Roseville Parks and Recreation

CEDARHOLM

COMMUNITY BUILDING, CART STORAGE BUILDING, AND SITE WORK

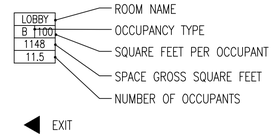
2323 Hamline Avenue N.
Roseville, Minnesota 55113

BID SET - July 10, 2017

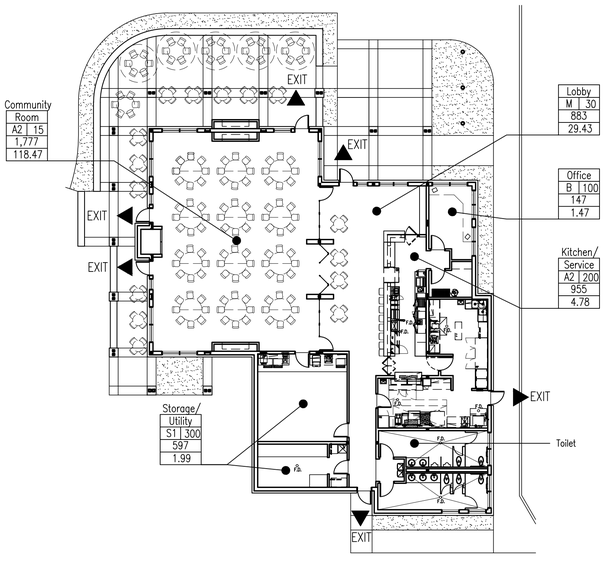
1 CONCEPT RENDERING – NORTH ELEVATION
NOT TO SCALE

2 SITE LOCATION MAP
NOT TO SCALE

SPACES LEGEND



TOTAL OCCUPANTS: 157



3 CODE REVIEW PLAN
1/16" = 1'-0"

CODE REVIEW

Zoning / Ordinance Review

A. Zoning District: Muni. Serv. Other

Building Code Review

B. Applicable Codes
Minnesota Building Code (MBC) - 2015
Minnesota Accessibility Code - 2015
Minnesota Fire Code - 2015
International Fire Code - 2015
International Plumbing Code - 2015
International Mechanical & Fuel and Gas Code - 2015
National Electrical Code - 2014

C. Proposed Building
The project is to build a new Community building on a site at the existing Cedarholm Golf Course in Roseville, MN. The Facility will consist of a Community Gathering Space for Dining and/or Assembly Space with support spaces including, Toilet Rooms, Servery, Lobby/Break-out space, Small Meeting Room and Storage. *The Building is proposed to be 5,000 SF.*

D. Occupancy Classifications (2015 Minnesota Building Code, Ch. 3)
The proposed building will have the following occupancy types:
- Occupancy Group A-2, Meeting and Dining Facility

E. Allowable Height and Building Area (2015 Minnesota Building Code, Table 503, Section 503 & Section 504)
Occupancy Group A-2 (Type V-B) with automatic sprinkler system)
6,000 SF x 3 = 18,000 SF allowable per floor, 2-story maximum
The proposed Building fits within these limits.

B. Occupancy Separation (2015 Minnesota Building Code, Ch.5)
No separation is required between Group A-2 and Group S-1 (Table 508.4)

C. Building Construction Type (2015 Minnesota Building Code, Chapter 6): Type II-B

D. Construction Requirements (2015 Minnesota Building Code, Table 601)

Construction type V-B
Partitions - permanent 0
Bearing walls 0
Structural frame 0
Floor Construction 0
Roof construction 0

E. Exiting - (2015 Minnesota Building Code, Table 1004.1.2)

•Community Room: 1,777 SF/15 SF per occupant = **118.47 occupants**
•Lobby: 883/30 SF per occupant = **29.43 occupants**
•Office: 147/100 SF per occupant = **1.47 occupants**
•Mechanical Room/Storage: 597/300 SF per occupant = **1.99 occupants**
•Kitchen: 955/200 SF per occupant = **4.78 occupants**
157 occupants x 0.2 = 31.4 inches
Total Exit Width required = 31.4 inches required

F. Accessibility (2015 Minnesota Accessibility Code)
All spaces shall comply with Minnesota Accessibility Code.

G. Automatic Fire Suppression System - The Building will have an Automatic Fire Suppression System.

H. Plumbing Fixture Requirements (2015 Minnesota Building Code, Ch.29, Table 2902.1)
Occupant Load:
157 total occupants (79 men & 78 women)
(Similar to Restaurants, Banquet Halls and Food Courts)

I. Total Fixtures Required:
Male
Water Closets Required: 1 per 75 occupants. Total required = 2
Lavatories Required: 1 per 200 occupants. Total required = 1
Female
Water Closets Required: 1 per 75 occupants. Total required = 2
Lavatories Required: 1 per 200 occupants. Total required = 1
Drinking fountains: 1 per 500
Required: 1
Service sinks:
Required: 1

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c3.0 OVERALL GRADING & UTILITIES PLAN
c4.0 OVERALL LAYOUT PLAN
c4.1 MISCELLANEOUS DETAILS
c5.0 MISCELLANEOUS DETAILS
c5.1 MISCELLANEOUS DETAILS

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a2.1fe FURNITURE AND EQUIPMENT FLOOR PLAN
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CAPTIVE AIRE SHEETS
NO.1 - NO. 13

Comm. No.
1758

ISSUE DATE
06/06/2017 – DESIGN DEVELOPMENT SET
07/10/2017 – BID SET

Foodservice Designer
premier
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7101 Northland Terrace, Minneapolis, MN 55428
ph: 763-504-3000 fax: 763-504-3140
premiermfg.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7925 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

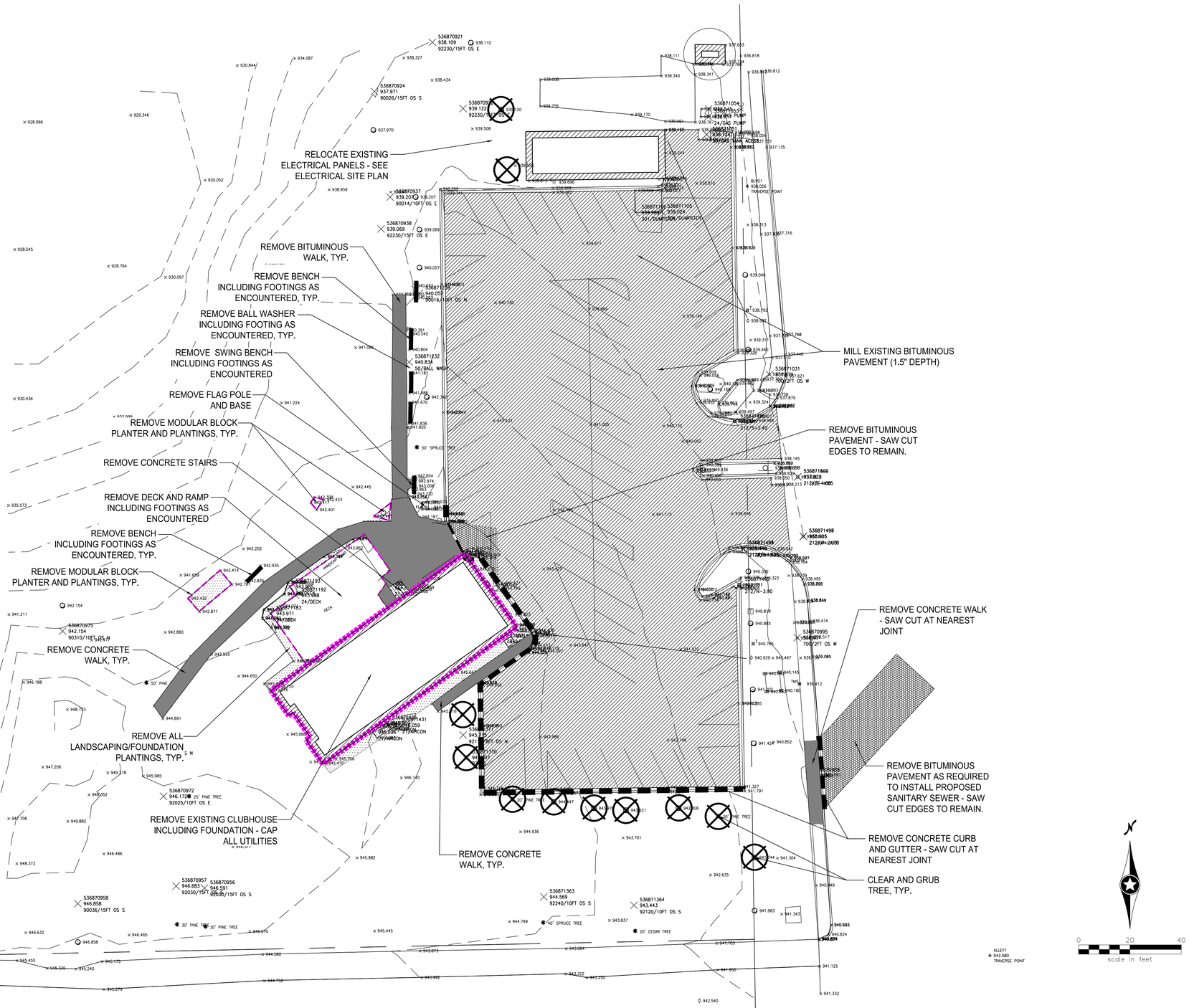
Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Title Sheet

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By: Tim McIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a0.0

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)824-1332 • FAX (612)824-7366



SRF PROJECT NO. 10577

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07/10/2017 – BID SET

Foodservice Designer
premier
International Design & Consultancy Services
720 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-5500 • fax: 763-544-5560
premierfsmg.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

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612-827-0805 fax

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City of Roseville
Project
Cedarholm Community Building
Title
Existing Conditions/Removals Plan

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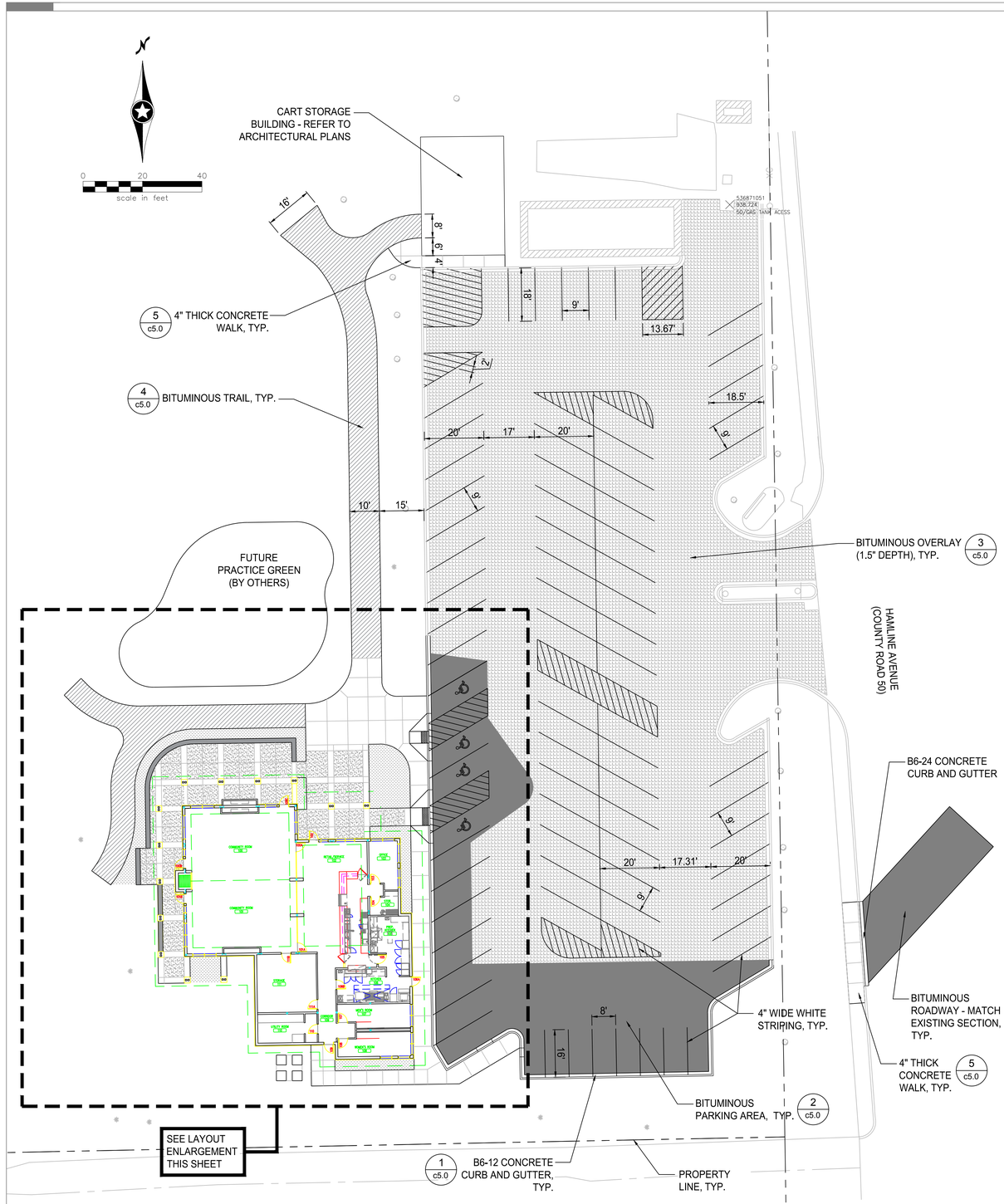
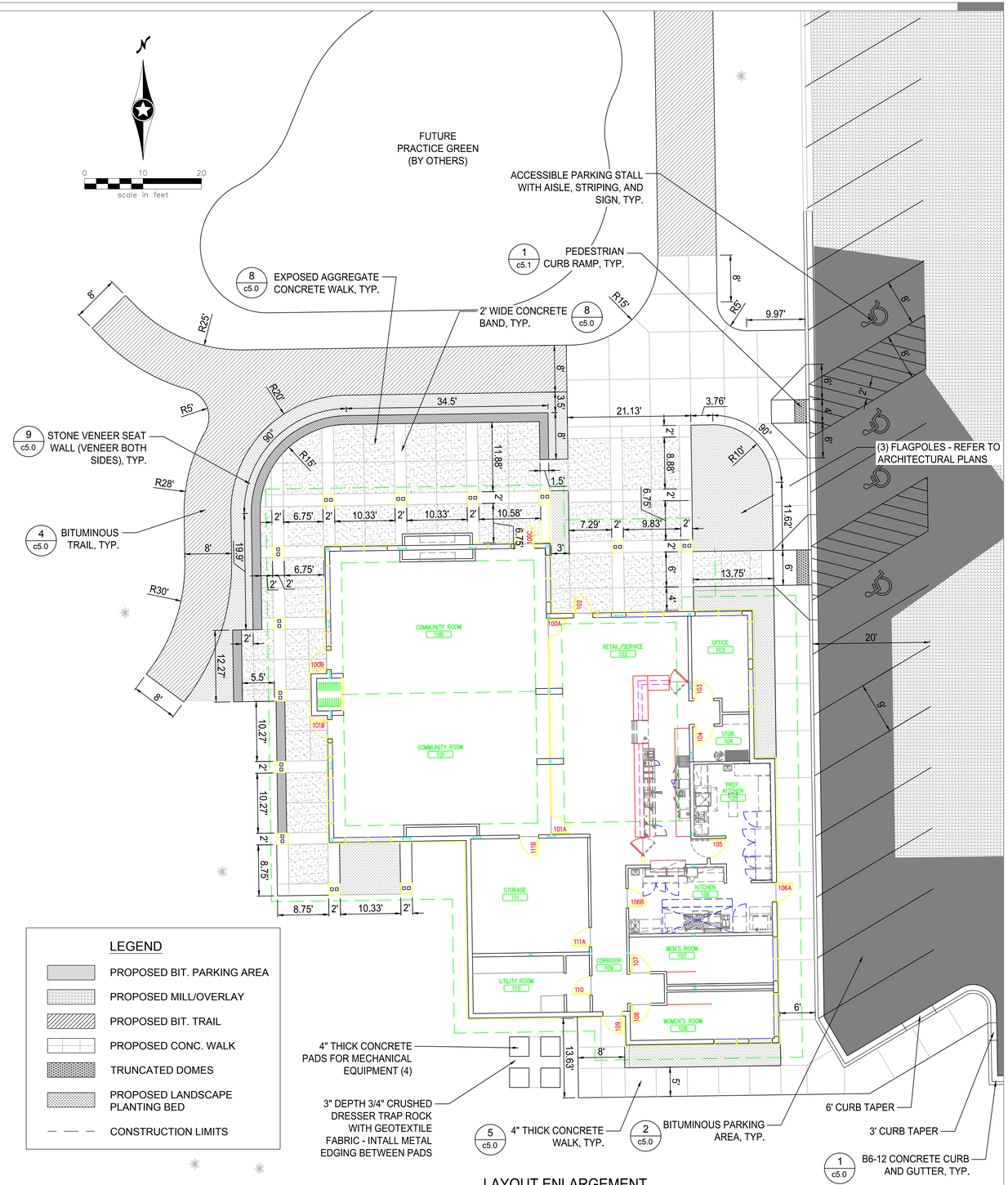
By:
Title: Landscape Architect Date:
Registration Number:

Drawing No.
c1.0

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL. (612)904-1332 • FAX (612)904-7386

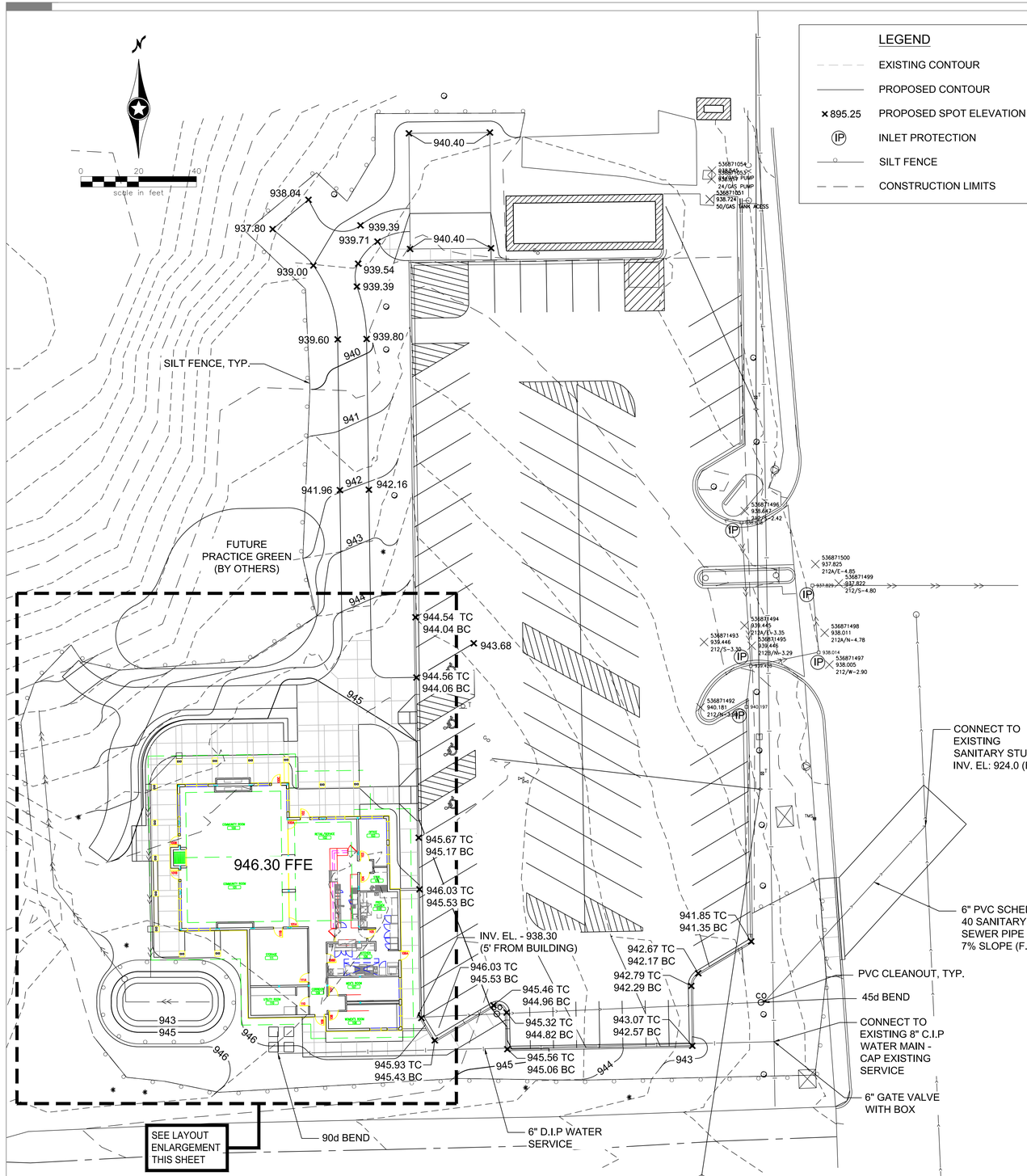




LAYOUT ENLARGEMENT

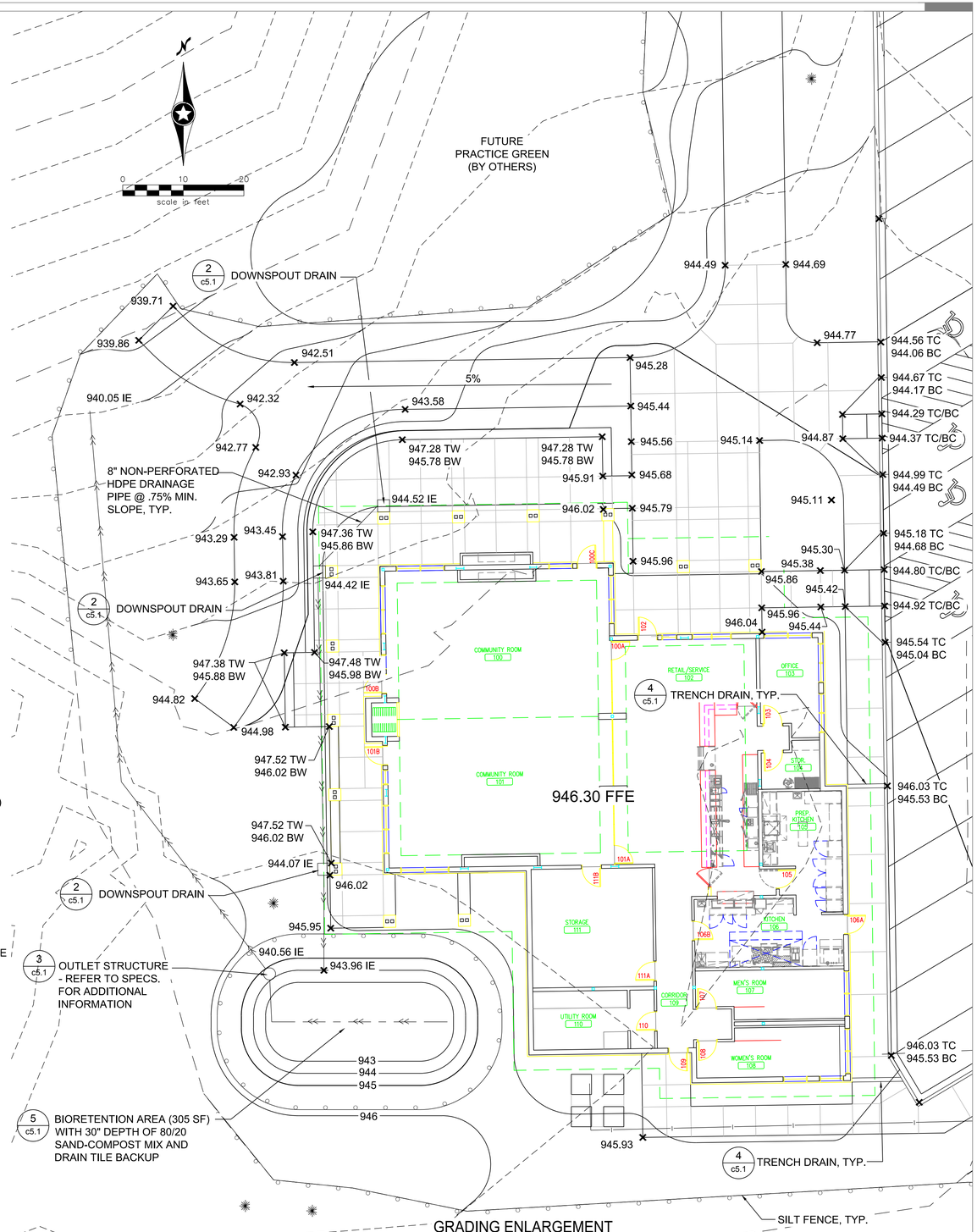
SRF PROJECT NO. 10577

Comm. No. 1758 ISSUE DATE 06/06/2017 – DESIGN DEVELOPMENT SET 07/10/2017 – BID SET	Foodservice Designer premier Foodservice Design ◆ Ingenious Results premiereng.com	Mechanical and Electrical Engineers emanuelson-podas consulting engineers 10401 Bren Road East Minnetonka, MN 55343 ph: 952–930–0050 fax: 952–930–0777 www.epinc.net	Structural Engineer Mattson Macdonald Young structural engineers Bassett Creek Business Center 901 North 3rd Street, Suite 100 Minneapolis, MN 55401 612-827-7825 voice 612-827-0805 fax	Civil Engineer & Landscape Architect SRF Consulting Group, Inc.	Owner ROSEVILLE	Owner City of Roseville Project Cedarholm Community Building Title Overall Layout Plan	I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed landscape architect under the laws of the State of Minnesota. By: Title: Landscape Architect Date: Registration Number:	Drawing No. c2.0	HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS 4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407 TEL (612)824-1332 • FAX (612)824-7366



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- ×895.25 PROPOSED SPOT ELEVATION
- (IP) INLET PROTECTION
- SILT FENCE
- CONSTRUCTION LIMITS



GRADING ENLARGEMENT

SRF PROJECT NO. 10577

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07/10/2017 – BID SET

Foodservice Designer
premier
premierfoodservice.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson
Macdonald
Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF
Consulting Group, Inc.

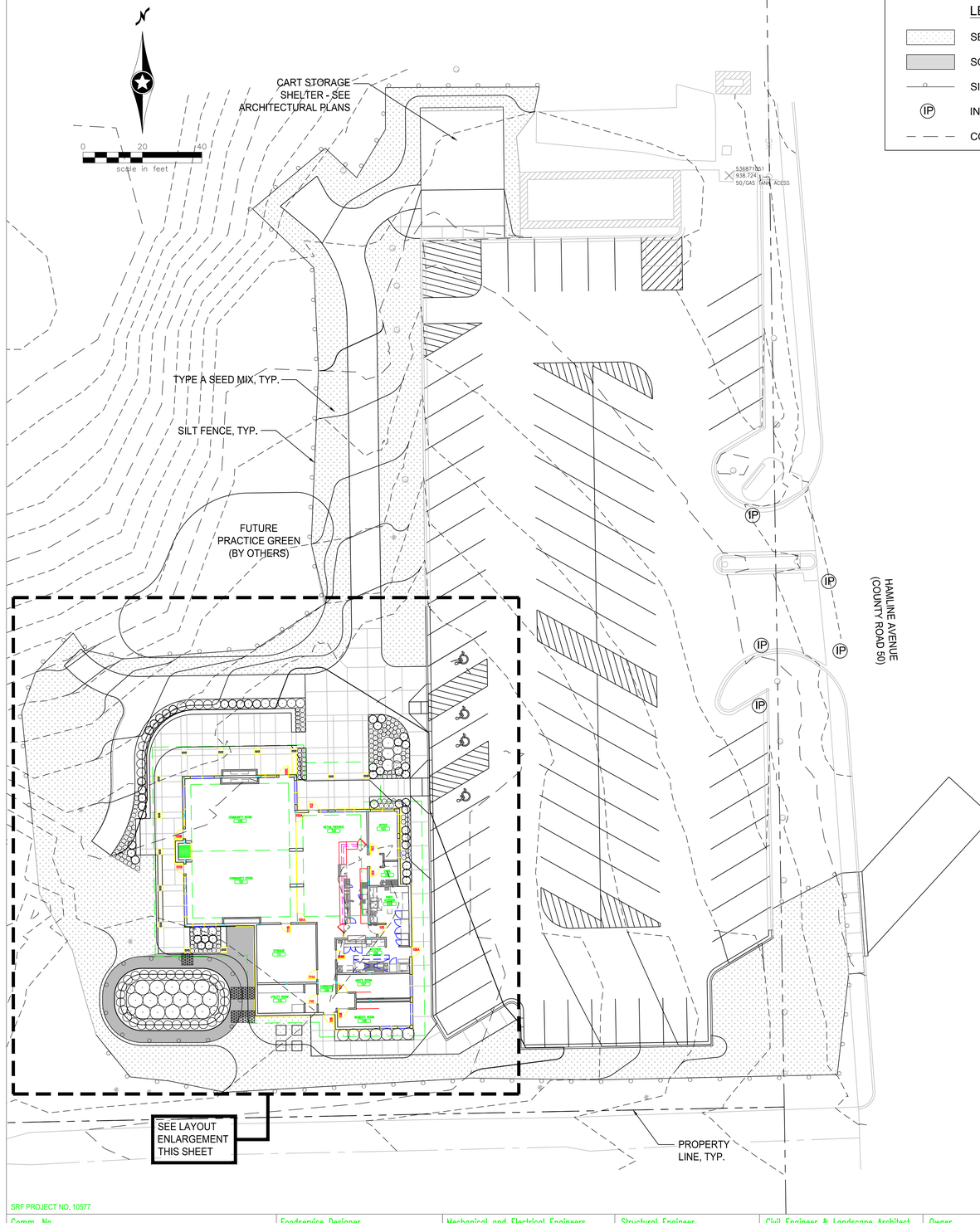
Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Overall Grading & Utilities Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.
By:
Title: Professional Engineer Date:
Registration Number:

Drawing No.
c3.0

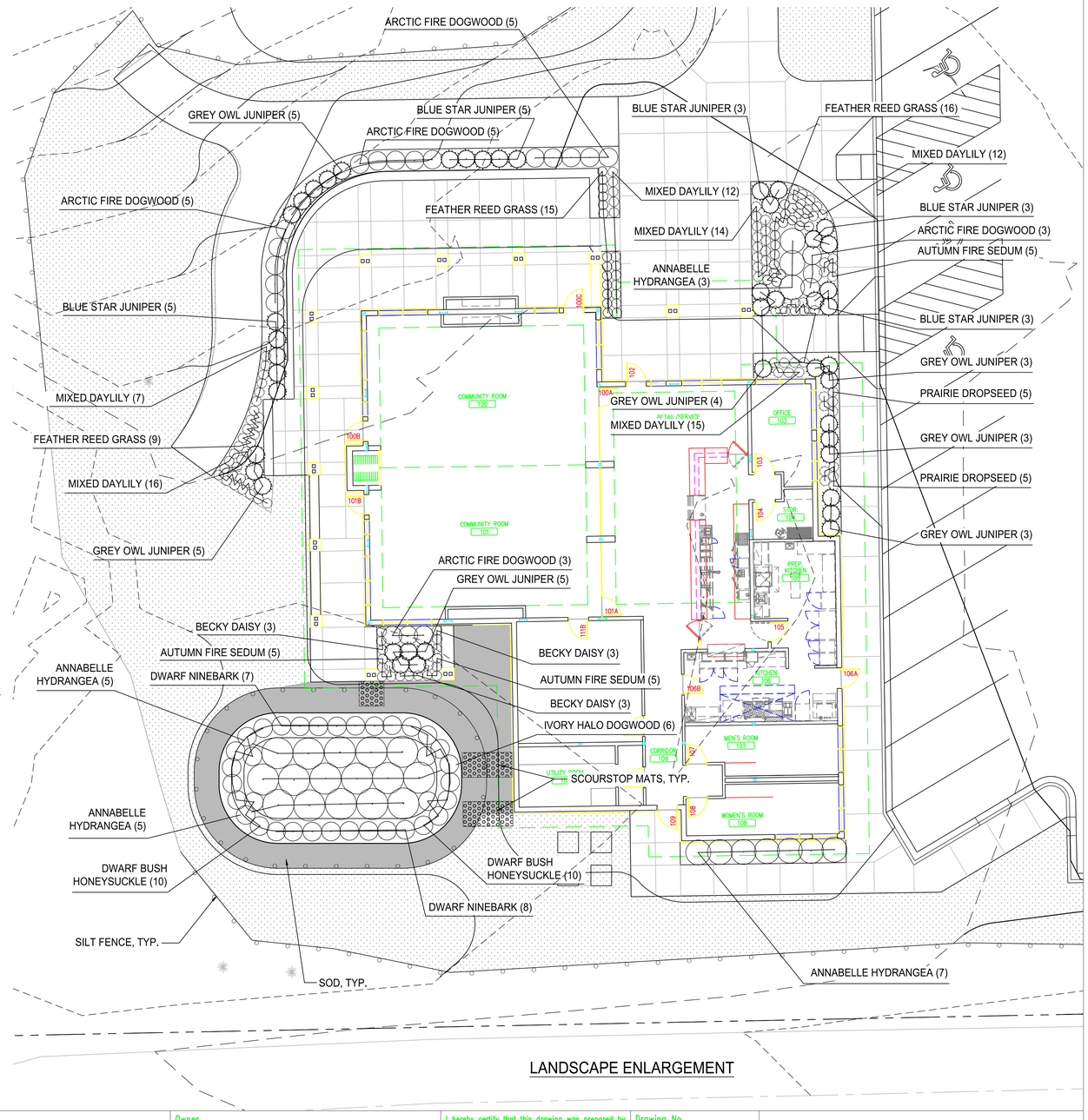
HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. - MINNEAPOLIS, MN 55407
TEL (612)824-1932 - FAX (612)824-7866



LEGEND

- SEED MIX TYPE A
- SOD
- SILT FENCE
- (IP) INLET PROTECTION
- CONSTRUCTION LIMITS

NOTE:
SEE SHEET c4.1 FOR PLANT SCHEDULE AND PLANTING DETAILS



LANDSCAPE ENLARGEMENT

SRF PROJECT NO. 10577

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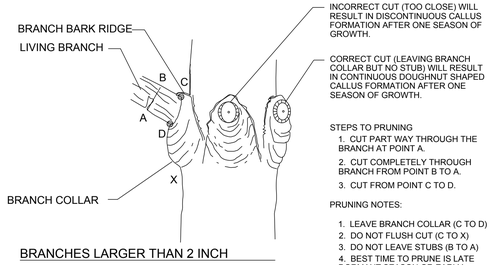


BRANCHES LARGER THAN 2 INCH

STEPS TO PRUNING

1. CUT PART WAY THROUGH THE BRANCH AT POINT A.
2. CUT COMPLETELY THROUGH BRANCH FROM POINT B TO A.
3. CUT FROM POINT C TO D.

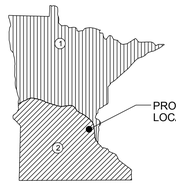
PRUNING NOTES:

1. LEAVE BRANCH COLLAR (C TO D)
2. DO NOT FLUSH CUT (C TO X)
3. DO NOT LEAVE STUBS (B TO A)
4. BEST TIME TO PRUNE IS LATE DORMANT SEASON OR EARLY SPRING.
5. AVOID PRUNING OAKS IN APRIL, MAY, JUNE OR JULY.
6. IMMEDIATELY PAINT OAK WOUNDS MADE IN APRIL, MAY, JUNE OR JULY WITH LATEX PAINT OR SHELLAC.

BRANCHES SMALLER THAN 2" IN DIAMETER WILL BE CUT JUST BEYOND A LATERAL BUD OR ANOTHER SMALL LATERAL BRANCH. THE CUT WILL BE SHARP, CLEAN, SLIGHTLY ANGLED.

BRANCHES SMALLER THAN 2 INCH

PRUNING



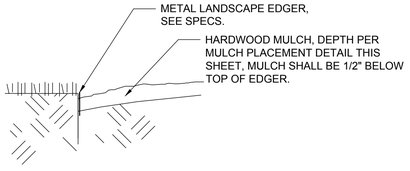
● - INDICATES PROJECT LOCATION

1. BARE ROOT PERENNIALS MUST BE INSTALLED IN THE SPRING NO LATER THAN JUNE 1ST OR FOLLOW THE FALL DECIDUOUS PLANTING DATES.
2. ACTUAL DATES MAY CHANGE DEPENDING UPON SEASONAL CONDITIONS, AS DETERMINED BY THE ENGINEER.
3. FALL PLANTING IS NOT ALLOWED FOR BARE ROOT FORM OF THE FOLLOWING SPECIES: HAWTHORN, DOGWOOD, POPLAR, HACKBERRY, LINDEN, IRONWOOD, HONEYLOCUST, BIRCH, MOUNTAIN ASH, MAPLE, WILLOW, CRABAPPLE, PLUM/CHERRY, OAKS, AND SUMAC.

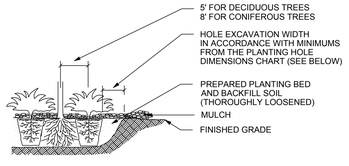
PLANTING DATE BY ZONES

KEY	SPRING				FALL	
	DECIDUOUS	CONIFEROUS	PERENNIALS	SEEDLINGS	DECIDUOUS	CONIFEROUS
1	APRIL 21 TO JUNE 1	APRIL 21 TO JUNE 1	MAY 1 TO JUNE 15	APRIL 21 TO JUNE 1	OCT. 1 TO NOV. 1	AUG. 25 TO SEPT. 16
2	APRIL 7 TO JUNE 1	APRIL 7 TO MAY 17	MAY 1 TO JUNE 15	APRIL 7 TO MAY 17	OCT. 10 TO NOV. 15	AUG. 25 TO SEPT. 15

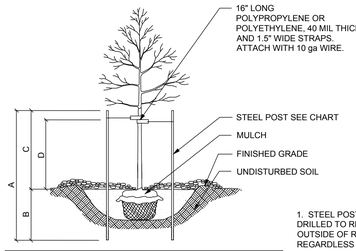
PLANT INSTALLATION PERIOD



MULCH AND EDGER DETAIL



PLANTING SPACING OF MASS BEDS

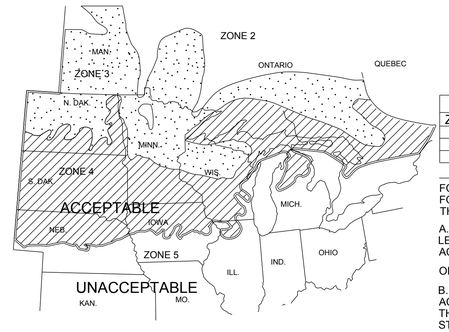


STEEL POST SIZING

CALIPER	STEEL POST TYPE	A	B	C	D
LESS THEN 4 INCHES	ROLLED STEEL FENCE POST (Mn/DOT 3403) OR APPROVED EQUAL.	7'-0"	3'-0" MIN.	4'-0"	3'-0"
GREATER THEN 4 INCHES	10', 2.2 LB. FLANGED CHANNEL STEEL SIGN POST (Mn/DOT 3401) OR APPOVED EQUAL.	10'-0"	4'-0" MIN.	6'-0"	5'-0"

1. STEEL POSTS TO BE NOTCHED OR DRILLED TO RETAIN GUY WIRES. PLACE OUTSIDE OF ROOT BALL. DRIVE PLUMB REGARDLESS OF GROUND SLOPE.
2. REQUESTS TO SUBSTITUTE RUBBER HOSE AND WIRE GUYING SYSTEMS WILL NOT BE APPROVED.
3. TREE STAKING IS NOT REQUIRED UNLESS SPECIFIED OR NECESSARY TO MAINTAIN TREES IN A PLUMB CONDITION WHERE VANDALISM, SOIL, OR WIND CONDITIONS ARE A PROBLEM, OR AS REQUESTED BY THE ENGINEER.
4. REMOVE AFTER ONE YEAR.

STAKING AND GUYING



ZONE MAP

ZONES	LEGEND	TEMPERATURE RANGE
2		-40 TO -50
3		-30 TO -40
4		-20 TO -30

FOR ALL PLANT STOCK, DOCUMENT ACCEPTABILITY FOR HARDINESS IN THE MINNESOTA ZONE WHERE THE PROJECT SITE IS LOCATED, AS FOLLOWS:

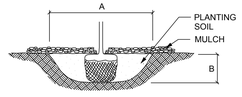
A. PLANT STOCK CONTINUOUSLY GROWN FOR AT LEAST THE LAST TWO YEARS WITHIN THE ACCEPTABLE LIMITS SHOWN.

OR

B. PLANT STOCK, GROWN OUTSIDE THE ACCEPTABLE GROWING RANGE LIMITS, HAVING THE SEED SOURCE OR ROOT AND GRAFT STOCK ORIGINATING FROM THE ACCEPTABLE LIMITS SHOWN.

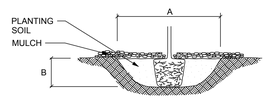
ACCEPTABLE PLANT STOCK GROWING RANGE LIMITS

SOURCE: U.S.D.A. PLANT HARDINESS ZONE MAP



BALLED & BURLAPPED STOCK

1. SCARIFY SIDES AND BOTTOM OF HOLE.
2. PROCEED WITH CORRECTIVE PRUNING AS DIRECTED BY THE ENGINEER.
3. SET PLANT ON UNDISTURBED NATIVE SOIL OR THOROUGHLY COMPACTED PLANTING SOIL. INSTALL PLANT SO THE ROOT FLARE IS AT OR UP TO 2" ABOVE THE FINISHED GRADE WITH BURLAP AND WIRE BASKET, (IF USED), INTACT.
4. BACKFILL TO WITHIN APPROXIMATELY 12" OF THE TOP OF THE ROOTBALL, THEN WATER PLANT. REMOVE THE TOP 1/3 OF THE BASKET OR THE TOP TWO HORIZONTAL RINGS WHICHEVER IS GREATER. REMOVE ALL BURLAP AND NAILS FROM THE TOP 1/3 OF THE BALL. REMOVE ALL TWINE. REMOVE OR CORRECT STEM GIRDLING ROOTS.
5. SLIT REMAINING TREATED BURLAP AT 6" INTERVALS.
6. PLUMB AND BACKFILL WITH PLANTING SOIL.
7. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
8. BACK FILL VOIDS AND WATER SECOND TIME.
9. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.



CONTAINER STOCK

1. SCARIFY SIDES AND BOTTOM OF HOLE.
2. PROCEED WITH CORRECTIVE PRUNING OF TOP AND ROOT AS DIRECTED BY THE ENGINEER.
3. REMOVE CONTAINER AND SCORE OUTSIDE OF SOIL MASS TO REDIRECT AND PREVENT CIRCLING FIBROUS ROOTS. REMOVE OR CORRECT STEM GIRDLING ROOTS.
4. SET PLANT ON UNDISTURBED NATIVE SOIL OR THOROUGHLY COMPACTED PLANTING SOIL. INSTALL PLANT SO THE TOP OF THE ROOT FLARE IS AT OR UP TO 2" ABOVE THE FINISHED GRADE.
5. PLUMB AND BACKFILL WITH PLANTING SOIL.
6. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
7. BACK FILL VOIDS AND WATER SECOND TIME.
8. PLACE MULCH WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE.

INSTALLATION OF PLANTS

PLANTING HOLE DIMENSIONS

HOLE DEPTH FOR B&B AND CONTAINER PLANTS SHALL NOT EXCEED MEASURMENT FROM ROOT FLAIR TO BOTTOM OF SOIL BALL.

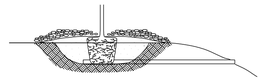
PLANT TYPE	PLANT SIZE UP TO AND INCLUDING	(A) MINIMUM HOLE WIDTH	(B) APPROXIMATE HOLE DEPTH
DECIDUOUS & ORNAMENTAL TREES	(4') B.B.	(42")	(11")
	(5') B.B.	(48")	(12")
	(6') B.B.	(54")	(14")
	(8') B.B.	(56")	(16")
	(10') B.B.	(66")	(16")
	(12') B.B.	(66")	(16")
	(1") B.B.	(48")	(14")
	(1.25") B.B.	(56")	(15")
	(1.5") B.B.	(61")	(15")
	(1.75") B.B.	(66")	(16")
	(2") B.B.	(72")	(16")
	(2.5") B.B.	(84")	(19")
	(3") B.B.	(96")	(20")
	(3.5") B.B.	(114")	(23")
	(4") B.B.	(126")	(25")
CONIFEROUS TREES AT LEAST 2/3 OF ALL CONIFER BRANCHES WILL CONTAIN TERMINAL BUDS	(2') B.B.	(38")	(10")
	(3') B.B.	(42")	(11")
	(4') B.B.	(51")	(13")
	(5') B.B.	(60")	(13")
	(6') B.B.	(66")	(15")
	(7') B.B.	(72")	(16")
	(8') B.B.	(81")	(18")
	(9') B.B.	(90")	(20")
	(10') B.B.	(102")	(21")
	(12') B.B.	(114")	(24")
CONTAINER GROWN PLANTS	CELLPACKS / PLUGS	(6")	(2.5")
	(2.25") CONT.	(7")	(3")
	(3.5") CONT.	(10")	(3")
	(4") CONT.	(11")	(4")
	(4.5") CONT.	(13")	(4")
	(6" / 1 QT.) CONT.	(15")	(5.5")
	(#1) CONT.	(18")	(6")
	(#2) CONT.	(23")	(7.5")
	(#3) CONT.	(29")	(8.5")
	(#5) CONT.	(30")	(11")
	(#7) CONT.	(37")	(11")
	(#15) CONT.	(44")	(14")
	(#10) CONT.	(45")	(15")
	(#20) CONT.	(60")	(16")
	(#25) CONT.	(72")	(17")

PLANT SCHEDULE

QTY	BOTANICAL NAME	SIZE	ROOT	NOTES
DECIDUOUS AND EVERGREEN SHRUBS				
23	*Juniperus virginiana 'Grey Owl'* **GREY OWL JUNIPER**	#5 GAL.	CONT	
19	*Juniperus squamata 'Blue Star'* **BLUE STAR JUNIPER**	#5 GAL.	CONT	
21	*Cornus stolonifera 'Farrow'* **ARCTIC FIRE DOGWOOD**	#5 GAL.	CONT	
20	*Hydrangea arborescens 'Annabelle'* **ANNABELLE HYDRANGEA**	#5 GAL.	CONT	
6	*Cornus alba 'Bailhalo'* **IVORY HALO DOGWOOD**	#5 GAL.	CONT	
15	*Physocarpus opulifolius 'Donna May'* **LITTLE DEVIL NINEBARK**	#5 GAL.	CONT	
20	*Diervilla lonicera* **DWARF BUSH HONEYSUCKLE**	#5 GAL.	CONT	
PERENNIALS AND ORNAMENTAL GRASSES				
15	*Sedum x 'Autumn Fire'* **AUTUMN FIRE SEDUM**	#1 GAL.	CONT	
9	*Leucanthemum x superbum 'Becky'* **BECKY DAISY**	#1 GAL.	CONT	
40	*Calamagrostis acutiflora 'Karl Foerster'* **FEATHER REED GRASS**	#1 GAL.	CONT	
10	*Sporobolus heterolepis 'Tara'* **PRAIRIE DROPSEED**	#1 GAL.	CONT	
	See Below for Species **MIXED DAYLILY**	#1 GAL.	CONT	
19	*Hemerocallis 'Red Volunteer'* **RED VOLUNTEER DAYLILY**	#1 GAL.	CONT	
19	*Hemerocallis 'Stella Supreme'* **STELLA SUPREME DAYLILY**	#1 GAL.	CONT	
19	*Hemerocallis 'Lavender Stardust'* **LAVENDER STARDUST DAYLILY**	#1 GAL.	CONT	
19	*Hemerocallis 'South Seas'* **SOUTH SEAS DAYLILY**	#1 GAL.	CONT	

INSTALL GRANULAR FILTER

1. EXCAVATE HOLE OR BED TO ALLOW PLACING THE TOP OF ROOT MASS 1"-3" HIGHER THAN FINISHED GRADE.
2. AUGER 8" DIAMETER HOLES ENTIRELY THROUGH IMPERVIOUS OR POORLY DRAINED HARD PAN SOIL LAYER TO ADEQUATELY DRAIN SUBSOIL.
3. TEST FOR POSITIVE DRAINAGE. RE-AUGER AN ADDITIONAL 8" IF NESSECARY FOR POSITIVE DRAINAGE.
4. THOUROUGHLY BACKFILL AUGER HOLES WITH A UNIFORM INCORPORATED MIXTURE OF 50% SAND AND 50% INPLACE SOIL.
5. COMPLETE PLANTING ACCORDING TO INSTALLATION OF PLANTS (Mn/DOT2571.3F).



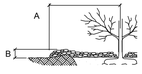
INSTALL TILE DRAINAGE

1. EXCAVATE HOLE OR BED TO ALLOW PLACING THE TOP OF THE ROOT MASS 1"-3" HIGHER THAN FINISHED GRADE.
2. INSTALL 4" MINIMUM DIAMETER DRAIN TILE DAYLIGHTING AT A LOWER GRADE, AS APPROVED BY THE ENGINEER.
3. COMPLETE PLANTING ACCORDING TO INSTALLATION OF PLANTS (Mn/DOT2571.3F).

NOTE:
1. THE NEED FOR USING ALTERNATIVE PLANTING DETAILS AND WHICH TYPE TO USE ARE DETERMINED BY THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENGINEER.

ALTERNATIVE PLANTING FOR POORLY DRAINED SOIL

TYPE OF PLANT	A CENTER OF PLANT TO MULCH LINE	B DEPTH OF MULCH
CONIFEROUS TREES	3' MIN.	4"-6"
DECIDUOUS TREES	3' MIN.	4"-6"
CONIFEROUS SHRUBS	3' MIN.	4"-6"
DECIDUOUS SHRUBS	3' MIN.	4"-6"
VINES	2' MIN.	4"-6"
PERENNIALS	2" MIN.	3"-4"
MACHINE-TRANSPLANTED TREES	12" BEYOND EDGE OF HOLE	4"-6"



1. PULL MULCH BACK NO LESS THAN 3" AND NO MORE THAN 6" FROM TREE TRUNKS.
2. SUBSIDING OR DETERIORATING MULCH IS ACCEPTABLE THROUGHOUT THE CONTRACT IF THE MULCH DEPTH IS MAINTAINED AT A MINIMUM 3" DEPTH.
3. IF THE MUCH DEPTH IS LESS THAN 3" ADDITIONAL MULCH IS REQUIRED TO PROVIDE THE MINIMUM DEPTH SPECIFIED IN CHART BELOW.
4. MULCH CONTAMINATED WITH SOIL MUST BE REMOVED AND REPLACED.

MULCH PLACEMENT

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55343
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Bassett Creek Business Center
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612-827-0805 fax

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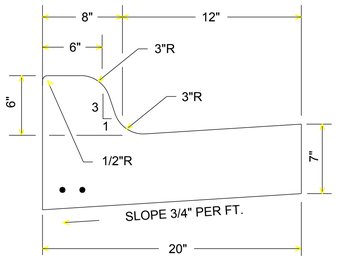
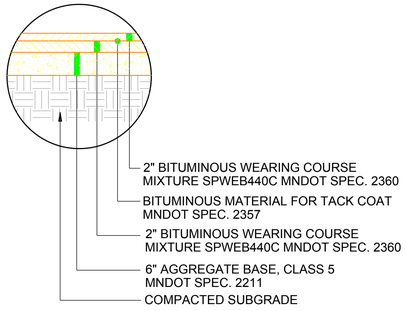


SEE MNDOT STANDARD PLATE NO. 7100H

NOTE: GUTTER SLOPE DIRECTION SHALL MATCH ADJACENT PAVEMENT - REFER TO GRADING PLANS

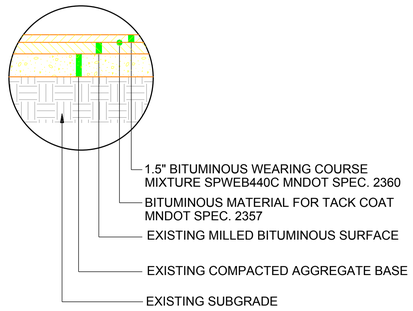
1 c5.0 B612 CURB & GUTTER

NOT TO SCALE



2 c5.0 BITUMINOUS PARKING LOT

NOT TO SCALE



3 c5.0 1.5" DEPTH BITUMINOUS OVERLAY

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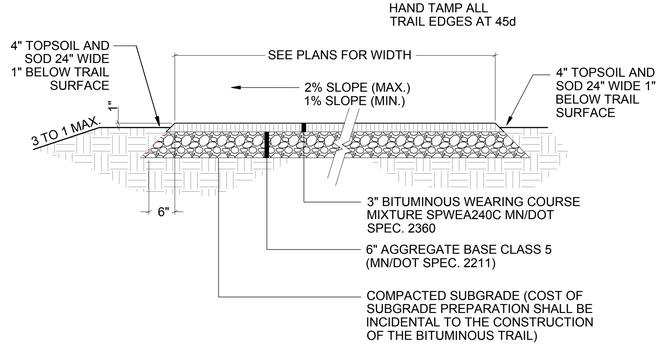
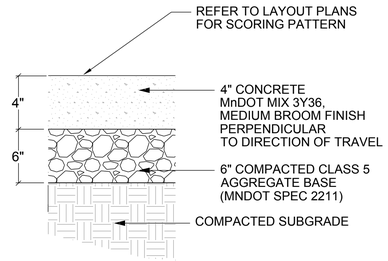


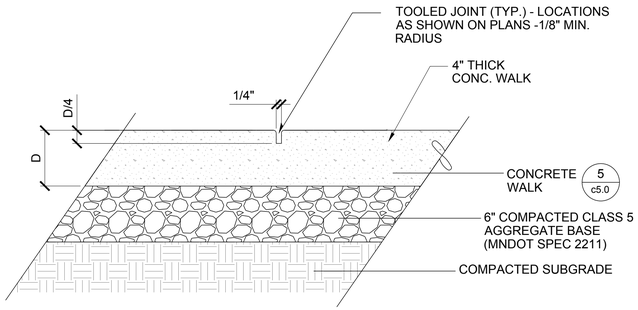
4 c5.0 BITUMINOUS TRAIL

NOT TO SCALE



5 C5.0 STANDARD CONCRETE WALK

NOT TO SCALE



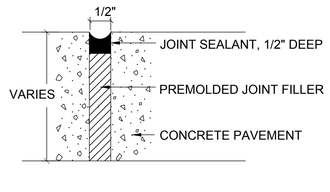
6 C5.0 TYPICAL CONCRETE WALK CONTROL JOINT

NOT TO SCALE

NOTE:

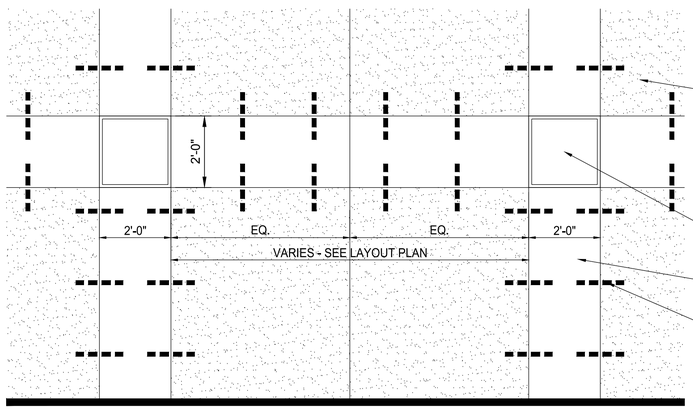
TYP. EXPANSION JOINT, SHALL BE - 30' O.C. MAXIMUM AND AS LOCATED ON PLANS AND WHERE WALK ABUTS ANY FIXED OBJECT (EG. WALLS, CURBS, MANHOLES ETC.)

EXPANSION JOINTS SHALL BE SEALED WITH A POURABLE GRAY SEALANT AND ARE INCIDENTAL TO SIDEWALK CONSTRUCTION.



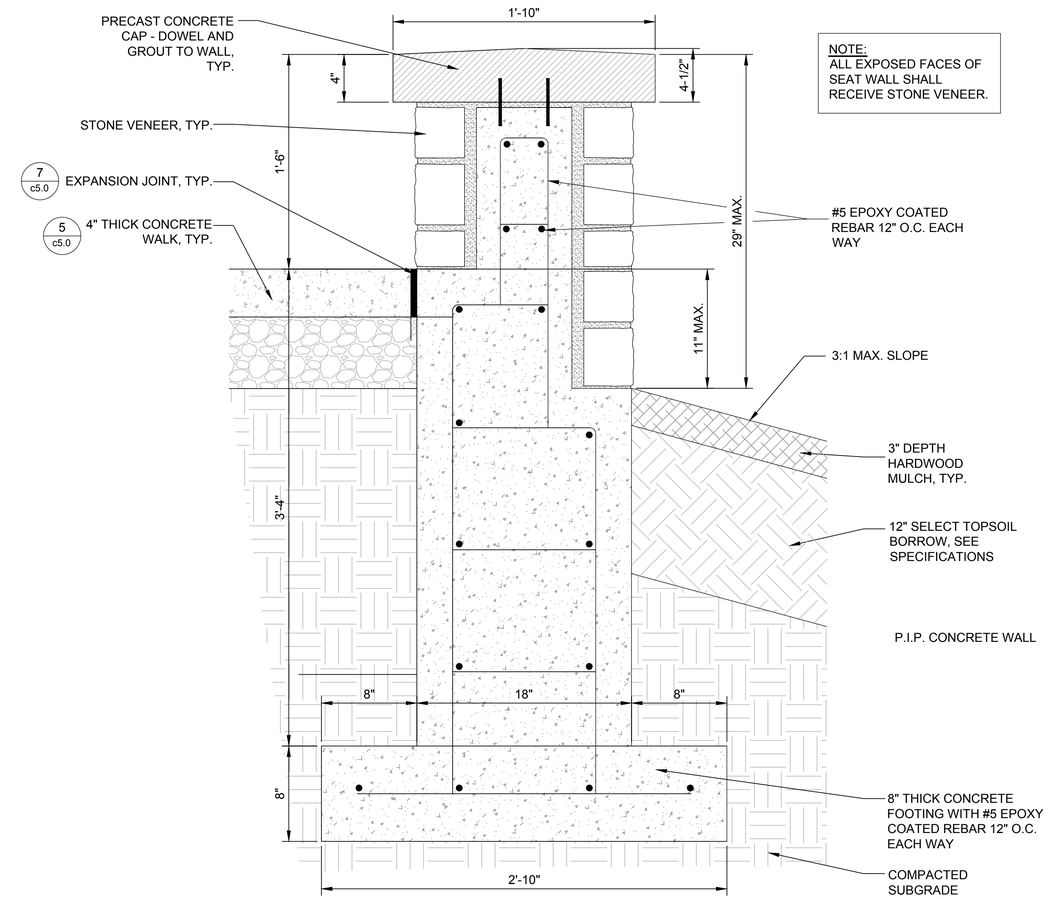
7 C5.0 TYPICAL CONCRETE WALK EXPANSION JOINT

NOT TO SCALE



8 C5.0 TYPICAL CONCRETE WALK CONTROL JOINT

NOT TO SCALE



NOTE:
ALL EXPOSED FACES OF SEAT WALL SHALL RECEIVE STONE VENEER.

SECTION VIEW

9 C5.0 STONE VENEER SEAT WALL

NOT TO SCALE

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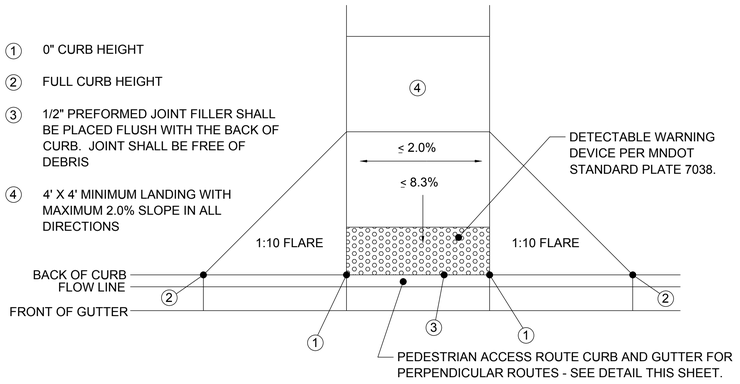


PERPENDICULAR RAMP

NOTES:
SEE MNDOT STANDARD PLATE 7038 FOR DETAILS ON DETECTABLE WARNING.

JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.

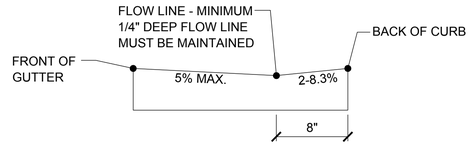
TOP OF CURB SHALL MATCH PROPOSED WALK GRADE.

