROVIDE ON/OFF TIMER SWITCH PER FIRE FIRE PIT. SEE CIVIL DRAWINGS FOR CONTINUATION OF PIPING. REFER TO ARCHITECTURAL DRAWINGS FOR CONTROLS.
7. PROVIDE 2PSIG TO 4OZ GAS REGULATOR AT EQUIPMENT.
8. MASTER GAS SHUTOFF SWITCH SERVING ALL EXTERIOR FIRE PITS.

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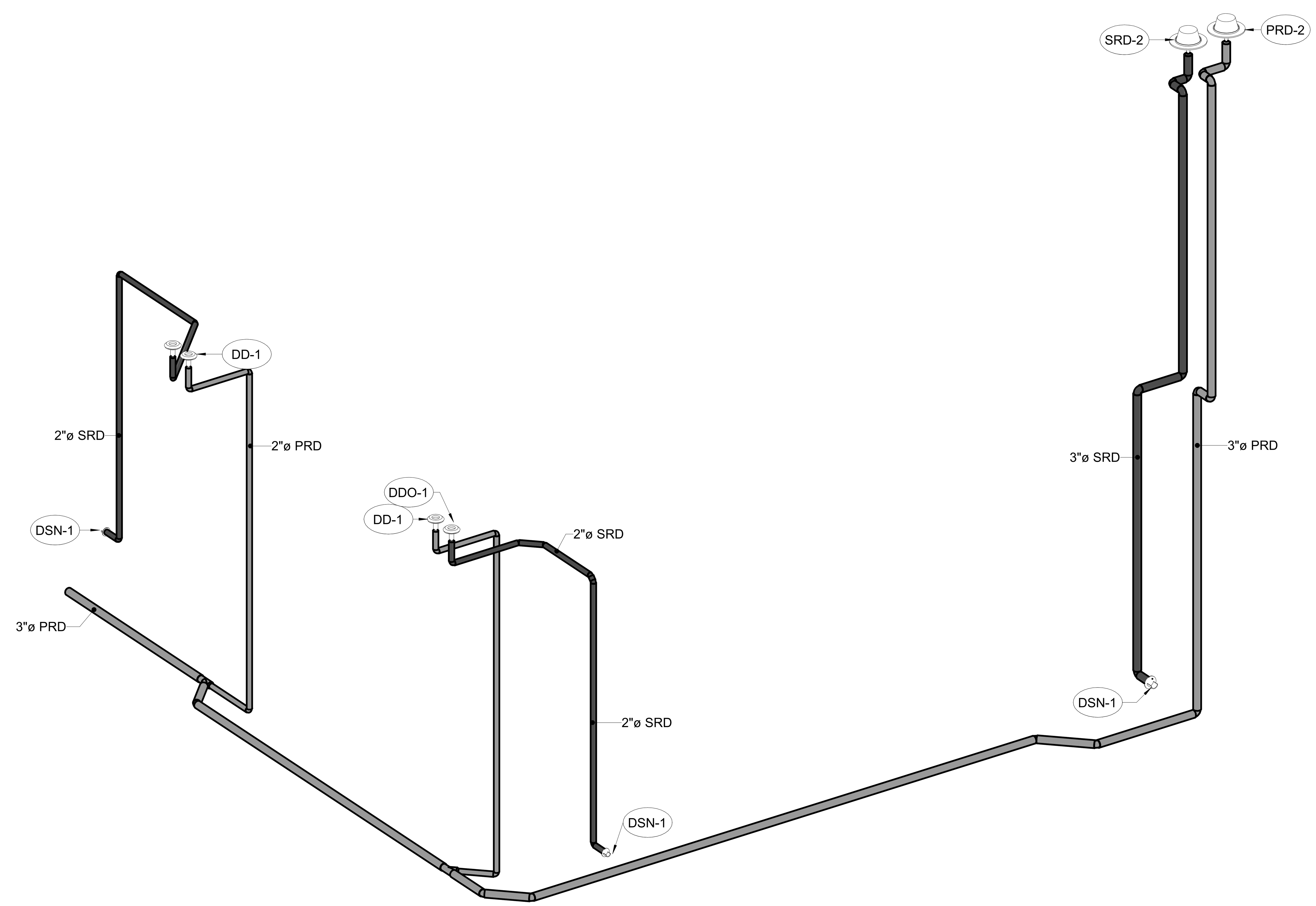

1 ROOF DRAIN ISOMETRIC

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ABBREVIATIONS INDEX

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
#	NUMBER	MH	MANHOLE
AC	ALTERNATING CURRENT	MIC	MICROPHONE
A.F.F.	ABOVE FINISH FLOOR	MIN	MINIMUM
AIC	AMPS INTERRUPTING CAPACITY	MTG	MOUNTING
AM	AMPS METER	MTR	MOTOR
AMP	AMPERE	N/A	NOT APPLICABLE
ANN	ANNUNCIATOR	NC	NORMALLY CLOSED
ATS	AUTOMATIC TRANSFER SWITCH	NEC	NATIONAL ELECTRICAL CODE
AUX	AUXILIARY	NEMA	NATIONAL ELECT. MANUFAC. ASSOC.
AWG	AMERICAN WIRE GAUGE	NFPA	NATIONAL FIRE PROTECTION ASSOC.
BC	BARE COPPER	N.I.C.	NOT IN CONTRACT
BFG	BELOW FINISH GRADE	NO	NORMALLY OPENED
C	CONDUIT	NTS	NOT TO SCALE
CAB	CABINET	OS & Y	OUTSIDE SCREW & YOKE
CATB	COMMUNITY ANTENNA TELEVISION	PB	PUSHBUTTON
CATV	CABLE TELEVISION	PF	POWER FACTOR
CKT	CIRCUIT	PFR	PHASE FAILURE RELAY
CLG	CEILING	PNL	PANEL
CNTR	CONTRACTOR	PT	POTENTIAL TRANSFORMER
C.O.	CONDUIT ONLY	PVC	POLYVINYL CHLORIDE CONDUIT
CRT	COMPUTER TERMINAL	(R)	RELOCATE
CT	CURRENT TRANSFORMER	RECEP	RECEPTACLE
CU	COPPER	REQ	REQUIREMENT
C/W	COMPLETE WITH	RLA	RATED LOAD AMPS
DB	DECIBEL	RMP	ROCKY MOUNTAIN POWER
DC	DIRECT CURRENT	RMS	ROOT MEAN SQUARE
DWG	DRAWING	SE	SERVICE ENTRANCE
(E)	EXISTING	SPEC	SPECIFICATIONS
EC	EMPTY CONDUIT	SPKR	SPEAKER
EG	EMERGENCY GENERATOR	SS	SELECTOR SWITCH
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
EX	EXPLOSION PROOF	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SWGR	SWITCHGEAR
FC	FOOT CANDLE	TTB	TELEPHONE TERMINAL BOARD
FT	FOOT	TTC	TELEPHONE TERMINAL CABINET
GFI	GROUND FAULT INTERRUPTER	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
GRC	GALVANIZED RIGID CONDUIT	UG	UNDERGROUND
HP	HORSE POWER	UPS	UNINTERRUPTED POWER SUPPLY
HZ	HERTZ	V	VOLT (KV-KILOVOLT)
IFC	INTERNATIONAL FIRE CODE	VA/R	VOLT-AMPS/REACTIVE
IG	ISOLATED GROUND	VM	VOLT METER
IMC	INTERMEDIATE METALLIC CONDUIT	W	WATTS
IN	INCH	W/	WITH
J-BOX	JUNCTION BOX	WH	WATTHOUR METER
KV	KILOVOLT	W/O	WITHOUT
KVA	KILOVOLT AMPERES	WP	WEATHERPROOF
KVAR	KILOVARS	XFMR	TRANSFORMER
KW	KILOWATT	XFMR SW	TRANSFER SWITCH
LRA	LOCKED ROTOR AMPS	XP	EXPLOSION PROOF
LTG	LIGHTING	1P	SINGLE-PHASE
MNF	MANUFACTURER	2P	TWO-POLE
MAX	MAXIMUM	3P	THREE-POLE
MB	MAIN BUS	4P	FOUR-POLE
MCC	MOTOR CONTROL CENTER	∅	PHASE
MCM	1000 CIRCULAR MILLS		

GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC) OF ALL EQUIPMENT FURNISHED UNDER ALL DIVISIONS, INCLUDING ALL EXISTING EQUIPMENT TO BE RE-USED. REVIEW ALL SHOP DRAWINGS AND EXISTING EQUIPMENT BEFORE BEGINNING ROUGH-IN.
4. SEE SECTION 265100 (16510) OF THE SPECIFICATION FOR REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

20 AMP MINIMUM BRANCH CIRCUIT CONDUCTOR SIZING		
MAXIMUM LENGTH	BRANCH CIRCUIT VOLTAGE	
CONDUCTOR LENGTH (FT)	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 - 115	MIN. #10 AWG	MIN. #12 AWG
115 - 170	MIN. #8 AWG	MIN. #10 AWG
170 - 270	MIN. #6 AWG	MIN. #8 AWG
271 - 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

A. THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.

B. PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.

C. CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.

12. CONTRACTOR SHALL VERIFY FURNITURE LAYOUT PRIOR TO ANY FLOORBOX OR POKE-THRU INSTALLATION. COORDINATE EXACT LOCATION OF FLOOR BOX OR POKE-THRU WITH OWNER AND FURNITURE PROVIDER PRIOR TO ROUGH-IN.

SHEET INDEX

SYMBOL SCHEDULE

NOTES:

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT DENOTES FIXTURES TO BE CONTROLLED.
5. NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT MEASURED TO TOP OF THE BOX FROM THE FINISH FLOOR.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. SOLID BOX AROUND DEVICE DENOTES IN FLOOR. DASHED LINE DENOTES IN CEILING.
12. COORDINATE WITH DOOR HARDWARE SUPPLIER.
13. FOR WATER COOLER, SEE DIAGRAM R002, FOR ALL OTHER LOCATIONS, MOUNT AT +18" TO CENTER OF BOX FROM FINISH FLOOR, OR AS NOTED.
14. ARROWS SHOWN ON DEVICE DENOTE SENSOR AIMING DIRECTION.
15. CAMERA NUMBERS ARE SHOWN INSIDE CAMERA SYMBOL. CAMERA TYPES ARE INDICATED IN TAG.
16. MOUNT ON TRACK OF OVERHEAD DOOR, 6" FROM TOP OF DOOR, UNLESS OVERHEAD DOOR IS A ROLL UP DOOR, THEN MOUNT PER MANUFACTURER'S INSTRUCTIONS.
17. INSTALL DEVICES PER MANUFACTURER'S INSTRUCTIONS.
18. DASHED LINE INDICATES CLEARANCES. ARROW DENOTES FRONT OF RACK.
19. SPEAKER TO BE MOUNTED IN HORIZONTAL POSITION.
20. MOUNTING HEIGHT IS TO BOTTOM OF DISPLAY.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

GENERAL

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, HOME RUN TO PANEL			J F	JUNCTION BOX ('F" IN FLOOR)	AS NOTED	
	2 CIRCUIT, HOME RUN TO PANEL				EQUIPMENT PANEL, SEE DRAWINGS	+72"	6.
	3 CIRCUIT, HOME RUN TO PANEL				CABLE TRAY	AS NOTED	
	CONDUIT RUN CONCEALED IN WALL OR CEILING				GROUND BUS BAR	+18"	6.
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND			A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
	CONDUIT UP				EQUIPMENT NUMBER		
	CONDUIT DOWN			842	ARCHITECTURAL ROOM NUMBER		
	CONDUIT STUB LOCATION	CAP CONDUIT			DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		
	CONDUIT/CIRCUIT CONTINUATION				DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		

LIGHTING

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	CEILING LIGHT FIXTURE	CEILING	1.	S	SINGLE POLE SWITCH	+46"	2. 4.
	WALL LIGHT FIXTURE	AS NOTED	1.	S^3	THREE-WAY SWITCH	+46"	2. 4.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.	S^4	FOUR-WAY SWITCH	+46"	2. 4.
	RECESSED WALLWASH DOWNLIGHT FIXTURE	CEILING	1.	S^K	KEY OPERATED SWITCH	+46"	2. 4.
	LIGHT FIXTURE	AS NOTED	1.	S^P	SWITCH WITH PILOT LIGHT	+46"	2. 4.
	EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED	S^D	VARIABLE INTENSITY SWITCH	+46"	2. 4.
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM	S^{TM}	TIMER SWITCH	+46"	2. 4.
	BOLLARD	CONCRETE BASE	1.		MOMENTARY CONTACT SWITCH	+46"	2. 4.
	STEP LIGHT FIXTURE	AS NOTED	1.	X	LOW VOLTAGE WALLSTATION (SUBSCRIPT INDICATES CONFIGURATION & CONTROL SEQUENCE)	+46"	2.4. SEE DIAGRAM, SPEC.
	FLOOD OR TRACK FIXTURE	AS NOTED			DUAL TECH, CEILING MOUNTED OCCUPANCY SENSOR (PROVIDE WITH ALL PP AND RC CONTROLLERS)	CEILING	SEE DIAGRAM, SPEC.
	CEILING/WALL MOUNTED EXIT LIGHT	CEILING/ AS NOTED	1. 3. 8.		DUAL TECH, WALL MOUNTED OCCUPANCY SENSOR (SUBSCIPT D = DIMMING AND DAYLIGHT CONTROL)	+46"	2.4. SEE DIAGRAM, SPEC.
	EMERGENCY LIGHT FIXTURE	AS NOTED	1.	P	PHOTO-ELECTRIC CONTROL (LOCATE ON ROOF, FACE NORTH)	AS NOTED	MOUNT AS PER MFR.
	COMBO EXIT / EMERGENCY LIGHT FIXTURE	AS NOTED	1.		DIGITAL DAYLIGHT SENSOR	CEILING	SEE DIAGRAM, SPEC.
PP	POWER PACK	CEILING	SEE DIAGRAM, SPEC.	TC	TIME CLOCK	+5'-0"	2.
RC X	DIGITAL ROOM CONTROLLER (SUBSCRIPT INDICATES NUMBER OF RELAYS)	CEILING	SEE DIAGRAM, SPEC.	R	RECEPTACLE SWITCH PACK	CEILING	
EP	EMERGENCY LIGHTING CONTROL UNIT	ABOVE CEILING	SEE DIAGRAM, SPEC.				

POWER

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+18" OR AS NOTED	2. 9.	R	RECEPTACLE SWITCH PACK	ABOVE CEILING	
	SIMPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.		POWER POLE		
T	TAMPER-PROOF RECEPTACLE	+18" OR AS NOTED	2. 9.		PLUGMOLD	+46" OR AS NOTED	2. SEE SPEC.
	DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	DP	FLAT PANEL DISPLAY WALL BOX TVSS RECEPT., DATA AND OTHER DEVICES, REFER TO DIAGRAMS	AS NOTED	SEE DIAGRAM, SPEC. 26 2726
U	DUPLEX RECEPTACLE WITH USB OUTLET	+18" OR AS NOTED	2. 9.	CP	CEILING PROJECTION SYSTEM CEILING BOX	ABOVE CEILING	SEE DIAGRAM, SPEC.
	CONTROLLED DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	C	CLOCK OUTLET	+90"	2.
A	DUPLEX RECEPTACLE		9.	FB	FLOOR BOX - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
G	5mA GFCI CIRCUIT BREAKER PROTECTED RECEPTACLE		13.	PT	POKE THRU - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.		MOTOR OUTLET	TO SUIT EQUIP.	
IG	ISOLATED GROUND RECEPTACLE	+18" OR AS NOTED	2. 9.		PUSHBUTTON	+46"	2.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.		NON-FUSED DISCONNECT SWITCH	+60"	5. 6.
	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+18" OR AS NOTED	2. 9.	F	FUSED DISCONNECT SWITCH	+60"	5. 6.
	4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	B	BREAKER DISCONNECT SWITCH	+60"	5. 6.
	GROUND FAULT INTERRUPTER 4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	S^T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+46"	2.
	4-PLEX RECEPTACLE EMERGENCY POWER (RED)	+18" OR AS NOTED	2. 9.		MAGNETIC STARTER	+60"	6. 7.
	CONTROLLED 4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.		MAGNETIC STARTER / DISCONNECT COMBINATION	+60"	6. 7.
	TVSS PROTECTED RECEPTACLE	+18" OR AS NOTED	2. 9.	VFD	VARIABLE FREQUENCY DRIVE	+66"	6.
	SPECIAL PURPOSE OUTLET	+18" OR AS NOTED	2. 10. W/ CAP.		PANEL BOARD	+72"	6.
	CORD DROP		SEE DIAGRAM		MAIN DISTRIBUTION PANEL		
	CORD REEL		SEE DIAGRAM	M	UTILITY METER / CT CABINET	+72"	6.
	TOMBSTONE RECEPTACLE						

TELECOMMUNICATIONS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
W	WALL PHONE	+60" OR AS NOTED	2.	CLG	EQUIPMENT CEILING RACK	CEILING	
	DATA OUTLET, ONE CABLE	+18" OR AS NOTED	2. 9. 11.		EQUIPMENT 4-POST RACK / CABINET	AS NOTED	18. SEE SPEC.
	DATA OUTLET, TWO CABLES	+18" OR AS NOTED	2. 9. 11.		EQUIPMENT 2-POST RACK	AS NOTED	18. SEE SPEC.
	DATA OUTLET, THREE CABLES	+18" OR AS NOTED	2. 9. 11.	SPL	SPLITTER	ABOVE CEILING	
X	DATA OUTLET, "X" INDICATES QUANTITY	+18" OR AS NOTED	2. 9. 11.	VIA	VIA	ABOVE CEILING	
	DATA OUTLET, CEILING	AS NOTED		BDA	FIBER BDA	ABOVE CEILING	
WAP	WIRELESS ACCESS POINT, TWO CABLES	CEILING		ANT XX	ANTENNA, PS - PUBLIC SAFETY, COM - CELLULAR/COMMERCIAL	CEILING	
	TELEVISION OUTLET	+18" OR AS NOTED	2. 9. 11.				

AUDIOVISUAL

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
HD	HDMI INPUT, WALL PLATE	+18" OR AS NOTED	2.		LOUDSPEAKER, CEILING RECESSED OR PENDANT	CEILING	
HV	HDMI AND VGA INPUT, WALL PLATE	+18" OR AS NOTED	2.	SB#	SOUND BAR, REFER TO SPECIFICATIONS FOR TYPE	UNDER DISPLAY	19.
TxH	HDBaseT, HDMI INPUT TRANSMITTER, WALL PLATE	+18" OR AS NOTED	2.	X##	DISPLAY, REFER TO SPECS FOR DISPLAY TYPE AND SIZE	AS NOTED	20.
TxD	HDBaseT, HDMI AND VGA TRANSMITTER, WALL PLATE	+18" OR AS NOTED	2.	SC#	PROJECTION SCREEN REFER TO SPECIFICATIONS FOR SCREEN TYPE AND SIZE	WALL OR CEILING	2.
TxM	HDBaseT, HDMI, DISPLAY PORT AND/OR VGA TRANSMITTER BOX, SURFACE MOUNTED	UNDER TABLE	9.	P#	PROJECTOR	WALL OR CEILING	2.
TxT	HDBaseT CATEGORY INPUT, WALL PLATE	+18" OR AS NOTED	2.				

FIRE ALARM

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	BELL	+7'-10"	2.	S	SMOKE DETECTOR	CEILING	
C	CHIME / STROBE	+ 7' -10" / CEILING	2.	SC	SMOKE/CARBON MONOXIDE DETECTOR	CEILING	
F	FIRE ALARM MANUAL STATION	+46"	2.	C	CARBON MONOXIDE DETECTOR	CEILING	
H	FIRE ALARM SIGNAL HORN/STROBE	+ 7' -10" / CEILING	2.	H	HEAT DETECTOR	CEILING	
H CLG	CONCEALED FIRE ALARM HORN/STROBE	CEILING		D	DUCT SMOKE DETECTOR		MTD. IN DUCT
H	CONCEALED FIRE ALARM HORN/STROBE WALL	+7'-10"	2.	D	FIRE/SMOKE DAMPER		
E	FIRE ALARM SPEAKER/STROBE	+ 7' -10" / CEILING	2.		DOOR HOLDER	AS NOTED	
E CLG	CONCEALED FIRE ALARM SPEAKER/STROBE	CEILING		FS	FLOW SWITCH		
E	CONCEALED FIRE ALARM SPEAKER/STROBE WALL	+7'-10"	2.	TS	TAMPER SWITCH		
S	FIRE ALARM STROBE	+ 7' -10" / CEILING	2.	WF	WATER FLOOD INDICATOR		
S CLG	CONCEALED FIRE ALARM STROBE	CEILING			O.S. & Y. VALVE		SEE DIAGRAM
S	CONCEALED FIRE ALARM STROBE WALL	+7'-10"	2.	R	FIRE ALARM RELAY OR SECURITY RELAY		
K	FIRE ALARM SPEAKER ONLY	+7'-10"	2.	CM	FIRE ALARM CONTROL MODULE		
B	FIRE ALARM STROBE WITH BLUE COLORED LENS (CO VISUAL ALARM)	+ 7' -10" / CEILING	2.	MM	FIRE ALARM MONITOR MODULE		
ANN	FIRE ALARM ANNUNCIATOR PANEL	+4'-10"	2. SEE DIAGRAM	TWZ	TWO-WAY COMMUNICATION SYSTEM ANNUNCIATOR PANEL	+46"	2.
V	ASPIRATING SMOKE DETECTION SYSTEM	CEILING	MOUNT AS PER. MFR.	TW	TWO-WAY COMMUNICATION SYSTEM CALL STATION	+46"	2.
B	BEAM DETECTOR		MOUNT AS PER. MFR.				

SECURITY

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
###	IP CAMERA - SEE SCHEDULE	AS NOTED	15. 16.	ES	ELECTRIC DOOR STRIKE	DOOR JAMB	12.
NVR	NETWORK VIDEO RECORDER			DP	DOOR POSITION INTRUSION SWITCH	DOOR JAMB	12.
DC 1	SECURITY SYSTEM DOOR CONTACT	DOOR JAMB		EL	ELECTRIC DOOR LOCK		12.
DC 2	SECURITY SYSTEM GARAGE DOOR CONTACT	+8'-0" OR AS NOTED	17.	RX	ACCESS CONTROL SYSTEM, REQUEST TO EXIT		
DB X	DURESS PUSHBUTTON: T = TRANSMITTER, R = RECEIVER, H = HARDWIRED	AS NOTED	17.	EC	ELECTRIC CRASH BAR	DOOR HARDWARE	12.
MD	INTRUSION MOTION DETECTOR		17.	CR	ACCESS CONTROL CARD READER	+46"	2.
GB GB	GLASS BREAK DETECTOR: SOLID = WALL MOUNTED, DASHED = CEILING		17.	BR	ACCESS CONTROL BIOMETRIC READER	+46"	2.
PI	INTRUSION SYSTEM POP-IT			KS	KEY OVERRIDE SWITCH	+46"	2.
KP	INTRUSION SYSTEM KEYPAD (ARM/DISARM)	+46"	2.	ICR	INTEGRATED CARD READER AND LOCK	+46"	2.
INT	INTERCOM STATION	+46"	2.	KCR	KEYPAD CARD READER COMBO	+46"	2.
ML	MAGNETIC LOCK			X	MOMENTARY PUSH BUTTON. DR = DOOR RELEASE, LD = LOCKDOWN, PTE = PUSH TO EXIT	AS NOTED	9.
DH	DOOR HOLD OPEN	AS NOTED	17.				

WPA architecture

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REV	DATE	DESCRIPTION

DESIGNED BY: BNA
DRAWN: BNA
CHECKED: BNA
ISSUE DATE: 01.15.2021
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Sheet Name:
SYMBOLS AND NOTES

Sheet Number:
E0.1-I

FLOOR BOX SCHEDULE

TYPE	DESCRIPTION	MFR.	CATALOG NUMBER

SECURITY RESPONSIBILITY MATRIX

SCOPE OF WORK	FURNISHED	INSTALLED
ROUGH-IN - CONDUIT W/PULL STRING, JUNCTION BOXES, FLOOR BOXES, FLAT PANEL DISPLAY BACK BOXES, ETC.	EC	EC
PATHWAY EQUIPMENT - CABLE TRAY, JHOOKS, SLEEVES, KNOCKOUTS, ETC.	EC	EC
STRUCTURAL BACKING AND SUPPORT FOR WALL MOUNTED EQUIPMENT	GC	GC
EQUIPMENT RACKS WITHIN THE ER(MDF)/TR(IDF) FOR SYSTEM COMPONENTS	TC	TC
SUPPORT CABLES, PRE-CONSTRUCTION KITS, TILE BRIDGES AND/OR BACK BOXES FOR CEILING MOUNTED SECURITY, INTRUSION AND ACCESS CONTROL DEVICES	EC	EC
AC POWER SYSTEMS (120/240 VOLTS)	EC	EC
ROUGH OR FINISHED TRIM, CASEWORK, MILLWORK, EQUIPMENT RACK PEDESTALS, STRUCTURAL WORK FOR SPECIAL CONSTRUCTION	GC	GC
SYSTEM CABLING - SECURITY CAMERA CATEGORY CABLING FROM DEVICE TO PATCH PANEL **	TC	TC
SYSTEM CABLING - ACCESS CONTROL CATEGORY CABLING, FROM DEVICE TO PATCH PANEL **	N/A	N/A
SYSTEM CABLING - SECURITY CAMERA NON-CATEGORY CABLING	SC	SC
SYSTEM CABLING - ACCESS CONTROL NON-CATEGORY CABLING	N/A	N/A
CAMERAS	SC	SC
CAMERA MOUNTS	SC	SC
CAMERA ETHERNET EXTENDERS AND POE INJECTORS	SC	SC
VIDEO MANAGEMENT SOFTWARE (VMS) (SERVER + CLIENT)	SC	SC
VIDEO MANAGEMENT SERVER	SC	SC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR SECURITY, ACCESS CONTROL AND/OR INTRUSION SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC
LOCK & ACCESS CONTROL POWER SUPPLIES	N/A	N/A
DOOR CONTROLLER POWER SUPPLIES	N/A	N/A
NETWORK SWITCHES WITHIN THE ER(MDF)/TR(IDF) FOR VIDEO SURVEILLANCE, ACCESS CONTROL AND/OR INTRUSION SYSTEMS	OWN	OWN
ACCESS CONTROL SERVER	N/A	N/A
ACCESS CONTROL SOFTWARE	N/A	N/A
DOOR LOCKS (ELECTRIC)	DC	DC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR AV AUDIO, CONTROL AND/OR VIDEO SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC

NOTES:

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

ADDITIONAL NOTES MAY BE PRESENT WITHIN THE CONTRACT DOCUMENTS INDICATING SPECIFIC EQUIPMENT PROVIDED BY OTHERS OR REQUIRE INSTALLATION BY SPECIFIC DIVISIONS.

INSTALLER PROVIDING THE SYSTEM CABLING SHALL PROVIDE THE CABLING, TERMINATION AND CERTIFICATION FOR A COMPLETE SYSTEM INSTALLATION, UNLESS OTHERWISE SPECIFICALLY NOTED WITHIN THE CONTRACT DOCUMENTS.

INSTALLER TO VERIFY WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM. IT IS THE CONTRACTORS RESPOSIBILITY TO PROVIDE A COMPLETE AND WORKING SYSTEM.

ACRONYM LEGEND

ACRONYM	CONTRACTOR	ACRONYM	CONTRACTOR
AC	ACCESS CONTROL CONTRACTOR	IC	INTRUSION DETECTION CONTRACTOR
AV	AUDIOVISUAL CONTRACTOR	TC	HORIZONTAL CABLING CONTRACTOR
DC	DOOR HARDWARE CONTRACTOR	NIC	NOT IN CONTRACT
EC	ELECTRICAL CONTRACTOR	OWN	OWNER
FR	FURNITURE CONTRACTOR	SC	VIDEO SURVEILLANCE CONTRACTOR
GC	GENERAL CONTRACTOR	SPEC	SEE SPECIFICATIONS

NOTES

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

ADDITIONAL NOTES MAY BE PRESENT WITHIN THE CONTRACT DOCUMENTS INDICATING SPECIFIC EQUIPMENT PROVIDED BY OTHERS OR REQUIRE INSTALLATION BY SPECIFIC DIVISIONS.

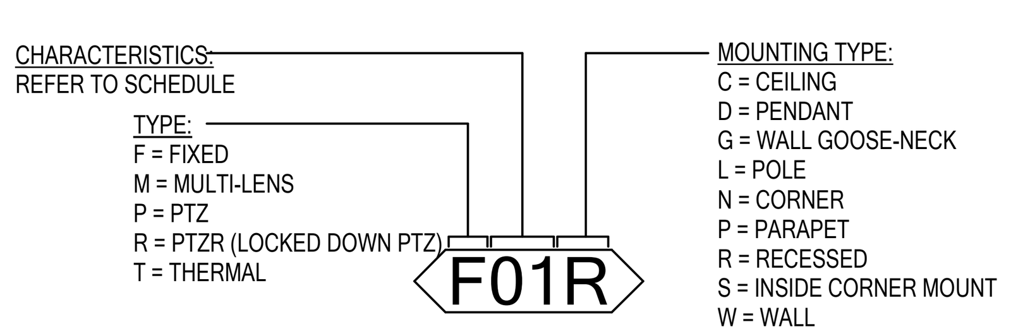
INSTALLER PROVIDING THE SYSTEM CABLING SHALL PROVIDE THE CABLING, TERMINATION AND CERTIFICATION FOR A COMPLETE SYSTEM INSTALLATION, UNLESS OTHERWISE SPECIFICALY NOTED WITHIN THE CONTRACT DOCUMENTS.

INSTALLER TO VERIFY WITH WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM.

* REFER TO AUDIOVISUAL DRAWINGS FOR ADDITIONAL REQUIREMENTS

** REFER TO SECURITY/ACCESS CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS

CAMERA SURVEILLANCE TAG LEGEND



EQUIPMENT SCHEDULE

CONNECTION TYPE NOTES:

1. NON-FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER WITH THERMAL OVERLOAD
5. MAGNETIC STARTER
6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION
7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/BREAKER COMBINATION
9. VARIABLE FREQUENCY DRIVE
10. REDUCED VOLTAGE STARTER
11. DIRECT CONNECTION
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. TWO-SPEED STARTER. COORDINATE WITH MOTOR TYPE
14. SOLID STATE SOFT-STARTER

RESPONSIBILITY LEGEND:

A. FURNISHED, INSTALLED AND CONNECTED UNDER DIVISION 26(16)
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION. REQUIRED CONNECTION UNDER DIVISION 26(16)
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26(16)
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION

CB = CIRCUIT BREAKER
CKW = CHILLER KILOWATTS

NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN THE PHASE CONDUCTOR
NOTE 2: OVERCURRENT PROTECTION DEVICE (OCPD) SHOWN IS LOCATED AT POWER PANEL. ALL FUSING TO BE SIZED IN ACCORDANCE WITH FUSE MFR RECOMMENDATION FOR MOTOR NAME PLATE RATING.
NOTE 3: ALL EQUIPMENT TO BE RATED FOR THE ENVIRONMENT FOR WHICH IT IS INSTALLED.

			ELECTRICAL EQUIPMENT INFORMATION								WIRE				OCPD				
			LOAD																
UNIT	#	DESCRIPTION	HP	FLA	MCA	VA	VOLTAGE	PHASE	FULL LOAD AMPS	CONDUIT SIZE	SETS	QTY	SIZE	EQ. GROUND	TYPE	AMPS	STARTER/ DISC/ VFD	OTHER (SEE NOTES)	REMARKS
CU	1	CONDENSING UNIT	0.00	0 A	8 A	0 VA	480 V	3	6 A	3/4"	1	3	12	12	CB	15 A	2	A	
CU	2	CONDENSING UNIT	0.00	0 A	8 A	0 VA	480 V	3	6 A	3/4"	1	3	12	12	CB	15 A	2	A	
EF	1	EXHAUST FAN	0.50	0 A	0 A	0 VA	120 V	1	10 A	3/4"	1	2	12	12	CB	15 A	4	A	
EF	2	EXHAUST FAN	0.50	0 A	0 A	0 VA	120 V	1	10 A	3/4"	1	2	12	12	CB	15 A	4	A	
EF	3	EXHAUST FAN	0.50	0 A	0 A	0 VA	120 V	1	10 A	3/4"	1	2	12	12	CB	15 A	4	A	
EF	4	EXHAUST FAN	0.50	0 A	0 A	0 VA	120 V	1	10 A	3/4"	1	2	12	12	CB	15 A	4	A	
F	1	FURNACE	0.50	0 A	0 A	0 VA	120 V	1	10 A	3/4"	1	2	12	12	CB	15 A	4	A	
F	2	FURNACE	0.50	0 A	0 A	0 VA	120 V	1	10 A	3/4"	1	2	12	12	CB	15 A	4	A	
UH	1	UNIT HEATER	0.00	0 A	8 A	0 VA	120 V	1	6 A	3/4"	1	2	12	12	CB	15 A	12	A	

RELAY PANEL SCHEDULE 'RP1'

MOUNTING: VOLTAGE: CONTROL CIRCUIT: AIC RATING:

RELAY	POWER	EMERGENCY	SPACE	CONTROL	DIMMING	PROGRAMMING
RP1-1	HL1-19		EXTERIOR	LWS, OC	0-10	B,E
RP1-2	HL1-19		HALL 104	LWS, OC	0-10	B,E
RP1-3	HL1-21		CHILLER YARD	TOD	0-10	A
RP1-4	HL1-19		EXTERIOR	TOD	0-10	A
RP1-5	HL1-19		RETAIL AREA	LWS, OC	0-10	B,E
RP1-6	HL1-23		UPPER TERRACE	LWS, TOD	0-10	B,E
RP1-7	HL1-23		PRE-FUNCTION	LWS, OC	0-10	B,E
RP1-8	HL1-23		UPPER TERRACE	LWS, TOD	0-10	B,E
RP1-9	HL1-25		OPEN OFFICE	LWS, DS, OC	0-10	B,E
RP1-10	HL1-25		OPEN OFFICE	LWS, OC	0-10	B,E
RP1-11	HL1-25		OPEN OFFICE	LWS, DS, OC	0-10	B,E
RP1-12	P1-24		OUTDOOR DECK	LWS, TOD	0-10	B,E

CONTROL LEGEND

PC	EXTERIOR PHOTOCELL
OC	OCCUPANCY/VACANCY SENSOR
DS	INTERIOR DAYLIGHT SENSOR
MS	EXTERIOR MOTION SENSOR
TC	ANALOG ASTRONOMICAL TIMECLOCK
TOD	TIME OF DAY - SOFTWARE BASED
LWS	LOCAL WALLSTATION

DIMMING LEGEND

N	NONE
0-10	0-10 VOLT DIMMING
DMX	DIGITAL MULTIPLEX (DMX) DIMMING
3WD	3-WIRE DIMMING
ELV	ELECTRONIC LOW VOLTAGE
MLV	MAGNETIC LOW VOLTAGE
DA	DALI DIMMING

PROGRAMMING

A	NIGHT LIGHT; ALWAYS ON.
B	MASTER CLOCK SCHEDULE (PROVIDED BY OWNER); PROVIDE 0-10V DIMMING.
C	EGRESS LIGHTING; MASTER CLOCK SCHEDULE (PROVIDED BY OWNER); 0-10V DIMMING.
D	MASTER CLOCK SCHEDULE (PROVIDED BY OWNER).
E	LOCAL WALLSTATION TO ACT AS OVERRIDE FOR AFTER HOURS CONTROL.

GENERAL NOTES

1. PROGRAM SYSTEM TO MEET THE REQUIREMENTS OF IECC 2015 OR CURRENT ENERGY CODE.
2. CONFIRM SWITCHING AND PROGRAMMING SCHEME WITH OWNER PRIOR TO PROGRAMMING.
3. PROGRAM SYSTEM TO INCORPORATE AUTO DAYLIGHT SAVINGS ADJUSTMENTS, ASTRONOMICAL CLOCK WITH OFFSETS, HOLIDAY DATES, AND NETWORK OVERRIDE.
4. REFER TO WALLSTATION DIAGRAMS FOR FACTORY ENGRAVED LABELING FOR ALL INDIVIDUAL PUSH-BUTTONS. DEVICE AND COVERPLATE COLORS SELECTED BY ARCHITECT.
5. SUBMIT ALL WALLSTATION LAYOUTS, ENGRAVING AND CONTROL SEQUENCES DURING THE SHOP DRAWINGS REVIEW PROCESS.
6. PROVIDE RELAY BARRIER FOR VOLTAGE AND POWER SOURCE SEPARATION (EMERGENCY AND NORMAL CIRCUITS, VOLTAGE DIFFERENCES).
7. PROGRAM NORMAL AND EMERGENCY RELAYS IN RELATED CORRIDORS TO OPERATE TOGETHER.
8. ALL RELAYS REQUIRING DIMMING AND/OR DAYLIGHT HARVESTING SHALL UTILIZE 0-10V DIMMING. PROVIDE 0-10V DIMMING WIRING AND CONTROLS AS REQUIRED.
9. PROVIDE A MINIUMUM OF (5) SPARE RELAYS.
10. SYSTEM MUST INTERFACE WITH NEW OR EXISTING ENERGY MANAGEMENT SYSTEM/BMS. PROVIDE SYSTEM CONSISTING OF MONITOR(S), COMMUNICATIONS EQUIPMENT, A CONTROLLER(S), TIMER(S), OR OTHER DEVICE(S) THAT MONITOR AND/OR CONTROL AN ELECTRICAL LOAD OR POWER PRODUCTION OR STORAGE SOURCE. COORDINATE EXACT TIE-IN POINTS AND COMMUNICATION PROTOCOL/MODULES REQUIRED. PROGRAM ACCORDINGLY AND PER OWNERS REQUIREMENTS.

PROJECT MANAGER: XX

LIGHT FIXTURE SCHEDULE

LIGHT FIXTURE ABBREVIATION SCHEDULE

A.F.F.	ABOVE FINISH FLOOR	SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
WALL@CLG	WALL MOUNT AT CORNER OF WALL AND CEILING	CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT	SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT

LIGHT FIXTURE GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES AND, CONFIRM CEILING TYPES WITH LIGHT FIXTURE TRIMS. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPENCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, FUSING, LED DRIVERS, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
4. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.
5. REFER TO LIGHTING PLANS FOR ALL LINEAR FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF LINEAR FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH.
6. REFER TO LIGHTING PLANS FOR ALL UNDERCABINET FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF THE UNDERCABINET FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH OR TO FIT WITHIN THE MILLWORK. COORDINATE FIXTURE LAYOUT WITH MILLWORK SHOP DRAWINGS PRIOR TO LIGHTING SUBMITTALS.
7. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING DESIGNER.
8. PRIOR APPROVALS ARE REQUIRED BEFORE BIDDING THE PROJECT AND SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) EIGHT WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
9. REFER TO SPECIFICATIONS 20 0500, 26 5100 & 26 5600 (16001, 16510 & 16551).
10. VALUE ENGINEERING CONDUCTED WITHOUT THE DESIGN TEAM IE; ARCHITECT, ENGINEER & LIGHTING CONSULTANT/DESIGNER WILL NOT BE ALLOWED, REVIEWED OR APPROVED.

TYPE	DESCRIPTION	MFR.	CATALOG NUMBER	VOLTS	TOTAL WATTS	LAMP
	12FT TALL ALUMINUM POLE WITH WOOD ON 2 SIDES; CATENARY CONNECTIONS; WOOD AND POLE COLOR SELCTIONS BY ARCHITECT	STRUCTURA	TOKA-S-12-SCBA-X-X-X-X-SCBA-SCBA-CAT-STD	277 V	4 VA	N/A
D4	4" ROUND RECESSED DOWNLIGHT; EXTRA WIDE DISTRIBUTION; 0-10V DIMMING TO 1%; SEMI-SPEC CLEAR REFLECTOR; WHITE FLANGE;	PRESCOLITE	LTR-4RD-H-HL-25L-DM1-UNV TRIM: LTR-4RD-T-HL-40K-8-XW-SS-WT	277 V	28 VA	"LAMP: LED , LUMENS: 2500 CCT: 4000° K, CRI: 80"
D4E	4" ROUND RECESSED DOWNLIGHT; EXTRA WIDE DISTRIBUTION; 0-10V DIMMING TO 1%; SEMI-SPEC CLEAR REFLECTOR; WHITE FLANGE; EM BATTERY AND INTEGRAL TEST SWITCH	PRESCOLITE	LTR-4RD-H-HL-25L-DM1-UNV TRIM: LTR-4RD-T-HL-40K-8-XW-SS-WT	277 V	28 VA	"LAMP: LED , LUMENS: 2500 CCT: 4000° K, CRI: 80"
DRE	4" ROUND RECESSED DOWNLIGHT; EXTRA WIDE DISTRIBUTION; 0-10V DIMMING TO 1%; SEMI-SPEC CLEAR REFLECTOR; SCBA FLANGE; INTEGRAL EM BATTERY AND REMOTE TEST SWITCH	PRESCOLITE	LTR-4RD-H-HL-25L-DM1-UNV TRIM: LTR-4RD-T-HL-40K-8-XW-SS-WT	277 V	28 VA	"LAMP: LED , LUMENS: 2500 CCT: 4000° K, CRI: 80"
L6	6FT LONG x 4.5" T x 3" W LINEAR DIRECT/INDIRECT W/.5" FROSTED DROP LENS; BATWING INDIRECT DISTRIBUTION; ADJUSTABLE AC CABLE; 0-10V DIMMING TO 1%; SCBA	LUMENWERX	VIA3PDI-HLO-0.5D-WIO-LED-90-500-500-40-6FT-UNV-D1-1-53WAC36-SCBA	277 V	60 VA	"LAMP: LED , LUMENS:3000 DIRECT/3000 INDIRECT CCT: 4000° K, CRI: 90"
L6A	6FT LONG x 4.5" T x 3" W LINEAR DIRECT/INDIRECT W/.5" FROSTED DROP LENS; BATWING INDIRECT DISTRIBUTION; ADJUSTABLE AC CABLE; 0-10V DIMMING TO 1%; SCBA; DIRECT/INDIRECT DIMMED/CONTROLLED SEPARATELY	LUMENWERX	VIA3PDI-HLO-0.5D-WIO-LED-90-750-500-40-6FT-UNV-DIA-2-53WAC48-SCBA	277 V	60 VA	"LAMP: LED , LUMENS 3000 DIRECT/3000 INDIRECT CCT: 4000° K, CRI: 90"
L8	8FT LONG x 4.5" T x 3" W LINEAR DIRECT/INDIRECT W/.5" FROSTED DROP LENS; BATWING INDIRECT DISTRIBUTION; ADJUSTABLE AC CABLE; 0-10V DIMMING TO 1%; SCBA	LUMENWERX	VIA3PDI-HLO-0.5D-WIO-LED-90-500-500-40-8FT-UNV-DIA-1-53WAC36-SCBA	277 V	80 VA	"LAMP: LED , LUMENS:4000 DIRECT/4000 INDIRECT CCT: 4000° K, CRI: 90"
L8E	8FT LONG x 4.5" T x 3" W LINEAR DIRECT/INDIRECT W/.5" FROSTED DROP LENS; BATWING INDIRECT DISTRIBUTION; ADJUSTABLE AC CABLE; 0-10V DIMMING TO 1%; SCBA; 4FT WITH EM BATTERY AT 1000 LMS PER 4FT	LUMENWERX	VIA3PDI-HLO-0.5D-WIO-LED-90-500-500-40-8FT-UNV-DIA-1-53WAC36-SCBA-EB	277 V	80 VA	"LAMP: LED , LUMENS:4000 DIRECT/4000 INDIRECT CCT: 4000° K, CRI: 90"
OC2	CATENARY/FESTOON STRING LIGHTS; 12" OPAL WHITE DIA GLOBES; G16.5 LED LAMPS; 48" O.C. SPACING; POWER CABLE ATTACHED TO AIRCRAFT CABLE FOR SUSPENSION; POWER CABLE AND LAMP HOLDERS BLACK	PRIMUS	DSW-48"O.C.-120V-PLED-G16.5F-3.5W-27K-DSS12-OPAL-TK KIT WHITE-SEE PLANS CONTRACTOR ALLOWANCE PRICE $1,680 INCLUDES LED LAMPS, GLOBES, # OF FIXTURES PER SPACING, AC CABLE FOR SUPPORT, ATTACHMENT KITS FOR EACH POINT OF ATTACHMENT	120 V	10 VA	LAMP: LED G16.5 LUMENS: 350 CCT: 2700K CRI:+90
OD6	6IN DIA. LED CYLINDER; CEILING SURFACE MOUNT, WET LOCATION; WIDE DISTRIBUTION; 0-10V DIM TO 1%; SCBA	CONTECH	CYL65-40K-MVD6-C-X-WCLR-SCBA	277 V	37 VA	"LAMP: LED , LUMENS: 3200 CCT: 4000° K, CRI: 82"
OW2E	WET LISTED EXTERIOR WEDGE SHAPED SCONCE; 7" D x 9" x 11.5" W; FORWARD THROW OPTICS; SCBA; INTEGRAL COLD WEATHER BATTERY	LITHONIA	WDGE2LED-P5-40K-90CRI-VF-MVOLT-E20WC-SCBA	277 V	48 VA	"LAMP: LED , LUMENS:6151 CCT: 4000° K, CRI: 90"
OWE	WET LISTED EXTERIOR SCONCE; 5.5" D x 8" T x 9" W; WIDE COMFORT OPTICS; SCBA; INTEGRAL COLD WEATHER BATTERY	LITHONIA	WDGE1LED-P2-40K-90CRI-VW-MVOLT-E4WH-SCBA	277 V	15 VA	"LAMP: LED , LUMENS:2075 CCT: 4000° K, CRI: 90"
S1	LINEAR 4ft LED STRIP LIGHT W/CURVED FROSTED LENS; SURFACE OR CHANIN MOUNTED; 0-10V DIMMING TO 10%	METALUX	4SNLED-LD5-65HL-LW-UNV-L840-CD1-U	277 V	62 VA	"LAMP: LED , LUMENS: 5612 CCT: 4000° K, CRI: 80"
S1E	LINEAR 4ft LED STRIP LIGHT W/CURVED FROSTED LENS; SURFACE OR CHANIN MOUNTED; 0-10V DIMMING TO 10%; 14W EM BATTERY W/INTEGRAL TEST SWITCH	METALUX	4SNLED-LD5-65HL-LW-UNV-EL14W-L840-CD1-U	277 V	62 VA	"LAMP: LED , LUMENS: 5612 CCT: 4000° K, CRI: 80"
W3E	SURFACE/WALL/BACK MOUNTED LED; 3'Lx 1.75"W x 2.56" D; DIFFUSE REVEAL LENS; 0-10V DIMMING TO 5%; EM BATTERY @ 1000 LMS	ALW	FBSMB-S4-HI-90-4K-0/10V/S-EXT/R-SCBA-UNV-EMB	277 V	54 VA	"LAMP: LED , LUMENS: 4388 CCT: 4000° K, CRI: 90"
WR4	4FT VANDAL RESISTAND WALL MOUNTED LED FIXTURE; CURVED FROSTED HIGH IMPACT POLY LENS;	VISCOR	VRSE-3556-48-LED-8-40K-060L	277 V	65 VA	"LAMP: LED , LUMENS:6000 CCT: 4000° K, CRI: 82"
WR4E	4FT VANDAL RESISTAND WALL MOUNTED LED FIXTURE; CURVED FROSTED HIGH IMPACT POLY LENS; 1000 LMN EM BATTERY	VISCOR	VRSE-3556-48-LED-8-40K-060L-B39	277 V	65 VA	"LAMP: LED , LUMENS: 6000 CCT: 4000° K, CRI: 82"
X1	SINGLE FACE CLEAR EDGELIT LED EXIT SIGN; UNIVERSAL/PIVOT DESIGN FOR MULTIPLE MOUNTING APPLICATIONS; FIELD APPLIED CHEVRONS; GREEN LETTERS	MULE	PVT-1-A-GC-S/R-BA	277 V	5 VA	"LAMP: LED "

CAMERA SURVEILLANCE TYPE SCHEDULE

				CAMERA INFORMATION					
CAMERA TYPE	DESCRIPTION	MANFR.	CAT NO.	RESOLUTION	AUDIO RECORDING	MAX FRAME RATE	INFRARED	WDR	NOTES
F01W	INDOOR/OUTDOOR DAY/NIGHT FIXED DOME. IK10 VANDAL-RESISTANT. VARIFOCAL 3.5-10MM LENS WITH REMOTE ZOOM AND FOCUS VIDEO MOTION DETECTION AND ACTIVE TAMPERING ALARM. MEMORY CARD SLOT FOR OPTIONAL LOCAL VIDEO STORAGE. POWER OVER INTERNET.	AXIS OR PANASONIC	P3245-LVE OR WV-S2531LN	2MP	No	30 FPS	Yes	Yes	MOUNTED TO WALL. WEATHERSHIELD (AXIS) OR PWM485S (PANASONIC) WALL MOUNT MUST BE PROVIDED AND INSTALLED.
M03N	INDOOR/OUTDOOR (4 X QUAD HD) MULTIDIRECTIONAL DOME WITH ONE IP ADDRESS AND ONE NETWORK CABLE, 3-6 MM LENS REMOTE ZOOM AND FOCUS	AXIS OR PANASONIC	P3717-PLE OR WV-S8530N	8MP	Yes	30 FPS	Yes	Yes	INCLUDE: AXIS T94N01D OR PWM850 PENDANT KIT T91A64 OR PACA4GR CORNER BRACKET
M04W	INDOOR/OUTDOOR FIXED DOME CAMERA WITH FOUR SENSORS PROVIDES A SEAMLESS 180 DEGREE PANORAMIC OVERVIEW IN ONE-CAMERA INSTALLATION - REDUCING INSTALLATION TIME, CABLING AND VMS LICENSE COSTS. WDR AND LIGHTFINDER TECHNOLOGY PROVIDES GREAT VIDEO QUALITY IN ANY LIGHT CONDITIONS. 30 FPS IN 8 MP RESOLUTION.	AXIS OR PANASONIC	P3807-PVE OR WV-X4571L	8MP	Yes	30 FPS	Yes	Yes	PROVIDE AND INSTALL WEATHER SHIELD (AXIS) OR WV-QWL500-G/W FOR PANASONIC

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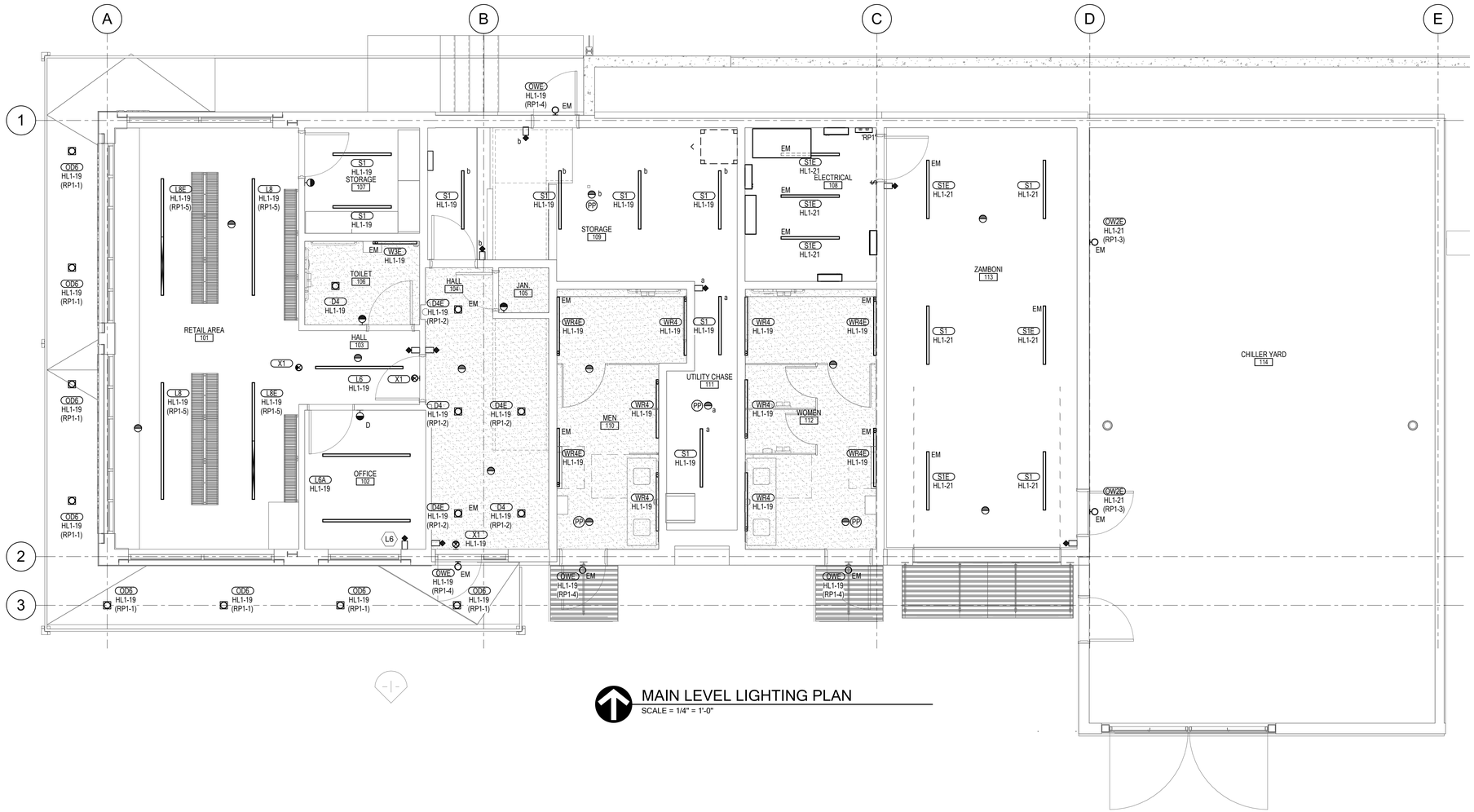

MAIN LEVEL LIGHTING PLAN

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

LIGHTING SENSOR GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE SENSOR MANUFACTURER FOR PROPER PLACEMENT AND ADJUSTMENT OF OCCUPANCY SENSORS.
2. EACH ZONE SHALL HAVE COVERAGE BY OCCUPANCY SENSOR SUCH THAT NO BLIND SPOT EXIST.
3. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE FREE INSTALLATION.
4. THE LOCATION AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY COVER THE RESPECTIVE ROOM.
5. PROVIDE DAYLIGHT ZONE CONTROL REQUIREMENTS PER IECC-2015 C405.2.2.3. LOCATE DAYLIGHT SENSOR(S) PER MANUFACTURER'S RECOMMENDATION AND WHERE REQUIRED WITHIN THE ROOM FOR PROPER COVERAGE.
6. PROVIDE OCCUPANCY SENSOR WITH AN ADDITIONAL SET OF DRY CONTACTS FOR HVAC CONTROL AT EACH VAV BOX LOCATION. COORDINATE WITH MECHANICAL DRAWINGS AND THE MECHANICAL CONTRACTOR FOR EXACT LOCATIONS.

LIGHTING GENERAL SHEET NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ALL FIXTURE LOCATIONS WITHIN A CEILING OR CEILING GRID. FOR AREAS WITHOUT CEILINGS, FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND STRUCTURAL ELEMENTS. CONTRACTOR TO PAINT EXPOSED RACEWAY TO MATCH ADJACENT SURFACES
2. FIELD VERIFY EXACT FIXTURE LENGTHS FOR CONTINUOUS ILLUMINATION FOR COVES AND LINEAR RUNS. PROVIDE CONTINUOUS ILLUMINATION WITH NO MORE THAN A 1" GAP BETWEEN THE END OF THE EDGE OF THE WALL / CEILING AND THE FIXTURE.
3. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR PLACEMENT OF FIXTURES WITHIN MECHANICAL ROOMS.
5. ALL ROOM CONTROLLERS AND/OR POWER PACKS SHALL BE INSTALLED IN THE CEILING SPACE DIRECTLY ABOVE THE ENTRY DOOR TO THE SPACE IT IS CONTROLLING.
6. ALL UNDERCABINET LIGHTS MUST BE COORDINATED WITH MILLWORK FOR EXACT LENGTHS. ALL UNDERCABINET LIGHTS WILL BE MOUNTED TO THE FACE OF THE CABINET.
7. PROVIDE 0-10V DIMMING CONDUCTORS FOR ALL AREAS AND/OR ROOMS WHERE 0-10V DIMMING IS INDICATED BY THE RELAY PANEL SCHEDULE AND/OR WALL STATION CONTROL SEQUENCE.
8. SUBSCRIPT ADJACENT TO LIGHT FIXTURE INDICATES CONTROLS. PROVIDE LIGHTING CONTROLS WITH THE REQUIRED NUMBER OF RELAY/DIMMERS. PROVIDE ADDITIONAL RELAY/DIMMERS FOR DAYLIGHT ZONES AS REQUIRED.

SHEET KEYNOTES

L6 DMX CONTROLLER FOR RGBW FLOODS, TYPE 03. COORDINATE LOCATION WITH OWNER PRIOR TO ROUGH-IN.

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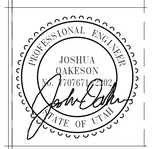

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MAIN LVL LTG PLAN

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LIGHTING SENSOR GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE SENSOR MANUFACTURER FOR PROPER PLACEMENT AND ADJUSTMENT OF OCCUPANCY SENSORS.
2. EACH ZONE SHALL HAVE COVERAGE BY OCCUPANCY SENSOR SUCH THAT NO BLIND SPOT EXIST.
3. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE FREE INSTALLATION.
4. THE LOCATION AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY COVER THE RESPECTIVE ROOM.
5. PROVIDE DAYLIGHT ZONE CONTROL REQUIREMENTS PER IECC-2015 C405.2.2.3. LOCATE DAYLIGHT SENSOR(S) PER MANUFACTURER'S RECOMMENDATION AND WHERE REQUIRED WITHIN THE ROOM FOR PROPER COVERAGE.
6. PROVIDE OCCUPANCY SENSOR WITH AN ADDITIONAL SET OF DRY CONTACTS FOR HVAC CONTROL AT EACH VAV BOX LOCATION. COORDINATE WITH MECHANICAL DRAWINGS AND THE MECHANICAL CONTRACTOR FOR EXACT LOCATIONS.

LIGHTING GENERAL SHEET NOTES

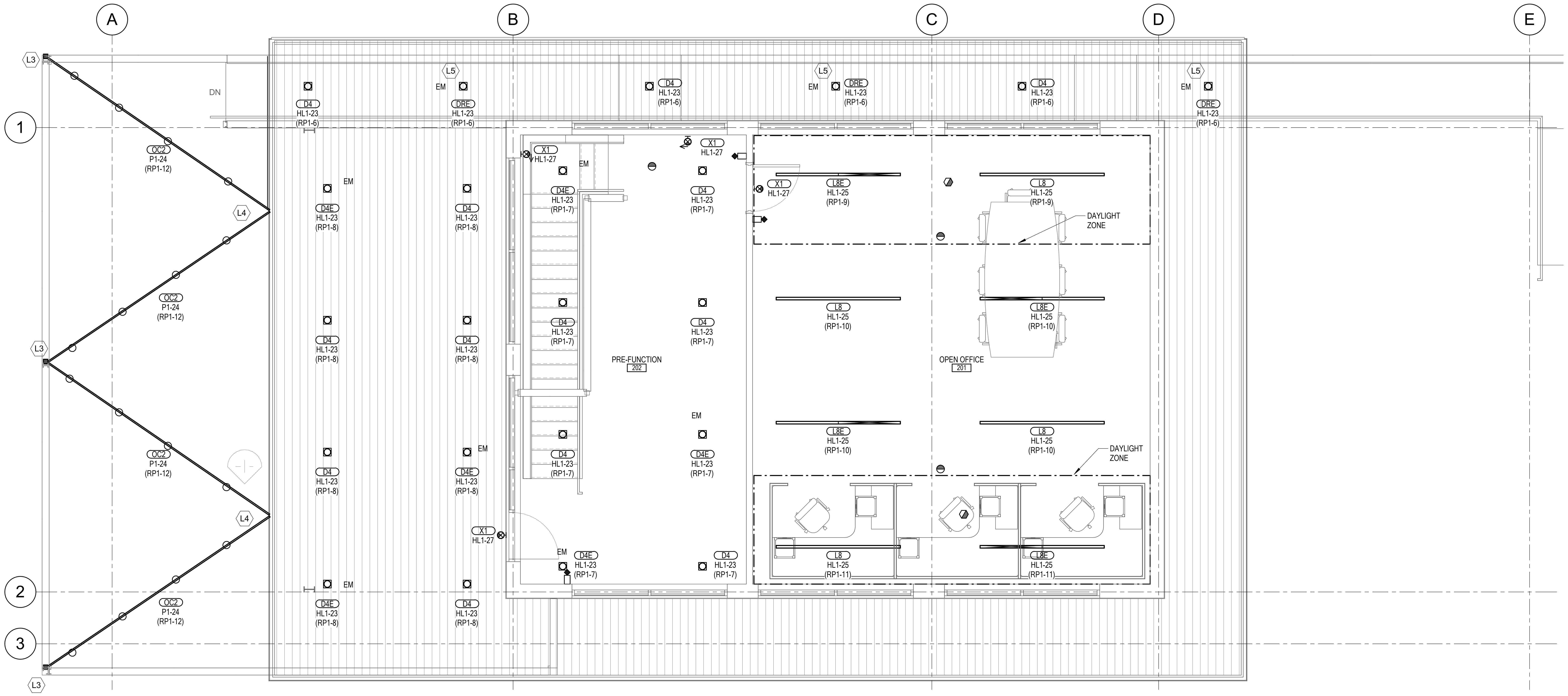
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ALL FIXTURE LOCATIONS WITHIN A CEILING OR CEILING GRID. FOR AREAS WITHOUT CEILINGS, FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND STRUCTURAL ELEMENTS. CONTRACTOR TO PAINT EXPOSED RACEWAY TO MATCH ADJACENT SURFACES
2. FIELD VERIFY EXACT FIXTURE LENGTHS FOR CONTINUOUS ILLUMINATION FOR COVES AND LINEAR RUNS. PROVIDE CONTINUOUS ILLUMINATION WITH NO MORE THAN A 1" GAP BETWEEN THE END OF THE EDGE OF THE WALL / CEILING AND THE FIXTURE.
3. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR PLACEMENT OF FIXTURES WITHIN MECHANICAL ROOMS.
5. ALL ROOM CONTROLLERS AND/OR POWER PACKS SHALL BE INSTALLED IN THE CEILING SPACE DIRECTLY ABOVE THE ENTRY DOOR TO THE SPACE IT IS CONTROLLING.
6. ALL UNDERCABINET LIGHTS MUST BE COORDINATED WITH MILLWORK FOR EXACT LENGTHS. ALL UNDERCABINET LIGHTS WILL BE MOUNTED TO THE FACE OF THE CABINET.
7. PROVIDE 0-10V DIMMING CONDUCTORS FOR ALL AREAS AND/OR ROOMS WHERE 0-10V DIMMING IS INDICATED BY THE RELAY PANEL SCHEDULE AND/OR WALL STATION CONTROL SEQUENCE.
8. SUBSCRIPT ADJACENT TO LIGHT FIXTURE INDICATES CONTROLS, PROVIDE LIGHTING CONTROLS WITH THE REQUIRED NUMBER OF RELAY/DIMMERS. PROVIDE ADDITIONAL RELAY/DIMMERS FOR DAYLIGHT ZONES AS REQUIRED.

SHEET KEYNOTES

L3 ATTACH AC SUSPENSION CABLE AT TOP OF 12FT TALL POST INTEGRAL WITH DECK RAILING. COORDINATE REQUIREMENTS WITH MANUFACTURER AND RAILING INSTALLER. PROVIDE ALL HARDWARE FOR A COMPLETE INSTALLATION.

L4 ATTACH AC SUSPENSION CABLE TO BUILDING AT +/- 12'FT. COORDINATE REQUIREMENTS WITH ARCHITECT AND FIXTURE MANUFACTURER . PROVIDE ALL HARDWARE FOR A COMPLETE INSTALLATION.

L5 EMERGENCY FIXTURE WITH REMOTE TEST SWITCH. COORDINATE LOCATIONS WITH OF TEST SWITCH WITH ARCHITECT.



UPPER LEVEL LIGHTING PLAN
SCALE = 1/4" = 1'-0"

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POWER GENERAL SHEET NOTES

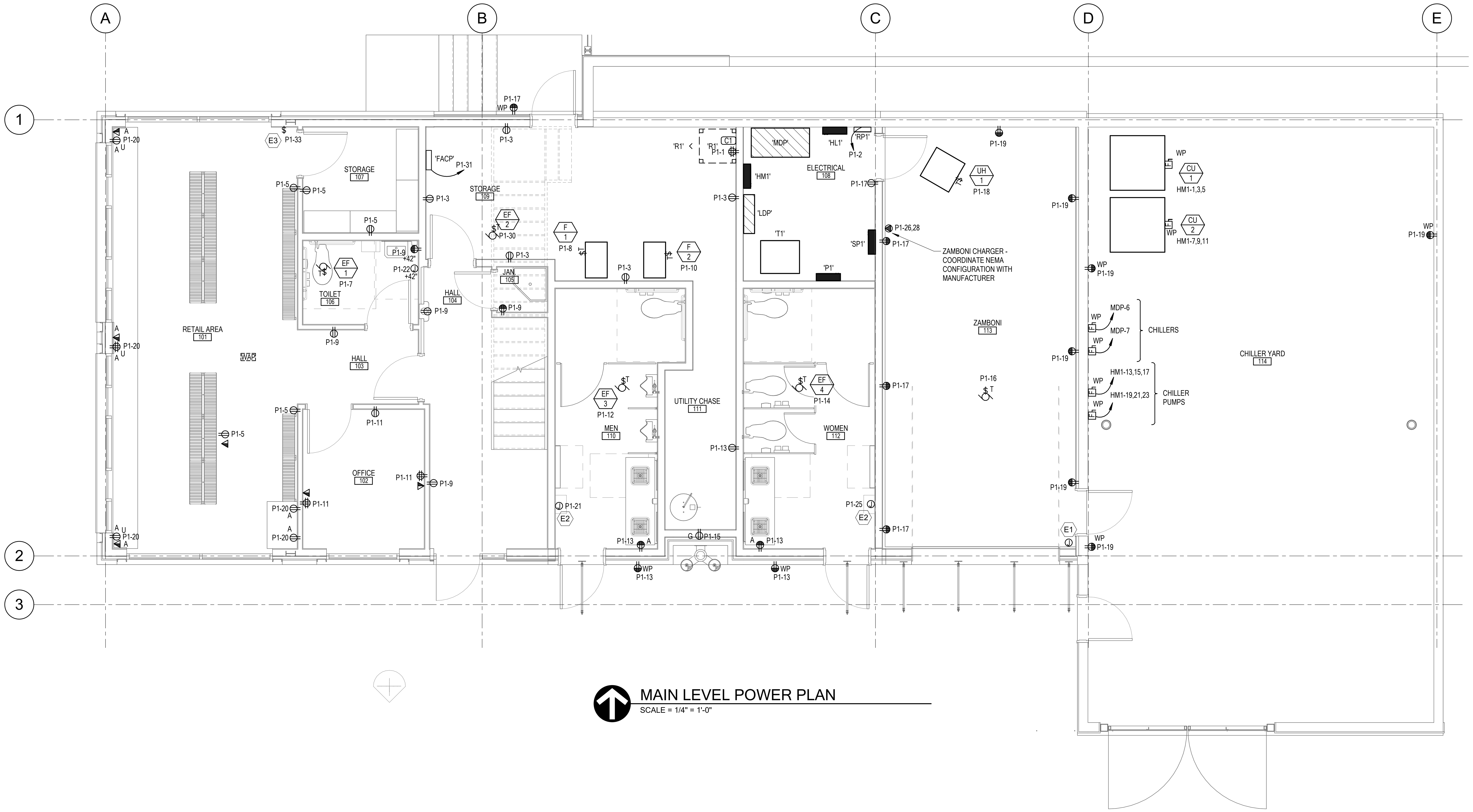
1. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL MECHANICAL UNITS WITH MECHANICAL CONTRACTOR.
2. CIRCUITS TO ALL MECHANICAL EQUIPMENT SHALL BE DEDICATED UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

E1 PROVIDE JUNCTION BOX FOR CONTROL OF OVERHEAD DOOR. COORDINATE REQUIREMENTS WITH OH DOOR MANUFACTURER. PROVIDE ALL CONDUIT, WIRE, ETC FOR A COMPLETE INSTALLATION.

E2 COORDINATE VOLTAGE/AMPERAGE AND EXACT LOCATION OF HAND DRYER PRIOR TO INSTALLATION.

E3 PROVIDE SINGLE ON/OFF SWITCH FOR EXTERIOR PATIO HEATERS. COORDINATE CONTROL WIRE AND TRANSFORMER REQUIREMENTS WITH MANUFACTURER PRIOR TO INSTALLATION OF HEATERS. ALL HEATERS TO BE CONTROLLED WITH SAME SWITCH. PROVIDE ALL WIRING, CONDUIT, CONNECTIONS, ETC. REQUIRED FOR COMPLETE AND WORKING HEATERS.



MAIN LEVEL POWER PLAN
SCALE = 1/4" = 1'-0"

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PROFESSIONAL ENGINEER JOSHUA OAKESON STATE OF UTAH

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Planning Director
801.214.2752
flilly@millcreek.us

MILLCREEK

MILLCREEK COMMON
1300 E 3300 S
MILLCREEK, UT 84005

REV	DATE	DESCRIPTION

DESIGNED BY: BNA
DRAWN: BNA
CHECKED: BNA
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

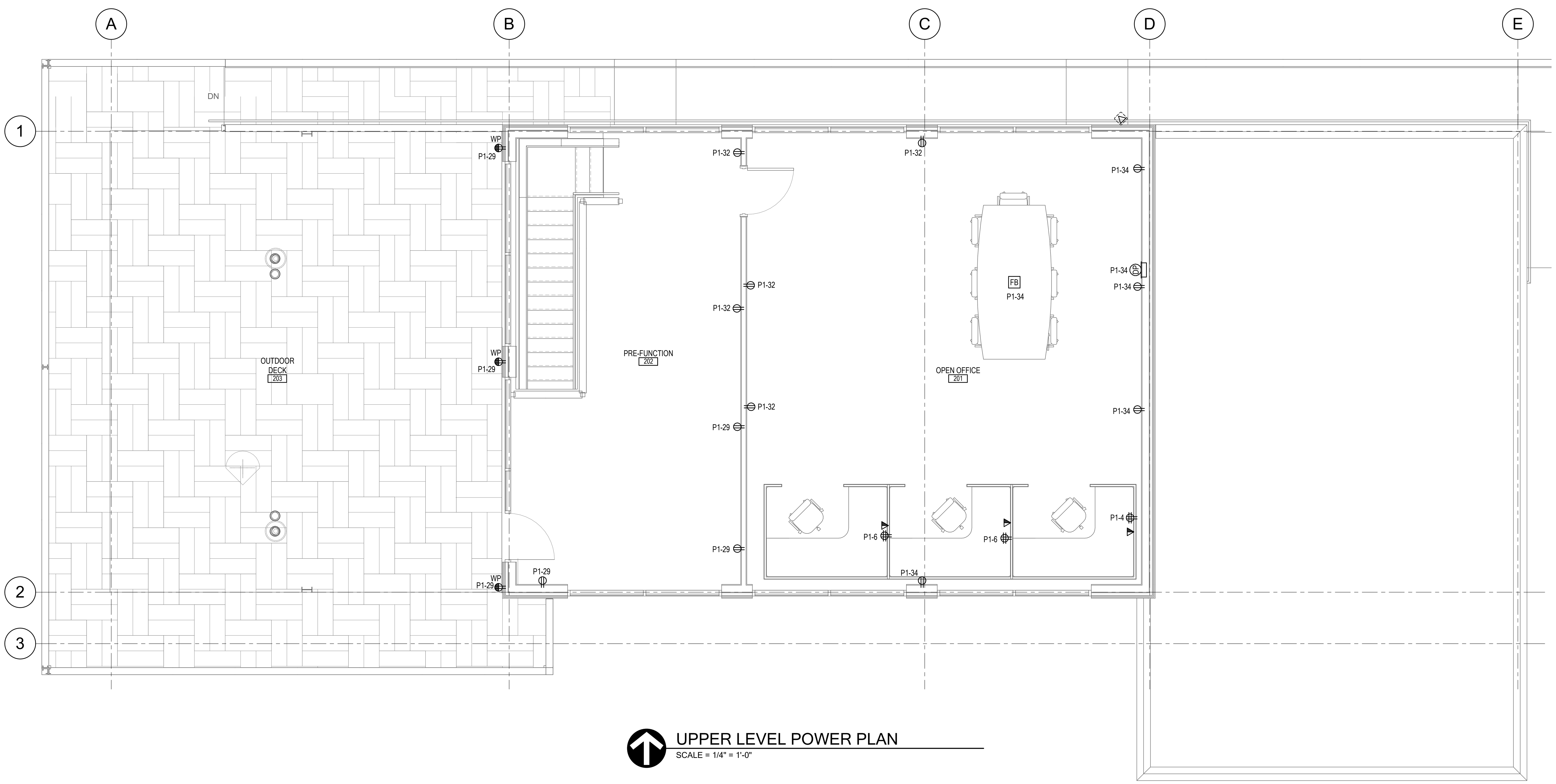
Sheet Name:
MAIN LEVEL POWER PLAN

Sheet Number:
E3.1-I

POWER GENERAL SHEET NOTES

1. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL MECHANICAL UNITS WITH MECHANICAL CONTRACTOR.
2. CIRCUITS TO ALL MECHANICAL EQUIPMENT SHALL BE DEDICATED UNLESS NOTED OTHERWISE.

SHEET KEYNOTES



UPPER LEVEL POWER PLAN
SCALE = 1/4" = 1'-0"

WPA architecture

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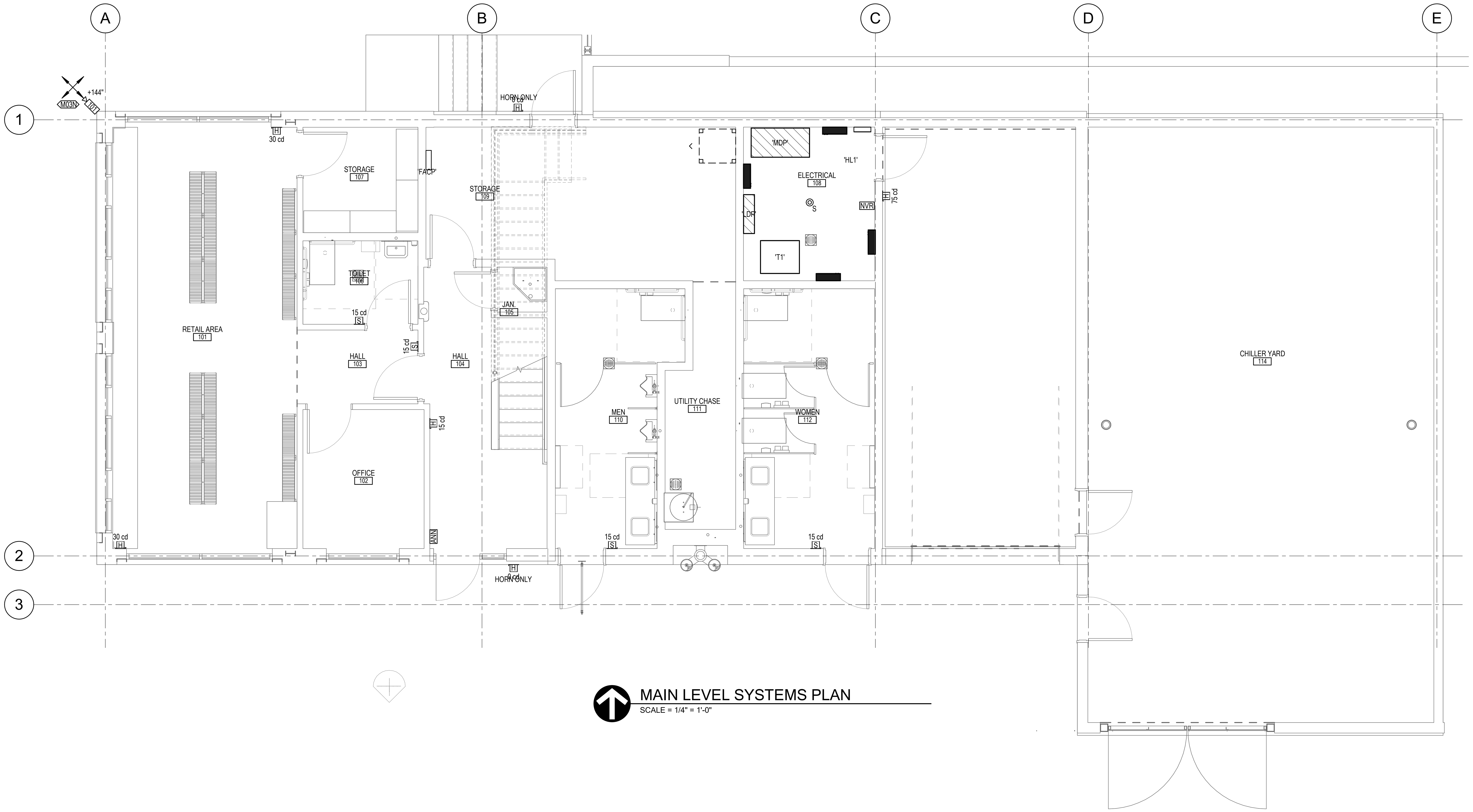

MAIN LEVEL SYSTEMS PLAN
SCALE = 1/4" = 1'-0"

FIRE ALARM GENERAL NOTES

1. CONNECT ELEVATOR LOBBY SMOKE DETECTORS TO ELEVATOR CONTROLLER FOR ELEVATOR RECALL. PROVIDE SHUNT TRIP DEVICE AT DISCONNECT FOR ALL ELEVATOR CONTROLLERS. PROVIDE A HEAT DETECTOR AT THE TOP OF ELEVATOR SHAFT AND ADJACENT TO EACH SPRINKLER HEAD IN ALL ELEVATOR MACHINE ROOMS. ACTIVATION OF HEAT DETECTOR TO INITIATE SHUNT-TRIP.
2. PROVIDE #14 AWG MINIMUM WIRING FOR ALL SIGNAL AND INITIATION DEVICES.
3. ALL EXPOSED CONDUIT SHALL BE ROUTED PERPENDICULAR AND PARALLEL TO COLUMNS AND BEAMS. ALL EXPOSED CONDUIT ROUTING SHALL BE COORDINATED WITH OWNER'S REP PRICER TO INSTALLATION. NO ADDITIONAL COST TO THE OWNER WILL BE ALLOWED FOR RELOCATING CONDUIT DUE TO LACK OF COORDINATION WITH THE OWNER'S REP.
4. ALL BACK BOXES SHALL BE FLUSH MOUNTED UNLESS OTHERWISE NOTED. CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND BACK BOXES IN POURED CONCRETE, PRE-CASTCONCRETE, MASONRY AND CYP WALLS.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT QUANTITY AND LOCATIONS OF ALL FIRE SPRINKLER SYSTEM TAMPER AND FLOW SWITCHES WITH CONSTRUCTION MANAGER. CONNECT ALL TAMPER AND FLOW SWITCHES TO FIRE ALARM SYSTEM.
6. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND QUANTITY OF ALL DUCT TYPE SMOKE DETECTORS WITH MECHANICAL CONTRACTOR. HARD WIRE TO RELAY STARTER.
7. PROVIDE SMOKE AND HEAT DETECTORS WITHIN ELEVATOR MACHINE ROOMS AND ELEVATOR HOST PITS.
8. PROVIDE CONNECTION OF FA SYSTEMS TO ALL MAGNETIC DOOR HOLD-OPEN DEVICES TO AUTOMATICALLY CLOSE DOORS DURING ALARM CONDITIONS.
9. DEVICES INDICATED ON FIRE ALARM ONE-LINE ARE FOR REFERENCE ONLY. REFER TO PLAN DRAWINGS AND SPECIFICATIONS FOR QUANTITIES. REFER TO ARCHITECTURAL DOOR SCHEDULE FOR MAGNETIC DOOR HOLDER AND BLOW OPEN DOOR REQUIREMENTS.
10. ALL VISUAL DEVICES SHALL BE SYNCHRONIZED WITHIN THE BUILDING REGARDLESS OF PROJECT SCOPE BOUNDARIES.
11. PROVIDE FIRE ALARM RELAY MODULES FOR ALL DOORS WITH ACCESS CONTROL DEVICES.
12. PROVIDE (2) DUCT TYPE SMOKE DETECTOR FOR EACH FAN COIL UNIT, AHU, SUPPLY FAN AND HEAT PUMP OF 2000 CFM OR GREATER.
13. FIRE ALARM DEVICES SHOWN ARE FOR REFERENCE ONLY AND BASED UPON A PERFORMANCE SPECIFICATION. ALL NEW EQUIPMENT/DEVICE QUANTITIES, LOCATION, AND ALL NATIONAL & LOCAL CODE COMPLIANCE TO BE PROVIDED AND STAMPED BY A LICENSED FIRE ALARM ENGINEER AND INCLUDED IN THE FIRE ALARM CONTRACTORS BID. IN NO WAY ARE THE DEVICES SHOWN ON THESE DRAWINGS TO BE IMPLEMENTED AS FINAL DESIGN DOCUMENTS.
14. PROVIDE 120V CIRCUIT FROM THE NEAREST EQUIPMENT BRANCH PANELBOARD FOR FIRE/SMOKE DAMPER RELAYS. PROVIDE FIRE ALARM MODULES AND RELAYS ASNECESSARY FOR ALL FIRE/SMOKE DAMPERS SHOWN ON DIVISION 23 DRAWINGS. ALL FIRE/SMOKE DAMPERS SHALL HAVE A MANUAL OVERRIDE SWITCH. PROVIDE DUCT DETECTOR WITHIN 5'-0" OF EACH FIRE/SMOKE DAMPER. REFER TO DIAGRAM D012 ON SHEET E9301.

SHEET KEYNOTES

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MAIN LVL SYS PLAN

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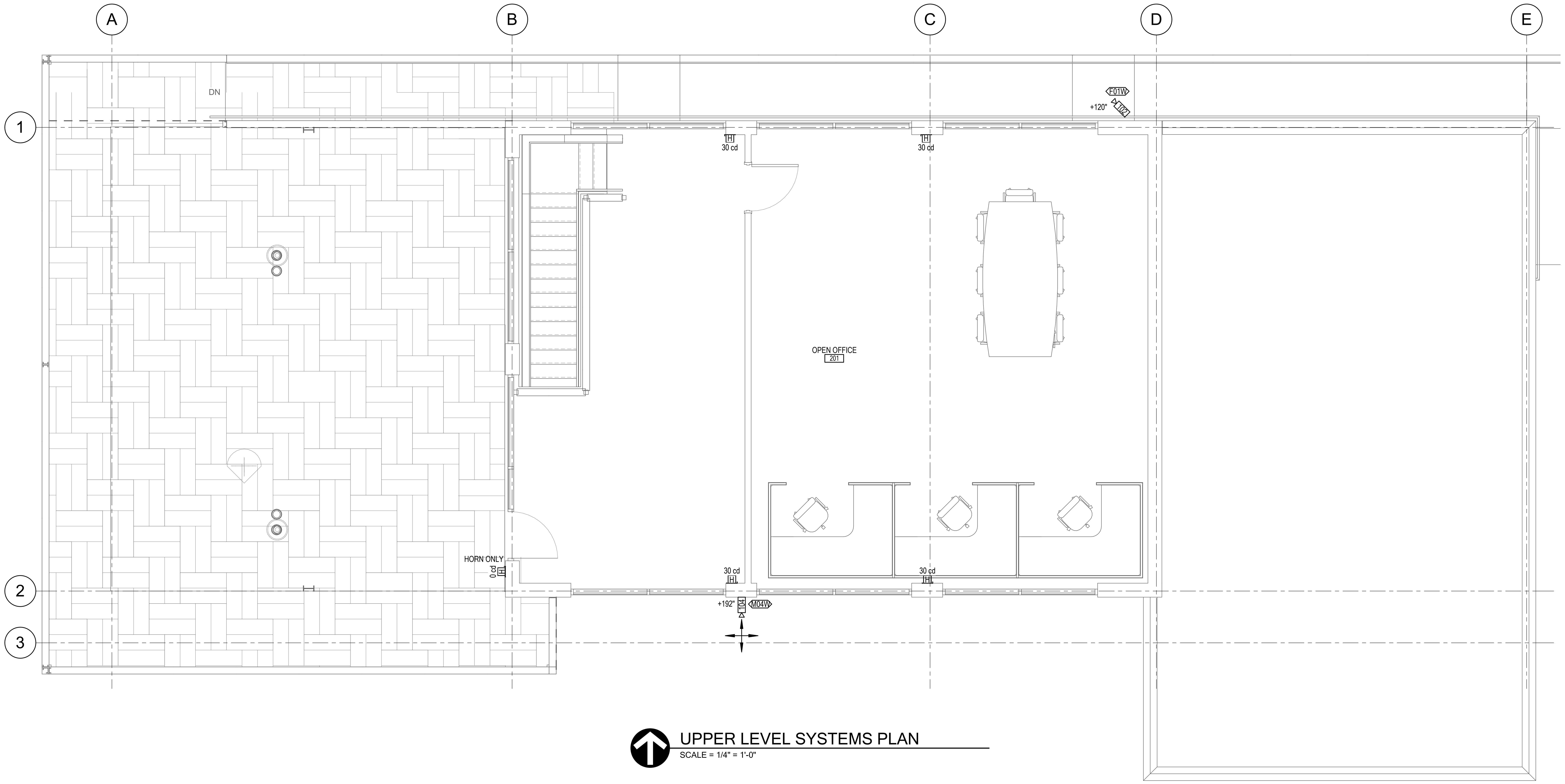

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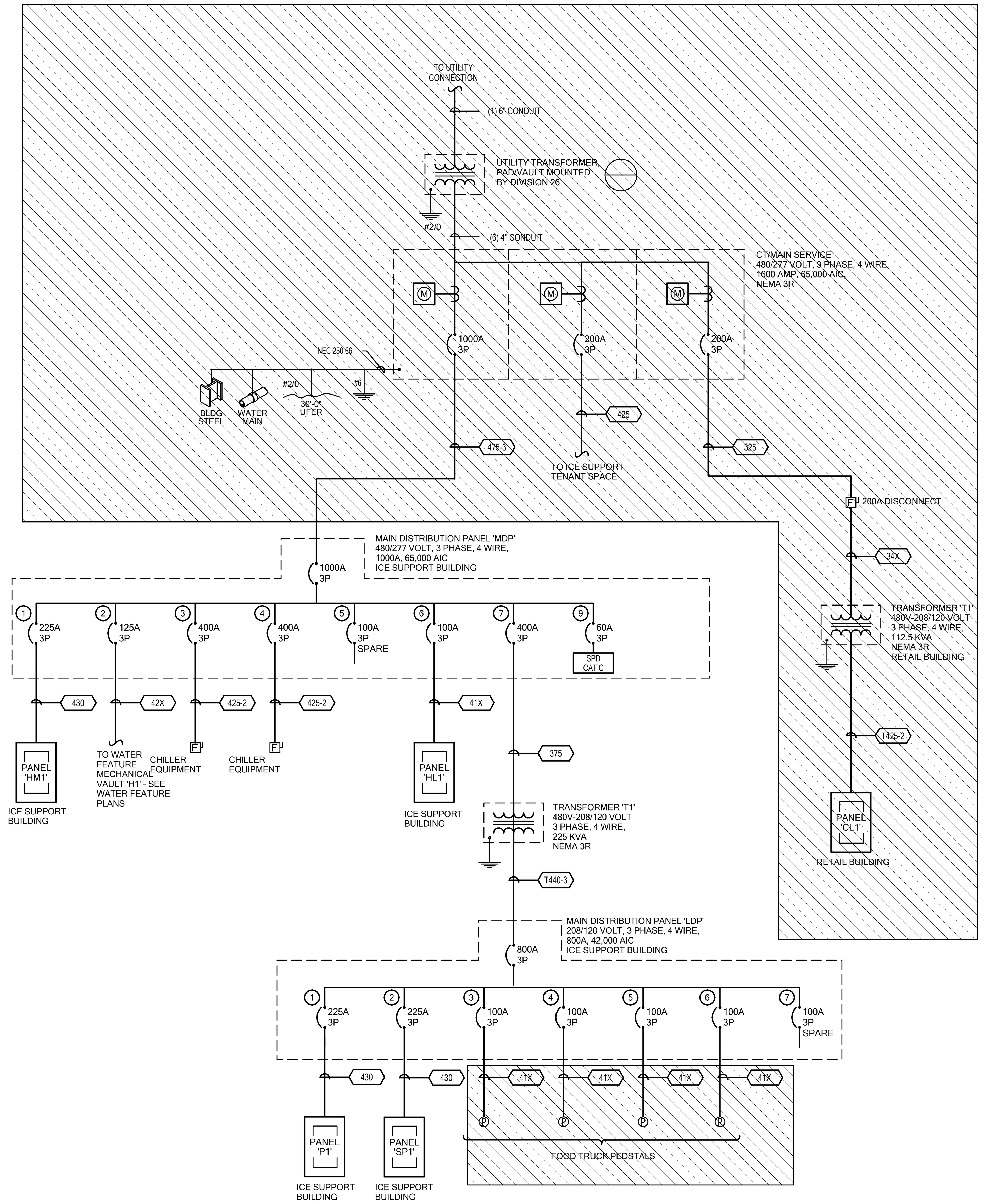

ONE-LINE DIAGRAM

NO SCALE

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY / ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY △ 480-208/120 Y

TRANS KVA	O.C. PROT.	TYPE COND.*	GEC (1)	MIN. Z%	O.C. PROT.	TYPE COND.*	COND. AMPS	SETS	CONDUCTOR (3) QUAN.	CONDUCTOR (3) SIZE	CONDUIT SIZE	BONDING JUMPER (2)
30	50	36	8 CU	3	100	T41X-1	120	1	4	1/0	2"	8 CU
45	70	34	4 CU	3	175	T44X-1	180	1	4	4/0	2-1/2"	4 CU
75	125	32X	2 CU	3	225	T435-1	250	1	4	350	3"	1/0 AL
112.5	175	34X	2 CU	4	400	T425-2	410	2	4	250	3"	1/0 AL
150	300	350	2/0 CU	4	600	T450-2	620	2	4	500	4"	4/0 AL
225	400	375	2/0 CU	4	800	T440-3	810	3	4	400	4"	4/0 AL
300	600	350-2	3/0 CU	5	1200	T450-4	1240	4	4	500	4"	250 AL
500	800	340-3	3/0 CU	5	1600	T440-6	1620	6	4	400	4"	300 AL
750	1200	350-4	3/0 CU	5	3000	T450-10	3100	10	4	500	4"	750 AL

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY / ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY (200% NEUTRAL) △ 480-208/120 Y

TRANS KVA	O.C. PROT.	TYPE COND.*	GEC (1)	MIN. Z%	O.C. PROT.	TYPE COND.*	COND. AMPS	SETS	CONDUCTOR (3) QUAN.	CONDUCTOR (3) SIZE	CONDUIT SIZE	BONDING JUMPER (2)
30	50	36	6 CU	3	100	T52X-1	108	1	5	2/0	2-1/2"	6 CU
45	70	34	2 CU	3	175	T530-1	184	1	5	300	3"	1/0 AL
75	125	32X	2 CU	3	225	T550-1	248	1	5	500	4"	1/0 AL
112.5	175	34X	1/0 CU	4	400	T535-2	400	2	5	350	3"	3/0 AL
150	300	350	2/0 CU	4	600	T535-3	600	3	5	350	4"	4/0 AL
225	400	375	2/0 CU	4	800	T535-4	800	4	5	350	4"	4/0 AL
300	600	350-2	3/0 CU	5	1200	T550-5	1240	5	5	500	4"	350 AL
500	800	340-3	3/0 CU	5	1600	T550-7	1736	7	5	500	4"	500 AL
750	1200	350-4	3/0 CU	5	3000	T575-10	3080	10	5	750	4"	750 AL

* SEE SCHEDULE FOR CONDUIT AND WIRE SIZE

NOTES:

(1) GROUNDING ELECTRODE CONDUCTOR. (NEC 250.66)

(2) SUPPLY SIDE BONDING JUMPER. (NEC 250.102 (C)(1))

(3) XHHW INSULATION.

COPPER CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSULATION	EQ. GND. COND.(AL)
20	30	3/4"	2	10	THHN THWN	10
30	30	3/4"	3	10	THHN THWN	10
40	30	3/4"	4	10	THHN THWN	10
28	40	1"	2	8	THHN THWN	10
38	40	1"	3	8	THHN THWN	10
48	40	1"	4	8	THHN THWN	10
26	55	1"	2	6	THHN THWN	8
36	55	1"	3	6	THHN THWN	8
46	55	1"	4	6	THHN THWN	8
24	70	1"	2	4	THHN THWN	8
34	70	1-1/4"	3	4	THHN THWN	8
44	70	1-1/4"	4	4	THHN THWN	8
23	85	1-1/4"	2	3	THHN THWN	8
33	85	1-1/4"	3	3	THHN THWN	8
43	85	1-1/2"	4	3	THHN THWN	8
32	95	1-1/2"	3	2	THHN THWN	6
42	95	1-1/2"	4	2	THHN THWN	6

GENERAL SHEET NOTES

1. EMERGENCY EQUIPMENT INDICATED SHALL BE SELECTIVELY COORDINATED TO 0.1 SECONDS PER SPECIFICATION SECTION 26 0573. STUDY SHALL BE SUBMITTED PRIOR TO ALL OTHER EQUIPMENT SUBMITTALS.
2. SEE PLANS FOR LOCATIONS OF PANELBOARDS, SWITCHBOARDS TRANSFER SWITCHES, BUSWAY, TRANSFORMERS DISCONNECTS, ETC. AND PROVIDE NEMA RATED ENCLOSURES AS REQUIRED.
3. SUBMIT DIMENSIONED DRAWINGS OF ALL ELECTRICAL ROOMS SHOWING ALL EQUIPMENT LOCATIONS WITHIN EACH SPACE BASED ON THE EQUIPMENT MANUFACTURER GEAR SIZES WITH ALL EQUIPMENT SHOP DRAWINGS.
4. PROVIDE AN ARC ENERGY-REDUCING MAINTENANCE SWITCH FOR ALL OVER-CURRENT PROTECTIVE DEVICES RATED 1200 AMPS OR HIGHER. REFER TO SPECIFICATION SECTION 26 2815 OVER-CURRENT PROTECTIVE DEVICES AND 240.87 OF CURRENT NATIONAL ELECTRICAL CODE (NEC).
5. PROVIDE ELECTRONIC TRIP CIRCUIT BREAKERS FOR ALL CIRCUIT BREAKERS 600 AMPS AND ABOVE. REFER TO THE OVERCURRENT PROTECTION SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS.
6. ALL EQUIPMENT SHALL BE FULLY RATED. NO SERIES RATINGS ARE ALLOWED.
7. REFER TO SPECIFICATION SECTIONS FOR ADDITIONAL DETAILS.
8. PROVIDE PRELIMINARY SHORT CIRCUIT STUDY SUBMITTAL PRIOR TO SUBMITTAL OF ANY ELECTRICAL EQUIPMENT. REFER TO SPECIFICATION SECTION 26 0573 PROTECTIVE DEVICE STUDY.
9. PROVIDE A SURGE PROTECTIVE DEVICE ON EACH SWITCHBOARD AND PANELBOARD LOCATED ON THE EMERGENCY DISTRIBUTION SYSTEM. REFER TO SPECIFICATION SECTION 26 4313 SURGE-PROTECTIVE DEVICES (SPD) FOR LOCATION CATEGORY.
10. HATCHED AREA INDICATES ELEMENTS OF ONE-LINE THAT DO NOT APPLY TO THIS BUILDING/PROJECT AREA.

SHEET KEYNOTES

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSULATION	EQ. GND. COND.(AL)
31X	120	2"	3	1/0	XHHW-2	4
41X	120	2"	4	1/0	XHHW-2	4
51X	96	2"	5 *	1/0	XHHW-2	4
32X	135	2"	3	2/0	XHHW-2	4
42X	135	2"	4	2/0	XHHW-2	4
52X	108	2"	5 *	2/0	XHHW-2	4
33X	155	2"	3	3/0	XHHW-2	4
43X	155	2"	4	3/0	XHHW-2	4
53X	124	3"	5 *	3/0	XHHW-2	4
34X	180	2"	3	4/0	XHHW-2	4
44X	180	3"	4	4/0	XHHW-2	4
54X	144	3"	5 *	4/0	XHHW-2	2
325	205	2"	3	250	XHHW-2	2
425	205	3"	4	250	XHHW-2	2
525	164	3"	5 *	250	XHHW-2	2
330	230	3"	3	300	XHHW-2	2
430	230	3"	4	300	XHHW-2	2
530	184	3"	5 *	300	XHHW-2	2
335	250	3"	3	350	XHHW-2	2
435	250	3"	4	350	XHHW-2	2
535	200	3"	5 *	350	XHHW-2	2
340	270	3"	3	400	XHHW-2	2
440	270	3"	4	400	XHHW-2	2
540	216	3"	5 *	400	XHHW-2	2
350	310	4"	3	500	XHHW-2	1
450	310	4"	4	500	XHHW-2	1
550	248	4"	5 *	500	XHHW-2	1
375	385	4"	3	750	XHHW-2	1
475	385	4"	4	750	XHHW-2	1
575	308	4"	5 *	750	XHHW-2	1

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE FOR PARALLEL RUNS

TYPE	MAX. O.C. PROT.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND. COND.(AL)
325-2	400	410	2	3	250	2-1/2"	2/0
425-2	400	410	2	4	250	2-1/2"	2/0
535-2	400	400	2	5*	350	3"	2/0
350-2	600	620	2	3	500	3"	2/0
450-2	600	620	2	4	500	3"	2/0
535-3	600	600	3	5*	350	3"	2/0
340-3	800	810	3	3	400	2-1/2"	3/0
440-3	800	810	3	4	400	3"	3/0
535-4	800	800	4	5 *	350	4"	3/0
375-3	1000	1155	3	3	750	4"	4/0
475-3	1000	1155	3	4	750	4"	4/0
535-5	1000	1000	5	5 *	350	4"	4/0
350-4	1200	1240	4	3	500	4"	250
450-4	1200	1240	4	4	500	4"	250
550-5	1200	1240	5	5 *	500	4"	250
340-6	1600	1620	6	3	400	4"	350
440-6	1600	1620	6	4	400	4"	350
550-7	1600	1736	7	5 *	500	4"	350
475-6	2000	2310	6	4	750	4"	400
475-7	2500	2695	7	4	750	5"	600
475-8	3000	3080	8	4	750	5"	600
475-11	4000	4235	11	4	750	5"	750

NOTES:
IN PARALLEL RUNS SIZE GND. COND. IN ACCORDANCE WITH NEC PARA. 250-122.

GND. CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS

* 200% NEUTRAL, DERATED TO 80% BASED ON NEC 310.15.B(5)(C)

** COPPER CONDUCTOR (XHHW)

PROVIDE COMPACT STRANDED ALUMINUM ASSOCIATION 8000 SERIES ALLOY CONDUCTORS.

PROVIDE TERMINATION FOR ALUMINUM-ALLOY CONDUCTORS OF HYDRAULIC COMPRESSION TYPE ONLY LISTED UNDER UL 486-B MARKED "AL7CU" FOR 75° RATED CIRCUITS.

PROVIDE ALL ELECTRICAL EQUIPMENT WITH PROPER SIZING TO ACCOMMODATE ALUMINUM CONDUCTORS, COORDINATE WITH EQUIPMENT SUPPLIER.

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ONE-LINE DIAGRAM

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E5.1-I

SWITCHBOARD SCHEDULE

SWITCHBOARD: MDP

LOCATION:	ELECTRICAL 108	VOLTS:	480/277 Wye	MAINS/BUS AMPS:	1000A
FED FROM:		PHASE:	3	MAIN DISC. TYPE:	
MOUNTING:		WIRES:	4	MAIN DISC. TRIP:	
ENCLOSURE		LUGS:		MAIN DISC. FRM.:	
BUSSING:				DOOR-IN-DOOR:	
				SPD:	

CKT	CIRCUIT DESCRIPTION	# OF POLES	AMPS	Load	REMARKS
1	T1	3	400 A	69584 VA	
2	IH1	3	225 A	55536 VA	
3					
4					
5	SL1	3	100 A	2890 VA	
6	CHILLER	3	400 A	202858 VA	
7	CHILLER	3	400 A	202858 VA	
8					
9					
10					
			TOTAL CONN. LOAD:	532726 VA	
			TOTAL AMPS:	641 A	

AIC RATING: ____________

NOTES:

SWITCHBOARD SCHEDULE

SWITCHBOARD: LDP

LOCATION:	ELECTRICAL 108	VOLTS:	120/208 Wye	MAINS/BUS AMPS:	800 A
FED FROM:	T1	PHASE:	3	MAIN DISC. TYPE:	
MOUNTING:		WIRES:	4	MAIN DISC. TRIP:	
ENCLOSURE		LUGS:		MAIN DISC. FRM.:	
BUSSING:				DOOR-IN-DOOR:	
				SPD:	

CKT	CIRCUIT DESCRIPTION	# OF POLES	AMPS	Load	REMARKS
1	P1	3	225 A	31184 VA	
2	SP1	3	225 A	0 VA	
3	FOOD TRUCK PEDESTAL	1	100 A	9600 VA	
4	FOOD TRUCK PEDESTAL	1	100 A	9600 VA	
5	FOOD TRUCK PEDESTAL	1	100 A	9600 VA	
6	FOOD TRUCK PEDESTAL	1	100 A	9600 VA	
7					
8					
9					
10					
			TOTAL CONN. LOAD:	68584 VA	
			TOTAL AMPS:	190 A	

AIC RATING: ____________

NOTES:

PANELBOARD SCHEDULE

PANEL: HM1 TYPE: Type 1 VOLTS: 480/277 Wye PHASE: 3 WIRES: 4

MOUNTING: SURFACE LOCATION: ELECTRICAL 108 MAINS: MLO

BUSSING: FED FROM: MDP

AMP: 225 A

___ SUBFEED LUGS
X DOOR-IN-DOOR
___ ISO GROUND
___ 200% NEUTRAL
___ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
CONDENSING UNIT	20 A	3	12	1	1774 VA						2				
--	--	--	--	3		1774 VA					4				
--	--	--	--	5			1774 VA				6				
CONDENSING UNIT	20 A	3	12	7	1774 VA						8				
--	--	--	--	9		1774 VA					10				
--	--	--	--	11			1774 VA				12				
CHILLER PUMP	45 A	3	8	13	7482 VA						14				
--	--	--	--	15		7482 VA					16				
--	--	--	--	17			7482 VA				18				
CHILLER PUMP	45 A	3	8	19	7482 VA						20				
--	--	--	--	21		7482 VA					22				
--	--	--	--	23			7482 VA				24				
				25							26				
				27							28				
				29							30				
				31							32				
				33							34				
				35							36				
				37							38				
				39							40				
				41							42				
					18512	18512	18512	TOTAL (VA)							CONNECTED LOAD TOTAL
					67 A	67 A	67 A	AMPS/PHASE							55536 VA

Legend:
* PROVIDE 5mA GFCI CIRCUIT BREAKER

AIC RATING ____________ AMPS RMS SYSM.

PANELBOARD SCHEDULE

PANEL: P1 TYPE: Type 1 VOLTS: 120/208 Wye PHASE: 3 WIRES: 4

MOUNTING: SURFACE LOCATION: ELECTRICAL 108 MAINS: MLO

BUSSING: FED FROM: LDP

AMP: 225 A

___ SUBFEED LUGS
___ DOOR-IN-DOOR
___ ISO GROUND
___ 200% NEUTRAL
___ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
DATA RACK	20 A	1	12	1	1800 VA			500 VA			2	12	1	20 A	'RP1'
RECEPT STORAGE 109	20 A	1	12	3		900 VA			360 VA		4	12	1	20 A	WORKSTATION OPEN OFFICE
RECEPT RETAIL/STORAGE	20 A	1	12	5			900 VA			720 VA	6	12	1	20 A	WORKSTATION OPEN OFFICE
EF-1 EXHAUST FAN	15 A	1	12	7	1176 VA			1176 VA			8	12	1	15 A	F-1 FURNACE
RECEPT 103, 104, 105	20 A	1	12	9		900 VA			1176 VA		10	12	1	15 A	F-2 FURNACE
RECEPT OFFICE 102	20 A	1	12	11			540 VA			1176 VA	12	12	1	15 A	EF-3 EXHAUST FAN
RECEPT 110, 111, EXTERIOR	20 A	1	12	13	900 VA			1176 VA			14	12	1	15 A	EF-4 EXHAUST FAN
* EWC	20 A	1	12	15		1000 VA			1000 VA		16	12	1	20 A	OVERHEAD DOOR
RECEPT ZAMBONI/EXTERIOR	20 A	1	12	17			900 VA			768 VA	18	12	1	15 A	UH-1 UNIT HEATER
RECEPT ZAMBONI/CHILLER	20 A	1	12	19	1260 VA			900 VA			20	12	1	20 A	RECEPT RETAIL AREA 101
HAND DRYER MEN 110	20 A	1	12	21		1500 VA			1500 VA		22	12	1	20 A	HAND DRYER TOILET 106
SPACE ONLY	--	--	--	23			0 VA			680 VA	24	12	1	20 A	LIGHTING OUTDOOR DECK
HAND DRYER WOMEN 112	20 A	1	12	25	1500 VA			750 VA			26	10	2	40 A	ZAMBONI CHARGER
SPACE ONLY	--	--	--	27		0 VA			750 VA		28	--	--	--	--
RECEPTACLE PRE-FUNCTION	20 A	1	12	29			1080 VA			1176 VA	30	12	1	15 A	EF-2
FACP	20 A	1	12	31	500 VA			900 VA			32	12	1	20 A	RECEPTACLE OPEN OFFICE
POWER RETAIL AREA 101	20 A	1		33		720 VA			900 VA		34	12	1	20 A	RECEPTACLE OPEN OFFICE
SPARE	20 A	1	--	35			0 VA			0 VA	36	--	1	20 A	SPARE
SPARE	20 A	1	--	37	0 VA			0 VA			38	--	1	20 A	SPARE
SPARE	20 A	1	--	39		0 VA			0 VA		40	--	1	20 A	SPARE
SPARE	20 A	1	--	41			0 VA			0 VA	42	--	1	20 A	SPARE
					12538	10706	7940	TOTAL (VA)							CONNECTED LOAD TOTAL
					108 A	93 A	66 A	AMPS/PHASE							30184 VA

Legend:
* PROVIDE 5mA GFCI CIRCUIT BREAKER

AIC RATING ____________ AMPS RMS SYSM.

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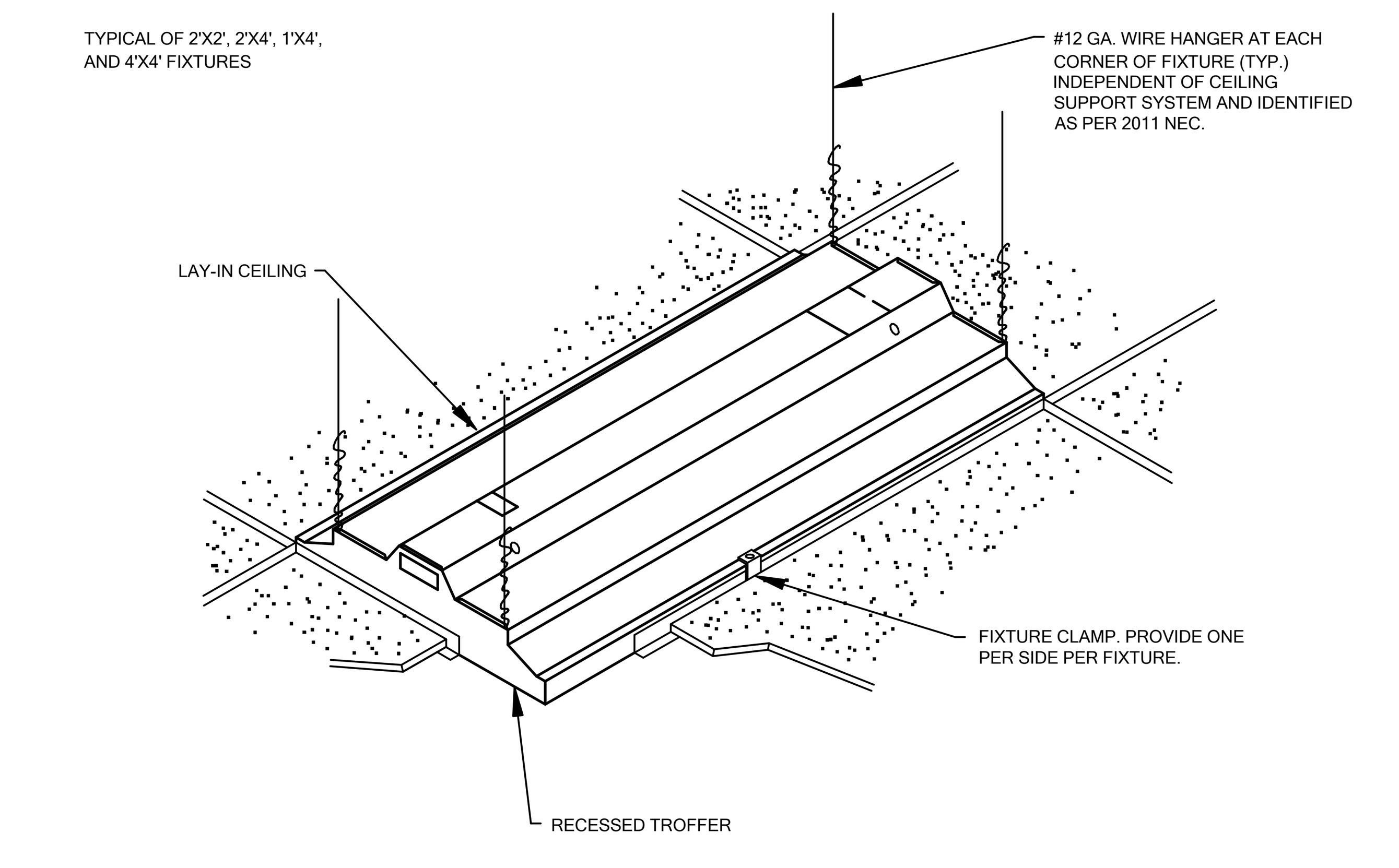


DIAGRAM A001 TYP. RECESSED FIXTURE MOUNTING

NTS

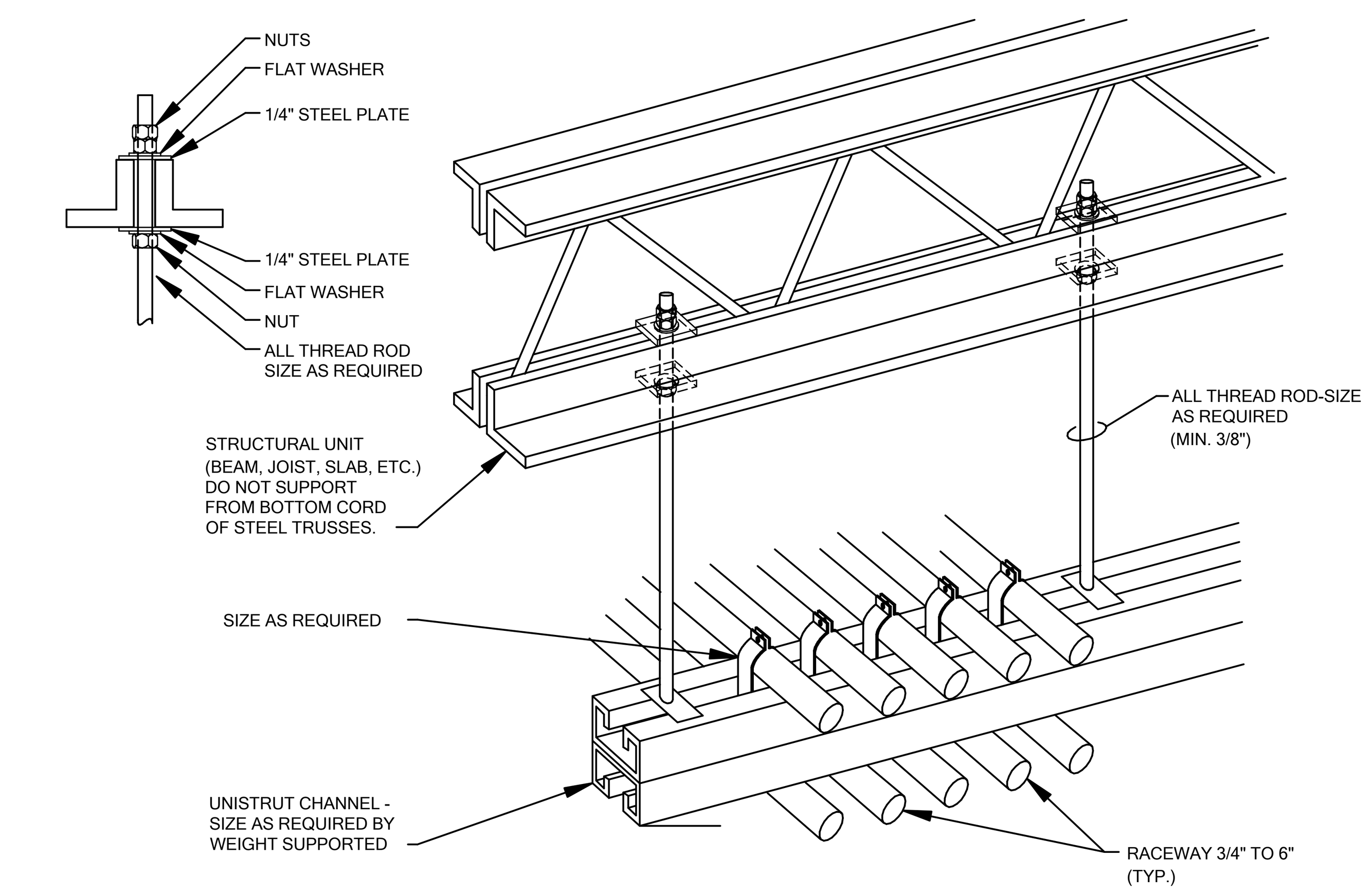


DIAGRAM H001 TYPICAL TRAPEZE CONDUIT RACK

NTS

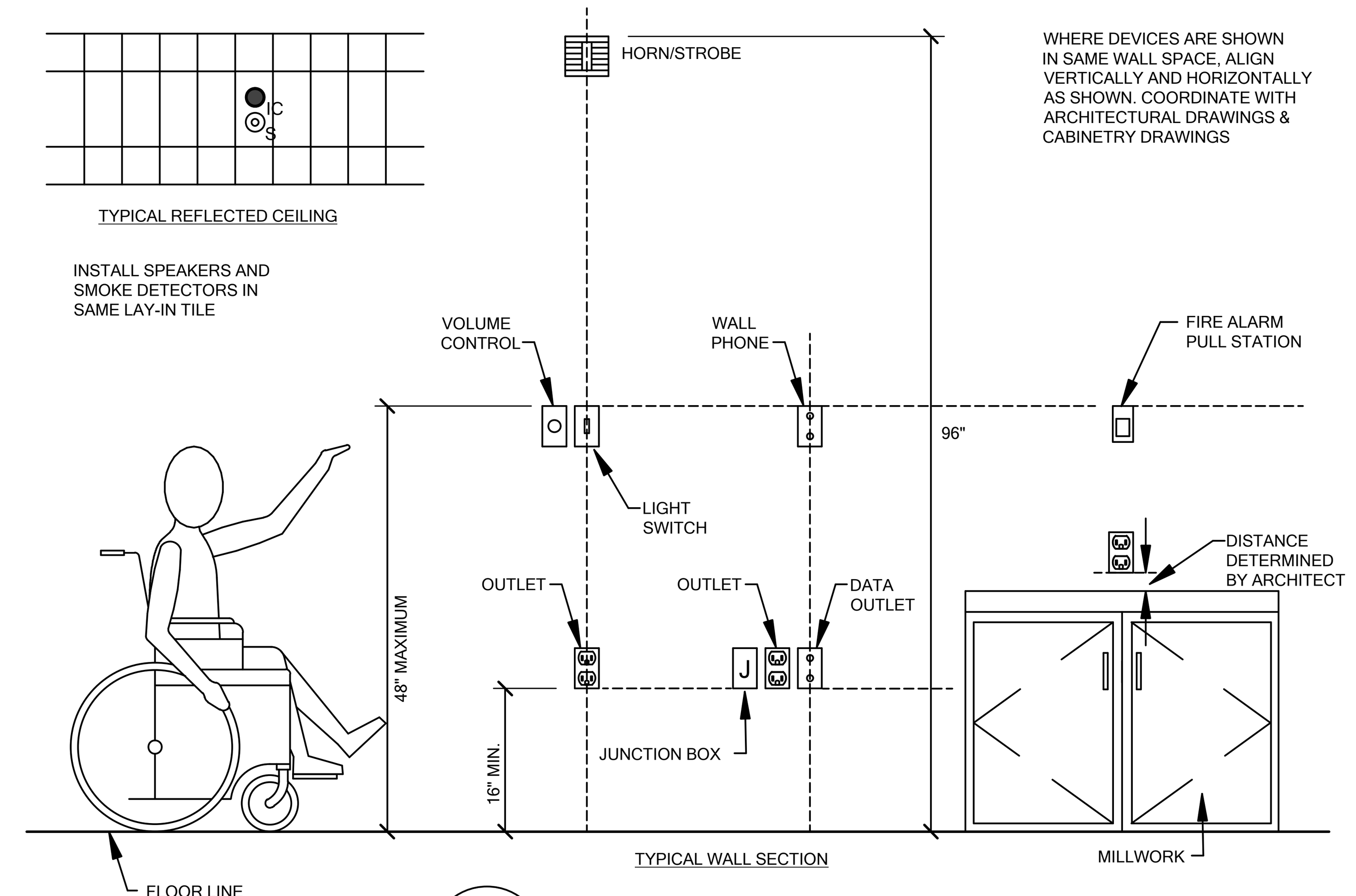


DIAGRAM R001 DEVICE MOUNTING HEIGHTS

NTS

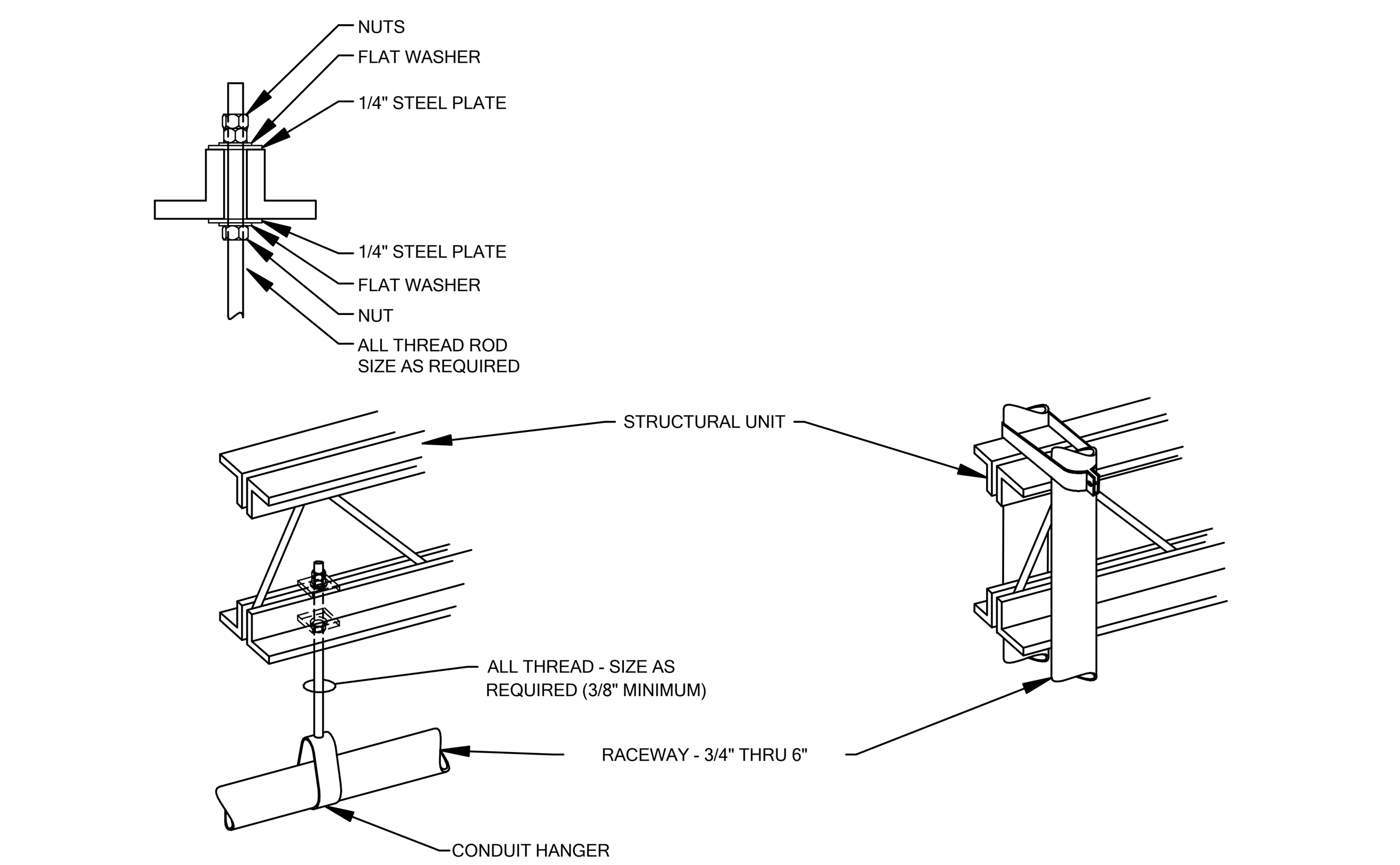
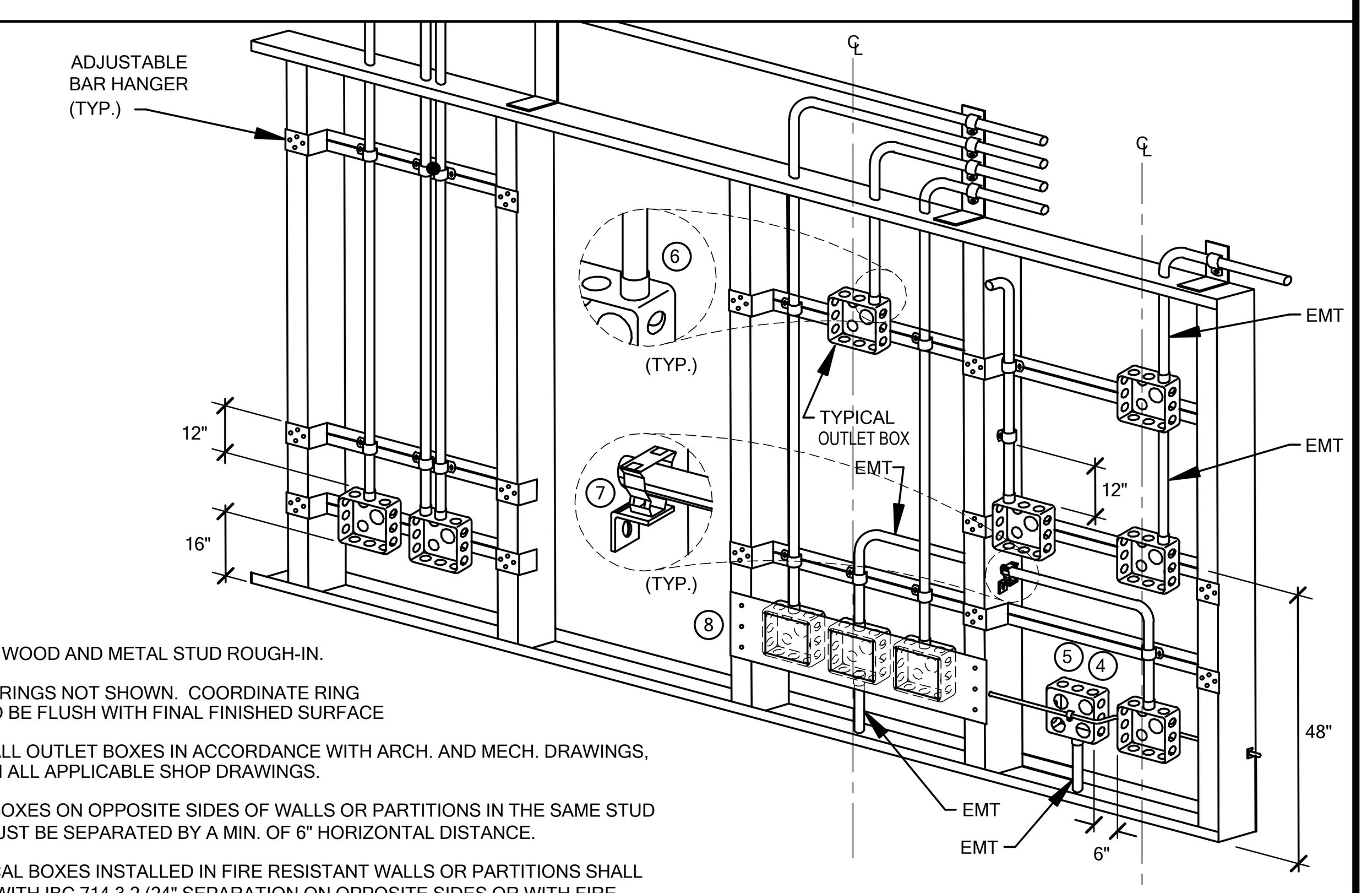


DIAGRAM H003 TYPICAL RACEWAY SUPPORT METHODS

NTS



NOTES:

1. TYP. FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN. COORDINATE RING DEPTH TO BE FLUSH WITH FINAL FINISHED SURFACE
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCH. AND MECH. DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 6" HORIZONTAL DISTANCE.
5. ELECTRICAL BOXES INSTALLED IN FIRE RESISTANT WALLS OR PARTITIONS SHALL COMPLY WITH IBC 714.3.2 (24" SEPARATION ON OPPOSITE SIDES OR WITH FIRE STOP PUTTY ON EACH BOX.)
6. INSULATED THROAT EMT CONNECTOR.
7. CADDY FASTENER, THROUGH STUD CABLE/CONDUIT SUPPORT 'FB12P'.
8. CADDY BOX MOUNTING BRACKET 'RBS16'.

DIAGRAM H004 TYPICAL ROUGH IN REQUIREMENTS

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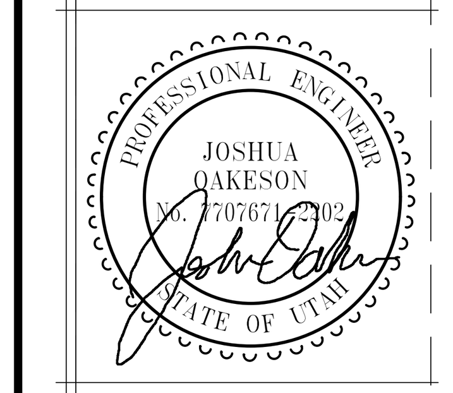

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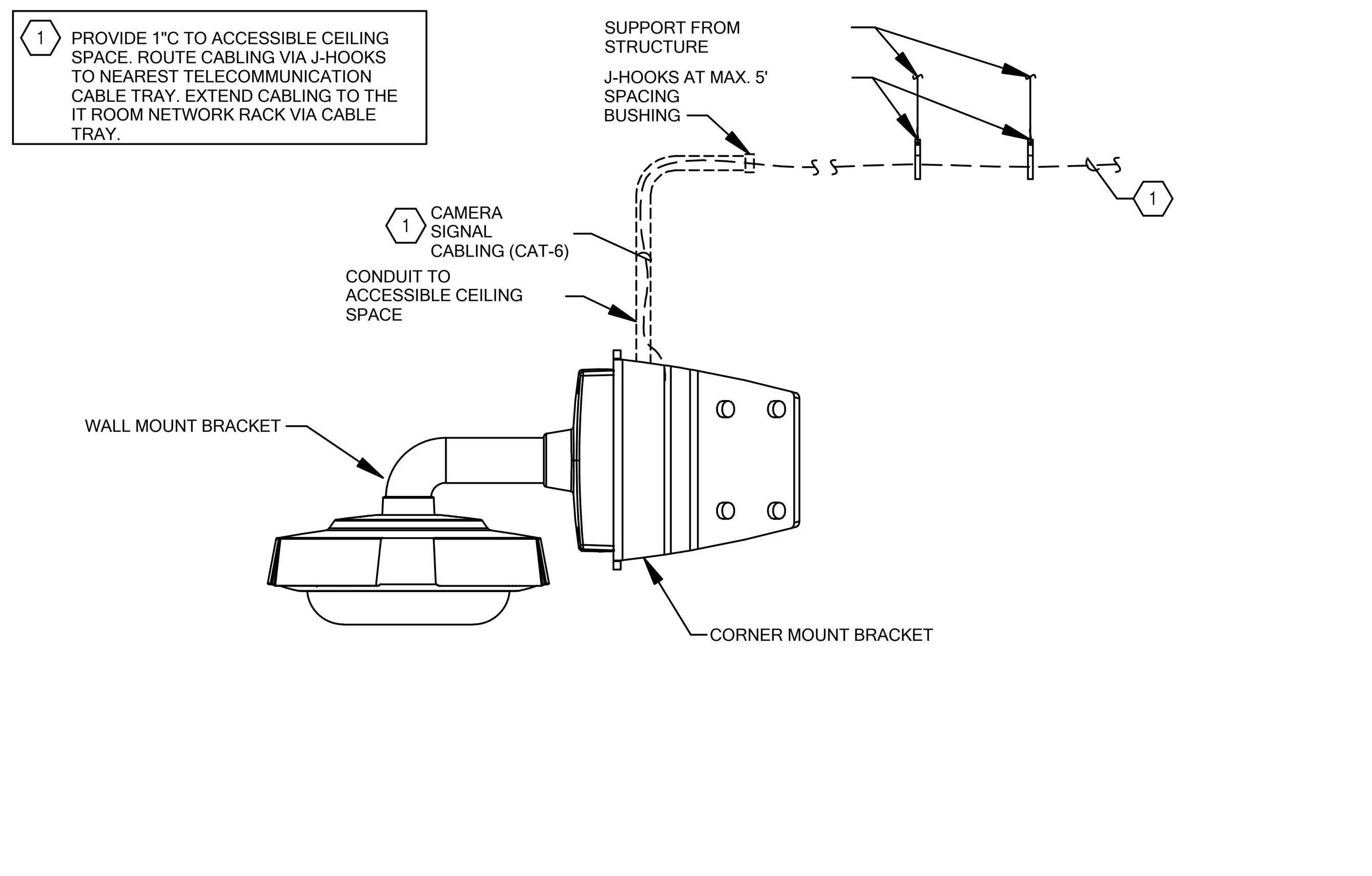

DIAGRAM M03N MULTI-IMAGER CORNER MOUNTED CAMERA
NTS

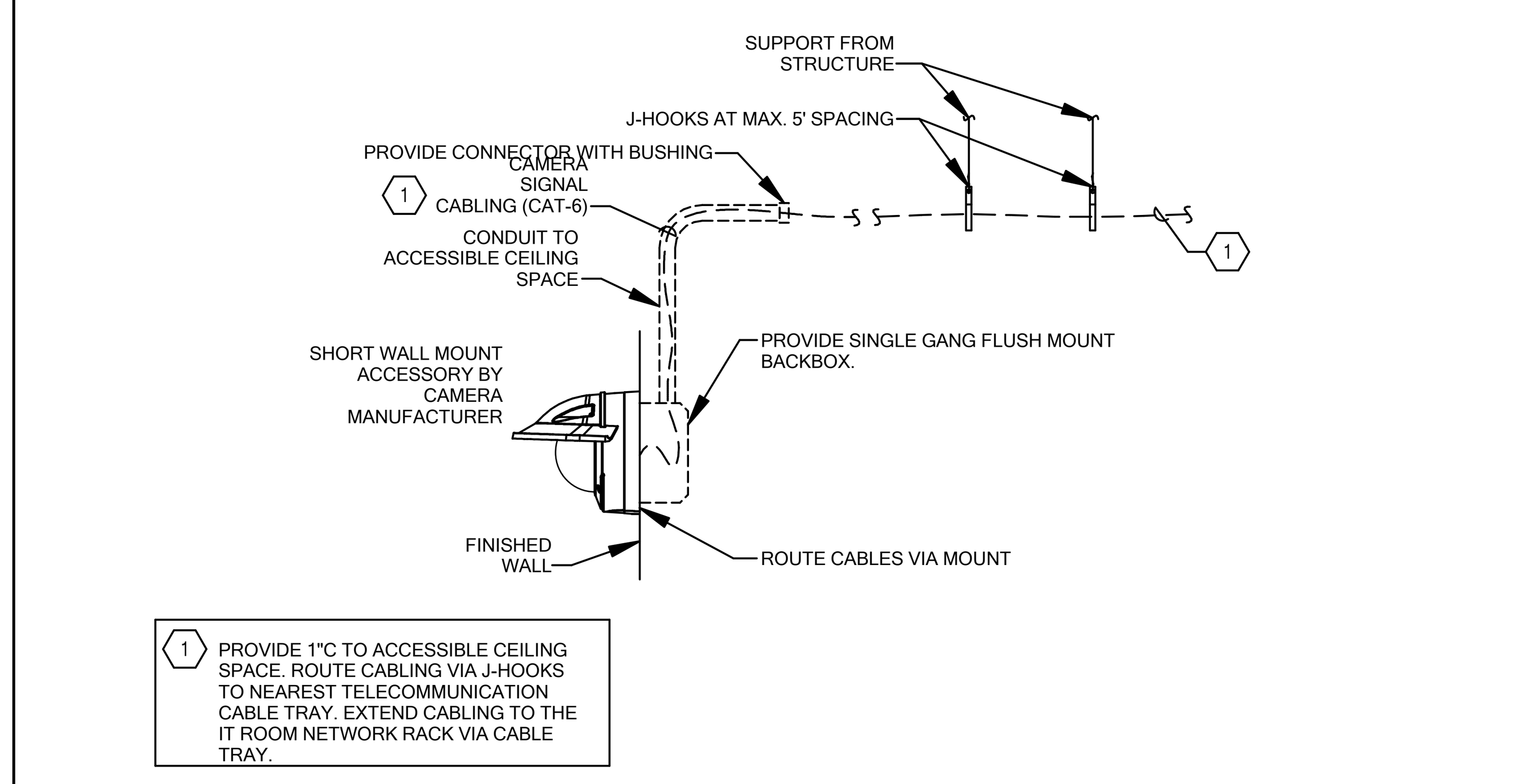

DIAGRAM F01W EXTERIOR FIXED CAMERA IN WALL MOUNTED HOUSING
NTS

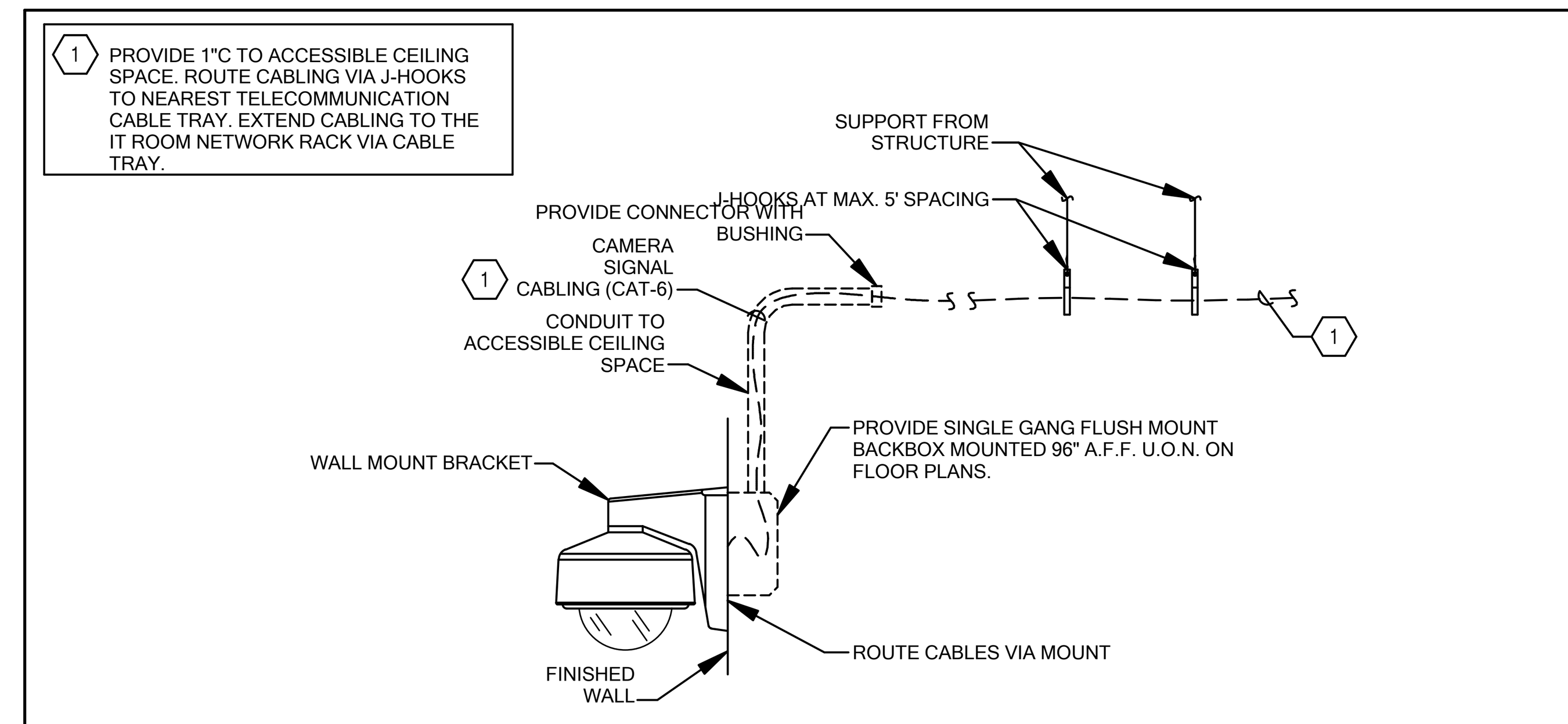

DIAGRAM M04W WALL MOUNTED DOME CAMERA
NTS

GENERAL SHEET NOTES

1. ALL SECURITY CAMERAS SHOWN SHALL HAVE (1) CAT-6 CABLE INSTALLED BY THE LOW VOLTAGE CONTRACTOR. PROVIDE A 10'-0" LOOP AT EACH CAMERA LOCATION TO ALLOW CAMERA TO BE RELOCATED WHERE REQUIRED. REFER TO THE TELECOMMUNICATIONS SHEETS FOR THE NEAREST PATCH PANEL.

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(1) COFFEE SHOP 3D VIEW 01

(2) COFFEE SHOP 3D VIEW 02

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LICENSED ARCHITECT
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5403169-0301
10.12.2018
date
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COFFEE SHOP 3D VIEWS

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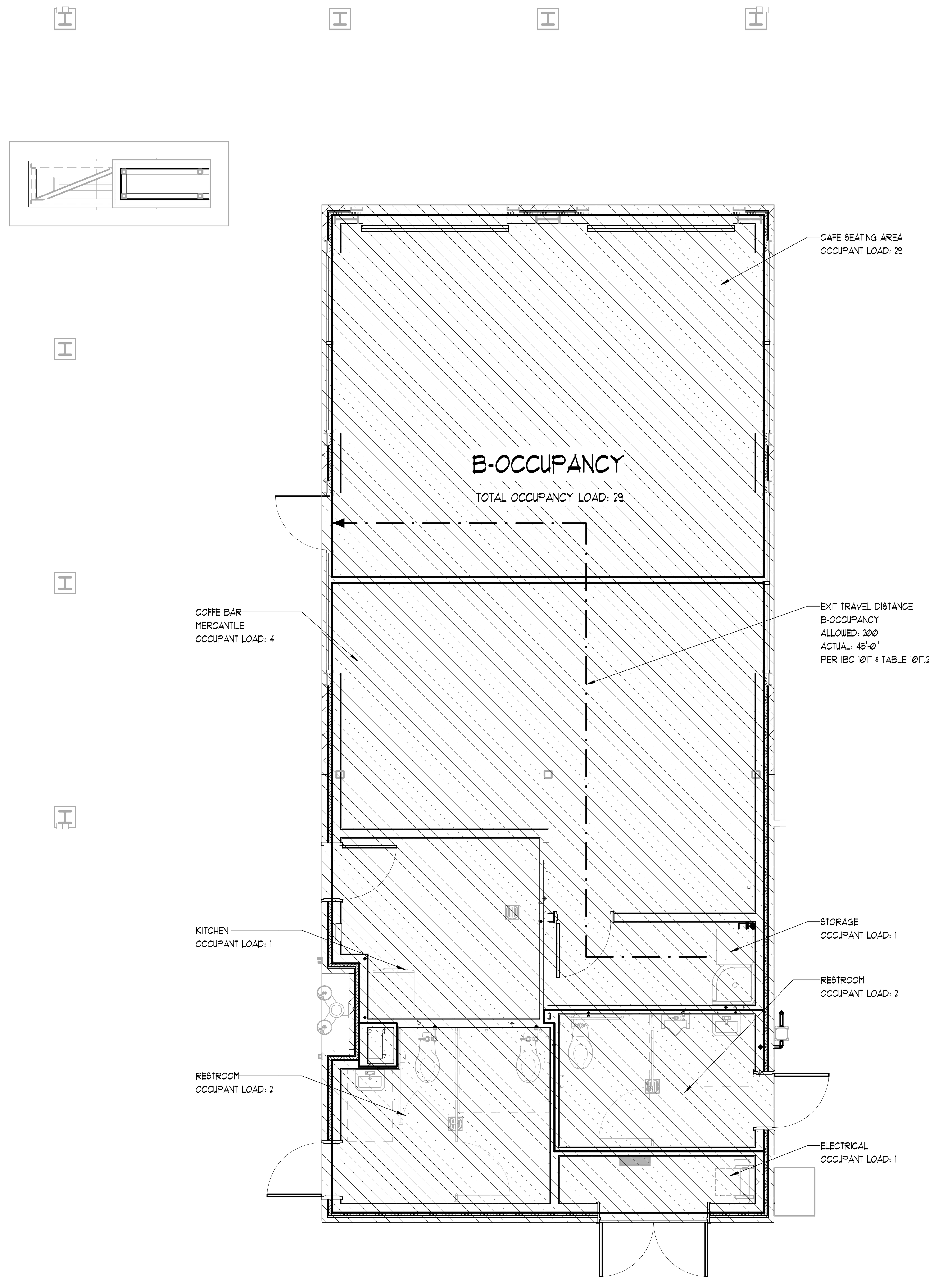
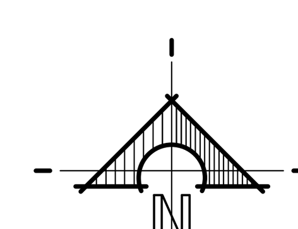


1 MAIN LEVEL - CODE ANALYSIS
1/4" = 1'-0"



CODE ANALYSIS

APPLICABLE CODES

2018 INTERNATIONAL BUILDING CODE (IBC)	2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL PLUMBING CODE	2017 NATIONAL ELECTRICAL CODE (NEC)
2018 INTERNATIONAL MECHANCIAL CODE	AMERICAN'S WITH DISABILITIES ACT
2018 INTERNATIONAL ENERGY CONSERVATION CODE	ICC/ANSI A117.1 - 2009

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

MAIN OCCUPANCY B

CONSTRUCTION TYPE: V-B

AREA OF BUILDING (IBC CHAPTER 5)

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

LOCATION:		TOTAL FINISHED:
RETAIL	794.18 SQ. FT.	
RESTROOM	259.57 SQ. FT.	
STORAGE	239.40 SQ. FT	
ELEC/MECH	113.75 SQ. FT.	
SUB-TOTALS:		1,406.90 SQ. FT.

ALLOWABLE BUILDING AREA (IBC SECTION 506)

B OCCUPANCY, NS: 9,000 SQ. FT. (ALLOWABLE AREA PER FLOOR)

AREA CALCULATIONS

AREA MODFICATIONS BY OCCUPANCY

NO INCREASE REQUIRED AS SIZE OF BUILDING WITHIN ALLOWABLE BUILDING AREA FOR OCCUPANCY AND A BUILDING OF ONE STORY ABOVE GRADE PLANE EQUIPPED THROUGHOUT WITH AN AUTOMATIC FIRE SPINKLER SYSTEM INSTALLED IN ACCORDANCE WITH IBC SECTION 903.3.1.1 (SEE FOOTNOTES OF IBC TABLE 506.2).

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

	TOTAL ALLOWABLE HEIGHT	ACTUAL HEIGHT
HEIGHT IN STORIES	2 STORIES	1 STORY
HEIGHT IN FEET	40' - 0"	19'-8"

NOTE: THE BUILDING NOT WILL 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 (TABLES 601 AND 602) — NOT REQUIRED

NOTE: FIRE SPARATION 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 DISTANCES ARE GREATER THAN 20 FEET AS SHOWN ON IBC TABLE 705.8.

OCCUPANCY SEPARATIONS (TABLE 508.4)

NONE REQUIRED

FIRE RATED CONSTRUCTION (IBC TABLE 601)

BUILDING ELEMENT	RATING	CODE REFERENCE
HORIZONTAL SEPARATION (R OCCUPANCY ONLY)	NON-RATED	SECTION 420.3
OCUPANCY 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 / TABLE 705.8
FIRE WALLS	NOT REQUIRED	TABLE 706.4
FIRE BARRIERS	NOT REQUIRED	SECTION 707
FIRE PARTITIONS	NOT REQUIRED	SECTION 708
HORIZONTAL ASSEMBLIES	NON-RATED	SECTION 711.2
VERTICAL OPENINGS (FIRE BARRIER)	NOT REQUIRED	SECTION 712
SHAFT ENCLOSURES (FIRE BARRIER)	NOT REQUIRED	SECTION 713
AUTOMATC SPRINKLER SYSTEM	YES	SECTION 903
FIRE RATED CORRIDORS (FIRE PARTITIONS)	NOT REQUIRED	TABLE 1020.1
INTERIOR EXIT STAIRWAYS (FIRE BARRIER)	NOT REQUIRED	SECTION 1023

DEFERRED SUBMITTALS

CERTAIN ITEMS REQUIRE APPROVAL OF THE AUTHORITY HAVING JURSDICTION 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 MANNERAND ALLOW SUFFICIENT TIME FOR REVIEW BY THE ARCHITECT AND CITY.