LANDINGS SHALL BE LOCATED ANYTIME PEDESTRIANS CHANGE DIRECTIONS, AND AT THE TOP OF RAMPS WHICH HAVE RUNNING SLOPE GREATER THAN 5.0 PERCENT

CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.

DETECTABLE WARNING DEVICES SHALL MATCH SIDEWALK WIDTH UP TO THE NEAREST FOOT INCREMENT.

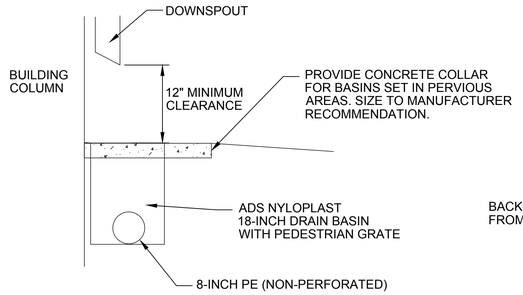
THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4" WITHIN FRONT OF GUTTER, FLOW LINE, OR BACK OF CURB.



PEDESTRIAN ACCESS ROUTE CURB AND GUTTER FOR PERPENDICULAR ROUTES.

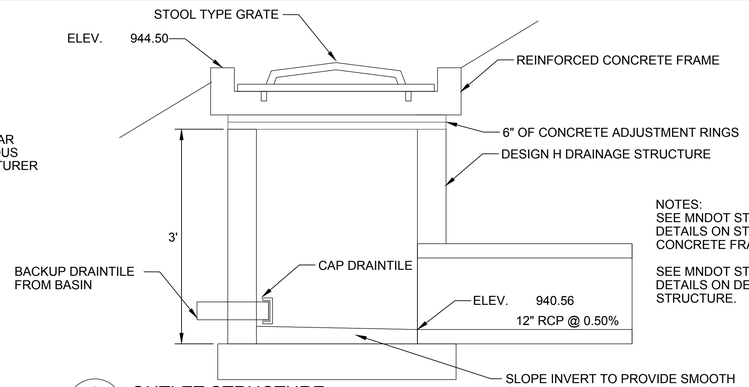
1 c5.1 PEDESTRIAN CURB RAMP

NOT TO SCALE



2 C5.1 DOWNSPOUT DRAIN TO BASIN

NOT TO SCALE

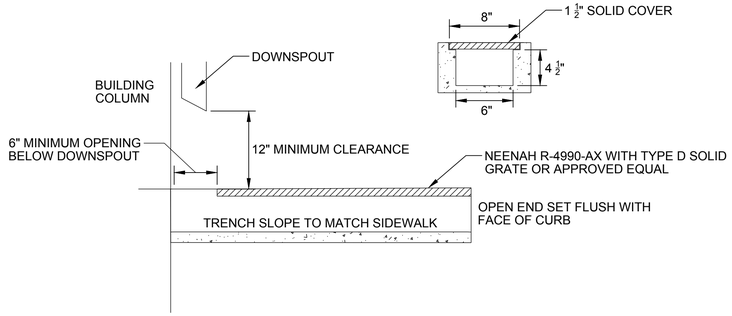


NOTES:
SEE MNDOT STANDARD PLATE 4143 FOR DETAILS ON STOOL GRATE AND CONCRETE FRAME.

SEE MNDOT STANDARD PLATE 4006 FOR DETAILS ON DESIGN H DRAINAGE STRUCTURE.

3 C5.1 OUTLET STRUCTURE

NOT TO SCALE



4 C5.1 TRENCH DRAIN

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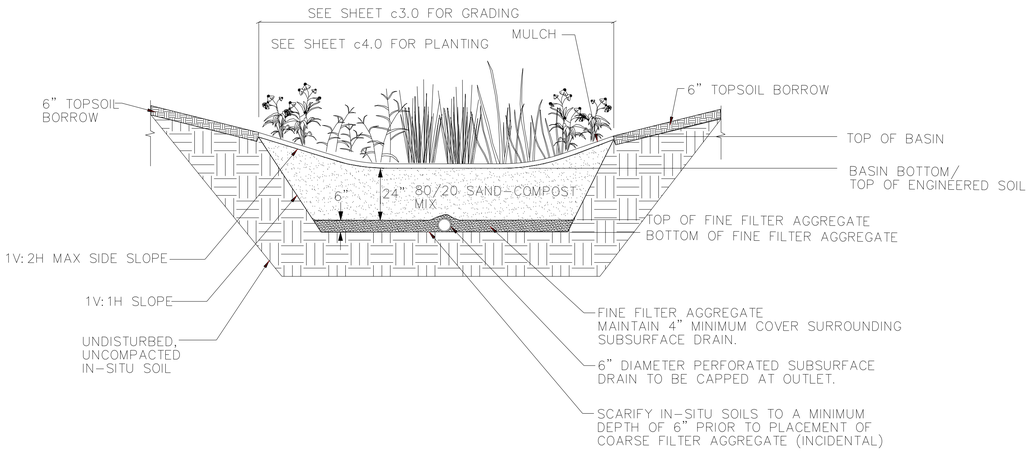

5 C5.1 BIORETENTION AREA

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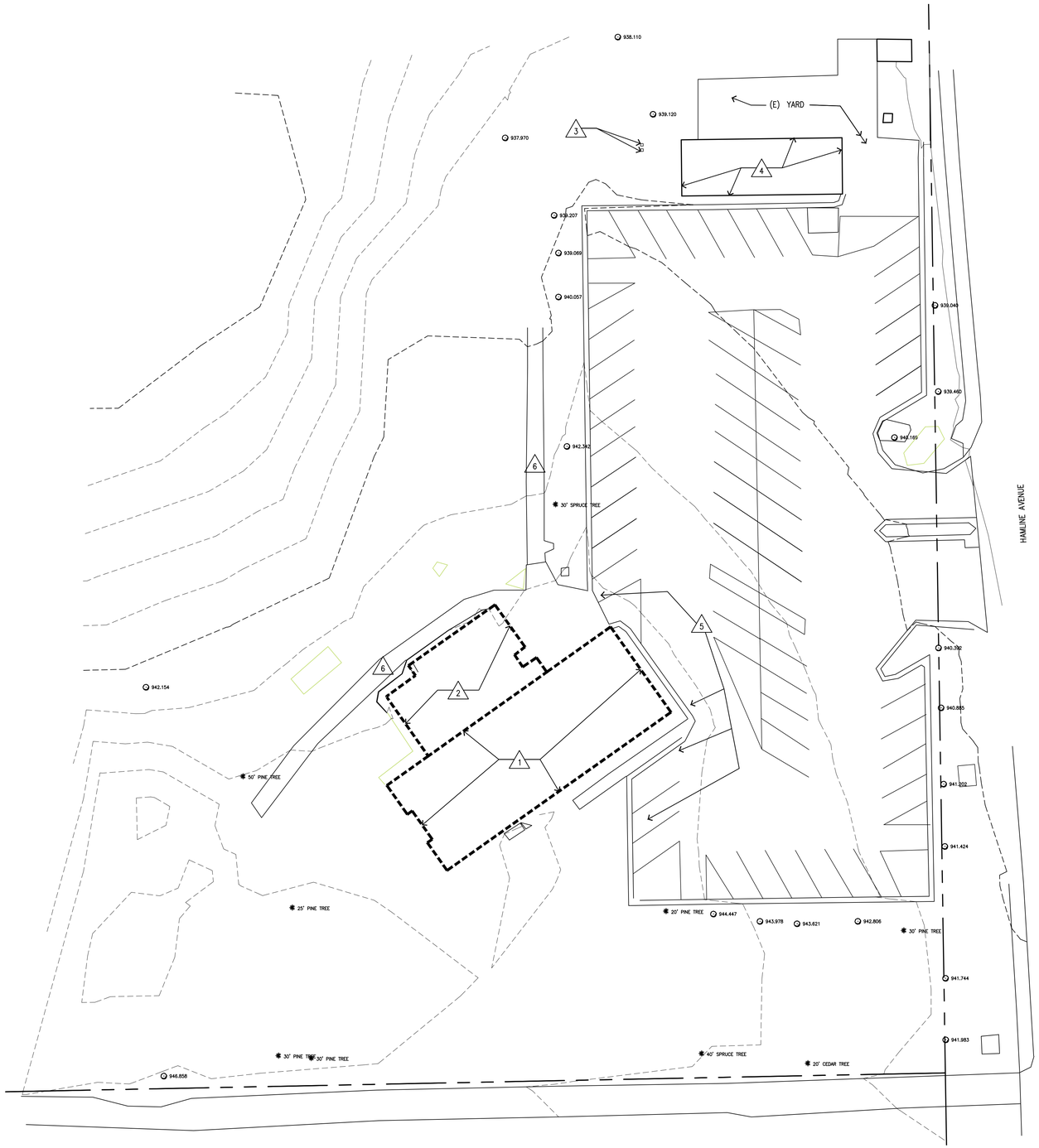

1 DEMOLITION PLAN
1" = 20'-0"

NORTH

GENERAL DEMOLITION NOTES

1. FOR BITUMINOUS AND CONC. CURB REMOVAL, SEE CIVIL
2. FOR CONC. REMOVAL, SEE CIVIL
3. FOR TREE AND LANDSCAPE REMOVAL, SEE CIVIL

DEMOLITION PLAN KEY NOTES

1. REMOVE EXISTING 1-STORY, WOOD-FRAMED, ASPHALT SHINGLED BUILDING IN ITS ENTIRETY (APPROX. 3,260 SF), INCLUDING FOUNDATION ASSEMBLY AND UTILITIES - SEE CIVIL FOR ADDITIONAL INFORMATION
2. REMOVE EXISTING WOOD DECK, RAMP, AND ASSOCIATED HANDRAILS/GUARDRAIL ASSEMBLIES IN THEIR ENTIRETY (APPROX. 1,300 SF)
3. RELOCATE ELECTRICAL PEDESTAL AS REQ'D FOR NEW CART SHED - SEE ELECTRICAL
4. EXISTING MAINTENANCE BUILDING TO REMAIN - PROTECT DURING CONSTRUCTION
5. SEE CIVIL FOR EXTENTS OF CURBING AND PAVING REMOVAL
6. SEE CIVIL FOR TRAIL/PATH REMOVAL

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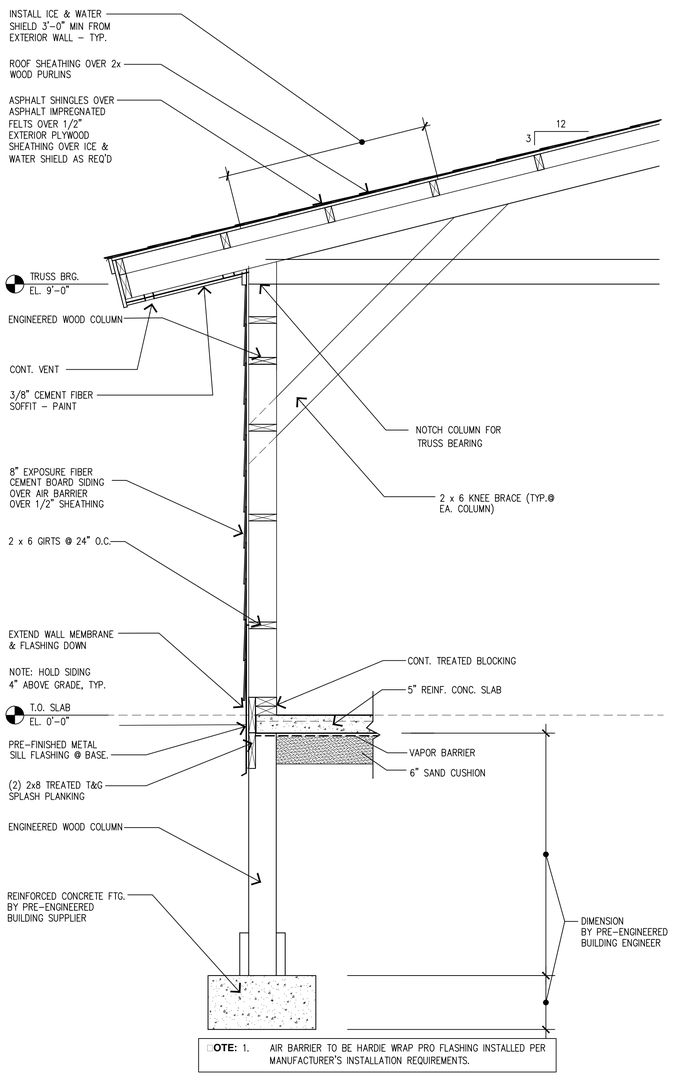
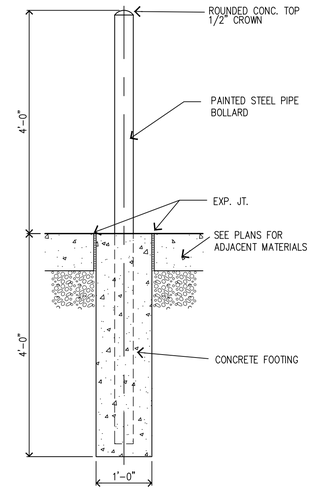
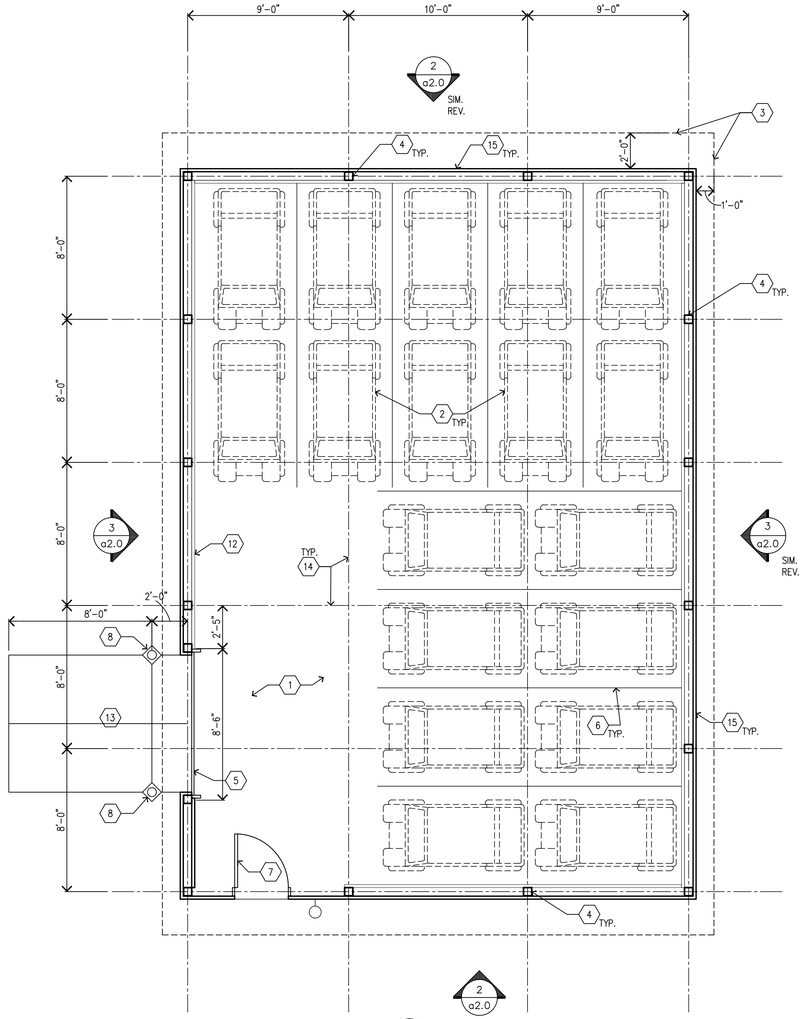


5 TYP. WALL SECTION
3/4"=1'-0"



4 BOLLARD DETAIL
3/4"=1'



1 FLOOR PLAN
1/4"=1'-0"

NORTH

CART STORAGE BUILDING GENERAL NOTES

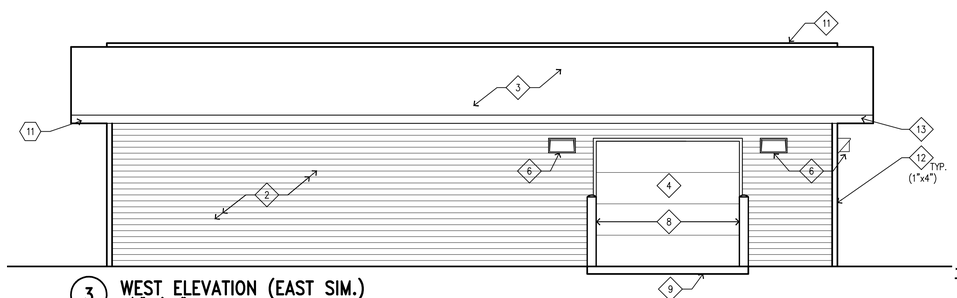
1. GENERAL CONTRACTOR SHALL PROVIDE A PRE-ENGINEERED POST FRAME BUILDING FROM A POST FRAME BUILDING MANUFACTURER.
2. BUILDING IS TO BE A PRE-ENGINEERED POST-FRAME STRUCTURE. SEE SPECIFICATIONS.
3. GENERAL CONTRACTOR SHALL PROVIDE SIGNED ENGINEER DRAWINGS ROM A PRE-ENGINEERED POST FRAME BUILDING MANUFACTURER WITH AN ENGINEER LICENSED IN THE STATE OF MINNESOTA FOR ALL STRUCTURAL COMPONENTS, TO INCLUDE FOOTINGS, STRUCTURAL FRAME AND ROOF STRUCTURE. SIGNED ENGINEER DRAWINGS TO BE SUBMITTED FOR PERMITTING.
4. GENERAL CONTRACTOR SHALL PROVIDE THE FOLLOWING ITEMS FROM A PRE-ENGINEERED POST-FRAME BUILDING MANUFACTURER: FOUNDATIONS, PRIMARY & SECONDARY STRUCTURAL FRAME, ROOF TRUSS FRAMING AND SHEATHING. POST-FRAME BUILDING SUPPLIER TO PROVIDE ROUGH OPENINGS FOR DOORS, WINDOWS, LOUVERS AND VENTS PER THE DRAWINGS.
5. GENERAL CONTRACTOR MAY PROVIDE SHINGLE ROOF ASSEMBLY AND SIDING FROM A PRE-ENGINEERED POST FRAME BUILDING MANUFACTURER IF IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
6. THE BUILDING SECTIONS AND DETAILS ARE SHOWN FOR DESIGN INTENT. THE GENERAL CONTRACTOR SHALL PROVIDE A PRE-ENGINEERED POST FRAME BUILDING WITH COMPONENTS AND MATERIALS THAT CONFORM TO MEET ALL STATE AND LOCAL CODES.
7. ALL DIMENSIONS TO CENTER OF COLUMN U.N.O.
8. PAINT ALL H.M. DOOR FRAMES
9. SEE CIVIL, STRUCT., MECH., & ELEC. DRAWINGS FOR FURTHER INFORMATION
10. NOT USED
11. GENERAL CONTRACTOR TO VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OR OWNER OF ANY DISCREPANCIES.

CART STORAGE BUILDING KEY NOTES

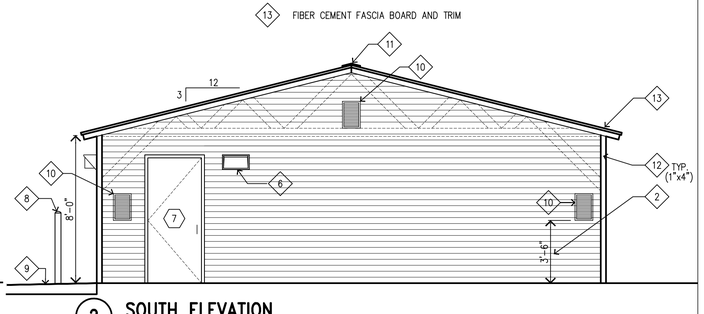
1. MINIMUM 5" CONCRETE INTERIOR SLAB REINFORCED W/6x6-W2.1xW2.1 WELDED WIRE REINFORCING LOCATED IN UPPER 1/3 OF SLAB. CONCRETE TO HAVE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI; MAXIMUM 3/4" AGGREGATE; MAXIMUM WATER-CEMENT RATIO OF 0.48; 6% +/- 1.5% ENTRAINED AIR AT ALL CONCRETE IN UNHEATED OR EXTERIOR EXPOSURES. SUBMIT MIX DESIGNS FOR APPROVAL PRIOR TO PLACEMENT. CUT CONTROL JOINTS AT MAXIMUM SPACING OF 15 FEET O.C. WITHIN 8 HOURS OF SLAB PLACEMENT (NO L-SHAPED PANELS OF PANEL WITH LENGTH/WIDTH RATIO GREATER THAN 1.5) SUBMIT JOINT LAYOUT TO ARCHITECT FOR APPROVAL
2. GOLF CART SHOWN FOR REFERENCE ONLY-CARTS BY OWNER
3. LINE OF ROOF OVERHANG ABOVE
4. LAMINATED WOOD COLUMN
5. 8'-0" WIDE X 7'-0" HIGH OVERHEAD DOOR (INSULATED)
6. PAINTED PARKING LINES BY OTHERS
7. INSULATED H.M. PASSAGE DOOR (3'-0" X 7'-0") W/ PAINTED H.M. DOOR FRAME
8. 6" ST. PIPE BOLLARD, CONC. FILLED. SET IN CONC. FOOTING TO 48" BELOW GRADE, DIAMOND CONTROL JOINT AT SLAB
9. LAMINATED ASPHALT SHINGLE ASSEMBLY TO MATCH COMMUNITY BUILDING
10. PREPRIMED FIBER CEMENT FASCIA ASSEMBLY - PAINT
11. 12" X 18" PREFINISHED METAL WALL LOUVER (EACH GABLE)
12. 2"X12" WOOD BUMPER @ PERIMETER (2'-2" HIGH TO TOP)
13. 5" CONCRETE APRON-SLOPE AWAY FROM BUILDING 1/4"/FOOT. SEE CART SHED KEYNOTE #1 FOR ADDITIONAL INFORMATION
14. CONTROL JOINT
15. CONT. TREATED BASE AROUND ENTIRE PERIMETER

CART STORAGE BUILDING ELEVATION KEY NOTES

1. NOT USED
2. FIBER CEMENT BOARD SIDING; SIDING TO MATCH COMMUNITY BUILDING, PAINT
3. LAMINATED ASPHALT SHINGLES
4. INSULATED OVERHEAD DOOR
5. H.M. FRAME AND H.M. INSULATED DOOR, PAINTED
6. EXTERIOR LIGHT FIXTURE, SEE ELECTRICAL
7. NOT USED
8. 6" ST. PIPE BOLLARD, CONC. FILLED. SUNK IN CONC. FOOTING TO 48" BELOW GRADE, DIAMOND CONTROL JOINT AT SLAB - SEE 4/a2.0
9. 5" THICK REINFORCED CONCRETE APRON
10. MECH. LOUVER, SEE MECHANICAL, PAINT TO MATCH SIDING
11. CONTINUOUS RIDGE VENT
12. 5/4" FIBER CEMENT TRIM BOARD (SIZE IN PARENTHESES)
13. FIBER CEMENT FASCIA BOARD AND TRIM



3 WEST ELEVATION (EAST SIM.)
1/4"=1'-0"



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

Comm. No. 1758	Foodservice Designer: premier	Mechanical and Electrical Engineers: emanuelson-podas consulting engineers, 10401 Bren Road East, Minnetonka, MN 55343, ph: 952-930-0050, fax: 952-930-0777, www.epinc.net	Structural Engineer: Mattson Macdonald Young structural engineers, Bassett Creek Business Center, 901 North 3rd Street, Suite 100, Minneapolis, MN 55401, 612-827-7825 voice, 612-827-0805 fax	Civil Engineer & Landscape Architect: SRF Consulting Group, Inc.	Owner	Owner: City of Roseville; Project: Cedarholm Community Building; Title: Cart Storage Building	I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota. By: Tim McIlwain. Title: Architect Date: 07/10/2017. Registration Number: 22541	Drawing No. a2.0

ISSUE DATE
06/06/2017 - DESIGN DEVELOPMENT SET
07/10/2017 - BID SET

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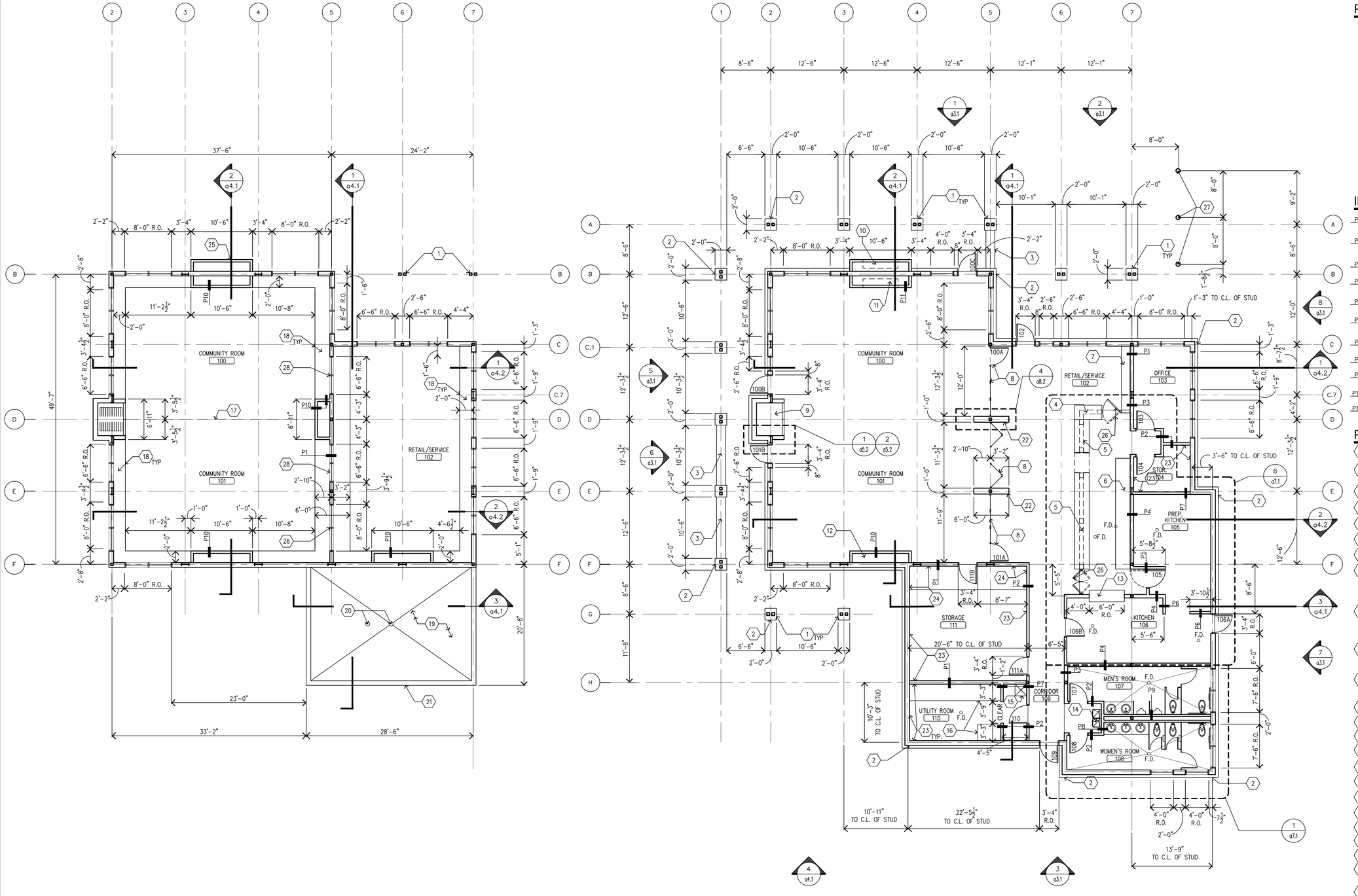

FLOOR PLAN GENERAL NOTES

1. ALL OVERALL EXTERIOR BUILDING DIMENSIONS TO CENTERLINE OF STUD WALL, NOT TO FACE OF EXTERIOR WALL FINISH
2. INTERIOR WALLS DIMENSIONED TO CENTERLINE OF STUD U.N.O.
3. SLOPE EXTERIOR CONCRETE SLABS AWAY FROM BUILDINGS AT 1/4" PER FOOT U.N.O. – NO PONDING OF WATER ALLOWED – SEE CIVIL DRAWINGS
4. SLOPE INTERIOR SLAB TO FLOOR DRAINS FROM CORNERS OF ROOM AT 1/4" PER FOOT, SET DRAINS SO NO LIP OCCURS AT EDGE OF FLOOR TILE FINISH
5. ALL DOORS TO HAVE ADA COMPLIANT SIGNAGE
6. SEE STRUCTURAL FOR ALL IN WALL STEEL FRAMING INFORMATION
7. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION
8. SEE CIVIL AND LANDSCAPE DRAWINGS FOR MORE INFORMATION RELATED TO SITE WORK AND DOWNSPOUT LOCATIONS
9. SEE FOODSERVICE DRAWINGS FOR KITCHEN EQUIPMENT
10. SEE SHEET a2.1i FOR FINISHES INFORMATION
11. SEE SHEET a7.1 FOR ENLARGED PLANS OF KITCHEN AND TOILET ROOMS
12. SEE SHEET a8.1 FOR DOOR SCHEDULE AND WINDOW/GLASS TYPES
13. FLOOR DRAINS (F.D.) SHOWN FOR REFERENCE ONLY – SEE MECHANICAL

INTERIOR PARTITION TYPES PX

- P1 — 2"X6" STUD FRAMING @ 16" O.C. WITH 5/8" GYP. BD. EACH FACE OF WALL.
- P2 — 2"X4" STUD FRAMING @ 16" O.C. WITH 5/8" GYP. BD. EACH FACE OF WALL.
- P3 — SAME AS P1 EXCEPT PROVIDE 5/8" CEMENT BOARD AT WALL TILE FINISH
- P4 — 2" X 6" STUD FRAMING @ 16" O.C. WITH 5/8" CEMENT BOARD AT WALL TILE FINISH AND 1/2" CEMENT BOARD AT FRP FINISH
- P5 — SAME AS P4 EXCEPT 2" X 4" STUD FRAMING
- P6 — 2"X4" STUD FRAMING @ 16" O.C. WITH 1/2" CEMENT BOARD EACH FACE OF WALL AT FRP FINISH
- P7 — 2" X 4" STUD FRAMING @ 16" O.C. WITH 5/8" GYP. BD. ONE FACE OF WALL AND 1/2" CEMENT BOARD AT FRP FINISH
- P8 — SAME AS P6 EXCEPT WALL TILE FINISH
- P9 — 2" X 4" STUD FRAMING @ 16" O.C. WITH 1/2" CEMENT BOARD AT WALL TILE FINISH – ONE SIDE ONLY, FULL HEIGHT
- P10 — 2" X 4" STUD FRAMING @ 16" O.C. WITH 5/8" GYP. BD. – ONE SIDE ONLY
- P11 — 2" X 6" STUD FRAMING @ 16" O.C. WITH 1/2" CEMENT BOARD AT STONE FINISH – ONE SIDE ONLY

FLOOR PLAN KEY NOTES

1. DUAL STEEL COLUMN (PRE-PRIMED FOR PAINT) AND STONE BASE ASSEMBLY – SEE DETAILS ON SHEET A4.4
2. DOWNSPOUT LOCATIONS TO GRADE – SEE CIVIL DRAWINGS FOR WATER COLLECTION AND ROUTING DETAILS
3. STONE LANDSCAPE PLANTER WALL AND CAP – SEE STRUCTURAL AND CIVIL DRAWINGS
4. ADA HEIGHT SERVICE COUNTER AND DIE WALL – SEE DETAILS ON a7.1 AND a7.2 – PROVIDE IN WALL STEEL SUPPORT POSTS WITH BASE PLATE, ANCHOR TO SLAB
5. SERVICE COUNTER AND DIE WALL – SEE DETAILS ON a7.1 AND a7.3 – PROVIDE IN WALL STEEL SUPPORT POSTS WITH BASE PLATE, ANCHOR TO SLAB
6. BACK SERVICE COUNTER AND BASE CABINETS – SEE SHEET a7.3
7. RETAIL SLAT WALL AND BASE CABINET MILLWORK – SEE DETAILS ON SHEET a7.1 AND a7.3
8. OPERABLE PARTITION WALL SYSTEM AND DOOR ASSEMBLY – BASIS OF DESIGN:
   - NANAWALL SL454
   - PREFIN. ALUM. FRAME W/ TEMP. GLASS
   - SEE SPECIFICATIONS
   - REP: KATIE STOMBAUGH, ALUMA SPEC INC., 651-451-9522, EXT. 094
9. OPERABLE ACOUSTIC PARTITION DIVIDER WALL SYSTEM – BASIS OF DESIGN:
   - MODERCO-SIGNATURE SERIES 8500
   - PAIRED PANELS
   - SEE SPECIFICATIONS
   - REP: CRAIG HIDDE, SKOLD COMPANIES, 612-655-1423
10. OUTDOOR GAS FIREPLACE UNIT – BASIS OF DESIGN:
    - MONESSEN-ODGR 500, 42", SST, W/SAFETY SCREEN
    - ZERO CLEARANCE AND VENT FREE UNIT
    - SEE SPECIFICATIONS
11. INDOOR GAS FIREPLACE UNIT – BASIS OF DESIGN:
    - NAPOLEAM-ASCENT B42, DIRECT VENT
    - ZEN FRONT (SAFETY SCREEN)
    - SEE SPECIFICATIONS
12. FEATURE WALL WITH TV CABINET MILLWORK ABOVE – SEE INTERIOR ELEVATIONS ON SHEET A7.2
13. KITCHEN PASS-THRU WINDOW AND SHELF – SEE FOOD SERVICE DRAWINGS
14. HIGH/LOW DRINKING FOUNTAIN WITH BOTTLE FILLER, SEE MECH. – PROVIDE IN-WALL BLOCKING AS REQUIRED
15. MOP SINK, SEE MECH. – PROVIDE SST SHELF W/ INTEGRAL MOP HANGERS AND HOOKS
16. 4" HIGH CONCRETE SERVICE PAD – SEE MECHANICAL
17. OPERABLE ACOUSTIC PARTITION DIVIDER WALL SYSTEM TRACK ABOVE – SEE RCP ON SHEET a9.1
18. MECHANICAL DISTRIBUTION SOFFIT – PROVIDE FULLY ENCLOSED 5/8" GYP. BD. OVER METAL STUD FRAMING ASSEMBLY – SEE DETAILS ON SHEET a4.3 AND a4.4
19. FLAT ROOF FOR MECHANICAL EQUIPMENT – SEE SHEET a2.2 AND MECH. DRAWINGS
20. PRIMARY AND OVERFLOW ROOF DRAINS – SEE MECHANICAL
21. PREFINISHED METAL COPING WITH CONTINUOUS KEEPER AT TOP OF FLAT ROOF PARAPET WALL ASSEMBLY – SEE DETAILS ON SHEET a5.2
22. PIER ASSEMBLY W/ MILLWORK DISPLAY – SEE DETAILS ON SHEET a5.3
23. PROVIDE 1/2" AC PLYWOOD FROM SLAB TO CEILING IN LIEU OF GYP. BD. – ENTIRE LENGTH OF WALLS, PROVIDE CONT. SEALANT AT ALL PANEL TO PANEL JOINTS AND TO CEILING, PAINT
24. PROVIDE FULL HEIGHT FRP WALL FINISH OVER 1/2" CEMENT BOARD IN LIEU OF GYP. BD. AT KITCHEN EQUIPMENT COUNTER LOCATION (4'-0" ON WEST WALL, 8'-0" ON NORTH WALL)
25. STONE WALL VENEER AT CHIMNEY ASSEMBLY – SEE DETAILS ON SHEET a4.4
26. MILLWORK, DOUBLE-ACTING WOOD GATE ASSEMBLY – SEE DETAILS ON SHEET a7.1 AND a7.3
27. PROVIDE (3) 30' HIGH FLAGPOLES – FLAGS BY OWNER
28. INTERIOR WINDOW FRAME AND TEMPERED GLAZING – SEE a7.2 AND a7.3

(2) FLOOR PLAN – HIGH (11'-0" A.F.F).
1/8"=1'-0"

NORTH

(1) FLOOR PLAN – LOW (4'-0" A.F.F).
1/8"=1'-0"

NORTH

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ph: 763-504-3000 fax: 763-504-3100
premiermpls.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7935 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Floor Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By: Tim McIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a2.1

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)824-1332 • FAX (612)824-7386

FINISHES SPECIFICATION

FLOOR FINISHES

CPT.1 CARPET TILE
MFR: INTERFACE
STYLE: 6003002504 FLOR41Z
COLOR: 603188 BLACK-BROWN

CPT.2 CARPET TILE
MFR: INTERFACE
COLLECTION: WHOLE EARTH
STYLE: 124990AK00
COLOR: 104420 CAPPUCCINO
PATTERN: ASHLAR

FT.1 PORCELAIN FLOOR TILE
MFR: NOVABELL
STYLE: MILANO FLOOR 4 DESIGN
COLOR: NAVIGLI
SIZE: 12"x24"
PATTERN: GRID
GROUT: TBD
REP: JENNIFER CHRISTOPHER
TILExDESIGN
612-280-9197
JCHRISTOPHER@TILEXDESIGN.COM

FT.2 PORCELAIN FLOOR TILE
MFR: DOM CERAMICHE
STYLE: APPROACH
COLOR: BROWN
SIZE: 14"x16" ESAGONA (HEXAGON)
PATTERN: GRID
GROUT: TBD
REP: JENNIFER CHRISTOPHER, TILExDESIGN

SC.1 SEALED CONCRETE FLOOR
COLOR: NATURAL
FINISH: SEALER

LVT LUXURY VINYL TILE
MFR: MANNINGTON
PRODUCT: SPACIA
COLOR: DRY STONE CINDER, SSSS4433
SIZE: 18"x18"

BASE FINISHES

PTB.1 PORCELAIN TILE BASE
MFR: NOVABELL
STYLE: MILANO FLOOR 4 DESIGN
COLOR: NAVIGLI
SIZE: 9"x35"
PATTERN: HORIZONTAL, WITH SST SCHLUTER COVE TRIM
GROUT: TBD
REP: JENNIFER CHRISTOPHER, TILExDESIGN

PTB.2 PORCELAIN TILE BASE
MFR: DOM CERAMICHE
STYLE: APPROACH
COLOR: BROWN
SIZE: 6 1/2"x20"
PATTERN: HORIZONTAL, WITH SST SCHLUTER COVE TRIM PIECE

WDB.1 WOOD BASE
MFR: TBD
STYLE: PLAIN SAWN WHITE OAK
SEE DETAIL 5/a7.2
FINISH: STAIN & FINSIH

VB.1 VINYL BASE
MFR: JOHNSONITE
COLOR: TBD
SIZE: 4" H.

WALL FINISHES

WT.1 CERAMIC WALL TILE (FIELD TILE)
MFR: SETTECENTO
STYLE: CRAYONS
COLOR: CARAMEL
SIZE: 3"x12"
PATTERN: HORIZONTAL, GRID
GROUT: TBD
REP: JENNIFER CHRISTOPHER, TILExDESIGN
*8-10 WEEK LEAD TIME

WT.2 CERAMIC WALL TILE (ACCENT TILE)
MFR: SETTECENTO
STYLE: CRAYONS
COLOR: TBD
SIZE: 3"x12"
PATTERN: SEE X/a7.x
GROUT: TBD
REP: JENNIFER CHRISTOPHER, TILExDESIGN
*8-10 WEEK LEAD TIME

WT.3 PORCELAIN WALL TILE (BAR FACE)
MFR: NOVABELL
STYLE: MILAN FLOOR 4 DESIGN
COLOR: NAVIGLI BRICK
SIZE: 4"x24"
PATTERN: HORIZONTAL 1/3 OFFSET
GROUT: TBD
REP: JENNIFER CHRISTOPHER, TILExDESIGN

WT.4 PORCELAIN WALL TILE (WAINSCOT TO 5' A.F.F.)
MFR: COEM
STYLE: REVERSO
COLOR: BEIGE NATURALE
SIZE: 12"x24"
PATTERN: HORIZONTAL 1/3 OFFSET
GROUT: TBD
REP: JENNIFER CHRISTOPHER, TILExDESIGN

FRP.1 FIBERGLASS REINFORCED PANEL
COLOR: WHITE
FINISH: SMOOTH

PT.1 PAINT
MFR: SHERWIN WILLIAMS
COLOR: SW7567 NATURAL TAN
FINISH: EGGSHELL

PT.2 PAINT
MFR: SHERWIN WILLIAMS
COLOR: SW7546 PRAIRIE GRASS
FINISH: EGGSHELL

PT.3 PAINT
MFR: SHERWIN WILLIAMS
COLOR: SW7737 MEADOW TRAIL
FINISH: EGGSHELL

WD.1 WOOD TRIM
STYLE: PLAIN SAWN WHITE OAK
FINISH: STAIN & FINISH

CEILING

ACP.1 ACOUSTIC CEILING PANEL
MFR: C.A.P., INC.
FABRIC: PALLAS,
PATTERN: SOLID FOOTING,
COLOR: DESERT
EDGE DETAIL: HALF BEVELED - HARDENED

EPT.3 PAINT - EPOXY
MFR: SHERWIN WILLIAMS
COLOR: WHITE
FINISH:

PT.1 PAINT
MFR: SHERWIN WILLIAMS
COLOR: SW7567 NATURAL TAN
FINISH: EGGSHELL

VCT VINYL COATED CEILING TILE
MFR: USG
SERIES: 2X4 LAY-IN CEILING PANEL, CLIMAPLUS
GRID: 15/16" DX/DXL, WHITE

WD.1 WOOD TRIM @ CEILING
MFR: TBD
STYLE: PLAIN SLICED WHITE OAK
SEE SH. a8.1 FOR DETIALS
FINISH: STAIN & FINISH

OTHER ITEMS

SS.1 SOLID SURFACE (LAVATORY COUNTERS & BAR TOP)
MFR: SILESTONE
COLOR: BLANCO CITY

TP.1 TOILET PARTITIONS
MFR: BRADLEY SOLID PLASTIC
COLOR: TBD

CMB METAL TRIM STRIP
MFR: SCHLUTER
STYLE: QUADEC
FINISH:STAINLESS STEEL

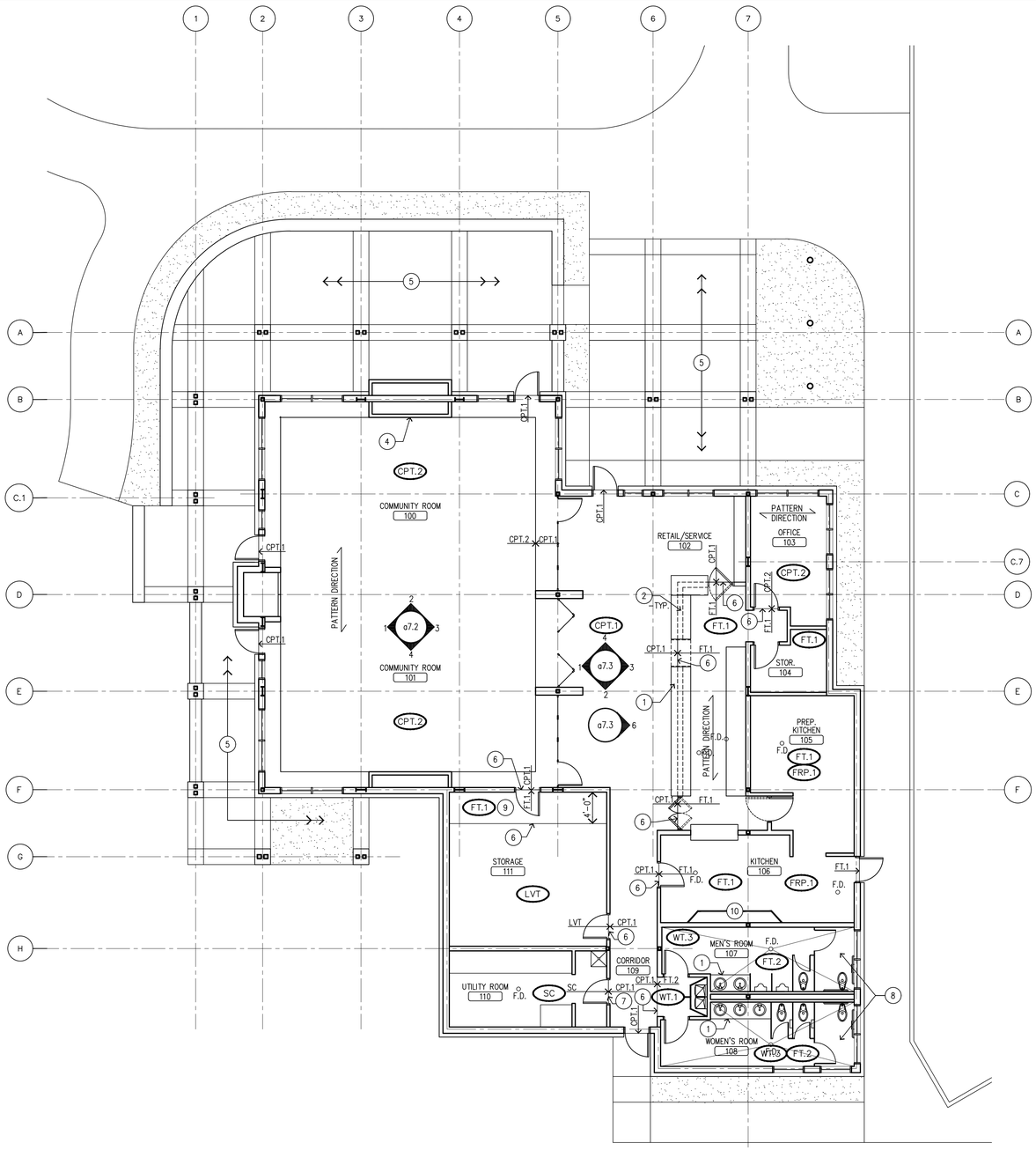
PT.4 PAINT (HM DOOR FRAMES)
MFR: SHERWIN WILLIAMS
COLOR: TBD
FINISH: SATIN

ST.1 MASONRY
STYLE: CHILTON LIMESTONE
FORMAT: SEE ELEVATIONS

ROOM FINISH SCHEDULE

Room Number	Room Name	Floor	Base	Wall West	Wall North	Wall East	Wall South	Ceiling	Ceiling Finish	Comments
100	COMMUNITY ROOM	CPT.1/CPT.2	WDB.1	PT.X/WD.1	PT.X/WD.1	PT.X/WD.1	PT.X/WD.1	GYP.BD/ WD.1/ACP.1	PT.1/WD.1	SEE a7.2 AND a7.3 FOR CONSTRUCTION
101	COMMUNITY ROOM	CPT.1/CPT.2	WDB.1	PT.X/WD.1	PT.X/WD.1	PT.X/WD.1	PT.X/WD.1	GYP.BD/ WD.1/ACP.1	PT.1/WD.1	SEE a7.2 AND a7.3 FOR CONSTRUCTION
102	RETAIL/SERVICE	CPT.1/FT.1	WDB.1	PT.X/WD.1	PT.X/WD.1	PT.X/WD.1/ WT.1/WT.2	PT.X/WD.1	GYP.BD/ WD.1	PT.1/WD.1	
103	OFFICE	CPT.2	WDB.1	PT.X/WD.1	PT.X/WD.1	PT.X/WD.1	PT.X/WD.1	GYP.BD	PT.1	
104	STORAGE	FT.1	PTB.1	PT.X	PT.X	PT.X	PT.X	GYP.BD	PT.1	
105	PREP. KITCHEN	FT.1	PTB.1	FRP.1	FRP.1	FRP.1	FRP.1	VINYL CEILING TILE	NA	
106	KITCHEN	FT.1	PTB.1	FRP.1	FRP.1	FRP.1	FRP.1	VINYL CEILING TILE	NA	
107	MEN'S ROOM	FT.2	PTB.2	PT.X	PT.X	PT.X/WT.4	PT.X/WT.4	GYP.BD	PT.1	WT.4 ON WET WALLS TO 5' A.F.F. - SEE a7.2 AND a7.3
108	WOMEN'S ROOM	FT.2	PTB.2	PT.X	PT.X/WT.4	PT.X/WT.4	PT.X	GYP.BD	PT.1	WT.4 ON WET WALLS TO 5' A.F.F. - SEE a7.2 AND a7.3
109	CORRIDOR	CPT.1	WDB.1	PT.X		PT.X/WT.1	PT.X	GYP.BD/ WD.1	PT.1/WD.1	WT.1 AT DRINKING FOUNTAIN WALL
110	UTILITY ROOM	SC	VB.1	PT.X	PT.X	PT.X	PT.X	GYP.BD	PT.1	
111	STORAGE	LVT/FT.1	VB.1	PT.X	PT.X	PT.X	PT.X	GYP.BD	PT.1	

NOTE: PT.X COLOR WILL BE DETERMINED AFTER MOCK-UPS PROVIDED.



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

NORTH

FINISH PLAN GENERAL NOTES

1. SEE PROJECT MANUAL FOR FINISH SPECIFICATIONS AND INSTALLATION INSTRUCTIONS
2. ALL PAINTED METAL GRILLES, LOUVERS, ETC. TO BE POWDER COAT FINISHED TO MATCH THE MATERIAL ON WHICH THEY ARE MOUNTED
3. PAINTING CONTRACTORS APPLICATION OF WALL FINISH CONSTITUTES ACCEPTANCE OF WALL CONDITION AND RESPONSIBILITY FOR IMPERFECTION CORRECTION
4. ALL TRIM TO BE STAINED UNLESS OTHERWISE NOTED
5. ALL HM FRAMES TO BE PAINTED
6. ALL WALLS TO BE PAINTED UNLESS OTHERWISE NOTED
7. PROVIDE HARDIEBACKER 500 CEMENT BOARD BEHIND ALL WALL TILE FINISH AREAS
8. MATERIALS AND FINISHES ARE CONSIDERED THE BASIS OF DESIGN PRODUCT. OWNER MAY SELECT OTHER COLOR OPTIONS WITHIN THE SELECTED PRODUCT LINE

FINISH PLAN SYMBOLS

RUB.1 / VCT.1 FLOORING TRANSITIONS

CT.1 WALL FINISH TAG

FINISH PLAN KEY NOTES

1. QUARTZ (SS.1) COUNTERTOP - SEE 9/a7.1
2. TILE (WT.3) FINISH ON DIE WALL
3. NOT USED
4. MASONRY (ST.1) CHIMNEY
5. CONCRETE PAVING - SEE CIVIL FOR PATTERN AND CONCRETE TYPES
6. PROVIDE 'L'-SHAPED SCHLUTER FLOORING TRANSITION - BRUSHED SST - PROVIDE FLUSH TRANSITION @ JOINT
7. PROVIDE TAPERED FLOOR TRANSITION
8. SEE SHEET a7.1 FOR WALL FINISH INFORMATION
9. PROVIDE FRP @ ALL WALLS ABOVE FT.1 FOR SERVER STATION
10. BRUSH SST WALL PANEL OVER 1/2" CEMENT BOARD FROM T.O. TILE BASE TO B.O. HOOD - FULL LENGTH OF HOOD

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ph 763-544-5800 ■ fax 763-544-7042
premiereq.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Finishes Floor Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By: Tim McIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a2.1i

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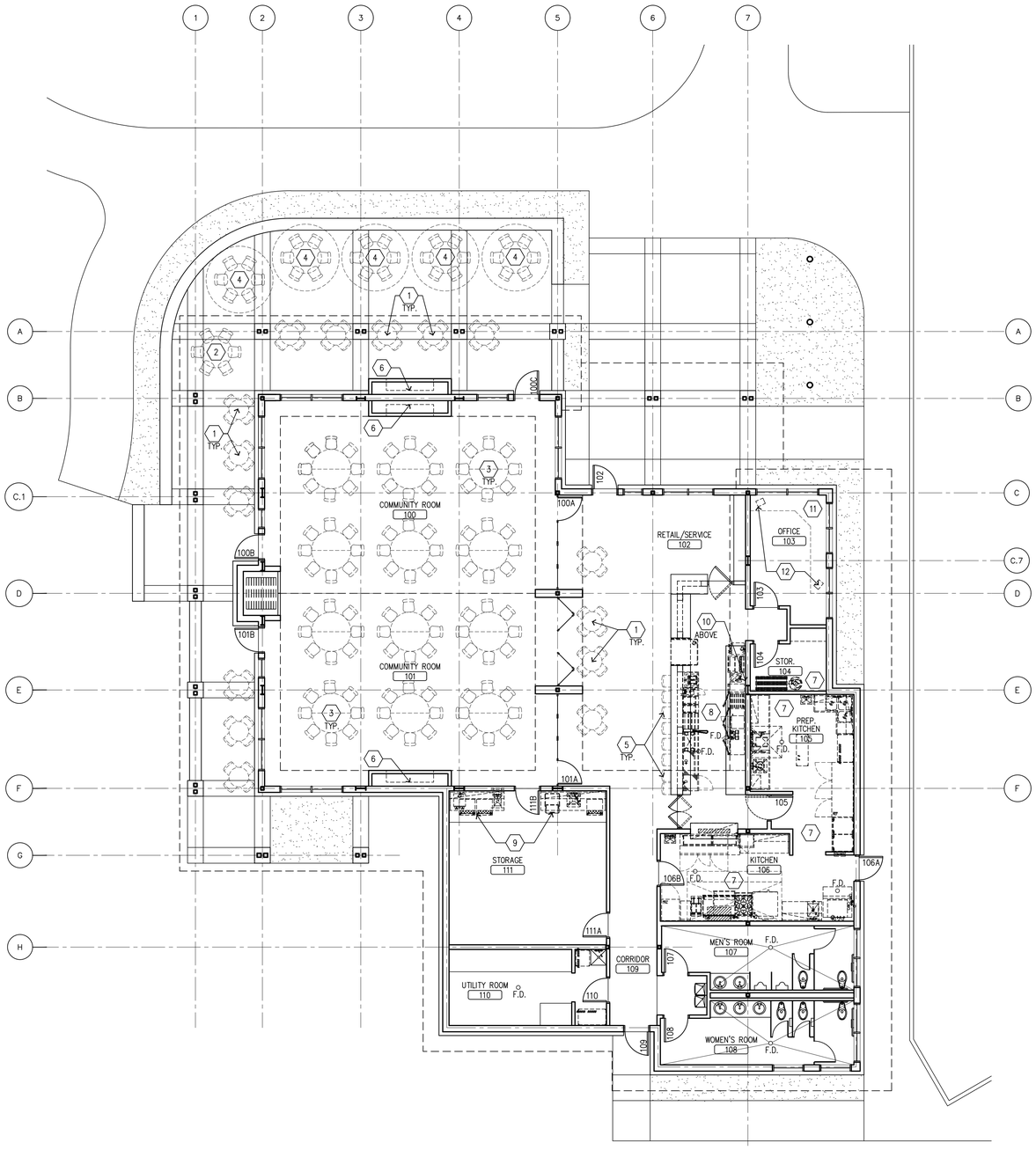
ARCHITECTS
4201 CEDAR AVENUE SO. - MINNEAPOLIS, MN 55407
TEL. (612)904-1892 - FAX (612)904-7886



GENERAL NOTES: FURN. & EQUIP. PLAN

1. G.C. TO PROVIDE BLOCKING AT LOCATIONS SCHEDULED TO RECEIVE WALL MOUNTED MILLWORK, COUNTERTOPS, SHELVING, KITCHEN EQUIPMENT, ETC.
2. REFER TO ELECTRICAL DRAWINGS FOR POWER AND DATA CONNECTIONS.
3. REFER TO SHEET a2.1i FOR FINISH SCHEDULE.
4. OWNER TO PROVIDE THE FOLLOWING AND GC TO INSTALL
   - TV MONITOR AND BRACKETS
   - KITCHEN EQUIPMENT
   - OFFICE FURNITURE
   - TABLES AND CHAIRS

KEY NOTES: FURNITURE & EQUIP. PLAN

1. 30" DIA. TABLE W/(4) CHAIRS
2. 48" DIA. TABLE W/(6) CHAIRS
3. 60" DIA. TABLE W/(8) CHAIRS
4. 48" DIA. TABLE W/(6) CHAIRS AND UMBRELLA
5. BAR HEIGHT STOOL
6. TV MONITOR AND MILLWORK CABINET W/SLIDING DOOR ASSEMBLY, LOCKABLE
7. SEE FOOD SERVICE DRAWINGS FOR KITCHEN EQUIPMENT
8. SEE FOOD SERVICE DRAWINGS FOR BAR COUNTER EQUIPMENT
9. SEE FOOD SERVICE EQUIPMENT FOR SERVER STATION EQUIPMENT
10. MENU BOARD/INFORMATION MONITOR – SEE INTERIOR ELEVATIONS
11. OFFICE WORK COUNTER FURNITURE SYSTEM
12. COMPUTER

1 FURNITURE & EQUIPMENT FLOOR PLAN
1/8"=1'-0"

NORTH

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consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
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Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

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SRF Consulting Group, Inc.

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ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Furnishings & Equipment Floor Plan

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By: Tim McIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

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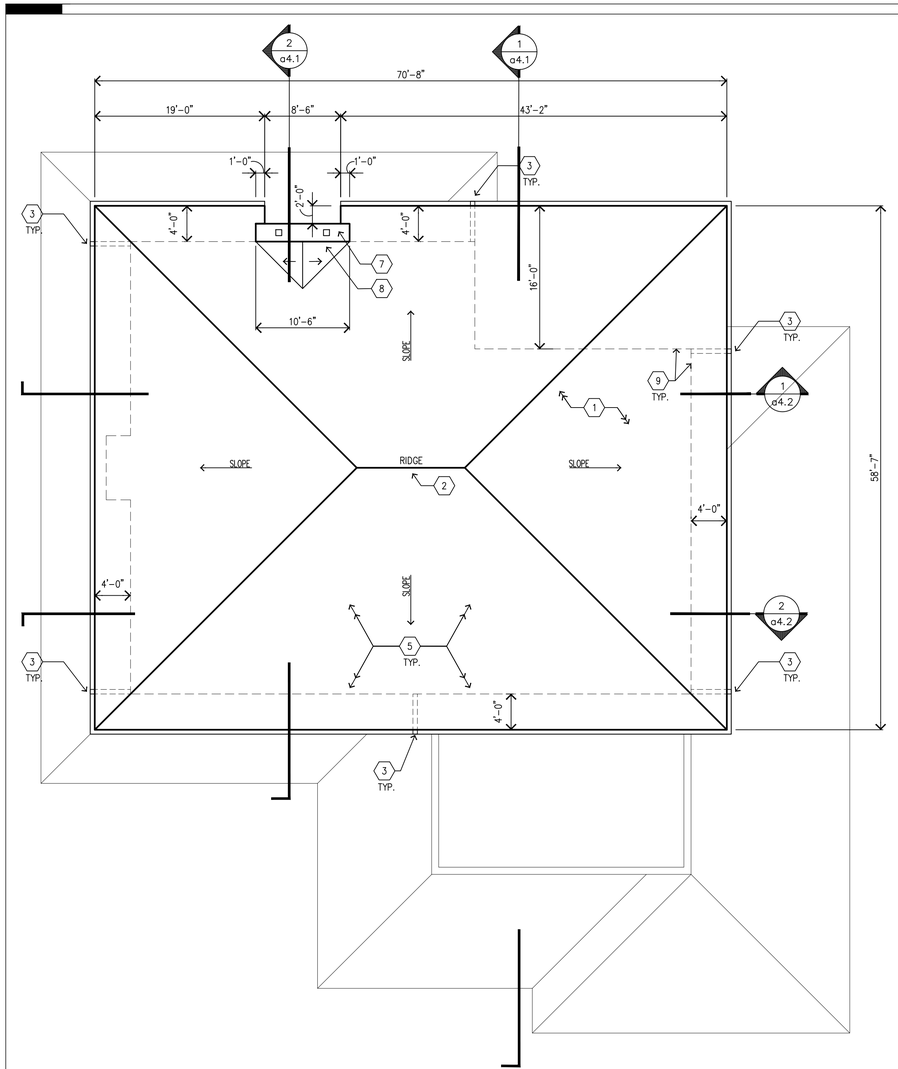
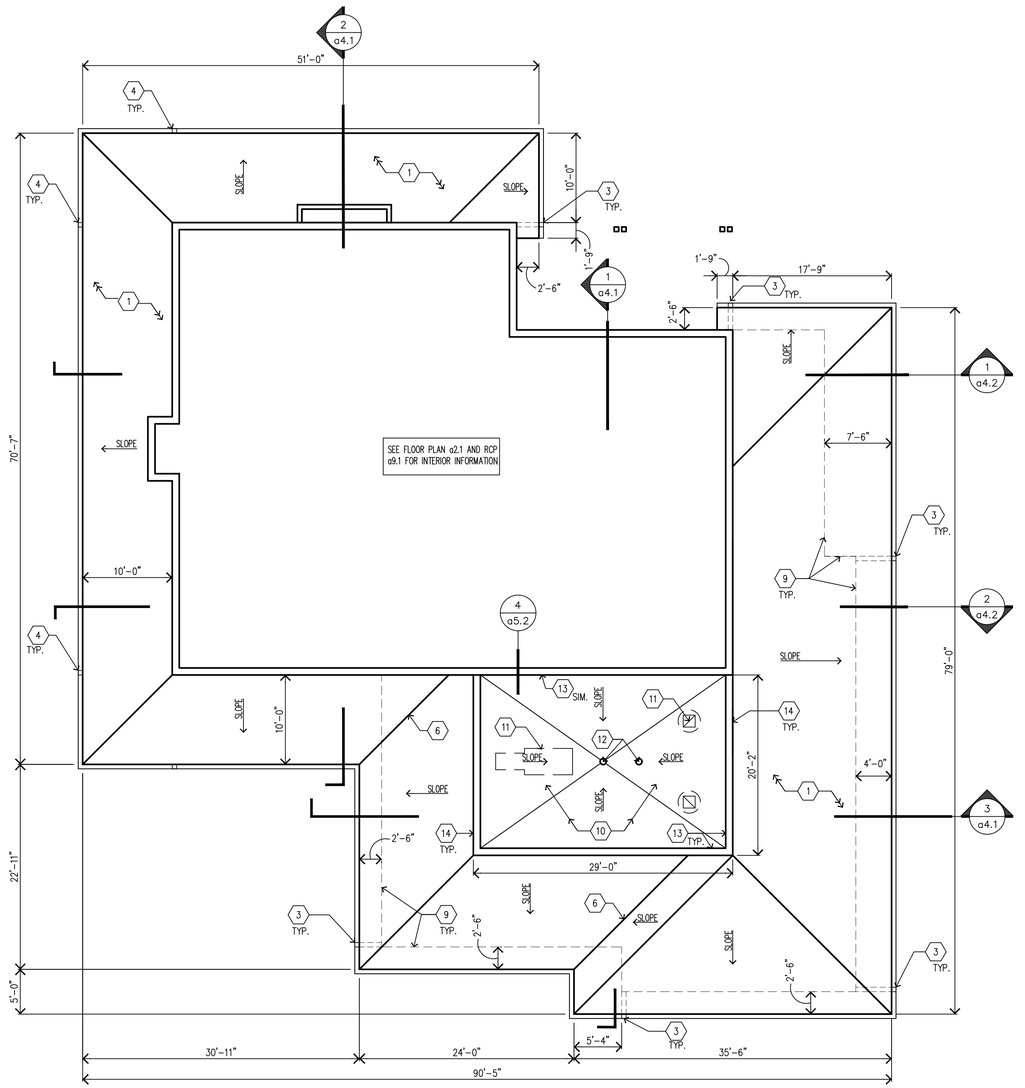
HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)824-1332 • FAX (612)824-7866



2 ROOF PLAN – HIGH
1/8"=1'-0"

NORTH



1 ROOF PLAN – LOW
1/8"=1'-0"

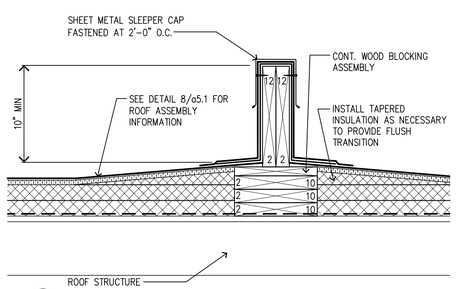
NORTH

ROOF PLAN GENERAL NOTES

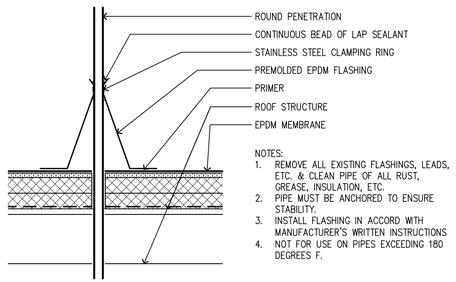
1. SEE MECHANICAL & ELECTRICAL DRAWINGS FOR ROOFTOP EQUIPMENT LOCATIONS AND PENETRATION/CURB INFORMATION.
2. PROVIDE CONTINUOUS ICE AND WATER SHIELD MEMBRANE UNDER THE ENTIRE ASPHALT SHINGLE ROOF ASSEMBLY
3. ALL SLOPED ROOFS AT 2–1/2" TO 12" PITCH
4. PROVIDE CONTINUOUS REFINISHED METAL GUTTER ASSEMBLY AT ENTIRE ROOF PERIMETER, LOW AND HIGH ROOF, SEE PLAN FOR DOWNSPOUT LOCATIONS

ROOF PLAN KEY NOTES:

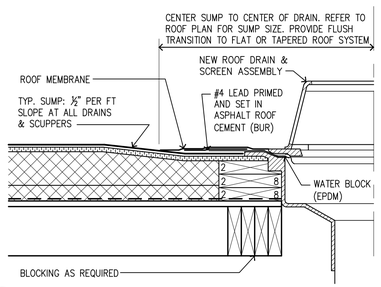
1. LAMINATED ASPHALT SHINGLE ROOF ASSEMBLY OVER BUILDING PAPER
   - NOTE: BASIS OF DESIGN PRODUCT TO MATCH ROSEVILLE COMMUNITY BUILDING AS FOLLOWS:
   - OWENS CORNING, DURATION SHINGLES, DRIFTWOOD
   - SEE SPECIFICATIONS
2. CONTINUOUS RIDGE VENT
3. PREFINISHED DOWNSPOUT AT WALL LOCATION – SEE CIVIL FOR MORE INFORMATION AT GRADE
4. PREFINISHED DOWNSPOUT AT COLUMN LOCATION – SEE CIVIL FOR MORE INFORMATION AT GRADE
5. SOUTH FACE TO HIGH SLOPED ROOF TO BE SOLAR READY – SEE STRUCTURAL AND ELECTRICAL FOR MORE INFORMATION
6. PROVIDE CONTINUOUS ICE AND WATER SHIELD MEMBRANE FULL LENGTH OF VALLEY – SEE GENERAL NOTE #2 THIS SHEET
7. ARCHITECTURAL PRECAST CHIMNEY CAP OVER CONTINUOUS PREFIN. METAL BASE FLASHING – SEE DETAILS ON SHEET a4.4
8. SLOPED CRICKET FRAMING, ROOFING AND FLASHING AT FACE OF STONE CHIMNEY – PROVIDE MINIMUM 6" COUNTERFLASHING AT BACK AND SIDE FACES OF STONE WITH CONTINUOUS SEALANT AT JOINTS AS REQUIRED.
9. LINE OF EXTERIOR WALL BELOW – FOR REFERENCE ONLY
10. FLAT ROOM ASSEMBLY: FULLY ADHERED SINGLE–PLY, 90 MIL EPDM OVER TAPERED RIGID INSULATION – SLOPE 1/4" PER FOOT – SEE DETAIL 3/a2.2
11. ROOF TOP EQUIPMENT, VENTS AND PIPING PENETRATION LOCATIONS – SEE MECHANICAL – PROVIDE TREATED WOOD BLOCKING AND EXTEND 90 MIL UP FACE AND OVER TOP OF CURB AS REQUIRED – SECURE UNDER PREFIN. METAL COUNTERFLASHING
12. PRIMARY ROOF DRAIN AND OVERFLOW ROOF DRAIN – SEE MECHANICAL AND 4/a2.2
13. EXTEND FULLY ADHERED ROOF MEMBRANE UP ENTIRE HEIGHT OF PARAPET WALL, LAP OVER TOP OF WALL AND SECURE AT CONTINUOUS KEEPER
14. PREFINISHED METAL COPING WITH CONTINUOUS KEEPER AT TOP OF FLAT ROOF PARAPET WALL ASSEMBLY – SEE DETAILS ON SHEET a5.2



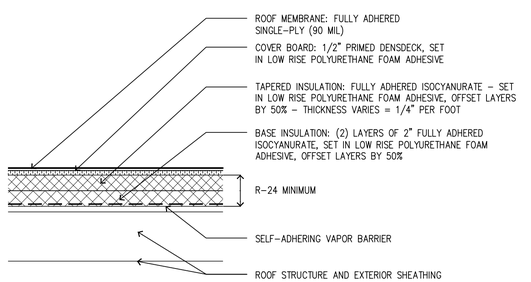
6 EQUIPMENT SKID
1 1/2"=1'-0"



5 FLASHING AT PIPES (EPDM)
1 1/2"=1'-0"



4 SECTION AT ROOF DRAIN
1 1/2"=1'-0"



3 TYPICAL ROOF ASSEMBLY
1 1/2"=1'-0"

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premierenj.com

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emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952–930–0050
fax: 952–930–0777
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Bassett Creek Business Center
901 North 3rd Street, Suite 100
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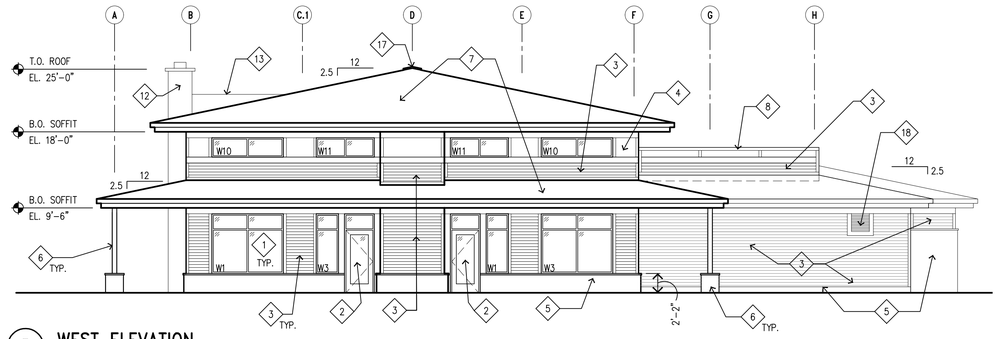
Title: Architect Date: 07/10/2017
Registration Number: 22541

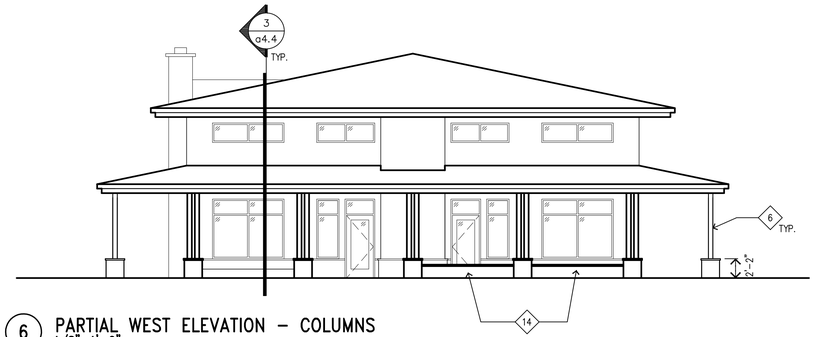
Drawing No.
a2.2

HAGEN, CHRISTENSEN & McILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL. (612)804-1932 • FAX (612)804-7386



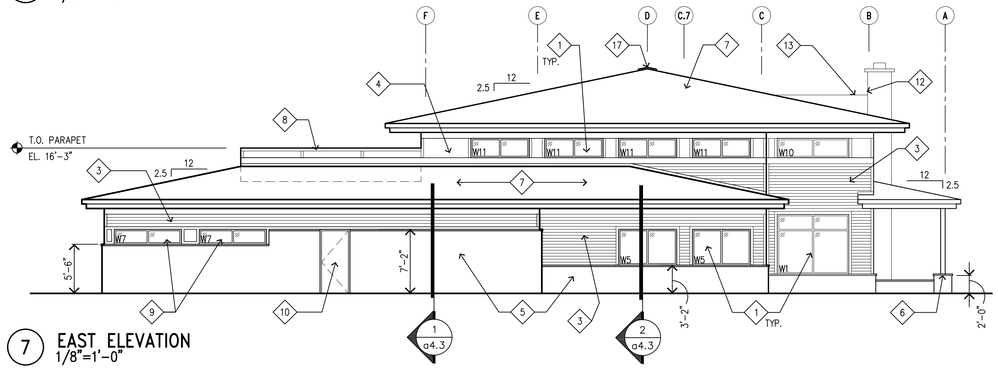
5 WEST ELEVATION
1/8"=1'-0"

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

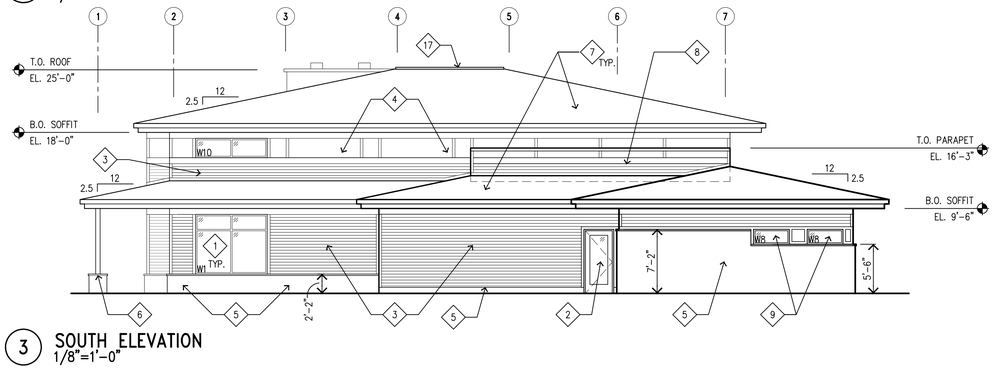


6 PARTIAL WEST ELEVATION – COLUMNS
1/8"=1'-0"

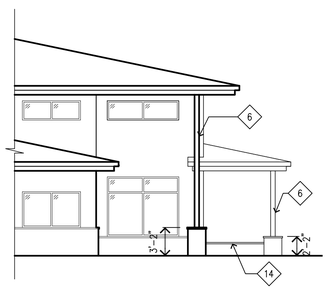
2 PARTIAL NORTH ELEVATION – COLUMNS
1/8"=1'-0"



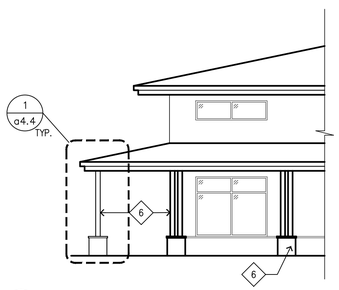
7 EAST ELEVATION
1/8"=1'-0"



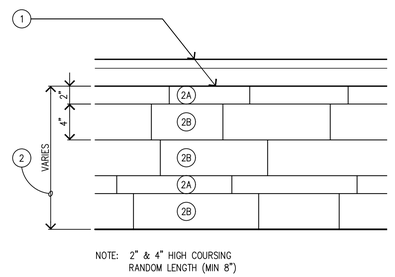
3 SOUTH ELEVATION
1/8"=1'-0"



8 PARTIAL EAST ELEVATION – COLUMNS
1/8"=1'-0"



4 PARTIAL SOUTH ELEVATION – COLUMNS
1/8"=1'-0"



NOTE: 2" & 4" HIGH COURSING
RANDOM LENGTH (MIN 8")

0 STONE VENEER COURSING DETAIL
1-1/2"=1'-0"

EXTERIOR ELEVATION KEY NOTES

1. PREFINISHED METAL CLAD WOOD WINDOWS WITH 1" INSULATED, TEMPERED GLASS UNITS – NOTE: ALTERNATIVE #1 – PROVIDE BIRD GLASS COATING, FACTORY APPLIED
2. PREFINISHED ALUMINUM STOREFRONT DOOR AND FRAME ASSEMBLY WITH 1" INSULATED TEMPERED GLASS UNITS – NOTE: ALTERNATIVE #1 – PROVIDE BIRD GLASS COATING, FACTORY APPLIED
3. PRE-PRIMED FIBER CEMENT LAP SIDING – PAINT, INSTALLED OVER ¾" FURRING OVER CONTINOUS INSULATION, SEE DETAILS ON SHEET a5.1
4. PRE-PRIMED FIBER CEMENT PANEL SIDING (BOARD AND BATTEN) – PAINT, INSTALLED OVER ¾" FURRING OVER CONTINUOUS INSULATION, SEE DETAILS ON SHEET A5.1
5. STONE VENEER BASE (4" THICK) AND ARCHITECTURAL PRECAST CAP OVER CONTINUOUS INSULATION, SEE DETAILS ON SHEET a5.1 & 9/a3.1.
6. DUAL STEEL COLUMN (PRE-PRIMED, PAINT) AND STONE BASE ASSEMBLY – SEE DETAILS ON SHEET a4.4
7. LAMINATED ASPHALT SHINGLE ROOF ASSEMBLY WITH PRE-PRIMED FIBER CEMENT TRIM BOARD FASCIA ASSEMBLY, PAINT – SEE DETAILS ON SHEET a5.1
8. PARAPET WALL AT PERIMETER OF MECHANICAL FLAT ROOF AREA – PROVIDE FIBER CEMENT PANEL LAP AND PANEL SIDING WITH CONTINUOUS PREFINISHED METAL ROOF COPING
9. PREFINISHED METAL CLAD WOOD WINDOW WITH 1" INSULATED TRANSLUCENT GLAZING – NOTE: ALTERNATE #1 BIRD GLASS COATING NOT REQUIRED FOR THIS TYPE
10. INSULATED HOLLOW METAL DOOR AND FRAME – PAINT
11. OUTDOOR GAS FIREPLACE UNIT – BASIS OF DESIGN:
    a. NAPOLEON ODGR 5000
    b. SEE SPECIFICATION
12. FIREPLACE CHIMNEY ASSEMBLY – STONE VENEER FULL HEIGHT
13. SLOPED CRICKET FRAMING, ROOFING AND FLASHING AT FACE OF STONE CHIMNEY – PROVIDE MINIMUM 6" COUNTERFLASHING AT BACK AND SIDE FACES OF STONE WITH CONTINUOUS SEALANT AT JOINTS AS REQUIRED
14. STONE LANDSCAPE PLANTER WALL AND CAP – SEE STRUCTURAL AND CIVIL DRAWINGS
15. WALL MOUNTED OUTDOOR TELEVISION (70" SHOWN, VERIFY SIZE) AND SPEAKER SYSTEM – PROVIDED BY OWNER
16. OUTDOOR MILLWORK CABINET WITH LOCKABLE SLIDING DOOR PANELS – SEE DETAILS ON SHEET a4.4
17. CONT. RIDGE VENT
18. LOUVER – SEE MECHANICAL, PAINT TO MATCH SIDING – PROVIDE PERIMETER FIBER CEMENT TRIM BOARDS

ENLARGED STONE ELEVATION KEY NOTES

1. PRECAST INTEGRAL COLOR STONE COPING CAP
2. 4" STONE VENEER: CHILTON LIMESTONE PER APPROVED MOCK UP PANEL
   COLOR – VARIES, GRAY MIX
   SIZES – VARIOUS LENGTHS, HEIGHTS TO BE 2" & 4" MATCH ON A TYPICAL COURSING
   TEXTURE – HONED FACE
   - 2A 2" HEIGHT NOMINAL
   - 2B 4" HEIGHT NOMINAL

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ph: 763-544-0800 • fax: 763-544-7949
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Mechanical and Electrical Engineers
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10401 Bren Road East
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ph: 952-930-0050
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City of Roseville
Project
Cedarholm Community Building
Title
Exterior Elevations

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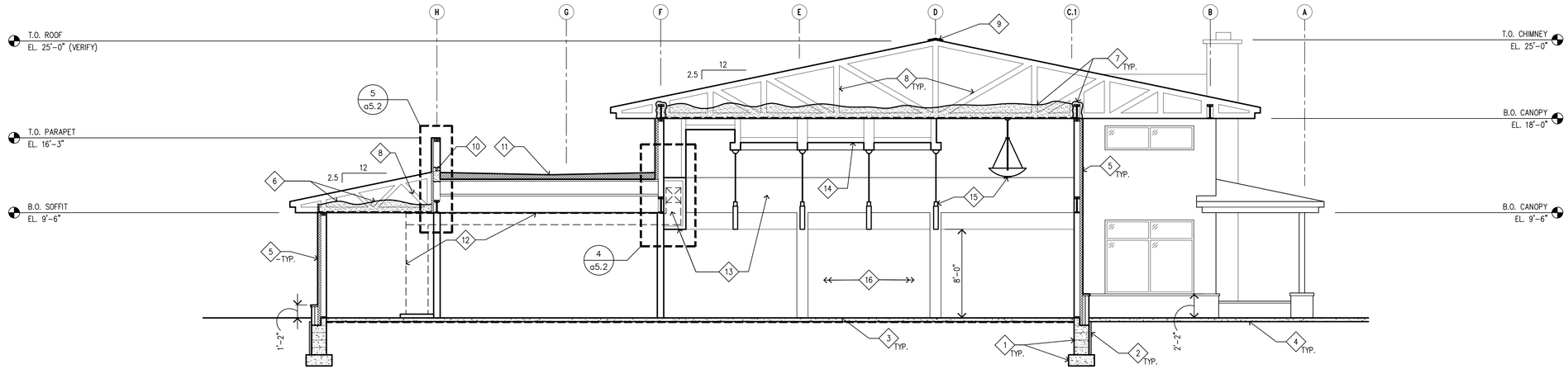
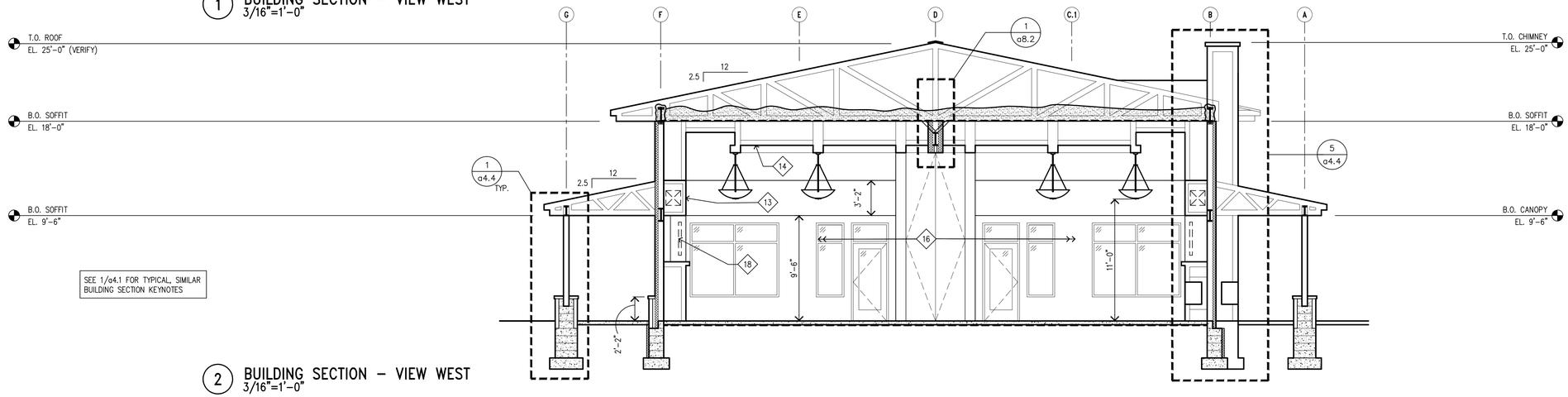
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a3.1

HAGEN, CHRISTENSEN & McILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL. (612)824-1392 • FAX (612) 824 - 7388

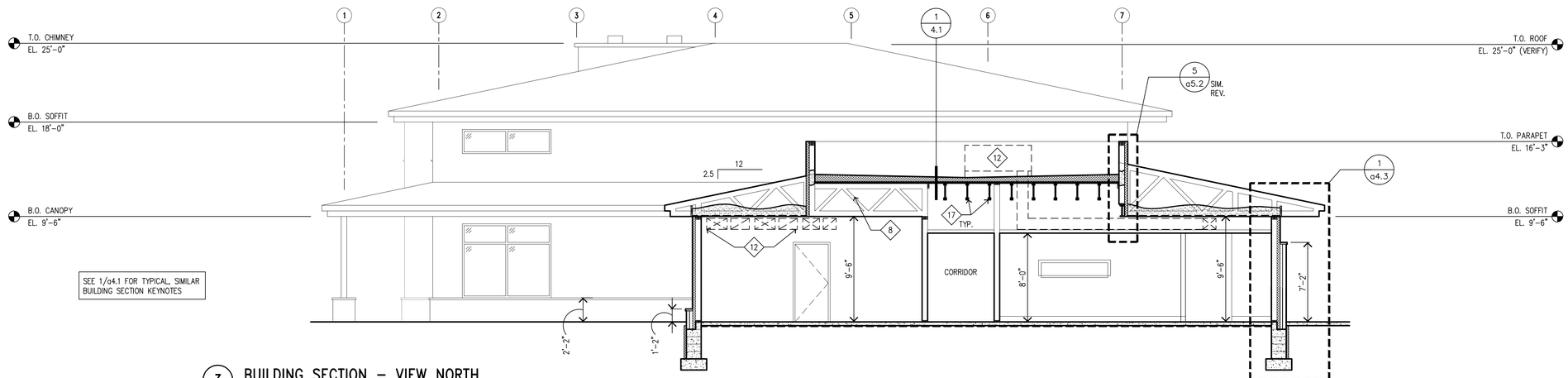


1 BUILDING SECTION – VIEW WEST
3/16"=1'-0"



SEE 1/a4.1 FOR TYPICAL, SIMILAR BUILDING SECTION KEYNOTES

2 BUILDING SECTION – VIEW WEST
3/16"=1'-0"



SEE 1/a4.1 FOR TYPICAL, SIMILAR BUILDING SECTION KEYNOTES

3 BUILDING SECTION – VIEW NORTH
3/16"=1'-0"

BUILDING SECTION KEY NOTES

1. FOOTINGS & FOUNDATION WALLS – SEE STRUCTURAL
2. CONTINUOUS RIGID INSULATION FROM TOP OF FOOTING TO BOTTOM OF SLAB OVER CONTINUOUS BITUMINOUS DAMP PROOFING
3. 4" CONCRETE SLAB (SEE STRUCTURAL) OVER VAPOR BARRIER ON COMPACTED FILL
4. EXTERIOR CONCRETE PAVING AND SITE WORK – SEE CIVIL DRAWINGS
5. EXTERIOR WALL ASSEMBLY WITH CONTINUOUS INSULATION FULL HEIGHT OVER 2X6 STUD FRAMING – SEE EXTERIOR WALL TYPE DETAILS ON SHEET a4.3
6. LOW ROOF: BLOW-IN INSULATION WITH CONTINUOUS 2" X 12" WOOD FRAMING INSULATION STOPS BETWEEN TRUSSES – PROVIDE CONTINUOUS VAPOR BARRIER INSTALLED AT BOTTOM FACE OF TRUSS – SEE DETAILS ON SHEET a5.1
7. HIGH ROOF: BLOW-IN INSULATION WITH TERMINATION AT CONTINUOUS CLOSED CELL SPRAY FOAM INSULATION AROUND STRUCTURAL STEEL FRAMING – SEE DETAILS ON SHEET a5.1
8. PRE-ENGINEERED WOOD TRUSSES – SEE STRUCTURAL
9. CONTINUOUS RIDGE VENT
10. PROVIDE CONTINUOUS CLOSED CELL SPRAY FOAM INSULATION IN PARAPET WALL CAVITY – SEE DETAILS ON SHEET a5.2
11. FLAT ROOF ASSEMBLY: FULLY ADHERED SINGLE-PLY, 90 MIL EPDM OVER TAPERED RIGID INSULATION – SLOPE 1/4" PER FOOT – SEE DETAIL 3/a2.2
12. MECHANICAL DUCT WORK AND EQUIPMENT – SEE MECHANICAL DRAWINGS
13. MECHANICAL DISTRIBUTION SOFFIT (RETURN AIR PLENUM) – PROVIDE FULLY ENCLOSED 5/8" GYP. BD. OVER METAL STUD FRAMING ASSEMBLY – SEE DETAILS ON SHEET a4.3 AND a4.4
14. 2X WOOD FRAMED DROPPED CEILING ASSEMBLY W/ PAINTED GYP. BD. FINISH, FABRIC WRAPPED ACOUSTIC PANELS AND PERIMETER LIGHT COVE – SEE RCP SHEET a9.1 FOR LAYOUT AND DETAILS
15. LIGHT FIXTURES – SEE SHEET a9.1 AND ELECTRICAL DRAWINGS FOR LAYOUT AND SPECIFICATIONS
16. FOR INTERIOR ELEVATIONS SEE SHEETS a7.1, a7.2 AND a7.3
17. PRE-ENGINEERED WOOD JOISTS – SEE STRUCTURAL
18. MILLWORK CABINET WITH LOCKABLE SLIDING DOOR PANELS AND OWNER PROVIDED, WALL MOUNTED TELEVISION – SEE WALL SECTION ON SHEET a4.4
19. SERVICE COUNTER MILLWORK AND DIE WALL
20. INTERIOR CLERESTORY WINDOW ASSEMBLY WITH 1/4" TEMPERED GLAZING
21. FOLDING GLASS STOREFRONT ASSEMBLY (BASIS OF DESIGN: NANAWALL)

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10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
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Minneapolis, MN 55401
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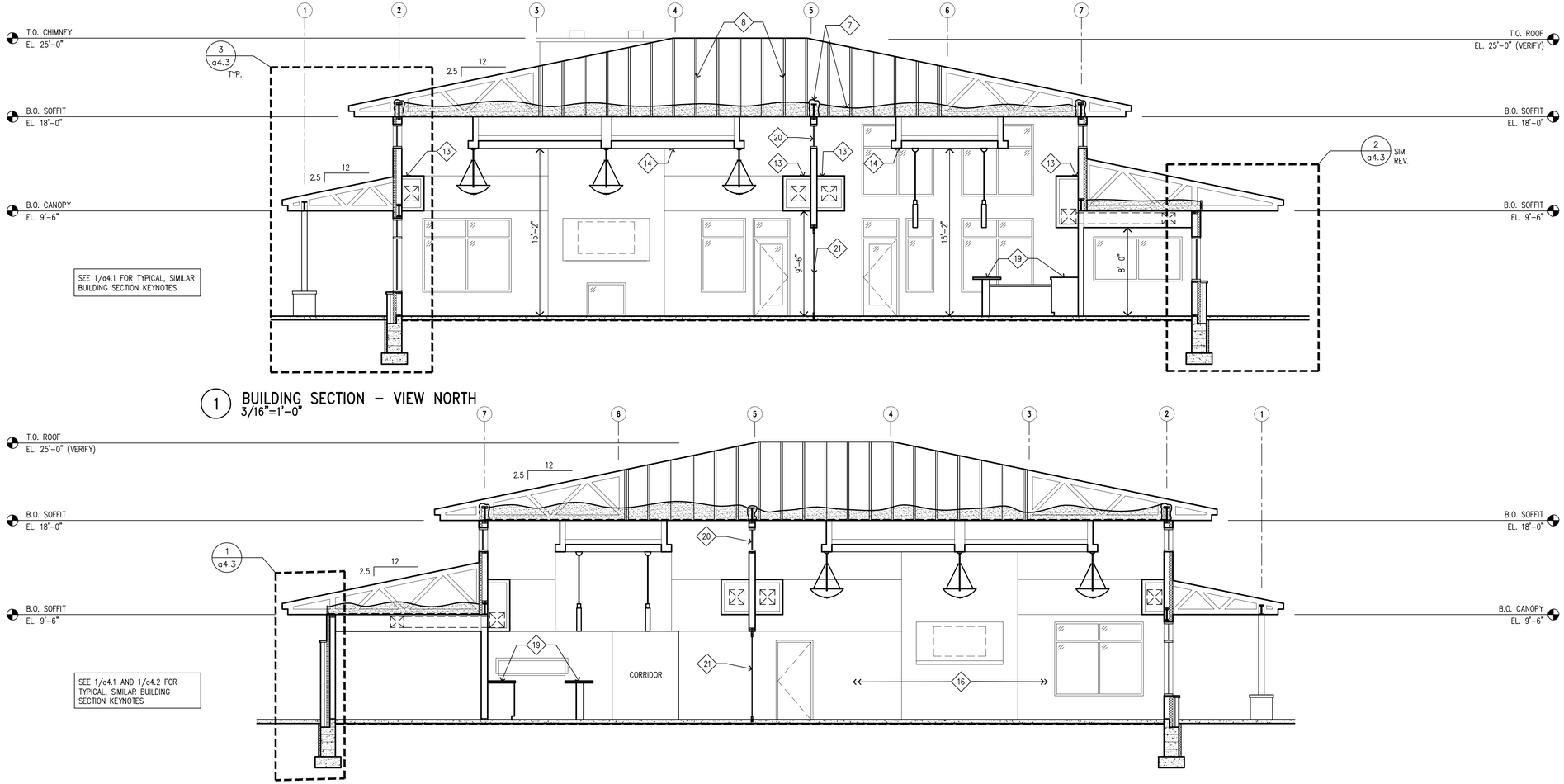
HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. - MINNEAPOLIS, MN 55407
TEL. (612)804-1932 - FAX (612)804-7886



1 BUILDING SECTION – VIEW NORTH
3/16"=1'-0"

2 BUILDING SECTION – VIEW SOUTH
3/16"=1'-0"

BUILDING SECTION KEY NOTES

1. FOOTINGS & FOUNDATION WALLS – SEE STRUCTURAL
2. CONTINUOUS RIGID INSULATION FROM TOP OF FOOTING TO BOTTOM OF SLAB OVER CONTINUOUS BITUMINOUS DAMP PROOFING
3. 4" CONCRETE SLAB (SEE STRUCTURAL) OVER VAPOR BARRIER ON COMPACTED FILL
4. EXTERIOR CONCRETE PAVING AND SITE WORK – SEE CIVIL DRAWINGS
5. EXTERIOR WALL ASSEMBLY WITH CONTINUOUS INSULATION FULL HEIGHT OVER 2X6 STUD FRAMING – SEE EXTERIOR WALL TYPE DETAILS ON SHEET a4.3
6. LOW ROOF: BLOW-IN INSULATION WITH CONTINUOUS 2" X 12" WOOD FRAMING INSULATION STOPS BETWEEN TRUSSES – PROVIDE CONTINUOUS VAPOR BARRIER INSTALLED AT BOTTOM FACE OF TRUSS – SEE DETAILS ON SHEET a5.1
7. HIGH ROOF: BLOW-IN INSULATION WITH TERMINATION AT CONTINUOUS CLOSED CELL SPRAY FOAM INSULATION AROUND STRUCTURAL STEEL FRAMING – SEE DETAILS ON SHEET a5.1
8. PRE-ENGINEERED WOOD TRUSSES – SEE STRUCTURAL
9. CONTINUOUS RIDGE VENT
10. PROVIDE CONTINUOUS CLOSED CELL SPRAY FOAM INSULATION IN PARAPET WALL CAVITY – SEE DETAILS ON SHEET a5.2
11. FLAT ROOF ASSEMBLY: FULLY ADHERED SINGLE-PLY, 90 MIL EPDM OVER TAPERED RIGID INSULATION – SLOPE 1/4" PER FOOT – SEE DETAIL 3/a2.2
12. MECHANICAL DUCT WORK AND EQUIPMENT – SEE MECHANICAL DRAWINGS
13. MECHANICAL DISTRIBUTION SOFFIT (RETURN AIR PLENUM) – PROVIDE FULLY ENCLOSED 5/8" GYP. BD. OVER METAL STUD FRAMING ASSEMBLY – SEE DETAILS ON SHEET a4.3 AND a4.4
14. 2X WOOD FRAMED DROPPED CEILING ASSEMBLY W/ PAINTED GYP. BD. FINISH, FABRIC WRAPPED ACOUSTIC PANELS AND PERIMETER LIGHT COVE – SEE RCP SHEET a9.1 FOR LAYOUT AND DETAILS
15. LIGHT FIXTURES – SEE SHEET a9.1 AND ELECTRICAL DRAWINGS FOR LAYOUT AND SPECIFICATIONS
16. FOR INTERIOR ELEVATIONS SEE SHEETS a7.1, a7.2 AND a7.3
17. PRE-ENGINEERED WOOD JOISTS – SEE STRUCTURAL
18. MILLWORK CABINET WITH LOCKABLE SLIDING DOOR PANELS AND OWNER PROVIDED, WALL MOUNTED TELEVISION – SEE WALL SECTION ON SHEET a4.4
19. SERVICE COUNTER MILLWORK AND DIE WALL
20. INTERIOR CLERESTORY WINDOW ASSEMBLY WITH 1/4" TEMPERED GLAZING
21. FOLDING GLASS STOREFRONT ASSEMBLY (BASIS OF DESIGN: NANAWALL)

Comm. No.
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SRF Consulting Group, Inc.

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ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Building Sections

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By:
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a4.2

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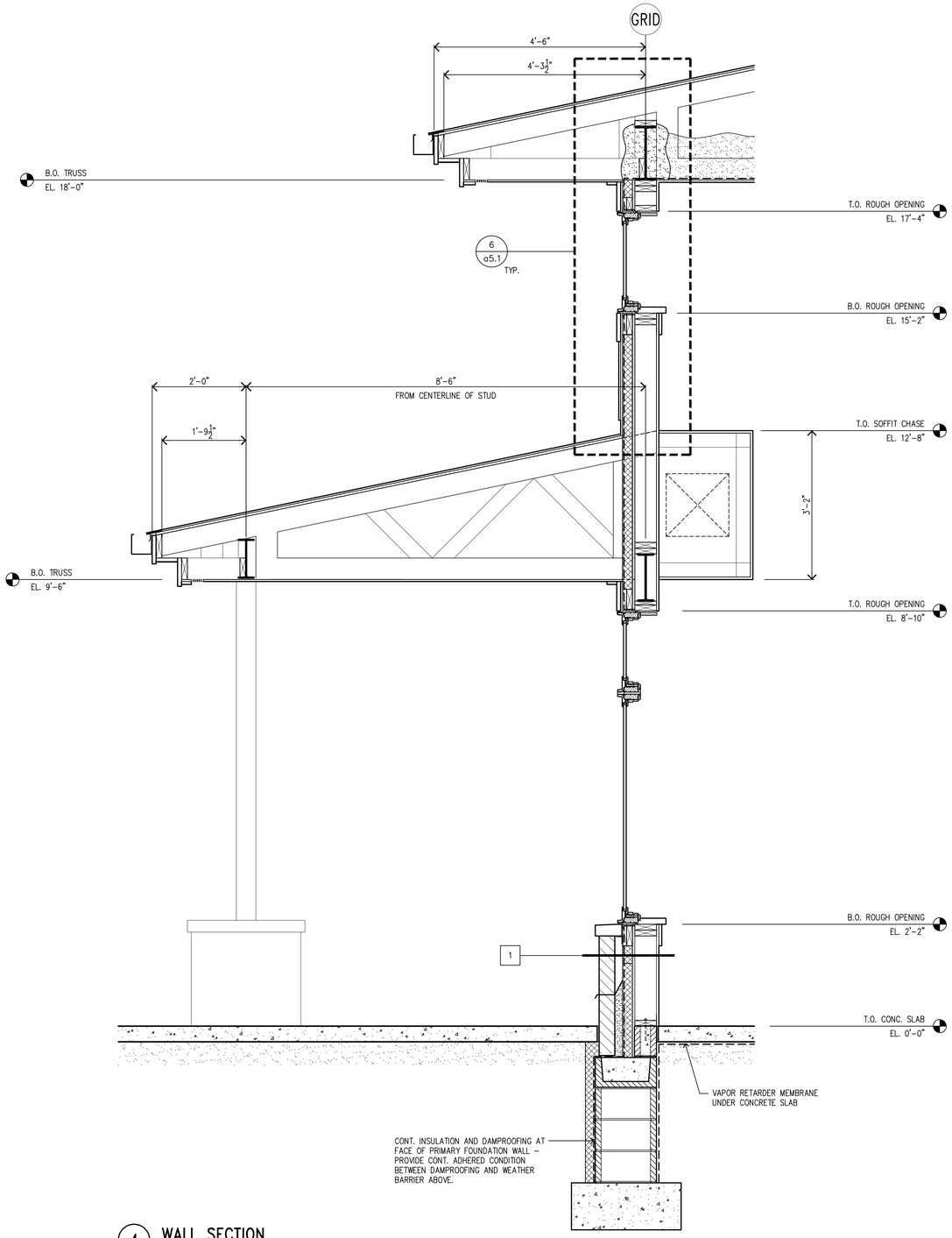
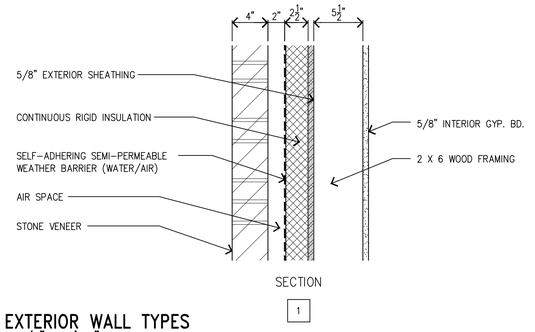
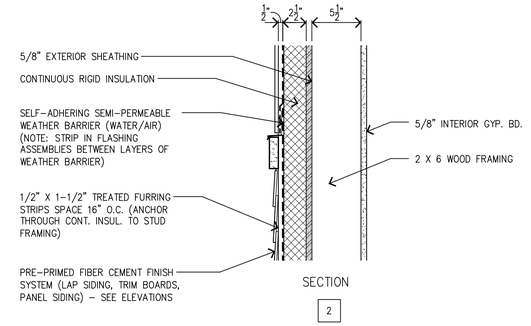
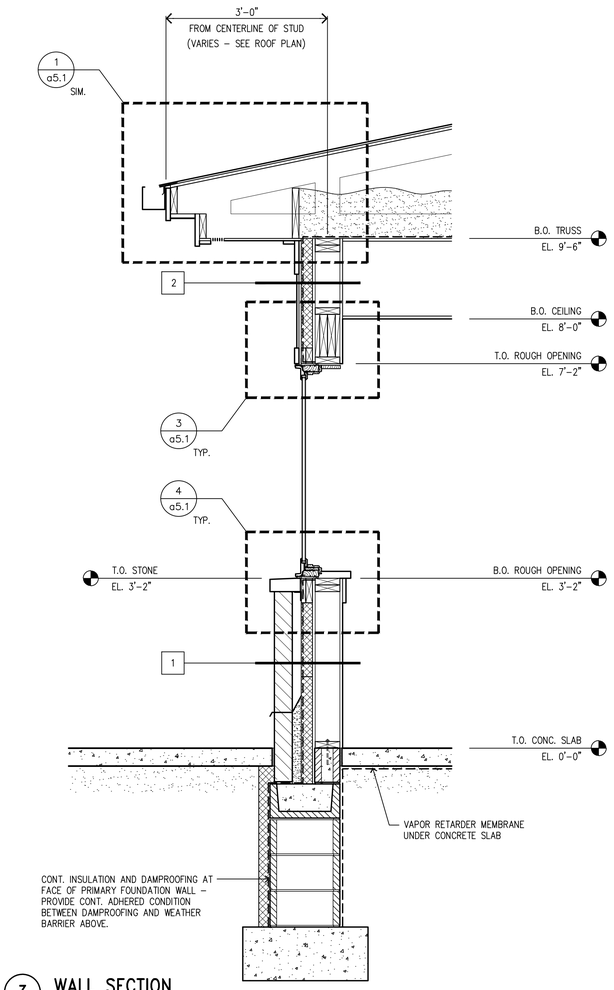


4 WALL SECTION
3/4"=1'-0"

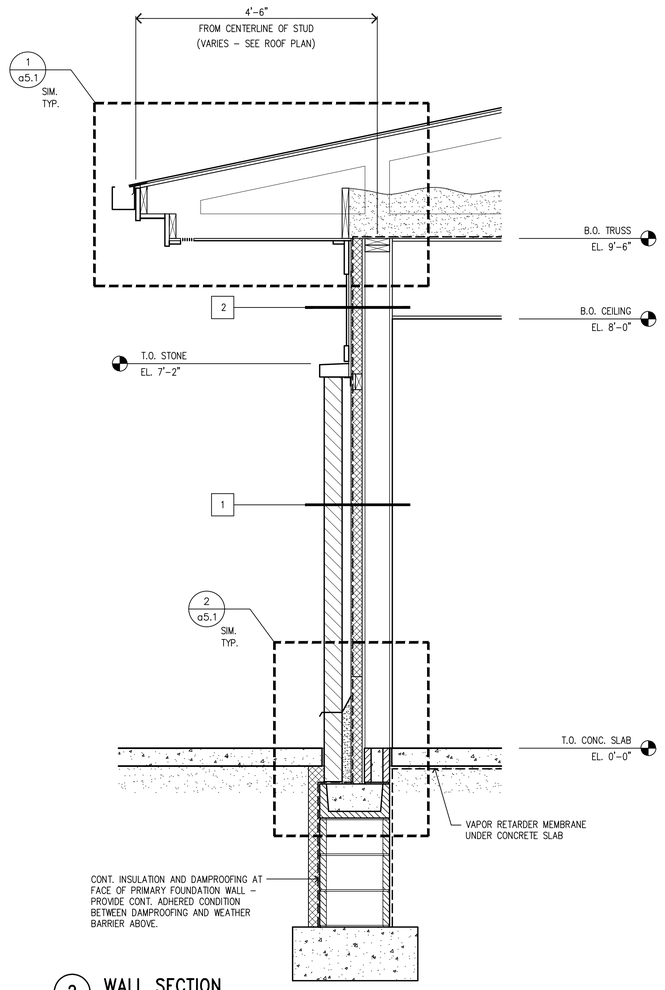




1 EXTERIOR WALL TYPES
1-1/2" = 1'-0"



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



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

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Registration Number: 22541

Drawing No.
a4.3

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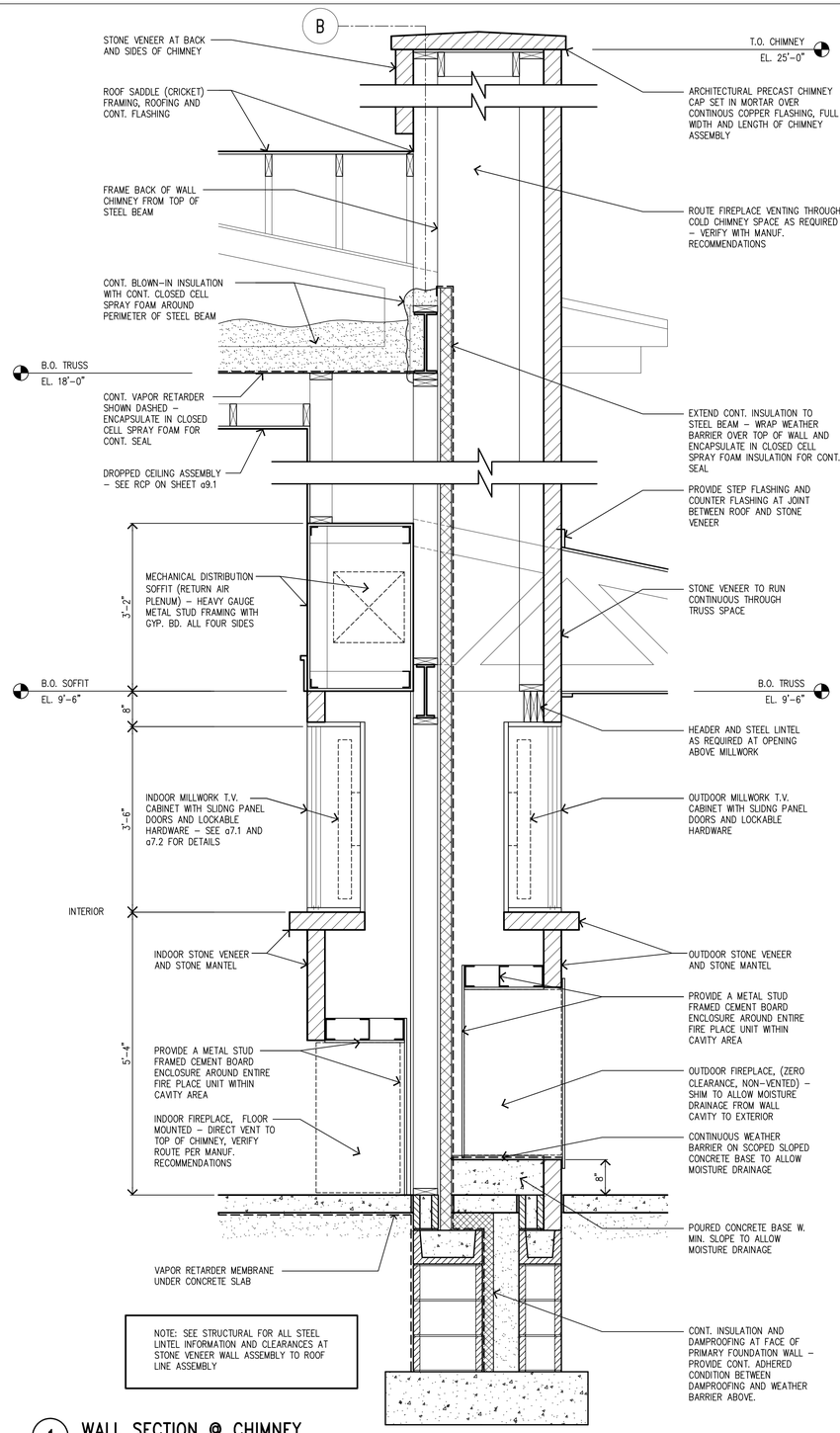
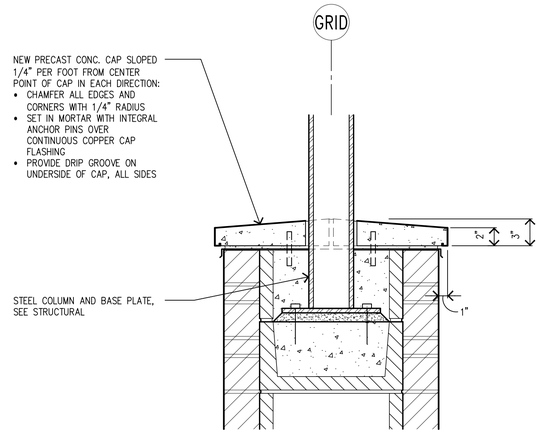
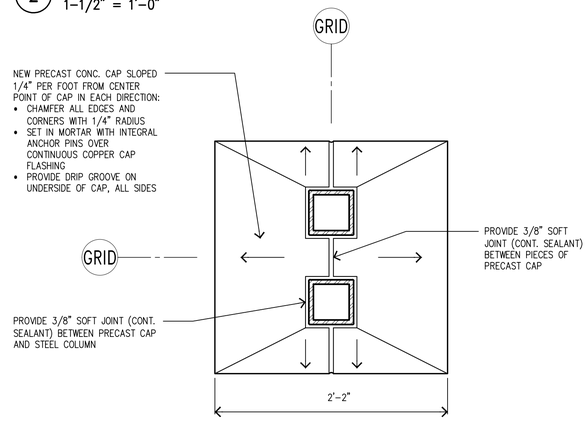


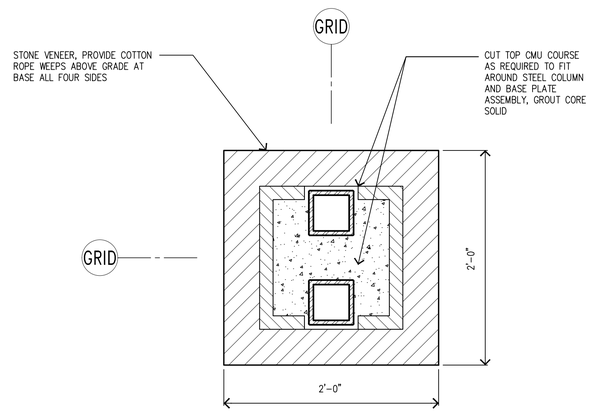
1 WALL SECTION @ CHIMNEY
3/4"=1'-0"



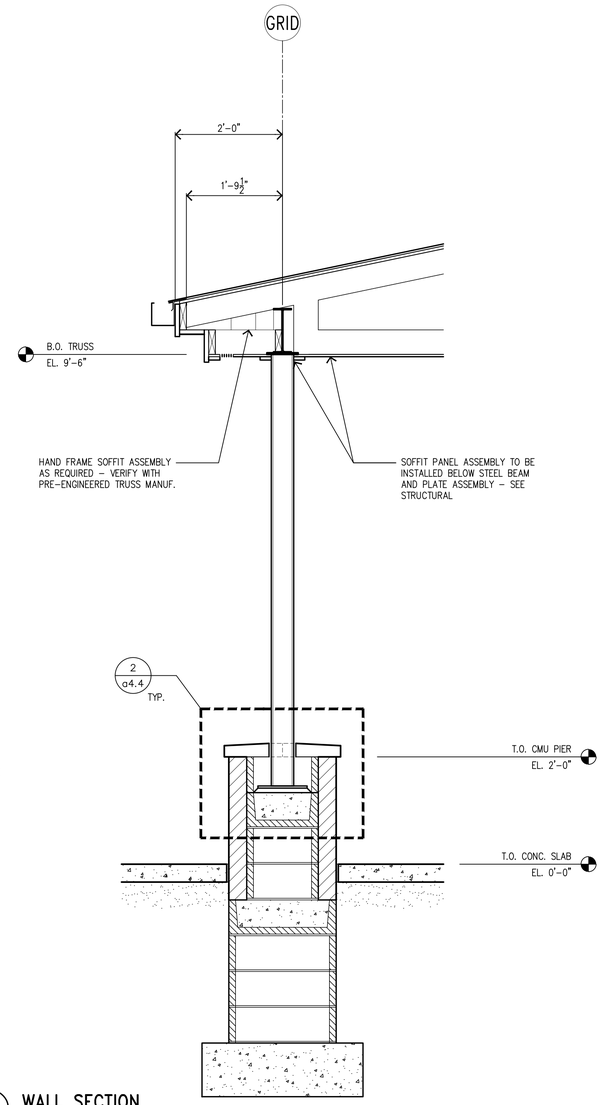
2 SECTION DETAIL
1-1/2" = 1'-0"



3 PLAN DETAIL - HIGH
1-1/2" = 1'-0"



4 PLAN DETAIL - LOW
1-1/2" = 1'-0"



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

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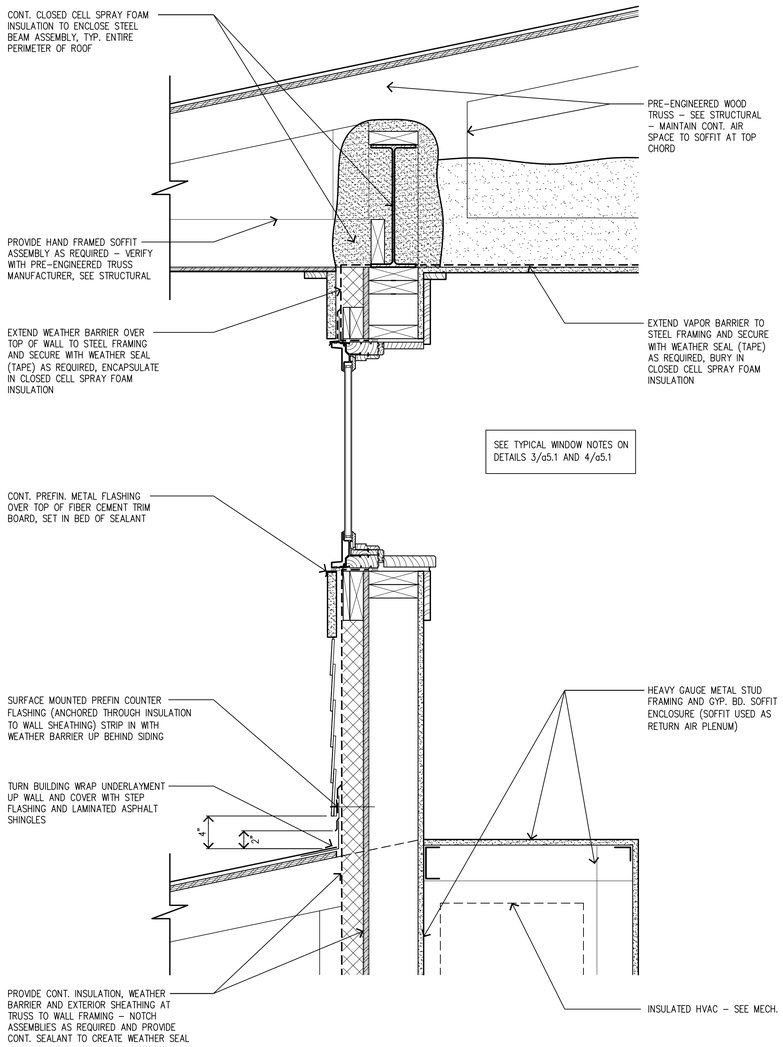
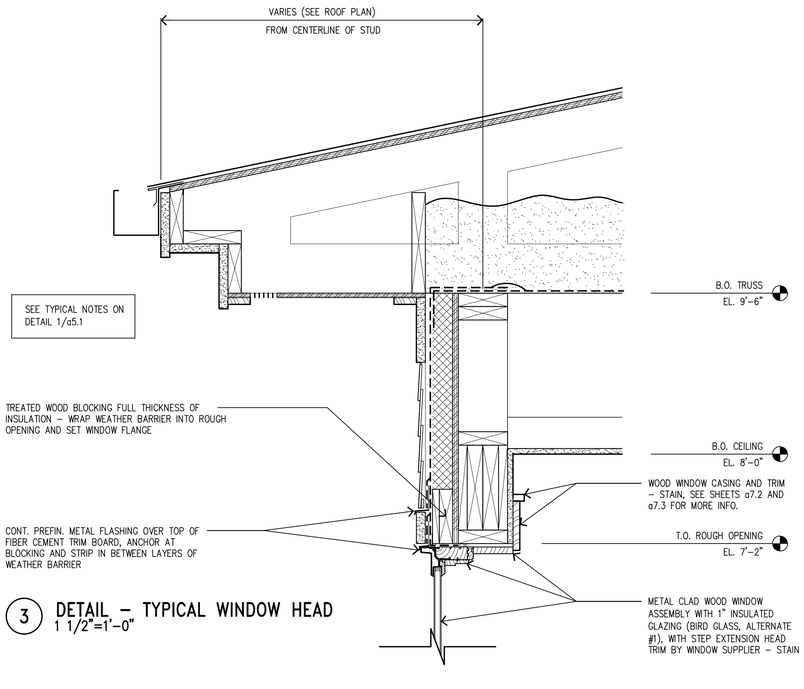
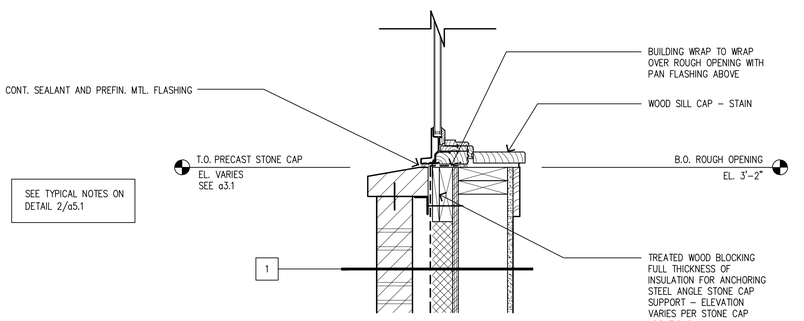


6 DETAIL - TYPICAL CLERESTORY WINDOW
1 1/2"=1'-0"

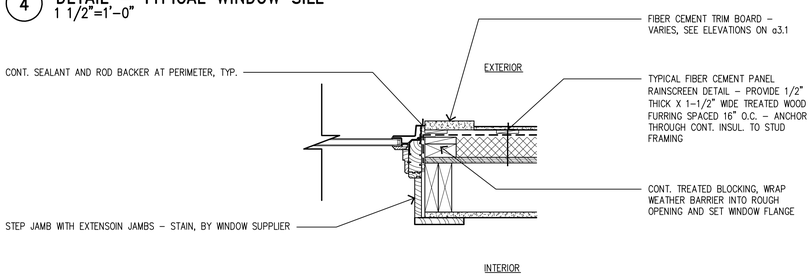
NOTE: CONTRACTOR RESPONSIBLE FOR SEQUENCING OF CONSTRUCTION TO PROVIDE CONTINOUS WEATHER BARRIER FROM FOUNDATION TO EXTERIOR WALL TO ROOF