DEFERRED ITEMS:

A. PRE-ENGINEERED ROOF TRUSSES
B. FIRE ALARM SYSTEM
C. FIRE SPRINKER SYSTEM
D. FIRE FLOW TESTING

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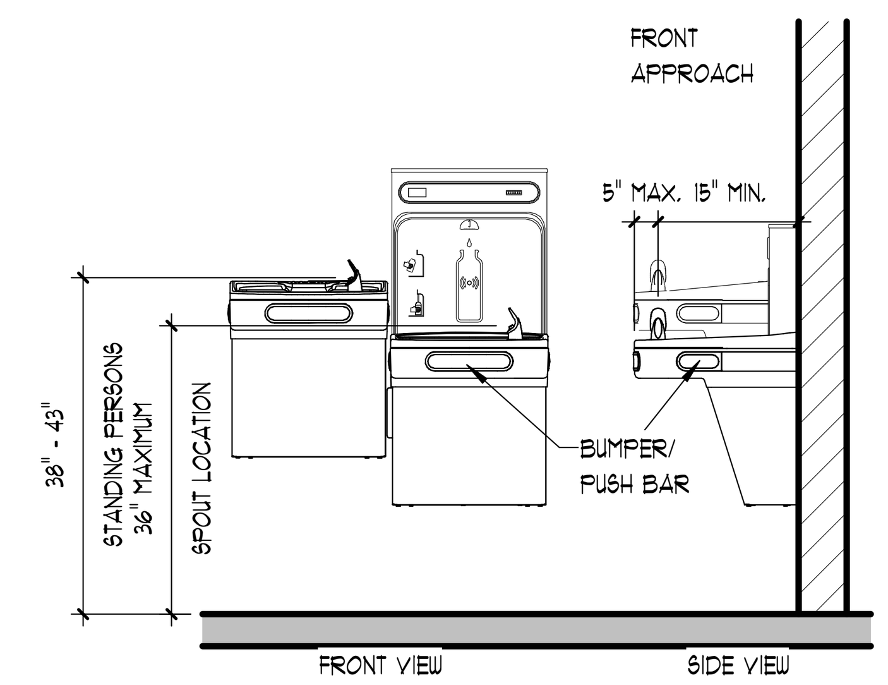
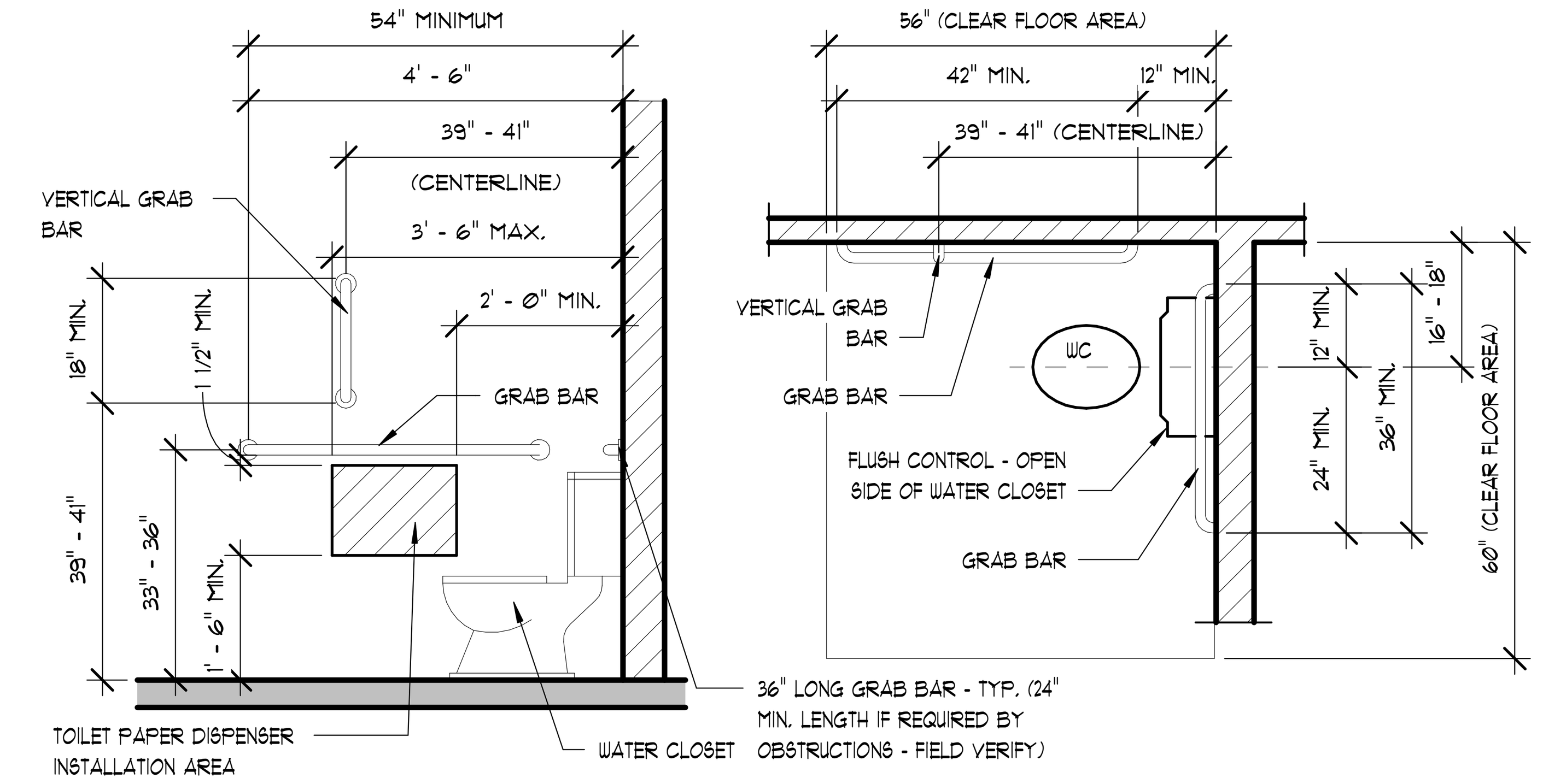
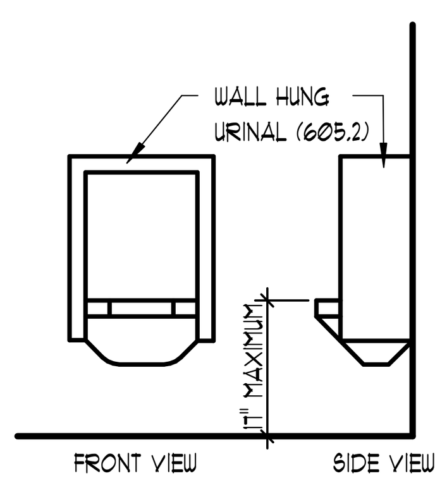


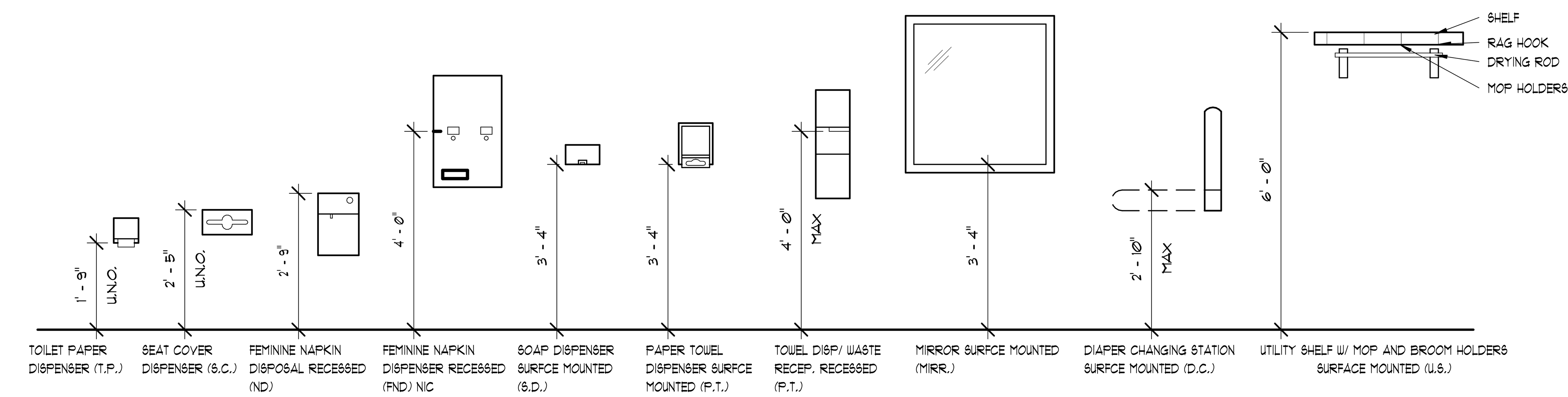
1 ACCESSIBLE DRINKING FOUNTAIN
1/2" = 1'-0"



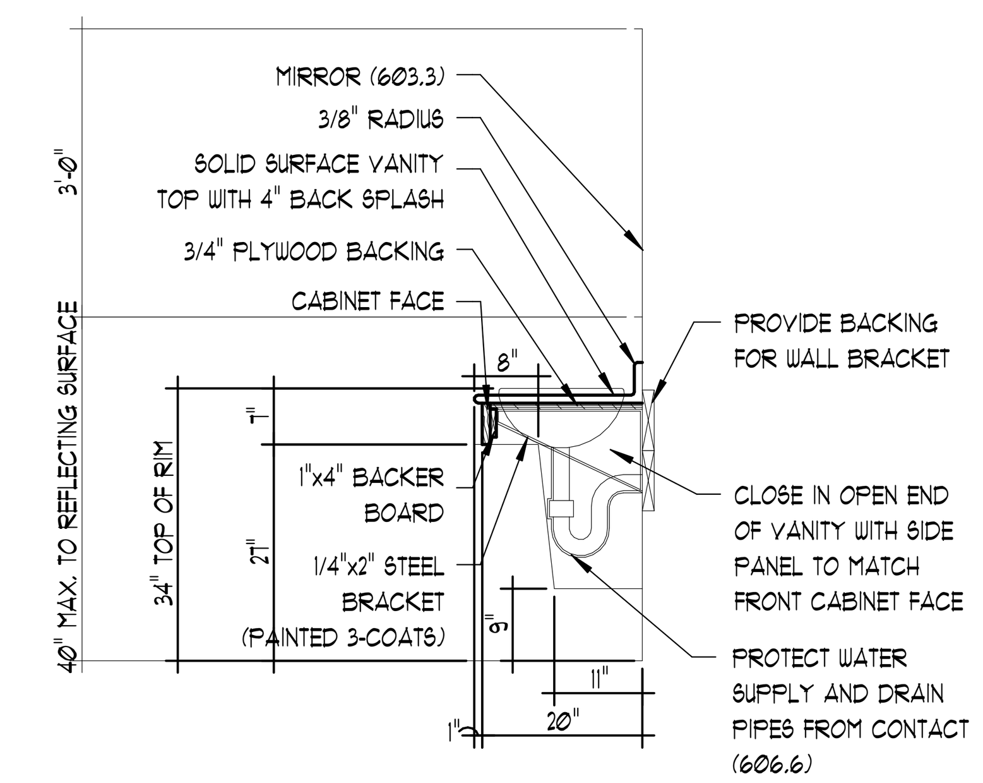
2 ACCESSIBLE WATER CLOSET
1/2" = 1'-0"



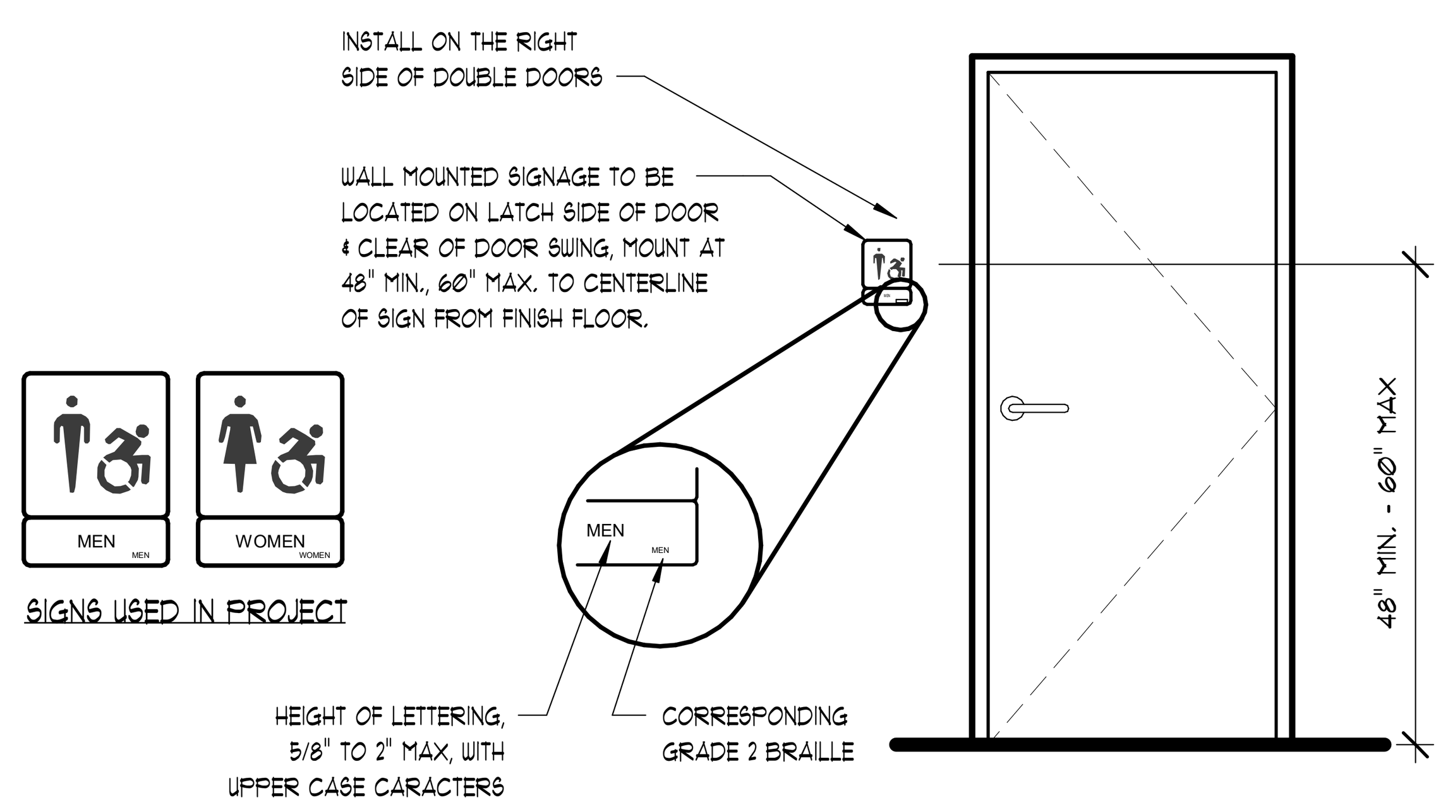
3 ACCESSIBLE URINAL
1/2" = 1'-0"



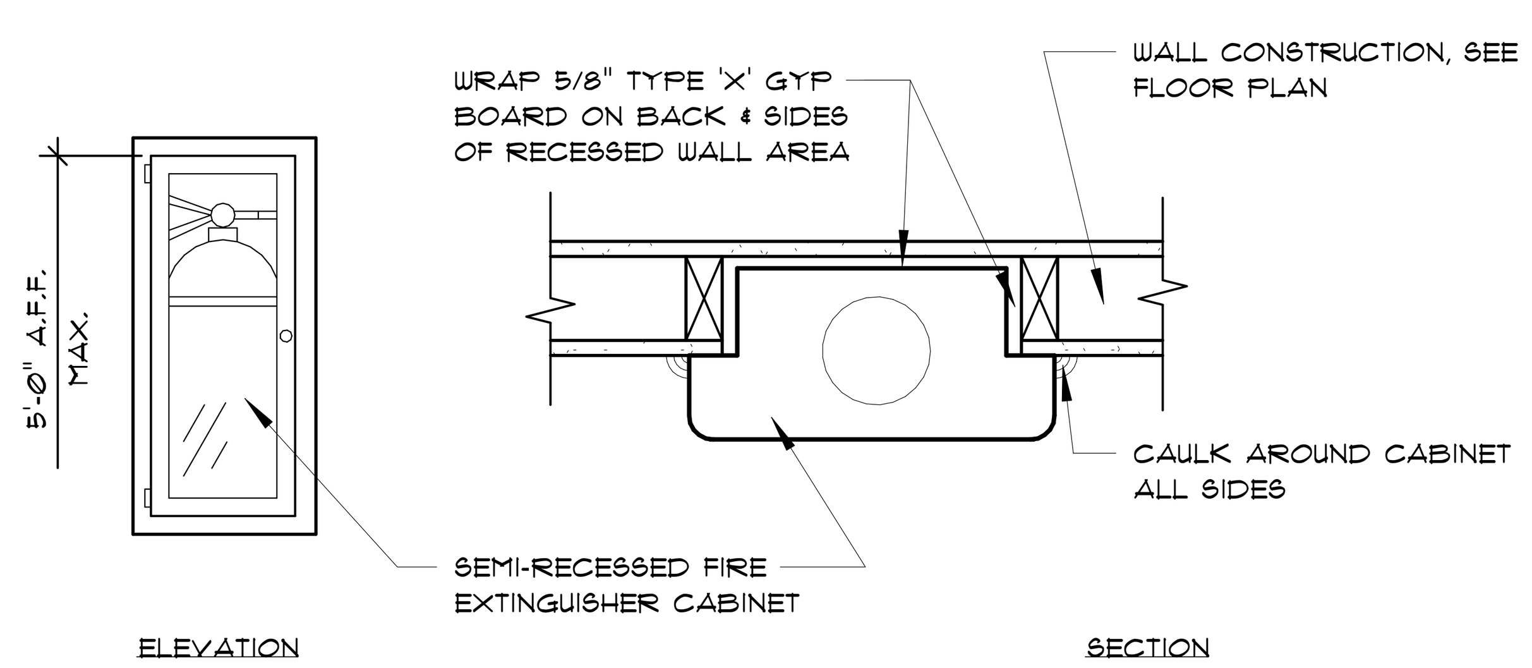
4 ACCESSORY MOUNTING HEIGHTS
1/2" = 1'-0"



5 ACCESSIBLE VANITY
1/2" = 1'-0"



6 RESTROOM SIGNAGE
1/2" = 1'-0"

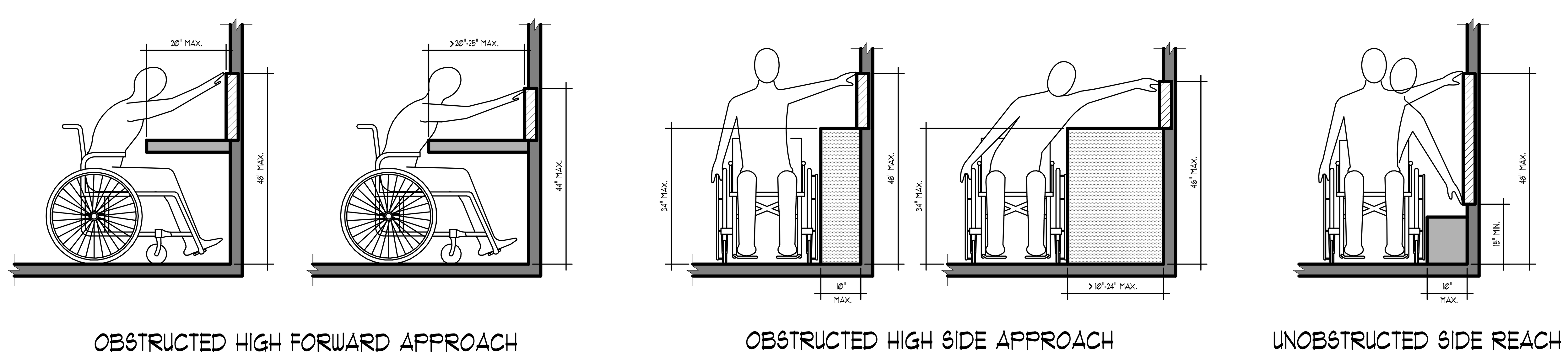


7 FIRE EXTINGUISHER CABINET
1 1/2" = 1'-0"

ADA REFERENCES

(ICC/ANSI A117.1-2009)

1. DRINKING FOUNAIN - 602
2. RESTROOM - 603-606
   MIRROR - 603.3
   WATER CLOSET - 604
   GRAB BARS - 604.5
   DISPENSER - 604.7
   LAVORATORY - 606



8 OBSTRUCTED HIGH FORWARD APPROACH
1/2" = 1'-0"

ACCESSIBILITY CLEARANCE NOTES

(ICC/ANSI A117.1-2009)

1. 60" DIAMETER WHEELCHAIR TURNING SPACE (304.3.1)
2. 30" X 48" CLEARANCE FOR WATER CLOSET (1004.11.3.1.2.2.1 & 1004.11.3.1.2.2.2)
3. 30" X 48" CLEAR FLOOR SPACE FOR FORWARD APPROACH TO SINK/WORK SPACE/APPLIANCE (305.3, 606.2, 1003.12.3.1, 1003.12.4.1, 1003.12.5.2)
4. 30" X 48" CLEAR FLOOR SPACE FOR PARALLEL/ADJACENT APPROACH TO SINK/APPLIANCE (305.3, 1004.10.1, 1004.11.1.1, 1004.12.2)
5. 30" X 48" CLEAR FLOOR SPACE BEYOND SWING OF DOOR FOR INDIVIDUAL USE (603.2.2 EXCEPTION, 1003.11.2 EXCEPTION)
6. 56" X 60" CLEARANCE FOR WATER CLOSET (604.3.1)
7. 66" X 60" CLEARANCE FOR WATER CLOSET (1003.11.2.4.4)

NOTE: CLEAR FLOOR OR GROUND SPACES, CLEARANCE AT FIXTURES, AND WHEELCHAIR TURNING SPACES SHALL BE PERMITTED TO OVERLAP (603.2.2, 1003.11.2.4.4, & 1004.11.3.1.2.2.4)

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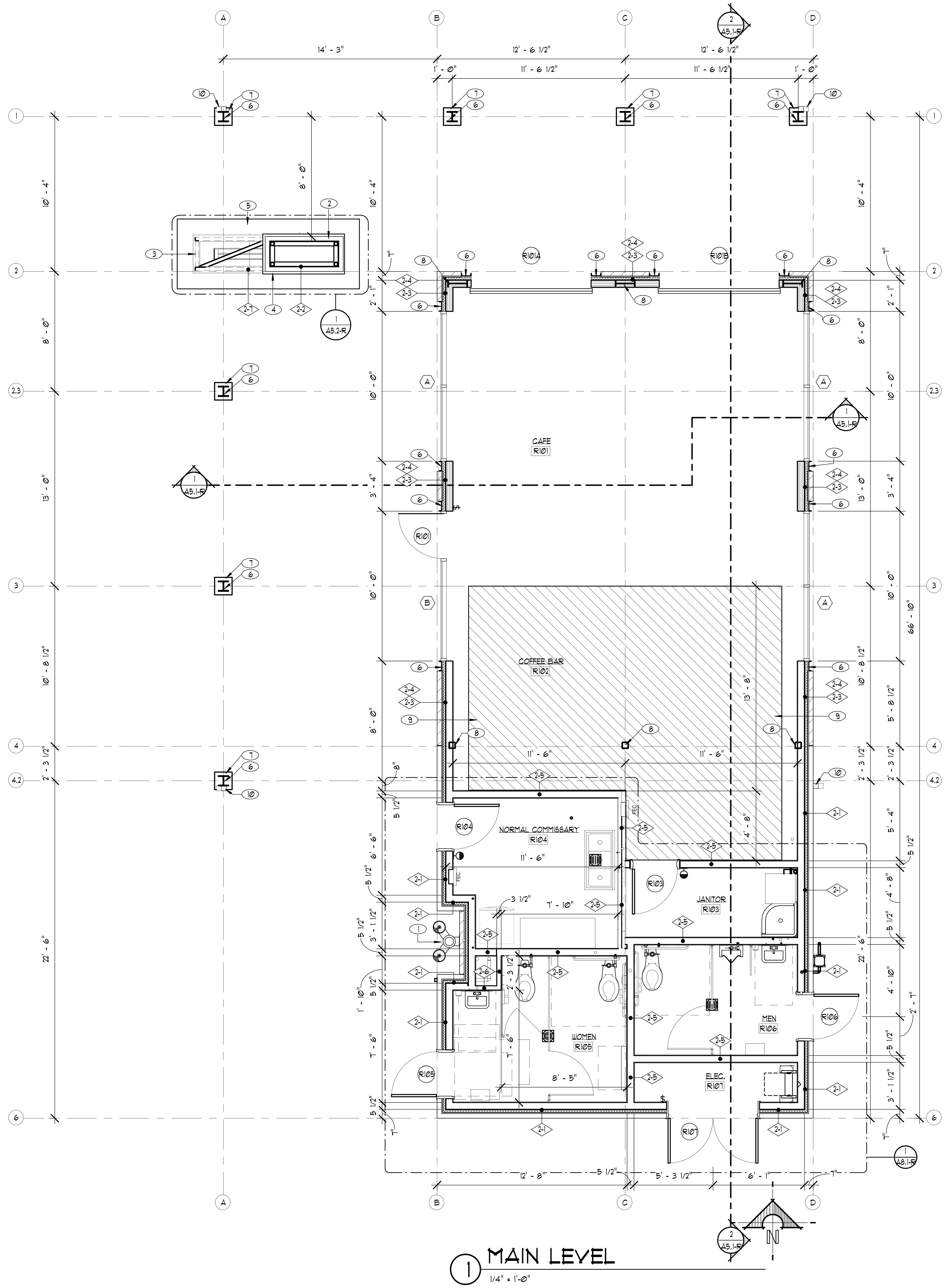

1 MAIN LEVEL

1/4" = 1'-0"

SHEETNOTES

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1R
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3R
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4R
- (1) DRINKING FOUNTAIN- SEE PLUMBING DRAWINGS
- (2) FIREPLACE STRUCTURE - SEE DETAILS ON A5.2-R
- (3) FIREPLACE STRUCTURE - SEE DETAILS ON A5.2-R
- (4) PRE-CAST CONCRETE - SEE DETAILS ON A5.2-R
- (5) PRE-CAST CONCRETE - SEE DETAILS ON A5.2-R
- (6) GALVANIZED STEEL COLUMN (PAINTED) - SEE STRUCTURAL DRAWINGS
- (7) STRUCTURAL SUPPORT COLUMN - SEE STRUCTURAL DRAWINGS
- (8) STRUCTURAL COLUMN - SEE STRUCTURAL DRAWINGS
- (9) HATCHED AREA DENOTES EXTENT OF FLOOR SLAB TO REMAIN UNINSTALLED FOR FUTURE TENANT IMPROVEMENT WORK
- (10) PREFINISHED METAL RAIN DOWNSPOUT

WPA architecture

5403169-0301
10.12.2018
date
STATE of UTAH

MILLCREEK CITY
3330 Soiuth 1300 East
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Owner's Representative:
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MILLCREEK

MILLCREEK COMMON
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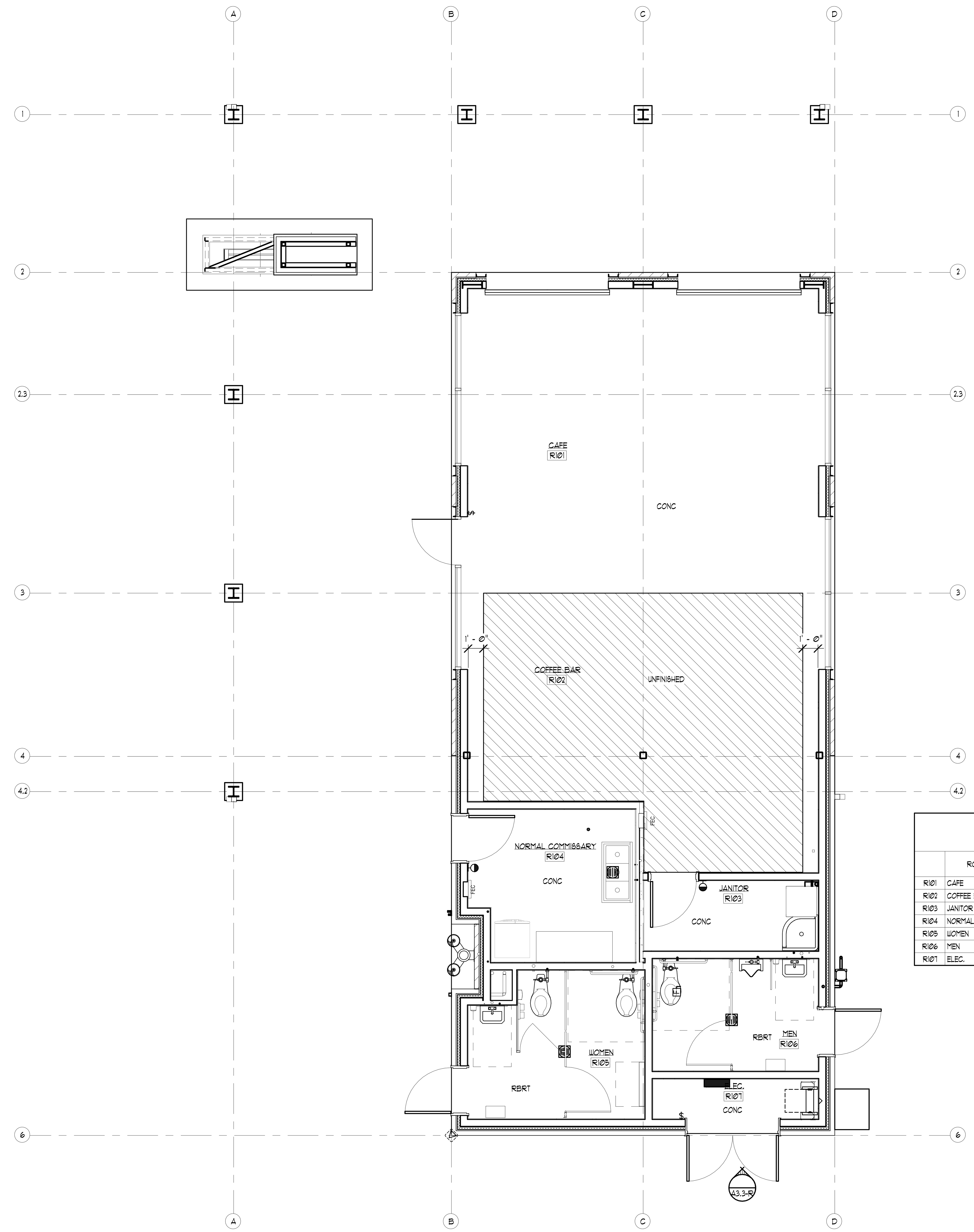
MILLCREEK, UT 84005

REV	DATE	DESCRIPTION

DESIGNED BY: BF
DRAWN: MR / BF
CHECKED: BF
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
MAIN LEVEL FLOOR PLAN

Sheet Number:
A2.3-R



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

FINISH LEGEND

BASE					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
CTB	PORCELAIN TILE COVE BASE	CROSSVILLE	STYLE: MATCH CTW-1 COLOR: MATCH CTW-1	4" X 16"	GROUT: MAPEI, COLOR: TBD USE WALL BULLNOSE WHERE NO TILE SHOWN ABOVE BASE
RB	RUBBER BASE	ROPPE	700 SERIES - STANDARD TOE COLOR: TBD	4"	--
FLOORS					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
RBRT	MULTILAYER VULCANIZED RUBBER TILES	NORTHWEST RUBBER	STYLE: WOODGRAINS COLOR: TBD	8" x 48"	USE 10 mm THICKNESS
CONC	CONCRETE	--	CLEAR SEALED	N/A	--
WALLS					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE/FINISH	NOTES
PTDW - 1	PAINTED GYPSUM BOARD	SHERWIN WILLIAMS	NATURAL CHOICE (SW7011)	SEMI-GLOSS	--
PTDW - 2	PAINTED PLYWOOD	SHERWIN WILLIAMS	NATURAL CHOICE (SW7011)	SEMI-GLOSS	--
CTW-1	CERAMIC TILE	DALTILE	STYLE: COLOR WAVE COLOR: TBD	3" X 6"	GROUT: MAPEI, COLOR: TBD BASKETWEAVE PATTERN
CTW-2	CERAMIC TILE	CROSSVILLE	STYLE: SWATCHES COLOR: TBD	3" X 12" GLOSS	GROUT: MAPEI, COLOR: TBD USE SCHLUTER METAL TRIM AT TOP OF WAINSCOT
CEILING					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE/FINISH	NOTES
OPEN-1	PAINTED STRUCTURE	SHERWIN WILLIAMS	IRON ORE (SW7069)	FLAT	EXPOSED CEILINGS DO NOT PAINT MECHANICAL DUCTWORK
OPEN-2	OPEN TO STRUCTURE UNFINISHED	N/A	N/A	N/A	--
PTDC-1	PAINTED GYPSUM BOARD	SHERWIN WILLIAMS	NATURAL CHOICE (SW7011)	FLAT	--
DOORS, WINDOWS and DOOR TRIM					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE/FINISH	NOTES
FRM	PAINTED DOOR FRAMES	SHERWIN WILLIAMS	MINDFUL GRAY (SW7016)	SEMI-GLOSS	--
DR	SOLID CORE WOOD DOOR	VT INDUSTRIES	SPECIES: WHITE MAPLE COLOR: RAVINE RA18	N/A	---

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

ROOM FINISH SCHEDULE

	ROOM NAME	FLOOR FINISH	BASE FINISH	DOOR FRAME	WALL FINISH				CEILING FINISH	MILLWORK	COUNTER	COMMENTS
					NORTH	EAST	SOUTH	WEST				
R101	CAFE	CONC	NONE	FRM	UNFINISHED	UNFINISHED	UNFINISHED	UNFINISHED	OPEN-2			
R102	COFFEE BAR	CONC	NONE	FRM	UNFINISHED	UNFINISHED	UNFINISHED	UNFINISHED	OPEN-2			
R103	JANITOR	CONC	RB	FRM	PTDW-1	PTDW-1 / CTW-2	PTDW-1 / CTW-2	PTDW-1	PTDC-1			
R104	NORMAL COMMISSARY	CONC	RB	FRM	PTDW-1	PTDW-1	PTDW-1	PTDW-1	PTDC-1			
R105	WOMEN	RBRT	CTB	FRM	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDC-1			USE CTW-1 FOR ACCENT TILE
R106	MEN	RBRT	CTB	FRM	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDW-1 / CTW-1 / CTW-2	PTDC-1			USE CTW-1 FOR ACCENT TILE
R107	ELEC.	CONC	RB	FRM	PTDW-2	PTDW-2	PTDW-2	PTDW-2	OPEN-2			

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MAIN LEVEL FINISH FLOOR PLAN

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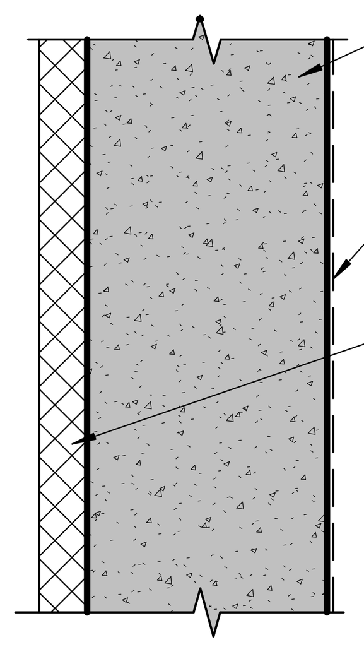
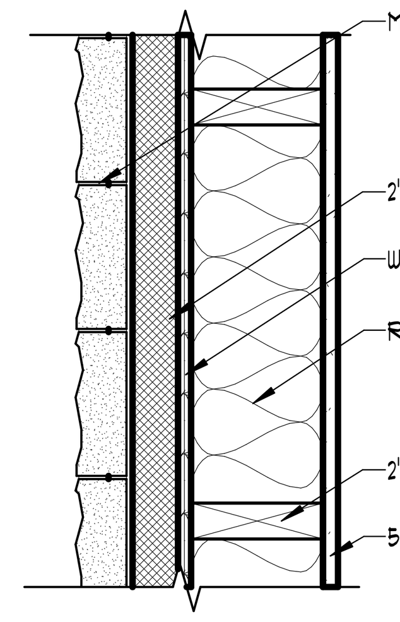


1-1 WALL CONSTRUCTION
1 1/2" = 1'-0"



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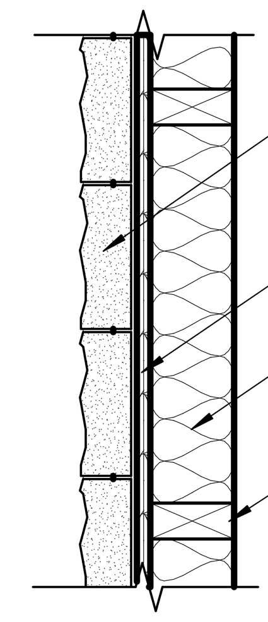

2-2 WALL CONSTRUCTION
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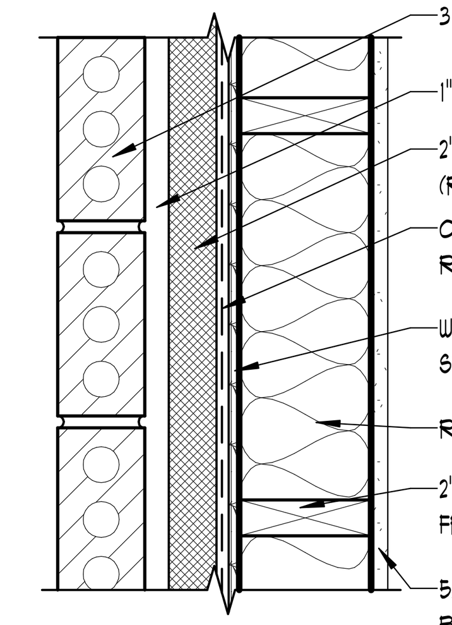

2-3 WALL CONSTRUCTION
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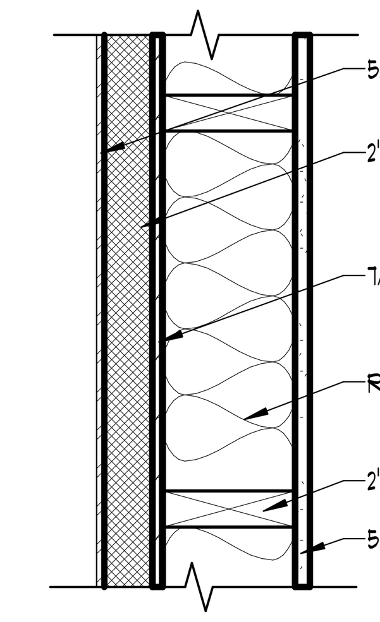
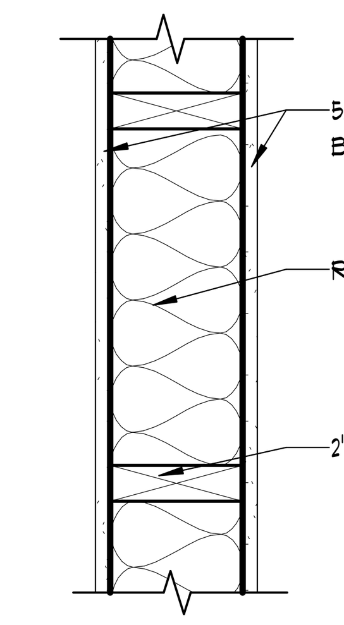
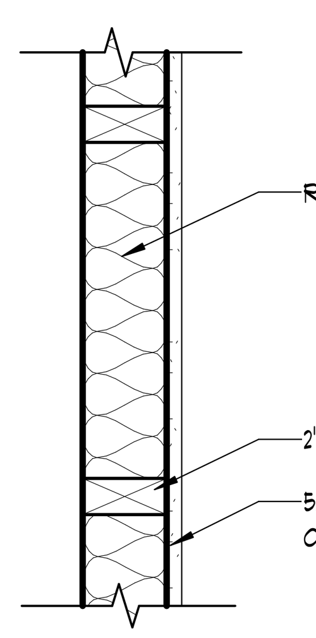


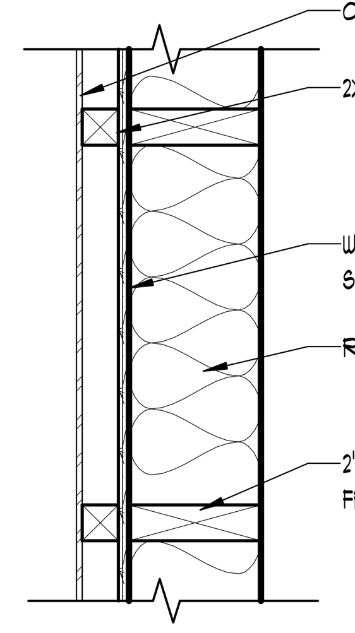
2-4 WALL CONSTRUCTION
1 1/2" = 1'-0"



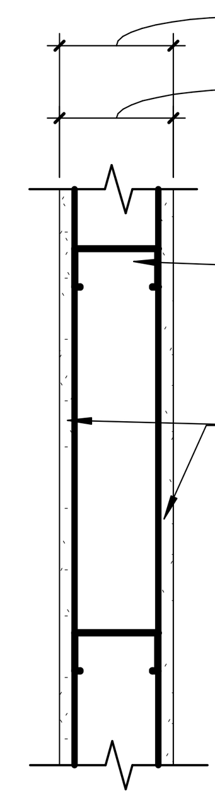
2-5 WALL CONSTRUCTION
1 1/2" = 1'-0"



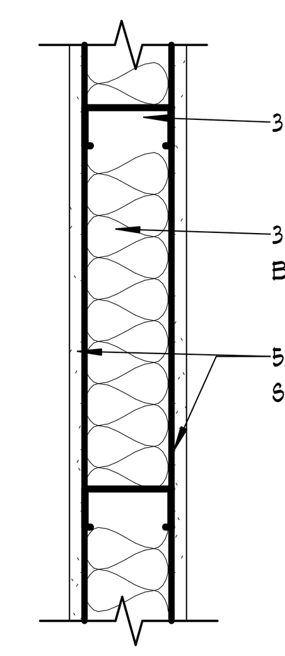
2-6 WALL CONSTRUCTION
1 1/2" = 1'-0"



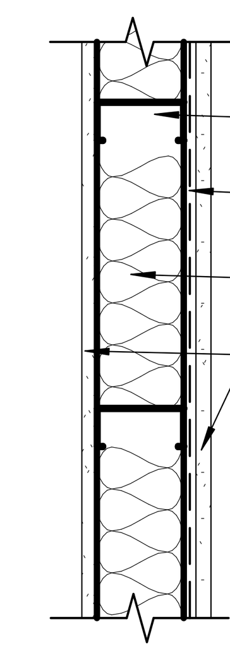
2-7 WALL CONSTRUCTION
1 1/2" = 1'-0"



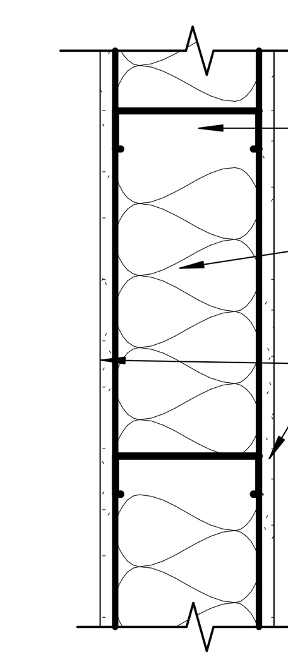
3-1 WALL CONSTRUCTION
1 1/2" = 1'-0"



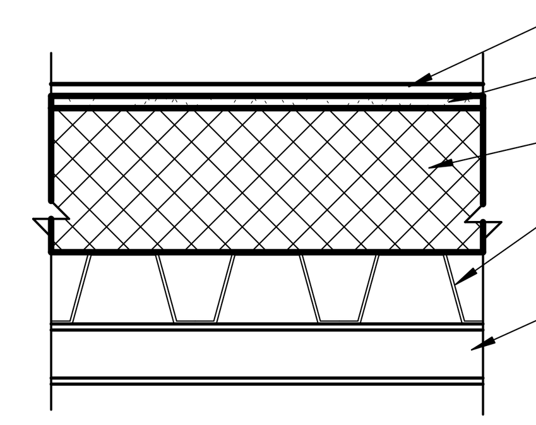
3-2 WALL CONSTRUCTION
1 1/2" = 1'-0"



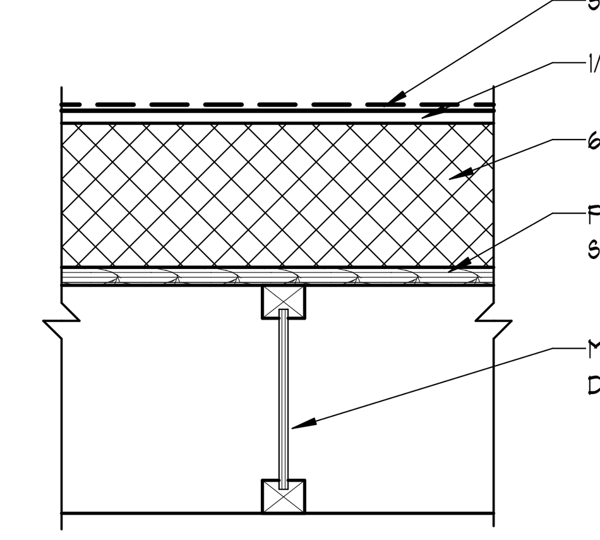
3-3 WALL CONSTRUCTION
1 1/2" = 1'-0"



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



4-1 ROOF/CEILING CONSTRUCTION
1 1/2" = 1'-0"



4-2 ROOF/CEILING CONSTRUCTION
1 1/2" = 1'-0"

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REV	DATE	DESCRIPTION

DESIGNED BY: BF
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Sheet Name:
CONSTRUCTION TYPES

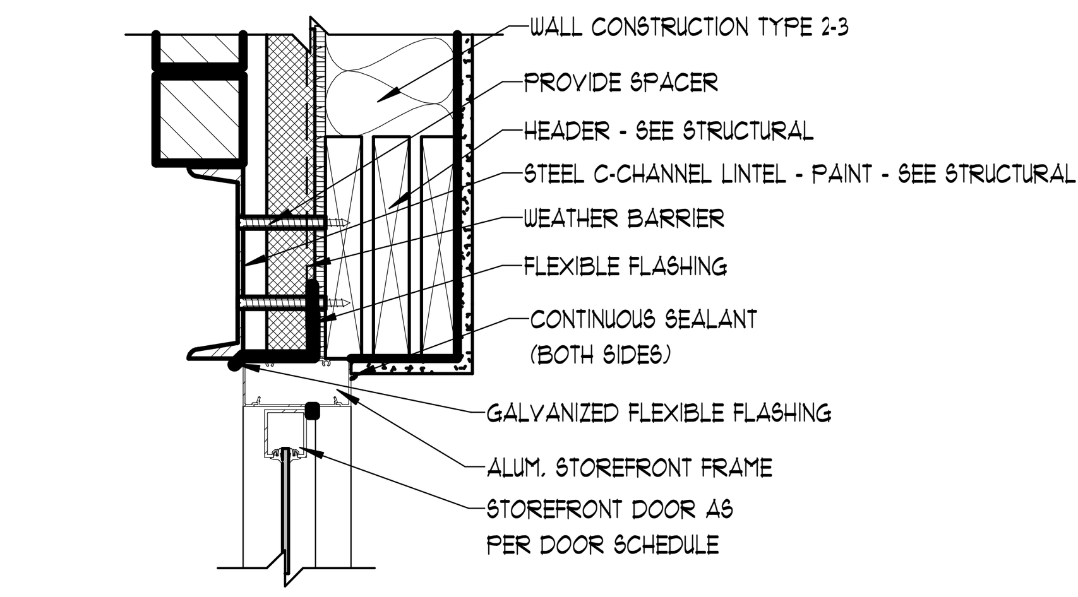
Sheet Number:
A3.1-R

GLAZING SCHEDULE

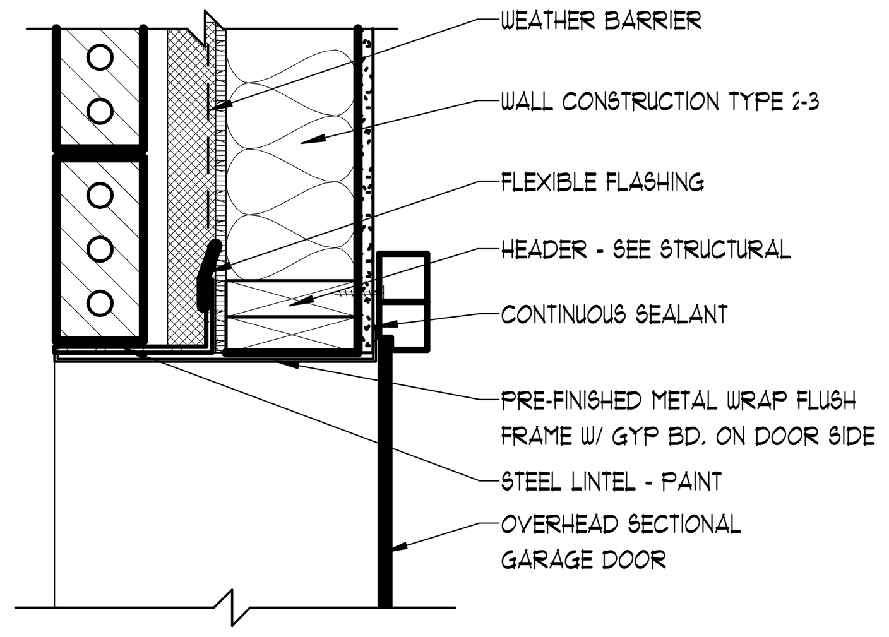
1	1" INSULATED FULLY TEMPERED GLASS W/ LOW-E
2	1" INSULATED GLASS W/ LOW-E
3	1" GUARDIAN GRAYFLOAT GLASS & SUNGUARD SPANDRELIGHT WARM GRAY

DOOR SCHEDULE

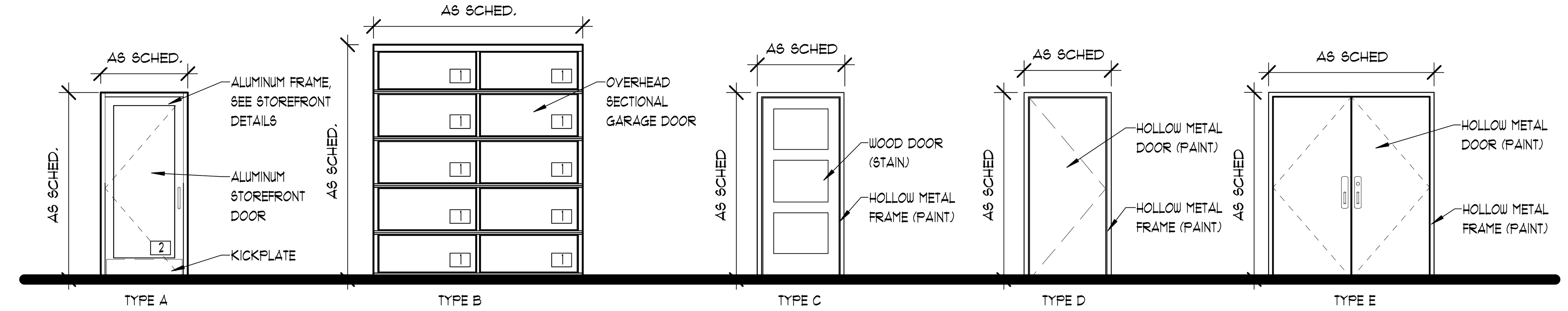
DR. NUMBER	ROOM NAME	DOOR TYPE	DOOR SIZE HEIGHT	DOOR SIZE WIDTH	DOOR SIZE THICK	DETAILS HEAD	DETAILS JAMB	HW SET	FIRE RATING	COMMENTS
R101	CAFE	A	7'-0"	3'-0"	1 3/4"	1/A3.3R	1/A3.3R	AL-01		
R101A	CAFE	B	9'-0"	8'-0"	2 1/8"	3/A3.3R	2/A3.3R	RU-01		
R101B	CAFE	B	9'-0"	8'-0"	2 1/8"	3/A3.3R	2/A3.3R	RU-01		
R103	JANITOR	C	7'-0"	3'-0"	1 3/4"	5/A3.3R	5/A3.3R	08		
R104	NORMAL COMMISSARY	D	7'-0"	3'-0"	1 3/4"	4/A3.3R	4/A3.3R	01		
R105	WOMEN	D	7'-0"	3'-0"	1 3/4"	4/A3.3R	4/A3.3R	04		
R106	MEN	D	7'-0"	3'-0"	1 3/4"	4/A3.3R	4/A3.3R	04		
R107	ELEC.	E	7'-0"	6'-0"	1 3/4"	4/A3.3R	4/A3.3R	05		

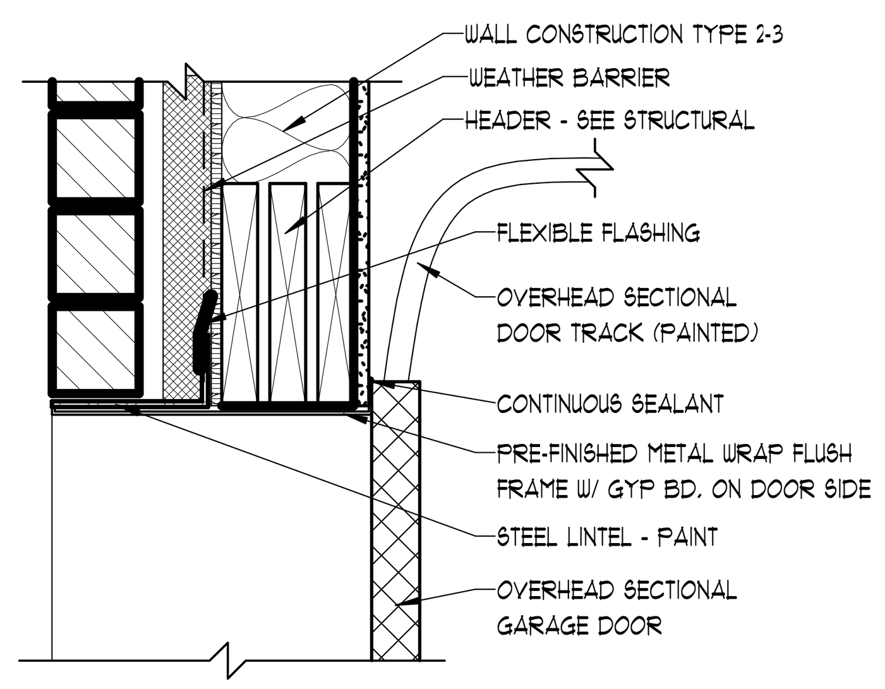


1 DOOR JAMB DETAIL
1 1/2" = 1'-0" HEAD SIMILAR

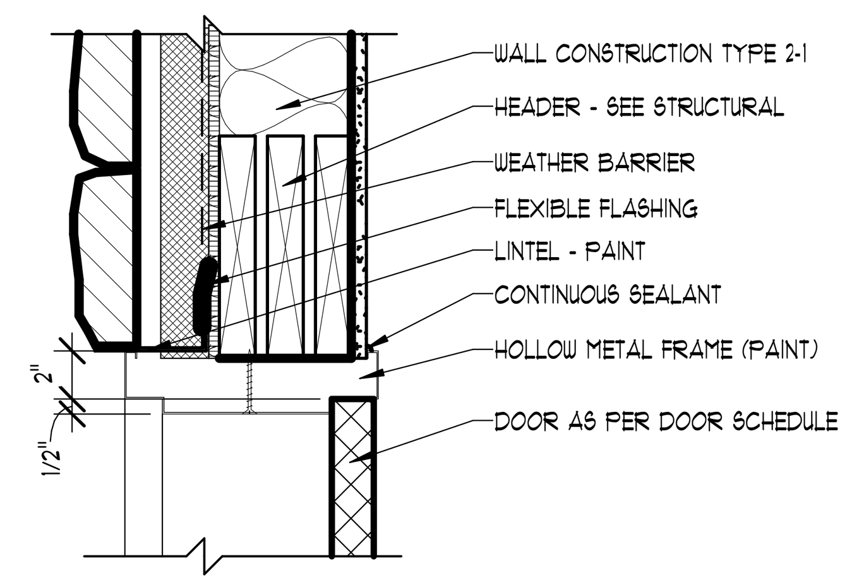


2 DOOR JAMB DETAIL
1 1/2" = 1'-0"

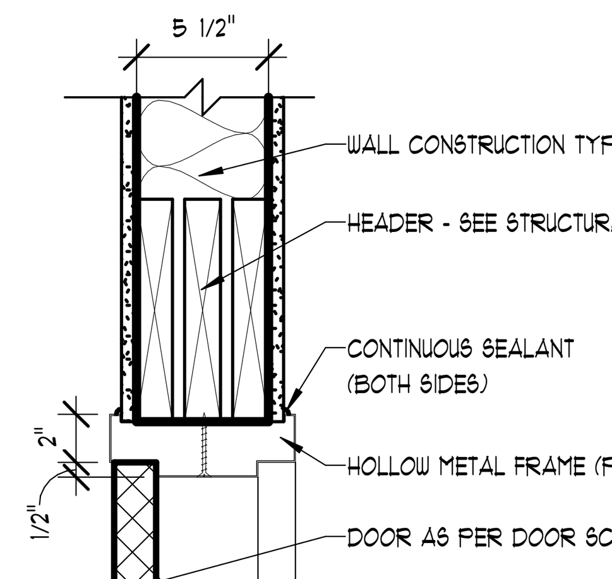




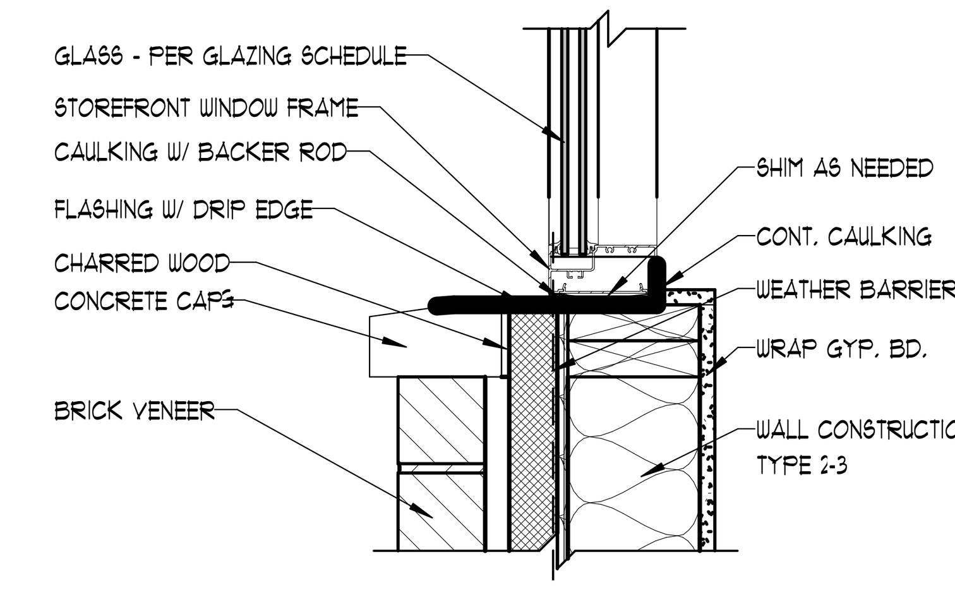
3 DOOR HEAD DETAIL
1 1/2" = 1'-0"



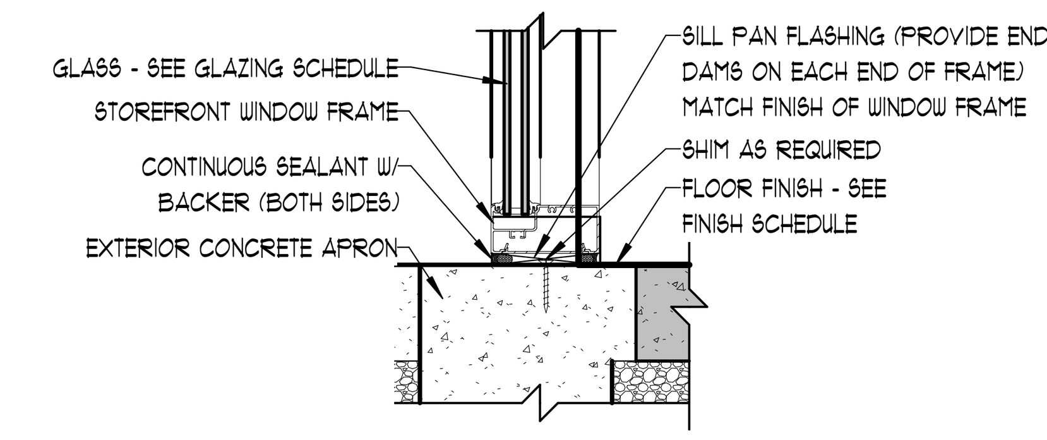
4 DOOR HEAD DETAIL
1 1/2" = 1'-0"



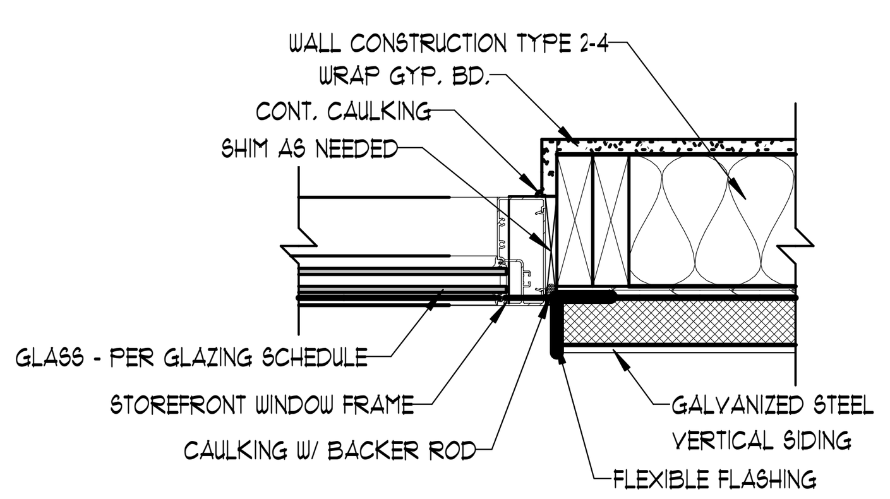
5 DOOR HEAD DETAIL
1 1/2" = 1'-0" JAMB SIMILAR



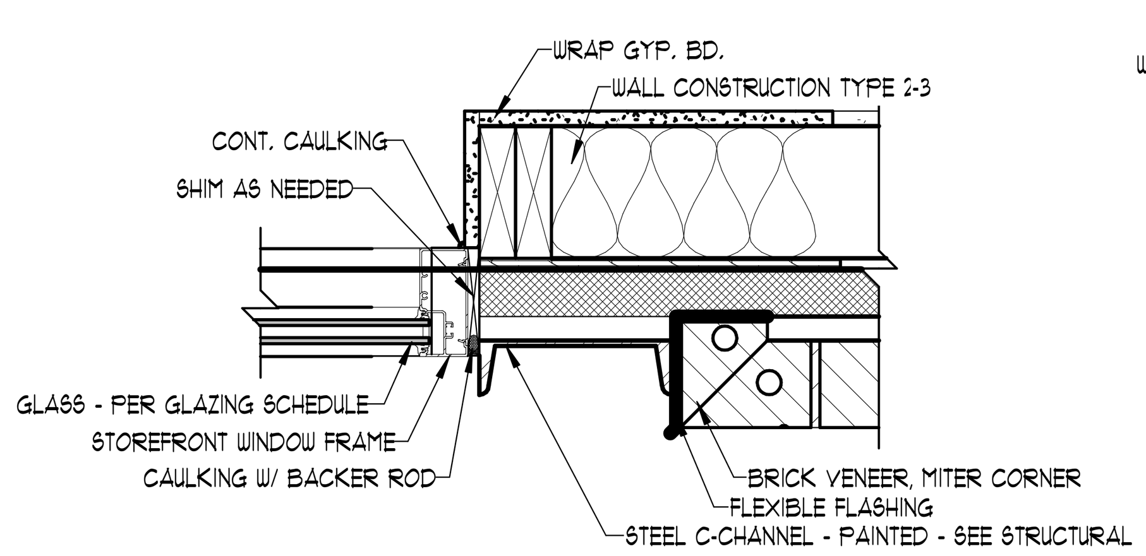
6 SIDING WINDOW SILL
1 1/2" = 1'-0" JAMB SIMILAR



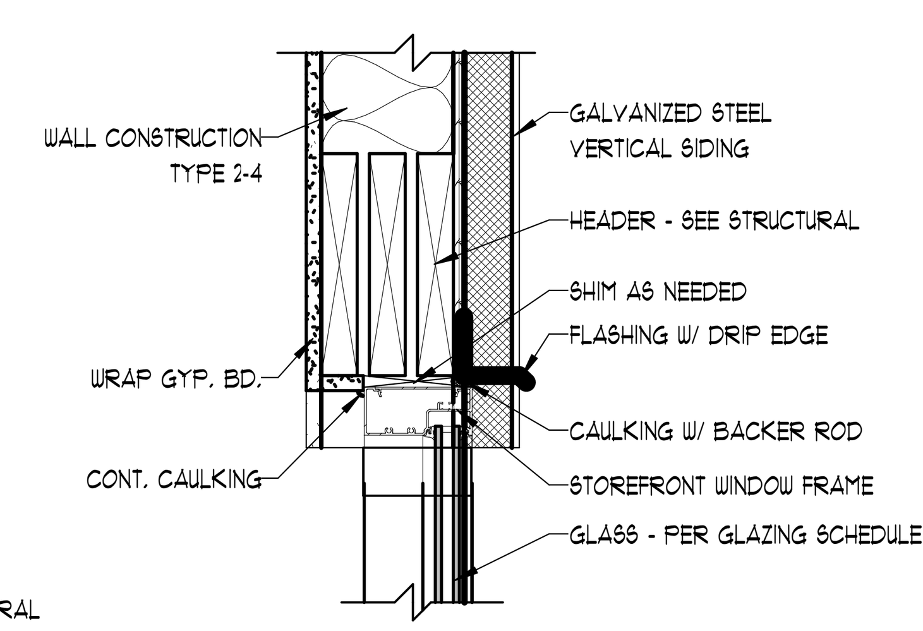
7 BRICK WINDOW SILL
1 1/2" = 1'-0"



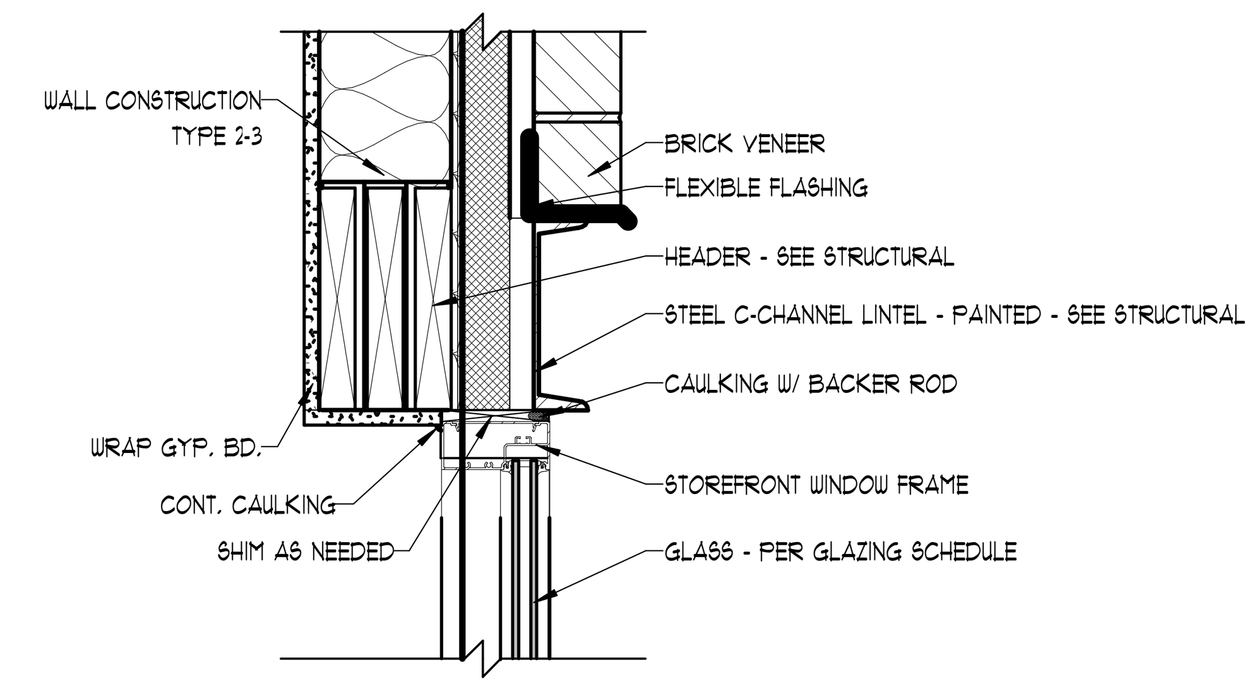
8 SIDING WINDOW JAMB
1 1/2" = 1'-0"



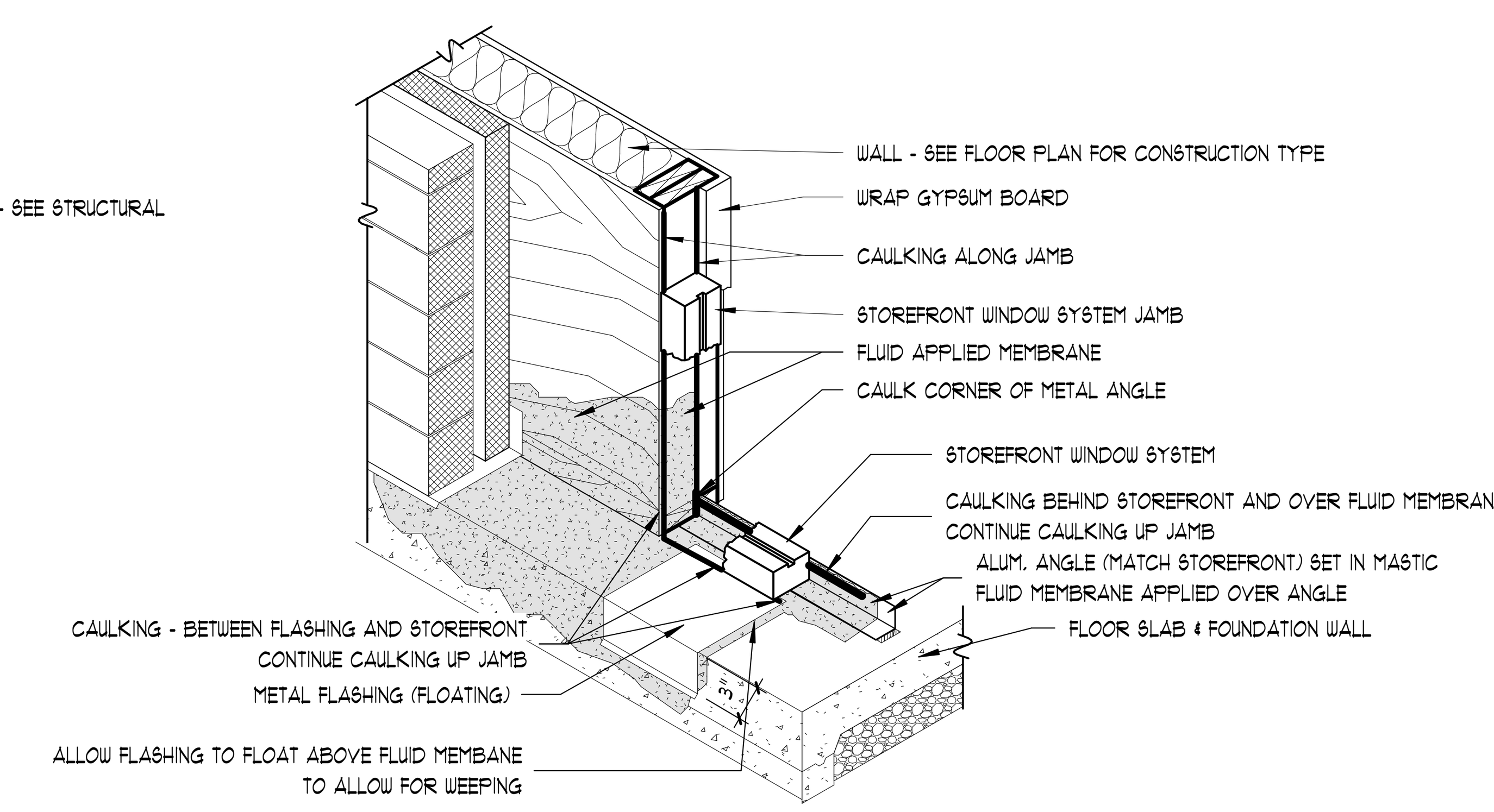
9 BRICK WINDOW JAMB
1 1/2" = 1'-0"



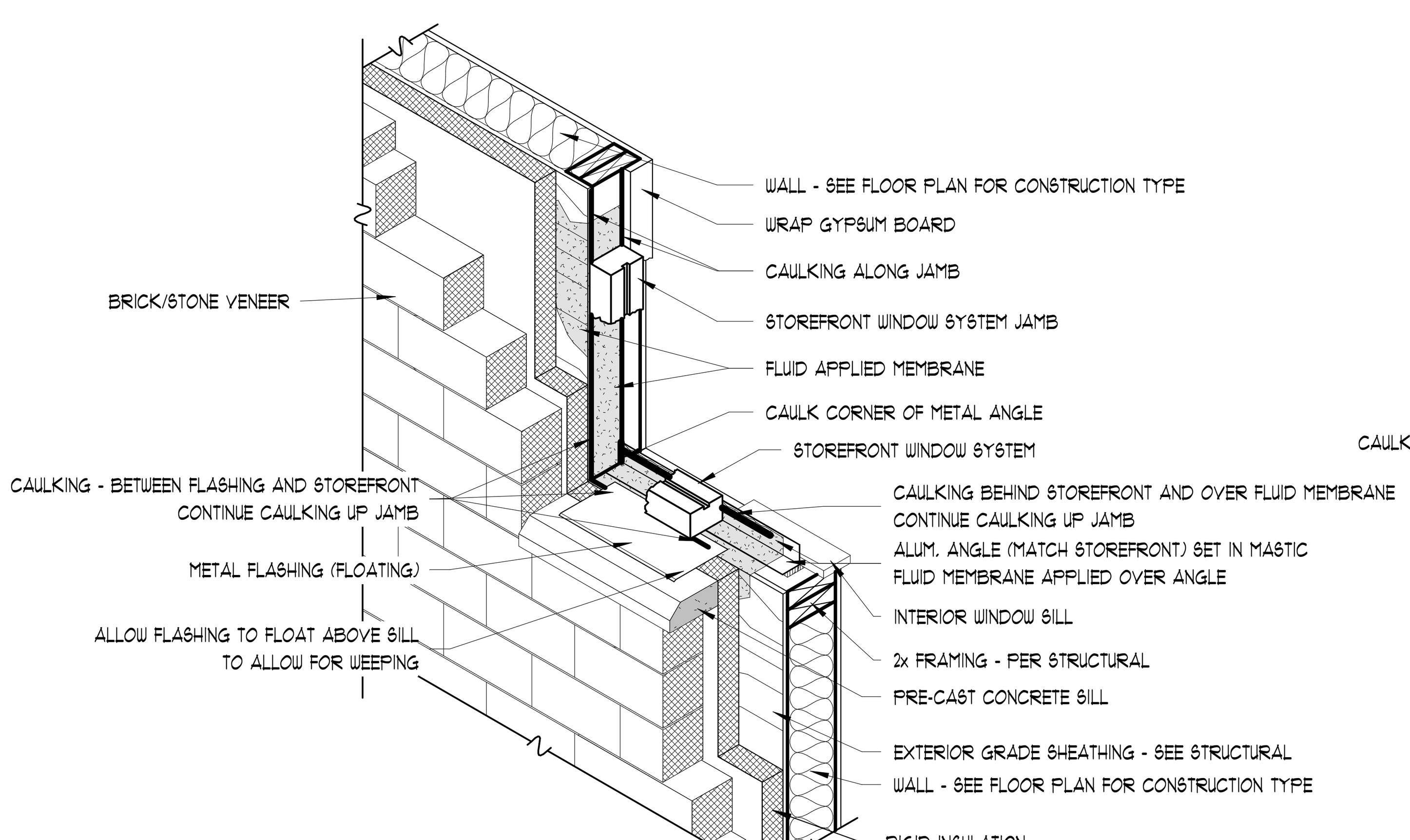
10 SIDING WINDOW HEADER
1 1/2" = 1'-0"



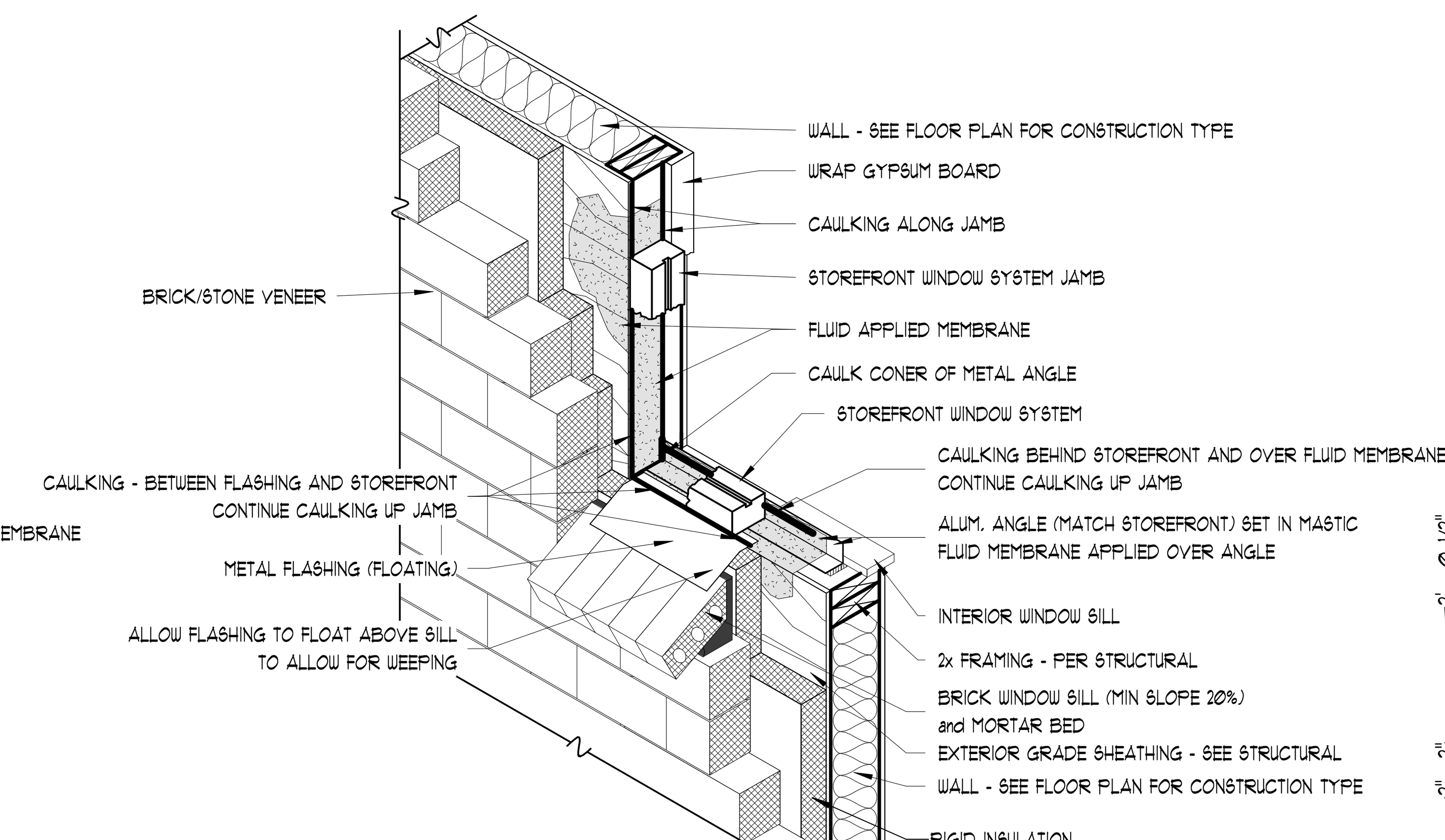
11 BRICK WINDOW HEADER
1 1/2" = 1'-0"



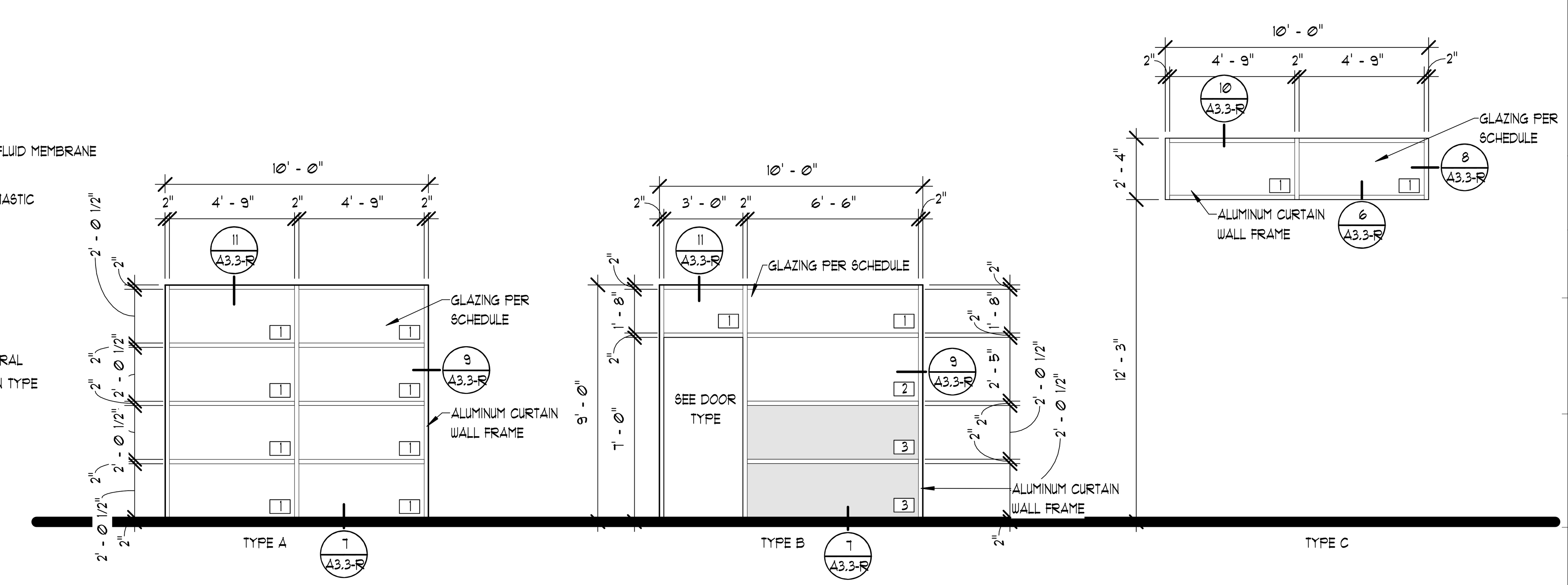
12 WINDOW SIL PAN DETAIL
1" = 1'-0"



13 WINDOW PRECAST DETAIL
1" = 1'-0"



14 WINDOW BRICK SILL DETAIL
1" = 1'-0"



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LICENSED ARCHITECT BRUCE T. FALLON 5403169-0301 10.12.2018 date STATE of UTAH

MILLCREEK

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REV	DATE	DESCRIPTION

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DOOR SCHEDULE + DETAILS

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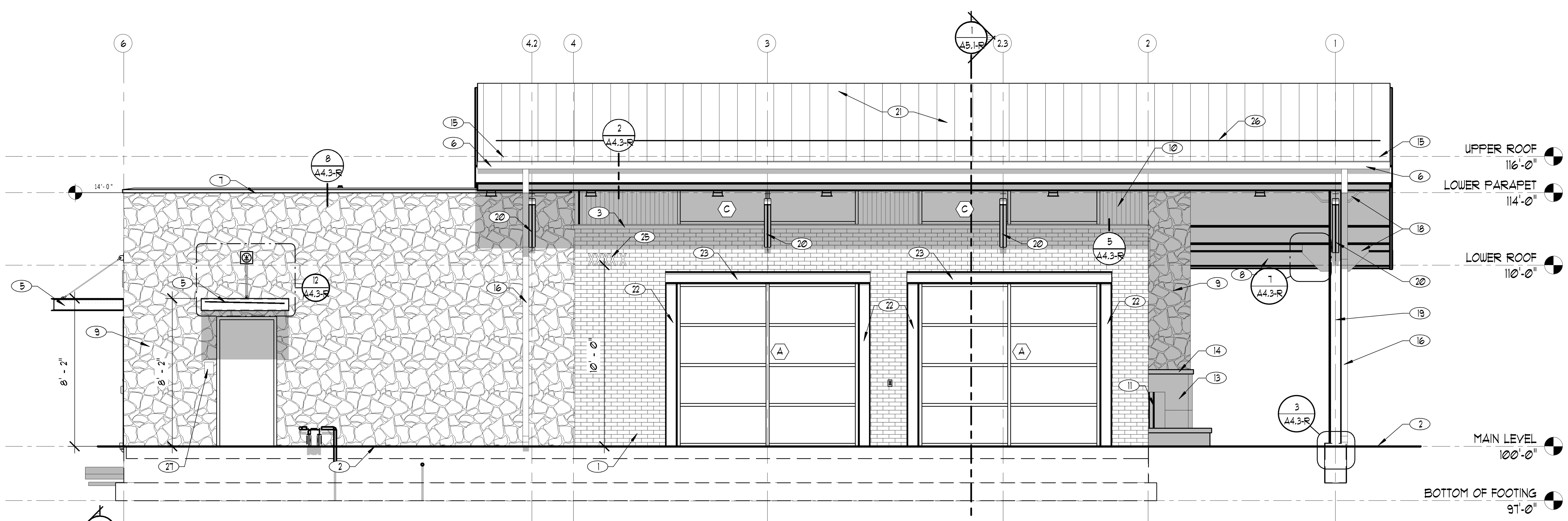
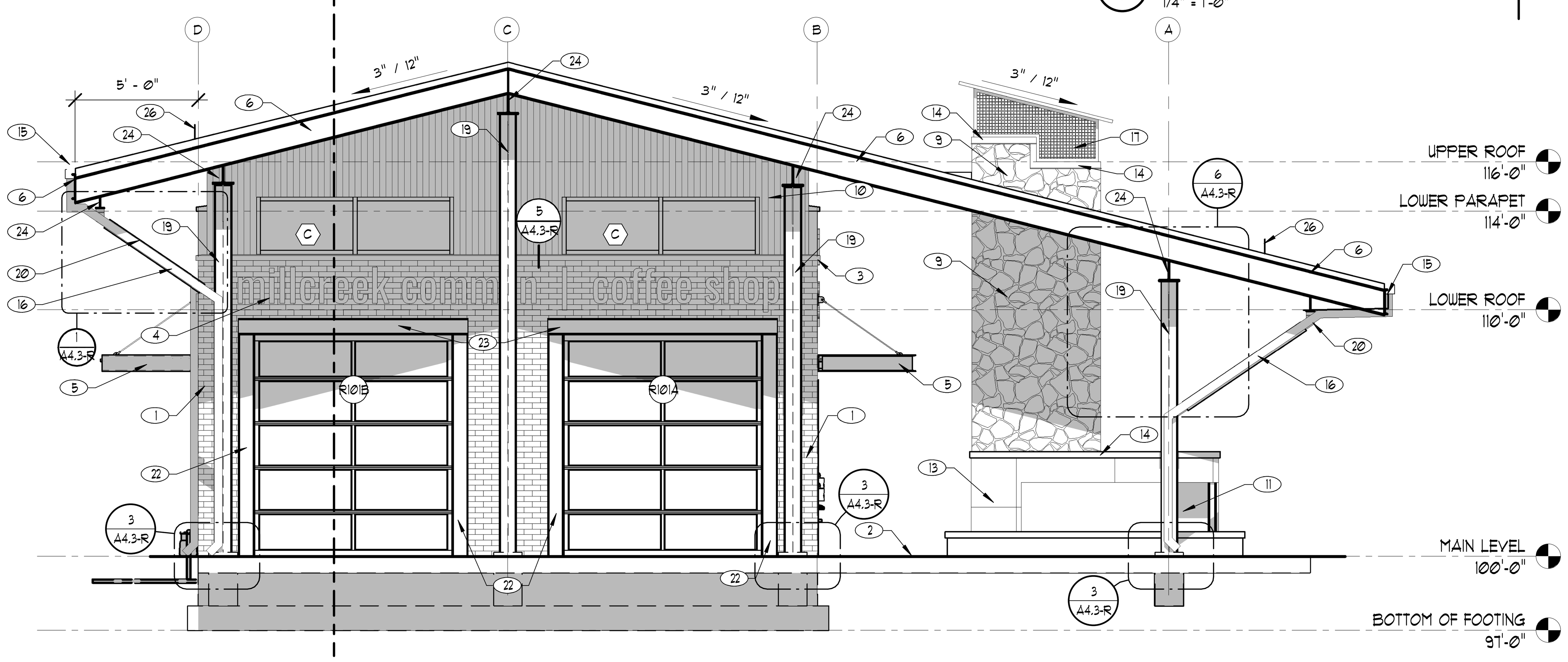
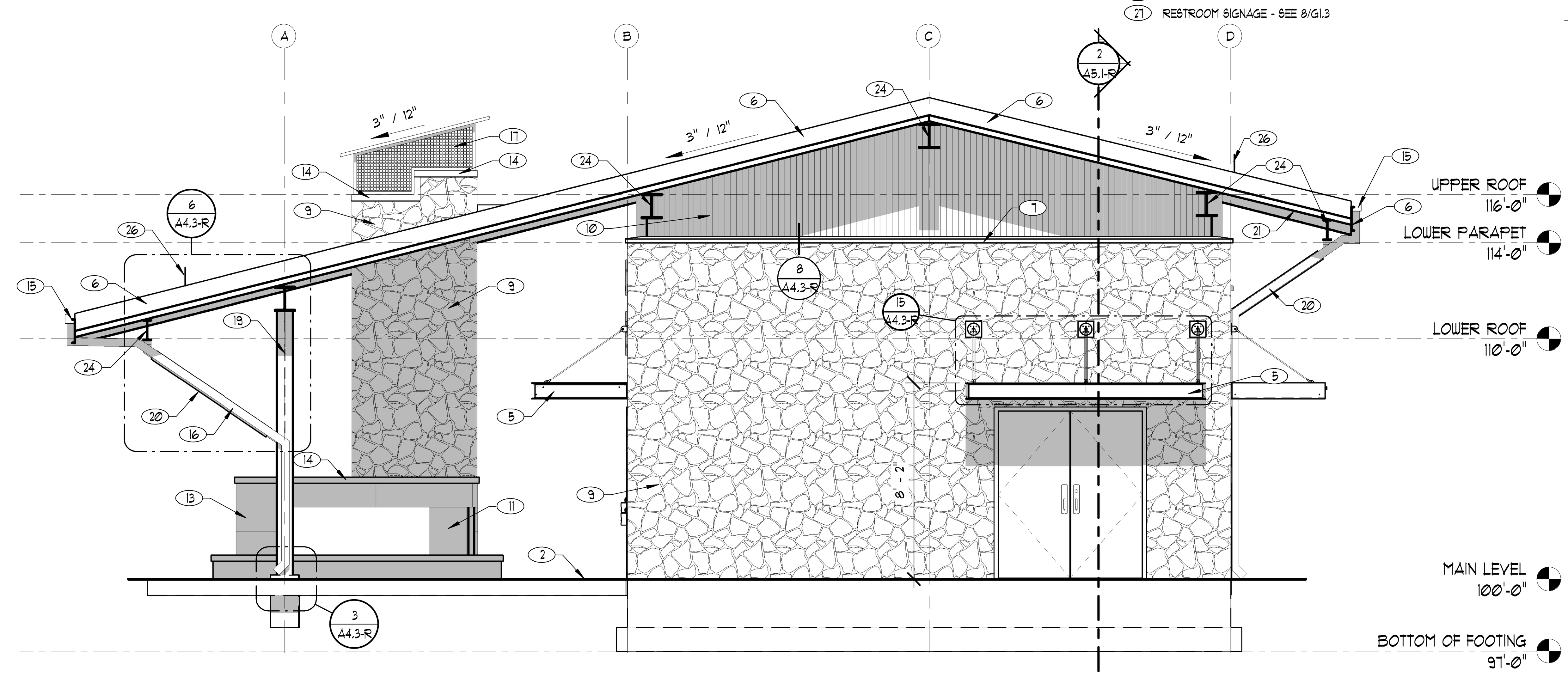


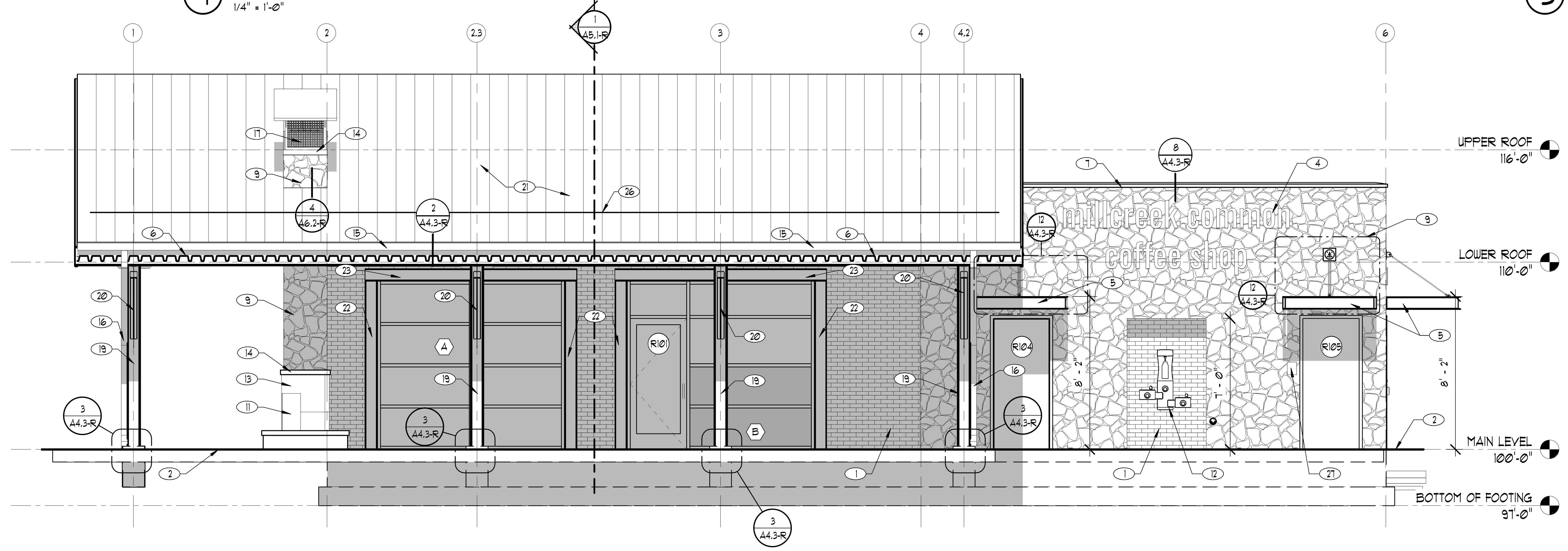
2 EAST ELEVATION
1/4" = 1'-0"



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



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



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

SHEETNOTES

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1R
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3R
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4R

1. BRICK VENEER (BRK)
2. APPROX. FINISH GRADE - SEE CIVIL DWGS
3. PRE-CAST CONCRETE BRICK CAP - SEE DETAIL 5/A4.3-R
4. BUILDING SIGNAGE BY OWNER - N.I.C. - PROVIDE BACKING AS REQUIRED FOR SIGN
5. STEEL CANOPY STRUCTURE
6. PRE-FINISHED METAL FASCIA, TYP
7. PRE-CAST CONCRETE WALL CAP, TYP
8. GALVANIZED METAL B-DECK
9. MANUFACTURED STONE VENEER (CMV-1)
10. CHARRED WOOD SIDING (CWSDG)
11. ENCLOSED GAS FIREPLACE
12. DRINKING FOUNTAIN- SEE PLUMBING DRAWINGS
13. CORTEN WEATHERED STEEL PANELS (MTLWP)
14. PRE-CAST CONCRETE CAP
15. PRE-FINISHED METAL RAIN GUTTER
16. PRE-FINISHED METAL RAIN DOWNSPOUT
17. METAL MESH CHIMNEY CAP - BASIS OF DESIGN: ABSTRACT MESH CHIMNEY CAP BY CYPRESS METALS (SLC) OR EQUAL
18. GALVANIZED STEEL GUSSET (PAINTED) - SEE DETAIL 7/A4.3R
19. GALVANIZED STEEL COLUMN (PAINTED) - SEE STRUCTURAL DWGS
20. GALVANIZED STEEL KNEEBRANCE (PAINTED) - SEE STRUCTURAL DWGS
21. STANDING SEAM METAL ROOF
22. STEEL C-CHANNEL - SEE STRUCTURAL DWGS
23. STEEL C-CHANNEL LINTEL - PAINTED- SEE STRUCTURAL DWGS
24. GALVANIZED STEEL BEAM (PAINTED) - SEE STRUCTURAL DWG'S
25. BUILDING ADDRESS SIGNAGE BY OWNER, 8" TALL WITH 1/2" STROKE WIDTH MIN - PROVIDE BACKING AS REQUIRED FOR SIGN
26. SNOW RAIL GUARD - SEE ROOF PLAN
27. RESTROOM SIGNAGE - SEE 8/G1.3

EXTERIOR FINISH SCHEDULE

MARK	ITEM DESCRIPTION	MANUFACTURER	COLOR / FINISH
BRK	BRICK VENEER	INTERSTATE BRICK	L-4, BRONZESTONE BRICK
CMV-1	ADHERED CONCRETE MASONRY VENEER	CREATIVE MINES	CRAFT ORCHARD LIMESTONE PROVIDE MIX OF BUTTERNUT (20 PERCENT,) ALPACA (60 PERCENT), & WHITEGOLD (20 PERCENT)
CWSDG	CHARRED WOOD SIDING	NAKAMOTO FORESTRY	GENDAI NM1901, ARMSTRONG AMBER
CWSFT	CHARRED WOOD SOFFIT	NAKAMOTO FORESTRY	GENDAI NM1901, ARMSTRONG AMBER
MTLWP	FORMED METAL WALL PANELS	WESTERN STATES METAL	RUSTWALL - A606 TYPE 4 (AKA CORETEN)
MTL-1	PRE-FINISHED METAL FASCIA	MAC	MS1, MS1.1 & MS1.2 IN PATTERN SHOWN COLOR: TBD
MTL-2	PRE-FINISHED METAL FASCIA	MAC	VERSA IN VERTICAL ORIENTATION COLOR: TBD
	ALUM. STOREFRONT ENTRANCES & WINDOWS	SEE SPEC.	BLACK ANODIZED ALUMINUM
	METAL DOORS & FRAMES	TBD	TBD
	PRE-MANUF METAL CANOPIES	TBD	POWDER COAT COLOR TBD
	PRE-FINISHED METAL FASCIA & DRIP EDGE	SEE SPEC.	TBD

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STATE of UTAH

MILLCREEK CITY
3330 South 1300 East
Millcreek UT 84106

Owner's Representative:
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MILLCREEK COMMON
XXXXX
MILLCREEK, UT 84005

REV	DATE	DESCRIPTION

DESIGNED BY: BF
DRAWN: RS / BF
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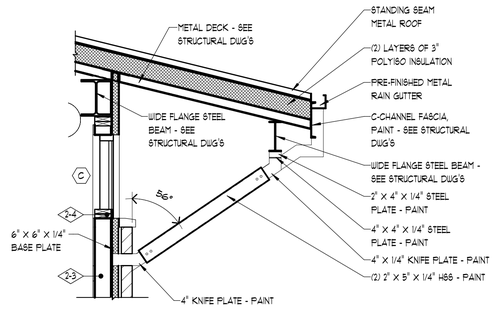
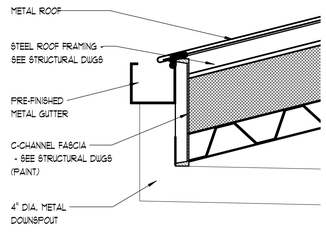
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
EXTERIOR ELEVATIONS

Sheet Number:
A4.2-R



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



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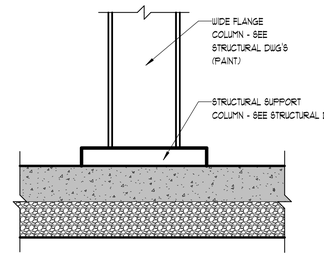
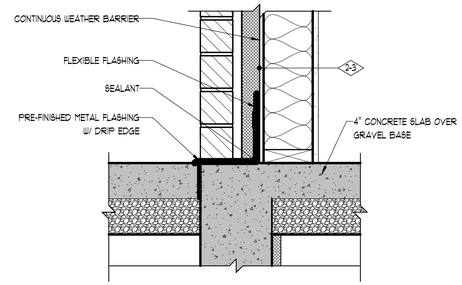
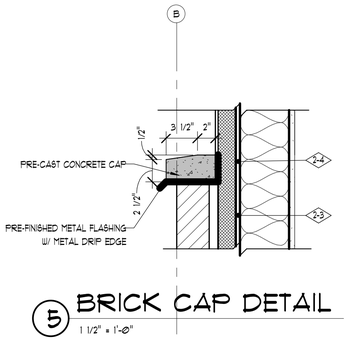
1 1/2" = 1'-0"



3 COLUMN @ GRADE
1 1/2" = 1'-0"



4 BRICK @ GRADE
1 1/2" = 1'-0"



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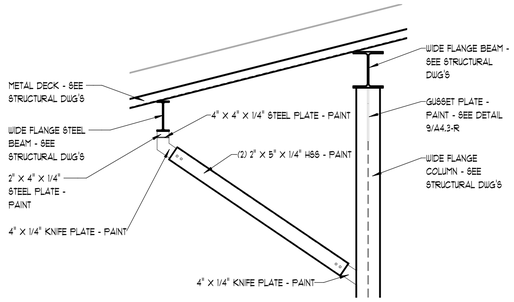
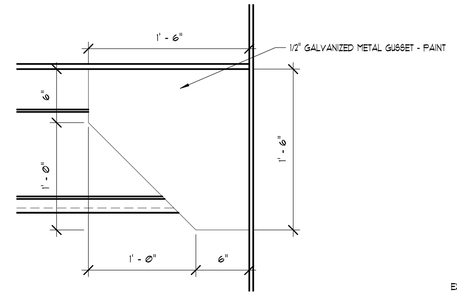
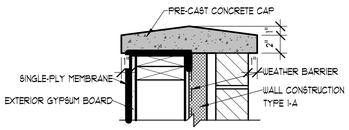
1 1/2" = 1'-0"



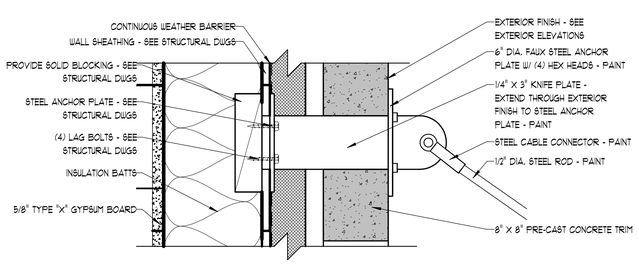
6 KNEEBRACE DETAIL
1/2" = 1'-0"



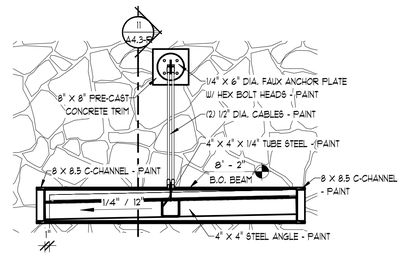
7 GUSSET DETAIL
1 1/2" = 1'-0"



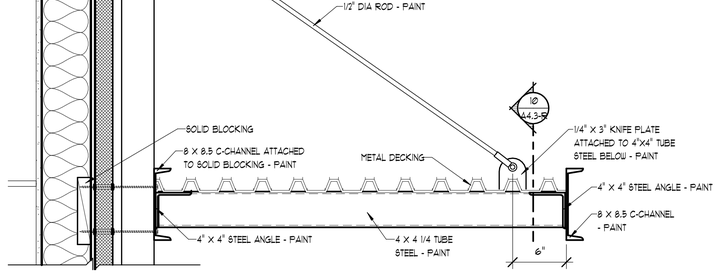
8 WALL CAP DETAIL
1 1/2" = 1'-0"



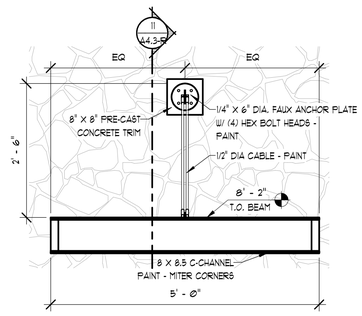
9 AWNING CONNECTION DETAIL
3" = 1'-0"



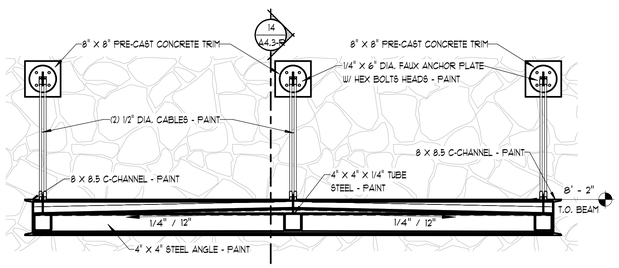
10 AWNING 2 SECTION
3/4" = 1'-0"



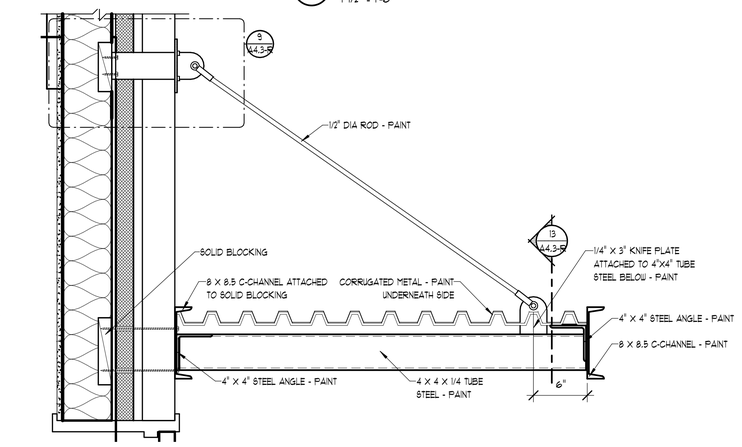
11 AWNING 2 DETAIL
1 1/2" = 1'-0"



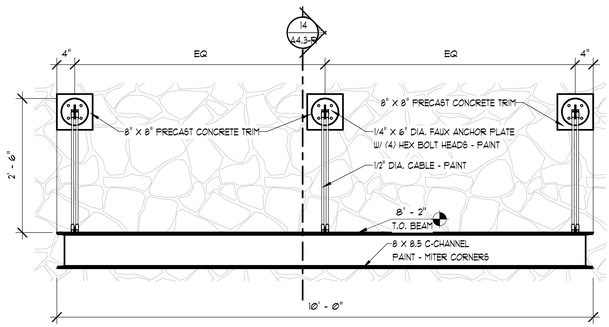
12 AWNING 2 ELEVATION
3/4" = 1'-0"



13 AWNING 1 SECTION
3/4" = 1'-0"



14 AWNING 1 DETAIL
1 1/2" = 1'-0"



15 AWNING 1 ELEVATION
3/4" = 1'-0"

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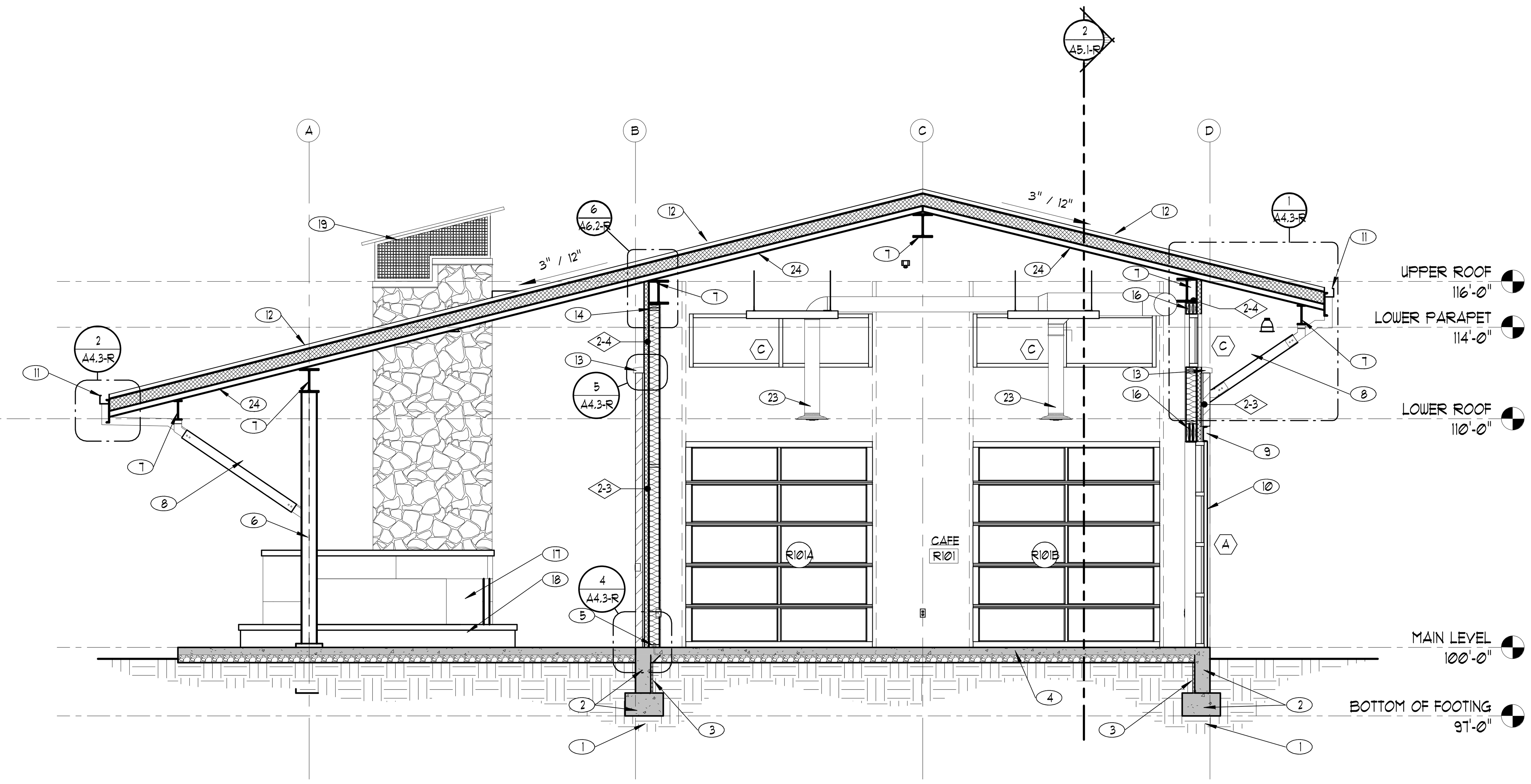
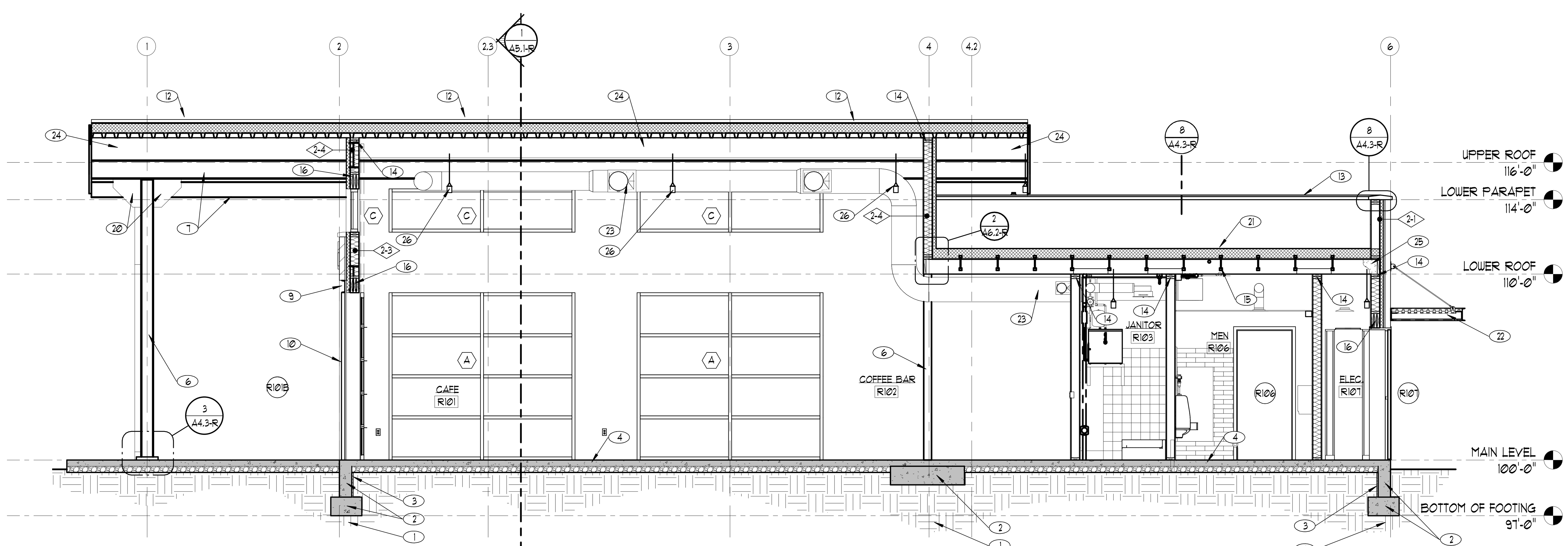


1 BUILDING SECTION
1/4" = 1'-0"



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

SHEETNOTES

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1R
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3R
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4R

1 UNDISTURBED EARTH OR ENGINEERED FILL
2 CONCRETE FOOTINGS AND FOUNDATIONS - SEE STRUCTURAL DWG'S
3 2" RIGID INSULATION ATTACHED TO INTERIOR OF FOUNDATION WALL
4 CONCRETE SLAB OVER GRAVEL BASE - SEE STRUCTURAL DWG'S
5 PRESSURE TREATED SILL PLATE & ANCHOR BOLT - SEE STRUCTURAL DWG'S
6 GALVANIZED STEEL COLUMN (PAINTED) - SEE STRUCTURAL DWGS
7 GALVANIZED STEEL BEAM (PAINTED) - SEE STRUCTURAL DWG'S
8 GALVANIZED STEEL ANGLED COLUMN - SEE STRUCTURAL DWG'S
9 8" WIDE FLANGE BEAM - PAINT
10 8" WIDE FLANGE COLUMN - PAINT
11 PRE-FINISHED METAL RAIN GUTTER
12 GALVANIZED METAL ROOF OVER 6" RIGID INSULATION
13 PRE-CAST CONCRETE CAP - SEE DETAIL 8/A4.3-R
14 DOUBLE TOP PLATE
15 ROOF FRAMING - SEE STRUCTURAL DWG'S
16 WOOD HEADER - SEE STRUCTURAL DWG'S
17 LINEAR GAS FIREPLACE
18 CONCRETE HEARTH
19 PRE-FINISHED METAL CHIMNEY CAP
20 GALVANIZED STEEL GUSSET (PAINTED)
21 SINGLE-PLY MEMBRANE ROOFING OVER 6" RIGID INSULATION
22 METAL SHADE CANOPY, PAINT - SEE EXTERIOR ELEVATIONS
23 EXPOSED MECHANICAL SYSTEMS - PAINT FLAT BLACK
24 GALVANIZED METAL DECK - SEE STRUCTURAL DWG'S
25 CLOSED CELL SPRAY FOAM INSULATION - PROVIDE AT ENTIRE PERIMETER
26 LIGHT FIXTURE - SEE ELECTRICAL DWG'S
27 CAST IN PLACE 8" CONCRETE BASE
28 CAST IN PLACE CONCRETE CAP
29 PRE-MANUFACTURED OUTDOOR LINEAR GAS BURNER W/ DECORATIVE STONES
30 9" x4" x 1 1/2" FIRE BRICK
31 CORTEN WEATHERED STEEL PANELS
33 PRE-CAST CONCRETE CAP
34 2"x4" STUDS @ 16" O.C.
35 TUBE STEEL FRAME- SEE STRUCTURAL DRAWINGS
36 MANUFACTURED STONE VENEER
37 TUBE STEEL COLUMNS- SEE STRUCTURAL DRAWINGS
38 STEEL ANGLE LEDGER- SEE STRUCTURAL DRAWINGS

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Sheet Name:
BUILDING SECTIONS

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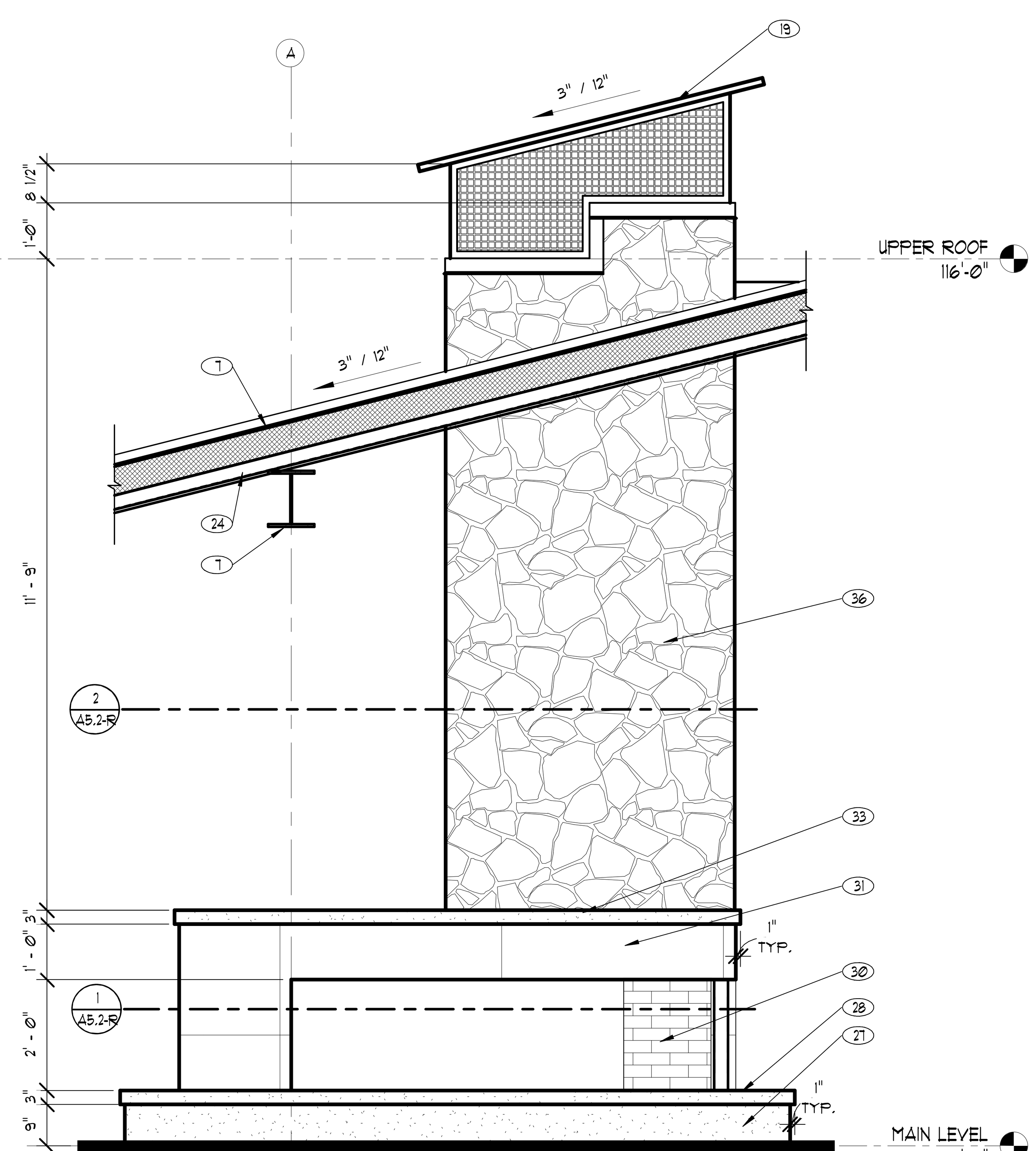
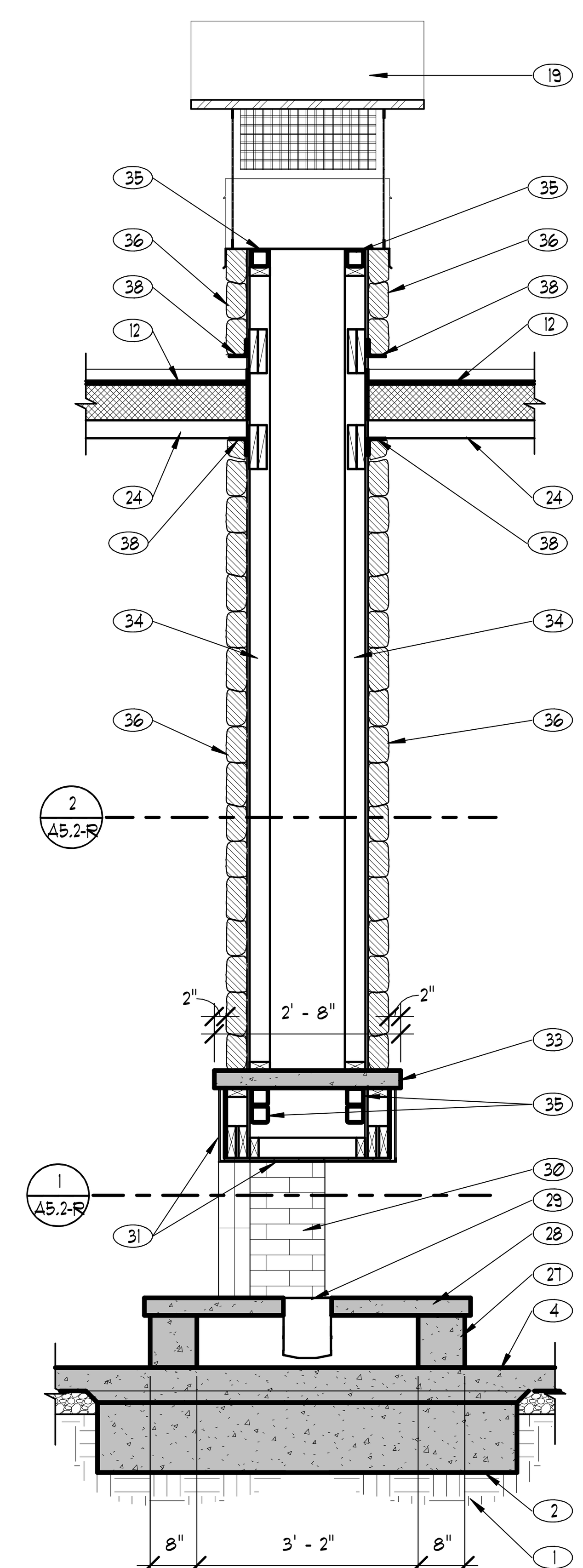
A5.1-R

SHEETNOTES

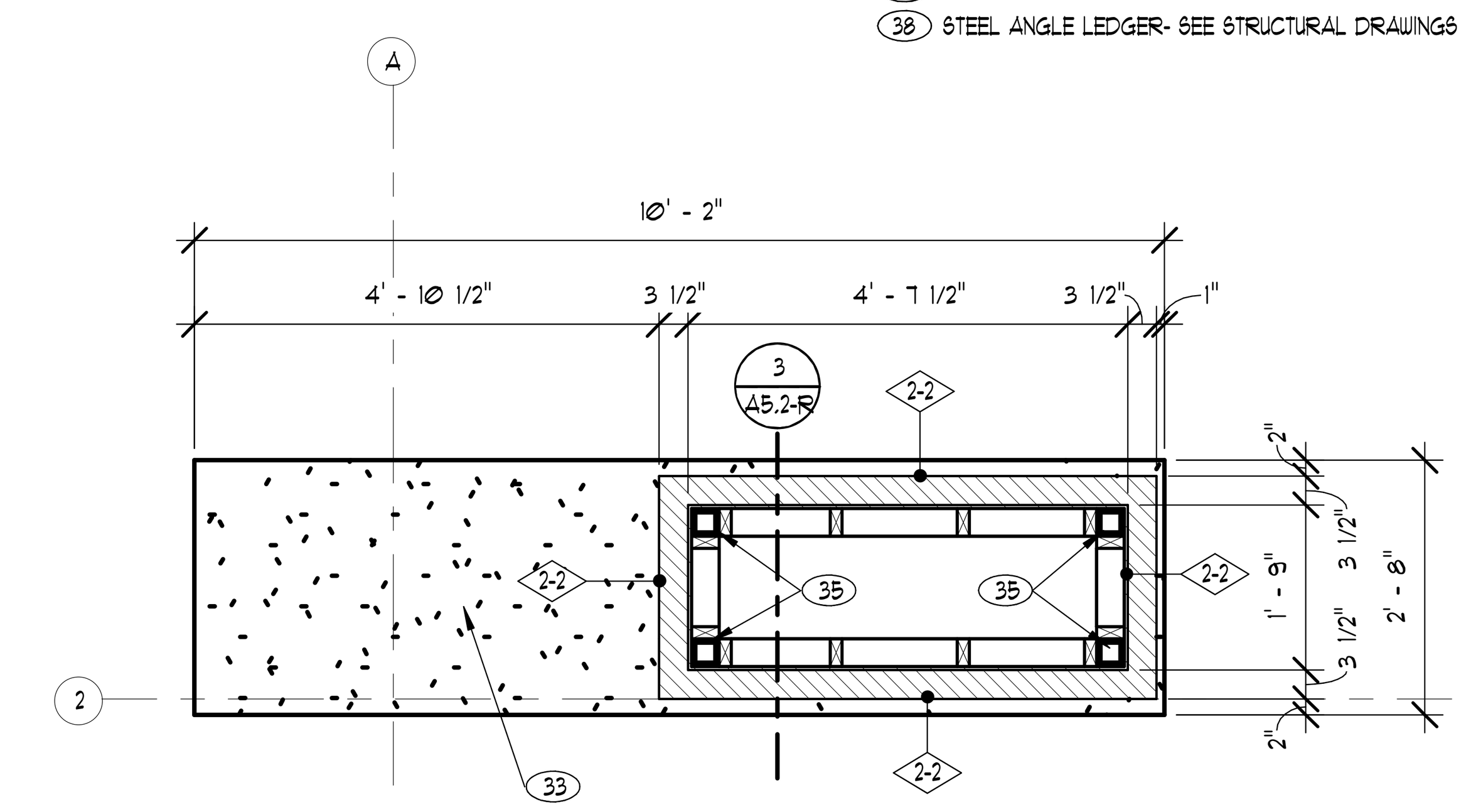
- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1R
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3R
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4R
- (1) UNDISTURBED EARTH OR ENGINEERED FILL
- (2) CONCRETE FOOTINGS AND FOUNDATIONS - SEE STRUCTURAL DWG'S
- (3) 2" RIGID INSULATION ATTACHED TO INTERIOR OF FOUNDATION WALL
- (4) CONCRETE SLAB OVER GRAVEL BASE - SEE STRUCTURAL DWG'S
- (5) PRESSURE TREATED SILL PLATE & ANCHOR BOLT - SEE STRUCTURAL DWG'S
- (6) GALVANIZED STEEL COLUMN (PAINTED) - SEE STRUCTURAL DWGS
- (7) GALVANIZED STEEL BEAM (PAINTED) - SEE STRUCTURAL DWG'S
- (8) GALVANIZED STEEL ANGLED COLUMN - SEE STRUCTURAL DWG'S
- (9) 8" WIDE FLANGE BEAM - PAINT
- (10) 8" WIDE FLANGE COLUMN - PAINT
- (11) PRE-FINISHED METAL RAIN GUTTER
- (12) GALVANIZED METAL ROOF OVER 6" RIGID INSULATION
- (13) PRE-CAST CONCRETE CAP - SEE DETAIL 8/A4.3-R
- (14) DOUBLE TOP PLATE
- (15) ROOF FRAMING - SEE STRUCTURAL DWG'S
- (16) WOOD HEADER - SEE STRUCTURAL DWG'S
- (17) LINEAR GAS FIREPLACE
- (18) CONCRETE HEARTH
- (19) PRE-FINISHED METAL CHIMNEY CAP
- (20) GALVANIZED STEEL GUSSET (PAINTED)
- (21) SINGLE-PLY MEMBRANE ROOFING OVER 6" RIGID INSULATION
- (22) METAL SHADE CANOPY, PAINT - SEE EXTERIOR ELEVATIONS
- (23) EXPOSED MECHANICAL SYSTEMS - PAINT FLAT BLACK
- (24) GALVANIZED METAL DECK - SEE STRUCTURAL DWG'S
- (25) CLOSED CELL SPRAY FOAM INSULATION - PROVIDE AT ENTIRE PERIMETER
- (26) LIGHT FIXTURE - SEE ELECTRICAL DWG'S
- (27) CAST IN PLACE 8" CONCRETE BASE
- (28) CAST IN PLACE CONCRETE CAP
- (29) PRE-MANUFACTURED OUTDOOR LINEAR GAS BURNER W/ DECORATIVE STONES
- (30) 9" x4" x 1 1/2" FIRE BRICK
- (31) CORTEN WEATHERED STEEL PANELS
- (33) PRE-CAST CONCRETE CAP
- (34) 2"x4" STUDS @ 16" O.C.
- (35) TUBE STEEL FRAME- SEE STRUCTURAL DRAWINGS
- (36) MANUFACTURED STONE VENEER
- (37) TUBE STEEL COLUMNS- SEE STRUCTURAL DRAWINGS
- (38) STEEL ANGLE LEDGER- SEE STRUCTURAL DRAWINGS



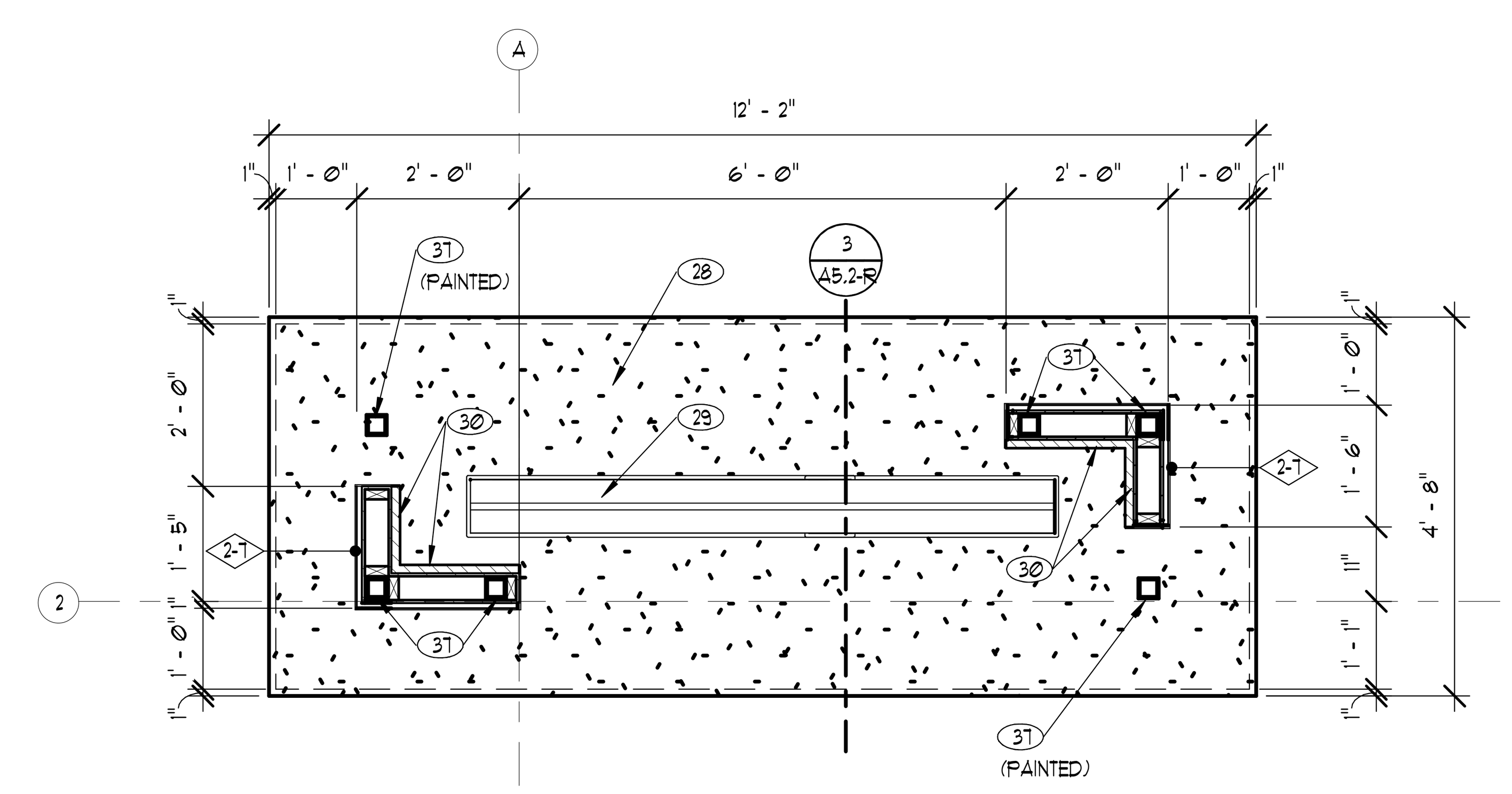
4 FIREPLACE ELEVATION
1/2" = 1'-0"



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



2 FIREPLACE SECTION DETAIL
1/2" = 1'-0"



1 FIREPLACE SECTION DETAIL
1/2" = 1'-0"

WPA architecture

LICENSED ARCHITECT
BRUCE T. FALLON
5403169-0301
10.12.2018
date
STATE of UTAH

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FIREPLACE DETAILS

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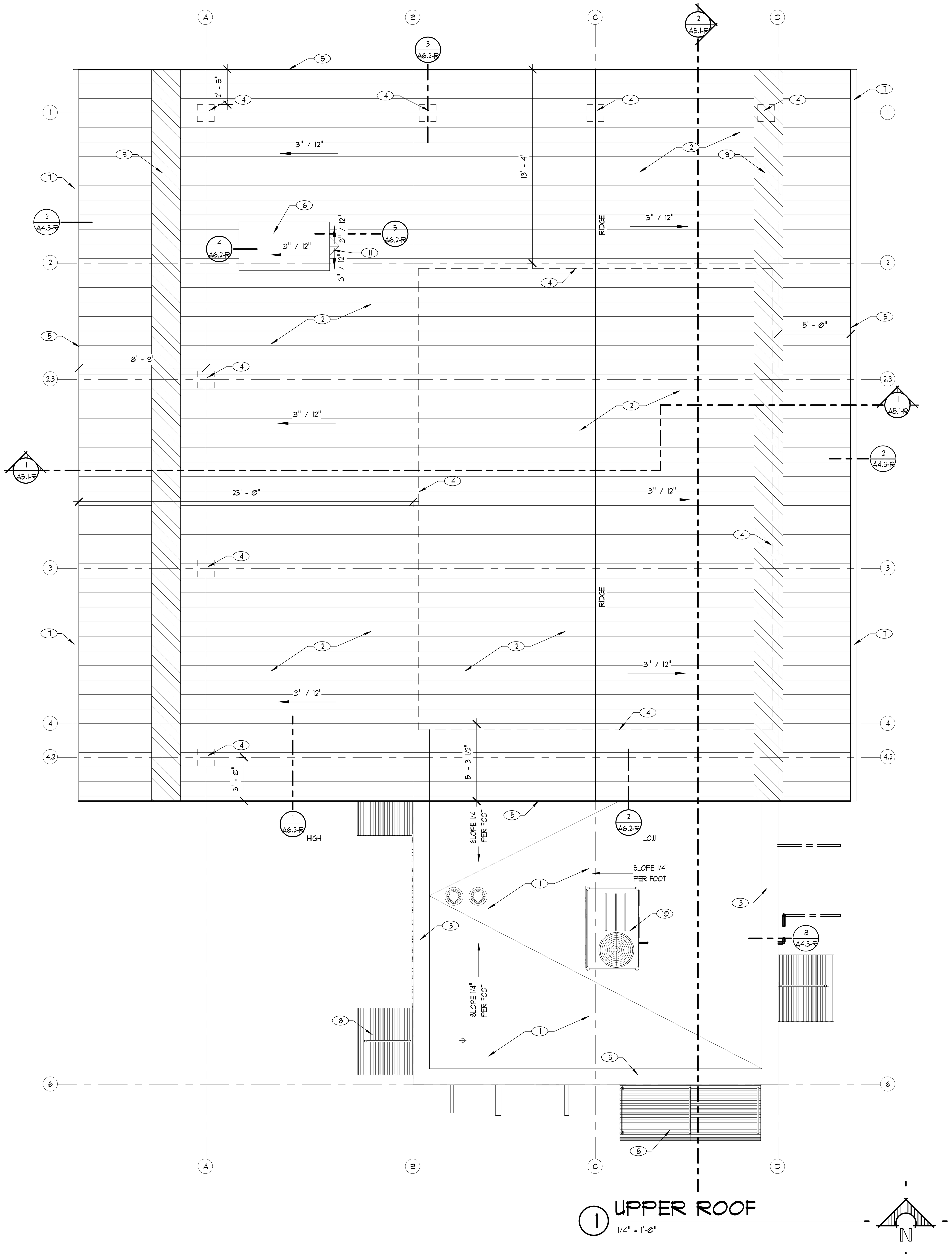

1 UPPER ROOF
1/4" = 1'-0"

SHEETNOTES

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1R
- ○ TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3R
- ⬡ TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4R

1. SINGLE-PLY MEMBRANE ROOFING OVER 6" RIGID INSULATION
2. STANDING SEAM METAL ROOF OVER 6" POLYISO INSULATION
3. PRE-FINISHED CONCRETE WALL CAP, TYP - SEE DETAIL 8/A4.3R
4. WALL BELOW
5. PRE-FINISHED METAL FASCIA, TYP
6. CHIMNEY
7. PRE-FINISHED METAL RAIN GUTTER
8. METAL SHADE CANOPY, PAINT - SEE EXTERIOR ELEVATIONS
9. SNOW RAIL GUARD
10. ROOF EQUIPMENT - SEE MECHANICAL
11. ROOF CRICKET

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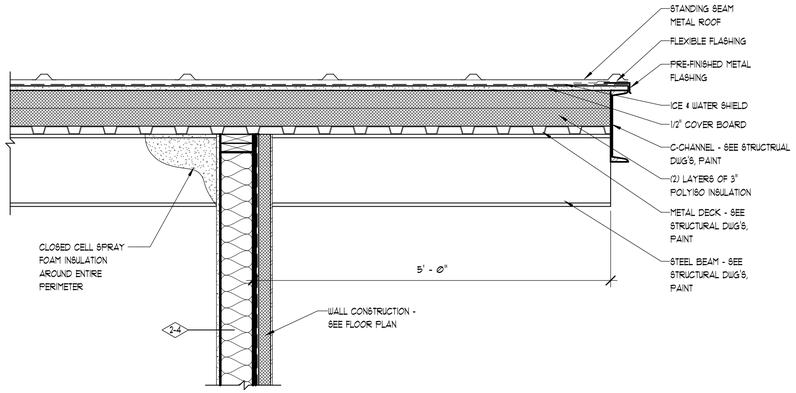
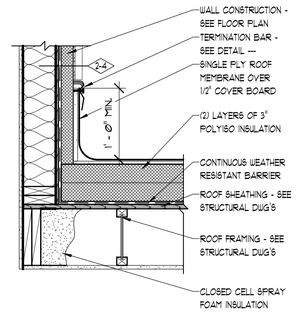
Sheet Name: ROOF PLAN

Sheet Number: A6.1-R



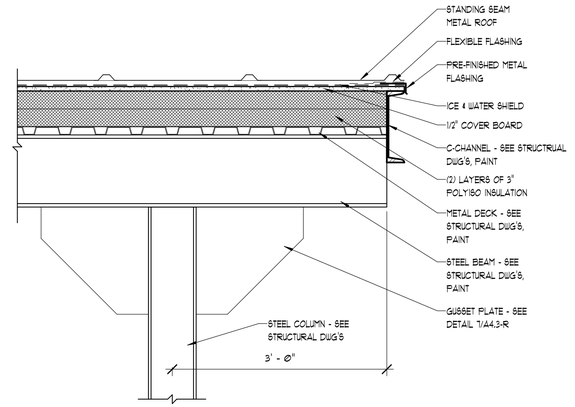
1 ROOF DETAIL

1" = 1'-0"



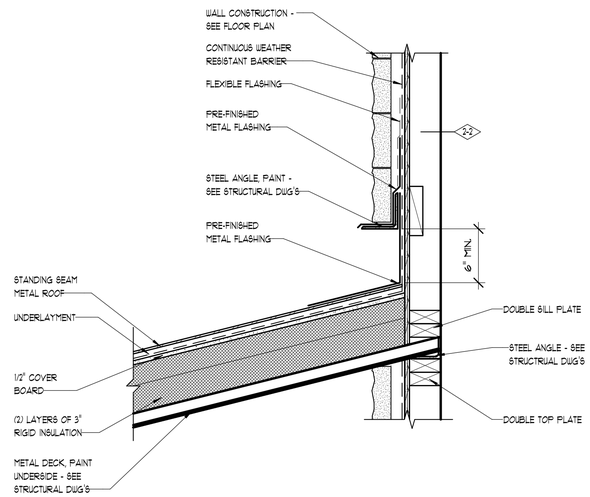
2 ROOF DETAIL

1" = 1'-0"



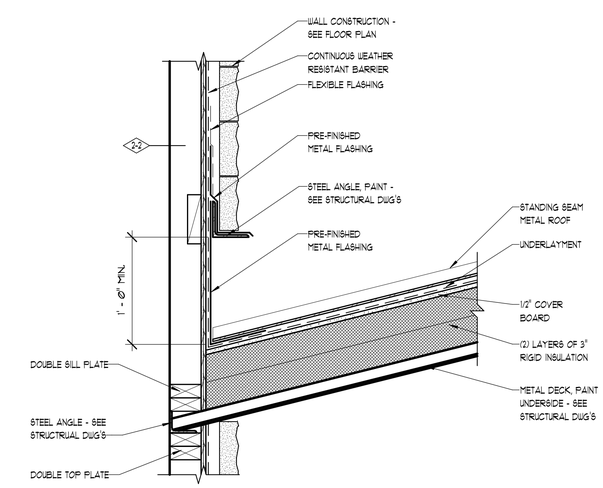
3 ROOF DETAIL

1" = 1'-0"



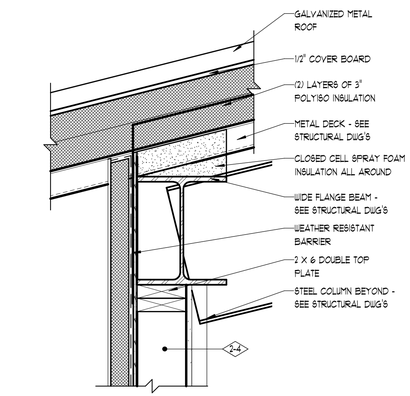
4 CHIMNEY DETAIL

1 1/2" = 1'-0"



5 ROOF DETAIL

1 1/2" = 1'-0"



6 ROOF DETAIL

1 1/2" = 1'-0"

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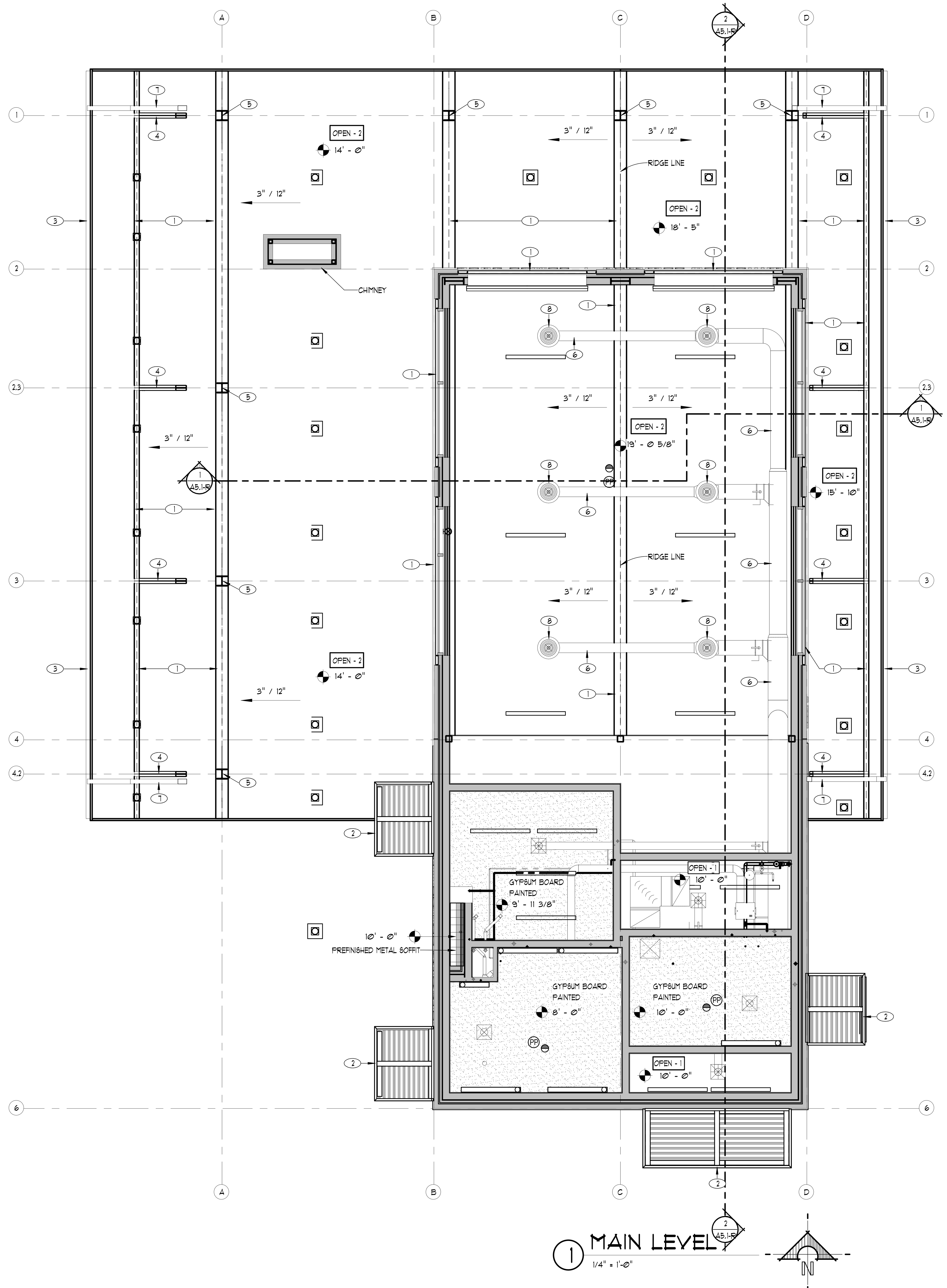

1 MAIN LEVEL
1/4" = 1'-0"

CEILING LEGEND

GYPSUM BOARD	2x2 LAY-IN LIGHT
PRE-FINISHED METAL SOFFIT	RECESSED CAN LIGHT
GALVANIZED METAL B-DECK	RETURN VENT
OPEN CEILING 1 - PAINT SW BLACK IRON ORE	SUPPLY VENT
OPEN CEILING 2 - OPEN TO STRUCTURE, DO NOT PAINT GALVANIZED STRUCTURE DO NOT PAINT MECHANICAL	LED DOWNLIGHT
	LED CYLINDER DOWNLIGHT
	LED STRIP LIGHT

SHEETNOTES

- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1R
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3R
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4R

1. STRUCTURAL SUPPORT BEAMS PAINTED, SEE STRUCTURAL DRAWINGS
2. STEEL CANOPY STRUCTURE
3. PRE-FINISHED METAL RAIN GUTTER
4. GALVANIZED STEEL KNEEBRANCE (PAINTED) - SEE STRUCTURAL DRAWINGS
5. GALVANIZED STEEL COLUMN (PAINTED) - SEE STRUCTURAL DRAWINGS
6. MECHANICAL DUCTWORK - DO NOT PAINT
7. PRE-FINISHED METAL RAIN DOWNSPOUT
8. PREFINISHED MECHANICAL GRILLE - SEE MECHANICAL DRAWINGS

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REFLECTED CEILING PLAN

Sheet Number:
A7.1-R

CLEARANCE LEGEND

1	60" TURNING CLEAR FLOOR AREA
2	56" X 60" CLEAR FLOOR AREA @ WATER CLOSET
3	36" X 48" CLEAR FLOOR AREA @ LAVATORY
4	60" X 60" TURNING CLEAR FLOOR AREA

FINISH LEGEND

WALLS

PTDW-1	PAINTED GYPSUM BOARD
CTW-1	CERAMIC WALL TILE
CTW-2	CERAMIC WALL TILE

BASE

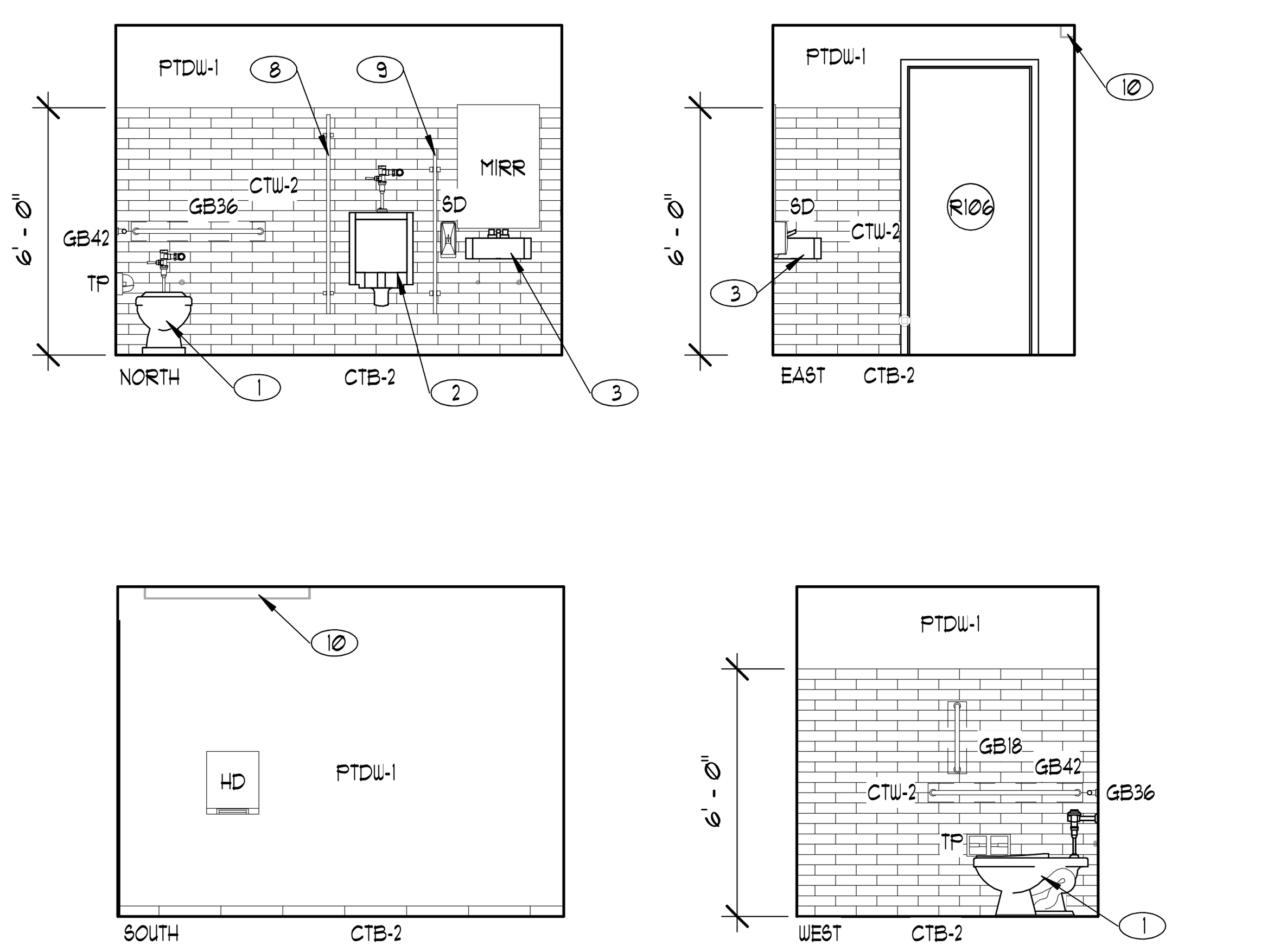
RB	RUBBER BASE
CTB-1	CERAMIC TILE BASE
CTB-2	CERAMIC TILE BASE

ABBREVIATIONS

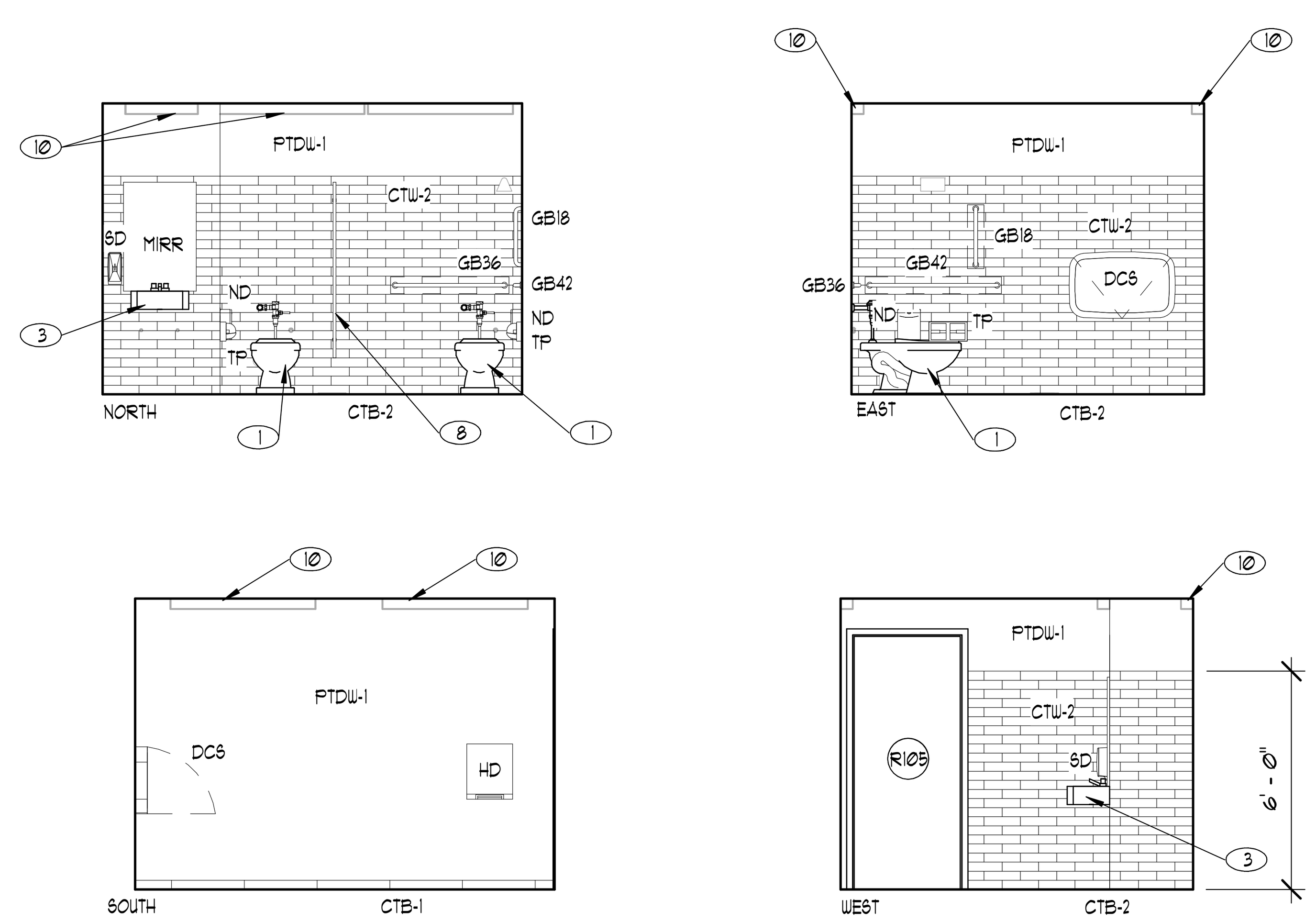
MIRR	MIRROR, SEE INT. ELEV.
SD	SOAP DISPENSER +48" AFF.
TP	TOILET PAPER DISPENSER +48" AFF.
GB18	18" GRAB BAR 18" LONG
GB36	36" GRAB BAR 36" LONG
GB42	42" GRAB BAR 42" LONG
PT	PAPER TOWEL DISPENSER
DC	DIAPER CHANGING STATION
ND	FEMININE NAPKIN DISPENSOR
M&B	MOP AND BROOM HANGER

SHEETNOTES

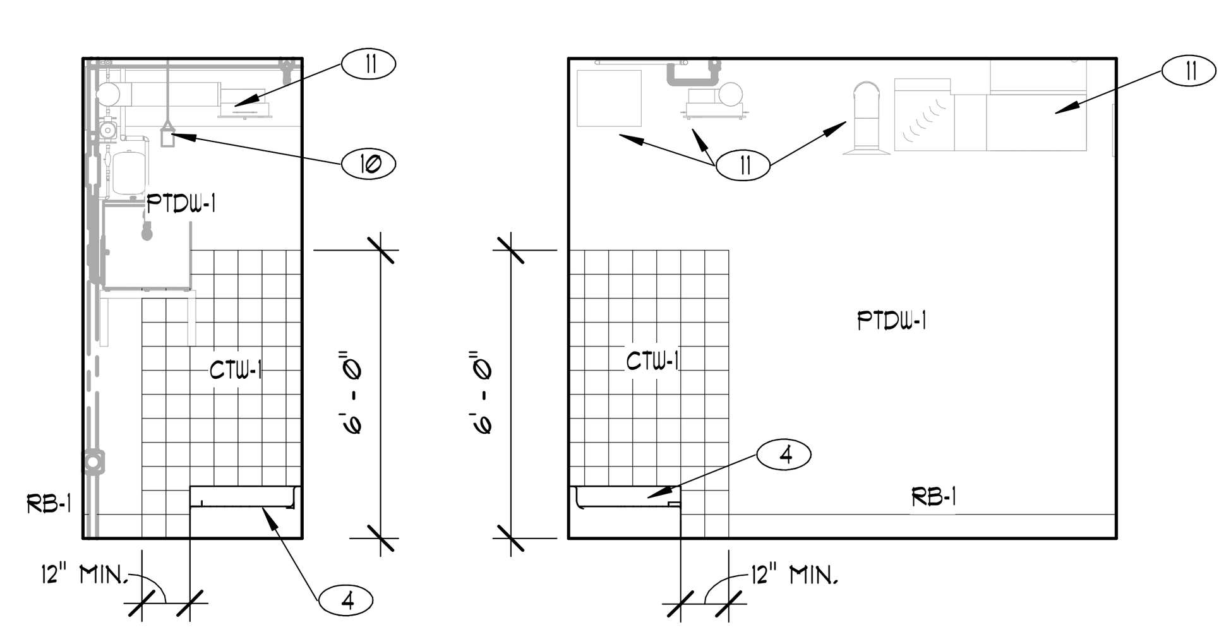
- TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1R
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3R
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.4R
- 1 WATER CLOSET - SEE PLUMBING DWG'S
- 2 URINAL - SEE PLUMBING DWG'S
- 3 LAVATORY - SEE PLUMBING DWG'S
- 4 MOP SINK - SEE PLUMBING DWG'S
- 6 DRINKING FOUNTAIN - SEE PLUMBING DWG'S
- 7 FLOOR DRAIN - SEE PLUMBING DWG'S
- 8 TOILET PARTITION
- 9 URINAL SCREEN
- 10 LIGHT FIXTURE - SEE ELECTRICAL DWG'S
- 11 MECHANICAL EQUIPMENT - SEE MECHANICAL DWG'S
- 12 SEMI-RECESSED FIRE EXTINGUISHER CABINET - SEE DETAIL 7/G1.3-R



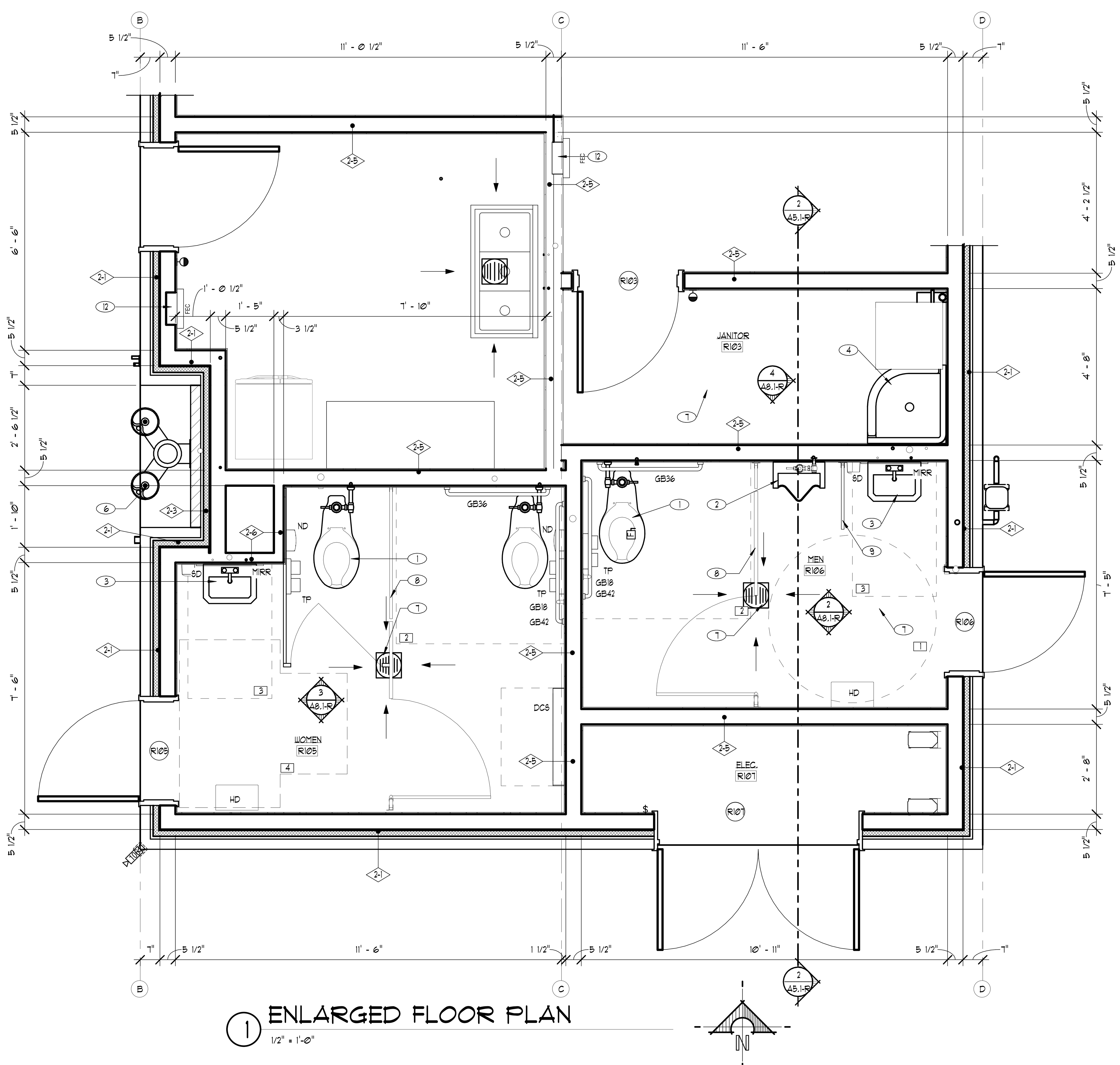
2 MEN 104
1/4" = 1'-0"



3 WOMEN 106 NORTH
1/4" = 1'-0"



4 JANITOR 103
1/4" = 1'-0"



1 ENLARGED FLOOR PLAN
1/2" = 1'-0"

WPA architecture

MILLCREEK CITY
3330 South 1300 East
Millcreek UT 84106

Owner's Representative:
Francis Lilly
Planning Director
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REV	DATE	DESCRIPTION

DESIGNED BY: Designer
DRAWN: Author
CHECKED: Checker
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
ENLARGED PLAN & INT. ELEV.

Sheet Number:
A8.1-R

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 2018 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-XP EPOXY OR HILTI HIT-HY200 MAX-SD ADHESIVE. ANCHORS SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
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 TZ ANCHORS.
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 2018 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. REQ'D 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 3,000 PSI IN 28 DAYS. FLAT SLABS, FOUNDATION WALLS, AND CONCRETE RETAINING WALLS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 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 BAR DIAMETERS. 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.

CONCRETE & REINFORCEMENT

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. 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. 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.
19. THE CONTRACTOR SHALL COORDINATE STEPS IN WALLS WITH THE ARCHITECT, AND SHALL VERIFY WITH THE ENGINEER.

SLABS

20. REINFORCE ALL SLABS ON GRADE w/ № 4 BARS AT 18" O.C. EACH WAY.
21. RECESS FOUNDATION AND POUR SLABS THROUGH, TYPICAL AT ALL EXTERIOR DOORS AND STORE FRONT TYPE WINDOWS. SEE FOUNDATION DETAILS.
22. DEPRESS SLABS AS REQUIRED IN AREAS OF CERAMIC TILE, SPECIAL ENTRY MATS, HARDWOOD FLOORS, ETC. COORDINATE LOCATION AND DEPTH WITH THE ARCHITECT.
23. PROVIDE ISOLATION JOINTS AROUND COLUMNS/SPREAD FOOTINGS, AND CONTROL JOINTS AS REQUIRED, PARTICULARLY WHERE SLABS TRANSITION IN SIZE.
24. 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.
25. REFER TO THE CIVIL PLANS FOR SPECIFICATION OF ALL EXTERIOR FLAT WORK.

FOOTINGS

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

STRUCTURAL FILL

30. 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.
31. STRUCTURAL FILL SHOULD 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 95% MAXIMUM DENSITY (ASTM D 1557).
32. ALL FILL MATERIAL MUST BE COMPLETELY REMOVED FROM UNDER THE PROPOSED STRUCTURE AND IMPROVEMENT AREAS. THIS HAS BEEN FOUND TO BE UP TO 16.5' DEEP AND POSSIBLY DEEPER. SUPPORT FOOTINGS AND SLABS ON PROPERLY PLACED AND COMPACTED STRUCTURAL FILL. REMOVED FILL MAY BE PROCESSED AND STOCK PILED FOR LATER USE AS STRUCTURAL FILL OR PLACED IN OTHER AREAS OF THE SITE WITH PROPER PLACEMENT, COMPACTION AND TESTING WITH APPROVAL OF GEOTECHNICAL ENGINEER.
33. 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.
34. CONTRACTOR SHALL EMPLOY THE GEOTECHNICAL ENGINEER TO OBSERVE AND APPROVE THE EXCAVATION PRIOR TO PLACING STRUCTURAL FILL OR FORMING FOOTINGS.

GENERAL STEEL NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK TO BE IN STRICT ACCORDANCE WITH THE 2018 IBC, AISC, AND LOCAL ORDINANCES.
3. ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND ERECTION.
4. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. SEE ARCHITECTURAL SHEETS FOR DECK BEARING ELEVATIONS. STRUCTURAL STEEL DETAILER SHALL DETERMINE ALL BEARING PLATE ELEVATIONS FROM ARCHITECTURAL DECK ELEVATIONS.
6. SEE ARCHITECTURAL SHEETS FOR ADDITIONAL DIMENSIONS.
7. SEE ARCHITECTURAL FOR ACCESS HATCHES, DRAFT STOPS, ETC.
8. SUBMIT SHOP DRAWINGS OF ALL STRUCTURAL STEEL, STEEL JOISTS, STEEL DECKING & MISCELLANEOUS STEEL TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
9. SEE FRAMING PLANS FOR ADDITIONAL NOTES AND REQUIREMENTS.
10. AT COMPLETION OF MANUFACTURE, THE STEEL JOIST MANUFACTURER SHALL SUBMIT A CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH 2018 18C SECTION 1704.2.5.2 STATING THAT WORK WAS PERFORMED IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND WITH SJI STANDARD SPECIFICATIONS.

STRUCTURAL STEEL

11. ALL WIDE FLANGE MEMBERS TO BE MANUFACTURED UNDER ASTM A992.
12. ALL STRUCTURAL PLATES, CHANNELS & ANGLES TO BE MANUFACTURED UNDER ASTM A36.
13. ALL HSS MEMBERS TO BE MANUFACTURED UNDER ASTM A500 GRADE B.
14. ALL PIPE COLUMNS TO BE MANUFACTURED UNDER ASTM A53 GRADE B.
15. ALL BOLTS FOR STEEL TO STEEL CONNECTIONS TO BE 3/4" DIA. MIN. A325-N HIGH STRENGTH BOLTS, UNLESS NOTED OTHERWISE. BOLTS EMBEDDED IN CONCRETE OR MASONRY SHALL BE F1554 GRADE 36 UNLESS NOTED OTHERWISE.
16. ALL JOIST WELDS TO BE E7024. ALL DECK WELDS TO BE E6022. ALL WELDS FOR SEISMIC SPECIFIC CONNECTIONS TO BE E7018. ALL OTHER WELDS TO BE 70 KSI MIN. ALL WELDS SHALL BE BY A CERTIFIED WELDER.
17. ALL WELDS AND BOLTING TO MEET APPROVAL OF SPECIAL INSPECTOR AS REQUIRED BY BUILDING OFFICIAL.
18. ALL STEEL SHALL BE PROPERLY PRIMED EXCEPT AREAS THAT REQUIRE FIELD WELDING (i.e. TOP OF BEAMS).
19. SEE ARCHITECTURAL, MECHANICAL & ELECTRICAL FOR ADDITIONAL STEEL MEMBERS (BRACKETS, ANGLES, ETC...) REQUIRED.
20. STEEL MEMBERS SHALL NOT BE CUT, DRILLED OR TORCHED FOR PIPES, ETC. UNLESS SPECIFICALLY DETAILED.
21. ANY MODIFICATION OF STRUCTURAL MEMBERS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS IS NOT PERMITTED WITHOUT PRIOR APPROVAL.
22. ANY CONNECTIONS NOT DETAILED ON STRUCTURAL PLANS SHALL BE PROVIDED BY THE STEEL DETAILER. SHOP DRAWINGS FOR ALL FABRICATED STEEL CONNECTIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

STEEL DECKING

23. STEEL DECK TO MEET REQUIREMENTS OF STEEL DECK INSTITUTE. ALL DECK SHALL BE PROVIDED TO SPAN A MINIMUM OF THREE SUPPORTS.
24. SEE SHEET NOTES ON S2.1-R FOR ROOF DECK SPECIFICATIONS
25. REINFORCE DECK OPENING FOR SKYLIGHTS, ACCESS HATCHES, MECHANICAL UNITS, ETC... WITH STEEL ANGLE ON ALL UNSUPPORTED EDGES WELDED IN PLACE. ANGLES SHALL SPAN BETWEEN JOIST AND BETWEEN OTHER ANGLES AS REQUIRED. STRUCTURAL STEEL SUPPLIER SHALL INCLUDE OPENINGS OF THIS TYPE IN ITS BID. SEE PLANS FOR ADDITIONAL FRAMING REQUIREMENTS AT OPENINGS.
26. SUPPORT ALL DECKING AT RIDGES & VALLEYS w/ STEEL BENT PLATE. SEE PLANS & DETAILS.

DESIGN CRITERIA

1. GOVERNING BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC)
2. ROOF LIVE LOADING:
    a. ROOF LIVE LOAD. . . . . 20 PSF
    b. ROOF SNOW LOAD. . . . . 30 PSF
        1. GROUND SNOW LOAD, P_G . . . . 43 PSF
        2. SNOW EXPOSURE FACTOR, C_E 1.0
        3. IMPORTANCE FACTOR, I_S 1.0
        3. THERMAL FACTOR, C_T 1.0
3. ROOF DEAD LOADS:
    a. FRAMED ROOF . . . . 25 PSF
4. EARTHQUAKE:
    a. RISK CATEGORY II
    b. SEISMIC DESIGN CATEGORY . . . . D
    c. SPECTRAL RESPONSE ACCELERATIONS:
        S_S = 1.41g
        S_{DS} = 1.12g
        S_1 = 0.52g
        S_{D1} = 0.62g
    d. SOIL SITE CLASS: . . . . D
        F_A = 1.2
        F_V = 1.8
    e. IMPORTANCE FACTOR, I_E 1.0
    f. DESIGN BASE SHEAR . . . . $C_S \times W$
    g. SEISMIC RESPONSE COEFFICIENT, C_S 0.172
    h. ANALYSIS PROCEDURE . . . . EQUIV. LATERAL FORCE
    i. BASIC SEISMIC FORCE RESISTING SYSTEM . . . . WOOD SHEARWALLS
    j. RESPONSE MODIFICATION FACTOR, R 6.5, 3.5
5. WIND:
    a. BASIC WIND SPEED (3 SECOND GUST) . . . . 115 MPH (ULTIMATE)
    b. EXPOSURE . . . . 90 MPH (NOMINAL)
    c. INTERNAL PRESSURE COEFFICIANT, $GC P_I$ 0.18
    d. COMPONENTS AND CLADDING PRESSURE . . . . VARIES
6. FOUNDATION:
    a. SOILS REPORT BY . . . . NINYO & MOORE
        DATED. . . . . JUNE 18, 2020
    b. SOIL BEARING PRESSURE . . . . 1,750 PSF
    c. LATERAL SOIL PRESSURE FLUID EQUIVALENT DENSITY
        1. ACTIVE . . . . 38 PCF (RETAINING WALLS)
        2. AT REST . . . . 58 PCF (FOUNDATION WALLS)
        3. PASSIVE . . . . 290 PCF
    d. COEFFICIENT OF FRICTION 0.53

VENEER

BRICK VENEER

1. PROVIDE CONTINUOUS SINGLE WIRE JOINT REINFORCEMENT OF WIRE SIZE W1. 7 AT A MAXIMUM SPACING OF 16" O.C. VERTICALLY. MECHANICALLY ATTACH ANCHORS TO THE JOINT REINFORCEMENT WITH CLIPS OR HOOKS.
2. PERMITTED ANCHOR TYPES SHALL BE CORRUGATED SHEET METAL ANCHORS, WIRE ANCHORS OR ADJUSTABLE ANCHORS. ANCHORS SHALL COMPLY WITH ACI 530-11 6. 2. 2. 5
3. FOR WOOD BACKING, ATTACH EACH ANCHOR TO WOOD STUDS OR FRAMING WITH A CORROSION RESISTANT 8d COMMON NAIL. FOR CORRUGATED SHEET METAL ANCHORS, LOCATE THE NAIL OR FASTENER WITHIN 1/2" OF THE 90 deg. BEND IN THE ANCHOR.
4. FOR STEEL BACKING, ATTACH VENEER WITH ADJUSTABLE ANCHORS ONLY. ATTACH EACH ANCHOR TO STEEL FRAMING WITH CORROSION RESISTANT SCREWS THAT HAVE A MINIMUM NOMINAL SHANKdia OF 0. 190 in. COLD FORMED STEEL FRAMING SHALL BE CORROSION RESISTANT AND SHALL BE 18ga MIN. THICKNESS.
5. ATTACH VENEER TO MASONRY BACKING WITH WIRE ANCHORS OR ADJUSTABLE ANCHORS.. ATTACH VENEER TO CONCRETE BACKING WITH ADJUSTABLE ANCHORS ONLY.
6. PROVIDE A 1" MINIMUM AIR SPACE BETWEEN THE BACK OF VENEER AND THE FACE OF SHEATHED FRAMED BACKING OR FACE OF MASONRY OR CONCRETE.
7. ALL VENEER LINTELS SHALL BE PROVIDED FOLLOWING THE SCHEDULE BELOW:
    - UP TO 5'-0" IN LENGTH SHALL BE L 3 1/2" x 3 1/2" x 1/4" AND SUPPORTED ON VENEER MIN. OF 6" EACH SIDE OF OPENING
    - OVER 5'-0" IN LENGTH SHALL BE L6" x 6" x 5/16" ATTACHED TO SUPPORTING MEMBER WITH 5/8"dia THRU-BOLTS AT 32" O.C. WITH A MIN. OF (3) PER HEADER. BOLTS NEED TO BE PLACED 3" FROM BOTTOM OF HEADER MIN.
    - SEE DETAIL 1/ S5.3-R FOR LOCATIONS WHRE BRICK IS SUPPORTED BY CHANNEL

VENEER

STONE VENEER

1. VENEER UNITS NOT EXCEEDING 10 INCHES (254mm) IN THICKNESS SHALL BE ANCHORED DIRECTLY TO MASONRY, CONCRETE OR TO STUD CONSTRUCTION BY ONE OF THE FOLLOWING METHODS:
2. WITH CONCRETE OR MASONRY BACKING, ANCHOR TIES SHALL BE NOT LESS THAN 0.1055-INCH (2.68 mm) CORROSION-RESISTANT WIRE, OR APPROVED EQUAL, FORMED BEYOND THE BASE OF THE BACKING. THE LEGS OF THE LOOPS SHALL BE NOT LESS THAN 6 INCHES (152 mm) IN LENGTH BENT AT RIGHT ANGLES AND LAID IN MORTAR JOINT, AND SPACED SO THAT THE EYES OR LOOPS ARE 12 INCHES (305 mm) MAXIMUM ON CENTER (O.C.) IN BOTH DIRECTIONS. THERE SHALL BE PROVIDED NOT LESS THAN A 0.1055-INCH (2.68 mm) CORROSIN-RESISTANT WIRE TIE, OR APPROVED EQUAL, THREADED THROUGH THE EXPOSED LOOPS FOR EVERY 2 SQUARE FEET (0.2 m) OF VENEER. THIS TIE SHALL BE A LOOP HAVING LEGS NOT LESS THAN 15 INCHES (381 mm) IN LENGHT BENT SO THAT IT WILL LIE IN THE STONE VENEER MORTAR JOINT. THE LAST 2 INCHES (51 mm) OF WIRE LEG SHALL HAVE A RIGHT-ANGLE BEND. ONE-INCH (25 mm) MINIMUM THICKNESS OF CEMENT GROUT SHALL BE PLACED BETWEEN THE BACKING AND THE STONE VENEER.
3. WITH STUD BACKING, A 2-INCH BY 2-INCH (51 BY 51 mm) 0.0625-INCH (1.59 mm) CORROSION-RESISTANT WIRE MESH WITH TWO LAYERS OF WATERPROOFED PAPER BACKING IN ACCORDANCE WITH SECTION 1403.3 SHALL BE APPLIED DIRECTLY TO WOOD STUDS SPACED A MAXIMUM OF 16 INCHES (406 mm) O.C. ON STUDS, THE MESH SHALL BE ATTACHED WITH 2-INCH-LONG (51 mm) CORROSION-RESISTANCE STEEL WIRE FURRING NAILS AT 4 INCHES (102 mm) O.C. PROVIDING A MINIMUM 1.125-INCH (29 mm) PENETRATION INTO EACH STUD AND WITH 8d COMMON NAILS AT 8 INCHES (203 mm) O.C. INTO TOP AND BOTTOM PLATES OR WITH EQUIVALENT WIRE TIES. THERE SHALL BE NO LESS THAN A 0.1055-INCH (2.68 mm) CORROSION-RESISTANT WIRE, OR APPROVED EQUAL, LOOPED THROUGH THE MESH FOR EVERY 2 SQUARE FEET (0.2 m) OF STONE VENEER. THIS TIE SHALL BE A LOOP HAVING LEGS NOT LESS THAN 15 INCHES (381 mm) IN LENGTH, SO BENT THAT IT WILL LIE IN THE VENEER MORTAR JOINT. THE LAST 2 INCHES (51 mm) OF EACH WIRE LEG SHALL HAVE A RIGHT-ANGLE BEND. ONE-INCH (25 mm) MINIMUM THICKNESS OF CEMENT GROUT SHALL BE PLACED BETWEEN THE BACKING AND THE VENEER.

GENERAL WOOD FRAMING NOTES

1. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
2. ALL WORK TO BE IN STRICT ACCORDANCE WITH THE 2018 IBC, AISC, 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. MIN. w/ 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. CONNECT EACH BLOCK TO TOP OF EXTERIOR WALLS WITH SIMPSON A34 CLIPS EACH JOIST OR RAFTER SHALL BE ANCHORED WITH SIMPSON H2.5 ANCHORS AT EACH END.
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 EXTERIOR WALLS SHALL BE 2 x 6's AT 16" O.C.
18. ALL INTERIOR BEARING WALLS SHALL BE 2 x 6's AT 16" O.C. UNLESS NOTED OTHERWISE ON PLANS. IN NO CASE SHALL 2 x 4 BEARING WALLS BE USED UNLESS NOTED ON STRUCTURAL PLANS.

FLOOR, ROOF & WALL SHEATHING

19. ALL ROOF SHEATHING SHALL BE 7/16" APA EXP. 1 RATED SHEATHING OR EQUAL WITH 8d COMMON NAILS 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.
20. 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 10" O.C. IN THE FIELD. PANEL EDGES ARE UNBLOCKED UNLESS NOTED OTHERWISE ON THE STRUCTURAL PLANS.
21. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" APA EXP. 1 RATED SHEATHING OR EQUAL WITH 8d COMMON NAILS AT 6" O.C. EDGES AND AT 12" O.C. IN THE FIELD - FLAT BLOCKED AT ALL PANEL EDGES, UNLESS NOTED OTHERWISE IN SHEAR WALL SCHEDULE.

STRUCTURAL CONNECTIONS

22. 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.
23. 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.
25. 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.
26. USE SIMPSON CONNECTIONS OR EQUIVALENT. INSTALL PER MANUFACTURERS SPECIFICATIONS.
27. SHOP DRAWINGS FOR ALL FABRICATED STEEL CONNECTIONS SHALL BE SUBMITTED FOR REVIEW & APPROVAL PRIOR TO FABRICATION AND INSTALLATION. SEE GENERAL STEEL NOTES.
28. 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.
29. ALL STRUCTURAL MEMBERS SHALL HAVE 1 3/4" MINIMUM BEARING.
30. FOR ADDITIONAL NAILING PATTERN, SEE SCHEDULES IN THE INTERNATIONAL BUILDING CODE (IBC).

DEFERRED SUBMITTALS

1. THE CONTRACTOR SHALL SUBMIT THE FOLLOWING DOCUMENTS TO THE ARCHITECT AND ENGINEER OF RECORD FOR REVIEW AND APPROVAL. THE DOCUMENTS MUST BE PREPARED AND STAMPED BY AN ENGINEER LICENSED IN THE STATE OF UTAH. THE DOCUMENTS MAY BE SUBMITTED AFTER THE BUILDING PERMIT IS ISSUED, BUT MUST BE SUBMITTED AND APPROVED PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION OF THE COMPONENTS.
    a. SEISMIC ATTACHMENT OF ROOF TOP MECHANICAL EQUIPMENT
    b. SEISMIC BRACING OF SUSPENDED CEILINGS AND SOFFITS

DYNAMIC
STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
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MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South
Millcreek, Utah 84106

JAY D. ADAMS
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2021
JOB No.	20-105

GENERAL
NOTE SHEET

SHEET No.
S0.1-R

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 < $\frac{5}{16}$" c. ALL OTHER WELDS	♦	♦ ♦	
X	CAST IN ANCHORS		♦	VERIFY MIX DESIGN MEETS STRENGTH AND EXPOSURE REQUIREMENTS LISTED ON APPROVED PLANS.
	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		♦	
X	PRESTRESSED CONCRETE a. PRESTRESSING FORCES b. GROUTING OF BONDED TENDONS	♦ ♦		
X	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):			
	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.
	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):			
	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):			
	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.
	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
	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
	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):			
	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
	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.
	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.
	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.
	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):			
	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.
	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.
	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
	PLACEMENT OF GROUT	♦		
	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
	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):			
X	VERIFY WELDING PROCEDURES	P	P	
X	MANUFACTURER CERTIFICATIONS	P	P	
X	MATERIAL IDENTIFICATION	O	O	VERIFY TYPE AND GRADE OF MATERIAL.
X	WELDER IDENTIFICATION	O	O	VERIFY THERE IS A SYSTEM IN PLACE TO IDENTIFY THE WELDER WHO HAS WELDED A JOINT OR MEMBER.
X	FIT-UP GROOVE WELDS	O	O	VERIFY JOINT PREPARATION, DIMENSIONS, CLEANLINESS, TACKING AND BACKING.
X	ACCESS HOLES	O	O	VERIFY CONFIGURATION AND FINISH.
X	FIT-UP FILLET WELDS	O	O	VERIFY ALIGNMENT, GAPS AT ROOT, CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY AND LOCATION.
X	CHECK WELDING EQUIPMENT	O	O	
	DURING WELDING (TABLE N5.4-2, AISC 360-10):			
X	USE OF QUALIFIED WELDERS	O	O	VERIFY THAT WELDERS ARE APPROPRIATELY QUALIFIED.
X	CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	VERIFY PACKAGING AND EXPOSURE CONTROL.
X	CRACKED TACK WELDS	O	O	VERIFY WELDING IS NOT OVER A CRACKED TACK WELD.
X	ENVIRONMENTAL CONDITIONS	O	O	VERIFY WIND SPEED IS WITHIN LIMITS AS WELL AS PRECIPITATION AND TEMPERATURE.
X	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.
X	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):			
X	WELDS CLEANED	O	O	VERIFY THAT WELDS HAVE BEEN PROPERLY CLEANED.
X	SIZE, LENGTH AND LOCATION OF WELDS	P	P	
X	WELDS MEET VISUAL ACCEPTANCE CRITERIA	P	P	
X	ARC STRIKES	P	P	
	PRIOR TO BOLTING (TABLE N5.6-1 AISC 360-10):			
X	MANUFACTURERS CERTIFICATIONS FOR FASTENERS	O	P	
X	FASTENERS MARKED w/ ASTM REQUIREMENTS	O	O	
X	PROPER FASTENERS SELECTED FOR DETAIL	O	O	
X	PROPER PROCEDURE FOR DETAIL	O	O	
X	CONNECTING ELEMENTS	O	O	
X	PRE-INSTALLATION VERIFICATION TESTING	P	O	
X	PROPER STORAGE OF FASTENERS	O	O	
	DURING BOLTING (TABLE N5.6-2 AISC 360-10):			
X	FASTENER ASSEMBLIES	O	O	
X	JOINTS SNUG TIGHT PRIOR TO PRETENSIONING	O	O	
X	PROPER WRENCH USAGE	O	O	
X	FASTENERS PRETENSIONED	O	O	
	AFTER BOLTING (TABLE N5.6-3, AISC 360-10):			
X	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 BELOW. 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.

DYNAMIC STRUCTURES
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MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
1300 East 3300 South
MILLCREEK CITY
MILL CREEK UTAH, 84005

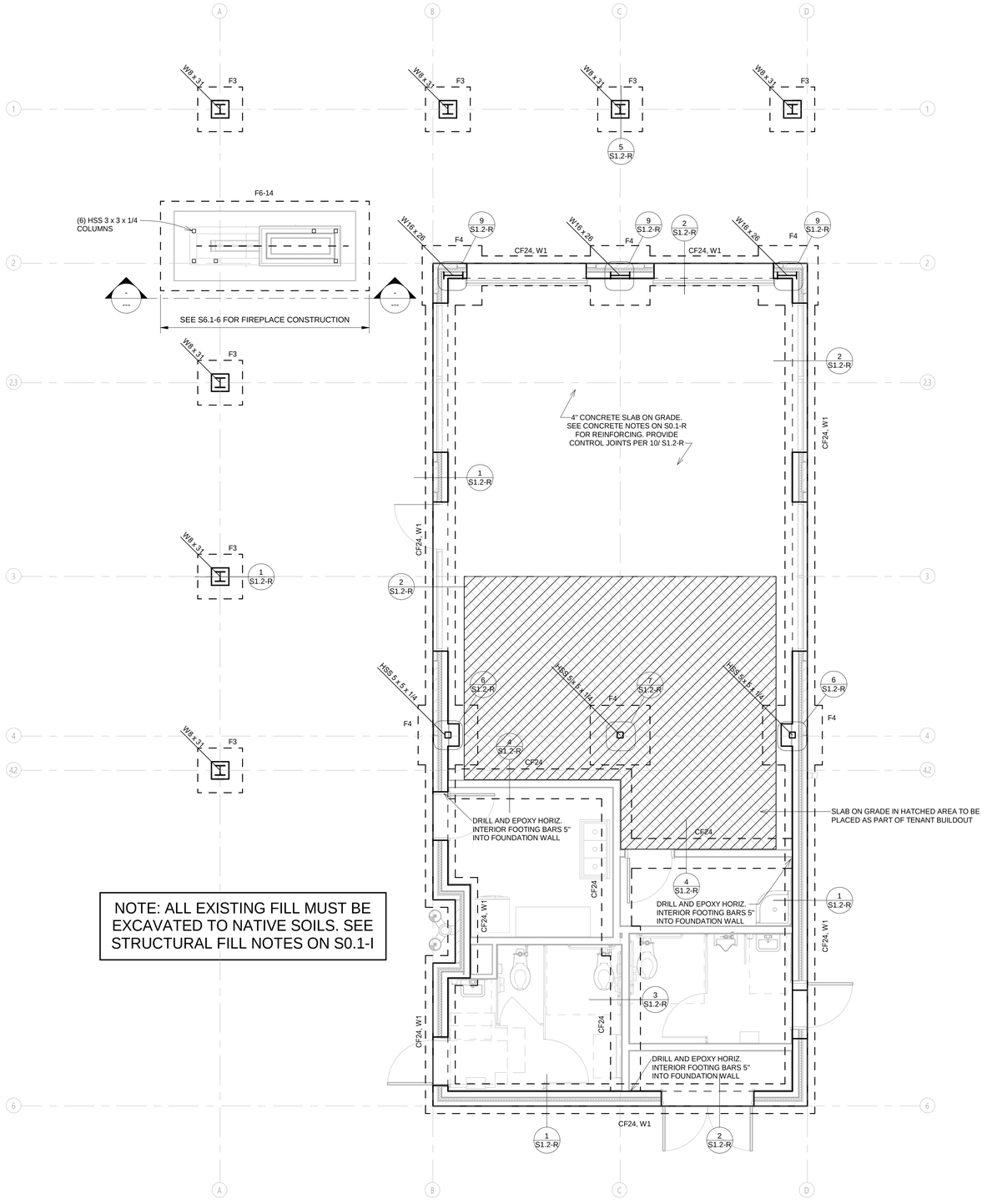
PROFESSIONAL STRUCTURAL ENGINEER
NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2021
JOB No.	20-105

SPECIAL INSPECTION SHEET

SHEET No.

S0.2-R



NOTE: ALL EXISTING FILL MUST BE EXCAVATED TO NATIVE SOILS. SEE STRUCTURAL FILL NOTES ON S0.1-I

FOUNDATION WALL SCHEDULE

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

1. PLACE (2) #4 HORIZ. BARS AT TOP OF WALL CONTINUOUS, TYP.
2. RECESS TOP OF WALL AT OPENINGS and POUR SLAB THROUGH, SEE DETAILS

⋆ THIS WALL REQUIRES (2) MATS OF REINFORCING (1) MAT 2" OFF EA. FACE AS SPECIFIED ABOVE

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSS-WISE No.	SIZE	LENGTH	SPACING	REINFORCING LENGTH-WISE No.	SIZE	LENGTH	SPACING
CF24	24"	CONT.	12"	-	-	-	-	(3)	#4	CONT.	EQUAL
F3	3'-0"	3'-0"	12"	(4)	#4	2'-6"	EQUAL	(4)	#4	2'-6"	EQUAL
F4	4'-0"	4'-0"	12"	(5)	#4	3'-6"	EQUAL	(5)	#4	3'-6"	EQUAL
F6-14	6'-0"	14'-0"	12"	(15)	#4	5'-6"	EQUAL	(7)	#4	13'-6"	EQUAL

DYNAMIC STRUCTURES
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MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS

MILLCREEK CITY

1300 East 3300 South MILL CREEK UTAH, 84005

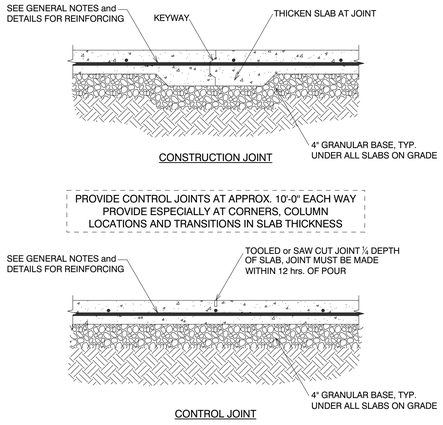
PROFESSIONAL STRUCTURAL ENGINEER
NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2021
JOB No.	20-105

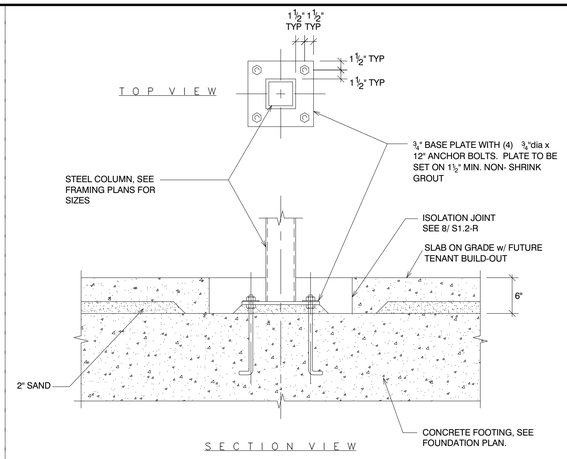
C.S. FOUNDATION PLAN

SHEET No.

S1.1-R



10 S1.2-R CONSTRUCTION DETAIL
NO SCALE



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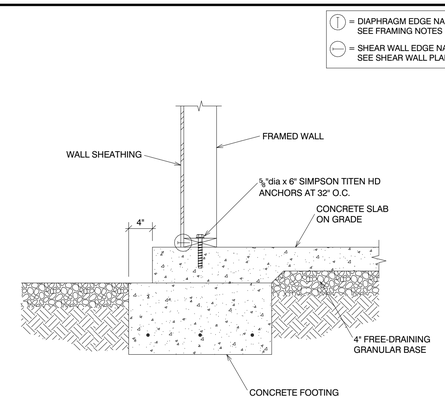

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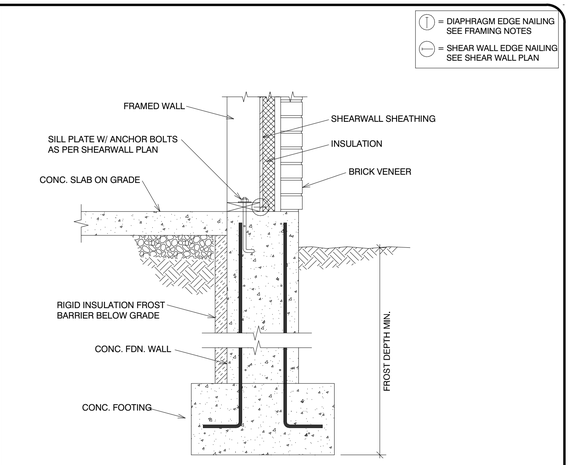

1 S1.2-R CONSTRUCTION DETAIL
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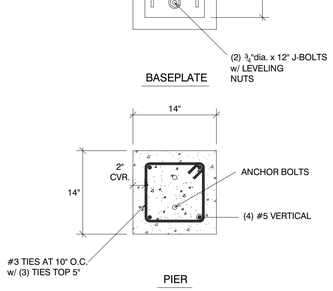

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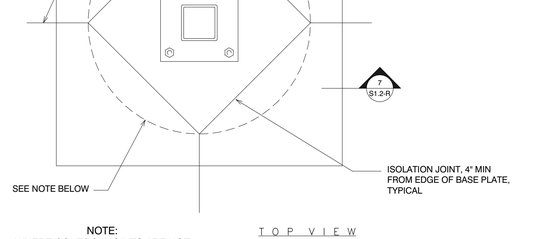

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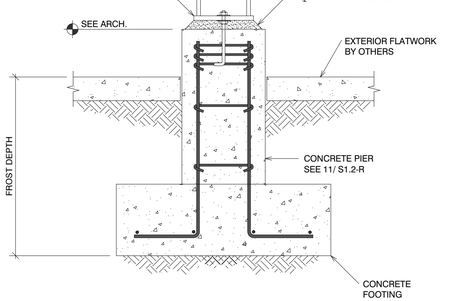

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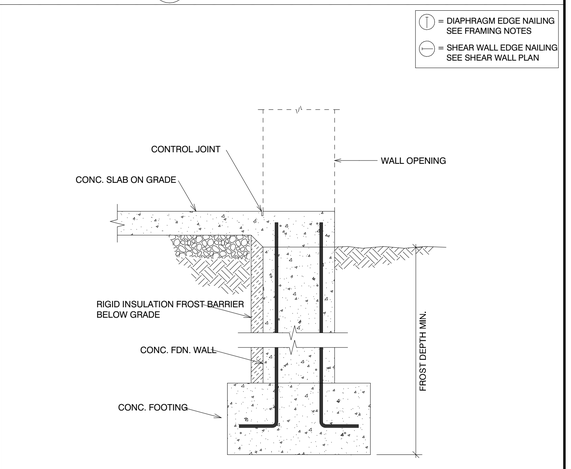

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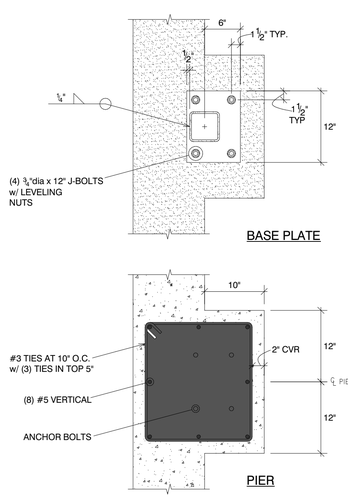

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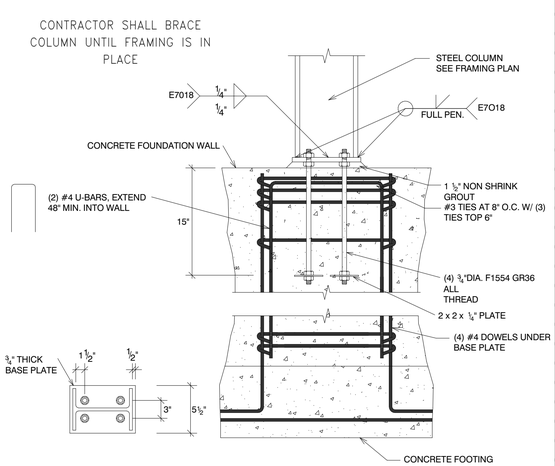

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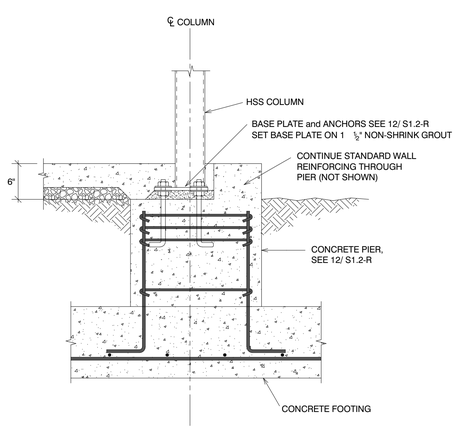

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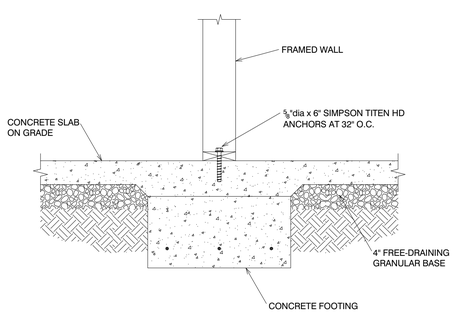


3 S1.2-R CONSTRUCTION DETAIL
NO SCALE

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
PH: (801) 356-1140 FAX: (801) 356-0001

MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS

MILLCREEK CITY

1300 East 3300 South MILL CREEK UTAH, 84005

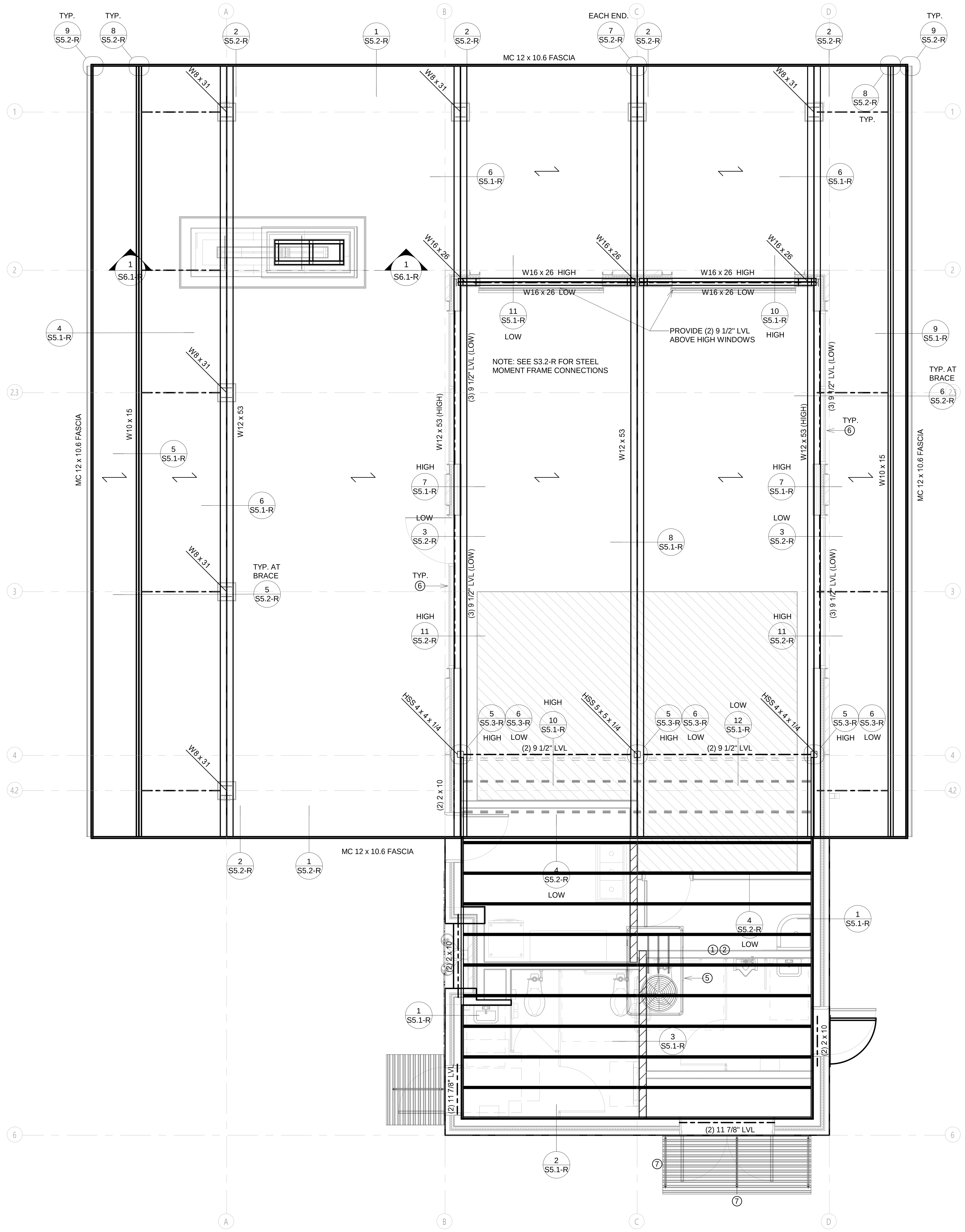
PROFESSIONAL STRUCTURAL ENGINEER
NO. 180917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2021
JOB No.	20-105

CONSTRUCTION DETAILS

SHEET No.

S1.2-R



ROOF FRAMING NOTES

1. FRAME ROOF w/ 9 1/2" TJI/ 210 AT 24" O.C.
2. SEE FRAMING NOTES FOR ROOF SHEATHING REQUIREMENTS
3. INDICATES INTERIOR BEARING WALL
4. PROVIDE 3" x 16ga VERCO TYPE PLN-24 GALVANIZED ROOF DECK. SUBMIT PREFERRED ATTACHMENT METHOD FOR APPROVAL TO ACHIEVE ASD DIAPHRAGM CAPACITY OF 350 PLF.
5. MECHANICAL UNIT. HEADER AROUND DUCT OPENINGS w/ DOUBLE 11 7/8" LVL AS NEEDED
6. SEE 1 AND 2/ S5.3-R FOR CHANNEL HEAD AND JAMB DETAILS WHERE OCCUR
7. SEE ARCH. FOR CANOPY ASSEMBLY, SEE DETAILS 3 & 4/ S5.3-R FOR ATTACHMENT TO BUILDING

DYNAMIC STRUCTURES
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MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
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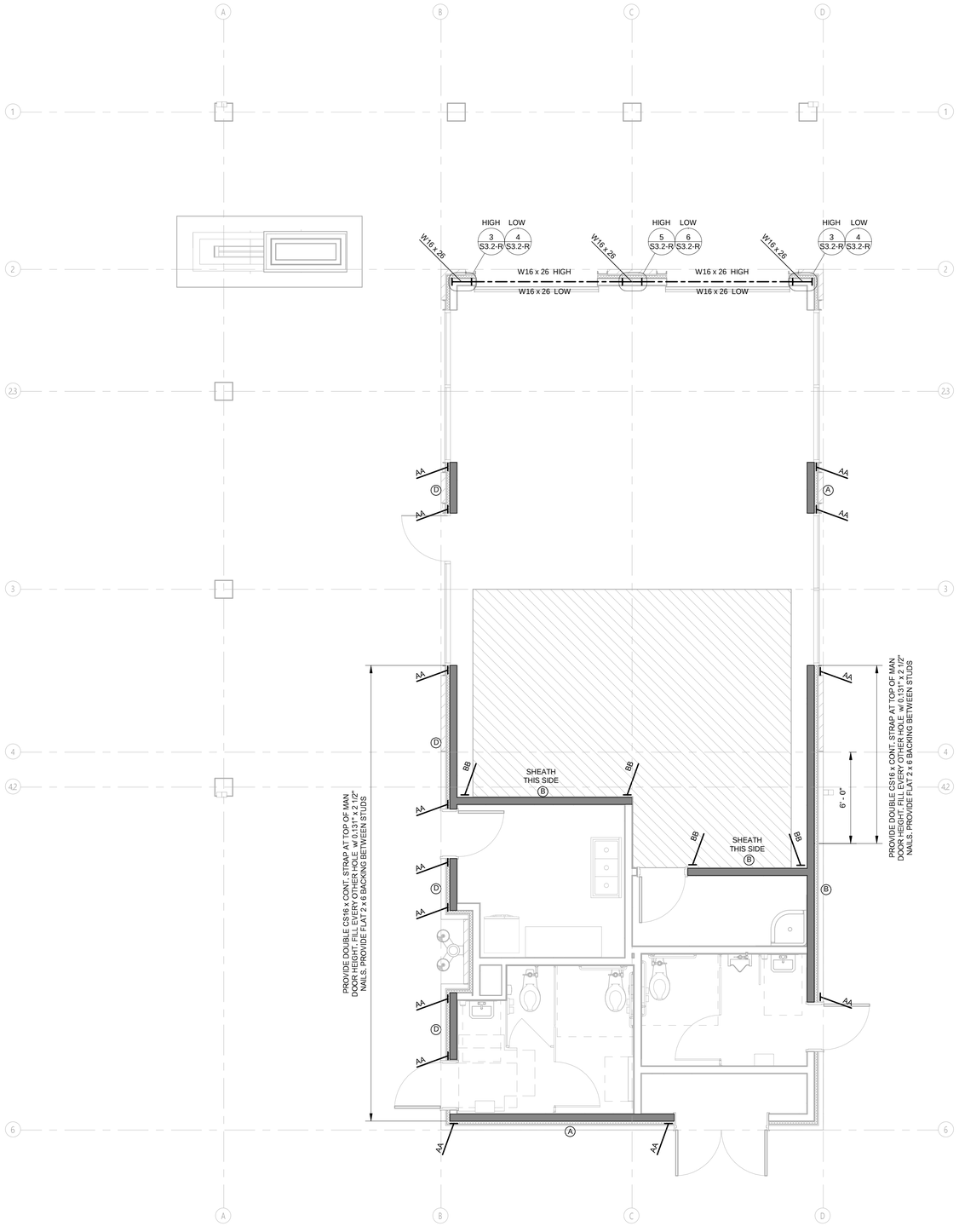
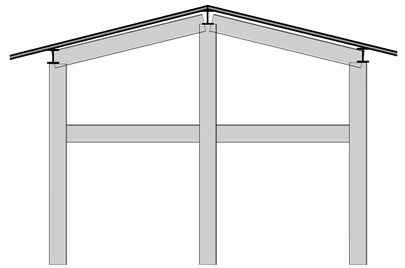
PROFESSIONAL STRUCTURAL ENGINEER NO. 190917 JAY D. ADAMS STATE OF UTAH 1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2021
JOB No.	20-105

C.S. ROOF FRAMING PLAN

SHEET No.
S2.1-R





HOLD DOWN SCHEDULE

MARK	HOLDOWN	ATTACHMENT TO STUDS	FOUNDATION ANCHORS	MINIMUM STUDS	REMARKS
AA	SIMPSON STHD14	(24) 0.148" x 3 1/4"	N.A.	(2) 2x	DETAIL 1/ S3.2-R
BB	SIMPSON HDU5	(14) 1/4" x 2 1/2" SDS	5/8"dia. ALL-THREAD	(2) 2x	DETAIL 2/ S3.2-R

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

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
(A)	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
(B)	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
(C)	APA EXP. 1	7/16"	8d AT 3" O.C.	8d AT 12" O.C.	(2) 2x	5/8"dia x 10" AT 32" O.C.	2x TREATED
(D)	APA EXP. 1	7/16"	8d AT 2" O.C.	8d AT 12" O.C.	2x	5/8"dia x 10" AT 16" O.C.	2x TREATED
(E)	GYPBOARD	5/8"	#6 DRYWALL SCREW AT 6" O.C.	#6 DRYWALL SCREW AT 12" O.C.	2x	5/8"dia x 10" AT 32" 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/ 4x MATERIAL. MULTIPLE LAYERS OF 2x FRAMING SHALL NOT BE USED WHERE 3x FRAMING IS INDICATED
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.

DYNAMIC STRUCTURES
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MILLCREEK COMMON - PHASE ONE
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1300 East 3300 South

MILLCREEK CITY

MILL CREEK UTAH, 84005

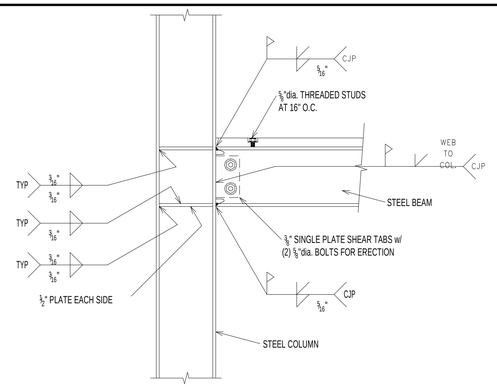
PROFESSIONAL STRUCTURAL ENGINEER
NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	1/4"=1'-0"
DATE:	JAN. 15, 2021
JOB No.	20-105

C.S. MAIN LEVEL SHEARWALL PLAN

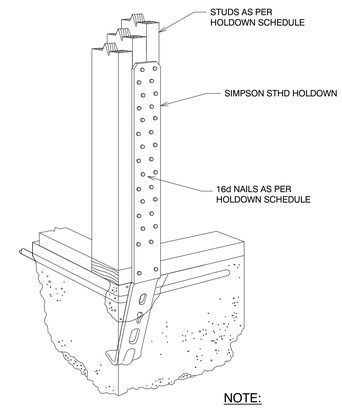
SHEET No.

S3.1-R



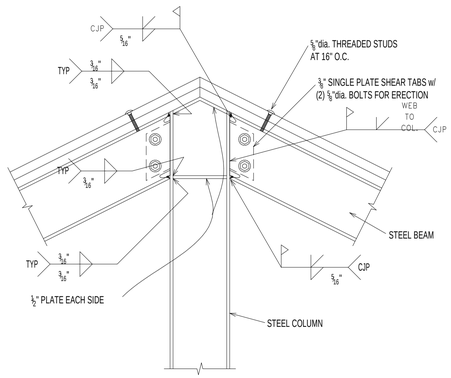
NOTES:
1. REMOVE STEEL BACKING PLATES, BACK GOUGE AND FINISH WITH FILLET WELDS AS SHOWN
2. PROVIDE WELD ACCESS HOLES COMPLYING WITH AISC 341-10 11. 2a

4 S3.2-R CONSTRUCTION DETAIL
NO SCALE



NOTE:
SET STRAP BACK FROM LEDGE AS NEEDED TO ACCOUNT FOR EXTERIOR FINISHES

1 S3.2-R CONSTRUCTION DETAIL
NO SCALE



NOTES:
1. REMOVE STEEL BACKING PLATES, BACK GOUGE AND FINISH WITH FILLET WELDS AS SHOWN
2. PROVIDE WELD ACCESS HOLES COMPLYING WITH AISC 341-15 11. 2a

5 S3.2-R CONSTRUCTION DETAIL
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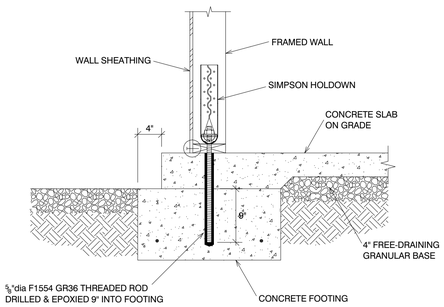

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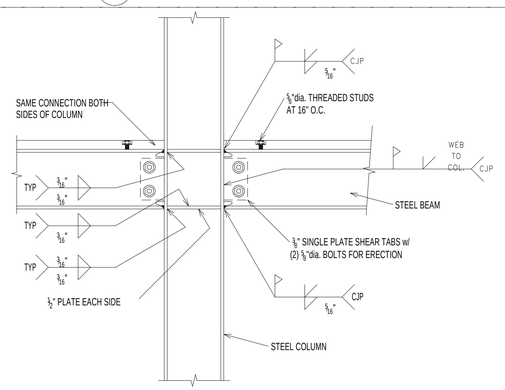
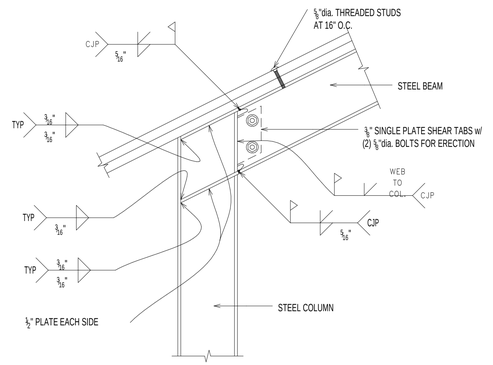


NOTES:
1. REMOVE STEEL BACKING PLATES, BACK GOUGE AND FINISH WITH FILLET WELDS AS SHOWN
2. PROVIDE WELD ACCESS HOLES COMPLYING WITH AISC 341-10 11. 2a

6 S3.2-R CONSTRUCTION DETAIL
NO SCALE



NOTES:
1. REMOVE STEEL BACKING PLATES, BACK GOUGE AND FINISH WITH FILLET WELDS AS SHOWN
2. PROVIDE WELD ACCESS HOLES COMPLYING WITH AISC 341-15 11. 2a

3 S3.2-R CONSTRUCTION DETAIL
NO SCALE

DYNAMIC STRUCTURES
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MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS

MILLCREEK CITY
MILL CREEK UTAH, 84005

1300 East 3300 South

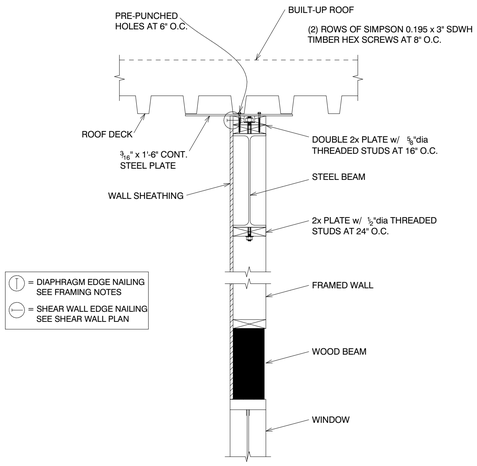
PROFESSIONAL STRUCTURAL ENGINEER
NO. 180917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2021
JOB No.	20-105

CONSTRUCTION DETAILS

SHEET No.

S3.2-R



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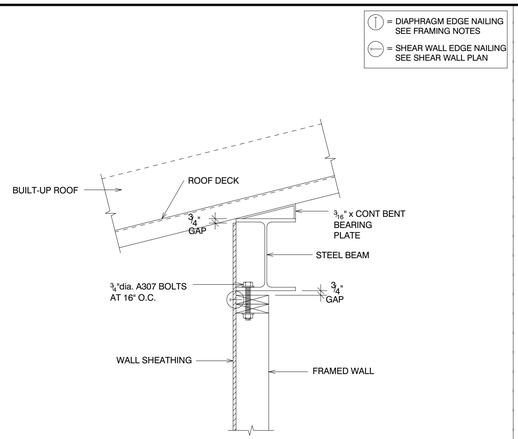

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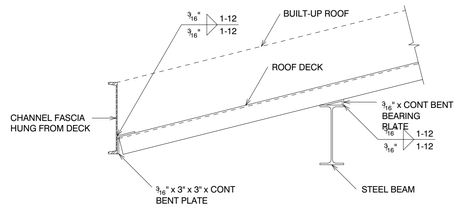
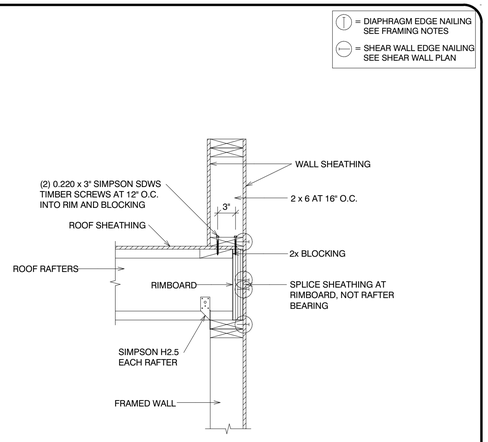


NOTE:
DECK PLACEMENT MUST OCCURE
BEFORE CHANNEL FASCIA PLACEMENT

4 S5.1-R CONSTRUCTION DETAIL
NO SCALE



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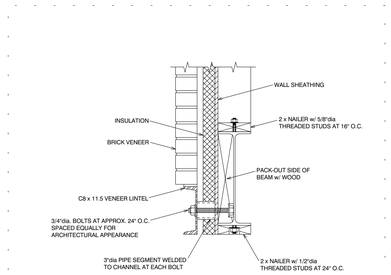
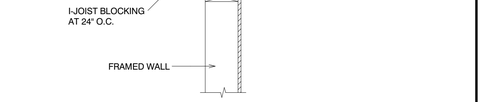


11 S5.1-R CONSTRUCTION DETAIL
NO SCALE

8 S5.1-R CONSTRUCTION DETAIL
NO SCALE

NOTE:
DECK PLACEMENT MUST OCCURE
BEFORE CHANNEL FASCIA PLACEMENT

5 S5.1-R CONSTRUCTION DETAIL
NO SCALE



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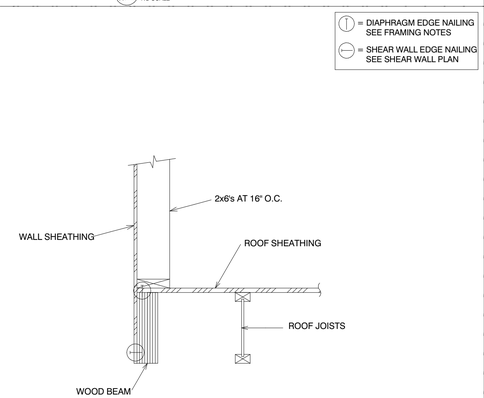

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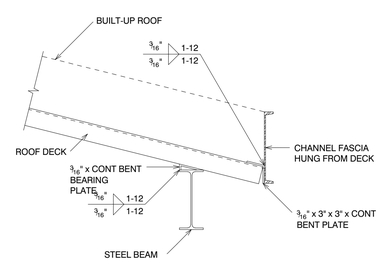

NOTE:
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BEFORE CHANNEL FASCIA PLACEMENT

9 S5.1-R CONSTRUCTION DETAIL
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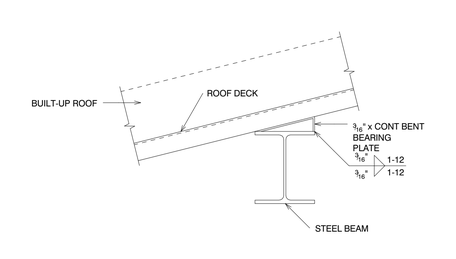

NOTE:
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BEFORE CHANNEL FASCIA PLACEMENT

6 S5.1-R CONSTRUCTION DETAIL
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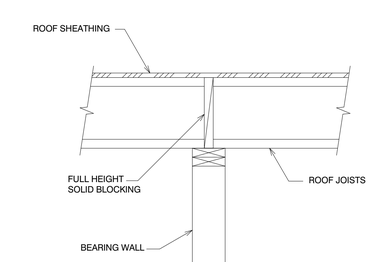

3 S5.1-R CONSTRUCTION DETAIL
NO SCALE

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MILLCREEK COMMON - PHASE ONE
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MILL CREEK UTAH, 84005

1300 East 3300 South

PROFESSIONAL STRUCTURAL ENGINEER
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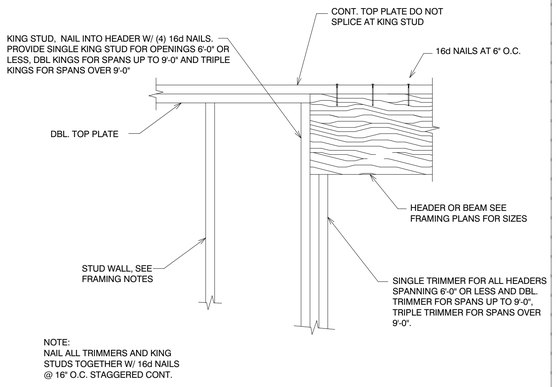
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2021
JOB No.	20-105

CONSTRUCTION DETAILS

SHEET No.

S5.1-R



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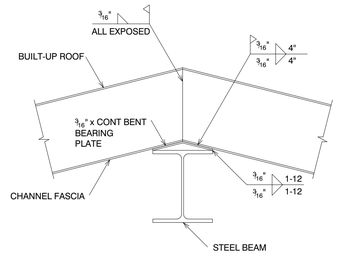

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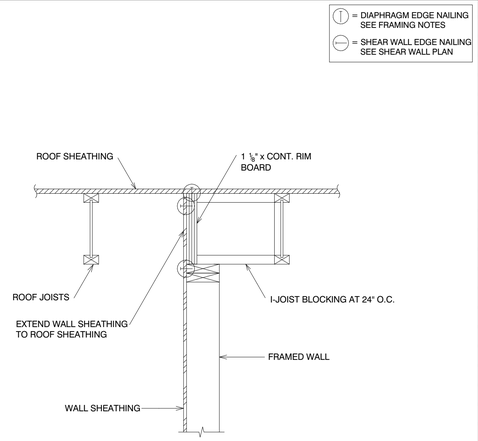

4 S5.2-R CONSTRUCTION DETAIL
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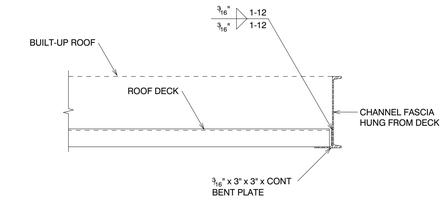

1 S5.2-R CONSTRUCTION DETAIL
NO SCALE

11 S5.2-R CONSTRUCTION DETAIL
NO SCALE

8 S5.2-R CONSTRUCTION DETAIL
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5 S5.2-R CONSTRUCTION DETAIL
NO SCALE

2 S5.2-R CONSTRUCTION DETAIL
NO SCALE

12 S5.2-R CONSTRUCTION DETAIL
NO SCALE

9 S5.2-R CONSTRUCTION DETAIL
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6 S5.2-R CONSTRUCTION DETAIL
NO SCALE

3 S5.2-R CONSTRUCTION DETAIL
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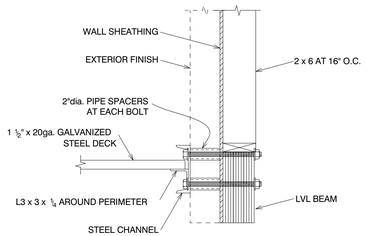
SCALE:	NO SCALE
DATE:	JAN. 15, 2021
JOB No.	20-105

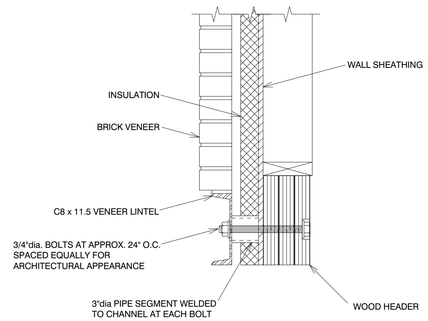
CONSTRUCTION DETAILS

SHEET No.

S5.2-R



4 S5.3-R CONSTRUCTION DETAIL
NO SCALE



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1 S5.3-R CONSTRUCTION DETAIL
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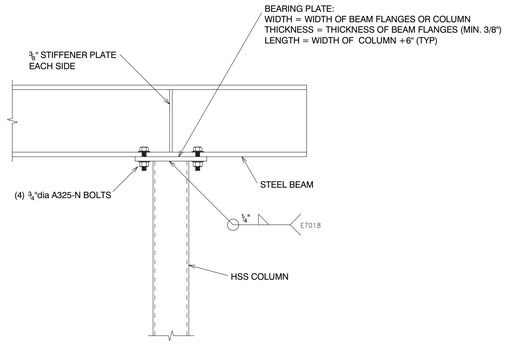

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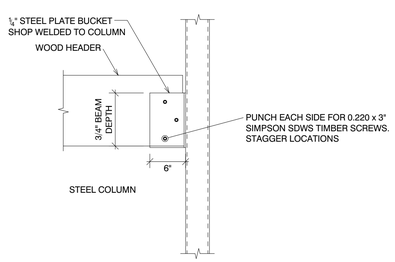

NOTE:

SEE PLAN FOR NUMBER OF BEAMS FRAMING INTO COLUMN

6 S5.3-R CONSTRUCTION DETAIL
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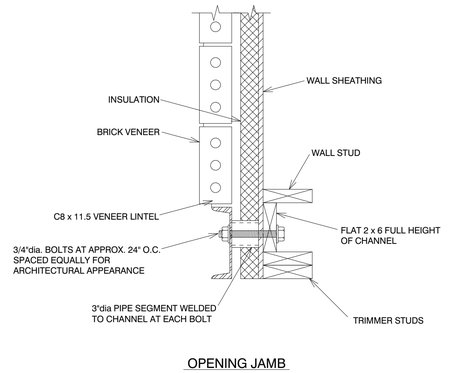

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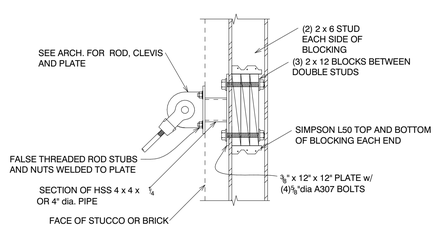

3 S5.3-R CONSTRUCTION DETAIL
NO SCALE

DYNAMIC STRUCTURES
1887 NORTH 1120 WEST PROVO, UTAH 84604
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MILLCREEK COMMON - PHASE ONE
ICE SUPPORT AND COFFEE SHOP BUILDINGS
MILLCREEK CITY
1300 East 3300 South

Checker

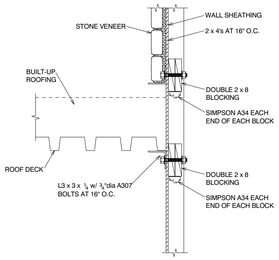
PROFESSIONAL STRUCTURAL ENGINEER
NO. 190917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	J.D.A.
SCALE:	NO SCALE
DATE:	JAN. 15, 2021
JOB No.	20-105

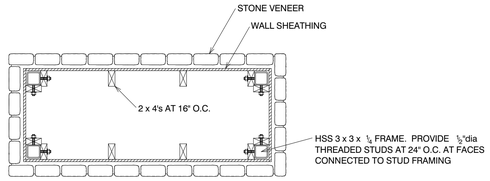
CONSTRUCTION DETAILS

SHEET No.

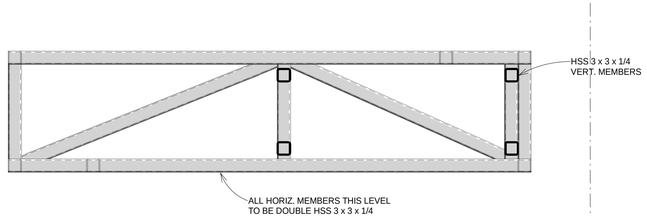
S5.3-R



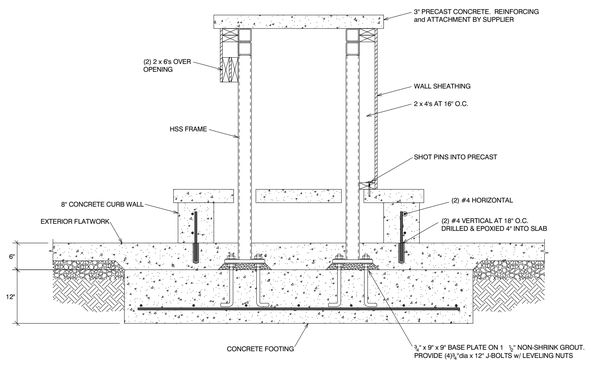
4 4/ S6.1-R
3/4" = 1'-0"



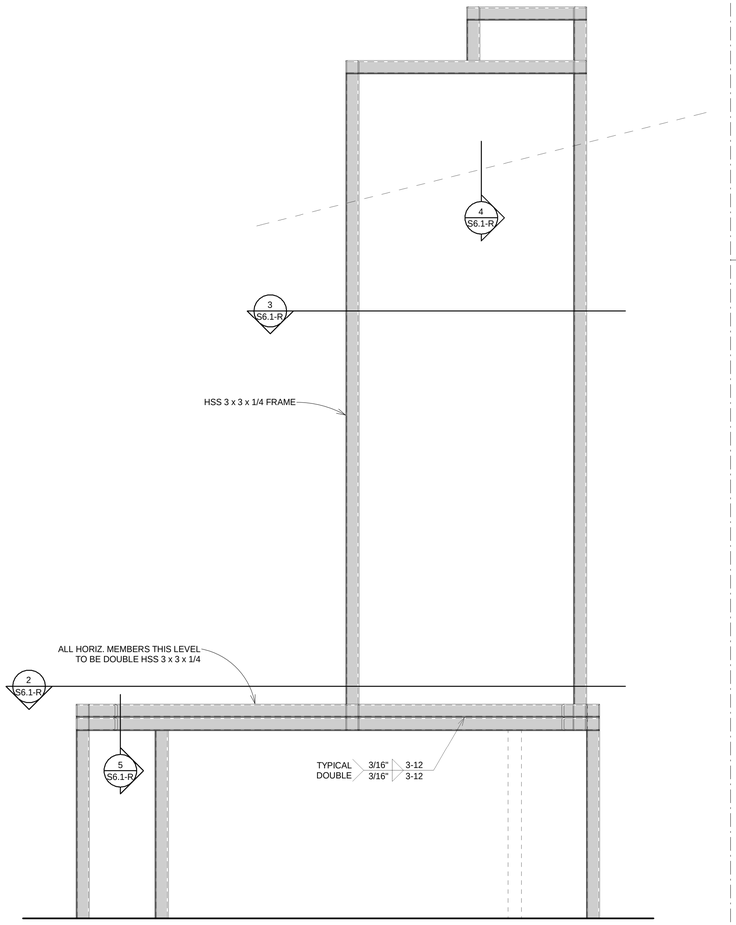
3 3/ S6.1-R
3/4" = 1'-0"



2 2/ S6.1-R
3/4" = 1'-0"



5 5/ S6.1-R
3/4" = 1'-0"



1 1/ S6.1-R
3/4" = 1'-0"

SHEET NOTES

1. ALL MEMBER TO MEMBER CONNECTIONS TO BE WELDED ALL AROUND w/ 3/16" FILLET WELDS. UNLESS NOTED OTHERWISE
2. FABRICATOR and ERECTOR TO COORDINATE SHOP vs. FIELD FABRICATION. SUBMIT SESIRED SPLICE CONNECTIONS IN SHOP DRAWING SUBMITTAL
3. SEE ARCHITECTURAL FOR DIMESNIOSN and ELEVATIONS
4. PROVIDE 1/2"dia THREADED STUDS AT 24" O.C. ON ALL FRAME EDGES IN CONTACT WITH STUD FRAMING

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PROFESSIONAL STRUCTURAL ENGINEER
NO. 150917
JAY D. ADAMS
STATE OF UTAH
1-15-21

DRAWN BY:	JDA
SCALE:	AS SHOWN
DATE:	JAN. 15, 2021
JOB No.	20-105

FIREPLACE CONSTRUCTION DETAILS

SHEET No.

S6.1-R

MECHANICAL LEGEND

SYMBOL	ABR,	DESCRIPTION
		GENERAL TERMINOLOGY
A		SECTION LETTER DESIGNATION
ME101		SECTION DRAWN ON THIS SHEET
A2		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION
AH		MECHANICAL EQUIPMENT DESIGNATION
1		EQUIPMENT ITEM DESIGNATION
D-1 CFM		REGISTER, GRILLE OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW
R-1		GRILLE OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRED
1		REVISION DESIGNATOR AND NUMBER
1		KEY NOTE DESIGNATOR AND NUMBER
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
AFF		ABOVE FINISHED FLOOR
AP		ACCESS PANEL
C EL.		CENTERLINE ELEVATION
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
ATC		CONTROLS CONTRACTOR
EC		ELECTRICAL CONTRACTOR
FPC		FIRE PROTECTION CONTRACTOR
NIC		NOT IN CONTRACT
NTS		NOT TO SCALE
VCP		VITRIFIED CLAY PIPE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

SYMBOL	ABR,	DESCRIPTION
		AIR SIDE
		EXISTING AIR DUCT TO BE REMOVED
		EXISTING AIR DUCT TO REMAIN
		NEW AIR DUCT
		RECT TO RECT AIR DUCT TAKE-OFF
		RECT TO RND AIR DUCT TAKE-OFF
		RND TO RND AIR DUCT TAKE-OFF
		MEDIUM PRESSURE TAKE-OFF
		FLEXIBLE AIR DUCT
		LINED DUCT
		RADIUS ELBOW
		ECCENTRIC DUCT TRANSITION
		CONCENTRIC DUCT TRANSITION
		VOLUME DAMPER
		SUPPLY AIR DIFFUSER
		RETURN & TRANSFER AIR GRILLE
		EXHAUST GRILLE OR CEILING EXH. FAN
		RETURN & OUTSIDE AIR DUCT UP/DN
		RETURN & OA ROUND DUCT UP/DN
		SUPPLY AIR DUCT UP/DN
		SUPPLY AIR ROUND DUCT UP/DN
		EXHAUST AIR DUCT UP/DN
		EXHAUST AIR ROUND DUCT UP/DN
	AP	ACCESS PANEL
		EXISTING EQUIPMENT TO BE REMOVED
		EXISTING EQUIPMENT TO REMAIN
		NEW EQUIPMENT
SA		SUPPLY AIR
RA		RETURN AIR
EA		EXHAUST AIR
OA		OUTSIDE AIR
MA		MIXED AIR
RF		RELIEF AIR
FO		FLAT OVAL
M	MVD	MOTORIZED VOLUME DAMPER
BD	BD	BACKDRAFT DAMPER
F	FD	FIRE DAMPER
S	SD	SMOKE DAMPER
FS	FS	FIRE & SMOKE DAMPER
T	T-STAT	WALL MOUNTED THERMOSTAT
S		WALL MOUNTED TEMP. SENSOR
H	H-STAT	WALL MOUNTED HUMIDISTAT
F	F-STAT	WALL MOUNTED FIRESTAT

SYMBOL	ABR,	DESCRIPTION
		WET SIDE
		PUMP
R		REGULATOR
		UNION
		MANUAL ACTUATOR
		PNUEMATIC DIAPHRAM ACTUATOR
M		ELECTRIC MOTOR ACTUATOR
S		SOLENOID ACTUATOR
		BUTTERFLY VALVE
		GATE VALVE
		GLOBE VALVE - STRAIGHT PATTERN
		GLOBE VALVE - ANGLE PATTERN
M		MOTORIZED 2-WAY CONTROL VALVE
M		MOTORIZED 3-WAY CONTROL VALVE
	PRV	PRESSURE REDUCING VALVE
		CHECK VALVE
		CIRCUIT BALANCING VALVE
		BALL VALVE
P		PRESSURE RELIEF VALVE
T		THERMAL RELIEF VALVE
S		SAFETY RELIEF VALVE
		PLUG VALVE
		NEEDLE VALVE
		TRIPLE DUTY VALVE
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		STRAINER
		STRAINER W/ PLUG BLOW OFF
		VENTURI
		PRESSURE GAUGE W/ COCK - WATER
		PRESSURE GAUGE W/ COCK - STEAM
		THERMOMETER & THERMOWELL
S		WATER TEMP SENSOR & THERMOWELL
F		FLOW SWITCH
PS		PRESSURE SWITCH
		THERMOWELL
		PRESSURE & TEMP TAP
T IBT		INVERTED BUCKET STEAM TRAP
TT		THERMOSTATIC STEAM TRAP
F&T		FLOAT & THERMOSTATIC STEAM TRAP
		DIRECTION OF FLOW
		BACKFLOW PREVENTING VALVE

SYMBOL	ABR,	DESCRIPTION
		WET SIDE
		PITCH DOWN
		ELBOW UP/DN
		TEE UP/DN
		EXISTING PIPING TO BE REMOVED
		EXISTING PIPING TO REMAIN
		NEW PIPING
		PIPE CAP OR PLUG
		REDUCER - CONCENTRIC / ECCENTRIC
		EXPANSION JOINT
		FLEXIBLE CONNECTION
		ANCHOR POINT
	CD	CONDENSATE DRAIN
	G	NATURAL GAS PIPING
	CF	CHEMICAL FEED LINE
	GF	GLYCOL FILL LINE
	MU	MAKE-UP WATER LINE
	CW	CULINARY COLD WATER
	HW	CULINARY HOT WATER
	HWREC	CULINARY HOT WATER RECIRC
	HWS	HEATING WATER SUPPLY
	HWR	HEATING WATER RETURN
	CHWS	CHILLED WATER SUPPLY
	CHWR	CHILLED WATER RETURN
	HTWS	HIGH TEMP HEATING WATER SUPPLY
	HTWR	HIGH TEMP HEATING WATER RETURN
	LPS	LOW PRESSURE STEAM
	LPR	LOW PRESSURE STEAM RETURN
	HPS	HIGH PRESSURE STEAM
	HPR	HIGH PRESSURE STEAM RETURN
	CS	CONDENSER SUPPLY
	CR	CONDENSER RETURN
	PC	PUMPED CONDENSATE
	L	REFRIGERANT LIQUID
	S	REFRIGERANT SUCTION
	HG	REFRIGERANT HOT GAS
	FOS	FUEL OIL SUPPLY
	FOR	FUEL OIL RETURN
	FOV	FUEL OIL VENT

GENERAL NOTES

G-1 - MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION OF THE EXISTING BUILDING AND SITE CONDITIONS, EXISTING PIPING, EXISTING ELECTRICAL, AND EXISTING SUPPORTS.

A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.

B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

G-2 - ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CHANGES FOR APPROVAL. CONTRACTOR SHALL NOT START ANY CHANGES UNTIL NOTIFIED IN WRITING. IF CHANGES ARE MADE PRIOR TO APPROVAL CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE CHANGES MADE AND ALL COSTS RELATING TO FAILURE OR REPLACEMENT OF ALTERATIONS.

G-3 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

G-4 - THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.

G-5 - THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.

G-6 - MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE AND FIRE DAMPERS AS REQUIRED BY LOCAL CODES AND AUTHORITIES.

G-7 - SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.

G-8 - PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY AND EXHAUST AIR BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.

G-9 - SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF DIFFUSERS AND GRILLES.

G-10 - PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.

G-11 - THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

G-12 - THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.

G-13 - C.F.M. LISTED IS ACTUAL AIR.

G-14 - SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

G-15 - CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

G-16 - ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE IMC AND IPC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-17 - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.

G-18 - ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.

WPA architecture

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING

PROFESSIONAL ENGINEER 01.15.2021 BRADLEY D. LASH No. 8681468 STATE OF UTAH

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MILLCREEK

MILLCREEK COMMON - PHASE ONE

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REV	DATE	DESCRIPTION

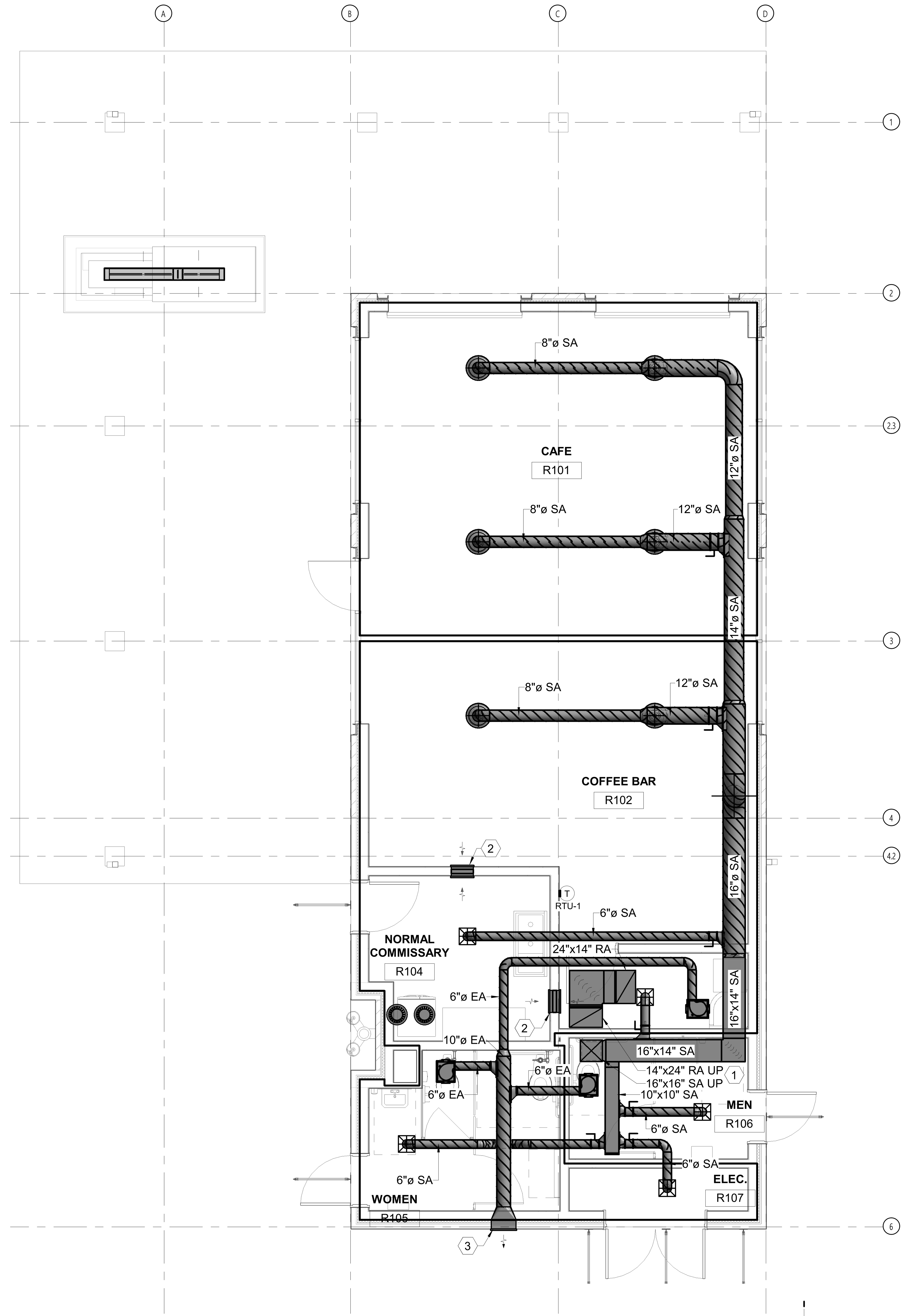
DESIGNED BY: Miah R
DRAWN: Miah R
CHECKED: Brad L
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
MECHANICAL SYMBOLS AND NOTES

Sheet Number:
M1.1-R

SHEET NOTES

1. RISE DUCT UP TO SERVE RTU ON ROOF.
2. TRANSFER AIR GRILLES.
3. PROVIDE WALL MOUNTED LOUVER IN THIS APPROXIMATE LOCATION. PROVIDE WITH BACKDRAFT DAMPER.



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

N

WPA architecture

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING

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DESIGNED BY: Miah R
DRAWN: Miah R
CHECKED: Brad L
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
MAIN LEVEL MECHANICAL PLAN

Sheet Number:
M2.1-R

VAULT EXHAUST FAN SCHEDULE													
TAG					ELECTRICAL								
TYPE	#	AREA SERVED	CFM	ESP	VOLTAGE	PHASE	FREQUENCY	RPM	HP	SONES	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
VEF	1	VAULT VENTILATION	450 CFM	0.40 in-wg	120 V	1	60 Hz	1500	0.19 hp	4	30 lb	COOK GC642	1,2,3,4

1. FAN SHALL RUN CONTINUOUSLY.
2. ALUMINUM CONSTRUCTION.
3. PROVIDE FAN SPEED CONTROLLER.
4. SEE SPECIFICATIONS FOR OTHER APPROVED MANURACTURERS.

ELECTRIC UNIT HEATER SCHEDULE											
TAG		AREA SERVED	CFM	HEAT INPUT (kW)	ELECTRICAL			MOUNTING HEIGHT	OPERATIN G WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#				VOLTAGE	PHASE	FREQUENCY				
EUH	1	FUTURE TENANT	650 CFM	10 kW	208 V	1	60 Hz	8' - 0"	38 lb	QMARK MUH078	1,2,3,4

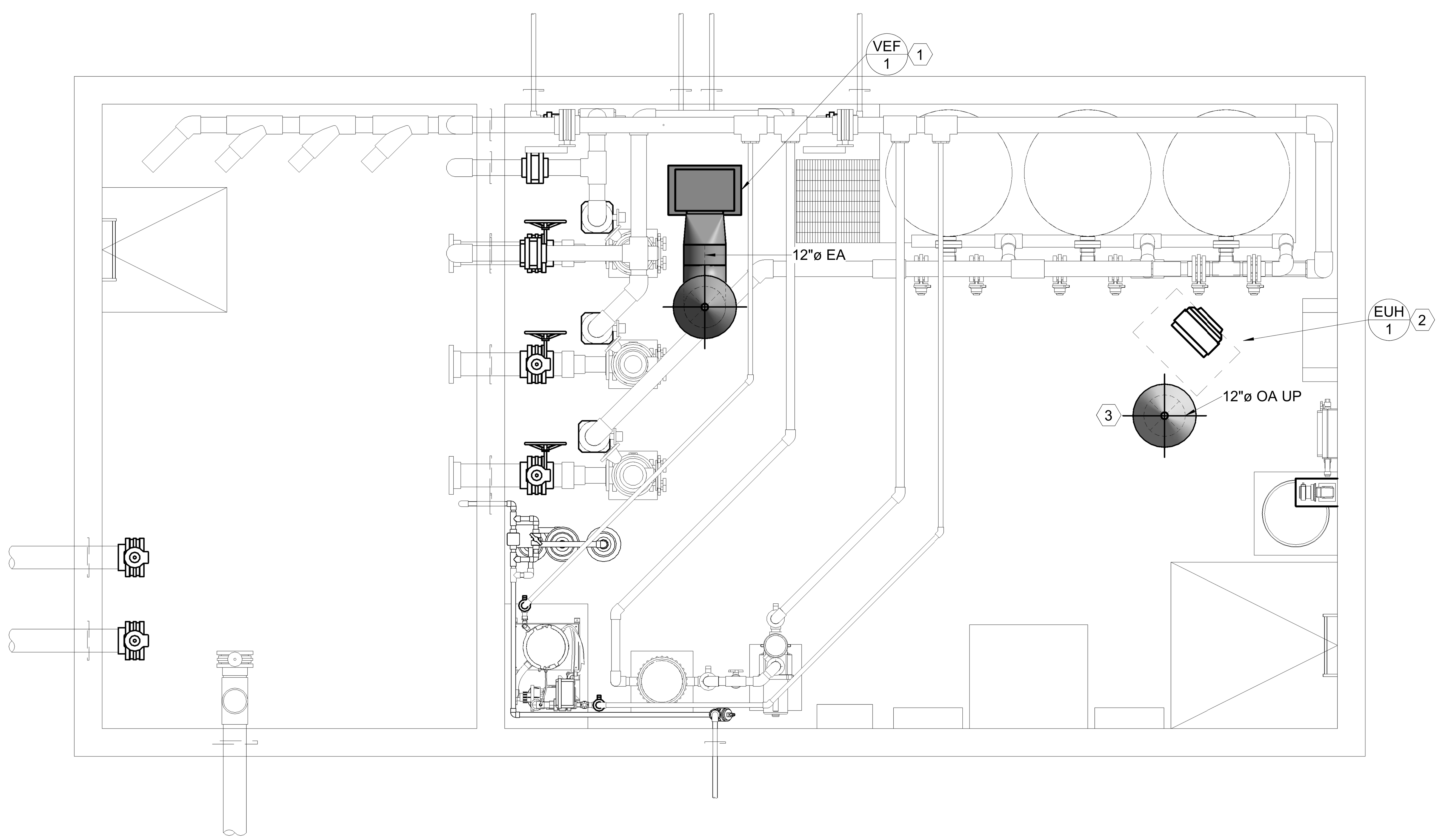
1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. PROVIDE WITH HANGER RODS C/W VIBRATION ISOLATERS SEISMICALLY BRACED UNITS.
3. CHEMICAL RESISTANT COATING FOR HARSH ENVIRNEMENTS.
4. SHALL BE QMARK OR EQUAL BY BERKO, FEHRENHEAT, MARKEL OR PRIOR APPROVED EQUAL.

SHEET NOTES

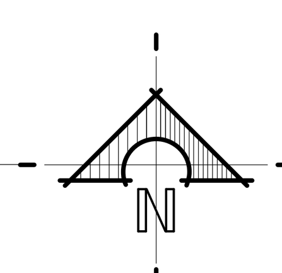
1 PROVIDE EXHAUST FAN HIGH. FAN SHALL RUN CONTINUOUSLY. ROUTE ALUMINUM DUCT UP THROUGH THE ROOF OF THE VAULT AND TERMINATE A MINIMUM OF 24" ABOVE GRADE WITH A WEATHER CAP AND BUG SCREEN. SHALL BE A MINIMUM OF 10'-0" FROM OUTSIDE AIR INTAKE.

2 PROVIDE ELECTRIC DUCT HEATER IN THIS APPROXIMATE LOCATION. COORDINATE CLEARANCES WITH OTHER EQUIPMENT IN THE SPACE. THERMOSTAT SHALL BE LOCATED ON WALL AND SET TO 50 F (ADJUSTABLE)

3 ROUTE NEW OUTSIDE AIR INTAKE DUCT UP AND THROUGH THE ROOF OF THE VAULT. TERMINATE ABOVE GRADE A MINIMUM OF 24" WITH WEATHER CAP AND BUG SCREEN. DUCTWORK SHALL BE ALUMINUM. SHALL BE A MINIMUM OF 10'-0" FROM EXHAUST OUTLET.



1 WATER FEATURE MECHANICAL PLAN
1/2" = 1'-0"



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REV	DATE	DESCRIPTION

DESIGNED BY: Miah R
DRAWN: Miah R
CHECKED: Brad L
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
MECHANICAL WATER FEATURE

Sheet Number:
M2.1-W

ROOF TOP UNIT SCHEDULE

TAG		AREA SERVED	CFM	CFM (OUTSIDE AIR)	ESP	HEATING		COOLING			ELECTRICAL						SEER (3-5 TON) EER (7.5+ TON)	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#					INPUT (BTU/HR)	OUTPUT (BTU/HR)	EAT (DB)	EAT (WB)	TOTAL LOAD (BTU/HR)	VOLTAGE	PHASE	FREQUENCY	# OF COMPRESSORS	MCA	MOCP				
RTU	1	1	1,600 CFM	300 CFM	0.5 in-wg	100,000 Btu/h	80,000 Btu/h	95 °F	63 °F	48000 Btu/h	208 V	3	60 Hz	1	24.1 A	35 A	14	800 lb	TRANE YSC048	1,2,3,4,5,6

1. RATED MINIMUM INPUT AT SEA LEVEL.
2. PROVIDE ONE 15 AMP, 120 VOLT, DUPLEX GFCI SERVICE OUTLET. FACTORY INSTALLED, FIELD WIRED.
3. ESP DOES NOT INCLUDE LOSSES THROUGH ACCESSORIES.
4. BELT DRIVE UNIT.
5. PROVIDE 100% OUTSIDE AIR ECONOMIZER.
6. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

EXHAUST FAN SCHEDULE

TAG		AREA SERVED	CFM	ESP	ELECTRICAL					SONES	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
TYPE	#				VOLTAGE	PHASE	FREQUENCY	RPM	HP				
EF	1	MEN	175 CFM	0.10 in-wg	120 V	1	60 Hz	1160	0.07 hp	3.5	12 lb	COOK GC	1
EF	2	WOMEN	150 CFM	0.10 in-wg	120 V	1	60 Hz	1100	0.06 hp	2.5	12 lb	COOK GC	1
EF	3	JANITOR	75 CFM	0.10 in-wg	120 V	1	60 Hz	750	0.04 hp	1	11 lb	COOK GC	1

1. INTERLOCK FAN WITH SWITCH IN RESTROOM AND JANITOR. PROVIDE 15 MINUTE TIME DELAY.

DIFFUSER AND GRILLE SCHEDULE

TAG	MAX FLOW	FACE SIZE		NECK SIZE		CEILING TYPE	BLOW PATTERN	THROW @ 50 FPM	MAX NC	MANUF & MODEL	SCHEDULE NOTES
		LENGTH	WIDTH	LENGTH/ DIAMETER	WIDTH						
D-1	325 CFM	0"	0"	8"	0"	DUCT MTD	N/A	12'	25	PRICE RCD	3,4,5,6
D-2	180 CFM	12"	12"	6"	0"	HARD	4 WAY	10'	25	PRICE SPD	1,4,5,6
TG-1	200 CFM	12"	12"	12"	12"	SIDEWALL	N/A	0'	25	PRICE 535	2,4,5,6

1. SHALL BE PRICE SPD OR APPROVED EQUAL.
2. SHALL BE PRICE 535 OR APPROVED EQUAL.
3. SHALL BE PRICE RCD OR APPROVED EQUAL.
4. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
5. FINISH SHALL BE STANDARD WHITE.
6. FINISH SHALL BE SPECIFIED BY ARCHITECT.

LOUVER SCHEDULE

TAG	AREA SERVED	MAX FLOW	FACE SIZE		MIN FREE AREA	MAX VELOCITY	MAX NC	MANUF & MODEL	SCHEDULE NOTES
			HEIGHT	WIDTH					
L-1	RESTROOMS	350 CFM	10"	18"	0.5 ft²	700 ft/min	25	RUSKIN ELF15J	1,2,3

1. SHALL BE RUSKIN ELF15J OR APPROVED EQUAL.
2. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
3. FINISH SHALL BE SPECIFIED BY ARCHITECT.

WPA architecture

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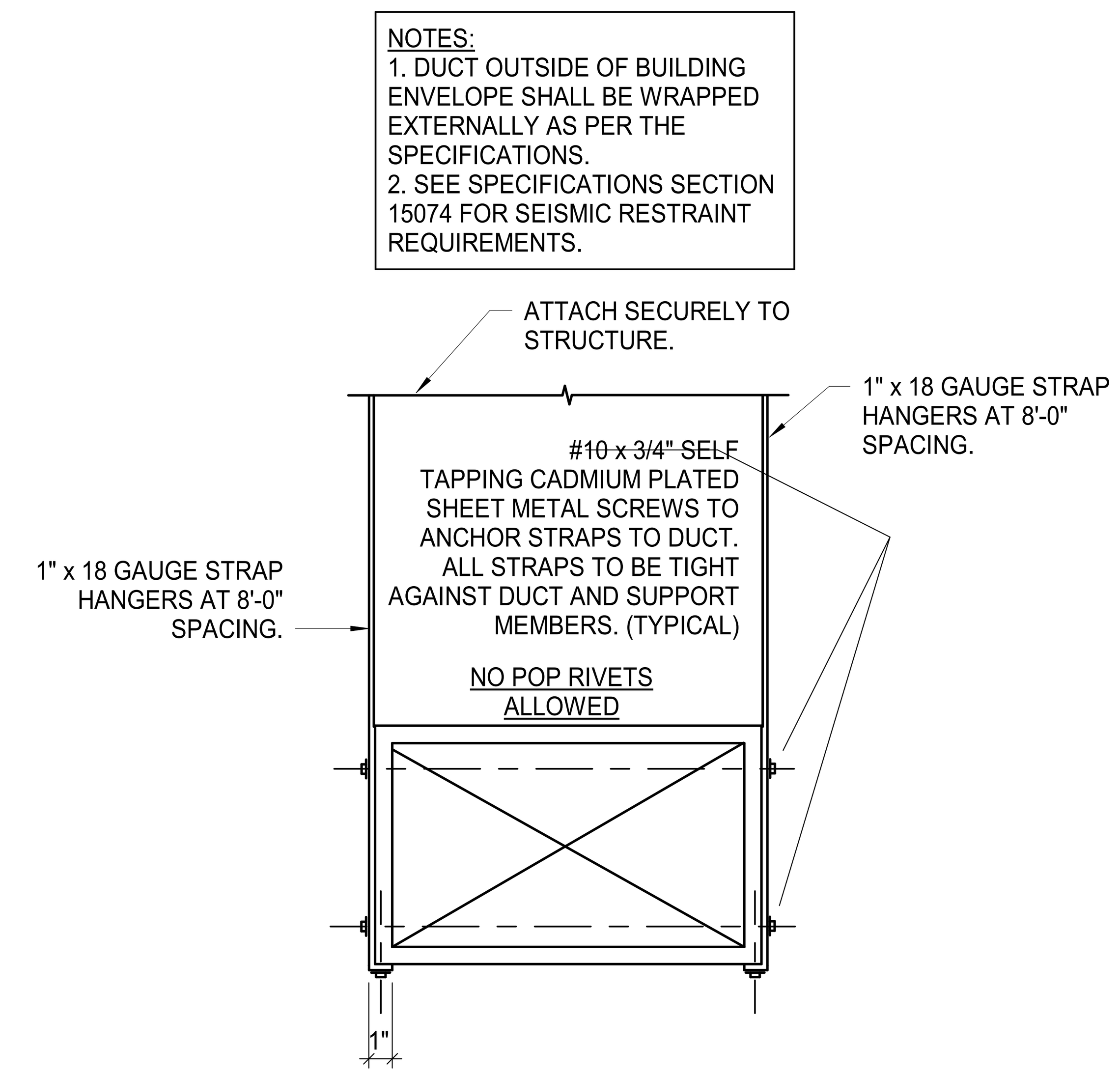
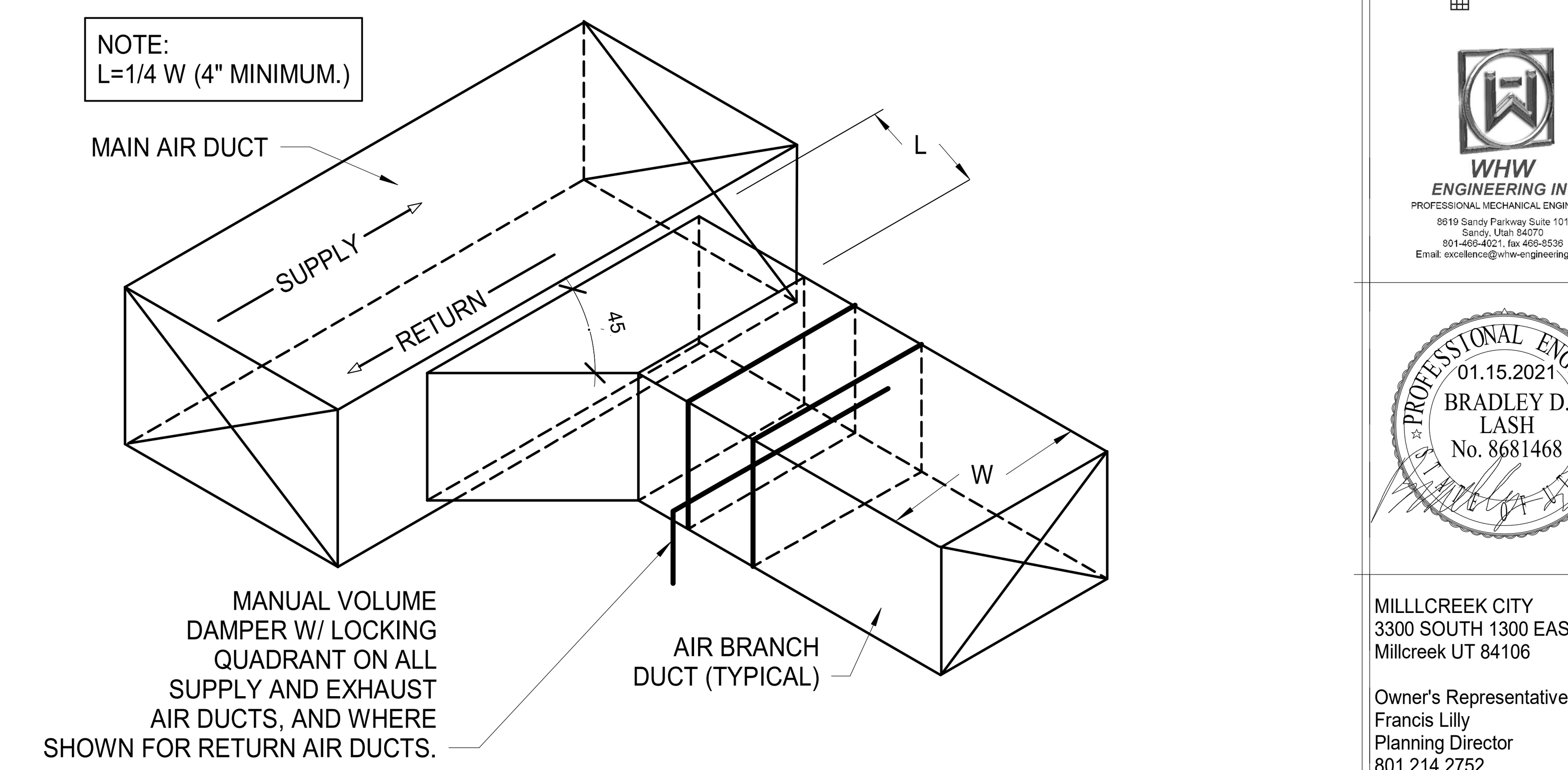
M3.1-R



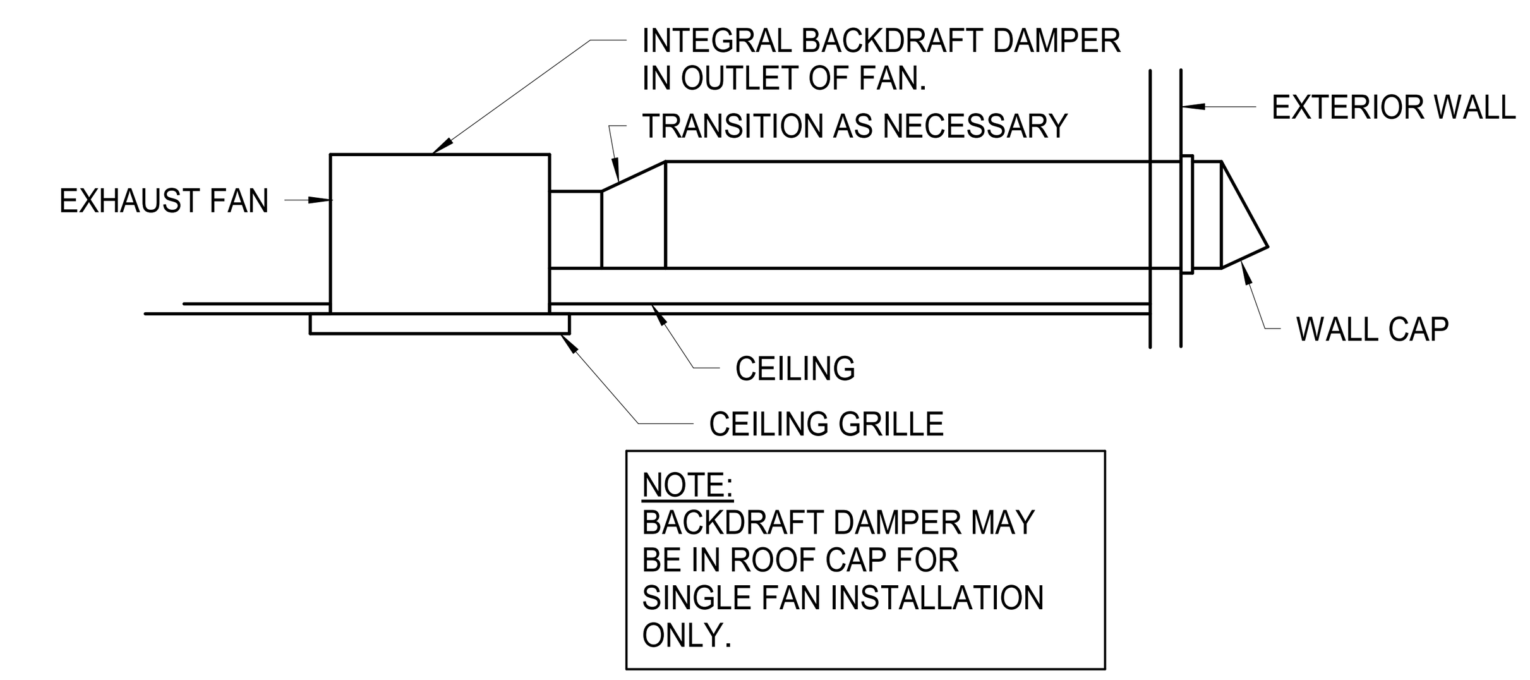
4 DUCT STRAP HANGER DETAIL

SCALE: NONE



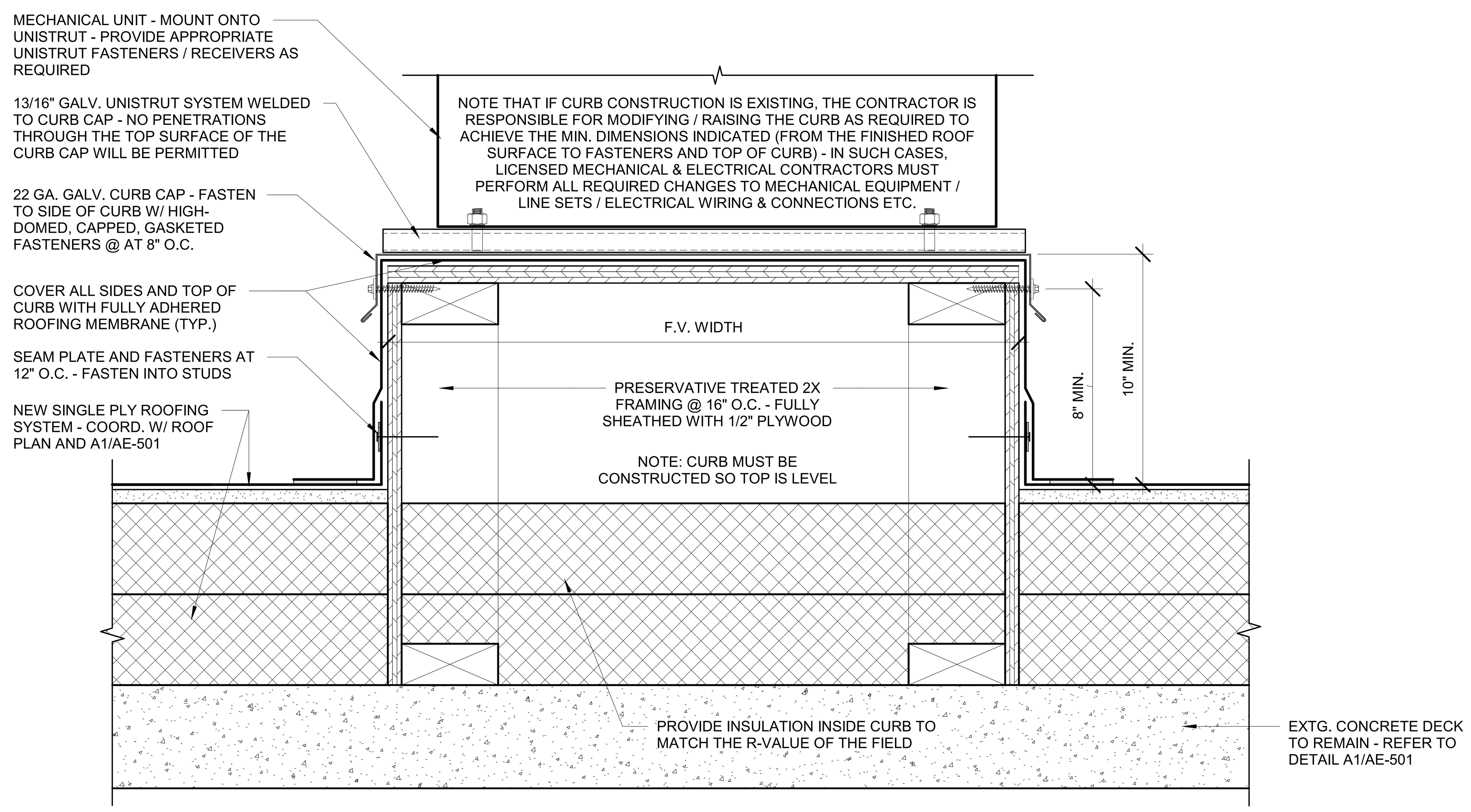
1 BRANCH DUCT TAKE-OFF & DAMPER DETAIL

SCALE: NONE



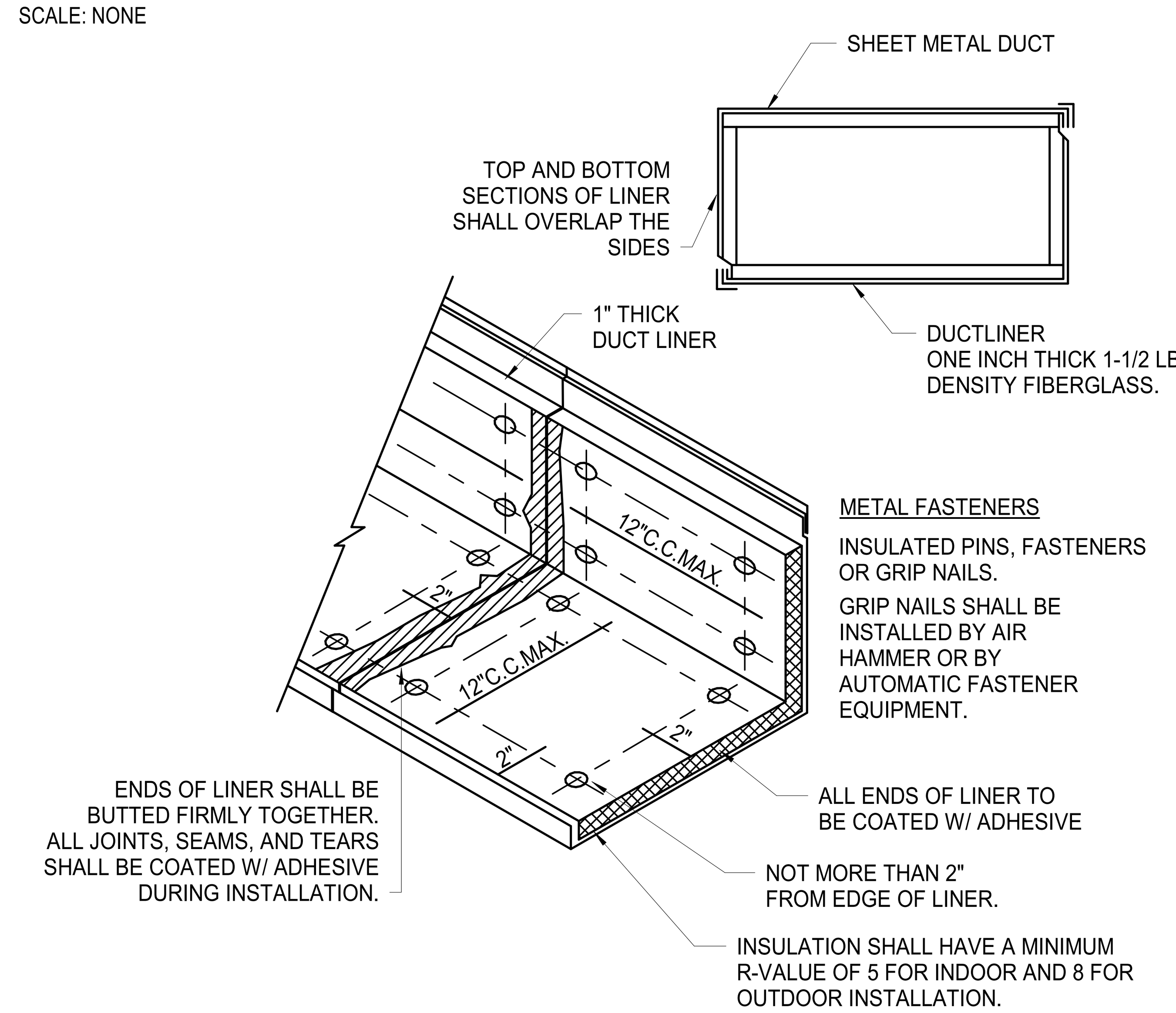
2 CEILING EXHAUST FAN WALL TERMINATION DETAIL

SCALE: NONE



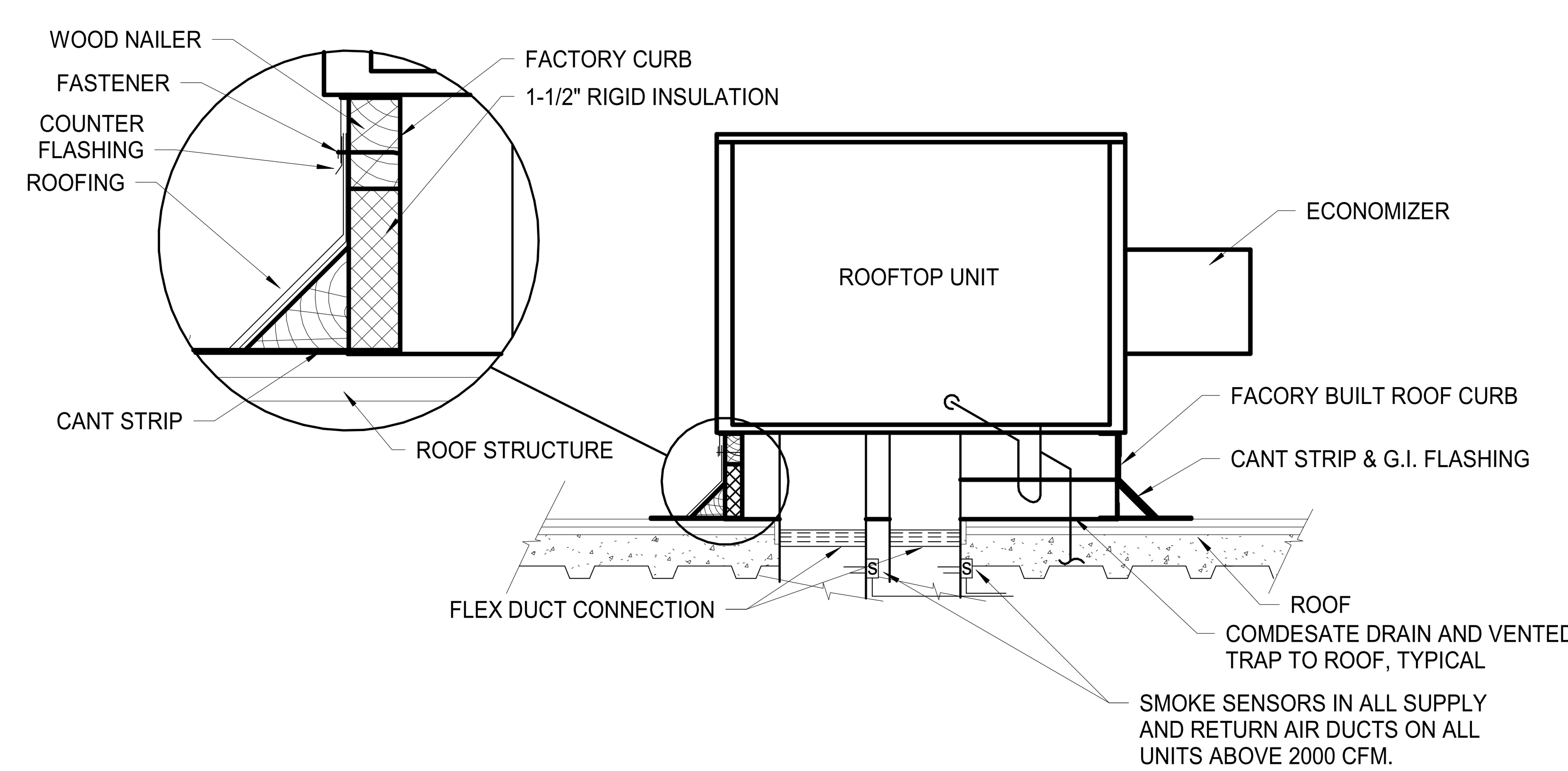
5 EQUIPMENT CURB - UNISTRUT DETAIL

SCALE: NONE



3 DUCT LINER DETAIL

SCALE: NONE



6 ROOFTOP UNIT DETAIL

SCALE: NONE

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MECHANICAL DETAILS

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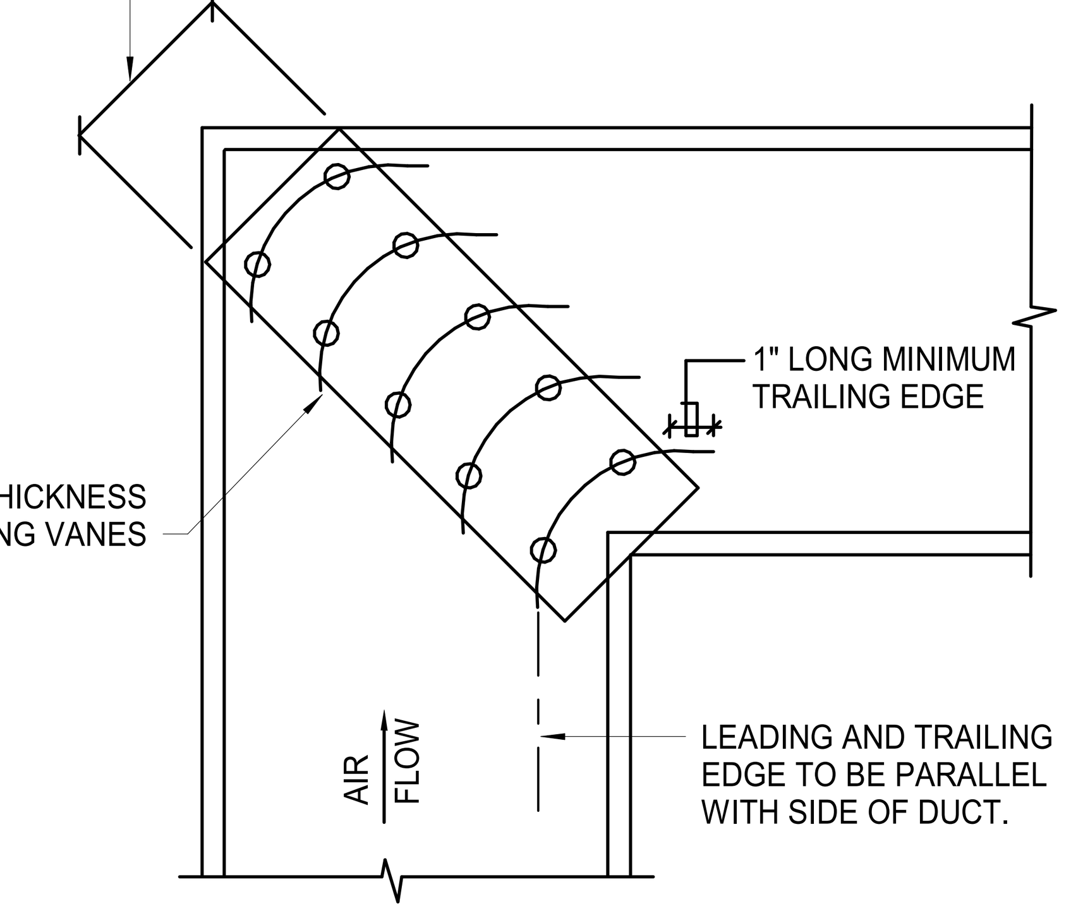
M5.1-R

STANDARD VANE RAIL 4-1/2" RUNNERS MAX 3-1/2" SPACING.
JUNIOR VANE RAIL 2-1/4" RUNNERS MAX 1-1/2" SPACING.
FOR DUCTS 12" WIDE AND SMALLER USE JUNIOR VANE RAIL.



4 SINGLE THICKNESS TURNING VANE DETAIL

SCALE: NONE

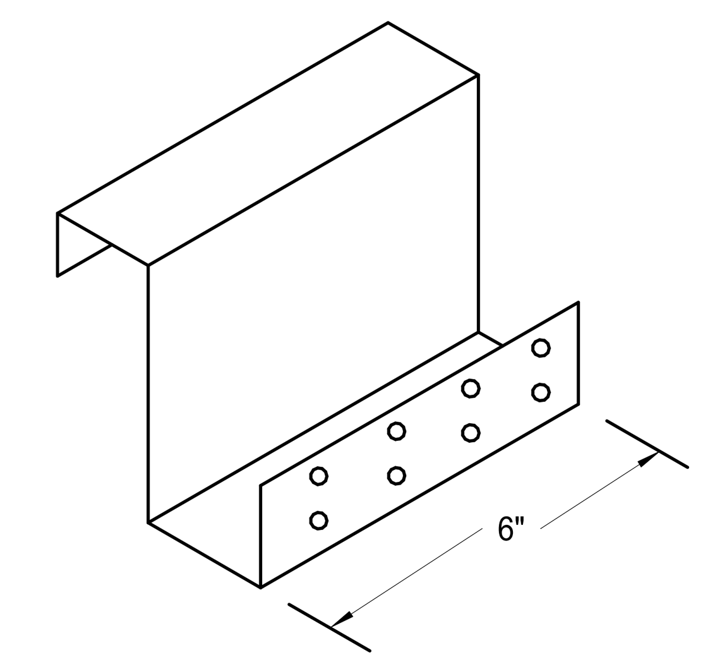
GENERAL NOTES:

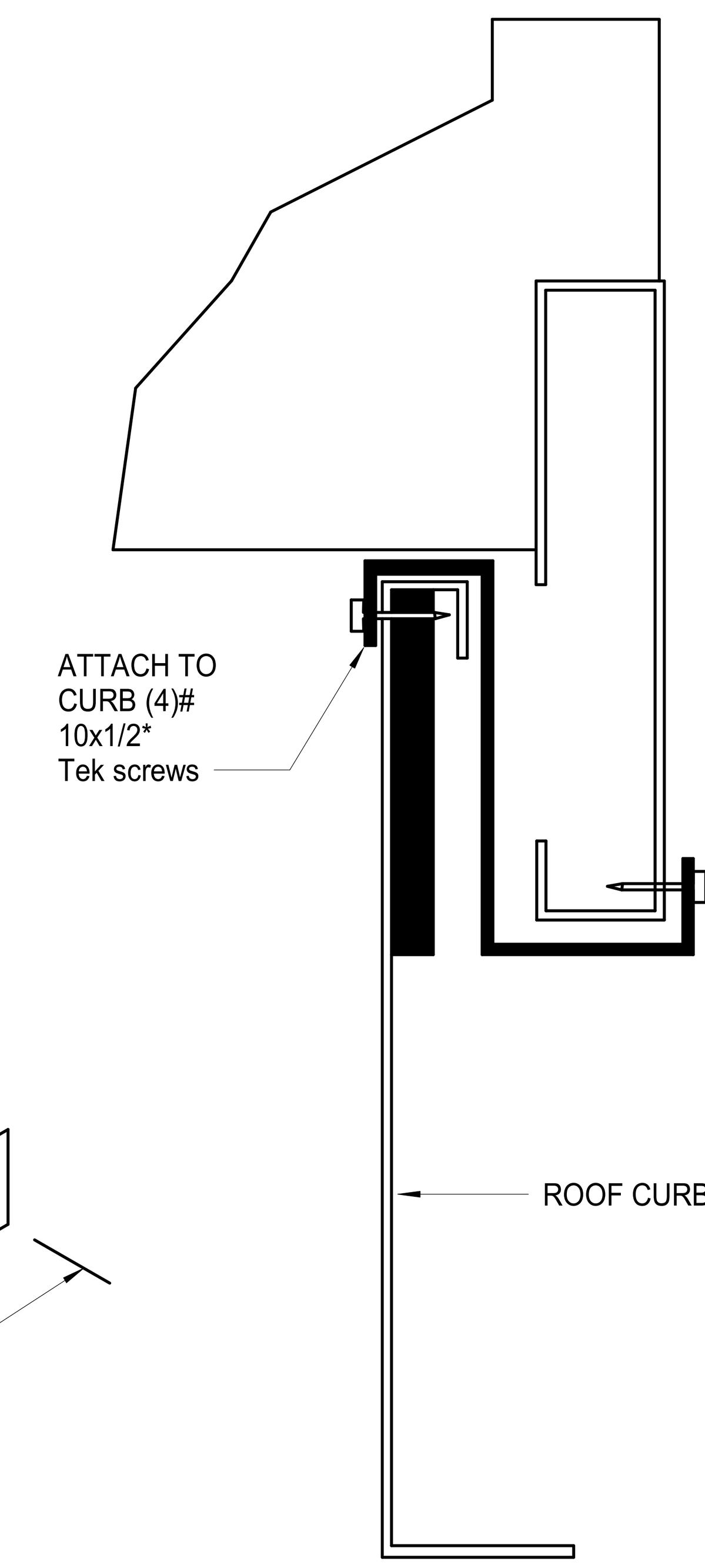
1. 16 GA GALVANIZED STEEL SEISMIC HOLD DOWN BRACKETS BY MICROMETL OR EQUAL.

2. COORDINATE EXACT DEPTH OF SEISMIC BRACKET WITH ROOFTOP MANUFACTURER.

3. PROVIDE A MINIMUM OF 2 BRACKETS PER SIDE.

4. COORDINATE WITH SPECIFICATIONS SECTION 15074 VIBRATION AND SEISMIC CONTROLS.



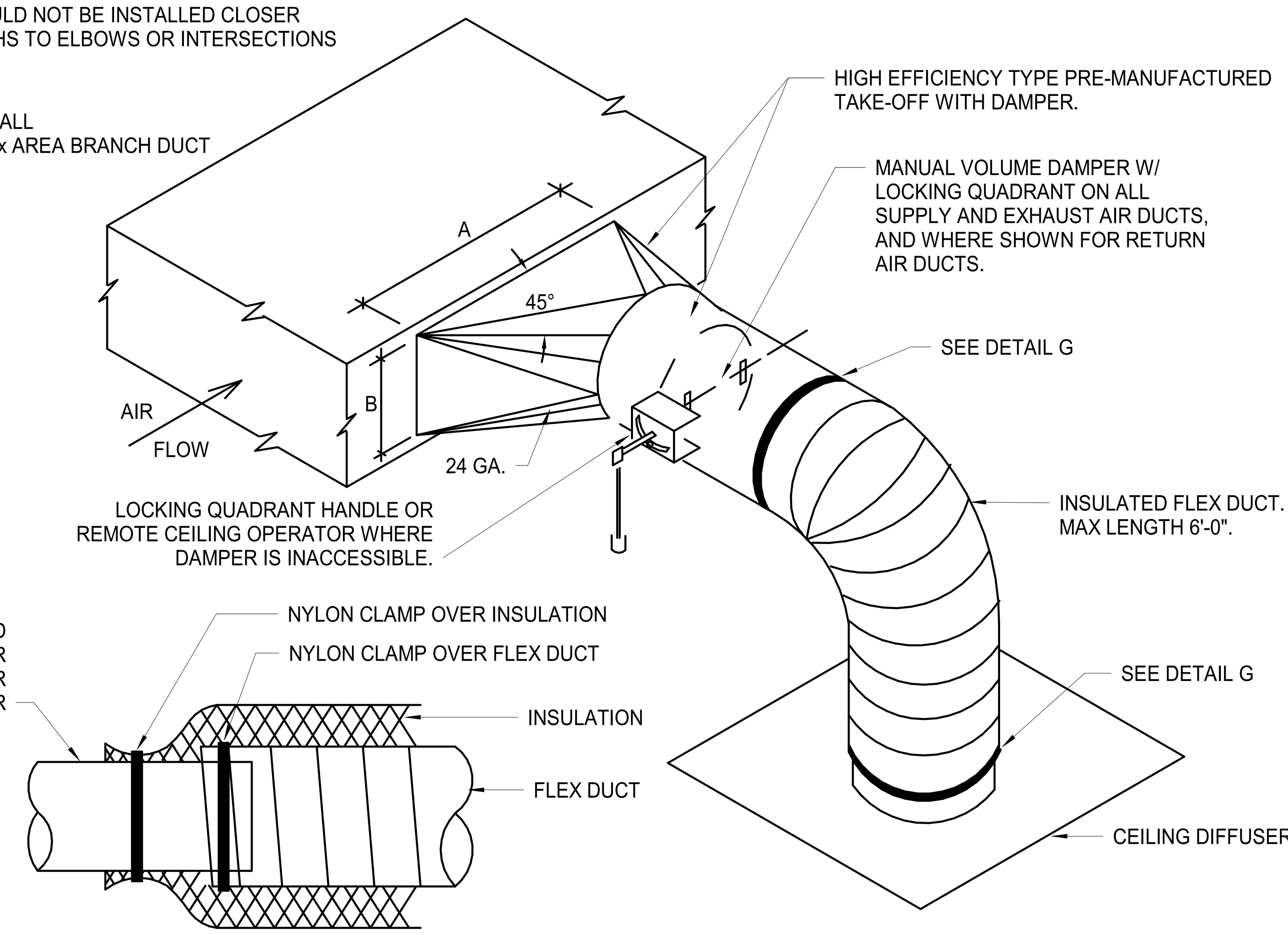


1 ROOFTOP UNIT SEISMIC BRACKET DETAIL

SCALE: NONE

NOTE:
TAKE-OFFS SHOULD NOT BE INSTALLED CLOSER THAN TWO WIDTHS TO ELBOWS OR INTERSECTIONS

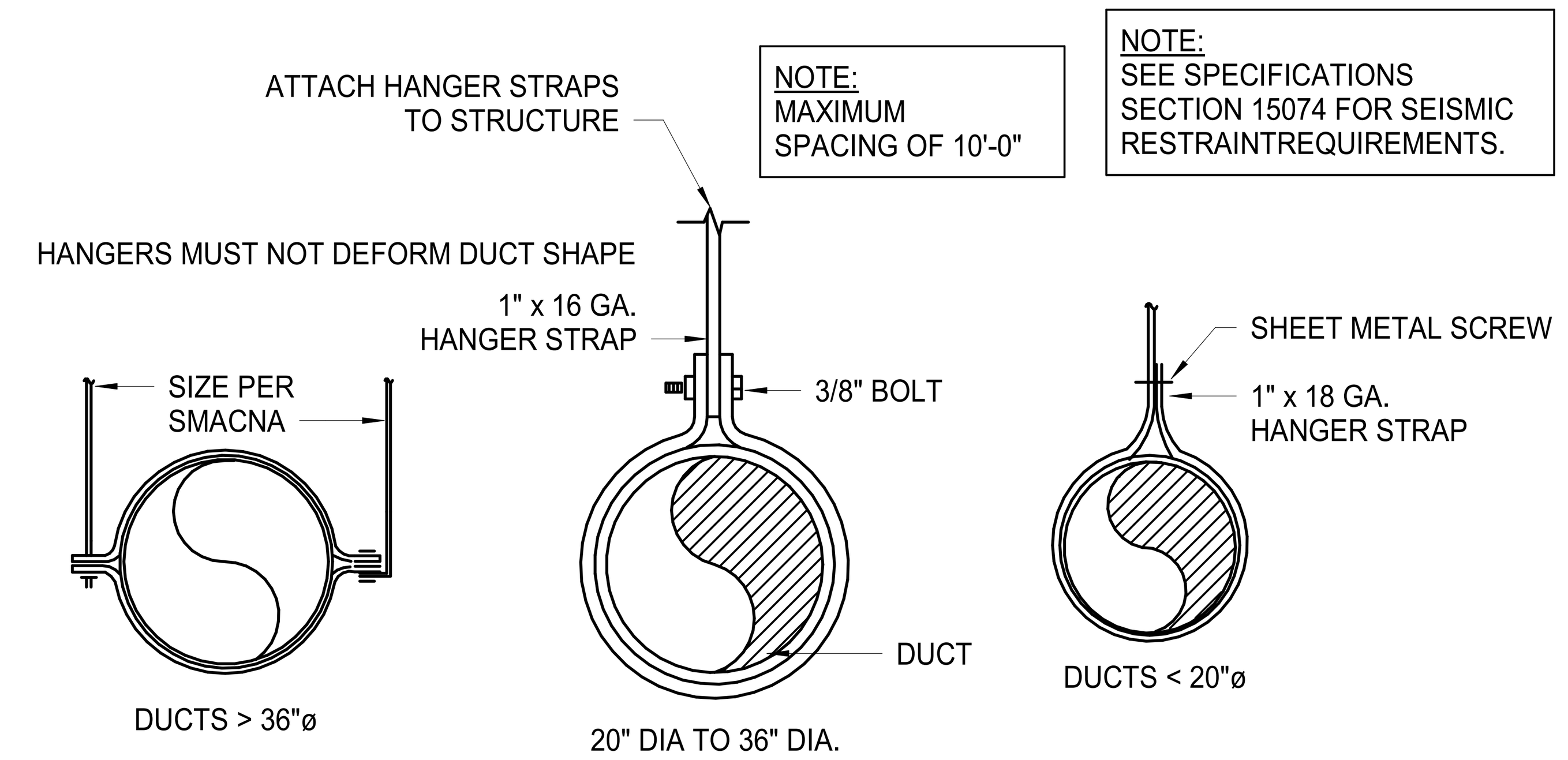
NOTE:
AREA OF A x B SHALL BE EQUAL TO 1.5 x AREA BRANCH DUCT



DETAIL G
SCALE: NONE

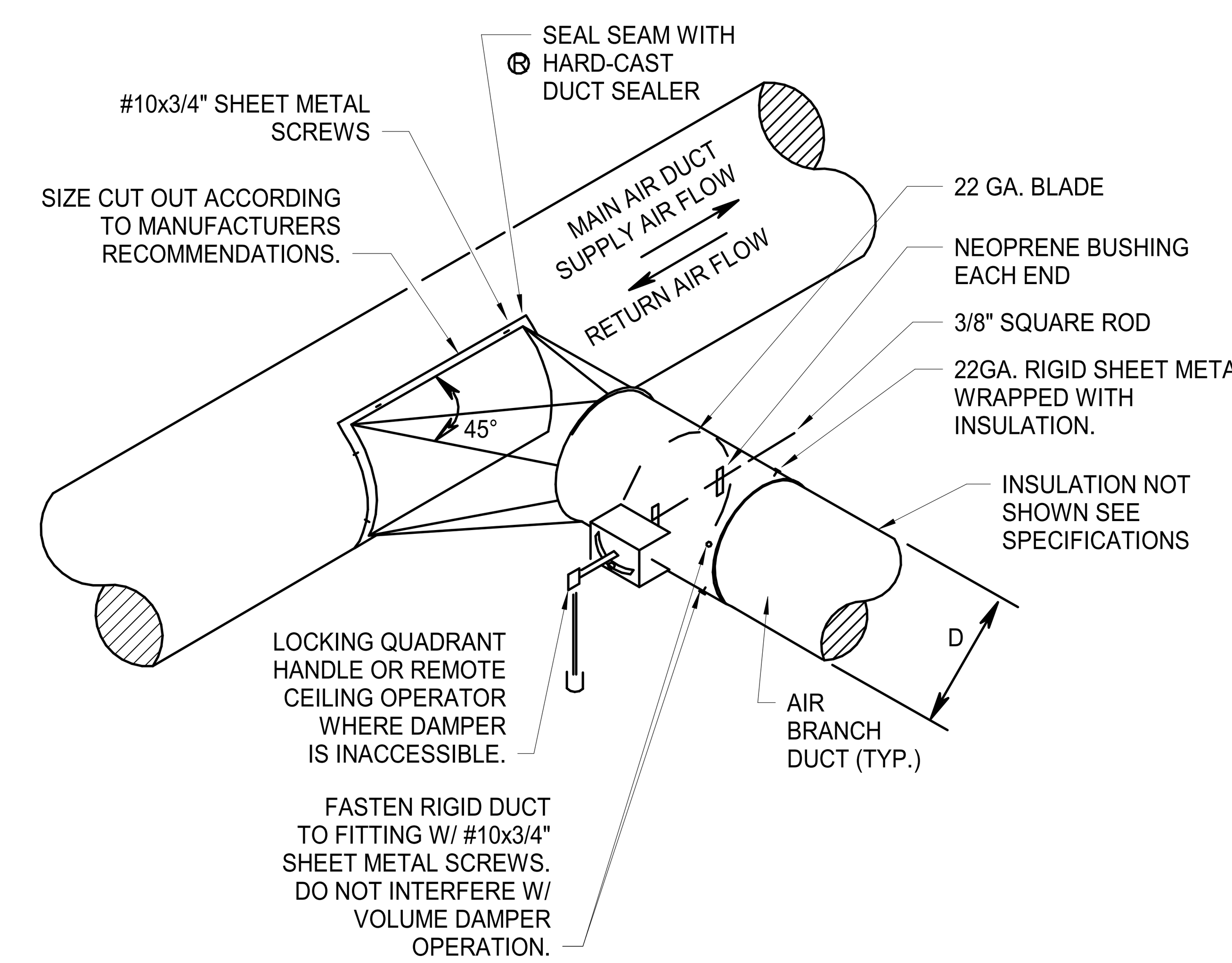
5 SQUARE-TO-ROUND TAKE-OFF DETAIL

SCALE: NONE



2 ROUND DUCT SUPPORT DETAIL

SCALE: NONE



3 ROUND-TO-ROUND DUCT CONSTRUCTION DETAIL

SCALE: NONE

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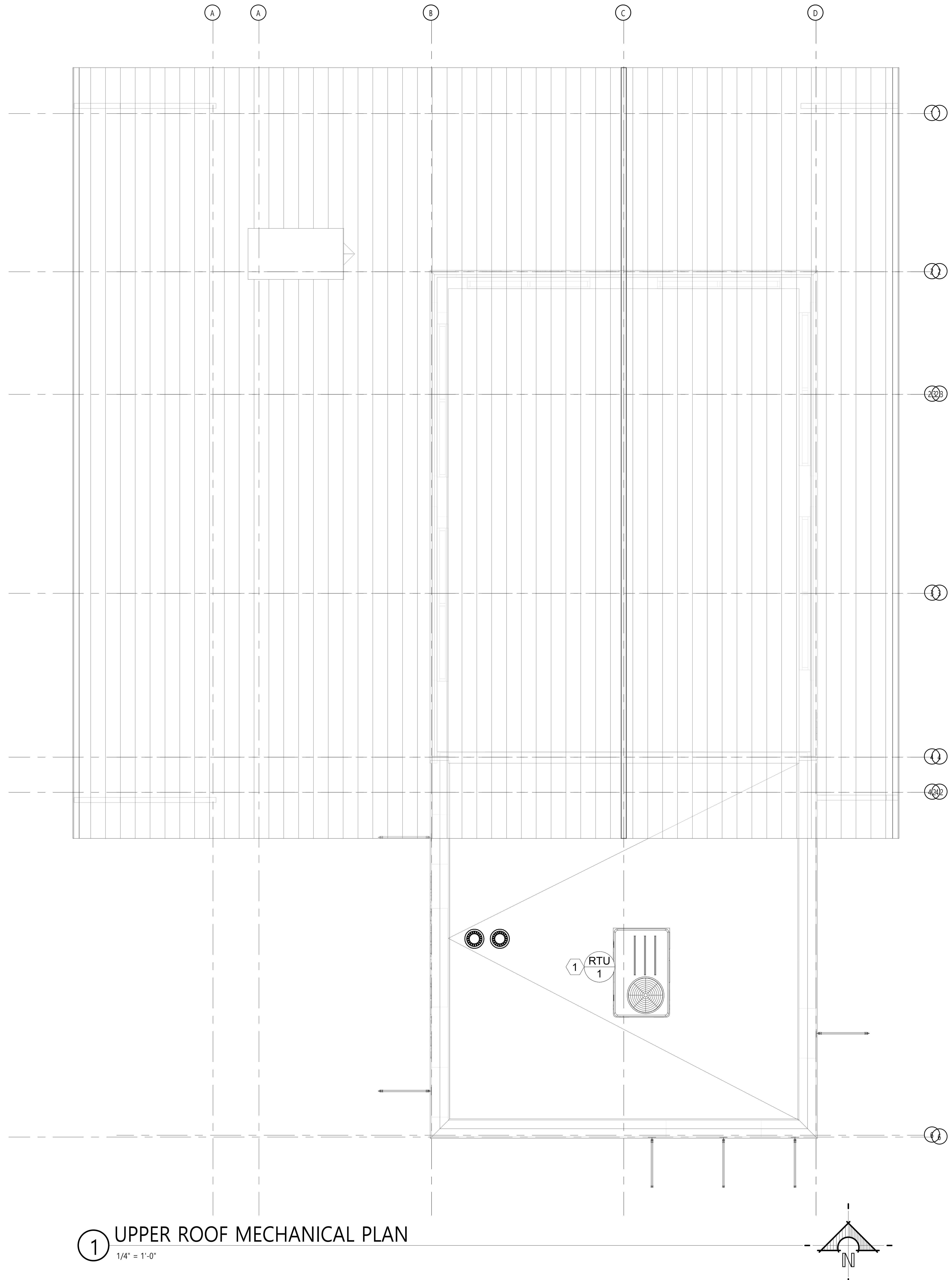
MECHANICAL DETAILS

Sheet Number:
M5.2-R

SHEET NOTES

1 PROVIDE RTU IN THIS APPROXIMATE LOCATION. ENSURE 10' CLEARANCE FROM EDGE OF BUILDING. FIELD VERIFY.



1 UPPER ROOF MECHANICAL PLAN

1/4" = 1'-0"

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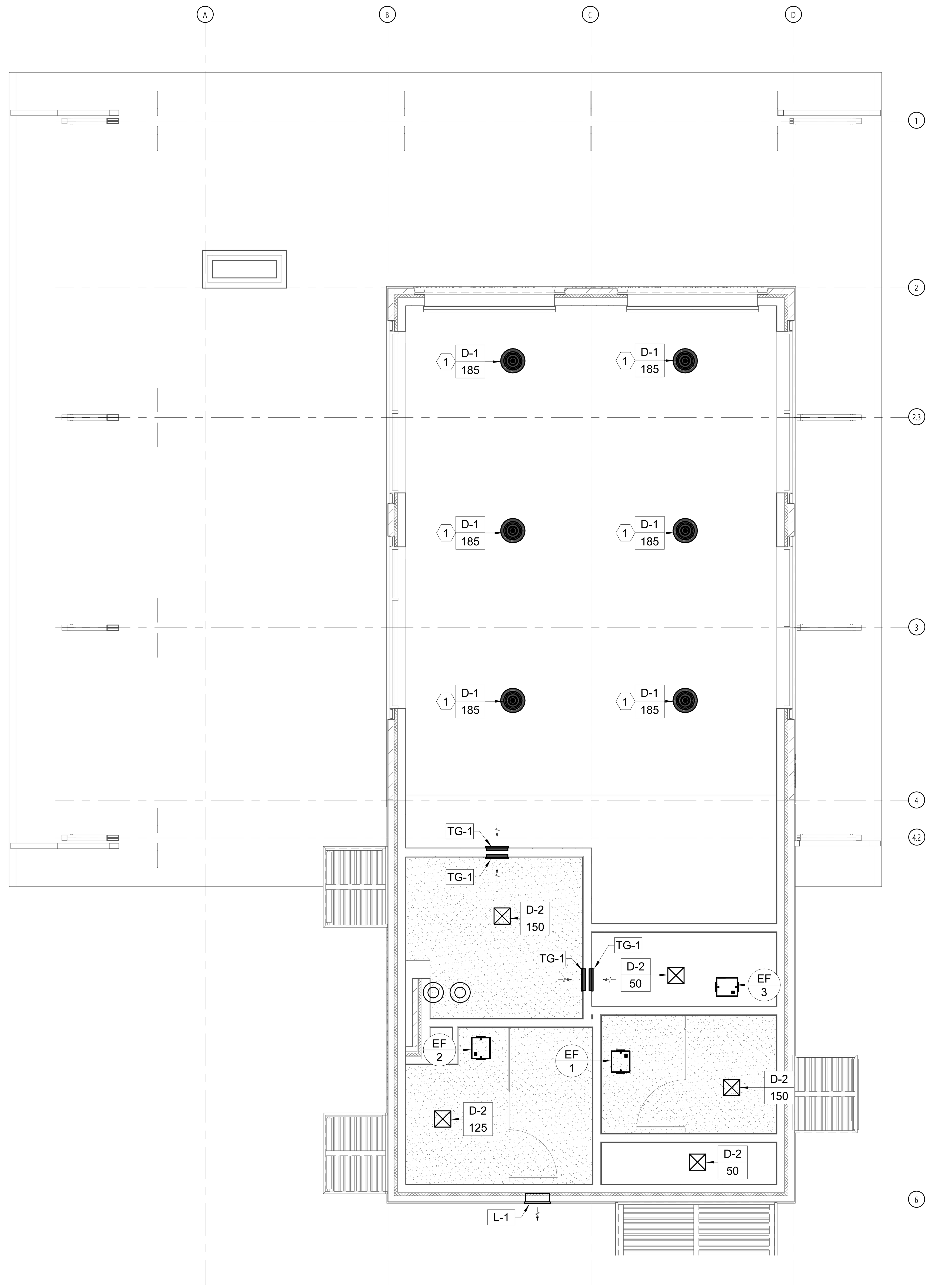
UPPER ROOF MECHANICAL PLAN

Sheet Number:
M6.1-R



1 MAIN LEVEL MECHANICAL REFLECTED CEILING PLAN
1/4" = 1'-0"

SHEET NOTES

1 INSTALL DIFFUSERS A MINIMUM OF 10'-0" A.F.F.

WPA architecture

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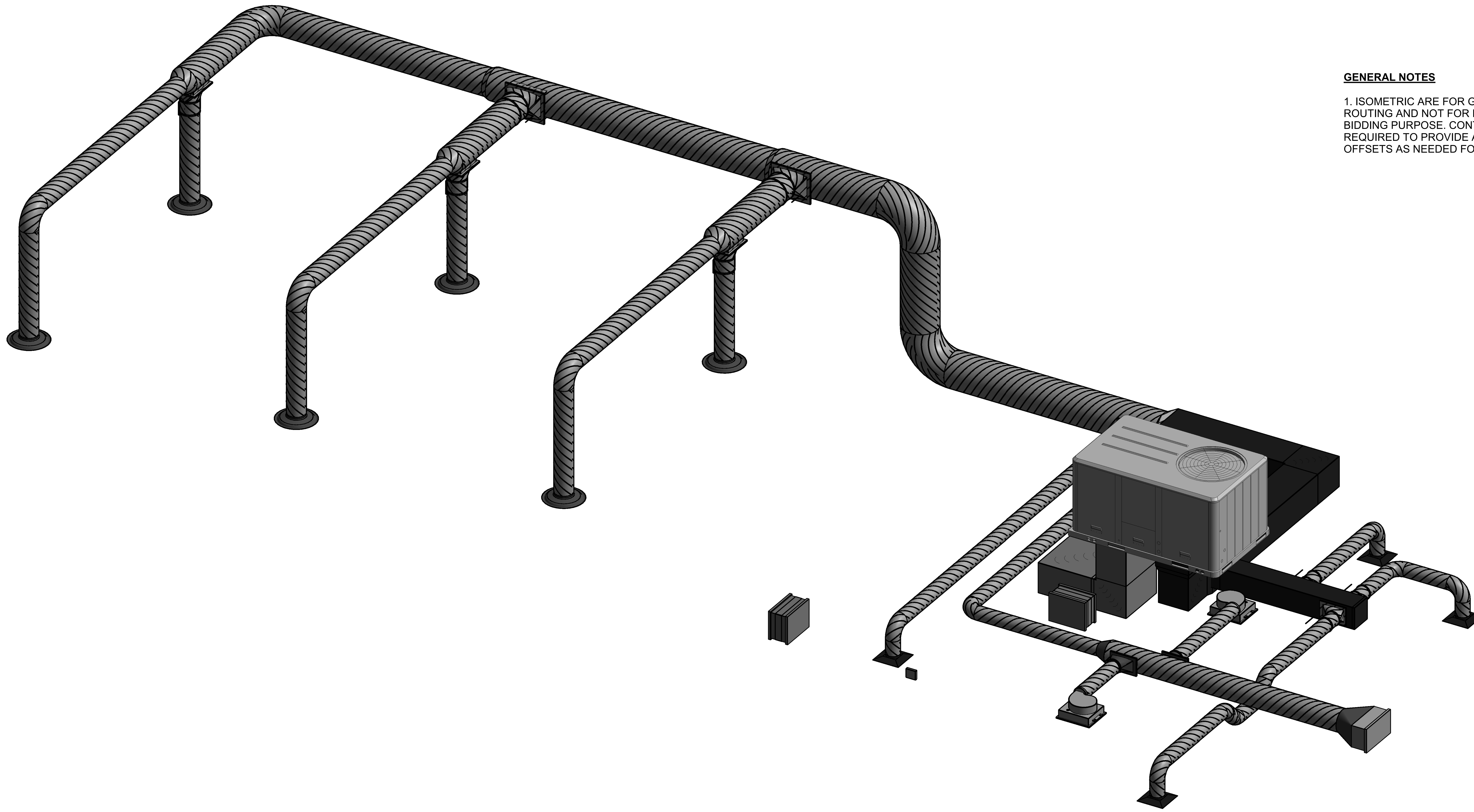
MAIN LEVEL MECH REFLECTED CEILING PLAN
M7.1-R



1 MECHANICAL ISOMETRIC

GENERAL NOTES

1. ISOMETRIC ARE FOR GENERAL LAYOUT ROUTING AND NOT FOR PART COUNT OR BIDDING PURPOSE. CONTRACTOR REQUIRED TO PROVIDE ALL DUCT, ELBOWS, OFFSETS AS NEEDED FOR THE PROJECT.

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Sheet Name:
MECHANICAL ISOMETRICS

Sheet Number:
M8.1-R

PLUMBING LEGEND

MEANING	SYMBOL OR ABBREVIATION	MEANING	SYMBOL OR ABBREVIATION
HOT WATER LINE	HW	WALL CLEANOUT	WCO
COLD WATER LINE	CW	CLEANOUT	CO
HOT WATER RECIRCULATING LINE	HWREC	CLEANOUT TO GRADE	COTG
VENT LINE	V	FLOOR CLEANOUT	FCO
WASTE LINE	SS	BALL VALVE	ϕ
GAS LINE	G	UNION	
VENT THRU ROOF	VTR	CONNECTION TO EXISTING PIPING	⨁
UNDER FLOOR	UF	REGULATOR	Ⓡ
SANITARY SEWER	SS	SOFT WATER	SW
PRIMARY ROOF DRAIN	PRD	SECONDARY ROOF DRAIN	SRD

PLUMBING GENERAL NOTES

G-1 - ALL PLUMBING SHALL BE INSTALLED AND CONFORM TO THE 2018 EDITION OF THE INTERNATIONAL PLUMBING CODE (IPC) WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-2 - ALL PIPING MATERIALS SHALL MEET ALL REQUIREMENTS OF IPC AND LOCAL AUTHORITY. PLASTIC PIPING SHALL BE ALLOWED ONLY WHERE ALLOWED BY CODE. PLASTIC PIPING SHALL NOT BE ROUTED THROUGH RETURN AIR PLENUMS OR OTHER AREAS PROHIBITED BY THE IMC, IPC, OR NFPA CODES OR BY LOCAL AUTHORITY.

G-3 - GAS PIPING INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH GAS COMPANY REGULATIONS, NFPA CODE REQUIREMENTS, AND LOCAL AUTHORITY.

G-4 - ALL MATERIALS SHALL BE NEW AND SHALL BE DOMESTIC MADE UNLESS SPECIFICALLY APPROVED OTHERWISE IN WRITING BY ARCHITECT OR OWNER.

G-5 - PROVIDE VACUUM BREAKERS AND BACK FLOW PREVENTERS WHERE REQUIRED BY CODE OR WHERE THERE MAY BE ANY POSSIBLE CHANCE FOR CROSS CONTAMINATION. PREVENTERS SHALL BE INSTALLED IN ACCORDANCE WITH UTAH CODE.

G-6 - ALL PLUMBING INFORMATION IS NOT LIMITED TO THE PLUMBING DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING SPECIFICATIONS, ARCHITECTURAL DRAWING, STRUCTURAL DRAWINGS, MECHANICAL DRAWINGS, AND ELECTRICAL DRAWINGS.

G-7 - THE WORKING DRAWINGS ARE DIAGRAMMATIC. BECAUSE OF THE SMALL SCALE OF THE DRAWING, THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL PIPING SHALL BE CHECKED AND COORDINATED WITH THE SPECIFICATIONS, ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

G-8 - COORDINATE ALL PIPING AND PLUMBING EQUIPMENT WITH ALL OTHER TRADES AND/OR CONTRACTORS PRIOR TO INSTALLATION.

G-9 - ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARCHITECT/ENGINEER SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.

G-10 - GAS LINE FITTINGS SHALL BE STANDARD WELD FITTINGS WITH TAPERED REDUCERS. DO NOT USE VALVES, UNIONS, OR AUTO CONTROLS IN GAS LINES ROUTED IN INACCESSIBLE CONCEALED SPACES.