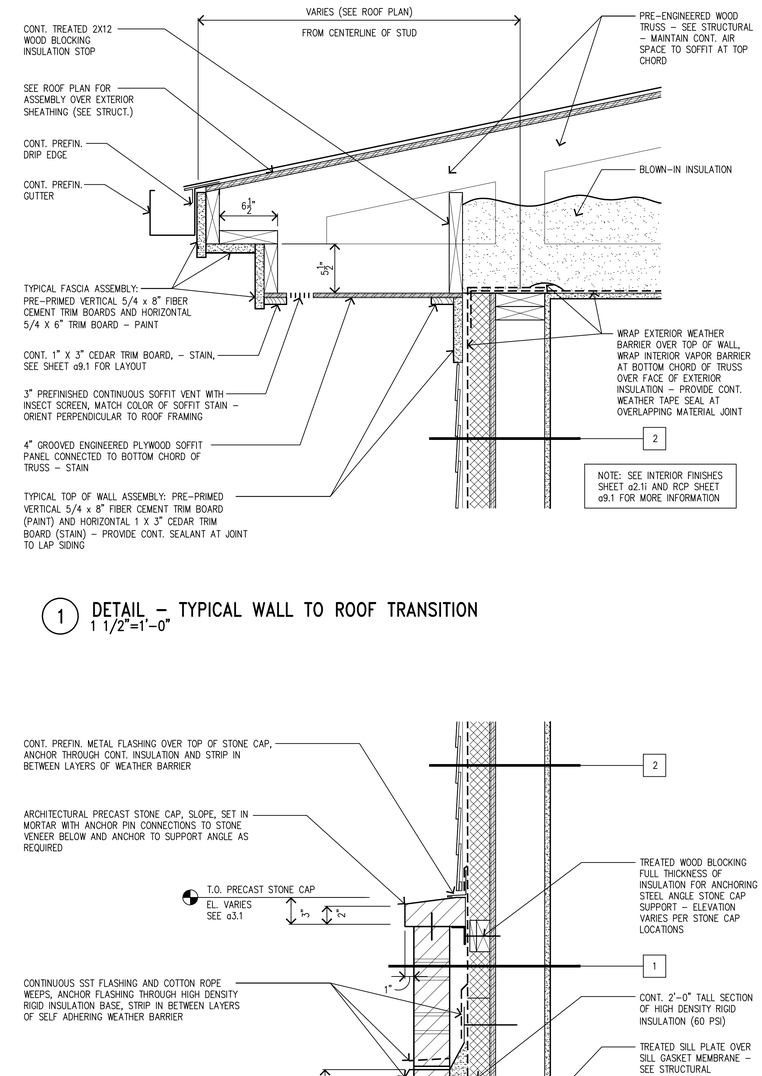
3 DETAIL - TYPICAL WINDOW HEAD
1 1/2"=1'-0"



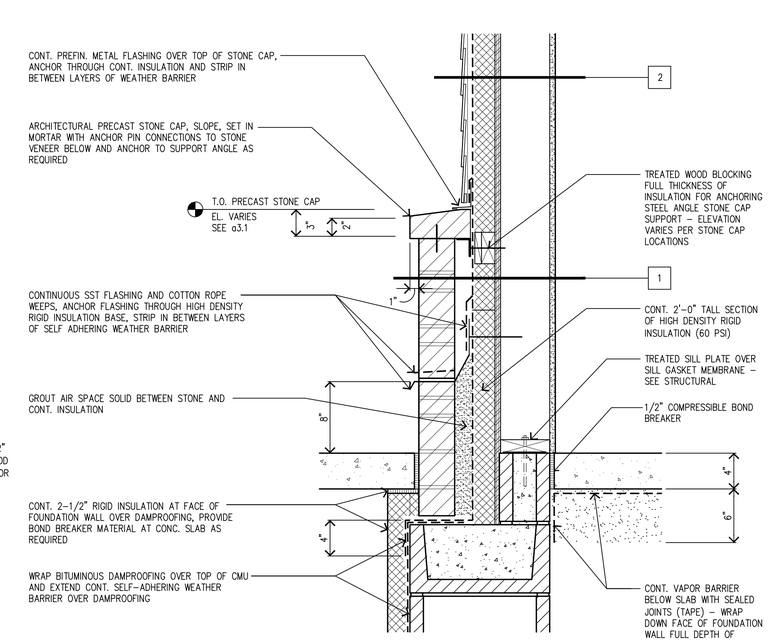
4 DETAIL - TYPICAL WINDOW SILL
1 1/2"=1'-0"



5 DETAIL - TYPICAL WINDOW JAMB
1 1/2"=1'-0"



1 DETAIL - TYPICAL WALL TO ROOF TRANSITION
1 1/2"=1'-0"



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

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Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
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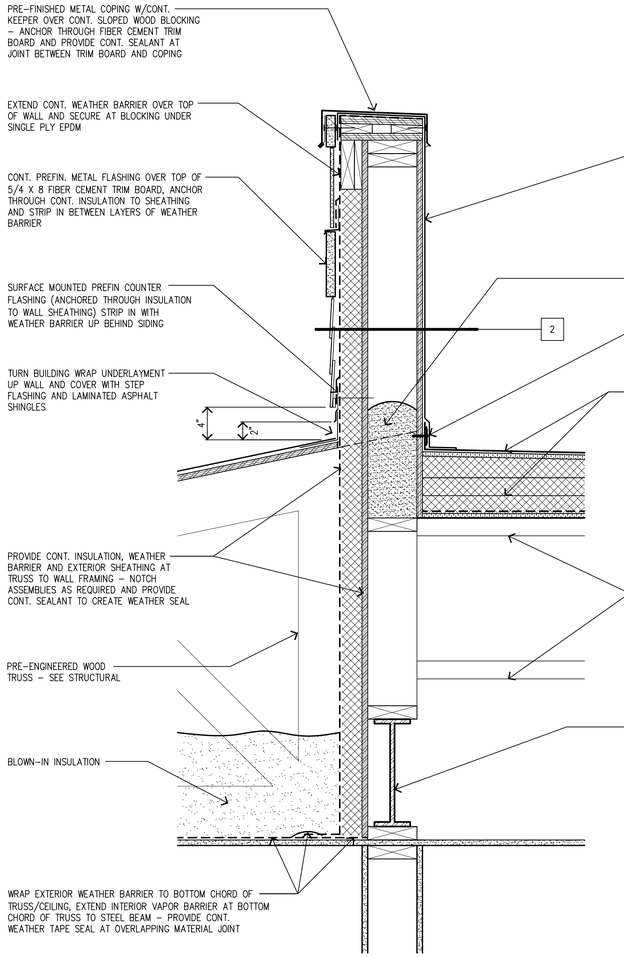
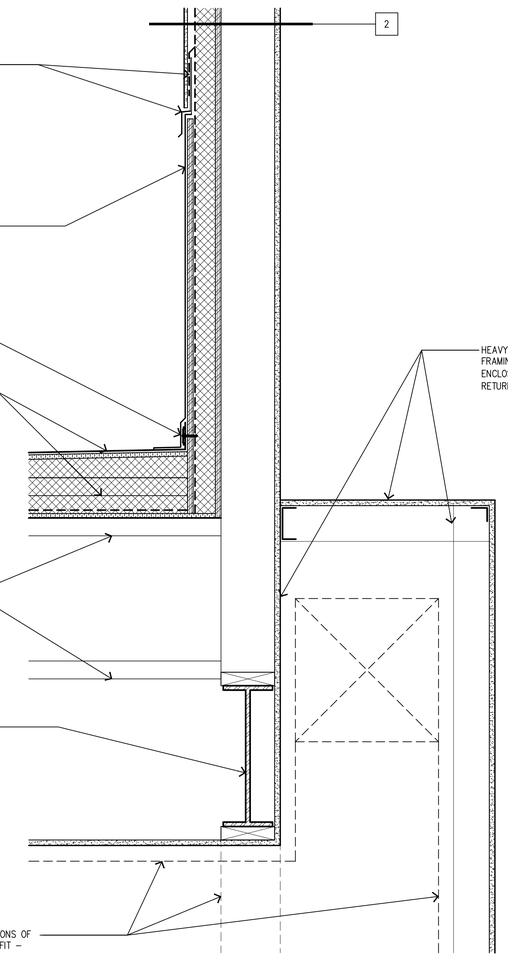
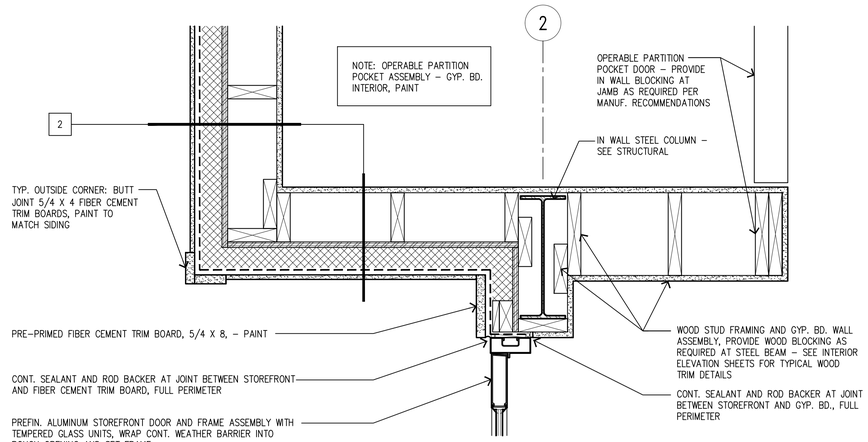


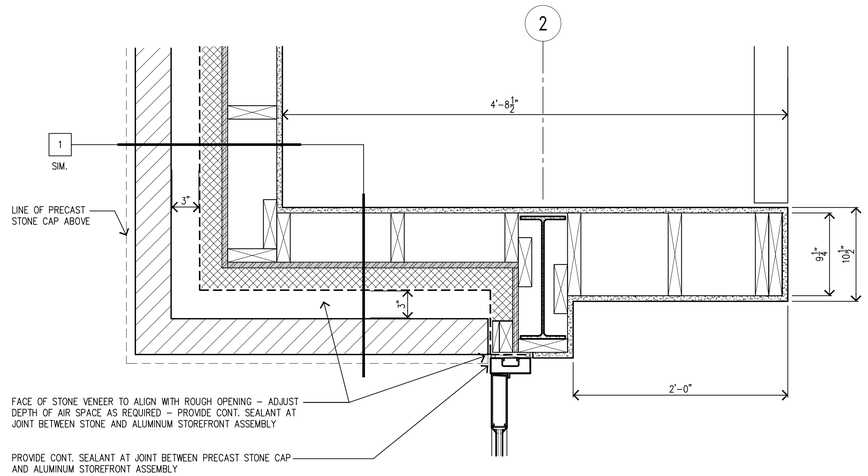
5 SECTION DETAIL @ FLAT ROOF PARAPET WALL ASSEMBLY
1-1/2" = 1'-0"



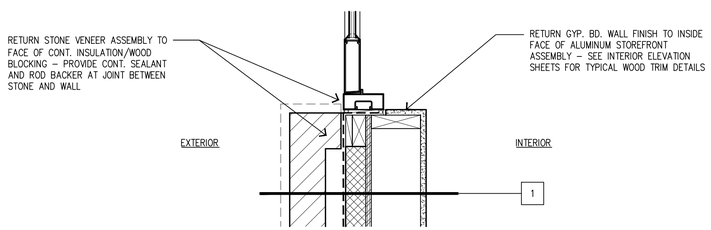
4 SECTION DETAIL @ FLAT ROOF TRANSITION TO WALL
1-1/2" = 1'-0"



1 PLAN DETAIL @ OPERABLE PARTITION POCKET WALL – HIGH CONDITION
1-1/2" = 1'-0"



2 PLAN DETAIL @ OPERABLE PARTITION POCKET WALL – LOW CONDITION
1-1/2" = 1'-0"



3 PLAN DETAIL – TYP. EXTERIOR DOOR JAMB – LOW CONDITION
1-1/2" = 1'-0"

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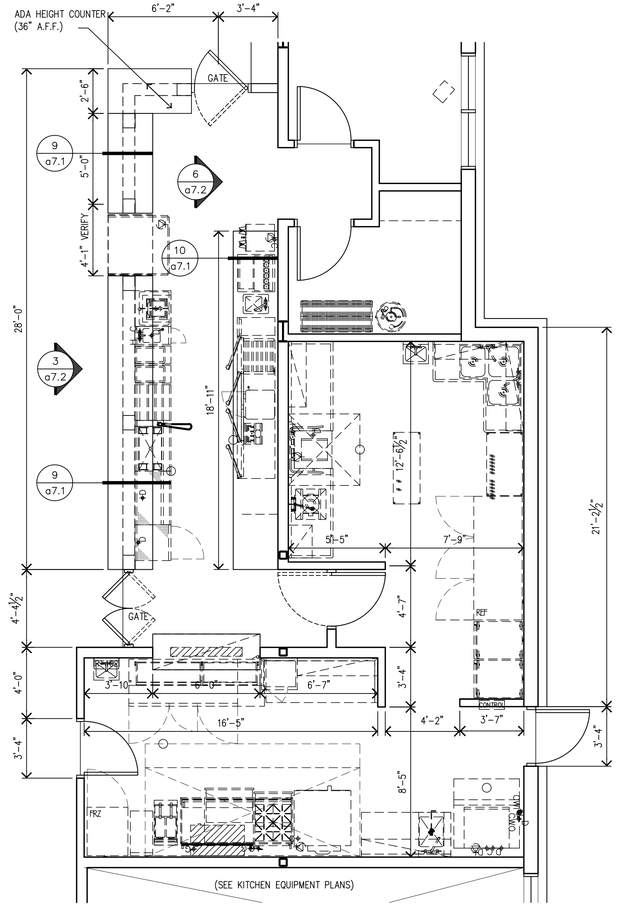
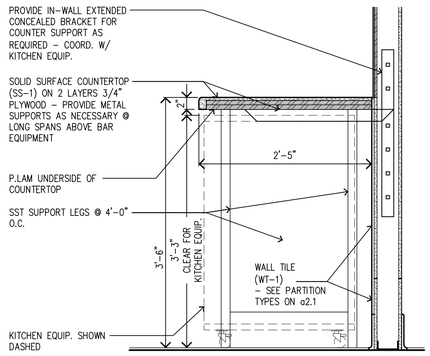
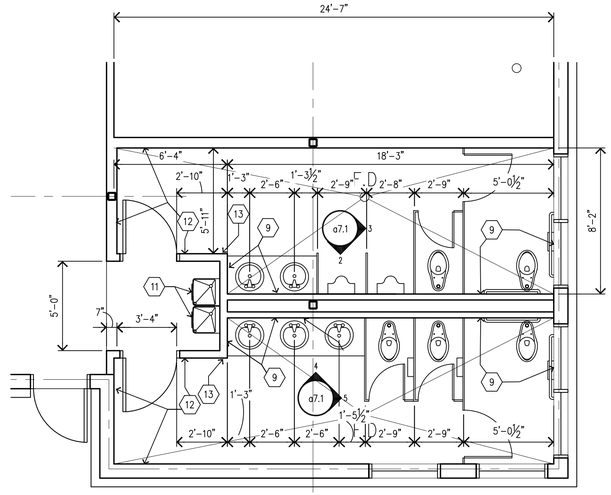


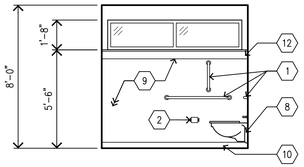
7 ENLARGED KITCHEN PLAN
1/4"=1'-0"



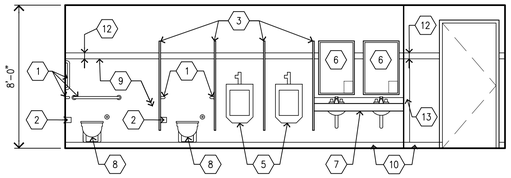
10 DETAIL @ BACK BAR
1"=1'-0"



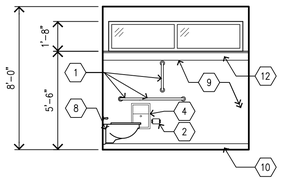
1 ENLARGED TOILET ROOM PLANS
1/4"=1'-0"



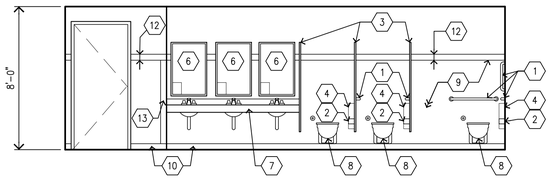
3 MEN'S – EAST ELEV.
1/4"=1'-0"



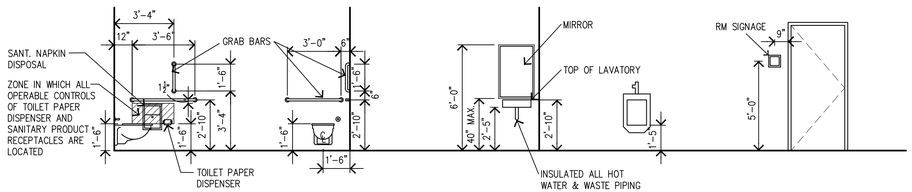
2 MEN'S – SOUTH ELEVATION
1/4"=1'-0"



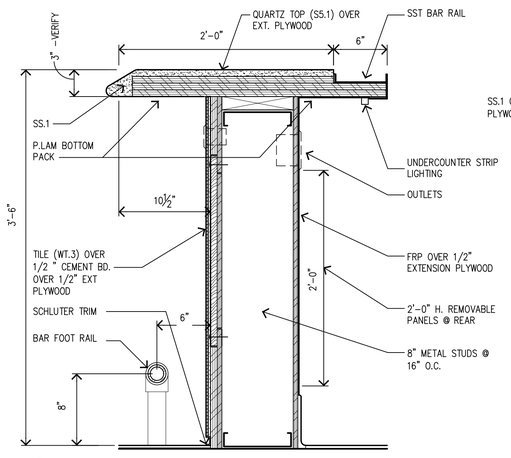
5 WOMEN'S – EAST ELEV.
1/4"=1'-0"



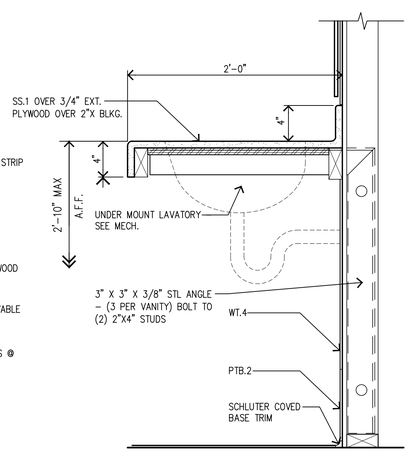
4 WOMEN'S – NORTH ELEV.
1/4"=1'-0"



6 TYPICAL ADA REQUIREMENTS PER MN CODE
1/4"=1'-0"



9 DETAIL – SERVICE/BAR COUNTER SECTION
1-1/2"=1'-0"



8 DETAIL – LAVATORY COUNTERTOP
1-1/2"=1'-0"

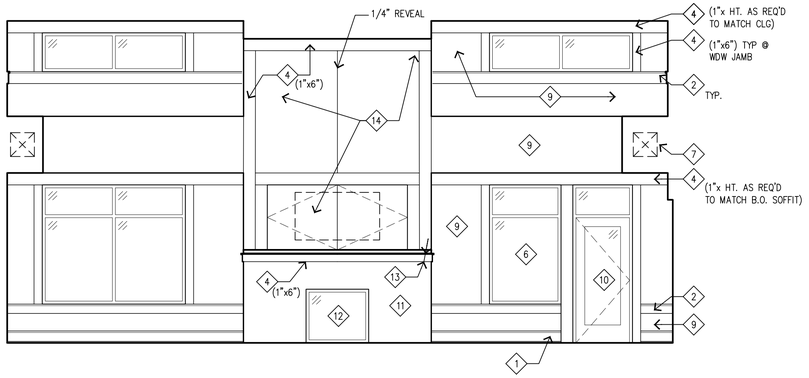
INTERIOR ELEVATION GENERAL NOTES:

1. SEE PROJECT MANUAL FOR FINISH SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
2. ALL PAINTED METAL GRILLS, LOUVERS, DIFFUSERS ETC. TO BE FINISHED TO MATCH THE MATERIAL ON WHICH THEY APPEAR.
3. CEILING HEIGHTS ARE SHOWN ON REFLECTED CEILING PLANS.
4. SEE REFLECTED CEILING PLAN SHEET a9.1 FOR CEILING FINISH INFORMATION.
5. REFER TO THE INTERIOR FINISH SCHEDULE FOR ALL FINISHES IN THE TOILET ROOMS.
6. REFER TO THE DIVISION 10 SPECIFICATIONS FOR ALL TOILET ROOM ACCESSORY PRODUCT INFORMATION.
7. TRASH RECEPTACLE PROVIDED BY OWNER – N.I.C.
8. ALL TOILETS TO BE MOUNTED WITH RIM 15" A.F.F., 18" A.F.F. @ ACCESSIBLE STALL.
9. URINALS TO BE MOUNTED WITH LIP 17" A.F.F. @ ACCESSIBLE URINALS.
10. REFER TO SHEETS a2.1 FOR PARTITION TYPE KEY.

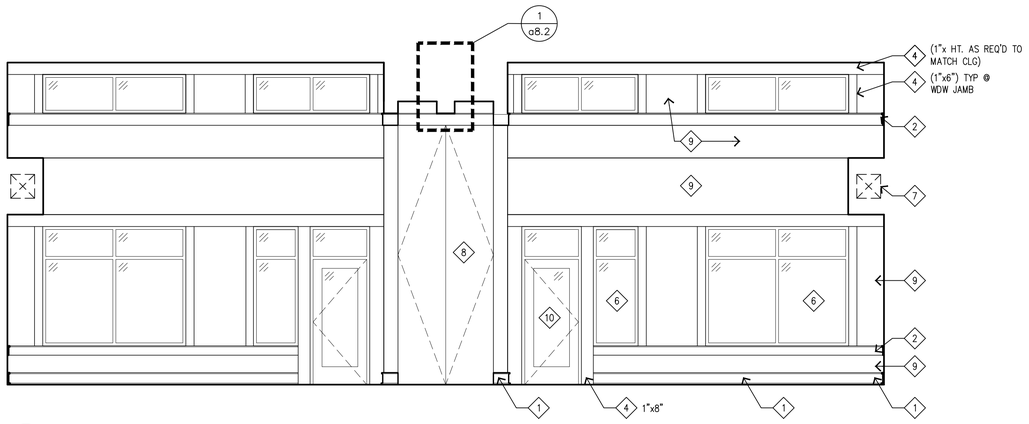
TOILET ROOM INTERIOR ELEVATION KEY NOTES:

1. SST GRAB BAR – SEE 6/a7.1 FOR MOUNTING HEIGHTS
2. SURFACE MOUNTED TOILET TISSUE DISPENSER (1 PER STALL) – SEE 6/a7.1 FOR MOUNTING HEIGHT
3. TOILET PARTITIONS – SOLID PLASTIC
4. NEW SURFACE MOUNTED SANITARY NAPKIN DISPENSER (1 PER STALL @ WOMEN'S) – SEE 6/a7.1 FOR MOUNTING HEIGHT
5. NEW URINAL – SEE 6/a7.1 FOR MOUNTING HEIGHT – SEE MECHANICAL
6. NEW MIRROR (3'-0"H x 2'-0"W)
7. NEW SOLID SURFACE (SS.1) COUNTERTOP WITH INTEGRAL SINKS – SEE DETAIL 8/a7.1
8. NEW TOILET – SEE 6/a7.1 FOR MOUNTING HEIGHT – SEE MECHANICAL
9. TILE WAINSCOT AT WET WALLS – 5'-0" A.F.F. – SEE FINISH SCHEDULE ON SHEET a2.1i
10. TILE BASE WITH SST SCHLUTER COVED BASE TRIM
11. HIGH/LOW DRINKING FOUNTAIN – SEE MECH.
12. WOOD TRIM (1" X 4") (WD.1) – B.O TRIM @ 5'-0" A.F.F. CONT. @ ALL TOILET ROOM WALLS; PAINTED GYB. BD. ABOVE AND BELOW TRIM @ NON-TILE WALLS
13. SCHLUTER TRANSITION @ CORNER

Comm. No. 1758 ISSUE DATE 06/06/2017 – DESIGN DEVELOPMENT SET 07/10/2017 – BID SET	Foodservice Designer premier premierequip.com	Mechanical and Electrical Engineers emanuelson-podas consulting engineers 10401 Bren Road East Minnetonka, MN 55343 ph: 952-930-0050 fax: 952-930-0777 www.epinc.net	Structural Engineer Mattson Macdonald Young structural engineers Bassett Creek Business Center 901 North 3rd Street, Suite 100 Minneapolis, MN 55401 612-827-7825 voice 612-827-0805 fax	Civil Engineer & Landscape Architect SRF Consulting Group, Inc.	Owner ROSEVILLE	Owner City of Roseville Project Cedarholm Community Building Title Enlarged Plans, Elevations & Details	I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota. By: Tim McIlwain Title: Architect Date: 07/10/2017 Registration Number: 22541	Drawing No. a7.1	HAGEN, CHRISTENSEN & McILWAIN ARCHITECTS 4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407 TEL (612)824-1332 • FAX (612)824-7386



2 COMMUNITY ROOM – NORTH ELEVATION
1/4"=1'-0"



1 COMMUNITY ROOM – WEST ELEVATION
1/4"=1'-0"

4 COMMUNITY ROOM – SOUTH ELEVATION (SEE 1/a7.2 FOR ADD'L NOTES)
1/4"=1'-0"

3 COMMUNITY ROOM – EAST ELEVATION (SEE 1/a7.2 FOR ADD'L NOTES)
1/4"=1'-0"

INTERIOR ELEVATION GENERAL NOTES:

1. SEE PROJECT MANUAL FOR FINISH SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
2. ALL PAINTED METAL GRILLS, LOUVERS, DIFFUSERS ETC. TO BE FINISHED TO MATCH THE MATERIAL ON WHICH THEY APPEAR.
3. CEILING HEIGHTS ARE SHOWN ON REFLECTED CEILING PLANS.
4. SEE REFLECTED CEILING PLAN SHEET a9.1 FOR CEILING FINISH INFORMATION.
5. REFER TO THE INTERIOR FINISH SCHEDULE FOR ALL FINISHES IN THE TOILET ROOMS.
6. REFER TO THE DIVISION 10 SPECIFICATIONS FOR ALL TOILET ROOM ACCESSORY PRODUCT INFORMATION.
7. TRASH RECEPTACLE PROVIDED BY OWNER – N.I.C.
8. ALL TOILETS TO BE MOUNTED WITH RIM 15" A.F.F., 18" A.F.F. @ ACCESSIBLE STALL.
9. URINALS TO BE MOUNTED WITH LIP 17" A.F.F. @ ACCESSIBLE URINALS.
10. REFER TO SHEETS a2.1 FOR PARTITION TYPE KEY.

INTERIOR ELEVATION KEY NOTES: (NOT ALL NOTES USED)

1. WOOD BASE – SEE 7/a8.2
2. WOOD TRIM – SEE 8/a8.2
3. HIGH-LOW D.F. – SEE MECH.
4. WOOD TRIM – SIZES SHOWN IN (1"x). WOOD SPECIES TO BE PLAIN SLICED WHITE OAK, STAIN & FINISH – PROVIDE CONT. REVEAL TO MATCH DETAIL 8/A8.2
5. FOLDING GLASS STOREFRONT ASSEMBLY
6. WOOD WINDOW – STAIN & FINISH
7. DUCTWORK WITHIN SOFFIT ASSEMBLY (RETURN AIR PLENUM) – SEE DETAILS ON a5.1 & a5.2
8. FABRIC PANIC DOORS FOR ACOUSTIC FOLDING WALL ASSEMBLY
9. GYP. BD. – PAINT
10. PREFIN. ALUM STOREFRONT FRAMING AND ENTRY DOOR
11. STONE VENEER – COURSING TO MATCH EXTERIOR
12. GAS FIREPLACE
13. 1-1/2" THICK WOOD MANTLE – SPECIES TO MATCH TRIM. STAIN & SEAL
14. MILLWORK CABINETS FOR MONITOR W/ WOOD FACING ABOVE.
15. HM. DOOR & FRAME
16. CERAMIC TILE BASE W/ COVED SCHLUTER TRIM
17. CERAMIC WALL TILE – FULL HT. – SET W/ 1/3 OFFSET
18. WOOD GATE
19. SERVICE COUNTER / BAR
20. GRAB & GO RETAIL DISPLAY COOLER – SEE KITCHEN EQUIPMENT DRAWINGS.
21. ELIASON KITCHEN DOOR – CLAD W/ P. LAM. W/ SET KICK PLATE. PROVIDE CIRCULAR VISION WINDOW
22. ELECTRONIC INFO / MENU BOARD. PROVIDE POWER & DATA BOX – SEE ELECTRICAL. MONITOR & BRACKET PROVIDED BY OWNER – GC TO INSTALL
23. SCHLUTER EDGE TRIM – FULL HT. OF OPG
24. PENDANT LIGHT FIXTURES – SEE a9.1 & ELECTRICAL
25. BRUSHED SST KITCHEN PASS-THRU SURROUND TRIM W/ 16" WIDE SHELF
26. FABRIC WRAPPED ACOUSTIC PANELS W/ CHAMFERED EDGE
27. INTERIOR WINDOW FRAME – 1" X 4" (WD.1) PERIMETER FRAME W/ 1/2" SQ. (WD.1) STOPS W/ 1/4" TEMP CLEAR GLASS

Comm. No.
1758

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Foodservice Designer
premier

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

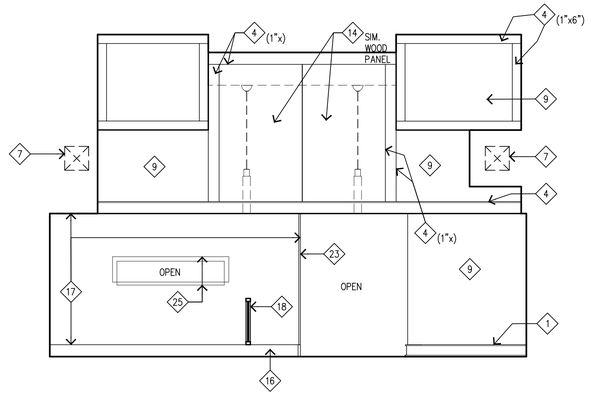
Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Interior Elevations

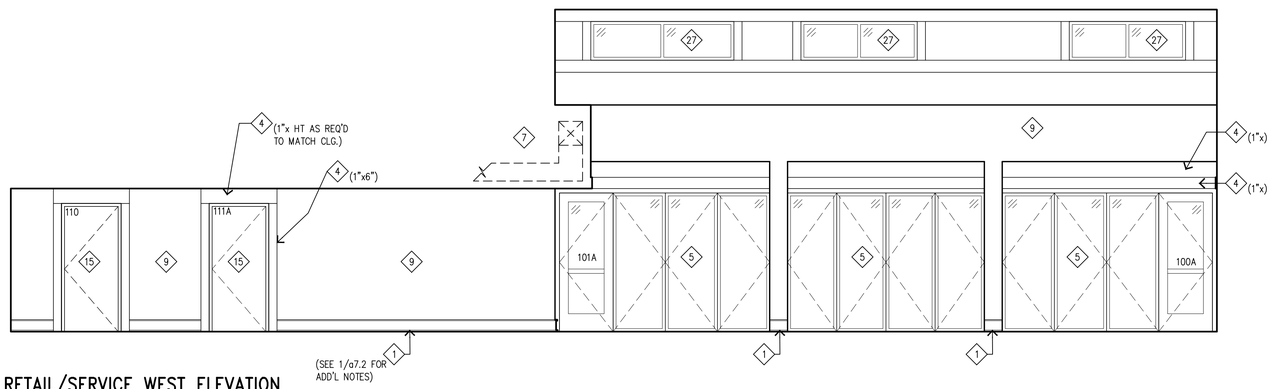
I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By: Tim McIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a7.2

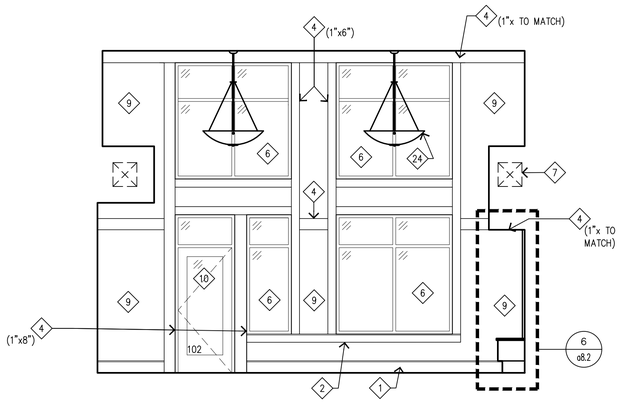
HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)824-1332 • FAX (612) 824-7386



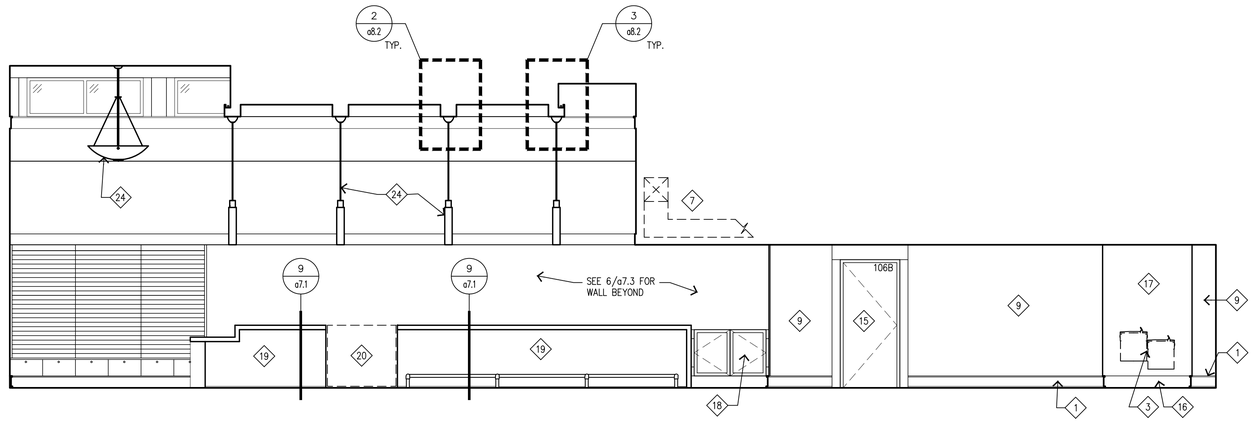
2 RETAIL/SERVICE SOUTH ELEVATION
1/4"=1'-0"



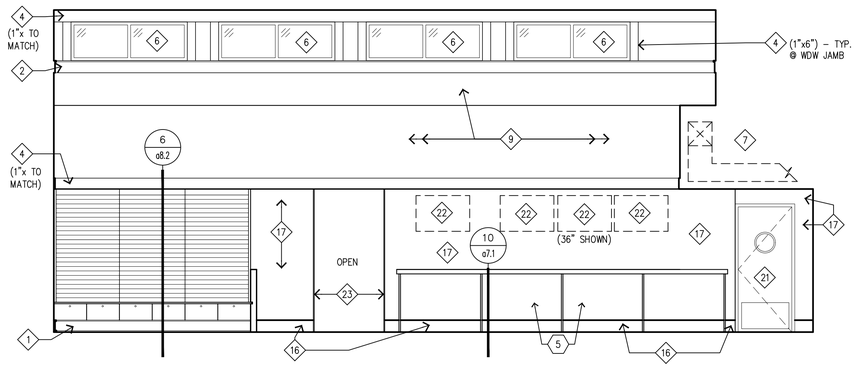
1 RETAIL/SERVICE WEST ELEVATION
1/4"=1'-0"



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



3 RETAIL/SERVICE EAST ELEVATION – FRONT SERVICE COUNTER
1/4"=1'-0"



6 RETAIL/SERVICE EAST ELEVATION – BACK COUNTER
1/4"=1'-0"

INTERIOR ELEVATION GENERAL NOTES:

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Foodservice Designer
premier
Foodservice Design & Equipment, Inc.
4201 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-8000 • fax: 763-544-7888
premiereq.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-8805 fax

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Owner
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Interior Elevations

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By: Tim MacIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
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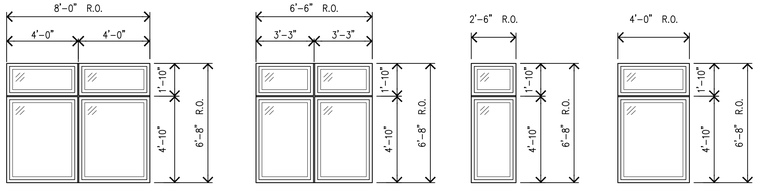
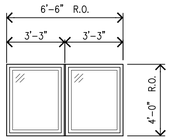


W1
CLAD WOOD

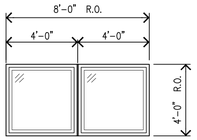
W2
CLAD WOOD

W3
CLAD WOOD

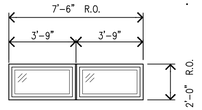
W4
CLAD WOOD



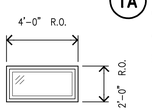
W5
CLAD WOOD



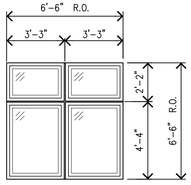
W6
CLAD WOOD



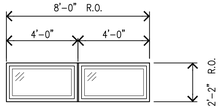
W7
CLAD WOOD
TRANSLUCENT GLAZING



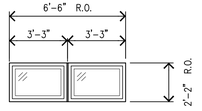
W8
CLAD WOOD
TRANSLUCENT GLAZING



W9
CLAD WOOD



W10
CLAD WOOD



W11
CLAD WOOD

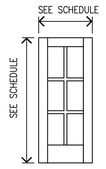
DOOR & OPENING SCHEDULE

DOOR NUMBER	DOOR SIZE (WxH)	DOOR TYPE	FRAME SIZE (WxH)	CARD READER	FRAME TYPE	HARDWARE GROUP	REMARKS
100A	3'-0" x 7'-0"	D-SIM	3'-0" x 7'-0"		SEE REMARKS	01	FOLDING GLASS WALL ASSEMBLY
100B	3'-0" x 7'-0"	D	3'-4" x 7'-2"		2	11	
100C	3'-0" x 7'-0"	D	3'-4" x 7'-2"		2	08	
101A	3'-0" x 7'-0"	D-SIM	3'-4" x 7'-2"		SEE REMARKS	01	FOLDING GLASS WALL ASSEMBLY
101B	3'-0" x 7'-0"	D	3'-0" x 7'-0"		2	11	
102	3'-0" x 7'-0"	D	3'-4" x 7'-2"		2	09	
103	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	03	
104	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	04	
105	3'-0" x 7'-0"	B	3'-4" x 7'-2"		3	02	
106A	3'-0" x 7'-0"	C	3'-4" x 7'-2"		1	07	INSUL. EXTERIOR DOOR
106B	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	06	
107	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	10	INSUL. EXTERIOR DOOR
108	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	10	
109	3'-0" x 7'-0"	D	3'-4" x 7'-2"		2	11	
110	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	06	
111A	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	05	
111B	3'-0" x 7'-0"	A	3'-4" x 7'-2"		1	05	

1A DOOR AND HARDWARE NOTES

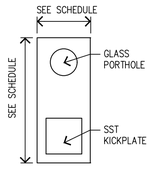
A. ALL NEW HARDWARE TO BE LEVER TYPE ACCESSIBLE. CONTRACTOR TO PROVIDE HARDWARE SCHEDULE FOR REVIEW AND APPROVAL BY OWNER AND ARCHITECT.

B. ALL HARDWARE GROUPS TO BE PER MN ACCESSIBILITY STANDARDS

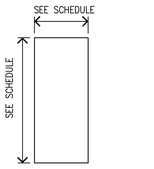


DOOR TYPE A
SOLID WOOD - 6 PANEL

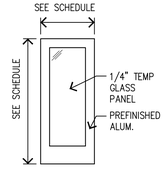
SPECIES: PLAIN SLICED
WHITE OAK - STAIN



DOOR TYPE B
ELIASON
(BI-SWING) KITCHEN DOOR



DOOR TYPE C
HOLLOW METAL - PAINT.

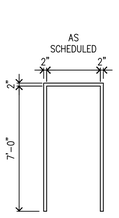


DOOR TYPE D
ALUM.

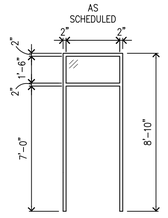
1B DOOR TYPES

NOTE:
- WOOD STAIN FINISH TO MATCH ARCHITECT'S SAMPLE.
- SEE I2.1 FOR ADD'L FINISH INFO.
- ALL GLASS TO BE TEMPERED AS REQ'D BY LOCAL AND NATIONAL CODE.

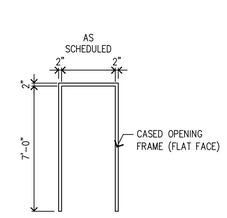
NOTE:
CONTRACTOR TO VERIFY ALL DOOR/FRAME SIZES AND ROUGH OPENING SIZES W/DOOR SUPPLIER PRIOR TO FRAMING



FRAME TYPE 1
HOLLOW METAL, PAINT



FRAME TYPE 2
ALUMINUM STOREFRONT, PREFINISHED



FRAME TYPE 3
HOLLOW METAL, PAINT

1C DOOR FRAME TYPES

NOTE:
CONTRACTOR TO VERIFY ALL DOOR/FRAME SIZES AND ROUGH OPENING SIZES W/DOOR SUPPLIER PRIOR TO FRAMING

2 EXTERIOR WINDOW TYPES (ALL WINDOWS FIXED)

NOTE:
- BASIS OF DESIGN: ANDERSEN E-SERIES AUXILIARY PREFINISHED METAL CLAD WOOD WINDOWS
- WOOD SPECIE TO BE MIX FIR
- WOOD STAIN FINISH TO MATCH ARCHITECTS SAMPLE
- SEE TYPICAL DETAILS ON SHEET a5.1

- ALTERNATIVE #1: "BIRD-FRIENDLY" GLAZING, FACTORY INSTALLED - SEE ALTERNATIVE DESCRIPTION IN SPECIFICATIONS
- SILK SCREEN COLOR: V948 MEDIUM GRAY VIRASPAN
- SILK SCREEN PATTERN: 1/8" HORIZONTAL LINES ALTERNATING WITH 1/2" SPACES, EQUATING TO 20% COVERAGE

Comm. No.
1758

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06/06/2017 - DESIGN DEVELOPMENT SET
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Foodservice Designer
premier
Exceptional Design ■ Legendary Results
100 Washington Avenue South, Minneapolis, MN 55401
ph: 952-544-5800 ■ fax: 763-544-7646
premiereq.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

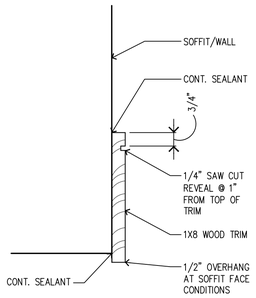
Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
DOOR AND WINDOW TYPES

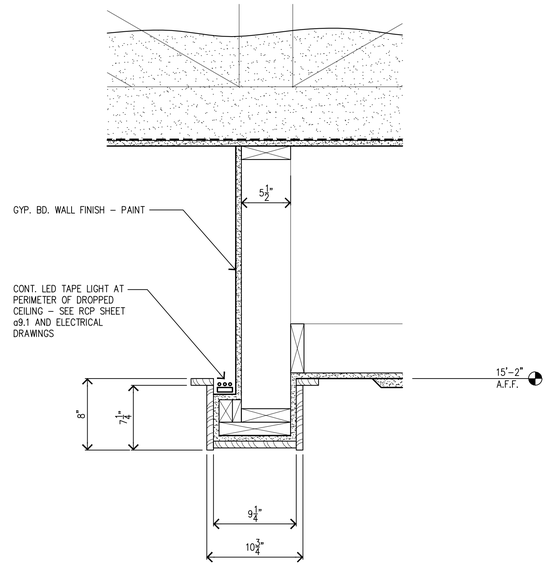
I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By:
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a8.1

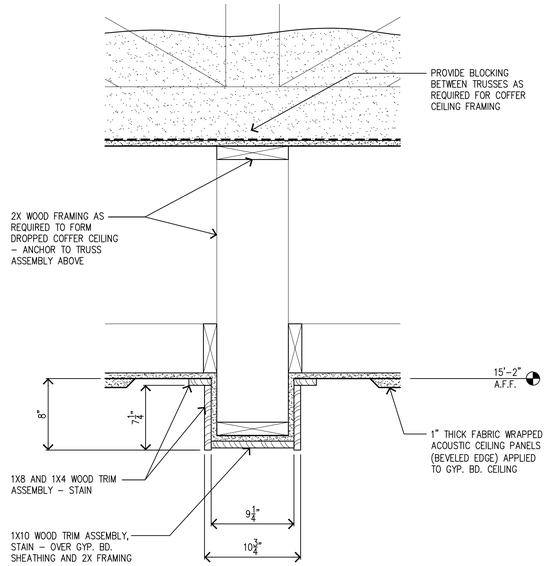
HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. - MINNEAPOLIS, MN 55407
TEL. (612)804-1932 - FAX (612)804-7886



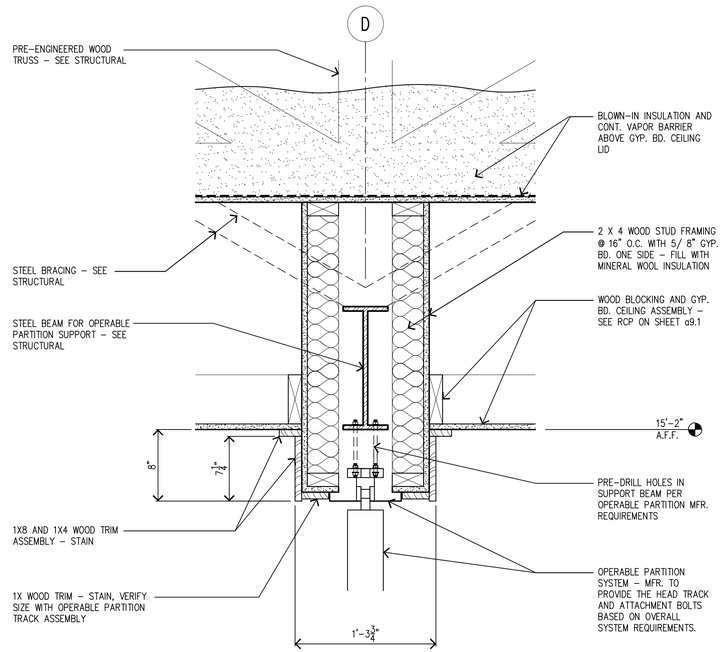
8 TYP. WOOD TRIM DETAIL @ SOFFIT/WALL
3"=1'-0"



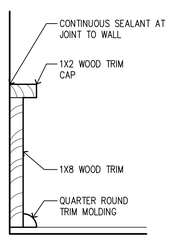
3 SECTION DETAIL @ TYP. COFFER LIGHT SHELF
1-1/2" = 1'-0"



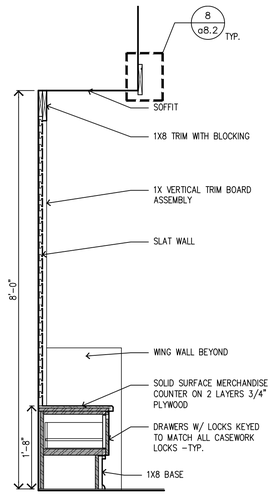
2 SECTION DETAIL @ TYP. COFFER WOOD BEAM
1-1/2" = 1'-0"



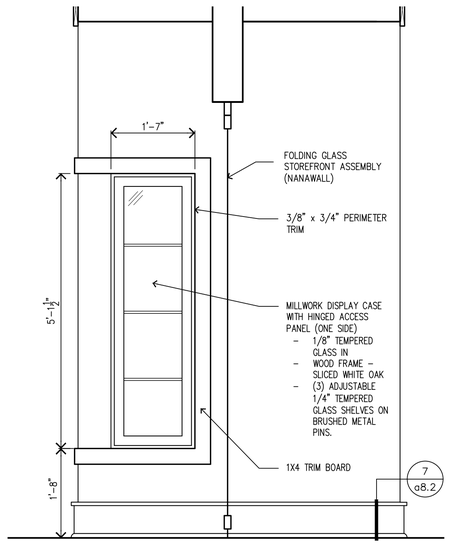
1 SECTION DETAIL @ OPERABLE PARTITION – HEAD CONDITION
1-1/2" = 1'-0"



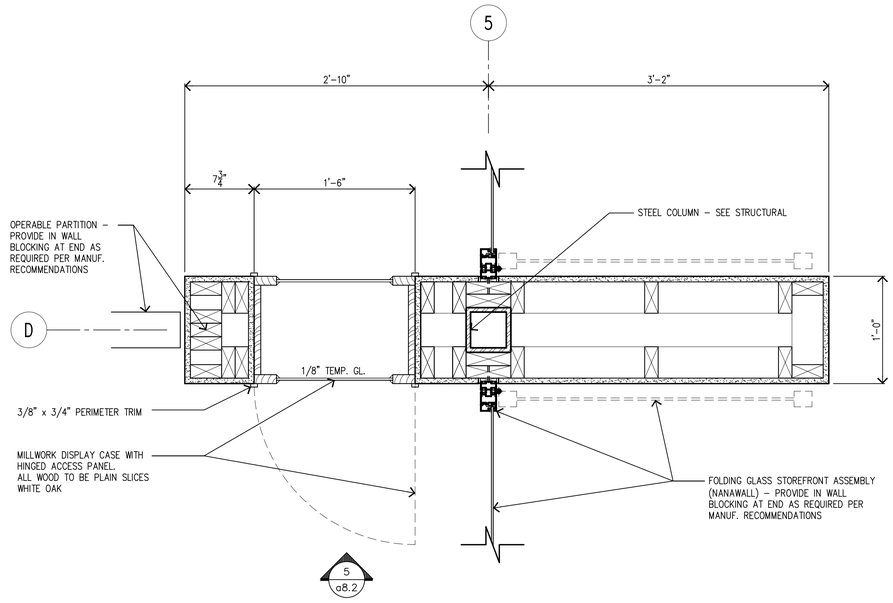
7 TYP. WOOD BASE DETAIL
3"=1'-0"



6 RETAIL FIXTURE SECTION
3/4" = 1'-0"



5 DISPLAY CASE ELEVATION
3/4" = 1'-0"



4 PLAN DETAIL @ OPERABLE PARTITION PIER
1-1/2" = 1'-0"

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Foodservice Designer
premier
Exceptional Design ■ Legendary Results
7101 Northland Terrace, Minneapolis, MN 55428
ph: 763-504-3000 fax: 763-504-3140
premierreg.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

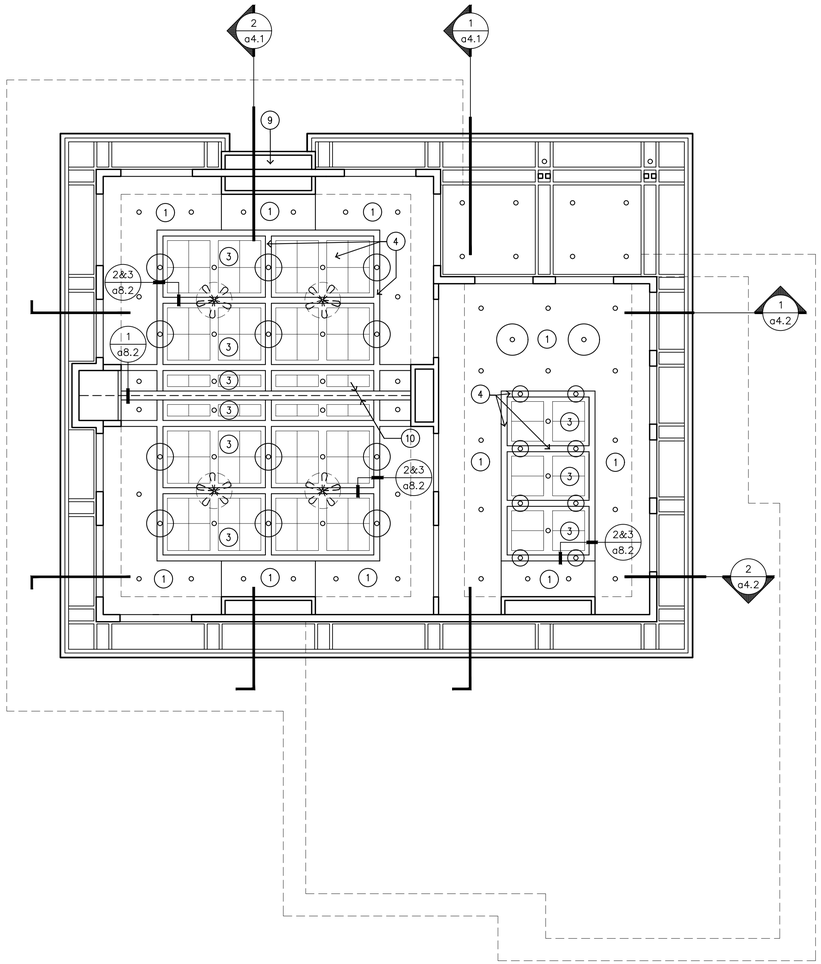
Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Interior Details

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By: Tim McIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

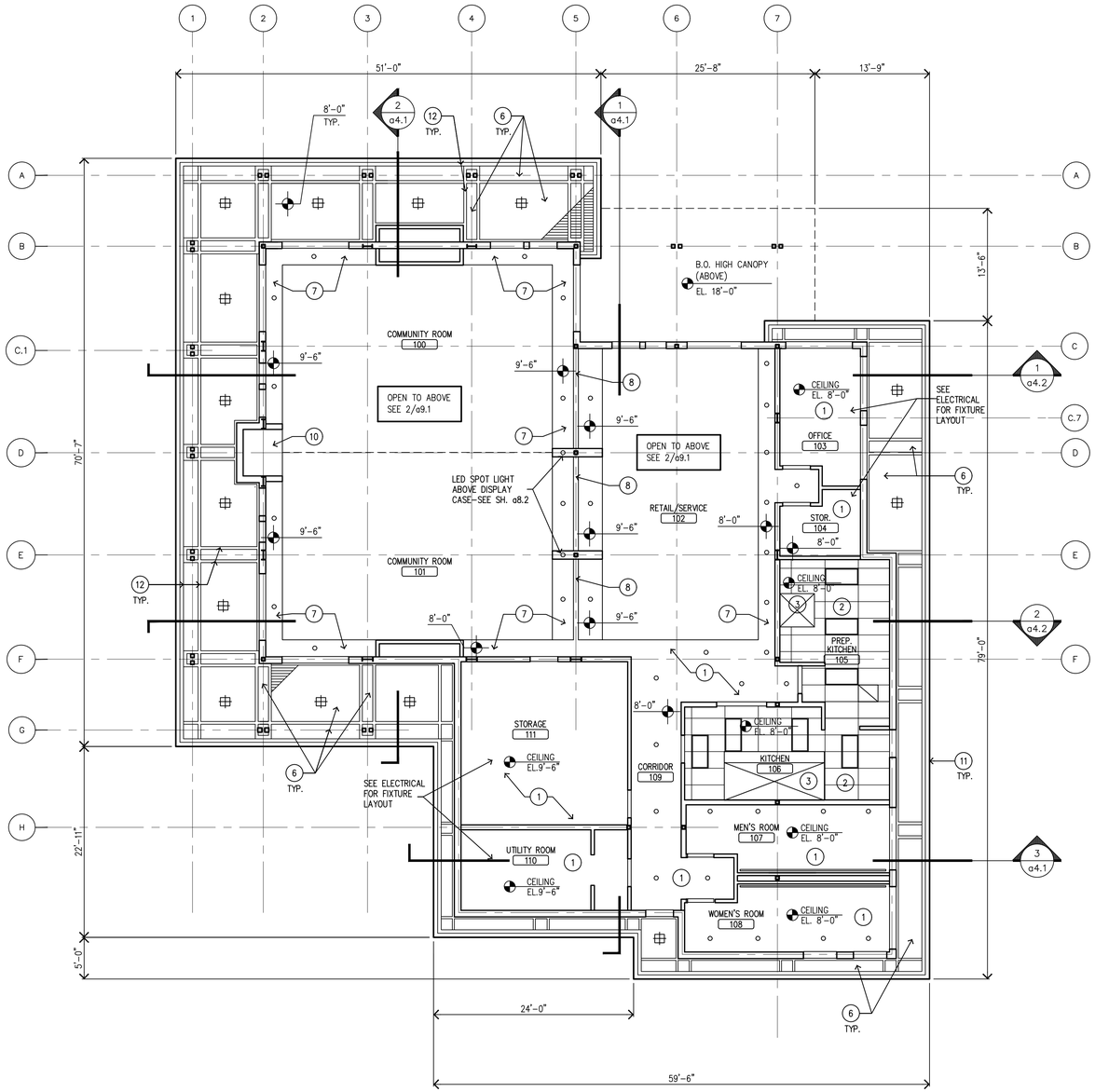
Drawing No.
a8.2

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7866



2 REFLECTED CEILING PLAN – HIGH
1/8"=1'-0"

NORTH



1 REFLECTED CEILING PLAN – LOW
1/8"=1'-0"

NORTH

GENERAL RCP NOTES:

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR FIXTURE TYPES & QUANTITIES
2. SEE ELECTRICAL DRAWINGS FOR LIGHTING LAYOUT & TYPES, EMERGENCY EXIT LIGHTS & SIGNAGE
3. ALL GYP. BOARD CEILINGS / SOFFITS TO BE PAINTED
4. GENERAL CONTRACTOR TO COORDINATE LOCATION OF ALL LIGHT FIXTURES BETWEEN JOIST SPACES WITH ELECTRICAL
4. PROVIDE (6) 2'X2' TAPE-IN ACCESS POINTS – LOCATE W/ ARCHITECT AND OWNER

RCP SYMBOL KEY (SEE ELECTRICAL)

- CEILING EL. X'-X" — CEILING ELEVATION ABOVE FINISH DOOR
- DOWN LIGHT
- LARGE PENDANT
- STRIP LIGHTING
- SMALL PENDANT
- SURFACE MOUNT LIGHT
- CEILING FAN
- 2' x 4' FLUORESCENT LIGHT FIXTURE

RCP KEY NOTES

1. GYP. BOARD CEILING ASSEMBLY – PAINT
2. SUSPENDED 2 X 4 VINYL-COATED CEILING TILE SYSTEM
3. COFFERED CEILING ASSEMBLY – GYP. BOARD PAN WITH DECORATIVE 1" THICK FABRIC WRAPPED ACOUSTIC PANELS W/ CHAMFERED EDGE
4. COFFERED CEILING ASSEMBLY – SEE 2&3/a8.2
5. NOT USED
6. FIR PANEL CEILING WITH V-GROOVES @ 4" O.C. – STAIN – (NO CAT EYES OR PATCHES ALLOWED)
7. GYP. BOARD SOFFIT ASSEMBLY
8. FOLDABLE GLASS PARTITION WALL TRACK ASSEMBLY
9. GAS FIREPLACE AND CHIMNEY ASSEMBLY
10. FOLDABLE PARTITION WALL POCKET ASSEMBLY WITH GYP. BOARD INTERIOR LID
11. PRE-PRIMED FIBER CEMENT TRIM BOARD FASCIA ASSEMBLY – PAINT
12. 1/2" X 2-1/2" CEDAR TRIM – STAIN

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Foodservice Designer
premier
Foodservice Design ■ Ergonomics ■ Facilities
7101 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-8800 ■ fax: 763-544-7600
premiereng.com

Mechanical and Electrical Engineers
emanuelson-podas
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10401 Bren Road East
Minnetonka, MN
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ph: 952-930-0050
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Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Reflected Ceiling Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By: Tim MacIlwain
Title: Architect Date: 07/10/2017
Registration Number: 22541

Drawing No.
a9.1

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL. (612)824-1332 • FAX (612)824-7386

STRUCTURAL NOTES

Unless noted otherwise on the plans and/or in the details, these notes shall apply. If there are discrepancies between the plans/details and these notes, the contractor must conform to the more stringent requirements, unless clarified with the Structural Engineer of Record (SER) prior to work.