G-11 - ALL WATER SYSTEMS SHALL MEET THE REQUIREMENTS OF ANSI/NSF STANDARD 61 SECTION 9 (1998), CONCERNING METAL CONTAMINANTS IN THE WATER SYSTEM.

G-12 - WATER PIPING SHALL NOT BE ROUTED IN OUTSIDE WALLS OR ON EXTERIOR SIDE OF BUILDING INSULATION ENVELOPE.

G-13 - WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ALL WATER LINES WITH QUICK OPEN OR QUICK CLOSE VALVES.

WATER HAMMER ARRESTOR SCHEDULE:
TYPE A 1-11 FIXTURE UNITS
TYPE B 12-32 FIXTURE UNITS
TYPE C 33-60 FIXTURE UNITS
TYPE D 61-113 FIXTURE UNITS

G-14 - ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.

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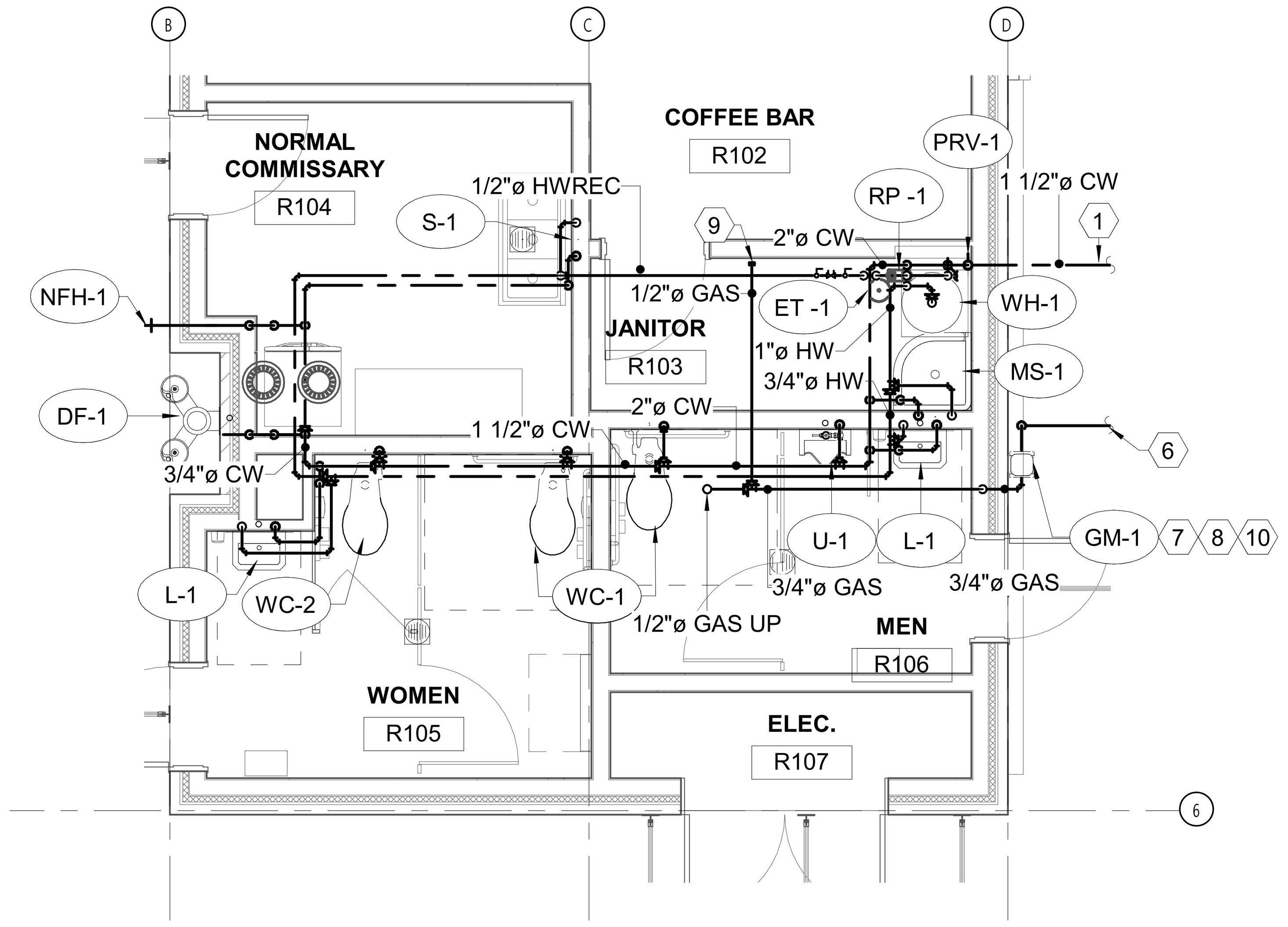
PLUMBING SYMBOLS AND NOTES

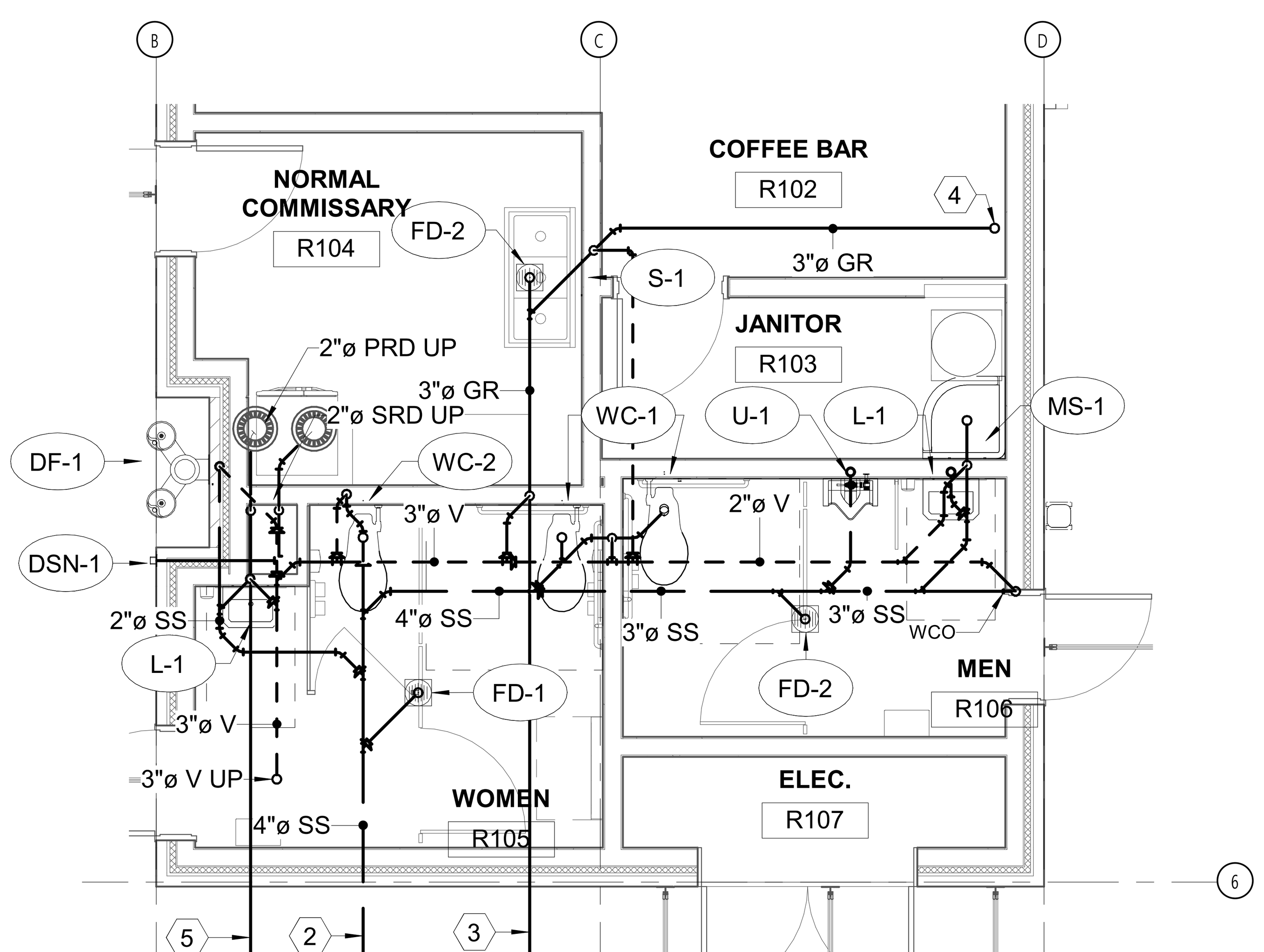
Sheet Number:
P1.1-R

SHEET NOTES

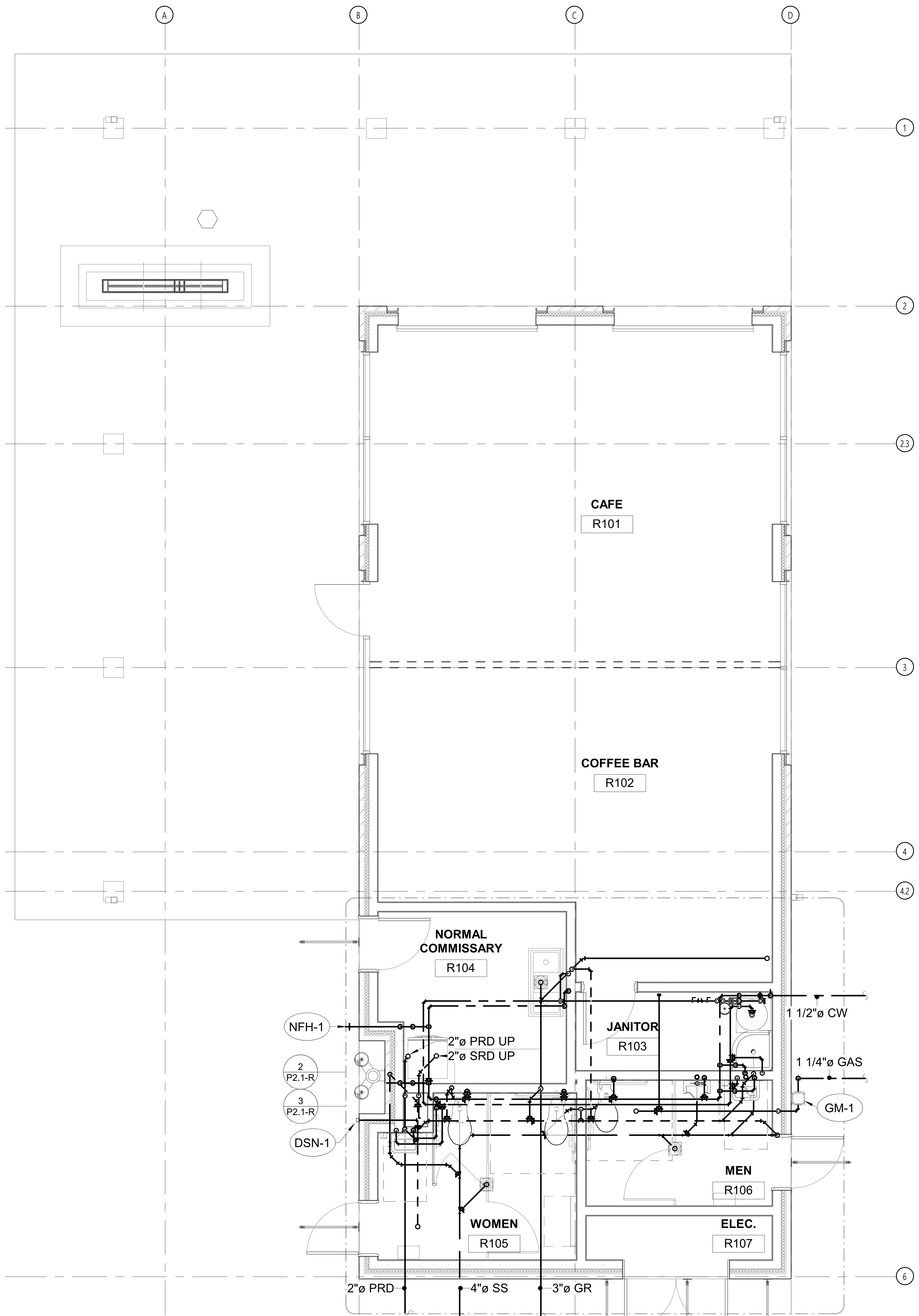
1. REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE DOMESTIC COLD WATER PIPING (CW).
2. REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE SANITARY SEWER PIPING (SS).
3. REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE GREASE WASTE PIPING (GR).
4. GREASE WASTE (GR) FLOOR CLEANOUT FOR FUTURE USE.
5. REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE PRIMARY ROOF DRAIN PIPING (PRD).
6. REFER TO CIVIL UTILITIES DRAWINGS FOR INVERT ELEVATION AND TIE-IN LOCATION FOR THE GAS PIPING (GAS).
7. CONTRACTOR SHALL CONTACT DOMINION ENERGY FOR SPECIFIC REQUIREMENTS TO PROVIDE NEW GAS METER.
8. CONTRACTOR SHALL INSTALL GAS EARTHQUAKE ISOLATION VALVE AND 2LB GAS REGULATOR ABOVE GROUND IN THIS APPROXIMATE LOCATION.
9. VALVE AND CAP GAS LINE FOR FUTURE TENANT. SIZED FOR 400 MBH FOR FUTURE LOAD.
10. GAS METER:
DESIGN CAPACITY: 500,000 BTUH
500 MBH (562 CFH)
DESIGN LENGTH: 100'
DESIGN PRESSURE: 2LB



2 ENLARGED DOMESTIC RESTROOMS
1/4" = 1'-0"



3 ENLARGED DWV RESTROOMS
1/4" = 1'-0"



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

WPA architecture

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MAIN LEVEL PLUMBING PLAN

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P2.1-R

PLUMBING FIXTURE SCHEDULE (TAG)

EQUIPMENT NUMBER	FIXTURE	PLUMBING PIPE SIZES: TRAP	WASTE	VENT	COLD WATER	HOT WATER	POINT OF USE MIXING VALVE?	MAX OUTLET TEMP	REMARKS
DF-1	DRINKING FOUNTAIN	1 1/2"	1 1/2"	1 1/2"	1/2"	0"	No		ELKAY LK4409BFWHT OUTDOOR EZH2O BOTTLE FILLING STATION WALL MOUNT, BI-LEVEL, NON-FILTERED NON-REFRIGERATED
DSN-1	DOWN SPOUT	0"	2"	0"	0"	0"	No		PROVIDE DOWN SPOUT. TERMINATE APPROXIMATELY 24" ABOVE GRADE. ZURN Z199 OR EQUAL.
FD-1	FLOOR DRAIN	2"	2"	1 1/2"	0"	0"	No		PROVIDE WITH TRAP GUARD. WATTS FD-100-A OR EQUAL.
FD-2	FLOOR DRAIN	3"	3"	1 1/2"	0"	0"	No		PROVIDE WITH TRAP GUARD. WATTS FD-100-A OR EQUAL.
L-1	LAVATORY	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	Yes	110 °F	WALL MOUNTED. PROVIDE WITH THERMOSTATIC AND PRESSURE MIXING VALVE. PROFLO PF5514WH WITH SYMMONS SS202IPSFR OR EQUAL.
MS-1	MOP SINK	3"	3"	2"	3/4"	3/4"	Yes	120 °F	CORNER MOUNTED SINK. PROVIDE WITH DRAIN FITTING, SERVICE SINK FAUCET WITH VACUUM BREAKER, HOSE, 3 STATION MOP HOLDER, HOSE HANGER, AND STAINLESS STEEL SPLASH GUARD. KOHLER K6710 OR EQUAL.
NFH-1	NON FREEZEE WALL HYDRANT	0"	0"	0"	3/4"	0"			PROVIDE NON FREEZE PROOF WALL HYDRANT. WOODFORD 65 OR EQUAL. PROVIDE WITH ANTI SYPHON DEVICE.
PRD-1	PRIMARY ROOF DRAIN	0"	4"	0"	0"	0"	No		PROVIDE ZURN Z100 OR EQUAL WITH DOME STRAINER
S-1	3 COMP SINK	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"	Yes	110 °F	COUNTER MOUNTED 3 COMPARTMENT STAINLESS STEEL SINK. PROVIDE WITH THERMOSTATIC AND PRESSURE MIXING VALVE. JUST 18 GAUGE OR EQUAL.
SRD-1	SECONDARY ROOF DRAIN	0"	4"	0"	0"	0"	No		ZURN Z100 OR EQUAL WITH DOME STRAINER. INSTALL 2" ABOVE PRIMARY OR WITH 2" RIM.
U-1	ADA URINAL	3"	3"	2"	3/4"	0"	No		ADA COMPLIANT WALL MOUNTED FLUSH VALVE. 1.0 GPF. ELJER MODEL 161 WITH ZURN Z6003-WSI OR EQUAL.
WC-1	ADA WATER CLOSET	3"	3"	2"	1"	0"	No		ADA COMPLIANT. FLOOR MOUNTED FLUSH VALVE WATER CLOSET. 1.6 GPF. AMERICAN STANDARD NEOLO OR EQUAL WITH BATTERY SENSOR FLUSH VALVE. FLUSH CONTROLS SHALL BE INSTALLED ON OPEN SIDE OF WATER CLOSET.
WC-2	WATER CLOSET	3"	3"	2"	1"	0"	No		FLOOR MOUNTED FLUSH VALVE WATER CLOSET. 1.6 GPF. AMERICAN STANDARD NEOLO OR EQUAL WITH BATTERY SENSOR FLUSH VALVE.

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

WATER HEATER (ELECTRIC) SCHEDULE (TAG)

EQUIPMENT NUMBER	WATTAGE	GPH RECOVERY @ 100 F	STORAGE CAPACITY	RELIEF VALVE BTU / PRESSURE RATING	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
WH-1	1.5 kW	7	20 gal	PER MANUFACTURERS RECOMMENDATIONS	150 lb	AO SMITH DEL 20	1,2

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. SET TEMPERATURE TO 140 F. MIXING VALVES AT EACH FIXTURES SHALL BE SET TO 105 F FOR LAVS.

PIPE ACCESSORIES SCHEDULE

EQUIPMENT NUMBER	FIXTURE	SIZE	REMARKS
PRV-1	PRV	1"	PROVIDE WATTS LF25AUB-Z3 OR EQUAL. SIZED FOR MAX 30 GPM AT 15 PSI PRESSURE DROP.

RECIRCULATION PUMP SCHEDULE

TAG: TYPE	#	AREA SERVED	PUMP TYPE	SUCTION SIZE	DISCHARGE SIZE	ELECTRICAL: VOLTAGE	PHASE	FREQUENCY	HP	MANUF & MODEL	SCHEDULE NOTES
RP	1	UTILITY CHASE	RECIRC	0.75"	0.75"	120 V	1	60 Hz	0.16 hp	PROVIDE B&G PL-30 OR EQUAL. SINGLE PHASE, 1/6 HP.	1,2

1. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.
2. PROVIDE REMOVABLE INSULATION KIT AROUND PUMP SUCTION.

EXPANSION TANK SCHEDULE

TAG: TYPE	#	AREA SERVED	ACCEPTANCE VOLUME	LENGTH	DIAMETER	OPERATING WEIGHT	MANUF & MODEL	SCHEDULE NOTES
ET	1	UTILITY CHASE	0.8 gal	15"	11"	46 lb	B&G PT-12	1

1. SEE SPECIFICATION FOR OTHER APPROVED MANUFACTURERS.

WPA architecture

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MILLCREEK

MILLCREEK COMMON - PHASE ONE
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MILLCREEK, UT 84106

REV	DATE	DESCRIPTION

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CHECKED: Brad L
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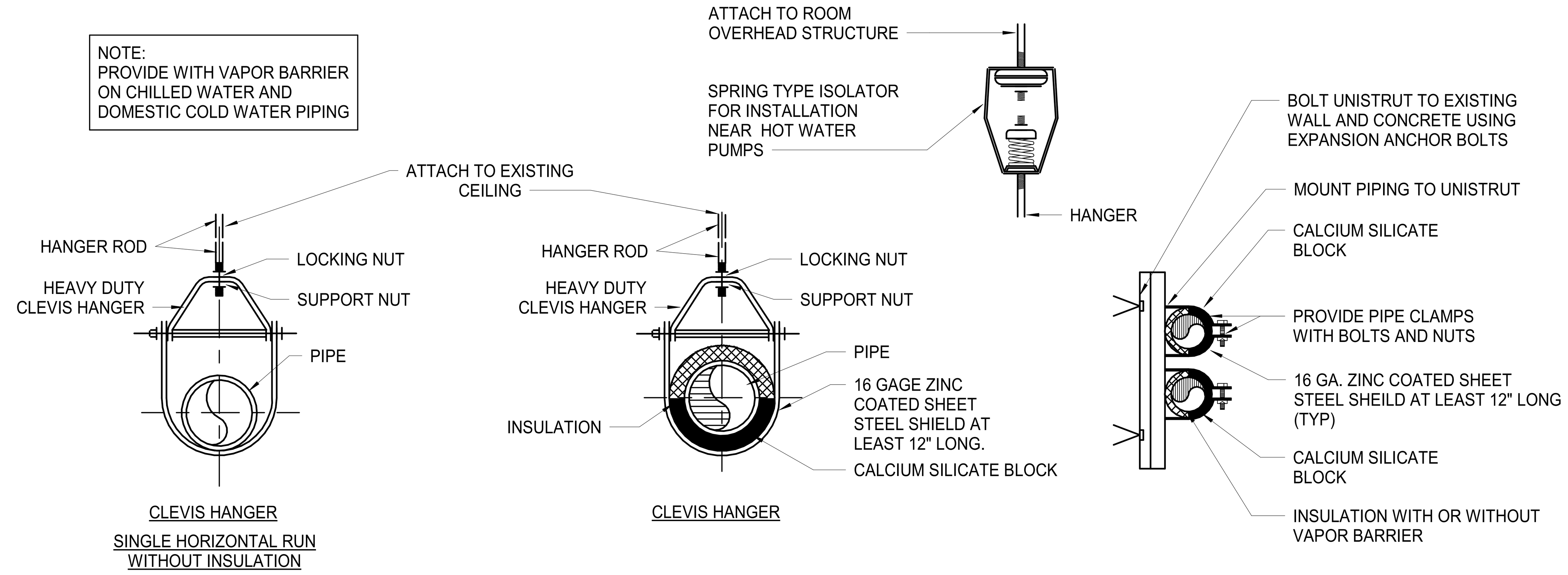
PROJ #: MILLCREEK 0001

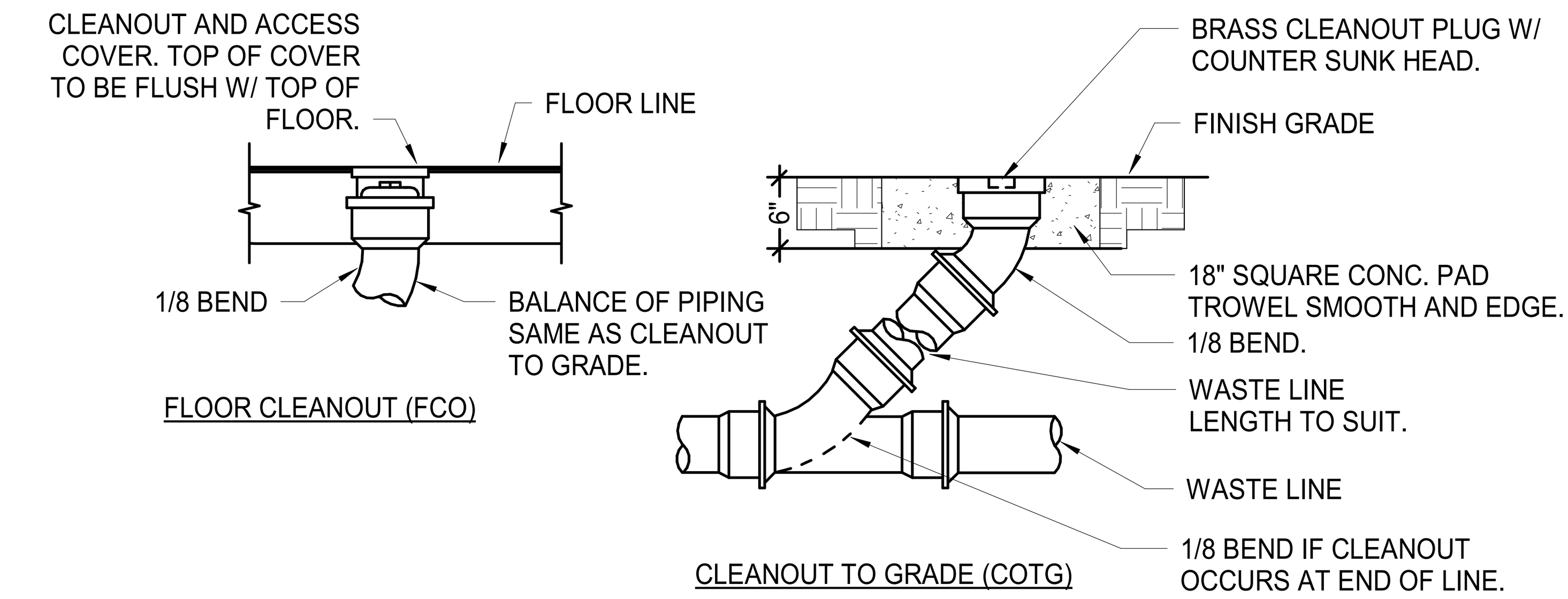
Sheet Name:
PLUMBING SCHEDULES

Sheet Number:
P3.1-R



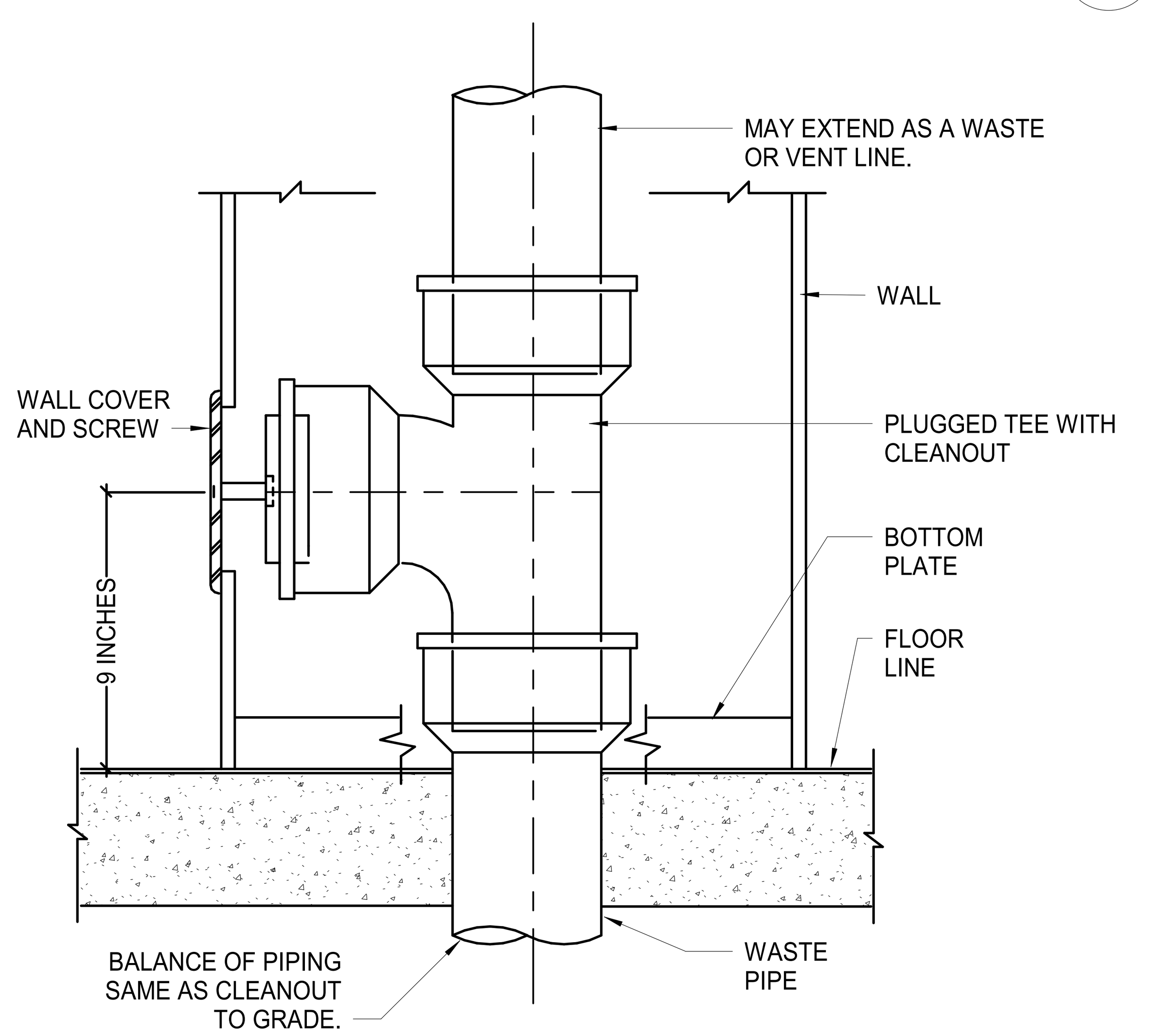
4 PIPE HANGER DETAIL

SCALE: NONE



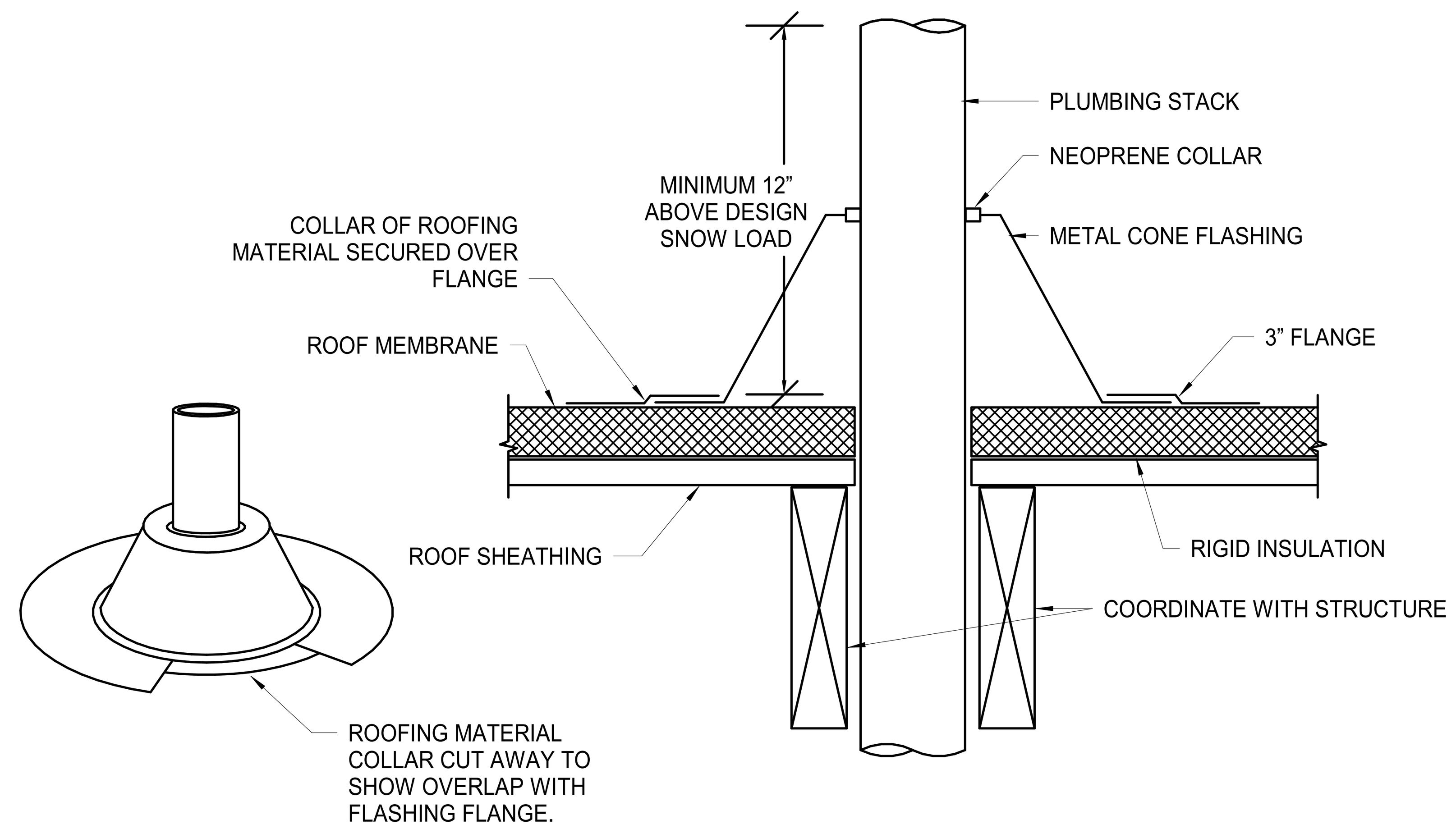
1 CLEAN-OUT DETAILS

SCALE: NONE



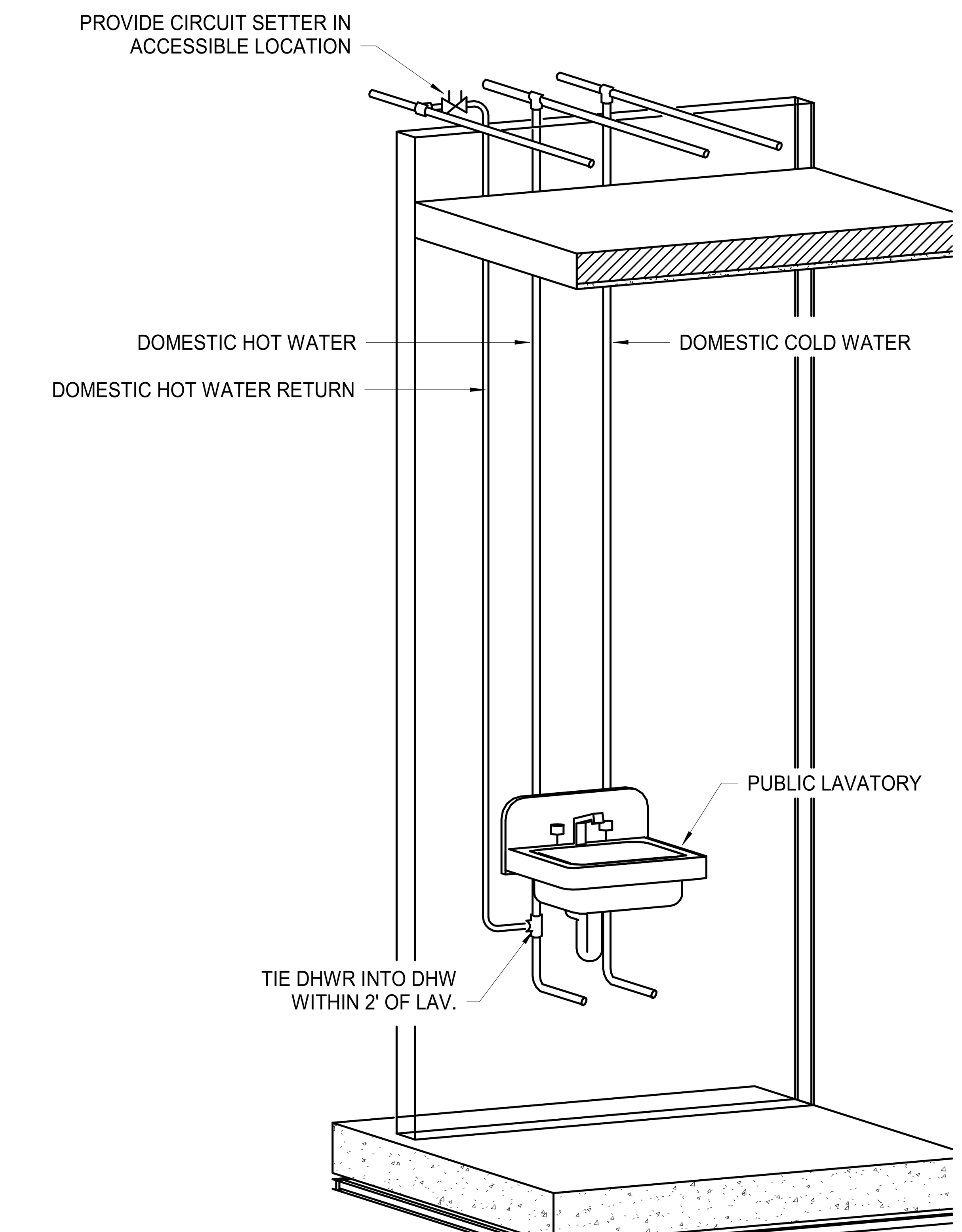
7 WALL CLEAN-OUT DETAIL

SCALE: NONE



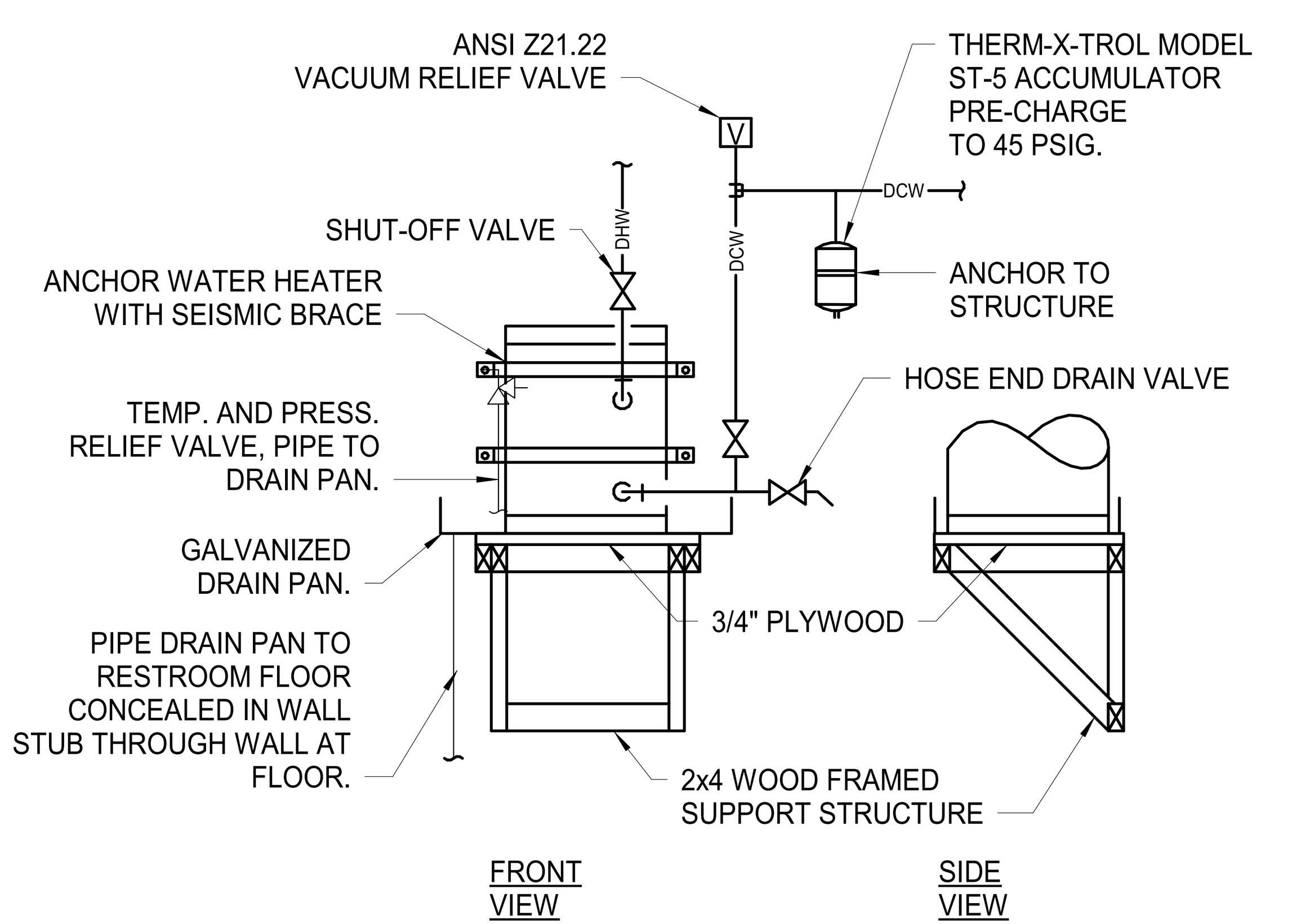
5 VENT THRU ROOF DETAIL

SCALE: NONE



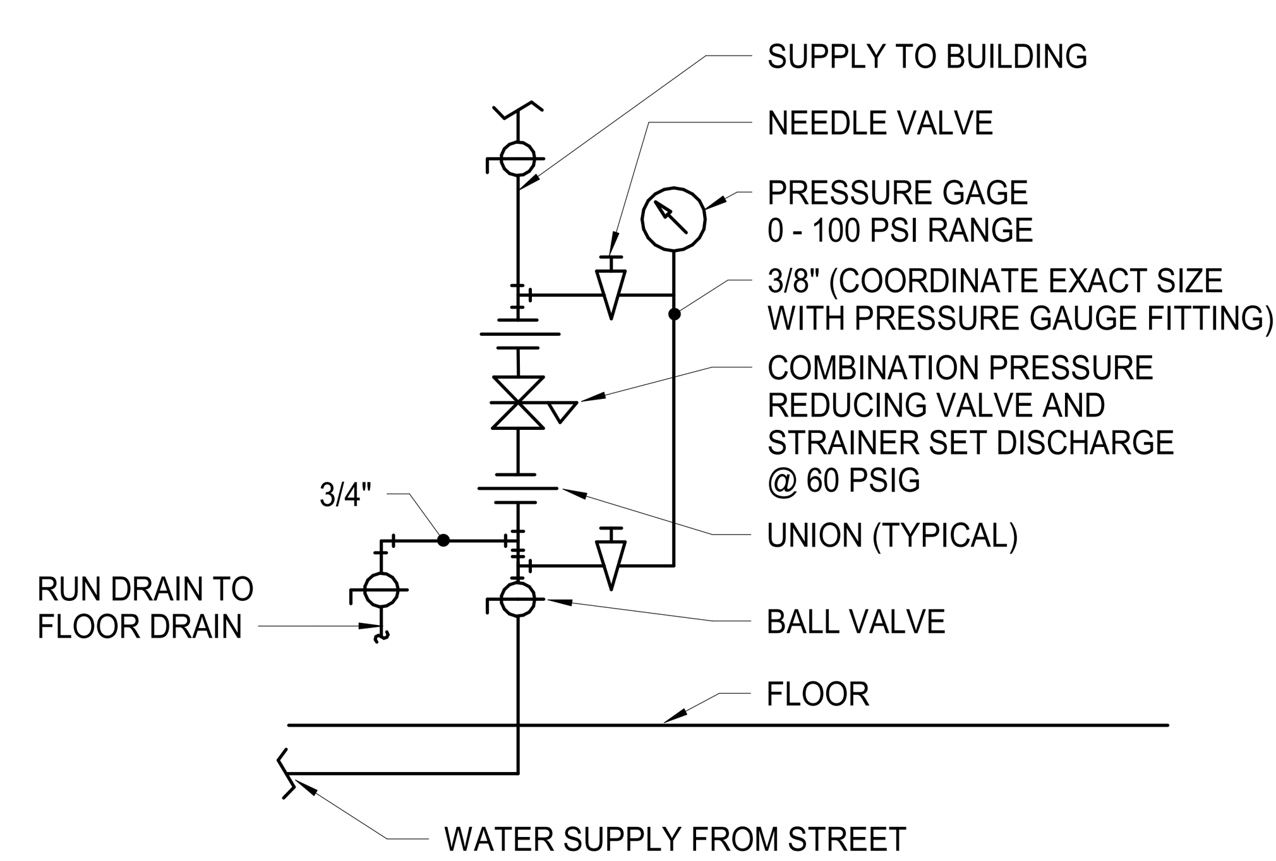
2 DOMESTIC HOT WATER RETURN DETAIL

SCALE: NONE



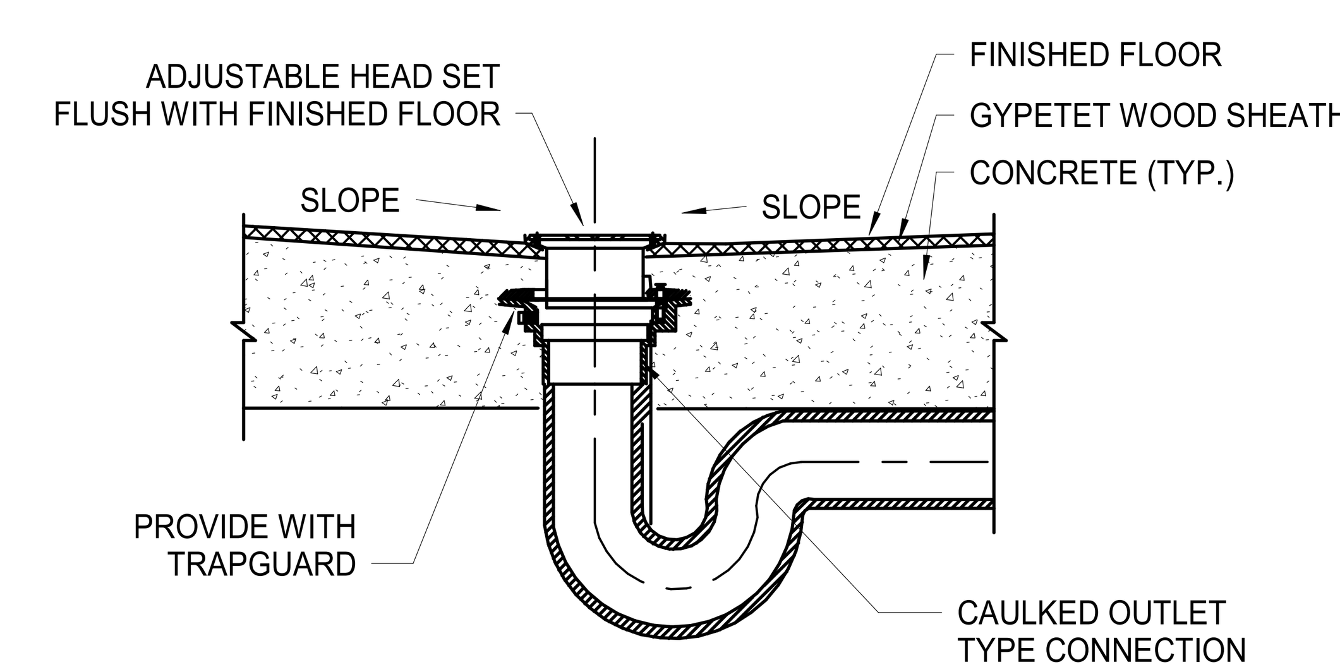
8 WATER HEATER DETAIL

SCALE: NONE



6 VERTICAL WATER PRESSURE REDUCING STATION

SCALE: NONE



3 FLOOR DRAIN DETAIL

SCALE: NONE

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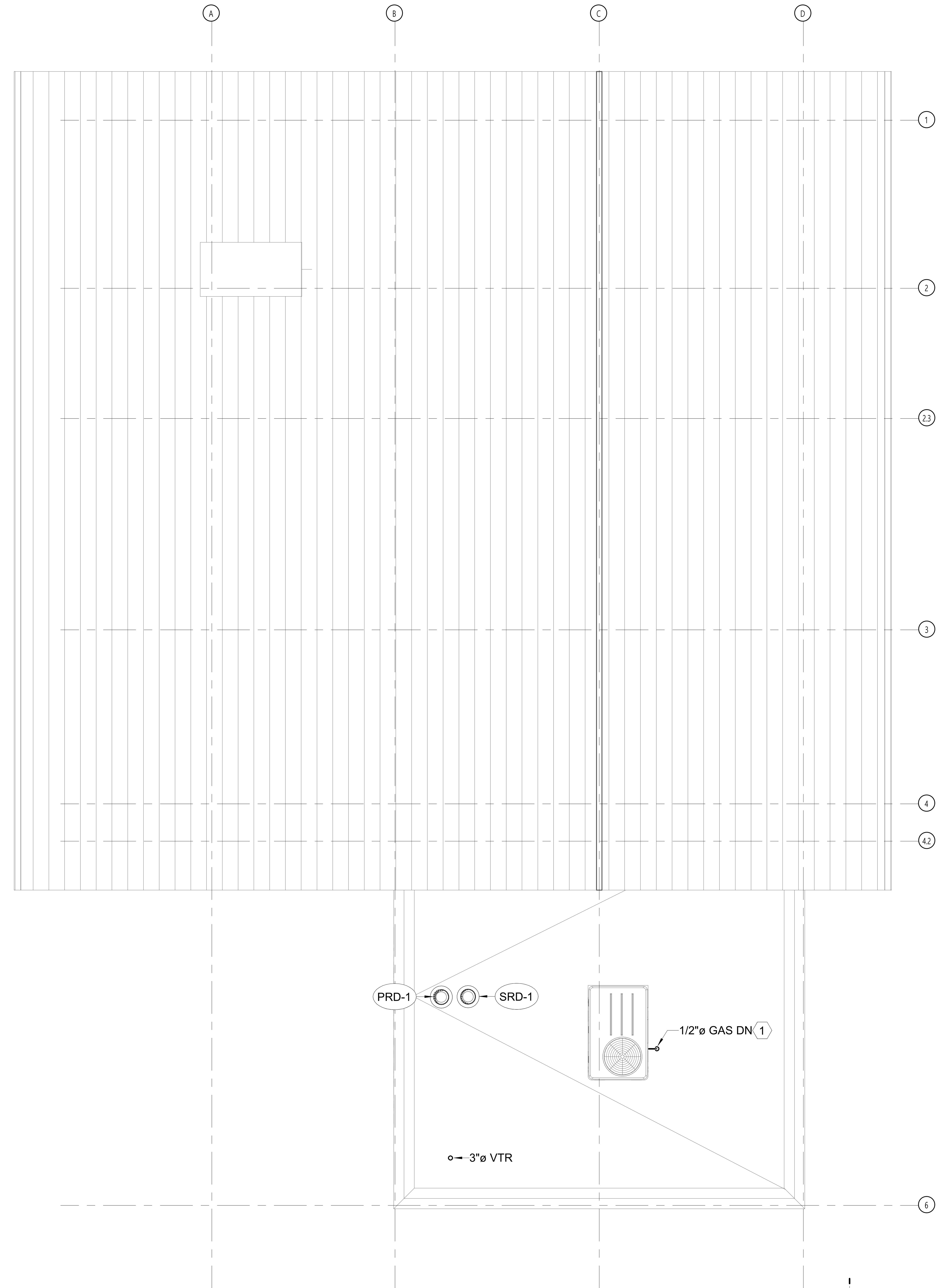
PLUMBING DETAILS

Sheet Number:
P5.1-R

SHEET NOTES

1 CONTRACTOR SHALL CONNECT GAS LINE TO EQUIPMENT PER DETAIL AND MANUFACTURES RECOMMENDATION, TYPICAL OF ALL GAS REQUIRED EQUIPMENT.



1 UPPER ROOF PLUMBING PLAN
1/4" = 1'-0"

WPA architecture

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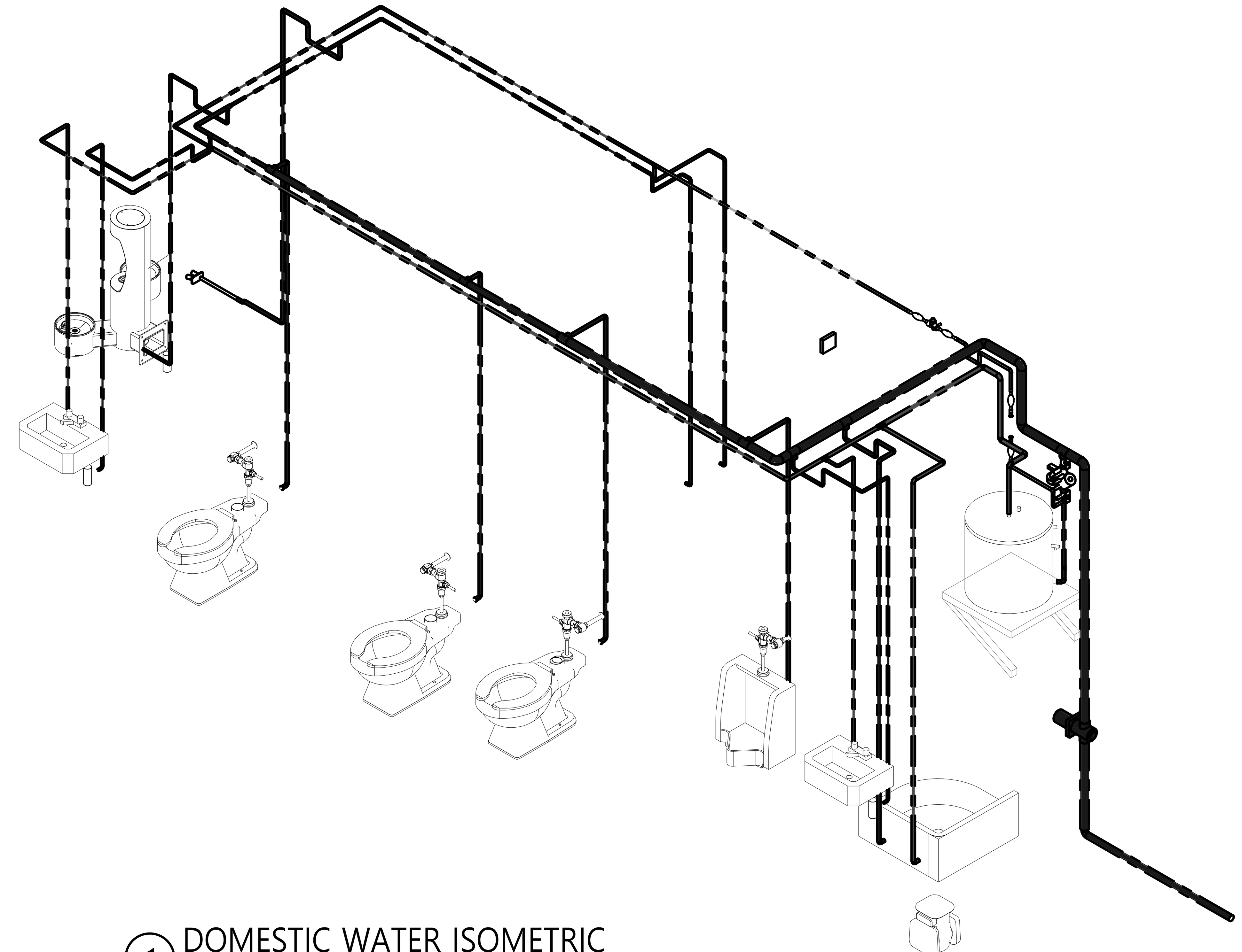
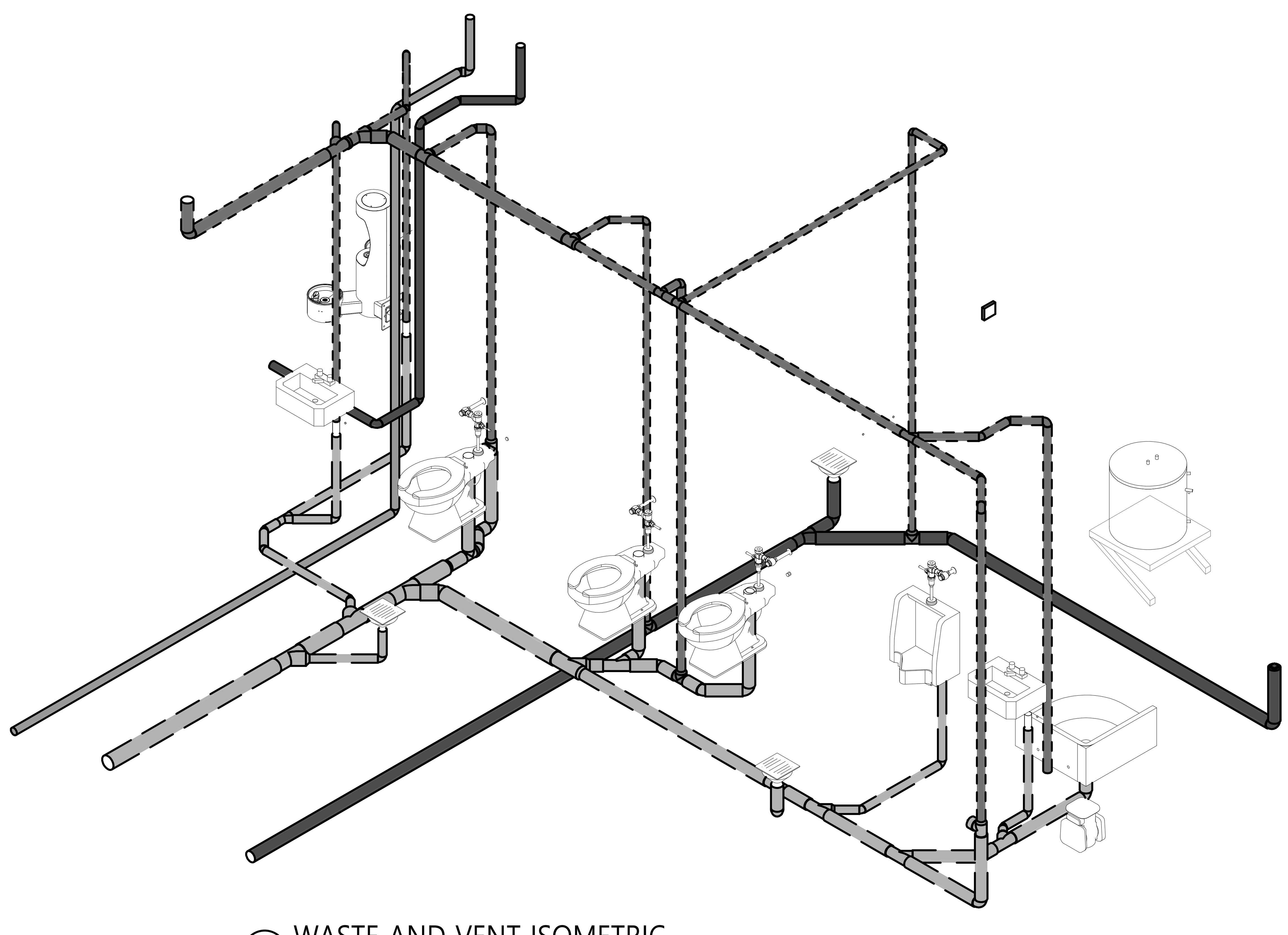
UPPER ROOF PLUMBING PLAN

Sheet Number:
P6.1-R



1 DOMESTIC WATER ISOMETRIC



2 WASTE AND VENT ISOMETRIC

GENERAL NOTES

1. ISOMETRIC ARE FOR GENERAL LAYOUT ROUTING AND NOT FOR PART COUNT OR BIDDING PURPOSE. CONTRACTOR REQUIRED TO PROVIDE ALL PIPING, BENDS, OFFSETS AS NEEDED FOR THE PROJECT.

WPA architecture

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Sheet Name:
PLUMBING ISOMETRICS

Sheet Number:
P8.1-R

ABBREVIATIONS INDEX

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
#	NUMBER	MH	MANHOLE
AC	ALTERNATING CURRENT	MIC	MICROPHONE
A.F.F.	ABOVE FINISH FLOOR	MIN	MINIMUM
AIC	AMPS INTERRUPTING CAPACITY	MTG	MOUNTING
AM	AMPS METER	MTR	MOTOR
AMP	AMPERE	N/A	NOT APPLICABLE
ANN	ANNUNCIATOR	NC	NORMALLY CLOSED
ATS	AUTOMATIC TRANSFER SWITCH	NEC	NATIONAL ELECTRICAL CODE
AUX	AUXILIARY	NEMA	NATIONAL ELECT. MANUFAC. ASSOC.
AWG	AMERICAN WIRE GAUGE	NFPA	NATIONAL FIRE PROTECTION ASSOC.
BC	BARE COPPER	N.I.C.	NOT IN CONTRACT
BFG	BELOW FINISH GRADE	NO	NORMALLY OPENED
C	CONDUIT	NTS	NOT TO SCALE
CAB	CABINET	OS & Y	OUTSIDE SCREW & YOKE
CATB	COMMUNITY ANTENNA TELEVISION	PB	PUSHBUTTON
CATV	CABLE TELEVISION	PF	POWER FACTOR
CKT	CIRCUIT	PFR	PHASE FAILURE RELAY
CLG	CEILING	PNL	PANEL
CNTR	CONTRACTOR	PT	POTENTIAL TRANSFORMER
C.O.	CONDUIT ONLY	PVC	POLYVINYL CHLORIDE CONDUIT
CRT	COMPUTER TERMINAL	(R)	RELOCATE
CT	CURRENT TRANSFORMER	RECEP	RECEPTACLE
CU	COPPER	REQ	REQUIREMENT
C/W	COMPLETE WITH	RLA	RATED LOAD AMPS
DB	DECIBEL	RMP	ROCKY MOUNTAIN POWER
DC	DIRECT CURRENT	RMS	ROOT MEAN SQUARE
DWG	DRAWING	SE	SERVICE ENTRANCE
(E)	EXISTING	SPEC	SPECIFICATIONS
EC	EMPTY CONDUIT	SPKR	SPEAKER
EG	EMERGENCY GENERATOR	SS	SELECTOR SWITCH
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
EX	EXPLOSION PROOF	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SWGR	SWITCHGEAR
FC	FOOT CANDLE	TTB	TELEPHONE TERMINAL BOARD
FT	FOOT	TTC	TELEPHONE TERMINAL CABINET
GFI	GROUND FAULT INTERRUPTER	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
GRC	GALVANIZED RIGID CONDUIT	UG	UNDERGROUND
HP	HORSE POWER	UPS	UNINTERRUPTED POWER SUPPLY
HZ	HERTZ	V	VOLT (KV-KILOVOLT)
IFC	INTERNATIONAL FIRE CODE	VA/R	VOLT-AMPS/REACTIVE
IG	ISOLATED GROUND	VM	VOLT METER
IMC	INTERMEDIATE METALLIC CONDUIT	W	WATTS
IN	INCH	W/	WITH
J-BOX	JUNCTION BOX	WH	WATTHOUR METER
KV	KILOVOLT	W/O	WITHOUT
KVA	KILOVOLT AMPERES	WP	WEATHERPROOF
KVAR	KILOVARS	XFMR	TRANSFORMER
KW	KILOWATT	XFMR SW	TRANSFER SWITCH
LRA	LOCKED ROTOR AMPS	XP	EXPLOSION PROOF
LTG	LIGHTING	1P	SINGLE-PHASE
MNF	MANUFACTURER	2P	TWO-POLE
MAX	MAXIMUM	3P	THREE-POLE
MB	MAIN BUS	4P	FOUR-POLE
MCC	MOTOR CONTROL CENTER	∅	PHASE
MCM	1000 CIRCULAR MILLS		

GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC) OF ALL EQUIPMENT FURNISHED UNDER ALL DIVISIONS, INCLUDING ALL EXISTING EQUIPMENT TO BE RE-USED. REVIEW ALL SHOP DRAWINGS AND EXISTING EQUIPMENT BEFORE BEGINNING ROUGH-IN.
4. SEE SECTION 265100 (16510) OF THE SPECIFICATION FOR REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

20 AMP MINIMUM BRANCH CIRCUIT CONDUCTOR SIZING		
MAXIMUM LENGTH	BRANCH CIRCUIT VOLTAGE	
CONDUCTOR LENGTH (FT)	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 - 115	MIN. #10 AWG	MIN. #12 AWG
115 - 170	MIN. #8 AWG	MIN. #10 AWG
170 - 270	MIN. #6 AWG	MIN. #8 AWG
271 - 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

   A. THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.
   B. PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.
   C. CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.
12. CONTRACTOR SHALL VERIFY FURNITURE LAYOUT PRIOR TO ANY FLOORBOX OR POKE-THRU INSTALLATION. COORDINATE EXACT LOCATION OF FLOOR BOX OR POKE-THRU WITH OWNER AND FURNITURE PROVIDER PRIOR TO ROUGH-IN.

SHEET INDEX

SYMBOL SCHEDULE

NOTES:

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT DENOTES FIXTURES TO BE CONTROLLED.
5. NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT MEASURED TO TOP OF THE BOX FROM FINISH FLOOR.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. SOLID BOX AROUND DEVICE DENOTES IN FLOOR. DASHED LINE DENOTES IN CEILING.
12. COORDINATE WITH DOOR HARDWARE SUPPLIER.
13. FOR WATER COOLER, SEE DIAGRAM R002. FOR ALL OTHER LOCATIONS, MOUNT AT +18" TO CENTER OF BOX FROM FINISH FLOOR, OR AS NOTED.
14. ARROWS SHOWN ON DEVICE DENOTE SENSOR AIMING DIRECTION.
15. CAMERA NUMBERS ARE SHOWN INSIDE CAMERA SYMBOL. CAMERA TYPES ARE INDICATED IN TAG.
16. MOUNT ON TRACK OF OVERHEAD DOOR, 6" FROM TOP OF DOOR, UNLESS OVERHEAD DOOR IS A ROLL UP DOOR, THEN MOUNT PER MANUFACTURER'S INSTRUCTIONS.
17. INSTALL DEVICES PER MANUFACTUER'S INSTRUCTIONS.
18. DASHED LINE INDICATES CLEARANCES. ARROW DENOTES FRONT OF RACK.
19. SPEAKER TO BE MOUNTED IN HORIZONTAL POSITION.
20. MOUNTING HEIGHT IS TO BOTTOM OF DISPLAY.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
GENERAL			
	ONE CIRCUIT, HOME RUN TO PANEL		
	2 CIRCUIT, HOME RUN TO PANEL		
	3 CIRCUIT, HOME RUN TO PANEL		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	CONDUIT UP		
	CONDUIT DOWN		
	CONDUIT STUB LOCATION	CAP CONDUIT	
	CONDUIT/CIRCUIT CONTINUATION		
LIGHTING			
	CEILING LIGHT FIXTURE	CEILING	1.
	WALL LIGHT FIXTURE	AS NOTED	1.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.
	RECESSED WALLWASH DOWNLIGHT FIXTURE	CEILING	1.
	LIGHT FIXTURE	AS NOTED	1.
	EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM
	BOLLARD	CONCRETE BASE	1.
	STEP LIGHT FIXTURE	AS NOTED	1.
	FLOOD OR TRACK FIXTURE	AS NOTED	
	CEILING/WALL MOUNTED EXIT LIGHT	CEILING/ AS NOTED	1. 3. 8.
	EMERGENCY LIGHT FIXTURE	AS NOTED	1.
	COMBO EXIT / EMERGENCY LIGHT FIXTURE	AS NOTED	1.
PP	POWER PACK	CEILING	SEE DIAGRAM, SPEC.
RC X	DIGITAL ROOM CONTROLLER (SUBSCRIPT INDICATES NUMBER OF RELAYS)	CEILING	SEE DIAGRAM, SPEC.
EP	EMERGENCY LIGHTING CONTROL UNIT	ABOVE CEILING	SEE DIAGRAM, SPEC.
POWER			
	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+18" OR AS NOTED	2. 9.
	SIMPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.
T	TAMPER-PROOF RECEPTACLE	+18" OR AS NOTED	2. 9.
	DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.
U	DUPLEX RECEPTACLE WITH USB OUTLET	+18" OR AS NOTED	2. 9.
IG	CONTROLLED DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.
A	DUPLEX RECEPTACLE		9.
G	5mA GFCI CIRCUIT BREAKER PROTECTED RECEPTACLE		13.
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.
IG	ISOLATED GROUND RECEPTACLE	+18" OR AS NOTED	2. 9.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.
	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+18" OR AS NOTED	2. 9.
	4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.
	GROUND FAULT INTERRUPTER 4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.
	4-PLEX RECEPTACLE EMERGENCY POWER (RED)	+18" OR AS NOTED	2. 9.
	CONTROLLED 4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.
	TVSS PROTECTED RECEPTACLE	+18" OR AS NOTED	2. 9.
	SPECIAL PURPOSE OUTLET	+18" OR AS NOTED	2. 10. W/ CAP.
	CORD DROP		SEE DIAGRAM
	CORD REEL		SEE DIAGRAM
	TOMBSTONE RECEPTACLE		
TELECOMMUNICATIONS			
W	WALL PHONE	+60" OR AS NOTED	2.
	DATA OUTLET, ONE CABLE	+18" OR AS NOTED	2. 9. 11.
	DATA OUTLET, TWO CABLES	+18" OR AS NOTED	2. 9. 11.
	DATA OUTLET, THREE CABLES	+18" OR AS NOTED	2. 9. 11.
X	DATA OUTLET, "X" INDICATES QUANTITY	+18" OR AS NOTED	2. 9. 11.
	DATA OUTLET, CEILING	AS NOTED	
WAP	WIRELESS ACCESS POINT, TWO CABLES	CEILING	
	TELEVISION OUTLET	+18" OR AS NOTED	2. 9. 11.

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
J F	JUNCTION BOX ("F" IN FLOOR)	AS NOTED	
	EQUIPMENT PANEL, SEE DRAWINGS	+72"	6.
	CABLE TRAY	AS NOTED	
	GROUND BUS BAR	+18"	6.
A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
EQ 347	EQUIPMENT NUMBER		
842	ARCHITECTURAL ROOM NUMBER		
	DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		
	DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		
S	SINGLE POLE SWITCH	+46"	2. 4.
S^3	THREE-WAY SWITCH	+46"	2. 4.
S^4	FOUR-WAY SWITCH	+46"	2. 4.
S^K	KEY OPERATED SWITCH	+46"	2. 4.
S^P	SWITCH WITH PILOT LIGHT	+46"	2. 4.
S^D	VARIABLE INTENSITY SWITCH	+46"	2. 4.
S^{TM}	TIMER SWITCH	+46"	2. 4.
S	MOMENTARY CONTACT SWITCH	+46"	2. 4.
X	LOW VOLTAGE WALLSTATION (SUBSCRIPT INDICATES CONFIGURATION & CONTROL SEQUENCE)	+46"	2,4. SEE DIAGRAM, SPEC.
	DUAL TECH. CEILING MOUNTED OCCUPANCY SENSOR (PROVIDE WITH ALL PP AND RC CONTROLLERS)	CEILING	SEE DIAGRAM, SPEC.
	DUAL TECH. WALL MOUNTED OCCUPANCY SENSOR (SUBSCIPT D = DIMMING AND DAYLIGHT CONTROL)	+46"	2,4. SEE DIAGRAM, SPEC.
P	PHOTO-ELECTRIC CONTROL (LOCATE ON ROOF, FACE NORTH)	AS NOTED	MOUNT AS PER MFR.
	DIGITAL DAYLIGHT SENSOR	CEILING	SEE DIAGRAM, SPEC.
TC	TIME CLOCK	+5'-0"	2.
R	RECEPTACLE SWITCH PACK	CEILING	
R	RECEPTACLE SWITCH PACK	ABOVE CEILING	
	POWER POLE		
	PLUGMOLD	+46" OR AS NOTED	2. SEE SPEC.
DP	FLAT PANEL DISPLAY WALL BOX TVSS RECEPT., DATA AND OTHER DEVICES, REFER TO DIAGRAMS	AS NOTED	SEE DIAGRAM, SPEC. 26 2726
CP	CEILING PROJECTION SYSTEM CEILING BOX	ABOVE CEILING	SEE DIAGRAM, SPEC.
C	CLOCK OUTLET	+90"	2.
FB	FLOOR BOX - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
PT	POKE THRU - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
	MOTOR OUTLET	TO SUIT EQUIP.	
	PUSHBUTTON	+46"	2.
	NON-FUSED DISCONNECT SWITCH	+60"	5. 6.
F	FUSED DISCONNECT SWITCH	+60"	5. 6.
B	BREAKER DISCONNECT SWITCH	+60"	5. 6.
S^T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+46"	2.
	MAGNETIC STARTER	+60"	6. 7.
	MAGNETIC STARTER / DISCONNECT COMBINATION	+60"	6. 7.
VFD	VARIABLE FREQUENCY DRIVE	+66"	6.
	PANEL BOARD	+72"	6.
	MAIN DISTRIBUTION PANEL		
M	UTILITY METER / CT CABINET	+72"	6.

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
FIRE ALARM			
	BELL	+7'-10"	2.
C	CHIME / STROBE	+7'-10" / CEILING	2.
F	FIRE ALARM MANUAL STATION	+46"	2.
H	FIRE ALARM SIGNAL HORN/STROBE	+7'-10" / CEILING	2.
H CLG	CONCEALED FIRE ALARM HORN/STROBE	CEILING	
H	CONCEALED FIRE ALARM HORN/STROBE WALL	+7'-10"	2.
E	FIRE ALARM SPEAKER/STROBE	+7'-10" / CEILING	2.
E CLG	CONCEALED FIRE ALARM SPEAKER/STROBE	CEILING	
E	CONCEALED FIRE ALARM SPEAKER/STROBE WALL	+7'-10"	2.
S	FIRE ALARM STROBE	+7'-10" / CEILING	2.
S CLG	CONCEALED FIRE ALARM STROBE	CEILING	
S	CONCEALED FIRE ALARM STROBE WALL	+7'-10"	2.
K	FIRE ALARM SPEAKER ONLY	+7'-10"	2.
B	FIRE ALARM STROBE WITH BLUE COLORED LENS (CO VISUAL ALARM)	+7'-10" / CEILING	2.
ANN	FIRE ALARM ANNUNCIATOR PANEL	+4'-10"	2. SEE DIAGRAM
V	ASPIRATING SMOKE DETECTION SYSTEM	CEILING	MOUNT AS PER. MFR.
B	BEAM DETECTOR		MOUNT AS PER. MFR.
SECURITY			
###	IP CAMERA - SEE SCHEDULE	AS NOTED	15. 16.
NVR	NETWORK VIDEO RECORDER		
DC 1	SECURITY SYSTEM DOOR CONTACT	DOOR JAMB	
DC 2	SECURITY SYSTEM GARAGE DOOR CONTACT	+8'-0" OR AS NOTED	17.
DB X	DURESS PUSHBUTTON: T = TRANSMITTER, R = RECEIVER, H = HARDWIRED	AS NOTED	17.
MD	INTRUSION MOTION DETECTOR		17.
GB GB	GLASS BREAK DETECTOR: SOLID = WALL MOUNTED, DASHED = CEILING		17.
PI	INTRUSION SYSTEM POP-IT		
KP	INTRUSION SYSTEM KEYPAD (ARM/DISARM)	+46"	2.
INT	INTERCOM STATION	+46"	2.
ML	MAGNETIC LOCK		
DH	DOOR HOLD OPEN	AS NOTED	17.
S SC	SMOKE DETECTOR	CEILING	
	SMOKE/CARBON MONOXIDE DETECTOR	CEILING	
C	CARBON MONOXIDE DETECTOR	CEILING	
H	HEAT DETECTOR	CEILING	
D	DUCT SMOKE DETECTOR		MTD. IN DUCT
D	FIRE/SMOKE DAMPER		
	DOOR HOLDER	AS NOTED	
FS	FLOW SWITCH		
TS	TAMPER SWITCH		
WF	WATER FLOOD INDICATOR		
	O.S. & Y. VALVE		SEE DIAGRAM
R	FIRE ALARM RELAY OR SECURITY RELAY		
CM	FIRE ALARM CONTROL MODULE		
MM	FIRE ALARM MONITOR MODULE		
TWZ	TWO-WAY COMMUNICATION SYSTEM ANNUNCIATOR PANEL	+46"	2.
TW	TWO-WAY COMMUNICATION SYSTEM CALL STATION	+46"	2.
ES	ELECTRIC DOOR STRIKE	DOOR JAMB	12.
DP	DOOR POSITION INTRUSION SWITCH	DOOR JAMB	12.
EL	ELECTRIC DOOR LOCK		12.
RX	ACCESS CONTROL SYSTEM, REQUEST TO EXIT		
EC	ELECTRIC CRASH BAR	DOOR HARDWARE	12.
CR	ACCESS CONTROL CARD READER	+46"	2.
BR	ACCESS CONTROL BIOMETRIC READER	+46"	2.
KS	KEY OVERRIDE SWITCH	+46"	2.
ICR	INTEGRATED CARD READER AND LOCK	+46"	2.
KCR	KEYPAD CARD READER COMBO	+46"	2.
X	MOMENTARY PUSH BUTTON. DR = DOOR RELEASE, LD = LOCKDOWN, PTE = PUSH TO EXIT	AS NOTED	9.

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
AUDIOVISUAL			
HD	HDMI INPUT, WALL PLATE	+18" OR AS NOTED	2.
HV	HDMI AND VGA INPUT, WALL PLATE	+18" OR AS NOTED	2.
TxH	HDBaseT, HDMI INPUT TRANSMITTER, WALL PLATE	+18" OR AS NOTED	2.
TxD	HDBaseT, HDMI AND VGA TRANSMITTER, WALL PLATE	+18" OR AS NOTED	2.
TxM	HDBaseT, HDMI, DISPLAY PORT AND/OR VGA TRANSMITTER BOX, SURFACE MOUNTED	UNDER TABLE	9.
TxT	HDBaseT CATEGORY INPUT, WALL PLATE	+18" OR AS NOTED	2.
	LOUDSPEAKER, CEILING RECESSED OR PENDANT	CEILING	
SB#	SOUND BAR, REFER TO SPECIFICATIONS FOR TYPE	UNDER DISPLAY	19.
X##	DISPLAY, REFER TO SPECS FOR DISPLAY TYPE AND SIZE	AS NOTED	20.
SC#	PROJECTION SCREEN REFER TO SPECIFICATIONS FOR SCREEN TYPE AND SIZE	WALL OR CEILING	2.
P#	PROJECTOR	WALL OR CEILING	2.

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SYMBOLS AND NOTES

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FLOOR BOX SCHEDULE

TYPE	DESCRIPTION	MFR.	CATALOG NUMBER

SECURITY RESPONSIBILITY MATRIX

SCOPE OF WORK	FURNISHED	INSTALLED
ROUGH-IN - CONDUIT W/PULL STRING, JUNCTION BOXES, FLOOR BOXES, FLAT PANEL DISPLAY BACK BOXES, ETC.	EC	EC
PATHWAY EQUIPMENT - CABLE TRAY, JHOOKS, SLEEVES, KNOCKOUTS, ETC.	EC	EC
STRUCTURAL BACKING AND SUPPORT FOR WALL MOUNTED EQUIPMENT	GC	GC
EQUIPMENT RACKS WITHIN THE ER(MDF)/TR(IDF) FOR SYSTEM COMPONENTS	TC	TC
SUPPORT CABLES, PRE-CONSTRUCTION KITS, TILE BRIDGES AND/OR BACK BOXES FOR CEILING MOUNTED SECURITY, INTRUSION AND ACCESS CONTROL DEVICES	EC	EC
AC POWER SYSTEMS (120/240 VOLTS)	EC	EC
ROUGH OR FINISHED TRIM, CASEWORK, MILLWORK, EQUIPMENT RACK PEDESTALS, STRUCTURAL WORK FOR SPECIAL CONSTRUCTION	GC	GC
SYSTEM CABLING - SECURITY CAMERA CATEGORY CABLING FROM DEVICE TO PATCH PANEL **	TC	TC
SYSTEM CABLING - ACCESS CONTROL CATEGORY CABLING, FROM DEVICE TO PATCH PANEL **	N/A	N/A
SYSTEM CABLING - SECURITY CAMERA NON-CATEGORY CABLING	VC	VC
SYSTEM CABLING - ACCESS CONTROL NON-CATEGORY CABLING	N/A	N/A
CAMERAS	VC	VC
CAMERA MOUNTS	VC	VC
CAMERA ETHERNET EXTENDERS AND POE INJECTORS	VC	VC
VIDEO MANAGEMENT SOFTWARE (VMS) (SERVER + CLIENT)	VC	VC
VIDEO MANAGEMENT SERVER	VC	VC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR SECURITY, ACCESS CONTROL AND/OR INTRUSION SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC
LOCK & ACCESS CONTROL POWER SUPPLIES	N/A	N/A
DOOR CONTROLLER POWER SUPPLIES	N/A	N/A
NETWORK SWITCHES WITHIN THE ER(MDF)/TR(IDF) FOR VIDEO SURVEILLANCE, ACCESS CONTROL AND/OR INTRUSION SYSTEMS	OWN	OWN
ACCESS CONTROL SERVER	N/A	N/A
ACCESS CONTROL SOFTWARE	N/A	N/A
DOOR LOCKS (ELECTRIC)	DC	DC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR AV AUDIO, CONTROL AND/OR VIDEO SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC

NOTES:

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

ADDITIONAL NOTES MAY BE PRESENT WITHIN THE CONTRACT DOCUMENTS INDICATING SPECIFIC EQUIPMENT PROVIDED BY OTHERS OR REQUIRE INSTALLATION BY SPECIFIC DIVISIONS.

INSTALLER PROVIDING THE SYSTEM CABLING SHALL PROVIDE THE CABLING, TERMINATION AND CERTIFICATION FOR A COMPLETE SYSTEM INSTALLATION, UNLESS OTHERWISE SPECIFICALLY NOTED WITHIN THE CONTRACT DOCUMENTS.

INSTALLER TO VERIFY WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM. IT IS THE CONTRACTORS RESPOSIBILITY TO PROVIDE A COMPLETE AND WORKING SYSTEM.

ACRONYM LEGEND

ACRONYM	CONTRACTOR	ACRONYM	CONTRACTOR
AC	ACCESS CONTROL CONTRACTOR	IC	INTRUSION DETECTION CONTRACTOR
AV	AUDIOVISUAL CONTRACTOR	TC	HORIZONTAL CABLING CONTRACTOR
DC	DOOR HARDWARE CONTRACTOR	NIC	NOT IN CONTRACT
EC	ELECTRICAL CONTRACTOR	OWN	OWNER
FR	FURNITURE CONTRACTOR	SC	VIDEO SURVEILLANCE CONTRACTOR
GC	GENERAL CONTRACTOR	SPEC	SEE SPECIFICATIONS

NOTES

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

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INSTALLER PROVIDING THE SYSTEM CABLING SHALL PROVIDE THE CABLING, TERMINATION AND CERTIFICATION FOR A COMPLETE SYSTEM INSTALLATION, UNLESS OTHERWISE SPECIFICALY NOTED WITHIN THE CONTRACT DOCUMENTS.

INSTALLER TO VERIFY WITH WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM.

* REFER TO AUDIOVISUAL DRAWINGS FOR ADDITIONAL REQUIREMENTS

** REFER TO SECURITY/ACCESS CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS

EQUIPMENT SCHEDULE

CONNECTION TYPE NOTES:

1. NON-FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER WITH THERMAL OVERLOAD
5. MAGNETIC STARTER
6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION
7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/BREAKER COMBINATION
9. VARIABLE FREQUENCY DRIVE
10. REDUCED VOLTAGE STARTER
11. DIRECT CONNECTION
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. TWO-SPEED STARTER. COORDINATE WITH MOTOR TYPE
14. SOLID STATE SOFT-STARTER

RESPONSIBILITY LEGEND:

A. FURNISHED, INSTALLED AND CONNECTED UNDER DIVISION 26(16)
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION. REQUIRED CONNECTION UNDER DIVISION 26(16)
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26(16)
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION

CB = CIRCUIT BREAKER
CKW = CHILLER KILOWATTS

NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN THE PHASE CONDUCTOR
NOTE 2: OVERCURRENT PROTECTION DEVICE (OCPD) SHOWN IS LOCATED AT POWER PANEL. ALL FUSING TO BE SIZED IN ACCORDANCE WITH FUSE MFR RECOMMENDATION FOR MOTOR NAME PLATE RATING.
NOTE 3: ALL EQUIPMENT TO BE RATED FOR THE ENVIRONMENT FOR WHICH IT IS INSTALLED.

UNIT	#	DESCRIPTION	ELECTRICAL EQUIPMENT INFORMATION							CONDUIT SIZE	WIRE				OCPD		STARTER/ DISC/ VFD	OTHER (SEE NOTES)	REMARKS
			LOAD								SETS	QTY	SIZE	EQ. GROUND	TYPE	AMPS			
			HP	FLA	MCA	VA	VOLTAGE	PHASE	FULL LOAD AMPS										
			0.00	0 A	0 A	0 VA	120 V	1	0 A	0"	0	2	Error	Error	CB	0 A			
RTU	1	ROOFTOP UNIT	0.00	0 A	24.1 A	0 VA	208 V	3	19 A	3/4"	1	3	10	10	CB	30 A	2	A	

PROJECT MANAGER: XX

LIGHT FIXTURE SCHEDULE

LIGHT FIXTURE ABBREVIATION SCHEDULE

A.F.F.	ABOVE FINISH FLOOR	SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
WALL@CLG	WALL MOUNT AT CORNER OF WALL AND CEILING	CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT	SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT

LIGHT FIXTURE GENERAL NOTES

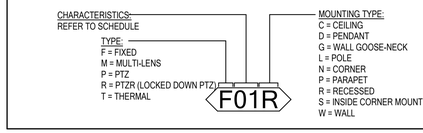
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES AND, CONFIRM CEILING TYPES WITH LIGHT FIXTURE TRIMS. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPENCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, FUSING, LED DRIVERS, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
4. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.
5. REFER TO LIGHTING PLANS FOR ALL LINEAR FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF LINEAR FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH.
6. REFER TO LIGHTING PLANS FOR ALL UNDERCABINET FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF THE UNDERCABINET FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH OR TO FIT WITHIN THE MILLWORK. COORDINATE FIXTURE LAYOUT WITH MILLWORK SHOP DRAWINGS PRIOR TO LIGHTING SUBMITTALS.
7. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING DESIGNER.
8. PRIOR APPROVALS ARE REQUIRED BEFORE BIDDING THE PROJECT AND SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) EIGHT WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
9. REFER TO SPECIFICATIONS 20 0500, 26 5100 & 26 5600 (16001, 16510 & 16551).
10. VALUE ENGINEERING CONDUCTED WITHOUT THE DESIGN TEAM IE; ARCHITECT, ENGINEER & LIGHTING CONSULTANT/DESIGNER WILL NOT BE ALLOWED, REVIEWED OR APPROVED.

TYPE	DESCRIPTION	MFR.	CATALOG NUMBER	VOLTS	TOTAL WATTS	LAMP
OD6	6IN DIA. LED CYLINDER; CEILING SURFACE MOUNT, WET LOCATION; WIDE DISTRIBUTION; 0-10V DIM TO 1%; SCBA	CONTECH	CYL63-40K-MVD6-C-X-WCLR-SCBA	120 V	20 VA	LAMP: LED , LUMENS: 2000 CCT: 4000° K, CRI: 82
S1	LINEAR 4ft LED STRIP LIGHT W/CURVED FROSTED LENS; SURFACE OR CHANIN MOUNTED; 0-10V DIMMING TO 10%	METALUX	4SNLED-LD5-65HL-LW-UNV-L840-CD1-U	120 V	62 VA	LAMP: LED , LUMENS: 5612 CCT: 4000° K, CRI: 80
S1E	LINEAR 4ft LED STRIP LIGHT W/CURVED FROSTED LENS; SURFACE OR CHANIN MOUNTED; 0-10V DIMMING TO 10%; 14W EM BATTERY W/INTEGRAL TEST SWITCH	METALUX	4SNLED-LD5-65HL-LW-UNV-EL14W-L840-CD1-U	120 V	62 VA	"LAMP: LED , LUMENS: 5612 CCT: 4000° K, CRI: 80"
WR2	2FT VANDAL RESISTAND WALL MOUNTED LED FIXTURE; CURVED FROSTED HIGH IMPACT POLY LENS	VISCOR	VRSE-3556-24-LED-8-40K-025L-UNV	120 V	27 VA	LAMP: LED , LUMENS: 2500 CCT: 4000° K, CRI: 82
WR4	4FT VANDAL RESISTAND WALL MOUNTED LED FIXTURE; CURVED FROSTED HIGH IMPACT POLY LENS;	VISCOR	VRSE-3556-48-LED-8-40K-060L	120 V	65 VA	LAMP: LED , LUMENS:6000 CCT: 4000° K, CRI: 82
WR4E	4FT VANDAL RESISTAND WALL MOUNTED LED FIXTURE; CURVED FROSTED HIGH IMPACT POLY LENS; 1000 LMN EM BATTERY	VISCOR	VRSE-3556-48-LED-8-40K-060L-B39	120 V	80 VA	LAMP: LED , LUMENS: 6000 CCT: 4000° K, CRI: 82
X1	SINGLE SIDED EDGELIT EXIT SIGN; GREEN LETTERS; UNIVERSAL MOUNTING INCLUDED; FIELD APPLIED CHEVRONS; BRUSHED ALUMINUM FINISH	SURE-LITES	EUX6-G-BA	120 V	5 VA	LAMP: LED

CAMERA SURVEILLANCE TYPE SCHEDULE

CAMERA TYPE	DESCRIPTION	MANFR.	CAT NO.	CAMERA INFORMATION					NOTES
				RESOLUTION	AUDIO RECORDING	MAX FRAME RATE	INFRARED	WDR	
M03N	INDOOR OUTDOOR (4 X QUAD HD) MULTIDIRECTIONAL DOME WITH ONE IP ADDRESS AND ONE NETWORK CABLE, 3-6MM LENS REMOTE ZOOM AND FOCUS	AXIS OR PANASONIC	P3717-PLE OR WV-S8530N	8MP	Yes	30 FPS	Yes	Yes	INCLUDE: AXIS T94N01D OR PWM850 PENDANT KIT T91A64 OR PACA4GR CORNER BRACKET

CAMERA SURVEILLANCE TAG LEGEND



RELAY PANEL SCHEDULE 'RP1'

MOUNTING: VOLTAGE: CONTROL CIRCUIT: AIC RATING:

RELAY	POWER	EMERGENCY	SPACE	CONTROL	DIMMING	PROGRAMMING

CONTROL LEGEND

PC	EXTERIOR PHOTOCELL
OC	OCCUPANCY/VACANCY SENSOR
DS	INTERIOR DAYLIGHT SENSOR
MS	EXTERIOR MOTION SENSOR
TC	ANALOG ASTRONOMICAL TIMECLOCK
TOD	TIME OF DAY - SOFTWARE BASED
LWS	LOCAL WALLSTATION

DIMMING LEGEND

N	NONE
0-10	0-10 VOLT DIMMING
DMX	DIGITAL MULTIPLEX (DMX) DIMMING
3WD	3-WIRE DIMMING
ELV	ELECTRONIC LOW VOLTAGE
MLV	MAGNETIC LOW VOLTAGE
DA	DALI DIMMING

PROGRAMMING

A	NIGHT LIGHT; ALWAYS ON.
B	MASTER CLOCK SCHEDULE (PROVIDED BY OWNER); PROVIDE 0-10V DIMMING.
C	EGRESS LIGHTING; MASTER CLOCK SCHEDULE (PROVIDED BY OWNER); 0-10V DIMMING.
D	MASTER CLOCK SCHEDULE (PROVIDED BY OWNER).
E	LOCAL WALLSTATION TO ACT AS OVERRIDE FOR AFTER HOURS CONTROL.

GENERAL NOTES

1.	PROGRAM SYSTEM TO MEET THE REQUIREMENTS OF IECC 2015 OR CURRENT ENERGY CODE.
2.	CONFIRM SWITCHING AND PROGRAMMING SCHEME WITH OWNER PRIOR TO PROGRAMMING.
3.	PROGRAM SYSTEM TO INCORPORATE AUTO DAYLIGHT SAVINGS ADJUSTMENTS, ASTRONOMICAL CLOCK WITH OFFSETS, HOLIDAY DATES, AND NETWORK OVERRIDE.
4.	REFER TO WALLSTATION DIAGRAMS FOR FACTORY ENGRAVED LABELING FOR ALL INDIVIDUAL PUSH-BUTTONS. DEVICE AND COVERPLATE COLORS SELECTED BY ARCHITECT.
5.	SUBMIT ALL WALLSTATION LAYOUTS, ENGRAVING AND CONTROL SEQUENCES DURING THE SHOP DRAWINGS REVIEW PROCESS.
6.	PROVIDE RELAY BARRIER FOR VOLTAGE AND POWER SOURCE SEPARATION (EMERGENCY AND NORMAL CIRCUITS, VOLTAGE DIFFERENCES).
7.	PROGRAM NORMAL AND EMERGENCY RELAYS IN RELATED CORRIDORS TO OPERATE TOGETHER.
8.	ALL RELAYS REQUIRING DIMMING AND/OR DAYLIGHT HARVESTING SHALL UTILIZE 0-10V DIMMING. PROVIDE 0-10V DIMMING WIRING AND CONTROLS AS REQUIRED.
9.	PROVIDE A MINIUMUM OF (5) SPARE RELAYS.
10.	SYSTEM MUST INTERFACE WITH NEW OR EXISTING ENERGY MANAGEMENT SYSTEM/BMS. PROVIDE SYSTEM CONSISTING OF MONITOR(S), COMMUNICATIONS EQUIPMENT, A CONTROLLER(S), TIMER(S), OR OTHER DEVICE(S) THAT MONITOR AND/OR CONTROL AN ELECTRICAL LOAD OR POWER PRODUCTION OR STORAGE SOURCE. COORDINATE EXACT TIE-IN POINTS AND COMMUNICATION PROTOCOL/MODULES REQUIRED. PROGRAM ACCORDINGLY AND PER OWNERS REQUIREMENTS.

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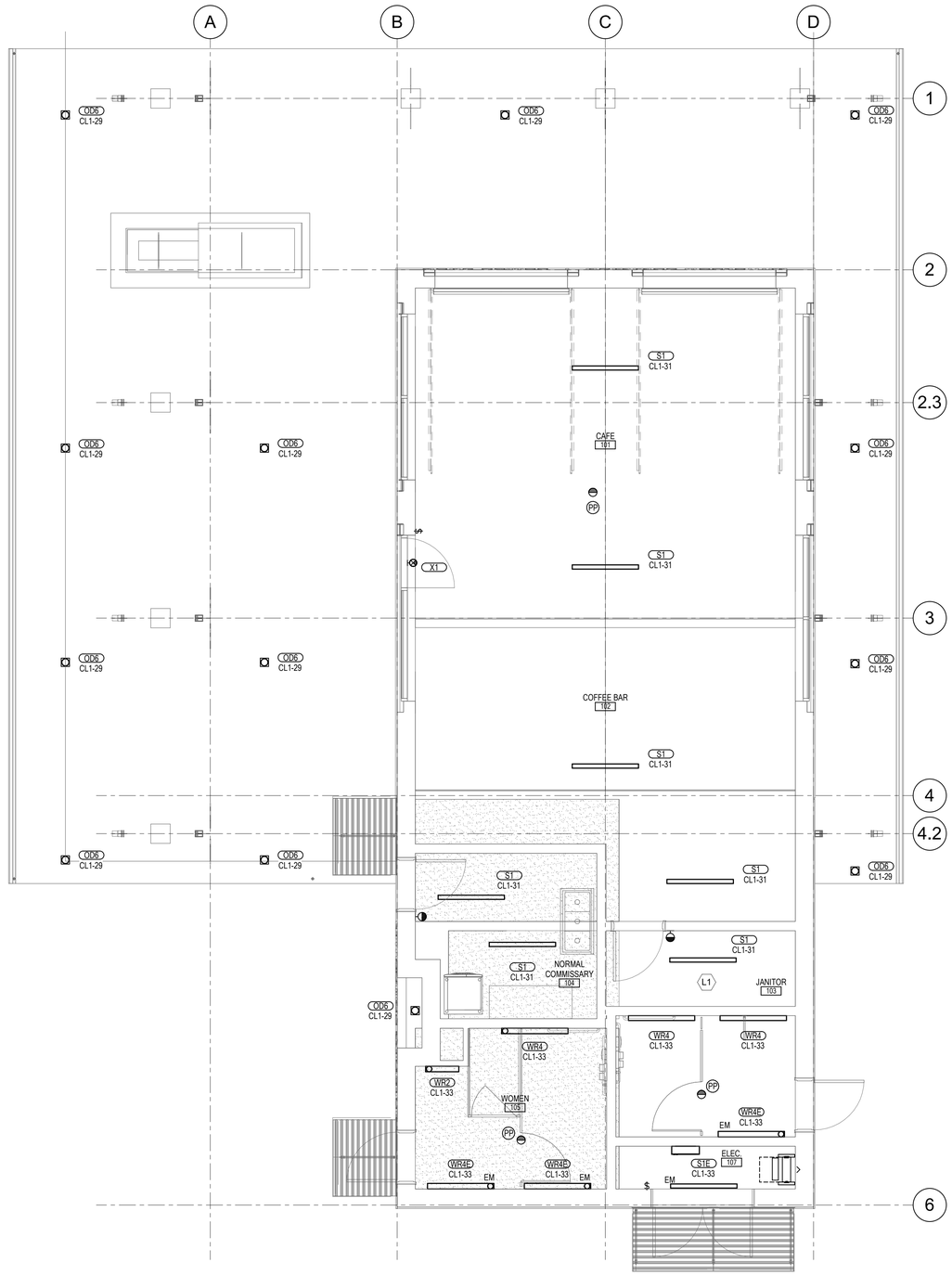

MAIN LEVEL LIGHTING PLAN

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

LIGHTING SENSOR GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE SENSOR MANUFACTURER FOR PROPER PLACEMENT AND ADJUSTMENT OF OCCUPANCY SENSORS.
2. EACH ZONE SHALL HAVE COVERAGE BY OCCUPANCY SENSOR SUCH THAT NO BLIND SPOT EXIST.
3. UPON COMPLETION OF THE INSTALLATION, THE SYSTEM SHALL BE COMPLETELY COMMISSIONED BY THE MANUFACTURER'S FACTORY AUTHORIZED TECHNICIAN WHO WILL VERIFY ALL ADJUSTMENTS AND SENSOR PLACEMENT TO ENSURE A TROUBLE FREE INSTALLATION.
4. THE LOCATION AND QUANTITIES OF SENSORS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE ONLY THE ROOMS WHICH ARE TO BE PROVIDED WITH SENSORS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL SENSORS IF REQUIRED TO PROPERLY COVER THE RESPECTIVE ROOM.
5. PROVIDE DAYLIGHT ZONE CONTROL REQUIREMENTS PER IECC-2015 C405.2.2.3. LOCATE DAYLIGHT SENSOR(S) PER MANUFACTURER'S RECOMMENDATION AND WHERE REQUIRED WITHIN THE ROOM FOR PROPER COVERAGE.
6. PROVIDE OCCUPANCY SENSOR WITH AN ADDITIONAL SET OF DRY CONTACTS FOR HVAC CONTROL AT EACH VAV BOX LOCATION. COORDINATE WITH MECHANICAL DRAWINGS AND THE MECHANICAL CONTRACTOR FOR EXACT LOCATIONS.

LIGHTING GENERAL SHEET NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ALL FIXTURE LOCATIONS WITHIN A CEILING OR CEILING GRID. FOR AREAS WITHOUT CEILINGS, FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND STRUCTURAL ELEMENTS. CONTRACTOR TO PAINT EXPOSED RACEWAY TO MATCH ADJACENT SURFACES
2. FIELD VERIFY EXACT FIXTURE LENGTHS FOR CONTINUOUS ILLUMINATION FOR COVES AND LINEAR RUNS. PROVIDE CONTINUOUS ILLUMINATION WITH NO MORE THAN A 1" GAP BETWEEN THE END OF THE EDGE OF THE WALL / CEILING AND THE FIXTURE.
3. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR PLACEMENT OF FIXTURES WITHIN MECHANICAL ROOMS.
5. ALL ROOM CONTROLLERS AND/OR POWER PACKS SHALL BE INSTALLED IN THE CEILING SPACE DIRECTLY ABOVE THE ENTRY DOOR TO THE SPACE IT IS CONTROLLING.
6. ALL UNDERCABINET LIGHTS MUST BE COORDINATED WITH MILLWORK FOR EXACT LENGTHS. ALL UNDERCABINET LIGHTS WILL BE MOUNTED TO THE FACE OF THE CABINET.
7. PROVIDE 0-10V DIMMING CONDUCTORS FOR ALL AREAS AND/OR ROOMS WHERE 0-10V DIMMING IS INDICATED BY THE RELAY PANEL SCHEDULE AND/OR WALL STATION CONTROL SEQUENCE.
8. SUBSCRIPT ADJACENT TO LIGHT FIXTURE INDICATES CONTROLS. PROVIDE LIGHTING CONTROLS WITH THE REQUIRED NUMBER OF RELAY/DIMMERS. PROVIDE ADDITIONAL RELAY/DIMMERS FOR DAYLIGHT ZONES AS REQUIRED.

SHEET KEYNOTES

L1 COORDINATE MOUTNING OF FIXTURE WITH MECHANICAL EQUIPMENT, DUCTING, PIPING, ETC. TO AVOID OBSTRUCTION OF ILLUMINATION. SUSPEND ON CHAIN OR SURFACE MOUNT ON UNI-STRUT. LAYOUT IS SCHEMATIC AND CAN BE CHANGED TO SUIT CIRCUMSTANCES.

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E2.1-R

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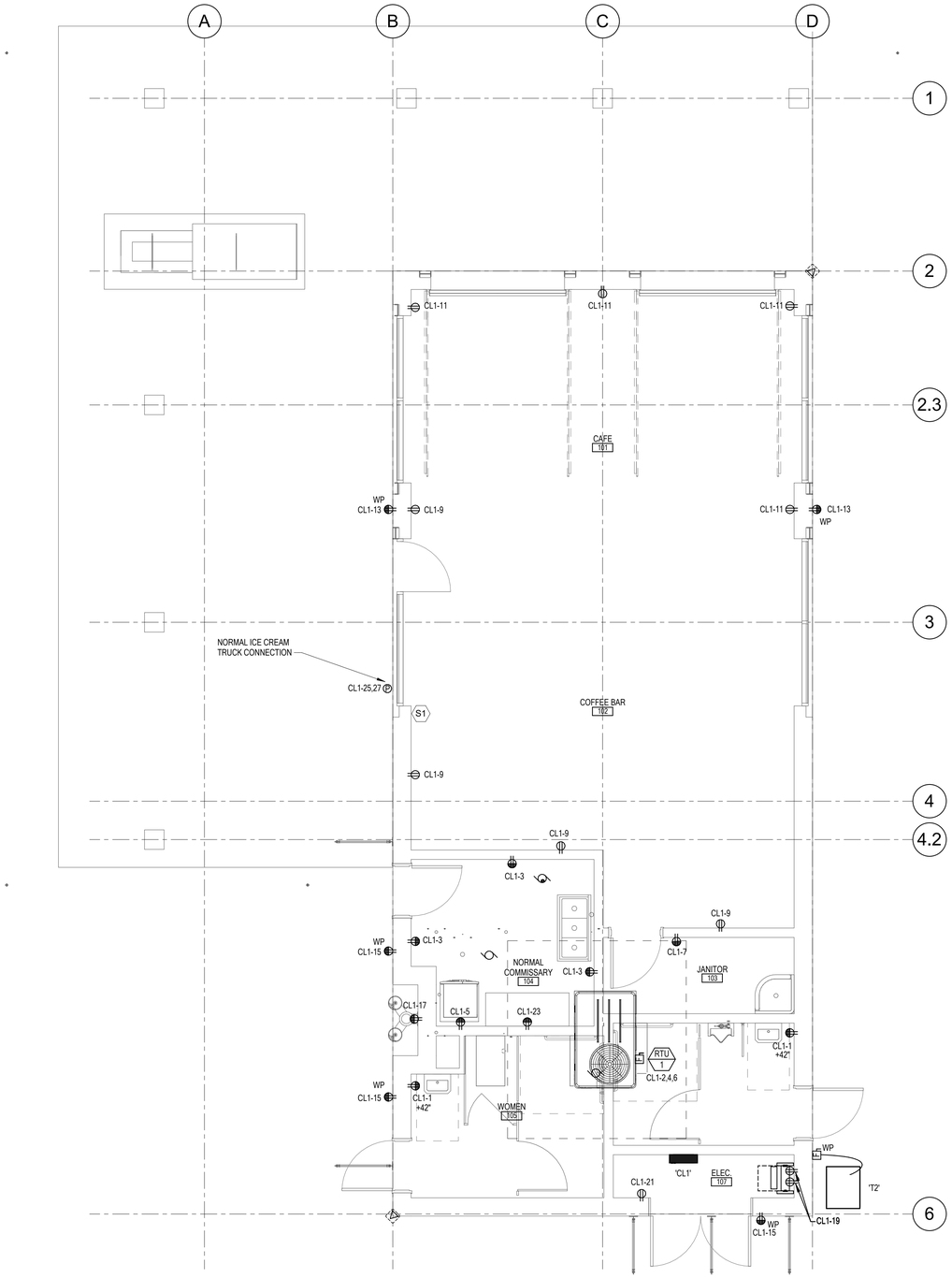

MAIN LEVEL POWER PLAN
SCALE = 1/4" = 1'-0"

POWER GENERAL SHEET NOTES

1. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL MECHANICAL UNITS WITH MECHANICAL CONTRACTOR.
2. CIRCUITS TO ALL MECHANICAL EQUIPMENT SHALL BE DEDICATED UNLESS NOTED OTHERWISE.
3. ALL 277V LIGHTING CIRCUITS TERMINATING AT LIGHTING CONTROL PANELS SHALL HAVE A MINIMUM LENGTH OF 20 FEET BETWEEN LIGHTING CONTROL PANEL AND BRANCH LIGHTING PANEL.
4. FOR VAV POWER, PROVIDE A DEDICATED 120V/20A CIRCUIT FROM A PANEL LOCATED IN THE ELECTRICAL ROOM OF THE ASSOCIATED QUADRANT. COORDINATE EXACT LOCATION OF ALL VAV BOXES WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
5. PROVIDE 120V CIRCUIT FROM THE NEAREST PANELBOARD FOR FIRE/SMOKE DAMPER RELAYS. PROVIDE FIRE ALARM MODULES AND RELAYS AS NECESSARY FOR ALL FIRE/SMOKE DAMPERS SHOWN ON DIVISION 23 DRAWINGS. ALL FIRE/SMOKE DAMPERS SHALL HAVE A MANUAL OVERRIDE SWITCH. PROVIDE DUCT DETECTOR WITHIN 5 FEET OF EACH FIRE/SMOKE DAMPER. REFER TO DIAGRAM XXX ON SHEET XXX.

SHEET KEYNOTES

S1 FOOD TRUCK POWER PEDESTAL. COORDINATE EXACT REQUIREMENTS AND LOCATION PRIOR TO ROUGH-IN.

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REV	DATE	DESCRIPTION

DESIGNED BY: Designer
DRAWN: Author
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Sheet Name:
MAIN LEVEL POWER

Sheet Number:
E3.1-R

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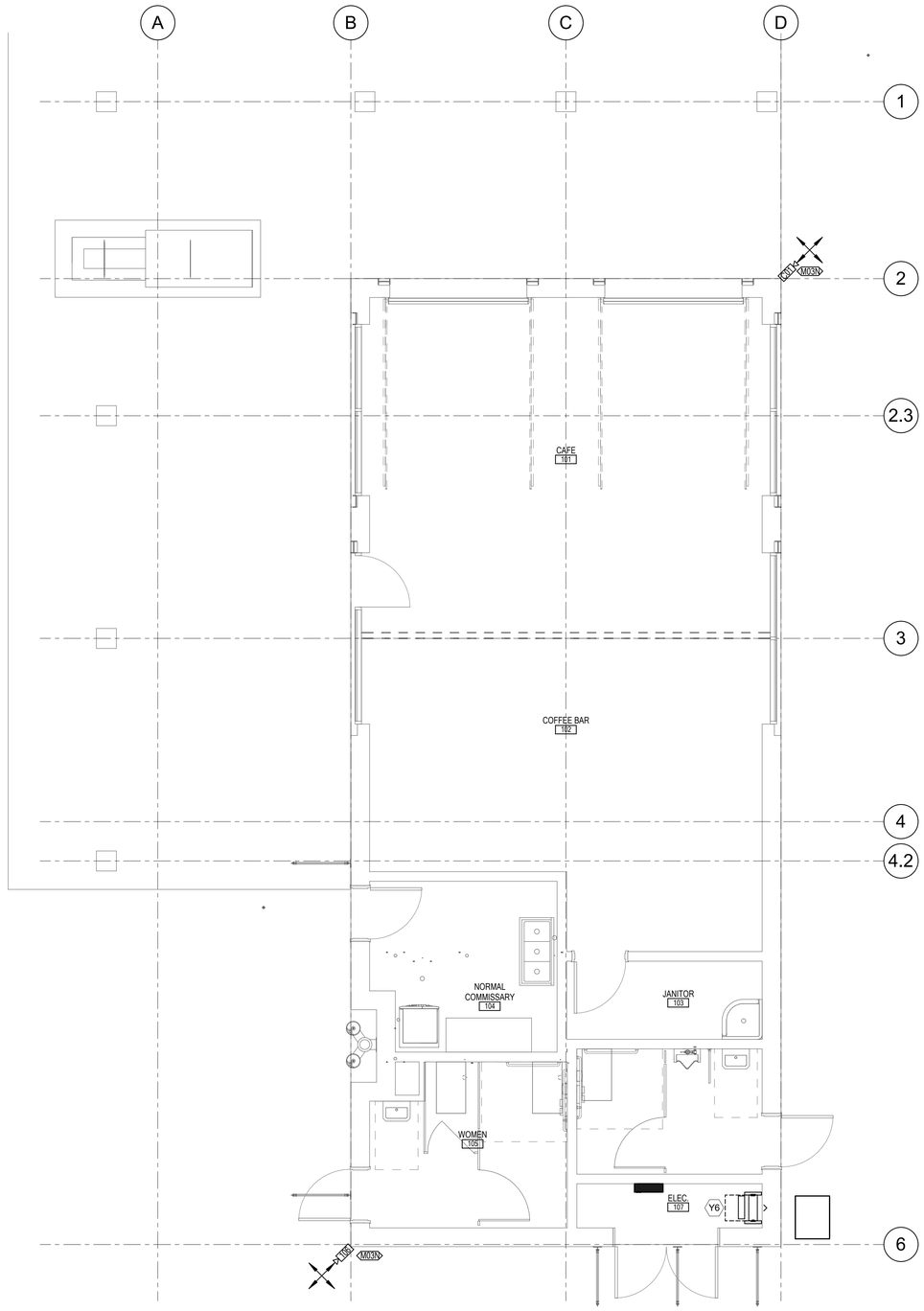

MAIN LEVEL SYSTEMS PLAN
SCALE = 1/4" = 1'-0"

FIRE ALARM GENERAL NOTES

1. CONNECT ELEVATOR LOBBY SMOKE DETECTORS TO ELEVATOR CONTROLLER FOR ELEVATOR RECALL. PROVIDE SHUNT TRIP DEVICE AT DISCONNECT FOR ALL ELEVATOR CONTROLLERS. PROVIDE A HEAT DETECTOR AT THE TOP OF ELEVATOR SHAFT AND ADJACENT TO EACH SPRINKLER HEAD IN ALL ELEVATOR MACHINE ROOMS. ACTIVATION OF HEAT DETECTOR TO INITIATE SHUNT-TRIP.
2. PROVIDE #14 AWG MINIMUM WIRING FOR ALL SIGNAL AND INITIATION DEVICES.
3. ALL EXPOSED CONDUIT SHALL BE ROUTED PERPENDICULAR AND PARALLEL TO COLUMNS AND BEAMS. ALL EXPOSED CONDUIT ROUTING SHALL BE COORDINATED WITH OWNER'S REP PRICER TO INSTALLATION. NO ADDITIONAL COST TO THE OWNER WILL BE ALLOWED FOR RELOCATING CONDUIT DUE TO LACK OF COORDINATION WITH THE OWNER'S REP.
4. ALL BACK BOXES SHALL BE FLUSH MOUNTED UNLESS OTHERWISE NOTED. CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND BACK BOXES IN POURED CONCRETE, PRE-CASTCONCRETE, MASONRY AND CYP WALLS.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT QUANTITY AND LOCATIONS OF ALL FIRE SPRINKLER SYSTEM TAMPER AND FLOW SWITCHES WITH CONSTRUCTION MANAGER. CONNECT ALL TAMPER AND FLOW SWITCHES TO FIRE ALARM SYSTEM.
6. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND QUANTITY OF ALL DUCT TYPE SMOKE DETECTORS WITH MECHANICAL CONTRACTOR. HARD WIRE TO RELAY STARTER.
7. PROVIDE SMOKE AND HEAT DETECTORS WITHIN ELEVATOR MACHINE ROOMS AND ELEVATOR HOST PITS.
8. PROVIDE CONNECTION OF FA SYSTEMS TO ALL MAGNETIC DOOR HOLD-OPEN DEVICES TO AUTOMATICALLY CLOSE DOORS DURING ALARM CONDITIONS.
9. DEVICES INDICATED ON FIRE ALARM ONE-LINE ARE FOR REFERENCE ONLY. REFER TO PLAN DRAWINGS AND SPECIFICATIONS FOR QUANTITIES. REFER TO ARCHITECTURAL DOOR SCHEDULE FOR MAGNETIC DOOR HOLDER AND BLOW OPEN DOOR REQUIREMENTS.
10. ALL VISUAL DEVICES SHALL BE SYNCHRONIZED WITHIN THE BUILDING REGARDLESS OF PROJECT SCOPE BOUNDARIES.
11. PROVIDE FIRE ALARM RELAY MODULES FOR ALL DOORS WITH ACCESS CONTROL DEVICES.
12. PROVIDE (2) DUCT TYPE SMOKE DETECTOR FOR EACH FAN COIL UNIT, AHU, SUPPLY FAN AND HEAT PUMP OF 2000 CFM OR GREATER.
13. FIRE ALARM DEVICES SHOWN ARE FOR REFERENCE ONLY AND BASED UPON A PERFORMANCE SPECIFICATION. ALL NEW EQUIPMENT/DEVICE QUANTITIES, LOCATION, AND ALL NATIONAL & LOCAL CODE COMPLIANCE TO BE PROVIDED AND STAMPED BY A LICENSED FIRE ALARM ENGINEER AND INCLUDED IN THE FIRE ALARM CONTRACTORS BID. IN NO WAY ARE THE DEVICES SHOWN ON THESE DRAWINGS TO BE IMPLEMENTED AS FINAL DESIGN DOCUMENTS.
14. PROVIDE 120V CIRCUIT FROM THE NEAREST EQUIPMENT BRANCH PANELBOARD FOR FIRE/SMOKE DAMPER RELAYS. PROVIDE FIRE ALARM MODULES AND RELAYS ASNECESSARY FOR ALL FIRE/SMOKE DAMPERS SHOWN ON DIVISION 23 DRAWINGS. ALL FIRE/SMOKE DAMPERS SHALL HAVE A MANUAL OVERRIDE SWITCH. PROVIDE DUCT DETECTOR WITHIN 5'-0" OF EACH FIRE/SMOKE DAMPER. REFER TO DIAGRAM D012 ON SHEET E9301.

SHEET KEYNOTES

Y6 OWNER PROVIDED SWITCH LOCATED IN ELECT. RM 107.

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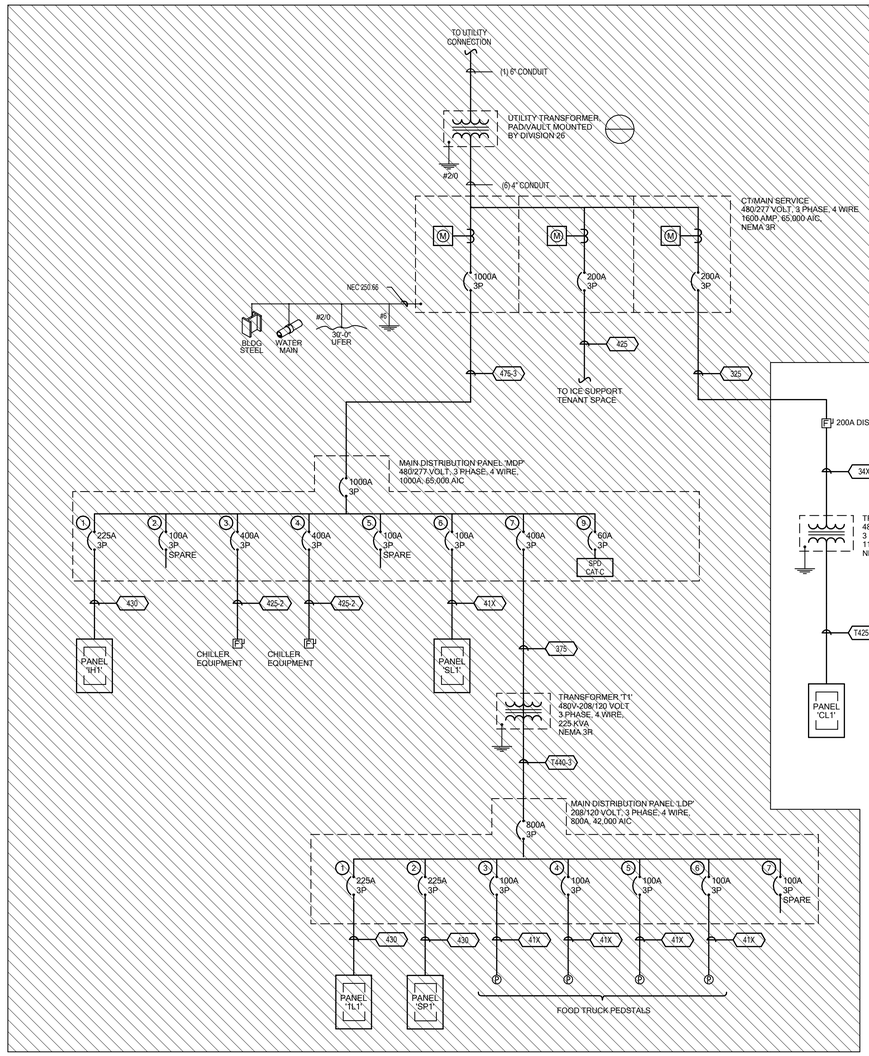
Sheet Name:
MAIN LEVEL SYSTEMS

Sheet Number:
E4.1-R



ONE-LINE DIAGRAM

NO SCALE

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY

TRANS KVA	O.C. PROT.	TYPE COND.*	GEC (1)	MIN. Z%
30	50	36	8 CU	3
45	70	34	4 CU	3
75	125	32X	2 CU	3
112.5	175	34X	2 CU	4
150	300	350	2/0 CU	4
225	400	375	2/0 CU	4
300	600	350-2	3/0 CU	5
500	800	340-3	3/0 CU	5
750	1200	350-4	3/0 CU	5

ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY △ 480-208/120 Y

O.C. PROT.	TYPE COND.*	COND. AMPS	SETS	CONDUCTOR (3) QUAN.	CONDUCTOR (3) SIZE	CONDUIT SIZE	BONDING JUMPER (2)
100	T41X-1	120	1	4	1/0	2"	8 CU
175	T44X-1	180	1	4	4/0	2-1/2"	4 CU
225	T435-1	250	1	4	350	3"	1/0 AL
400	T425-2	410	2	4	250	3"	1/0 AL
600	T450-2	620	2	4	500	4"	4/0 AL
800	T440-3	810	3	4	400	4"	4/0 AL
1200	T450-4	1240	4	4	500	4"	250 AL
1600	T440-6	1620	6	4	400	4"	300 AL
3000	T450-10	3100	10	4	500	4"	750 AL

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY

TRANS KVA	O.C. PROT.	TYPE COND.*	GEC (1)	MIN. Z%
30	50	36	6 CU	3
45	70	34	2 CU	3
75	125	32X	2 CU	3
112.5	175	34X	1/0 CU	4
150	300	350	2/0 CU	4
225	400	375	2/0 CU	4
300	600	350-2	3/0 CU	5
500	800	340-3	3/0 CU	5
750	1200	350-4	3/0 CU	5

ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY (200% NEUTRAL △480-208/120 Y

O.C. PROT.	TYPE COND.*	COND. AMPS	SETS	CONDUCTOR (3) QUAN.	CONDUCTOR (3) SIZE	CONDUIT SIZE	BONDING JUMPER (2)
100	T52X-1	108	1	5	2/0	2-1/2"	6 CU
175	T530-1	184	1	5	300	3"	1/0 AL
225	T550-1	248	1	5	500	4"	1/0 AL
400	T535-2	400	2	5	350	3"	3/0 AL
600	T535-3	600	3	5	350	4"	4/0 AL
800	T535-4	800	4	5	350	4"	4/0 AL
1200	T550-5	1240	5	5	500	4"	350 AL
1600	T550-7	1736	7	5	500	4"	500 AL
3000	T375-10	3080	10	5	750	4"	750 AL

* SEE SCHEDULE FOR CONDUIT AND WIRE SIZE

NOTES:

1. GROUNDING ELECTRODE CONDUCTOR. (NEC 250.66)
2. SUPPLY SIDE BONDING JUMPER. (NEC 250.102 (C)(1))
3. XHHW INSULATION.

COPPER CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSULATION	EQ. GND. COND.(AL)
20	30	3/4"	2	10	THHN THWN	10
30	30	3/4"	3	10	THHN THWN	10
40	30	3/4"	4	10	THHN THWN	10
28	40	1"	2	8	THHN THWN	10
38	40	1"	3	8	THHN THWN	10
48	40	1"	4	8	THHN THWN	10
26	55	1"	2	6	THHN THWN	8
36	55	1"	3	6	THHN THWN	8
46	55	1"	4	6	THHN THWN	8
24	70	1"	2	4	THHN THWN	8
34	70	1-1/4"	3	4	THHN THWN	8
44	70	1-1/4"	4	4	THHN THWN	8
23	85	1-1/4"	2	3	THHN THWN	8
33	85	1-1/4"	3	3	THHN THWN	8
43	85	1-1/2"	4	3	THHN THWN	8
32	95	1-1/2"	3	2	THHN THWN	6
42	95	1-1/2"	4	2	THHN THWN	6

GENERAL SHEET NOTES

1. EMERGENCY EQUIPMENT INDICATED SHALL BE SELECTIVELY COORDINATED TO 0.1 SECONDS PER SPECIFICATION SECTION 26 0573. STUDY SHALL BE SUBMITTED PRIOR TO ALL OTHER EQUIPMENT SUBMITTALS.
2. SEE PLANS FOR LOCATIONS OF PANELBOARDS, SWITCHBOARDS TRANSFER SWITCHES, BUSWAY, TRANSFORMERS DISCONNECTS, ETC. AND PROVIDE NEMA RATED ENCLOSURES AS REQUIRED.
3. SUBMIT DIMENSIONED DRAWINGS OF ALL ELECTRICAL ROOMS SHOWING ALL EQUIPMENT LOCATIONS WITHIN EACH SPACE BASED ON THE EQUIPMENT MANUFACTURER GEAR SIZES WITH ALL EQUIPMENT SHOP DRAWINGS.
4. PROVIDE AN ARC ENERGY-REDUCING MAINTENANCE SWITCH FOR ALL OVER-CURRENT PROTECTIVE DEVICES RATED 1200 AMPS OR HIGHER. REFER TO SPECIFICATION SECTION 26 2815 OVER-CURRENT PROTECTIVE DEVICES AND 240.87 OF CURRENT NATIONAL ELECTRICAL CODE (NEC).
5. PROVIDE ELECTRONIC TRIP CIRCUIT BREAKERS FOR ALL CIRCUIT BREAKERS 600 AMPS AND ABOVE. REFER TO THE OVERCURRENT PROTECTION SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS.
6. ALL EQUIPMENT SHALL BE FULLY RATED. NO SERIES RATINGS ARE ALLOWED.
7. REFER TO SPECIFICATION SECTIONS FOR ADDITIONAL DETAILS.
8. PROVIDE PRELIMINARY SHORT CIRCUIT STUDY SUBMITTAL PRIOR TO SUBMITTAL OF ANY ELECTRICAL EQUIPMENT. REFER TO SPECIFICATION SECTION 26 0573 PROTECTIVE DEVICE STUDY.
9. PROVIDE A SURGE PROTECTIVE DEVICE ON EACH SWITCHBOARD AND PANELBOARD LOCATED ON THE EMERGENCY DISTRIBUTION SYSTEM. REFER TO SPECIFICATION SECTION 26 4313 SURGE-PROTECTIVE DEVICES (SPD) FOR LOCATION CATEGORY.
10. HATCHED AREA INDICATES ELEMENTS OF ONE-LINE THAT DO NOT APPLY TO THIS BUILDING/PROJECT AREA.

SHEET KEYNOTES

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSULATION	EQ. GND. COND.(AL)
31X	120	2"	3	1/0	XHHW-2	4
41X	120	2"	4	1/0	XHHW-2	4
51X	96	2"	5 *	1/0	XHHW-2	4
32X	135	2"	3	2/0	XHHW-2	4
42X	135	2"	4	2/0	XHHW-2	4
52X	108	2"	5 *	2/0	XHHW-2	4
33X	155	2"	3	3/0	XHHW-2	4
43X	155	2"	4	3/0	XHHW-2	4
53X	124	3"	5 *	3/0	XHHW-2	4
34X	180	2"	3	4/0	XHHW-2	4
44X	180	3"	4	4/0	XHHW-2	4
54X	144	3"	5 *	4/0	XHHW-2	2
325	205	2"	3	250	XHHW-2	2
425	205	3"	4	250	XHHW-2	2
525	164	3"	5 *	250	XHHW-2	2
330	230	3"	3	300	XHHW-2	2
430	230	3"	4	300	XHHW-2	2
530	184	3"	5 *	300	XHHW-2	2
335	250	3"	3	350	XHHW-2	2
435	250	3"	4	350	XHHW-2	2
535	200	3"	5 *	350	XHHW-2	2
340	270	3"	3	400	XHHW-2	2
440	270	3"	4	400	XHHW-2	2
540	216	3"	5 *	400	XHHW-2	2
350	310	4"	3	500	XHHW-2	1
450	310	4"	4	500	XHHW-2	1
550	248	4"	5 *	500	XHHW-2	1
375	385	4"	3	750	XHHW-2	1
475	385	4"	4	750	XHHW-2	1
575	308	4"	5 *	750	XHHW-2	1

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE FOR PARALLEL RUNS

TYPE	MAX. O.C. PROT.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND. COND.(AL)
325-2	400	410	2	3	250	2-1/2"	2/0
425-2	400	410	2	4	250	2-1/2"	2/0
535-2	400	400	2	5*	350	3"	2/0
350-2	600	620	2	3	500	3"	2/0
450-2	600	620	2	4	500	3"	2/0
535-3	600	600	3	5*	350	3"	2/0
340-3	800	810	3	3	400	2-1/2"	3/0
440-3	800	810	3	4	400	3"	3/0
535-4	800	800	4	5 *	350	4"	3/0
375-3	1000	1155	3	3	750	4"	4/0
475-3	1000	1155	3	4	750	4"	4/0
535-5	1000	1000	5	5 *	350	4"	4/0
350-4	1200	1240	4	3	500	4"	250
450-4	1200	1240	4	4	500	4"	250
550-5	1200	1240	5	5 *	500	4"	250
340-6	1600	1620	6	3	400	4"	350
440-6	1600	1620	6	4	400	4"	350
550-7	1600	1736	7	5 *	500	4"	350
475-6	2000	2310	6	4	750	4"	400
475-7	2500	2695	7	4	750	5"	600
475-8	3000	3080	8	4	750	5"	600
475-11	4000	4235	11	4	750	5"	750

NOTES:
IN PARALLEL RUNS SIZE GND. COND. IN ACCORDANCE WITH NEC PARA. 250-122.

GND. CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS

* 200% NEUTRAL, DERATED TO 80% BASED ON NEC 310.15.B(5)(C)

** COPPER CONDUCTOR (XHHW)

PROVIDE COMPACT STRANDED ALUMINUM ASSOCIATION 8000 SERIES ALLOY CONDUCTORS.

PROVIDE TERMINATION FOR ALUMINUM-ALLOY CONDUCTORS OF HYDRAULIC COMPRESSION TYPE ONLY LISTED UNDER UL 486-B MARKED "AL7CU" FOR 75° RATED CIRCUITS.

PROVIDE ALL ELECTRICAL EQUIPMENT WITH PROPER SIZING TO ACCOMMODATE ALUMINUM CONDUCTORS, COORDINATE WITH EQUIPMENT SUPPLIER.

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Sheet Name:
ONE-LINE DIAGRAM

Sheet Number:
E5.1-R

PANELBOARD SCHEDULE

PANEL: CL1 **TYPE:** Type 1 **VOLTS:** 120/208 Wye **PHASE:** 3 **WIRES:** 4

MOUNTING: SURFACE **LOCATION:** ELEC. 107 **MAINS:** MCB

BUSSING: **FED FROM:** ___ SUBFEED LUGS

AMP: 400 A ___ DOOR-IN-DOOR

___ ISO GROUND

___ 200% NEUTRAL

___ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
RECEPT WOMEN 105	20 A	1	12	1	360 VA			2315 VA			2	10	3	30 A	ROOF TOP UNIT
RECEPT JANITOR 104	20 A	1	12	3		540 VA			2315 VA		4	--	--	--	--
RECEPT JANITOR 104	20 A	1	12	5			180 VA			2315 VA	6	--	--	--	--
RECEPT STORAGE 103	20 A	1	12	7	180 VA			0 VA			8	--	1	20 A	SPARE
RECEPT COFFEE BAR 102	20 A	1	12	9		720 VA			0 VA		10	--	1	20 A	SPARE
RECEPT CAFE 101	20 A	1	12	11			720 VA			0 VA	12	--	1	20 A	SPARE
RECEPT	20 A	1	12	13	360 VA			0 VA			14	--	1	20 A	SPARE
RECEPT	20 A	1	12	15		540 VA			0 VA		16	--	1	20 A	SPARE
RECEPT	20 A	1	12	17			180 VA			0 VA	18	--	1	20 A	SPARE
RECEPT ELEC. 107	20 A	1	12	19	360 VA			0 VA			20	--	1	20 A	SPARE
RECEPT ELEC. 107	20 A	1	12	21		180 VA			0 VA		22	--	1	20 A	SPARE
RECEPT JANITOR 104	20 A	1	12	23			180 VA			0 VA	24	--	1	20 A	SPARE
POWER	50 A	2	8	25	4160 VA			0 VA			26	--	1	20 A	SPARE
--	--	--	--	27		4160 VA			0 VA		28	--	1	20 A	SPARE
LIGHTING	20 A	1	12	29			260 VA			0 VA	30	--	1	20 A	SPARE
LIGHTING	20 A	1	12	31	434 VA			0 VA			32	--	1	20 A	SPARE
LIGHTING WOMEN 105	20 A	1	12	33		1024 VA			0 VA		34	--	1	20 A	SPARE
SPACE ONLY	--	--	--	35			0 VA			0 VA	36	--	1	20 A	SPARE
SPACE ONLY	--	--	--	37	0 VA			0 VA			38	--	1	20 A	SPARE
SPACE ONLY	--	--	--	39		0 VA			0 VA		40	--	1	20 A	SPARE
SPACE ONLY	--	--	--	41			0 VA			0 VA	42	--	1	20 A	SPARE
					8169	9479	3835	**TOTAL (VA)**							
					74 A	85 A	32 A	**AMPS/PHASE**							

CONNECTED LOAD TOTAL
20984 VA

Legend:
*** PROVIDE 5mA GFCI CIRCUIT BREAKER**

AIC RATING _____ **AMPS RMS SYSM.**

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PANELBOARD SCHEDULES

Sheet Number:
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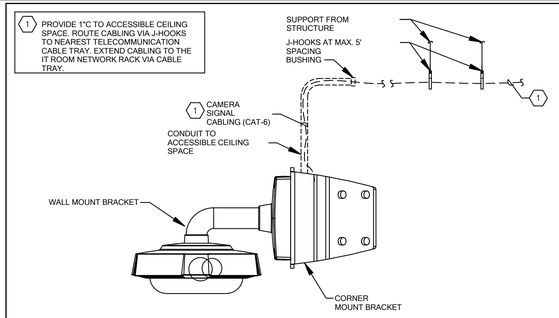


DIAGRAM M03N MULTI-IMAGER CORNER MOUNTED CAMERA

NTS

GENERAL SHEET NOTES

1. ALL SECURITY CAMERAS SHOWN SHALL HAVE (1) CAT-6 CABLE INSTALLED BY THE LOW VOLTAGE CONTRACTOR. PROVIDE A 10'-0" LOOP AT EACH CAMERA LOCATION TO ALLOW CAMERA TO BE RELOCATED WHERE REQUIRED. REFER TO THE TELECOMMUNICATIONS SHEETS FOR THE NEAREST PATCH PANEL.

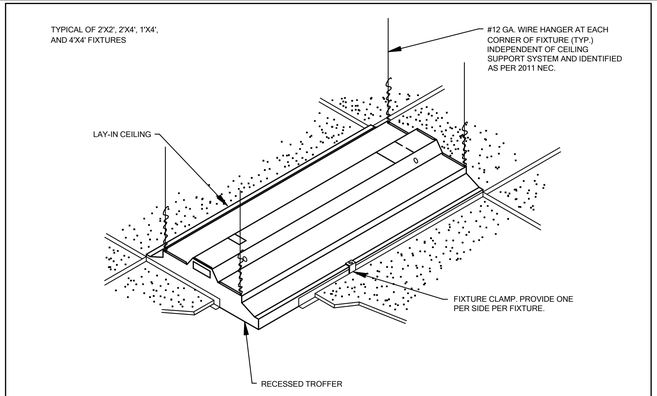


DIAGRAM A001 TYP. RECESSED FIXTURE MOUNTING

NTS

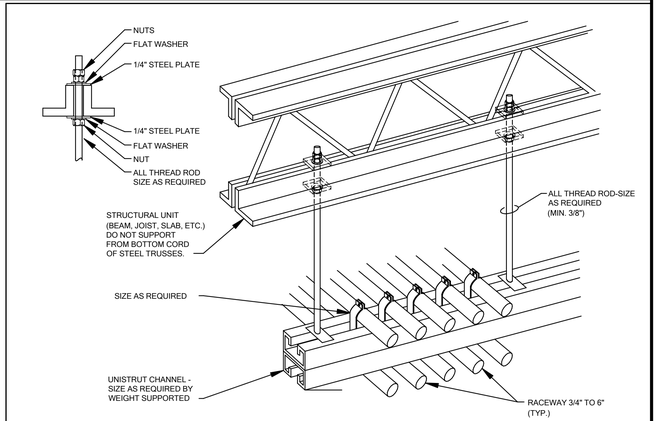


DIAGRAM H001 TYPICAL TRAPEZE CONDUIT RACK

NTS

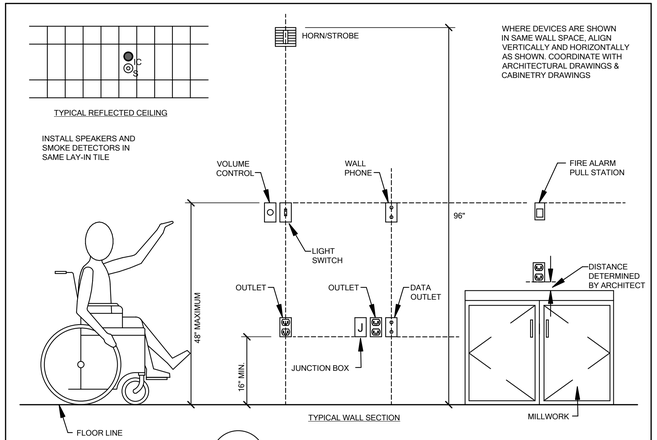


DIAGRAM R001 DEVICE MOUNTING HEIGHTS

NTS

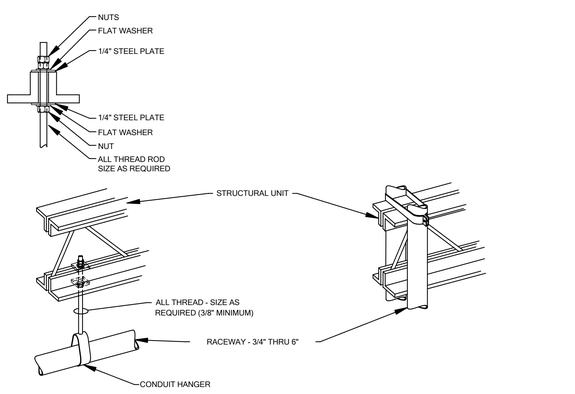
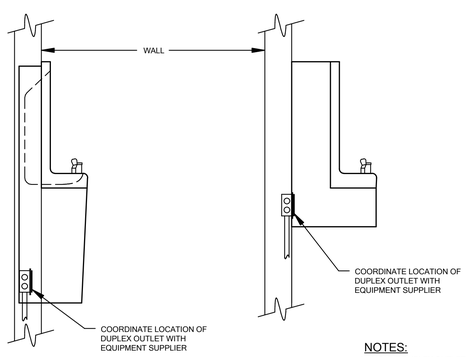


DIAGRAM H003 TYPICAL RACEWAY SUPPORT METHODS

NTS

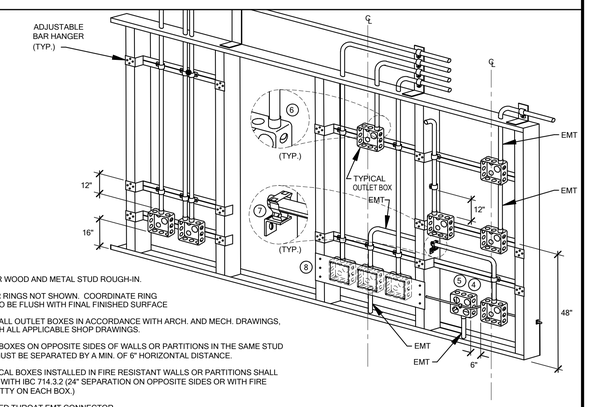


NOTES:

1. MOUNT DUPLEX OUTLET BEHIND WATER COOLER.
2. PROVIDE 5mA GFCI CIRCUIT BREAKER IN PANEL.

DIAGRAM R002 ELECTRIC WATER COOLER (EWC)

NTS



NOTES:

1. TYP. FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN. COORDINATE RING DEPTH TO BE FLUSH WITH FINAL FINISHED SURFACE
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCH. AND MECH. DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 6" HORIZONTAL DISTANCE.
5. ELECTRICAL BOXES INSTALLED IN FIRE RESISTANT WALLS OR PARTITIONS SHALL COMPLY WITH IBC 714.3.2 (24" SEPARATION ON OPPOSITE SIDES OR WITH FIRE STOP PUTTY ON EACH BOX.)
6. INSULATED THROAT EMT CONNECTOR.
7. CADDY FASTENER, THROUGH STUD CABLE/CONDUIT SUPPORT 'FB12P'.
8. CADDY BOX MOUNTING BRACKET 'RBS16'.

DIAGRAM H004 TYPICAL ROUGH IN REQUIREMENTS

NTS

NOT FOR CONSTRUCTION

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ELECTRICAL DIAGRAMS

Sheet Number:
E7.1-R

FIRE ALARM

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	BELL	+7'-10"	2.	S	SMOKE DETECTOR	CEILING	
C	CHIME / STROBE	+ 7' -10" / CEILING	2.	SC	SMOKE/CARBON MONOXIDE DETECTOR	CEILING	
F	FIRE ALARM MANUAL STATION	+46"	2.	C	CARBON MONOXIDE DETECTOR	CEILING	
H	FIRE ALARM SIGNAL HORN/STROBE	+ 7' -10" / CEILING	2.	H	HEAT DETECTOR	CEILING	
H CLG	CONCEALED FIRE ALARM HORN/STROBE	CEILING		D	DUCT SMOKE DETECTOR		MTD. IN DUCT
H	CONCEALED FIRE ALARM HORN/STROBE WALL	+7'-10"	2.	D	FIRE/SMOKE DAMPER		
E	FIRE ALARM SPEAKER/STROBE	+ 7' -10" / CEILING	2.		DOOR HOLDER	AS NOTED	
E CLG	CONCEALED FIRE ALARM SPEAKER/STROBE	CEILING		FS	FLOW SWITCH		
E	CONCEALED FIRE ALARM SPEAKER/STROBE WALL	+7'-10"	2.	TS	TAMPER SWITCH		
S	FIRE ALARM STROBE	+ 7' -10" / CEILING	2.	WF	WATER FLOOD INDICATOR		
S CLG	CONCEALED FIRE ALARM STROBE	CEILING			O.S. & Y. VALVE		SEE DIAGRAM
S	CONCEALED FIRE ALARM STROBE WALL	+7'-10"	2.	R	FIRE ALARM RELAY OR SECURITY RELAY		
K	FIRE ALARM SPEAKER ONLY	+7'-10"	2.	CM	FIRE ALARM CONTROL MODULE		
B	FIRE ALARM STROBE WITH BLUE COLORED LENS (CO VISUAL ALARM)	+ 7' -10" / CEILING	2.	MM	FIRE ALARM MONITOR MODULE		
ANN	FIRE ALARM ANNUNCIATOR PANEL	+4'-10"	2. SEE DIAGRAM	TWZ	TWO-WAY COMMUNICATION SYSTEM ANNUNCIATOR PANEL	+46"	2.
V	ASPIRATING SMOKE DETECTION SYSTEM	CEILING	MOUNT AS PER. MFR.	TW	TWO-WAY COMMUNICATION SYSTEM CALL STATION	+46"	2.
B	BEAM DETECTOR		MOUNT AS PER. MFR.				

SECURITY

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
###	IP CAMERA - SEE SCHEDULE	AS NOTED	15. 16.	ES	ELECTRIC DOOR STRIKE	DOOR JAMB	12.
NVR	NETWORK VIDEO RECORDER			DP	DOOR POSITION INTRUSION SWITCH	DOOR JAMB	12.
DC1	SECURITY SYSTEM DOOR CONTACT	DOOR JAMB		EL	ELECTRIC DOOR LOCK		12.
DC2	SECURITY SYSTEM GARAGE DOOR CONTACT	+8'-0" OR AS NOTED	17.	RX	ACCESS CONTROL SYSTEM, REQUEST TO EXIT		
DB X	DURESS PUSHBUTTON: T = TRANSMITTER, R = RECEIVER, H = HARDWIRED	AS NOTED	17.	EC	ELECTRIC CRASH BAR	DOOR HARDWARE	12.
MD	INTRUSION MOTION DETECTOR		17.	CR	ACCESS CONTROL CARD READER	+46"	2.
GB GB	GLASS BREAK DETECTOR: SOLID = WALL MOUNTED, DASHED = CEILING		17.	BR	ACCESS CONTROL BIOMETRIC READER	+46"	2.
PI	INTRUSION SYSTEM POP-IT			KS	KEY OVERRIDE SWITCH	+46"	2.
KP	INTRUSION SYSTEM KEYPAD (ARM/DISARM)	+46"	2.	ICR	INTEGRATED CARD READER AND LOCK	+46"	2.
INT	INTERCOM STATION	+46"	2.	KCR	KEYPAD CARD READER COMBO	+46"	2.
ML	MAGNETIC LOCK			X	MOMENTARY PUSH BUTTON. DR = DOOR RELEASE, LD = LOCKDOWN, PTE = PUSH TO EXIT	AS NOTED	9.
DH	DOOR HOLD OPEN	AS NOTED	17.				

ABBREVIATIONS INDEX

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
#	NUMBER	MH	MANHOLE
AC	ALTERNATING CURRENT	MIC	MICROPHONE
A.F.F.	ABOVE FINISH FLOOR	MIN	MINIMUM
AIC	AMPS INTERRUPTING CAPACITY	MTG	MOUNTING
AM	AMPS METER	MTR	MOTOR
AMP	AMPERE	N/A	NOT APPLICABLE
ANN	ANNUNCIATOR	NC	NORMALLY CLOSED
ATS	AUTOMATIC TRANSFER SWITCH	NEC	NATIONAL ELECTRICAL CODE
AUX	AUXILIARY	NEMA	NATIONAL ELECT. MANUFAC. ASSOC.
AWG	AMERICAN WIRE GAUGE	NFPA	NATIONAL FIRE PROTECTION ASSOC.
BC	BARE COPPER	N.I.C.	NOT IN CONTRACT
BFG	BELOW FINISH GRADE	NO	NORMALLY OPENED
C	CONDUIT	NTS	NOT TO SCALE
CAB	CABINET	OS & Y	OUTSIDE SCREW & YOKE
CATB	COMMUNITY ANTENNA TELEVISION	PB	PUSHBUTTON
CATV	CABLE TELEVISION	PF	POWER FACTOR
CKT	CIRCUIT	PFR	PHASE FAILURE RELAY
CLG	CEILING	PNL	PANEL
CNTR	CONTRACTOR	PT	POTENTIAL TRANSFORMER
C.O.	CONDUIT ONLY	PVC	POLYVINYL CHLORIDE CONDUIT
CRT	COMPUTER TERMINAL	(R)	RELOCATE
CT	CURRENT TRANSFORMER	RECEP	RECEPTACLE
CU	COPPER	REQ	REQUIREMENT
C/W	COMPLETE WITH	RLA	RATED LOAD AMPS
DB	DECIBEL	RMP	ROCKY MOUNTAIN POWER
DC	DIRECT CURRENT	RMS	ROOT MEAN SQUARE
DWG	DRAWING	SE	SERVICE ENTRANCE
(E)	EXISTING	SPEC	SPECIFICATIONS
EC	EMPTY CONDUIT	SPKR	SPEAKER
EG	EMERGENCY GENERATOR	SS	SELECTOR SWITCH
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
EX	EXPLOSION PROOF	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SWGR	SWITCHGEAR
FC	FOOT CANDLE	TTB	TELEPHONE TERMINAL BOARD
FT	FOOT	TTC	TELEPHONE TERMINAL CABINET
GFI	GROUND FAULT INTERRUPTER	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
GRC	GALVANIZED RIGID CONDUIT	UG	UNDERGROUND
HP	HORSE POWER	UPS	UNINTERRUPTED POWER SUPPLY
HZ	HERTZ	V	VOLT (KV-KILOVOLT)
IFC	INTERNATIONAL FIRE CODE	VA/R	VOLT-AMPS/REACTIVE
IG	ISOLATED GROUND	VM	VOLT METER
IMC	INTERMEDIATE METALLIC CONDUIT	W	WATTS
IN	INCH	W/	WITH
J-BOX	JUNCTION BOX	WH	WATTHOUR METER
KV	KILOVOLT	W/O	WITHOUT
KVA	KILOVOLT AMPERES	WP	WEATHERPROOF
KVAR	KILOVARS	XFMR	TRANSFORMER
KW	KILOWATT	XFMR SW	TRANSFER SWITCH
LRA	LOCKED ROTOR AMPS	XP	EXPLOSION PROOF
LTG	LIGHTING	1P	SINGLE-PHASE
MNF	MANUFACTURER	2P	TWO-POLE
MAX	MAXIMUM	3P	THREE-POLE
MB	MAIN BUS	4P	FOUR-POLE
MCC	MOTOR CONTROL CENTER	∅	PHASE
MCM	1000 CIRCULAR MILLS		

SHEET INDEX

SYMBOL SCHEDULE

NOTES:

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT DENOTES FIXTURES TO BE CONTROLLED.
5. NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT MEASURED TO TOP OF THE BOX FROM FINISH FLOOR.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. SOLID BOX AROUND DEVICE DENOTES IN FLOOR. DASHED LINE DENOTES IN CEILING.
12. COORDINATE WITH DOOR HARDWARE SUPPLIER.
13. FOR WATER COOLER, SEE DIAGRAM R002. FOR ALL OTHER LOCATIONS, MOUNT AT +18" TO CENTER OF BOX FROM FINISH FLOOR, OR AS NOTED.
14. ARROWS SHOWN ON DEVICE DENOTE SENSOR AIMING DIRECTION.
15. CAMERA NUMBERS ARE SHOWN INSIDE CAMERA SYMBOL. CAMERA TYPES ARE INDICATED IN TAG.
16. MOUNT ON TRACK OF OVERHEAD DOOR, 6" FROM TOP OF DOOR, UNLESS OVERHEAD DOOR IS A ROLL UP DOOR, THEN MOUNT PER MANUFACTURER'S INSTRUCTIONS.
17. INSTALL DEVICES PER MANUFACTUER'S INSTRUCTIONS.
18. DASHED LINE INDICATES CLEARANCES. ARROW DENOTES FRONT OF RACK.
19. SPEAKER TO BE MOUNTED IN HORIZONTAL POSITION.
20. MOUNTING HEIGHT IS TO BOTTOM OF DISPLAY.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

GENERAL

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, HOME RUN TO PANEL			J F	JUNCTION BOX ('F' IN FLOOR)	AS NOTED	
	2 CIRCUIT, HOME RUN TO PANEL				EQUIPMENT PANEL, SEE DRAWINGS	+72"	6.
	3 CIRCUIT, HOME RUN TO PANEL				CABLE TRAY	AS NOTED	
	CONDUIT RUN CONCEALED IN WALL OR CEILING				GROUND BUS BAR	+18"	6.
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND			A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
	CONDUIT UP			EQ 34	EQUIPMENT NUMBER		
	CONDUIT DOWN			842	ARCHITECTURAL ROOM NUMBER		
	CONDUIT STUB LOCATION	CAP CONDUIT			DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		
	CONDUIT/CIRCUIT CONTINUATION				DEVICE/EQUIPMENT (TEXT DESIGNATES TYPE) SEE SCHEDULE		

LIGHTING

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	CEILING LIGHT FIXTURE	CEILING	1.	S	SINGLE POLE SWITCH	+46"	2. 4.
	WALL LIGHT FIXTURE	AS NOTED	1.	S^3	THREE-WAY SWITCH	+46"	2. 4.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.	S^4	FOUR-WAY SWITCH	+46"	2. 4.
	RECESSED WALLWASH DOWNLIGHT FIXTURE	CEILING	1.	S^K	KEY OPERATED SWITCH	+46"	2. 4.
	LIGHT FIXTURE	AS NOTED	1.	S^P	SWITCH WITH PILOT LIGHT	+46"	2. 4.
	EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED	S^D	VARIABLE INTENSITY SWITCH	+46"	2. 4.
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM	S^{TM}	TIMER SWITCH	+46"	2. 4.
	BOLLARD	CONCRETE BASE	1.	S	MOMENTARY CONTACT SWITCH	+46"	2. 4.
	STEP LIGHT FIXTURE	AS NOTED	1.	X	LOW VOLTAGE WALLSTATION (SUBSCRIPT INDICATES CONFIGURATION & CONTROL SEQUENCE)	+46"	2,4. SEE DIAGRAM, SPEC.
	FLOOD OR TRACK FIXTURE	AS NOTED			DUAL TECH. CEILING MOUNTED OCCUPANCY SENSOR (PROVIDE WITH ALL PP AND RC CONTROLLERS)	CEILING	SEE DIAGRAM, SPEC.
	CEILING/WALL MOUNTED EXIT LIGHT	CEILING/ AS NOTED	1. 3. 8.		DUAL TECH. WALL MOUNTED OCCUPANCY SENSOR (SUBSCIPT D = DIMMING AND DAYLIGHT CONTROL)	+46"	2,4. SEE DIAGRAM, SPEC.
	EMERGENCY LIGHT FIXTURE	AS NOTED	1.	P	PHOTO-ELECTRIC CONTROL (LOCATE ON ROOF, FACE NORTH)	AS NOTED	MOUNT AS PER MFR.
	COMBO EXIT / EMERGENCY LIGHT FIXTURE	AS NOTED	1.		DIGITAL DAYLIGHT SENSOR	CEILING	SEE DIAGRAM, SPEC.
PP	POWER PACK	CEILING	SEE DIAGRAM, SPEC.	TC	TIME CLOCK	+5'-0"	2.
RC X	DIGITAL ROOM CONTROLLER (SUBSCRIPT INDICATES NUMBER OF RELAYS)	CEILING	SEE DIAGRAM, SPEC.	R	RECEPTACLE SWITCH PACK	CEILING	
EP	EMERGENCY LIGHTING CONTROL UNIT	ABOVE CEILING	SEE DIAGRAM, SPEC.		CATENARY/BISTRO/CABLE-HUNG LIGHT FIXTURE	AS NOTED	1.

POWER

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+18" OR AS NOTED	2. 9.	R	RECEPTACLE SWITCH PACK	ABOVE CEILING	
	SIMPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.		POWER POLE		
T	TAMPER-PROOF RECEPTACLE	+18" OR AS NOTED	2. 9.	J	PLUGMOLD	+46" OR AS NOTED	2. SEE SPEC.
	DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	DP	FLAT PANEL DISPLAY WALL BOX TVSS RECEPT., DATA AND OTHER DEVICES, REFER TO DIAGRAMS	AS NOTED	SEE DIAGRAM, SPEC. 26 2726
U	DUPLEX RECEPTACLE WITH USB OUTLET	+18" OR AS NOTED	2. 9.	CP	CEILING PROJECTION SYSTEM CEILING BOX	ABOVE CEILING	SEE DIAGRAM, SPEC.
	CONTROLLED DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	C	CLOCK OUTLET	+90"	2.
A	DUPLEX RECEPTACLE		9.	GB	GROUND BOX - SEE SCHEDULE	GROUND	SEE DIAGRAM, SPEC.
G	5mA GFCI CIRCUIT BREAKER PROTECTED RECEPTACLE		13.	PT	POKE THRU - SEE SCHEDULE	FLOOR	SEE DIAGRAM, SPEC.
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.		MOTOR OUTLET	TO SUIT EQUIP.	
IG	ISOLATED GROUND RECEPTACLE	+18" OR AS NOTED	2. 9.		PUSHBUTTON	+46"	2.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.		NON-FUSED DISCONNECT SWITCH	+60"	5. 6.
	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+18" OR AS NOTED	2. 9.	F	FUSED DISCONNECT SWITCH	+60"	5. 6.
	4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	B	BREAKER DISCONNECT SWITCH	+60"	5. 6.
	GROUND FAULT INTERRUPTER 4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.	S^T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+46"	2.
	4-PLEX RECEPTACLE EMERGENCY POWER (RED)	+18" OR AS NOTED	2. 9.		MAGNETIC STARTER	+60"	6. 7.
	CONTROLLED 4-PLEX RECEPTACLE	+18" OR AS NOTED	2. 9.		MAGNETIC STARTER / DISCONNECT COMBINATION	+60"	6. 7.
	TVSS PROTECTED RECEPTACLE	+18" OR AS NOTED	2. 9.	VFD	VARIABLE FREQUENCY DRIVE	+66"	6.
	SPECIAL PURPOSE OUTLET	+18" OR AS NOTED	2. 10. W/ CAP.		PANEL BOARD	+72"	6.
	CORD DROP		SEE DIAGRAM		MAIN DISTRIBUTION PANEL		
	CORD REEL		SEE DIAGRAM	M	UTILITY METER / CT CABINET	+72"	6.
	TOMBSTONE RECEPTACLE			P	RV PEDESTAL	AS NOTED	

TELECOMMUNICATIONS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
W	WALL PHONE	+60" OR AS NOTED	2.	CLG	EQUIPMENT CEILING RACK	CEILING	
	DATA OUTLET, ONE CABLE	+18" OR AS NOTED	2. 9. 11.		EQUIPMENT 4-POST RACK / CABINET	AS NOTED	18. SEE SPEC.
	DATA OUTLET, TWO CABLES	+18" OR AS NOTED	2. 9. 11.		EQUIPMENT 2-POST RACK	AS NOTED	18. SEE SPEC.
	DATA OUTLET, THREE CABLES	+18" OR AS NOTED	2. 9. 11.	SPL	SPLITTER	ABOVE CEILING	
X	DATA OUTLET, "X" INDICATES QUANTITY	+18" OR AS NOTED	2. 9. 11.	VIA	VIA	ABOVE CEILING	
	DATA OUTLET, CEILING	AS NOTED		BDA	FIBER BDA	ABOVE CEILING	
WAP	WIRELESS ACCESS POINT, TWO CABLES	CEILING		ANT XX	ANTENNA, PS - PUBLIC SAFETY, COM - CELLULAR/COMMERCIAL	CEILING	
	TELEVISION OUTLET	+18" OR AS NOTED	2. 9. 11.				

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SYMBOLS AND NOTES

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CAMERA SURVEILLANCE TYPE SCHEDULE

CAMERA TYPE	DESCRIPTION	MANFR.	CAT NO.	CAMERA INFORMATION: RESOLUTION	AUDIO RECORDING	MAX FRAME RATE	INFRARED	WDR	NOTES
F01L	INDOOR/OUTDOOR DAY/NIGHT FIXED DOME. IK10 VANDAL-RESISTANT. VARIFOCAL 3.5-10 MM LENS WITH REMOTE ZOOM AND FOCUS VIDEO MOTION DETECTION AND ACTIVE TAMPERING ALARM. MEMORY CARD SLOT FOR OPTIONAL LOCAL VIDEO STORAGE. POWER OVER ETHERNET.	AXIS OR PANASONIC	P3245-LVE OR WV-S2531LN	2MP	No	30 FPS	Yes	Yes	INCLUDE: T91B67 AND T94T01D (AXIS), OR PPM485S POLE MOUNT PANASONIC
F02L	OUTDOOR DAY AND NIGHT BULLET, 2 MP LICENSE PLATE CAMERA. 50/60 FPS. VARIFOCAL 18-137 MM ZOOM LENS WITH REMOTE ZOOM AND FOCUS. LICENSE PLATE CAPTURE RANGE 20-50 METER AT NIGHT, SHOCK DETECTION, ACTIVE TAMPERING ALARM, DEFOGGING AND ELECTRONIC IMAGE STABILIZATION. AUDIO MIC/LINE IN, I/O FOR ALARM/EVENT HANDLING AND MEMORY CARD SLOT FOR OPTIONAL LOCAL VIDEO STORAGE. BLACK FIXED METAL WEATHER SHIELD WITH ANTI-GLARE COATING. POWERED BY POE (IEEE 802-3AF), RJ45 OR DC, 20-28 V DC OR 20-24 V AC.	AXIS OR PANASONIC	Q1700-L	2MP	No	30 FPS	Yes	Yes	INCLUDE: T91B47 POLE MOUNT. PROGRAM AND POSITION CAMERA TO CAPTURE LICENSE PLATES OF VEHICLES DAY AND NIGHT.

CAMERA SURVEILLANCE TAG LEGEND

CHARACTERISTICS: REFER TO SCHEDULE

TYPE:
F = FIXED
M = MULTI-LENS
P = PTZ
R = PTZR (LOCKED DOWN PTZ)
T = THERMAL

F01R

MOUNTING TYPE:
C = CEILING
D = PENDANT
G = WALL GOOSE-NECK
L = POLE
N = CORNER
P = PARAPET
R = RECESSED
S = INSIDE CORNER MOUNT
W = WALL

SECURITY RESPONSIBILITY MATRIX

SCOPE OF WORK	FURNISHED	INSTALLED
ROUGH-IN - CONDUIT W/PULL STRING, JUNCTION BOXES, FLOOR BOXES, FLAT PANEL DISPLAY BACK BOXES, ETC.	EC	EC
PATHWAY EQUIPMENT - CABLE TRAY, JHOOKS, SLEEVES, KNOCKOUTS, ETC.	EC	EC
STRUCTURAL BACKING AND SUPPORT FOR WALL MOUNTED EQUIPMENT	GC	GC
EQUIPMENT RACKS WITHIN THE ER(MDF)/TR(IDF) FOR SYSTEM COMPONENTS	TC	TC
SUPPORT CABLES, PRE-CONSTRUCTION KITS, TILE BRIDGES AND/OR BACK BOXES FOR CEILING MOUNTED SECURITY, INTRUSION AND ACCESS CONTROL DEVICES	EC	EC
AC POWER SYSTEMS (120/240 VOLTS)	EC	EC
ROUGH OR FINISHED TRIM, CASEWORK, MILLWORK, EQUIPMENT RACK PEDESTALS, STRUCTURAL WORK FOR SPECIAL CONSTRUCTION	GC	GC
SYSTEM CABLING - SECURITY CAMERA CATEGORY CABLING FROM DEVICE TO PATCH PANEL **	TC	TC
SYSTEM CABLING - ACCESS CONTROL CATEGORY CABLING, FROM DEVICE TO PATCH PANEL **	N/A	N/A
SYSTEM CABLING - SECURITY CAMERA NON-CATEGORY CABLING	SC	SC
SYSTEM CABLING - ACCESS CONTROL NON-CATEGORY CABLING	N/A	N/A
CAMERAS	SC	SC
CAMERA MOUNTS	SC	SC
CAMERA ETHERNET EXTENDERS AND POE INJECTORS	SC	SC
VIDEO MANAGEMENT SOFTWARE (VMS) (SERVER + CLIENT)	SC	SC
VIDEO MANAGEMENT SERVER	SC	SC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR SECURITY, ACCESS CONTROL AND/OR INTRUSION SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC
LOCK & ACCESS CONTROL POWER SUPPLIES	N/A	N/A
DOOR CONTROLLER POWER SUPPLIES	N/A	N/A
NETWORK SWITCHES WITHIN THE ER(MDF)/TR(IDF) FOR VIDEO SURVEILLANCE, ACCESS CONTROL AND/OR INTRUSION SYSTEMS	OWN	OWN
ACCESS CONTROL SERVER	N/A	N/A
ACCESS CONTROL SOFTWARE	N/A	N/A
DOOR LOCKS (ELECTRIC)	DC	DC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR AV AUDIO, CONTROL AND/OR VIDEO SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC

NOTES:

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

ADDITIONAL NOTES MAY BE PRESENT WITHIN THE CONTRACT DOCUMENTS INDICATING SPECIFIC EQUIPMENT PROVIDED BY OTHERS OR REQUIRE INSTALLATION BY SPECIFIC DIVISIONS.

INSTALLER PROVIDING THE SYSTEM CABLING SHALL PROVIDE THE CABLING, TERMINATION AND CERTIFICATION FOR A COMPLETE SYSTEM INSTALLATION, UNLESS OTHERWISE SPECIFICALLY NOTED WITHIN THE CONTRACT DOCUMENTS.

INSTALLER TO VERIFY WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM. IT IS THE CONTRACTORS RESPOSIBILITY TO PROVIDE A COMPLETE AND WORKING SYSTEM.

ACRONYM LEGEND

ACRONYM	CONTRACTOR	ACRONYM	CONTRACTOR
AC	ACCESS CONTROL CONTRACTOR	IC	INTRUSION DETECTION CONTRACTOR
AV	AUDIOVISUAL CONTRACTOR	TC	HORIZONTAL CABLING CONTRACTOR
DC	DOOR HARDWARE CONTRACTOR	NIC	NOT IN CONTRACT
EC	ELECTRICAL CONTRACTOR	OWN	OWNER
FR	FURNITURE CONTRACTOR	SC	VIDEO SURVEILLANCE CONTRACTOR
GC	GENERAL CONTRACTOR	SPEC	SEE SPECIFICATIONS

NOTES

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

ADDITIONAL NOTES MAY BE PRESENT WITHIN THE CONTRACT DOCUMENTS INDICATING SPECIFIC EQUIPMENT PROVIDED BY OTHERS OR REQUIRE INSTALLATION BY SPECIFIC DIVISIONS.

INSTALLER PROVIDING THE SYSTEM CABLING SHALL PROVIDE THE CABLING, TERMINATION AND CERTIFICATION FOR A COMPLETE SYSTEM INSTALLATION, UNLESS OTHERWISE SPECIFICALY NOTED WITHIN THE CONTRACT DOCUMENTS.

INSTALLER TO VERIFY WITH WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM.

* REFER TO AUDIOVISUAL DRAWINGS FOR ADDITIONAL REQUIREMENTS

** REFER TO SECURITY/ACCESS CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS

RELAY PANEL SCHEDULE 'RP1'

MOUNTING: VOLTAGE: CONTROL CIRCUIT: AIC RATING:

RELAY	POWER	EMERGENCY	SPACE	CONTROL	DIMMING	PROGRAMMING
RP1-13	HL1-7		SITE	TC	0-10	B
RP1-15	HL1-9		SITE	TC	0-10	B
RP1-16	HL1-17		SITE	TC	0-10	B
RP1-17	HL1-1		SITE	TC	0-10	B
RP1-19	SP1-1		SITE	TC	0-10	B
RP1-20	SP1-5		SITE	TC	N	B
RP1-21	SP1-3		SITE	TC	N	B
RP1-22	SP1-7		SITE	TC	N	B
RP1-23	HL1-11		SITE	TC	N	B
RP1-24	HL1-15		SITE	TC	0-10	B
RP1-25	HL1-13		SITE	TC	0-10	B
RP1-26	SP1-17		SITE	TC	0-10	B
RP1-27	SP1-9		SITE	TC	N	B
RP1-28	SP1-15		SITE	TC	N	B
RP1-29	SP1-11		SITE	TC	N	B
RP1-30	SP1-13		SITE	TC	N	B

CONTROL LEGEND

PC	EXTERIOR PHOTOCELL
OC	OCCUPANCY/VACANCY SENSOR
DS	INTERIOR DAYLIGHT SENSOR
MS	EXTERIOR MOTION SENSOR
TC	ANALOG ASTRONOMICAL TIMECLOCK
TOD	TIME OF DAY - SOFTWARE BASED
LWS	LOCAL WALLSTATION

DIMMING LEGEND

N	NONE
0-10	0-10 VOLT DIMMING
DMX	DIGITAL MULTIPLEX (DMX) DIMMING
3WD	3-WIRE DIMMING
ELV	ELECTRONIC LOW VOLTAGE
MLV	MAGNETIC LOW VOLTAGE
DA	DALI DIMMING

PROGRAMMING

A	NIGHT LIGHT; ALWAYS ON.
B	MASTER CLOCK SCHEDULE (PROVIDED BY OWNER); PROVIDE 0-10V DIMMING.
C	EGRESS LIGHTING; MASTER CLOCK SCHEDULE (PROVIDED BY OWNER); 0-10V DIMMING.
D	MASTER CLOCK SCHEDULE (PROVIDED BY OWNER).
E	LOCAL WALLSTATION TO ACT AS OVERRIDE FOR AFTER HOURS CONTROL.

GENERAL NOTES

1. PROGRAM SYSTEM TO MEET THE REQUIREMENTS OF IECC 2015 OR CURRENT ENERGY CODE.
2. CONFIRM SWITCHING AND PROGRAMMING SCHEME WITH OWNER PRIOR TO PROGRAMMING.
3. PROGRAM SYSTEM TO INCORPORATE AUTO DAYLIGHT SAVINGS ADJUSTMENTS, ASTRONOMICAL CLOCK WITH OFFSETS, HOLIDAY DATES, AND NETWORK OVERRIDE.
4. REFER TO WALLSTATION DIAGRAMS FOR FACTORY ENGRAVED LABELING FOR ALL INDIVIDUAL PUSH-BUTTONS. DEVICE AND COVERPLATE COLORS SELECTED BY ARCHITECT.
5. SUBMIT ALL WALLSTATION LAYOUTS, ENGRAVING AND CONTROL SEQUENCES DURING THE SHOP DRAWINGS REVIEW PROCESS.
6. PROVIDE RELAY BARRIER FOR VOLTAGE AND POWER SOURCE SEPARATION (EMERGENCY AND NORMAL CIRCUITS, VOLTAGE DIFFERENCES).
7. PROGRAM NORMAL AND EMERGENCY RELAYS IN RELATED CORRIDORS TO OPERATE TOGETHER.
8. ALL RELAYS REQUIRING DIMMING AND/OR DAYLIGHT HARVESTING SHALL UTILIZE 0-10V DIMMING. PROVIDE 0-10V DIMMING WIRING AND CONTROLS AS REQUIRED.
9. PROVIDE A MINIUMUM OF (5) SPARE RELAYS.
10. SYSTEM MUST INTERFACE WITH NEW OR EXISTING ENERGY MANAGEMENT SYSTEM/BMS. PROVIDE SYSTEM CONSISTING OF MONITOR(S), COMMUNICATIONS EQUIPMENT, A CONTROLLER(S), TIMER(S), OR OTHER DEVICE(S) THAT MONITOR AND/OR CONTROL AN ELECTRICAL LOAD OR POWER PRODUCTION OR STORAGE SOURCE. COORDINATE EXACT TIE-IN POINTS AND COMMUNICATION PROTOCOL/MODULES REQUIRED. PROGRAM ACCORDINGLY AND PER OWNERS REQUIREMENTS.

IN-GRADE BOX SCHEDULE

TYPE	DESCRIPTION	MFR.	CATALOG NUMBER
GB01	OUTDOOR INGROUND BOX ASSEMBLY; SINGLE SERVICE 2-GANG NONMETALLIC GROUND BOX; FINISH BY ARCHITECT	LEGRAND	XB814C520-
GB02	OUTDOOR IN-GROUND BOX ASSEMBLY; DUAL SERVICE 2-GANG NONMETALLIC GROUND BOX FOR POWER AND AV DEVICES; FINISH BY ARCHITECT	LEGRAND	XB814C520 XB814CLV

PROJECT MANAGER: XX

LIGHT FIXTURE SCHEDULE

LIGHT FIXTURE ABBREVIATION SCHEDULE

A.F.F.	ABOVE FINISH FLOOR	SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
WALL@CLG	WALL MOUNT AT CORNER OF WALL AND CEILING	CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT	SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT

LIGHT FIXTURE GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES AND, CONFIRM CEILING TYPES WITH LIGHT FIXTURE TRIMS. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPENCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
3. REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, FUSING, LED DRIVERS, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
4. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.
5. REFER TO LIGHTING PLANS FOR ALL LINEAR FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF LINEAR FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH.
6. REFER TO LIGHTING PLANS FOR ALL UNDERCABINET FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF THE UNDERCABINET FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH OR TO FIT WITHIN THE MILLWORK. COORDINATE FIXTURE LAYOUT WITH MILLWORK SHOP DRAWINGS PRIOR TO LIGHTING SUBMITTALS.
7. WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING DESIGNER.
8. PRIOR APPROVALS ARE REQUIRED BEFORE BIDDING THE PROJECT AND SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) EIGHT WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
9. REFER TO SPECIFICATIONS 20 0500, 26 5100 & 26 5600 (16001, 16510 & 16551).
10. VALUE ENGINEERING CONDUCTED WITHOUT THE DESIGN TEAM IE; ARCHITECT, ENGINEER & LIGHTING CONSULTANT/DESIGNER WILL NOT BE ALLOWED, REVIEWED OR APPROVED.

TYPE	DESCRIPTION	MFR.	CATALOG NUMBER	VOLTS	TOTAL WATTS	LAMP
O1	SINGLE HEAD POLE MOUNTED FIXTURE; 14FT POLE; TYPE 4 DISTRIBUTION; (1) BANNER ARM	LANDSCAPE FORMS	RM-024L4-CLR-05C-40K-UVI-5A-AL	277 V	40 VA	LAMP: LED LUMENS: 4669 CCT: 4000K CRI: 70
O2	12FT TALL NON-POWERED ALUMINUM POLE WITH WOOD ON 2 SIDES; CATENARY CONNECTIONS; WOOD AND POLE COLOR SELCTIONS BY ARCHITECT	STRUCTURA	TOKA-S-12-SCBA-X-X-X-X-SCBA-SCBA-CAT-STD	277 V	0 VA	N/A
O3	16FT TALL x 8INCH DIAMETER COLUMN; TOP 3FT ILLUMINMATED x BOTTOM 13FT SOLIDALUMINUM POLE; (3) GVA RGBW FLOOD HEADS MOUNTED TO POLE AT 12.5'FT - (2) HEADS 30x60 DISTRIBUTION/(1) HEAD 90x90 DISTRIBUTION; EACH RGBW HEAD INDIVIDUAL DMX CONTROLLED;SCBA FOR POLE AND FLOODS	GVA NLS	(2) HEADS - FL100-SCBA-RGBW65K-IM-30x60-AC277-SM200 (1) HEAD - FL100-SCBA-RGBW65K-IM-90x90-AC277-SM200 LIR-SYM-110(3FT)-40K-UNV-13FT-AB-SCBA-CUSTOMGVAMOUNT CONTRACTOR ALLOWANCE PRICE $12,465 PER INCLUDES ALL 4 FIXTURES, DRIVERS, MOUNTING HARDWARE, DMX CONTROLLERS, SOFTWARE, WIRING FROM REMOTE DRIVERS TO FIXTURES AND 5 HOURS OF TRAINING	277 V	120 VA	LAMP: LED GVA LUMENS: 1938 (RED) 2819 (GREEN) 783 (BLUE) 5300 (WHITE) 4018 (ALL ON) CCT: 6500K CRI: 70 NLS LUMENS: 14,740 CCT: 4000K CRI: 70
OC1	CATENARY/FESTOON STRING LIGHTS; 12" OPAL WHITE DIA GLOBES; G16.5 LED LAMPS; 48" O.C. SPACING; POWER CABLE ATTACHED TO AIRCRAFT CABLE FOR SUSPENSION; POWER CABLE AND LAMP HOLDERS BLACK	PRIMUS	DSW-48"O.C.-120V-PLED-G16.5F-3.5W-27K-DSS12-OPAL WHITE-SEE PLANS CONTRACTOR ALLOWANCE PRICE $2,110 INCLUDES LED LAMPS, GLOBES, # OF FIXTURES PER SPACING, AC CABLE FOR SUPPORT, ATTACHMENT KITS FOR EACH POINT OF ATTACHMENT	120 V	4 VA (EACH LAMP)	LAMP: LED G16.5 LUMENS: 350 CCT: 2700K CRI:+90
OT	SINGLE HEAD LED PARKING FIXTURE; 25FT SQUARE STEEL POLE; TYPE 5 DISTRIBUTION	ILP	AL-190-U-50-T5S-UPMB/R-SCBA-xxx	277 V	190 VA	LAMP: LED LUMENS: 24,496 CCT: 4000K CRI: 50
S1E	LINEAR 4FT LED STRIP LIGHT W/CURVED FROSTED LENS; SURFACE OR CHAIN MOUNTED; 0-10V DIMMING TO 10%; 14W EM BATTERY W/INTEGRAL TEST SWITCH	METALUX	4SNLED-LD5-65HL-LW-UNV-EL14W-L840-CD1-U	277 V	40 VA	LED
ST	LED 9.5"W x 2.83"H x 3"D STEP LIGHT; RECESSED IN MASONRY; INTEGRAL DRIVER; WHITE TEMPERED GLASS LENS; 0-10V DIIMABLE; IP65; STAINLESSSTEEL FINISH	FC LIGHTING	FCSL108-UNV-4K-CR185-3L-SS-LD-OPC/H99001-ETL	277 V	10 VA	LAMP: LED LUMENS: 341 CCT: 4000K CRI: 85

GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC) OF ALL EQUIPMENT FURNISHED UNDER ALL DIVISIONS, INCLUDING ALL EXISTING EQUIPMENT TO BE RE-USED. REVIEW ALL SHOP DRAWINGS AND EXISTING EQUIPMENT BEFORE BEGINNING ROUGH-IN.
4. SEE SECTION 265100 (16510) OF THE SPECIFICATION FOR REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

20 AMP MINIMUM BRANCH CIRCUIT CONDUCTOR SIZING		
MAXIMUM LENGTH	BRANCH CIRCUIT VOLTAGE	
CONDUCTOR LENGTH (FT)	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 - 115	MIN. #10 AWG	MIN. #12 AWG
115 - 170	MIN. #8 AWG	MIN. #10 AWG
170 - 270	MIN. #6 AWG	MIN. #8 AWG
271 - 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

A. THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.
B. PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.
C. CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.

12. CONTRACTOR SHALL VERIFY FURNITURE LAYOUT PRIOR TO ANY FLOORBOX OR POKE-THRU INSTALLATION. COORDINATE EXACT LOCATION OF FLOOR BOX OR POKE-THRU WITH OWNER AND FURNITURE PROVIDER PRIOR TO ROUGH-IN.

HL1-1 HL1-3 SITE SITE SITE SITE SITE SITE SITE SITE SITE SITE SITE

WPA architecture

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MILLCREEK

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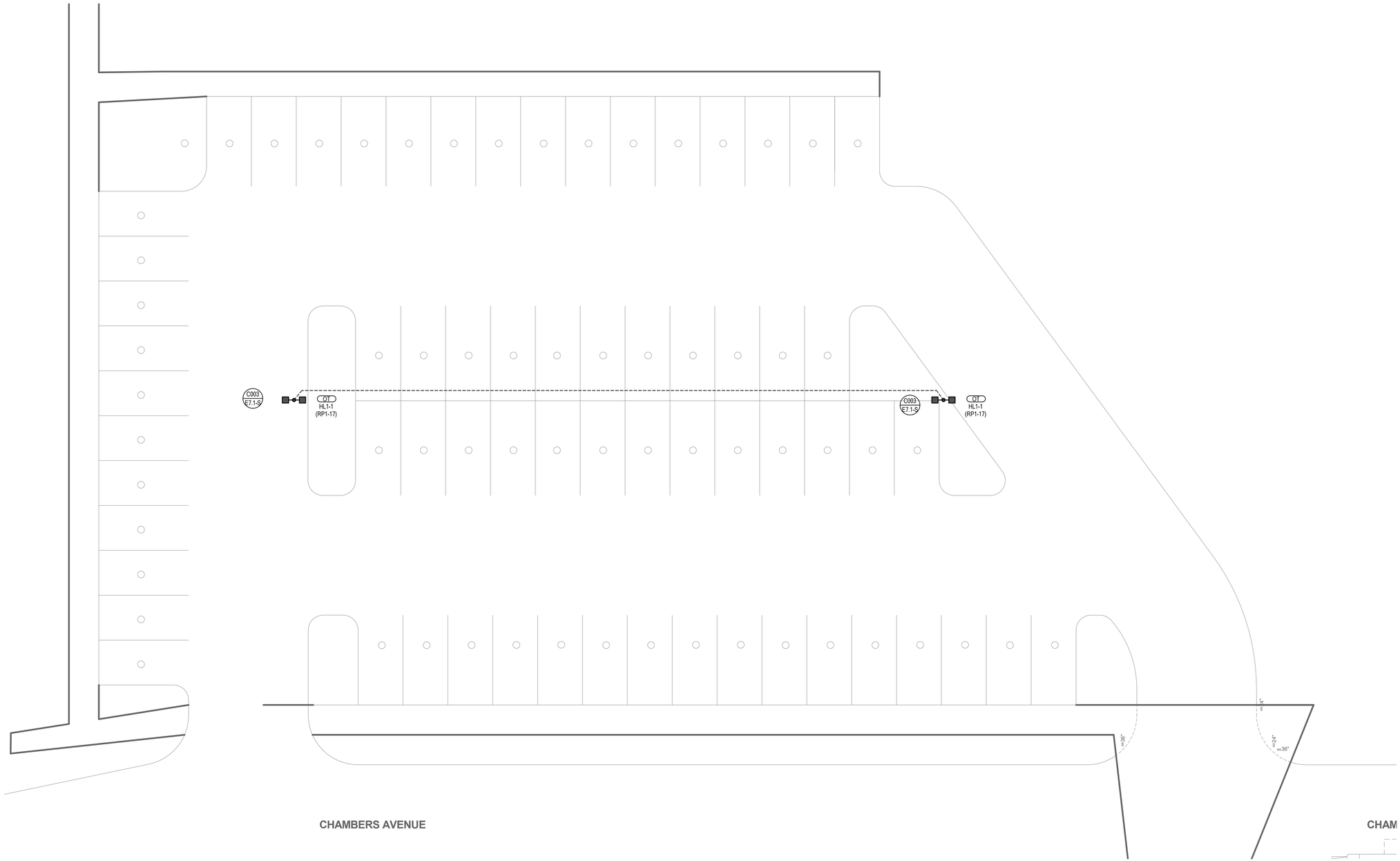
PROJ #: MILLCREEK 0001

Sheet Name: SCHEDULES

Sheet Number: E0.2-S

SHEET KEYNOTES



LIGHTING SITE PLAN - PARKING
SCALE = 1" = 10'-0"

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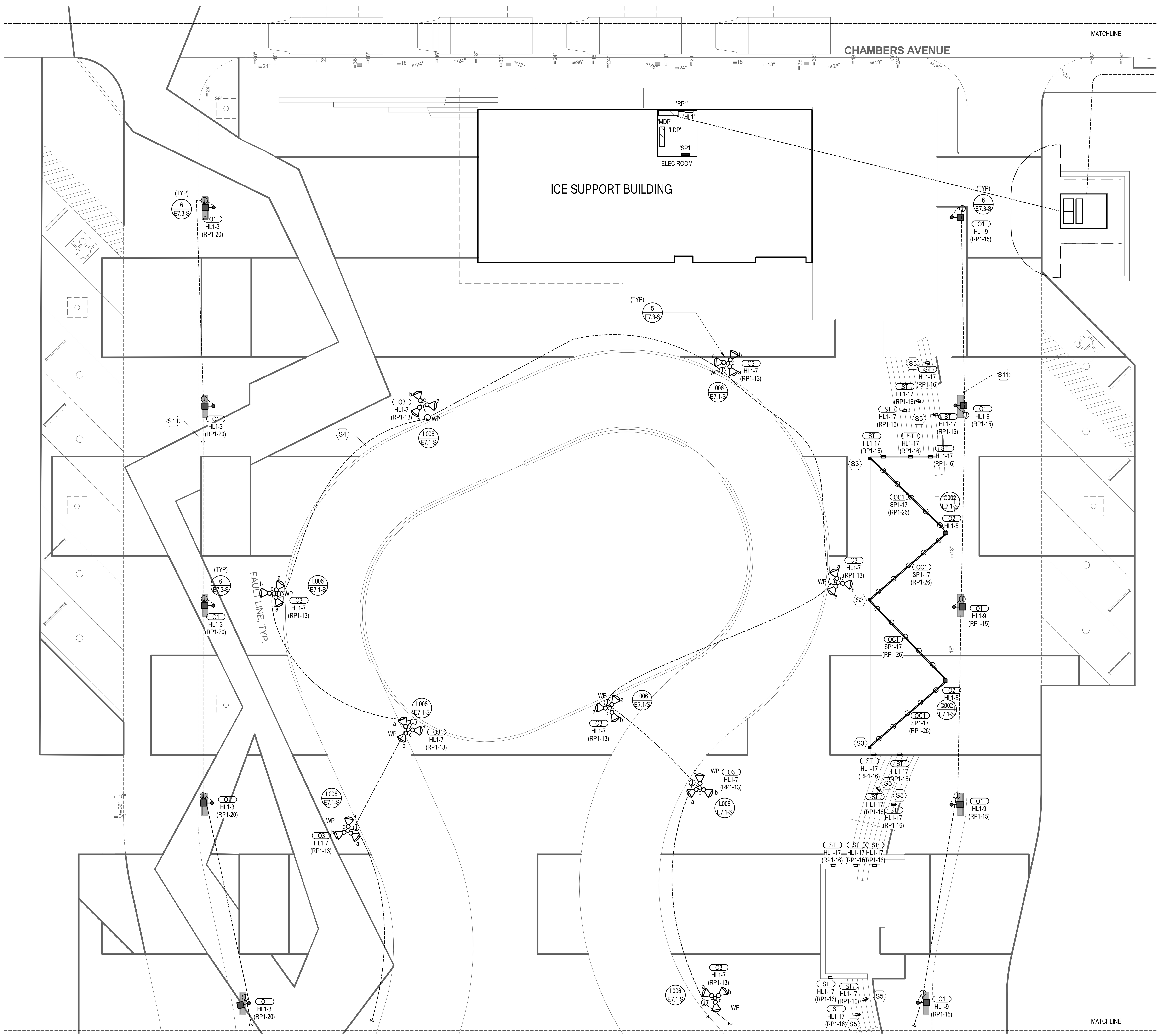
LIGHTING SITE PLAN - PARKING
Sheet Number:
E1.1-S

SHEET KEYNOTES

S3	CATENARY LIGHTING ATTACHIING TO POST INTEGRAL TO RAILING. PROVIDE ATTACHMENT METHOD APPROVED BY THE ARCHITECT. PROVIDE ALL MATERIAL REQUIRED FOR SUSPENSION OF TYPE OC1 CATENARY FIXTURES.
S4	ELECTRICAL CONTRACTOR TO PROVIDE (1) 1" CONDUIT FOR POWER AND (1) 1" CONDUIT FOR CONTROL/DMX WITH PULL STRING FOR ALL LIGHT POLES POWER AND CONTROL. PROVIDE ADDITIONAL CONDUITS AS REQUIRED FOR SECURITY CAMERAS AND WIRELESS ACCESS POINTS (WAP) AS SHOWN ON SYSTEMS PLANS.
S5	STEP LIGHT MOUNTED IN END OF TIMBER BENCH. COORDINATE INSTALLATION WITH LANDSCAPE ARCHITECT AND TIMBER BENCH MANUFACTURER SHOW DRAWINGS AND TIMBER BENCH INSTALLATION.
S11	ELECTRICAL CONTRACTOR TO PROVIDE (1) 2" CONDUIT WITH PULL STRING TO ALL LIGHT POLES FOR POWER AND CONTROL. PROVIDE ADDITIONAL CONDUITS AS REQUIRED FOR SECURITY CAMERAS AND WIRELESS ACCESS POINTS (WAP) AS SHOWN ON SYSTEMS PLANS.



LIGHTING SITE PLAN - NORTH

SCALE = 1" = 10'-0"

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LIGHTING SITE PLAN - NORTH

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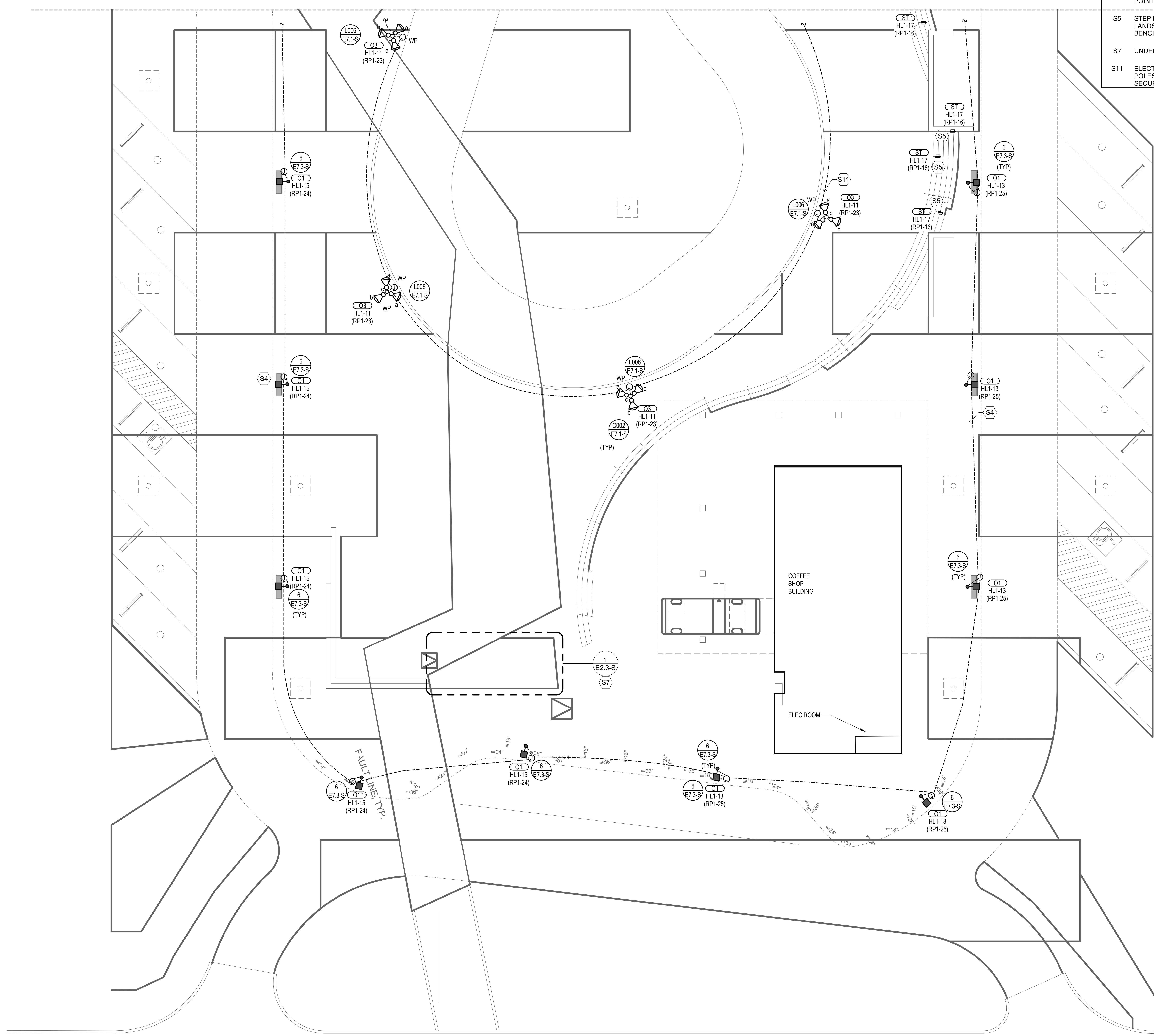

LIGHTING SITE PLAN - SOUTH

SCALE = 1" = 10'-0"

SHEET KEYNOTES

S4	ELECTRICAL CONTRACTOR TO PROVIDE (1) 1" CONDUIT FOR POWER AND (1) 1" CONDUIT FOR CONTROL/DMX WITH PULL STRING FOR ALL LIGHT POLES POWER AND CONTROL. PROVIDE ADDITIONAL CONDUITS AS REQUIRED FOR SECURITY CAMERAS AND WIRELESS ACCESS POINTS (WAP) AS SHOWN ON SYSTEMS PLANS.
S5	STEP LIGHT MOUNTED IN END OF TIMBER BENCH. COORDINATE INSTALLATION WITH LANDSCAPE ARCHITECT AND TIMBER BENCH MANUFACTURER SHOW DRAWINGS AND TIMBER BENCH INSTALLATION.
S7	UNDERGROUND WATER FEATURE VAULT.
S11	ELECTRICAL CONTRACTOR TO PROVIDE (1) 2" CONDUIT WITH PULL STRING TO ALL LIGHT POLES FOR POWER AND CONTROL. PROVIDE ADDITIONAL CONDUITS AS REQUIRED FOR SECURITY CAMERAS AND WIRELESS ACCESS POINTS (WAP) AS SHOWN ON SYSTEMS PLANS.

WPA architecture

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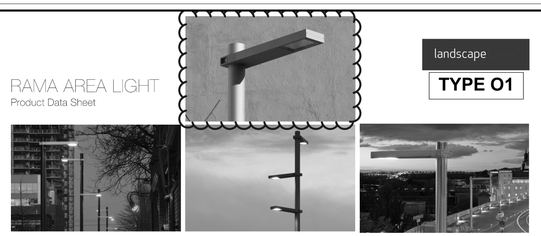
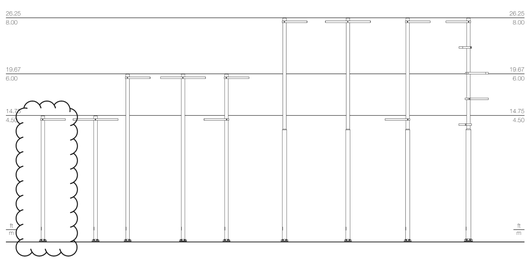
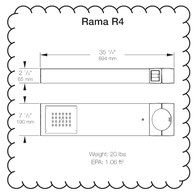
LIGHTING SITE PLAN - SOUTH

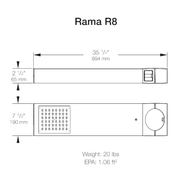
Sheet Number:

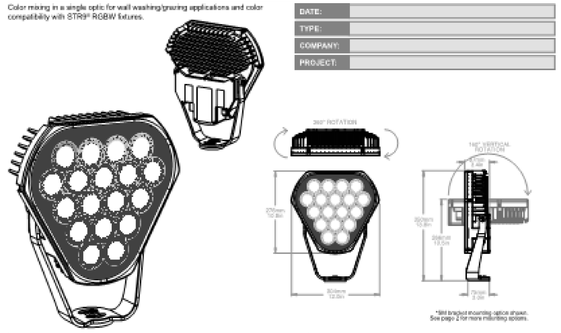
E1.3-S











RAMA AREA LIGHT

Product Data Sheet

landscape forms

TYPE O1

Rama R4

Weight: 20 lbs
EPA: 1.06 ft²

Rama R8

Weight: 20 lbs
EPA: 1.06 ft²

page 2 of 5

Landscape Forms, Inc. | 800.521.2546 | F 269.381.3455 | 7800 E. Michigan Ave., Kalamazoo, MI 49048

1 FIXTURE TYPE O1
NTS

TYPE O2

Toka 12' - 30' Square Steel Pole

FIXTURE TYPE: ______________

PROJECT NAME: ______________

Steel square tube upright with wood or metal accent panels for pedestrian or roadway fixtures and catenary mounting.

FEATURES:

- Available as a straight or tilted upright
- High allowable EPA
- Optional LED strip along front of the pole

SPECIFICATIONS:

CONSTRUCTION: Formed A500 square steel tube welded to an A36 steel baseplate. Wood panel is assembled through glulam construction and precision machined using CNC technology. Adhesive complies with ASTM D-2559 glulam construction specifications for extreme exposed weather conditions, is waterproof and rated for wet or dry use exposure.

FINISHES AND MATERIALS: All steel and aluminum parts are polyester powder coat painted. Wood panels are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors.

ELECTRICAL: Wireway access is provided through a NEC compliant handhole on front of pole upright with a 5/16"-8 grounding point behind handhole.

HARDWARE: All fasteners and hardware are stainless steel. Anchor bolt kits are hot dipped galvanized steel.

FIXTURE MOUNTING: Fixtures mount to pole from bolt pattern, horizontal mast arm, or custom arm.

Shown with LED strip and catenary options.

NO LED STRIP

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2 FIXTURE TYPE O2
NTS

FL100™

INFINITY GVA TECHNOLOGY COLOR-AMP GVA TECHNOLOGY **TYPE O3** GVA LIGHTING

RGBW Inner-Mixing Architectural Spot and Floodlight

PRODUCT SPECIFICATION SHEET

Color mixing in a single optic for wall washing/grazing applications and color compatibility with STR9® RGBW fixtures.

DATE:
TYPE:
COMPANY:
PROJECT:

*SM bracket mounting option shown. See page 2 for more mounting options.

FEATURES:

- COLOR-AMP™ technology allows up to three times higher light output in specific colors
- INFINITY® Technology compatible (INF)
- Built-in, high temperature power supply (AC)
- Meets ANSI C136.31 3G Vibration standard for bridge and overpass applications, taking into consideration wind and traffic vibrations
- Plug-and-play with STR9® luminaires
- Color matched with STR9® RGBW linear luminaires
- Advanced thermal design with cutting-edge manufacturing process and materials
- Compact size, only 87mm (3.4in) in depth
- Weight of only 5kg (11lbs)
- Highly adjustable with 360° horizontal rotation and 160° vertical rotation
- ASTM B117 marine grade powder coating

OPTIONS:

- Beam angles ranging from 10° to 90° with elliptical distribution Optical accessories for glare control
- White, silver, and black matte standard powder coated body colors
- Custom body colors available on demand
- ELV (48VDC), INF (380VDC) and AC (85~264VAC or 85~277VAC) input options
- Range of bracket lengths and mounting options

SPECIFICATION LOGIC: FL100™ IM (INNER MIXING)

FAMILY	BODY COLOR	LED COLOR	OPTICS(FWHM)[1]	VOLTAGE	MOUNTING OPTION
FL100	WH - White Matte Powder Coated SR - Silver Matte Powder Coated BL - Black Matte Powder Coated CUST - Custom Color[1] SCBA	RGBW45K-IM	10 - 10°x10° 20 - 20°x20° 40 - 40°x40° 60 - 60°x60° 90 - 90°x90° (1) b 30 - 30°x30° 10x40 - 10°x40° H 40x10 - 40°x10° V 10x60 - 10°x60° H 60x10 - 60°x10° V (2) a 30x60 - 30°x60° H 60x30 - 60°x30° V	ELV - 48VDC INF - 380VDC AC - 85~264VAC AC277 - 85~277VAC	SM120 - Surface Mount 120mm[1] SM200 - Surface Mount 200mm SM300 - Surface Mount 300mm[1] SM400 - Surface Mount 400mm[1] SM500 - Surface Mount 500mm[1] SMXXX - Surface Mount Custom[1] (specify length) TM200 - Tenon Mount 200mm[1] PM - Pole Mount[1]

PRODUCT CONFIGURATION

1. Non standard option and might require longer leadtime than usual. Contact factory for details.

Nominal values are used. Actual measurements may differ slightly.

GVA Lighting, Inc. 2771 Bristol Cir, Oakville, ON L6H 6X5
Tel: + 1 905 569 6044 Email: info@gvalighting.com

SP-FL100 RGBW-IM, 2020-01-27 | Page 1 / 5
gvalighting.com

NLS LIGHTING

LIRA LIGHT COLUMN

TYPE 03 LIGHT COLUMN

STAR POWER™ OPTICAL SYSTEM

The Star Power™ reflector is an excellent system which provides great value and performance.

Project Name: LIR-SYM-110(3FT)-40K-UNV-13FT-AB-SCBA-CUSTOGVAMOUNT

Cat #	Light Dist.	Wattage / Lens Ht.	Kelvin	Volts	Base Height	Mounting	Color	Options
Lira Light Column 6" OD (LIR-6) Lira Light Column 8" OD (LIR-8)	Symmetric (SYM)	22W / 1' Lens (22) 44W / 2' Lens (44) 66W / 3' Lens (66) 88W / 4' Lens (88) *LIR-6 max lens ht. 110W / 3' Lens (110)	3000K (30K) Warm 4000K (40K) Neutral 5000K (50K) Cool RGBW (RGB)	120-277 (UNV)	2' (2) 4' (4) 6' (6) 7' (7) 8' (8) 10' (10) *LIR-6 max base ht. 12' (12) 13' (13)	Anchor Base (AB) custom GVA mount GVA is the RGBW fixture manufacturer	Bronze (BRZ) White (WHT) Silver (SVR) Hunter Green (HGR) Black (BLK) Graphite (GPH) Grey (GRY) Custom (CS) scba	GFI Kit (GFI) Banner Arms (BA)

3 FIXTURE TYPE O3
NTS

PRIMUS LIGHTING

DECOSTRING SHADES & GUARDS

TYPE OC1

DSS8 8" DIAMETER ACRYLIC SPHERE
DSS10 10" DIAMETER ACRYLIC SPHERE
DSS12 12" DIAMETER ACRYLIC SPHERE
FINISH: OPAL WHITE CLEAR OR FROSTED

SHADES & GUARDS FINISH CODES

RAW & ACID ETCHED FINISHES	POWDER COAT FINISHES	ACRYLIC FINISHES
RB – RAW BRASS	**PCW** – POWDER COAT WHITE	**O** – OPAL WHITE
AB – AGED BRASS	**PCB** – POWDER COAT BLACK	**C** – CLEAR
VB – VERDE BRASS	**PCS** – POWDER COAT SILVER	**F** – FROSTED
BA – BRUSHED ALUM	**PCC** – POWDER COAT (CUSTOM) PROVIDE RAL COLOR	

SHADES & GUARDS FINISH NOTES

- Decostring shades are hand crafted from solid brass or aluminum and feature either chemical etched or powder coat finishes.
- Most shades are shipped separately and attached to cable system by means of a tool-less keeper ring.
- All shades and guards dimensions are nominal.
- Please contact us for material, finish and shape variations or custom designs.

DECOSTRING MOUNTING

3570 LEXINGTON AVE. EL MONTE, CA 91731 • PH. 626.442.4600 FAX 626.442.4900 • primuslighting.com

4 FIXTURE TYPE OC1
NTS

Project Name:	Part Number:	Type:

AREA LIGHT SERIES

OUTDOOR

TYPE OT

ILP
407-478-3759
www.ilp-inc.com

FEATURES

- Slim Profile die-cast aluminum housing
- Factory Select Finishes: Bronze (BRZ), Black (BLK), Silver (SLV) & White (WHT)
- Custom colors finishes available[1]
- Type II, III, IV, & VS optics available
- Optional Spill Light Control via Integral Shield (HSS)
- UPMB - Universal Pole Mounting Bracket (std.)
- 1.5G/3G ANSI C136.31-2010 mounting option available
- Toolless hinged drop down driver access
- 120–277V Universal Voltage or 347–480V High Voltage
- 0–10V Dimmable Driver (std.)
- Battery backup option available (56W, 90W)
- PIR Occupancy, Photocell, & Bi-Level Dimming Sensors Available
- 3-Pin & 7-Pin ANSI C136.41 Control Receptacle Options
- Wireless control integrated luminaire
- 3000K, 4000K & 5000K CCT
- >70 Color Rendering Index (CRI)
- Calculated L70 >100,000 hrs @ 25°C per TM-21-11
- IP66 Rated Luminaire
- Dark Sky Compliant[1,2]
- 5 Year Warranty
- ETL Listed for Wet Locations
- DesignLights Consortium® Premium Qualified Luminaire

[1] 3000K is IDA Listed
[2] Must select UPMB, ARM6, WMB, or HTMA mounting options to qualify

SUITABLE APPLICATIONS

- Parking Structures • Roadways • Parks • Education • Hospitals • Car Dealerships • Roadways • Shopping Centers

ORDERING GUIDE:

SERIES	WATTS	DRIVER	CCT	OPTIC	MOUNTING		FINISH[6]	
☐ AL Area Light Series	☐ 56W	☐ U 120-277V	☐ 50	☐ T2	☐ UPMB	Universal Pole Mount Bracket Square (std.)	☐ BLANK	Bronze
	☐ 90W	☐ HV[7] 347-480V	☐ 40	☐ T3	☐ UPMB/R	Universal Pole Mount Bracket Round (4-5")	☐ BLK	Black
	☐ 110W		☐ 30	☐ T4	☐ ARM6-S	6" Straight Arm Adaptor for Square Pole	☐ SLV	Silver
	☐ 150W			☐ T5S	☐ ARM6-Rx[3]	6" Straight Arm Adaptor for Round Pole	☐ WHT	White
	☐ 190W				☐ AL-SLPF	2⅜" Adjustable Slip Fitter	☐ CC	Custom Color
	☐ 225W				☐ AL-SB[4]	Adjustable Trunnion Mount Bracket	SCBA	
	☐ 270W				☐ HTMA	Horizontal Tenon Mount Bracket		
	☐ 375W				☐ WMB[4]	Wall Mount Bracket		
					☐ LARGE-WMB[5]	Large Housing Wall Mount Bracket		

OPTIONS		CONTROLS	
Factory Installed		**BASIC - Factory Installed**	
☐ HSS[1]	Integral House Side Shield	☐ CR3P	Universal 3-Pin control receptacle
☐ SP1[7,8]	10KA Max Univolt Surge Protector	☐ CR7P[13]	Universal 7-Pin control receptacle ANSI C136.41
☐ SP2[7,8]	22KA Max Univolt Surge Protector	☐ USBD[11]	User Select Bi-Level Dim Occ. Sensor
☐ SP480V2[8]	20kA Max 347-480V Surge Protector	☐ BDXX[12]	Preset Bi-Level Dim Sensor (xx=% ex: 20,30)
☐ FI/ILBCP05[9]	5W LED Factory Installed Battery Backup	☐ BDXXPC[11]	Preset Bi-Level Dim Sensor w/ photocell (xx=% ex: 20,30)
☐ FI/ILBCP05/HE[9]	5W 120-277V LED High Efficacy CEC Title 20 Battery Backup (32°F-100°F)	☐ WLOS	PIR Occupancy Sensor
☐ FUSE/SXXX	Single-line Voltage Fuse (120, 277 or 347V)	**ADVANCED - Factory Installed**	
☐ FUSE/DXXX	Dual-line Voltage Fuse (208, 240 or 480V)	☐ SU/5S/LR/IL[2,7]	Enlighted 5S Individual Lighting (IL) Sensor with Control Unit
☐ SMLxxxx	Specified Lumen Output (xxxx = lumen output)	☐ SU/5S/LR/CL[2,7]	Enlighted 5S Connected Lighting (CL) Sensor with Control Unit
☐ SD347[7,10]	347V Step Down Transformer	☐ SU/5S/LR/IOT[2,7]	Enlighted 5S Internet of Things (IOT) Sensor with Control Unit
☐ SD480[7,10]	480V Step Down Transformer	☐ LPL/INT[2,7]	Limelight by Lutron Wireless Control System w/ Sensor (8-15ft)
☐ TPS/L	Tamperproof Fixture Latches	☐ LPM/INT[2,7]	Limelight by Lutron Wireless Control System w/ Sensor (15-30ft)
☐ TPS/FF	Tamperproof Screws Full Fixture	☐ LPH/INT[2,7]	Limelight by Lutron Wireless Control System w/ Sensor (30-40ft)
		☐ IRTEC/W/B[2,7,11]	IR-TEC OS-NET Wireless Control System w/ Sensor
Ship with Accessories		**Ship with Accessories**	
☐ GS[5]	External Glare Shield	☐ PCU[7]	Electronic UNIV Photocell (120-277V)
☐ FSIR/100	FSP-2x1 Remote Programmer Tool		
☐ SRP/281	IR-TEC OS-NET Remote Sensor Configuration Tool		
☐ TLPC/UNIV	Photocell for use w/ CRxP option (120-277V)		
☐ TLPC/HV	Photocell for use w/ CRxP option (347V-480V)		

[1] Does not qualify for DLC
[2] Not available with SD347 or SD480 options
[3] Must specify pole diameter (3"–6")
[4] EXCLUDES 270W-375W
[5] 270W-375W ONLY
[6] Bronze, Black, Silver & White finishes are standard. Consult factory for pricing & availability of other finishes; subject to longer lead times
[7] Not available with HV option
[8] SP1/SP2 specified in combination w/ battery backups, separate surge protectors are required per electrical line
[9] 56W-90W ONLY
[10] EXCLUDES 56W-90W
[11] Requires FSIR/100 remote to program
[12] Requires SRP/281 to program
[13] Dimming leads will be wired to receptacle unless otherwise specified

AI SPFC0720

5 FIXTURE TYPE OT
NTS

TYPE ST1

FC LIGHTING

FCSL108

ADA

Date:
Type:
Fixture:
Project:
Approved:

FCSL108 IP65 rated exterior stainless steel brick step light with open lens for masonry applications. Corrosion resistant, die-cast aluminum housing construction, this fixture provides illumination for damp, dry or wet areas.

SPECIFICATIONS

PHYSICAL					
lengths/dimensions	fixture: 9.5" W x 2.83" H x 3" D				
weight	2 lbs				
housing	marine grade, corrosion resistant, stainless steel.				
lens	standard: white, tempered, glass lens				
mounting	mounts directly to standard junction box; concrete pour, masonry applications				
ingress protection	IP65 : dry, damp or wet locations with extruded silicone gasket to seal out contaminants				
finish	marine grade stainless steel faceplate				
PERFORMANCE					
color temperature	2700K	3000K	3500K	4000K	
lumen output	630 lm (with clear polycarbonate lens) 340 lm with white lens				
lifetime	> 70,000 hours / L70 or better				
color consistency	3-Step MacAdam Ellipse / standard: CRI85				
junction temperature	73°C @ Tª 25°C				
warranty	5 year limited warranty (refer to website for details)				
ELECTRICAL					
input voltage	Universal 120~277V AC				
power supply	integral Class II, electronic high-power factor > 94% @120V				
certifications	ETL / cETL Listed | ADA compliant				
standards	UL1598/CSA C22.2 No. 250.0; UL 8750/CSA C22.2 No. 250.13/IES LM-79/LM-80				
power consumption	10W @ 120V - 277V				
dimming interface	standard: 0-10V (10%)				

QUICK SHIP PRODUCT visit fclighting.com

Due to continuous development and improvements, specifications are subject to change without notice. Product use certifies agreement to FC Lighting terms and conditions.

US Commercial Lighting Manufacturer Since 1982

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6 FIXTURE TYPE ST1
NTS

WPA architecture

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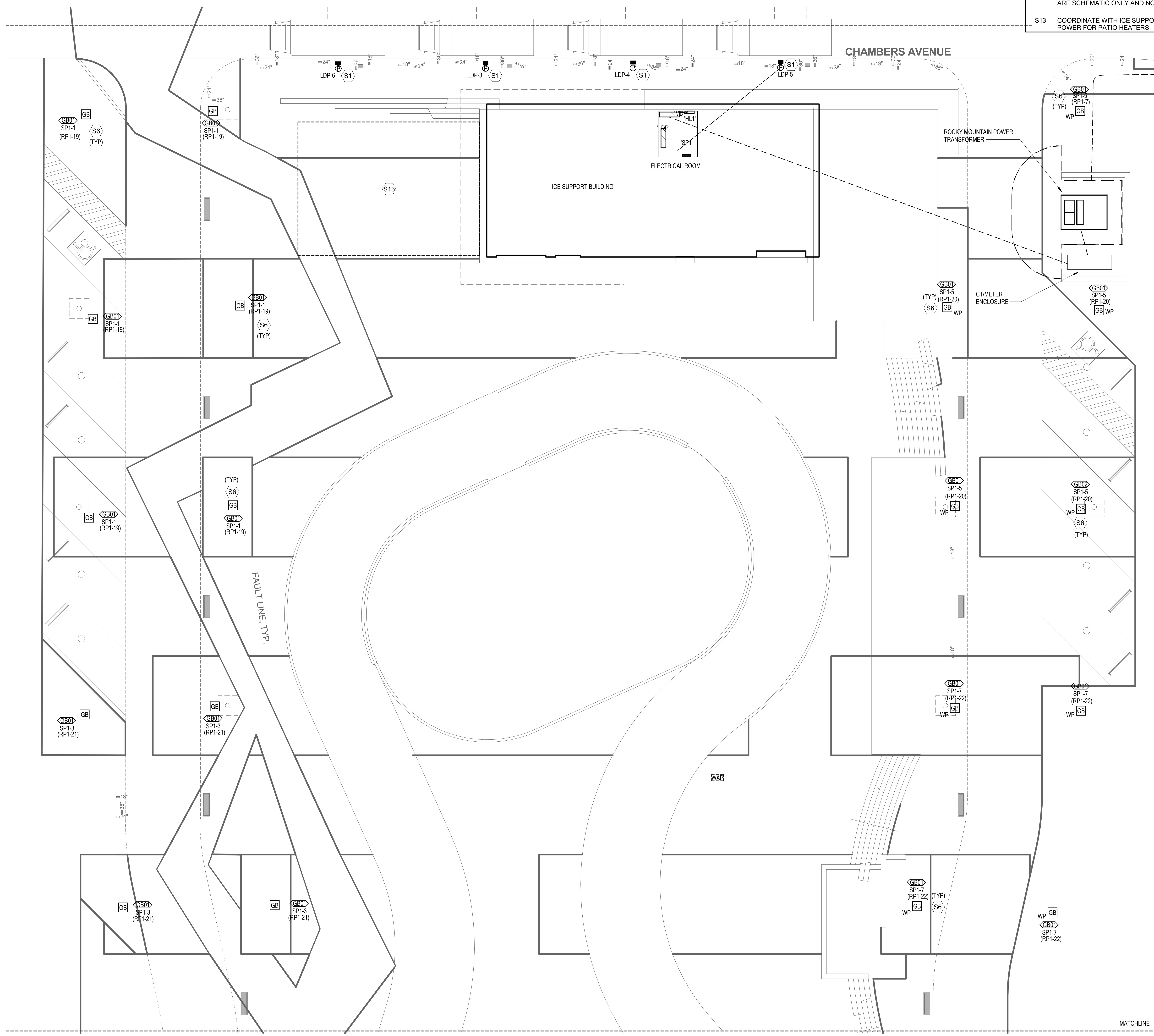
Sheet Name:
LIGHT FIXTURE CUTSHEETS

Sheet Number:
E1.4-S

SHEET KEYNOTES

S1	FOOD TRUCK POWER PEDESTAL. COORDINATE EXACT REQUIREMENTS AND LOCATION PRIOR TO ROUGH-IN.
S6	CAREFULLY COORDINATE LOCATIONS OF ALL IN-GRADE BOXES WITH LANDSCAPE ARCHITECT, LANDSCAPE ISNTALLER AND OWNER PRIOR TO ROUGH-IN. LOCATIONS SHOWN ARE SCHEMATIC ONLY AND NOT MEANT TO BE USED FOR EXACT LOCATIONS.
S13	COORDINATE WITH ICE SUPPORT BUILDING ELECTRICAL DRAWINGS FOR CONTROL AND POWER FOR PATIO HEATERS.



ELECTRICAL SITE PLAN - NORTH

SCALE = 1" = 10'-0"

WPA architecture

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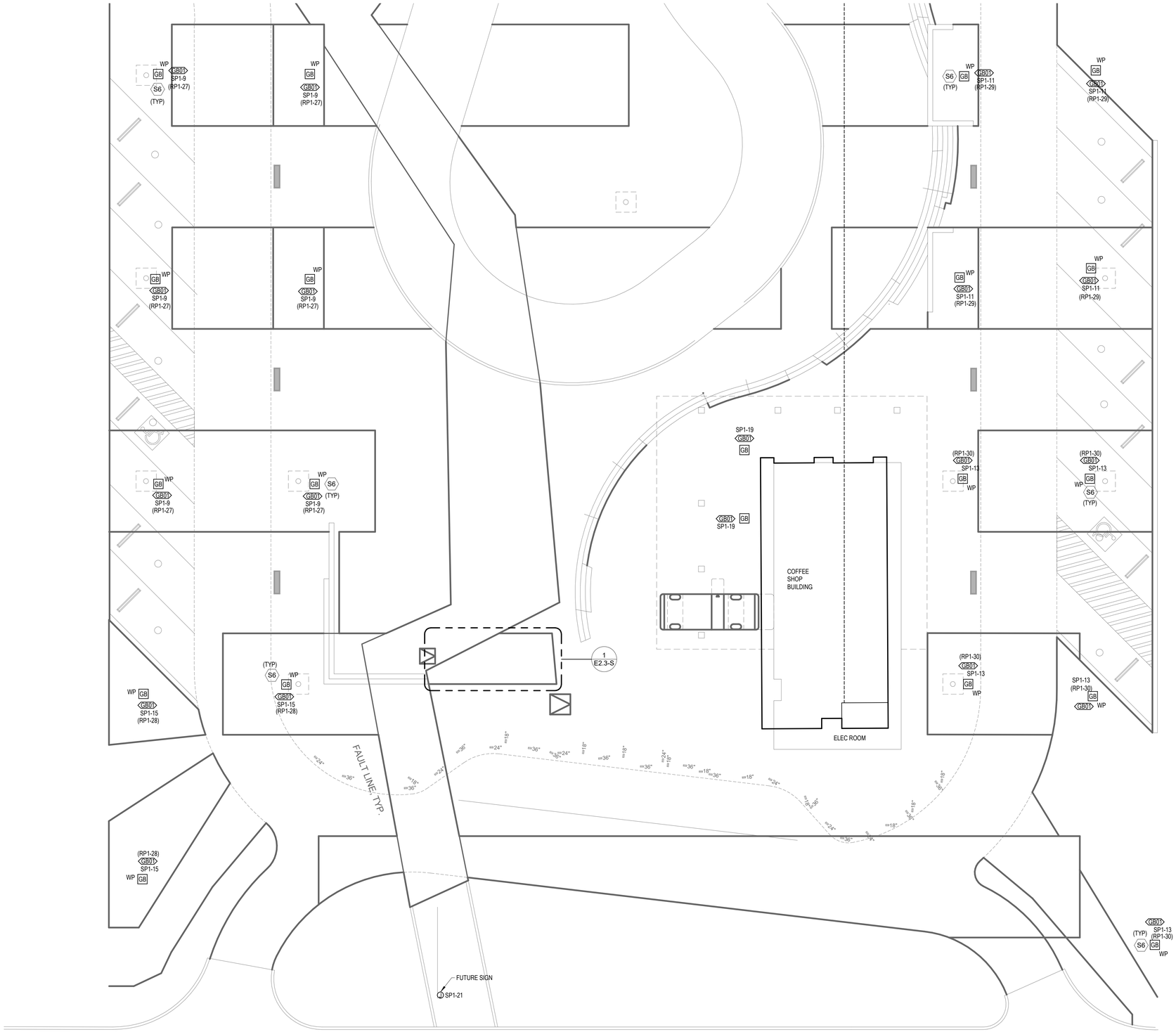
Sheet Name:
ELECTRICAL SITE PLAN - NORTH

Sheet Number:
E2.1-S

SHEET KEYNOTES

S6 CAREFULLY COORDINATE LOCATIONS OF ALL IN-GRADE BOXES WITH LANDSCAPE ARCHITECT, LANDSCAPE ISNTALLER AND OWNER PRIOR TO ROUGH-IN. LOCATIONS SHOWN ARE SCHEMATIC ONLY AND NOT MEANT TO BE USED FOR EXACT LOCATIONS.



ELECTRICAL SITE PLAN - SOUTH
SCALE = 1" = 10'-0"

WPA architecture

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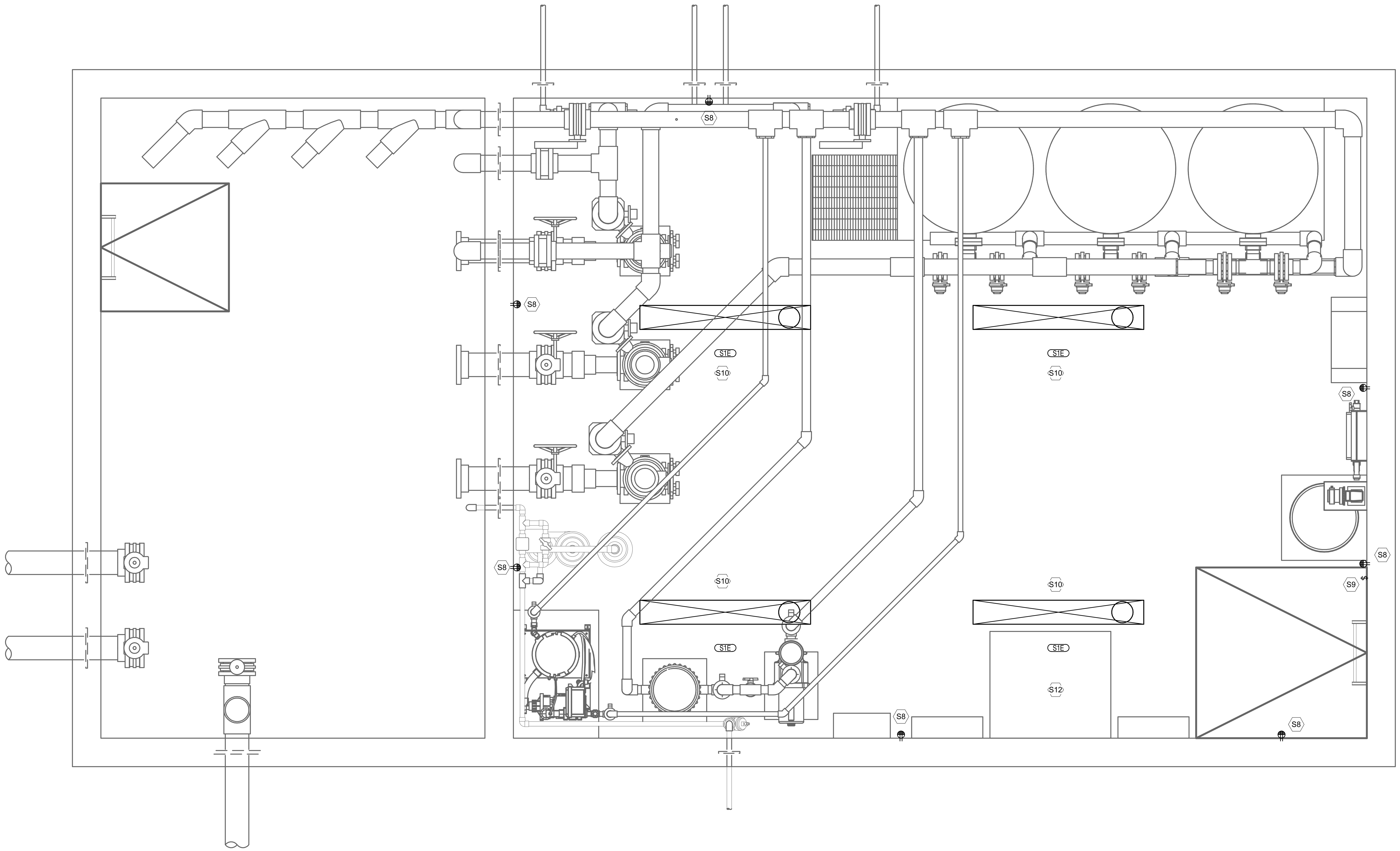
Sheet Name:
ELECTRICAL SITE PLAN - SOUTH

Sheet Number:
E2.2-S

SHEET KEYNOTES

S8	RECEPTACLE LOCATIONS ARE SCHEMATIC. COORDINATE LAYOUT WITH PIPING AND EQUIPMENT TO AVOID OBSTRUCTION.
S9	PROVIDE LIGHTING CONTROL WITHIN EASY ACCESS OF TOP OF ACCESS LADDER. COORDINATE LOCATION WITH OWNER PRIOR TO ROUGH-IN.
S10	FIXTURE LOCATIONS ARE SCHEMATIC. COORDINATE LAYOUT WITH PIPING AND EQUIPMENT TO AVOID OBSTRUCTION OF ILLUMINATION. FIXTURES CAN BE SURFACE MOUNTED OR CHAIN HUNG.
S12	ELECTRICAL CONTRACTOR TO PROVIDE CONNECTION FROM 'MDP' LOCATED IN ICE SUPPORT BUILDING TO PANEL 'H1' PROVIDED IN WATER FEATURE MECHANICAL VAULT DRAWINGS. COORDINATE WITH WATER FEATURE ENGINEER FOR EXACT REQUIREMENTS.



ELECTRICAL MECHANICAL VAULT PLAN

SCALE = 3/4" = 1'-0"

WPA architecture

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Sheet Name:
MECHANICAL VAULT ELECTRICAL PLAN

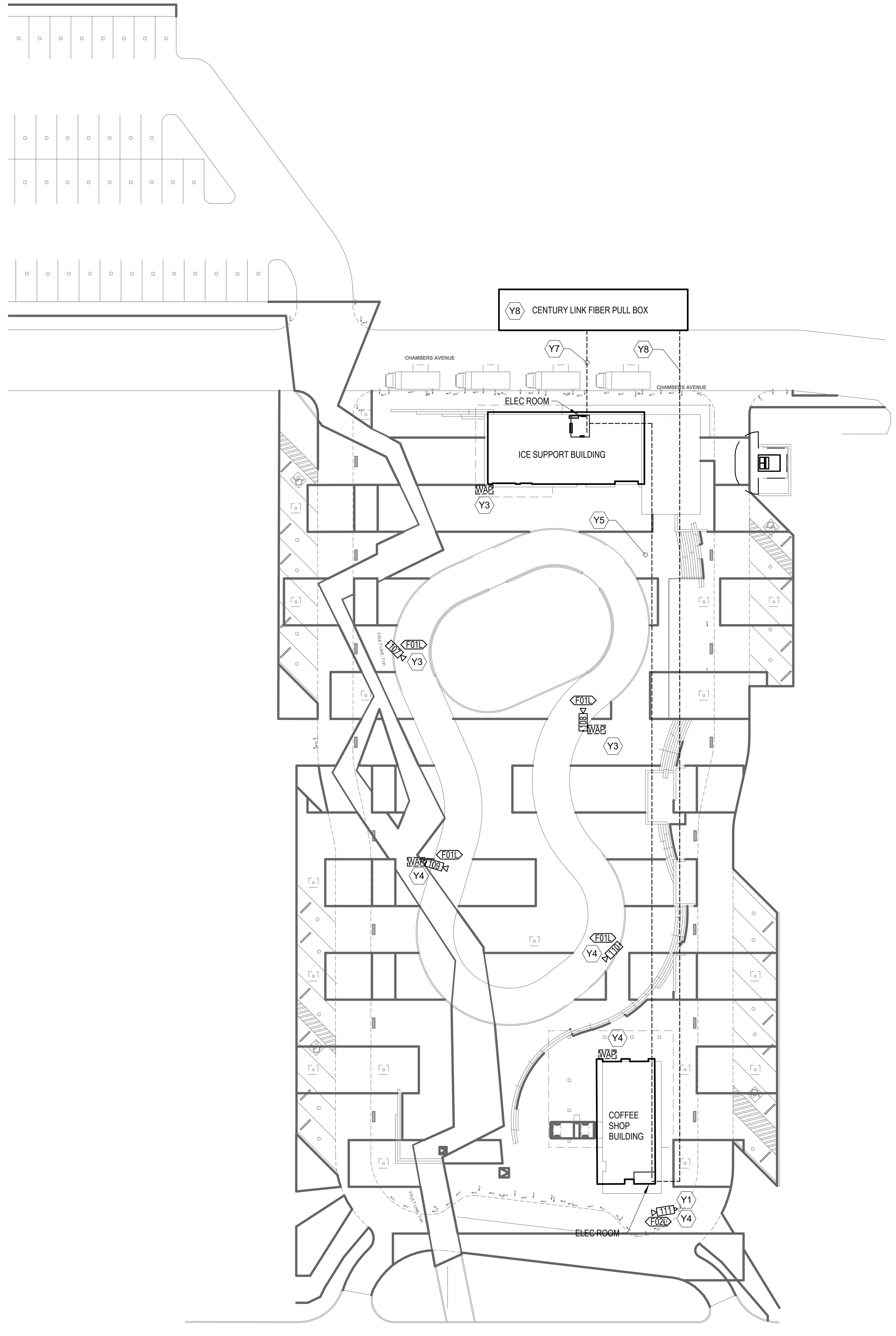
Sheet Number:
E2.3-S

GENERAL SHEET NOTES

1. SEE ICE SUPPORT AND COFFEE SHOP BUILDING FOR SECURITY CAMERAS ON BUILDING.

SHEET KEYNOTES

Y1	PROVIDE AND INSTALL LICENSE PLATE CAMERA. AIM AND PROGRAM PER MANUFACTURERS DIRECTIONS TO CAPTURE LICENSE PLATE.
Y3	PROVIDE (1) 1" CONDUIT WITH (3) CAT 6 FROM THE IT ROOM IN ICE SUPPORT BUILDING.
Y4	PROVIDE (1) 1" CONDUIT WITH (3) CAT 6 FROM THE TE ROOM IN THE COFFEE SHOP BUILDING.
Y5	PROVIDE (2) 2" CONDUITS. CONDUITS MUST BE 2' APART TO AVOID DAMAGE. NEITHER ONE OF THE CONDUITS ARE TO BE UNDER THE ICE RIBBON.
Y7	PROVIDE (2) 4" CONDUITS WITH (3) 1-1/4" INNERDUCTS UNDER THE SLAB AND THEN TURN DIRECTLY INTO THE BUILDING COMMUNICATION ROOM FROM THE CENTURY LINK PULL BOX DIRECTLY NORTH OF THE ICE SUPPORT BUILING. NONE OF THE CONDUITS ARE TO BE UNDER THE ICE RIBBON.
Y8	THIS LINE WILL NEED TO BE MOVED NORTH SLIGHTLY DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING EXACT LOCATION OF THIS PULL BOX AND WHERE IT NEEDS TO BE MOVED.



SYSTEMS SITE PLAN

SCALE = 1" = 30'-0"

WPA architecture

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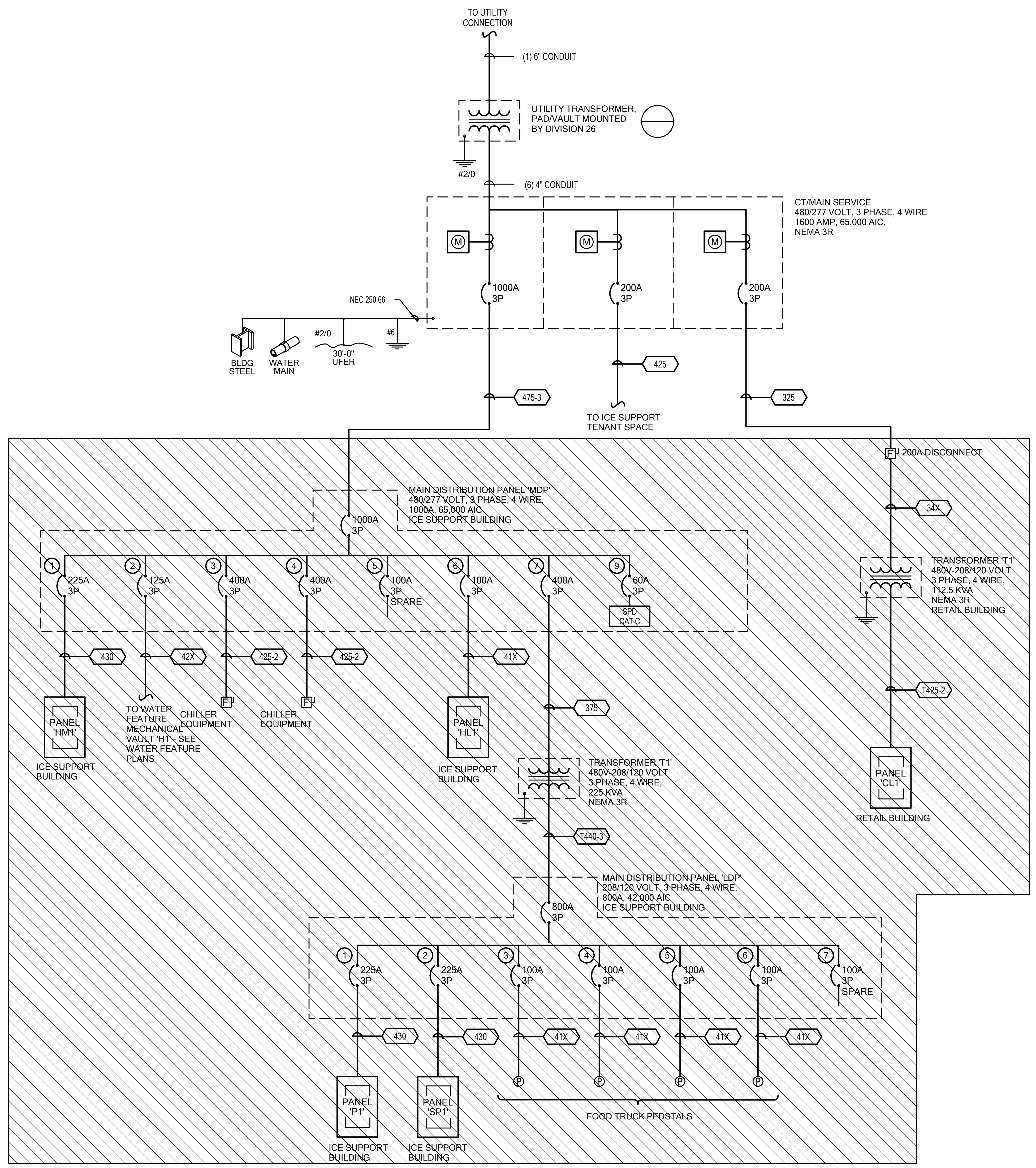
SYSTEMS SITE PLAN

Sheet Number:
E3.1-S



ONE-LINE DIAGRAM

NO SCALE

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY					ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY Δ 480-208/120 Y							
TRANS KVA	O.C. PROT.	TYPE COND.*	GEC (1)	MIN. Z%	O.C. PROT.	TYPE COND.*	COND. AMPS	SETS	CONDUCTOR (3) QUAN.	CONDUCTOR (3) SIZE	CONDUIT SIZE	BONDING JUMPER (2)
30	50	36	8 CU	3	100	T41X-1	120	1	4	1/0	2"	8 CU
45	70	34	4 CU	3	175	T44X-1	180	1	4	4/0	2-1/2"	4 CU
75	125	32X	2 CU	3	225	T435-1	250	1	4	350	3"	1/0 AL
112.5	175	34X	2 CU	4	400	T425-2	410	2	4	250	3"	1/0 AL
150	300	350	2/0 CU	4	600	T450-2	620	2	4	500	4"	4/0 AL
225	400	375	2/0 CU	4	800	T440-3	810	3	4	400	4"	4/0 AL
300	600	350-2	3/0 CU	5	1200	T450-4	1240	4	4	500	4"	250 AL
500	800	340-3	3/0 CU	5	1600	T440-6	1620	6	4	400	4"	300 AL
750	1200	350-4	3/0 CU	5	3000	T450-10	3100	10	4	500	4"	750 AL

ALUMINUM CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY					ALUMINUM XHHW-2 CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY (200% NEUTRAL) Δ 480-208/120 Y							
TRANS KVA	O.C. PROT.	TYPE COND.*	GEC (1)	MIN. Z%	O.C. PROT.	TYPE COND.*	COND. AMPS	SETS	CONDUCTOR (3) QUAN.	CONDUCTOR (3) SIZE	CONDUIT SIZE	BONDING JUMPER (2)
30	50	36	6 CU	3	100	T52X-1	108	1	5	2/0	2-1/2"	6 CU
45	70	34	2 CU	3	175	T530-1	184	1	5	300	3"	1/0 AL
75	125	32X	2 CU	3	225	T550-1	248	1	5	500	4"	1/0 AL
112.5	175	34X	1/0 CU	4	400	T535-2	400	2	5	350	3"	3/0 AL
150	300	350	2/0 CU	4	600	T535-3	600	3	5	350	4"	4/0 AL
225	400	375	2/0 CU	4	800	T535-4	800	4	5	350	4"	4/0 AL
300	600	350-2	3/0 CU	5	1200	T550-5	1240	5	5	500	4"	350 AL
500	800	340-3	3/0 CU	5	1600	T550-7	1736	7	5	500	4"	500 AL
750	1200	350-4	3/0 CU	5	3000	T575-10	3080	10	5	750	4"	750 AL

* SEE SCHEDULE FOR CONDUIT AND WIRE SIZE

NOTES:

1. GROUNDING ELECTRODE CONDUCTOR. (NEC 250.66)
2. SUPPLY SIDE BONDING JUMPER. (NEC 250.102 (C)(1))
3. XHHW INSULATION.

COPPER CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSULATION	EQ. GND. COND.(AL)
20	30	3/4"	2	10	THHN THWN	10
30	30	3/4"	3	10	THHN THWN	10
40	30	3/4"	4	10	THHN THWN	10
28	40	1"	2	8	THHN THWN	10
38	40	1"	3	8	THHN THWN	10
48	40	1"	4	8	THHN THWN	10
26	55	1"	2	6	THHN THWN	8
36	55	1"	3	6	THHN THWN	8
46	55	1"	4	6	THHN THWN	8
24	70	1"	2	4	THHN THWN	8
34	70	1-1/4"	3	4	THHN THWN	8
44	70	1-1/4"	4	4	THHN THWN	8
23	85	1-1/4"	2	3	THHN THWN	8
33	85	1-1/4"	3	3	THHN THWN	8
43	85	1-1/2"	4	3	THHN THWN	8
32	95	1-1/2"	3	2	THHN THWN	6
42	95	1-1/2"	4	2	THHN THWN	6

GENERAL SHEET NOTES

1. EMERGENCY EQUIPMENT INDICATED SHALL BE SELECTIVELY COORDINATED TO 0.1 SECONDS PER SPECIFICATION SECTION 26 0573. STUDY SHALL BE SUBMITTED PRIOR TO ALL OTHER EQUIPMENT SUBMITTALS.
2. SEE PLANS FOR LOCATIONS OF PANELBOARDS, SWITCHBOARDS TRANSFER SWITCHES, BUSWAY, TRANSFORMERS DISCONNECTS, ETC. AND PROVIDE NEMA RATED ENCLOSURES AS REQUIRED.
3. SUBMIT DIMENSIONED DRAWINGS OF ALL ELECTRICAL ROOMS SHOWING ALL EQUIPMENT LOCATIONS WITHIN EACH SPACE BASED ON THE EQUIPMENT MANUFACTURER GEAR SIZES WITH ALL EQUIPMENT SHOP DRAWINGS.
4. PROVIDE AN ARC ENERGY-REDUCING MAINTENANCE SWITCH FOR ALL OVER-CURRENT PROTECTIVE DEVICES RATED 1200 AMPS OR HIGHER. REFER TO SPECIFICATION SECTION 26 2815 OVER-CURRENT PROTECTIVE DEVICES AND 240.87 OF CURRENT NATIONAL ELECTRICAL CODE (NEC).
5. PROVIDE ELECTRONIC TRIP CIRCUIT BREAKERS FOR ALL CIRCUIT BREAKERS 600 AMPS AND ABOVE. REFER TO THE OVERCURRENT PROTECTION SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS.
6. ALL EQUIPMENT SHALL BE FULLY RATED. NO SERIES RATINGS ARE ALLOWED.
7. REFER TO SPECIFICATION SECTIONS FOR ADDITIONAL DETAILS.
8. PROVIDE PRELIMINARY SHORT CIRCUIT STUDY SUBMITTAL PRIOR TO SUBMITTAL OF ANY ELECTRICAL EQUIPMENT. REFER TO SPECIFICATION SECTION 26 0573 PROTECTIVE DEVICE STUDY.
9. PROVIDE A SURGE PROTECTIVE DEVICE ON EACH SWITCHBOARD AND PANELBOARD LOCATED ON THE EMERGENCY DISTRIBUTION SYSTEM. REFER TO SPECIFICATION SECTION 26 4313 SURGE-PROTECTIVE DEVICES (SPD) FOR LOCATION CATEGORY.
10. HATCHED AREA INDICATES ELEMENTS OF ONE-LINE THAT DO NOT APPLY TO THIS BUILDING/PROJECT AREA.

SHEET KEYNOTES

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSULATION	EQ. GND. COND.(AL)
31X	120	2"	3	1/0	XHHW-2	4
41X	120	2"	4	1/0	XHHW-2	4
51X	96	2"	5 *	1/0	XHHW-2	4
32X	135	2"	3	2/0	XHHW-2	4
42X	135	2"	4	2/0	XHHW-2	4
52X	108	2"	5 *	2/0	XHHW-2	4
33X	155	2"	3	3/0	XHHW-2	4
43X	155	2"	4	3/0	XHHW-2	4
53X	124	3"	5 *	3/0	XHHW-2	4
34X	180	2"	3	4/0	XHHW-2	4
44X	180	3"	4	4/0	XHHW-2	4
54X	144	3"	5 *	4/0	XHHW-2	2
325	205	2"	3	250	XHHW-2	2
425	205	3"	4	250	XHHW-2	2
525	164	3"	5 *	250	XHHW-2	2
330	230	3"	3	300	XHHW-2	2
430	230	3"	4	300	XHHW-2	2
530	184	3"	5 *	300	XHHW-2	2
335	250	3"	3	350	XHHW-2	2
435	250	3"	4	350	XHHW-2	2
535	200	3"	5 *	350	XHHW-2	2
340	270	3"	3	400	XHHW-2	2
440	270	3"	4	400	XHHW-2	2
540	216	3"	5 *	400	XHHW-2	2
350	310	4"	3	500	XHHW-2	1
450	310	4"	4	500	XHHW-2	1
550	248	4"	5 *	500	XHHW-2	1
375	385	4"	3	750	XHHW-2	1
475	385	4"	4	750	XHHW-2	1
575	308	4"	5 *	750	XHHW-2	1

ALUMINUM CONDUCTOR & CONDUIT SCHEDULE FOR PARALLEL RUNS

TYPE	MAX. O.C. PROT.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND. COND.(AL)
325-2	400	410	2	3	250	2-1/2"	2/0
425-2	400	410	2	4	250	2-1/2"	2/0
535-2	400	400	2	5*	350	3"	2/0
350-2	600	620	2	3	500	3"	2/0
450-2	600	620	2	4	500	3"	2/0
535-3	600	600	3	5*	350	3"	2/0
340-3	800	810	3	3	400	2-1/2"	3/0
440-3	800	810	3	4	400	3"	3/0
535-4	800	800	4	5 *	350	4"	3/0
375-3	1000	1155	3	3	750	4"	4/0
475-3	1000	1155	3	4	750	4"	4/0
535-5	1000	1000	5	5 *	350	4"	4/0
350-4	1200	1240	4	3	500	4"	250
450-4	1200	1240	4	4	500	4"	250
550-5	1200	1240	5	5 *	500	4"	250
340-6	1600	1620	6	3	400	4"	350
440-6	1600	1620	6	4	400	4"	350
550-7	1600	1736	7	5 *	500	4"	350
475-6	2000	2310	6	4	750	4"	400
475-7	2500	2695	7	4	750	5"	600
475-8	3000	3080	8	4	750	5"	600
475-11	4000	4235	11	4	750	5"	750

NOTES:
IN PARALLEL RUNS SIZE GND. COND. IN ACCORDANCE WITH NEC PARA. 250-122.

GND. CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS

* 200% NEUTRAL, DERATED TO 80% BASED ON NEC 310.15.B(5)(C)

** COPPER CONDUCTOR (XHHW)

PROVIDE COMPACT STRANDED ALUMINUM ASSOCIATION 8000 SERIES ALLOY CONDUCTORS.

PROVIDE TERMINATION FOR ALUMINUM-ALLOY CONDUCTORS OF HYDRAULIC COMPRESSION TYPE ONLY LISTED UNDER UL 486-B MARKED "AL7CU" FOR 75° RATED CIRCUITS.

PROVIDE ALL ELECTRICAL EQUIPMENT WITH PROPER SIZING TO ACCOMMODATE ALUMINUM CONDUCTORS, COORDINATE WITH EQUIPMENT SUPPLIER.

WPA architecture

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DRAWN: BNA
CHECKED: BNA
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ONE-LINE DIAGRAM

Sheet Number:
E5.1-S

PANELBOARD SCHEDULE

PANEL: HL1 **TYPE:** Type 1 **VOLTS:** 480/277 Wye **PHASE:** 3 **WIRES:** 4

MOUNTING: SURFACE **LOCATION:** **MAINS:** MLO

BUSSING: **FED FROM:** ___ SUBFEED LUGS

AMP: 100 A ___ DOOR-IN-DOOR

___ ISO GROUND

___ 200% NEUTRAL

___ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
SITE LIGHTING	20 A	1	6	1	380 VA			0 VA			2	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	6	3		200 VA			0 VA		4	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	6	5			0 VA			0 VA	6	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	6	7	1080 VA			0 VA			8	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	6	9		200 VA			0 VA		10	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	6	11			480 VA			0 VA	12	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	6	13	200 VA			0 VA			14	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	6	15		200 VA			0 VA		16	--	1	20 A	SPARE
SITE LIGHTING	20 A	1	ML	17			210 VA			0 VA	18	--	1	20 A	SPARE
ICE SUPPORT LIGHTING	20 A	1	12	19	2229 VA			0 VA			20	--	1	20 A	SPARE
ICE SUPPORT LIGHTING	20 A	1	12	21		654 VA			0 VA		22	--	--	--	SPACE ONLY
ICE SUPPORT LIGHTING	20 A	1	12	23			616 VA			0 VA	24	--	--	--	SPACE ONLY
ICE SUPPORT LIGHTING	20 A	1	12	25	640 VA			0 VA			26	--	--	--	SPACE ONLY
ICE SUPPORT LIGHTING	20 A	1	12	27		20 VA			0 VA		28	--	--	--	SPACE ONLY
SPACE ONLY	--	--	--	29			0 VA			0 VA	30	--	--	--	SPACE ONLY
SPACE ONLY	--	--	--	31	0 VA			0 VA			32	--	--	--	SPACE ONLY
SPACE ONLY	--	--	--	33		0 VA			0 VA		34	--	--	--	SPACE ONLY
SPACE ONLY	--	--	--	35			0 VA			0 VA	36	--	--	--	SPACE ONLY
SPACE ONLY	--	--	--	37	0 VA			0 VA			38	--	--	--	SPACE ONLY
SPACE ONLY	--	--	--	39		0 VA			0 VA		40	--	--	--	SPACE ONLY
SPACE ONLY	--	--	--	41			0 VA			0 VA	42	--	--	--	SPACE ONLY
					4529	1274	1306	**TOTAL (VA)**							**CONNECTED LOAD TOTAL**
					16 A	5 A	5 A	**AMPS/PHASE**							7109 VA

Legend:
*** PROVIDE 5mA GFCI CIRCUIT BREAKER**

AIC RATING _____ **AMPS RMS SYSM.**

PANELBOARD SCHEDULE

PANEL: SP1 **TYPE:** Type 1 **VOLTS:** 120/208 Wye **PHASE:** 3 **WIRES:** 4

MOUNTING: SURFACE **LOCATION:** **MAINS:** MLO

BUSSING: **FED FROM:** ___ SUBFEED LUGS

AMP: 225 A ___ DOOR-IN-DOOR

___ ISO GROUND

___ 200% NEUTRAL

___ SPD

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	A	B	C	A	B	C	CIR. NO.	WIRE SIZE	POLE	AMPS	ITEM
IN-GRADE BOX	20 A	1	6	1	1080 VA						2				
IN-GRADE BOX	20 A	1	6	3		720 VA					4				
IN-GRADE BOX	20 A	1	6	5			900 VA				6				
IN-GRADE BOX	20 A	1	6	7	720 VA						8				
IN-GRADE BOX	20 A	1	6	9		1080 VA					10				
IN-GRADE BOX	20 A	1	6	11			720 VA				12				
IN-GRADE BOX	20 A	1	6	13	900 VA						14				
IN-GRADE BOX	20 A	1	6	15		540 VA					16				
Other	20 A	1	6	17			291 VA				18				
RECEPTACLE	20 A	1	6	19	360 VA						20				
FUTURE SIGN	20 A	1	6	21		500 VA					22				
				23							24				
				25							26				
				27							28				
				29							30				
				31							32				
				33							34				
				35							36				
				37							38				
				39							40				
				41							42				
					3060	2840	1911	**TOTAL (VA)**							**CONNECTED LOAD TOTAL**
					27 A	25 A	16 A	**AMPS/PHASE**							7811 VA

Legend:
*** PROVIDE 5mA GFCI CIRCUIT BREAKER**

AIC RATING _____ **AMPS RMS SYSM.**

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DESIGNED BY: BNA
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PANELBOARD SCHEDULES

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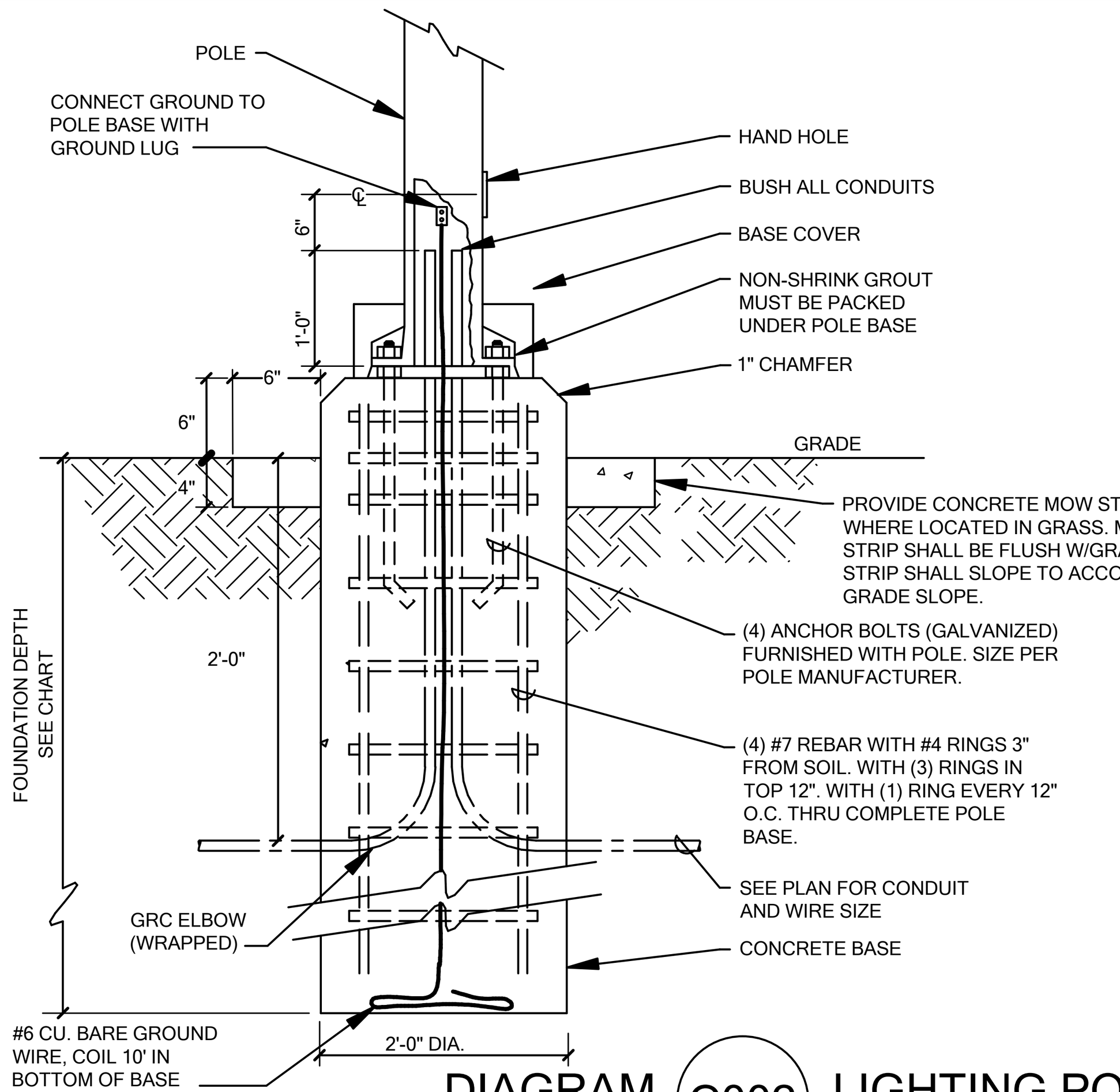


POLE FOUNDATION DEPTH

POLE HEIGHT	FLUSH TO 6" ABOVE GRADE
10'	3'
15'	3'-6"
20'	4'
25'	4'-6"
30'	5'
35'	5'-6"
40'	6'

* ALL FOUNDATIONS ARE 24" IN DIAMETER UNLESS NOTED OTHERWISE.

PROVIDE BUSSMAN HEB FUSEHOLDER (OR LITTELFUSE LEB-XX-S) WITH "BREAKAWAY" RECEPTACLES IN ALL CONDUCTORS RUNNING TO THE TOP OF EACH POLE. LOCATE FUSEHOLDER AT HAND HOLE OR IN BASE JUNCTION BOX AS APPLICABLE.

DIAGRAM C002 LIGHTING POLE FOUNDATION
NTS

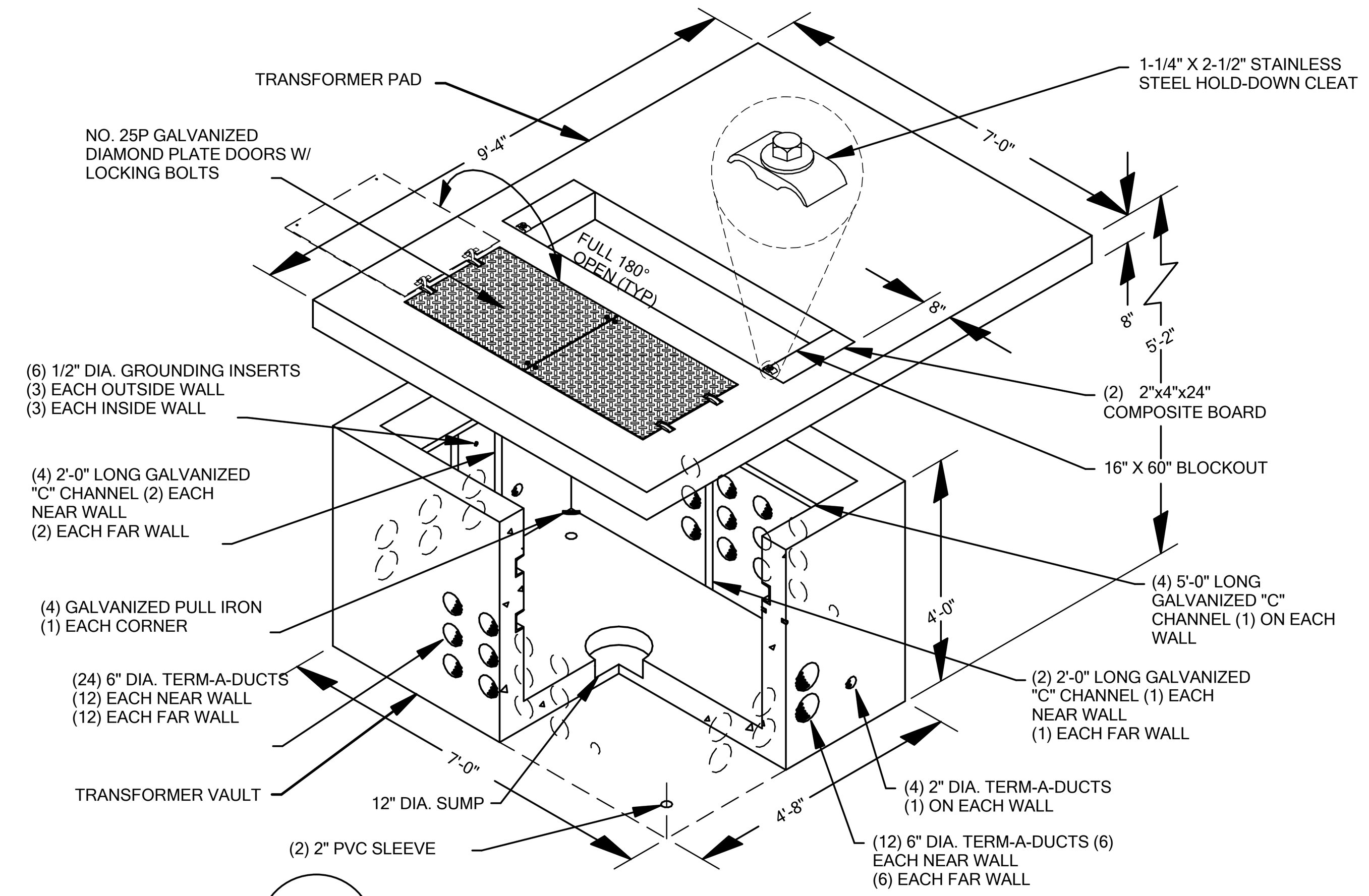
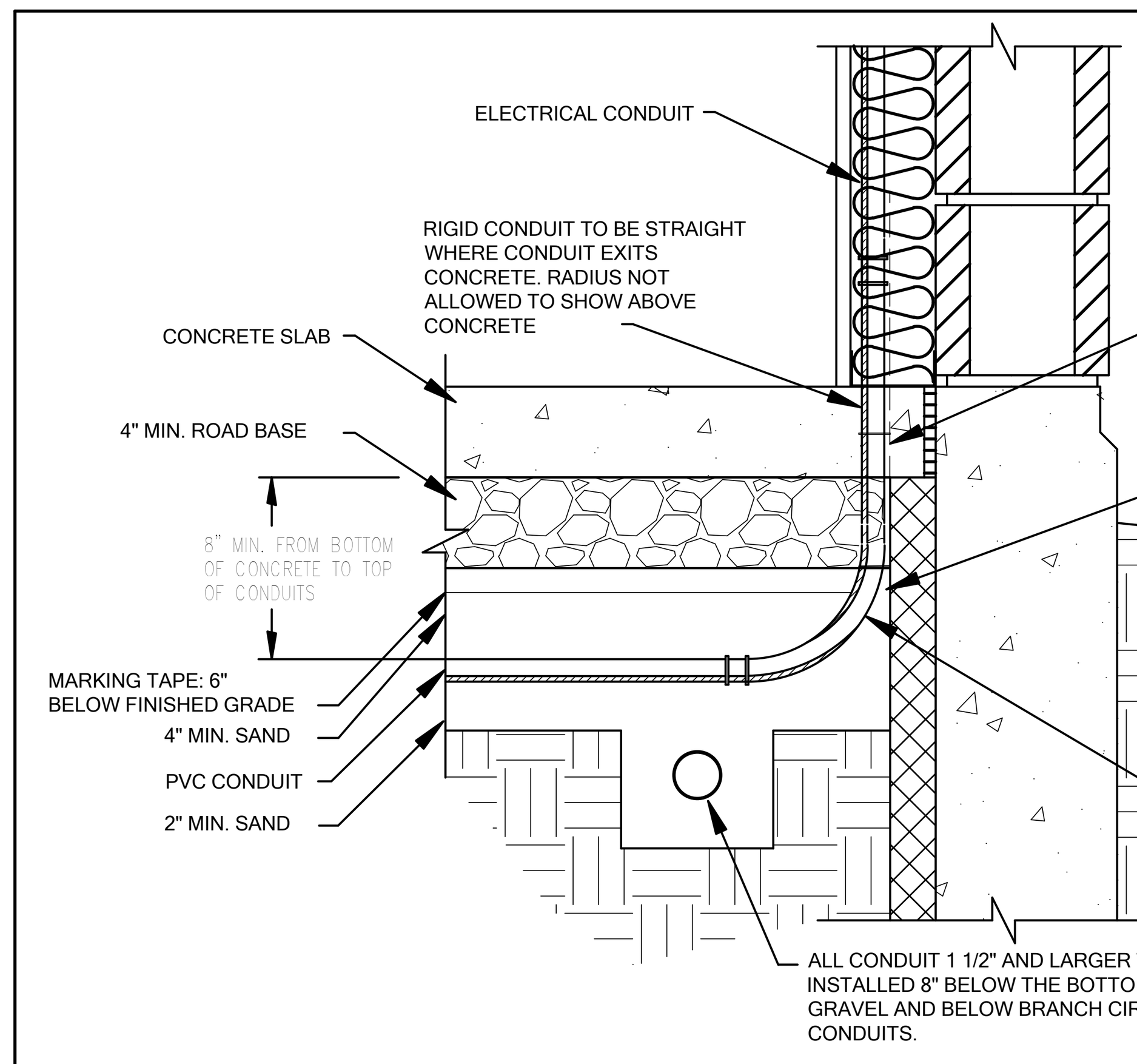
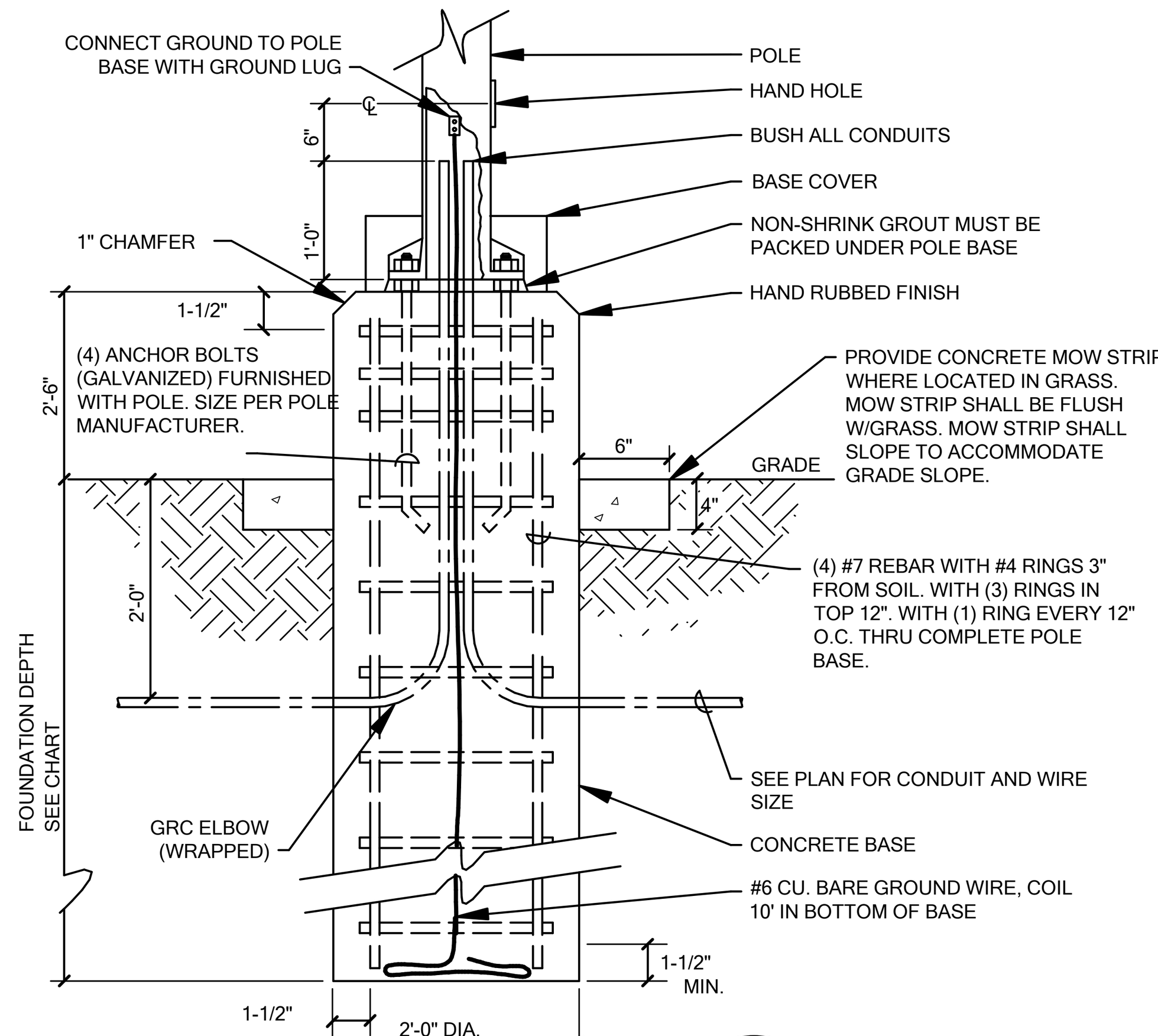


DIAGRAM Q015 TRANSFORMER VAULT (75-750KVA)
NTS



NOTES:
1. SEE SPECIFICATION FOR ALL INSTALLATION REQUIREMENTS.
2. INSTALL DETECTABLE MARKING TAPE FOR ALL UNDERGROUND WIRING. SEE SPECIFICATION FOR MORE INFORMATION.

DIAGRAM F016 TYPICAL CONDUIT INSTALLATION
NTS



POLE FOUNDATION DEPTH

POLE HEIGHT	2'-6" ABOVE GRADE
10'	4'
15'	4'-6"
20'	5'
25'	5'-6"
30'	6'
35'	6'-6"
40'	7'

* ALL FOUNDATIONS ARE 24" IN DIAMETER UNLESS NOTED OTHERWISE.

PROVIDE BUSSMAN HEB FUSEHOLDER (OR LITTELFUSE LEB-XX-S) WITH "BREAKAWAY" RECEPTACLES IN ALL CONDUCTORS RUNNING TO THE TOP OF EACH POLE. LOCATE FUSEHOLDER AT HAND HOLE OR IN BASE JUNCTION BOX AS APPLICABLE.

DIAGRAM C003 LIGHTING POLE FOUNDATION
NTS

NOTES:
1. SEE SPECIFICATION FOR ALL INSTALLATION REQUIREMENTS.
2. INSTALL DETECTABLE MARKING TAPE FOR ALL UNDERGROUND WIRING. SEE SPECIFICATION FOR MORE INFORMATION.

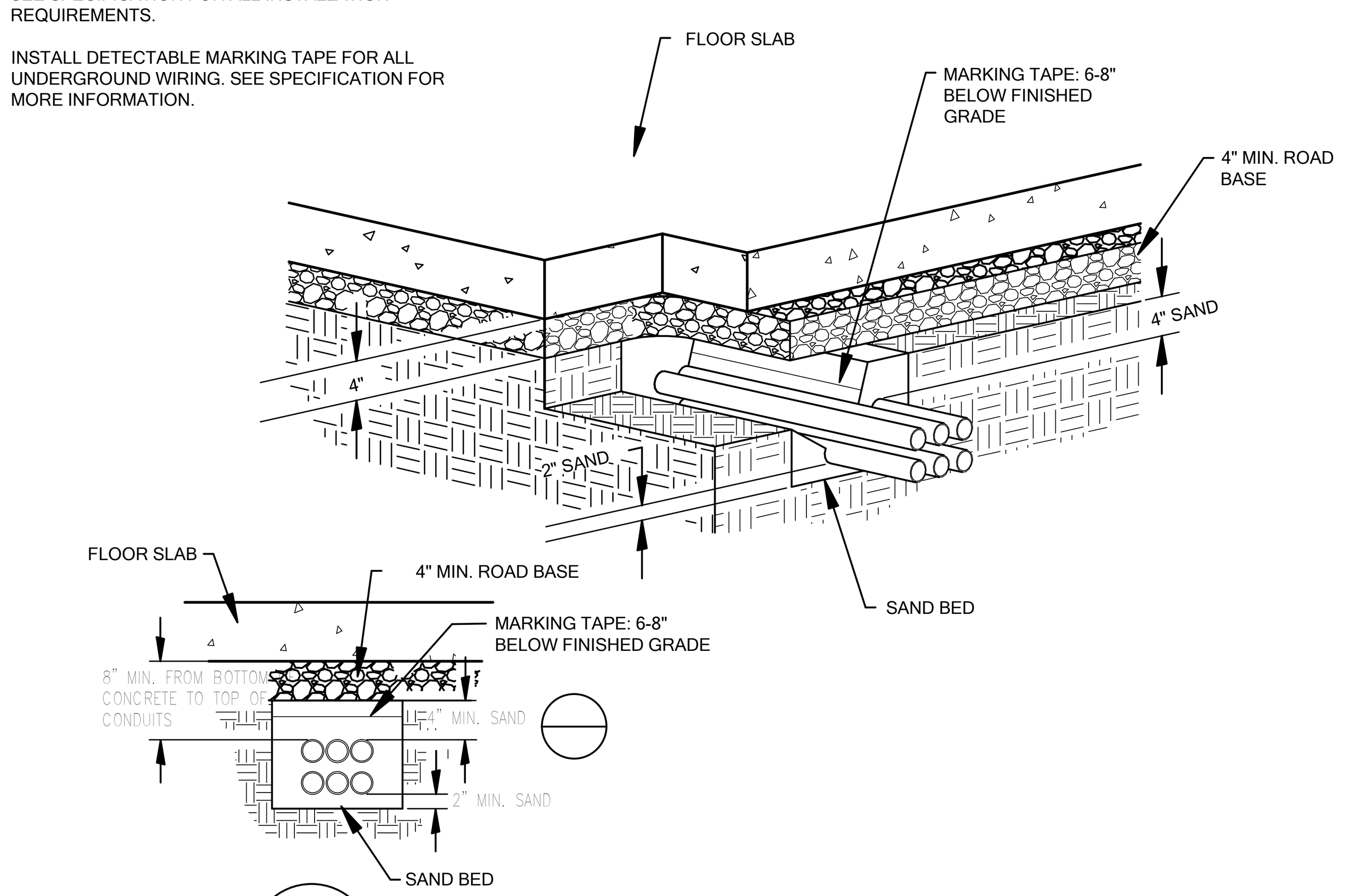


DIAGRAM U007 CONDUIT BELOW SLAB
NTS

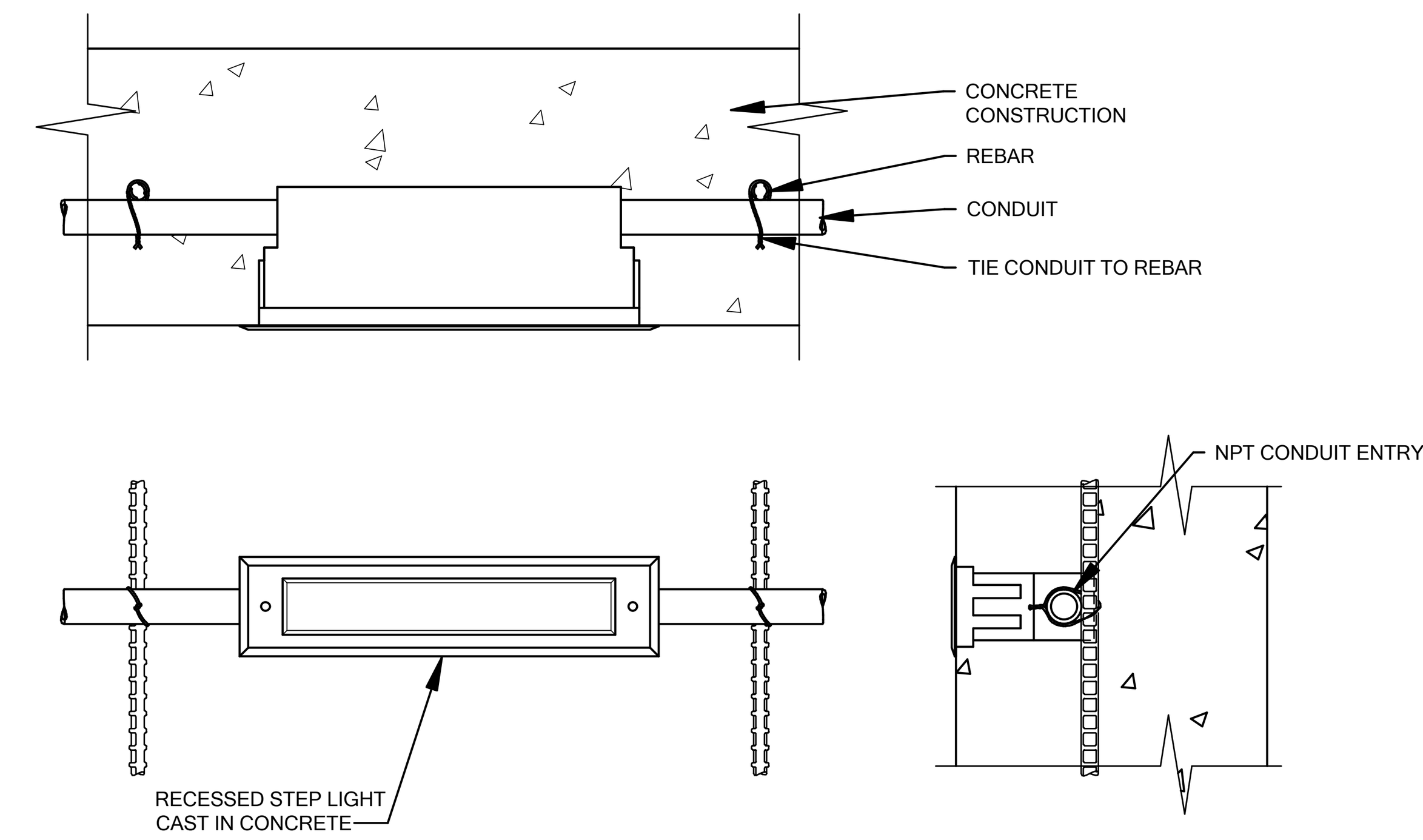


DIAGRAM B024 RECESSED STEP LIGHT
NTS

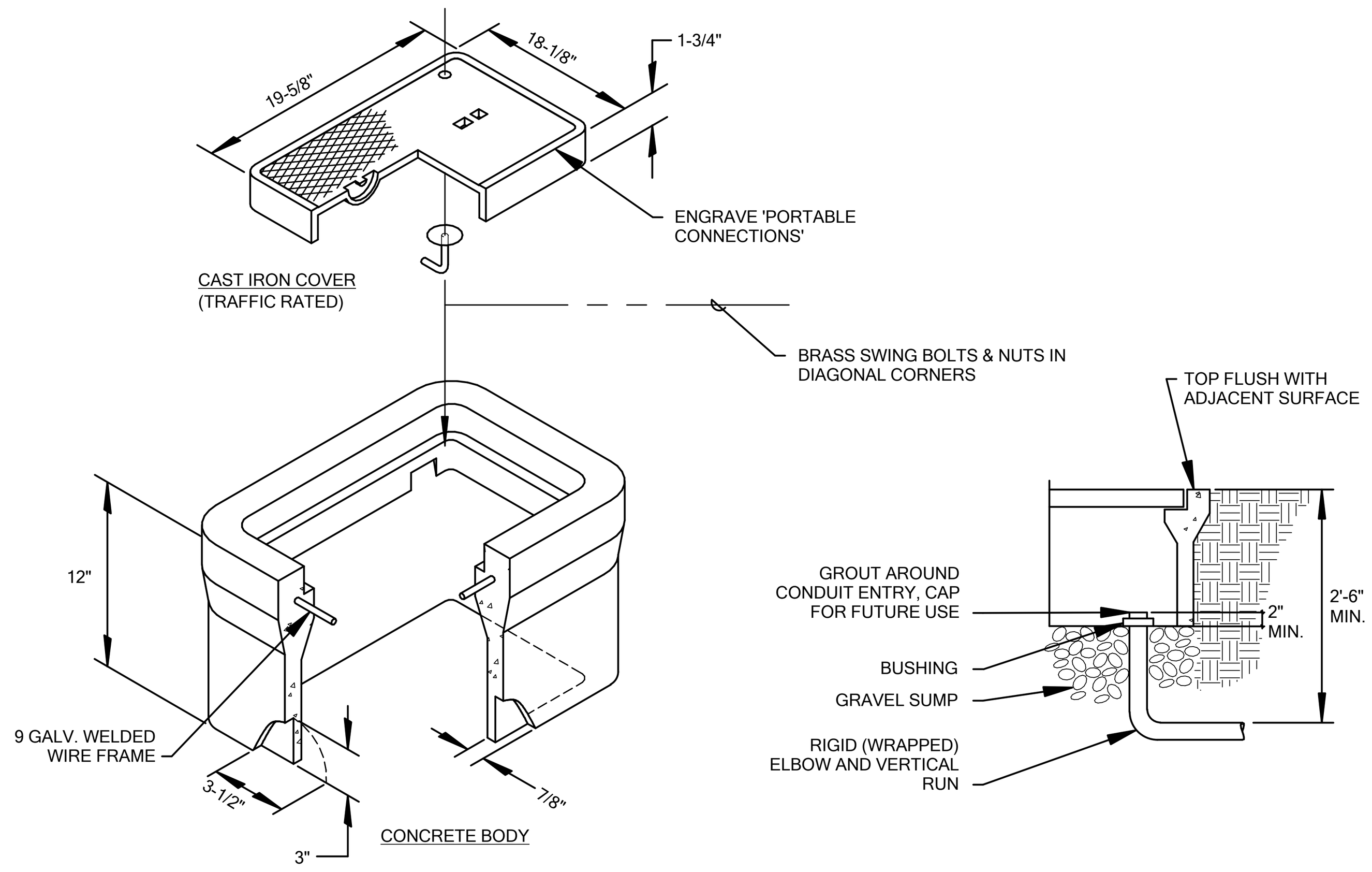
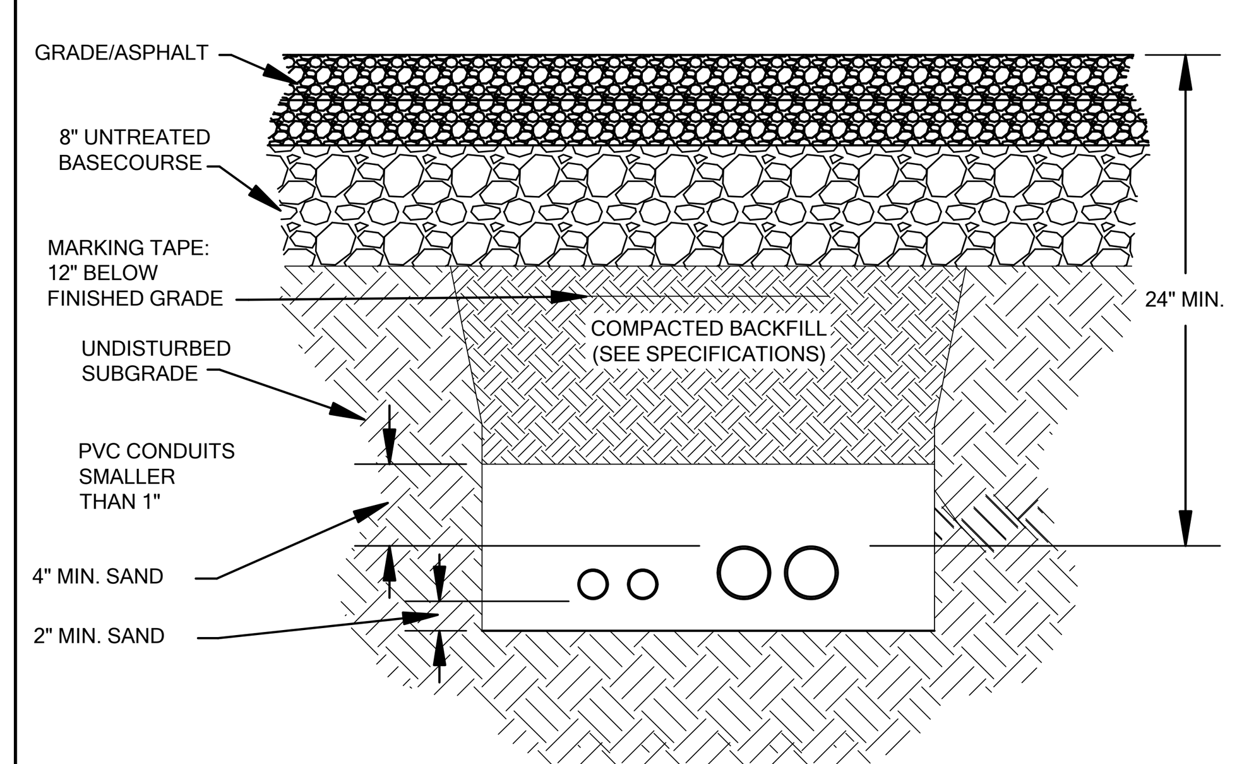


DIAGRAM L006 CONCRETE J-BOX
NTS



NOTES:
1. SEE SPECIFICATION FOR ALL INSTALLATION REQUIREMENTS.
2. INSTALL DETECTABLE MARKING TAPE FOR ALL UNDERGROUND WIRING. SEE SPECIFICATION FOR MORE INFORMATION.
3. APPLY PROTECTIVE COATING TO METALLIC RACEWAYS IN DIRECT CONTACT WITH EARTH OR FILL OF ANY TYPE; CONSISTING OF SPIRALLY WRAPPED PVC TAPE (1/2" MINIMUM OVERLAP OF SCOTCH WRAP TAPE OR EQUAL); OR FACTORY APPLIED VINYL CLADDING (MINIMUM THICKNESS .020 INCHES). COMPLETELY WRAP AND TAPE ALL FIELD JOINTS.
4. BURIAL DEPTHS MUST COMPLY WITH NEC SECTION 300-5 BUT IN NO CASE BE LESS THAN 24", UNLESS NOTED OTHERWISE ON DRAWINGS.
5. LOCATE AND PROTECT ALL CROSSINGS OF EXISTING UTILITIES AND OTHER UNDERGROUND WORK.
6. PROVIDE 6 INCHES TOP SOIL IN PLANTED AREAS INSTEAD OF BASECOARSE AND ASPHALT.
7. SEE SPECIFICATIONS FOR SUBSIDENCE WARRANTY.
8. SEE SPECIFICATIONS FOR STORAGE AND REMOVAL OF EXCAVATED MATERIAL.

DIAGRAM U009 CONDUIT BELOW GRADE
NTS

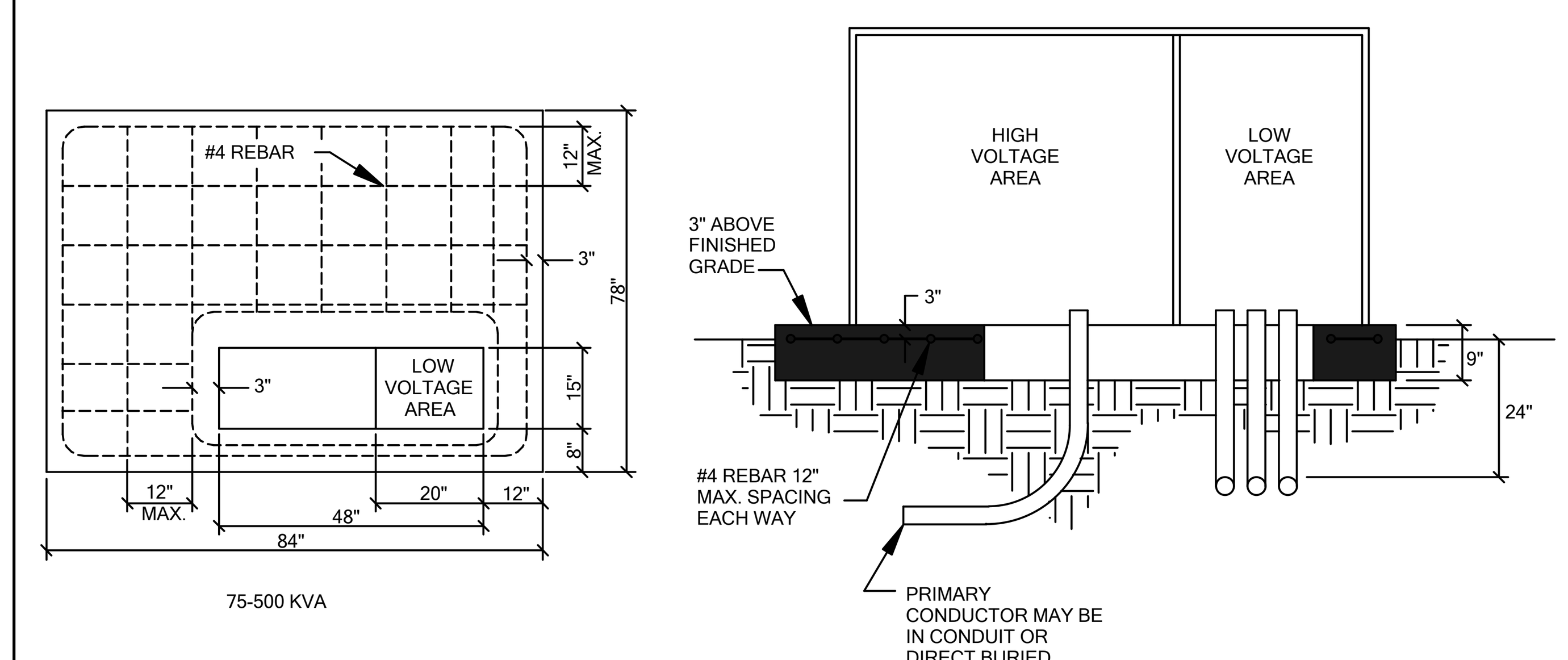


DIAGRAM Q004 PAD MOUNTED TRANSFORMER (75-500 KVA)
NTS

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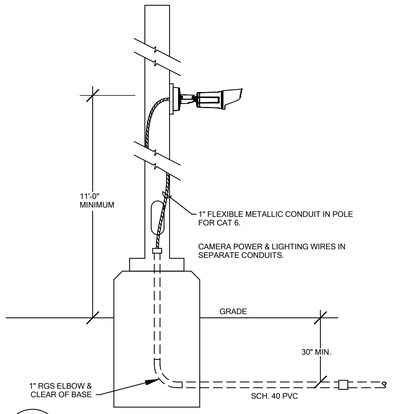

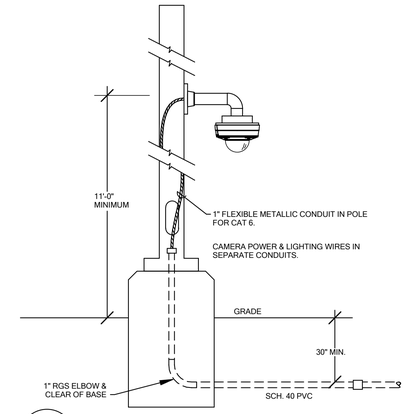

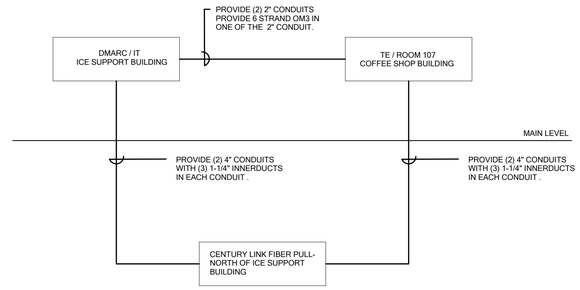

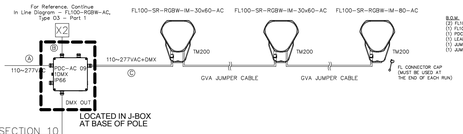

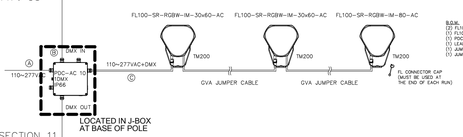

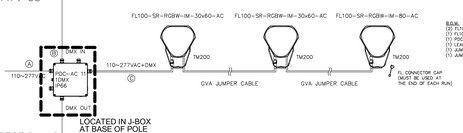

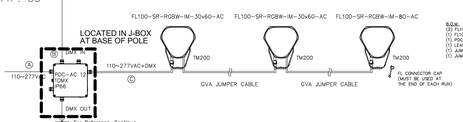

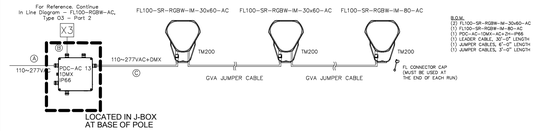

DIAGRAM F02L LICENSE PLATE CAMERA ON LIGHT POLE

NTS

DIAGRAM F01L CAMERA/LIGHT POLE

NTS

DIAGRAM T001 DATA RISER - MILL CREEK

NTS

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Ⓐ MAINS POWER CONDUIT AND WIRING PROVIDED AND INSTALLED BY CONTRACTOR.

Ⓑ DMX CABLE RECOMMENDED SUCH AS BELDEN 9842. FOR A DMX CONNECTION, USE 2 WIRES AS DMX+ AND DMX– AND ONE WIRE AS DMX COMMON/GROUND.

Ⓒ 30FT LEADER CABLE FOR FL AC, PROVIDED BY GVA LIGHTING. GVA LEADER AND JUMPER CABLE TO NOT BE EXTENDED USING THIRD PARTY CABLES.

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Ⓒ 30FT LEADER CABLE FOR FL AC, PROVIDED BY GVA LIGHTING. GVA LEADER AND JUMPER CABLE TO NOT BE EXTENDED USING THIRD PARTY CABLES.

GENERAL SHEET NOTES

1. ALL SECURITY CAMERAS SHOWN SHALL HAVE (1) CAT-6 CABLE INSTALLED BY THE LOW VOLTAGE CONTRACTOR. PROVIDE A 10'-0" LOOP AT EACH CAMERA LOCATION TO ALLOW CAMERA TO BE RELOCATED WHERE REQUIRED. REFER TO THE TELECOMMUNICATIONS SHEETS FOR THE NEAREST PATCH PANEL.

WPA architecture

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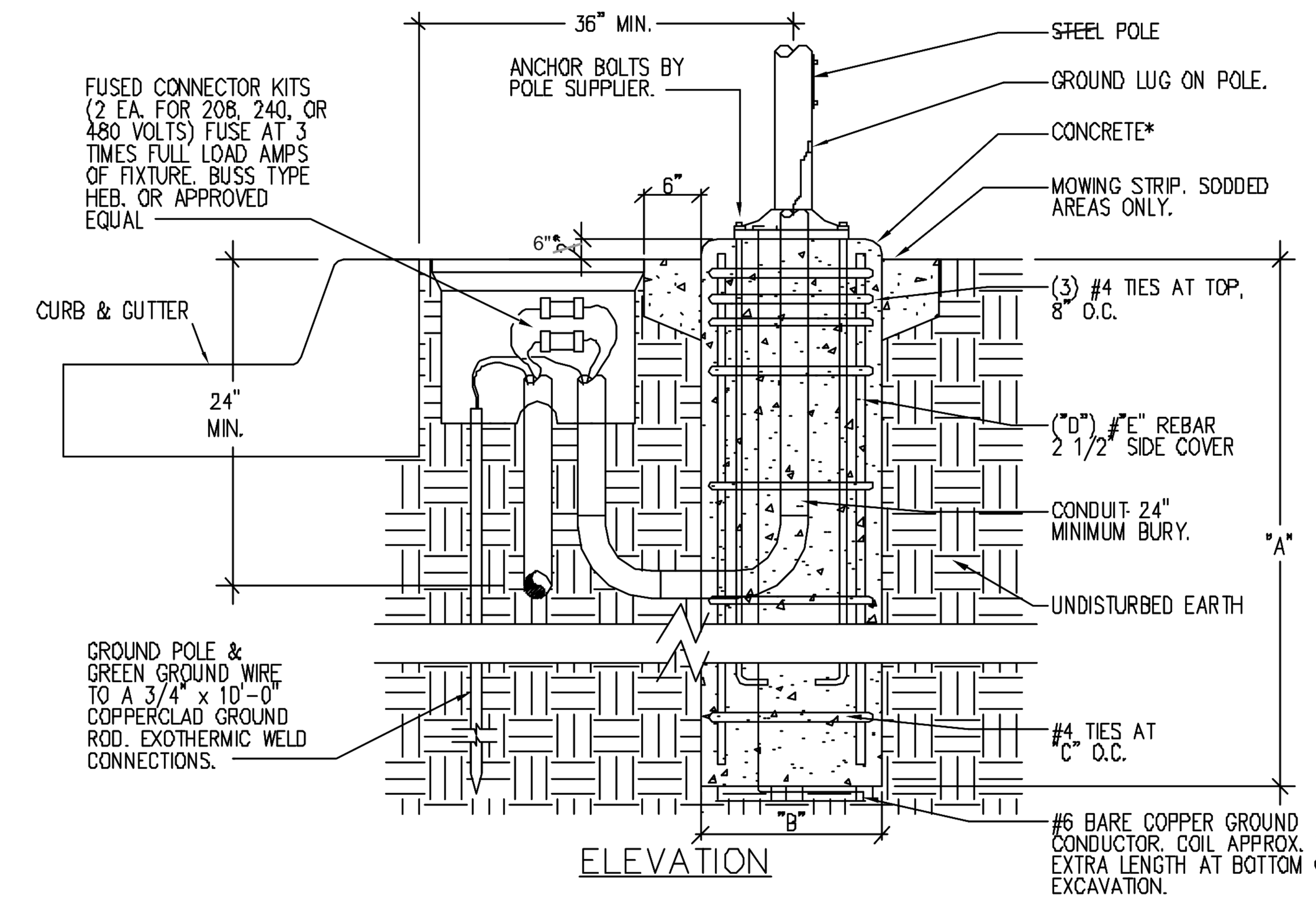
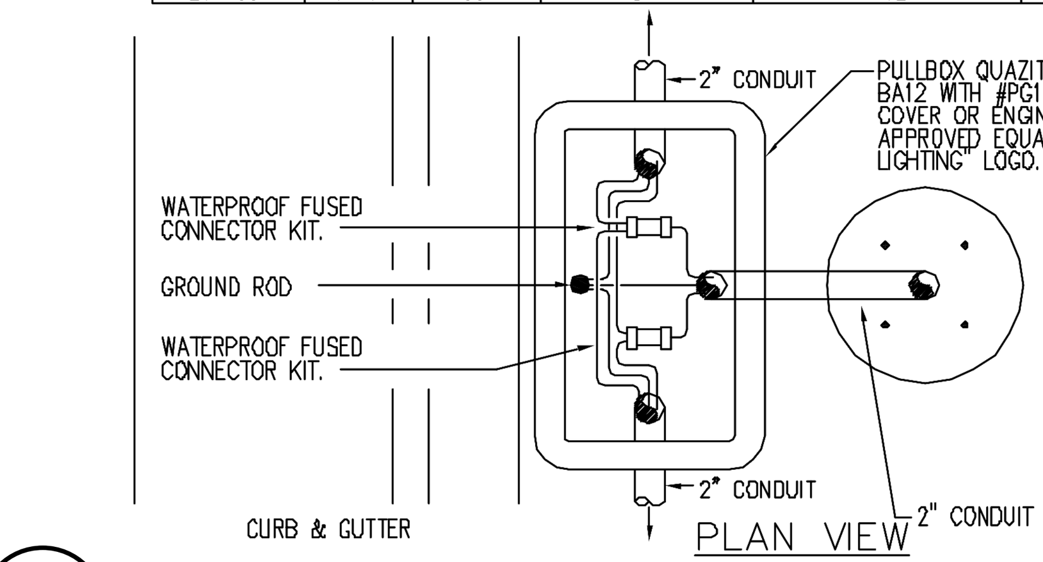


ELEVATION

POLE SIZE	DEPTH "A"	DIAMETER "B"	REBAR TIES O.C. "C"	NO. OF VERT. REBAR "D"	REBAR SIZE "E"
10'-15'	4'-6"	18"	8"	6	#6
16'-25'	6'-0"	24"	8"	8	#7
26'-50'	9'-0"	30"	8"	12	#7

*CONCRETE
CLASS 4000 PER APWA 03304
PLACEMENT PER APWA 03310
CURE PER APWA 03390



PLAN VIEW

6 STREET LIGHT POLE, CONCRETE ANCHOR BASE AND PULL BOX
SCALE: NONE

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AUDIOVISUAL RESPONSIBILITY MATRIX

SCOPE OF WORK	FURNISHED	INSTALLED
ROUGH-IN - CONDUIT W/PULL STRING, JUNCTION BOXES, FLOOR BOXES, FLAT PANEL DISPLAY BACK BOXES, ETC.	EC	EC
PATHWAY EQUIPMENT - CABLE TRAY, JHOOKS, SLEEVES, KNOCKOUTS, ETC.	EC	EC
SOUNDMASKING SYSTEM - INCLUDES A COMPETE SYSTEM; LOUDSPEAKERS/EMITTERS, CABLING, POWER MODULES, ETC.	LVC / AV	LVC / AV
LIGHTING CONTROL SYSTEM INTERFACE DEVICE(S) AND CABLING TO AV CONTROL SYSTEM. TERMINATION INTO AV SYSTEM CONTROLLER BY AV INSTALLER	EC	EC
MOTORIZED SHADE CONTROL SYSTEM INTERFACE DEVICE(S) AND CABLING TO AV CONTROL SYSTEM. TERMINATION INTO AV SYSTEM CONTROLLER BY AV INSTALLER	GC	GC
STRUCTURAL BACKING AND SUPPORT FOR WALL MOUNTED EQUIPMENT	GC	GC
CUSTOM TELECOMMUNICATIONS CONNECTOR INSERT PLATE FOR FLOOR BOXES AND/OR WALL PLATES	EC	EC
CUSTOM AUDIOVISUAL CONNECTOR INSERT PLATE FOR FLOOR BOXES AND/OR WALL PLATES	AV	AV
INSTRUCTOR'S LECTERNS/CONSOLES WITH INTEGRATED AUDIOVISUAL SYSTEMS COMPONENTS	OWN	OWN
FURNITURE BOXES WITH AUDIOVISUAL CONNECTIONS AND/OR CABLES	AV	AV
EQUIPMENT RACKS WITHIN THE ER(MDF)/TR(IDF) FOR SYSTEM COMPONENTS	TC	TC
SUPPORT CABLES, PRE-CONSTRUCTION KITS, TILE BRIDGES AND/OR BACK BOXES FOR CEILING MOUNTED SECURITY, INTRUSION AND ACCESS CONTROL DEVICES	EC	EC
SUPPORT CABLES, PRE-CONSTRUCTION KITS, TILE BRIDGES AND/OR BACK BOXES FOR CEILING MOUNTED AV DEVICES	AV	AV
SPECIALTY BACK BOXES FOR AUDIOVISUAL COMPONENTS (TOUCH PANELS, LOUDSPEAKERS, KEYPADS, ETC.)	EC	EC
AC POWER SYSTEMS (120/240 VOLTS)	EC	EC
NETWORK SWITCHES WITHIN THE ER(MDF)/TR(IDF) FOR AUDIOVISUAL NETWORK, AUDIO, CONTROL AND VIDEO	OWN	OWN
ROUGH OR FINISHED TRIM, CASEWORK, MILLWORK, EQUIPMENT RACK PEDESTALS, STRUCTURAL WORK FOR SPECIAL CONSTRUCTION	GC	GC
SYSTEM CABLING - AUDIOVISUAL CATEGORY CABLING FROM DEVICE TO PATCH PANEL *	LVC	LVC
SYSTEM CABLING - AUDIOVISUAL CATEGORY CABLING, FROM DEVICE TO DEVICE, NOT TERMINATED IN PATCH PANELS *	AV	AV
SYSTEM CABLING - AUDIOVISUAL NON-CATEGORY CABLING; MIC, LINE, SPEAKER, VIDEO, ETC.*	AV	AV
SYSTEM CABLING - COAXIAL	LVC	LVC
SYSTEM CABLING - CATEGORY TYPE PATCH CABLES WITHIN THE ER(MDF)/TR(IDF) FOR SECURITY, ACCESS CONTROL, INTRUSION AND/OR AV SYSTEMS	LVC	LVC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR SECURITY, ACCESS CONTROL AND/OR INTRUSION SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC
CATEGORY CABLING WITHIN THE ER(MDF)/TR(IDF) FOR AV AUDIO, CONTROL AND/OR VIDEO SYSTEMS, PATCH PANELS, JACKS, ETC.	TC	TC

NOTES:

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

ADDITIONAL NOTES MAY BE PRESENT WITHIN THE CONTRACT DOCUMENTS INDICATING SPECIFIC EQUIPMENT PROVIDED BY OTHERS OR REQUIRE INSTALLATION BY SPECIFIC DIVISIONS.

INSTALLER PROVIDING THE SYSTEM CABLING SHALL PROVIDE THE CABLING, TERMINATION AND CERTIFICATION FOR A COMPLETE SYSTEM INSTALLATION, UNLESS OTHERWISE SPECIFICALLY NOTED WITHIN THE CONTRACT DOCUMENTS.

INSTALLER TO VERIFY WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM.

ACRONYM LEGEND

ACRONYM	CONTRACTOR	ACRONYM	CONTRACTOR
AC	ACCESS CONTROL CONTRACTOR	IC	INTRUSION DETECTION CONTRACTOR
AV	AUDIOVISUAL CONTRACTOR	TC	HORIZONTAL CABLING CONTRACTOR
DC	DOOR HARDWARE CONTRACTOR	NIC	NOT IN CONTRACT
EC	ELECTRICAL CONTRACTOR	OWN	OWNER
FR	FURNITURE CONTRACTOR	SC	VIDEO SURVEILLANCE CONTRACTOR
GC	GENERAL CONTRACTOR	SPEC	SEE SPECIFICATIONS

NOTES

RESPONSIBILITY MATRIX DELINEATES THE SCOPE OF WORK BETWEEN THE OWNER AND THE CONTRACTORS. CONTRACTORS ARE RESPONSIBLE TO COORDINATE BETWEEN EACH OTHER FOR THE FULL SCOPE OF WORK THEY ARE RESPONSIBLE FOR.

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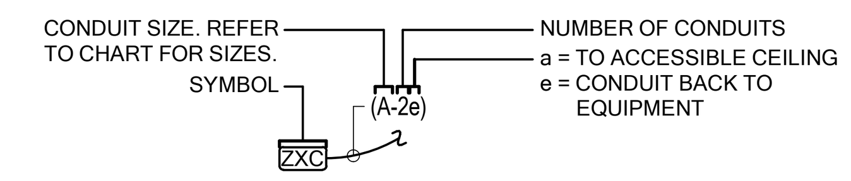
INSTALLER TO VERIFY WITH WITH CONTRACT DOCUMENTS FOR THE CONNECTION TYPE (MALE OR FEMALE) REQUIRED FOR EACH SYSTEM.

* REFER TO AUDIOVISUAL DRAWINGS FOR ADDITIONAL REQUIREMENTS

** REFER TO SECURITY/ACCESS CONTROL DRAWINGS FOR ADDITIONAL REQUIREMENTS

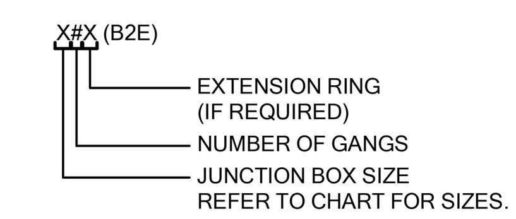
CONDUIT SCHEDULE LEGEND:



CONDUIT SIZE CHART

A = 3/4" CONDUIT
B = 1" CONDUIT
C = 1-1/4" CONDUIT
D = 1-1/2" CONDUIT
E = 2" CONDUIT
F = 4" CONDUIT

ROUGH-IN JUNCTION BOX LEGEND:



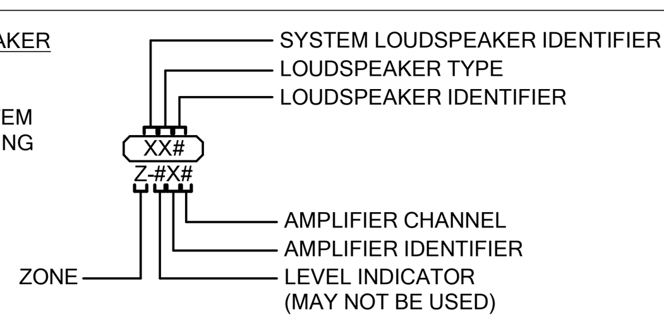
JUNCTION BOX SIZE

A = 4" SQ. 2-1/8" DEEP JUNCTION BOX
B = 4-11/16" SQ. JUNCTION BOX
C = CUSTOM JUNCTION BOX SEE SCHEDULE FOR SIZE
D = HUBBELL - HBL260/HBL985

LOUDSPEAKER LEGEND:

SYSTEM LOUDSPEAKER IDENTIFIER

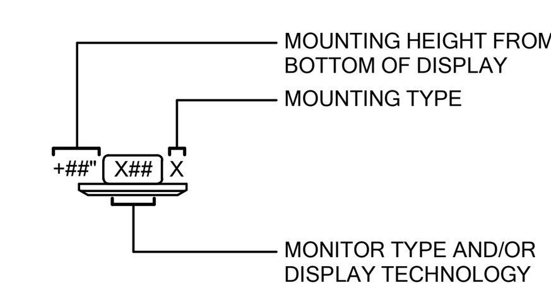
I = INTERCOM SYSTEM
SM = SOUND MASKING SYSTEM



LOUDSPEAKER TYPES

A = ARRAY, CABINET, CLUSTER
C = CEILING RECESSED
P = PENDANT MOUNTED
R = WALL RECESSED
S = CEILING SURFACE MOUNTED
W = WALL SURFACE MOUNTED

FLAT PANEL MONITOR LEGEND:



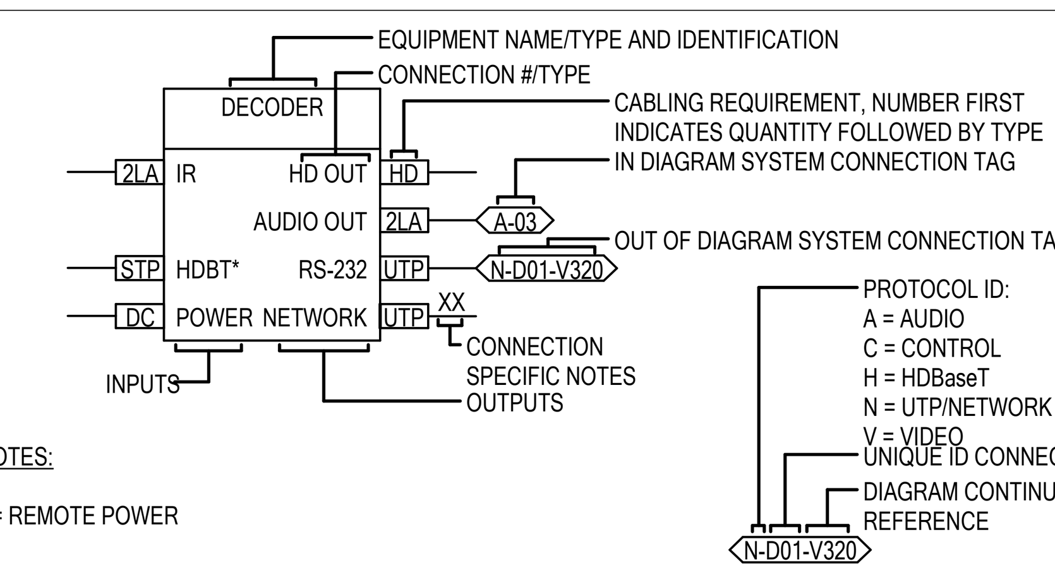
MOUNT TYPES

CLG = CEILING (POLE) MOUNT
F = FLAT MOUNT
T = TILT MOUNT
R = RECESSED MOUNT
S = ARTICULATING MOUNT

MONITOR TYPES

D = TYPICAL COMMERCIAL GRADE
S = INTERACTIVE COMMERCIAL GRADE
V = VIDEO WALL (SLIM BEZEL)
L = DIRECT VIEW LED PRODUCT

SIGNAL FLOW LEGEND:



NOTES:

* = REMOTE POWER

ABBREVIATIONS INDEX

ABBREV.	DESCRIPTION	ABBREV.	DESCRIPTION
#	NUMBER	MEP	MECHANICAL, ELECTRICAL AND PLUMBING
AFF	ABOVE FINISH FLOOR	MFG	MANUFACTURER
ARCH	ARCHITECTURE	MAX	MAXIMUM
AUX	AUXILIARY	MIC	MICROPHONE
AWG	AMERICAN WIRE GAUGE	MIN	MINIMUM
BC	BARE COPPER	MTG	MOUNTING
C	CONDUIT	N/A	NOT APPLICABLE
CATV	CABLE TELEVISION	NIC	NOT IN CONTRACT
CLG	CEILING	NTS	NOT TO SCALE
CNTR	CONTRACTOR	PLEN	PLENUM
CU	COPPER	(R)	RELOCATE
C/W	COMPLETE WITH	RECPT	RECEPTACLE
DWG	DRAWING	SPEC	SPECIFICATIONS
(E)	EXISTING	SPKR	SPEAKER
FT	FOOT	TV	TELEVISION
GND	GROUND	TYP	TYPICAL
IG	ISOLATED GROUND	UG	UNDERGROUND
IN	INCH	UPS	UNINTERRUPTED POWER SUPPLY
J-BOX	JUNCTION BOX	W	WATTS
LTG	LIGHTING	W/O	WITHOUT

AUDIOVISUAL SHEET INDEX

AUDIOVISUAL SYMBOL SCHEDULE

NOTES:

1. HEIGHT MEASURED TO BOTTOM OF THE DEVICE FROM FINISHED FLOOR.
2. HEIGHT MEASURED TO CENTER LINE OF THE DEVICE FROM THE FINISHED FLOOR.
3. REFER TO DIAGRAMS AND ELEVATIONS FOR CUSTOM ROUGH-IN REQUIREMENTS.
4. STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS.
5. ROUGH-IN TO BE HORIZONTAL.
6. ROUGH-IN TO BE INSTALLED ABOVE ACCESSIBLE CEILING.
7. ROUGH-IN TO BE INSTALLED ABOVE CEILING.
8. DEVICE IS TYPICALLY LOCATED IN MILLWORK, FURNITURE, BEHIND A MONITOR OR ABOVE A PROJECTOR.
9. ABOVE TABLE/COUNTER MOUNTED DEVICE.
10. REFER TO MANUFACTURER'S RECOMMENDED CABLE REQUIREMENTS FOR EXACT CABLE REQUIRED.
11. FOLLOW BICSI STANDARDS FOR CABLE ROUTING AND DISTANCES.
12. JUNCTION BOX INDICATED IS FOR MOST INSTALLATIONS. DEVICE WILL BE NOTED WHEN JUNCTION BOX SIZE REQUIREMENTS ARE DIFFERENT FROM INDICATED.
13. MOUNTING HEIGHT SHOWN IS FROM THE BOTTOM OF THE MONITOR TO THE FINISHED FLOOR

GENERAL SCHEDULE NOTES:

1. TYPICAL SYMBOL SCHEDULE. SOME SYMBOLS MAY NOT BE USED IN THIS SET OF DRAWINGS.
2. DEVICES WITH "A" ADJACENT TO IT INDICATE DEVICE TO BE COORDINATED WITH MILLWORK PRIOR TO ROUGH-IN.
3. ROUGH-IN JUNCTION BOX, CONDUIT AND MOUNTING HEIGHT ARE DEFAULT REQUIREMENTS. REFER TO PLANS FOR SPECIFIC NOTES AND REQUIREMENTS FOR A SPECIFIC INSTANCE.
4. CONDUIT STUBBED INTO ACCESSIBLE CEILING UNLESS OTHERWISE NOTED.
5. CABLE FROM DEVICE TO BE HOMERUN TO DESTINATION WITHOUT SPLICES.