MATERIAL STRENGTHS

Structural Steel
- HSS Rectangular and Square - ASTM A500 Gr. B, Fy = 46 ksi
- W shapes - ASTM A992, Fy = 50 ksi
- Misc. structural steel - ASTM A36, Fy = 36 ksi

Structural Steel Fasteners
- Connection bolts - ASTM A325 or F1852, Fu = 120 ksi
- Anchor rods - ASTM F1554, Gr. 36, Fy = 36 ksi
- Threaded rods - ASTM A36, Fy = 36 ksi

Reinforcing Steel
- Deformed Bars - ASTM A615, Gr. 60, Fy = 60 ksi
- Fabric - ASTM A185, Fy = 70 ksi
- Masonry Joint Reinforcing - ASTM A951, Fy = 70 ksi
- Epoxy Coating for Reinforcing Steel - ASTM A775

Concrete
- f 'c = compressive strength in 28 days
  - 4,000 psi unless noted otherwise
  - 3,000 psi for footings
  - 3,500 psi for slab on grade
  - 3,000 psi for masonry corefill

Masonry
- Concrete Masonry Units - ASTM C90
- f 'm = net area compressive strength of masonry
  - based on IBC table 2105.2.2.1.2
  - 2,000 psi

Structural Lumber
- 2x4 and 2x6 lumber - #2 Spruce Pine Fir (SPF) or equal
- 2x8, 2x10 and 2x12 lumber - #2 Hem Fir or equal
- Treated lumber - #2 Southern Pine or equal
- Laminated Veneer Lumber (LVL)
  - E = 2,000,000 psi minimum
  - Fb = 2,600 psi minimum
- Laminated Strand Lumber (LSL)
  - E = 1,550,000 psi minimum
  - Fb = 2,325 psi minimum
- Parallel Strand Lumber (PSL) Beam
  - E = 2,000,000 psi minimum
  - Fb = 2,900 psi minimum
- Parallel Strand Lumber (PSL) Column
  - E = 1,800,000 psi minimum
  - Fb = 2,400 psi minimum

DESIGN LOADS

Roof

Dead load	17 psf (7 psf top + 10 psf bot chord)
Live load	20 psf
Snow load	
Ground snow, pg	50 psf
Flat roof snow load, pf	39 psf
Ce = 1.0, Ct = 1.1, Is = 1.0	
Snow drift	As shown on plan
Roof top units See mechanical & notes below	

Wind

Risk Category	II
Vult	115 mph (3 second gust)
Vasd	90 mph (3 second gust)
Exposure Category	B
Iw	1.0
Internal pressure coefficient (GCpi)	±0.18
Component & Cladding design pressure	15 psf

DESIGN CODES

Minnesota Building Code (2015)

REFERENCE CODES

International Building Code (IBC-2012)
American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI 7-10)
American Institute of Steel Construction Manual (AISC 360-10)
American Welding Society - Structural Welding Code - Steel (ANSI D1.1-10, D1.3-98, D1.4-98)
American Concrete Institute - Building Code Requirements for Structural Concrete - (ACI 318-11)
American Concrete Institute - Building Code Requirements for Masonry Structures - (ACI 530-11)
American Forest & Paper Association - National Design Specifications for Wood Construction with 2012 Supplement (ANSI/AWC - NDS-2012)
Truss Plate Institute - National Design Standards for Metal-Plate Connected Wood Truss Construction (TPI 1-2007)

GENERAL NOTES

The contractor is solely responsible for site safety including all temporary precautionary measures and safety programs. Site observation visits by the SER do not include review of the contractor's safety precautions.

SUBMITTALS

Submit all submittals for all materials and/or products in a given system at one time.
The contractor shall review and stamp all submittals prior to the SER's review.
Stamp will include: Signature or initials certifying that all materials and/or products are in accordance with the requirements of the design documents.
Allow ten (10) business days for review and response for each submittal for review excluding delivery time to and from the Contractor.
When revised for resubmission, identify all changes made since previous submission.
Submittals not requested will not be recognized or processed.
All engineering design and associated calculations provided by others and submitted to the SER for review must bear a certification stamp and signature of a qualified professional engineer who is licensed in the state where the project is located.
The following items are to be issued as deferred submittals per 2015 Minnesota State Building Code Section 1300.0180:
- Prefabricated wood roof trusses
- Engineered Wood I-Joists
- Steel connections

All items issued as deferred submittals are to be issued a minimum of 30 days prior to installation and must not be installed until their design and submittal documents have been reviewed for general conformance to the drawings by the general contractor, the SER and the building official. A copy of the deferred submittal must be forwarded to the authority having jurisdiction (AHJ) after the SER has reviewed the documents and prior to the erection of the deferred submittal items. Deferred submittal items must not be installed until approved by the AHJ.

COORDINATION - ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL ITEMS

Contractor shall verify all dimensions and conditions on site with the plans before construction begins. All discrepancies must be reported immediately.
Location, dimensions, and details of recesses, depressions, openings, and equipment supports must be verified by reference to architectural, civil, electrical, and mechanical drawings.

TEMPORARY BRACING

All structural members are designed for in-place loads. Contractor is responsible for bracing, without overstressing, all structural elements as required at all stages of construction until completion of this project.
Provide temporary lateral support for all walls until adequately braced by the permanent structure.
Provide required temporary bracing for structural steel until permanent bracing and walls are in place.

ROOF TOP EQUIPMENT/OPENINGS

Verify size and location of all openings with architectural and mechanical drawings.
Openings in floor and roof not shown on structural drawings must be placed between structural members.
The contractor shall provide sleeves through concrete slabs for all plumbing. Spread reinforcing as required to provide concrete cover for reinforcing.
For any mechanical equipment not shown, the total weight must not exceed the maximum weight of 200 lbs without prior approval of the SER.
Provide mechanical unit locations, sizes, and weights to the SER and joist supplier. Do not place multiple roof top units on the same joists without prior approval by the SER.

GENERAL SOIL NOTES

The structure has been designed using an allowable soil bearing pressure of 2000 psf, as stated in the geotechnical report number 20-15630, prepared by American Engineering Testing Inc, dated June 23, 2017.
The structure must be located on the site as indicated in the geotechnical report. The geotechnical report recommendations are valid for a specific structure location and conditions. If any of the following conditions of the structure change, notify the geotechnical engineer immediately: the structure location, design loads, grading, and/or the size of the structure. Remove all top soil, un-compacted fill, and other poor soil from the construction site as determined by the geotechnical engineer. Slope the site to drain away from the building.
The contractor shall verify the location of existing underground utilities, tanks and other obstacles prior to beginning excavation.

FOOTINGS

Footings are to be formed cast-in-place concrete. Unless noted otherwise, wall footings to be 12" deep with a minimum projection of 4" each side reinforced with 2-#5 continuous bottom bars. Provide 30 bar diameter lap at splices and full crossing lap at corners and intersections. Pad footings to be a minimum of 2'-6" square by 12" deep reinforced with 3-#5 bottom bars each way. Unless noted otherwise, wall footings are centered under walls and pad footings under columns or piers.
Footing elevations shown on plan are to the top of the footing. Maintain minimum frost depth for all exterior footings. Frost depth is 42" typically and 60" at isolated, unheated spaces. Frost depth is measured from finished grade to the bottom of the footing. Where the wall footing elevation changes, step the footing two units horizontal to one unit vertical. Footing reinforcing must be continuous through footing steps.
Cast dowels in footing for foundation walls and piers/pilasters. Dowels are to be the same size, and spacing as the vertical reinforcing of the wall or pier. Dowels must extend to 3" clear of bottom of footing. Refer to details for hooked dowels where needed.

CONCRETE

Provide ready-mixed concrete per ASTM C94. Portland cement must be ASTM C150, Type I. Use only one brand of cement throughout the work. Provide concrete aggregates meeting the requirements of ASTM C33.
Water must be clean, free of deleterious amounts of acids, alkalis, or organic materials, and be considered potable. Provide admixtures to reduce water content, provide air-entrainment, or alter the equality of the concrete to meet the job conditions. Admixtures must be indicated in the mix designs.
All concrete exposed to weather, freeze-thaw conditions or de-icing chemicals shall contain 5% - 7% entrained air.
Slump at point of discharge shall be as follows:

Footings	3" - 4"
Slabs on grade	3" - 4"
Masonry grout	8" - 11"

Verify slump on site matches slump specified in the approved mix design by testing methods listed in ASTM C143.
Workability of the concrete must be maintained so that concrete will completely fill forms without voids and bond to reinforcing without separation of materials.
Mix and deliver concrete in accordance with ASTM C94. Cooled or heated water must be used in accordance with ACI 305 and 306. Ready mixed concrete must be transported to the site in watertight agitators or mixer trucks loaded not in excess of rated capacities. Discharge at the site must be within one hour after charging. Air-entraining and chemical admixtures, if approved, must be charged into mixer as a solution as recommended by the manufacturer.
Concrete placed during cold weather must conform to the requirements of ACI 306.1. For hot weather conditions, apply recommendations of ACI 305.
Place concrete in accordance with ACI 304 "Guide for Measuring, Mixing, Transporting, and Placing Concrete". Use mechanical vibrating equipment for consolidation. Do not use vibrators to transport concrete in forms.
Protect fresh concrete from premature drying and excessively hot or cold temperatures while maintaining minimal moisture loss at a relatively constant temperature above 55 degrees Fahrenheit.
Provide wire, plastic, or precast concrete spacers, chairs, slab bolsters, support bars, etc. for support of reinforcing steel in proper position while placing concrete. Chairs/bolsters must be stable and resist tipping.

CONCRETE SLABS

All slabs on grade to be 4" thick and reinforced with 3.0 pounds per cubic yard polypropylene macro fiber.
Construction and/or control joints should occur at a maximum of 10'-0" OC at exterior slabs on grade, and at a maximum of 16'-0" OC at interior slabs on grade.
Construction and/or control joints should be laid out in a rectangular pattern with long to short side ratio less than or equal to 1.5 and with no re-entrant corners.
Control joints for slabs on grade should be saw-cut as soon as concrete can accept it without raveling.
Do not cut control joints in structural slabs or topping slabs unless specifically directed.
All control/construction joints must be continuous and not staggered or offset.
Control joints must be cleaned and sealed for curing purposes as soon as possible.
Verify floor finishes and control/construction joint locations with owner and architect.

CONCRETE COVER ON REINFORCING

Footings	3" clear, bottom and sides
Walls and slabs	2" clear all sides

REINFORCED CONCRETE MASONRY WALLS

Hollow unit concrete masonry must be per ASTM C90.
Mortar must be per ASTM C270: Type S for below grade and exterior masonry; Type N for all interior above grade masonry.
All masonry units must be placed in running bond.
Provide special shapes for jambs, columns, pilasters, control joints, corners and lintels.
See plans for location and spacing of reinforcement in walls.
Locate reinforcement in cores with positioners.
Place at least (1) vertical reinforcing bar in wall corners.
When one bar is in a single core, place in center.
When two bars are in a single core, place one near each face and refer to grout clearance requirements.
For #6 and smaller, vertical steel must be continuous with 48 diameter lap at all splices for reinforcement in center of wall, 72 diameter lap at all splices for reinforcement near face of wall or as scheduled for specific conditions.
Fill masonry core at vertical columns with grout vibrated in place.
Grout must be per ASTM C476 with a slump of 8" - 11" and tested per ASTM C143.
Wall heights must not exceed 5'-4" before placement of core grout unless cleanout holes are provided at the bottom of each maximum 5'-4" grout lift.
Provide ladder or truss style horizontal joint reinforcing, fabricated with galvanized minimum 9-gauge wire, placed every 2nd course (16" OC) in single wythe masonry walls.
Provide bond beam with 2 - #5 at all floor lines, roof lines and top of walls or as specified on drawings.
Provide corner bars with 2'-0" legs for each horizontal bar in all bond beams at corners and intersecting walls.
Provide full mortar bedded face shells and webs around all grouted cells for full bearing and to prevent leakage into adjacent cells.
Place control joints in the masonry walls such that no straight run of wall exceeds the lesser of 32 feet or 2.5 times the height.
Locate control joints at least 4'-0" from masonry wall pilasters and corners.
Bond beam reinforcing must be continuous through control joints.
See architectural plans for location and detail of wall control joints.

STRUCTURAL STEEL

Structural steel must be designed, fabricated, and erected according to the specifications of the American Institute of Steel Construction (AISC).
Roof structure has been designed for ponding in accordance with the IBC, section 1611.
Overflow drains are required and roof scuppers must not have ballast stops higher than the roof ballast. See the architectural and/or mechanical drawings.
Structural steel supplier must supply all cap plates, bearing assemblies, base plates, stiffeners, splices and connections.
All welding must match filler materials in accordance with the rules of the American Welding Society (AWS D1.1) Structural Welding Code.
All welders shall be certified by the rules of the American Welding Society.
Steel beams to have minimum 5/16" full height web stiffeners each side at all bearing locations and when supporting columns above.
All structural steel below grade must be coated with bituminous paint.
All structural steel exposed to weather must be galvanized.
Modification of structural steel members in the field is not permitted without prior approval by the SER.

STRUCTURAL STEEL CONNECTIONS

Provide standard connections given in parts 7 - 10 of the AISC 360 Steel Construction Manual. Provide certified calculations for non-standard connections by a qualified Professional Engineer who is licensed in the state where the project is located.
Connections which require additional capacity or have special load requirements are noted on the drawings similar to V = 75 k. All reactions given are service load reactions.
Typically provide bolted connections for field installation and welded or bolted shop connections.
Typical bolts are 3/4" diameter A325-N bolts in standard or short slotted holes.
Structural steel supplier must provide all components for OSHA requirements.

DIMENSION LUMBER

Design assumes lumber is free of significant splits and checks. Contractor must visually inspect lumber during installation.
All lumber must be grade stamped and provide the following information: grading agency, mill number or name, grade of lumber, species or species grouping or combination designation, rules under which graded, where applicable, and condition of seasoning at time of manufacture.
Lumber grading rules and wood species must conform to Voluntary Product Standard PS 20-10 as published by the Department of Commerce. Grading rules must be from an agency certified by the Board of Review of the American Lumber Standards Committee.
All lumber must be seasoned to a moisture content of 19% or less, with the indication of "S-Dry" on the grade stamp.
All lumber must be protected from the elements.
Sill plates and all other lumber in contact with concrete or masonry and within 8" of finished grade must be preservative treated wood. In crawlspaces or unexcavated areas within the building foundation, wood must be preservative treated for joists within 18" of exposed ground and/or girders within 12" of exposed ground.
Preservative treated wood must be in accordance with the American Wood Protection Association,
Standard U1.
All fasteners and hangers in contact with treated lumber must be G185 hot dipped galvanized or equal.
Sill plates to be bolted to foundation wall with 5/8" diameter screw anchors at 2'-0" OC maximum.
Sill anchors to extend 4½" minimum into solidly grouted foundation wall. Attach each sill plate with a minimum of 2 anchors with one anchor located not more than 12" or less than 4 ½" from each end of the plate section. Use 1/8" x 2" washers, slightly crushing plate.
All walls must have a single bottom plate and double top plate.
Frame exterior walls with 2 x 6 studs @ 16" OC.
Frame interior bearing walls with 2 x 6 studs @ 16" OC.
Frame interior non-load bearing walls with 2 x 4 studs @ 16" OC.
At typical openings, provide a minimum of 2 bearing (trimmer or jack) studs and 1 full-height king stud.
For headers not noted, provide 2-2x6 up to 4'-0" span and 2-2x8 from 4'-0" to 6'-0" span.
Beams and headers must be fully supported across the width of the member. Bear each end on all support studs or columns noted on plan with a minimum 3" bearing length.
Beams or headers made of multiple 2x plies with 1/2" spacer must be nailed together with 16d nails (.162" x 3 ½") at 16" OC along each edge, typical for each lumber ply.
Wood joists must bear the full width of supporting members (stud wall, beams, etc.)
Provide solid vertical blocking at all joist spaces below wood columns. Provide matching columns to foundation at lower levels below columns comprised of 3 or more studs.
Beams and joists not bearing on supporting members must be framed with prefabricated metal hangers.
Space joist bridging at a maximum of 8'-0" OC.
Double all joists under parallel partitions.
Minimum nailing to be in accordance with Table 2304.9.1 of IBC.
All plywood and OSB must be installed per APA standards, including the use of construction adhesive for fastening to floor joists.
Performance requirements, adhesive bond performance, panel construction, workmanship, dimensions, tolerances, marking, and moisture content of Wood-based Structural-use Panels must conform to Voluntary Product Standard PS 2-10 published by the Department of Commerce.

ENGINEERED LUMBER

All engineered LVL, LSL, and PSL lumber must meet the minimum design properties listed in the Material Strengths section of these notes.
Protect engineered lumber from the elements.
All engineered lumber intended for exterior use must be PSL lumber with Wolmanized preservative protection and meet the minimum design properties as listed in the Material Strengths section of these notes.
All fasteners and hangers in contact with treated engineered lumber must be G185 hot dipped galvanized or equal.
Engineered lumber headers and beams must have a minimum 3" length of bearing at each end and be supported fully across their width.
Fasten LVL beam or header plies together with 2 rows of TrussLOK or SDN screws spaced at 24" OC staggered. TrussLOK or SDN screws must be 3 3/8" long for 2-ply members, 5" long for 3-ply members, and 6 3/4" long for 4-ply.
Fasten PSL or LSL beam or header plies together per manufacturer recommendations.
Provide solid vertical blocking at all joist spaces below engineered lumber columns.
Provide matching columns to foundation at lower levels below engineered lumber columns.
Engineered lumber beams and joists not bearing on supporting members must be framed with prefabricated metal hangers.

ENGINEERED LUMBER I-JOISTS

I-joist supplier shall notify SER of any proposed revisions to the layout indicated on this plan. Revisions that affect the structural design will not be allowed without prior approval by the SER.
All wood I-joists must be furnished in accordance with designs prepared by a Professional Engineer licensed in the state in which the project is located, using the design loads and span conditions indicated.
I-joist manufacturer shall submit a layout, certified drawings, and certified calculations prior to beginning construction.
I-joists must be designed for superimposed dead and live loads as indicated in the Design Loads section of these notes.
I-joist supplier shall design I-joists to support additional dead load from, but not limited to; roof top mechanical units; sprinkler lines, rain leader systems, piping, cable trays, ductwork and similar items.
Contractor to coordinate with architectural, mechanical, and electrical requirements.
Contractor to provide location and magnitude of all such loads to I-joist supplier and SER prior to preparation of shop drawings.
Live load deflection of roof joists must be limited to l/240 of the span.
Live load deflection of floor joists must be limited to l/480 of the span.
Design I-joists bearing conditions as shown on drawings.
I-joists must bear the full width of supporting members.
Install web stiffeners, blocking between members, and nail to supporting members as per manufacturers recommendations.
I-joist manufacturer shall provide connection hangers as required.
No cutting, notching, or modifications of I-joists will be allowed without the manufacturer's written approval.
Notching or cutting of I-joist flanges is not permitted.
Web openings may occur under strict limitations indicated by the joist manufacturer.
Properly designed open web parallel chord pre-engineered wood trusses with same nominal depth may be provided in lieu of I-joists with prior approval of the SER.

WOOD TRUSSES

Responsibilities of the contractor, building designer, truss manufacturer, and truss designer must follow the publication "TPI 1-2007 National Design Standard for Metal Plate Connected Wood Truss Construction."
Truss supplier shall notify SER of any proposed revisions to the layout indicated on this plan. Revisions that affect the structural design will not be allowed without prior approval of the SER.
Verify allowable bearing locations for girder trusses with SER prior to final design stage.
Provide metal bearing enhancers as necessary to utilize stud columns shown on plan.
All prefabricated wood trusses must be furnished in accordance with designs prepared by a Professional Engineer licensed in the state in which the project is located, using the design loads and span conditions indicated, including designing gable end truss webs for perpendicular to face wind loads.
Truss manufacturer shall submit a truss layout, certified truss drawings, and certified calculations prior to beginning construction.
Trusses must be designed for the superimposed dead and live loads as indicated in the Design Loads section of these notes.
Truss supplier shall design trusses to support additional dead load from, but not limited to; roof top mechanical units, sprinkler lines, rain leader systems, piping, cable trays, ductwork, and similar items. Contractor to coordinate with architectural, mechanical, and electrical requirements. Contractor to provide location and magnitude of all such loads to truss supplier and SER prior to preparation of shop drawings.
Live load deflection of roof trusses must be limited to l/240 of the span.
Live load deflection of floor trusses must be limited to l/480 of the span.
See plans and details for specific requirements adjacent to parallel walls.
Design trusses for top chord bearing or bottom chord bearing as shown on drawings.
Truss configuration, pitch, overhang, etc. must be indicated as noted on the architectural drawings.
Spacing of roof trusses must not exceed 24" OC
Lumber for wood trusses must be in accordance with manufacturer's recommendations.
Truss manufacturer to provide girder trusses, hip jacks, and step-down trusses as required and designed to support all superimposed loads. Provide hip-sets, dormers, and piggy-back trusses as required.
Truss manufacturer shall design and provide tie downs for all girder trusses, hip jacks, and step down trusses.
Provide metal framing anchors at roof truss bearing to mechanically fasten truss to bearing wall or supporting member as shown in details.
Truss manufacturer shall provide truss to truss connection hangers.
No cutting, notching, or modifications of trusses will be allowed without the manufacturer's written approval.
Locations of bridging and bracing at truss compression and tension members must be indicated by the truss manufacturer.
Contractor shall provide permanent and temporary diagonal, lateral, and cross bracing in accordance with the publication "BCSI 1-06 Building Component Safety Information, Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" by the Truss Plate Institute and Wood Truss Council of America and as otherwise necessary. For spans longer than 60 ft., the bracing system must be designed by a Professional Engineer licensed in the state in which the project is located.
Permanent bottom chord bracing and web bracing must be located as shown on the truss drawings and at a minimum be 2 x 4 with 2 - 16d nails to end walls and trusses lapping two truss spaces at splices.

WALL SHEATHING

Wood panel wall sheathing must be minimum 1/2" nominal (15/32") thick panels rated per APA for the spacing of the supporting members. A minimum 32/16 span rating is recommended.
Provide Exterior or Exposure 1 grade.
Fasten wood panel wall sheathing with 8d nails (.131" diameter x 2 1/2") spaced at 4" OC at supported edges and 12" OC at intermediate supports. Leave an 1/8" gap at all end and edge joints to allow for expansion. Stagger end joints of panels.
Gypsum wall sheathing must be a minimum of 1/2" thick fastened with 6d cooler or wallboard nails at 4" OC to all framing members.
Panels must be continuous over two or more spans and the long panel dimension may be either perpendicular or parallel to supports.
All edges must be blocked.
Refer to plan and notes for any special shear wall nailing and bolting conditions.

ROOF SHEATHING

Roof sheathing must be minimum 5/8" nominal (19/32") thick panels rated per APA for the spacing of the supporting members. A minimum 40/20 span rating is recommended. Provide panel clips, one between each support, for supports spaced greater than 16" OC.
Provide Exterior or Exposure 1 grade.
Panels must be continuous over two or more spans and the long panel dimension must be perpendicular to supports.
Fasten roof sheathing with 10d nails (.148" diameter x 3") spaced at 6" OC at supported edges and 6" OC at intermediate supports. Leave an 1/8" gap at all end and edge joints to allow for expansion.
Design of roof sheathing assumes that the roof will be properly insulated and ventilated. Refer to APA publication N335N "Proper Installation of APA Rated Sheathing for Roof Applications."

STRUCTURAL WOOD CONNECTORS

Prefabricated steel connectors noted on drawings refer to Simpson Strong-Tie hangers, clips, post bases, hold downs, etc. with specified product number.
USP connectors may be submitted as a substitution to the SER for approval.
All prefabricated metal connectors must be installed in strict accordance with the manufacturer's recommendation.

Structural Wood Screws (SWS) noted in the drawings refer to high-strength, self-tapping wood screws. The table below defines SWS by diameter with a list of acceptable manufacturer products. The following criteria apply:
- Minimum Yield Strength: 160,000 psi (carbon steel)
- Conforms to ASTM A510 and/or has values published by third-party testing such as ICC
- Powder-coated or otherwise treated for corrosion protection.
- Acceptable products by Size (length varies per manufacturer)

Size Noted	Acceptable Products
#12 SWS	FastenMaster TimberLok, FastenMaster HeadLok, Simpson SDWH
#14 SWS	FastenMaster LedgerLok, FastenMaster TitaLok, Simpson SDWS

All substitute products for use as structural wood screws must be submitted to the SER for approval.

ADHESIVE/MECHANICAL ANCHORS

Adhesive and mechanical anchors must be provided and installed in strict accordance with the manufacturer's instructions and the design documents.
Refer to the special inspections table for inspection requirements.
All horizontal and upwardly inclined installations that resist sustained tension loads must be performed by certified adhesive anchor installers.
Provide anchor type and size as indicated on the drawings with length identification markings conforming to ICC ES AC01 or ICC ES AC193.
Concrete Screw Anchors are a single-use item. Do not remove and reinstall anchors nor install new anchors in previously used holes.
For exposed exterior applications, use only adhesive anchoring systems with stainless steel accessories.
Adhesive anchoring systems:
- Concrete:
  - Hilti HIT HY-200
  - Hilti HIT-RE 500
- Masonry:
  - Hilti HIT HY-70

Mechanical anchoring systems
- Concrete and grouted CMU:
  - Hilti Kwik Bolt 3 or Simpson STRONG-BOLT 2 expansion anchor
  - Hilti Kwik HUS-EZ or Simpson Titen HD screw anchor.

Alternate anchoring system may be submitted to the SER for approval. Reference drawings for additional information and requirements.

SHEET INDEX	
s1.1	STRUCTURAL NOTES AND SPECIAL INSPECTIONS
s2.1	FOOTING AND FOUNDATION PLAN
s2.2	LOW ROOF FRAMING PLAN
s2.3	HIGH ROOF FRAMING PLAN
s3.1	FOUNDATION SECTIONS & DETAILS
s4.1	ROOF FRAMING SECTIONS & DETAILS
s4.2	ROOF FRAMING SECTIONS & DETAILS

SPECIAL INSPECTIONS

The contractor shall include in the bid the cost of all testing and inspections indicated on the plans and in the specifications, including special inspections required by the building code. The actual contracting of the inspection and testing services shall be in accordance with the division of responsibility dictated by the Minnesota Building Code.

IBC Section 1705 requires that in addition to the inspections required by Section 110, the owner shall employ one or more special inspectors who shall provide inspections during construction of certain types of work.

"Special Inspection" concerns work requiring observation and judgement and shall be performed by a structural engineer (or a designated person under the supervision of the engineer). "Testing" involves the analysis of materials in accordance with approved standards and shall be performed by an independent testing agency.

The contractor shall coordinate the testing and inspection services in accordance with the progress of the work. The contractor shall provide sufficient prior notice to the testing and/or inspection agency of the required work to allow proper scheduling of personnel. The cost of any retesting or additional inspections as a result of failed tests and rejected work shall be borne by the contractor.

This project requires a STRUCTURAL TESTING AND SPECIAL INSPECTION SCHEDULE, to be signed by the Owner, Contractor, Architect, Structural Engineer of Record and Testing Agency. Refer to the program summary schedule for frequency of testing and inspections.

REQUIRED SPECIAL INSPECTIONS

DESCRIPTION OF WORK IBC SECTION 1705		INSPECTION YES	INSPECTION NO	TESTING YES	TESTING NO	N/A	REMARKS
1. Welding	(1705.2.1)	●			●		1a, 1b and 1c
2. Struct Steel Details	(1705.2.1)	●			●		2a
3. High-strength Bolting	(1705.2.1)	●			●		3a, 3b, 3c, and 3d
4. Concrete Construction	(1705.3)	●		●			4a, 4b, 4c, and 4d
5. Structural Masonry	(1705.4)	●		●			5a, 5b, and 5c
6. Wood Assemblies	(1705.5)	●			●		6a and 6b
7. Soils	(1705.6)		●	●			7a, 7b, and 7c
8. Pile Foundations	(1705.7)					●	
9. Pier Foundations	(1705.8)					●	
10. Special Inspections for Wind Resistance	(1705.10)					●	
11. Sprayed Fire-Resistant Materials	(1705.13)					●	See architectural drawings
12. Mastic and Intumescent Fire-Resistant Materials	(1705.14)					●	See architectural drawings
13. Exterior Insulation and Finish Systems (EIFS)	(1705.15)					●	See architectural drawings
14. Fire-Resistance Penetration and Joints	(1705.16)					●	See architectural drawings
15. Smoke Control	(1705.17)					●	See Mechanical specs.
16. Special Cases	(1705.1.1)	●					16a

SPECIAL INSPECTIONS WORK REQUIRED

Items marked with an asterisk " * " are conventional testing not strictly a part of Section 1705 but are required for adequate quality assurance and can be provided by the contractor. All other work must be provided by the owner as indicated by the MN State Building Code.

1. **Welding - Structural Steel**
   a.* Provide verification of Quality Control/Quality Assurance Program regarding fabrication process.
   b. Provide visual inspection of all field welding.
   c. Qualification of Welders prior to start of work.
2. **Structural Steel Details**
   a. Provide visual inspection of structural steel details such as bracing, stiffening, member configuration and proper construction of joint details at each connection.
3. **High-strength Bolting**
   a. Provide verification of Quality Control/Quality Assurance Program regarding fabrication process.
   b. Visual inspection of all field bolting.
   c. Bolt Designs are based on "bearing" type connections, verify that the connected materials have been drawn together properly.
   d. Provide periodic inspection of bolt installation method. Acceptable methods are turn of the nut, direct tension indicator, or twist-off bolt.
4. **Concrete Testing**
   a.* Provide mix design in accordance with ACI requirements.
   b. Test concrete at the time of pouring for slump, air-entrainment, and temperature in accordance with the specifications.
   c. Make and test concrete cylinders for representative strength in accordance with the specifications.
   d. Design of concrete footing is based on design stress F'c = 2500 psi, therefore no footing special inspection required.
5. **Masonry**
   a. Design of masonry based on net area compressive strength of masonry = 2000 psi. Inspections may be performed in accordance with Table 1.19.2 in ACI 530-11.
   b. Provide letter of certification from the manufacturer of concrete masonry units and suppliers of mortar and grout, to assure compliance with the compressive strengths required.
   c. Inspection of masonry core grouting - 1 inspection prior to each grouting procedure.
      i. Reinforcing size and spacing.
      ii. Grout pour height and cleanouts.
      iii. Hot weather or cold weather procedures.
6. **Wood Assemblies**
   a. Provide verification of Quality Control/Quality Assurance Program regarding fabrication process.
   b. Visually inspect framing layout and connection details.
7. **Soils**
   a.* Verify footing excavation for suitability for planned footing.
   b.* Verify material used for compacted backfill.
   c.* Test Compacted backfill for specified compaction.
16. **Special Cases**
   a. Post-installed anchors. Inspection requirements based on manufacturer's requirements, as described in the ICC Evaluation Service Report (ICC-ESR).

Comm. No. 1758	MMY Project No. 17255	Foodservice Designer: premier Foodservice Design ● Ingenuity Results, 920 Northland Terrace, Minneapolis, MN 55428, ph 763-544-5807 ● fax 763-544-7968, premierfsd.com	Mechanical and Electrical Engineers: emanuelson-podas consulting engineers, 10401 Bren Road East, Minnetonka, MN 55343, ph: 952-930-0050, fax: 952-930-0777, www.epinc.net	Structural Engineer: Mattson Macdonald Young structural engineers, Bassett Creek Business Center, 901 North 3rd Street, Suite 100, Minneapolis, MN 55401, 612-827-7825 voice, 612-827-0805 fax	Civil Engineer & Landscape Architect: SRF Consulting Group, Inc.
ISSUE DATE 06/06/2017 - DESIGN DEVELOPMENT SET 07/10/2017 - BID SET					

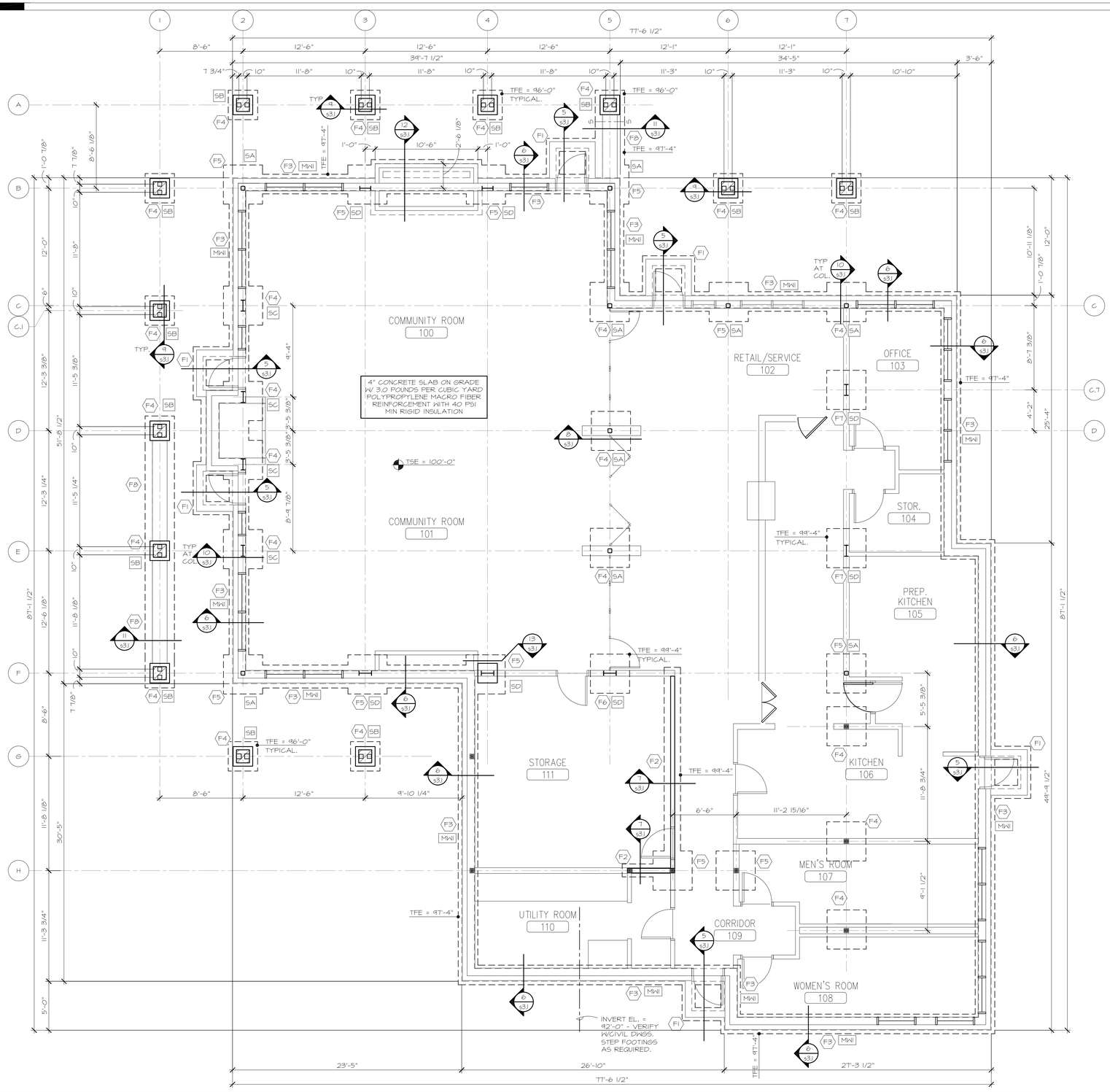
Owner: ROSEVILLE

Owner: City of Roseville
Project: Cedarholm Community Building
Title: Structural Notes & Special Inspections

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.
By: David H. Macdonald
Title: David H. Macdonald Date: 7/10/17
Registration Number: 14751

Drawing No. s1.1

HAGEN, CHRISTENSEN & McILWAIN ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL. (612)904-1332 • FAX (612)904-7966



1 s2.1 FOOTING AND FOUNDATION PLAN

3/16" = 1'-0"

NORTH

UNLESS NOTED OTHERWISE:

1. SEE DETAILS 2/s3.1 AND 3/s3.1 FOR TYPICAL SLAB ON GRADE JOINTS.
2. SEE ARCHITECTURAL DRAWINGS FOR SLOPED SLABS AND FLOOR DRAINS.
3. MAINTAIN MINIMUM OF 42" COVER (FINAL GRADE ELEVATION TO BOTTOM OF FOOTING) AT ALL EXTERIOR WALL FOOTINGS. STEP FOOTINGS AS NECESSARY TO MAINTAIN COVER AND TO CLEAR UNDERGROUND UTILITIES/SLOPED SLABS. SEE DETAIL 1/s3.1 FOR TYPICAL STEPPED FOOTING.
4. SEE 4/s3.1 FOR TYPICAL UNDERGROUND PIPING EXCAVATION.

SOIL PREPARATION:
FOLLOW SOIL CORRECTION PROCEDURES DESCRIBED IN THE GEOTECHNICAL REPORT TO OBTAIN DESIGN BEARING PRESSURES STATED IN THE STRUCTURAL NOTES.

FOOTING SCHEDULE

MARK	SIZE	REINFORCEMENT
F1	16" x 12" THICK CONTINUOUS	(2) - #5 CONTINUOUS
F2	20" x 12" THICK CONTINUOUS	(2) - #5 CONTINUOUS
F3	24" x 12" THICK CONTINUOUS	(2) - #5 CONTINUOUS
F4	3'-0" x 3'-0" x 12" THICK	(4) - #5 x 2'-6" EACH WAY BOTTOM
F5	4'-0" x 4'-0" x 12" THICK	(5) - #5 x 3'-6" EACH WAY BOTTOM
F6	5'-0" x 5'-0" x 12" THICK	(6) - #5 x 4'-6" EACH WAY BOTTOM
F7	6'-0" x 6'-0" x 12" THICK	(7) - #5 x 5'-6" EACH WAY TOP & BOTTOM
F8	36" x 12" THICK CONTINUOUS	(4) - #5 CONTINUOUS

STEEL COLUMN SCHEDULE

MARK	SIZE	BASE PLATE
SA	HSS5 x 5 x 1/4	3/4 x 10 x 0'-11"
SB	(2)HSS6 x 6 x 3/16	3/4 x 17 x 1'-5"
SC	W14 x 26	3/4 x 10 x 1'-7"
SD	W16 x 31	3/4 x 10 x 1'-7"

CMU WALL REINFORCEMENT SCHEDULE

MARK	WALL TYPE	REINFORCEMENT
MWI	12" CMU	#4 @ 32" OC 3" CLEAR INSIDE FACE

SCHEDULE NOTES:

1. PROVIDE TYPE "MWI" REINFORCING FOR WALLS WHERE REINFORCING IS NOT NOTED.

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ISSUE DATE
06/06/2017 - DESIGN DEVELOPMENT SET
07/10/2017 - BID SET

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.
By: David H. Macdonald
Title: David H. Macdonald Date: 7/10/17
Registration Number: 14751

Drawing No. s2.1

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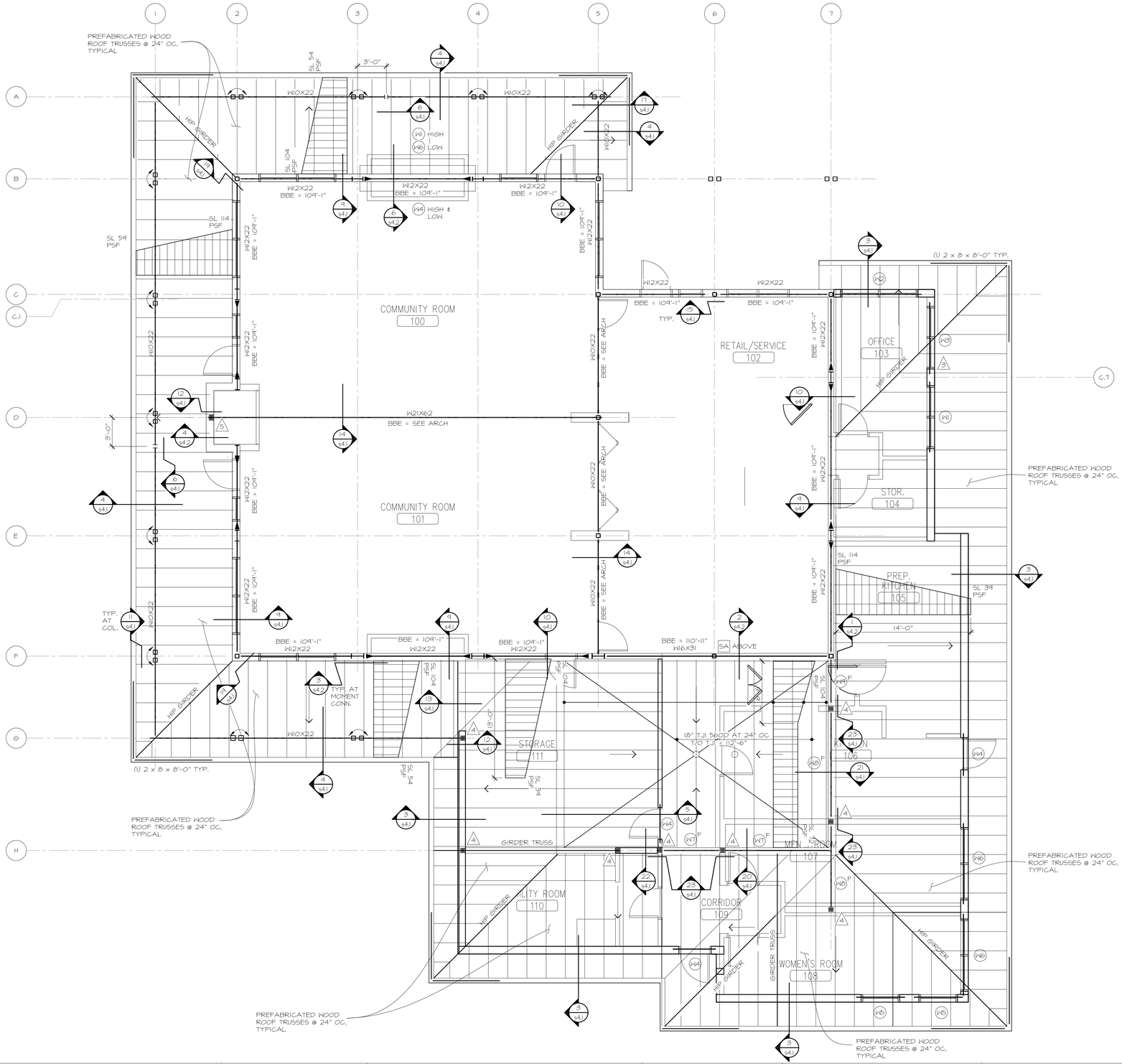
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1332 • FAX (612)904-7966



1/s2.2 LOW ROOF FRAMING PLAN

3/16" = 1'-0"

NORTH

UNLESS NOTED OTHERWISE:

1. PREFABRICATED WOOD ROOF TRUSSES @ 24" OC. ANCHOR EACH TRUSS TO TOP PLATE W/ 1 - SIMPSON H1 HURRICANE ANCHOR (OR EQUAL) AT EACH BEARING LOCATION. SEE ARCHITECTURAL DRAWINGS FOR ROOF SLOPES.
2. TRUSS SUPPLIER SHALL DESIGN FOR DESIGN LOADS ON SHEET s1.1 AND NON-UNIFORM SNOW LOAD SHOWN ON PLAN.
3. TRUSS SUPPLIER SHALL PROVIDE ALL HANGERS NECESSARY FOR TRUSS-TO-TRUSS CONNECTIONS.
4. MARKS THUS " ◄——► " INDICATE STEEL MOMENT FRAME. BEAM TO COLUMN CONNECTIONS BY FABRICATOR. SERVICE LOADS ARE SHOWN ON PLAN THUS:
   M=26k-ft
   V=10k
5. MARKS THUS: "△3" INDICATE NUMBER OF STUDS REQUIRED FOR BEARING. IF NUMBER NOT SHOWN, PROVIDE MINIMUM OF 2 STUDS (3" LENGTH OF BEARING). FULL WIDTH OF BEAM/HEADER/GIRDER TRUSS MUST BE SUPPORTED.
6. MARKS THUS: "[-]" INDICATE COLUMN REQUIRED FOR BEARING. SEE COLUMN SCHEDULE FOR ADDITIONAL INFORMATION.
7. ROOF SHEATHING SHALL BE 5/8" PLYWOOD/OSB (MINIMUM). ATTACH SHEATHING TO ROOF FRAMING MEMBERS W/ 10d NAILS @ 6" OC AT PANEL EDGES AND @ 12" OC AT INTERMEDIATE SUPPORTS.
8. EXTERIOR WALLS AND CORRIDOR WALLS SHALL BE 2 x 6 STUDS @ 16" OC UP TO 12'-0". STUDS TALLER THAN 12'-0" SHALL BE 1 3/4" x 5 1/2" LSL @ 16" OC. ADDITIONAL INTERIOR BEARING WALLS SHALL BE 2 x 6 STUDS @ 16" OC. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING WALL TYPES.
8. TRUSS BEARING ELEVATION = 109'-6". UNLESS NOTED OTHERWISE, BOTTOM OF STEEL BEAM ELEVATION (BBE) = 109'-6 1/2".

WOOD BEAM/ BEARING HEADER SCHEDULE [-]

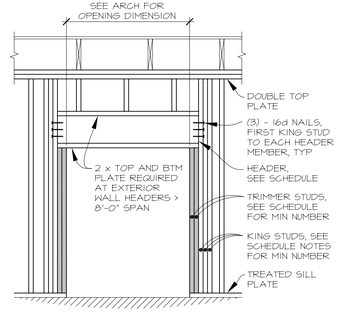
MARK	SIZE	MINIMUM NUMBER OF JAMB STUDS
W1	3 1/2" X 7 1/4" LVL	2
W2	3 1/2" X 9 1/4" LVL	2
W3	3 1/2" X 11 1/4" LVL	2
W4	(2) - 2 x 8	1
W5	(2) - 2 x 8	2
W6	(3) - 2 x 10	2
W7	3 - 1 3/4" x 18" LVL	-
W8	3 - 1 3/4" x 11 1/4" LVL	-
W9	(3) - 2 x 12	-

SCHEDULE NOTES:

1. "[-]F" INDICATES "FLUSH" BEAM/HEADER (TOP OF BEAM = TOP OF JOIST OR BOTTOM OF BEAM = BOTTOM OF JOIST).
2. HEADERS IN NON-LOAD BEARING WALLS ARE NOT INDICATED ON PLAN. FOLLOW SCHEDULE BELOW FOR ALL NON-LOAD BEARING WALL HEADERS.

WOOD NON-LOAD BEARING HEADER SCHEDULE (UNMARKED)

SPAN	SIZE	TRIMMER STUDS	KING STUDS	
			INT	EXT
0'-0" TO 6'-0"	(2) - 2 x 4	1	1	1
6'-0" TO 8'-0"	(2) - 2 x 6	1	2	2
8'-0" TO 10'-0"	(2) - 2 x 8	1	2	2
10'-0" TO 12'-0"	(2) - 2 x 10	2	2	3



TYPICAL NON-LOAD BEARING HEADER FRAMING

Comm. No. 1758 | MMY Project No. 17255

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07/10/2017 - BID SET

Foodservice Designer
premier
Design/Build Dealer ■ Engineered Solutions
1500 Northland Terrace, Minneapolis, MN 55427
ph) 763-544-8870 ■ fax) 763-544-7566
premierfsg.com

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
10401 Bren Road East
Minnetonka, MN 55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

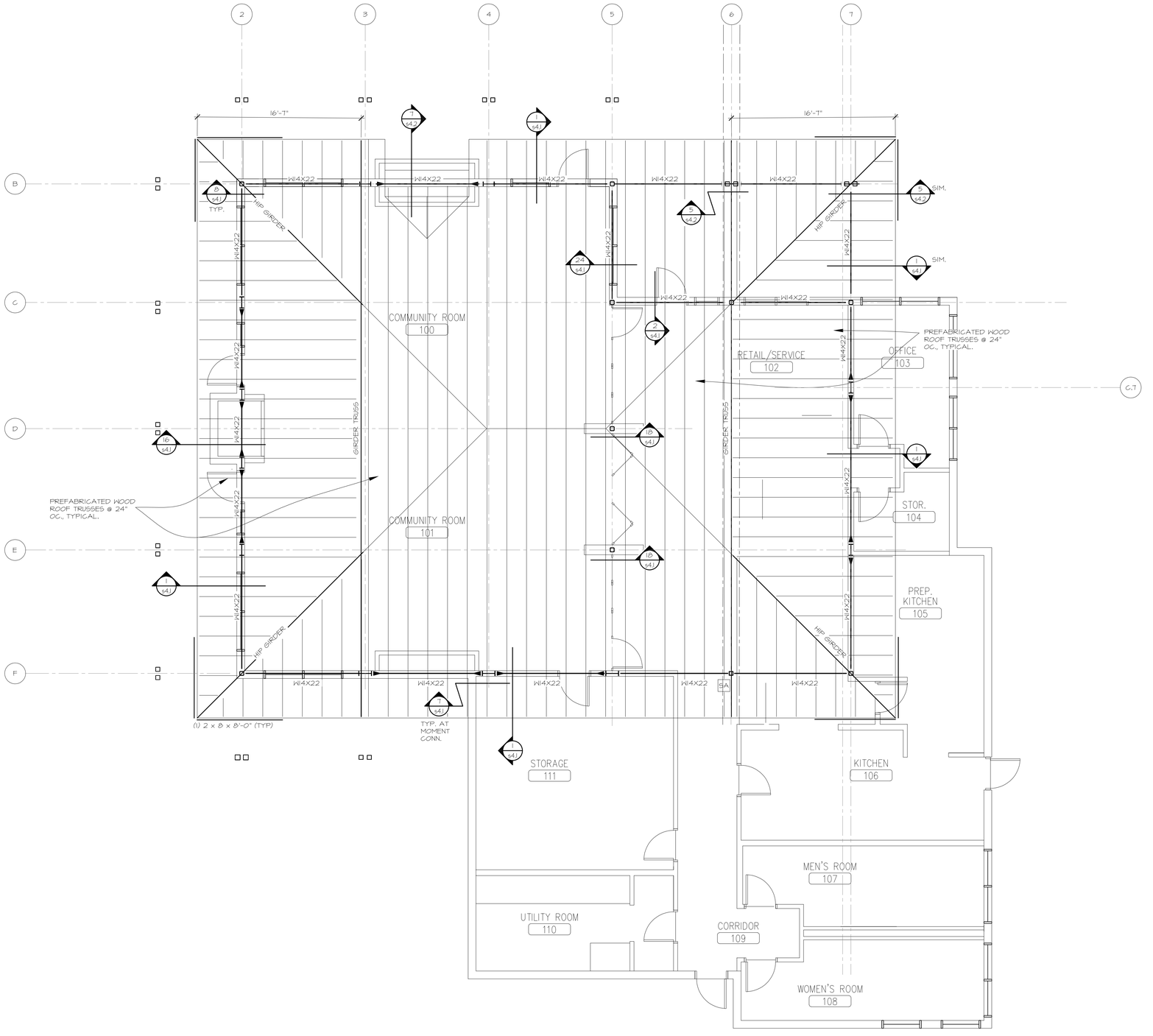
Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Low Roof Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.
By:
Title: David H. Macdonald Date: 7/10/17
Registration Number: 14751

Drawing No.
s2.2

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1332 • FAX (612)904-7966



HIGH ROOF FRAMING PLAN

1 / s2.3

3/16" = 1'-0"

NORTH

UNLESS NOTED OTHERWISE:

1. PREFABRICATED WOOD ROOF TRUSSES @ 24" OC. ANCHOR EACH TRUSS TO TOP PLATE W/ 1 - SIMPSON H1 HURRICANE ANCHOR (OR EQUAL) AT EACH BEARING LOCATION. SEE ARCHITECTURAL DRAWINGS FOR ROOF SLOPES.
2. TRUSS SUPPLIER SHALL PROVIDE ALL HANGERS NECESSARY FOR TRUSS-TO-TRUSS CONNECTIONS.
3. TRUSS SUPPLIER SHALL DESIGN AND PROVIDE ALL TIE DOWNS FOR GIRDER TRUSSES AND HIP GIRDERS.
4. MARKS THUS " ◄► " INDICATE STEEL MOMENT FRAME. BEAM TO COLUMN CONNECTIONS BY FABRICATOR. SERVICE LOADS ARE THUS:
   M=30k-ft
   V=15k
5. MARKS THUS: " [-] " INDICATE COLUMN REQUIRED FOR BEARING. SEE STEEL COLUMN SCHEDULE FOR ADDITIONAL INFORMATION.
6. ROOF SHEATHING SHALL BE 5/8" PLYWOOD/OSB (MINIMUM). ATTACH SHEATHING TO ROOF FRAMING MEMBERS W/ 10d NAILS @ 6" OC AT PANEL EDGES AND @ 12" OC AT INTERMEDIATE SUPPORTS.
7. EXTERIOR WALLS AND CORRIDOR WALLS SHALL BE 2 x 6 STUDS @ 16" OC UP TO 12'-0". STUDS TALLER THAN 12'-0" SHALL BE 1 3/4" x 5 1/2" LSL @ 16" OC. ADDITIONAL INTERIOR BEARING WALLS SHALL BE 2 x 6 STUDS @ 16" OC. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING WALL TYPES.
8. BOTTOM OF TRUSS AND BEAM SHALL BE 118'-0" U.N.O.

Comm. No. 1758 — MMY Project No. 17255

ISSUE DATE
06/06/2017 - DESIGN DEVELOPMENT SET
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Foodservice Designer: premier

Mechanical and Electrical Engineers: emanuelson-podas consulting engineers, 10401 Bren Road East, Minnetonka, MN 55343, ph: 952-930-0050, fax: 952-930-0777, www.epinc.net

Structural Engineer: Mattson Macdonald Young structural engineers, Bassett Creek Business Center, 901 North 3rd Street, Suite 100, Minneapolis, MN 55401, 612-827-7825 voice, 612-827-0805 fax

Civil Engineer & Landscape Architect: SRF Consulting Group, Inc.