SYMBOL	DESCRIPTION	J-BOX	CONDUIT	MOUNTING HEIGHT	CABLE TYPE	NOTES
M#	MICROPHONE INPUT, WALL PLATE	D1,D2	(1) 3/4"	RECEPTACLE HEIGHT	(#) MA	2,4.
AX	AUXILIARY INPUT, 3.5MM/RCA CONNECTION, WALL PLATE	D1	(1) 3/4"	RECEPTACLE HEIGHT	(1) LA	2,4.
T TS	AUDIO OUTPUT, WALL PLATE, T = XLR MALE CONNECTION, TS = 1/4 TS CONNECTION	D1	(1) 3/4"	RECEPTACLE HEIGHT	(1) LA	2,4.
MA	MICROPHONE INPUT WITH AUXILIARY INPUT, WALL PLATE	D1	(1) 3/4"	RECEPTACLE HEIGHT	(1) MA (1) LA	2,4.
MC	MICROPHONE INPUT, CEILING	D1	(1) 3/4"	CEILING	(1) MA	2,4.
MB	TABLE TOP BOUNDARY MICROPHONE		(1) 1/2"	ON TABLE/ MILLWORK	(1) MA	2,3,9.
MW	WALL MOUNTED, PUSH TO TALK MICROPHONE	D1	(1) 3/4"	SWITCH HEIGHT	(1) MA	2,4.
MDT	DUAL MICROPHONE INPUT, WALL PLATE, UTP TRANSMITTER EXTENDER	D1	(1) 3/4"	RECEPTACLE HEIGHT	(1) UTP	2,4.
MAT	MICROPHONE AND AUXILIARY INPUT, WALL PLATE, UTP TRANSMITTER EXTENDER	D1	(1) 3/4"	RECEPTACLE HEIGHT	(1) UTP	2,4,11.
MXT	MICROPHONE AND AUXILIARY INPUT, WALL PLATE, UTP TRANSMITTER AUDIO ENCODER	D2	(1) 1"	RECEPTACLE HEIGHT	(1) UTP	2,4,11.
MT	DUAL MICROPHONE INPUT/OUTPUT WALL PLATE, UTP TRANSMITTER AUDIO ENCODER	D1	(1) 1"	RECEPTACLE HEIGHT	(1) UTP	2,4,11.
M2D	DUAL MICROPHONE INPUT/OUTPUT WALL PLATE, UTP TRANSMITTER AUDIO ENCODER	D2	(1) 1"	RECEPTACLE HEIGHT	(1) UTP	2,4,11.
M4D	FOUR MICROPHONE INPUT WALL PLATE, UTP TRANSMITTER AUDIO ENCODER	D2	(1) 1"	RECEPTACLE HEIGHT	(1) UTP	2,4,11.
AXT	BLUETOOTH AND AUXILIARY INPUT, WALL PLATE, UTP TRANSMITTER AUDIO ENCODER	D2	(1) 1"	SWITCH HEIGHT	(1) UTP	2,4,11.
CI	CREWCOM HEADSET INPUT, WALL PLATE	D1	(1) 3/4"	SWITCH HEIGHT	(1) MA	2,4.
CIS	CREWCOM WALL STATION, WALL PLATE	D3	(1) 3/4"	SWITCH HEIGHT	(1) MA	2,4.
BT	BLUETOOTH, WALL PLATE, AUDIO EXTENDER	D1	(1) 1"	SWITCH HEIGHT	(1) UTP	2,4,11.
VG	VGA INPUT, WALL PLATE	D1	(1) 1 1/4"	RECEPTACLE HEIGHT	(1) VG	2,4.
HD	HDMI INPUT, WALL PLATE	D1	(1) 1 1/4"	RECEPTACLE HEIGHT	(1) HD (1) LA	2,4.
HV	HDMI AND VGA INPUT, WALL PLATE	D2	(1) 1 1/4"	RECEPTACLE HEIGHT	(1) HD (1) VG	2,4.
TxH	HDBaseT, HDMI INPUT TRANSMITTER, WALL PLATE	D1	(1) 1"	RECEPTACLE HEIGHT	(1) STP	2,4,11.
TxD	HDBaseT, HDMI AND VGA TRANSMITTER, WALL PLATE	D2	(1) 1"	RECEPTACLE HEIGHT	(1) STP	2,4,11.
TxM	HDBaseT, HDMI, DISPLAY PORT AND/OR VGA TRANSMITTER BOX, SURFACE MOUNTED			IN MILLWORK/ UNDER TABLE	(1) STP	2,4,11.
TxT	HDBaseT CATEGORY INPUT, WALL PLATE	D1	(1) 1"	RECEPTACLE HEIGHT	(1) STP	2,4,11.
RxH	HDBaseT, HDMI RECEIVER, WALL PLATE	D1	(1) 1"	AS NOTED	(1) STP	2,4,11.
US	USB INPUT, WALL PLATE, UTP EXTENSION	D1	(1) 1"	RECEPTACLE HEIGHT	(1) STP	2,4,11.
Rx	HDBaseT RECEIVER DEVICE, SURFACE MOUNTED		(1) 1"	IN MILLWORK/ UNDER TABLE	(1) STP	2,4,8,11.
CHV	HDMI AND VGA TRANSMITTER, WALL PLATE (CLASSROOM SYSTEM)	D2	(1) 1 1/4"	RECEPTACLE HEIGHT	(1) STP	2,4,11.
CHD	DUAL HDMI TRANSMITTER, WALL PLATE (CLASSROOM SYSTEM)	D2	(1) 1 1/4"	RECEPTACLE HEIGHT	(1) STP	2,4,11.
HDU	HDMI AND USB TRANSMITTER, WALL PLATE	D2	(1) 1 1/4"	RECEPTACLE HEIGHT	(2) STP	2,4,11.
CAL	2-WAY INTERCOMMUNICATION PUSHBUTTON STATION	D1	(1) 3/4"	SWITCH HEIGHT	AS NOTED	2,7,10.
CSA	CLASSROOM SOUND AMPLIFICATION SYSTEM		(1) 1 1/4" (1) 1"	IN MILLWORK/ AS NOTED		2,3.
IR	INFRARED SENSOR, WALL/CEILING	D1	(1) 3/4"	CEILING	(1) UTP OR (1) CT	2,6,11.
ALS	ASSISTIVE LISTENING SYSTEM ANTENNA/EMITTER, WALL/CEILING	A1	(1) 1"	AS NOTED	AS NOTED	2,6.
AT	AV ANTENNA, WALL/CEILING	D1	(1) 1"	AS NOTED	(1) AT	2,6.
V	VOLUME CONTROL	D1	(1) 1"	SWITCH HEIGHT	(1) S16	2,4.
SV	VOLUME CONTROL WITH SOURCE SELECTOR	D2	(1) 1"	SWITCH HEIGHT	(1) S16 (1) UTP	2,4,9,11.
TPT	TOUCH PANEL, TABLE TOP		(1) 1"	AS NOTED	(1) UTP	
TP#	TOUCH PANEL, WALL MOUNTED, REFER TO SPECIFICATIONS FOR TOUCH PANEL TYPE AND ORIENTATION	C#	(1) 1"	SWITCH HEIGHT	(1) UTP	2,4,5,11.
KP#	KEYPAD, WALL MOUNTED, REFER TO SPECIFICATIONS FOR KEYPAD TYPE	C#	(1) 1"	SWITCH HEIGHT	(1) CT or (1) UTP	2,4,10.
RS#	ROOM SCHEDULING TOUCHPANEL	C#	(1) 1"	SWITCH HEIGHT	(1) STP	
TB#	TABLE/FURNITURE BOX, NUMBER REFERS TO TYPE REFER TO SPECIFICATIONS/DIAGRAMS FOR REQUIREMENTS			IN MILLWORK	SEE DIAGRAMS.	
	LOUDSPEAKER, WALL MOUNTED	C#	(1) 3/4"	AS NOTED	(1) S16	2,4.
	LOUDSPEAKER, ARRAY, CABINET, CLUSTER	A0	(1) 3/4"	AS NOTED	(1) S12	2,4.
	LOUDSPEAKER, CEILING RECESSED OR PENDANT	C#	(1) 3/4"	CEILING	(1) S16	2,7.
SB#	SOUND BAR, REFER TO SPECIFICATIONS FOR TYPE	D1	(1) 1"	UNDER DISPLAY OR AS NOTED		1,5.
X##	DISPLAY, REFER TO SPECIFICATIONS FOR DISPLAY TYPE AND SIZE	C#	(1) 1 1/4" (1) 1"	AS NOTED	AS NOTED	4,13.
SC#	PROJECTION SCREEN REFER TO SPECIFICATIONS FOR SCREEN TYPE AND SIZE	(2) A0	(1) 3/4"	CEILING OR WALL	(1) UTP	2,7.
P#	PROJECTOR	D2	(1) 1 1/4"	CEILING OR AS NOTED	AS NOTED	2,6.
	AV CAMERA	C#	(1) 1"	AS NOTED	AS NOTED	1.
	EQUIPMENT CABINET/RACK	C#	SCH	AS NOTED		
CLG	EQUIPMENT CEILING RACK	C#	SCH	AS NOTED		
	EQUIPMENT 2-POST CABINET/RACK	C#	SCH	AS NOTED		
GP#	PASS THROUGH PLATE, # = NUMBER OF GANGS	D#	(1) 1-1/2"	AS NOTED		2.
J	JUNCTION BOX, ABOVE ACCESSIBLE CEILING	A0	AS NOTED	AS NOTED		
C##	CUSTOM JUNCTION BOX, REFER TO SCHEDULE AND DIAGRAM FOR EQUIPMENT, JUNCTION BOX AND CONDUIT	C#	SCH	AS NOTED	AS NOTED	
FB	FLOOR BOX - REFER TO ELECTRICAL DOCUMENTS FOR MAKE/MODEL - REFER TO DIAGRAMS FOR AV DEVICE LAYOUT		AS NOTED		AS NOTED	
PT	POKE THRU - REFER TO ELECTRICAL DOCUMENTS FOR MAKE/MODEL - REFER TO DIAGRAMS FOR AV DEVICE LAYOUT		(1) 1 1/2"		AS NOTED	
	CONDUIT RUN CONCEALED IN WALL OR CEILING		AS NOTED			
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		AS NOTED			
	CONDUIT UP		AS NOTED			
	CONDUIT DOWN		AS NOTED			
	CONDUIT STUB LOCATION		AS NOTED			
	CONDUIT/CIRCUIT CONTINUATION		AS NOTED			
####	DEVICE/EQUIPMENT TYPE CALLOUT					
# ##	ELEVATION VIEW TAG.					
# ##	DIAGRAM CALLOUT TAG.					

WPA architecture

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Sheet Name:
AUDIOVISUAL SYMBOLS

Sheet Number:
TA0.1-S

AV LOUDSPEAKER SCHEDULE

TYPE	DIMENSIONS				SHAPE	WEIGHT	INSTALLATION	NOTES
	WIDTH (H)	WIDTH (V)	DIAMETER	DEPTH				
W1	14 29/32"	0"	14 1/2"	0"	ROUND	14.5 LBS	SURFACE	LOUDSPEAKERS LOCATED WITHIN THE PLANTER BOXES
W2	38 13/16"	4 3/32"	0"	5 1/2"	SQUARE	21 LBS	SURFACE	

AV CUSTOM BACK BOX SCHEDULE

TYPE	MANUFACTURER	MODEL	BOX DIMENSIONS (Cx) IN INCHES			CONDUIT'S	MOUNTING TYPE	ORIENTATION	NOTES
			HEIGHT	WIDTH	DEPTH				
C1	HOFFMAN	ASE12X12X4	12"	12"	4"	(4) 1", (4) 3/4, (2) 1-1/4"	RECESSED	HORIZONTAL	
C31	HOFFMAN	ASE SERIES	4 11/32"	2 19/32"	2 1/8"	(1) 4", (3) 2", (5) 1"	RECESSED	HORIZONTAL	

AUDIOVISUAL GENERAL NOTES

1. THIS SHEET SET SHOWS WORK AND MATERIALS BY DIVISION 26 AND DIVISION 27. SEE SPECIFICATIONS AND DRAWING NOTES FOR RESPONSIBILITY FOR EACH ITEM.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE REQUIRED PROVISIONS WITH THE PROJECT AV SYSTEMS INTEGRATOR PRIOR TO INSTALLATION OF AV SYSTEM ROUGH-IN. WHERE CONDUIT AND JUNCTION BOX PROVISIONS ARE SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS, NOTIFY THE AV CONSULTANT IN WRITING OF THE REQUIREMENTS. WHERE MINOR MODIFICATIONS TO PROVISIONS ARE REQUIRED, THEY SHALL BE MADE AT NO ADDITIONAL COST AS A MATTER OF JOB COORDINATION.
3. BIDDERS SHALL THOROUGHLY ACQUAINT AND EXAMINE THE EXISTING PROJECT CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. INCLUDING THE COMPLETE SET OF PLANS AND SPECIFICATIONS COVERING THE ENTIRE PROJECT. BIDDERS SHALL BECOME FULLY CONVERSANT WITH THE TYPE OF GENERAL. CONSTRUCTION AS WELL AS ALL PERTINENT FACTS AFFECTING THE COST OF CARRYING OUT THE WORK THEY WILL CONTRACT TO PERFORM AND BRING ANY DISCREPANCIES OR OMISSIONS FOUND IN THE DRAWINGS TO THE AV CONSULTANT'S ATTENTION BEFORE SUBMITTING BID.
4. AV SYSTEMS INTEGRATOR SHALL PROVIDE A FULLY FUNCTIONING SYSTEM IN EVERY RESPECT. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT AV CONSULTANT PRIOR TO BIDDING.
5. THE FOREGOING WORK SHALL BE COMPLETE IN EVERY RESPECT, AND ANY MATERIAL OR WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS. BUT NECESSARY TO FULLY COMPLETE THE WORK, SHALL BE FURNISHED BY THE PROJECT AV SYSTEMS INTEGRATOR.
6. NO CHANGES TO THE DESIGN SHALL BE MADE WITHOUT THE PROJECT AV CONSULTANT'S WRITTEN CONSENT.
7. WHERE APPLICABLE, AV SYSTEMS INTEGRATOR SHALL FOLLOW ALL MANUFACTURER'S INSTALLATION GUIDELINES.
8. REFER TO DRAWINGS FOR EXACT NUMBER OF COMPONENTS USED IF NOT SPECIFIED IN EQUIPMENT LIST.
9. COORDINATE EXACT SPEAKER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS. ANY CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT AV CONSULTANT PRIOR TO BIDDING.
10. CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL SPEAKERS AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND AV CONSULTANT PRIOR TO RELEASE.
11. INSTALL/SUSPEND ALL AUDIOVISUAL SYSTEMS EQUIPMENT IN COMPLIANCE WITH SEISMIC CODES, MANUFACTURER'S WRITTEN INSTRUCTIONS, AND INDUSTRY BEST PRACTICES. DURING THE SUBMITTAL PROCESS, PROVIDE SHOP DRAWINGS WHICH DETAIL PROPOSED MOUNTING FOR ALL SUCH EQUIPMENT.
12. ALL TWISTED-PAIR (U/UTP, F/UTP, U/FTP, S/FTP) CATEGORY TYPE CABLING SHALL BE TERMINATED BY CERTIFIED DATA TECHNICIANS. TEST PER SPECIFICATIONS REQUIREMENTS AND PROVIDE DATA TO AV CONSULTANT.
13. ALL HDBaseT SIGNAL CABLING, TERMINATIONS, AND TERMINATION HARDWARE SHALL COMPLY WITH TIA/EIA WIRING CONFIGURATION T568 B. ALL HDBaseT SIGNAL CABLING SHALL BE SHIELDED/FOIL (SF/UTP) CATEGORY TYPE CABLE.
14. CONDUCT A RADIO FREQUENCY AUDIT OF THE SITE PRIOR TO SELECTING RF OPERATIONAL FREQUENCIES. AV SYSTEMS INTEGRATOR TO ENSURE INTERFERENCE FREE OPERATION OF ALL RF DEVICES. AV SYSTEMS INTEGRATOR SHALL COORDINATE AUDIT RESULTS WITH MANUFACTURER PRIOR TO PURCHASING RF EQUIPMENT.
15. PROVIDE RACK MOUNT KITS FOR ALL RACK MOUNTED EQUIPMENT. PROVIDE CUSTOM RACK MOUNT KITS WHEN NOT AVAILABLE FROM THE EQUIPMENT MANUFACTURER.
16. PROVIDE SURGE PROTECTION DEVICE (SPD) IN ALL AV EQUIPMENT RACKS.
17. ALL AV EQUIPMENT RACKS SHALL BE GROUNDED AND BONDED TO MEET OR EXCEED THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NED), IEC 1000-5-2 ANSI/J-STD-607-A.
18. ALL AV EQUIPMENT SHALL BE GROUNDED PER MANUFACTURER'S SPECIFICATIONS.
19. PROVIDE MANUFACTURER RECOMMENDED POWER SUPPLIES OR TRANSFORMERS FOR ALL SPECIFIED EQUIPMENT.
20. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR LACK OF COORDINATION WITH AV CONSULTANT AS ADDRESSED IN THE DOCUMENTS
21. UNLESS SPECIFICALLY SPECIFIED OR NOTED PROVIDE COMMERCIAL QUALITY EQUIPMENT, MATERIALS AND COMPONENTS DESIGNED FOR CONTINUOUS USE. CONSUMER QUALITY COMPONENTS ARE NOT ACCEPTABLE.

AUDIOVISUAL CABLE AND CONDUIT SCHEDULE

NOTES:

1. APPROVED EQUALS FROM OTHER MANUFACTURERS ARE BELDEN, GEPCO/GENERAL, ICE, KRAMER, EXTRON, CRESTRON, LIBERTY CABLE, AND WINDY CITY WIRE.
2. PROVIDE PLENUM RATED CABLES IN ANY "AIR HANDLING" SPACES E.G. ABOVE CEILINGS, RAISED FLOORS, CHASES, ETC.
3. CABLE QUANTITY INDICATED ON DRAWINGS SHOWS ON FINAL RUN. IF NOT NOTED PROVIDE CABLING FOR SINGLE DEVICE.
4. CONDUIT REQUIREMENTS SHOWN ARE MINIMUM CONDUIT SIZE REQUIRED FOR A SINGLE CABLE, UNLESS OTHERWISE NOTED ON DRAWINGS. NUMBER OF CABLES LISTED IS THE MAXIMUM AMOUNT ALLOWED FOR CONDUIT SIZE INDICATED.
5. WHEN COMBINING CABLE TYPES OF THE SAME GROUP, THE TYPE WITH THE LARGEST CONDUIT REQUIREMENT DICTATES CONDUIT SIZE.
6. PROVIDE ON ALL HDMI CABLES LONGER THAN 35' OR WITH MORE THAN (3) CONNECTION POINTS (1) ACTIVE HDMI EXTENSION DEVICE.
7. ALL CATEGORY CABLE SHALL BE TESTED AND CERTIFIED TO ANSI/TIA/EIA-568C AND IEEE 802.3an STANDARDS USING A LEVEL IIIe TESTER.
8. REFER TO SPECIFICATIONS FOR STP CABLE REQUIREMENTS. ALL UNSHIELDED (UTP) CATEGORY CABLES WITHIN THE PROJECT SHALL BE SUPPLIED FROM A SINGLE MANUFACTURER AND MATCH MAKE/MODEL.
9. HDMI CABLES ARE INTENDED TO PASS 4K 60 4:4:4 FROM SOURCE TO DESTINATION. CONTRACTOR TO VERIFY THE LENGTH OF ALL CABLES USED MEET THIS REQUIREMENT.

* INDICATES DEFAULT CABLE IF MANUFACTURER DOES NOT RECOMMEND A SPECIFIC CABLE.
** INDICATES DEFAULT CABLE IF HORIZONTAL CABLING IS EXCLUDED FROM THE PROJECT AND NOT OWNER PROVIDED.

CABLE TYPE	DESCRIPTION	CONDUIT REQUIREMENTS	MANUFACTURER	MODEL NUMBER	CABLE GROUP
(#)AT	ANTENNA, COAXIAL RG8X	1" CONDUIT = (7) CABLES 1 1/2" CONDUIT = (12) CABLES	WEST PENN	807 *	5
(#)CT	CONTROL, 2/22 SHIELDED, 2/18 UNSHIELDED	1" CONDUIT = (7) CABLES 1 1/4" CONDUIT = (12) CABLES	WEST PENN	77350 * D25350 (P) *	5
(#)HD	HDMI < 20', ULTRA FLEXIBLE	1 1/4" CONDUIT = (1) CABLES 2" CONDUIT = (3) CABLES	EXTRON CRESTRON	HDMI ULTRA/## CBL-HD-##	5
(#)HD	HDMI > 20'	1 1/4" CONDUIT = (1) CABLES 2" CONDUIT = (3) CABLES	EXTRON KRAMER	HDMI PRO P/XX CP-HM/HM/ETH (P)	5
(#)LA (#)MA	LINE LEVEL, 22 AWG MICROPHONE, 22 AWG	1" CONDUIT = (23) CABLES 1 1/2" CONDUIT = (77) CABLES	WEST PENN	291 D25454 (P)	3 2
(#)MFB	MULTIMODE FIBER OPTIC	1" CONDUIT MINIMUM	PER SPEC	27 1500	1
(#)RG6	RG-6 COAXIAL CABLE	1" CONDUIT = (8) CABLES 1 1/2" CONDUIT = (18) CABLES	WEST PENN	841 25841 (P)	5
(#)RG11	RG-11 COAXIAL CABLE	1" CONDUIT = (3) CABLES 1 1/4" CONDUIT = (6) CABLES	WEST PENN	821 D25821 (P)	5
(#)S12	SPEAKER, 12 AWG	1" CONDUIT = (3) CABLES 1 1/2" CONDUIT = (7) CABLES 2" CONDUIT = (11) CABLES	WEST PENN	227 25227B (P)	4
(#)S16	SPEAKER, 16 AWG	1" CONDUIT = (10) CABLES 1 1/4" CONDUIT = (17) CABLES	WEST PENN	225 25225B (P)	4
(#)SFB	SINGLE MODE FIBER OPTIC	1" CONDUIT MINIMUM	PER SPEC	27 1500	1
(#)STP	SHIELDED TWISTED PAIR, CAT 6A	1" CONDUIT = (4) CABLES 1 1/4" CONDUIT = (8) CABLES	PER MFG WEST PENN	4246AF * 254246AF (P) *	5
(#)UTP	UN-SHIELDED TWISTED PAIR CAT 6	1" CONDUIT = (9) CABLES 1 1/4" CONDUIT = (15) CABLES	PER SPEC WEST PENN	4246 ** 254246 (P) ** SPEC 27 1500	5
(#)VG	HIGH RESOLUTION VIDEO	1" CONDUIT = (1) CABLES 1 1/4" CONDUIT = (4) CABLES	WEST PENN	5CRGB 255CRGB (P)	5
(#)SDI	SERIAL DIGITAL INTERFACE (RG-6 COAX)	1" CONDUIT = (8) CABLES 1 1/2" CONDUIT = (18) CABLES	WEST PENN	841 25841 (P)	5
(#)USB	USB EXTENSION CABLE	1" CONDUIT = (3) CABLES 1 1/4" CONDUIT = (10) CABLES	CRESTRON	CBL-USB-A-EXT-15	5
(#)X#	MANUFACTURER PROPRIETARY CABLE	AS NOTED	SPEC. 27 4100	SPEC. 27 4100	NA

CABLING GROUPS AND CONDUIT SEPARATION SCHEDULE

AUDIO AND VIDEO WIRING TYPES:

AUDIO AND VIDEO SYSTEM WIRING IS DIVIDED INTO WIRING GROUPS ACCORDING TO THEIR NOMINAL LEVELS:

GROUP	WIRING TYPE
GROUP 1	FIBER OPTIC CABLE
GROUP 2	O mV TO 100 mV SIGNALS, EXAMPLE: MICROPHONE LEVEL SIGNAL
GROUP 3	100 mV TO 10 V SIGNALS, EXAMPLE: LINE-LEVEL SIGNAL
GROUP 4	10 V TO 70 V SIGNALS, EXAMPLE: SPEAKER LEVEL SIGNAL
GROUP 5	CONTROL, DIGITAL CIRCUITS, DATA AND VIDEO

NOTE: GROUPS LISTED ABOVE SHALL NEVER BE COMBINED WITHIN THE SAME CONDUIT

AUDIO AND VIDEO CONDUIT SEPARATION

MINIMUM CONDUIT SEPARATION BETWEEN CONDUITS CARRYING WIRING OF DIFFERENT AUDIO AND VIDEO GROUPS IS AS FOLLOWS:

GROUP	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5
GROUP 1	ADJACENT	ADJACENT	ADJACENT	ADJACENT	ADJACENT
GROUP 2	ADJACENT	ADJACENT	6"	12"	12"
GROUP 3	ADJACENT	6"	ADJACENT	12"	6"
GROUP 4	ADJACENT	12"	12"	ADJACENT	6"
GROUP 5	ADJACENT	12"	6"	6"	ADJACENT

NOTE: NINETY DEGREE CROSSING IN CLOSE PROXIMITY IS PERMITTED.

ELECTRICAL CONDUIT SEPARATION

MINIMUM CONDUIT SEPARATION BETWEEN CONDUITS CARRYING AUDIO AND VIDEO WIRING AND OTHER ELECTRICAL SERVICE CONDUIT IS AS FOLLOWS:

	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5
277/480V AC CIRCUIT	ADJACENT	24"	24"	24"	24"
120/208V AC CIRCUIT	ADJACENT	24"	12"	12"	24"

NOTE: CONDUITS SHALL NOT RUN MORE THAN 20 FEET IN PARALLEL WITHIN THE GIVEN DISTANCES ABOVE.

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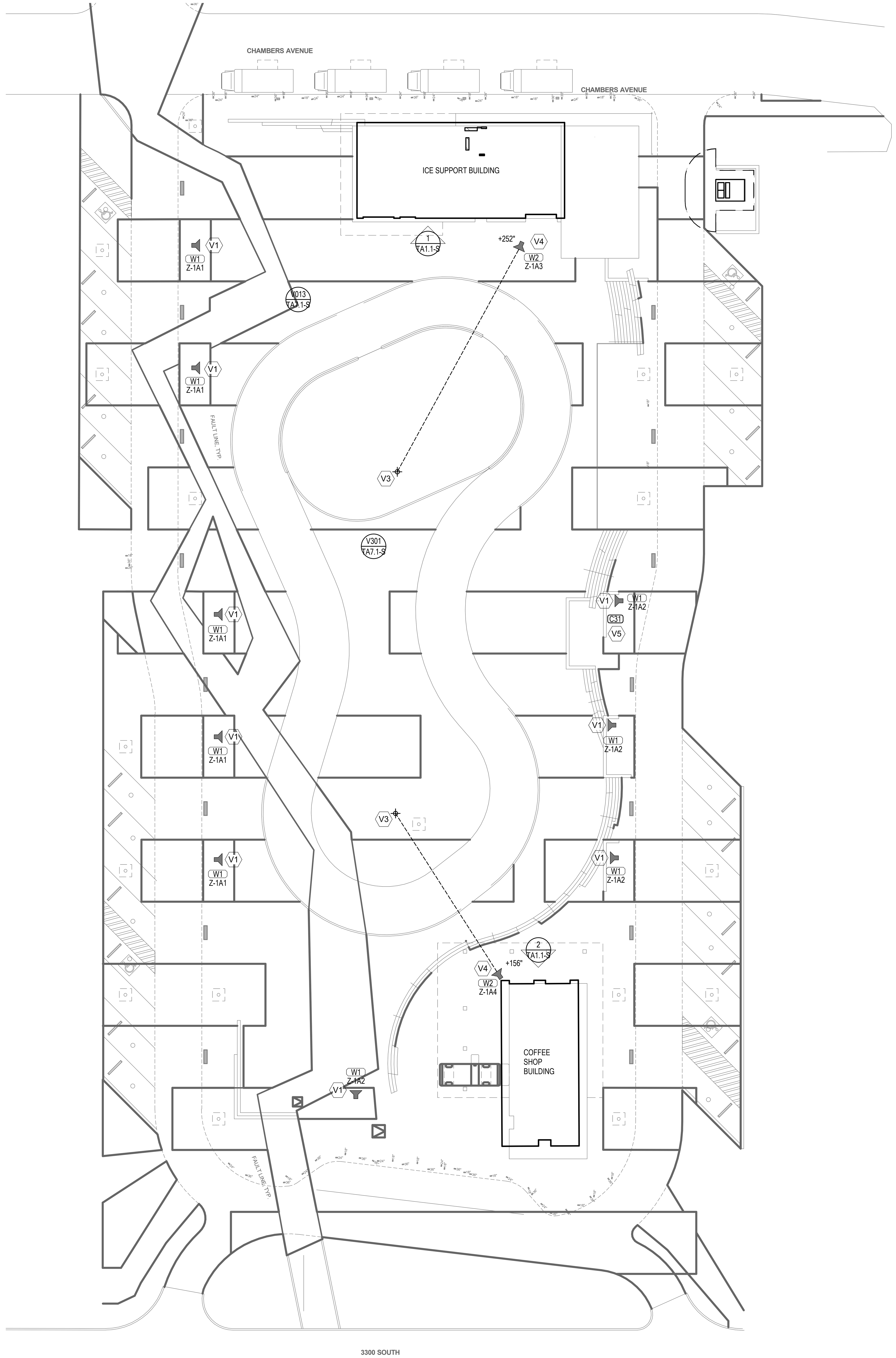
Sheet Name:
AUDIOVISUAL SCHEDULES

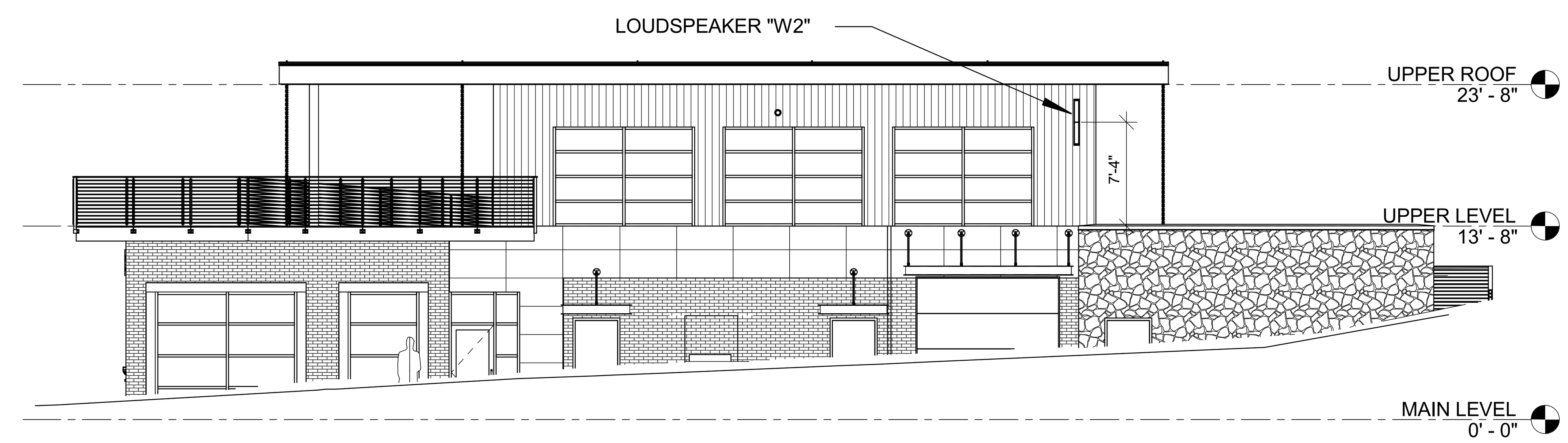
Sheet Number:
TA0.2-S

SHEET KEYNOTES

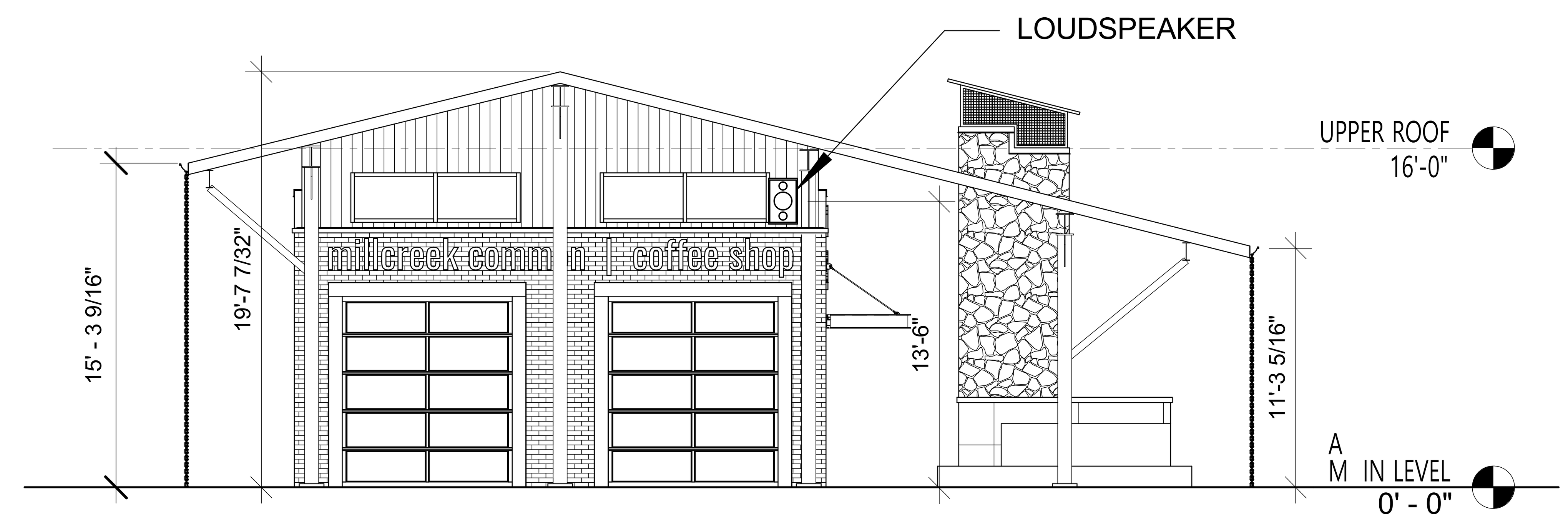
V1	LOUDSPEAKER LOCATED WITHIN PLANTER BOX. COORDINATE WITH LANDSCAPE DRAWINGS FOR THE EXACT LOCATION OF EACH PLANTER BOX PRIOR TO ROUGH-IN.
V3	AIM LOUDSPEAKER HERE.
V4	SECURE LOUDSPEAKER TO THE FACE OF THE BUILDING. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MOUNT THAT WILL BLEND INTO THE ARCHITECTURAL FACE OF THE BUILDING AND FIELD PAINT THE LOUDSPEAKER SO THAT IT BLENDS IN.
V5	DEVICE LOCATED WITHIN IN-GRADE BOX. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ELECTRICAL DRAWINGS PRIOR TO ROUGH-IN.



AUDIOVISUAL SITE PLAN
SCALE = 1" = 20'-0"



1 ICE SUPPORT BUILDING ELEVATION VIEW
NTS



2 COFFEE SHOP BUILDING ELEVATION VIEW
NTS

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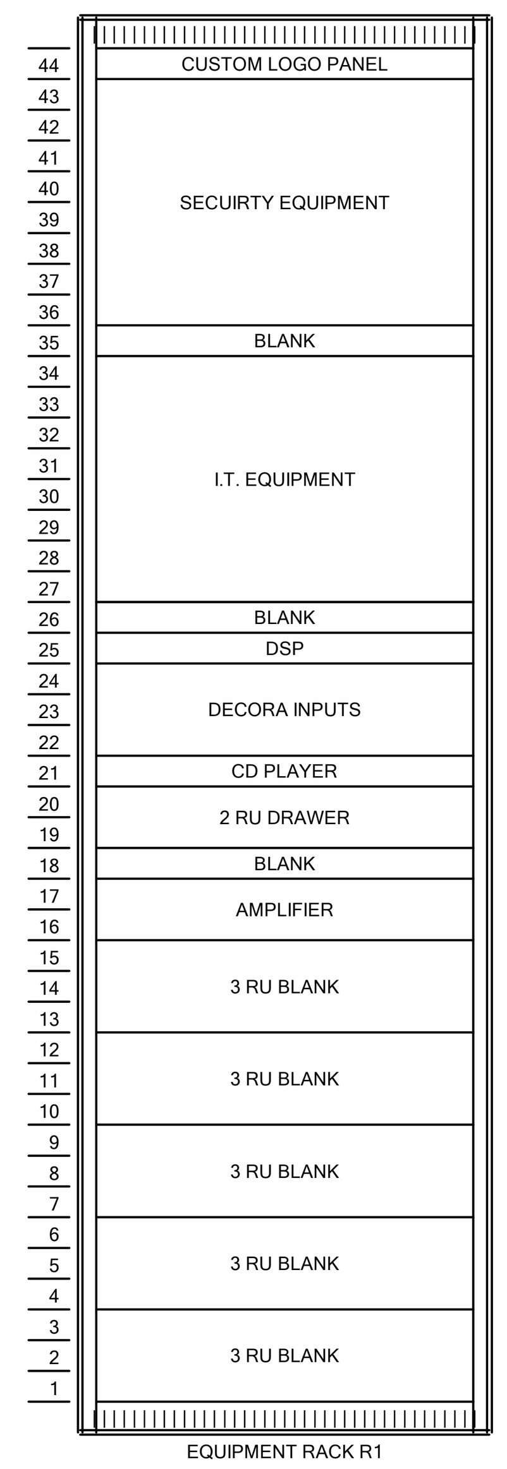

DIAGRAM V014 EAV EQUIPMENT RACK

NTS

DIAGRAM NOTES

① EQUIPMENT LOCATED IN EQUIPMENT RACK. EQUIPMENT RACK IS LOCATED IN THE ICE BUILDING ELECTRICAL ROOM. REFER TO SHEET E3.1-I FOR EXACT LOCATION.

② EQUIPMENT LOCATED IN EXTERIOR IN-GRADE BOX. REFER TO FLOOR PLANS FOR EXACT LOCATION.

③ CONTROLLER NETWORK PORT.

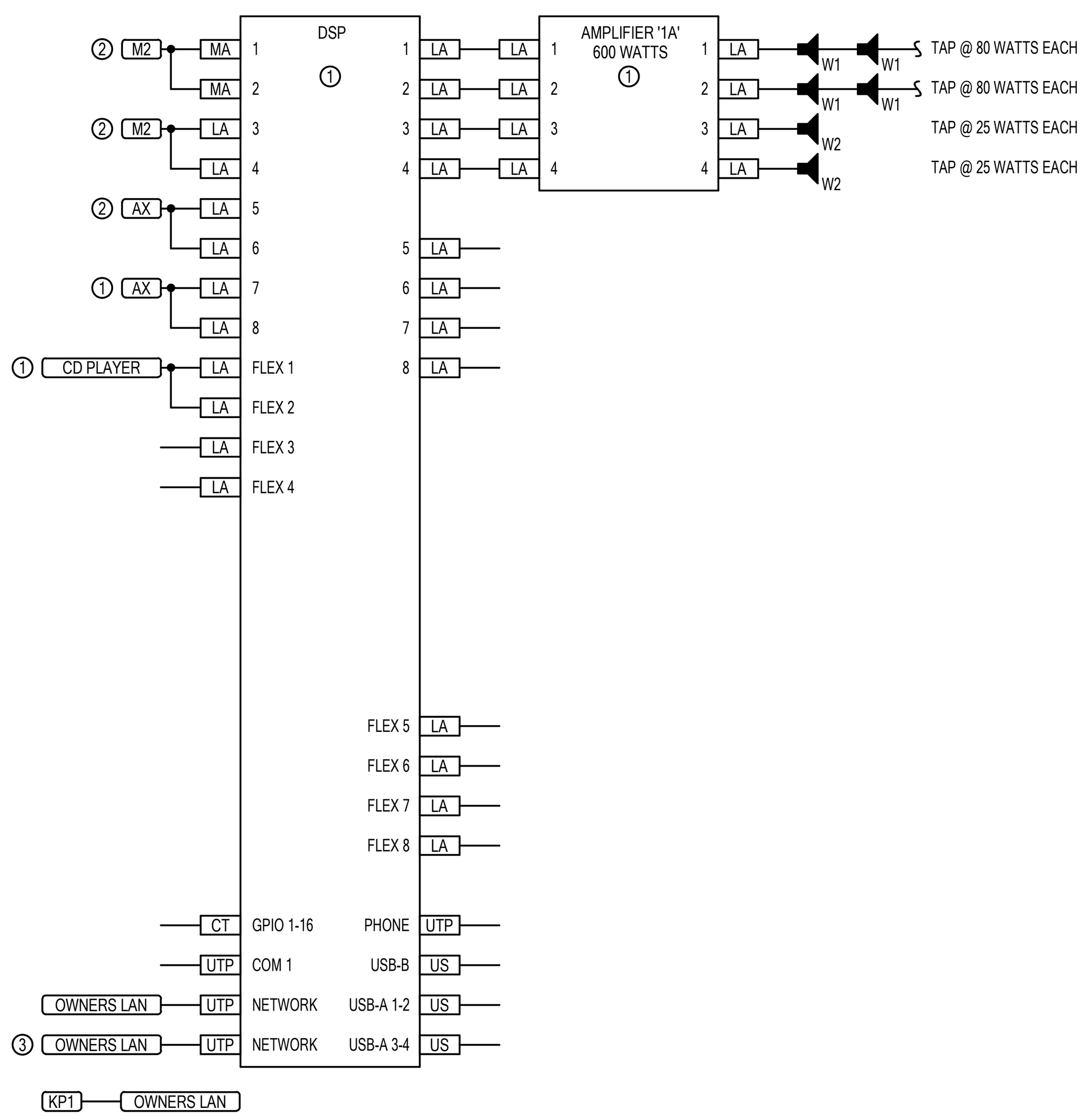

DIAGRAM V301 SITE AUDIOVISUAL RISER

NTS

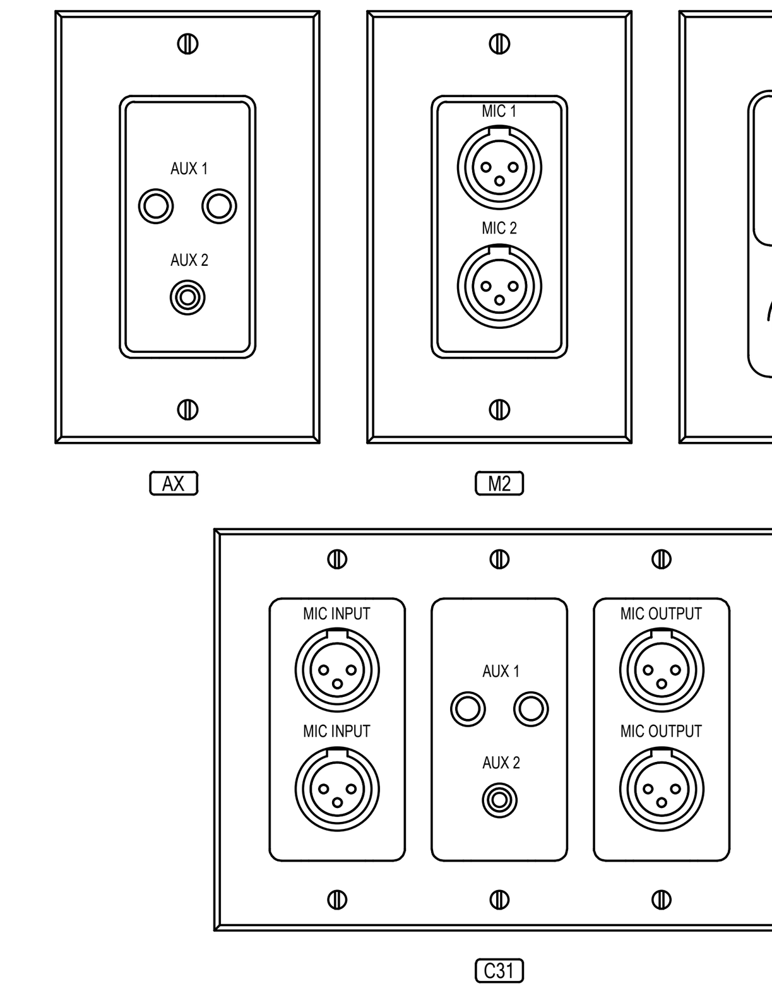

DIAGRAM V012 WALL PLATES

NTS

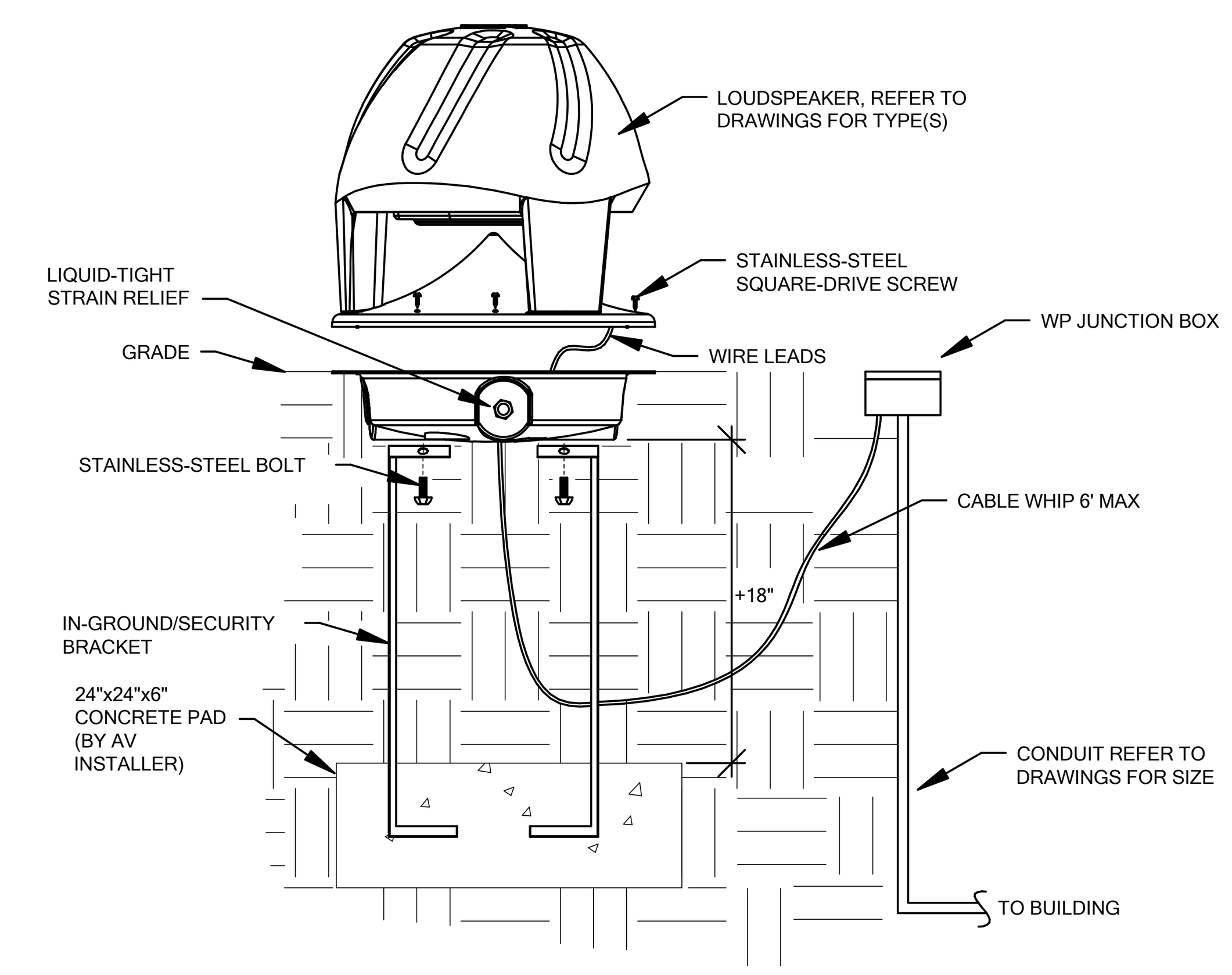

DIAGRAM V013 IN GROUND LOUDSPEAKER

NTS

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AUDIOVISUAL DIAGRAMS

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ABBREVATION	NAME	SYMBOL
1" PVC	1" DIA. PVC PIPE	
AV	AIR VAC VALVE	
BV	BALL VALVE	
BFV	BUTTERFLY VALVE	
CHK	CHECK VALVE, BALL	
CHK-FLNG	CHECK VALVE FLANGE	
FD	FLOOR DRAIN	
FM	FLOW METER	FM
GPM	GALLONS PER MINUTE	
GBV	GLOBE VALVE	
NC	NORMALLY CLOSED	

ABBREVATION	NAME	SYMBOL
NO	NORMALLY OPEN	
PG	PRESSURE GAUGE	PG
PSV	PRESSURE SUSTAINING VALVE	PSV
RD	REDUCER/ENLARGER	
SMV	SAMPLING VALVE	
SV	SOLENOID VALVE	E

PIPE SIZE (IN) — X XXX — DESIGN FLOW RATE (GPM)

SHEET INDEX

		JULY 31ST, 2020 - 100% SD	DECEMBER 18TH, 2020 - 90% CD	DECEMBER 23TH, 2020 - 90% CD	JANUARY 18TH, 2021 - 100% CD
W0.00	SHEET INDEX/ SYM. & ABBR.	☒	☒	☒	■
W0.01	GENERAL NOTES				■
W0.02	OVERALL SITE LAYOUT PLAN	☒	☒	☒	■
W0.03	OVERALL SITE PIPING PLAN	☒	☒	☒	■
W1.01	SPLASH PAD SITE LAYOUT PLAN	☒	☒	☒	■
W1.02	SPLASH PAD FEATURE PIPING PLAN	☒	☒	☒	■
W1.10	SPLASH PAD SECTIONS	☒	☒	☒	■
W4.01	SPLASH PAD FEATURE FILTRATION FLOW DIAGRAM	☒	☒	☒	■
W4.01	SPLASH PAD FEATURE PUMPING FLOW DIAGRAM	☒	☒	☒	■
W4.20	MECHANICAL VAULT & BALANCE TANK EQUIPMENT LAYOUT PLAN	☒	☒	☒	■
W4.30	MECHANICAL VAULT & BALANCE TANK EQUIPMENT SECTIONS		☒	☒	■
W4.31	MECHANICAL VAULT & BALANCE TANK EQUIPMENT SECTIONS		☒	☒	■
W4.32	MECHANICAL VAULT & BALANCE TANK EQUIPMENT SECTIONS		☒	☒	■
W5.01	GENERAL DETAILS	☒	☒	☒	■
W5.02	GENERAL DETAILS	☒	☒	☒	■
W5.03	GENERAL DETAILS	☒	☒	☒	■
W5.04	GENERAL DETAILS				■
WE0.00	ELECTRICAL GENERAL SHEET			☒	■
WE0.01	ELECTRICAL SITE PLAN			☒	■
WE2.01	MECHANICAL ROOM PLAN			☒	■
WE5.01	ELECTRICAL DETAILS			☒	■
WE5.10	ELECTRICAL DETAILS			☒	■
WE5.11	ELECTRICAL DETAILS			☒	■
WE6.01	ELECTRICAL SCHEDULES			☒	■

KEY

☒ ISSUED FOR INFORMATION AND COORDINATION

◪ ISSUED FOR INFORMATION AND COORDINATION, AND PRICING

■ ISSUED FOR CONSTRUCTION

▩ ISSUED FOR PRICING

NUMBERING SYSTEM:

DISCIPLINE:
W-WATER FEATURES
EW-WATERFEATURE ELECTRICAL

FEATURE NUMBER
DRAWING NUMBER

W1.01

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Sheet Name:
SHEET INDEX, SYM. & ABBR.

Sheet Number:
W0.00

GENERAL NOTES & SPECIFICATIONS

A. General Requirements

1. The Plans will govern the Work and are intended to be complimentary, to describe and provide for a complete project.
2. All work shall be performed in accordance with current Local State, County and City Standards, Specifications and adopted building Codes.
3. "Contractor" refers to the contractor or sub-contractor responsible for the installation and construction of the work contained in the W- and WE- series documents and is responsible for meeting all the requirements contained on the drawings and notes.
4. The Contractor is responsible for coordinating all phases of work contained in the W- and WE- series documents with other construction trades and construction documents including but not limited to civil, structural, mechanical, electrical and architectural trade work.
5. The Contractor is responsible for providing complete installation of the systems included in the W- and WE- series documents including piping, mechanical equipment and electrical equipment, components and power in coordination with other project documents and trades.
6. The Contractor is responsible for coordinating the installation and purchase of all the electrical components, including electrical devices, power panels, control panels etc...as indicated on the electrical (WE series) drawings for the complete operation of the systems.
7. The Contractor shall notify the Owners Representative of any discrepancies, omissions or conflicts between various elements of the contract documents prior to proceeding with any work involved in the discrepancy, omission or conflict. Generally, the most stringent requirements shall govern the work.
8. The Contractor shall verify the location of all existing utilities including cables, conduits, pipes, water lines, gas lines, etc. and shall take proper precautions to avoid damage to such components. In the event of a conflict or discrepancy, the contractor shall promptly notify the Owner and engineer and request for necessary relocation. Failure to follow this procedure places upon the contractor the responsibility of making repair or replace such damage at his own expense.
9. The Contractor shall provide necessary safeguards and exercise caution against damage to existing and new structures, structural components and finishes. The contractor shall be responsible for any damage resulting from his operations and shall repair or replace such damage.
10. Prior to construction the Contractor shall verify all existing conditions, dimensions, elevations, etc. on the site and shall coordinate the work to be performed with all trades.
11. Shop drawings shall be submitted by the Contractor and reviewed and approved by the Owners Representative prior to fabrication, erection, manufacturing of components or purchasing materials.
12. The Contractor is responsible for safety and protection within and adjacent to the job site during construction.

B. Site Work

1. Refer to soils report and geotechnical engineer for additional requirements for excavation, backfill materials, ground water elevations, dewatering requirements, etc. Soils report will govern the work related to excavation and backfill.
2. The Contractor shall excavate to required sub-grade elevations for all piping, footings, foundations, slabs, vaults and structures necessary to complete the work described in these documents.
3. All footings, slabs and concrete shells shall bear on undisturbed natural material or properly placed engineered backfill. If a portion of the structure is on engineered fill then the entire structure shall be excavated and backfilled so the entire structure is on engineered fill to minimize differential settlement.
4. Pipe layouts shown on the contract drawings represent the desired pipe routing, allowing for minor realignment required by field conditions. The Engineer of Record approval is required for all major rerouting of piping.
5. All Pipe runs shall be installed with the least number of fittings and without air entrapping high points or reverse slopes.
6. Gravity drain lines must be installed with constant slope and great care to not have high points in the line.
7. Piping shall be fully supported along its entire length to prevent pipe deflections and in accordance with contract specifications. All fittings shall be adequately supported to resist thrust, vibration, and movement. Provide thrust blocks and bracing where needed.

C. Water Feature Requirements

1. All work shall be in strict accordance with the Local Health/Building Department requirements.
2. Surface treatment of wet deck areas shall be impervious and slip resistant. See architectural documents for materials. Wet deck includes the deck immediately around the feature and the first 15 feet (4.5 m) of walkways to sanitary facilities.
3. Install backflow prevention device at all water feature fill connections to main potable supply line.
4. Provide Automatic Fill Valve with level sensor and controller manufactured by AquatiControl Technology as shown on the drawings.
5. Provide a potable water fill/makeup supply for each water feature system with a 6 inch (15 cm) minimum air gap above the high water level in the chamber.

D. Water Feature Piping Requirements

1. All circulation and treatment equipment that comes in contact with the water feature water shall be NSF approved and meet potable water standards.
2. Provide PVC Swing Check Valves as shown on the drawings. PVC Swing Check Valves shall have a one piece Thermoplastic PVC body construction conforming to Cell Classification 12454 with top-entry access to internal parts without removing flanges. Body shall be flanged type conforming to ANSI B 16.5 bolt circle. External lever and weight shall be of non-slam design. Shaft and bolts shall be 316 Stainless Steel. Gasket material and seats composed of Viton® or EPDM.
3. Provide PVC Butterfly Valves manufactured by Asahi or Spears as shown on the drawings for pipe size 4" and up. 4" valves may be lever actuated, 6" and larger shall be gear operated. Stem and metallic fasteners shall be 316 St. Steel, seals shall be EPDM or Viton. Submerged valves shall be supplied with stem extensions or 2 in. square operating nuts.
4. Provide PVC Ball Valves manufactured by Asahi or Spears as shown on the drawings for pipe sizes 3" and smaller. Valves shall be Tru-Union with PTFE seats and seals of Viton or EPDM. Valves shall have a minimum pressure rating of 150 psi.
5. All PVC pipe and fittings shall be schedule 40 conforming to ASTM D1785. All PVC pipe exposed to sunlight shall be coated to resist deterioration due to ultraviolet radiation. All fitting connections shall be flanged or solvent welded, no slip type or push on gasketed joints will be permitted. Solvent Cement to comply with ASTM D2564.
6. All piping shall be adequately supported with anchor blocks, thrust blocks and pipe supports to prevent sagging, shaking and motion of the piping system.
7. Install water stop flange with a bead of swell seal around pipe at base of flange for all horizontal wall penetrations as shown on the drawings.
8. Perform hydrostatic pressure test on all newly laid and installed pipe. Prior to testing, verify all piping, valves, and fittings have been properly installed and that all flange bolts are tight and secure. The pipeline shall be flushed or vacuumed to remove all construction debris and foreign material from the pipeline prior to testing & protected from foreign material introduction thereafter.

E. Water Feature Equipment Requirements

1. Contractor may submit equipment alternatives of the same quality & performance characteristics for approval by engineer.
2. Provide flow meters capable of reading 1.5 times the designed flow at the installation point indicated on the drawings & correctly sized for the pipe diameter. Install flow meter in a location where it is easily read per manufacturers instructions including minimum straight pipe diameters up & down stream from insertion point.
3. Pressure and Compound Gauges shall be 2.5" OR 4" diameter liquid filled Stainless Steel style & rated for no more than 2x the intended pressure reading at the installation point.
4. Provide and install treatment circulation and feature pumps as shown on the drawings. Pumps shall be manufactured of non-corrosive materials with integral molded body basket strainers with transparent lid design. Motors shall be NEMA premium efficiency.
5. Water feature chemicals shall be stored in accordance with manufacturer's recommendations under roofed areas that are non-accessible to unauthorized persons.
6. Provide and install mechanical identification for all pipe, valves, and equipment. Install plastic nameplates with corrosion-resistant mechanical fasteners or sufficient adhesive to ensure permanent adhesion. Identify all piping, concealed or exposed, with plastic pipe markers or stenciled painting. Identify service, flow direction, and pressure. Install in clear view and align with axis of piping. Spacing between indentifying markers/stencils not to exceed 20 feet (6 meters)..
7. Provide housekeeping pads of concrete, minimum 4 inches (100 mm) thick and extending a minimum of 3 inches (75 mm) beyond supported equipment. Provide templates, anchor bolts and accessories for mounting and anchoring equipment. Provide shims, anchors, support straps, angles, grouted bases, or other items required to accomplish proper installation.

F. Electrical Requirements

1. All electrical work shall be in strict compliance with the latest edition of the National Electric Code (NEC) and local ordinances. The most stringent requirements shall take precedence.
2. All system treatment and feature pumps shall be supplied with a General duty quick-make, quick-break type, non-fused disconnect switch compliant with NEC requirements. Disconnects for motor circuits shall be horsepower rated.
3. Feature pumps shall be electrically interlocked with the treatment pumps such that feature pumps may not operate unless treatment pump(s) are on.
4. Water features shall be grounded as required by the National Electric Code (NEC) including reinforcing, spray features, handrails, anchors, etc. Make grounding conductor connections to grounding electrodes using approved bolted clamps of bronze or brass designed for such use. Connections to structural steel, ground rods, or splices shall be made using exothermic welds or high pressure compression type connectors.
5. All outlets within the water feature areas shall be GFCI rated.
6. Control panels, power panels, etc. shall be installed in locations where the panels are easily accessible and meet NEC code clearance requirements. Enclosures shall be NEMA 4X outdoor rated.
7. High water level switch shall be incorporated as shown in electrical diagrams to monitor high water levels in the pump pit and provide shunt-trip shutdown of electrical power de-energizing all water feature equipment. The switch shall be installed near the floor as shown in the contract documents.
8. Contractor shall verify all electrical loads (voltage, phase, connection requirements, etc.) of equipment furnished before beginning rough in work. Notify the engineer if there are any discrepancies between equipment furnished and contract documents.
9. Contractor shall insure that all components of the control system are fully operational and function as originally intended. Operation of the system shall meet the requirements as indicated in the control specifications and in the construction drawings.

G. Concrete Work

1. Concrete placement shall be in accordance with the latest edition of ACI-301 and ACI-302. When concrete is placed during hot weather conform to the latest edition of ACI 305R. When concrete is place during cold weather conform to the latest edition of ACI 306R.
2. All work shall be in strict accordance with ACI 318, ACI 350 and local building codes.
3. Contractor shall provide Owner with Concrete Supplier's statements of mix proportions, anticipated 28 day compressive strength and test reports.
4. Concrete tests cylinders shall be made and stored in accordance with ASTM C-31. Records of test cylinders and test results shall be sent to the owner and the engineer of record for approval. If test cylinders are not prepared at time of concrete installation Contractor shall be fully responsible for obtaining cored test samples and repairing concrete surface to the satisfaction of the engineer. All tests and samples shall be performed in accordance with ASTM standards and per the written specifications.
5. Contractor shall coordinate location of penetrations with all other trades prior to placing concrete and install sleeves, block outs, etc. as required.
6. All penetrations through walls or slabs subjected to water shall be installed with a mechanical water stop or link seal.
7. Contractor shall be responsible for proper placement of all anchor bolts, imbeds, plates, and etc. as required.
8. Contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shoring. Do not remove forms and shoring until structural members acquire sufficient strength to support their own weight plus construction loads.
9. All expansion joints shown on the plans shall be installed without change to the number or location except with the written approval of the Engineer of Record.
10. Joint sealant shall be either fiber expansion joint type conforming to ASTM D1751 or closed cell neoprene sponge rubber conforming to ASTM D1752.
11. All concrete structures holding or retaining water shall have water stops or water bars placed at all construction joints to protect reinforcement.
12. Concrete mixture shall meet the following requirements unless noted otherwise.
    a. 28 day compressive strength: 4,500 psi
    b. Portland cement type: Type II, with C3A≤5% per ASTM C150
    c. Maximum water to cement ratio: 0.50
    d. Maximum concrete slump: 4 inches (plus or minus 1")
    e. Air entraining: as recommended by ACI 318 & ASTM C-260
    f. Aggregate: normal weight conforming to ASTM C33 and that are clean, washed, non-friable and uniformly graded from coarse to fine.
    g. Do not add calcium chloride to concrete mix
13. See project specifications for additional Concrete requirements and admixtures.
14. All concrete shall be water (damp) cured as described in project specifications unless the Engineer of Record has provided written approval of an alternative method.
15. Contractor shall be responsible for the clean up and removal from the site of all concrete debris and associated materials upon completion of the work.

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REV	DATE	DESCRIPTION

DESIGNED BY: DA
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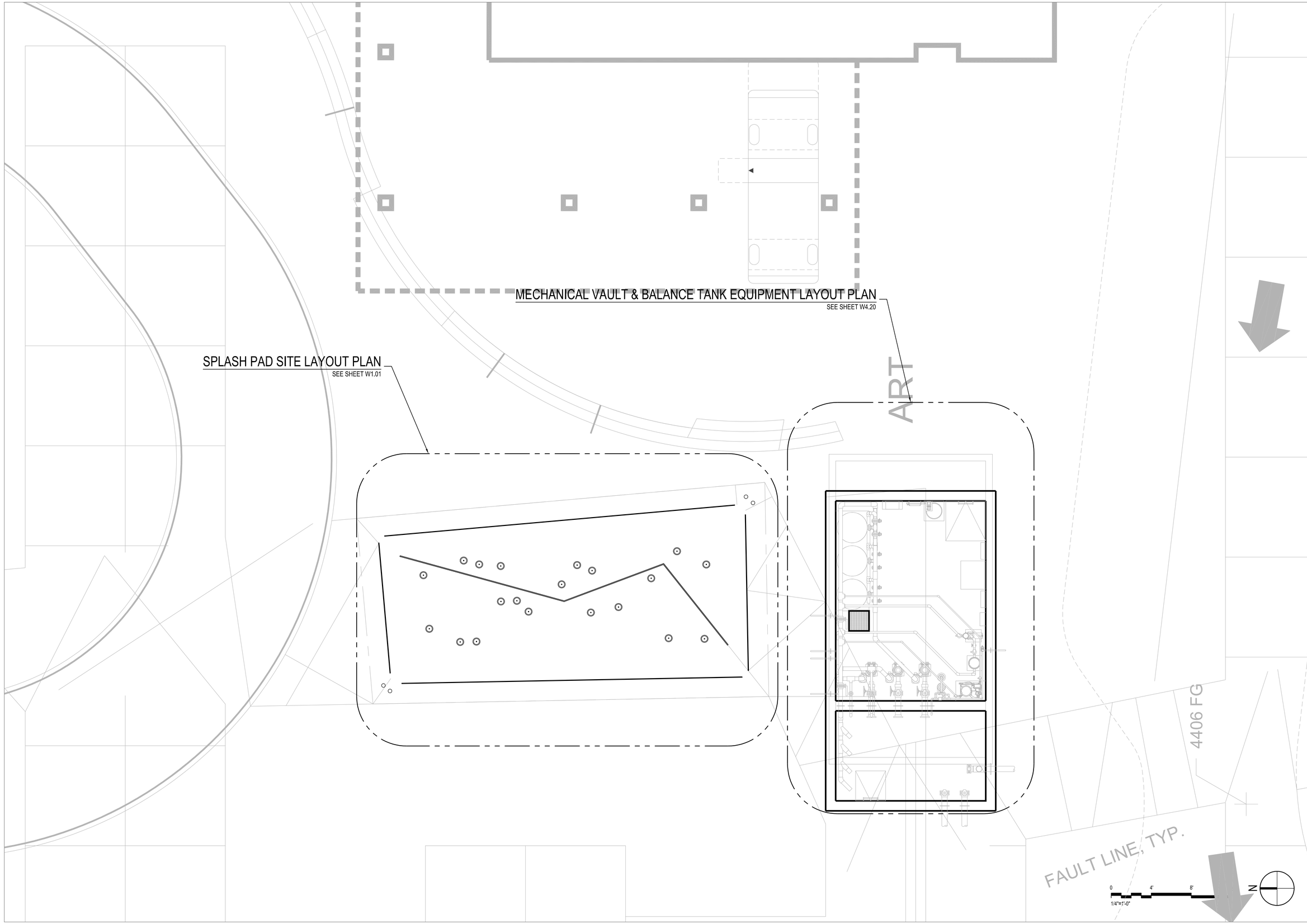
PROJ #: MILLCREEK 0001

Sheet Name:
GENERAL NOTES

Sheet Number:
W0.01



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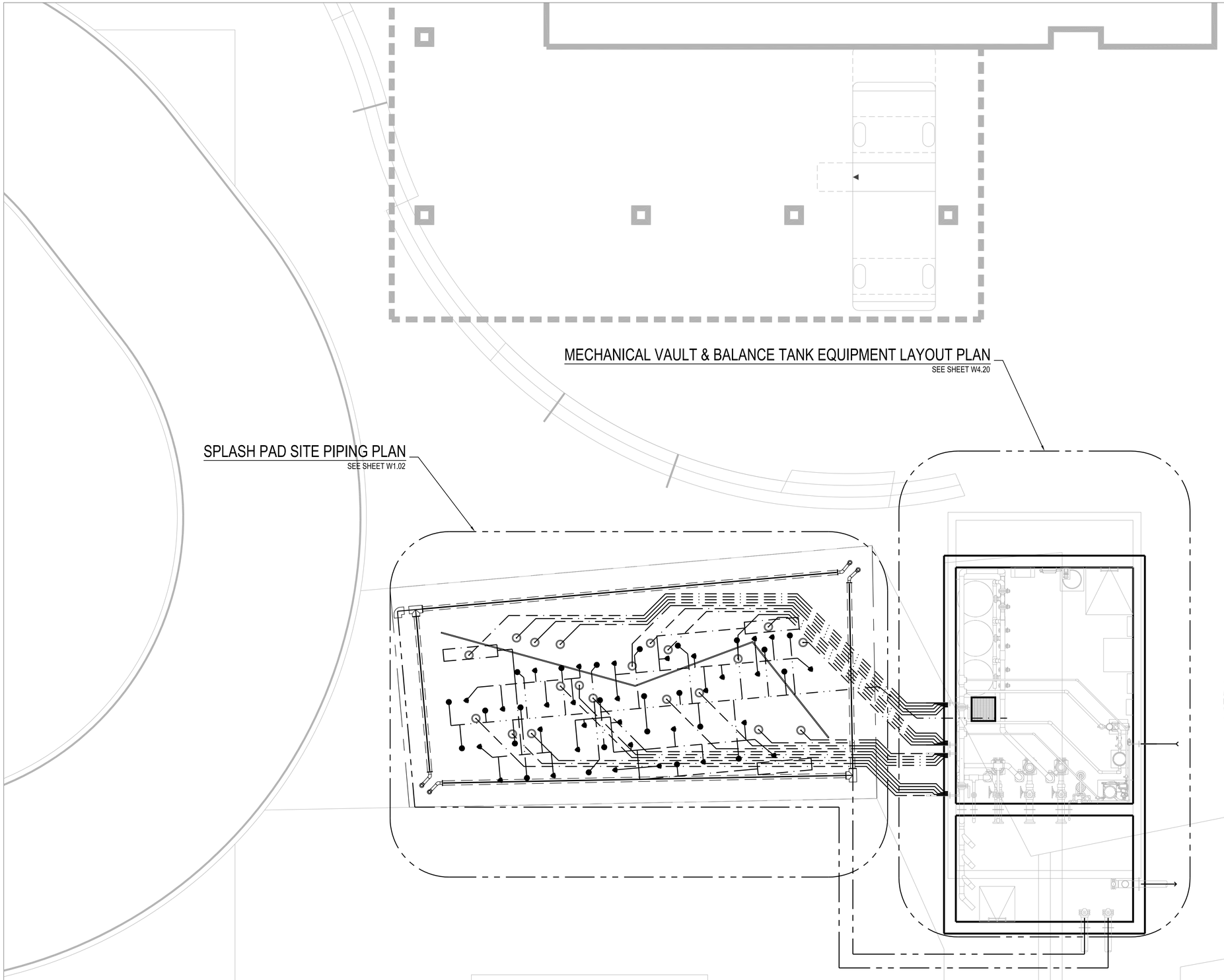
ISSUE DATE: 01.18.2021
PROJ #: MILLCREEK 0001

Sheet Name:
OVERALL SITE LAYOUT PLAN

Sheet Number:
W0.02



0 4' 8' 12'
1/4"=1'-0"

N

PIPING LEGEND

- INLET PIPING
- DRAIN PIPING
- FEATURE NOZZLE PIPING
- GUTTER PIPING

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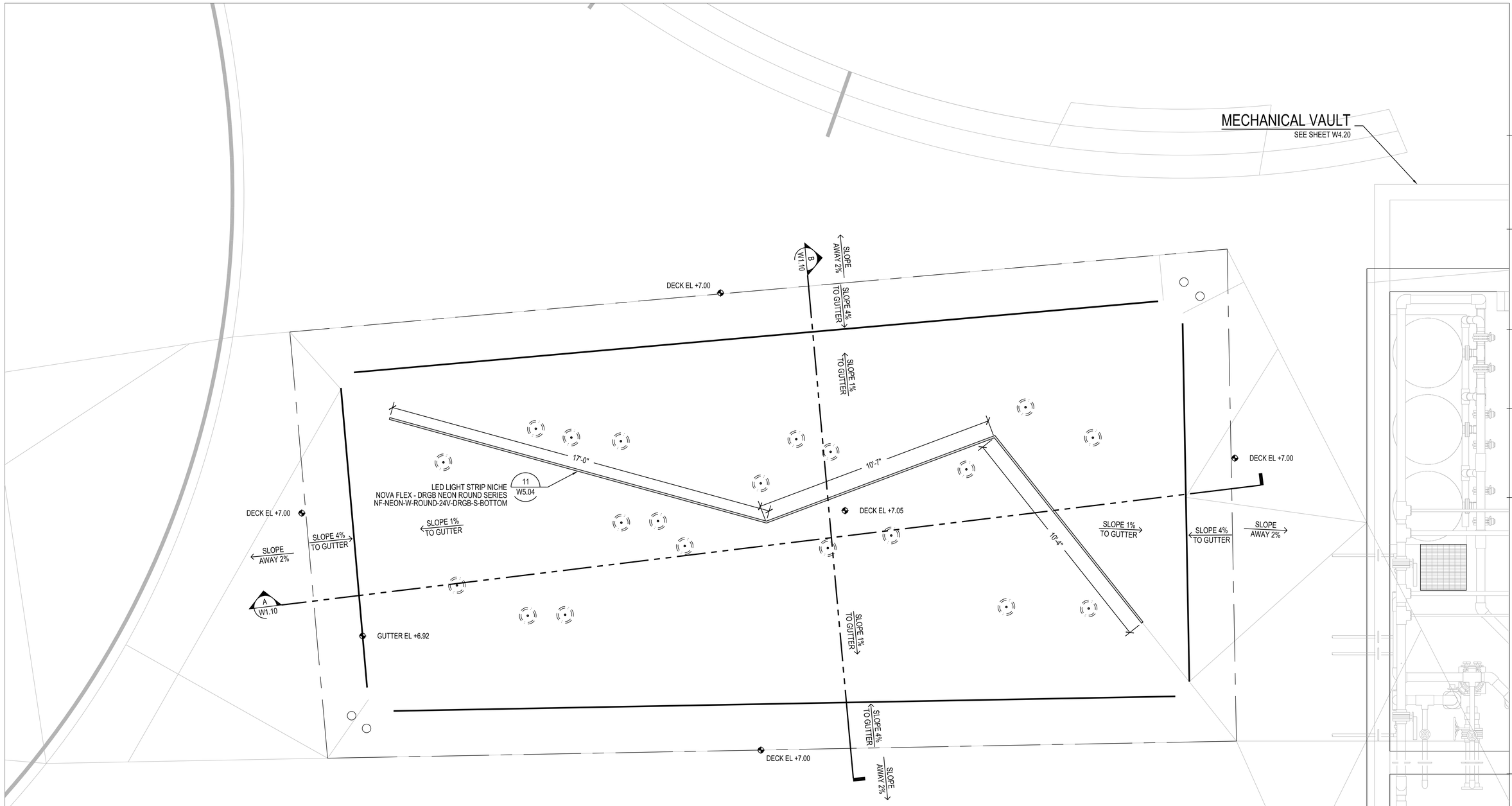
Sheet Name:
OVERALL SITE PIPING PLAN

Sheet Number:
W0.03



SPLASH PAD COLLECTION TANK DATA	
SURFACE AREA	= 135 SQ. FT.
TOTAL VOLUME	= 6,060 GALLONS
SYSTEM FLOW RATE	= 240 GPM
TURNOVER RATE	= 25.2 MINUTES / 0.42 HOURS

0 2' 4' 6'
1/2"=1'-0"

N

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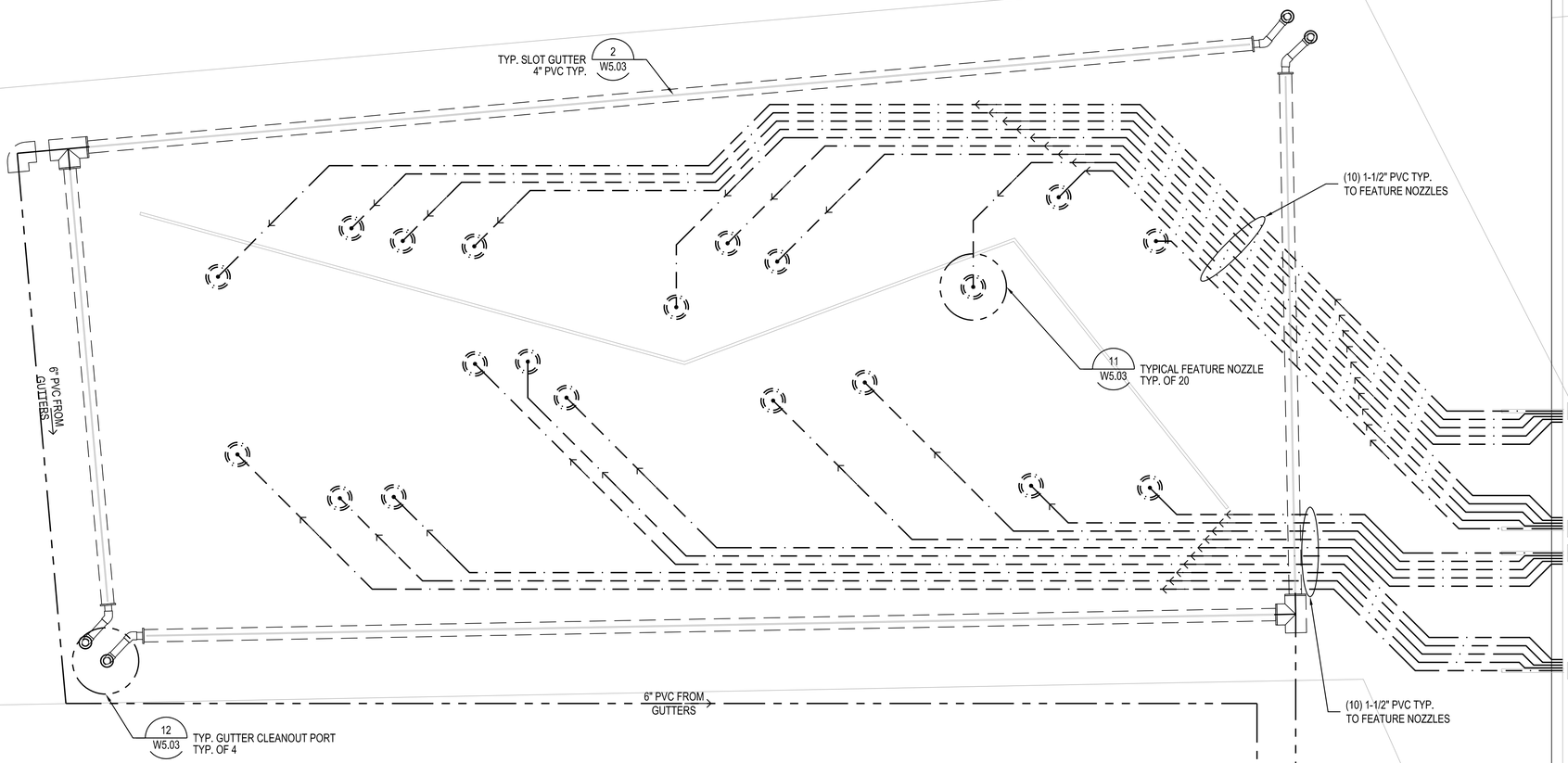
Sheet Name:
SPLASH PAD SITE LAYOUT PLAN

Sheet Number:
W1.01

MECHANICAL VAULT & BALANCE TANK EQUIPMENT LAYOUT PLAN

SEE SHEET W4.20



NOTE: NOZZLE LOCATIONS BY EPG

0 2' 4' 6'
1/2"=1'-0"

N

PIPING LEGEND

- INLET PIPING
- DRAIN PIPING
- FEATURE NOZZLE PIPING
- GUTTER PIPING

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Sheet Name:
SPLASH PAD SITE PIPING PLAN

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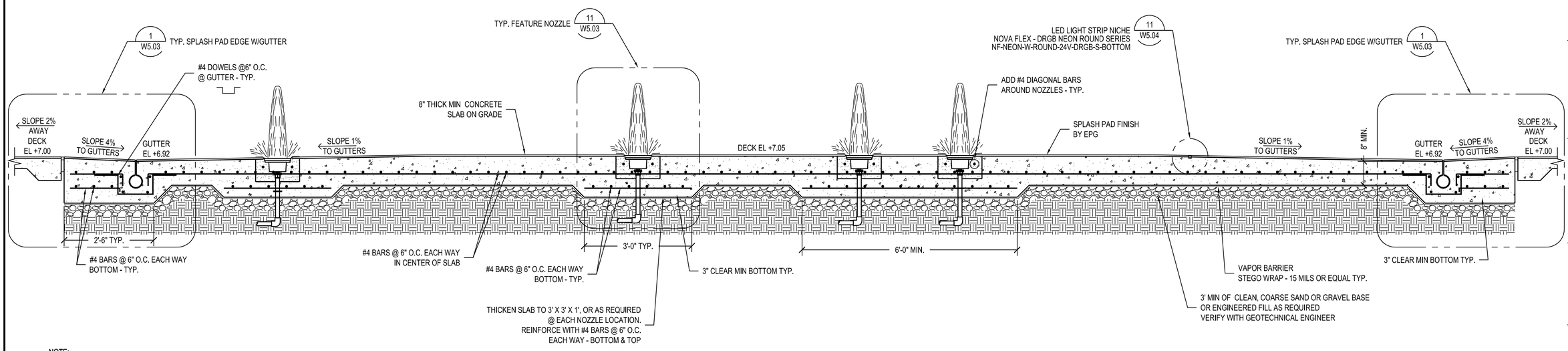
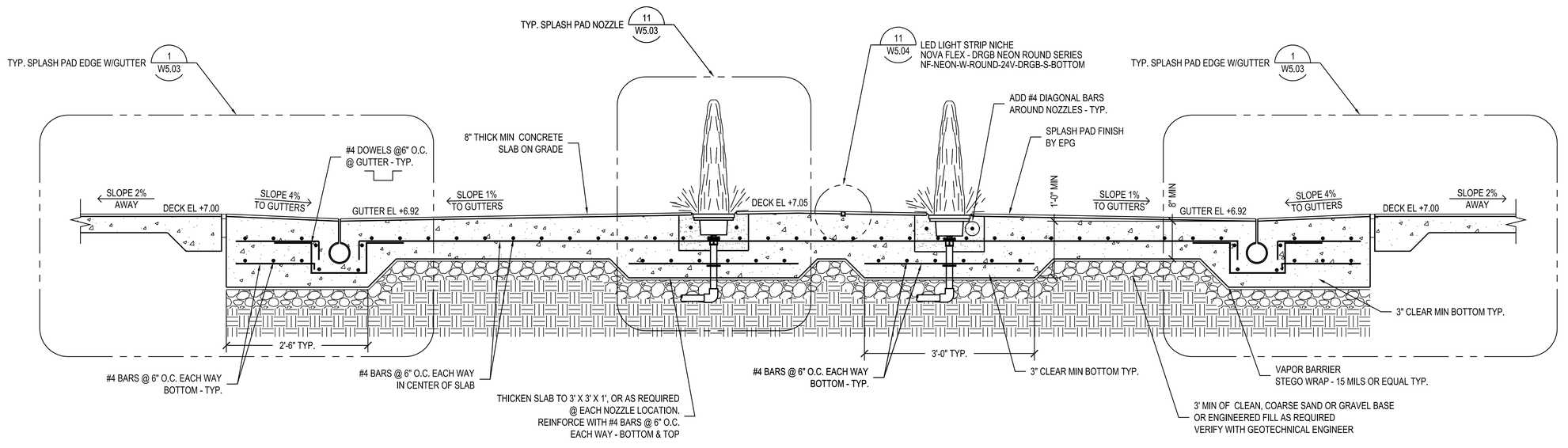
W1.02



NOTE:
NOZZLE SPRAY HEIGHT SET DURING COMMISSIONING PER EPG - NOT TO EXCEED 3' HIGH.

SECTION A - SPLASH PAD

SCALE: 3/4"=1'-0"



NOTE:
NOZZLE SPRAY HEIGHT SET DURING COMMISSIONING PER EPG - NOT TO EXCEED 3' HIGH.

SECTION B - SPLASH PAD

SCALE: 1"=1'-0"

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Sheet Name:
SPLASH PAD SECTIONS

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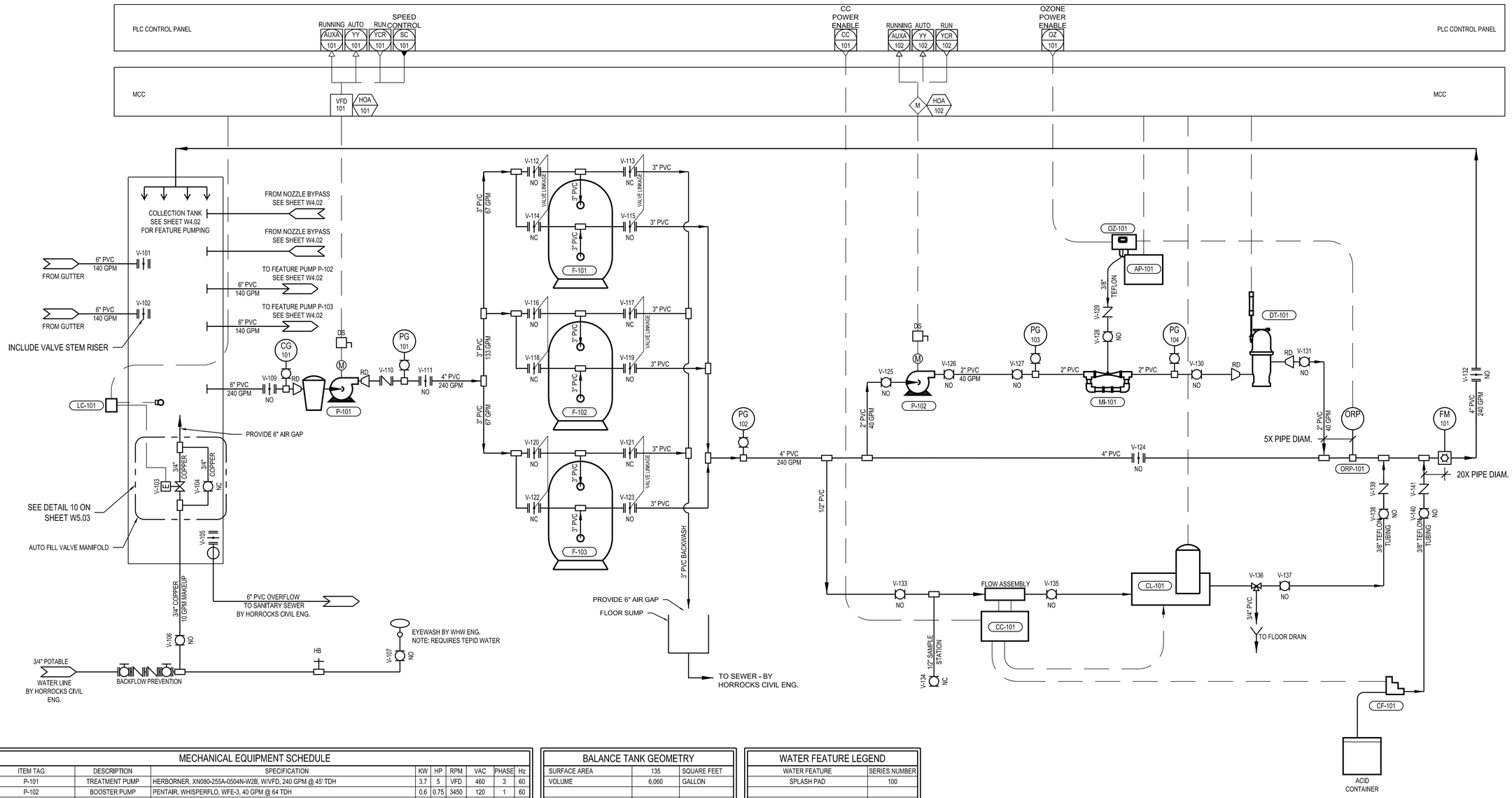
W1.10



MECHANICAL EQUIPMENT SCHEDULE

ITEM TAG	DESCRIPTION	SPECIFICATION	KW	HP	RPM	VAC	PHASE	Hz
P-101	TREATMENT PUMP	HERBORNER, XN080-255A-0504N-W2B, W/VFD, 240 GPM @ 45' TDH	3.7	5	VFD	460	3	60
P-102	BOOSTER PUMP	PENTAIR, WHISPERFLO, WFE-3, 40 GPM @ 64 TDH	0.6	0.75	3450	120	1	60
F-101 THRU F-103	SAND FILTER	TRITON, TR-140C-3, 7.07 SQ. FT. PER FILTER, 3 INCH FLANGE CONNECTIONS						
CF-101	pH FEED PUMP	STENNER, 45M1, MAX FEED RATE 3 GPD	.02			120	1	60
CT-101	CHEMICAL TANK	7 GAL CARBOY						
CL-101	CLORINATOR	ACCU-TAB CHLORINATOR, POWERBASE 1030 (30 LB CAPACITY)	0.8	1		120	1	60
CC-101	CHEMICAL CONTROLLER	BECS TECHNOLOGY, BECSYS3, INCLUDE INDUSTRIAL PROBES	1.1			120	1	60
FM-101	FLOW METER	FLOWVIZ FV4						
PG-101 & PG-102	PRESSURE GAUGE	WIKA (TYPE PER INSTALLATION), LIQUID FILLED 2.5 INCH (63mm) DIA.						
CG-101	COMPOUND GAUGE	WIKA (TYPE PER INSTALLATION), LIQUID FILLED 2-1/2 INCH DIA., 0-30 HG / 0-30 PSI RANGE						
LC-101	WATER LEVEL CONTROLLER	AQUATICONTROL, ELC-800R SURGE TANK LEVEL SENSOR & CONTROLLER				120	1	60
OZ-101	OZONATOR GENERATOR	MICRO PLASMA O3, MP10-O2, 10 G/HR, 3/8" OZONE OUT, (1) CPC QUICK CONNECT O2 INLET	.8			120	1	60
MI-101	OZONE INJECTOR ASSEM.	MICRO PLASMA O3 860-0006 O2 VENTURI INJECTOR ASSEMBLY, FULL FLOW, 2"						
DT-101	DEGAS TANK	MICROPLASMA O3, 870-0015 MP10 (O2) OZONE DEGAS/DESTRUCT SYSTEM						
AP-101	AIR PREP	AIRSEP TOPAZ, AS013-105 (680-0005 MP03), (6 LPM) *INCLUDED WITH MP10*	6			120	1	60
ORP-101	ORP PROBE	ORP SENSOR *INCLUDED WITH MP10*						

BALANCE TANK GEOMETRY

SURFACE AREA	135	SQUARE FEET
VOLUME	6,060	GALLON

TREATMENT INFORMATION

TURNOVER FLOW RATE	240	GPM
TURNOVER TIME	0.42	HOURS
	25.2	MINUTES
MAX. BATHER LOAD	-	PEOPLE

EQUIPMENT TAG LEGEND

EQUIPMENT CALL OUT → EQ-100 ← IDENTIFICATION NUMBER

WATER FEATURE LEGEND

WATER FEATURE	SERIES NUMBER
SPLASH PAD	100

NOTES

1) AIR RELIEF VALVES MAY NEED TO BE ADDED IN HIGH POINTS OF PIPING BUT ARE NOT SHOWN ON SCHEMATIC DRAWINGS.
2) ALL VALVES LOCATED 7 FEET ABOVE THE FINISHED FLOOR REQUIRE CHAIN OPERATORS.

NOTE:
CONTRACTOR TO SUPPLY PORTABLE VACUUM SYSTEM

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REV	DATE	DESCRIPTION

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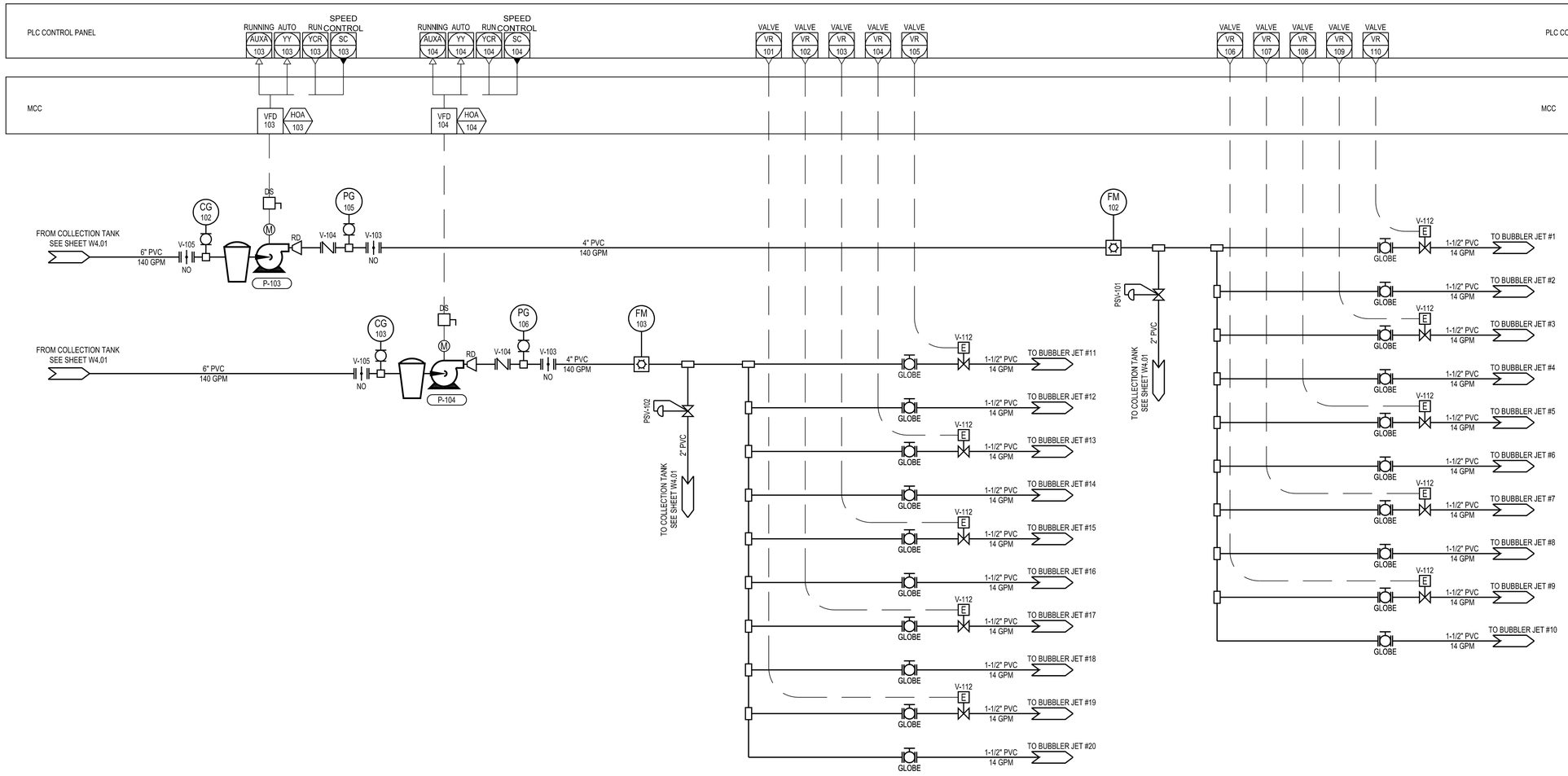
ISSUE DATE: 01.18.2021
PROJ #: MILLCREEK 0001

Sheet Name:
SPLASH PAD FEATURE FILTRATION FLOW DIAGRAM

Sheet Number:
W4.01



MECHANICAL EQUIPMENT SCHEDULE

ITEM TAG	DESCRIPTION	SPECIFICATION	KW	HP	RPM	VAC	PHASE	Hz
P-103 & P-104	FEATURE PUMP	HERBORNER, XN050-240A-0754N-W2B, W/VFD, 140 GPM @ 95' TDH	5	7.5	VFD	460	3	60
FM-102 & FM-103	FLOW METER	FLOWVIZ FV4						
PG-105 & PG-106	PRESSURE GAUGE	WIKA (TYPE PER INSTALLATION), LIQUID FILLED 2.5 INCH (63mm) DIA.						
CG-102 & CG-103	COMPOUND GAUGE	WIKA (TYPE PER INSTALLATION), LIQUID FILLED 2-1/2 INCH DIA., 0-30 HG / 0-30 PSI RANGE						
PSV-101 & PSV-102	PRES. SUSTAINING VALVE	PLAST-O-MATIC, PRESURE RELIEF VALVE, RVT200V-PV						

WATER FEATURE LEGEND

WATER FEATURE	SERIES NUMBER
SPLASH PAD	100

NOTES

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2) ALL VALVES LOCATED 7 FEET ABOVE THE FINISHED FLOOR REQUIRE CHAIN OPERATORS.

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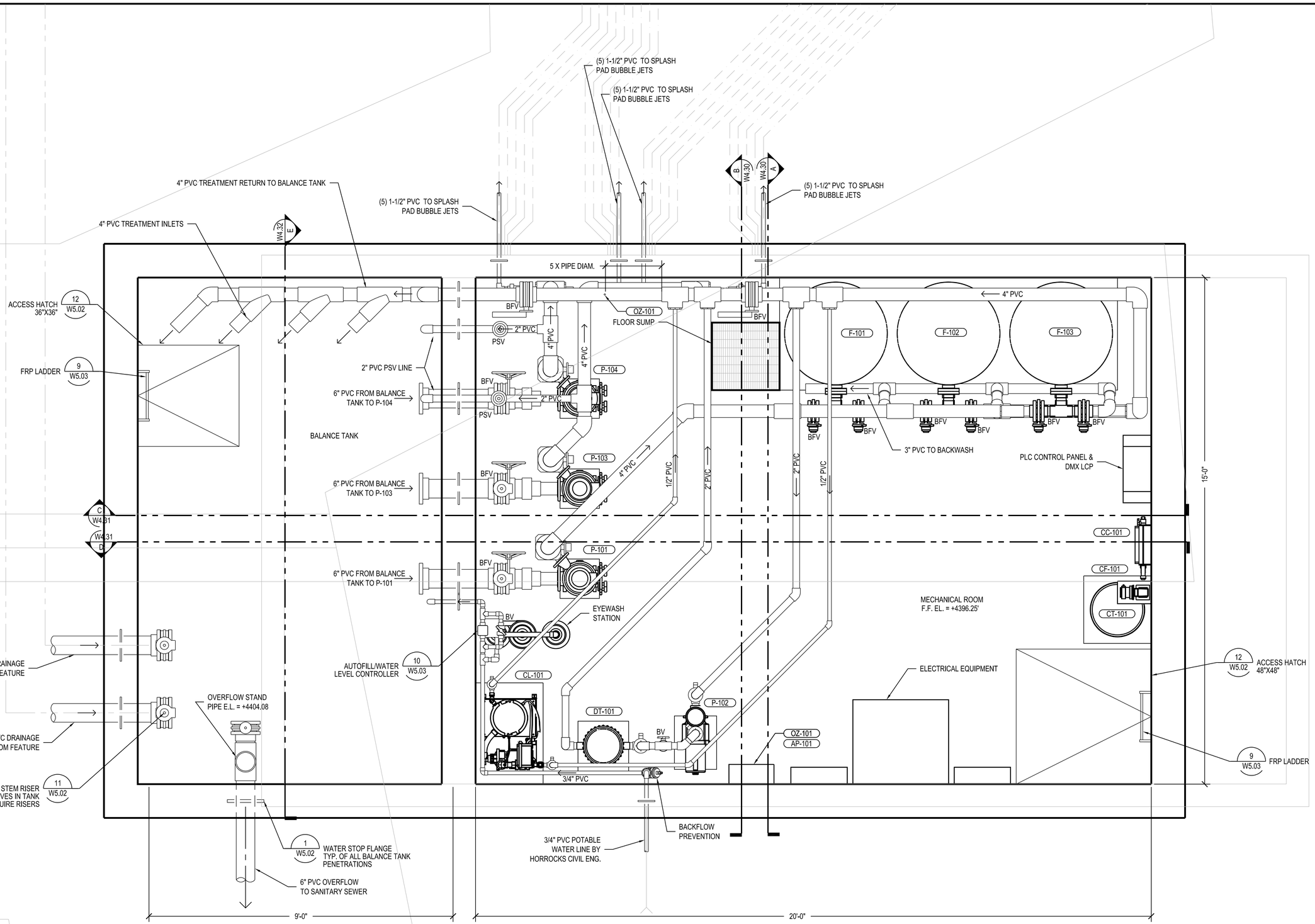
Sheet Name:
SPLASH PAD FEATURE PUMPING FLOW DIAGRAM

Sheet Number:
W4.02



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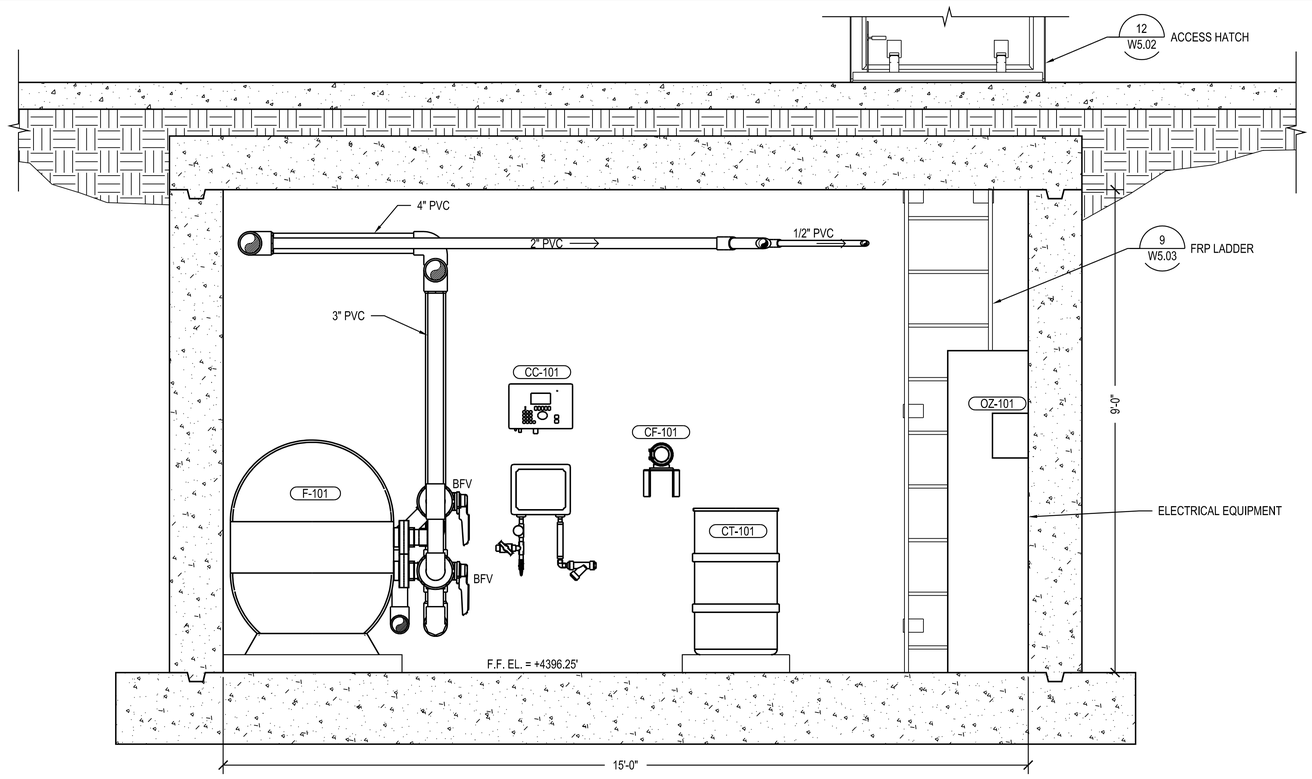
PROJ #: MILLCREEK 0001

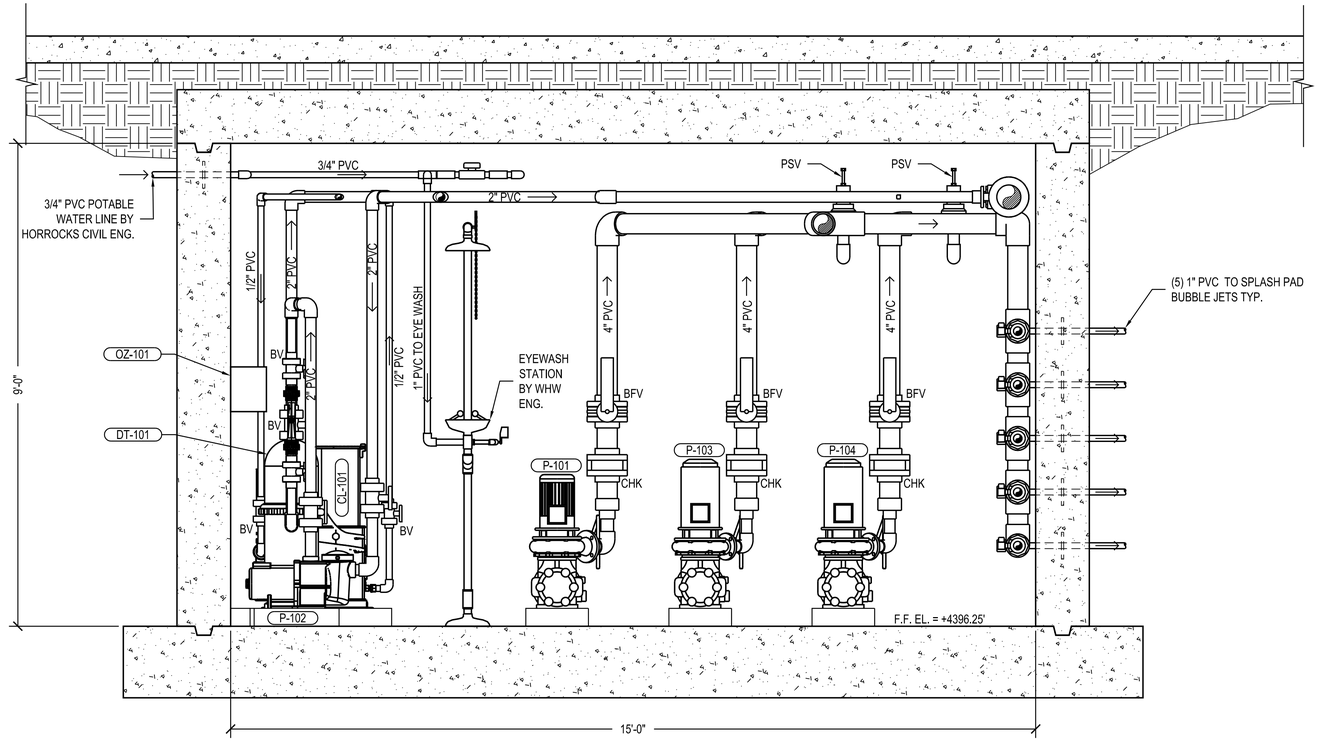
Sheet Name:
MECHANICAL VAULT EQUIPMENT LAYOUT PLAN

Sheet Number:
W4.20



MECHANICAL VAULT - SECTION A

SCALE: 3/4"=1'-0"



MECHANICAL VAULT - SECTION B

SCALE: 3/4"=1'-0"

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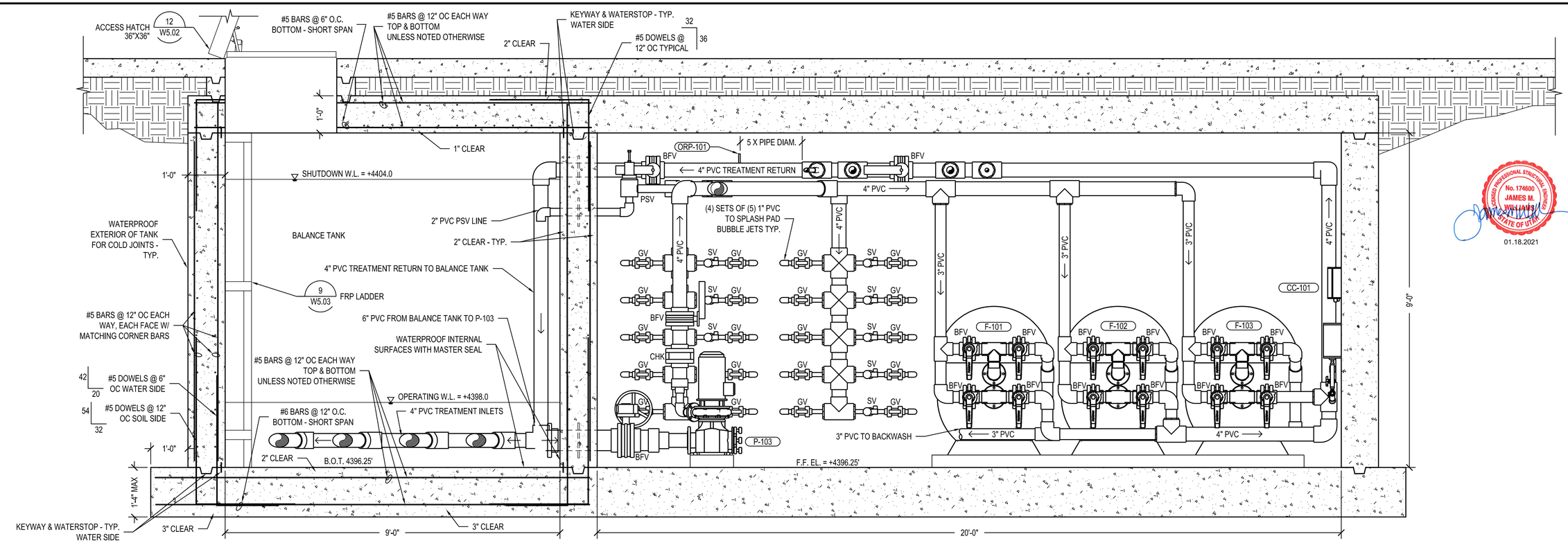
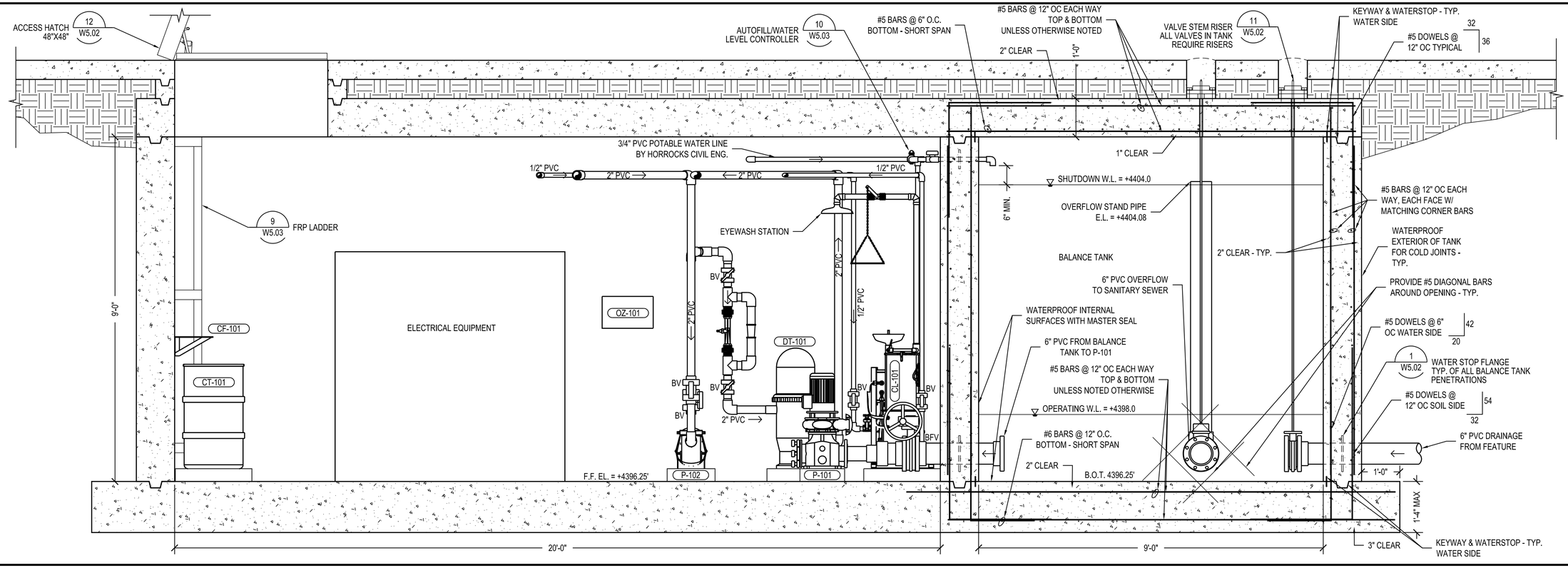
MECHANICAL VAULT - SECTION C

SCALE: 3/4"=1'-0"



MECHANICAL VAULT - SECTION D

SCALE: 3/4"=1'-0"



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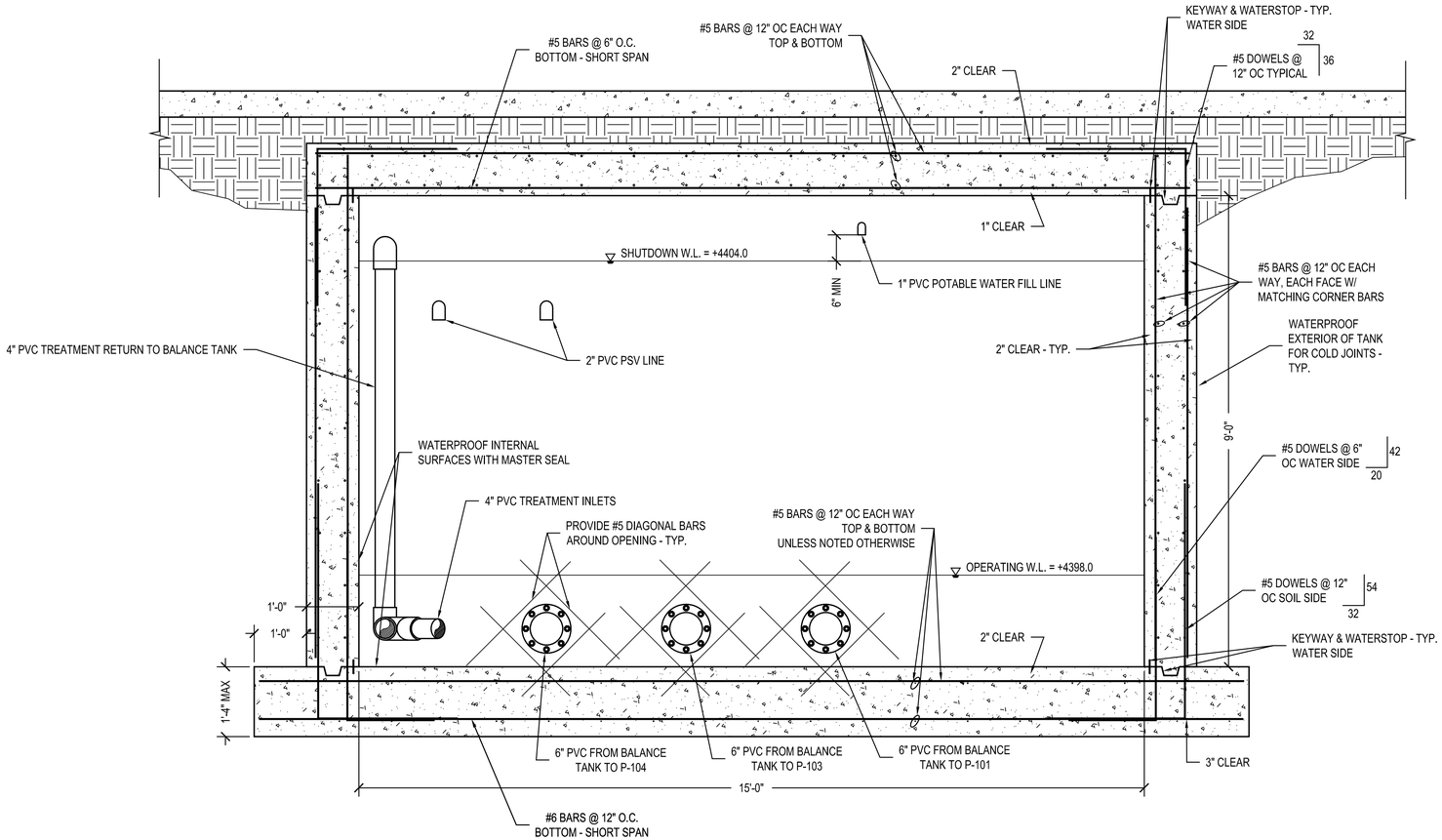

MECHANICAL VAULT - SECTION E

SCALE: 3/4"=1'-0"

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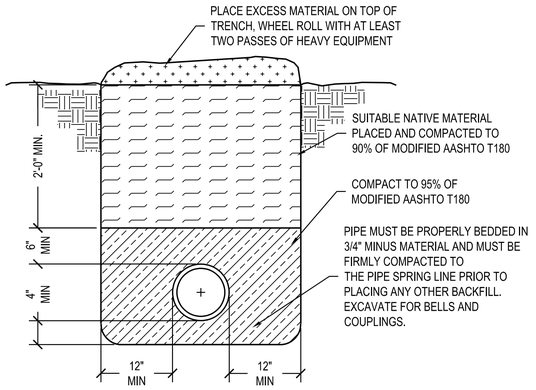
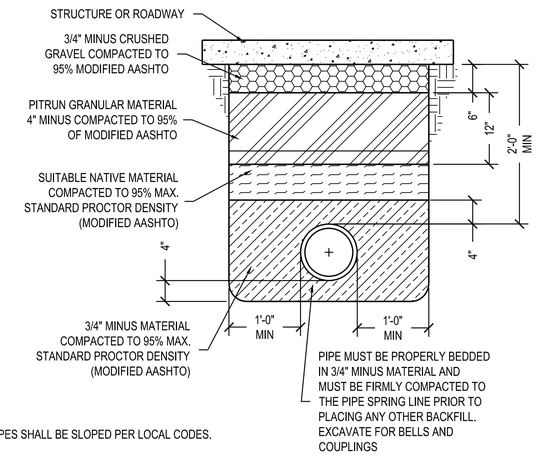


PIPES SHALL BE SLOPED PER LOCAL CODE.

① TRENCH BACKFILL IN LANDSCAPE

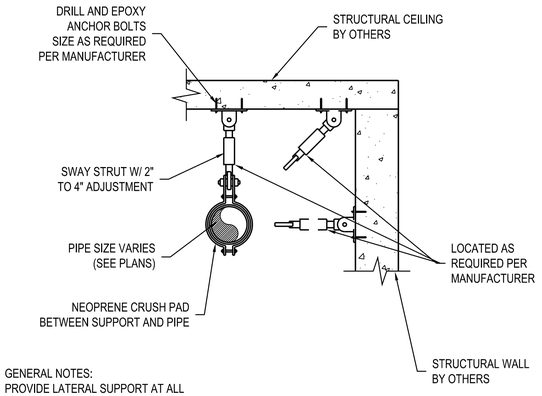
SCALE: 1"=1'-0"



PIPES SHALL BE SLOPED PER LOCAL CODES.

② TRENCH BACKFILL UNDER STRUCTURES & ROADWAYS

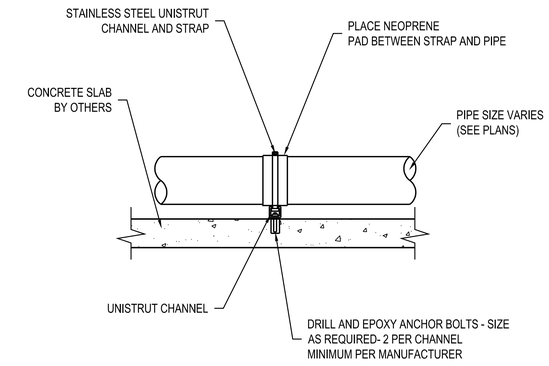
SCALE: 1"=1'-0"



GENERAL NOTES:
PROVIDE LATERAL SUPPORT AT ALL LOCATIONS WHERE THRUST SUPPORT IS REQUIRED, OR AS REQUIRED FOR SEISMIC.

③ LATERAL PIPE SUPPORT

SCALE: 1"=1'-0"



④ FLOOR PIPE SUPPORT

SCALE: 1"=1'-0"

NOTES:
1) PIPES RUNNING PARALLEL AND ABOVE OTHER PIPES ALLOWED ONLY UPON SPECIAL APPROVAL OF THE ENGINEER.
2) PIPES SHALL BE SLOPED PER LOCAL CODES.

⑤ MULTIPLE PIPE TRENCH SECTION

SCALE: 1"=1'-0"

⑦ MULTIPLE PIPE WALL SUPPORT

SCALE: 1"=1'-0"

⑧ CEILING PIPE SUPPORT

SCALE: 1"=1'-0"

⑨ MULTIPLE PIPE CEILING SUPPORT

SCALE: 1"=1'-0"

⑩ BUTTERFLY VALVE WALL ANCHOR

SCALE: 1"=1'-0"

NOTES:
1) PROVIDE THRUST BLOCKING OR LATERAL SUPPORTS ON THE FIRST FITTING AFTER STEEL COUPLINGS.
2) PROVIDE STEEL COUPLINGS AT LOCATIONS OF STRUCTURAL EXPANSION JOINTS AND ADJACENT TO RIGID CONCRETE OR MASONRY EXTERIOR WALL / FOUNDATIONS.

⑪ FLEXIBLE STEEL COUPLING

SCALE: 1"=1'-0"

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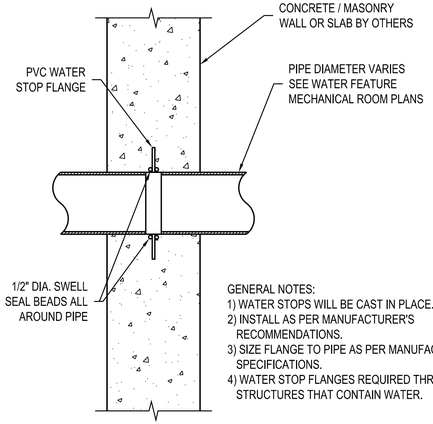
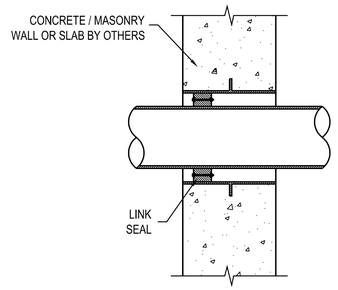


GENERAL NOTES:
1) WATER STOPS WILL BE CAST IN PLACE.
2) INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
3) SIZE FLANGE TO PIPE AS PER MANUFACTURER'S SPECIFICATIONS.
4) WATER STOP FLANGES REQUIRED THROUGH ALL STRUCTURES THAT CONTAIN WATER.

① WATER STOP FLANGE

SCALE: 1"=1'-0"



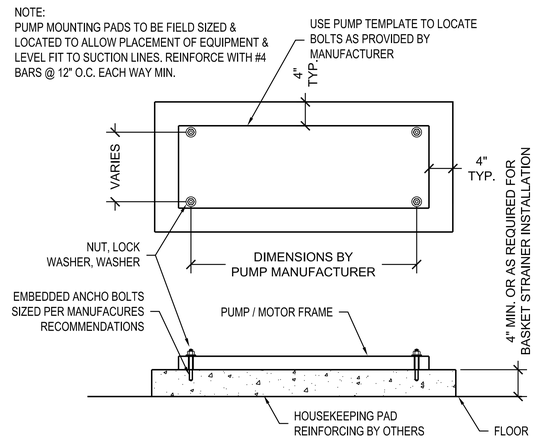
GENERAL NOTES:
1) INSTALL LINK SEALS AS PER MANUFACTURER'S RECOMMENDATIONS.
2) PROVIDE PLASTIC SLEEVE OR CAST IN PLACE OR CORE DRILLED HOLE. SIZED AS PER MANUFACTURER'S SPECIFICATIONS.
3) LINK SEALS REQUIRED THROUGH ALL EXTERIOR BLDG. WALLS & STRUCTURES THAT DO NOT CONTAIN WATER.
4) PIPE DIAMETER VARIES SEE WATER FEATURE MECHANICAL ROOM PLANS.

PVC NOMINAL PIPE SIZE		CAST OR CORE BIT DRILLED HOLE SIZE		PVC NOMINAL PIPE SIZE		CAST OR CORE BIT DRILLED HOLE SIZE	
[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]
1/2	21	2	51	10	250	14	356
3/4	26	2.5	64	12	300	16	406
1	33	3	76	14	350	18	457
1 1/4	42	3	76	16	400	20	508
1 1/2	48	3.5	89	18	450	22	559
2	60	4	102	20	500	24	610
2 1/2	73	4	102	24	600	28	711
3	90	5	127	30	750	34	864
4	110	6	152	36	900	40	1016
6	150	10	254	42	1100	46	1168
8	200	12	305	48	1200	52	1321

② LINK SEAL

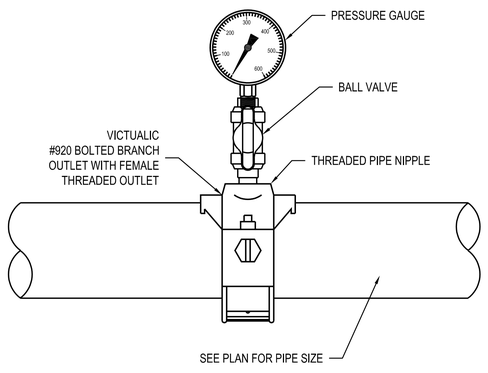
SCALE: 1"=1'-0"

NOTE:
PUMP MOUNTING PADS TO BE FIELD SIZED & LOCATED TO ALLOW PLACEMENT OF EQUIPMENT & LEVEL FIT TO SUCTION LINES. REINFORCE WITH #4 BARS @ 12" O.C. EACH WAY MIN.



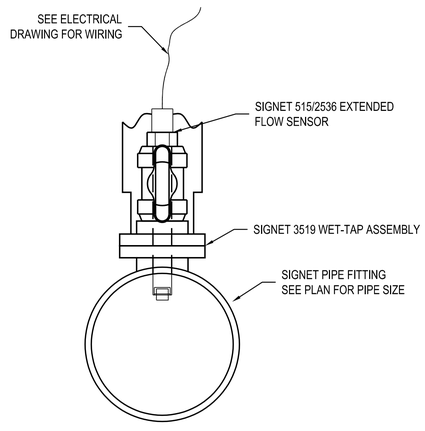
④ TYPICAL PUMP MOUNTING DETAIL

SCALE: 1"=1'-0"



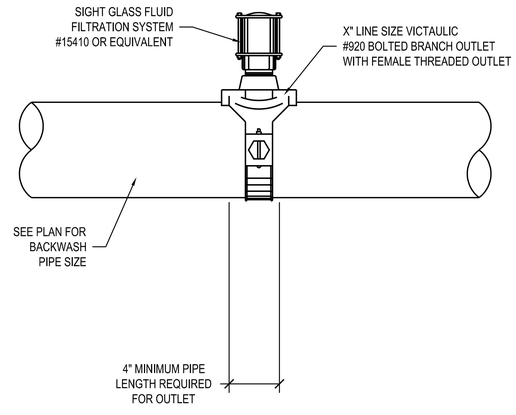
⑤ TYP. PRESSURE GAUGE INSTALLATION

SCALE: 3"=1'-0"



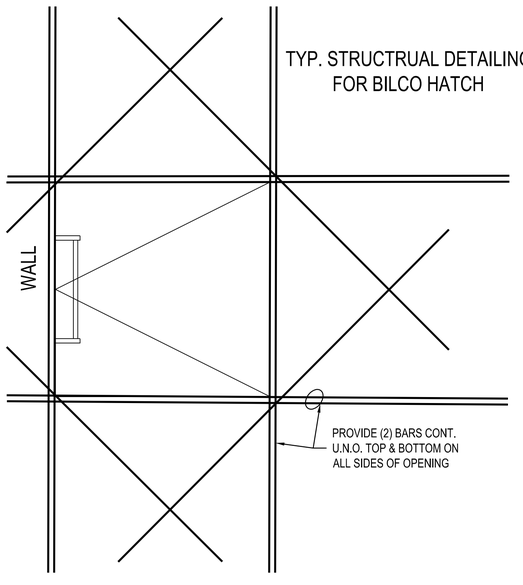
⑥ TYP. FLOW METER INSTALLATION

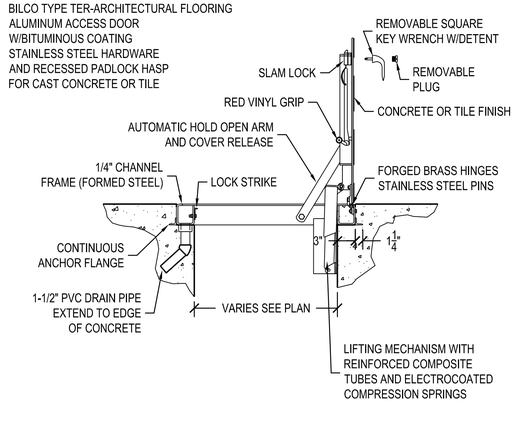
SCALE: 3"=1'-0"



⑦ BACKWASH SIGHT GLASS

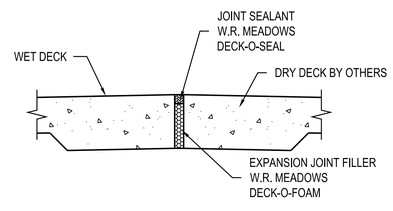
SCALE: 3"=1'-0"





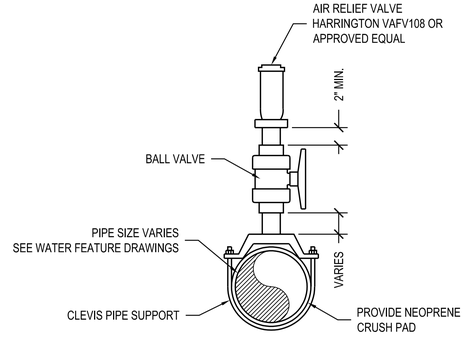
⑫ ACCESS HATCH

SCALE: 1"=1'-0"



⑨ ISOLATION JOINT

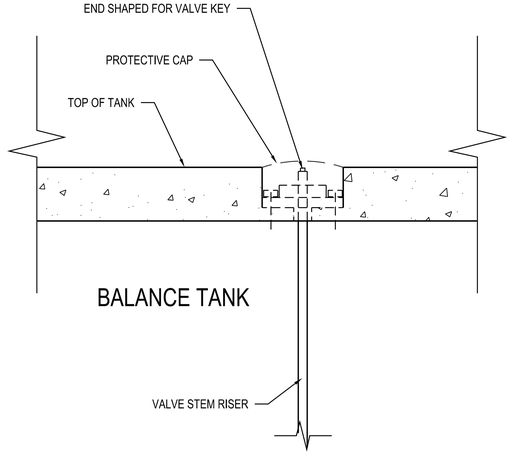
SCALE: 1-1/2"=1'-0"



NOTES:
1) LOCATE IN HIGH POINTS AS NEEDED.
2) FOR USE INSIDE OF BUILDINGS.

⑩ TYPICAL AIR / VACUUM VALVE

SCALE: 1-1/2"=1'-0"



⑪ VALVE STEM RISER

SCALE: 1-1/2"=1'-0"

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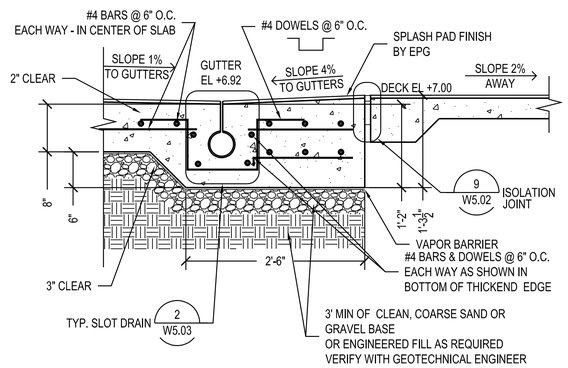
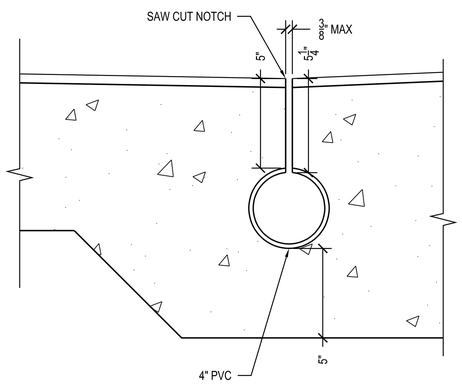


① TYPICAL SPLASH PAD EDGE W/GUTTER SCALE: 1"=1'-0"



② TYPICAL SLOT GUTTER SCALE: 3"=1'-0"

CLEANOUTS

SMITH® CUSTOMER DRIVEN SINCE 1926

FIG. 4810 FLOOR ACCESS COVER W/ROUND FRAME AND SCORIATED COVER

FUNCTION: Used in concrete floors and/or surfaced areas. Scoriated covers are used where floors are subject to ordinary foot traffic and normal loadings. The secured cover should be used wherever vandalism can be a problem.

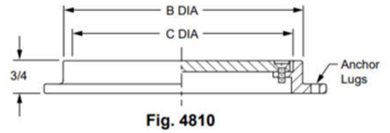


Fig. 4810

OPTIONS: **ADD**

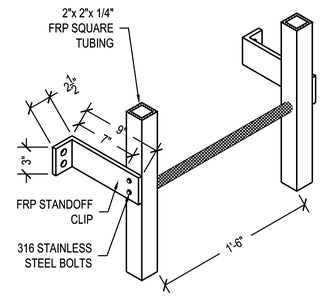
-U Vandal Proof Screws 101.00
Cover Drilled in Center and furnished with
1/4"-20 x 2 1/2" Long Screw 156.00
Smooth Top for Flush-Type Cover ..... See Fig. 4725

4810	COVER MATERIAL	C - COVER DIA:	04 "	05"	06"	06"	08"	10"
		PLUG SIZE	2"	3"	4"	5"	6"	8"
		B - DIA:	4 1/2"	5 3/4"	6 1/2"	6 1/2"	8 1/2"	10 1/2"
	†Nickel Bronze (-NB)		366.00	366.00	366.00	366.00	639.00	927.00
	Polished Bronze (-PB)		329.00	329.00	329.00	329.00	592.00	814.00
		APPROX WT. LBS.	2	3	5	5	9	13

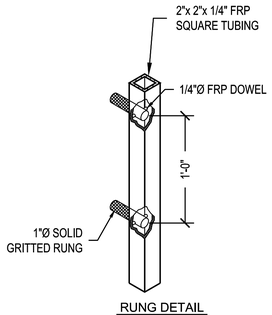
REGULARLY FURNISHED: Secured Scoriated Nickel Bronze Cover and Frame with Anchor Lugs.

③ 4" CAST IN PLACE CLEANOUT COVER SCALE: N.T.S.

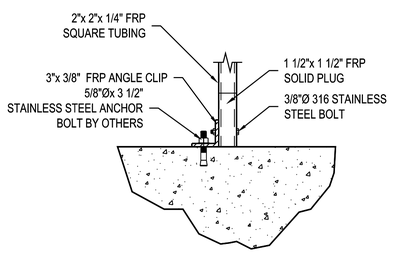
01.18.2021



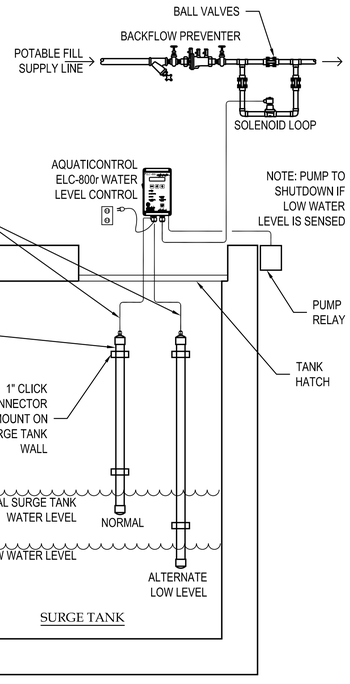
VERTICAL SUPPORT DETAIL

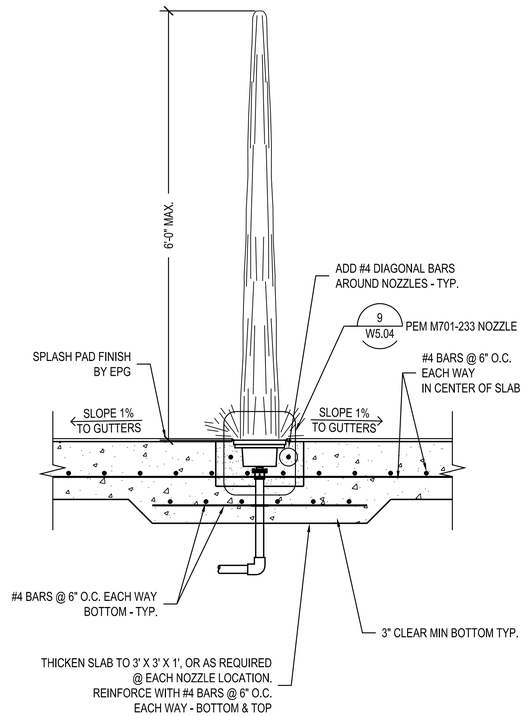


RUNG DETAIL

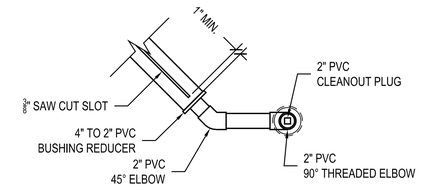


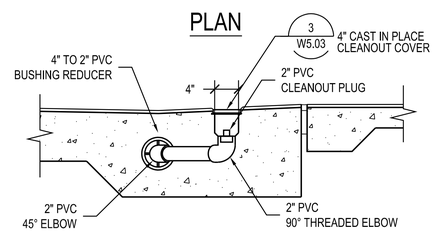
ANCHOR DETAIL





⑧ -- SCALE: 1"=1'-0"





ELEVATION

⑨ FRP LADDER SCALE: 1-1/2"=1'-0"

⑩ WATER LEVEL CONTROLLER SCALE: 1"=1'-0"

⑪ TYP. FEATURE NOZZLE SCALE: 1"=1'-0"

⑫ TYPICAL GUTTER CLEANOUT PORT SCALE: 1"=1'-0"

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PEM M 701-200 MODULE

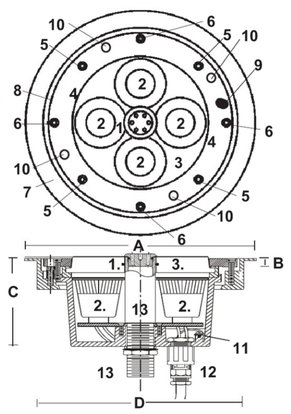
Not for Water Switch !

PARTS

1. Spray Nozzle (Choice of 7)
2. MR 16, 5 W, 12VAC / 24 VDC LED Lamp (4)
3. Clear Poly. Carbonate Plastic Lens 18.375mm / 0.750" x 143mm / 5.625"
4. Face Plate
5. Face Plate Bolts (4)
6. Module Bolts to Grout Frame (4)
7. Grout Frame
8. Surface Drain Opening, 5mm/ 0.19"
9. Valve Key Access Opening (701-3)
10. Access Openings (4) for levelling
11. Epoxy Cable Entry Encapsulation
12. 4 Conductor Plug In Connection for LED's
13. 3/4" NPS/BSP Red Brass Pipe

DIMENSIONS

A - 222mm / 8.740"
B - 5mm / 0.200"
C - 112mm / 4.410"
D - 200mm / 8.000"



M 701-200 NOZZLE PERFORMANCES

All Nozzles except M701-233 not for M701-300

M701-230 V	FL	MC	M701-231 V	FL	MC	M701-233 V	FL	MC	M701-244 V	FL	MC
m	L	m	m	L	m	m	L	m	m	L	m
1.0m	7.5	1.50	1.0m	24	5.7	1.0m	44	14.7	1.0m	14	3.8
1.5m	8.8	2.15	1.5m	27	7.9	1.5m	52	21.4	1.5m	16	5.1
2.0m	9.5	2.84	2.0m	30	9.3	2.0m	56	27.1	2.0m	18	6.0
3.0m	12.0	5.27	3.0m	34	12.8	3.0m	69	38.4	3.0m	22	11.0
4.0m	14.0	8.54	4.0m	38	18.5	4.0m	80	52.7	4.0m	26	15.0

METRIC

M701-230 V	FL	MC	M701-231 V	FL	MC	M701-233 V	FL	MC	M701-244 V	FL	MC
F	G	F	F	G	F	F	G	F	F	G	F
3'	2.2	5'	3'	6.1	18.1	3'	11.4	43	3'	3.7	12'
5'	2.4	8'	5'	7.2	26.0	5'	13.8	69	5'	4.3	14'
8'	3.0	15'	8'	8.5	35.8	8'	16.4	105	8'	4.8	16'
10'	3.5	19'	10'	9.0	42.0	10'	18.3	112	10'	5.9	18'
12'	4.0	29'	12'	9.8	54.5	12'	20.1	155	12'	6.9	20'

SAE

M 701-233/333-A

M701-255 V	FL	MC	H	M701-256 V	FL	MC	H
m	L	m	m	m	L	m	m
1.0m	15	3	0.4	1.0m	28	8	0.5
1.5m	16	5	0.6	1.5m	33	11	0.7
2.0m	18	6	0.8	2.0m	37	14	0.8
3.0m	23	11	1.1	3.0m	55	19	1.1
4.0m	27	18	1.2	4.0m	58	28	1.4

METRIC

M701-255 V	FL	MC	H	M701-256 V	FL	MC	H
F	G	F	F	F	G	F	F
3'	4.0	10'	1.3'	3'	7.7	30'	1.7'
5'	4.3	17'	2.0'	5'	8.8	43'	2.3'
8'	5.6	29'	2.7'	8'	9.0	60'	2.7'
10'	6.1	36'	3.6'	10'	14.6	69'	3.8'
12'	6.9	59'	4.0'	12'	15.9	89'	4.6'

SAE

Performance Codes: **V** = Sprayheight, **m** = Meter, **F** = Feet, **FL** = Flow PM, **MC** = Pressure, **H** = SprayDiameter

Selection of Spray nozzle(s) to be made with order. For safety reasons, do not gher than height of smallest children attending.

One (1) Spray Nozzle is included in Assembly. If no selection is made; M 701-33 ded. Extra nozzle (s) can be purchased.

PEM M 701series

with 12 x 3W LED / RGB / Solid Colour Direct or DMX controllable

M 701 SPRAY APRON MODULES WITH RGB OR SOLID COLOUR,DIRECT / DMX 36W, LED PLATE ILLUMINATION

PEM M701 CENTERLINE LIGHT OUTPUT PERFORMANCES AT HEIGHT ABOVE FIXTURE LENS:
With "UNMEI " U700 SERIES LED, RGB , 36W, Ring LED Plate
In RGB, Solid Red, Green, Blue or White - Direct/DMX Controllable

Height	Lumen	CP-Candle Power
1.0 m / 3.28 Feet	1152 / 482	92 / 38
2.0m / 6.56 Feet	490 / 140	40 / 11
3.0m / 9.84 Feet	302 / 96	24 / 7

(Maximum / Minimum RGB Output Range)

For maximum Illumination by 12 x 3W LED's
RGB / Direct or DMX
Solid colors:
Cree White
Red
Green
Blue
Amber

3B, WITH 12 VAC

PEM U 700 SERIES
SUBMERSIBLE RING LIGHT FIXTURE FOR UNMEI C-112 LED PLATES WITH
COLOUR CHANGING OR SOLID COLOUR ILLUMINATION WITH LOW VOLTAGE POWER SUPPLY

PEM U 701
FOR 12V-AC WITH INTEGRAL PROGRAMMING, WITH 2 CONDUCTOR 12 VAC CABLE.
TO REPLACE EXISTING HALOGEN - MR16 LAMPS IN PEM M 701 ASSEMBLIES WITH
12VAC RGB - LED PLATES WITH INTEGRAL PROGRAMMING & 2 CONDUCTOR CABLE.
PEM U 702
FOR 12V- AC POWER SUPPLY & 12 VDC - DMX WITH 4 CONDUCTOR CABLE
FOR DMX PARALLEL PROGRAMMING, (2 X 12VAC POWER IN & 2 X 12VDC- DMX IN)
PEM U 703
FOR 12V-AC POWER SUPPLY & 12 VDC - DMX WITH 6 CONDUCTOR CABLE
FOR DMX SERIAL PROGRAMMING,(2 X12VAC POWER IN & 12VDC-DMX , 2 X IN & 2 X OUT)
12VAC & VDC POWER SUPPLIES FOR U701, U702 OR U703
12VAC from Swimming Pool Safety Transformer,
DMX 12VDC from UNMEI UNIVERSAL POWER SUPPLY "A300' VAC 88V-264V, 47Hz - 63Hz.

DRGB NEON ROUND SERIES

NOVA FLEX

The DRGB Neon Round Series offers architectural-grade LED color changing neon.

- Indoor / Outdoor
- Commercial / Residential
- Accent Direct Lighting

Physical	
Operating Temp	-15° to 140°F (-25° to 60°C)
Environment	IP68 Rugged (Water/chemical resistant)
Cut Marks	See diagram below
Mounting	Clips | Channel (Required)
Lead Options	Standard | Injection Molded* Right, Bottom, Left and Back
Bend Diameter	4.72 in

Performance	
Lumen Maintenance	50,000 Hrs
Warranty	3 years
CCT Binning	<3SDCM
Certifications	UL

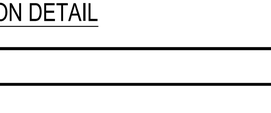
Electrical	
Voltage	24V
Wire Size	18 AWG. 3 Wire
Lead	1M, 3M, or 5M
Jumper	6 Inch or 12 Inch
Dimming	With Controller

CCT	Lumens/ft	Efficacy (lm/w)	Power (w/ft)	Max Run
DRGB	10 - 40	2 - 12	3.7	24.6 ft

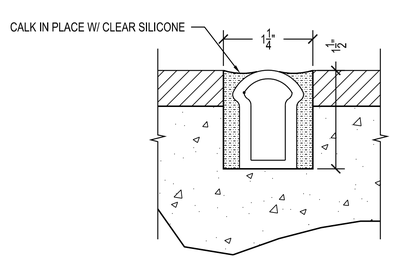
Lumens have a tolerance of +/- 10%.

Complete Solution

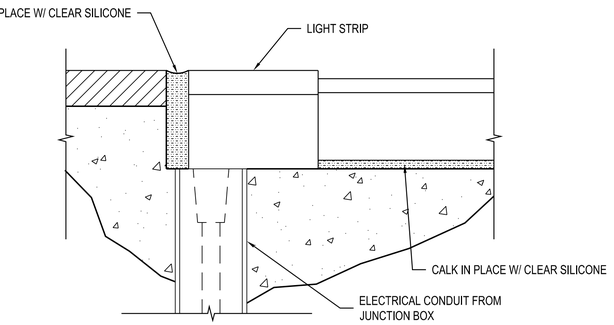
Step 1	Build your ribbon order code
Step 2	Select your channel (pg 2)
Step 3	Select your power and controls (pg 3-4)
Step 4	Select your accessories (pg 5)
Step 5	Contact your local agent or Nova Flex Rep.



ORDER CODE	SERIES	ENV		VOLTAGE	CCT	LEAD OPTION	LEAD DIRECTION
NF	NEON	W	ROUND	24V	DRGB		
NF	NEON	W = IP68	ROUND	24V	DRGB	S = Standard I = Injection Molded	RIGHT BOTTOM LEFT BACK



NOTE:
1. CONDITION OF END CONNECTION MAY REQUIRE CONCRETE RECESS TO BE ENLARGE TO FIT.



INSTALLATION DETAIL
SCALE: 1'-0" = 1'-0"

epg design
Planning + Landscape Architecture
Phoenix | Salt lake | Vegas | Denver
208 East 800 South
Salt Lake City, UT 84111
Contact:
Dave Harris, PLA
480.213.6534
dharris@epgllc.co
www.epgllc.design

7402605-2202 ALLEN D. CLAWSON STATE OF UTAH
01.18.2021

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Tel: +1.801.375.1223
www.clowardh2o.com

MILLCREEK CITY
3330 Soiuth 1300 East
Millcreek UT 84106

Owner's Representative:
Francis Lilly
Planning Director
801.214.2752
flilly@millcreek.us

MILLCREEK COMMON
MILLCREEK CITY
MILLCREEK, UT 84005

REV	DATE	DESCRIPTION

DESIGNED BY: DA
DRAWN: EVO
CHECKED: DA
ISSUE DATE: 01.18.2021
PROJ #: MILLCREEK 0001

Sheet Name:
GENERAL DETAILS

Sheet Number:
W5.04

ELECTRICAL GENERAL NOTES

1. THE ELECTRICAL SYSTEMS DEFINED BY THESE PLANS AND THE SPECIFICATIONS ARE TO BE CONSTRUCTED AS COMPLETE AND OPERABLE SYSTEMS AND SHALL BE BID WITH THIS INTENT. THE CONTRACTOR SHALL VISIT THE SITE, READ ALL THE RELEVANT DOCUMENTS, AND BECOME FAMILIAR WITH THE TYPE OF CONSTRUCTION AND WORK TO BE ACCOMPLISHED. SHOULD ANY ERROR, OMISSION, OR CONFLICT EXIST IN EITHER THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE SUBMITTING THEIR BID PRICE SO A CHANGE CAN BE ISSUED IN A PRE-BID ADDENDUM. OTHERWISE, THE CONTRACTOR AND/OR EQUIPMENT SUPPLIERS SHALL SUPPLY THE PROPER MATERIALS AND LABOR TO INSTALL COMPLETE AND OPERABLE SYSTEMS INCLUSIVE OF THE ORIGINAL BID. WHEN EACH ELECTRICAL SYSTEM IS COMPLETE, THE CONTRACTOR SHALL TEST AND CONFIRM ITS PROPER OPERATION. ANY INCOMPLETE SYSTEM SHALL BE MADE COMPLETE AND OPERABLE PRIOR TO PROJECT CLOSEOUT.
2. THE ARCHITECTURAL AND MECHANICAL PLANS ARE CONSIDERED A PART OF THE ELECTRICAL DOCUMENTS SO FAR AS ANY ELECTRICAL ITEMS THEY MAY CONTAIN. THE ELECTRICAL CONTRACTOR SHALL REFER TO AND COORDINATE WITH THEM. NO EXTRA COST SHALL BE ALLOWED FOR FAILURE TO COORDINATE THE CONTRACT DOCUMENTS WITH OTHER TRADES AND/OR IF EQUIPMENT DIMENSIONS ARE GREATER THAN SPECIFIED AND/OR DIMENSIONED ON THE PLANS.
3. THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT, MATERIALS, AND LABOR FOR THE CONNECTIONS OF ALL EQUIPMENT SHOWN ON THE PLANS - ARCHITECTURAL, MECHANICAL, ETC.
4. THIS PROJECT IS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MOST RECENT LOCAL, REGIONAL, AND NATIONAL CODES. IF AT ANY TIME DURING OR AFTER CONSTRUCTION SOMETHING IS FOUND TO BE INSTALLED IN VIOLATION OF THESE CODES LISTED ABOVE, IT SHALL BE CORRECTED BY THE CONTRACTOR.
5. WHERE A RACEWAY ENTERS A BUILDING OR STRUCTURE FROM THE OUTSIDE, IT SHALL BE SEALED.
6. ALL ELECTRICAL EQUIPMENT THAT IS LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD OR FACTORY LABELED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE LABEL SHALL ALSO CONTAIN THE MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE THE FAULT CURRENT CALCULATIONS WERE PERFORMED.
7. ALL PANELBOARDS AND SWITCHBOARDS SHALL BE PERMANENTLY MARKED TO INDICATE EACH DEVICE OR EQUIPMENT WHERE THEIR POWER ORIGINATES. ALL EQUIPMENT PROVIDED BY THE EC SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND BE PROPERLY INSTALLED FOR THE CONDITIONS AND SPACE THAT EQUIPMENT IS BEING INSTALLED WITHIN.
8. THE EC SHALL INSTALL A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT RUN. CONDUIT SHALL NOT BE USED AS AN EQUIPMENT GROUNDING CONDUCTOR. THE EC SHALL GROUND THE ELECTRICAL SYSTEM IN ACCORDANCE WITH LOCAL AND NATIONAL CODES.
9. CONDUIT LAYOUTS SHOWN ON THE PLANS ARE DIAGRAMMATIC, NOT INDICATING THE ROUTING REQUIRED. THE EC SHALL ROUTE THE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION AND SHALL COORDINATE WITH DUCTWORK, PIPING, EQUIPMENT, BUILDING STRUCTURE, AND OTHER POTENTIAL OBSTRUCTIONS.
10. THE CONTRACTOR SHALL ALLOW THE MOVEMENT, BEFORE ROUGH-IN, OF ANY ELECTRICAL PANEL, DEVICE, ETC. A DISTANCE OF 10' WITHOUT REQUIRING ADDITIONAL COST TO THE PROJECT.
11. THE EC SHALL SECURE ALL CONDUIT AND TROUGHS TO THE STRUCTURE AS IT IS SET IN PLACE USING INDUSTRY STANDARD METHODS AND PRACTICES. TO ASSURE ALL DEVICES ARE RIGIDLY SET, THE ELECTRICAL CONTRACTOR SHALL SECURE ALL DEVICE BOXES WITH BRACKETS, HANGERS, ETC. DESIGNED FOR THE APPLICATION.
12. MINIMUM SIZE CONDUIT SHALL BE 1/2" UNO. CONDUIT INSTALLED WITHIN THE BUILDING IN DRY LOCATIONS WITHIN WALL, CEILINGS, OR EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE SHALL BE EMT WITH STEEL SET SCREW FITTINGS. IN EXTERIOR LOCATIONS THE CONDUIT SHALL BE EMT WITH COMPRESSION GLAND TYPE FITTINGS. UNDERGROUND CONDUIT SHALL BE PVC (SCH. 40) WITH GRC ELBOWS AND RISERS WRAPPED IN CORROSION RESISTANT MATERIALS WHERE IN DIRECT CONTACT WITH THE SOIL.
13. FLEXIBLE CONDUIT SHALL BE LIMITED TO CONNECTIONS TO MOTORS OR OTHER EQUIPMENT SUBJECT TO VIBRATION. LENGTHS OF FLEXIBLE OR SEAL-TITE CONDUIT SHALL NOT BE GREATER THAN 24".
14. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EMPTY CONDUITS WITH 100KG RATED NYLON PULL CORD.
15. BEFORE ANY ELECTRICAL CONDUIT, BOXES, ETC. ARE COVERED (FLOOR, CEILINGS, WALLS, ETC.), THEY SHALL BE APPROVED BY THE INSPECTING OFFICER (INSPECTOR).
16. WHERE WIRE SIZE IS NOT SHOWN ON THE DRAWINGS FOR 20A, 120VAC BRANCH CIRCUITS, THE CIRCUIT SHALL CONSIST OF (2) #12 (CU,THHN) + (1) #12 (CU,THHN) GND IN 3/4" EMT CONDUIT OR TROUGH. THIS WIRE SIZE SHALL BE INCREASED TO #10 (CU,THHN) FOR BRANCH CIRCUITS WITH OVERALL LENGTHS EXCEEDING 125 FT. TO ACCOMMODATE FOR VOLTAGE DROP. REFER TO EQUIPMENT SCHEDULES, FEEDER SCHEDULES, AND NOTES ON DRAWINGS FOR ALL OTHER BRANCH CIRCUIT AND FEEDER WIRE/CONDUIT SIZING.
17. CONDUCTORS SHALL BE COPPER, 600VAC RATED, TYPE THHN/THWN-2 UNO. CONDUCTORS UP TO #10 SHALL BE SOLID AND CONDUCTORS #8 OR LARGER SHALL BE STRANDED.
18. EC SHALL CLEAN THE ENTIRE ELECTRICAL SYSTEM AFTER COMPLETION OF THE INSTALLATION. REMOVE ALL FINGER PRINTS, FOREIGN MATTER, PAINT, DIRT, GREASE, AND UN-NEEDED LABELS OR STICKERS FROM FIXTURES AND EQUIPMENT. REMOVE ALL RUBBISH AND DEBRIS ACCUMULATED DURING INSTALLATION FROM THE PREMISES.
19. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE SEALED WITH FIRE STOPPING, IE. 3M BRAND CAULK, PUTTY, STRIP AND SHEET FORMS, DOW CORNING 3-6548 SILICONE RTV FOAM.
20. COORDINATE LOCATION OF WALL MOUNTED DEVICES WITH CABINETRY AND OTHER WALL OBSTRUCTIONS. COORDINATE CEILING MOUNTED DEVICES WITH CEILING OBSTRUCTIONS. ANY DEVICES THAT NEED TO BE RELOCATED MUST BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER PRIOR TO ROUGH-IN FOR NEW LOCATION.
21. ELECTRICAL CONTRACTOR SHALL CONFIRM MINIMUM CODE WORKING CLEARANCE BEFORE INSTALLING ANY ELECTRICAL PANELS OR CABINETS AND SHALL MOVE THE PANELS IF REJECTED BY AN INSPECTOR. IF CLEARANCE IS NOT POSSIBLE, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN WRITING.
22. WIRING DEVICES SHALL BE WHITE OR GRAY IN COLOR WITH METAL COVER PLATES. EXTERIOR OUTLETS SHALL HAVE CAST COVERS WITH FLIP TYPE LIDS UNO.
23. EC SHALL COORDINATE WITH EQUIPMENT SUPPLIERS ON THE EXACT LOCATIONS OF ALL EQUIPMENT AND ELECTRICAL CONNECTIONS PRIOR TO ROUGH-IN. THE EC SHALL MAKE THE FINAL CONNECTION TO ALL EQUIPMENT UNLESS OTHERWISE DIRECTED BY THE EQUIPMENT SUPPLIER. OBTAIN FROM SUPPLIERS ALL WIRING DIAGRAMS FOR EQUIPMENT PRIOR TO ANY ROUGH-IN. TO ASSURE THAT PROPER CHARACTERISTICS ARE PROVIDED, ANY INCORRECT WIRING OR DEVICES INSTALLED BY THE EC WITHOUT THE WIRING DIAGRAM SHALL BE CORRECTED AT THE EC'S EXPENSE. PROVIDE COPIES OF WIRING DIAGRAMS WITHIN EACH PIECE OF EQUIPMENT AND ADDITIONAL COPIES WITH THE OPERATION AND MAINTENANCE MANUALS..
24. ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO DUCTS, PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER, OR PASS THROUGH ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
25. ELECTRICAL CONTRACTOR SHALL REVIEW ALL ARCHITECT'S ELEVATIONS, SECTIONS AND FLOOR PLANS PRIOR TO ROUGH-IN OF ELECTRICAL DEVICE JUNCTION BOXES.
26. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. REFER TO THE MECHANICAL SHEETS FOR THE EXACT LOCATION OF THE MECHANICAL EQUIPMENT.
27. ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH-IN. CONSULT CONTRACT DOCUMENT DRAWINGS AND SHOP DRAWINGS TO VERIFY AND MAINTAIN REQUIRED CLEARANCES.
28. CONTRACTOR SHALL VERIFY ACTUAL ELECTRICAL LOADS FROM NAMEPLATE RATINGS OF EACH PIECE OF EQUIPMENT REQUIRING POWER. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE PROJECT ENGINEER. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.
29. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
30. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
31. AT THE END OF THE JOB. PROVIDE BLANK COVER PLATES TO MATCH THE OTHER COVER PLATES FOR ALL JUNCTION BOXES WHERE DEVICES HAVE NOT YET BEEN INSTALLED.
32. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED OR EQUIVALENT AND NEW.
33. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
34. CONTRACTOR TO ENSURE THAT ALL AREAS OUTSIDE OF CONSTRUCTION AREA ARE KEPT CLEAN AND CLEAR OF DEBRIS AND OBSTRUCTIONS AT ALL TIMES.
35. ALL PLC CONTROL PANELS TO INCLUDE MINIMUM 20% SPARE I/O CAPACITY OF EACH TYPE.
37. ANALOG SIGNAL WIRE SHALL BE 2 CONDUCTOR 18AWG TWISTED SHIELDED WIRE WITH SHIELD DRAIN, FOR NON-LOOP POWERED INSTRUMENTS AND SIGNALS. INSTRUMENTS THAT REQUIRE 24VDC LOOP POWER SHALL HAVE MINIMUM 3 CONDUCTORS WITH SHIELD AND DRAIN WIRE.
38. DIGITAL CONTROL SIGNAL WIRE MAY BE 18AWG MULTI-CONDUCTOR CABLE WITH WATER TIGHT JACKET.

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION	MOUNTING	NOTES
$TH	THERMAL OVERLOAD SWITCH	4' - 0" UNO	
$P	PILOT LIGHT SWITCH	4' - 0"	
	DUPLEX OUTLET, 20A, 120VAC	1' - 6" UNO	
	DUPLEX OUTLET, 20A, 120VAC - GFCI	1' - 6" UNO	
	DUPLEX OUTLET - SPLIT WIRED	1' - 6" UNO	
	DUPLEX OUTLET - ISOLATED GROUND	1' - 6" UNO	
	DUPLEX OUTLET WITH USB PORTS	1' - 6" UNO	
OS	DUPLEX OUTLET - OCCUPANCY SENSOR CONTROLLED	1' - 6" UNO	
	DUPLEX OUTLET, 20A, 120VAC - CEILING	CEILING	
	DUPLEX OUTLET, 20A, 120VAC - FLOOR	FLOOR	
	FOURPLEX OUTLET, 20A, 120VAC	1' - 6" UNO	
	FOURPLEX OUTLET, 20A, 120VAC - GFCI	1' - 6" UNO	
	FOURPLEX OUTLET - ISOLATED GROUND	1' - 6" UNO	
	FOURPLEX OUTLET, 20A, 120VAC - CEILING	CEILING	
	FOURPLEX OUTLET, 20A, 120VAC - FLOOR	FLOOR	
	APPLIANCE OUTLET - 208/240V SINGLE PHASE	18" OR 48"	
	APPLIANCE OUTLET - 208/480V 3-PHASE	18" OR 48"	
	DATA OUTLET	1' - 6" UNO	
	TELEPHONE OUTLET	1' - 6" UNO	
	DUAL TELEPHONE/DATA OUTLET	1' - 6" UNO	
	DATA OUTLET - FLOOR	FLOOR	
	DUAL TELEPHONE/DATA OUTLET - FLOOR	FLOOR	
	CEILING DATA OUTLET/ WIRELESS ACCESS POINT	CEILING	
	CABLE TELEVISION OUTLET	1' - 6" UNO	
	JUNCTION BOX	SURFACE	
H	WALL JUNCTION BOX	1' - 6" UNO	
	FLOOR JUNCTION BOX	FLOOR	
L	DISCONNECT SWITCH - NON-FUSED	5' - 0" UNO	1
LF	DISCONNECT SWITCH - FUSED	5' - 0" UNO	1
	DISCONNECT SWITCH - SHUNT TRIP	5' - 0" UNO	1
	COMBINATION MAGNETIC STARTER/DISCONNECT	5' - 0" UNO	
	MOTOR STARTER	5' - 0" UNO	
	CONTACTOR	5' - 0" UNO	
	MOTOR	SURFACE	
	METER - PLAN VIEW	WALL	
	PUSH BUTTON SWITCH	4' - 0"	
	EMERGENCY POWER SHUTOFF SWITCH	4' - 0"	
	PANELBOARD - SURFACE MOUNTED	6' - 6" TO TOP	
	PANELBOARD - RECESSED	6' - 6" TO TOP	
	TRANSFORMER - PLAN VIEW	PAD/FLOOR	
	TELEPHONE TERMINAL BOARD	WALL	
VS	VACUUM SWITCH	PIPE/PUMP	
FS	FLOW SWITCH	PIPE/PUMP	
FM	FLOW METER	PIPE/PUMP	

	FIRE ALARM HORN	7' - 6"	
	FIRE ALARM STROBE	7' - 6"	
	FIRE ALARM HORN STROBE	7' - 6"	
	FIRE ALARM GONG	7' - 6"	
F	FIRE ALARM DUAL ACTION MANUAL PULL STATION	4' - 0"	
AR	FIRE ALARM ADDRESSABLE CONTROL RELAY		
MM	FIRE ALARM MONITOR MODULE		
	FIRE ALARM CONTROL PANEL	6' - 6" TO TOP	
	FIRE ALARM ANNUNCIATOR PANEL	4' - 0"	
	PHOTOELECTRIC SMOKE DETECTOR	SURFACE	
	RATE OF RISE/HEAT DETECTOR	SURFACE	
CO	CARBON MONOXIDE DETECTOR	SURFACE	
	DUCT SMOKE DETECTOR	DUCT	6
	FIRE SMOKE DAMPER		
T	FIRE RISER TAMPER SWITCH		
F	FIRE RISER FLOW SWITCH		
	ELECTROMAGNETIC DOOR HOLDER	2' - 0"	
CR	SECURITY CARD READER	4' - 0"	
KP	SECURITY KEYPAD	4' - 0"	
ES	ELECTRIC STRIKE		
	SECURITY CCTV CAMERA		
S	SPEAKER - CEILING		
S	SPEAKER - WALL		
M	MICROPHONE CONNECTION		
$VC	VOLUME CONTROL SWITCH	4' - 0"	

	CIRCUIT BREAKER		METER - ONE-LINE
	MLO PANEL - ONE-LINE		TRANSFORMER - ONE-LINE
	MCB PANEL - ONE-LINE		PAD MOUNT XFMR - ONE-LINE
	AUTOMATIC TRANSFER SWITCH		GROUND SLEEVE - ONE-LINE
	CT ENCLOSURE - ONE-LINE	XXXA XP XXXA LPMR	FUSED DISCONNECT - ONE-LINE
	CURRENT TRANSFORMER		FUSED SWITCH
			GROUND
	OH RISER	XXX	CABLE/WIRE SIZE TAG
X	KEYED NOTE TAG	X EXXX	DETAIL/VIEW NUMBER
XX X	MECH/ELEC. EQUIPMENT TAG		DETAIL/VIEW REFERENCE TAG
X	OTHER EQUIPMENT TAG		SHEET NUMBER
	WIRING / CONDUIT		UNDERGROUND/FLOOR WIRING
	CONDUIT TURNED UP		CONDUIT TURNED DOWN
	CIRCUIT HOME RUN TO PANEL: # OF ARROWHEADS INDICATE # OF CIRCUITS (SEPARATE NEUTRAL PER CIRCUIT). BOTH EX. INCLUDE AN EQUIP. GROUND.		

NOTES

1. USE HEAVY DUTY FOR 480 VOLT.

ABBREVIATIONS

AFCI - ARC FAULT CKT INTERRUPTER
AFF - ABOVE FINISHED FLOOR
AFG - ABOVE FINISHED GRADE
AIC - AMPS INTERRUPTING CAPACITY
AL - ALUMINUM
ATS - AUTOMATIC TRANSFER SWITCH
BC - BARE COPPER
BFC - BELOW FINISHED CEILING
BFG - BELOW FINISHED GRADE
CKT - CIRCUIT
CND. OR C. - CONDUIT
CLG - INSTALLED IN CEILING
C.R. - CORD REEL
CT - CURRENT TRANSDUCER
CU - COPPER
(E) - EXISTING TO REMAIN
EC - ELECTRICAL CONTRACTOR
EM - EMERGENCY
(F) - FUTURE
FACP - FIRE ALARM CONTROL PANEL
FLA - FULL LOAD AMPS
FVNR - FULL VOLTAGE NON REVERSING
GC - GENERAL CONTRACTOR
GFCI - GROUND FAULT CKT INTERRUPTER
GND - GROUND
HP - HORSEPOWER
IG - ISOLATED GROUND
KW - KILOWATTS
LCP - LIGHTING CONTROL PANEL
LTG - LIGHTING
LV - LOW VOLTAGE
MC - MECHANICAL CONTRACTOR
MCA - MINIMUM CIRCUIT AMPS
MCB - MAIN CIRCUIT BREAKER
MCC - MOTOR CONTROL CENTER
MDP - MAIN DISTRIBUTION PANEL
MLO - MAIN LUGS ONLY
MOCP - MAX. OVERCURRENT PROTECTION
(N) - NEW
NIC - NOT IN CONTRACT
NEC - NATIONAL ELECTRICAL CODE
NFPA - NATIONAL FIRE PROT. ASSN.
NL - NIGHT LIGHT
NR - NOT REQUIRED
NTS - NOT TO SCALE
PC - PLUMBING CONTRACTOR
PH - PHASE
PNL - PANEL
POC - POINT OF CONNECTION
POS - POINT OF SALE
(R) - RELOCATED
REC - RECEPTACLES
RMC - RIGID METAL CONDUIT
SCA - SHORT CIRCUIT AMPERES
SES - SERVICE ENTRANCE SWITCHGEAR
SPD - SURGE PROTECTIVE DEVICE
TL - TWIST LOCK
TTB - TELEPHONE TERMINAL BOARD
TR - TAMPER RESISTANT
TYP - TYPICAL
UNO - UNLESS NOTED OTHERWISE
VA - VOLT/AMPS
VIF - VERIFY IN FIELD
VR - VANDAL RESISTANT
WP - WEATHERPROOF/NEMA 3R
WU - FURNISHED WITH UNIT
XFMR - TRANSFORMER

ELECTRICAL SHEET INDEX

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ELECTRICAL GENERAL SHEET

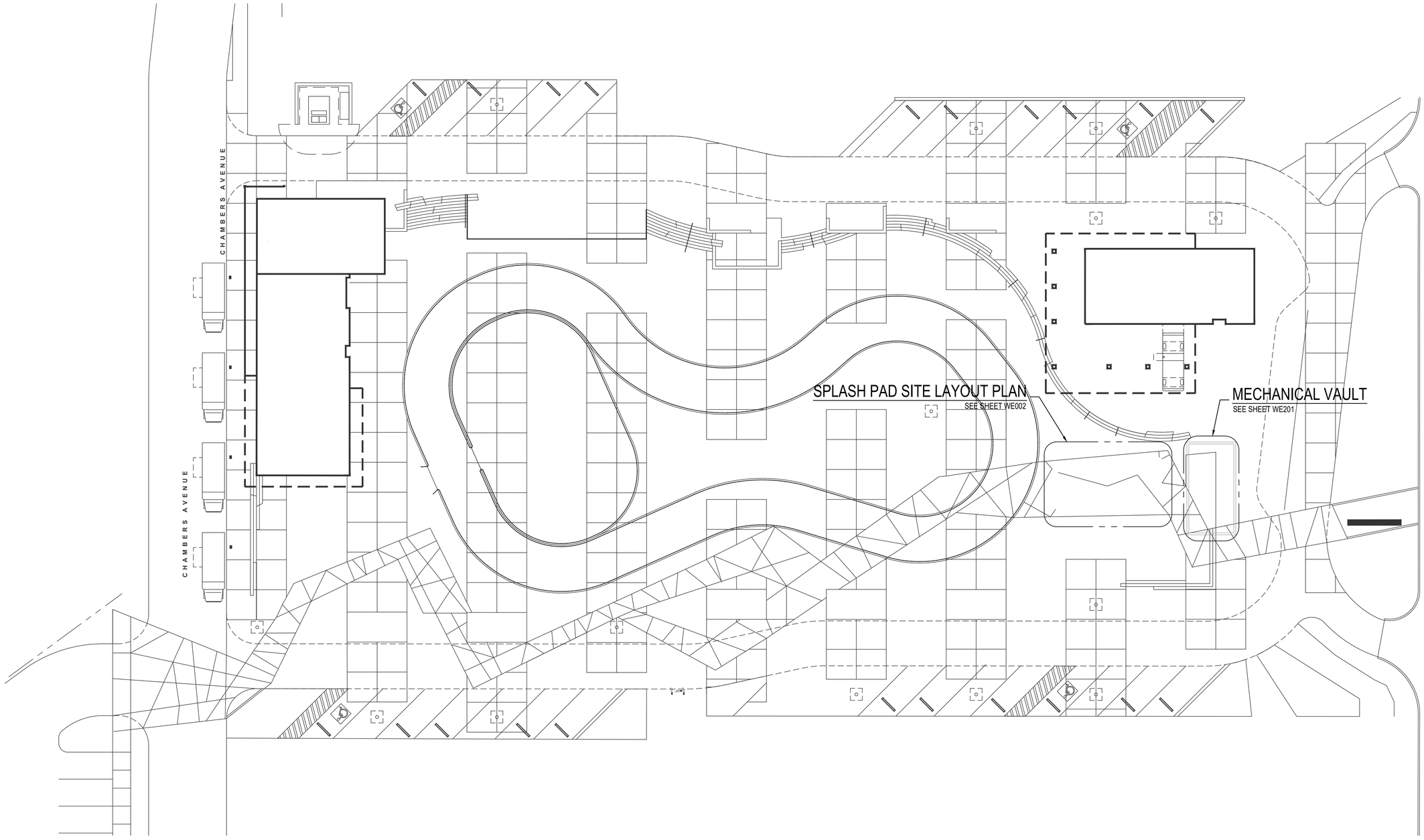
Sheet Number:
WE000

KEYED NOTES

1. ROUTE CONDUIT(S) TO DMX LIGHTING CONTROL PANEL.
2. PROVIDE (1) 3/4" C TO EACH OF THE SPLASH PAD LIGHTS. COORDINATE EXACT CONDUCTORS AND CONNECTIONS WITH MANUFACTURES RECOMMENDATIONS.

GENERAL NOTES

A. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER'S INSTALLATION GUIDELINES PRIOR TO INSTALLATION OF EQUIPMENT.
B. ALL CONDUIT SHALL BE ABOVE GROUND SHALL BE METAL AND UNDERGROUND SHALL BE PVC.
C. ALL SITE CONDUIT IS TO BE BURIED IN ACCORDANCE WITH NEC TABLE 300.5 UNLESS OTHERWISE NOTED. ALL CONDUIT RUNS SHALL HAVE RED MARKING TAPE BURIED 12" ABOVE CONDUIT RUNS.
D. PROVIDE POOL BONDING AND GROUNDING PER NEC 680. SEE DETAIL 5/WE-5.11 FOR MORE INFORMATION.



1 WE001 ELECTRICAL SITE PLAN
SCALE: 1/16" = 1'-0"

N

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ELECTRICAL SITE PLAN

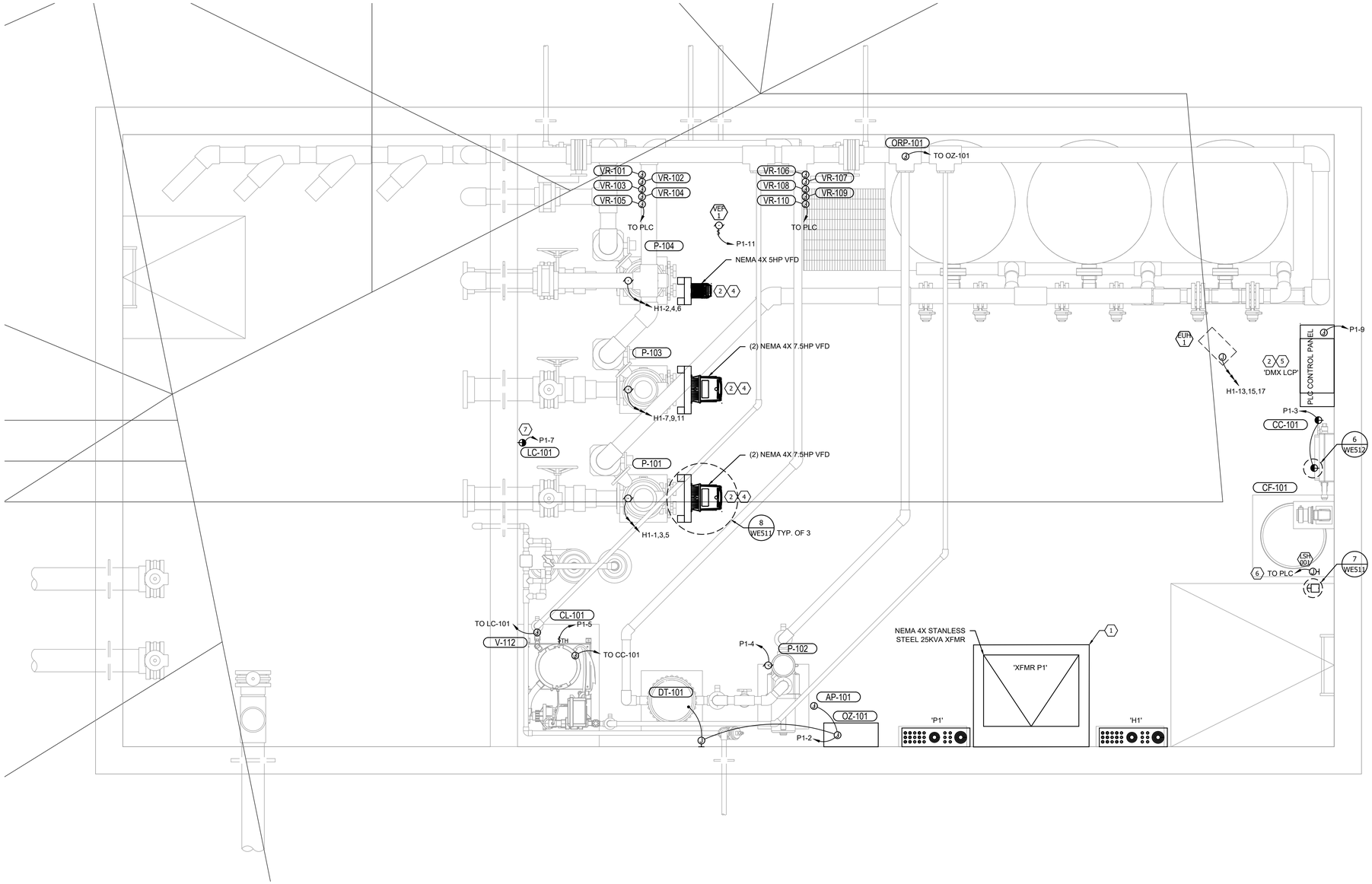
Sheet Number:
WE001

KEYED NOTES

1. PROVIDE A CONCRETE PAD TO FIT ELECTRICAL EQUIPMENT. CONCRETE PAD SHALL BE MINIMUM OF 3" TALL AND HAVE MINIMUM OF 3" BORDER EXTENDING AROUND OUTSIDE EDGES.
2. PROVIDE A P1000 UNISTRUT SUPPORT RACK FOR MOUNTING OF PUMP DISCONNECT. RACK IS TO HAVE VERTICAL SUPPORTS HELD IN PLACE UTILIZING THE FLOOR CONCRETE. SEE DETAIL 9-WE511.
3. PROVIDE (1) 3/4" C WITH 8 14AWG TWISTED SHIELDED CONDUCTORS FROM EACH OF THE VFD'S BACK TO THE PLC.
4. PROVIDE A FXPRO-LED-LCP-20 DMX LED LIGHTING CONTROL PANEL WITH 2 POWER SUPPLIES. VERIFY EXACT CONNECTION REQUIREMENTS PRIOR TO ROUGH-IN.
5. SHUNT TRIP/HIGH WATER LEVEL TEST SWITCH.
6. PROVIDE (2) 14-2AWG CONDUCTORS IN A 3/4"C FOR EACH OF THE BALANCE TANK SENSORS PROVIDE (1) 14-2AWG CONDUCTORS IN A 3/4"C FOR THE SOLENOID VALVE FROM THE WATER LEVEL CONTROLLER TO THE BALANCE TANK LOCATED ON THE WEST SIDE OF THIS WALL.

GENERAL NOTES

A. COORDINATE MOUNTING HEIGHTS OF ALL EQUIPMENT WITH ARCHITECTURAL DRAWINGS AND MILL WORK CONTRACTOR PRIOR TO ROUGH IN.
B. VERIFY AND COORDINATE EXACT ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT WITH MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLATION OF EQUIPMENT.



1 WE201 POWER PLAN

SCALE: 3/4" = 1'-0"

N

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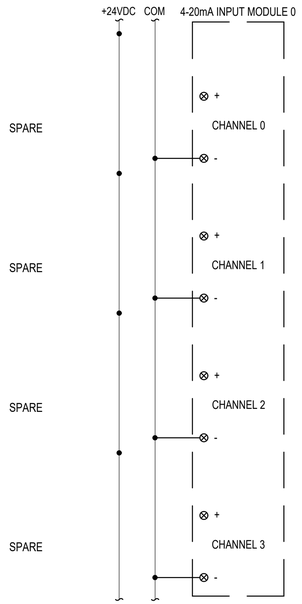
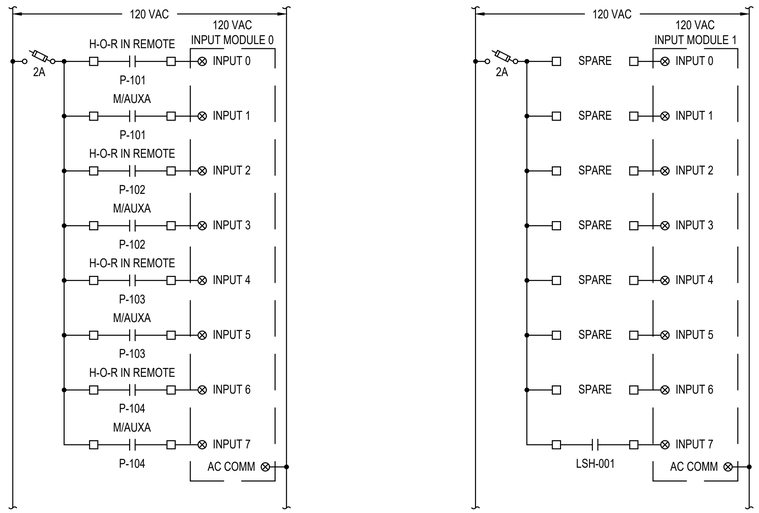
MECHANICAL ROOM PLAN

Sheet Number:
WE201



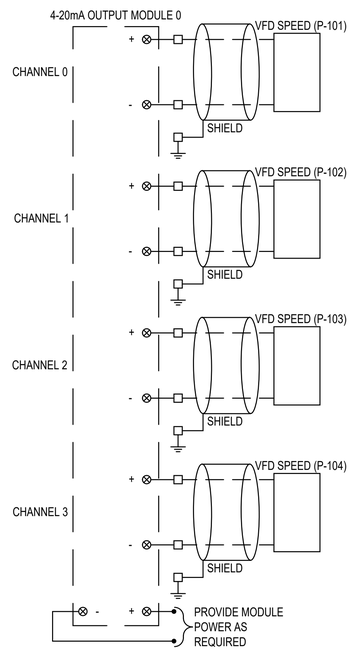
① PLC ANALOG INPUTS

SCALE: SCHEMATIC



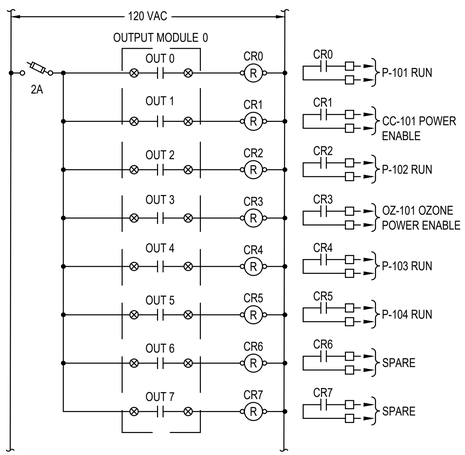
② PLC DIGITAL INPUTS

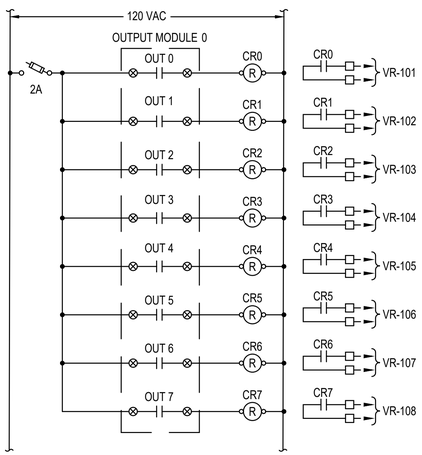
SCALE: SCHEMATIC

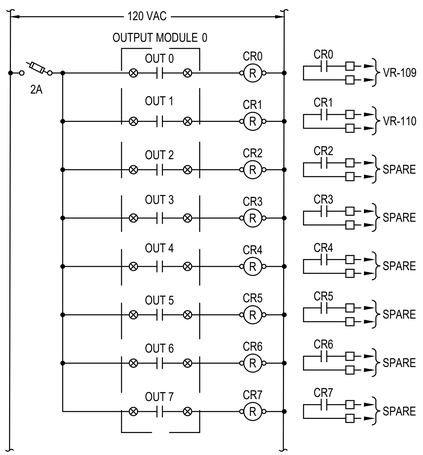


③ PLC ANALOG OUTPUTS

SCALE: SCHEMATIC



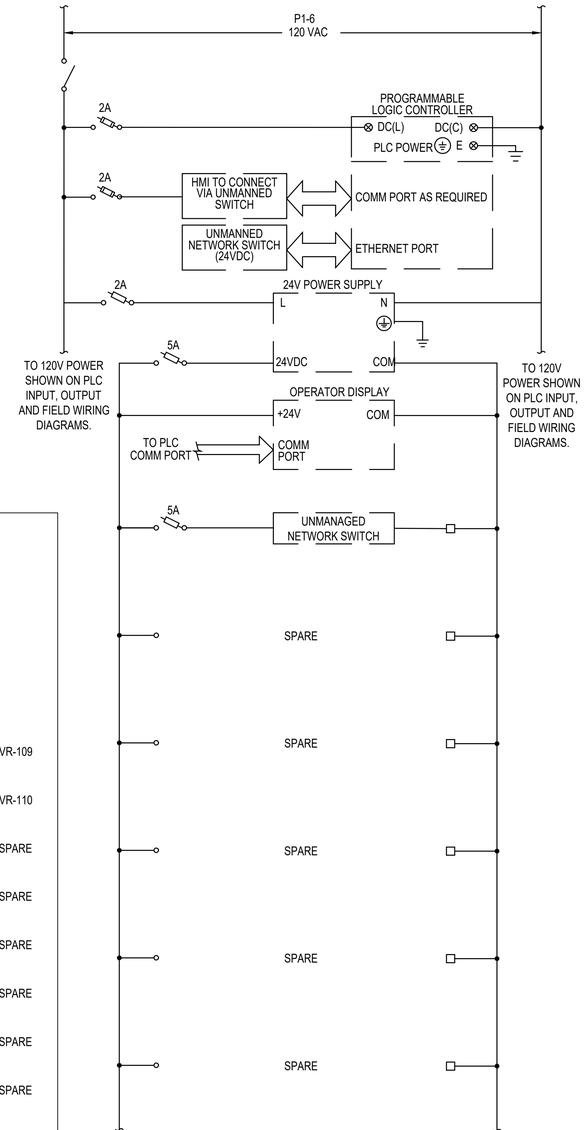




④ PLC DIGITAL OUTPUTS

SCALE: SCHEMATIC

GENERAL CONTROL DIAGRAM NOTES:
1. CONTROL DIAGRAMS ARE CONCEPTUAL. CONTRACTOR SHALL MODIFY AS REQUIRED BASED ON EQUIPMENT SUPPLIED.
2. REFER TO SPECIFICATIONS FOR CONTROL REQUIREMENTS.
3. CONTRACTOR SHALL ASSIGN RELAY AND TERMINAL AND WIRE NUMBERS AS REQUIRED. REFER TO CONTROL PANEL NOTES.



⑤ CONTROL PANEL POWER & COMMUNICATION

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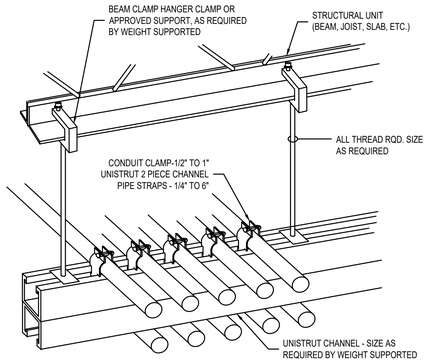
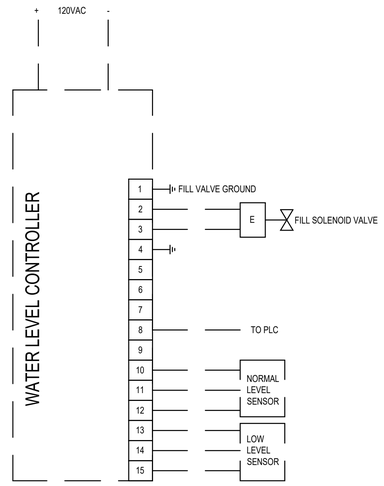


① TYPICAL CONDUIT RACK DETAIL

SCALE: NTS



② TYP. LEVEL CONTROLLER WIRING DIAGRAM

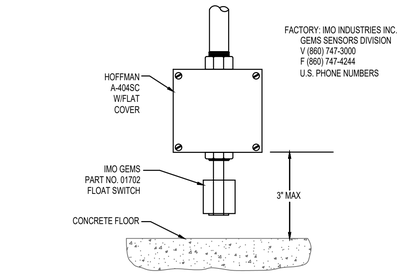
SCALE: NTS

NOTES
1. PROVIDE ONE RECEPTACLE FOR EACH CHEMICAL CONTROLLER.
2. LOCATE RECEPTACLE APPROX. 8" ABOVE CHEMICAL CONTROLLER.
◇1 PROVIDE LABEL TO IDENTIFY POOL OR SPA SYSTEM.

③ TYPICAL UNDER WATER LIGHTING WIRING DIAGRAM

SCALE: SCHEMATIC

NOTES
◇1 GROUND CHEMICAL CONTROLLER ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
◇2 INSTALL RECEPTACLE NEAR CHEMICAL CONTROLLER. REFER TO ELECTRICAL PLANS FOR LOCATION(S).
◇3 INSTALL RECEPTACLE/THERMAL OVERLOAD SWITCH NEAR CHEMICAL FEED PUMPS. REFER TO ELECTRICAL PLANS FOR LOCATION(S).
◇4 PROVIDE A 120VAC/120VAC MOTOR RATED CONTACTOR INSIDE A NEMA 4X RATED JUNCTION BOX.

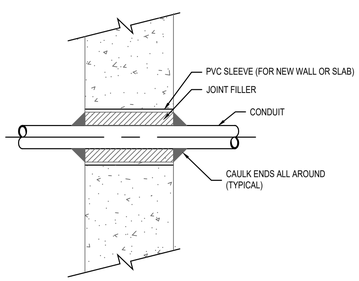


④ FLOOR HIGH WATER ALARM LEVEL SWITCH

SCALE: SCHEMATIC

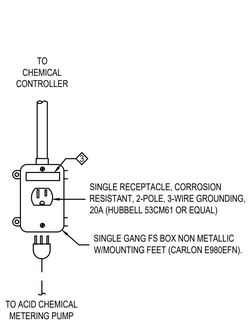
NOTES
◇1 FIELD MOUNTED NON-FUSED DISCONNECT SWITCH NOT REQUIRED FOR MOTORS WITHIN SIGHT OF MOTOR CONTROLLER. PROVIDE SWITCH FOR MOTORS NOT WITHIN SITE OF MOTOR CONTROLLER. REFER TO EQUIPMENT ROOM PLANS.
◇2 PLC CONTROLLED RELAY CRB IN CONTROL PANEL. CLOSES FOR NORMAL START, OPENS FOR NORMAL STOP.

⑤



⑨ CONDUIT PENETRATION DETAIL NEW WALL

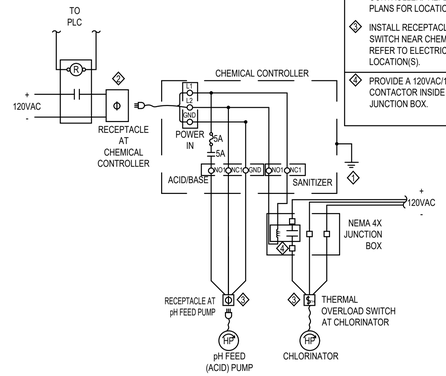
SCALE: NTS



⑥ CHEM PUMP ELEC. INSTALLATION DETAIL

SCALE: NTS

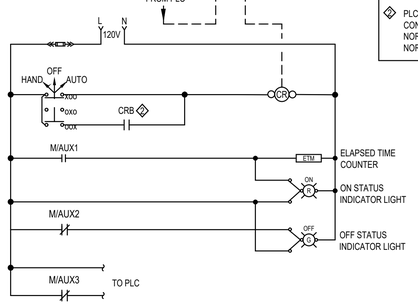
NOTES
1. ALL LETTERS TO BE 1/4" UNLESS NOTED OTHERWISE.
2. ALL NAMEPLATES TO BE MOUNTED ON THE VERTICAL CENTERLINE OF THE CUBICAL OR DEVICE.
3. ATTACH ALL NAMEPLATES WITH STAINLESS STEEL SCREWS.
4. PROVIDE BLANK NAMEPLATES FOR ALL SPARE AND FUTURE DEVICES.



⑦ CHEMICAL CONTROLLER CONNECTION DIAGRAM

SCALE: SCHEMATIC

NOTES:
1. WHEN MOUNTED IN CONTROL PANEL, ENCLOSURE IS NOT REQUIRED.



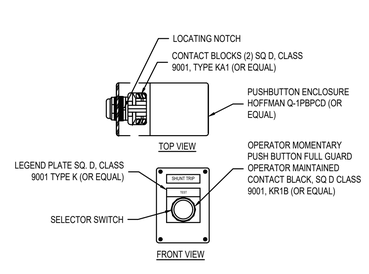
⑧ PUMP W/VFD CONTROL DIAGRAM

SCALE: SCHEMATIC

NOTES:
1. CIRCUIT SHOWN FOR 120 VAC SHUNT TRIP COIL, CONTRACTOR SHALL VERIFY COIL VOLTAGE DURING CONSTRUCTION.
2. TEST SWITCH SHALL BE INSTALLED IN CONTROL PANEL. PROVIDE ENGRAVED LEGEND PLATE "SHUNT TRIP TEST".
3. PROVIDE "TEST" LEGEND PLATE WITH SWITCH.

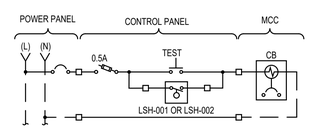
⑩ NAMEPLATE DETAIL

SCALE: NTS



⑪ SHUNT TRIP/HIGH LEVEL TRIP TEST SWITCH

SCALE: NTS



⑫ MCB SHUNT TRIP WIRING DIAGRAM

SCALE: SCHEMATIC

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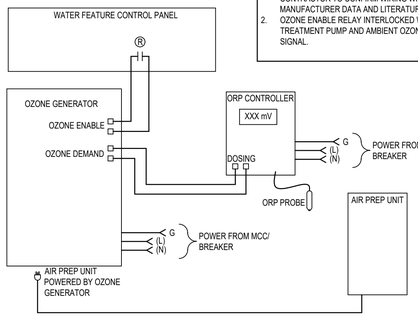
WE510

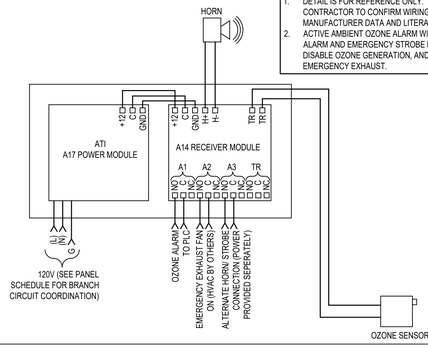
NOTES:
1. DETAIL IS FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM WIRING WITH MANUFACTURER DATA AND LITERATURE.
2. OZONE ENABLE RELAY INTERLOCKED WITH TREATMENT PUMP AND AMBIENT OZONE ALARM SIGNAL.



① OZONE CONTROL DIAGRAM

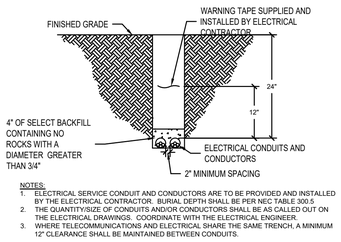
NTS

NOTES:
1. DETAIL IS FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM WIRING WITH MANUFACTURER DATA AND LITERATURE.
2. ACTIVE AMBIENT OZONE ALARM WILL SOUND AN ALARM AND EMERGENCY STROBE LIGHT, DISABLE OZONE GENERATION, AND TURN ON EMERGENCY EXHAUST.



④ OZONE ALARM DIAGRAM

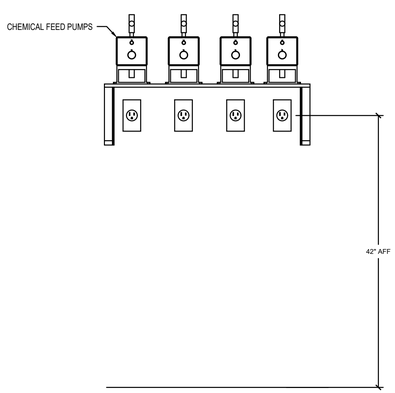
NTS



NOTES:
1. ELECTRICAL SERVICE CONDUIT AND CONDUCTORS ARE TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. BURIAL DEPTH SHALL BE PER NEC TABLE 300.5
2. THE QUANTITY/SIZE OF CONDUITS AND/OR CONDUCTORS SHALL BE AS CALLED OUT ON THE ELECTRICAL DRAWINGS. COORDINATE WITH THE ELECTRICAL ENGINEER.
3. WHERE TELECOMMUNICATIONS AND ELECTRICAL SHARE THE SAME TRENCH, A MINIMUM 12" CLEARANCE SHALL BE MAINTAINED BETWEEN CONDUITS.

④ UNDERGROUND CONDUIT DETAIL

SCALE: NTS

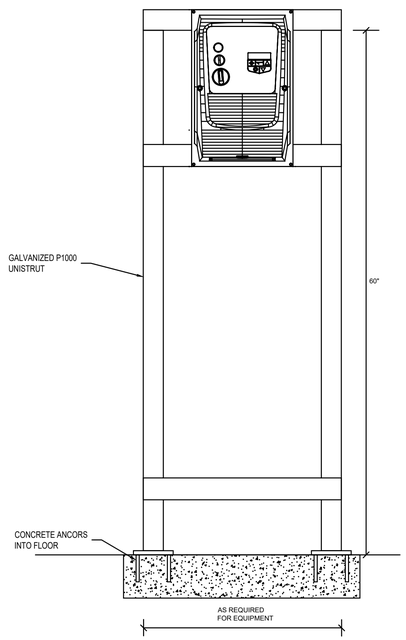


⑦ TYPICAL CHEMICAL FEED PUMP RECEPTACLE HEIGHT DETAIL

SCALE: NTS

⑤

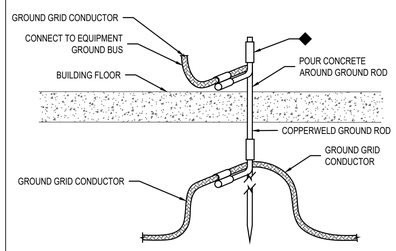
NTS



⑧ VFD MOUNTED ON UNISTRUT

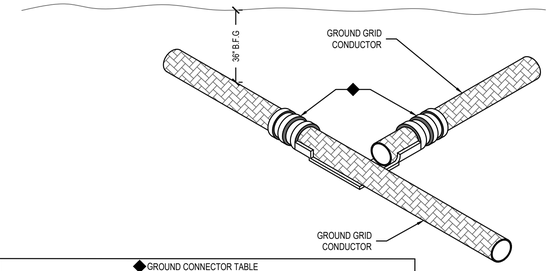
SCALE: NTS

BURNDY CATALOG NUMBER	◆ GROUND CONNECTOR TABLE CABLE TO GROUND ROD	
	ELEMENT "A"	ELEMENT "B"
YGL2C2	- -	- -
YGL29C2	1/2"-5/8" ROD	#6 SOL. (.162) - #2 STR. (.292)
YGL29C29		#2 STR. (.292) - 250 KCMIL (.575)
YGL34C2	5/8"-3/4" ROD	#6 SOL. (.162) - #2 STR. (.292)
YGL34C29		#2 STR. (.292) - 250 KCMIL (.575)
YGL34C34		250 KCMIL (.575) - 500 KCMIL (.813)



② GROUND ROD DETAIL

SCALE: NONE

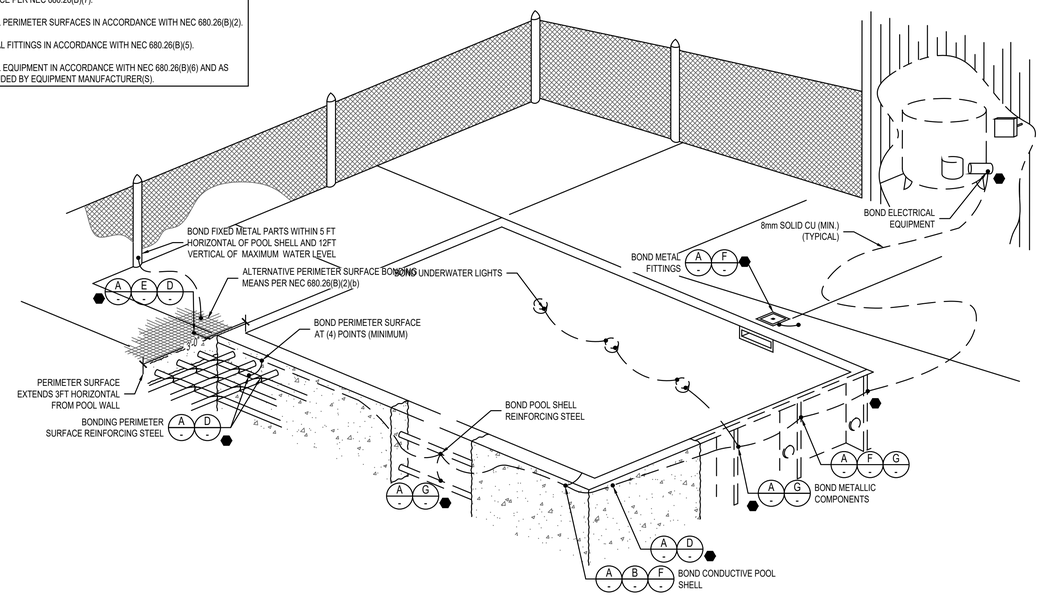


BURNDY CATALOG NUMBER	◆ GROUND CONNECTOR TABLE CABLE TO CABLE	
	ELEMENT "A"	ELEMENT "B"
YGL2C2	#5 SOL. (.162) - #2 STR. (.292)	#6 SOL. (.162) - #2 STR. (.292)
YGL29C2	#1 STR. (.322) - 250 KCMIL (.575)	
YGL29C29	#2 STR. (.292) - 250 KCMIL (.575)	#2 STR. (.292) - 250 KCMIL (.575)
YGL34C2	250 KCMIL (.575) - 500 KCMIL (.813)	#6 SOL. (.162) - #2 STR. (.292)
YGL34C29		#2 STR. (.292) - 250 KCMIL (.575)
YGL34C34		250 KCMIL (.575) - 500 KCMIL (.813)

③ COPPER GROUNDING CABLE TIE-IN

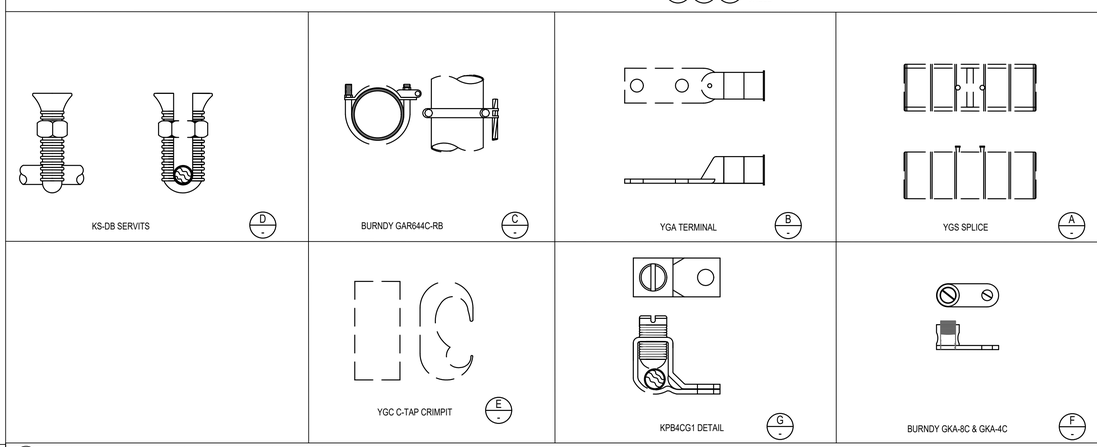
SCALE: NONE

NOTES:
- PROVIDE BONDING IN ACCORDANCE WITH NEC 680.26.
- SEE SEPARATE DETAIL FOR UNDERWATER LIGHTING BONDING PER NEC 680.26(B)(4) AND HANDRAIL BONDING PER NEC 680.26(B)(5).
- BOND POOL SHELL IN ACCORDANCE WITH NEC 680.26(B)(1), METALLIC COMPONENTS PER NEC 680.26(B)(3), AND FIXED METAL PARTS IN ACCORDANCE PER NEC 680.26(B)(7).
- BOND POOL PERIMETER SURFACES IN ACCORDANCE WITH NEC 680.26(B)(2).
- BOND METAL FITTINGS IN ACCORDANCE WITH NEC 680.26(B)(5).
- BOND POOL EQUIPMENT IN ACCORDANCE WITH NEC 680.26(B)(6) AND AS RECOMMENDED BY EQUIPMENT MANUFACTURER(S).



⑦ NEC 680.26 EQUIPOTENTIAL BONDING DETAIL

SCALE: NONE



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LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	VOLTAGE	LAMPING	CONTROL	MOUNTING	LOAD(VA)	DESCRIPTION
FL	FOUNTAIN PEOPLE	M701-88	24 DC	LED - RGB	DMX	IN GRADE	20	RGB LED MR16 (IN MULTIPLES OF 4); POWER SUPPLY INCLUDE IN LCP. LCP MUST BE FXPRO-LED-LCP-20. MODULE, CASING, AND NOZZLE PROVIDED BY OTHERS.

NOTES:

1. ALL LIGHT FIXTURES SHOWN HALF SHADED SHALL BE PROVIDED WITH AN EMERGENCY BATTERY PACK CAPABLE OF PROVIDING 90 MIN. OF EGRESS ILLUMINATION.

2. ALL LIGHTING VALUE ENGINEERING PROVIDED FOR THIS PROJECT SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER FOR REVIEW AND APPROVAL AFTER THE PROJECT HAS BEEN BID AND AWARDED. ANY CREDITS FOR VE SHALL INCLUDE TIME TO COMPENSATE OUR OFFICE FOR ENGINEERING REVIEW AND VERIFICATION OF BRANCH CIRCUIT LOADING AND/OR ENERGY CODE COMPLIANCE. NO VE SUBMITTALS WILL BE APPROVED WITHOUT THIS PROCESS IN PLACE. VE SUBMITTALS SHALL INCLUDE PHOTOMETRIC ANALYSIS TO ENSURE NEW LIGHT FIXTURES PROVIDE COMPARABLE LIGHT LEVELS TO THOSE ORIGINALLY DESIGNED.

3. PRIOR APPROVALS SHALL BE SUBMITTED TO OUR OFFICE NO LESS THAN 5 BUSINESS DAYS OF THE PROJECT BID DATE. ANYTHING SUBMITTED AFTER THIS TIME FRAME WILL NOT BE REVIEWED AND WILL BE CONSIDERED NON-APPROVED FOR BIDDING PURPOSES. ALL LIABILITY ASSOCIATED WITH NON-APPROVED FIXTURES THAT DO NOT MEET THE PROJECT REQUIREMENTS WILL REST SOLELY WITH THE CONTRACTOR.

EQUIPMENT SCHEDULE

MARK	DESCRIPTION	ELECTRICAL V	PH	KW	HP	MCA	FLA	MOCP	CONDUIT SIZE	WIRE QTY.	WIRE SIZE	GND. SIZE	STARTER NEMA SIZE	OVERCURRENT PROTECTION DISCONNECT SIZE/POLE	OVERCURRENT PROTECTION FUSE SIZE	REMARKS
AP-101	AIR PREP	120	1				6	20	3/4"	2	12	12	-	-	-	12A & 13A
CF-101	pH FEED PUMP	120	1	200W				-	3/4"	2	12	12	-	-	-	12A & 15A
CL-101	CLORINATOR	120	1		1		6.4	20	3/4"	2	12	12	-	-	-	4A & 14A
CC-101	CHEMICAL CONTROLLER	120	1	1.1				20	3/4"	2	12	12	-	-	-	12A
LC-101	WATER LEVEL CONTROLLER	120	1					20	3/4"	2	12	12	-	-	-	12A
OZ-101	OZONATOR	120	1	800W				-	3/4"	2	12	12	-	-	-	10A
-	ORP CONTROLLER	120	1					20	3/4"	2	12	12	-	-	-	12A
P-101	TREATMENT PUMP	480	3		5		7.6	20	3/4"	3	12	12	VFD	-	-	11A
P-102	BOOSTER PUMP	120	1		3/4		4.8	20	3/4"	2	12	12	VFD	-	-	11B
P-103	FEATURE PUMP	480	3		7 1/2		11	20	3/4"	3	12	12	VFD	-	-	11A
P-104	FEATURE PUMP	480	3		7 1/2		11	20	3/4"	3	12	12	VFD	-	-	11A
VEF	VERTICAL EXHAUST FAN	120	1		1/5		4	20	3/4"	2	12	12	-	-	-	2A
EUH	ELEC. UNIT HEATER	480	3	10			12	20	3/4"	3	12	12	-	30/3	15	1A

NOTE: COORDINATE FINAL EQUIPMENT CONNECTIONS WITH EQUIPMENT PROVIDER PRIOR TO ROUGH-IN. VERIFY ALL MOUNTING HEIGHTS.

REMARKS:

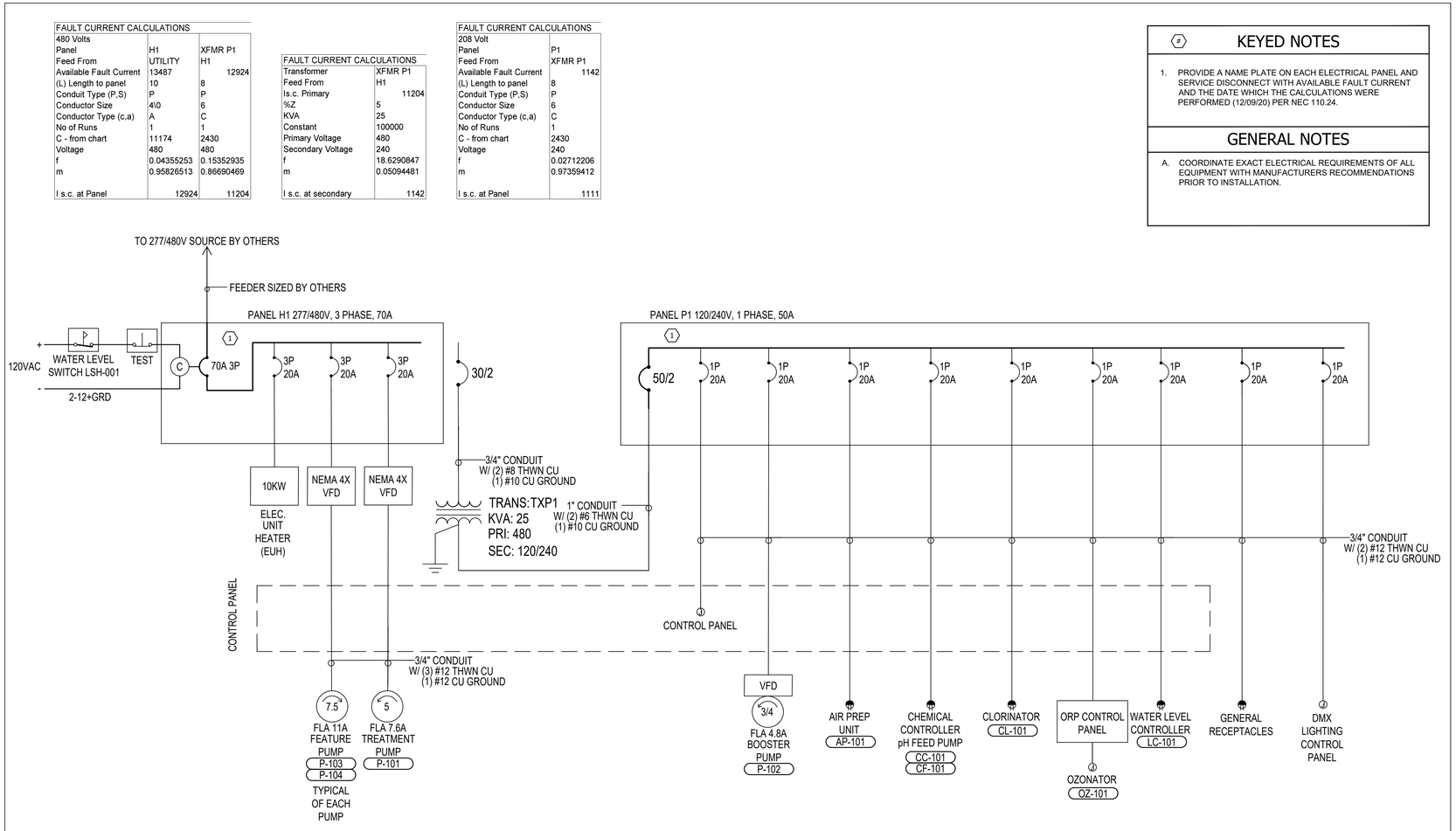
1. FUSED DISCONNECT SWITCH
2. NON-FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. THERMAL OVERLOAD SWITCH
5. TOGGLE SWITCH
6. MAGNETIC STARTER
7. MAGNETIC STARTER/NON-FUSED DISCONNECT SWITCH
8. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
9. MAGNETIC STARTER/BREAKER COMBINATION
10. CIRCUIT WITH ORP CONTROLLER
11. VARIABLE FREQUENCY DRIVE
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. FIVE FOOT PIGTAIL
14. ISOLATION CONTACTOR INPUT FROM CC-101
15. CIRCUIT WITH CHEMICAL CONTROLLER

A. FURNISHED, INSTALLED AND CONNECTED UNDER DIVISION 26
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 26
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26
D. FURNISHED, INSTALLED, AND CONNECTED UNDER ANOTHER DIVISION
E. FURNISHED AND INSTALLED UNDER DIVISION 26 REQUIRING CONNECTION UNDER ANOTHER DIVISION

FAULT CURRENT CALCULATIONS		
480 Volts		
Panel	H1	XFMR P1
Feed From	UTILITY	H1
Available Fault Current	13487	12924
(L) Length to panel	10	8
Conduit Type (P,S)	P	P
Conductor Size	4\0	6
Conductor Type (c,a)	A	C
No of Runs	1	1
C - from chart	11174	2430
Voltage	480	480
f	0.04355253	0.15352935
m	0.95826513	0.86690469
I s.c. at Panel	12924	11204

FAULT CURRENT CALCULATIONS	
Transformer	XFMR P1
Feed From	H1
Is.c. Primary	11204
%Z	5
KVA	25
Constant	100000
Primary Voltage	480
Secondary Voltage	240
f	18.6290847
m	0.05094481
I s.c. at secondary	1142

FAULT CURRENT CALCULATIONS	
208 Volt	
Panel	P1
Feed From	XFMR P1
Available Fault Current	1142
(L) Length to panel	8
Conduit Type (P,S)	P
Conductor Size	6
Conductor Type (c,a)	C
No of Runs	1
C - from chart	2430
Voltage	240
f	0.02712206
m	0.97359412
I s.c. at Panel	1111



KEYED NOTES

1. PROVIDE A NAME PLATE ON EACH ELECTRICAL PANEL AND SERVICE DISCONNECT WITH AVAILABLE FAULT CURRENT AND THE DATE WHICH THE CALCULATIONS WERE PERFORMED (12/09/20) PER NEC 110.24.

GENERAL NOTES

A. COORDINATE EXACT ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT WITH MANUFACTURERS RECOMMENDATIONS PRIOR TO INSTALLATION.

1 MECHANICAL ROOM ONE-LINE DIAGRAM

SCALE: SCHEMATIC

PANEL SCHEDULE H1

VOLT/PHASE/WIRE: 277/480V/3PH/4W — AIC RATING: 22,000 AIC — MAIN BREAKER: 70A
MOUNT/ENCLOSURE: SURFACE/NEMA 4X — LOCATION: — MAIN LUGS:

CKT NO	DESCRIPTION	LOAD	AMPS	POLES	A	B	C	POLES	AMPS	LOAD	DESCRIPTION	CKT NO
1	TREATMENT PUMP (P-101)	2104	20	3	5149			3	20	3045	FEATURE PUMP (P-104)	2
3	----------	2104	-	-		5149		-	-	3045	----------	4
5	----------	2104	-	-			5149	-	-	3045	----------	6
7	FEATURE PUMP (P-103)	3045	20	3	3045			3	20	0	SPARE	8
9	----------	3045	-	-		3045		-	-	0	----------	10
11	----------	3045	-	-			3045	-	-	0	----------	12
13	EUH	3333	20	3	3333			3	20	0	SPARE	14
15	----------	3333	-	-		3333		-	-	0	----------	16
17	----------	3333	-	-			3333	-	-	0	----------	18
19	SPARE	0	20	3	0			3	20	0	SPARE	20
21	----------	0	-	-		0		-	-	0	----------	22
23	----------	0	-	-			0	-	-	0	----------	24
25	SPARE	0	20	3	0			3	20	0	SPARE	26
27	----------	0	-	-		0		-	-	0	----------	28
29	----------	0	-	-			0	-	-	0	----------	30
31	SPARE	0	20	3	0			1	20	0	SPARE	32
33	----------	0	-	-		0		1	20	0	SPARE	34
35	----------	0	-	-			0	1	20	0	SPARE	36
37	SPARE	0	20	3	0			1	20	0	SPARE	38
39	----------	0	-	-		5508		2	30	5508	XFMR TO PANEL P1	40
41	----------	0	-	-			4296	-	-	4296	----------	42
TOTALS					11,527	17,035	15,823					

TOTAL LOAD: 44,385

LOADS	CONTINUOUS	NON-CONTINUOUS	DEMAND FACTOR/CALCULATION			DEMAND LOAD
EXISTING	0	0	125% x	0		0
LIGHTING	400	0	125% x	400	+ 100% x 0	500
RECEPTACLE	0	0	100% x	0	+ 50% x 0	0
MOTOR	0	26,578	125% x	9134	+ 100% x 17444	28,862
FIXED HEAT	0	9,999	100% x	9999		9999
A/C	0	0	100% x	0		
KITCHEN EQUIP.	0	0	100 % x	0		0
MISC	0	7,408	125% X	0	+ 100% x 7408	7,408
					TOTAL DEMAND LOAD:	46,769 VA
						56 A

PANEL NOTES:

PANEL SCHEDULE P1

VOLT/PHASE/WIRE: 120/240V/1PH/3W — AIC RATING: AIC — MAIN BREAKER: 50A
MOUNT/ENCLOSURE: RECESSED/NEMA 4X — LOCATION: — MAIN LUGS:

CKT NO	DESCRIPTION	LOAD	AMPS	POLES	A	C	POLES	AMPS	LOAD	DESCRIPTION	CKT NO
1	AIR PREP (AP-101)	720	20	1	1920		1	20	1200	ORP CONTROLLER (OZ-101)	2
3	CC-101,CF-101	1300	20	1		1876	1	20	576	BOOSTER PUMP (P-102)	4
5	CL-101	768	20	1	2688		1	20	1920	CONTROL PANEL	6
7	LC-101	1920	20	1		1920	1	20	0	SPARE	8
9	DMX LCP	900	20	1	900		1	20	0	SPARE	10
11	VEF	500	20	1		500	1	20	0	SPARE	12
13	SPARE	0	20	1	0		1	20	0	SPARE	14
15	SPARE	0	20	1		0	1	20	0	SPARE	16
17	SPARE	0	20	1	0		1	20	0	SPARE	18
19	SPARE	0	20	1		0	1	20	0	SPARE	20
21	SPARE	0	20	1	0		1	20	0	SPARE	22
23	SPARE	0	20	1		0	1	20	0	SPARE	24
TOTALS					5,508	4,296					

TOTAL LOAD: 9,804

LOADS	CONTINUOUS	NON-CONTINUOUS	DEMAND FACTOR/CALCULATION			DEMAND LOAD
EXISTING	0	0	125% x	0		0
LIGHTING	400	0	125% x	400	+ 100% x 0	500
RECEPTACLE	0	0	100% x	0	+ 50% x 0	0
MOTOR	0	1,996	125% x	720	+ 100% x 1276	2,176
FIXED HEAT	0	0	100% x	0		0
A/C	0	0	100% x	0		
KITCHEN EQUIP.	0	0	0	0		0
MISC	0	7,408	125% X	0	+ 100% x 7408	7,408
					TOTAL DEMAND LOAD:	10,084 VA
						42 A

PANEL NOTES:

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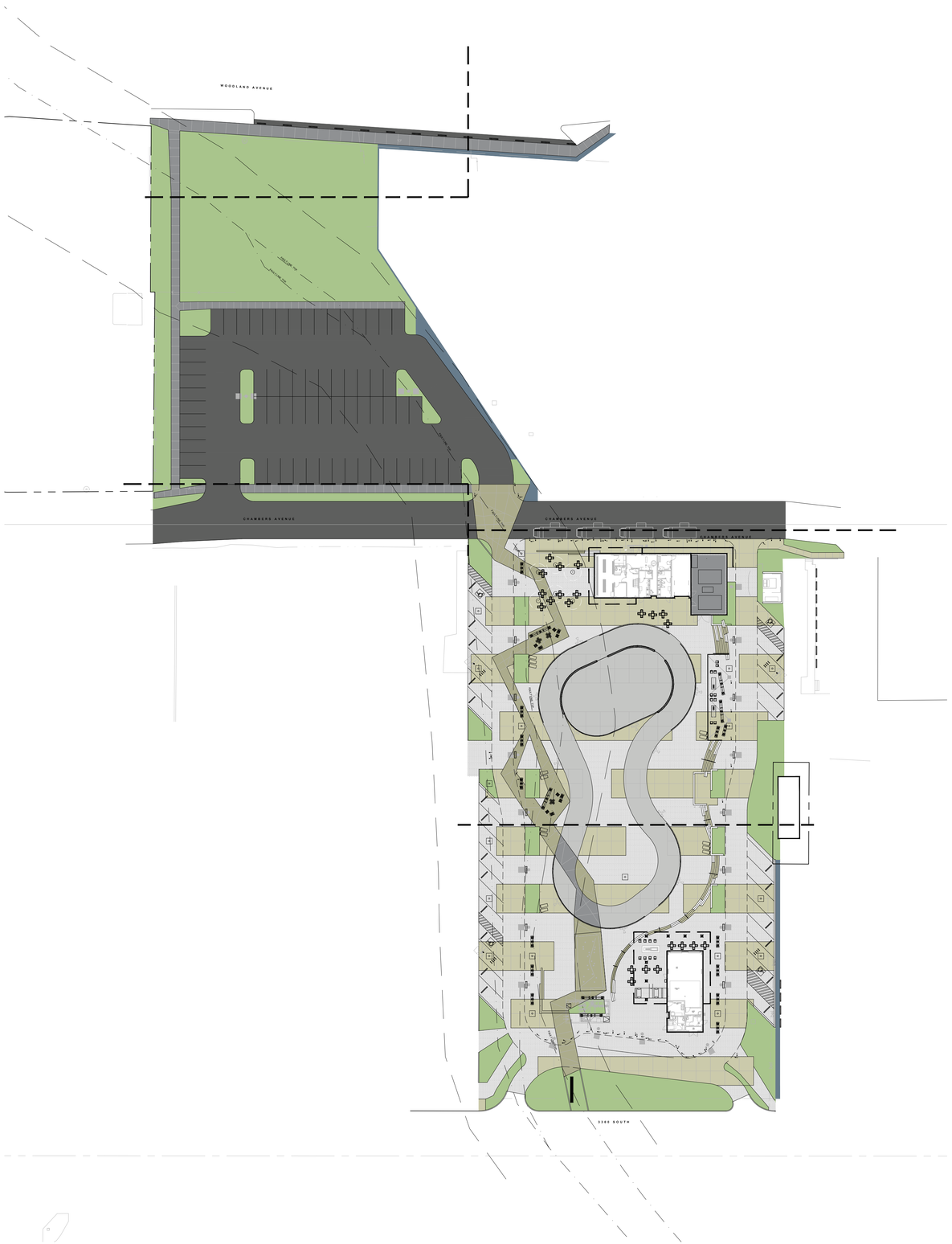

REFERENCE NOTES SCHEDULE

SYMBOL	CAST-IN-PLACE CONCRETE DESCRIPTION	DETAIL
03-30-01	C.I.P. CONCRETE STAIRS, NATURAL GRAY WITH PACIFIC CONCRETE PRODUCTS SPARKLE GRAIN (831.457.4566) OR EQUAL, HEAVY ACID FINISH	4/LM302

SYMBOL	CAST-IN-PLACE CONCRETE DESCRIPTION	DETAIL
03-30-02	C.I.P CONCRETE PAVEMENT, NATURAL COLOR LIGHT BROOM FINISH. EXPANSION AND CONTROL JOINTS PER DETAILS AND SPECS	1/LM301
03-30-03	CONCRETE PAVEMENT NATURAL GRAY CONCRETE WITH SPARKLE GRAIN FROM 03-30-01, LIGHT ACID FINISH	1/LM301
03-30-04	COLORED CONCRETE PAVEMENT, CONCRETE WITH SPARKLE GRAIN FROM 03-30-01 AND SCOFIELD A-21 DEEP CHARCOAL COLOR HARDENED, HEAVY ACID FINISH	7/LM301
03-30-05	CONCRETE MOW STRIP NATURAL GRAY CONCRETE, LIGHT BROOM FINISH	9/LM301
03-30-06	CURB AND GUTTER, SEE CIVIL PLANS	
03-33	C.I.P. CONCRETE RETAINING WALL, NATURAL COLOR WITH SPARKLE GRAIN FROM 03-30-01, BOARDFORM FINISH.	5/LM302

SYMBOL	04 MASONRY DESCRIPTION	DETAIL
04-01	RETAINING WALL CMU BLOCK RETAINING WALL WITH MILLCREEK STONE VENEER (MATCH ARCH) SUBMIT SAMPLE FOR APPROVAL	1/LM303
04-02	TEMPORARY RETAINING WALL, VERSA-LOK STANDARD INTERLOCKING BLOCK GRAVITY RETAINING WALL, STANDARD GRAY COLOR, SUNROC CONSTRUCTION & MATERIALS 482 WEST 800 NORTH OREM, UT 84057; OR EQUAL	6/LM302

SYMBOL	METAL RAILINGS DESCRIPTION	DETAIL
05-52	HANDRAIL 2" DIAMETER TUBE STAINLESS STEEL HANDRAIL EMBEDDED INSTALL PER DETAIL	4/LM302
05-53	GUARDRAIL, MATCH ARCHITECTURAL PLANS	2/LM303
05-54	REMOVABLE RAILING FOR ICE RINK HANDRAIL AND UV STABILIZED KICK PLATE REMOVABLE SURFACE MOUNT SYSTEM SEE SHEET LM202	

SYMBOL	SIGNAGE DESCRIPTION	DETAIL
10-14	MILLCREEK COMMON SIGN BY OTHERS, SEE ELECTRICAL DRAWINGS FOR CONDUIT STUB	

SYMBOL	ICE RINKS DESCRIPTION	DETAIL
13-18-01	ICE RIBBON NATURAL GRAY CONCRETE PAVEMENT WITH SPARKLE GRAIN FROM 03-30-01, 1" EXPANSION JOINT AROUND ALL EDGES OF ICE RIBBON DESIGN BUILD BY CUSTOM ICE INC.	
13-18-02	ICE RIBBON NATURAL GRAY CONCRETE WITH SPARKLE GRAIN FROM 03-30-01 AND SCOFIELD A-21 DEEP CHARCOAL COLOR HARDENER, 1" EXPANSION JOINT AROUND ALL EDGES OF ICE RIBBON DESIGN BUILD BY CUSTOM ICE	

SYMBOL	26 ELECTRICAL DESCRIPTION	DETAIL
26-01	POWER PEDESTAL, SEE ELECTRICAL DRAWINGS	
26-02	LIGHT POLE, SEE ELECTRICAL DRAWINGS	

SYMBOL	ASPHALT PAVING DESCRIPTION	DETAIL
32-12	ASPHALT PAVING	5/LM301

SYMBOL	UNIT PAVING DESCRIPTION	DETAIL
32-14-01	CONCRETE PAVERS STEPSTONE LARGE SCALE CALARC PAVERS 8" X 16" X 2-1/2", 12" X 12" X 2-1/2", AND, 12" X 24" X 2-1/2" SEE ENLARGEMENT FOR PATTERN	7/LM301

SYMBOL	AGGREGATE SURFACE DESCRIPTION	DETAIL
32-15-01	DECORATIVE LANDSCAPE ROCK 2" DEEP COMPACTED TO 95%, 1" SCREENED, COLOR: WASATCH GREY, OR APPROVED EQUAL	

SYMBOL	CONCRETE PARKING BUMPERS DESCRIPTION	DETAIL
32-17-01	STANDARD CONCRETE PARKING STOP	

SYMBOL	SITE FURNISHINGS DESCRIPTION	DETAIL
32-33-01	WOOD BLOCK BENCH TYPE 1 TIMBERFORM COLOSSUS GIANT TIMBER SEAT 8`-0" LONG MOUNTED ON CONC. FOOTING BELOW PAVER SYSTEM PER MANUFACTURE SPECS.	
32-33-02	WOOD BLOCK BENCH TYPE 2 2219 COLOSSUS GIANT TIMBER SEAT WITH BACKREST	
32-33-03	MOVABLE WOOD BLOCK BENCH TYPE 3 TIMBERFORM COLOSSUS GIANT TIMBER SEAT 3`-0" LONG WITH ACRYLIC FOOTING	
32-33-04	MOVABLE WOOD BLOCK BENCH TYPE 4 TIMBERFORM COLOSSUS GIANT TIMBER SEAT 2`-0" LONG WITH ACRYLIC FOOTING	
32-33-05	WOOD BLOCK STEP/SEATWALL TIMBERFORM CUSTOM COLOSSUS GIANT BENCH MOUNTED TO 4" CONC. SLAB W/ #4 REBAR 24" O.C. 18" TALL X 2`-4" WIDE X LENGTH VARIES (SEE PLAN)	2/LM302
32-33-06	MOVEABLE TABLE. MAGLIN KONTUR CAFE TABLE. PRE-ASSEMBLED, SOLID STEEL, TABLE WITH ROLLED EDGE. WITH UMBRELLA HOLE. 30" H X 36" D. COLOR: RAL 2009	3/LM303
32-33-07	MOVEABLE CHAIRS. MAGLIN KONTUR-CH. PRE-ASSEMBLED, SOLID STEEL, STACKABLE CHAIR. COLOR: RAL 2009	3/LM303
32-33-08	LOUNGE CHAIR. LANDSCAPE FORMS CHILL. FREESTANDING	1/LM304
32-33-09	BIKE RACK. BELSON OUTDOORS LATERAL BIKE RACK. MODEL DF6555: 22"L X 4"W X 36"H. FRAME COLOR: BLACK TOP COLOR: IPE WOOD	4/LM303
32-33-10	BOLLARD 8" BLACK POWDER COATED `I` BEAM X 18" TALL CONTRACTOR TO HOLD CONTINGENCY FOR 10 EXTRA BOLLARDS TO BE INSTALLED AS NEEDED	10/LM301
32-33-11	BOLLARD 8" BLACK POWDER COATED `I` BEAM X 24" TALL	10/LM301
32-33-12	BOLLARD 8" BLACK POWDER COATED `I` BEAM X 36" TALL	10/LM301
32-33-13	CONCRETE PLANTER KORNEGAY DESIGN, LLC SQUARE-15 FOUR-SIDED LANDSCAPE CONTAINER WITH TAPERED RADIUS SIDES. 15" TALL, 70" DIAMETER, 58.5" BASE.	6/LM303
32-33-14	PARKING STOP 4" `I` BEAM X 6` LENGTH MOUNTED TO 8"X24" CONC. FOOTING WITH #5 REBAR @ 12" O.C.	
32-33-15	TRASH RECEPTACLE LANDSCAPE FORMS MULT-DU-EM-HM-LL MULTIPLICITY - DOUBLE UNIT EMBEDDED MULTI USE RECEPTACLE WITH HOLE AND LOCKS	5/LM303
32-33-16	IRONSMITH PAVE-GRATE® SUSPENDED PAVER SYSTEM. CANTILEVERING TREE GRATE SYSTEM	8/LM301
32-33-17	FIRE PLACE SEE ARCHITECTS PLAN	
32-33-18	FIRE RING QCP FIRE RING PORTERO COLOR: SLATE GRAY	2/LM304
32-33-19	FIRE PIT QCP SLAB FIRE FEATURE 36"X72" COLOR: MISSION WHITE	3/LM304
32-33-20	BIKE REPAIR STAND; THE PARK AND FACILITIES CATALOG. ITEM NO.: 509-2001; STAINLESS STEEL; SURFACE MOUNT PER MANUFACTURERS SPECIFICATIONS	
32-33-21	PATIO HEATER (GAS), SUN GLO: MODEL: PSA265V WITH UNDERGROUND VAULT BOX. TROPIC HEATING 949-510-9600. AUTOMATED IGNITION SYSTEM; COLOR: STANDARD BLACK; IN-GROUND MOUNT ON CONCRETE	4/LM304

SYMBOL	PLANTING DESCRIPTION	DETAIL
32-93	LANDSCAPE AREA, SEE PLANTING PLAN	

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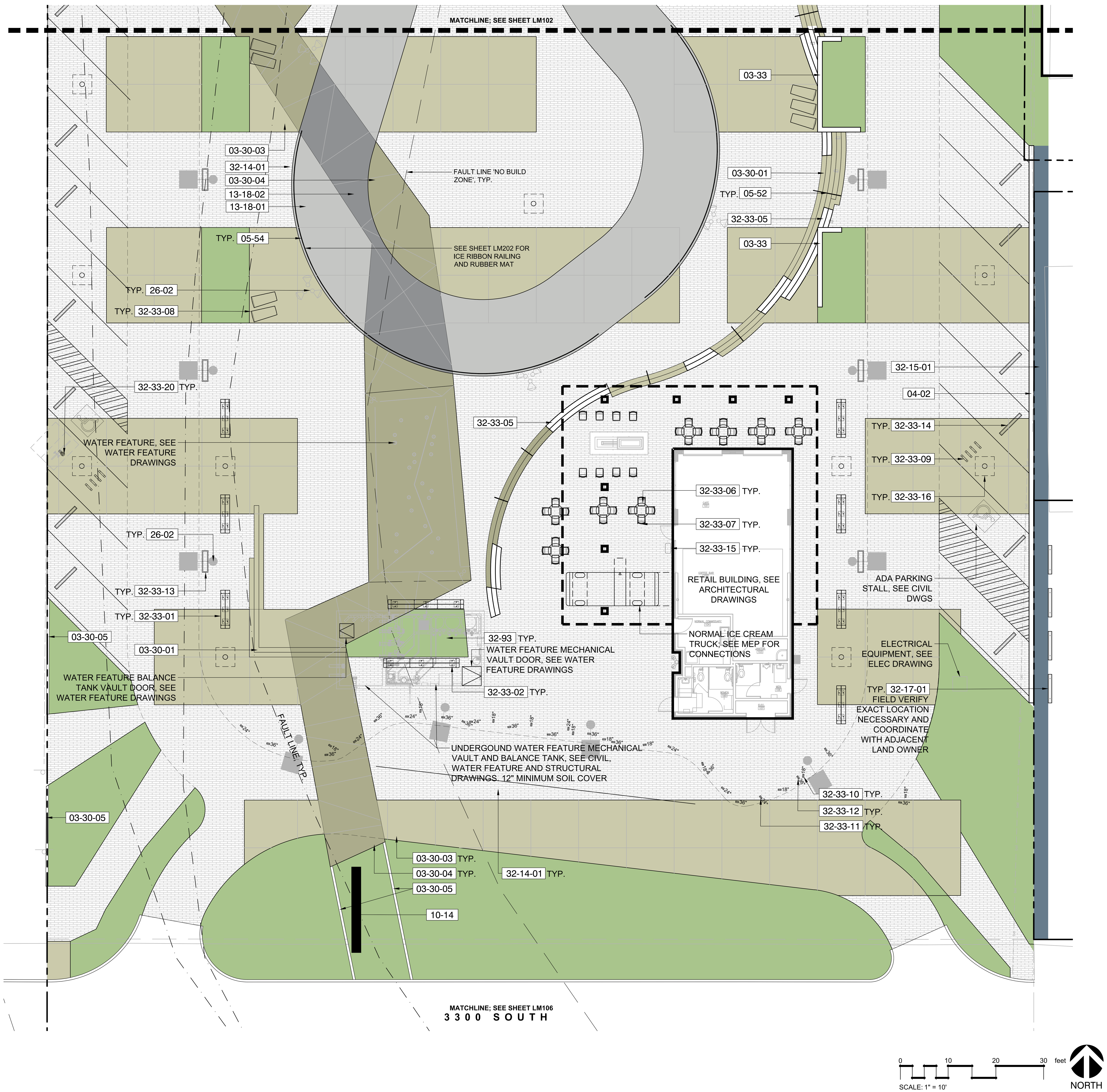

REFERENCE NOTES SCHEDULE LM101

SYMBOL	DESCRIPTION	DETAIL
	CAST-IN-PLACE CONCRETE	
03-30-01	C.I.P. CONCRETE STAIRS, NATURAL GRAY WITH PACIFIC CONCRETE PRODUCTS SPARKLE GRAIN (831.457.4566) OR EQUAL, HEAVY ACID FINISH	4/LM302
	CAST-IN-PLACE CONCRETE	
03-30-03	CONCRETE PAVEMENT. NATURAL GRAY CONCRETE WITH SPARKLE GRAIN FROM 03-30-01, LIGHT ACID FINISH	1/LM301
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03-33	C.I.P. CONCRETE RETAINING WALL, NATURAL COLOR WITH SPARKLE GRAIN FROM 03-30-01, BOARDFORM FINISH.	5/LM302
	04 MASONRY	
04-02	TEMPORARY RETAINING WALL, VERSA-LOK STANDARD INTERLOCKING BLOCK GRAVITY RETAINING WALL	6/LM302
	METAL RAILINGS	
05-52	HANDRAIL, 2" DIAMETER TUBE STAINLESS STEEL HANDRAIL EMBEDDED INSTALL PER DETAIL	4/LM302
05-54	REMOVABLE RAILING FOR ICE RINK HANDRAIL AND UV STABILIZED KICK PLATE REMOVABLE SURFACE MOUNT SYSTEM SEE SHEET LM202	
	SIGNAGE	
10-14	MILLCREEK COMMON SIGN BY OTHERS, SEE ELECTRICAL DRAWINGS FOR CONDUIT STUB	
	ICE RINKS	
13-18-01	ICE RIBBON; NATURAL GRAY CONCRETE PAVEMENT WITH SPARKLE GRAIN FROM 03-30-01, 1" EXPANSION JOINT AROUND ALL EDGES OF ICE RIBBON. DESIGN BUILD BY CUSTOM ICE INC.	
13-18-02	ICE RIBBON; NATURAL GRAY CONCRETE WITH SPARKLE GRAIN FROM 03-30-01 AND SCOFIELD A-21 DEEP CHARCOAL COLOR HARDENER, 1" EXPANSION JOINT AROUND ALL EDGES OF ICE RIBBON. DESIGN BUILD BY CUSTOM ICE	
	26 ELECTRICAL	
26-02	LIGHT POLE, SEE ELECTRICAL DRAWINGS	
	UNIT PAVING	
32-14-01	CONCRETE PAVERS. STEPSTONE LARGE SCALE CALARC PAVERS 8" X 16" X 2-1/2", 12" X 12" X 2-1/2", AND, 12" X 24" X 2-1/2" SEE ENLARGEMENT FOR PATTERN	7/LM301
	AGGREGATE SURFACE	
32-15-01	DECORATIVE LANDSCAPE ROCK. 2" DEEP COMPACTED TO 95%, 1" SCREENED, COLOR: WASATCH GREY, OR APPROVED EQUAL	
	CONCRETE PARKING BUMPERS	
32-17-01	STANDARD CONCRETE PARKING STOP	
	SITE FURNISHINGS	
32-33-01	WOOD BLOCK BENCH TYPE 1. TIMBERFORM COLOSSUS GIANT TIMBER SEAT 8`-0" LONG MOUNTED ON CONC. FOOTING BELOW PAVER SYSTEM PER MANUFACTURE SPECS.	
32-33-02	WOOD BLOCK BENCH TYPE 2 2219 COLOSSUS GIANT TIMBER SEAT WITH BACKREST	
32-33-05	WOOD BLOCK STEP/SEATWALL. TIMBERFORM CUSTOM COLOSSUS GIANT BENCH MOUNTED TO 4" CONC. SLAB W/ #4 REBAR 24" O.C. 18" TALL X 2`-4" WIDE X LENGTH VARIES (SEE PLAN)	2/LM302
32-33-06	MOVEABLE TABLE. MAGLIN KONTUR CAFE TABLE. PRE-ASSEMBLED, SOLID STEEL, TABLE WITH ROLLED EDGE. WITH UMBRELLA HOLE. 30" H X 36" D. COLOR: RAL 2009	3/LM303
32-33-07	MOVEABLE CHAIRS. MAGLIN KONTUR-CH. PRE-ASSEMBLED, SOLID STEEL, STACKABLE CHAIR. COLOR: RAL 2009	3/LM303
32-33-08	LOUNGE CHAIR. LANDSCAPE FORMS CHILL. FREESTANDING	1/LM304
32-33-09	BIKE RACK. BELSON OUTDOORS LATERAL BIKE RACK. MODEL DF6555: 22"L X 4"W X 36"H. FRAME COLOR: BLACK TOP COLOR: IPE WOOD	4/LM303
18" 32-33-10	BOLLARD; 8" BLACK POWDER COATED `I` BEAM X 18" TALL	10/LM301
24" 32-33-11	BOLLARD; 8" BLACK POWDER COATED `I` BEAM X 24" TALL	10/LM301
36" 32-33-12	BOLLARD; 8" BLACK POWDER COATED `I` BEAM X 36" TALL	10/LM301
32-33-13	CONCRETE PLANTER. KORNEGAY DESIGN, LLC SQUARE-15 FOUR-SIDED LANDSCAPE CONTAINER WITH TAPERED RADIUS SIDES. 15" TALL, 70" DIAMETER, 58.5" BASE.	6/LM303
32-33-14	PARKING STOP 4" `I` BEAM X 6` LENGTH MOUNTED TO 8"X24" CONC. FOOTING WITH #5 REBAR @ 12" O.C.	
32-33-15	TRASH RECEPTACLE. LANDSCAPE FORMS MULT-DU-EM-HM-LL	5/LM303
32-33-16	IRONSMITH PAVE-GRATE® SUSPENDED PAVER SYSTEM. CANTILEVERING TREE GRATE SYSTEM	8/LM301
32-33-20	BIKE REPAIR STAND; THE PARK AND FACILITIES CATALOG. ITEM NO.: 509-2001; STAINLESS STEEL; SURFACE MOUNT PER MANUFACTURERS SPECIFICATIONS	
	PLANTING	
32-93	LANDSCAPE AREA, SEE PLANTING PLAN	

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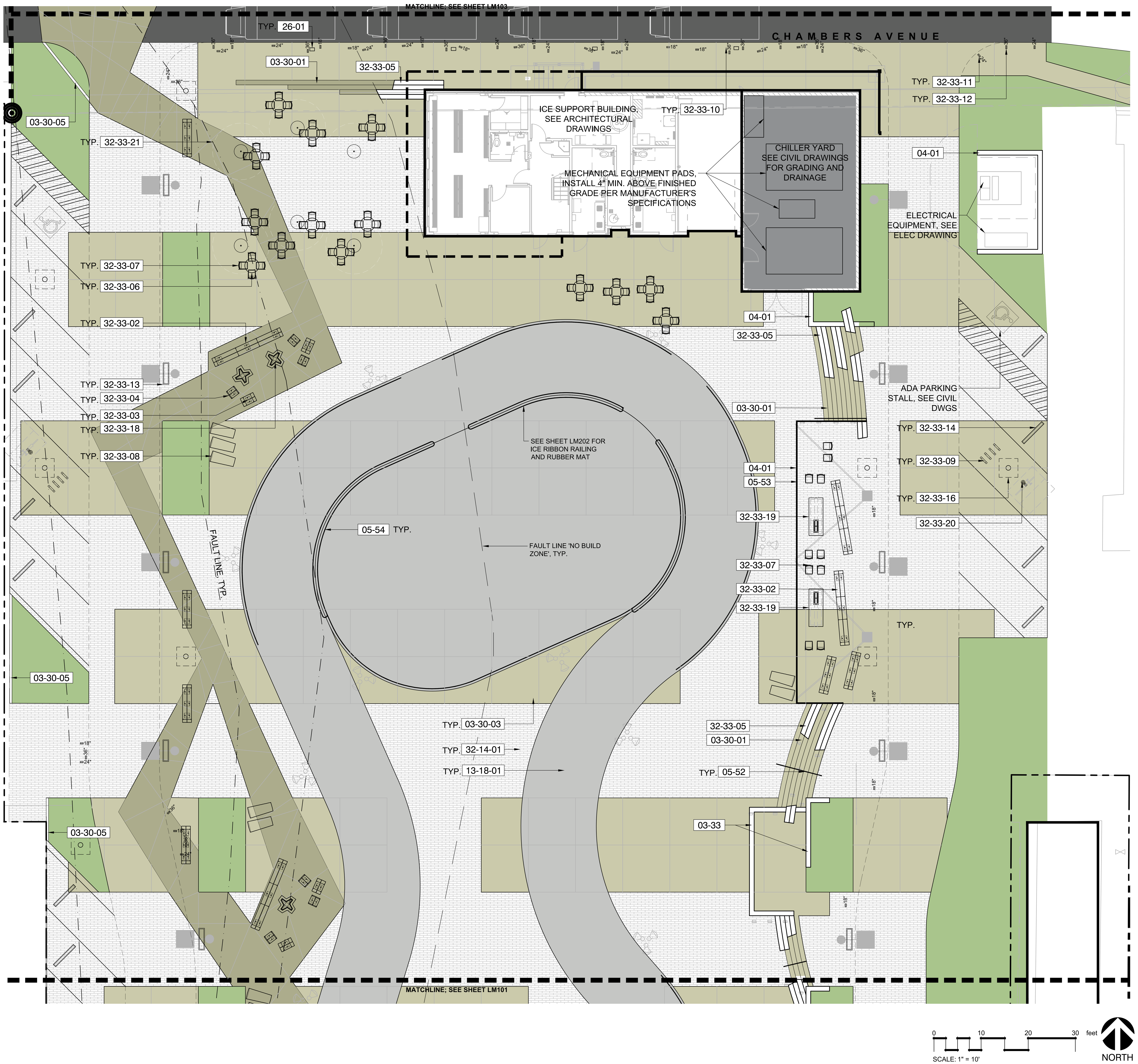

REFERENCE NOTES SCHEDULE LM102

SYMBOL	DESCRIPTION	DETAIL
	CAST-IN-PLACE CONCRETE	
03-30-01	C.I.P. CONCRETE STAIRS, NATURAL GRAY WITH PACIFIC CONCRETE PRODUCTS SPARKLE GRAIN (831.457.4566) OR EQUAL, HEAVY ACID FINISH	4/LM302
	CAST-IN-PLACE CONCRETE	
03-30-02	C.I.P CONCRETE PAVEMENT, NATURAL COLOR LIGHT BROOM FINISH. EXPANSION AND CONTROL JOINTS PER DETAILS AND SPECS	1/LM301
03-30-03	CONCRETE PAVEMENT NATURAL GRAY CONCRETE WITH SPARKLE GRAIN FROM 03-30-01, LIGHT ACID FINISH	1/LM301
03-30-04	COLORED CONCRETE PAVEMENT, CONCRETE WITH SPARKLE GRAIN FROM 03-30-01 AND SCOFIELD A-21 DEEP CHARCOAL COLOR HARDENED, HEAVY ACID FINISH	7/LM301
03-30-05	CONCRETE MOW STRIP NATURAL GRAY CONCRETE, LIGHT BROOM FINISH	9/LM301
03-33	C.I.P. CONCRETE RETAINING WALL, NATURAL COLOR WITH SPARKLE GRAIN FROM 03-30-01, BOARDFORM FINISH.	5/LM302
	04 MASONRY	
04-01	RETAINING WALL. CMU BLOCK RETAINING WALL WITH MILLCREEK STONE VENEER (MATCH ARCH) SUBMIT SAMPLE FOR APPROVAL	1/LM303
	METAL RAILINGS	
05-52	HANDRAIL; 2" DIAMETER TUBE STAINLESS STEEL HANDRAIL EMBEDDED INSTALL PER DETAIL	4/LM302
05-53	GUARDRAIL, MATCH ARCHITECTURAL PLANS	2/LM303
05-54	REMOVABLE RAILING FOR ICE RINK HANDRAIL AND UV STABILIZED KICK PLATE REMOVABLE SURFACE MOUNT SYSTEM SEE SHEET LM202	
	ICE RINKS	
13-18-01	ICE RIBBON; NATURAL GRAY CONCRETE PAVEMENT WITH SPARKLE GRAIN FROM 03-30-01, 1" EXPANSION JOINT AROUND ALL EDGES OF ICE RIBBON. DESIGN BUILD BY CUSTOM ICE INC.	
	26 ELECTRICAL	
26-01	POWER PEDESTAL, SEE ELECTRICAL DRAWINGS	
	ASPHALT PAVING	
32-12	ASPHALT PARKING	5/LM301
	UNIT PAVING	
32-14-01	CONCRETE PAVERS; STEPSTONE LARGE SCALE CALARC PAVERS 8" X 16" X 2-1/2", 12" X 12" X 2-1/2", AND, 12" X 24" X 2-1/2" SEE ENLARGEMENT FOR PATTERN	7/LM301
	SITE FURNISHINGS	
32-33-01	WOOD BLOCK BENCH TYPE 1 TIMBERFORM COLOSSUS GIANT TIMBER SEAT 8`-0" LONG MOUNTED ON CONC. FOOTING BELOW PAVER SYSTEM PER MANUFACTURE SPECS.	
32-33-02	WOOD BLOCK BENCH TYPE 2 2219 COLOSSUS GIANT TIMBER SEAT WITH BACKREST	
32-33-03	MOVABLE WOOD BLOCK BENCH TYPE 3. TIMBERFORM COLOSSUS GIANT TIMBER SEAT 3`-0" LONG WITH ACRYLIC FOOTING	
32-33-04	MOVABLE WOOD BLOCK BENCH TYPE 4. TIMBERFORM COLOSSUS GIANT TIMBER SEAT 2`-0" LONG WITH ACRYLIC FOOTING	
32-33-05	WOOD BLOCK STEP/SEATWALL TIMBERFORM CUSTOM COLOSSUS GIANT BENCH MOUNTED TO 4" CONC. SLAB W/ #4 REBAR 24" O.C. 18" TALL X 2`-4" WIDE X LENGTH VARIES (SEE PLAN)	2/LM302
32-33-06	MOVEABLE TABLE. MAGLIN KONTUR CAFE TABLE. PRE-ASSEMBLED, SOLID STEEL, TABLE WITH ROLLED EDGE. WITH UMBRELLA HOLE. 30" H X 36" D. COLOR: RAL 2009	3/LM303
32-33-07	MOVEABLE CHAIRS. MAGLIN KONTUR-CH. PRE-ASSEMBLED, SOLID STEEL, STACKABLE CHAIR. COLOR: RAL 2009	3/LM303
32-33-08	LOUNGE CHAIR. LANDSCAPE FORMS CHILL. FREESTANDING	1/LM304
32-33-09	BIKE RACK. BELSON OUTDOORS LATERAL BIKE RACK. MODEL DF6555: 22"L X 4"W X 36"H. FRAME COLOR: BLACK TOP COLOR: IPE WOOD	4/LM303
18" 32-33-10	BOLLARD; 8" BLACK POWDER COATED `I` BEAM X 18" TALL	10/LM301
24" 32-33-11	BOLLARD; 8" BLACK POWDER COATED `I` BEAM X 24" TALL	10/LM301
36" 32-33-12	BOLLARD; 8" BLACK POWDER COATED `I` BEAM X 36" TALL	10/LM301
32-33-13	CONCRETE PLANTER. KORNEGAY DESIGN, LLC SQUARE-15	6/LM303
32-33-14	PARKING STOP. 4" `I` BEAM X 6` LENGTH MOUNTED TO 8"X24" CONC. FOOTING WITH #5 REBAR @ 12" O.C.	
32-33-16	IRONSMITH PAVE-GRATE® SUSPENDED PAVER SYSTEM. CANTILEVERING TREE GRATE SYSTEM	8/LM301
32-33-18	FIRE RING. QCP FIRE RING PORTERO. COLOR: SLATE GRAY	2/LM304
32-33-19	FIRE PIT. QCP SLAB FIRE FEATURE 36"X72". COLOR: MISSION WHITE	3/LM304
32-33-20	BIKE REPAIR STAND; THE PARK AND FACILITIES CATALOG. ITEM NO.: 509-2001; STAINLESS STEEL; SURFACE MOUNT PER MANUFACTURERS SPECIFICATIONS	
32-33-21	PATIO HEATER (GAS), SUN GLO: MODEL: PSA265V WITH UNDERGROUND VAULT BOX. TROPIC HEATING 949-510-9600. AUTOMATED IGNITION SYSTEM; COLOR: STANDARD BLACK; IN-GROUND MOUNT ON CONCRETE	4/LM304
	PLANTING	
32-93	LANDSCAPE AREA, SEE PLANTING PLAN	

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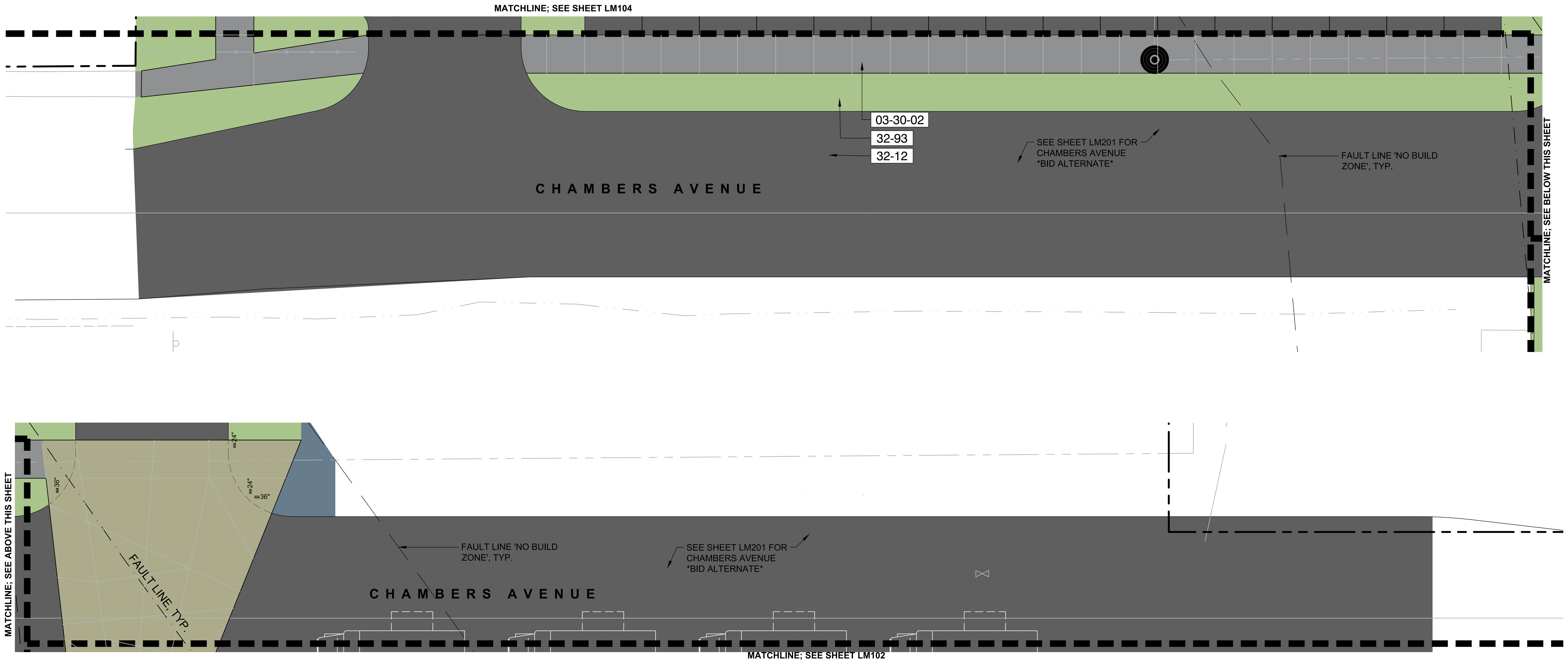

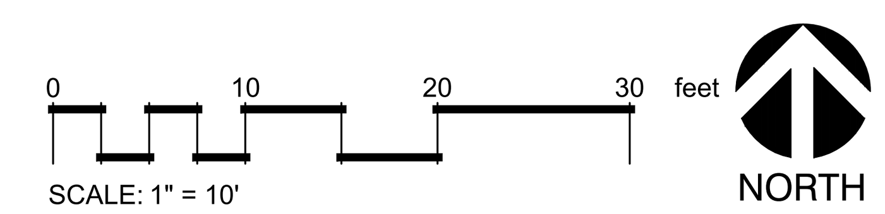

REFERENCE NOTES SCHEDULE LM103

SYMBOL	DESCRIPTION	DETAIL
	CAST-IN-PLACE CONCRETE	
03-30-01	C.I.P. CONCRETE STAIRS, NATURAL GRAY WITH PACIFIC CONCRETE PRODUCTS SPARKLE GRAIN (831.457.4566) OR EQUAL, HEAVY ACID FINISH	4/LM302
	CAST-IN-PLACE CONCRETE	
03-30-03	CONCRETE PAVEMENT NATURAL GRAY CONCRETE WITH SPARKLE GRAIN FROM 03-30-01, LIGHT ACID FINISH	1/LM301
03-30-04	COLORED CONCRETE PAVEMENT, CONCRETE WITH SPARKLE GRAIN FROM 03-30-01 AND SCOFIELD A-21 DEEP CHARCOAL COLOR HARDENED, HEAVY ACID FINISH	7/LM301
03-30-05	CONCRETE MOW STRIP NATURAL GRAY CONCRETE, LIGHT BROOM FINISH	9/LM301
	26 ELECTRICAL	
26-02	LIGHT POLE, SEE ELECTRICAL DRAWINGS	
	CONCRETE PARKING BUMPERS	
32-17-01	STANDARD CONCRETE PARKING STOP	
	SITE FURNISHINGS	
32-33-01	WOOD BLOCK BENCH TYPE 1 TIMBERFORM COLOSSUS GIANT TIMBER SEAT 8'-0" LONG MOUNTED ON CONC. FOOTING BELOW PAVER SYSTEM PER MANUFACTURE SPECS.	
32-33-02	WOOD BLOCK BENCH TYPE 2 2219 COLOSSUS GIANT TIMBER SEAT WITH BACKREST	
32-33-06	MOVEABLE TABLE. MAGLIN KONTUR CAFE TABLE. PRE-ASSEMBLED, SOLID STEEL, TABLE WITH ROLLED EDGE. WITH UMBRELLA HOLE. 30" H X 36" D. COLOR: RAL 2009	3/LM303
32-33-07	MOVEABLE CHAIRS. MAGLIN KONTUR-CH. PRE-ASSEMBLED, SOLID STEEL, STACKABLE CHAIR. COLOR: RAL 2009	3/LM303
32-33-13	CONCRETE PLANTER KORNEGAY DESIGN, LLC SQUARE-15 FOUR-SIDED LANDSCAPE CONTAINER WITH TAPERED RADIUS SIDES. 15" TALL, 70" DIAMETER, 58.5" BASE.	6/LM303
32-33-14	PARKING STOP 4" 'I' BEAM X 6' LENGTH MOUNTED TO 8"X24" CONC. FOOTING WITH #5 REBAR @ 12" O.C.	
32-33-15	TRASH RECEPTACLE LANDSCAPE FORMS MULT-DU-EM-HM-LL MULTIPLICITY - DOUBLE UNIT EMBEDDED MULTI USE RECEPTACLE WITH HOLE AND LOCKS	5/LM303
32-33-16	IRONSMITH PAVE-GRATE® SUSPENDED PAVER SYSTEM. CANTILEVERING TREE GRATE SYSTEM	8/LM301
	PLANTING	
32-93	LANDSCAPE AREA, SEE PLANTING PLAN	

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LM103

MATCHLINE; SEE SHEET LM105

REMOVE AND REPLACE EXISTING LANDSCAPE ALONG ADJACENT PARKING LOT. CONTRACTOR AND OWNER TO COORDINATE WITH ADJACENT LAND OWNER PRIOR TO REMOVAL.

FAULT LINE 'NO BUILD ZONE', TYP.

FAULT LINE_TYP.

FAULT LINE_TYP.

FAULT LINE 'NO BUILD ZONE', TYP.

FAULT LINE_TYP.

REMOVE EXISTING LANDSCAPE AND WALL ALONG ADJACENT PARKING LOT. CONTRACTOR AND OWNER TO COORDINATE WITH ADJACENT LAND OWNER PRIOR TO REMOVAL.

FAULT LINE 'NO BUILD ZONE', TYP.

MATCHLINE; SEE SHEET LM103

REFERENCE NOTES SCHEDULE LM104

SYMBOL	ASPHALT PAVING DESCRIPTION	DETAIL
32-12	ASPHALT PARKING	5/LM301

SYMBOL	PLANTING DESCRIPTION	DETAIL
32-93	LANDSCAPE AREA, SEE PLANTING PLAN	

0 10 20 30 feet

SCALE: 1" =10'

NORTH

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LICENSED LANDSCAPE ARCHITECT
DAVID HARRIS
SIGNED 01.15.21
STATE OF UTAH

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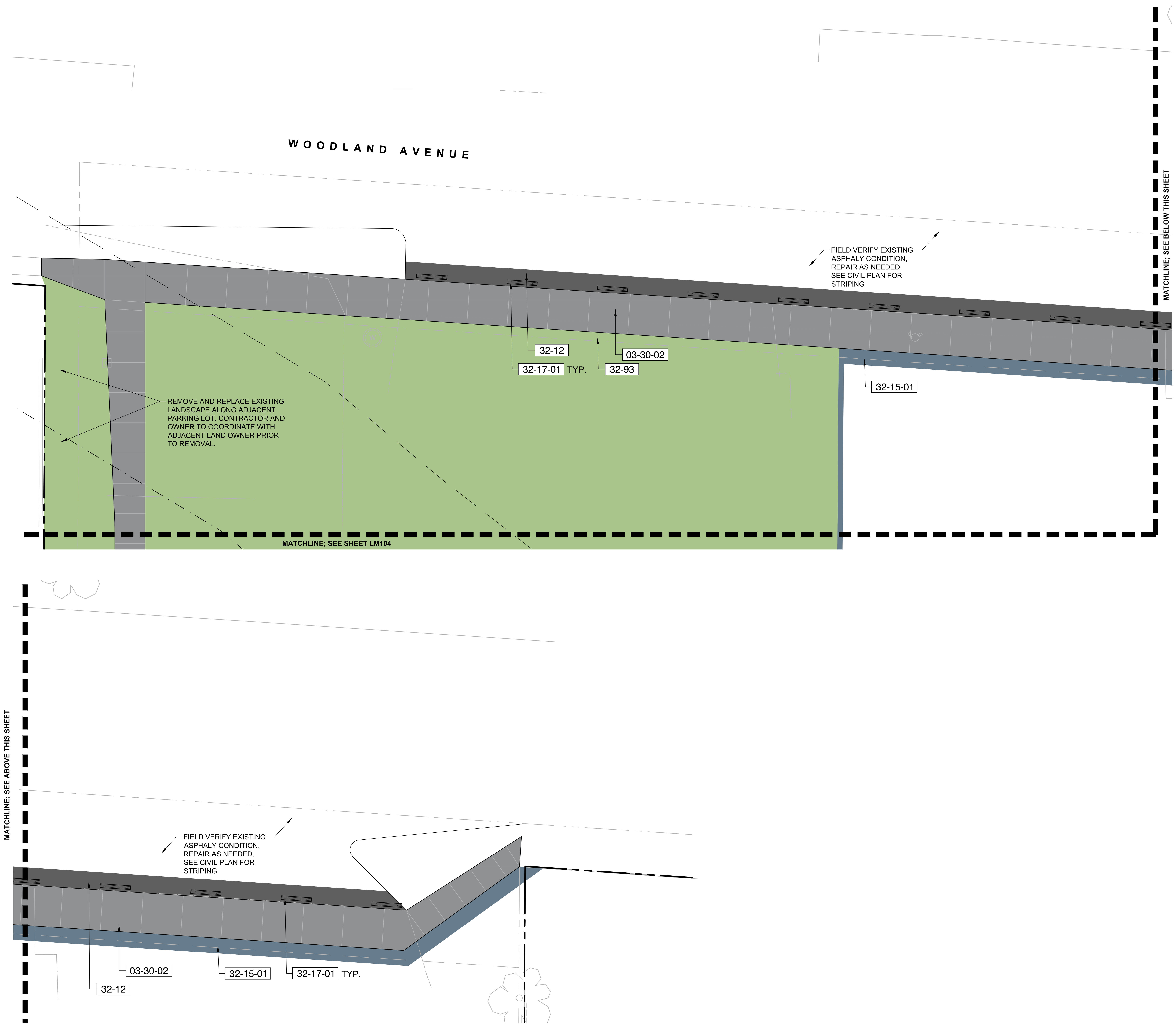
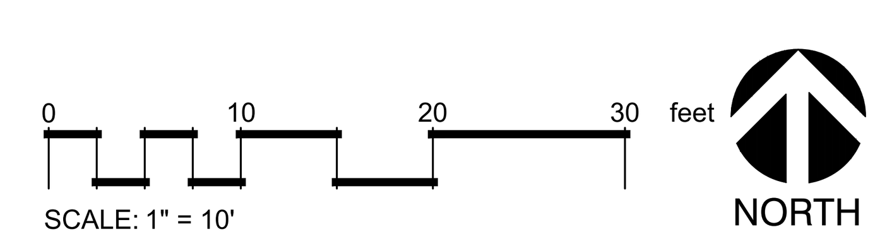


REFERENCE NOTES SCHEDULE LM105

SYMBOL	DESCRIPTION	DETAIL
	CAST-IN-PLACE CONCRETE	
03-30-02	C.I.P CONCRETE PAVEMENT, NATURAL COLOR LIGHT BROOM FINISH. EXPANSION AND CONTROL JOINTS PER DETAILS AND SPECS	1/LM301
	ASPHALT PAVING	
32-12	ASPHALT PAVING	5/LM301
	AGGREGATE SURFACE	
32-15-01	DECORATIVE LANDSCAPE ROCK 2" DEEP COMPACTED TO 95%, 1" SCREENED, COLOR: WASATCH GREY, OR APPROVED EQUAL	
	CONCRETE PARKING BUMPERS	
32-17-01	STANDARD CONCRETE PARKING STOP	
	PLANTING	
32-93	LANDSCAPE AREA, SEE PLANTING PLAN	



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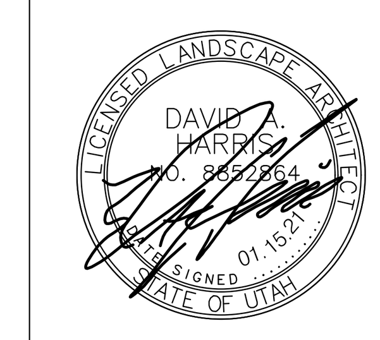

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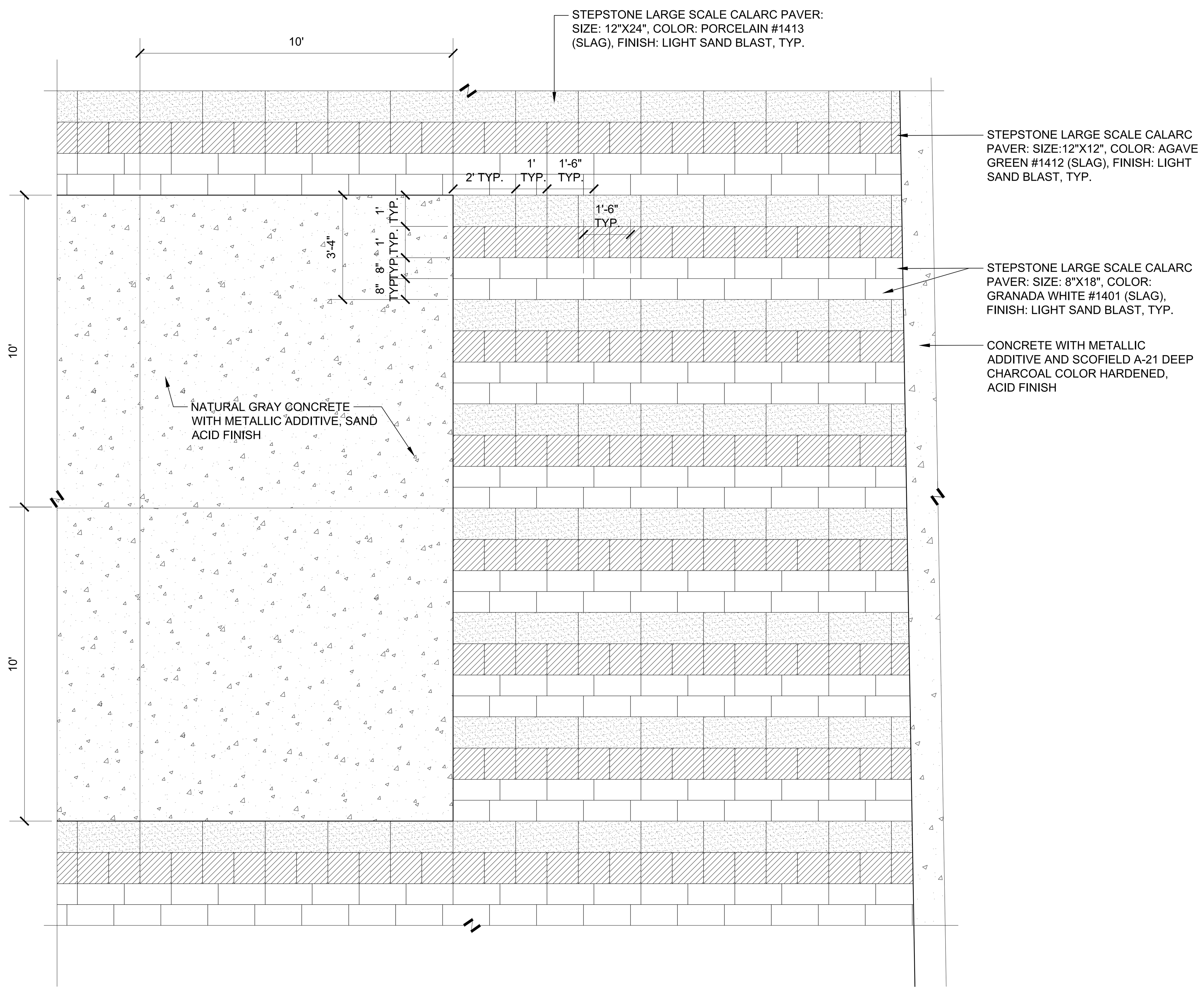
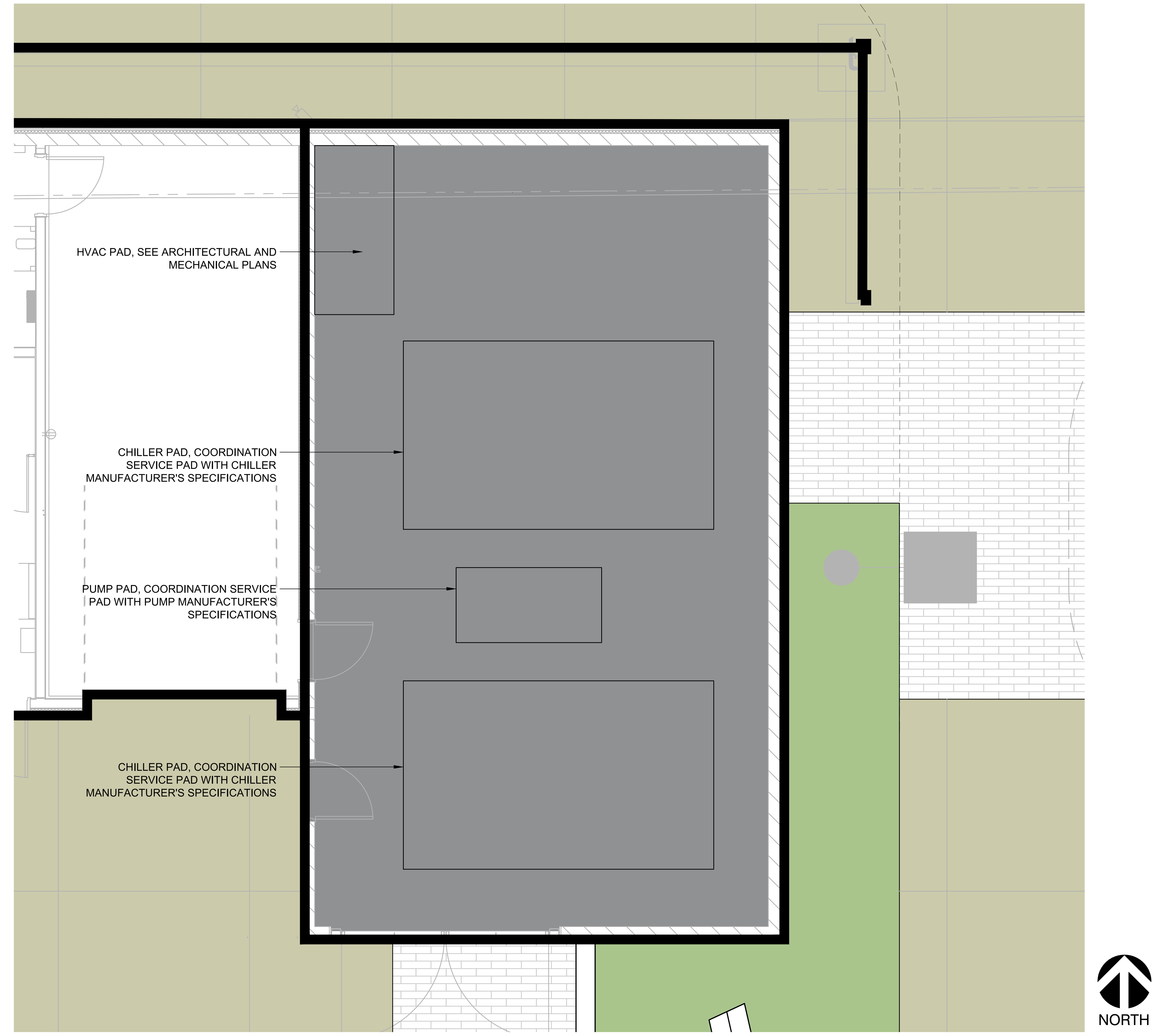


1 TYPICAL PAVER LAYOUT ENLARGEMENT

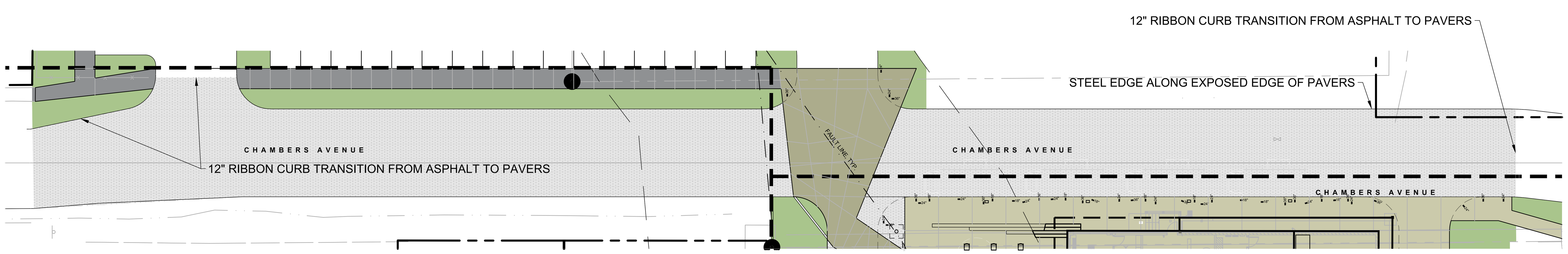
3/8" = 1'-0"

P-PU-MC-107



01 CHILLER YARD ENLARGEMENT

3" = 1'-0"



2 CHAMBERS AVENUE *BID ALTERNATE*

1" = 20'

P-PU-MC-109

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LM201

HANDRAIL/DASHER BOARD

MANUFACTURING FACILITY: 554 LF OF HANDRAIL FIELD VERIFY
701 MAIN STREET
JOHNSTOWN, PA 15901
MAILING ADDRESS:
P.O. BOX 250
SALIX, PA 15952
LOCAL: (814) 487-6056
FAX: (814) 487-6058
INFO@EVERYTHING-ICE.COM
IAN BENNETT

REC ICE SERIES

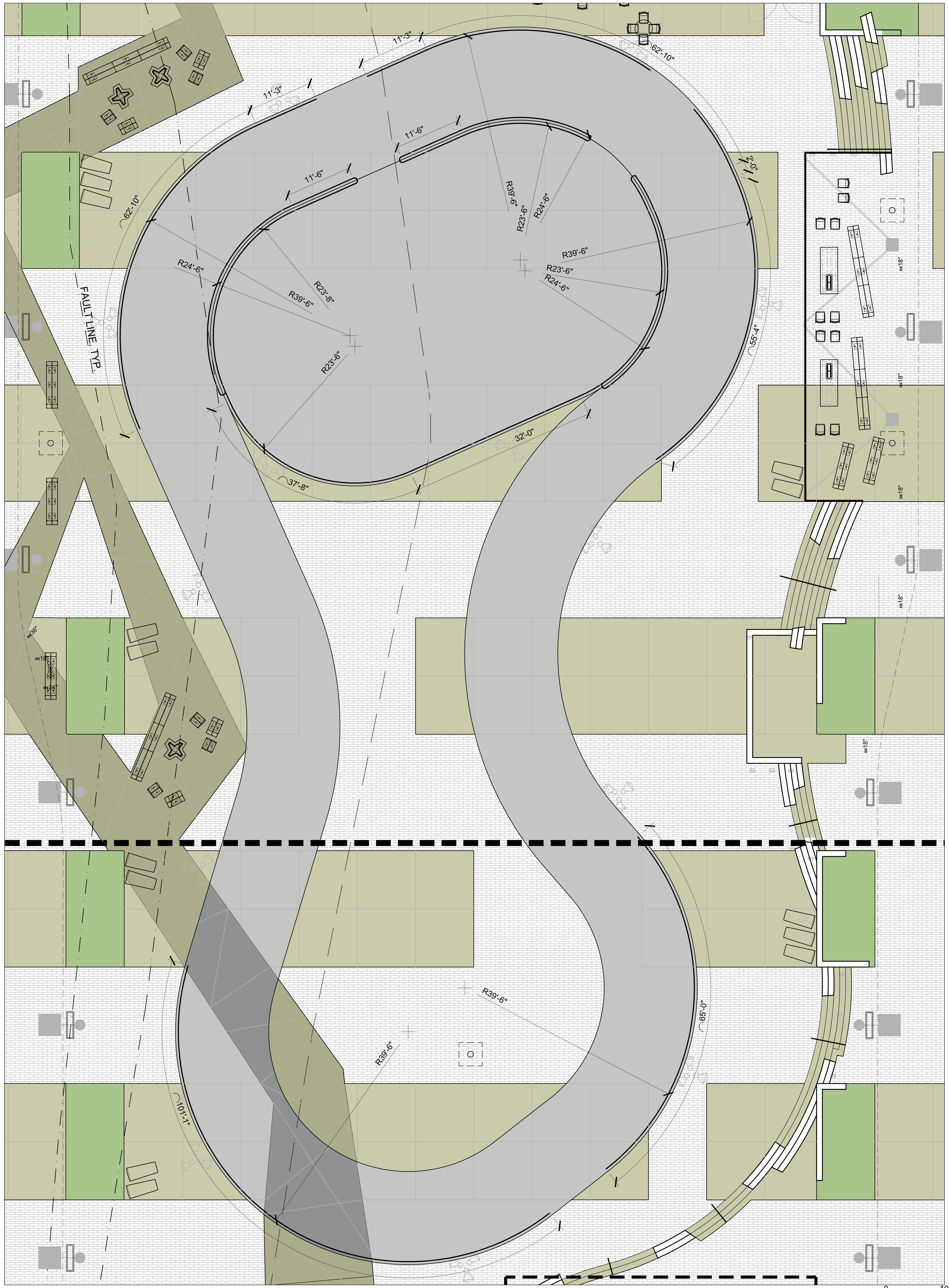
PROVIDE ALT 1 WITH ANODIZED ALUMINUM FRAME
ALT 2 WITH PAINTED GALV. FRAME

NO UPPER SHIELDING REQUIRED

ENTIRE HANDRAIL MUST BE REMOVABLE

PROVIDE SPEC SHEET AND SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION

IMBED SLEEVES IN ICE RIBBON MUST BE COORDINATED AND APPROVED BY CUSTOM ICE AND THE ARCHITECT PRIOR TO INSTALLATION

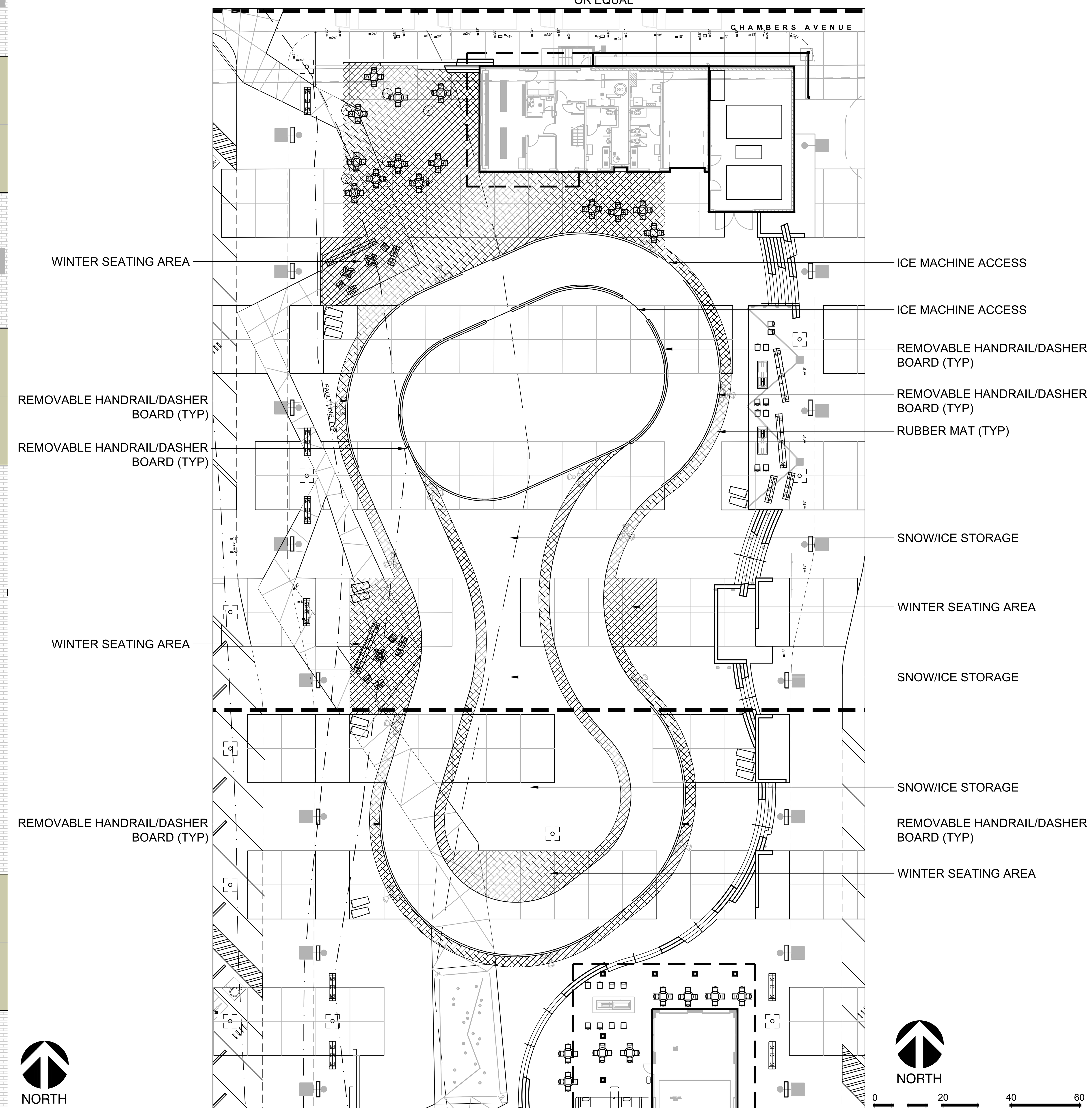


01 ICE RIBBON ENLARGEMENT

1" = 10'-0"

RUBBER MAT LAYOUT PLAN

INTERLOCKING RUBBER MATS 7,600 S.F. FIELD VERIFY
RUBBERLOCK 3/8" THICK 4'X4' SQ.,
COLOR: BLACK
GREATMATS.COM
844-804-1632
OR EQUAL



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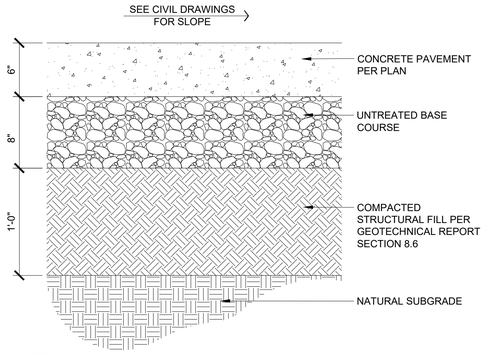
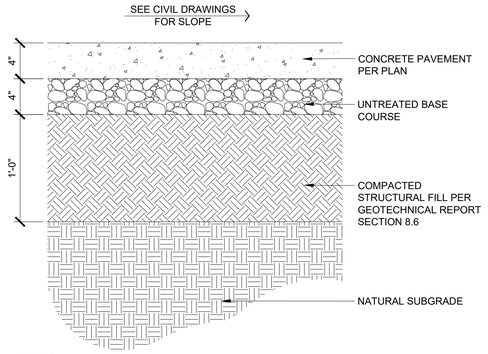


NOTES:
1. CONCRETE COLOR AND FINISH AS INDICATED ON MATERIALS PLANS.
2. CONTRACTOR TO PROVIDE 5'X5' MOCK UP OF EACH COLOR AND FINISH OF CONCRETE SPECIFIED ON PLANS PRIOR TO CONSTRUCTION.
3. PLACE CONTROL AND EXPANSION JOINTS PER DETAILS ON THIS SHEET.

1 CONCRETE PAVEMENT

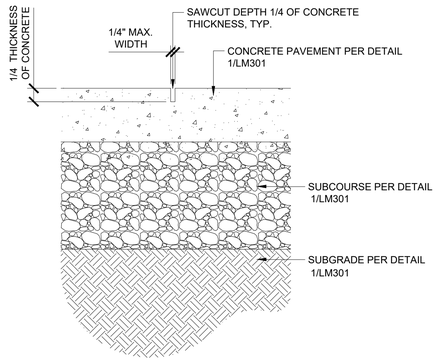
1 1/2" = 1'-0" P-PU-MC-02



NOTES:
1. CONCRETE COLOR AND FINISH AS INDICATED ON MATERIALS PLANS.
2. CONTRACTOR TO PROVIDE 5'X5' MOCK UP OF EACH COLOR AND FINISH OF CONCRETE SPECIFIED ON PLANS PRIOR TO CONSTRUCTION.
3. PLACE CONTROL AND EXPANSION JOINTS PER DETAILS ON THIS SHEET.

2 CONCRETE SIDEWALK (NORTH OF CHAMBERS ONLY)

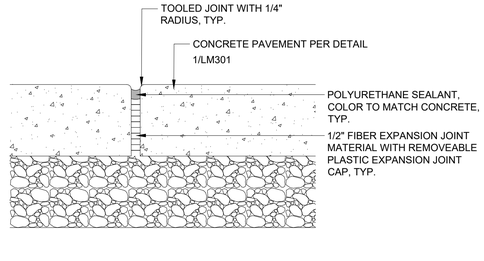
1 1/2" = 1'-0" P-PU-MC-110



NOTES:
1. CONTROL JOINTS SPACING AS SHOWN ON PLANS.
2. REFER TO STRUCURAL PLANS FOR REBAR AND SUPPORTS.
3. ALL CONTROL JOINTS TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

3 CONTROL JOINT

3" = 1'-0" P-PU-MC-03

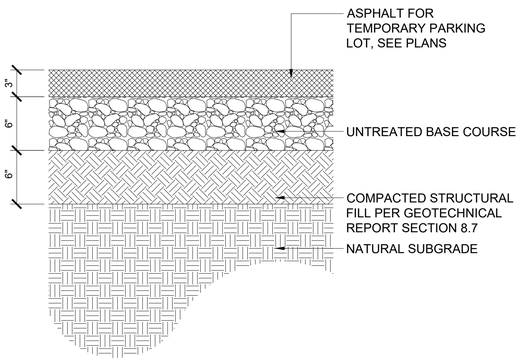


JOINT SPACING SCHEDULE		
WALK WIDTH	EXPANSION JOINT	CONTROL JOINT
10'	40' O.C.	10' O.C.
8'	32' O.C.	8' O.C.
6'	24' O.C.	6' O.C.

NOTES:
1. ALL JOINT SPACING SHALL BE PER THIS DETAIL OR AS SHOWN ON PLANS, TYP.

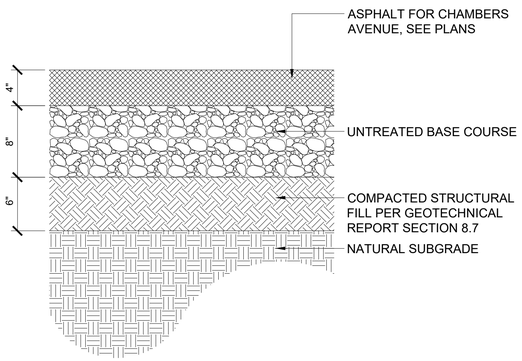
4 EXPANSION/CONSTRUCTION JOINT

3" = 1'-0" P-PU-MC-19



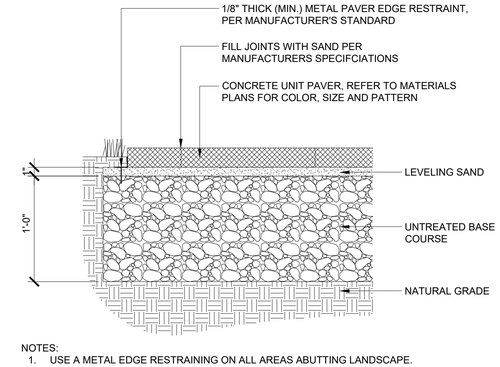
5 ASPHALT (TEMPORARY PARKING LOT)

1 1/2" = 1'-0" P-PU-MC-111



6 ASPHALT (CHAMBER AVENUE)

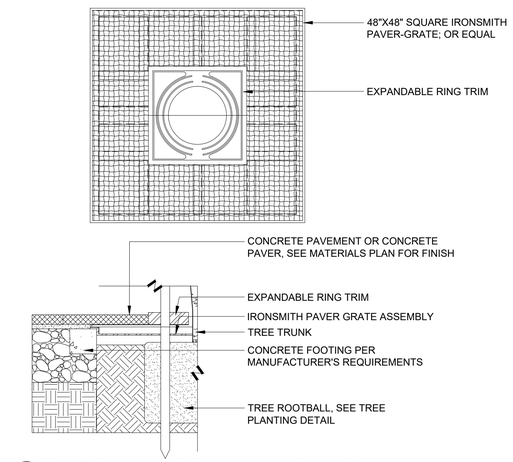
1 1/2" = 1'-0" P-PU-MC-13



NOTES:
1. USE A METAL EDGE RESTRAINING ON ALL AREAS ABUTTING LANDSCAPE.
2. FINE-GRAINED SOILS FOUND WITHIN 36" OF FINISH GRADE SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL FILL THAT MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT SECTION 8.1.4.

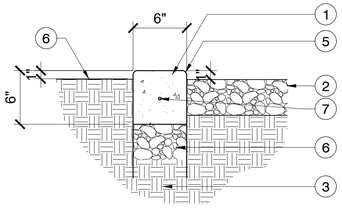
7 CONCRETE UNIT PAVERS

1 1/2" = 1'-0" P-PU-MC-97



8 IRONSMITH PAVER-GRATE DETAIL

3/4" = 1'-0" P-PU-MC-99

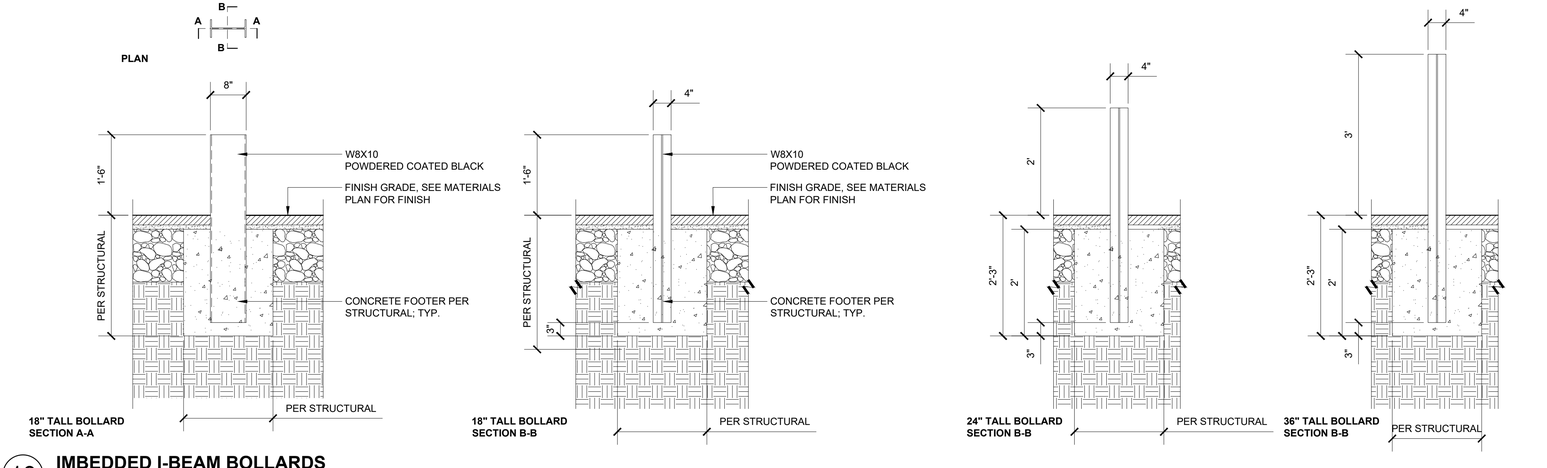


LEGEND

1. CONCRETE MOW STRIP. CONCRETE COLORS AND FINISHES AS INDICATED ON LAYOUT AND MATERIALS PLANS. CONSTRUCTION JOINT PLACED 5' O.C., EXPANSION JOINTS PLACED 24' O.C.
2. FINISH GRADE TO BE 1" BELOW TOP OF MOW STRIP
3. 95% COMPACTED SUBGRADE
4. 1/4" TOOLED RADIUS AT EDGES
5. TURF - FINISH GRADE 1" BELOW TOP OF MOW STRIP
6. 4" GRAVEL
7. (1) #5 REBAR CONT.

9 6" CONCRETE MOW CURB

1 1/2" = 1'-0" P-PU-MC-14



10 IMBEDDED I-BEAM BOLLARDS

3/4" = 1'-0" P-PU-MC-100

epg design
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flilly@millcreek.us

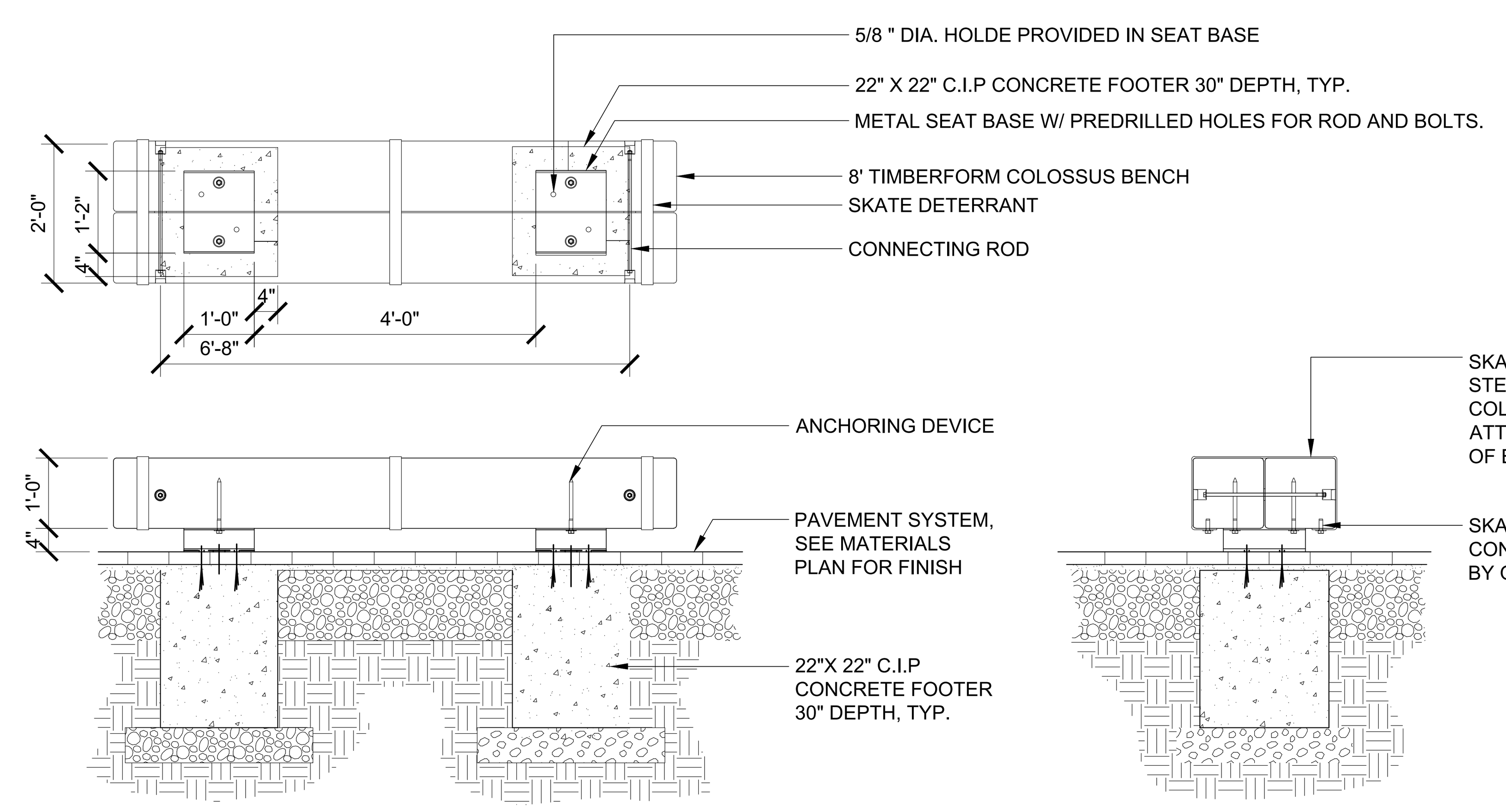
MILLCREEK COMMON
1353 EAST 3300 SOUTH
MILLCREEK, UT 84106

REV	DATE	DESCRIPTION

DESIGNED BY: DAH
DRAWN: BVH/LKS
CHECKED: DAH
ISSUE DATE: 01.15.2021
PROJ #: MILLCREEK 0001

Sheet Name:
LANDSCAPE MATERIALS DETAILS

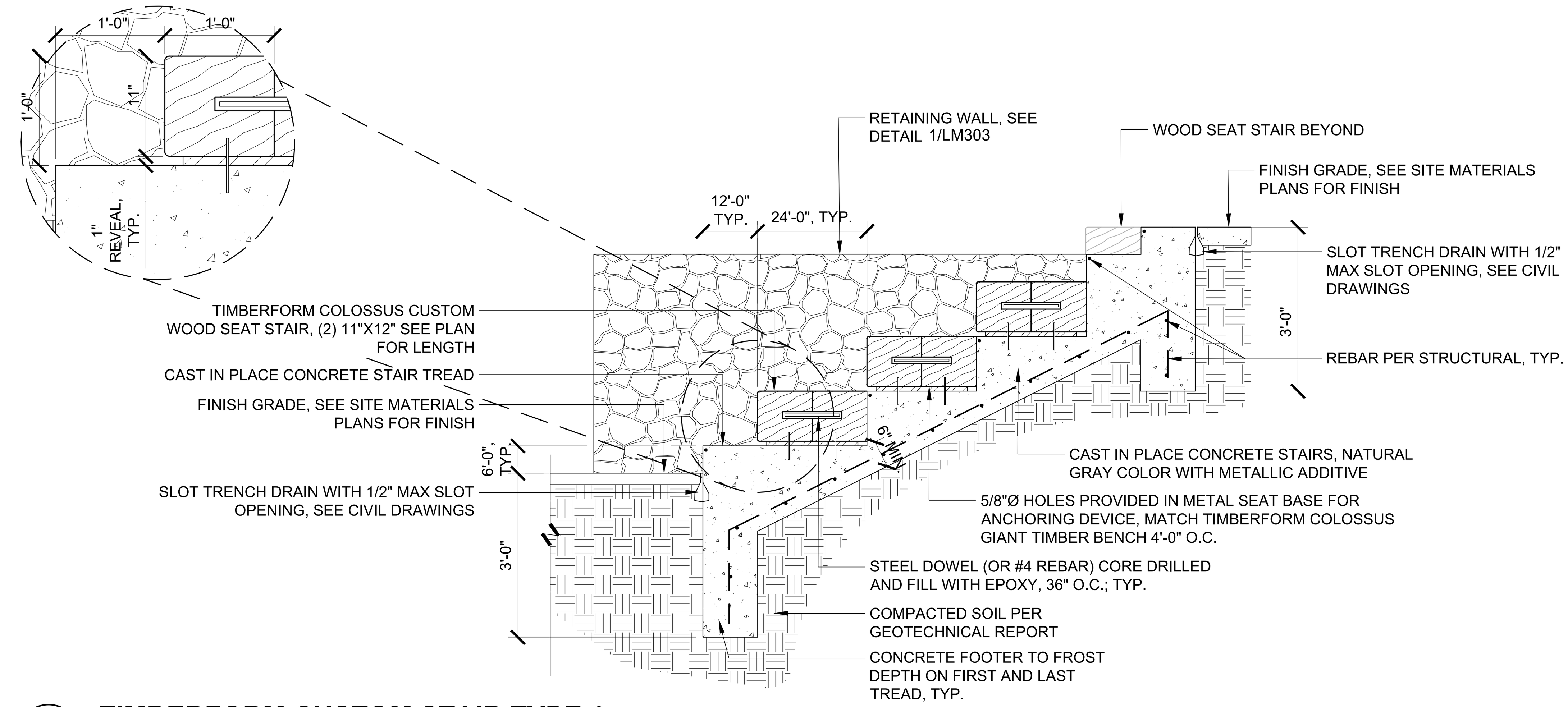
Sheet Number:
LM301



NOTES:
1. ALL SHOP DRAWINGS ARE TO BE SUBMITTED FOR APPROVAL.