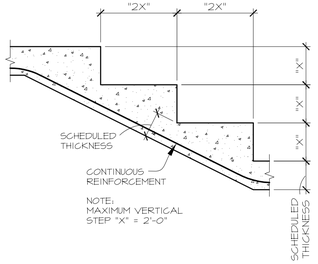
Owner: ROSEVILLE

Owner: City of Roseville
Project: Cedarholm Community Building
Title: High Roof Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.
By:
Title: David H. Macdonald Date: 7/10/17
Registration Number: 14751

Drawing No. s2.3

HAGEN, CHRISTENSEN & McILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL. (612)1904-1332 • FAX (612)1904-7366



1 s3.1 TYPICAL STEPPED FOOTING
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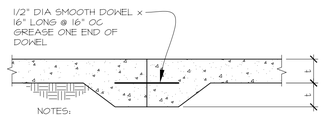

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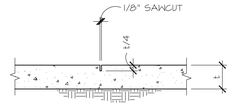

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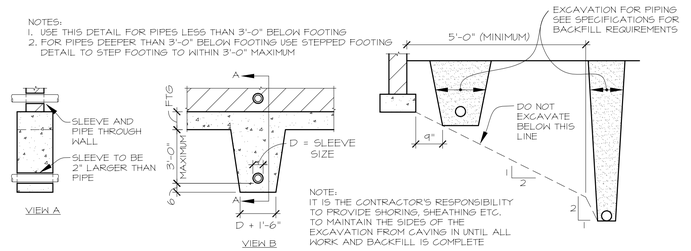

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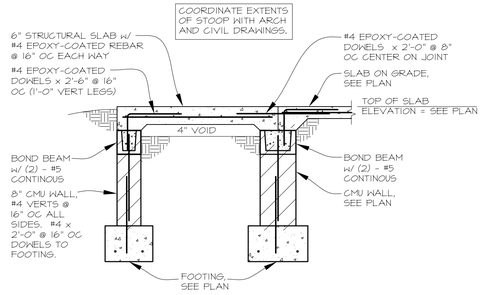

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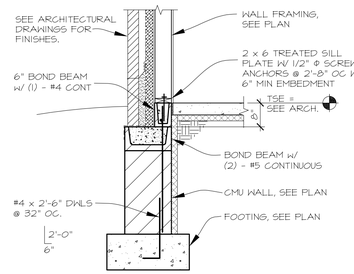
1/2" = 1'-0"



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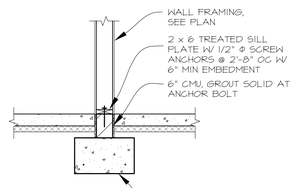

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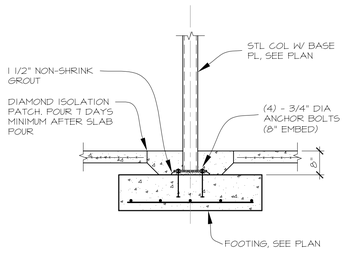

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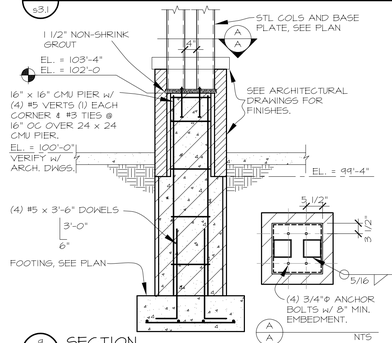

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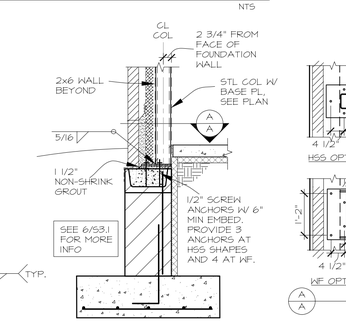

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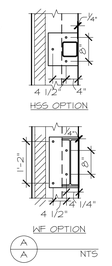

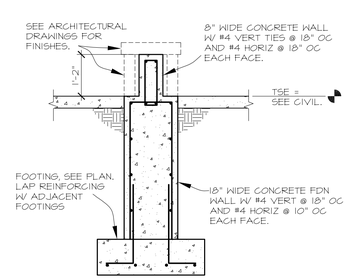

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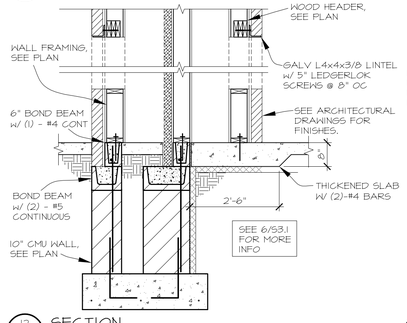

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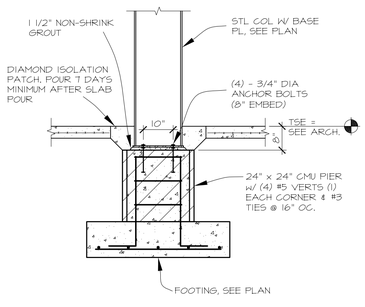

13 s3.1 SECTION
1/2" = 1'-0"

Comm. No. 1758	MMY Project No. 17255	Foodservice Designer: premier, Consultant Design ■ Engineering Services, 7525 Northland Terrace, Minneapolis, MN 55428, ph 763-544-5825 • fax 763-544-7566, premiereq.com	Mechanical and Electrical Engineers: emanuelson-podas consulting engineers, 10401 Bren Road East, Minnetonka, MN 55343, ph: 952-930-0050, fax: 952-930-0777, www.epinc.net	Structural Engineer: Mattson Macdonald Young structural engineers, Bassett Creek Business Center, 901 North 3rd Street, Suite 100, Minneapolis, MN 55401, 612-827-7825 voice, 612-827-0805 fax	Civil Engineer & Landscape Architect: SRF Consulting Group, Inc.	Owner: ROSEVILLE	Owner: City of Roseville Project: Cedarholm Community Building Title: Foundation Sections & Details
ISSUE DATE 06/06/2017 – DESIGN DEVELOPMENT SET 07/10/2017 – BID SET							

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.
By: David H. Macdonald
Title: David H. Macdonald Date: 7/10/17
Registration Number: 14751

Drawing No. s3.1

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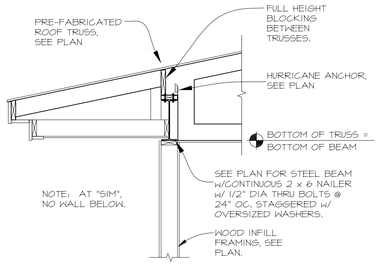
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL: (612)904-1332 • FAX (612)904-7366



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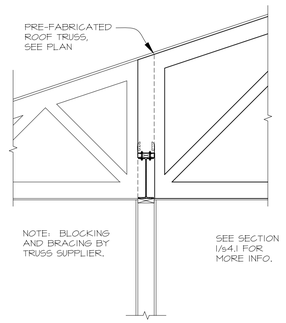

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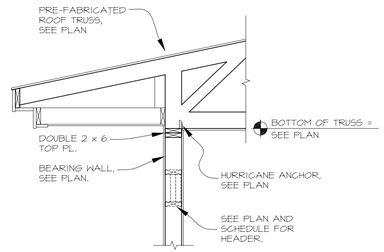

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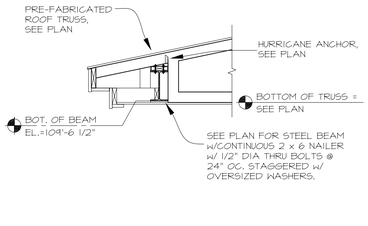

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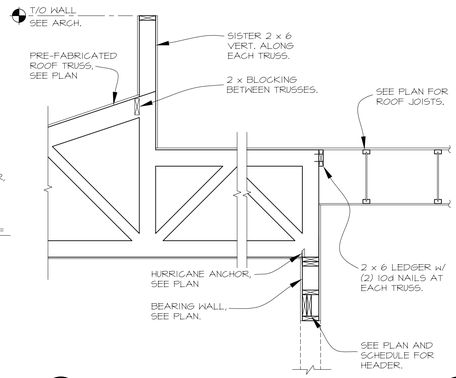

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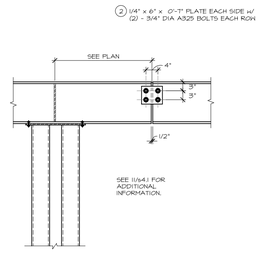

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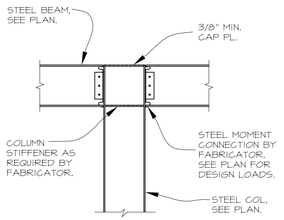

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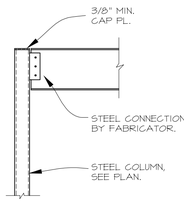

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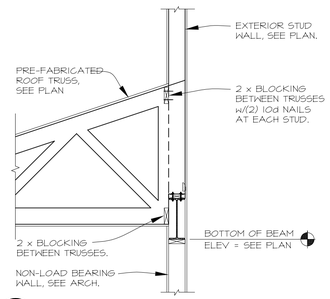

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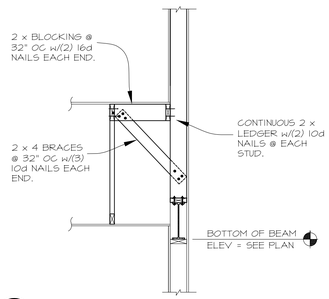

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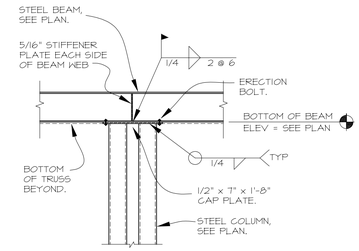

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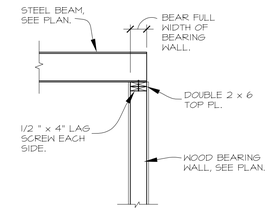

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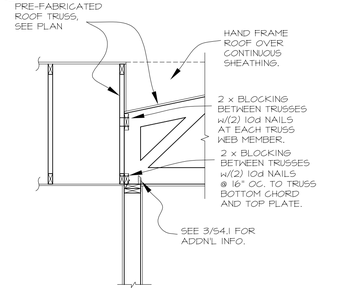

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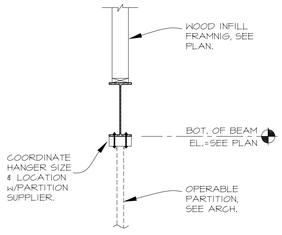

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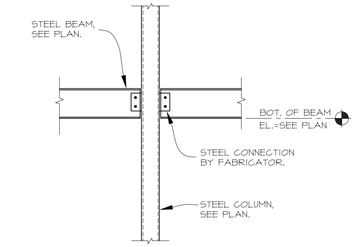

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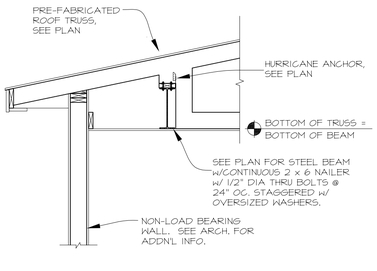

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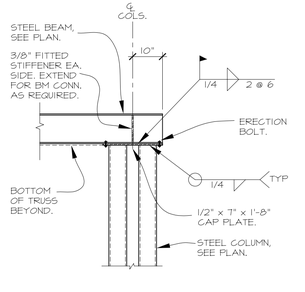

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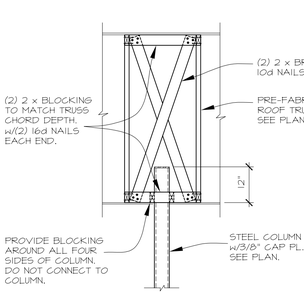

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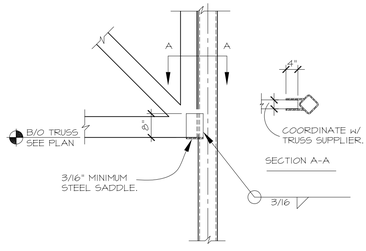

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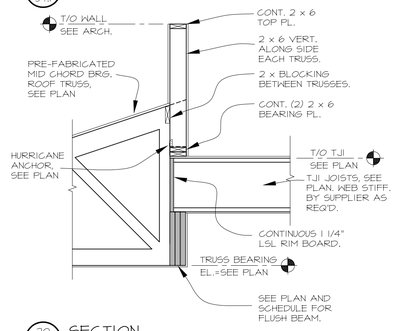

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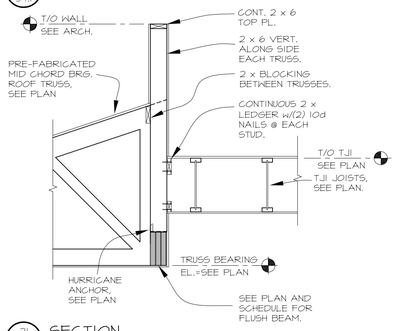

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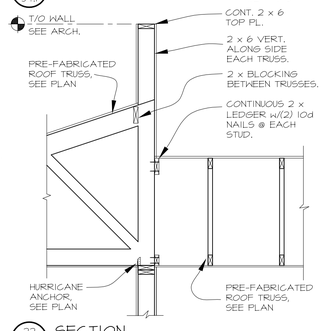

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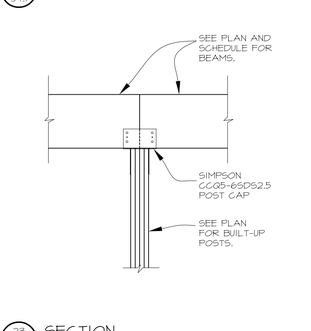

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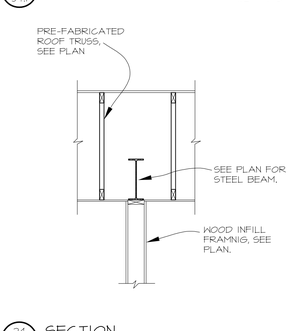
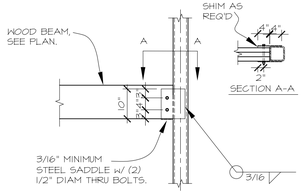


24 / s4.1 SECTION 1/2" = 1'-0"

Comm. No. 1758	MMY Project No. 17255	Foodservice Designer: premier, Complete Design ■ Ingenuity ■ Results, 1120 Northland Terrace, Minneapolis, MN 55405, ph) 763-544-8870 ■ fax) 763-544-7546, premiereq.com	Mechanical and Electrical Engineers: emanuelson-podas consulting engineers, 10401 Bren Road East, Minnetonka, MN 55343, ph: 952-930-0050, fax: 952-930-0777, www.epinc.net	Structural Engineer: Mattson Macdonald Young structural engineers, Bassett Creek Business Center, 901 North 3rd Street, Suite 100, Minneapolis, MN 55401, 612-827-7825 voice, 612-827-0805 fax	Civil Engineer & Landscape Architect: SRF Consulting Group, Inc.	Owner: ROSEVILLE	Owner: City of Roseville; Project: Cedarholm Community Building; Title: Roof Framing Sections & Details	Drawing No. s4.1
ISSUE DATE: 06/06/2017 – DESIGN DEVELOPMENT SET; 07/10/2017 – BID SET							I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota. By: David H. Macdonald. Title: David H. Macdonald Date: 7/10/17. Registration Number: 14751	

HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS
4201 CEDAR AVENUE S.O. • MINNEAPOLIS, MN 55407
TEL: (612)904-1332 • FAX (612)904-7366



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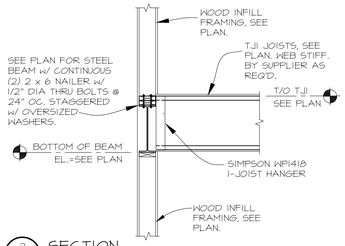

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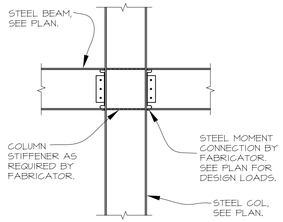

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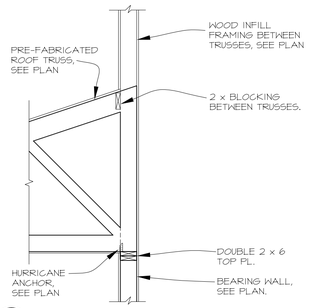
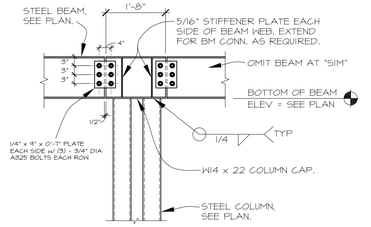


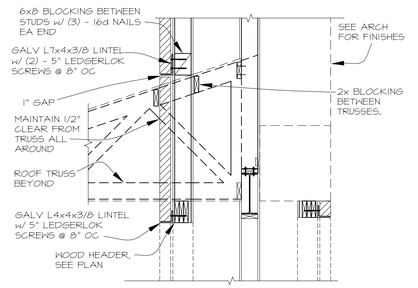
4 s4.2 SECTION

1/2" = 1'-0"



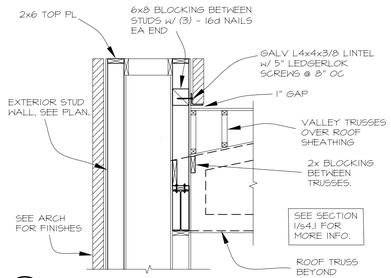
5 s4.2 SECTION

1/2" = 1'-0"



6 s4.2 SECTION

1/2" = 1'-0"



7 s4.2 SECTION

1/2" = 1'-0"

Comm. No. 1758 | MMY Project No. 17255

ISSUE DATE
06/06/2017 - DESIGN DEVELOPMENT SET
07/10/2017 - BID SET

Foodservice Designer
premier
Culinary Design ■ Ingenuity Results
920 Northland Terrace, Minneapolis, MN 55426
ph/763-544-5607 • fax 763-544-7960
premierbeq.com

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Owner
ROSEVILLE

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Roof Framing Sections & Details

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.
By:
Title: David H. Macdonald Date: 7/10/17
Registration Number: 14751

Drawing No.
s4.2

HAGEN, CHRISTENSEN & McILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1332 • FAX (612)904-7966

GENERAL NOTES

1. Work to be accomplished on these Drawings and the accompanying specifications includes the furnishing of all labor, materials, equipment, and services necessary for the proper completion of all mechanical work.

2. Before submitting a proposal on the work contemplated on these drawings and accompanying specifications, each bidder shall examine the site, check as to the means of making connections to services, and shall become familiar with all the existing conditions and limitations. Mechanical equipment and systems shown as existing on the plans have been based on existing drawings. No extras will be allowed because of the contractor's misunderstanding as to the amount of work involved or his lack of knowledge of any site conditions which may affect his work. Any apparent variance of the plan or specification from existing conditions at the site shall be called to the attention of the Engineer during the bid period so clarification can be made by addendum.

3. Existence of any wires, conduits, pipes, ducts, or other facilities are shown in a general way only. It will be the duty of the contractor to visit the site and make exact determination of the existence of any such facilities prior to the submission of his bid. It is understood that he will be responsible for making the exact determination of the location and condition of such facilities.

4. All required fees, permits, and inspections shall be obtained and/or arranged for by the contractor under the section of the Specifications for which they are required.

5. Regular inspections shall be arranged by the contractor as required by any and all regulations. All charges from regulating agencies for inspections of installations or review of plans and Specifications shall be paid by the contractor.

6. Certificate of Final Inspection. Under each applicable section of the Specifications, contractor shall, upon completion of the work under that section, furnish a Certificate of Final Inspection to the Engineer from the inspection department having jurisdiction.

7. All materials and workmanship shall comply with all current and applicable codes, specifications, ordinances, laws, regulations, industry standards, and utility company regulations.

8. In case of difference among building codes, specifications, state laws, local ordinances, industry standards, and utility company regulations and the Contract Documents, the most stringent shall govern. Contractor shall promptly notify the Engineer in writing of any such difference.

9. All applicable federal, state, and local laws and ordinances shall be adhered to throughout the construction project.

10. Non-Compliance. Should the contractor perform any work that does not comply with the requirements of the applicable building codes, state laws, local ordinances, industry standards, and utility company regulations, he shall bear all costs arising to correct the deficiencies.

11. Contractor shall initiate, maintain, and supervise all safety pre-cautions required for his work, including regulations of the Occupational Safety and Health Administration (OSHA).

12. Drawings are to scale as noted, but the contractor shall refer to Architectural and Structural Drawings for exact location of partitions, walls, beams, shafts, equipment, etc.

13. Each trade shall obtain drawings and specifications of all other trades and coordinate his work with all other trades.

14. Drawings show the general arrangement of ductwork, piping, equipment, and appurtenances and shall be followed as closely as actual building construction and work of other trades will permit. Mechanical work shall conform to the requirements shown on all of the drawings. Architectural and Structural Drawings shall take precedence over Mechanical Drawings. Because of the small scale of the Mechanical Drawings, it is not possible to indicate all offsets, fittings, and accessories that may be required.

15. Discrepancies discovered before or after work has started shall be brought to the attention of the Engineer immediately, and the Engineer reserves the right to require minor changes in the work of any contractor to eliminate such discrepancies with no change in contract cost.

16. Plans and specifications are complementary, and what is called for in either one shall be as binding as if called for in both.

17. Where a disagreement exists between the plans and specifications, the item or arrangement of better quality, greater quality, or higher cost shall be included in the bid.

18. Access panels shall be furnished by the trade requiring them and delivered to the general contractor for installation.

19. All materials and equipment shall be stored in such a place and in such a manner that a minimum of congestion will result. the placing of such materials and equipment shall be subject to the approval of the owner.

20. Contractor shall thoroughly examine the existing building with regard to what temporary measures he must take in order to permit the owner to occupy specific areas of the building during the various construction phases. refer to architectural specification section for construction sequencing schedule. in general, systems must remain in use in those designated areas to permit the owner to function in a pre-construction manner.

21. Each contractor shall coordinate work with other trades in the installation of equipment, piping, conduit, and ductwork.

22. HVAC/sheet-metal contractor shall initiate the coordination process by providing reproducible plan drawings showing ductwork and equipment.

23. Drawings will be forwarded to the piping contractor and electrical contractor for inclusion of their systems work.

24. Contractors shall solve all coordination conflicts among themselves when possible. engineer will arbitrate when necessary, and his judgment will stand, with no additional cost to the owner.

25. Normal use of the facility shall not be disturbed, except within the immediate construction area. all walks, driveways, and entrances shall be kept clear and free of all contractor's equipment, material, and debris at all times.

26. Access panels shall be as manufactured by milcor, or approved equal, and of type the is compatible with construction and finish of the wall and/or ceiling

27. Each trade shall perform all cutting and patching necessary in order to perform the work, unless such work has been delegated to the general contractor/another trade. however, special permission shall be obtained from the engineer before cutting structural members or finished materials. all patching shall be performed in such manner as to leave no visible trace and to return the part affected to the condition of undisturbed work. patching work shall be performed by persons experienced, skilled, and licensed for the particular type of work involved. inferior work will not be accepted. all holes in masonry shall be drilled with rotary drills. impact tools shall not be used.

28. Each trade shall bear the expense of all cutting, patching, repairing, or replacing of the work of other trades required because of his fault, error, or tardiness of because of any damage done by him.

29. Each trade shall provide all holes and openings required for his work, unless such holes and openings are shown to be provided on the architectural or structural drawings.

30. Each trade shall remove existing work that is shown, specified, or obviously necessary for completion of his work. owner shall have the option of retaining any item or material removed under this contract. items or materials not retained by owner shall become the property of the trade and shall be removed from the premises.

31. Each trade shall periodically clear away all debris, surplus materials, etc., resulting from his work or operations, leaving the job and the equipment furnished under any or all contracts in a clean condition.

32. Each trade shall test the equipment provided and/or installed under the specification and shall demonstrate its proper operation to the owner's operating engineer.

33. Each trade shall furnish, without additional expense to the owner, the services of competent instructors, who will give full instruction in the care, adjustment, and operation and maintenance of all parts of the equipment to the owner's permanent employees who are to have charge of the equipment.

34. Each subcontractor shall be responsible for tested & rated fire stop systems for all thru-penetration of walls, floors & roof assemblies resulting from piping & other work under his contract. refer to specification section for fire stopping for requirements.

35. All wood nailers and other lumber which is installed in contact with metal, concrete, or masonry shall be pressure treated against decay (unless otherwise noted).

36. Provide only products from manufacturers with local representation that can provide complete coverage, service, parts and labor of their products in a timely manner.

37. Material exposed within return air plenum ceilings shall comply with Local Mechanical code requirements.

38. HVAC contractor shall line the inside of all return/relief/exhaust plenum boxes per specifications. If no lining is required, hvac contractor shall paint the inside flat black.

39. All duct sizes are internal dimensions. Contractor shall increase sheet metal size if duct receives internal liner. See specifications for insulation requirements.

40. Duct roof penetration sizes to rooftop units are same as duct main, unless noted otherwise. Transition to unit connection sizes within roof curbs.

41. Locations of orifices/L-vents for fabric ducts are oriented when facing the direction of airflow.

42. HVAC equipment shall be no closer to roof edge than 10'-6" at all times.

43. Maintain a minimum of 15'-0" horizontal distance from any intake to exhaust outlet.

44. Coordinate underground piping with general contractor to ensure proper footing depth clearance.

45. Plans do not include all offsets for coordination with duct, lighting, and structural systems. Provide allowances for required offsets.

46. Provide all materials and equipment and perform all labor required to install complete and operable plumbing system as indicated on the drawings, as specified, and as required by code.

47. Run 3" and larger sanitary waste, storm drain, and all vent piping at 1/8" per foot slope unless noted otherwise; and less than 3" was piping at 1/4" per foot slope. Horizontal vent piping shall be graded to drain back to the waste pipe by gravity.

48. Elevations shown are to the invert of all piping based on architectural finished floor elevation (FFE) of 100'-0", unless noted otherwise.

49. Adjust sewer inverts to keep bottom of pipes in line where pipe sizes change.

50. Provide shutoff valves in all water piping system branches in which branch piping serves two or more fixtures (not shown for clarity) and where shown on plan and risers.

51. Install piping so that all valves, strainers, unions, traps, flanges, and other accessories requiring access are accessible.

52. Unions and/or flanges shall be installed at each piece of equipment, in bypasses, and in long runs (over 100') to permit disassembly for alteration and repairs.

53. All valves shall be adjusted for smooth and easy operation.

54. All valves (except control valves) and strainers shall be full size of pipe before reducing size to make connections to equipment and controls.

55. All valves shall be installed so that the valve remains in service when equipment or piping on equipment side of valve is removed.

56. All piping work shall be coordinated with all trades involved. Offsets in piping around obstructions shall be provided at no additional cost to the owner.

57. See plumbing risers for sizing not shown on plan sheets (for clarity) and see plumbing fixture schedule for fixture connections and runout sizes.

58. Contractor to ensure that cleanouts (FCO, WCO, CO) locations do not rest below or behind casework. Maintain accessibility for servicing.

59. Plumbing contractor is responsible for all removing, cutting, patching, and replacement of all building structure, surfaces, and finishes required to complete work stated in the contract documents.

60. Plumbing contractor to coordinate counter openings for new sinks/lavs with general contractor prior to ordering materials.

61. Pipes shown spread apart on plans for clarity. Contractor to install pipes tight together.

62. See architectural roof plan for roof slope and scupper sizes/locations.

63. Piping material for sanitary waste, plumbing vents, and storm sewer shall be cast iron where piping runs through a return-air plenum per Local Mechanical Code.

64. Fire caulk all floor penetrations and where piping penetrates rated walls.

MECHANICAL SYMBOL LEGEND

- DOMESTIC COLD WATER (CW)
- HARD — DOMESTIC HARD COLD WATER (CW)
- TEMPERED DOMESTIC HOT WATER (120° F)
- 140 — DOMESTIC HOT WATER (140° F)
- RECIRCULATION HOT WATER (CHW)
- SANITARY WASTE UNDERGROUND
- SANITARY WASTE ABOVE GROUND
- VENT
- A — COMPRESSED AIR
- G — NATURAL GAS
- CD — CONDENSATE DRAIN PIPING
- T — THERMOSTAT
- S — SPACE TEMPERATURE SENSOR
- H — HUMIDISTAT
- CO — CARBON DIOXIDE SENSOR
- TEMPERATURE GAUGE
- N.O. — NORMALLY OPEN
- N.C. — NORMALLY CLOSED
- VFD — VARIABLE FREQUENCY DRIVES
- OR — WATER HAMMER ARRESTER WITH
- ELBOW UP (PIPE)
- ELBOW DOWN (PIPE)
- TEE UP
- TEE-OFF THE BOTTOM / DOWN

- THERMOMETER
- FCO — CO — CLEANOUT FLOOR / CEILING CLEANOUT
- PIPE CAP
- CHECK VALVE
- STOP & WASTE VALVE
- (GPM) — CIRCUIT BALANCING VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- BALL VALVE
- CONTROL VALVE (TWO-WAY)
- FLOW DIRECTION
- PIPE UNION
- OR — IN-LINE PUMP
- FLOOR DRAIN
- FLOOR SINK
- BREAK IN MATERIAL
- DRAIN VALVE
- CONNECT TO EXISTING
- SIAMESE FIRE DEPT. CONNECTION
- SUPPLY, RETURN AND EXHAUST AIR
- M — MOTORIZED DAMPER
- FS — FIRE/SMOKE DAMPER
- S — SMOKE DAMPER
- F — FIRE DAMPER
- VOLUME DAMPER (MANUAL)

- EXHAUST REGISTER
- CEILING SUPPLY DIFFUSER
- RETURN AIR GRILLE/REGISTER
- SIDEWALL SUPPLY REGISTER
- SIDWALL RETURN OR EXHAUST GRILLE
- FLOOR REGISTER
- LINEAR DIFFUSER
- FLEX DUCT
- ROOF (PRV) EXHAUST FAN
- CABINET UNIT HEATER
- VAV BOX WITH COIL
- SUPPLY DUCT ELBOW WITH TURNING VANES
- 14x10 — STANDARD OR LINED DUCT (SUPPLY, RETURN, EXHAUST). DUCT IS LABELED TO INDICATE INTERNAL DUCT DIMENSION. SEE SPECIFICATION FOR INSULATION.
- STANDARD ROUND TAKEOFF WITH VOLUME DAMPER
- GAS PRESSURE REGULATOR
- WALL HYDRANT
- HOSE BIBB

PLUMBING CODE - (WHERE APPLICABLE)

ALL PLUMBING MUST BE INSTALLED IN ACCORDANCE WITH CODE (MN 4714).

THE HORIZONTAL DRAINAGE PIPING MUST BE INSTALLED WITH A UNIFORM SLOPE OF AT LEAST 1/4" PER FOOT (MN 4714, 708.1)

ALL SINKS EXCEPT LAVATORIES AND PRIVATE USE BAR SINKS, MUST BE PROVIDED WITH A 2" MINIMUM VERTICAL FIXTURE DRAIN (MN 4714, 702.1 & 703.2)

A COMMON VENT MAY SERVE TWO FIXTURES IF EACH FIXTURE DRAIN CONNECTS INDEPENDENTLY TO A VERTICAL DRAIN THROUGH AN APPROVED DOUBLE FIXTURE FITTING. DOUBLE SANITARY TEES ARE NOT PERMITTED (MN 4714, 704.2 & 905.6)

VENT PIPE SIZES SHALL BE PER CODE (MN 4714, 703.2)

DOMESTIC DISHWASHER MUST DISCHARGE INDIRECTLY THROUGH A ASSE 1020 OR IAPMO PS23-2006a LISTED AIR GAP FITTING (MN 4714, 414.3 & 807.4).

ABOVE GRADE HORIZONTAL PLUMBING PIPING MUST BE SUPPORTED PER CODE. (MN 4714, 313.1)

HOT WATER DELIVERED FROM PUBLIC USE LAVATORIES MUST BE LIMITED TO A MAXIMUM TEMPERATURE OF 110 DEGREE F BY A DEVICE THAT IS IN ACCORDANCE WITH ASSE 1070 OR CSA B125.3. (MN 4714, 421.2).

WATER HEATERS MUST BE ACCESSIBLE WITH SUFFICIENT CLEARANCE FOR MAINTENANCE AND REPAIR. UNLISTED WATER HEATERS MUST HAVE 12" MINIMUM CLEARANCE ON ALL SIDES (MN 4714, 507.26 & 504.3.2)

WALL HYDRANTS MUST MEET ASSE STANDARD 1019, OR ASSE 1052 OR ASSE 1011 WHERE PERMITTED BY THE ADMINISTRATIVE AUTHORITY.

INSTALLATION OF BACKFLOW PREVENTERS SHALL BE INSTALLED AND SET UP WITH A TESTING AND INSPECTION PROGRAM ACCEPTABLE TO THE ADMINISTRATIVE AUTHORITY (MN 4714, 603.5.23)

CLEANOUT OPENINGS MAY NOT BE SMALLER THAN THE PIPE SIZE CONNECTED TO OR SIZE PER CODE (MN 4714, 707.10)

CLEANOUT TO BE PROVIDED AT THE CONNECTION BETWEEN BUILDING DRAIN AND BUILDING SEWER (MN 4714, 719.1)

IN NO CASE SHALL WATER FROM ROOF BE ALLOWED TO FLOW UPON A PUBLIC SIDEWALK (MN 4714, 1101.1)

PLUMBING SYSTEM MUST BE TESTED IN ACCORDANCE WITH CODE (MN 4714, 609.4, 712.0, 1109.0)

WATER SUPPLY CONNECTIONS TO FIXTURES OR EQUIPMENT WHICH HAVE INLETS BELOW THE SPILL LINE MUST BE PROVIDED WITH AN AIR GAP OR APPROVDED BACKFLOW PREVENTER (MN 4714, 2000).

PROVIDE ADDITIONAL AIR GAP ARRANGEMENT OR APPROVED BACKFLOW PREVENTER ON DISHWASHERS, CLOTHES WASHER, COFFEE MAKERS, REFRIGERATORS, AND/OR ICE MAKERS WHEN NOT PROVIDE WITH THE EQUIPMENT.

MATERIALS USED FOR THE PLUMBING SYSTEM SHALL COMPLY WITH THE STANDARDS SET FOURTH IN THE CODE (MN 4714, 301.1)

CPVC WATER SERVICE OR DISTRIBUTION SYSTEMS MATERIAL AND INSTALLATION MUST MEET CODE (MN 4714, 605.4 & TABLE 604.1)

PLASTIC PIPE MATERIAL AND INSTALLATION USED FOR INTERIOR STORM PIPING, DRAIN, WASTE AND/OR VENT MUST MEET CODE (MN 4714, 705.1, 705.7 & TABLE 701.1)

HUBLESS CAST IRON DRAIN, WASTE AND VENT PIPING MUST COMPLY WITH CODE (MN 4714, 701.1 AND TABLE 701.1 AND INSTALLATION STANDARD 6)

UNIONS SHALL BE INSTALLED IN WATER SUPPLIES ON WATER HEATING OR REGULATING EQUIPMENT, WATER CONDITIONING, ETC.. (MN 4714, 609.5)

EACH HORIZONTAL DRAIN BRANCH, INCLUDING FLOOR DRAIN BRANCHES, SHALL BE PROVIDED WITH A CLEANOUT AT ITS UPPER TERMINAL UNLESS BRANCH LINE IS LESS THAN 5 FEET (EXCEPT URINALS & SINKS) OR 72 DEGREES OR LESS FROM VERTICAL.

PROVIDE ADDITIONAL CLEANOUTS AS REQUIRED TO TEST NEW WASTE AND VENT SYSTEMS.

PROVIDE ADDITIONAL CLEANOUTS WHERE REQUIRED BY CODE.

DOUBLE WYES MAY NOT BE USED FOR DRAINAGE FITTINGS IN THE HORIZONTAL POSITION.

FAUCETS WITH HOSED THREADED OUTLETS MUST BE PROVIDED WITH APPROVED BACKFLOW PREVENTERS. FIELD VACUUM BREAKERS MUST MEET ASSE 1052.

PIPING SHALL BE INSTALLED PER CODE. CHANGE IN DIRECTION IN DRAINAGE PIPING MUST BE MADE WITH USE OF WYES, AND BEND. SANITARY TEES ARE NOT ALLOWED WHERE THE DIRECTION OF FLOW CHANGES.

ALL SANITARY PIPING UNDERGROUND SHALL BE A MINIMUM 2" DIAMETER.

ALL SOIL, WASTE, DRAIN AND VENT PIPING ABOVE THE GROUND WITHIN A PLENUM RETURN CEILING SHALL BE STANDARD WEIGHT CAST IRON PIPE, WITH NO-HUB NEOPRENE SLEVE BANDED GASKETS,. INSTALLATION AND MATERIAL OF PIPING SHALL BE IN ACCORDANCE WITH CODE.

INSTALL VALVES ON EACH ROOM OR INDIVIDUAL FIXTURE PER CODE

MATERIALS USED FOR PLUMBING SYSTEM MUST COMPLY WITH STANDARDS SET PER CODE.

A CLEANOUT SHALL BE PROVIDED ON A COMMON VERTICAL FIXTURE DRAIN OR COMMON VENT SERVING TWO FIXTURE TRAPS THAT CONNECT TO A VERTICAL DRAIN AT THE SAME LEVEL. WHERE THE VERTICAL FIXTURE DRAIN IS ACCESSIBLE THROUGH THE TRAP OPENING, THE CLEANOUT MAY BE ELIMINATED.

SHEET INDEX

SHEET NO.	DRAWING TITLE
m0.0	MECHANICAL TITLESHEET
m0.1	MECHANICAL SITE PLAN
m1.0	PLUMBING PLAN
m1.1	PLUMBING RISER DIAGRAMS
m2.0	HVAC PLAN
m2.1	HVAC SECTIONS
m3.0	MECHANICAL DETAILS
m4.0	MECHANICAL SCHEDULES

Comm. No.
4071.0000

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Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
www.epinc.com

Foodservice Designer
Boelter premier
FOODSERVICE DESIGN, EQUIPMENT & SUPPLY

Owner
City of Roseville

Project
Cedarholm Community Building

Title
Mechanical Title Sheet

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota.

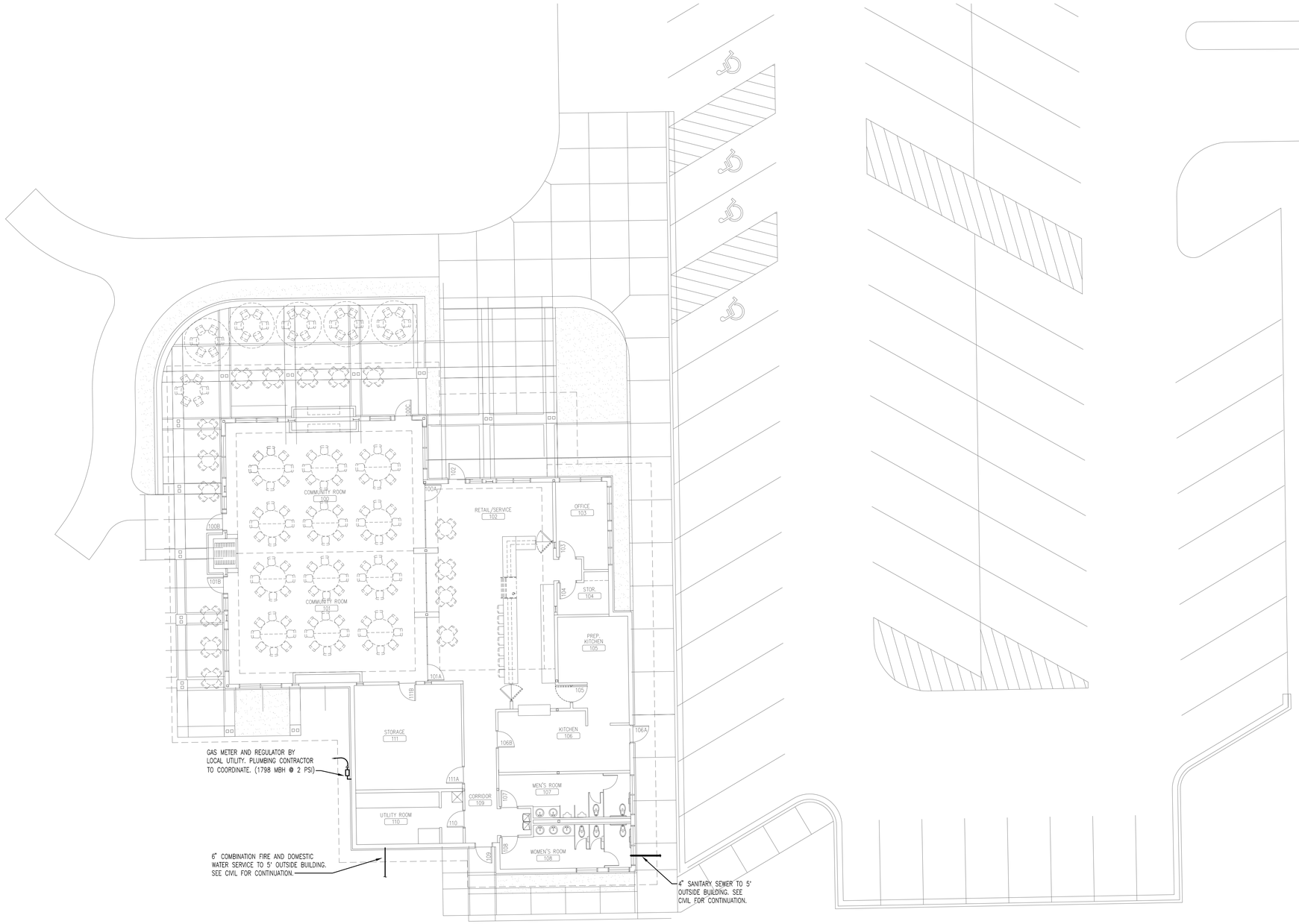
By:

Title: Engineer Date: 07/10/2017

Registration Number: 40918

Drawing No.
m0.0

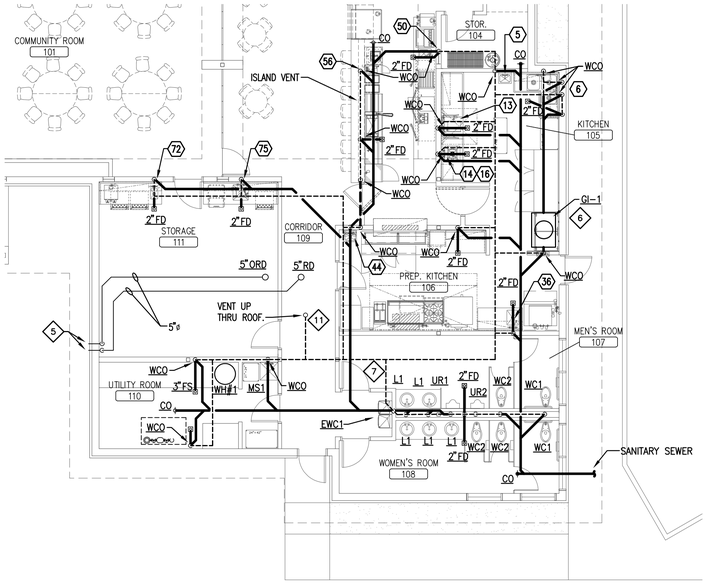
HAGEN, CHRISTENSEN & McILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7866



1 MECHANICAL SITE PLAN

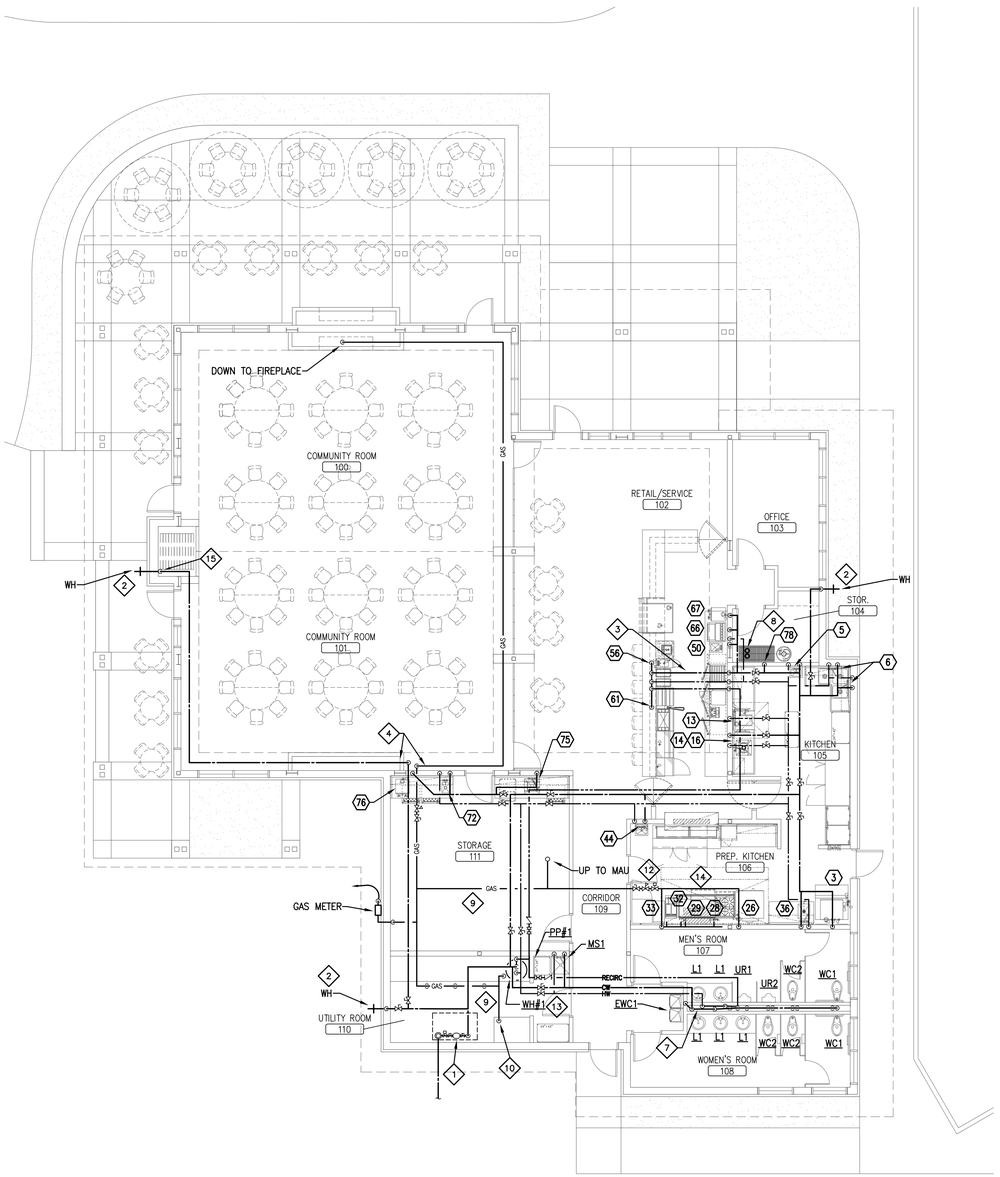
SCALE:1" = 10'-0"

Comm. No. 4071.0000 **ISSUE DATE** 06/06/2017 - DD ESTIMATING SET 07/10/2017 - BID SET	**Civil Engineer & Landscape Architect** SRF Consulting Group, Inc.	**Structural Engineer** Mattson Macdonald Young structural engineers Bassett Creek Business Center 901 North 3rd Street, Suite 100 Minneapolis, MN 55401 612-827-7825 voice 612-827-0805 fax	**Mechanical and Electrical Engineers** emanuelson-podas consulting engineers 7705 Bush Lake Road Edina, MN 55439 (952) 930-0050 www.epinc.com	**Foodservice Designer** Boelter premier FOODSERVICE DESIGN, EQUIPMENT & SUPPLY	**Owner** City of Roseville **Project** Cedarholm Community Building **Title** Mechanical Site Plan	I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota. By: Title: Engineer Date: 07/10/2017 Registration Number: 40918	**Drawing No.** m0.1	Hagen, Christensen & McIlwain ARCHITECTS 4201 Cedar Avenue So. • Minneapolis, MN 55407 TEL (612)904-1932 • FAX (612)904-7966



1 PLUMBING PLAN - SANITARY & VENT

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



2 PLUMBING PLAN - DOMESTIC

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

KEYED NOTES:

1. EXTEND COMBINATION 6" FIRE SPRINKLER & WATER SERVICE INTO BUILDING, TAP OFF WITH 2" DOMESTIC WATER. COORDINATE WITH CITY ON METER SIZE.
2. MOUNT WALL HYDRANT AT 18" ABOVE GRADE WITH SHUT-OFF VALVE FOR WINTER SHUT-DOWN.
3. ROUTE PIPING DOWN IN WALL AND UNDER FLOOR TO ISLAND.
4. ROUTE PIPING THROUGH WALL AND INTO SOFFIT. RUN THROUGH SOFFIT TO DESIRED LOCATION. COORDINATE ROUTING WITH DUCTWORK.
5. PROVIDE DOWNSPOUT NOZZLE 18" ABOVE GRADE.
6. GREASE INTERCEPTOR PROVIDED BY MECHANICAL CONTRACTOR. SEE SCHEDULE ON M4.0 FOR MORE DETAILS.
7. RUN VENT PIPING, CW, & HW DOWN AND ALONG IN CHASE BETWEEN BACK TO BACK FIXTURES.
8. PROVIDE SODA PVC SLEEVES FOR SODA LINES. SEE FOODSERVICE DRAWINGS FOR DETAILS AND LOCATIONS.
9. COORDINATE WATER, VENT, STORM & FIRE PROTECTION PIPING WITH DUCTWORK. KEEP AS HIGH AS POSSIBLE.
10. DROP GAS DOWN TO FURNACE & WATER HEATER (TYPICAL 5). SEE GAS RISER DIAGRAM.
11. EXTEND VENT UP THROUGH ROOF, MAINTAIN MINIMUM 10' FROM MAU OUTSIDE AIR INTAKE.
12. SHUT-OFF VALVE, REGULATOR & SOLENOID VALVE SERVING KITCHEN EQUIPMENT. SOLENOID VALVE PROVIDED WITH HOOD, INSTALLED BY PLUMBING CONTRACTOR. LOCATE ABOVE CEILING IN ACCESSIBLE LOCATION.
13. SEE DETAIL 7/M3.0 FOR WATER HEATER AND RECIRC PUMP PIPING DIAGRAM.
14. CONNECT GAS TO KITCHEN EQUIPMENT PER FOOD SERVICE PLANS. SEE DETAIL 5/M3.0 FOR REFERENCE.
15. DROP CW CORNER, MAINTAIN CLEARANCE FROM PARTITION DOOR. DO NOT LOCATE PIPE DROP IN EXTERIOR WALL. COORDINATE WITH GC.

COORDINATE PIPING LOCATIONS WITH CEILING HEIGHTS, LIGHTS, DUCTS & STRUCTURE PRIOR TO DUCT FABRICATION/INSTALLATION.

COORDINATE SLEEVE SIZES AND LOCATIONS FOR BELOW FLOOR PIPING WITH CONCRETE CONTRACTOR PRIOR TO FOOTING INSTALLATION.

COORDINATE ALL SPRINKLER PIPING WITH DUCTWORK, CEILING HEIGHTS, ETC.

(i) SEE FOOD SERVICE PLANS FIXTURE SCHEDULE AND ROUGH-IN PLAN FOR ADDITIONAL PIPE AND FIXTURE CONNECTION SIZES. USE THE CORRESPONDING NUMBER AND SYMBOL.

SEE PLUMBING FIXTURE SCHEDULE AND PLUMBING RISER DIAGRAMS FOR DOMESTIC WATER, WASTE AND VENT PIPE SIZING.

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Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
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consulting engineers
7705 Bush Lake Road
Edina, MN 55439
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Foodservice Designer
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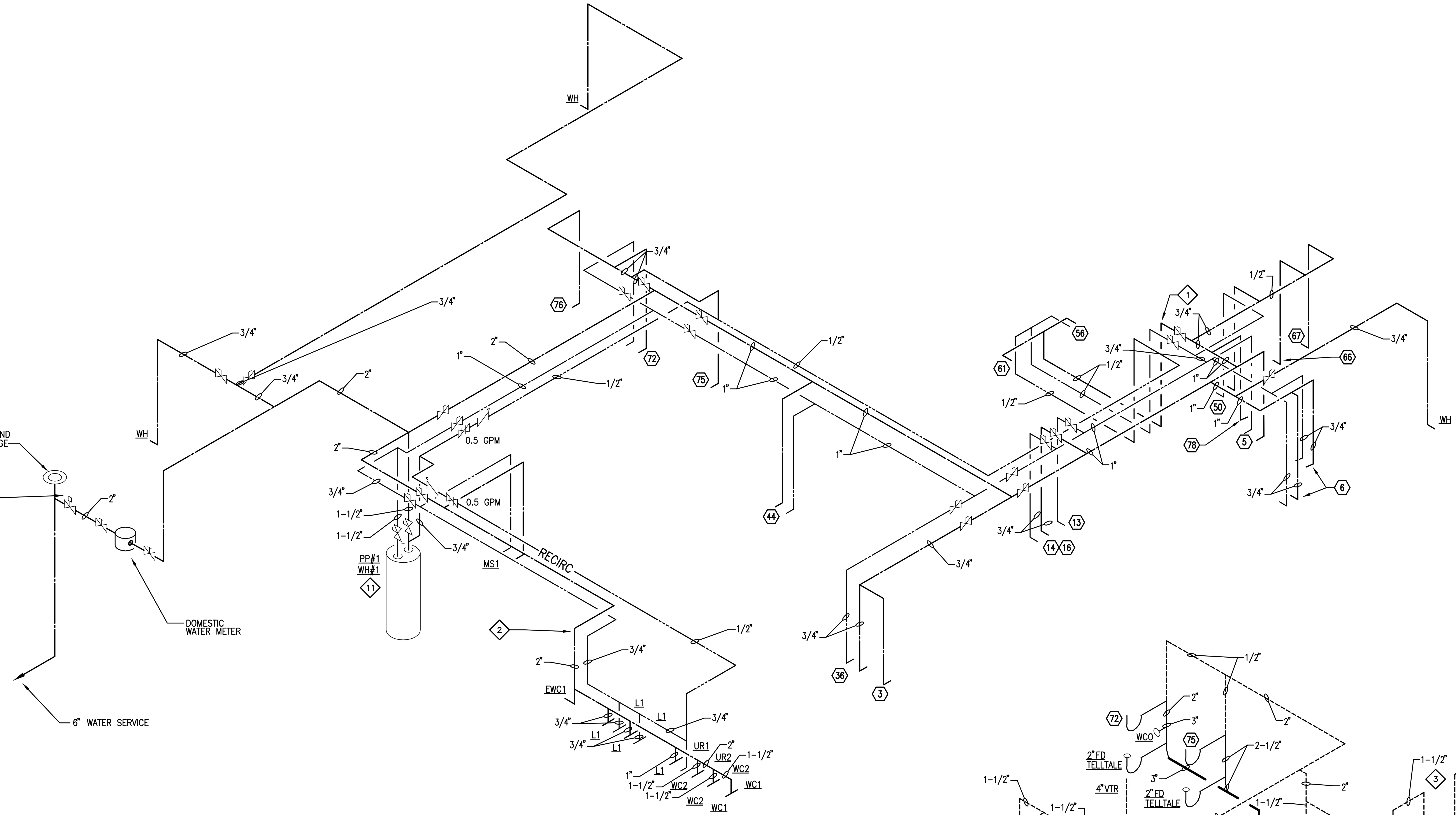
FOODSERVICE DESIGN, EQUIPMENT & SUPPLY

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Plumbing Plan

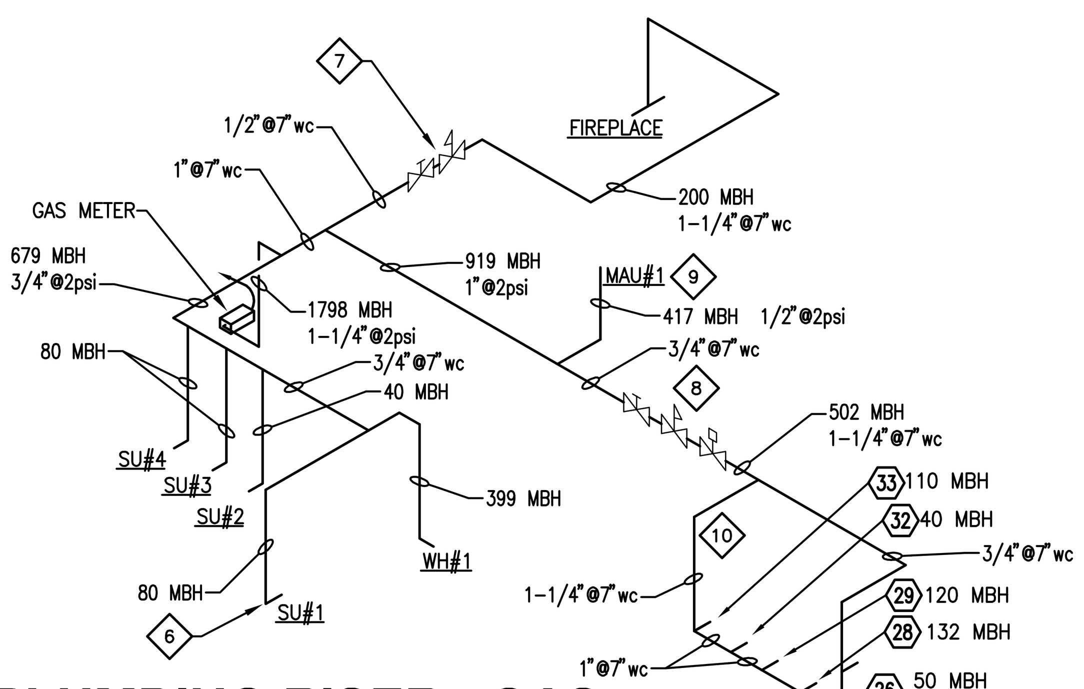
I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota.
By:
Title: Engineer Date: 07/10/2017
Registration Number: 40918

Drawing No.
m1.0

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
401 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7866



1 **PLUMBING RISER - DOMESTIC**
SCALE: NONE



2 **PLUMBING RISER - GAS**
SCALE: NONE

KEYED NOTES:

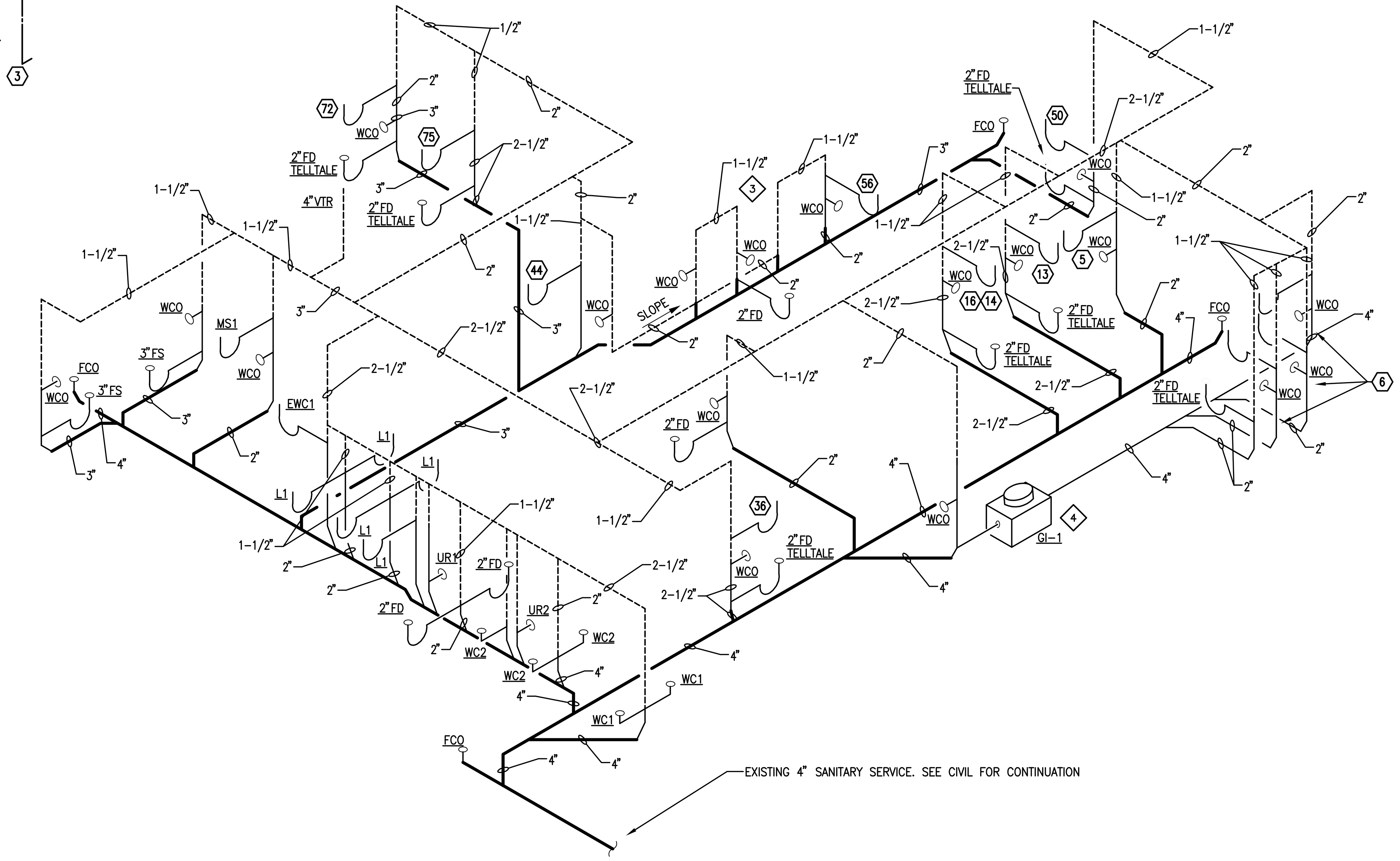
1. RUN PIPING DOWN IN WALL AND UNDER FLOOR TO BAR/ISLAND. (TYP.)
2. RUN PIPING DOWN AND ALONG IN CHASE BETWEEN BACK TO BACK FIXTURES.
3. PROVIDE ISLAND VENT SYSTEM PER CODE.
4. GREASE INTERCEPTOR PROVIDED BY MECHANICAL CONTRACTOR. SEE SCHEDULE ON M4.0 FOR MORE DETAILS.
5. RUN VENT PIPING DOWN AND ALONG IN CHASE BETWEEN BACK TO BACK FIXTURES.
6. DROP 1/2"G@2psi DOWN AND CONNECT TO FURNACE/WATER HEATER WITH SHUT OFF VALVE, DIRT LEG, REGULATOR, AND UNION. (TYP.)
7. LOCATE SHUT-OFF VALVE AND REGULATOR IN STORAGE ROOM, ROUTE GAS PIPING THROUGH SOFFIT AND CONNECT TO FIREPLACE WITH SHUT-OFF VALVE. VERIFY INSTALLATION WITH FIREPLACE INSTALLER.
8. SHUT-OFF VALVE, REGULATOR AND SOLENOID VALVE LCOATED ABOVE CEILING TILE. SOLENOID VALVE BY FOOD SERVICE CONTRACTOR, INSTALLED BY PLUMBING CONTRACTOR.
9. GAS SERVICE UP FROM CEILING SPACE THROUGH ROOF TO MAU#1. CONNECT WITH SHUT-OFF VALVE, DIRT LEG, REGULATOR AND UNION. SEE CAPTIVE AIRE DRAWINGS FOR CONNECTION SIZES.
10. GAS SERVICE DOWN FROM CEILING TO COOKING EQUIPMENT. SEE FOOD SERVICE DRAWINGS FOR CONNECTION SIZES.
11. SEE DETAIL 7/M3.0 FOR WATER HEATER AND RECIRC PUMP PIPING DIAGRAM.

(#) SEE FOOD SERVICE DRAWINGS FOR SCHEDULE AND ROUGH-IN PLAN FOR ADDITIONAL PIPE AND FIXTURE CONNECTION SIZES. USE THE CORRESPONDING NUMBER AND SYMBOL.

PLUMBING RISER DIAGRAMS ARE FOR REFERENCE OF GENERAL PIPE ROUTING AND PIPE SIZES AND ARE NOT FOR ACTUAL PIPING INSTALLATION. ALL PIPING SHALL BE INSTALLED PER CODE.

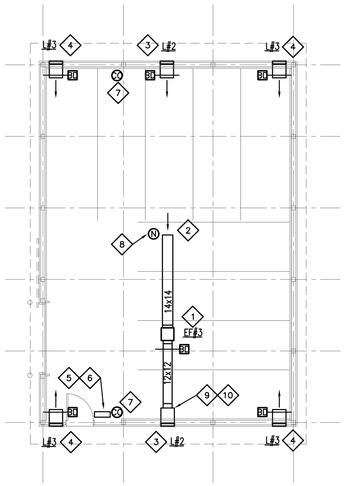
PROVIDE WATER HAMMER ARRESTORS ON ALL FLUSH VALVE AND SENSOR OPERATED FIXTURES. SIZE AND INSTALL PER MANUFACTURERS INSTRUCTIONS.

SEE PLUMBING FIXTURE SCHEDULE AND PLUMBING RISER DIAGRAMS FOR DOMESTIC WATER, WASTE AND VENT PIPE SIZING.



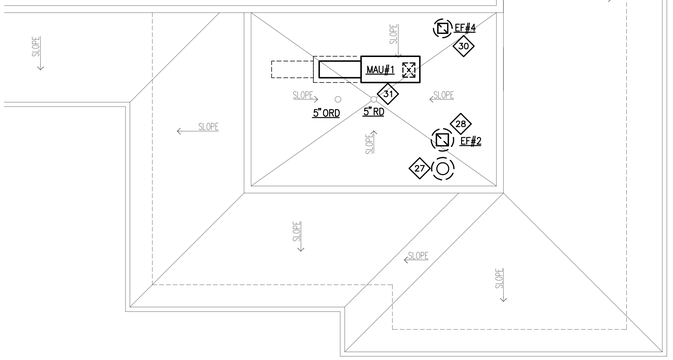
3 **PLUMBING RISER - SANITARY & VENT**
SCALE: NONE

Comm. No.	Civil Engineer & Landscape Architect	Structural Engineer	Mechanical and Electrical Engineers	Foodservice Designer	Owner		Drawing No.	
4071.0000 ISSUE DATE 06/06/2017 - DD ESTIMATING SET 07/10/2017 - BID SET	SRF Consulting Group, Inc.	Mattson Macdonald Young structural engineers Bassett Creek Business Center 901 North 3rd Street, Suite 100 Minneapolis, MN 55401 612-827-7825 voice 612-827-0805 fax	emanuelson-podas consulting engineers 7705 Bush Lake Road Edina, MN 55439 (952) 930-0050 www.epinc.com	Boelter premier FOODSERVICE DESIGN, EQUIPMENT & SUPPLY	City of Roseville **Project** Cedarholm Community Building **Title** Plumbing Risers	I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota. By: [signature] Title: Engineer Date: 07/10/2017 Registration Number: 40918	m1.1	HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS 4201 CEDAR AVENUE SO • MINNEAPOLIS, MN 55407 TEL (612) 904-1332 • FAX (612) 904-7366



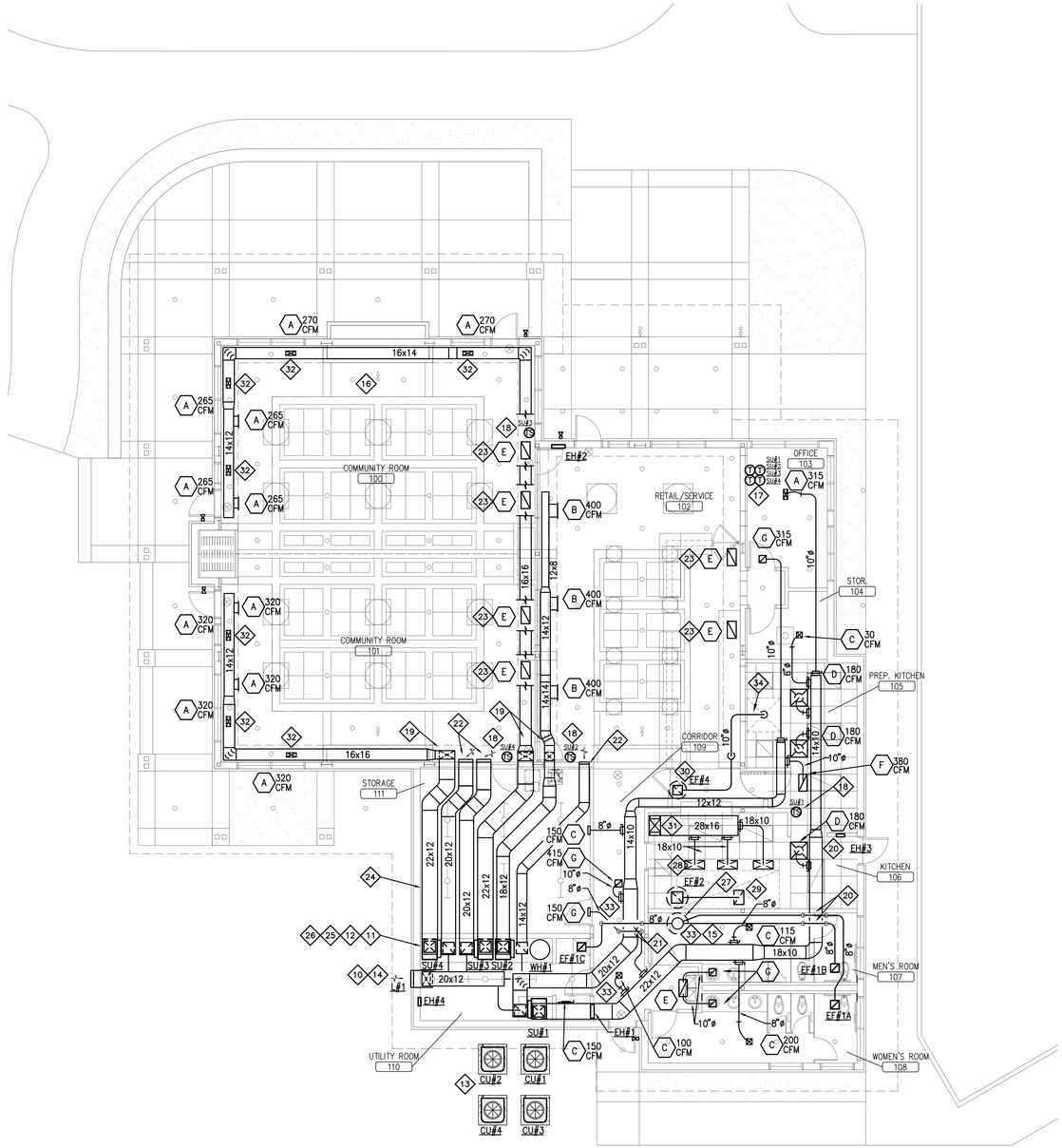
1 HVAC PLAN - CART SHED

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



2 HVAC PLAN - ROOF

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



3 HVAC PLAN

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

COORDINATE DUCTWORK LOCATIONS WITH CEILING HEIGHTS, LIGHTS, PIPING & STRUCTURE PRIOR TO DUCT FABRICATION/INSTALLATION.

KEYED NOTES:

1. HANG EXHAUST FAN IN TRUSS SPACE, WITH VIBRATION ISOLATORS. MOUNT MANUFACTURERS GRAVITY BACKDRAFT DAMPER AT OUTLET OF FAN AND EXTEND DUCT TO LOUVER PLENUM. LINE VOLTAGE BY ELEC. CONTR. WITH LOW VOLTAGE CONTROL RELAY. MAINTAIN MINIMUM FAN CLEARANCE REQUIREMENTS.
2. EXTEND EXHAUST 10' FROM FAN AND PROVIDE BIROSCREEN OVER OPENING. DUCT TO BE SAME SIZE AS FAN DUCT COLLAR.
3. INSTALL LOUVER 8'-8" ABOVE FLOOR, FIELD COORDINATE LOCATION WITH BUILDING STRUCTURE AND ARCHITECT.
4. INSTALL INTAKE LOUVER WITH BOTTOM AT 18" ABOVE FLOOR AND PROVIDE COUNTER WEIGHTED GRAVITY BACK DRAFT DAMPER. COORDINATE LOCATION WITH BUILDING STRUCTURE AND ARCHITECT.
5. PROVIDE HONEYWELL ANALYTICS INC – E3 POINT VENTILATION CONTROL SYSTEM SYSTEM CONTROLLER, TWO CARBON MONOXIDE (CO), ONE NITROGEN DIOXIDE (NO2), POWER TRANSFORMERS, AND ALL COMPONENTS FOR A COMPLETE AND OPERATIONAL SYSTEM. LOW VOLTAGE CONTROL WIRING BETWEEN CONTROL PANEL, SENSOR, DAMPER ACTUATORS, EXHAUST FAN SHALL BE BY MECHANICAL CONTRACTOR. ALL CONTROL WIRING TO BE INSTALL IN CONDUITS. SYSTEM SHALL CONTINUOUSLY MONITOR REMOTE SENSORS. ON ALARM, AUDIBLE ALARM SHALL SOUND, AND EXHAUST FAN SHALL START. ALARM RUN TIME SHALL BE ADJUSTABLE BETWEEN 5 AND 55 MINUTES. PROVIDE ADJUSTABLE TIMER SWITCH FOR MANUAL OPERATION OF SYSTEM (ADJUSTABLE BETWEEN 30 AND 60 MINUTES).
6. VENTILATION SYSTEM CONTROL PANEL. MOUNT AT 60" AFF. SYSTEM TO CONTROL EF#3.
7. MOUNT CO SENSOR ON WALL AT 60" AFF.
8. MOUNT NO2 SENSOR ON BOTTOM OF TRUSS.
9. PROVIDE PLENUM BOX BEHIND LOUVER AND CONNECT EXHAUST DUCT TO BACK OF PLENUM. SLOPE BOTTOM OF PLENUM BACK TOWARDS LOUVER AND SEAL PLENUM BOX WATER TIGHT.
10. PROVIDE 12x12 ACCESS PANEL IN SIDE OF LOUVER PLENUM.
11. MOUNT FURNACE ON 4" HOUSEKEEPING PAD, PAD BY GC. EXTEND FLUE AND COMBUSTION FROM EACH FURNACE, UP THROUGH ROOF, GROUP TOGETHER ON WEST ROOF SLOPE, COORDINATE LOCATIONS WITH ARCHITECT. SIZE AND INSTALL PER MANUFACTURERS INSTRUCTIONS. INSULATE FLUE PIPE IN ATTIC (TYPICAL 4)
12. EXTEND REFRIGERANT PIPING FROM FURNACE, DROP DOWN AGAINST WALL, THRU EXTERIOR WALL TO CONDENSING UNIT, INSTALL PER MANUFACTURERS INSTRUCTIONS. SEAL EXTERIOR WALL OPENINGS WATER TIGHT.
13. MOUNT CONDENSING UNIT ON 4" CONCRETE PAD, MAINTAIN MINIMUM CLEARANCE BETWEEN CONDENSING UNITS AND 36" FROM ELECTRICAL PANELS AND GAS METER. (TYPICAL 4)
14. PROVIDE PLENUM BOX BEHIND LOUVER AND CONNECT OUTSIDE AIR DUCT TO TOP OF PLENUM. SLOPE BOTTOM OF PLENUM BACK TOWARDS LOUVER AND SEAL PLENUM BOX WATER TIGHT.
15. PROVIDE REMOTE DAMPER ACTUATOR FOR DIFFUSERS AND GRILLES WHERE VOLUME DAMPERS ARE LOCATED ABOVE GYP. BOARD OR NOT ACCESSIBLE. LOCATE ADJUSTMENT ABOVE 2'X2' ACCESSIBLE CEILINGS OR IN ACCESSIBLE AREA. (TYPICAL)
16. FIREPLACE FLUE BY FIREPLACE SUPPLIER/INSTALLER.
17. MOUNT THERMOSTATS FOR EACH FURNACE IN OFFICE, VERIFY LOCATION WITH ARCHITECT AND OWNER.
18. MOUNT REMOTE TEMPERATURE SENSORS AT 54" AFF. VERIFY LOCATION WITH ARCHITECT.
19. ROUTE DUCT THROUGH WALL AND INTO SOFFIT. OFFSET UP TO ABOVE LIGHT FIXTURES IN HIGHER SOFFIT. SEE SECTIONS.
20. OFFSET EXHAUST/SUPPLY DUCT UP INTO TRUSS SPACE OVER MAIN DUCT AND BACK DOWN BELOW STRUCTURE. GENERAL CONTRACTOR TO BOX OUT AREA BETWEEN TRUSSES WITH GYP BOARD TO MAINTAIN CEILING PLENUM. FIELD COORDINATE.
21. OFFSET EXHAUST/SUPPLY DUCT UP AND OVER RETURN DUCT AND SUPPLY DUCT IN HIGH STRUCTURE SPACE.
22. RETURN DUCT OPEN TO INSIDE OF SOFFIT FOR USE AS A RETURN AIR PLENUM. VERIFY STEEL STUD SOFFIT FRAMING AND COMBUSTIBLES WITHIN SOFFIT. VERIFY NO OBSTRUCTIONS BETWEEN RETURN DUCT AND RETURN GRILLES.
23. RETURN GRILLE LOCATED IN TOP OF SOFFIT.
24. ROUTE DUCTWORK HIGH NEAR BOTTOM OF TRUSSES THROUGH STORAGE ROOM.
25. EXTEND 8"ø OUTSIDE AIR DUCT FROM OA MAIN AND CONNECT TO FURNACE RETURN WITH MOTORIZED DAMPER AND VOLUME DAMPER. TYPICAL SU#2.
26. EXTEND 10"ø OUTSIDE AIR DUCT FROM OA MAIN AND CONNECT TO FURNACE RETURN WITH MOTORIZED DAMPER AND VOLUME DAMPER. TYPICAL SU#1, SU#3 & SU#4.
27. EXTEND 16"ø EXHAUST DUCT UP TO ROOF MOUNTED HOOD, COORDINATE ROUTING WITH ROOF STRUCTURE. MOUNT EXHAUST HOOD AND CURB ON FLAT ROOF, SEE DETAIL 8/M3.0. MAINTAIN MINIMUM 10' FROM MAU OUTSIDE AIR INTAKE.
28. EXTEND 18"ø GREASE EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN, COORDINATE ROUTING WITH ROOF STRUCTURE. MOUNT EXHAUST FAN AND CURB ON FLAT ROOF, SEE DETAIL 2/M3.0. VERIFY FAN DISCHARGE WITH CURB/CURB EXTENSION IS 40" ABOVE ROOF. MAINTAIN MINIMUM 10' FROM MAU OUTSIDE AIR INTAKE. FAN PROVIDED BY FOOD SERVICE, INSTALLED BY MECHANICAL CONTRACTOR.
29. EXTEND 20x14 GREASE DUCTWORK FROM FAN TO HOOD. SLOPE GREASE DUCTWORK AND INSTALL WITH DRAINS, TRAPS, ACCESS PANELS, ACCESSORIES AS REQUIRED FOR GREASE DUCT INSTALLATION PER CODE. VERIFY HOOD CONNECTION SIZE AND TRANSITION AS REQUIRED. WRAP GREASE DUCT WITH 3M FIREWRAP INSULATION.
30. EXTEND 12"ø DISHWASHER EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST FAN, COORDINATE ROUTING WITH ROOF STRUCTURE. MOUNT EXHAUST FAN AND CURB ON FLAT ROOF, SEE DETAIL 3/M3.0. MAINTAIN MINIMUM 10' FROM MAU OUTSIDE AIR INTAKE. FAN PROVIDED BY FOOD SERVICE, INSTALLED BY MECHANICAL CONTRACTOR.
31. EXTEND 28x16 SUPPLY DUCT UP, TRANSITION, UP THROUGH ROOF AND CONNECT TO MAKE-UP AIR UNIT. CONNECT TO SUPPLY CONNECTIONS ON HOOD WITH VOLUME DAMPERS. MOUNT MAKE-UP AIR UNIT AND CURB ON FLAT ROOF, SEE DETAIL 1/M3.0. MAKE-UP AIR UNIT AND CURB PROVIDE BY FOOD SERVICE, INSTALLED BY MECHANICAL CONTRACTOR.
32. MOUNT SUPPLY GRILLE IN BOTTOM OF SOFFIT.
33. ROUTE DUCTWORK BETWEEN LIGHTS, FIELD COORDINATE.
34. OFFSET EXHAUST DUCT UP INTO TRUSS SPACE AND INTO SOFFIT. GENERAL CONTRACTOR TO BOX OUT AREA BETWEEN TRUSSES WITH GYP BOARD TO MAINTAIN CEILING PLENUM. FIELD COORDINATE.

Comm. No.
4071.0000

ISSUE DATE
06/06/2017 – DD ESTIMATING SET
07/10/2017 – BID SET

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Structural Engineer
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Bassett Creek Business Center
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Minneapolis, MN 55401
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m2.0

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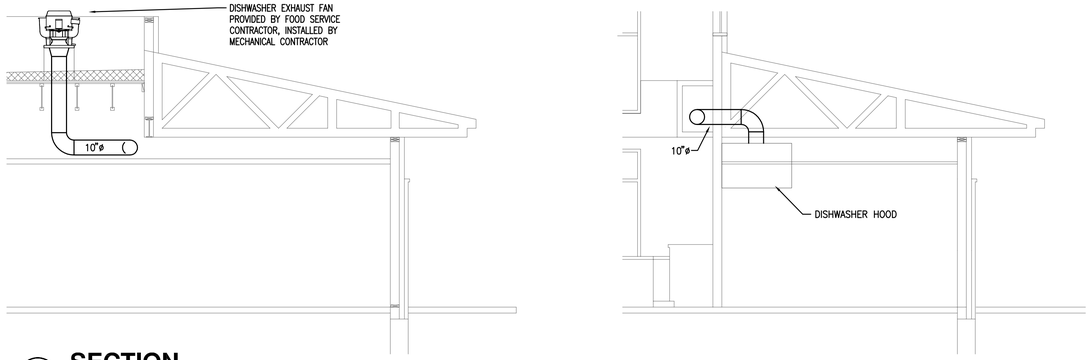
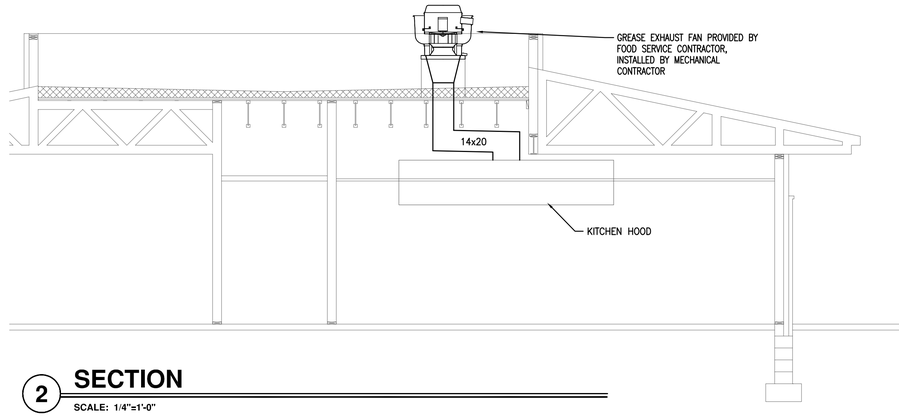


1 SECTION

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



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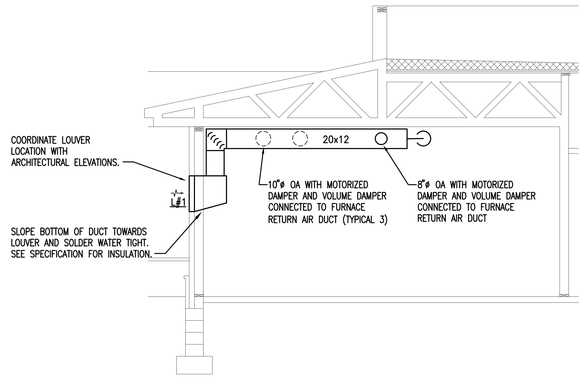

3 SECTION

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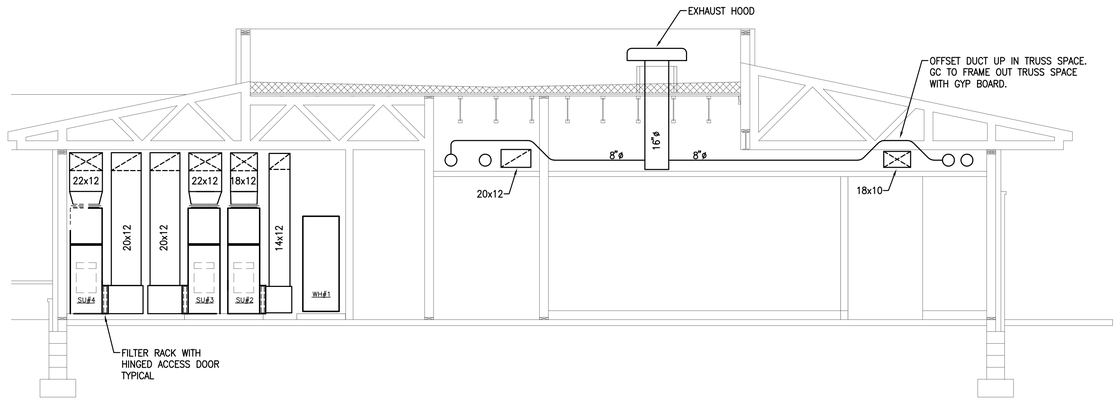

4 SECTION

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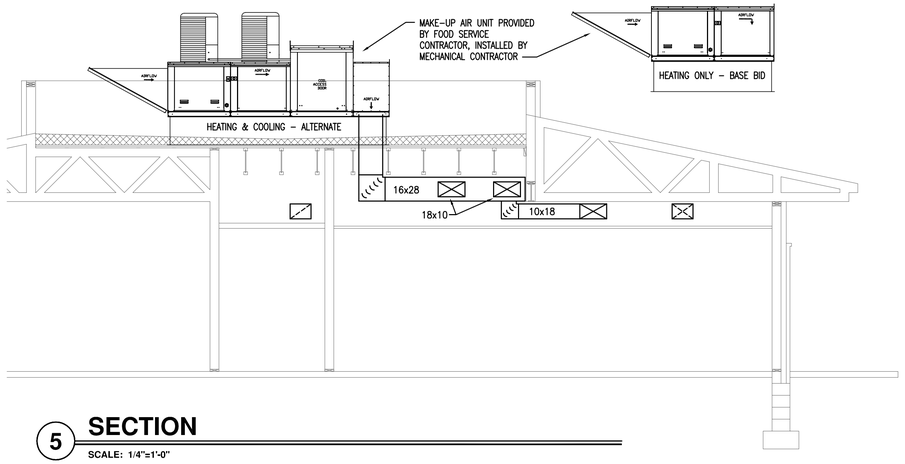
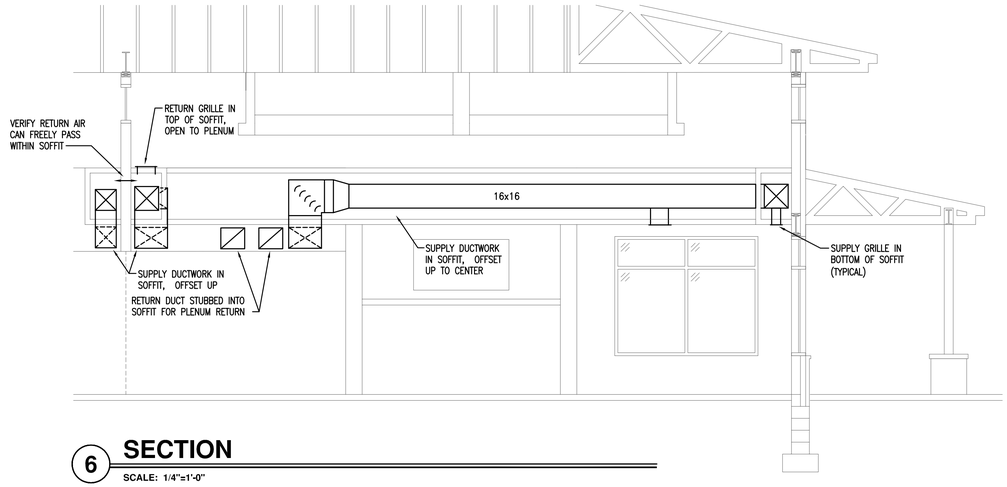


5 SECTION

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



6 SECTION

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

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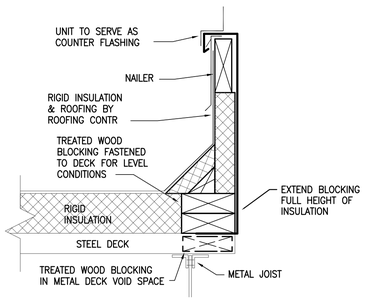
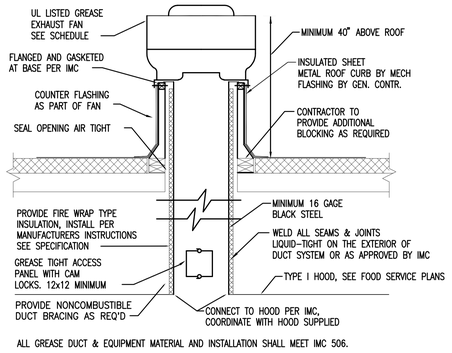


1 ROOF TOP CURB DETAIL

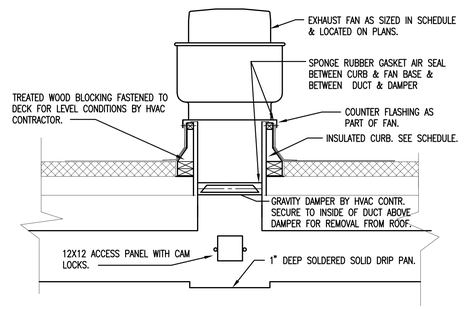
SCALE: NONE



ALL GREASE DUCT & EQUIPMENT MATERIAL AND INSTALLATION SHALL MEET IMC 506.

2 UPBLAST GREASE FAN DETAIL

SCALE: NONE

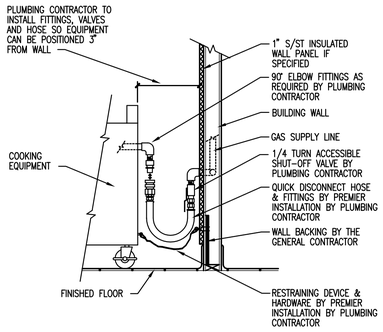


3 UPBLAST FAN DETAIL

SCALE: NONE

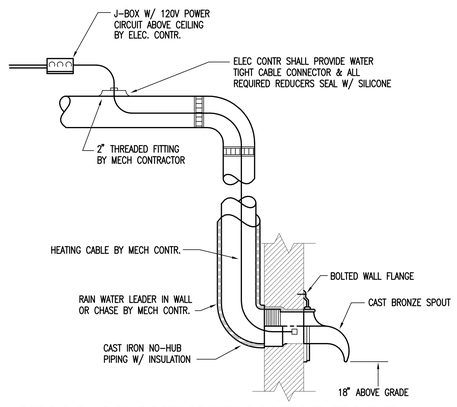
4 NOT USED

SCALE: NONE



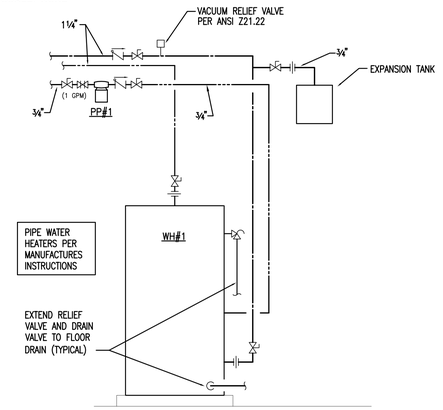
5 GAS KITCHEN EQUIP. CONN. DETAIL

SCALE: NONE



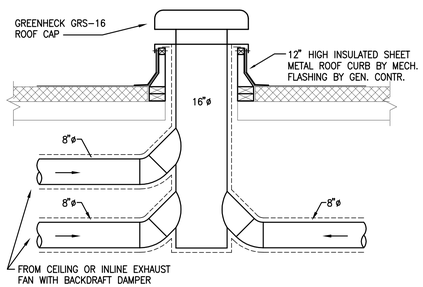
6 WALL SPOUT WITH HEAT TAPE

SCALE: NONE



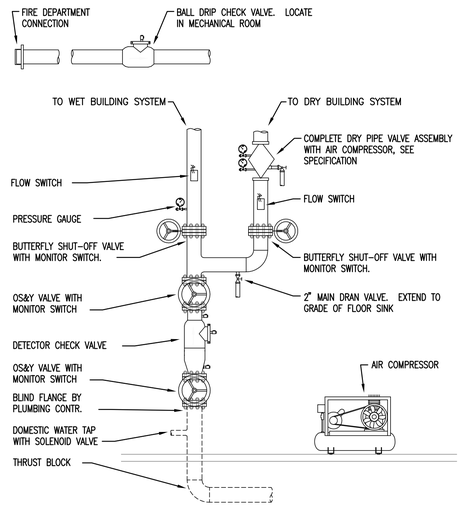
7 WATER HEATER PIPING DETAIL

SCALE: NONE



8 EXHAUST ROOF HOOD DETAIL

SCALE: NONE



FIRE ALARM CONTROL SYSTEM, WIRING OF FLOW SWITCHES, TAMPER SWITCHES, ETC, BY THE ELECTRICAL CONTRACTOR. FIRE SPRINKLER CONTRACTOR TO COORDINATE.

PROVIDE BACKFLOW PREVENTER IF REQUIRED. COORDINATE WITH FIRE MARSHALL AND LOCAL AUTHORITY.

10 FIRE SERVICE RISER

SCALE: NONE

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FURNACE – GAS FIRED SCHEDULE

MARK	LOCATION	SERVES	MANUF	MODEL	FAN DATA						HEATING DATA				COOLING DATA				FLA	FILTER	NOTES
					SUPPLY CFM	FRESH AIR CFM	ESP (IN)	H.P.	V	PH	E.A.T. (°F)	STAGES	INPUT (MBH)	OUTPUT (MBH)	E.A.T.	L.A.T.	TONS	COIL MODEL			
SU#1	MECH. ROOM	KITCHEN/BATHROOM	CARRIER	58MVB080-20	1600	300	0.6	1	120	1	78/64	2	80/52	78/50	78/64	56/56	4	CNP	9.9	MERV 8	1,2
SU#2	MECH. ROOM	BAR/ENTRANCE	CARRIER	58MVB040-12	1200	200	0.6	1/2	120	1	78/64	2	40/26	39/25	78/64	56/56	3	CNP	6.8	MERV 8	1,2
SU#3	MECH. ROOM	BANQUET ROOM	CARRIER	58MVB080-20	1600	300	0.6	1	120	1	78/64	2	80/52	78/50	78/64	56/56	4	CNP	9.9	MERV 8	1,2
SU#4	MECH. ROOM	BANQUET ROOM	CARRIER	58MVB080-20	1600	300	0.6	1	120	1	78/64	2	80/52	78/50	78/64	56/56	4	CNP	9.9	MERV 8	1,2

NOTES:
1. PROVIDE SIDE/BOTTOM FILTER RACK WITH HINGED ACCESS DOOR, AND CONCENTRIC INTAKE/VENT KIT.
2. CONTRACTOR TO ADJUST FAN SPEED FOR FIRST STAGE OF HEATING TO MAXIMUM AIRFLOW.

AIR COOLED CONDENSING SCHEDULE

MARK	SERVES	MANUF	MODEL #	TOTAL CAPACITY (TONS)	STAGES	REFRIGERANT	MIN SEER	CONDENSER DATA				ELECTRICAL DATA				WEIGHT (lbs)	MECH NOTES
								FAN NO	COIL NO/ROWS	NO COMP	AMB TEMP (°F)	VOLTS	PH	AMPS	TOTAL MCA		
CU#1	SU#1	CARRIER	24ACB7	4	2	R-410A	16	1	1/1	1	95	240	1	21.2 + 1.3	27.8	300	1,2
CU#2	SU#2	CARRIER	24ACB7	3	2	R-410A	16	1	1/1	1	95	240	1	15.3 + 0.7	19.8	250	1,2
CU#3	SU#3	CARRIER	24ACB7	4	2	R-410A	16	1	1/1	1	95	240	1	21.2 + 1.3	27.8	300	1,2
CU#4	SU#4	CARRIER	24ACB7	4	2	R-410A	16	1	1/1	1	95	240	1	21.2 + 1.3	27.8	300	1,2

MECHANICAL NOTES:
1. PROVIDE REFRIGERANT PIPE QUANTITIES AND SIZE PER MANUFACTURERS PIPING SCHEMATIC. PROVIDE CUSTOM SIZING IF LENGTH EXCEEDS MANUFACTURERS REQUIREMENTS.
2. PROVIDE WITH LOW AMBIENT CONTROLS AND ACCESSORIES DOWN TO 0 DEGREES F.

ELECTRIC HEAT SCHEDULE

MARK	LOCATION	QUANTITY	MANUF	MODEL #	TYPE	DIMENSIONS (IN)	INSTALLATION	FINISH	MOUNTING HEIGHT	CONTROL	ELECTRIC COIL DATA				MECH NOTES
											KW	WATTS	V	PH	
EH#1	SEE PLANS	1	BERKO	FRA 4024F	WALL/FAN FORCED	–	WALL RECESSED	STANDARD	BTM 12" AFF	INTERGRAL	4	–	240	1	1
EH#2	SEE PLANS	1	BERKO	FRA 4024F	WALL/FAN FORCED	–	WALL RECESSED	STANDARD	BTM 12" AFF	INTERGRAL	4	–	240	1	1
EH#3	SEE PLANS	1	BERKO	SRA 2024	WALL/FAN FORCED	–	WALL RECESSED	STANDARD	BTM 12" AFF	INTERGRAL	2	–	240	1	2
EH#4	SEE PLANS	1	BERKO	SRA 2024	WALL/FAN FORCED	–	WALL RECESSED	STANDARD	BTM 12" AFF	INTERGRAL	2	–	240	1	2

MECHANICAL NOTES:
1. PROVIDE WITH INTEGRAL CONCEALED THERMOSTAT, RECESSED MOUNTING.
2. PROVIDE WITH INTEGRAL THERMOSTAT WITH ACCESSIBLE MANUAL KNOB, RECESSED MOUNTING.

FAN SCHEDULE

MARK	LOCATION	SERVES	MANUFACTURER	MODEL #	FAN				MOTOR					MAX. SONES	ROOF CURB HEIGHT (IN)	NOTES
					TYPE	CFM	EXTERNAL SP (IN WG)	RPM	TYPE	HP	AMPS	V	PH			
EF#1A	CEILING	BATHROOM EXHAUST	BROAN	L300	CEILING	250	0.50	#NAME?	DIRECT	–	2.6	115	1	5	–	1
EF#1B	CEILING	BATHROOM EXHAUST	BROAN	L300	CEILING	250	0.50	#NAME?	DIRECT	–	2.6	115	1	5	–	1
EF#1C	CEILING	UTILITY ROOM EXHAUST	BROAN	L300	CEILING	200	0.50	#NAME?	DIRECT	–	2.6	115	1	5	–	1
EF#2	ROOF	KITCHEN HOOD	CAPTIVEAIRE	DU200HFA	ROOF	2,950	–	–	–	–	–	–	–	–	–	2
EF#3	TRUSS	CART SHED	GREENHECK	SQ-100-VG	INLINE	800	0.50	1,357	DIRECT	1/4	3.7	115	1	7.1	–	3
EF#4	ROOF	DISHWASHER HOOD	CAPTIVEAIRE	DU30HFA	ROOF	600	–	–	–	–	–	–	–	–	–	2

MECHANICAL NOTES:
1. PROVIDE WITH BACKDRAFT DAMPER, CEILING GRILLE, VOLUME SPEED CONTROL SWITCH. SPEED CONTROL SWITCH TO BE MOUNTED HIGH IN UTILITY ROOM FOR BALANCING.
2. FAN, CURB AND ACCESSORIES PROVIDE BY FOOD SERVICE CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR. SEE FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION.
3. PROVIDE GRAVITY DAMPER, DISCONNECT SWITCH, MOTOR MOUNTED SPEED CONTROLLER.

LOUVER SCHEDULE

MARK	MANUFACTURER	QUANTITY	MODEL	MAX PD (IN WG)	FREE AREA	CFM	FINISH	SIZE			MECH NOTES
								W	H	D	
L#1	POTTORFF	1	EFD-445	0.10	1.7	1000	NOTE 1	24	24	4	1
L#2	POTTORFF	2	EFD-445	0.10	0.80	800.00	NOTE 1	18	18	4	1
L#3	POTTORFF	4	EFD-445	0.10	0.50	200.00	NOTE 1	12	18	4	1

MECHANICAL NOTES:
1. PROVIDE COLOR FROM STANDARD COLOR CHART. COLOR TO BE SELECTED IN SHOP DRAWINGS BY ARCHITECT.

MAKE UP AIR UNIT – GAS FIRED

UNIT	LOCATION	MANUFACTURER	MODEL	TYPE	FAN DATA					HEATER DATA						FILTERS	ELECTRICAL DATA				OPERATING WEIGHT (LBS)	NOTES
					AIRFLOW (CFM)	ESP (IN WG)	TOTAL SP (IN WG)	POWER (BHP)	MOTOR (HP)	EAT (°F)	LAT (°F)	INPUT (MBH)	OUTPUT (MBH)	STAGES	THERMAL EFFICIENCY (%)		VOLT	PH	MCA	MCOP		
MAU-1	ROOF	CAPTIVE AIRE	A2-D.500-20D	GAS FIRED	2,950							417	383									1

NOTES:
1. MAKE-UP AIR UNIT, CURB, CONTROLS AND ACCESSORIES PROVIDED BY FOOD SERVICE CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR. SEE FOOD SERVICE PLANS FOR ADDITIONAL INFORMATION.

DIFFUSER, REGISTER & GRILLE SCHEDULE

MARK	MANUFACTURER	LOCATION/ TYPE	AIR	TYPE	MODEL	SIZE (IN)	DAMPER	MAX STATIC P.D. (IN WG)	MAX NC	FINISH	MECH NOTES
A	TITUS	SURFACE	SUPPLY	GRILLE	272RL	14x6	OBD	0.1	30	WHITE	
B	TITUS	SURFACE	SUPPLY	GRILLE	272RL	18x6	OBD	0.1	30	WHITE	
C	TITUS	SURFACE	SUPPLY	GRILLE	272RL	8x8	N	0.1	30	WHITE	1
D	TITUS	LAY-IN	SUPPLY	DIFFUSER	PAS	24x24x8"	N	0.1	30	WHITE	
E	TITUS	SURFACE	RETURN	GRILLE	50F	12x24	N	0.1	30	WHITE	
F	TITUS	LAY-IN	RETURN	GRILLE	50F	12x24	N	0.1	30	WHITE	
G	TITUS	SURFACE	RETURN	GRILLE	50F	10x10	N	0.1	30	WHITE	1

MECHANICAL NOTES:
1. PROVIDE TRIM MOUNTING FRAME FOR INSTALLATION IN GYP CEILINGS.

INTERCEPTOR SCHEDULE

UNIT	DESCRIPTION	MANUFACTUER	MODEL	ACCESSORIES	NOTES
GI-1	INTERIOR INTERCEPTOR	SCHIER	GB-75	4" INLETM 4" OUTLET	ALL

NOTES:
1. GREASE INTERCEPTOR IS SIZED FOR CITY SEWER APPLICATIONS ONLY. DO NOT USE FOR SEPTIC FIELDS.
2. PROVIDE RISER(S) AS REQUIRED, TO ALLOW FOR PROPER INVERT.
3. PROVIDE RISER, STANDARD COLLAR, AND ANCHOR KIT.
4. PROVIDE A 15-MINUTE MANOMETER TEST AT 1-INCH OF WATER COLUMN PER SECTION 712.5 MSPC.
5. THE INTERCEPTOR MUST BE MAINTAINED IN EFFICIENT OPERATING CONDITION.

WATER HEATER – GAS FIRED SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL #	TANK CAPACITY (GAL)	RECOVERY (GAL/HR)	TEMP RISE (°F)	LWT (°F)	INPUT (MBH)	VENT & COMB AIR (IN)	ELECTRICAL		MECH NOTES
										AMPS	V/PH	
WH#1	110	PVI	40L 130A-GCL	130	450	80	120	399	4"	11	120/1	1,2

MECHANICAL NOTES:
1. VERIFY VENT & COMBUSTION PVC PIPE SIZE WITH MANUFACTURER, AND INSTALL PER MANUFACTURERS INSTRUCTIONS.
2. PROVIDE AMTROL ST-25 POTABLE WATER EXPANSION TANK.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	LOCAL CONNECTIONS				HEIGHT	MECH NOTES
		WASTE	VENT	C.W.	H.W.		
L1	LAVATORY/UNDER MOUNT SINK/SENSOR FAUCET/ADA	1-1/4"	1-1/4"	1/2"	1/2"	CTR	1,2
WC1	WATER CLOSET/WALL/SENSOR FLUSH VALVE/ADA	4"	2"	1-1/4"	–	17"	
WC2	WATER CLOSET/WALL/SENSOR FLUSH VALVE	4"	2"	1-1/4"	–	15"	
MS1	MOP SINK/FLOOR	2"	1-1/2"	1/2"	1/2"	FLR	3
UR1	URINAL/WALL/SENSOR FLUSH VALVE/ADA	4"	2"	1-1/4"	–	17"	
UR2	URINAL/WALL/SENSOR FLUSH VALVE	4"	2"	1-1/4"	–	24"	
EWC1	ELECTRIC WATER COOLER/DUAL HEIGHT/BOTTLE FILLER	1-1/2"	1-1/2"	1/2"	–	MFR	

MECHANICAL NOTES:
1. TRAP AND SUPPLY WRAP
2. COUNTER BY OTHERS – COORDINATE CLEARANCE SIZE AND ROUGH-IN ELEVATION
3. 4ft. HOSE AND MOP RACK

PLUMBING PUMP SCHEDULE

MARK	LOCATION	SERVICE	MANUFACTURER	MODEL #	PUMP TYPE	GPM	PUMP HEAD (FT WG)	MOTOR DATA					MECH NOTES
								HP	V	PH	FLA	RPM	
PP#1	110	HOT WATER RECIRC	BELL & GOSSETT	NBF-22	INLINE	1	10	---	120	1	0.8	2940	1

MECHANICAL NOTES:
1. ALL BRONZE CONSTRUCTION.

Comm. No.
4071.0000

ISSUE DATE
06/06/2017 – DD ESTIMATING SET
07/10/2017 – BID SET

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
www.epinc.com

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Mechanical Schedules

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota.
By:
Title: Engineer Date: 07/10/2017
Registration Number: 40918

Drawing No.
m4.0

HAGEN, CHRISTENSEN & McILWAIN ARCHITECTS
4201 CEDAR AVENUE SO • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7866

GENERAL NOTES

GENERAL

1. IN MECHANICAL EQUIPMENT ROOMS, CONDUIT FOR LIGHTING FIXTURES MAY BE RUN EXPOSED.
2. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES AND DEVICES.
3. INTERRUPTING RATINGS NOTED IN SCHEDULES SHALL APPLY TO ENTIRE PANELBOARD AND/OR SWITCHBOARD. ALL EQUIPMENT COMPRISING PANELS AND/OR SWITCHBOARDS SHALL BE FULLY RATED FOR SHORT CIRCUIT CURRENT NOTED.
4. LETTER THUS: "A" – INDICATES TYPE OF LIGHTING FIXTURES. REFER TO LIGHTING FIXTURE TYPES AS NOTED ON THE LIGHTING FIXTURE SCHEDULE.
5. PROVIDE ENGRAVED NAMEPLATES ON SWITCHBOARDS, PANELBOARDS,DISCONNECT SWITCHES, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC., INDICATING EQUIPMENT DESIGNATION (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE.
6. DATA TELEPHONE AND TELEVISION CONDUIT SHALL BE MINIMUM ¾ INCH UNLESS OTHERWISE NOTED ON DRAWINGS.
7. MOUNT MANUAL FIRE ALARM STATIONS AT 42"ON THE HORIZONTAL CENTER LINE OF THE ADJACENT SWITCH.
8. WHERE OTHER ELECTRICAL DEVICES ARE LOCATED ADJACENT TO LIGHT SWITCHES, MOUNT ALL DEVICES AT THE SAME CENTER LINE ELEVATION.
9. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
10. FINAL CONNECTIONS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS , AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
11. ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A PULLWIRE OR EQUAL AND SHALL BE INDENTIFIED AT ALL JUNCTION, PULL, AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
12. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER RESERVES THE RIGHT TO APPROVE METHODS AND MATERIALS NOT REFLECTED HEREIN.
13. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
14. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE OF MINNESOTA, AND NATIONAL CODES AND ORDINANCES.
15. PROVIDE PERMITS AND INSPECTIONS REQUIRED.
16. GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
17. VERIFY THAT EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
18. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING OR FACTORY WIRING IN EQUIPMENT PROVIDED BY THIS CONTRACTOR.
20. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS.
21. SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC. SHALL BE CONNECTED AND OPERABLE.
22. VERIFY EXACT LOCATIONS OF NEW UNDERGROUND UTILITIES, PIPING, AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC. REQUIRED. BACKFILL TRENCHES TO AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
23. PANEL DIRECTORIES SHALL BE REMOVABLE. SUBMIT PROPOSED SCHEDULE OF DIRECTORIES TO OWNER FOR APPROVAL. ROOM NAMES AND NUMBERS SHALL BE AS DIRECTED BY OWNER. DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
24. PROVIDE SELF ADHESIVE IDENTIFICATION INSIDE COVER OF EACH FUSABLE SWITCH, INDICATING SIZE AND TYPE OF FUSES PROVIDED.
25. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH PVC JACKET OR PROVIDED EQUAL PROTECTION. EMT FITTINGS SHALL BE MALLEABLE IRON OR STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE.
26. ALL BRANCH CIRCUIT AND FEEDER CONDUITS SHALL HAVE A CODE SIZED COPPER GROUNDING CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.
27. FIRE ALARM, SOUND, TELEPHONE, COMPUTER, AND SIMILAR SYSTEMS CONDUITS LARGER THAT 1" SHALL HAVE LONG RADIUS SWEEPS (12 TIMES THE DIAMETER).
28. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS, AND OTHER VIBRATING EQUIPMENT SHALL BE WITH LIQUIDTIGHT FLEX METAL CONDUIT AND FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS, OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
29. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY UL OR OTHER RECOGNIZED TESTING FACILITY.
30. ALL BRANCH CIRCUIT CONDUCTORS RATED 120 VOLTS TO GROUND SHALL BE INSTALLED TO A MINIMUM OF 100LF INSTALLED LENGTH FOR A #12 CONDUCTOR.
31. WHERE THE NEUTRAL CONDUCTOR IS SHARED BETWEEN (2) OR (3) CIRCUITS (MULTIWIRE BRANCH CIRCUIT), IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE HANDLE TIES AS REQUIRED TO COMPLY WITH NEC 210.

LIGHTING

1. FIXTURES INDICATED AS BEING ON EMERGENCY OR NIGHT LIGHT CIRCUITS SHALL BE PROVIDED WITH SELF-CONTAINED BATTERY POWERED INVERTER UNIT FOR DIRECT MOUNTING IN FIXTURE. PROVIDE UNIT WITH FULLY AUTOMATIC TWO RATE CHARGER, NICKEL CADMIUM BATTERY, AC "ON" PILOT LIGHT, AND TEST SWITCH. DESIGN AND WIRE UNIT TO AUTOMATICALLY TRANSFER TO BATTERY SUPPLY UPON LOSS OF NORMAL AC POWER AND TO OPERATE LINEAR FLUORESCENT LAMP WITH MINIMUM OUTPUT OF 1000 LUMENS FOR MINIMUM 1-1/2 HOURS.
2. RECESSED LIGHT FIXTURES INSTALLED IN GYP BOARD OR PLASTER CEILINGS SHALL HAVE PLASTER FRAMES INSTALLED PRIOR TO CEILING MATERIAL.
3. RECESSED FIXTURES INSTALLED INDOORS SHALL BE THERMALLY PROTECTED.
4. VERIFY TYPE OF CEILING CONSTRUCTION FOR PROPER MOUNTING OF ALL RECESSED LIGHT FIXTURES. INSTALLATION OF LIGHT FIXTURES SHALL COMPLY WITH ALL INTERNATIONAL BUILDING CODE REQUIREMENTS.
5. FIXTURES INSTALLED IN "LIGHT-DUTY CEILING SYSTEMS" SHALL HAVE SEPARATE SUPPORTING MEMBERS. FIXTURES INSTALLED IN "INTERMEDIATE-DUTY AND HEAVY-DUTY CEILING SYSTEMS" SHALL HAVE SEPARATE SUPPORTING MEMBERS WHEN THE WEIGHT OF THE FIXTURES EXCEEDS THE DEFLECTION AND ROTATION REQUIREMENTS OF ASTM C636 2.7.2.3 & 4.

MOTORS

1. VERIFY LOCATION OF ALL MOTORS AND EQUIPMENT BEFORE ROUGH-IN. SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AND CONNECT EQUIPMENT AS REQUIRED.

FIRE ALARM

1. FIRE ALARM SYSTEM. CONTRACTOR SHALL PROVIDE DEVICES, CONDUIT, WIRES, AND CABLE AS DIRECTED BY EQUIPMENT MANUFACTURER. MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL MEET PREVAILING CODES. THE SYSTEM SHALL BE COMPLETE AND OPERABLE IN EVERY RESPECT.

COMMUNICATIONS

1. BOXES FOR TELEPHONE, TV, DATA, WIRING DEVICES, ETC. SHALL BE MINIMUM TWO GANG WITH SINGLE GANG MUD RING.
2. SOUND SYSTEM. CONTRACTOR SHALL PROVIDE ALL CONDUIT, J-BOXES FOR SOUND SYSTEM COMPLETE RACEWAY SYSTEM. CONDUIT SHALL BE A MINIMUM OF ¾" UNLESS NOTED. SOUND SYSTEM CONTRACTOR SHALL FURNISH AND INSTALL SPEAKER WIRE, VOLUME CONTROLS, MICROPHONES, AMPLIFIERS, SPLITTERS, ETC.
3. SECURITY SYSTEM. CONTRACTOR SHALL PROVIDE ALL CONDUIT, AND J-BOXES (MINIMUM TWO-GANG) FOR A COMPLETE RACEWAY SYSTEM. CONDUIT SHALL BE A MINIMUM OF ¾" UNLESS NOTED. SECURITY SYSTEM CONTRACTOR SHALL INSTALL SECURITY PANELS, CAMERAS, WIRE, SECURITY DEVICES, ETC.

ELECTRICAL SYMBOLS SCHEDULE

LIGHTING

SYMBOL	DESCRIPTION	MTG HT
	FLUORESCENT FIXTURE RECESSED MOUNTED	CEILING
	FLUORESCENT FIXTURE SURFACE MOUNTED	CEILING
	STRIP TYPE FLUORESCENT FIXTURE	
	STRIP TYPE FLUORESCENT FIXTURE	
	WALL MOUNTED STRIP TYPE FLUORESCENT FIXTURE	WALL
	ROUND DOWN LIGHT TYPE LIGHT FIXTURE	CEILING
	WALL MOUNT FIXTURE	WALL
	PENDANT TYPE LIGHT FIXTURE	
	HIGHBAY TYPE LIGHT FIXTURE	
	TRACK LIGHTING WITH HEADS SPACED AS INDICATED	
	EXIT LIGHT FACE/DIRECTIONAL ARROWS AS INDICATED	WALL
	EXIT LIGHT FACE/DIRECTIONAL ARROWS AS INDICATED	CEILING
	EXIT LIGHT WITH EMERGENCY HEADS DIRECTION ARROWS AS INDICATED	WALL
	EXIT LIGHT WITH EMERGENCY HEADS DIRECTION ARROWS AS INDICATED	CEILING
	LIGHT FIXTURE ON EMERGENCY CIRCUIT	CEILING
	SELF CONTAINED EMERGENCY LIGHT UNIT	
	DOWNLIGHT ON EMERGENCY CIRCUIT	
	EXTERIOR POLE MOUNTED LIGHT FIXTURE	GRADE
	EXTERIOR BOLLARD TYPE LIGHT FIXTURE	GRADE

LIGHTING CONTROL

SYMBOL	DESCRIPTION	MTG HT
	SINGLE POLE SWITCH – LETTER INDICATES SWITCH LEG	46"
	DOUBLE POLE, 3-WAY AND 4-WAY SWITCHES	46"
	EXPLOSION PROOF SWITCH	46"
	EMERGENCY SWITCH	46"
	LOW VOLTAGE SWITCH	46"
	PILOT LIGHT SWITCH	46"
	KEY OPERATED SWITCH	46"
	LIGHTED TOGGLE SWITCH	46"
	MOMENTARY CONTACT SWITCH	46"
	DIMMER – LETTER DENOTES TYPE – SEE SPECIFICATIONS	46"
	LINE VOLTAGE RELAY	
	LOW VOLTAGE RELAY	
	TIME SWITCH AS NOTED OR SPECIFIED	
	CONTACTOR PROVIDE # OF POLES AS NOTED	
	OCCUPANCY SENSOR "X" DENOTES TYPE – SEE SPECIFICATIONS	CEILING
	OCCUPANCY SENSOR WALL SWITCH BOX MOUNTED	46"
	PHOTOSENSOR	
	EMERGENCY BYPASS RELAY REFER TO ES.0	
	DAYLIGHT SENSOR	CEILING

POWER

SYMBOL	DESCRIPTION	MTG HT
WP SS CP GFCI	DUPLEX RECEPTACLE WP INDICATES WEATHER-RESISTANT RECEPT W/ CAST ALUMINUM NEMA-3R IN-USE COVER SS INDICATES STAINLESS STEEL FACEPLATE CP INDICATES CHILDPROOF RECEPTACLE GFCI INDICATES GROUND FAULT CIRCUIT INTERRUPTER	18"
	FOURPLEX RECEPTACLE	18"
	SIMPLEX RECEPTACLE	18"
	CEILING MOUNT DUPLEX RECEPTACLE	
	LOWER HALF OF DUPLEX RECEPTACLE TO BE SWITCHED	18"
	ENTIRE DUPLEX RECEPTACLE SHALL BE SWITCHED	18"
	DUPLEX RECEPTACLE SHALL BE MOUNTED HORIZONTALLY	18"
	SPECIAL PURPOSE RECEPTACLE TYPE AS NOTED	18"
	SPECIAL PURPOSE RECEPTACLE TYPE AS NOTED	CEILING
	RECESSED JUNCTION BOX WITH FLEX CONNECTION	CEILING
	RECESSED JUNCTION BOX	CEILING
	SURFACE MOUNTED JUNCTION BOX	CEILING
	RECESSED JUNCTION BOX	WALL
	SURFACE MOUNTED JUNCTION BOX	WALL
	FLOOR BOX WITH DEVICES INDICATED	FLOOR
	PULLBOX SIZE AS REQUIRED OR NOTED	

POWER DISTRIBUTION

SYMBOL	DESCRIPTION	MTG HT
	GROUND	
M	METER	
	MANHOLE	
	HANDHOLE	
	PANELBOARD	
	DISTRIBUTION PANELBOARD SURFACE MOUNTED	WALL OR FLOOR
	SWITCHBOARD SURFACE MOUNTED	WALL OR FLOOR
CT	CT CABINET	
T	UTILITY CO. TRANSFORMER	GRADE
T	TRANSFORMER	

FIRE ALARM

SYMBOL	DESCRIPTION	MTG HT
FACP	FIRE ALARM CONTROL PANEL	
FAA	FIRE ALARM ANNUNCIATOR PANEL	
	MAGNETIC DOOR HOLD OPEN	
	FIRE ALARM BELL	
	FIRE ALARM HORN	80"
	FIRE ALARM SPEAKER	80"
	FIRE ALARM STROBE	80"
	FIRE ALARM HORN/STROBE	80"
	FIRE ALARM SPEAKER/STROBE	80"
	FIRE ALARM CEILING HORN	CEILING
	FIRE ALARM CEILING SPEAKER	CEILING
	FIRE ALARM CEILING STROBE	CEILING
	FIRE ALARM CEILING HORN/STROBE	CEILING
	FIRE ALARM CEILING SPEAKER/STROBE	CEILING
	FIRE/SMOKE DAMPER	
	FIRE ALARM ADDRESSABLE MODULE	
	FIRE ALARM PULL STATION	42"
	FIRE ALARM SMOKE DETECTOR – PHOTOELECTRIC	CEILING
	FIRE ALARM SMOKE DETECTOR – IONIZATION	CEILING
	FIRE ALARM DUCT DECTECTOR	
135 200 250 OR	FIRE ALARM HEAT DETECTOR 135 INDICATES 135 F.D. HEAT DETECTOR 200 INDICATES 200 F.D. HEAT DETECTOR 250 INDICATES 250 F.D. HEAT DETECTOR OR INDICATES 200 ROR HEAT DETECTOR	CEILING
	FIRE ALARM BEAM DETECTOR – TRANSMITTER	
	FIRE ALARM BEAM DETECTOR – RECEIVER	
	FIRE SPRINKLER TAMPER SWITCH	
	FIRE SPRINKLER POST INDICATOR VALVE (PIV)	
	FIREFIGHTER TELEPHONE	
	FIRE ALARM FLOW SWITCH	

MOTORS

SYMBOL	DESCRIPTION	MTG HT
	PUSHBUTTON – SINGLE	
	PUSHBUTTON – DOUBLE	
	PUSHBUTTON – TRIPLE	
	TOGGLE SWITCH – MOTOR RATED	
	SWITCH / FUSE ASSEMBLY	
	SWITCH / THERMAL OVERLOAD	
	THERMOSTAT	60"
	COMBO MOTOR STARTER/DISCONNECT SWITCH	
	MAGNETIC CONTACT	
	MOTOR	
X.X FT	MOTOR WITH ELECTRICAL CONNECTION; REFER TO MOTOR SCHEDULE (MECHANICAL EQUIPMENT CROSS REFERENCE)	
	NON-FUSED DISCONNECT SWITCH	
	FUSED DISCONNECT SWITCH	
	MOTOR STARTER	
	HAND/HAIR DRYER CONNECTION	VERIFY
	MUSHROOM HEAD PUSHBUTTON	
	FAN FORCED HEATER	
	BASEBOARD HEATER	
	EQUIPMENT CONNECTION	
	HEAT TAPE	

CABLING

SYMBOL	DESCRIPTION	MTG HT
	CONDUIT RUN EXPOSED	
	CONDUIT RUN IN OR BELOW FLOOR, OR UNDERGROUND (UG)	
	WIRE COUNTS SHOWN WHEN MORE THAN 2 IN CONDUIT (NOT INCLUDING GROUND)	
	HOME RUN TO PANELBOARD	
	CONDUIT SLEEVE	
	CONDUIT STUB	
D	DATA	
F	FIRE	
I	INTERCOM	
S	SOUND	
T	TELEPHONE	
CCTV	CUSTOM	

TEMPERATURE CONTROLS

SYMBOL	DESCRIPTION	MTG HT
	TEMPERATURE CONTROL WALL MOUNT SENSOR	44"
	TEMPERATURE CONTROL CEILING SENSOR	
	TEMPERATURE CONTROL HEAD END EQUIPMENT	

SECURITY

SYMBOL	DESCRIPTION	MTG HT
	SECURITY ALARM PUSHBUTTON (DURESS BUTTON)	
	SECURITY CARD READER (PROXIMITY READER)	
	SECURITY ELECTRIC STRIKE	
	SECURITY ELECTRIC LATCH	
	SECURITY MAGNETIC CONTACT	
	REQUEST TO EXIT	
	CALL BUTTON	
	FACILITY INTERCOM	
	HANDS FREE INTERCOM	
	INTRUSION DETECTOR – CEILING MOUNTED	
	INTRUSION DETECTOR – WALL MOUNTED	
	INTRUSION RECEIVER	
	INTRUSION TRANSMITTER	
	SECURITY MOTION DETECTOR – CEILING MOUNTED	
	SECURITY MOTION DETECTOR – WALL MOUNTED	
	INDICATOR LIGHT – CEILING MOUNTED	
	INDICATOR LIGHT – WALL MOUNTED	
	LASER BEAM RECEIVER	
	LASER BEAM TRANSMITTER	
	PAGING HORN	
	SECURITY SOUND DETECTOR ALARM	
	SECURITY GLASS BREAK DETECTOR	
	SECURITY KEYPAD	
	VEHICLE DETECTION LOOP	IN SLAB
	CCTV VIDEO CAMERA – CEILING MOUNTED	
	CCTV VIDEO CAMERA – WALL MOUNTED	
	VIDEO MONITOR	
	VISITOR INTERCOM	

COMMUNICATIONS

SYMBOL	DESCRIPTION	MTG HT
	TELEPHONE	18"
	TELEPHONE – WALL HUNG	
	TELEPHONE – CABINET SIZE AS INDICATED	
	COMMUNICATIONS BOARD SIZE AS INDICATED	
	DATA OUTLET	
	WIRELESS ACCESS POINT – ROUGH IN ONLY	
	COMBINATION PHONE/DATA OUTLET	
	WALL MOUNTED CLOCK	
	DOUBLE FACE CLOCK	
	MASTER CLOCK	
	CLOCK OUTLET	
	HANDSET	
	CALL STATION	
	WALL MOUNTED HORN	
	WALL MOUNTED HORN – DOUBLE SIDED	
	SPEAKER – WALL MOUNTED	
	SPEAKER – CEILING MOUNTED	
	VOLUME CONTROL	
	MICROPHONE OUTLET – WALL MOUNTED	
	MICROPHONE OUTLET – FLOOR MOUNTED	
	BUZZER	
	BELL	
	CHIME	
	AUDIO/VISUAL OUTLET 4SQ BOX WITH BLANK PLATE – WALL MOUNT	
	AUDIO/VISUAL OUTLET 4SQ BOX WITH BLANK PLATE – CEILING MOUNT	

NOTES:
1. THESE SYMBOLS COMPRISE A STANDARD LIST; ALL SYMBOLS MAY NOT APPEAR ON THIS PROJECT.
2. MOUNTING HEIGHTS SHOWN ARE STANDARD AND SHALL BE USED UNLESS INDICATED OTHERWISE. MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE, UNLESS INDICATED OTHERWISE.

ELECTRICAL SHEET INDEX

e0.0	ELECTRICAL TITLE SHEET
e0.1	ELECTRICAL SITE PLAN
e1.0	LIGHTING PLAN
e2.0	POWER & SIGNAL PLAN
e2.1	ENLARGED KITCHEN ELECTRICAL PLAN
e2.2	POWER & SIGNAL PLAN
e3.0	SINGLE LINE DIAGRAM & SCHEDULES
e4.0	ELECTRICAL SCHEDULES
e5.0	WATTSTOPPER ELECTRICAL DETAILS

Comm. No.
4071.0000

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Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
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Project
Cedarholm Community Building

Title
Electrical Title Sheet

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By:

Title: Engineer Date: 07/10/2017

Registration Number: 40887

Drawing No.
e0.0

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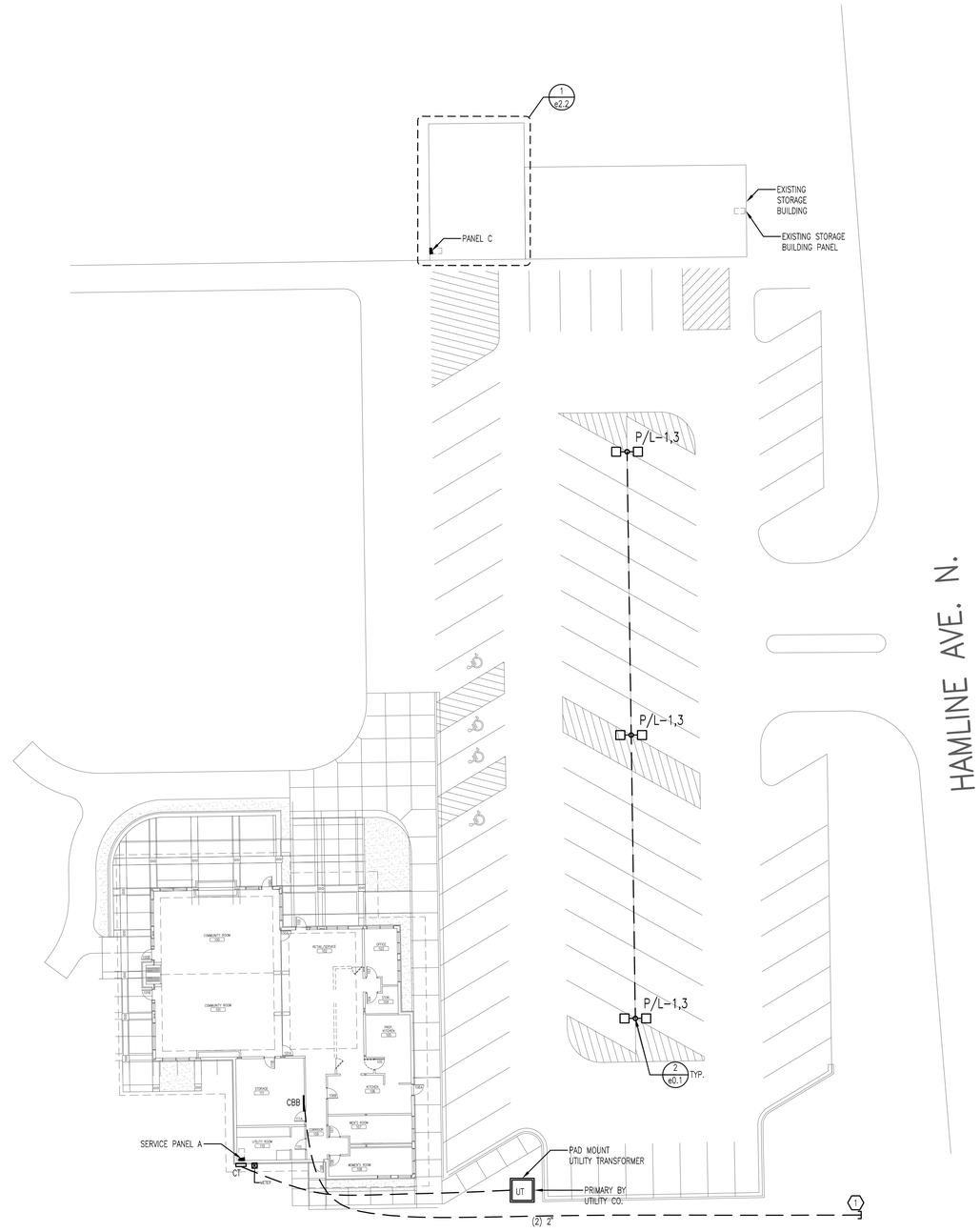


1 ELECTRICAL SITE PLAN

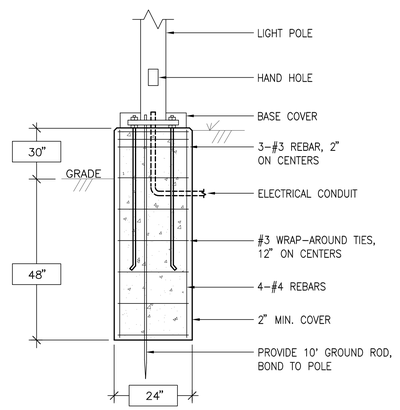
SCALE:1" = 20'-0"

GENERAL NOTES

A. PROVIDE 1" C-2 #10 & #10 GND. FOR POLE LIGHTING CIRCUIT.

KEY NOTES

1. STUB, CAP, AND MARK AT PROPERTY LINE COORDINATE EXACT LOCATION IN FIELD WITH UTILITY CO.



2 POLE BASE DETAIL

NO SCALE

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SRF Consulting Group, Inc.