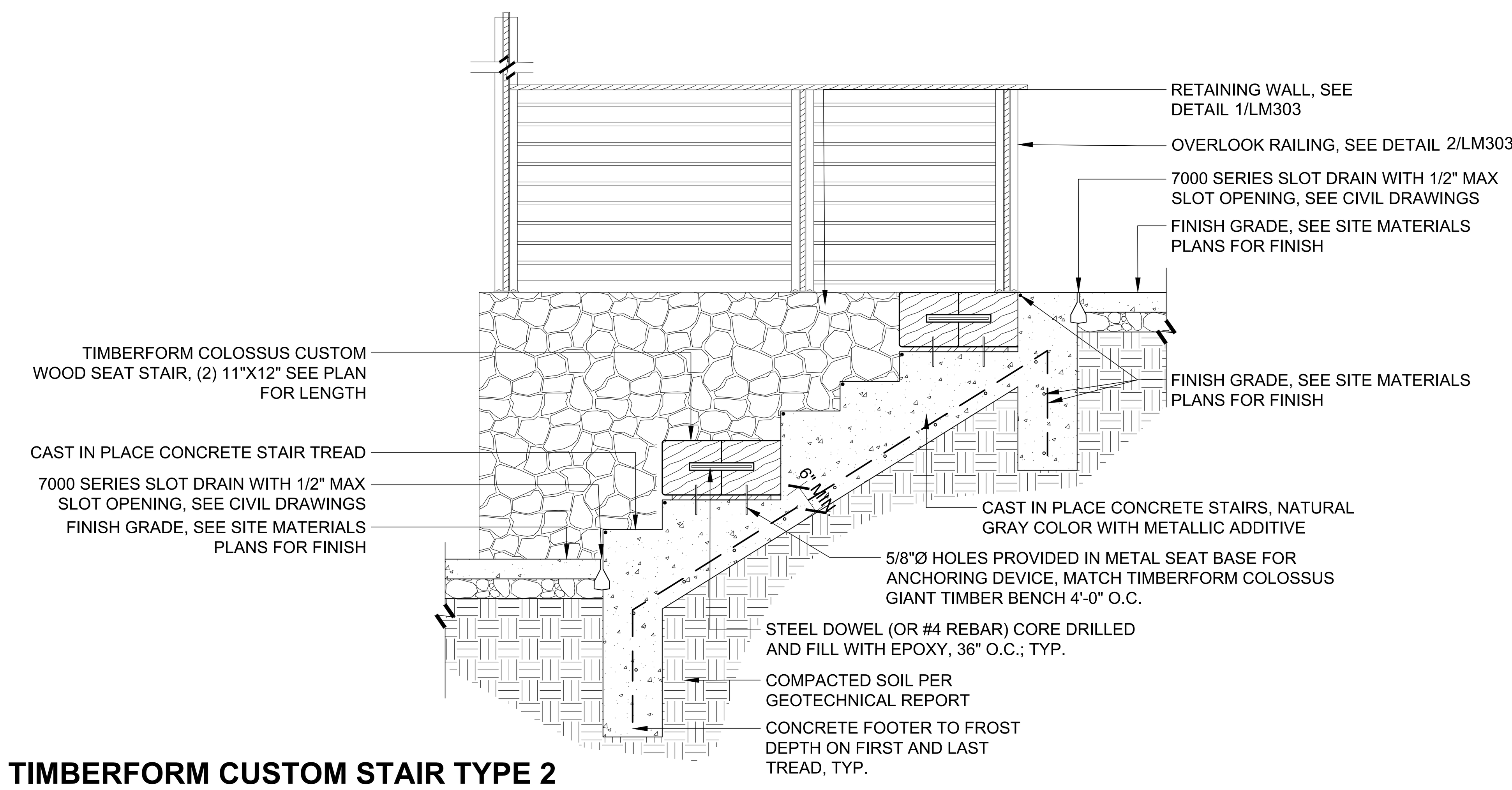
1 TIMBERFORM COLOSSUS BENCH SURFACE MOUNT

1/2" = 1'-0" P-PU-MC-06



2 TIMBERFORM CUSTOM STAIR TYPE 1

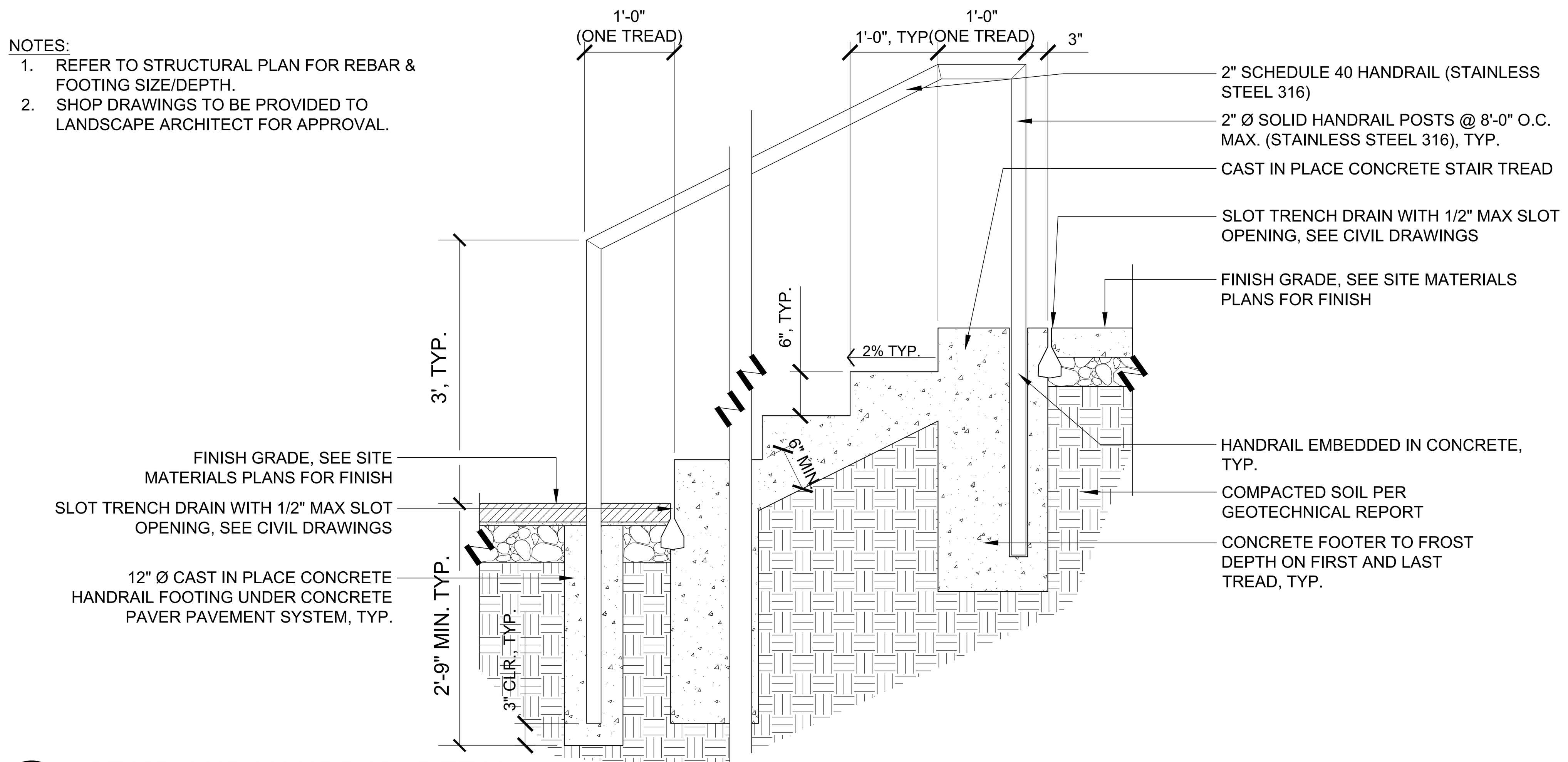
1/2" = 1'-0" P-PU-MC-04



3 TIMBERFORM CUSTOM STAIR TYPE 2

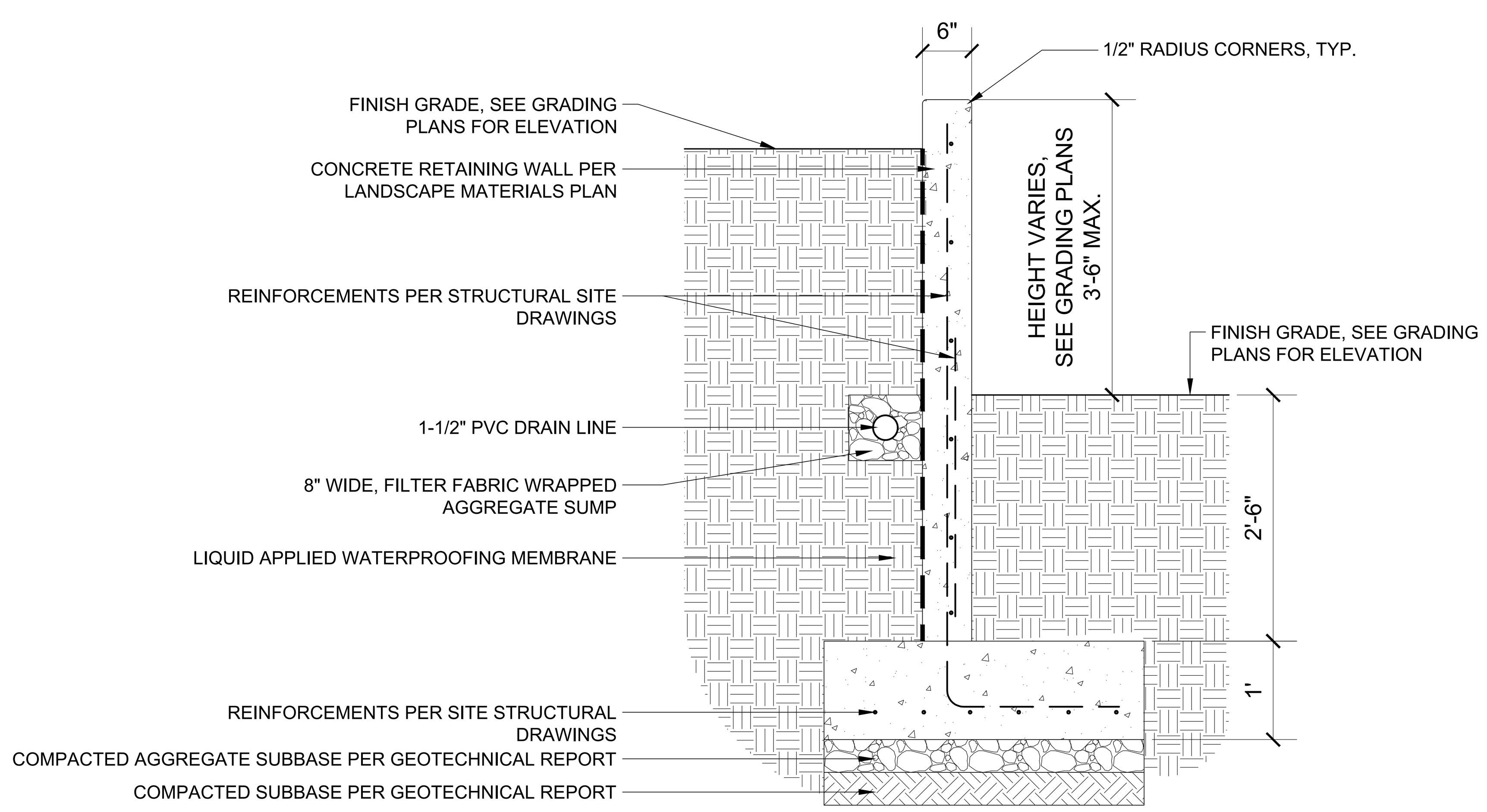
1/2" = 1'-0" P-PU-MC-05

NOTES:
1. REFER TO STRUCTURAL PLAN FOR REBAR & FOOTING SIZE/DEPTH.
2. SHOP DRAWINGS TO BE PROVIDED TO LANDSCAPE ARCHITECT FOR APPROVAL.



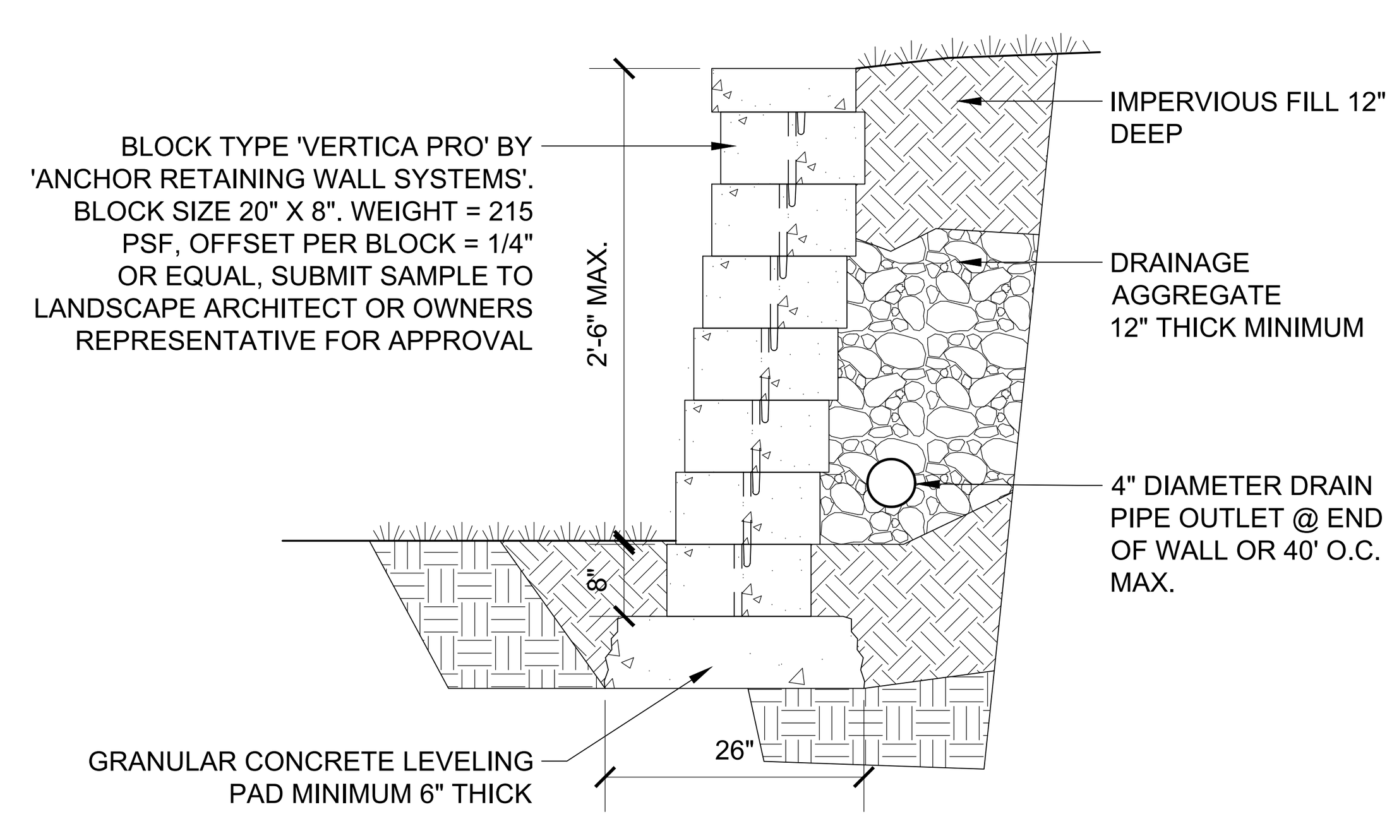
4 STAIR AND HANDRAIL DETAIL

3/4" = 1'-0" P-PU-MC-08



5 C.I.P. CONCRETE RETAINING WALL

3/4" = 1'-0" P-PU-MC-94



6 GRAVITY RETAINING WALL

3/4" = 1'-0" P-PU-MC-95

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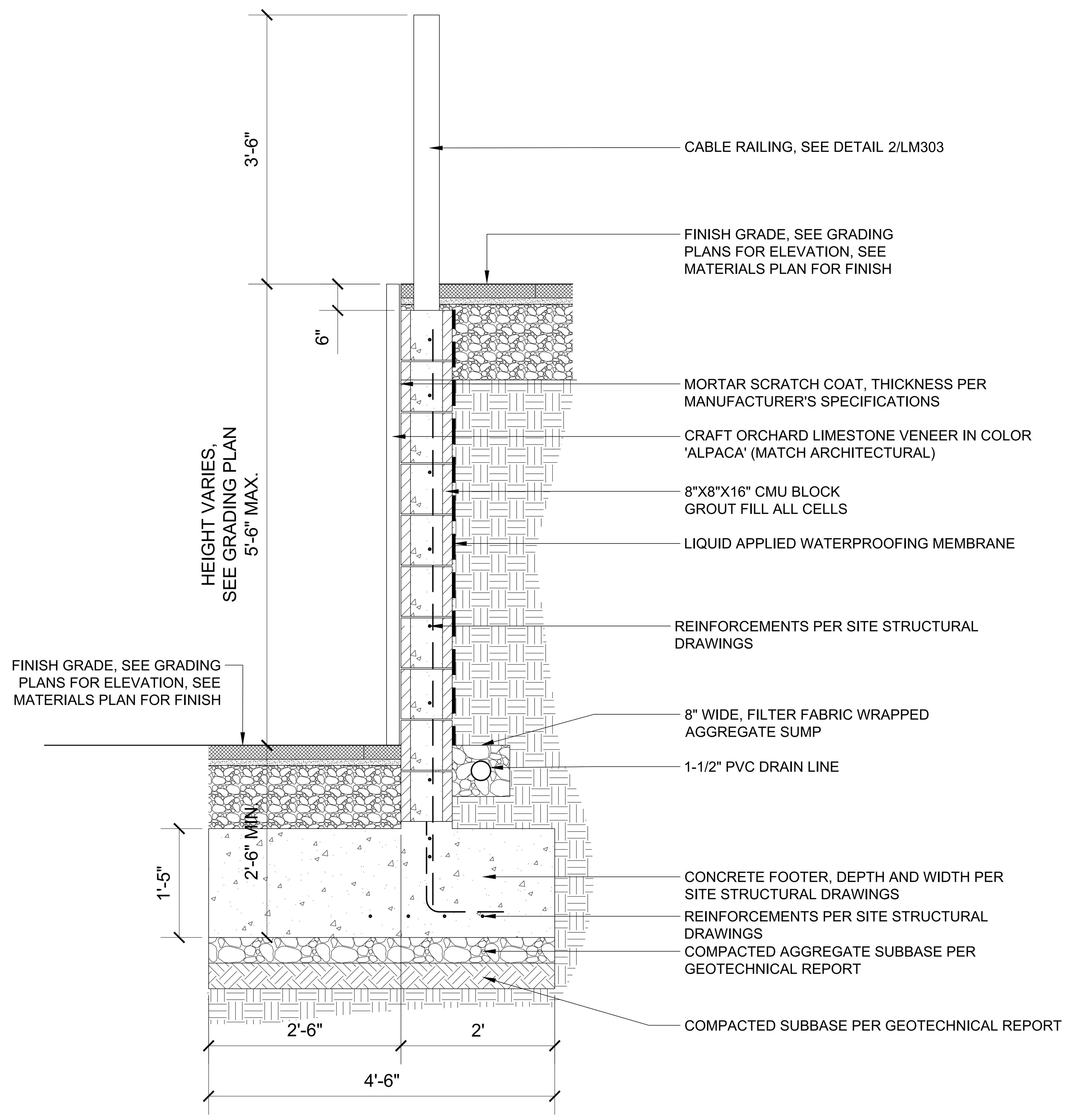
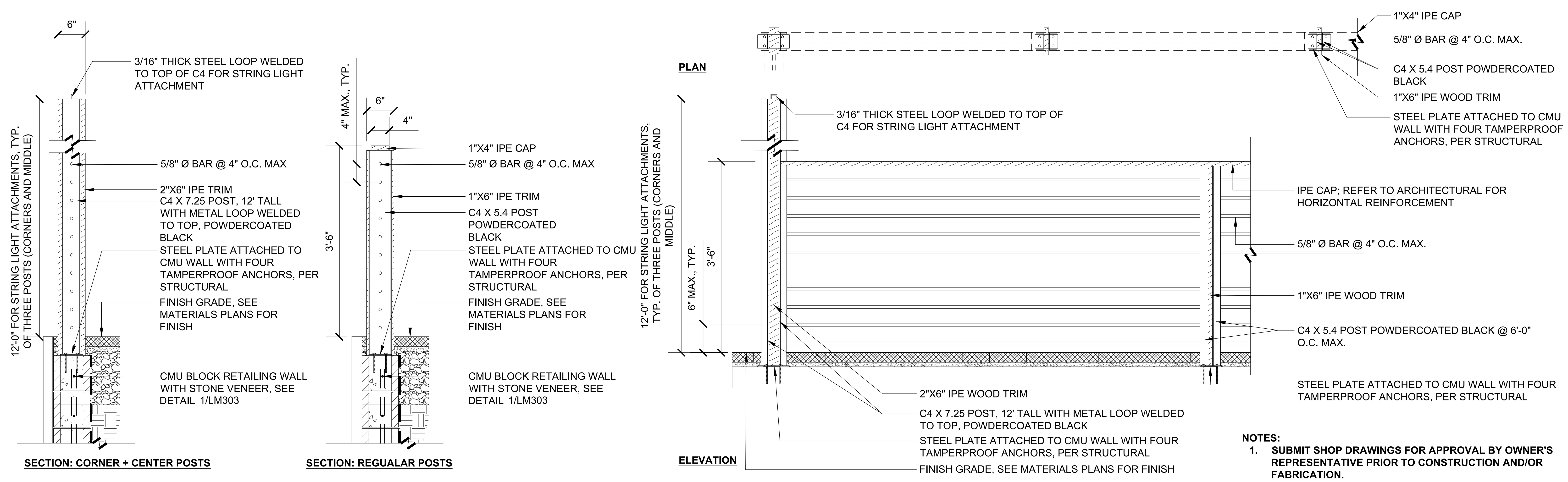


1 **CMU BLOCK RETAINING WALL WITH STONE VENEER**

3/4" = 1'-0" P-PU-MC-96



NOTES:
1. SUBMIT SHOP DRAWINGS FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION AND/OR FABRICATION.

2 **OVERLOOK RAILING**

3/4" = 1'-0" P-PU-MC-98

3 **KONTOUR CAFE TABLE AND CHAIR**

NTS P-PU-MC-102

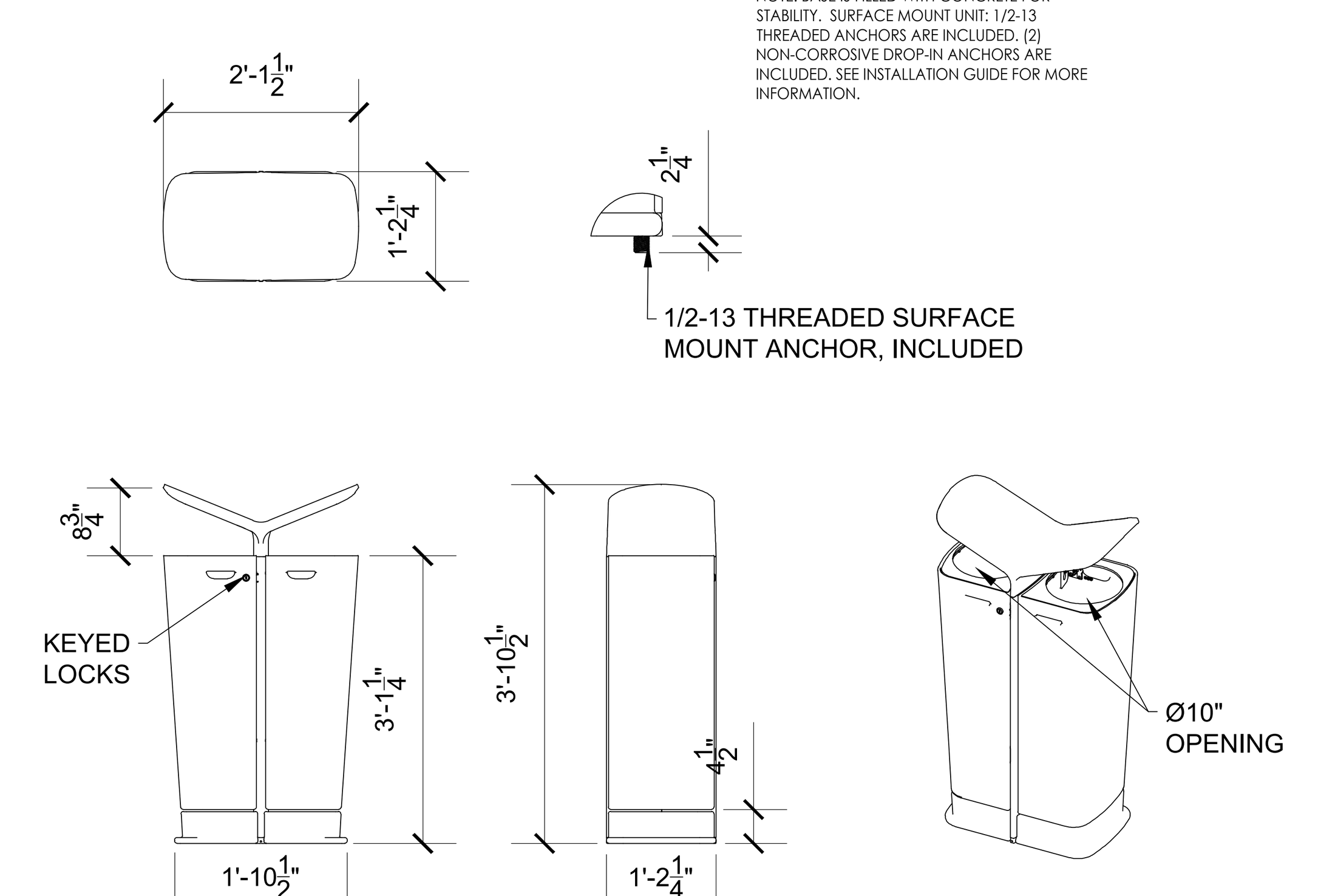
4 **LATERAL BIKE RACK**

3/4" = 1'-0" P-PU-MC-103

landscapeforms

Drawing: FU501-08
Dimensions are in inches
U.S. Patent No. D717,511

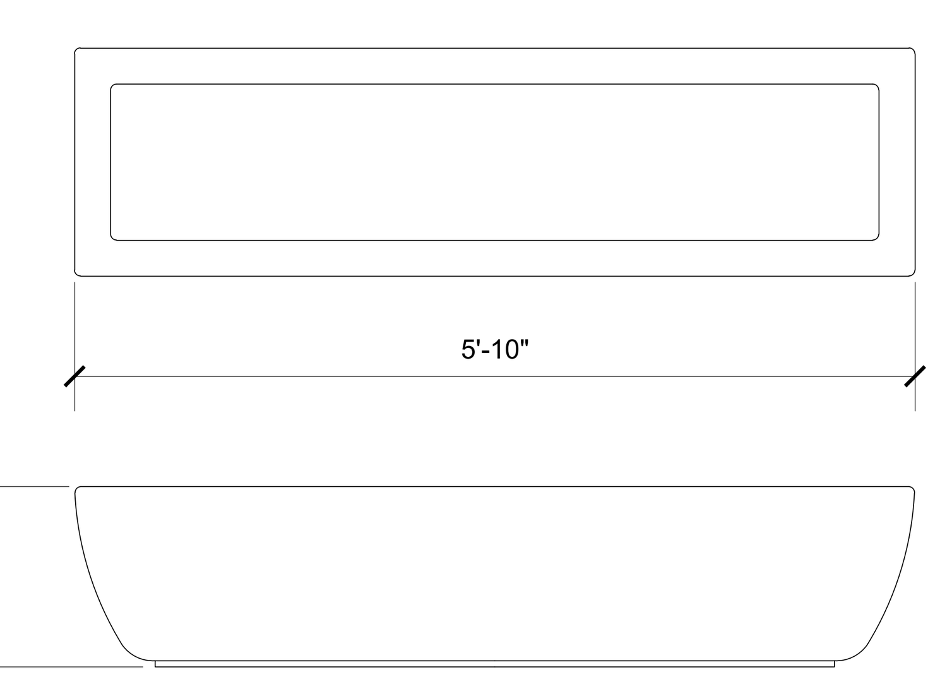
NOTE: BASE IS FILLED WITH CONCRETE FOR STABILITY. SURFACE MOUNT UNIT: 1/2-13 THREADED ANCHORS ARE INCLUDED. (2) NON-CORROSIVE DROP-IN ANCHORS ARE INCLUDED. SEE INSTALLATION GUIDE FOR MORE INFORMATION.



5 **MULTIPLICITY LITTER RECEPTACLE**

1/2" = 1'-0" P-PU-MC-104

KORNEGAY DESIGN LLC
212 South 18th Street
Phoenix, AZ 85034
Toll free 877.252.6323



6 **CONCRETE PLANTER**

3/4" = 1'-0" P-PU-MC-105

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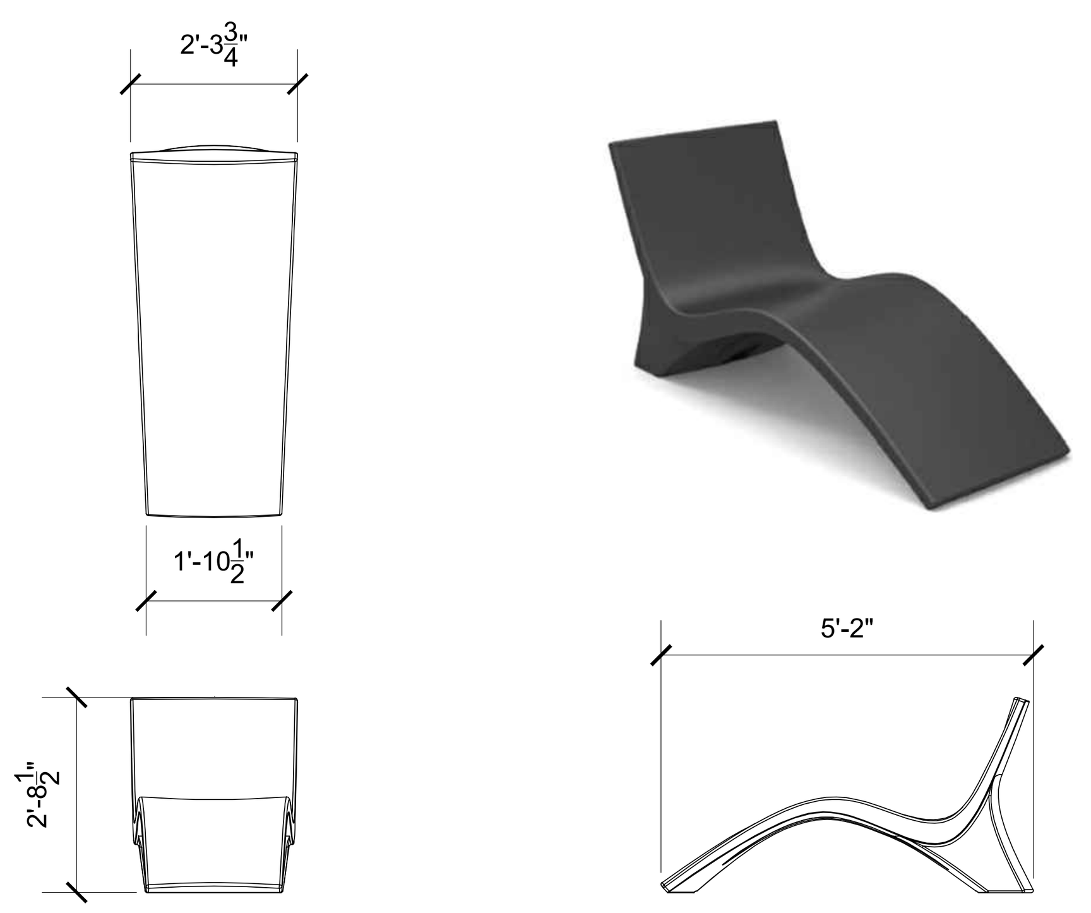
LM303

DRAWING: CL350-00
DIMENSIONS ARE IN INCHES
U.S. PATENT NO.: D490,618



1 CHILL® LOUNGE, FREESTANDING

3/8" = 1'-0"　　P-PU-MC-101

PRODUCT: QR-PO-FR　　WEIGHT: 1,052 lbs.
(CUSTOMER TO OFFLOAD IF OVER 6000 Lbs.)

QUANTITY: 3

CONCRETE COLOR:
- ○ QUAIL HILL RED
- ○ NATURAL
- X MISSION WHITE
- ○ LATTE
- ○ HARVEST
- ○ FRENCH GREY
- ○ BUNGALOW
- ○ ADOBE TAUPE
- ○ CUSTOM COLOR

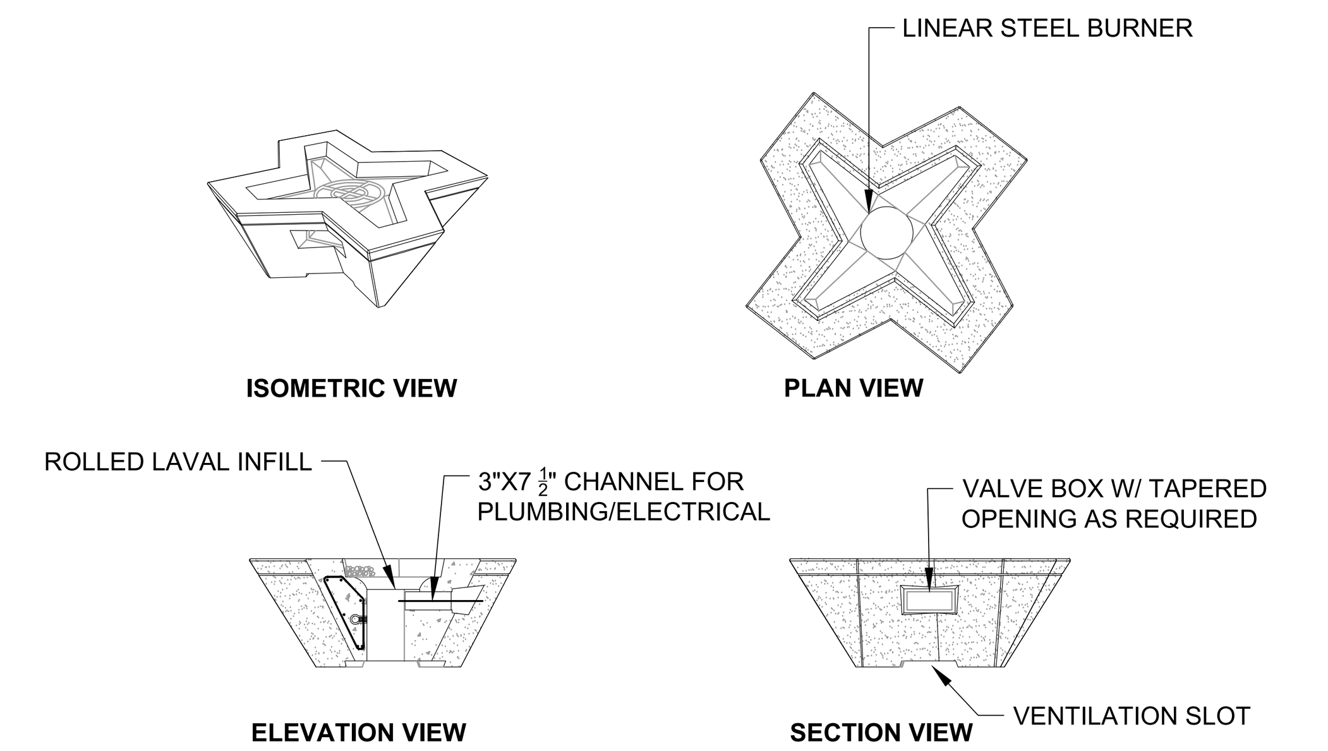
CONCRETE TEXTURE:
- ○ CRAFTSMANS ETCH
- ○ STRATA

SEALER: STANDARD SEALER

GENERAL PRODUCT NOTES:
E = EXPOSED FINISHED SURFACE
INSTALLATION IS REQUIRED BY OTHERS.
ALL EDGES TO BE EASED.
MANUFACTURING TOLERANCE ±1/4".
MUST BE INSTALLED BY AUTHORIZED CONTRACTORS

SPECIFICATIONS:
1. CSA CERTIFIED SST BURNER W/ 90,000 BTUs
2. CHOICE OF NATURAL GAS OR PROPANE
3. FLAME SENSING TECHNOLOGY
4. BATTERY POWERED PUSH BUTTON START
5. NO ELECTRICAL REQUIRED
6. MANUAL FLAME HEIGHT ADJUSTMENT
7. ROLLED LAVA ROCK INFILL
8. CERTIFIED REMOTE ELECTRON IGNITION
9. 2-HOUR COMMERCIAL TIMER
10. EMERGENCY STOP

NOTES:
1. INSTALL PER MANUFACTURES SPECIFICATIONS.
2. SEE MECHANICAL DRAWINGS FOR GAS CONNECTION DETAILS.



2 QCP FIRE RING PORTERO

3/8" = 1'-0"　　P-PU-MC-106

PRODUCT: Q-RECSLAB9636-FF　　WEIGHT: 5,144 lbs.
(CUSTOMER TO OFFLOAD IF OVER 6000 Lbs.)

QUANTITY: 2

CONCRETE COLOR:
- ○ QUAIL HILL RED
- ○ NATURAL
- X MISSION WHITE
- ○ LATTE
- ○ HARVEST
- ○ FRENCH GREY
- ○ BUNGALOW
- ○ ADOBE TAUPE
- ○ CUSTOM COLOR

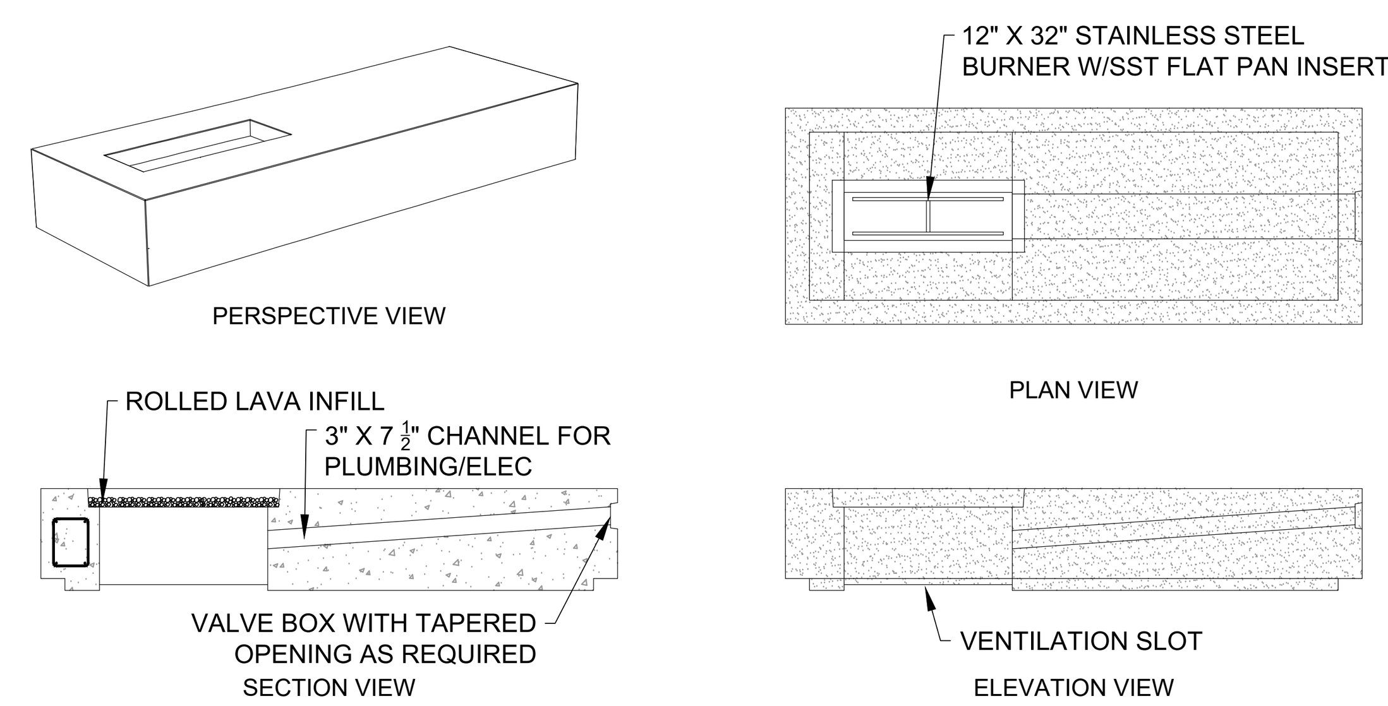
CONCRETE TEXTURE:
- ○ CRAFTSMANS ETCH
- ○ STRATA

SEALER: STANDARD SEALER

GENERAL PRODUCT NOTES:
E = EXPOSED FINISHED SURFACE
INSTALLATION IS REQUIRED BY OTHERS.
ALL EDGES TO BE EASED.
MANUFACTURING TOLERANCE ±1/4".
MUST BE INSTALLED BY AUTHORIZED CONTRACTORS
LIFT WITH STRAPS AROUND ENDS

SPECIFICATIONS:
1. CSA CERTIFIED SST BURNER W/ 90,000 BTUs
2. CHOICE OF NATURAL GAS OR PROPANE
3. FLAME SENSING TECHNOLOGY
4. BATTERY POWERED PUSH BUTTON START
5. NO ELECTRICAL REQUIRED
6. MANUAL FLAME HEIGHT ADJUSTMENT
7. ROLLED LAVA ROCK INFILL
8. CERTIFIED REMOTE ELECTRON IGNITION
9. 2-HOUR COMMERCIAL TIMER
10. EMERGENCY STOP

NOTES:
1. INSTALL PER MANUFACTURES SPECIFICATIONS.
2. SEE MECHANICAL DRAWINGS FOR GAS CONNECTION DETAILS.



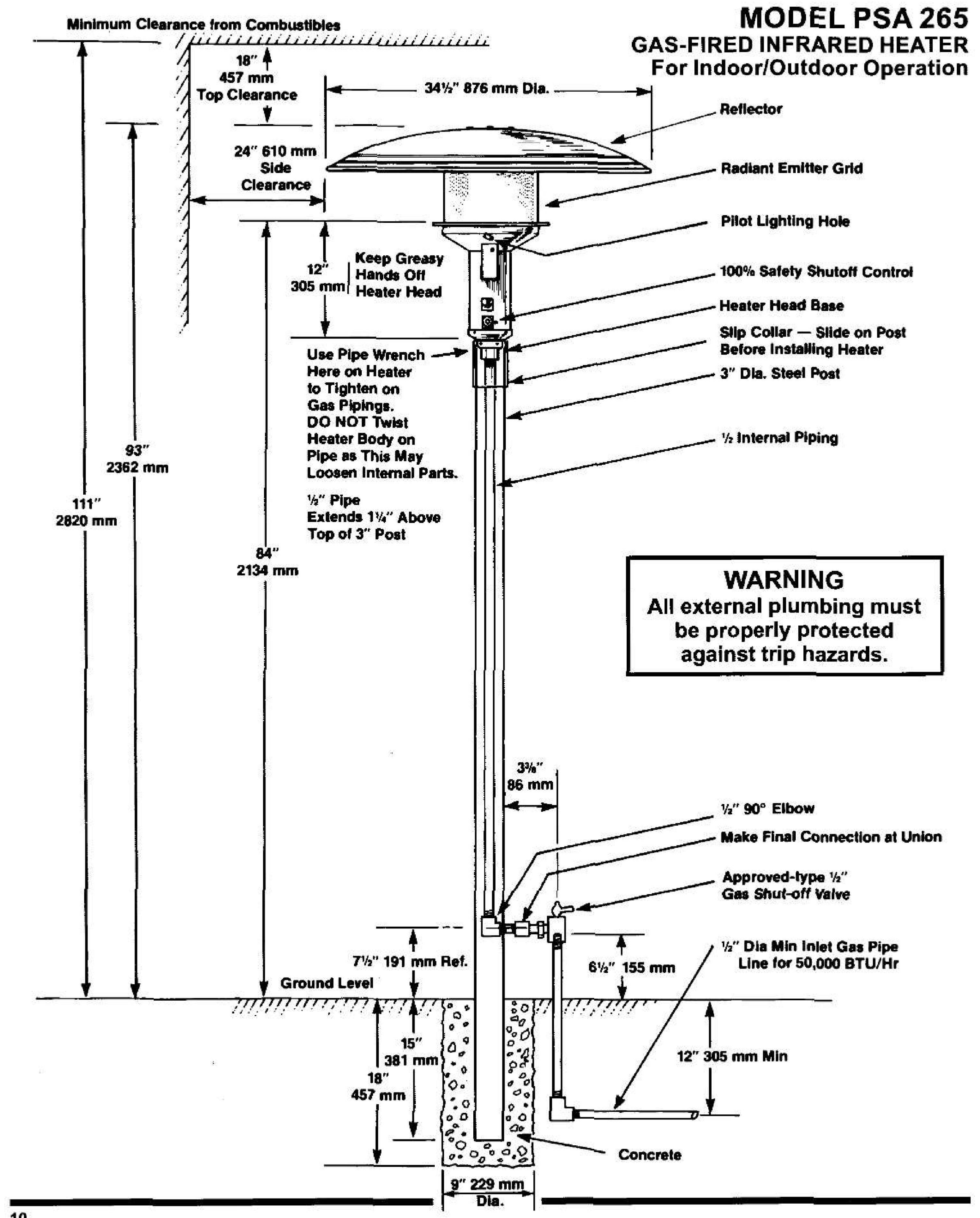
3 QPC FIRE FEATURE SLAB 36"X72"

3/8" = 1'-0"　　P-PU-MC-108

SUNGLO™ INFRARED HEATERS

HEATER MODELS

MODEL PSA 265
GAS-FIRED INFRARED HEATER
For Indoor/Outdoor Operation



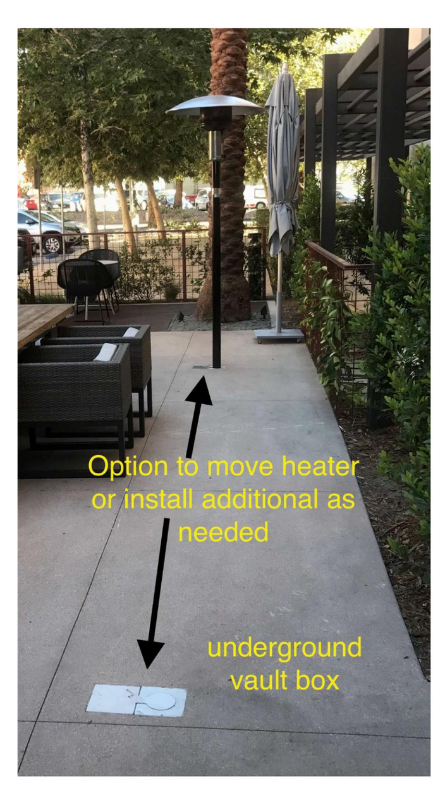
10

Underground Vault Box (UVB1)

for use with Infrared Dynamics
Sunglo PSA265 natural gas heaters

KEY BENEFITS

- ✓ Below grade NG gas connections*
- ✓ 100% 304 grade stainless steel
- ✓ Trip hazard reduction
- ✓ Warm and safe patio
- ✓ Heaters are removable
- ✓ Increased patio space



Tropic Heating
Made in the USA

*For use with Natural Gas Only

CONTACT
TROPIC HEATING
FOR FURTHER INFORMATION

949-510-9600
SUPPORT@PATIOHEAT.COM

NOTES:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS AND SUBMITTAL FOR APPROVAL BY LANDSCAPE ARCHITECT.

4 SUNGLO PATIO HEATER AND IN-GROUND VALVE BOX

1" = 1"　　P-PU-MC-112

epg design
Planning + Landscape Architecture
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Midvale, UT 84047

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LICENSED LANDSCAPE ARCHITECT
DAVID HARRIS
01.15.21
STATE OF UTAH

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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
B1 B2 B3 B4 B5	RAIN BIRD 1804-U 15 STRIP SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
Q T X P	RAIN BIRD 1804-U UB SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
U1 U2 U3 U4 U5	RAIN BIRD 1804-U U12 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
HE-VAN HE-VAN HE-VAN HE-VAN	RAIN BIRD 1804-U HE-VAN SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
1401 1402	RAIN BIRD RWS-M-B-SOCK 1401 MINI ROOT WATERING SYSTEM WITH 4.0" DIAMETER X 18.0" LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE AND RAIN BIRD 1401 0.25 GPM	30
V	SHRUB DRIP ZONE 1 PVC TO 1/2" POLY TUBING WITH PUNCH IN EMITTERS PER LEGEND	30
V	SHRUB DRIP ZONE 2	30
V	SHRUB DRIP ZONE 3	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
35	RAIN BIRD 3504-PC-SAM TURF ROTOR, 4.0" POP-UP. ADJUSTABLE AND FULL CIRCLE. WITH SEAL-A-MATIC CHECK VALVE.	45	3.00	31'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD XCZLF-100-PRF LOW FLOW, 0.2-10GPM, WITH 1" LOW FLOW VALVE VALVE AND 1" PRESSURE REGULATING REV FILTER AND 40PSI PRESSURE REGULATOR.
	FLUSH VALVE 1/2" PVC FLUSH VALVE WITH 24" OF FLEXIBLE DRIP TUBING (COILED IN 12" VALVE BOX
	RAIN BIRD ARV050 1/2" AIR RELIEF VALVE, MADE OF QUALITY RUST-PROOF MATERIALS, WITH A 6.0" DRIP VALVE BOX (SEE TAB EMITTER BOX). USE WITH INSTALLATION BELOW SOIL. THE VALVE WILL ALLOW AIR TO ESCAPE THE PIPELINE, THUS PREVENTING WATER HAMMER OR BLOCKAGE.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD PEB 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY. GLOBE CONFIGURATION.
	RAIN BIRD 44-LRC 1" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING LOCKING THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.
	LANDSCAPE PRODUCTS INC. BBV 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" 3" FULL PORT BRASS BALL VALVE. SUITABLE FOR A FULL RANGE OF LIQUIDS AND GASES IN RESIDENTIAL AND COMMERCIAL APPLICATIONS
BF2	FEBCO 825Y 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER
BF	FEBCO 825Y 1" REDUCED PRESSURE BACKFLOW PREVENTER
C	RAIN BIRD ESPBLXME 8 STATION CAPABLE COMMERCIAL CONTROLLER. MOUNTED ON A PLASTIC WALL MOUNT. WITHOUT FLOW SENSOR.
POC 2 1/2	POINT OF CONNECTION 1" POC 2 EXISTING WATER METER FIELD VERIFY
POC 1 1/2	POINT OF CONNECTION 3/4" POC 1 EXISTING 3/4" METER FIELD VERIFY
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: PVC SCHEDULE 40

Valve Callout
Valve Number
Valve Flow
Valve Size

SLEEVING: CLASS 200 PVC
3 ONE 6", ONE 4", ONE 2" SLEEVE
2 ONE 4", ONE 2" SLEEVE
1 ONE 2" SLEEVE

Pipe Schedule

Maximum Flow Rate - SCH. 40 PVC Plastic Pipe

Pipe Size	Maximum Flow (GPM)
1/2"	NOT ALLOWED
3/4"	5–7
1"	10–12
1 1/4"	16–22
1 1/2"	26–30
2"	50
2 1/2"	70

CRITICAL ANALYSIS

Generated: 2021-01-15 00:10

P.O.C. NUMBER: 01
Water Source Information: POC 1 EXISTING 3/4" METER FIELD VERIFY

FLOW AVAILABLE
Point of Connection Size: 3/4"
Flow Available: 12.50 gpm

PRESSURE AVAILABLE
Static Pressure at POC: 80.00 psi
Pressure Available: 80.00 psi

DESIGN ANALYSIS
Maximum Station Flow: 10.00 gpm
Flow Available at POC: 12.50 gpm
Residual Flow Available: 2.50 gpm

Critical Station: 5
Design Pressure: 30.00 psi
Friction Loss: 5.23 psi
Fittings Loss: 0.52 psi
Elevation Loss: 0.00 psi
Loss through Valve: 1.80 psi
Pressure Req. at Critical Station: 37.55 psi
Loss for Fittings: 0.33 psi
Loss for Main Line: 3.31 psi
Loss for POC to Valve Elevation: 0.00 psi
Loss for Backflow: 12.40 psi
Critical Station Pressure at POC: 53.59 psi
Pressure Available: 80.00 psi
Residual Pressure Available: 26.41 psi

CRITICAL ANALYSIS

Generated: 2021-01-15 00:22

P.O.C. NUMBER: 02
Water Source Information: POC 2 EXISTING WATER METER FIELD VERIFY

FLOW AVAILABLE
Point of Connection Size: 1"
Flow Available: 20.24 gpm

PRESSURE AVAILABLE
Static Pressure at POC: 80.00 psi
Pressure Available: 80.00 psi

DESIGN ANALYSIS
Maximum Station Flow: 29.92 gpm
Flow Available at POC: 20.24 gpm
Residual Flow Available: -9.68 gpm

Critical Station: 9
Design Pressure: 45.00 psi
Friction Loss: 5.04 psi
Fittings Loss: 0.50 psi
Elevation Loss: 0.00 psi
Loss through Valve: 4.80 psi
Pressure Req. at Critical Station: 55.35 psi
Loss for Fittings: 0.39 psi
Loss for Main Line: 3.94 psi
Loss for POC to Valve Elevation: 0.00 psi
Loss for Backflow: 12.20 psi
Critical Station Pressure at POC: 71.88 psi
Pressure Available: 80.00 psi
Residual Pressure Available: 8.12 psi

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC
1	RAIN BIRD XCZLF-100-PRF	1"	BUBBLER	7.30	39.21	50.58
2	RAIN BIRD PEB	1"	BUBBLER	9.00	37.03	48.48
3	RAIN BIRD PEB	1"	BUBBLER	1.75	31.91	43.22
4	RAIN BIRD PEB	1"	BUBBLER	2.00	31.97	43.31
5	RAIN BIRD PEB	1"	BUBBLER	10.00	37.76	49.86
6	RAIN BIRD XCZLF-100-PRF	1"	BUBBLER	3.45	35.31	46.72
7	RAIN BIRD PEB	2"	TURF SPRAY	29.92	40.31	58.41
8	RAIN BIRD PEB	1"	BUBBLER	9.50	34.23	46.33
9	RAIN BIRD PEB	2"	TURF ROTOR	24.00	55.34	74.05
10	RAIN BIRD PEB	2"	TURF ROTOR	27.00	52.49	74.57
11	RAIN BIRD PEB	2"	TURF ROTOR	27.00	53.46	76
12	RAIN BIRD PEB	2"	TURF SPRAY	28.54	39.32	63.25
13	RAIN BIRD PEB	2"	TURF SPRAY	28.60	39.15	63.25
14	RAIN BIRD XCZLF-100-PRF	1"	BUBBLER	1.25	34.49	45.83

GENERAL IRRIGATION NOTES

1. THE IRRIGATION CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE SPECIFICATIONS FOR THIS AND RELATED WORK PRIOR TO CONSTRUCTION.

2. INSTALL POP-UP TYPE SPRINKLER HEADS INSTALLED IN LAWN AREAS SO THAT TOP OF SPRINKLER HEAD IS FLUSH WITH ADJACENT SIDEWALK OR CURB.

3. SET SPRINKLER HEADS PERPENDICULAR TO FINISH GRADE OF AREA TO BE IRRIGATED UNLESS OTHERWISE INDICATED ON DRAWINGS.

4. WHEN VERTICAL OBSTRUCTIONS (FIRE HYDRANTS, TREES, LIGHTS, ETC.) INTERFERE WITH SPRAY PATTERN OF SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, ADJUST SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE, HALF CIRCLE, OR ADJUSTABLE CIRCLE SPRINKLER HEAD ON EACH SIDE OF OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE PRIOR TO MAKING ANY ADJUSTMENTS.

5. SPRINKLER SYSTEM DESIGN IS BASED ON MINIMUM OPERATING PRESSURE AND MAXIMUM FLOW DEMAND SHOWN ON IRRIGATION DRAWINGS AT EACH POINT-OF-CONNECTION. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT DIFFERENCES BETWEEN WATER PRESSURE INDICATED ON DRAWINGS AND ACTUAL PRESSURE READING AT IRRIGATION POINT-OF-CONNECTION TO OWNER'S AUTHORIZED REPRESENTATIVE.IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REVISIONS.

6. 120 VOLT ELECTRICAL POWER OUTLET AT THE CONTROLLER WILL BE PROVIDED BY GENERAL CONTRACTOR. MAKE FINAL HOOK-UP FROM ELECTRICAL OUTLET TO AUTOMATIC CONTROLLER. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH CURRENT N.E.C.

7. THIS DESIGN IS DIAGRAMMATIC. PIPING, VALVES, ETC. MAY BE SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE AVOID CONFLICTS BETWEEN SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES. NO VALVE BOXES SHALL BE PLACED WITHIN TURF AREAS.

8. FLUSH AND ADJUST SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND BUILDINGS. THIS INCLUDES SELECTING THE BEST DEGREE OF ARC TO FIT SITE CONDITIONS AND TO THROTTLE FLOW CONTROL AT EACH VALVE TO OBTAIN OPTIMUM PRESSURE FOR EACH SYSTEM.

9. DO NOT WILLFULLY INSTALL SPRINKLER SYSTEM AS INDICATED ON DRAWINGS WHEN IT IS OBVIOUS IN FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES IN AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED DURING DESIGN. BRING SUCH OBSTRUCTIONS OR OR DIFFERENCES TO THE ATTENTION OF OWNER'S AUTHORIZED REPRESENTATIVE. IN EVENT THIS NOTIFICATION IS NOT PERFORMED, CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REVISIONS.

10. INSTALL PIPE MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE ON PVC MALE PIPE THREADS ON SPRINKLER SWING JOINT AND VALVE ASSEMBLIES.

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH GRADE DIFFERENCES, LOCATION OF WALL, RETAINING WALLS, ETC. COORDINATE WORK WITH GENERAL CONTRACTOR AND OTHER SUB- CONTRACTORS FOR LOCATION AND INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, STRUCTURES, ETC.

12. IN ADDITION TO SLEEVES SHOWN ON THE DRAWINGS, CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF PIPE SLEEVING AT ALL HARDSCAPE CROSSINGS AND SEPARATE CONTROL WIRE SLEEVES OF SUFFICIENT SIZE UNDER PAVED AREAS.

13. THE FOLLOWING SHOULD BE NOTED REGARDING PIPE SIZING: IF A SECTION OF UNSIZED LATERAL IS LOCATED BETWEEN TWO IDENTICALLY SIZED SECTIONS THE UNSIZED SECTION SHALL BE OF THE SAME SIZE. IN NO CASE SHALL A SECTION OF PIPE BE SMALLER THAN ANY DOWNSTREAM SECTION LOCATED ON THE SAME LATERAL RUN.

14. THE IRRIGATION CONTRACTOR SHALL TURN OVER TO THE OWNER; TWO EACH OF ALL OPERATING KEYS AND SERVICING TOOLS NEEDED FOR COMPLETE ACCESS, ADJUSTMENT, AND REPAIR OF ALL IRRIGATION SYSTEM COMPONENTS. THIS INCLUDES SPECIALIZED TOOLS REQUIRED FOR COMPLETE DISASSEMBLY OF EACH SPRINKLER AND VALVE.

15. IRRIGATION SYSTEM IS DESIGNED FOR NON-POTABLE WATER USAGE. CONTRACTOR TO PROVIDE PURPLE CAPS FOR SPRAYS/ROTORS, AND BRAND "NON POTABLE" ON ALL VALVE BOXES IN 3-INCH HIGH LETTERS.

DRIP IRRIGATION NOTES

1. INSTALL EMITTERS ON UPHILL SIDE OF TREE OR SHRUB IF LOCATED ON A SLOPE.

2. VERIFICATION OF PLANT MATERIAL QUANTITIES AND NUMBER OF EMITTERS PER VALVE STATION IS THE RESPONSIBILITY OF THE CONTRACTOR.

4. DRIP IRRIGATION LINES ARE SHOWN DIAGRAMMATIC FOR CLARITY. INSTALL ALL PIPING IN LANDSCAPE PLANTING AREAS.

5. INSTALL POLYETHYLENE DRIP LATERAL WITHIN PVC SLEEVE WHEN ROUTING UNDER PAVED SURFACES OR THROUGH PLANTER'S WALLS.

6. REFER TO PLANTING LEGEND FOR PLANT MATERIAL NAMES, ABBREVIATIONS, SPECIFIC SIZES, ON-CENTER SPACING AND ADDITIONAL INFORMATION.

7. PROVIDE ONE (1) FLUSH-VALVE ASSEMBLY AT EACH END OF DRIP ZONE LATERAL LATERAL OR AS SHOWN ON PLANS. LOCATE FLUSH-VALVE ASSEMBLY BOXES ADJACENT TO PLANTING BORDERS OR PAVING EDGES FOR MAINTENANCE CONVENIENCE.

8. THE MAXIMUM ALLOWABLE LENGTH DOWNSTREAM OF EACH ZONE CONTROL VALVE FOR THE 3/4" NOMINAL DIAMETER POLYETHYLENE DRIP LATERAL IS 250 FEET. FLOW MUST NOT EXCEED EIGHT (5) GPM. IF THE LENGTH OR FLOW EXCEEDS THE ALLOWABLE AMOUNT AN ADDITIONAL CONNECTION TO A PVC LATERAL WILL BE NECESSARY. IN NO CASE SHALL THE ACTUAL FLOW OF THE DRIP LATERAL BE INCREASED BY MORE THAN 5% THROUGH THE ADDITION OF MORE EMITTERS OR BY CHANGING THE FLOW RATE OF THE EMITTERS.

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DAVID HARRIS
NO. 8652864
01.15.21
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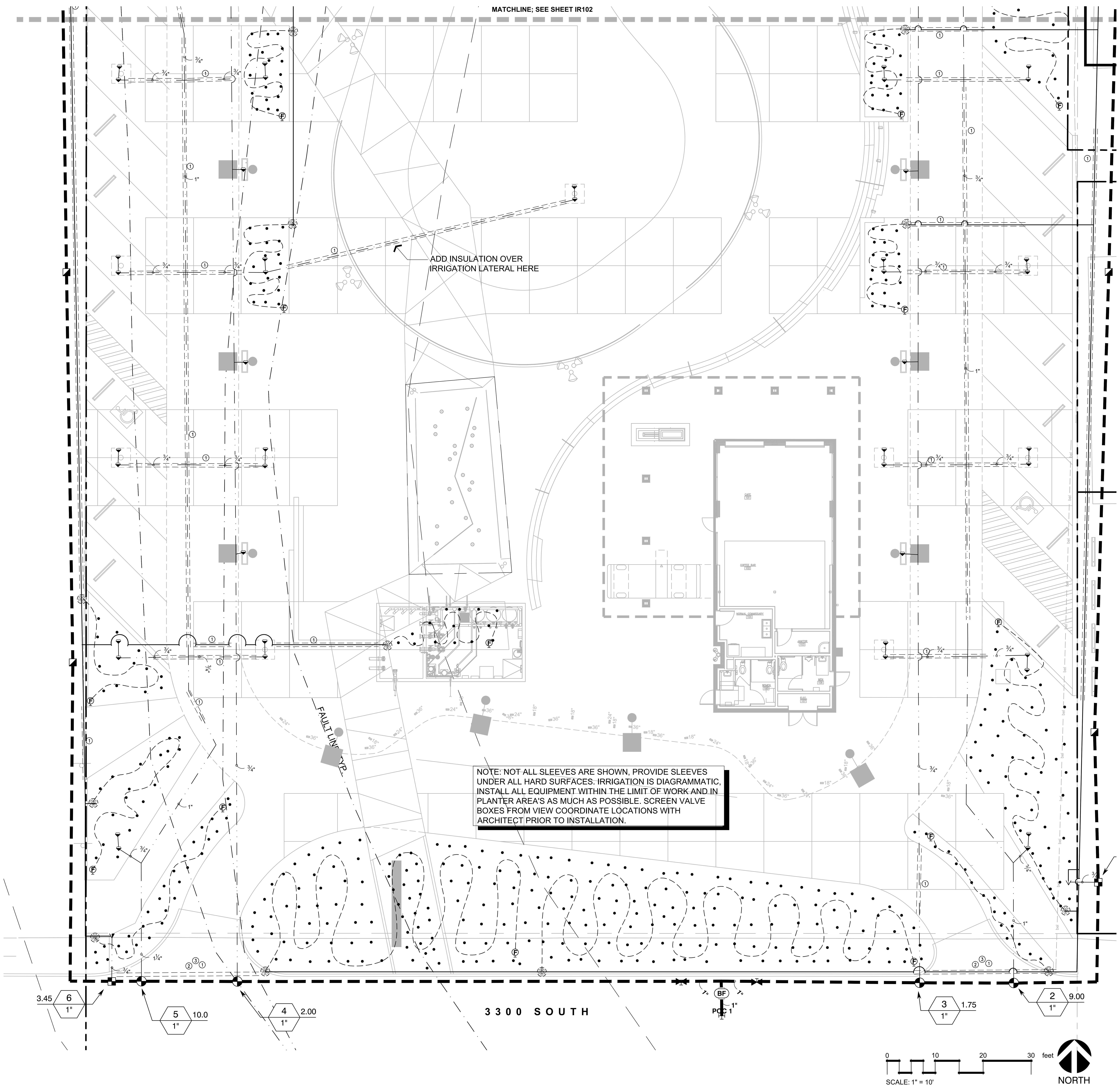
Sheet Name:
IRRIGATION COVER SHEET

Sheet Number:
IR100



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
EST LCS RCS CST SST	RAIN BIRD 1804-U 15 STRIP SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
Q T H F	RAIN BIRD 1804-U U8 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
Q T H TT TQ F	RAIN BIRD 1804-U U12 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
08HE-VAN 12HE-VAN 10HE-VAN 15HE-VAN	RAIN BIRD 1804-U HE-VAN SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
1401 1402	RAIN BIRD RWS-M-B-SOCK 1401 MINI ROOT WATERING SYSTEM WITH 4.0" DIAMETER X 18.0" LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE AND RAIN BIRD 1401 0.25 GPM	30
	SHRUB DRIP ZONE 1 PVC TO 1/2" POLY TUBING WITH PUNCH IN EMITTERS PER LEGEND	30
	SHRUB DRIP ZONE 2	30
	SHRUB DRIP ZONE 3	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
3.0	RAIN BIRD 3504-PC-SAM TURF ROTOR, 4.0" POP-UP. ADJUSTABLE AND FULL CIRCLE. WITH SEAL-A-MATIC CHECK VALVE.	45	3.00	31'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD XCZLF-100-PRF LOW FLOW, 0.2-10GPM, WITH 1" LOW FLOW VALVE VALVE AND 1" PRESSURE REGULATING RBY FILTER AND 40PSI PRESSURE REGULATOR.
F	FLUSH VALVE 1/2" PVC FLUSH VALVE WITH 24" OF FLEXIBLE DRIP TUBING COILED IN 12" VALVE BOX
A	RAIN BIRD ARV050 1/2" AIR RELIEF VALVE, MADE OF QUALITY RUST-PROOF MATERIALS, WITH A 6.0" DRIP VALVE BOX (SEB 7XB EMITTER BOX). USE WITH INSTALLATION BELOW SOIL. THE VALVE WILL ALLOW AIR TO ESCAPE THE PIPELINE, THUS PREVENTING WATER HAMMER OR BLOCKAGE.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD PEB 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.
	RAIN BIRD 44-LRC 1" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.
	LANDSCAPE PRODUCTS INC. BBV 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" 3" FULL PORT BRASS BALL VALVE. SUITABLE FOR A FULL RANGE OF LIQUIDS AND GASES IN RESIDENTIAL AND COMMERCIAL APPLICATIONS.
BF2	FEBCO 825Y 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER
BF	FEBCO 825Y 1" REDUCED PRESSURE BACKFLOW PREVENTER
C	RAIN BIRD ESP8LXME 8 STATION CAPABLE COMMERCIAL CONTROLLER. MOUNTED ON A PLASTIC WALL MOUNT. WITHOUT FLOW SENSOR.
POC 2	POINT OF CONNECTION 1" POC 2 EXISTING WATER METER FIELD VERIFY
POC 1	POINT OF CONNECTION 3/4" POC 1 EXISTING 3/4" METER FIELD VERIFY
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: PVC SCHEDULE 40

Valve Callout
Valve Number
Valve Flow
Valve Size

SLEEVING: CLASS 200 PVC
3 ONE 6", ONE 4", ONE 2" SLEEVE
2 ONE 4", ONE 2" SLEEVE
1 ONE 2" SLEEVE

Pipe Schedule

Maximum Flow Rate - SCH. 40 PVC Plastic Pipe

Pipe Size	Maximum Flow (GPM)
1/2" NOT ALLOWED	
3/4"	5-7
1"	10-12
1 1/4"	16-22
1 1/2"	26-30
2"	50
2 1/2"	70

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IRRIGATION PLAN

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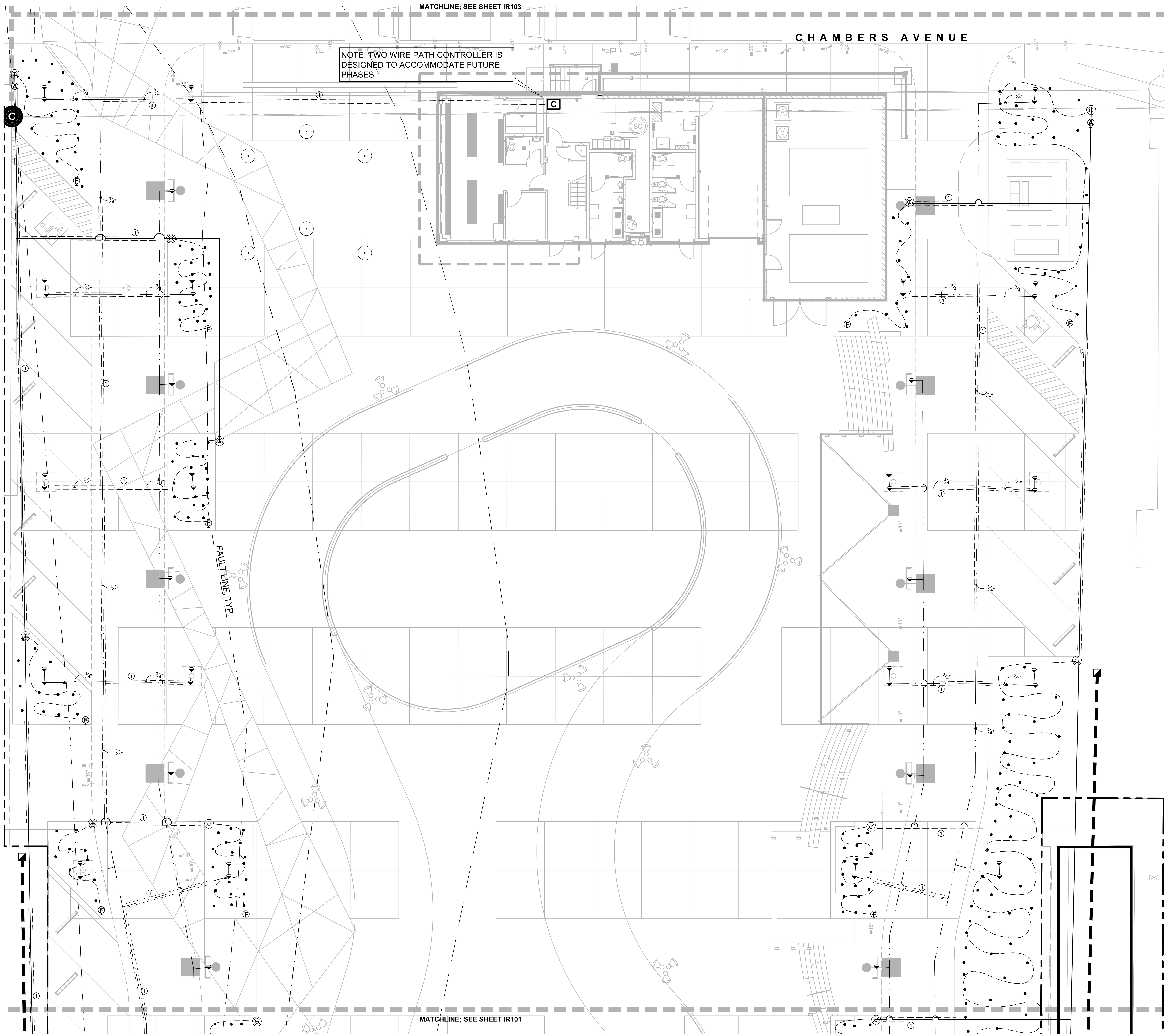
IR101



SCALE: 1" = 10'

0 10 20 30 feet

NORTH

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
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	SHRUB DRIP ZONE 1 PVC TO 1/2" POLY TUBING WITH PUNCH IN EMITTERS PER LEGEND	30
	SHRUB DRIP ZONE 2	30
	SHRUB DRIP ZONE 3	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
3.0	RAIN BIRD 3504-PC-SAM TURF ROTOR, 4.0" POP-UP. ADJUSTABLE AND FULL CIRCLE. WITH SEAL-A-MATIC CHECK VALVE.	45	3.00	31'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
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POC 1	POINT OF CONNECTION 3/4" POC 1 EXISTING 3/4" METER FIELD VERIFY
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
	IRRIGATION MAINLINE: PVC SCHEDULE 40

Valve Callout: Valve Number, Valve Flow, Valve Size

SLEEVING: CLASS 200 PVC
3 ONE 6", ONE 4", ONE 2" SLEEVE
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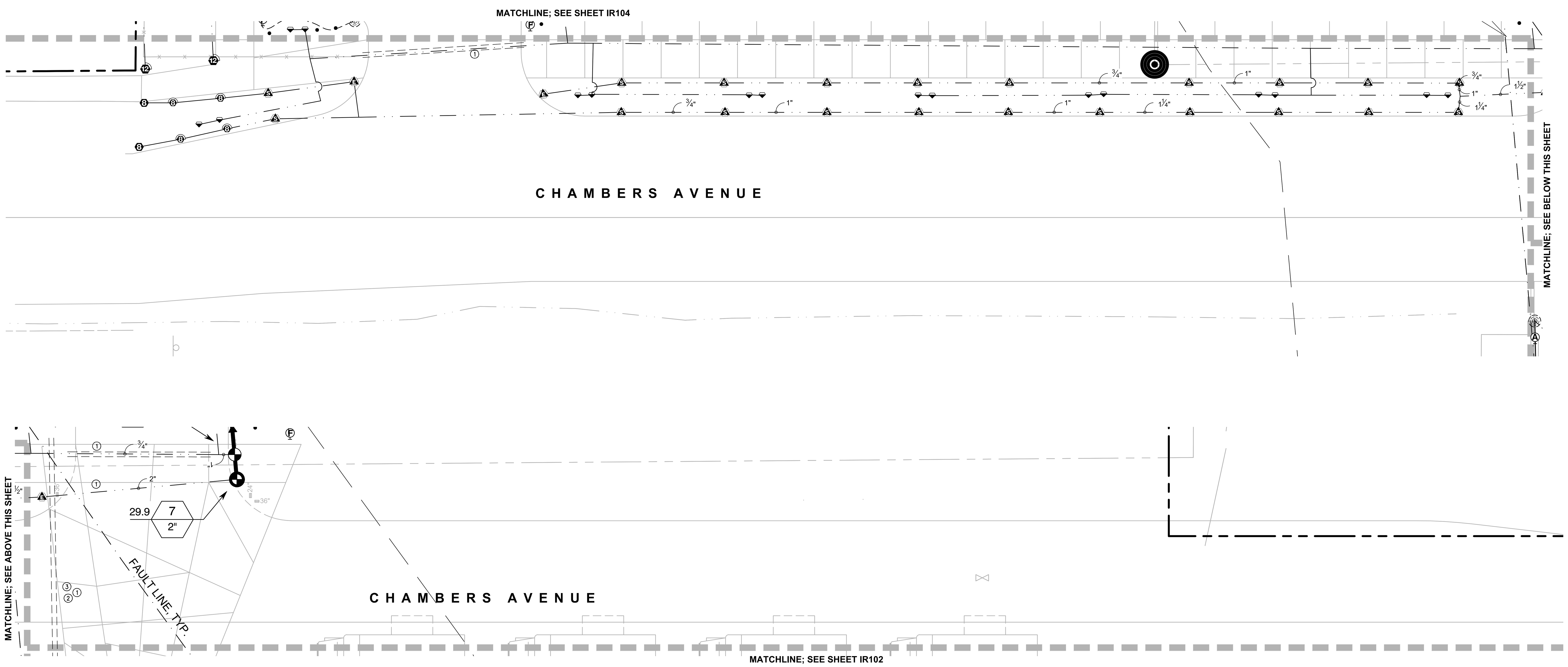

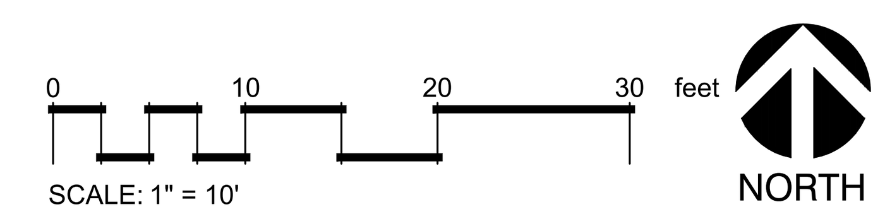

IRRIGATION SCHEDULE

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	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
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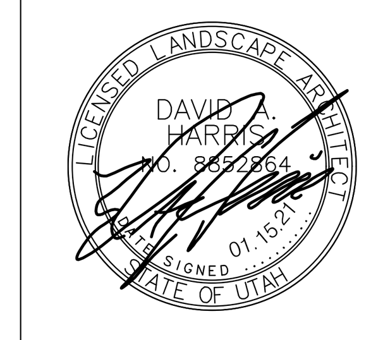

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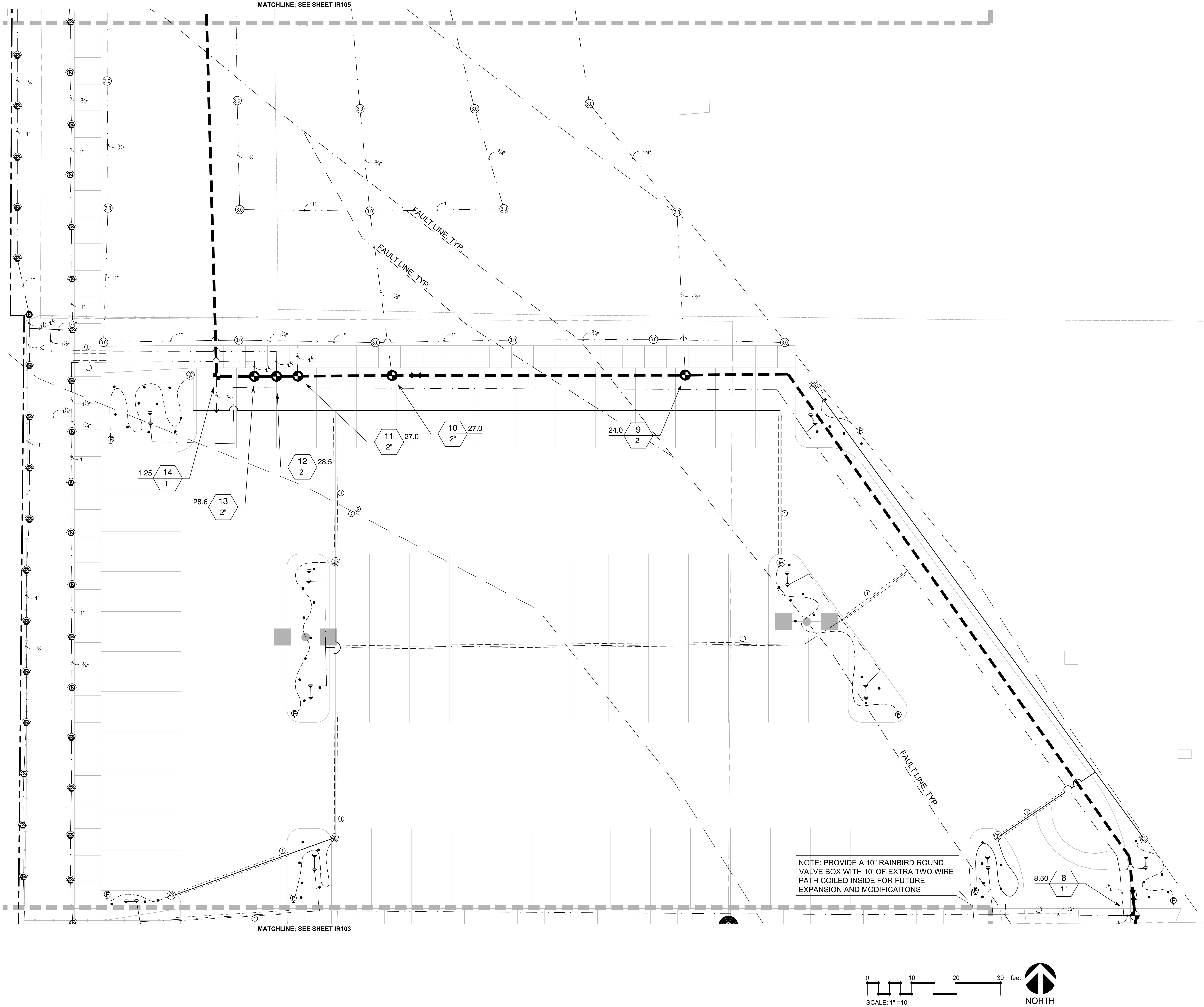

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
EST LCS RCS CST SST	RAIN BIRD 1804-U 15 STRIP SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
Q T H F	RAIN BIRD 1804-U U8 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
Q T H TT TQ F	RAIN BIRD 1804-U U12 SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
08HE-VAN 12HE-VAN 10HE-VAN 15HE-VAN	RAIN BIRD 1804-U HE-VAN SERIES TURF SPRAY 4.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2" NPT FEMALE THREADED INLET.	30
1401 1402	RAIN BIRD RWS-M-B-SOCK 1401 MINI ROOT WATERING SYSTEM WITH 4.0" DIAMETER X 18.0" LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE AND RAIN BIRD 1401 0.25 GPM	30
	SHRUB DRIP ZONE 1 PVC TO 1/2" POLY TUBING WITH PUNCH IN EMITTERS PER LEGEND	30
	SHRUB DRIP ZONE 2	30
	SHRUB DRIP ZONE 3	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
3.0	RAIN BIRD 3504-PC-SAM TURF ROTOR, 4.0" POP-UP. ADJUSTABLE AND FULL CIRCLE. WITH SEAL-A-MATIC CHECK VALVE.	45	3.00	31'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD XCZLF-100-PRF LOW FLOW, 0.2-10GPM, WITH 1" LOW FLOW VALVE VALVE AND 1" PRESSURE REGULATING RBY FILTER AND 40PSI PRESSURE REGULATOR.
F	FLUSH VALVE 1/2" PVC FLUSH VALVE WITH 24" OF FLEXIBLE DRIP TUBING COILED IN 12" VALVE BOX
A	RAIN BIRD ARV050 1/2" AIR RELIEF VALVE, MADE OF QUALITY RUST-PROOF MATERIALS, WITH A 6.0" DRIP VALVE BOX (SEB 7XB EMITTER BOX). USE WITH INSTALLATION BELOW SOIL. THE VALVE WILL ALLOW AIR TO ESCAPE THE PIPELINE, THUS PREVENTING WATER HAMMER OR BLOCKAGE.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	RAIN BIRD PEB 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.
	RAIN BIRD 44-LRC 1" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.
	LANDSCAPE PRODUCTS INC. BBV 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" 3" FULL PORT BRASS BALL VALVE. SUITABLE FOR A FULL RANGE OF LIQUIDS AND GASES IN RESIDENTIAL AND COMMERCIAL APPLICATIONS.
BF2	FEBCO 825Y 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER
BF	FEBCO 825Y 1" REDUCED PRESSURE BACKFLOW PREVENTER
C	RAIN BIRD ESP8LXME 8 STATION CAPABLE COMMERCIAL CONTROLLER. MOUNTED ON A PLASTIC WALL MOUNT. WITHOUT FLOW SENSOR.
POC 2	POINT OF CONNECTION 1" POC 2 EXISTING WATER METER FIELD VERIFY
POC 1	POINT OF CONNECTION 3/4" POC 1 EXISTING 3/4" METER FIELD VERIFY
———	IRRIGATION LATERAL LINE: PVC SCHEDULE 40
— — —	IRRIGATION MAINLINE: PVC SCHEDULE 40

Valve Callout
Valve Number
Valve Flow
Valve Size

SLEEVING: CLASS 200 PVC
(3) ONE 6", ONE 4", ONE 2" SLEEVE
(2) ONE 4", ONE 2" SLEEVE
(1) ONE 2" SLEEVE

Pipe Schedule

Maximum Flow Rate - SCH. 40 PVC Plastic Pipe

Pipe Size	Maximum Flow (GPM)
1/2" NOT ALLOWED	
3/4"	5-7
1"	10-12
1 1/4"	16-22
1 1/2"	26-30
2"	50
2 1/2"	70

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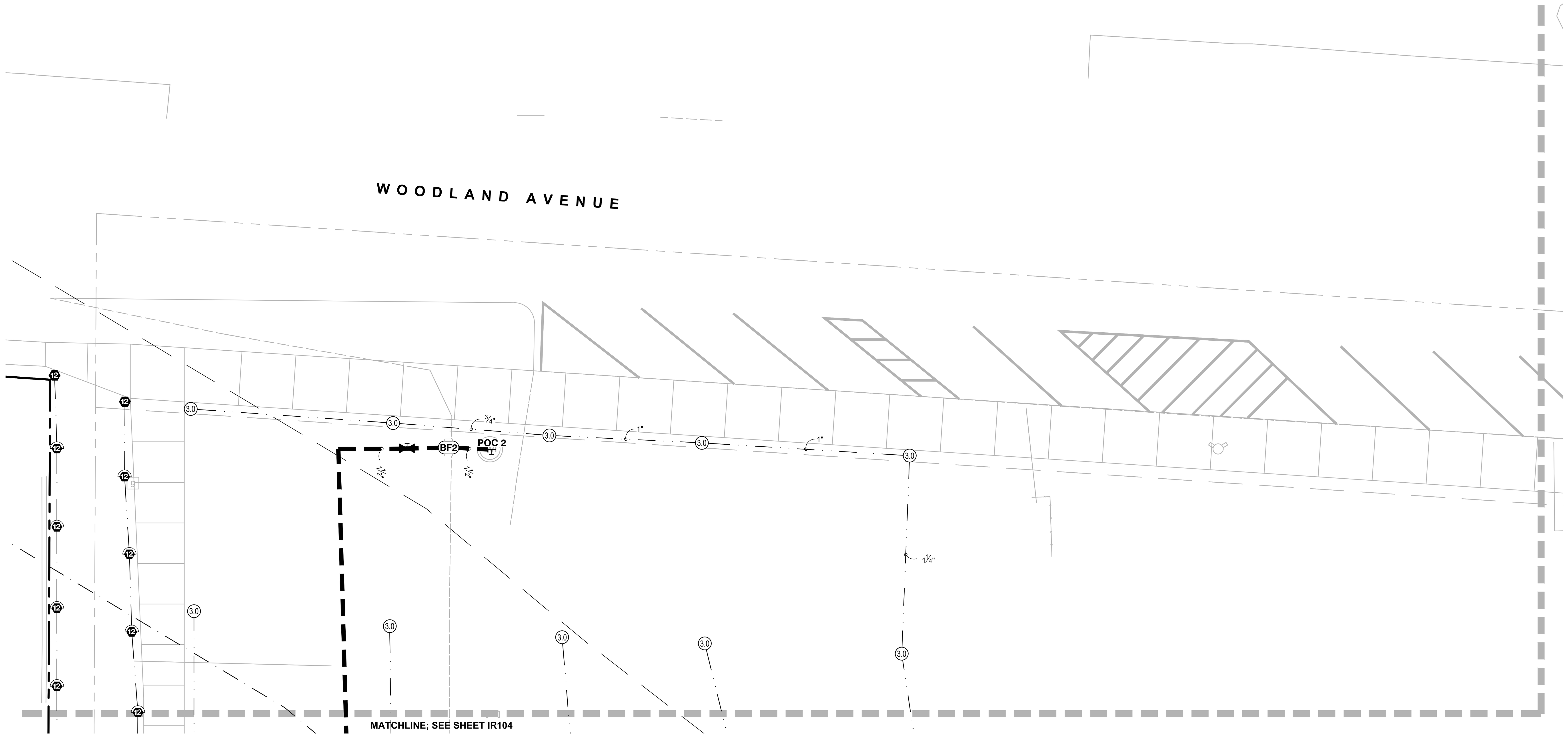

IRRIGATION SCHEDULE

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	SHRUB DRIP ZONE 2	30
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SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
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Valve Callout: Valve Number, Valve Flow, Valve Size

SLEEVING: CLASS 200 PVC
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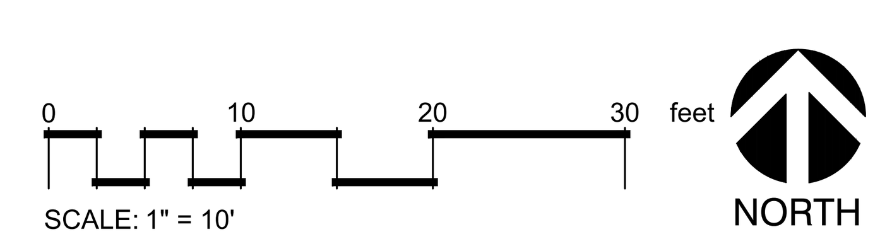

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LICENSED LANDSCAPE ARCHITECT DAVID HARRIS 01.15.21 SIGNED STATE OF UTAH

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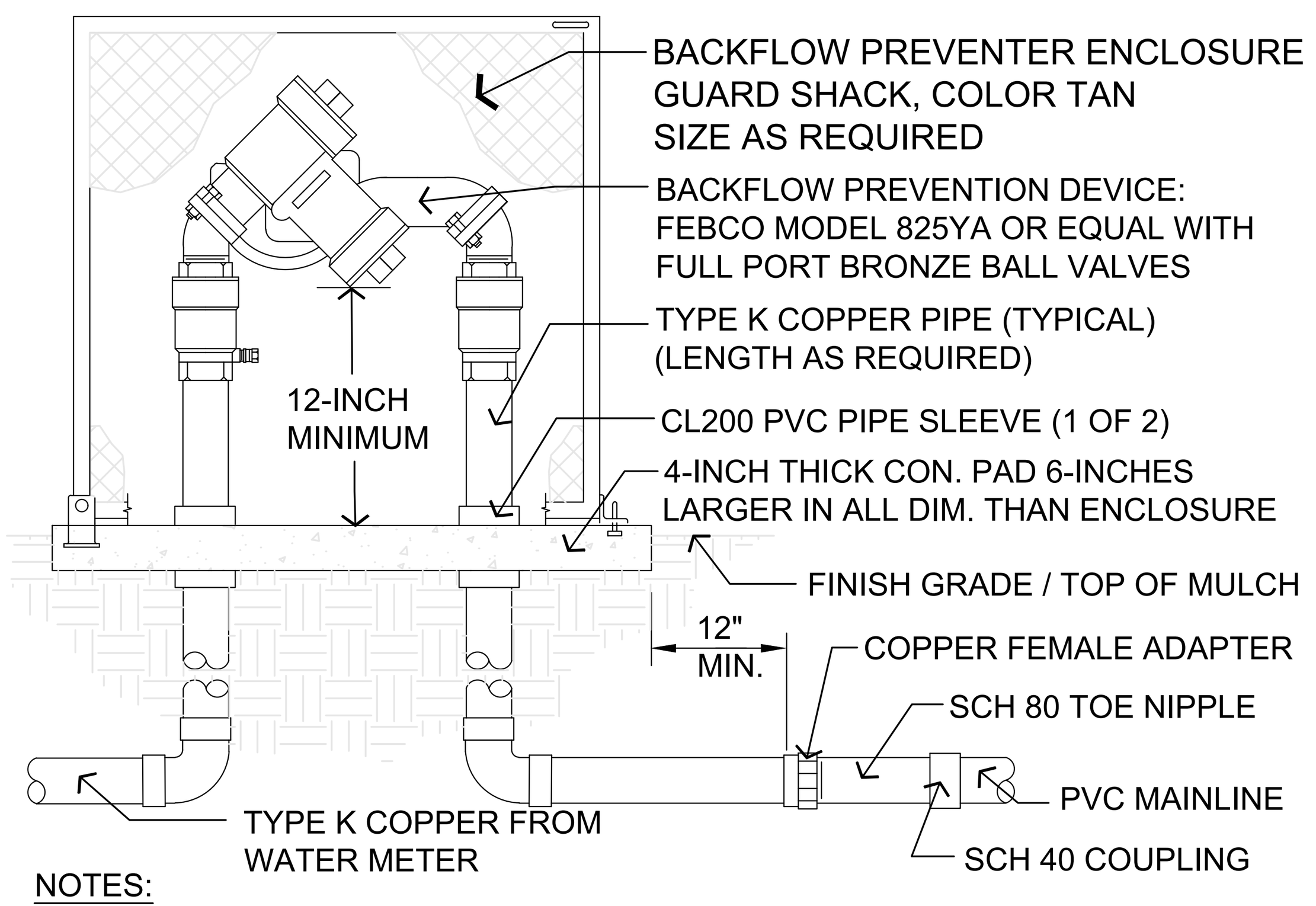
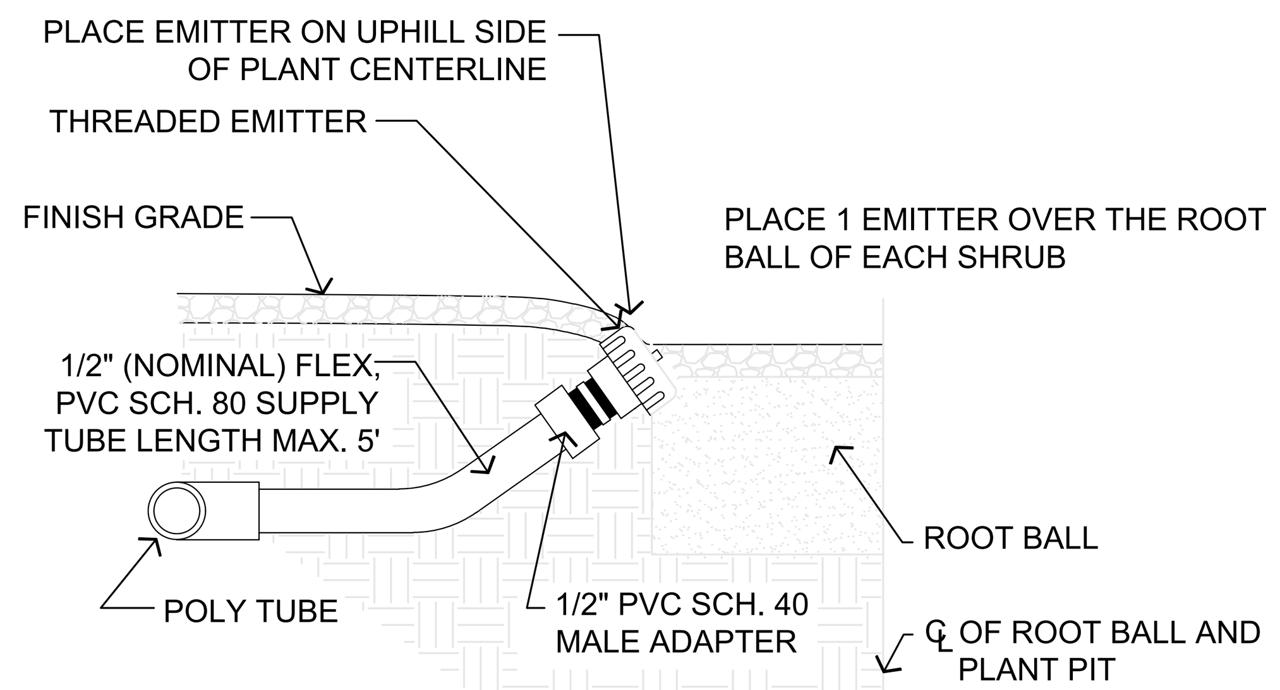


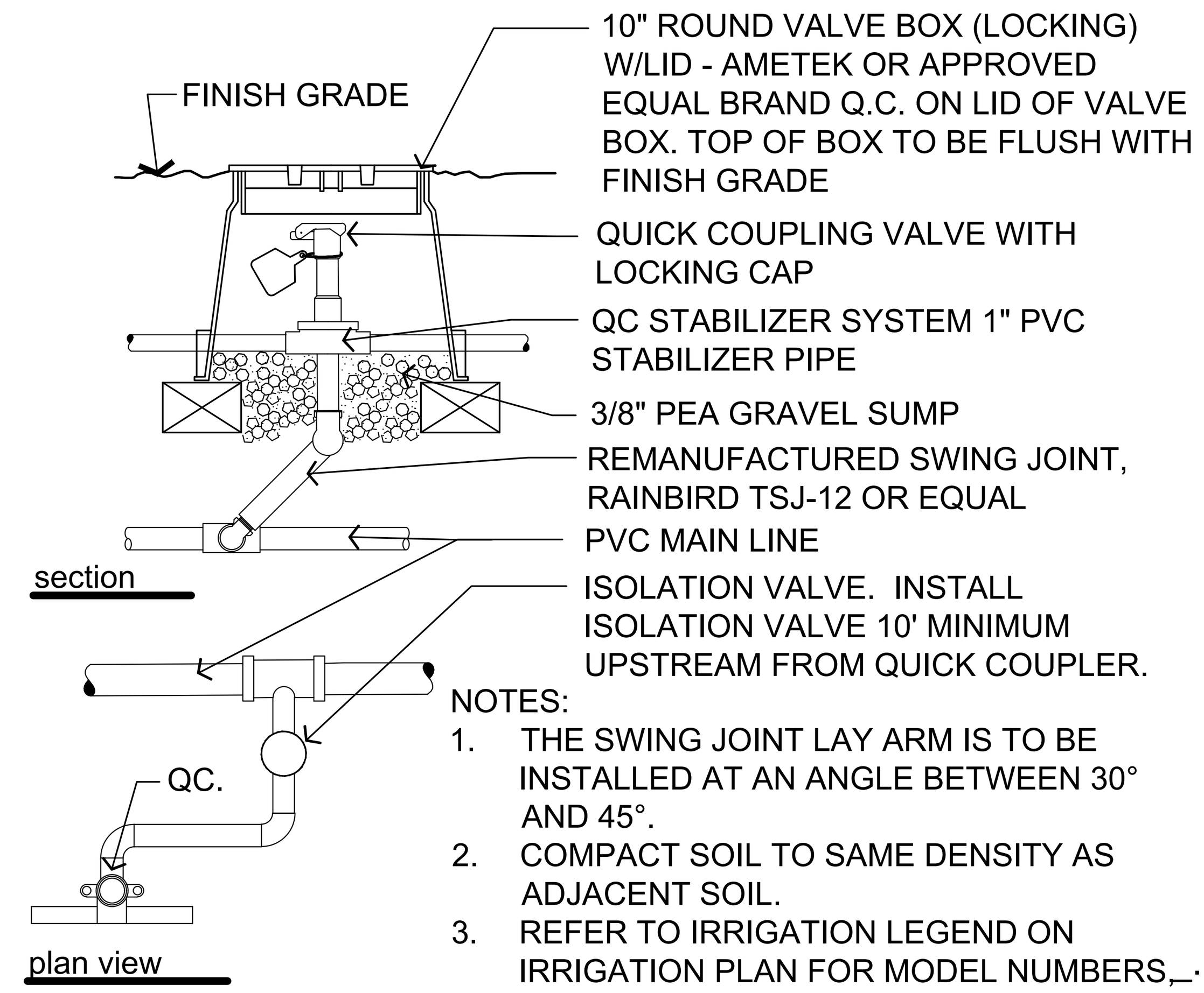
NOTES:
1. FURNISH FITTINGS AND PIPING SIZED IDENTICALLY WITH NOMINAL BACKFLOW PREVENTION DEVICE.
2. SUBMIT SHOP DRAWINGS SPECIFYING ENCLOSURE SIZE AND SHOWING RELATIVE LAYOUT OF EQUIPMENT.
3. CONTRACTOR SHALL PROVIDE A LOCK FOR THE ENCLOSURE AND TURN A COPY OF THE KEYS OVER TO THE OWNER UPON COMPLETION.

1 BACKFLOW PREVENTER
3/4" = 1'-0" P-CO-USA-08



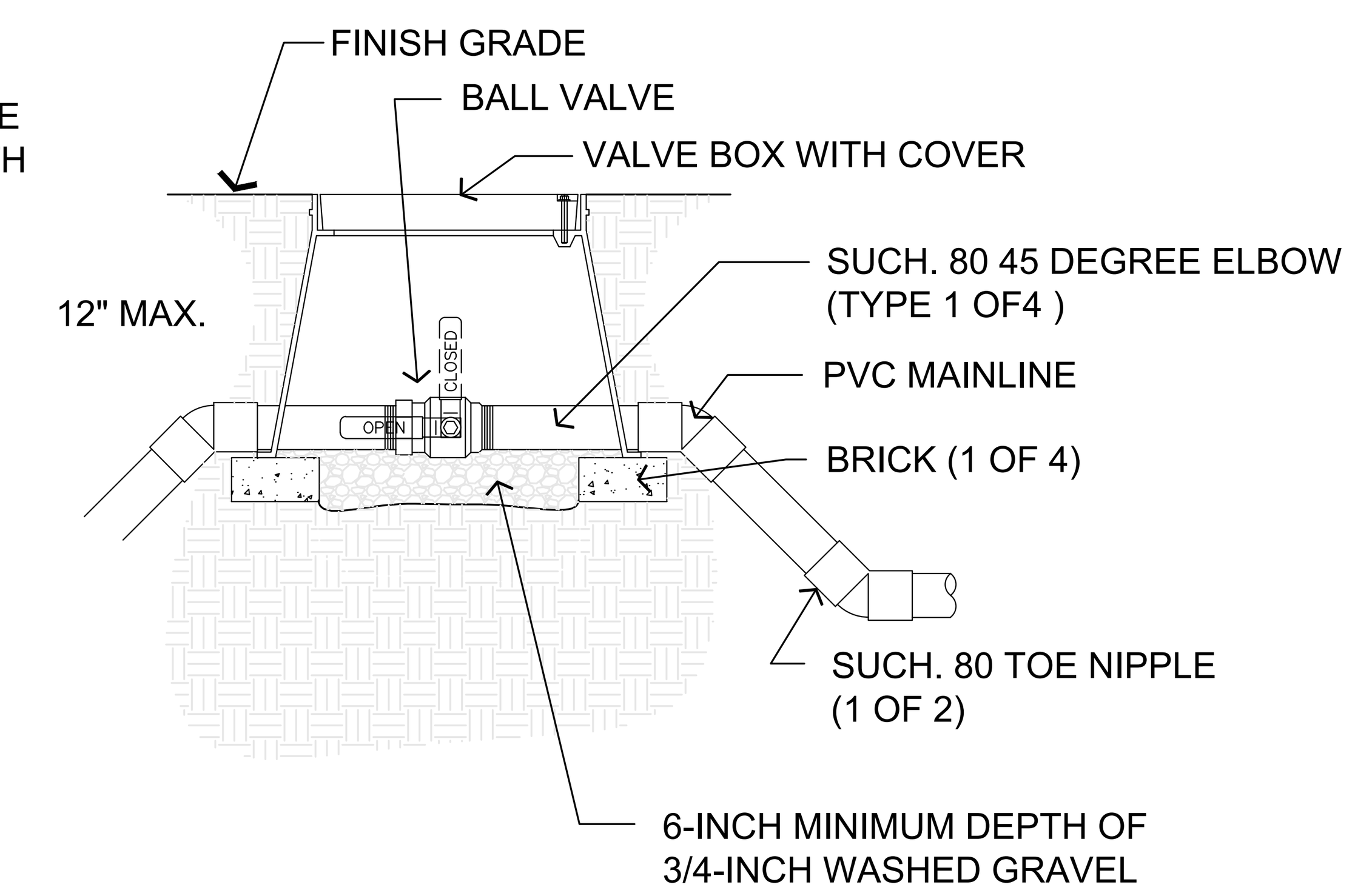
NOTES:
1. PROVIDE ONE THREADED EMITTER PER SHRUB, SEE IRRIGATION LEGEND.
2. POLY TUBING MAX LENGTH PER IRRIGATION SCHEDULE.
3. MAX GPM PER EACH POLY LATER PER IRRIGATION SCHEDULE.
4. EACH THREADED EMITTER SERVES AS FLUSH VALVE.

2 SHRUB EMITTER DETAIL
6" = 1'-0" P-CO-USA-02



NOTES:
1. THE SWING JOINT LAY ARM IS TO BE INSTALLED AT AN ANGLE BETWEEN 30° AND 45°.
2. COMPACT SOIL TO SAME DENSITY AS ADJACENT SOIL.
3. REFER TO IRRIGATION LEGEND ON IRRIGATION PLAN FOR MODEL NUMBERS, DESCRIPTIONS, AND NOTES.

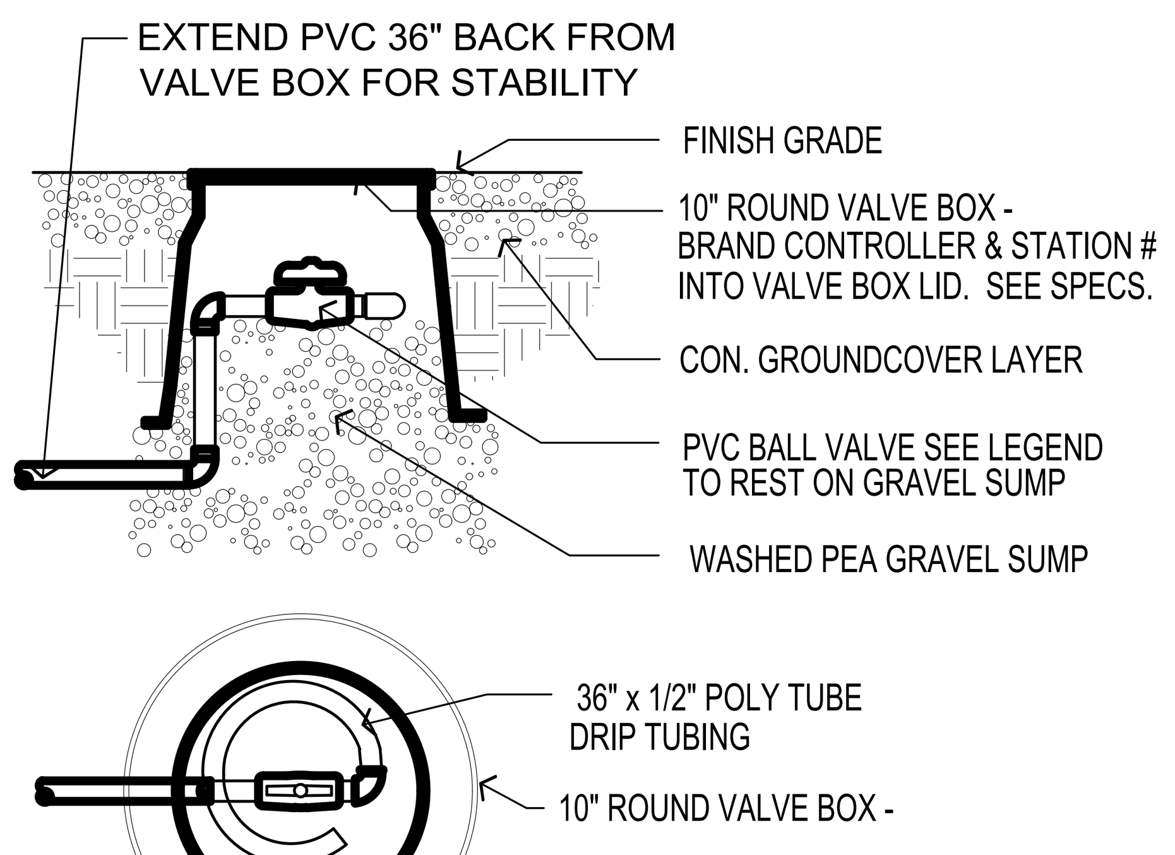
3 QUICK COUPLER
1 1/2" = 1'-0" P-CO-USA-05



NOTES:
1. NOMINAL SIZE OF BALL VALVE TO MATCH NOMINAL MAINLINE SIZE.

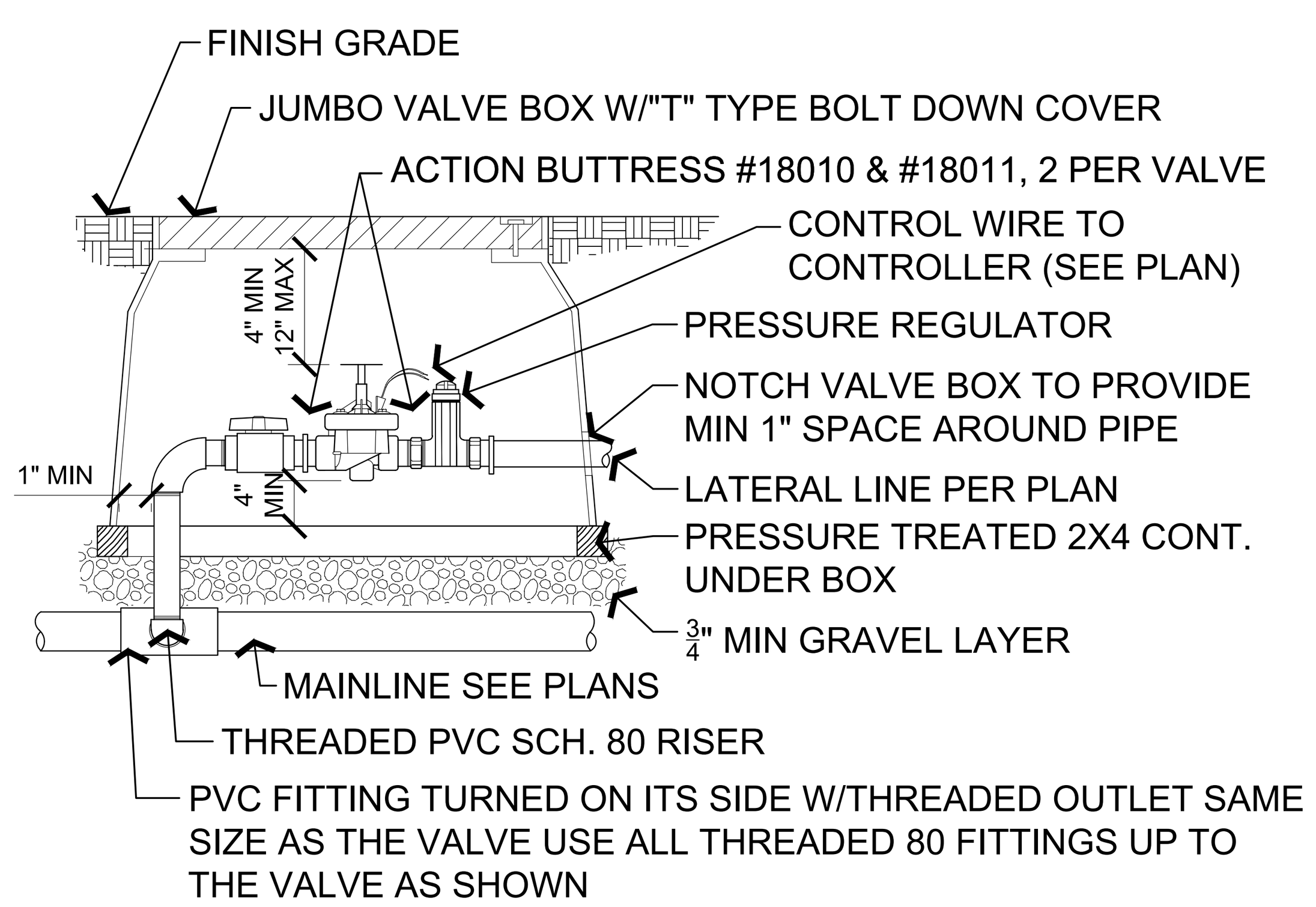
PURGE

4 BALL VALVE
1 1/2" = 1'-0" P-CO-USA-01



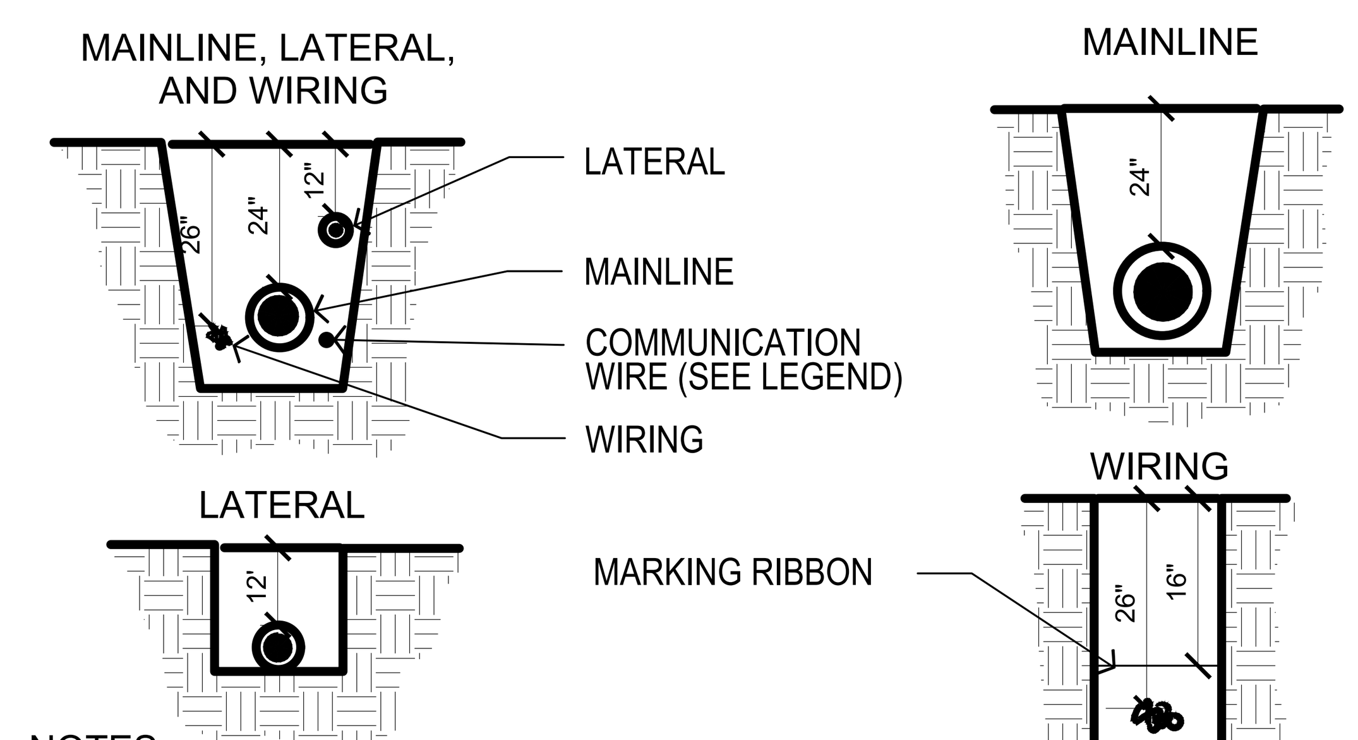
NOTES:
1. REFER TO IRRIGATION LEGEND ON IRRIGATION PLAN FOR MODEL NUMBERS, DESCRIPTIONS, AND NOTES.

5 FLUSH CAP
1 1/2" = 1'-0" P-CO-USA-03



NOTE:
1. MAINTAIN 6" MIN CLEARANCE BETWEEN VALVES IN (2) VALVES ARE PLACED IN ONE BOX
2. CONTRACTOR TO INSTALL ONE ADDITIONAL WIRE TO EACH VALVE FROM CONTROLLER 2' MIN EXCESS WIRE LOOP IN VALVE BOX USE WATERPROOF CONNECTORS PER SPECS

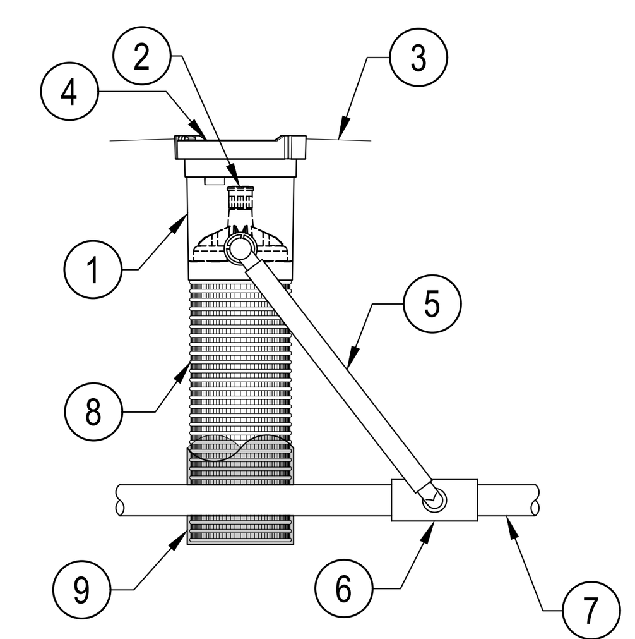
6 DRIP VALVE CONTROL ZONE KIT / ASSEMBLY
3/4" = 1'-0" P-CO-CIB-32



NOTES:
1. TAPE AND BUNDLE WIRING AT 10' INTERVALS.
2. ALL MAINLINE PIPING TO BE INSTALLED PER SPECIFICATIONS.
3. ROUTE TRENCH MIN. 6' FROM ANY TREE PLANTING AND OUTSIDE THE DRIP LINE OF EXISTING TREES.
4. TIE A 20" LOOP IN ALL WIRING AT CHANGES OF DIRECTIONS GREATER THAN 30 DEGREES.
5. BACK FILL MATERIAL TO BE FREE OF ALL DEBRIS AND ROCKS LARGER THAN 3/4-INCH IN DIA.
6. REFER TO IRRIGATION LEGEND.

7 TRENCHING DETAIL
3/8" = 1'-0" P-CO-USA-09

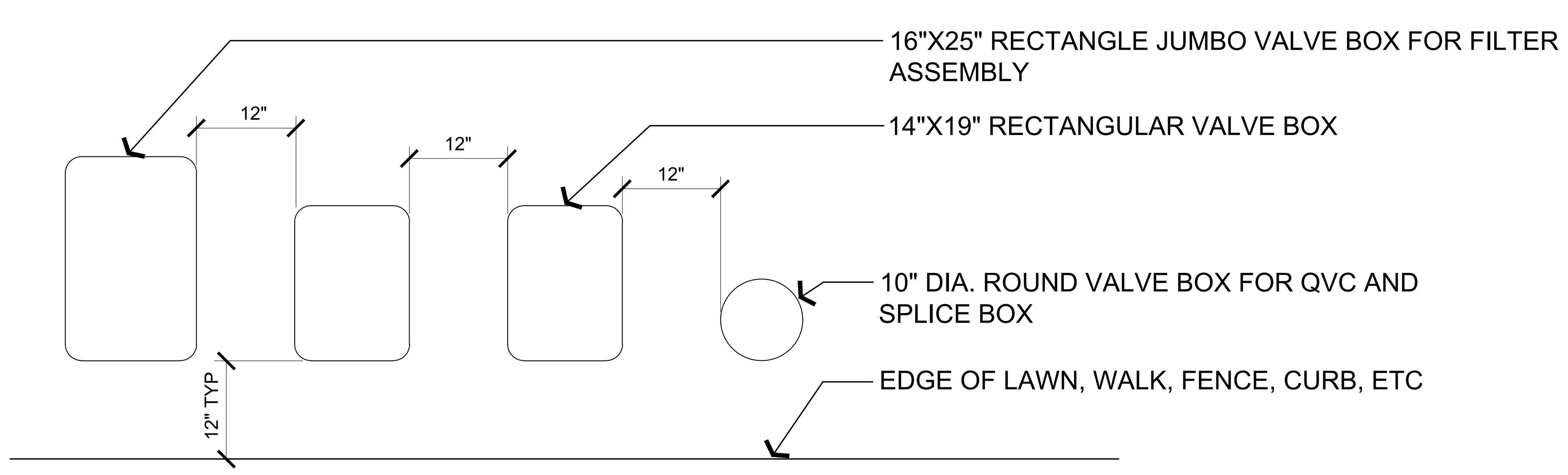
RAIN BIRD



1. RAIN BIRD RWS–M–B–C–1401 (INCLUDES RETAINER, 18" (45.7 cm) TUBE, 0.25 GPM (0.95 L/M) BUBBLER & INTEGRATED CHECK VALVE, 4" (10.2 cm) GRATE, 1/2" (1.3 cm) M NPT INLET SPIRAL BARB ELBOW)
2. BUBBLER: RAIN BIRD 1401 0.25 GPM (0.95 L/M) (INCLUDED)
3. FINISH GRADE/TOP OF MULCH
4. 4" (10.2 cm) LOCKING GRATE (INCLUDED)
5. 1/2" (1.3 cm) SWING ASSEMBLY: RAIN BIRD SA-125050 OR 1/2" (1.3 cm) SWING PIPE: RAIN BIRD SP SERIES WITH 1/2" (1.3 cm) MALE NPT x 0.490" BARB ELBOW: RAIN BIRD SBE-050
6. PVC OR POLYETHYLENE LATERAL PIPE
7. PVC OR POLYETHYLENE LATERAL PIPE
8. 4" (10.2 cm) WIDE x 18" (45.7 cm) LONG RIGID BASKET WEAVE CANISTER (INCLUDED)
9. OPTIONAL SOCK (RWS-SOCK) FOR SANDY SOILS

NOTES:
1. 4" (10,2 CM) GRATE IS ALSO AVAILABLE IN PURPLE (RWS–GRATE–P).
2. INSTALL PRODUCT SO THAT THE GRATE IS EVEN WITH FINISH GRADE OR TOP OF MULCH.
3. OPTIONAL SAND SOCK (RWS–SOCK) IS 34" (86,4 CM) IN LENGTH. CUT TO LENGTH NEEDED TO COVER MESH BASKET AREA.
4. WHEN INSTALLING IN EXTREMELY HARD OR CLAY SOILS, ADD 3/4" (1,9 CM) GRAVEL UNDER AND AROUND THE UNIT TO ALLOW FASTER WATER INFILTRATION AND ROOT PENETRATION.
5. ONCE RWS–M HAS BEEN INSTALLED FILL THE BASKET WITH PEA GRAVEL BEFORE LOCKING LID.

8 ROOT WATERING SYSTEM-M-B-C-1401
NOT TO SCALE P-PU-MC-12



NOTES:
1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.

9 VALVE BOX INSTALLATION
3/4" = 1'-0" P-CO-CIB-38

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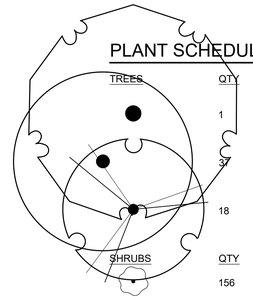
IRRIGATION DETAILS

Sheet Number:
IR201

PLANTING NOTES

1. TREES AND OTHER PLANT MATERIAL SHALL CONFORM TO GRADE, TYPE, ETC. AS SET FORTH IN THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED (WHEN IN LEAF) AS IS TYPICAL FOR THE SPECIES. THEY SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS (NOT POT BOUND); A NORMAL HABIT OF GROWTH CONSISTENT WITH INDUSTRY STANDARDS, AND BE FREE OF BRUISES, CUTS, OR OTHER ABNORMALITIES.
3. QUANTITIES SHOWN ON PLANT LIST ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLAN AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL GOVERN.
4. NO PLANT SUBSTITUTIONS INCLUDING TYPE, SIZE, OR QUANTITY AS SHOWN ON THE APPROVED LANDSCAPE PLANS ARE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
5. THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT SATISFY THE INTENT OF THE LANDSCAPE DESIGN BASED ON SIZE, SHAPE, EVIDENCE OF STRESS, OR IMPROPER CARE BOTH AT THE NURSERY AND ON THE SITE FOLLOWING DELIVERY, UNLOADING OF PLANT MATERIAL, AND PLANTING.
6. PLANT MATERIAL TO REMAIN IS TO BE PROTECTED. PROTECTED PLANT MATERIAL THAT IS DESTROYED OR DIES DURING CONSTRUCTION OR THE MAINTENANCE PERIOD WILL BE REPLACED WITH A PLANT OF THE SAME SIZE AND TYPE BY THE RESPONSIBLE PARTY A MINIMUM OF 90 DAYS BEFORE THE COMPLETION OF THE PROJECT. REPLACEMENT MATERIAL SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
7. PLANT MATERIAL'S BEST SIDE SHALL BE ALIGNED TO THE WALKS, PEDESTRIAN AREAS, ROADS, AND PARKING AREAS UNLESS OTHERWISE SHOWN ON THESE PLANS. SPACING SHALL BE ADJUSTED AS NECESSARY, SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT.
8. PLANTINGS AROUND ELECTRICAL TRANSFORMERS SHALL MAINTAIN A MINIMUM CLEARANCE OF THREE (3) FEET ON ALL SIDES AND 12 FEET ON SIDES WITH DOORS UNLESS OTHER MORE RESTRICTIVE REQUIREMENTS ARE REQUIRED BY THE LOCAL ELECTRIC PROVIDER. THE CONTRACTOR SHALL VERIFY CLEARANCE REQUIREMENTS PRIOR TO INSTALLATION.
9. PLANTINGS AT MATURITY SHALL MAINTAIN 6-0" CLEARANCE AROUND FIRE HYDRANTS AND FIRE SUPPRESSION DEVICES.
10. PLANTINGS SHALL NOT INTERFERE WITH TRAFFIC CONTROL SIGNS AND SHALL MAINTAIN A MAXIMUM HEIGHT OF 18 INCHES WITHIN SIGHT DISTANCE TRIANGLES.
11. TREE TRUNKS SHALL NOT BE LOCATED WITHIN SIGHT DISTANCE TRIANGLES AND TREE CANOPIES SHALL BE PRUNED A MINIMUM OF 6'-0" WITHIN SIGHT DISTANCE TRIANGLES OR AS REQUIRED BY THE LOCAL MUNICIPALITY.
12. TREES SHALL MAINTAIN A MINIMUM 6'-0" CLEARANCE FROM CITY WATER OR SEWER LINES. PLANTINGS SHALL MAINTAIN A SUFFICIENT DISTANCE TO SANITARY AND STORM SEWER MANHOLES TO ALLOW ACCESS BY MAINTENANCE VEHICLES.
13. SHRUBS SHALL BE INSTALLED FROM BACK OF CURB, EDGE OF WALK, OR EDGE OF PAVING A MINIMUM OF TWO (2) FEET AT MATURE SIZE.
14. PLANT MATERIAL LOCATIONS SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT, PROJECT MANAGER OR OTHER DESIGNEE PRIOR TO INSTALLATION.
15. THE IRRIGATION SYSTEM IS TO BE FULLY OPERATIONAL AND EFFECTIVE PRIOR TO THE INSTALLATION OF PLANT MATERIAL.
16. ALL PLANT BEDS TO RECEIVE FOUR (4) INCHES OF SOIL PEP INCORPORATED INTO THE TOP EIGHT (8) INCHES OF SOIL.. PLANTING BEDS SHALL RECEIVE AN ADDITIONAL TWO (2) INCH LAYER OF SOIL PEP OR GRAVEL MULCH AFTER PLANTING IS COMPLETE.



PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	SIZE
	1	PLATANUS X ACERIFOLIA LONDON PLANE TREE	4" CAL
	37	ULMUS X `ACCOLADE` ACCOLADE ELM	4" CAL
	18	ZELKOVA SERRATA `JFS-KW1` TM CITY SPRITE ZELKOVA	2" CAL

SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE
	156	BUXUS MICROPHYLLA `WINTER GEM` GLOBE WINTER GEM BOXWOOD	5 GAL
	49	GENISTA LYDIA `SELECT` TM BANGLE DYERS GREENWOOD	5 GAL
	74	GERANIUM SANGUINEUM `NEW HAMPSHIRE` NEW HAMPSHIRE BLOODY CRANESBILL	1 GAL
	39	HIBISCUS X `BALLET SLIPPERS` TM SUMMERIFIC BALLET SLIPPERS HIBISCUS	5 GAL
	265	PENNISETUM ALOPECUROIDES `LITTLE BUNNY` LITTLE BUNNY FOUNTAIN GRASS	1 GAL
	22	PHYSOCARPUS OPULIFOLIUS `DONNA MAY` TM LITTLE DEVIL NINEBARK	5 GAL
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	65	RHUS AROMATICA `GRO-LOW` GRO-LOW FRAGRANT SUMAC	1 GAL

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE
	59 SF	ANNUAL FLOWERS SPECIES SELECTED DURING INSTALL	---
	18,002 SF	POA PRATENSIS KENTUCKY BLUEGRASS	SOD

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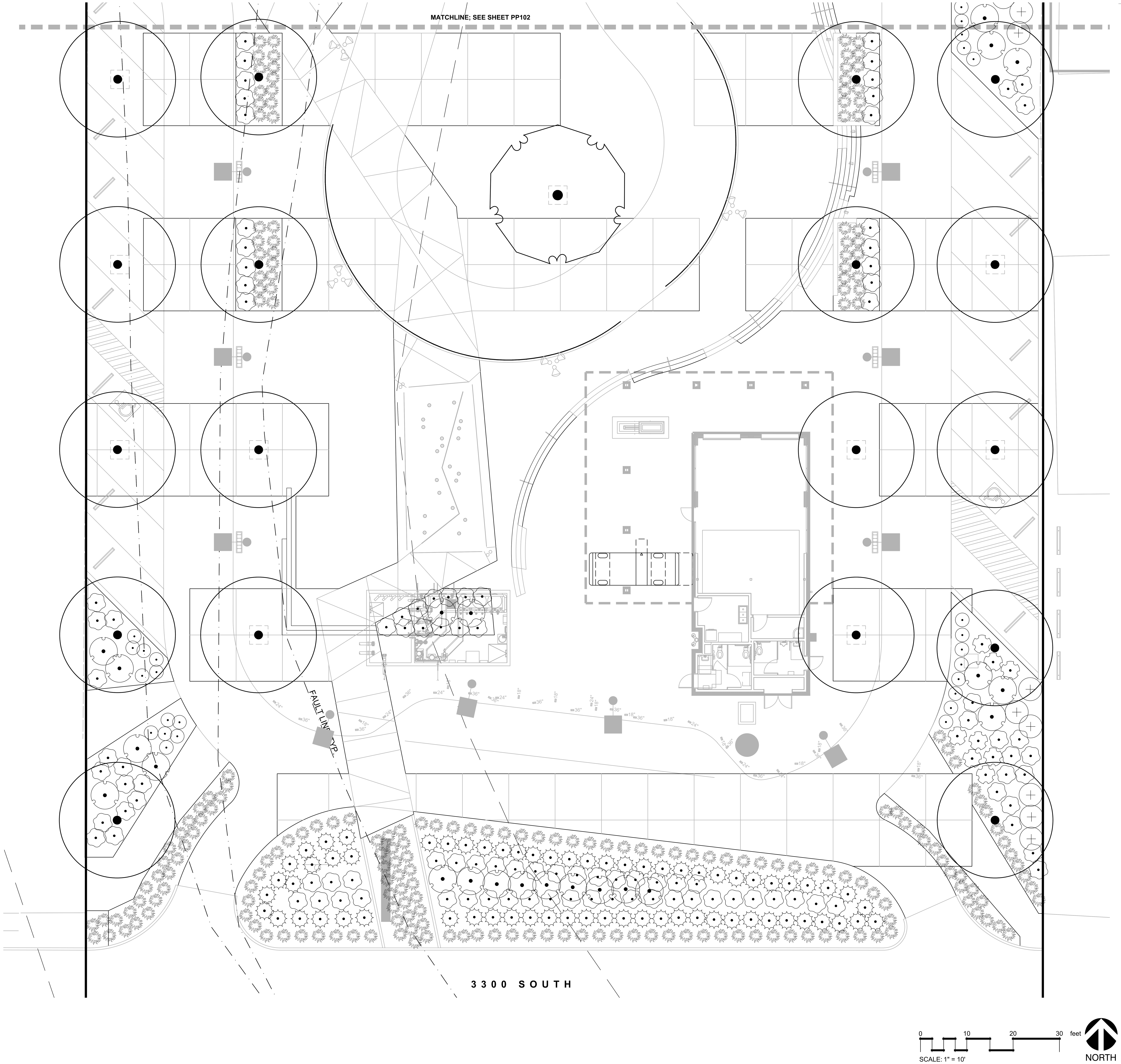
PLANTING PLAN
SCHEDULE AND NOTES

Sheet Number:
PP100



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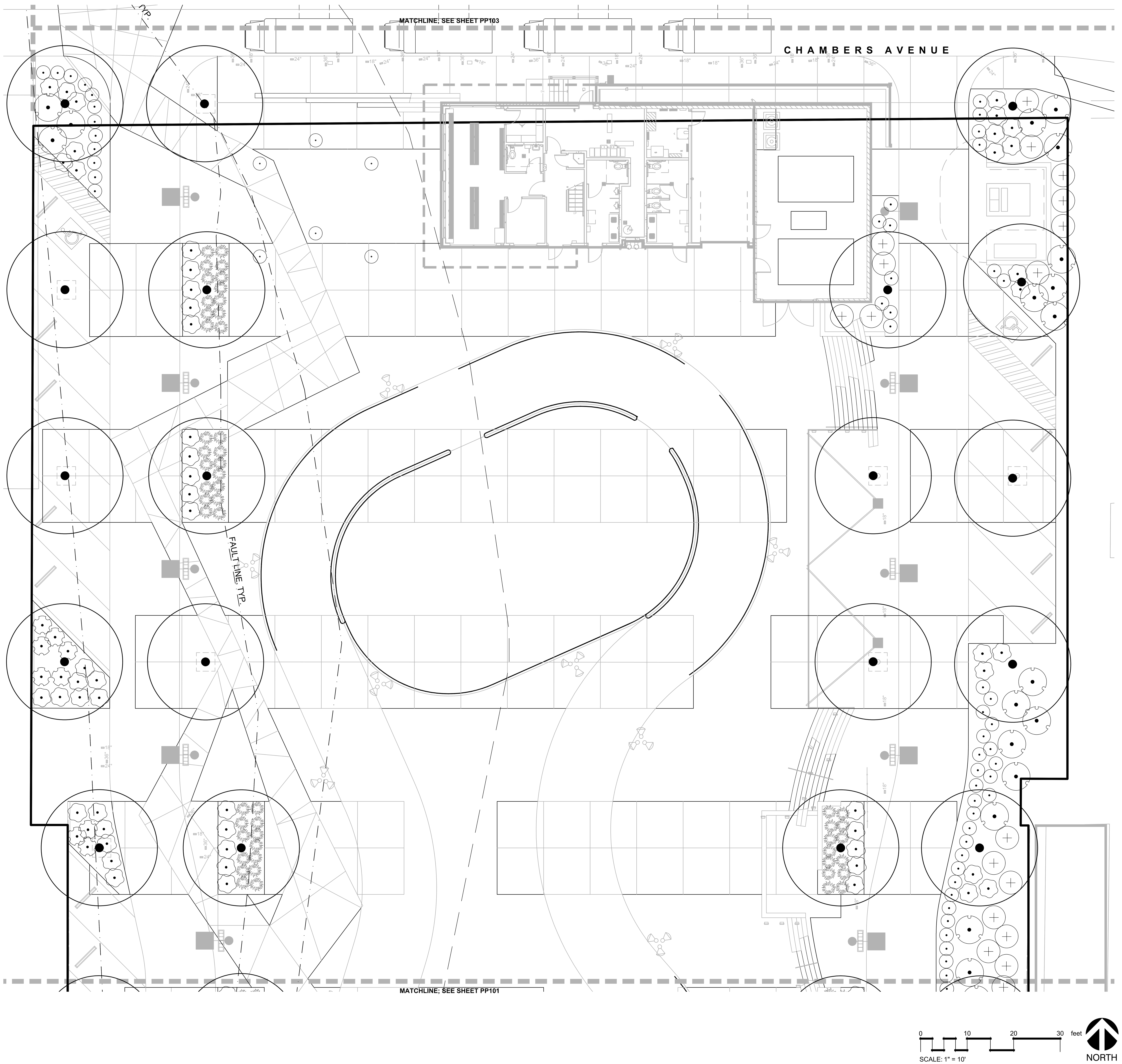

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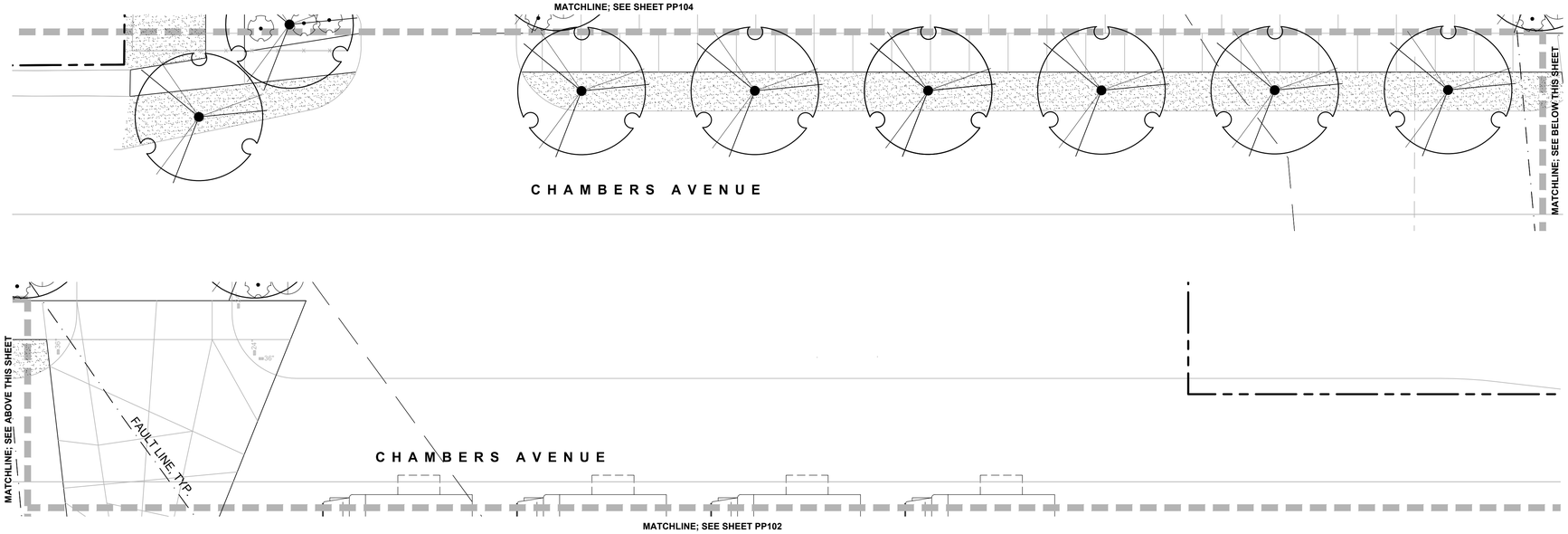

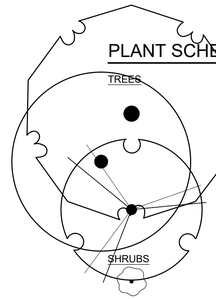

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	59 SF	ANNUAL FLOWERS SPECIES SELECTED DURING INSTALL	---
	18,002 SF	POA PRATENSIS KENTUCKY BLUEGRASS	SOD

0 10 20 30 feet

SCALE: 1" = 10'

NORTH

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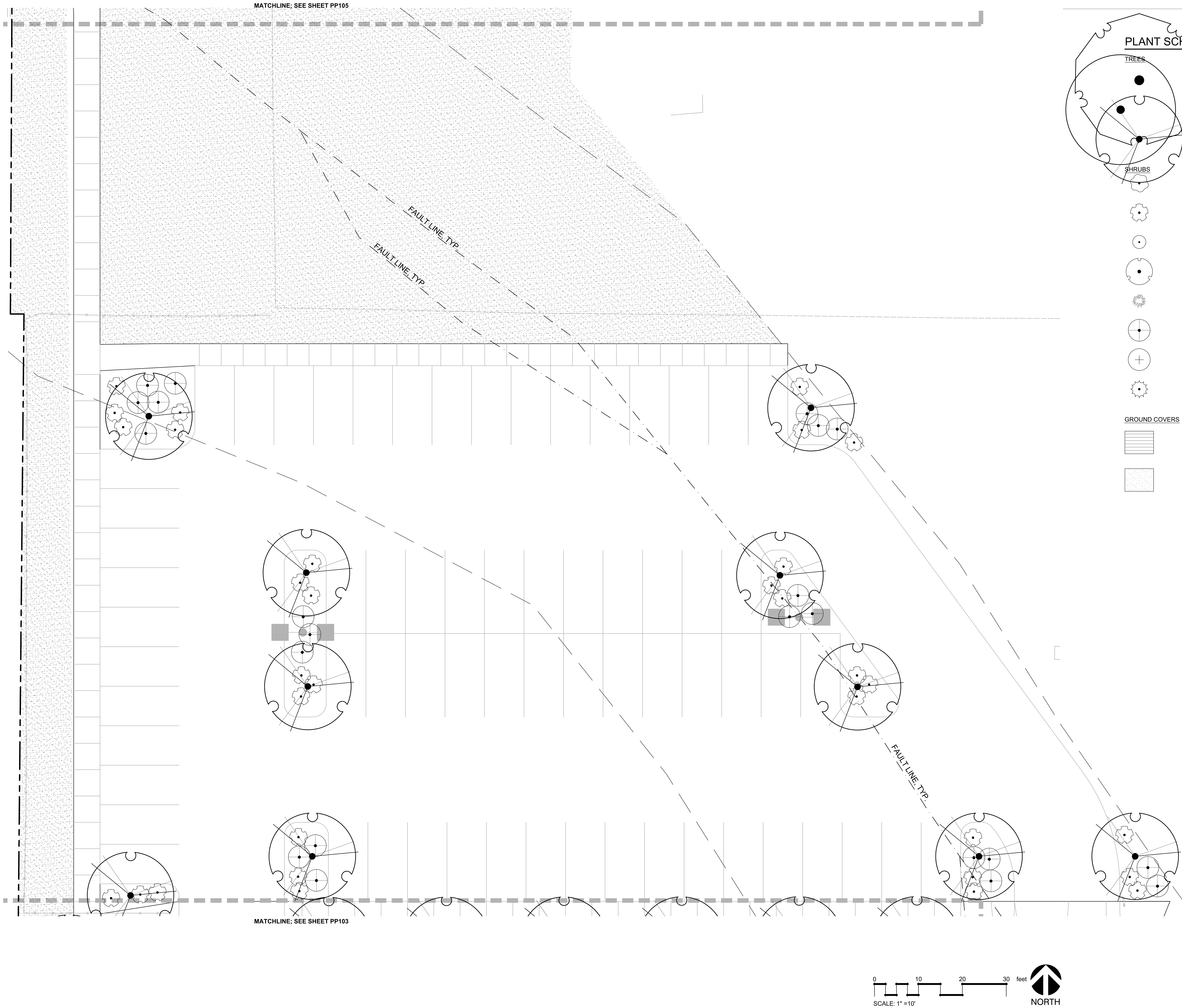

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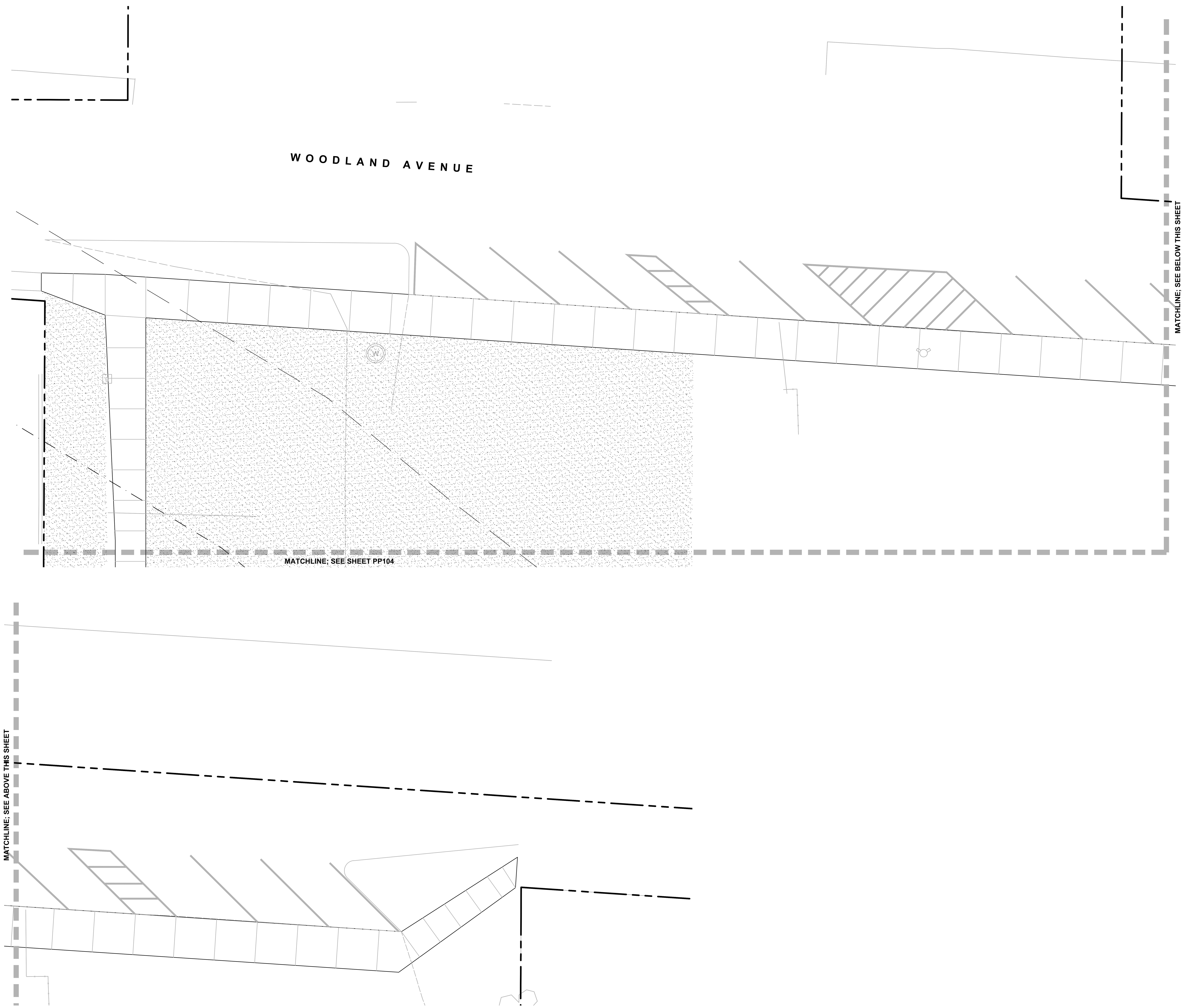

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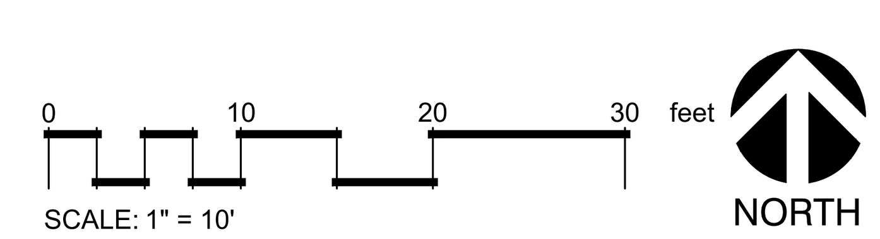

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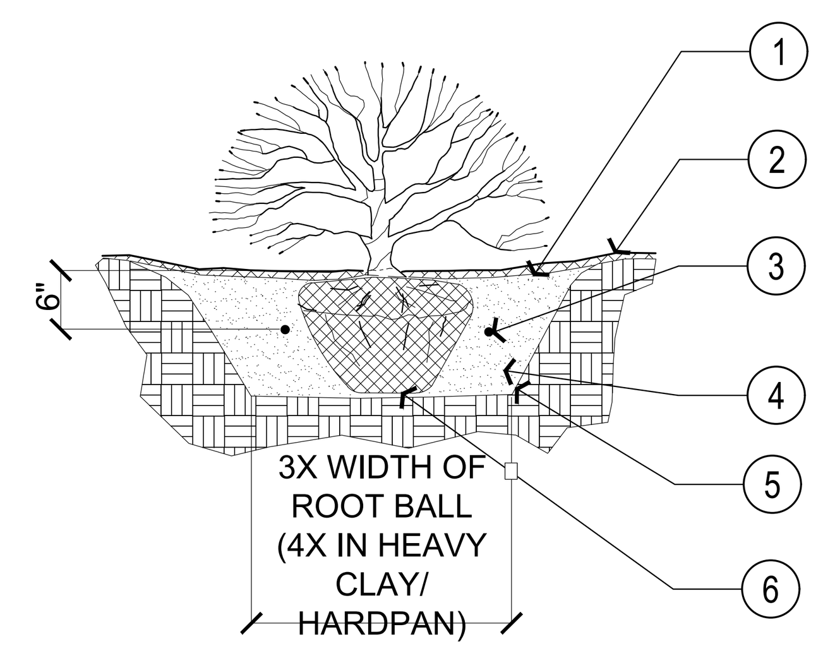
PP105

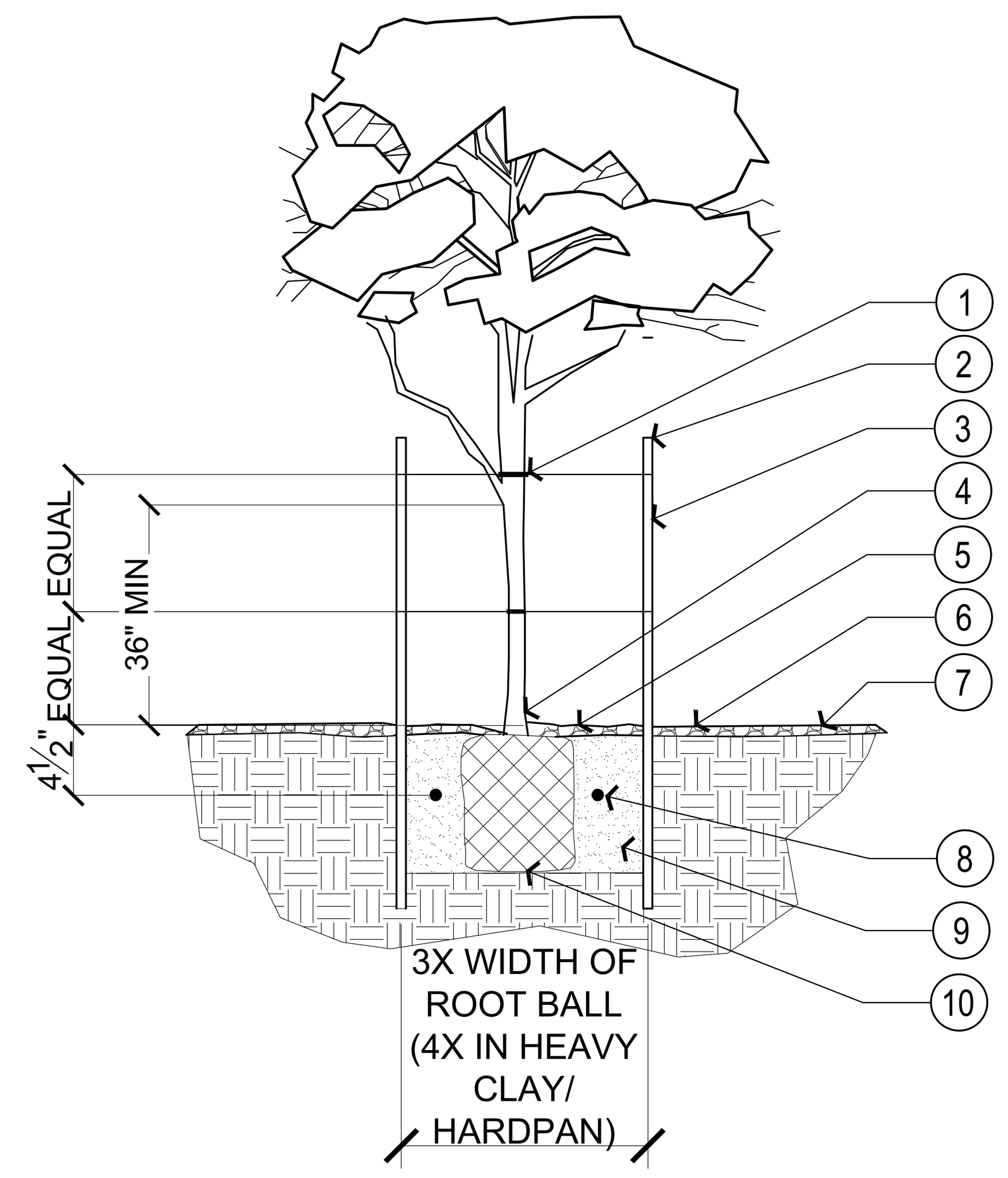
1. 2" DEEP WATERING BASIN SHALL BE GENTLE AND UNIFORM THROUGHOUT WITH NO OBTRUSIVE EDGES
2. FINISHED GRADE, SEE PLANS FOR MULCH MATERIAL AND DEPTH
3. PLANT TABLET PER SPECIFICATIONS
4. BACKFILL MIX PER SPECIFICATIONS
5. SCARIFY SIDES OF PIT, TYP
6. SET ROOT BALL ON NATIVE UNDISTURBED SOIL



1 SHRUB PLANTING

NTS

P-PU-MC-01



1. 3/4" WEBBED NYLON STRP; MAINTAIN 4"-6" I.D. LOOP FOR WRAPPING AROUND STAKE, STAPLE STRAP TO TREE STAKE
2. TRIM TREE STAKES 6" ABOVE FIRST SCAFFOLD BRANCH
3. 2" DIA LODGEPOLE PINE STAKES, SHALL BE 8' VERTICAL; LOCATE OUTSIDE OF ROOTBALL (TYP OF 2)
4. SET BASE OF ROOT FLARE 1"-2" ABOVE FINISHED GRADE
5. FOOT TAMP 6" DIA AROUND ROOT BALL TO ENSURE TREE STABILITY
6. PROVIDE A 6' DIA SHOVEL CUT TREE RING IN SOD; MULCH PER SPECIFICATIONS
7. FINISHED GRADE
8. FERTILIZER TABLETS PER SPECIFICATIONS
9. BACKFILL MIX PER SPECIFICATIONS
10. SET ROOT BALL ON UNDISTURBED NATIVE SOIL

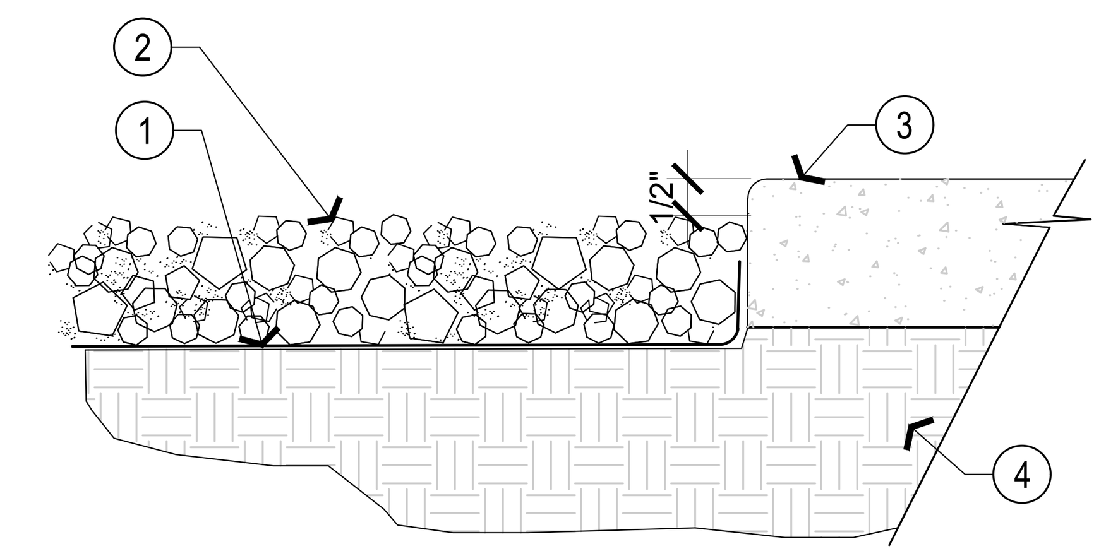
NOTES:
1. REMOVE SUCKERS AND POORLY ATTACHED LOWER BRANCHES.
2. STANDARD TREES SHALL HAVE A SINGLE, RELATIVELY STRAIGHT CENTRAL LEADER AND TAPERED TRUNK FREE OF CODOMINANT STEMS.
3. TREES WITH CALIPER EQUAL TO OR LESS THAN 4" WILL BE MEASURED AT 6" ABOVE THE SOIL LINE.

2 TREE PLANTING

NTS

P-PU-MC-07

1. WEED BARRIER
2. FINISHED GRADE: 3-4" DEEP ROCK MULCH PER LANDSCAPE SCHEDULE
3. FINISHED GRADE; CONCRETE CURB OR SIDEWALK PER PLANS
4. UNDISTURBED NATIVE SOIL OR TOP SOIL



NOTES:
1. APPLY PRE-EMERGENT HERBICIDE PRIOR TO AND FOLLOWING INSTALLATION OF ROCK MULCH.
2. SEE LANDSCAPE SCHEDULE FOR COLOR AND SIZE OF ROCK MULCH.

3 ROCK MULCH

NTS

P-PU-MC-33

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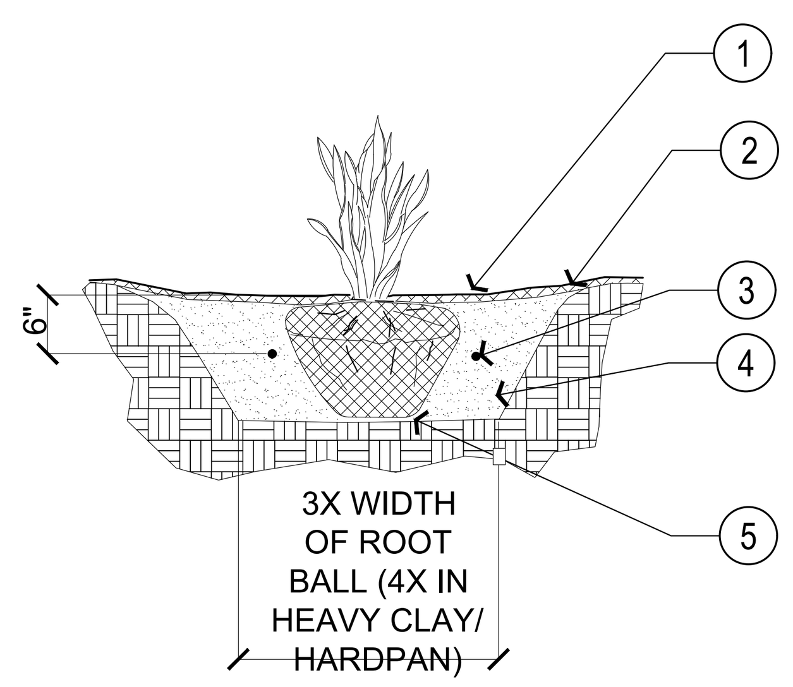

4 ORNAMENTAL GRASS

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P-PU-MC-36

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