Structural Engineer
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Minneapolis, MN 55401
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612-827-0805 fax

Mechanical and Electrical Engineers
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(952) 930-0050
www.epinc.com

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TEL (612)904-1932 • FAX (612)904-7966

1 LIGHTING PLAN

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

GENERAL NOTES

A. CIRCUIT ALL LIGHTING TO PANEL L UNLESS INDICATED OTHERWISE.

B. LIGHTING CONTROLS SHOWN ARE BASED UP WATTSTOPPER. OTHER MANUFACTURERS SHALL BE SUBMITTED FOR PRIOR APPROVAL.

KEY NOTES

1. MOUNT PHOTOSENSOR UNDER SOFFIT. ADJUST FOR AMBIENT LIGHT.
2. POWER SUPPLIES FOR TYPE 'M1' TAPE LIGHT COVE LIGHTING. MOUNT POWER SUPPLIES IN NEMA 1 ENCLOSURE HIGH ON WALL. PROVIDE 1 POWER SUPPLY PER RUN.
3. CHAIN HANG FIXTURES AS HIGH AS POSSIBLE. COORDINATE EXACT LOCATION WITH MECHANICAL & PLUMBING ITEMS.
4. LCP OVERRIDE SWITCH. SEE 2/E3.0.
5. 5 SCENE ROOM CONTROLLER. SET UP TO CONTROL EITHER ROOM OR BOTH ROOMS COMBINED.
6. PROVIDE IC RATING OPTION FOR THIS FIXTURE.

LIGHTING CONTROL KEY

(BASED ON WATTSTOPPER)

SYMBOL	DESCRIPTION
OS	OCCUPANCY SENSOR DUAL TECH, CEILING, 24V
OSP	OCCUPANCY SENSOR PIR, CEILING, 24V
OSWC	OCCUPANCY SENSOR PIR, WALL, 120V
D	DIGITAL WALL DIMMER
5B	5 BUTTON SCENE SWITCH ROOM CONTROLLER
PS	SINGLE ZONE CLOSED LOOP PHOTOSENSOR
DSM	DIGITAL NETWORK SEGMENT MANAGER

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Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas
consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
www.epinc.com

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Lighting Plan

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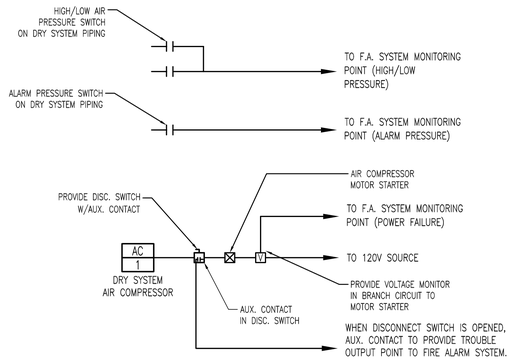
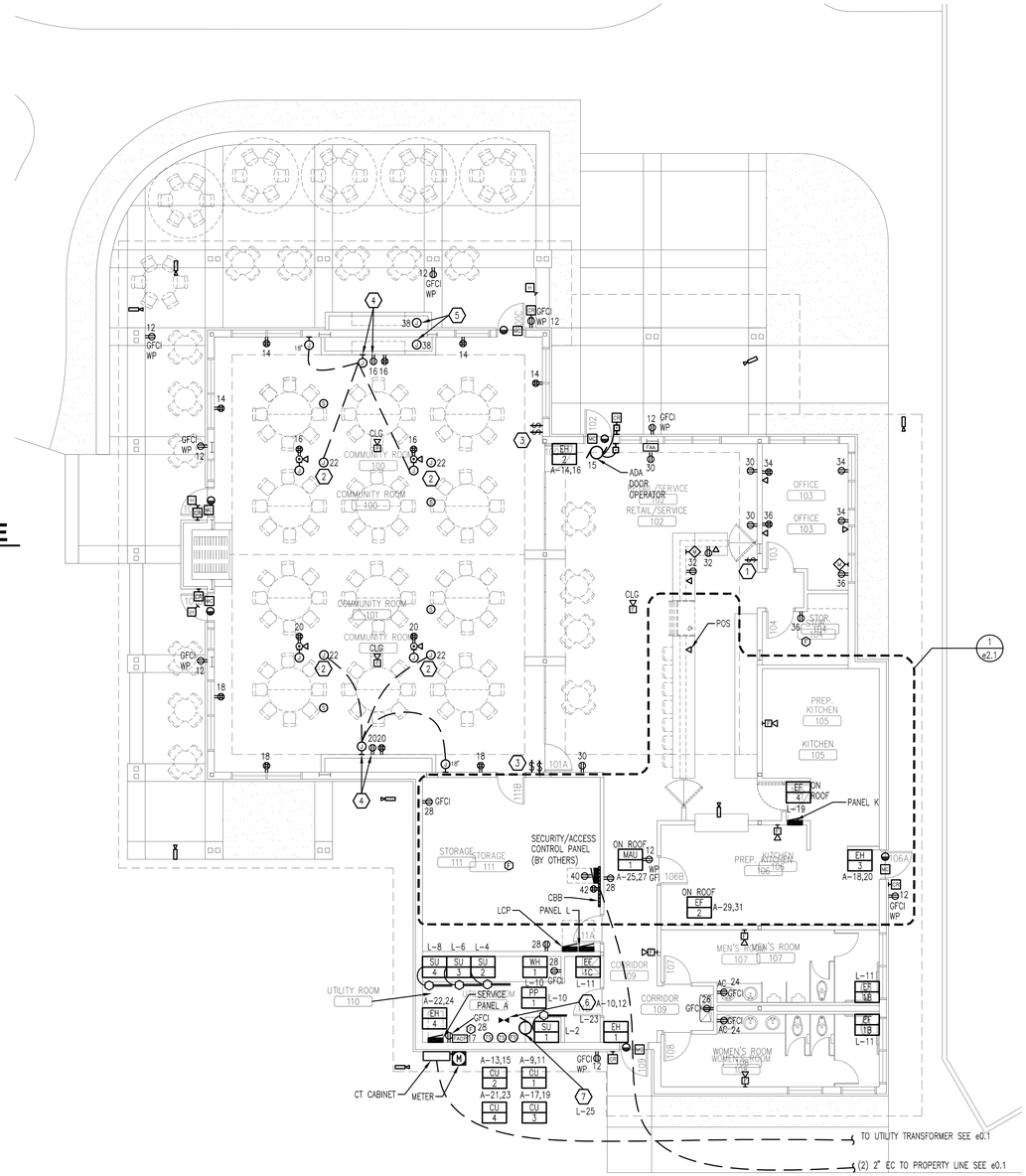
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7866



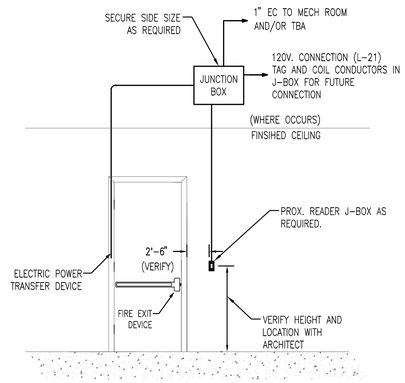
3 FIRE SPRINKLER DRY SYSTEM CONNECTION SCHEME

NOT TO SCALE



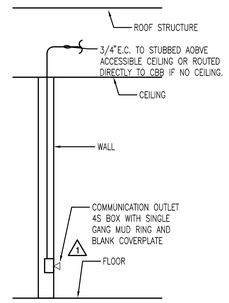
1 POWER & SIGNAL PLAN

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



2 DOOR SECURITY DETAIL

NO SCALE



4 TYPICAL COMMUNICATION ROUGH-IN

NO SCALE

GENERAL NOTES

A. ACCESS CONTROL, P.A., SECURITY, AND CCTV SHALL BE ROUGH-INS ONLY. EQUIPMENT, WIRING, AND INSTALLATION SHALL BE BY OTHERS.

KEY NOTES

1. SWITCH FOR GAS FIREPLACE ON/OFF.
2. PROVIDE MINKA AIRE #F524-ORB 52" FAN OR APPROVED EQUAL. FAN TO BE PROVIDED WITH WALL CONTROL #WC105.
3. INSTALL AND CONNECT PADDLE FAN CONTROL SWITCH FURNISHED WITH FAN.
4. MOUNT J-BOX AND RECEPTACLE AS DIRECTED BY ARCHITECT. PROVIDE (3) 1 ¼" CONDUITS TO BOXES AS SHOWN FOR A/V CABLES.
5. CONNECT TO GAS FIREPLACE AS REQUIRED. PROVIDE ON/OFF SWITCH FOR FIREPLACE. SEE NOTE 1.
6. CONNECT TO FIRE WATER SERVICE SOLENOID VALVE. INTERLOCK W/F.A. SYSTEM SO SOLENOID CLOSES UPON SPRINKLER WATER FLOW.
7. CONNECT TO DRY SPRINKLER SYSTEM AIR COMPRESSOR AS REQUIRED. SEE 3/e2.0 FOR ADDITIONAL REQUIREMENTS.

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Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
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emanuelson-podas consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
www.epinc.com

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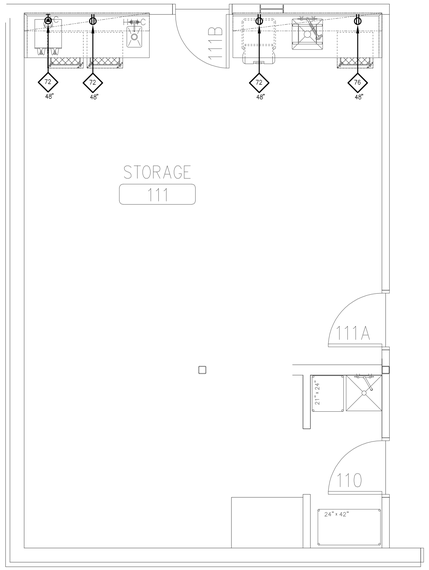
4201 CEDAR AVENUE SO - MINNEAPOLIS, MN 55407
TEL (612)904-1932 - FAX (612)904-7366

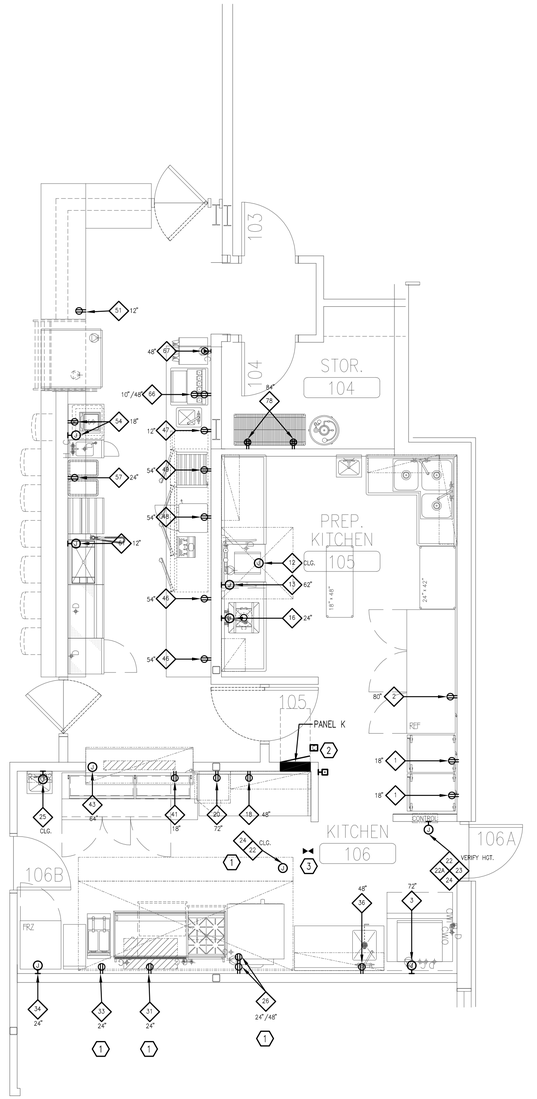
KITCHEN EQUIPMENT CONNECTION SCHEDULE

ITEM NUMBER	QTY	DESCRIPTION	VOLTS / PHASE	KW	AMPS	HP	CIRCUIT NUMBER	FEEDER PH-G-C	PLUG TYPE	NOTES
1	2	CABINET, HOLDING/PROOFING	120	–	16.7	–	K-1,3	12-12-1/2"	5-20P	– –
2	1	REFRIGERATOR, REACH-IN	120	–	6.5	–	K-5	12-12-1/2"	5-20P	– –
3	1	ICE MAKER W/ BIN	240	–	10.8	–	K-40,42	12-12-1/2"	DIRECT	– –
12	1	EXHAUST FAN (EF-4)	120	–	6.0	3/4	L-19	12-12-1/2"	DIRECT	VERIFY LOCATION WITH ARCHITECT; EC TO INTERCONNECT TO DISHMACHINE AS REQUIRED
13	1	WAREWASHER, DOOR-TYPE	240	–	83.6	–	A-33,35	2-6-1 1/4"	DIRECT	EC TO RUN TO UNIT AS REQ'D
16	1	DISPOSER, GARBAGE – 2HP	120/240	–	17.4	2	K-12,14	10-10-3/4"	DIRECT	PC RUN TO MANUAL-REVERSING SW
18	1	WORK TABLE	120	–	1.5	–	K-7	12-12-1/2"	5-20P	– –
20	1	OVEN, MICROWAVE	120	–	13.0	–	K-9	12-12-1/2"	5-20P	EC TO PROVIDE CONVENIENCE DR ABOVE COUNTER WHERE SHOWN
22	1	EXHAUST HOOD WITH MAKE-UP PLENUM	120	–	4.0	–	K-11	12-12-1/2"	DIRECT	FOR LIGHTS – MANUFACTURER'S SHOP DRAWINGS
22A	1	EXHAUST HOOD CONTROL PANEL	120	–	4.0	–	K-13	12-12-1/2"	DIRECT	EC TO WIRE FROM JB TO CONTROL (VFY. HEIGHT), MUA, EXHAUST FAN, FIRE SUPPRESSION, DUCT SENSOR & T-STAT AS REQ'D; SEE MANUFACTURER SHOP DRAWINGS
23	1	EXHAUST FAN (EF-2)	240	–	NOTE 1	–	A-29,31	NOTE 1	DIRECT	VERIFY LOCATION WITH ARCHITECT
24	1	MAKE UP AIR (MAU-1)	240	–	NOTE 1	–	A-25,27	NOTE 1	DIRECT	VERIFY LOCATION WITH ARCHITECT. SEE MOTOR SCHEDULE FOR CONDENSING UNITS.
25	1	FIRE PROTECTION SYSTEM – WET CHEMICAL TYPE	120	–	5.0	–	K-15	12-12-1/2"	5-20P	SEE FIRE NOTES, DETAIL & MANUFACTURER'S SHOP DRAWINGS
26	1	OVEN, CONVECTION, GAS – DOUBLE-DECK	2) 120	–	6.0 EA	1/3	K-17	12-12-1/2"	5-20P	6' CORD W/PLUG PROVIDED – ELECTRICAL PER SECTION, PROVIDE 2 DRS
31	1	REFRIGERATOR, SHORTY EQUIPMENT STAND	120	–	4.8	1/4	K-19	12-12-1/2"	5-20P	CORD W. PLUG PROVIDED
33	1	FRYER, DEEP FAT, GAS	120	–	3.0	–	K-21	12-12-1/2"	5-20P	EC TO PROVIDE CONV. DR IN CASE OWNER USES FILTER – FRYER REQUIRES NO ELEC.
34	1	FREEZER, REACH-IN	120	–	7.2	–	K-23	12-12-1/2"	5-20P	– –
36	1	WORKTABLE WITH SINK	120	–	1.5	–	K-25	12-12-1/2"	5-20P	EC TO PROVIDE CONVENIENCE DR ABOVE COUNTER WHERE SHOWN
41	1	REFRIGERATED PREP. TABLE – 91"	120	–	6.5	1/2	K-27	12-12-1/2"	5-20P	8' CORD W/PLUG PROVIDED
43	1	HEAT LAMP	120	–	9.2	–	K-29	12-12-1/2"	DIRECT	EC TO WIRE FROM JB TO CONTROL AS REQUIRED
46	1	BACK COUNTER	120	–	3.0	–	K-31	12-12-1/2"	5-20P	– –
47	1	BACK BAR COOLER/BEER DISPENSER	120	–	5.7	1/3	K-33	12-12-1/2"	5-20P	EC TO PROVIDE CONVENIENCE DR'S ABOVE COUNTER WHERE SHOWN
48	1	DISPLAY CASE, HEATED	120	–	11.6	–	K-35	12-12-1/2"	5-20P	6' CORD W/PLUG PROVIDED
49	1	HOT DOG GRILL	120	–	10.0	–	K-37	12-12-1/2"	5-20P	– –
51	1	COMBO NON-REFRIGERATED/REFRIGERATED SERVICE CASE	120	–	12.0	–	K-39	12-12-1/2"	5-20P	– –
54	1	POS MACHINE	120	–	3.0	–	K-41	12-12-1/2"	5-20P	EC TO PROVIDE SYSTEM SERVICES AS REQ'D
57	2	SLIM JIM	120	–	3.0	–	K-2	12-12-1/2"	5-20P	EC TO PROVIDE DR'S FOR CONVENIENCE & UNDERBAR LIGHTING WHERE SHOWN
61	1	SODA GUN	120	–	5.0	–	K-4	12-12-1/2"	DIRECT	FOR CARBONATOR AT BAR, IF REQ'D – VERIFY WITH OWNER'S VENDOR
66	1	SODA & ICE DISPENSER	120	–	3.0	–	K-6	12-12-1/2"	5-20P	PROVE SERVICE ABOVE & BELOW COUNTER – VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR
67	1	COFFEE BREWER	120/240	–	28.8	–	K-16,18	8-10-1"	VERIFY	REQUIRES 3-WIRE PLUS GROUND – VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR. PROVIDE RECEPTACLE TO MATCH CORD AND PLUG OF EQUIPMENT
72	1	BEVERAGE COUNTER	120	–	1.5	–	K-8	12-12-1/2"	5-20P	EC TO PROVIDE CONVENIENCE DR'S ABOVE COUNTER WHERE SHOWN
75	1	GLASS FILLER STATION	120	–	3.0	–	K-24	12-12-1/2"	5-20P	EC TO PROVIDE CONVENIENCE DR'S ABOVE COUNTER WHERE SHOWN
76	1	COFFEE BREWER	120/240	–	28.8	–	K-20,22	8-10-1"	VERIFY	REQUIRES 3-WIRE PLUS GROUND – VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR. PROVIDE RECEPTACLE TO MATCH CORD AND PLUG OF EQUIPMENT
78	1	SODA SYSTEM	2) 120	–	6.0	–	K-10	12-12-1/2"	5-20P	EC TO PROVIDE (2) QUAD-PLEX OUTLETS FOR CARBONATORS; VERIFY REQUIREMENTS W/OWNER'S VENDOR

GENERAL NOTES:
A. SEE FOODSERVICE ELECTRICAL PLANS FOR ROUGH-IN LOCATIONS AND ADDITIONAL INFORMATION.
B. ALL 120V 15A OR 20A RECEPTACLES IN THE KITCHEN AREAS SHALL BE GFCI PROTECTED PER NEC.

SPECIFIC NOTES:
1. SEE MOTOR SCHEDULE ON SHEET e4.1.





1 ENLARGE KITCHEN ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

A. PROVIDE ALL CUTTING AND PATCHING (INCLUDING FIRE STOPPING) OF FLOORS, WALLS OR CEILINGS REQUIRED FOR THE POWER AND SIGNAL SYSTEMS. MATCH ADJACENT SURFACES.

B. VERIFY MOUNTING HEIGHTS OF ALL RECEPTACLES PRIOR TO ROUGH-IN. REFER TO THE ARCHITECTURAL ELEVATIONS AND KITCHEN EQUIPMENT PLANS.

C. PROVIDE #10 AWG WIRING FOR ALL HOME RUNS IN EXCESS OF 75 FEET, UNLESS NOTED OTHERWISE.

D. PROVIDE GFI PROTECTED RECEPTACLES (PROTECTED BY GFI CIRCUIT BREAKERS ONLY) FOR ALL 120V, 15A AND 20A RECEPTACLES LOCATED IN THE KITCHEN/BAR/WITHIN 6' OF WATER AS REQUIRED BY THE NEC AND LOCAL AHJ.

E. VERIFY EXACT ROUGH-IN SIZES, LOCATIONS AND HEIGHTS WITH FSEC AND KITCHEN EQUIPMENT SHOP DRAWINGS PRIOR TO ANY ROUGH-IN WORK.

F. ALL KITCHEN EQUIPMENT IS FURNISHED BY OTHERS, UNLESS NOTED OTHERWISE.

G. PROVIDE ALL FINAL CONNECTIONS AND INTERCONNECTIONS TO KITCHEN EQUIPMENT, UNLESS NOTED OTHERWISE.

H. ALL HOLES NECESSARY TO BE MADE INTO KITCHEN EQUIPMENT FOR CONNECTION BY ELECTRICAL CONTRACTOR ARE PROVIDED BY FSEC, UNLESS NOTED OTHERWISE.

I. ALL RECEPTACLES, DEVICES, ETC. SHALL BE CIRCUITED TO PANEL K UNLESS NOTED OTHERWISE.

KEY NOTES

1. ROUTE CIRCUIT THROUGH CONTACTOR.
2. PROVIDE NEMA 1 ENCLOSED 30a, 4P, ELECTRICALLY HELD CONTACTOR WITH 120V CONTROL COIL. MOUNT ABOVE CEILING NEAR PANEL K. PROVIDE REMOTE RESET BUTTON ON WALL BELOW. INTERLOCK WITH HOOD CONTROL PANEL SO POWER IS SHUT DOWN UNDER HOOD WHEN HOOD FIRE SUPPRESSION SYSTEM IS ACTIVATED. COORDINATE WITH HOOD SUPPLIER.
3. CONNECT POWER TO 120V GAS SOLENOID VALVE. INTERLOCK WITH HOOD CONTROL PANEL SO VALVE CLOSES UPON HOOD FIRE SUPPRESSION SYSTEM ACTIVATION. VALVE SHALL BE THE MANUAL RESET TYPE. COORDINATE WITH KITCHEN EQUIPMENT CONTRACTOR.

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Project
Cedarholm Community Building
Title
Enlarged Kitchen Electrical Plan

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By:
Title: Engineer Date: 07/10/2017
Registration Number: 40887

Drawing No.
e2.1

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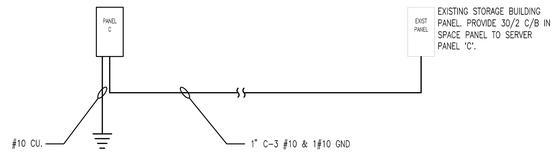
4201 CEDAR AVENUE SO - MINNEAPOLIS, MN 55407
TEL (612)904-1932 - FAX (612)904-7866

PANEL SCHEDULE

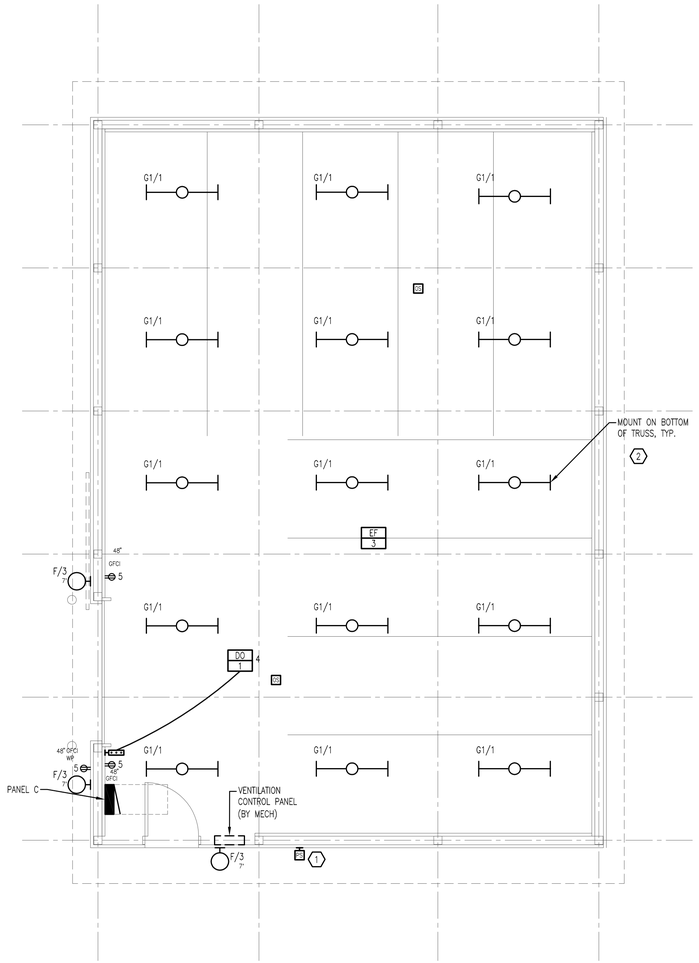
PANEL: C | LOCATION: CART SHED | VOLTS: 240 / 120 | PH: 1 | W: 3
AMP MAIN BRKR: | AMP M.LO: 100 | SCCR: 10,000 | MOUNT: SURFACE | FED FROM: EXIST PNL

CIRCUIT DESCRIPTION	LOAD VA	CKT BKR	P	CKT #	PH	CKT #	P	CKT BKR	LOAD VA	CIRCUIT DESCRIPTION
LIGHTING	360	20	1	1	A	2	1	15	444	EF-3
EXTERIOR LIGHTS	42	20	1	3	B	4	1	20	864	DO-1
RECEPTACLES	540	20	1	5	A	6	1	20		SPARE
VENTILATION CONTROL PANEL	500	20	1	7	B	8	1	20		SPARE
SPACE				9	A	10				SPACE
SPACE				11	B	12				SPACE

NOTES:
1. ISOLATED NEUTRAL BUS.



2 SINGLE LINE DIAGRAM
SCALE: NONE



1 CART SHED ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

A. ALL LIGHTS, DEVICES, ETC. SHALL BE CIRCUITED TO PANEL 'C'.

KEY NOTES

1. MOUNT PHOTOSENSOR ON WALL AS HIGH AS POSSIBLE. PHOTOSENSOR TO CONTROL EXTERIOR LIGHTING TYPE 'F'.

2. OCCUPANCY SENSOR IN SPACE SHALL CONTROL ALL TYPE 'G1' FIXTURES.

Comm. No.
4071.0000

ISSUE DATE
06/06/2017 - DD ESTIMATING SET
07/10/2017 - BID SET

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
www.epinc.com

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Owner
City of Roseville
Project
Cedarholm Community Building
Title
Power & Signal Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota.
By:
Title: Engineer Date: 07/10/2017
Registration Number: 40887

Drawing No.
e2.2

HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1892 • FAX (612)904-7866

PANEL SCHEDULE

PANEL: A | LOCATION: MECH/ELEC | VOLTS: 240 / 120 | PH: 1 | W: 3
AMP MAIN BRKR: 600 | AMP MLO: | SCCR: 22,000 | MOUNT: SURFACE | FED FROM: UTILITY

CIRCUIT DESCRIPTION	LOAD VA	CKT BKR	P	CKT #	PH	CKT #	P	CKT BKR	LOAD VA	CIRCUIT DESCRIPTION
PANEL L	12715	200	2	1	A	2				SPACE
– –	13281	– –	– –	3	B	4				SPACE
PANEL K	22680	200	2	5	A	6				SPACE
– –	19974	– –	– –	7	B	8				SPACE
CU–1	2700	40	2	9	A	10	2	25	2000	EH–1
– –	2700	– –	– –	11	B	12	–	– –	2000	– –
CU–2	1920	35	2	13	A	14	2	25	2000	EH–2
– –	1920	– –	– –	15	B	16	–	– –	2000	– –
CU–3	2700	40	2	17	A	18	2	15	1000	EH–3
– –	2700	– –	– –	19	B	20	–	– –	1000	– –
CU–4	2700	40	2	21	A	22	2	15	1000	EH–4
– –	2700	– –	– –	23	B	24	–	– –	1000	– –
MAU–1	2700	50	2	25	A	26	2	30	2586	COND. – 1
– –	2700	– –	– –	27	B	28	–	– –	2142	– –
EF–2	2700	50	2	29	A	30	2	40	3132	COND. – 2
– –	2700	– –	– –	31	B	32	–	– –	3132	– –
WAREWASHER	10032	110	2	33	A	34				SPACE
– –	10032	– –	– –	35	B	36				SPACE
SPACE				37	A	38				SPACE
SPACE				39	B	40				SPACE
SPACE				41	A	42				SPACE

LOAD SUMMARY:	CONNECTED	FEEDER / SERVICE CALCULATION
LIGHTING	5.57 KVA	6.96 KVA (125%)
LARGEST MOTOR	27.00 KVA	33.75 KVA (125%)
MOTORS	21.76 KVA	21.76 KVA (100%)
RECEPT	9.90 KVA	9.90 KVA(10KVA@100%,REMAIN@50%)
KITCHEN EQUIPMENT	62.72 KVA	40.77 KVA (65%)
ELECTRONIC LOADS	0.00 KVA	0.00 KVA (100)
ELECTRIC HEATING	12.44 KVA	12.44 KVA (100%)
MISC.	3.16 KVA	3.16 KVA (100%)
TOTALS	143 KVA	129 KVA HI–PHASE
	594 AMPS	536 AMPS 470 A

NOTES:
1. ROUTE CKT. THRU LCP.
2. SERVICE ENTERANCE RATED.
3.
4.
5.
6.

CONNECTED LOAD PER PHASE
A: 73 KVA
B: 70 KVA

PANEL SCHEDULE

PANEL: K | LOCATION: KITCHEN | VOLTS: 240 / 120 | PH: 1 | W: 3
AMP MAIN BRKR: | AMP MLO: 200 | SCCR: 10,000 | MOUNT: FLUSH | FED FROM: A

CIRCUIT DESCRIPTION	LOAD VA	CKT BKR	P	CKT #	PH	CKT #	P	CKT BKR	LOAD VA	CIRCUIT DESCRIPTION
HOLDING CABINET – NOTE 1	1920	20	1	1	A	2	1	20	720	SLIM JIM (2) – NOTE 1
HOLDING CABINET – NOTE 1	1920	20	1	3	B	4	1	20	600	SODA GUN
REFRIGERATOR – NOTE 1	1296	20	1	5	A	6	1	20	360	SODA & ICE DISPENSOR – NOTE 1
WORK TABLE RECEP – NOTE 1	180	20	1	7	B	8	1	20	180	BEVERAGE COUTNER – NOTE 1
MICROWAVE – NOTE 1	1560	20	1	9	A	10	1	20	720	SODA SYSTEM – NOTE 1
HOOD LTS. – NOTE 2	480	20	1	11	B	12	2	25	2088	GARBAGE DISPOSAL
HOOD CONTROL PANEL – NOTE 3	480	20	1	13	A	14	–	–	2088	– –
HOOD FIRE PROJECTION – NOTE 3	600	20	1	15	B	16	2	50	3456	COFFEE BREWER
CONVECTION OVEN (2) – NOTE 1, 2	1440	20	1	17	A	18	2	–	3456	– –
REFRIGERATOR – NOTE 1, 2	576	20	1	19	B	20	–	50	3456	COFFEE BREWER
FRYER – NOTE 1, 2	360	20	1	21	A	22	2	–	3456	– –
FREEZER – NOTE 1	864	20	1	23	B	24	–	20	506	GLASS FILLER STATION – NOTE 1
WORK TABLE – NOTE 1	180	20	1	25	A	26	1	20		SPARE – NOTE 1
REFRIGERATOR PREP TABLE – NOTE 1	780	20	1	27	B	28	1	20		SPARE – NOTE 1
HEAT LAMP	1104	20	1	29	A	30	1	20		SPARE – NOTE 1
BACK COUNTER – NOTE 1	360	20	1	31	B	32	1	20		SPARE – NOTE 1
BACK BAR – NOTE 1	684	20	1	33	A	34				SPACE
DISPLAY CASE – NOTE 1	1392	20	1	35	B	36				SPACE
HOT DOG GRILL – NOTE 1	1200	20	1	37	A	38				SPACE
SERVICE CASE – NOTE 1	1440	20	1	39	B	40	2	20	1296	ICE MAKER
POS – NOTE 1	360	20	1	41	A	42	–	–	1296	– –

LOAD SUMMARY:	CONNECTED	FEEDER / SERVICE CALCULATION
LIGHTING	0.00 KVA	0.00 KVA (125%)
LARGEST MOTOR	0.00 KVA	0.00 KVA (125%)
MOTORS	0.00 KVA	0.00 KVA (100%)
RECEPT	0.00 KVA	0.00 KVA(10KVA@100%,REMAIN@50%)
KITCHEN EQUIPMENT	42.85 KVA	27.73 KVA (65%)
ELECTRONIC LOADS	0.00 KVA	0.00 KVA (100)
ELECTRIC HEATING	0.00 KVA	0.00 KVA (100%)
MISC.	0.00 KVA	0.00 KVA (100%)
TOTALS	43 KVA	28 KVA HI–PHASE
	178 AMPS	116 AMPS 106 A

NOTES:
1. QPD CIRCUIT BREAKER.
2. ROUTE CIRCUIT THROUGH CONTACTOR.
3. PROVIDE C/B LOCK–ON CLIP.
4.
5.
6.

CONNECTED LOAD PER PHASE
A: 23 KVA
B: 20 KVA

PANEL SCHEDULE

PANEL: L | LOCATION: STORAGE | VOLTS: 240 / 120 | PH: 1 | W: 3
AMP MAIN BRKR: | AMP MLO: 200 | SCCR: 22,000 | MOUNT: SURFACE | FED FROM: A

CIRCUIT DESCRIPTION	LOAD VA	CKT BKR	P	CKT #	PH	CKT #	P	CKT BKR	LOAD VA	CIRCUIT DESCRIPTION
EXTERIOR POLE LTS. – NOTE 1	414	20	2	1	A	2	1	20	1308	SU–1
– –	414	– –	– –	3	B	4	1	20	912	SU–2
EXTERIOR LTS. – NOTE 1	540	20	1	5	A	6	1	20	1308	SU–3
COMMUNITY ROOM LTS. – NOTE 1	1584	20	1	7	B	8	1	20	1308	SU–4
RETAIL/SERVICE AREA LTS. – NOTE 1	1003	20	1	9	A	10	1	20	300	PP–1 – NOTE 1
BACK OF HOUSE LTS. – NOTE 1	1303	20	1	11	B	12	1	20	1260	EXTERIOR RECEPS
COVE LTS.	310	20	1	13	A	14	1	20	1440	COMMUNITY RECEPS
KIA DOOR OPERATOR	500	20	1	15	B	16	1	20	1260	COMMUNITY RECEPS
FACP – NOTE 2	500	20	1	17	A	18	1	20	1080	COMMUNITY RECEPS
EF–4	720	20	1	19	B	20	1	20	1260	COMMUNITY RECEPS
ACCESS CONTROL PWR SUPPLIES – NOTE 2	500	20	1	21	A	22	1	20	212	CEILING FANS
FIRE SOLENOID VALVE – NOTE 2	100	20	1	23	B	24	1	20	360	RESTROOM RECEPS
SPRINKLER AIR COMP. – NOTE 2	800	20	1	25	A	26	1	20	800	EWC
SPARE		20	1	27	B	28	1	20	720	STORAGE 111 & 110 RECEPS
SPARE		20	1	29	A	30	1	20	720	RM 102 RECEPS
SPARE		20	1	31	B	32	1	20	360	RM 102 RECEPS
SPARE		20	1	33	A	34	1	20	720	OFFICE 103 RECEPS
SPARE		20	1	35	B	36	1	20	720	OFFICE 103 RECEPS
SPACE				37	A	38	1	20	400	CAD FIREPLACE
SPACE				39	B	40	1	20	500	ACCESS CONTROL SYSTEM PWR. – NOTE 2
SPACE				41	A	42	1	20	360	COMM BOARD POWER – NOTE 2

LOAD SUMMARY:	CONNECTED	FEEDER / SERVICE CALCULATION
LIGHTING	5.57 KVA	6.96 KVA (125%)
LARGEST MOTOR	0.00 KVA	0.00 KVA (125%)
MOTORS	7.37 KVA	7.37 KVA (100%)
RECEPT	9.90 KVA	9.90 KVA(10KVA@100%,REMAIN@50%)
KITCHEN EQUIPMENT	0.00 KVA	0.00 KVA (65%)
ELECTRONIC LOADS	0.00 KVA	0.00 KVA (100)
ELECTRIC HEATING	0.00 KVA	0.00 KVA (100%)
MISC.	3.16 KVA	3.16 KVA (100%)
TOTALS	26 KVA	27 KVA HI–PHASE
	108 AMPS	114 AMPS 102 A

NOTES:
1. ROUTE CKT . THRU LCP.
2. PROVIDE C/B LOCK–ON CLIP.
3.
4.
5.
6.

CONNECTED LOAD PER PHASE
A: 13 KVA
B: 13 KVA

LIGHTING CONTROL PANEL

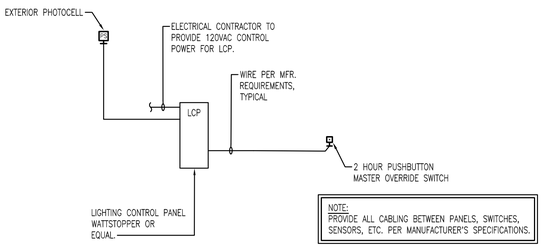
LCP

RELAY #	PANEL / CKT NO.	CONTROL DESCRIPTION	CONTROL TYPE	AREA	NOTES
1	L–1,3	PARKING LTS.	PC, TC	PARKING LOT	1
2	L–5	EXT. LTS.	PC, TC	EXTERIOR	
3	L–7	COMMUNITY ROOM LTS.	TC, ORS	PUBLIC AREA	
4	L–9	RETAIL/SERVICE AREA LTS.	TC, ORS	PUBLIC AREA	
5	L–11	BACK OF HOUSE LTS.	TC, ORS	BACK OF HOUSE	
6	L–10	PP–1	TC	HOT WATER LOOP	
7	SPARE				

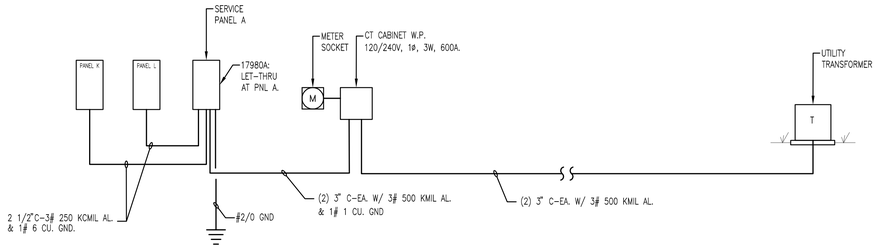
ABBREVIATIONS: SW – SWITCH; PC – PHOTOCELL; OS – OCCUPANCY SENSOR; TC – TIMECLOCK; ORS – OVERRIDE SWITCH

GENERAL NOTES:
1. PROGRAM SCHEDULES PER OWNER'S DIRECTION

SPECIFIC NOTES:
1. 2 POLE RELAY.



2 LIGHTING CONTROL PANEL RISER DIAGRAM



1 SINGLE LINE DIAGRAM

SCALE: NONE

Comm. No.
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Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
www.epinc.com

Foodservice Designer
Boelter premier FOODSERVICE DESIGN, EQUIPMENT & SUPPLY

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Single Line Diagram & Schedules

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota.
By:
Title: Engineer Date: 07/10/2017
Registration Number: 40887

Drawing No.
e3.0

HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS
401 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7866

LIGHT FIXTURE SCHEDULE

FIXT. TYPE	DESCRIPTION	VOLTAGE	LAMPS TYPE	LAMPS QTY./ FIXT.	VA/ FIXT.	MANUFACTURER	CATALOG NUMBER	NOTES
A1	2X4 PANEL LED ZERO PLENUM TROFFER FOR GRID CEILINGS 3500 K 7200 NOMINAL LUMENS	UNV	LED	–	77	COLUMBIA	L2PT24-35ULG-L5RS-ED-U	1
A2	2X2 PANEL LED ZERO PLENUM TROFFER FOR GRID CEILINGS 3500 K 3600 NOMINAL LUMENS PROVIDE FLANGE KIT FOR FIXTGURE IN ROOM 104	UNV	LED	–	35	COLUMBIA	L2PT22-35HLG-L5RS-EU	
B1	58" DECORATIVE BOWL PENDANT LED BOTTOM OF FIXTURE +11'. 3500 K 4500 NOMINAL LUMENS OIL RUBBED BRONZE FINISH. WHITE ACRYLIC LENS	UNV	LED	–	50	CCL LIGHTING	ON1-P11D-36-GW-ORB-LED7/35K-UNV-XX-DMO	1
B2	42" DECORATIVE BOWL PENDANT LED BOTTOM OF FIXTURE AT 13' 3500 K 4500 NOMINAL LUMENS OIL RUBBED BRONZE FINISH. WHITE ACRYLIC LENS	UNV	LED	–	50	CCL LIGHTING	ON1-P11D-42-GW-ORB-LED7/35K-UNV-XX-DMO	1
B3	DECORATIVE CABLE HUNG CYLINDER W/BOTTOM OF FIXTURE AT 9'-6" 3500 K 2100 NOMINAL LUMENS BRONZE FINISH W/WHITE ACRYLIC DIFFUSER BALCK POWER CORD	UNV	LED	–	25	CCL LIGHTING	TR1-P1CC+26-MW-BNP-ILG2/5/35K-120-XX-DMO	1
C1	6" DOWNLIGHT LED 3500 K 1200 NOMINAL LUMENS	UNV	LED	–	19	MAXILUME	HH6C-LED-1200L-DMO-120-MD-35K-85-HHE-6501-CL-WH	1
C2	8" DOWNLIGHT LED IC RATED 3500 K 2000 NOMINAL LUMENS	UNV	LED	–	27	MAXILUME	HH8C-LED-2000L-DMO-120-MD-35K-85-HHE-6501-CL-WH	1
C3	12" DOWNLIGHT LED WALL WASHER 3500 K 1200 NOMINAL LUMENS	UNV	LED	–	24	PRESCOLITE	02LED-20WLED-12L-35K-B-WW-55-WT	1
D1	DECORATIVE SURFACE LED FIXTURE 3500 K 1400 NOMINAL LUMENS BRONZE FINISH	UNV	LED	–	10	FC LIGHTING	FCW336312WLED44K140OBZ	
D2	9" WEATHERPROOF DOWNLIGHT LED 3500 K 1000 NOMINAL LUMENS	UNV	LED	–	15	LIGHTOLIER	STR840NW	
EM	WALL MOUNTED EMERGENCY LIGHTING WITH TWIN HEADS AND BATERY BACK UP WHITE FINISH	UNV	LED	–	2	DUAL LITE	EV2	
EM1	WALL MOUNTED EMERGENCY LIGHTING WITH TWIN HEADS, BATTERY BACK UP, REMOTE CAPACITY AND TWIN REMOTE HEADS, WHITE FINISH EMERGENCY BATTERY PACK.	UNV	LED	–	2	DUAL LITE	EV4-EVCDW	
F	WALL MOUNTED LED FIXTURE WITH BRONZE FINISH 4000 K 1200 NOMINAL LUMENS MOUNT ADJACENT TO DOOR AS HIGH AS POSSIBLE	UNV	LED	–	14	LITHONIA	OLWX1LED134OK	
G1	STRIP LED 4000K 2100 NOMINAL LUMENS CHAIN HANG	UNV	LED	–	24	LITHONIA	MNSLMW6	
L1	6" RECESSED FIXTURE WITH WHITE ACRYLIC LENS 3500 K 500 LUMENS PER FOOT DRY WALL FLANGE KIT 4" OFFSET FROM WALL	UNV	LED	–	4.6W/FT.	AXIS	BRLED-500-80-35-FLSF-W-UNI-DP1-DF	1
W1	LED TAPE LIGHT COVE FIXTURE WITH ALUMINUM SNAP TRACK WITH DIFFUSE COVER, POWER SUPPLY AND DIMMER 3200K 170 LUMENS/FT	UNV	LED	–	1.5W/FT	NOVA FLEX	NF-WW-0-60-24Vi-3225K-NF-T-S/SNAP-1M/2M-NF-T-SOFT/SNAP -S-1M/2M-POWER SUPPLY	2
P	25' POLE MOUNTED SHOE BOX FIXTURE (2 HEADS) SQUARE STEEL POLE AND TYPE4 MEDIUM DISTRIBUTION 4000 K 15000 NOMINAL LUMENS/HEAD	UNV	LED	–	136/HEAD	LITHONIA	DSX0-40C-1000-40K-T4M-MVOLT-SPA-DDBXD	
X	EXIT SIGNW BATTERY TYPE W/RED STENCIL LETTERS, PROVIDE ARROWS AS REQUIRED.	UNV	LED	–	2	DUAL LITE	EVE-U-R-W-E	

FIXTURE NOTES:
1. PROVIDE 0-10 VOLT DIMMING.
2. PROVIDE COMPATIABLE DIMMER. LOCATE DIMMER ADJACENT TO DRIVER.

MOTOR SCHEDULE

MOTOR NUMBER	EQUIPMENT	LOCATION	KW	HP	MCA	VOLTAGE	PHASE	STARTER TYPE	STARTER SIZE	STARTER LOC	STARTER BY	DISCONNECT FU/SW	BY	CONTROL DEVICE	FURNISHED BY	WIRED BY	DEVICES TO BE INTERLOCKED	FURNISHED BY:	WIRED BY	FEEDER PH-G-C	NOTES	MOTOR NUMBER
SU-1	FURNACE	MECH. ROOM	– –	3/4	9.9	120	1	– –	– –	– –	– –	TT	ELEC	T-STAT	MECH	MECH	DUCT SMOKE DETECTOR	ELEC	ELEC	12-12-1/2"	1	SU-1
SU-2	FURNACE	MECH. ROOM	– –	1/2	6.6	120	1	– –	– –	– –	– –	TT	ELEC	T-STAT	MECH	MECH	DUCT SMOKE DETECTOR	ELEC	ELEC	12-12-1/2"	1	SU-2
SU-3	FURNACE	MECH. ROOM	– –	3/4	9.9	120	1	– –	– –	– –	– –	TT	ELEC	T-STAT	MECH	MECH	DUCT SMOKE DETECTOR	ELEC	ELEC	12-12-1/2"	1	SU-3
SU-4	FURNACE	MECH. ROOM	– –	3/4	9.9	120	1	– –	– –	– –	– –	TT	ELEC	T-STAT	MECH	MECH	DUCT SMOKE DETECTOR	ELEC	ELEC	12-12-1/2"	1	SU-4
COND-1	MAU-1 CONDENSOR 1	ROOF	– –	– –	21.8	240	1	– –	– –	– –	– –	WP 30/30	ELEC	MAU-1	MFGR	MFGR	INTERLOCK W/MAU -1	MFGR	MFGR	10-10-1"	3	COND-1
COND-2	MAU-1 CONDENSOR 2	ROOF	– –	– –	32.1	240	1	– –	– –	– –	– –	WP 30/30	ELEC	MAU-1	MFGR	MFGR	INTERLOCK W/MAU -1	MFGR	MFGR	8-10-1"	3	COND-2
CU-1	CONDERSING UNIT	EXTERIOR GRADE	– –	– –	27.8	240	1	– –	– –	– –	– –	WP 40/60	MECH	SU-1	MECH	MECH	– –	MECH	MECH	10-10-3/4"	1	CU-1
CU-2	CONDERSING UNIT	EXTERIOR GRADE	– –	– –	19.8	240	1	– –	– –	– –	– –	WP 35/60	MECH	SU-2	MECH	MECH	– –	MECH	MECH	12-12-1/2"	1	CU-2
CU-3	CONDERSING UNIT	EXTERIOR GRADE	– –	– –	27.8	240	1	– –	– –	– –	– –	WP 40/60	MECH	SU-3	MECH	MECH	– –	MECH	MECH	10-10-3/4"	1	CU-3
CU-4	CONDERSING UNIT	EXTERIOR GRADE	– –	– –	27.8	240	1	– –	– –	– –	– –	WP 40/60	MECH	SU-4	MECH	MECH	– –	MECH	MECH	10-10-3/4"	1	CU-4
EH-1	ELECTRIC HEATER	ENTRY	4	– –	– –	240	1	– –	– –	– –	– –	INTEGRAL	ELEC	T-STAT	MECH	MECH	– –	– –	– –	10-10-3/4"	2	EH-1
EH-2	ELECTRIC HEATER	ENTRY	4	– –	– –	240	1	– –	– –	– –	– –	INTEGRAL	ELEC	T-STAT	MECH	MECH	– –	– –	– –	10-10-3/4"	2	EH-2
EH-3	ELECTRIC HEATER	ENTRY	2	– –	– –	240	1	– –	– –	– –	– –	INTEGRAL	ELEC	T-STAT	MECH	MECH	– –	– –	– –	12-12-1/2"	2	EH-3
EH-4	ELECTRIC HEATER	MECH. ROOM	2	– –	– –	240	1	– –	– –	– –	– –	INTEGRAL	ELEC	T-STAT	MECH	MECH	– –	– –	– –	12-12-1/2"	2	EH-4
EF-1A	EXHAUST FAN	RESTROOM	– –	– –	3.3	120	1	– –	– –	– –	– –	INTEGRAL	MECH	SWITCH WITH LIGHTS	ELEC	ELEC	LIGHTS	ELEC	ELEC	12-12-1/2"	2	EF-1A
EF-1B	EXHAUST FAN	RESTROOM	– –	– –	3.3	240	1	– –	– –	– –	– –	INTEGRAL	MECH	SWITCH WITH LIGHTS	ELEC	ELEC	LIGHTS	ELEC	ELEC	12-12-1/2"	2	EF-1B
EF-1C	EXHAUST FAN	UTILITY ROOM	– –	– –	3.3	240	1	– –	– –	– –	– –	INTEGRAL	MECH	SWITCH WITH LIGHTS	ELEC	ELEC	LIGHTS	ELEC	ELEC	12-12-1/2"	2	EF-1C
EF-2	EXHAUST FAN	ROOF	– –	5.0	– –	240	1	– –	– –	– –	– –	INTEGRAL	MFGR	HOOD	ELEC	ELEC	SEE CAPTIVE AIR DRAWINGS	MFGR	ELEC	6-10-1 1/4"	3	EF-2
EF-3	EXHAUST FAN	CART SHED ROOF	– –	1/4	– –	120	1	– –	– –	– –	– –	TT	ELEC	VENT. CONTROL PNL.	MECH	MECH	SENSORS	MECH	ELEC	12-12-1/2"	1	EF-3
EF-4	EXHAUST FAN	ROOF	– –	– –	3.8	120	1	– –	– –	– –	– –	INTEGRAL	MFGR	DISHWASHER	ELEC	ELEC	INTERLOCK W/ DISHWASHER	ELEC	ELEC	12-12-1/2"	3	EF-4
MAU-1	MAKE UP AIR UNIT	ROOF	– –	5.0	– –	240	1	– –	– –	– –	– –	INTEGRAL	MECH	HOOD CONTROL PANEL	MFGR	ELEC	SEE CAPTIVE AIR DRAWINGS	MFGR	ELEC	6-10-1 1/4"	3	MAU-1
WH-1	GAS WATER HEATER	MECH. ROOM	– –	– –	3	120	1	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	12-12-1/2"	2	WH-1
PP-1	PLUMBING PUMP	MECH. ROOM	– –	– –	1	120	1	– –	– –	– –	– –	TT	ELEC	LCP	ELEC	ELEC	– –	– –	– –	12-12-1/2"	4	PP-1
DO-1	DOOR OPERATOR	CART SHED	– –	1/2	– –	120	1	– –	– –	– –	– –	TT	ELEC	PUSH BUTTON	MFGR	ELEC	SAFTIES	MFGR	DOOR SUPP	12-12-1/2"	5	DO-1

ABBREVIATIONS:
HOA – HAND/OFF/AUTOMATIC, TT – THERMAL TOGGLE, BCE – BUILDING CONTROLLER ENCLOSURE, CPI – CAROLINA PRODUCTS INC.

NOTES:
1. PROVIDE DISCONNECT SWITCH AND CONNECT POWER TO UNIT.
2. CONNECT POWER TO UNIT.
3. CONNECT POWER TO UNIT. SEE CAPTIVE AIR DRAWINGS FOR ADDITIONAL ELECTRICAL CONNECTION AND INTERLOCKING REQUIREMENTS.
4. PROVIDE DISCONNECT SWITCH AND CONNECT POWER TO UNIT VIA LCP.
5. PROVIDE DISCONNECT SWITCH AND CONNECT POWER TO UNIT. CONNECT ALL CONTROLS AND SAFETY INTERLOCKS AS REQUIRED. COORDINATE WITH EQUIMENT SUPPLIER.

Comm. No.
4071.0000

ISSUE DATE
06/06/2017 – DD ESTIMATING SET
07/10/2017 – BID SET

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
7705 Bush Lake Road
Edina, MN 55439
(952) 930-0050
www.epinc.com

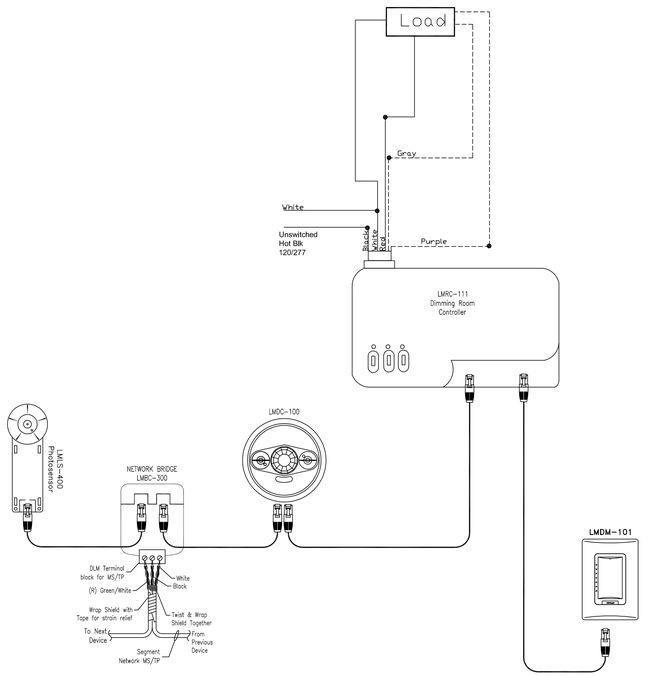
Foodservice Designer
Boelter premier FOODSERVICE DESIGN, EQUIPMENT & SUPPLY

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Electrical Schedules

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota.
By:
Title: Engineer Date: 07/10/2017
Registration Number: 40887

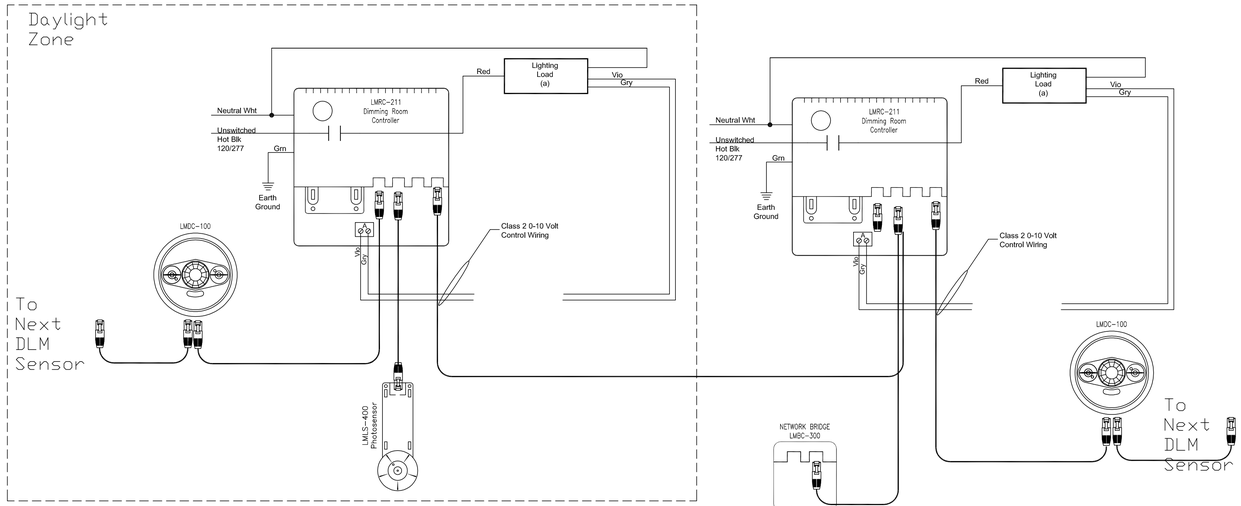
Drawing No.
e4.0

HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS
4201 CEDAR AVENUE SO • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7866



1 TYPICAL OFFICE WITH DAYLIGHTING

SCALE: NONE



2 TYPICAL OPEN AREA WITH DAYLIGHTING

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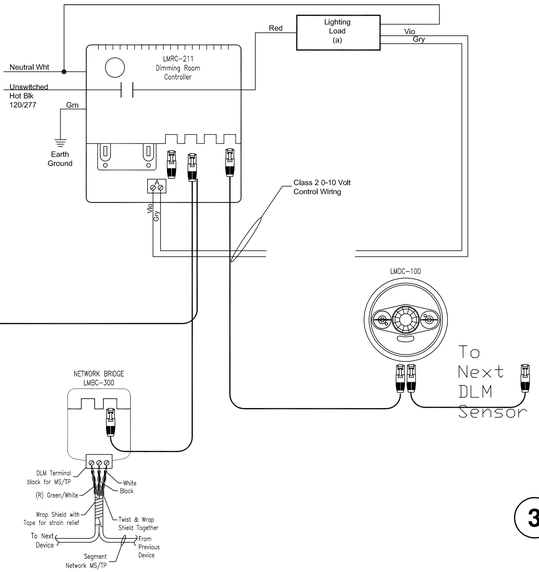
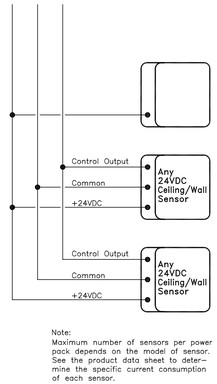
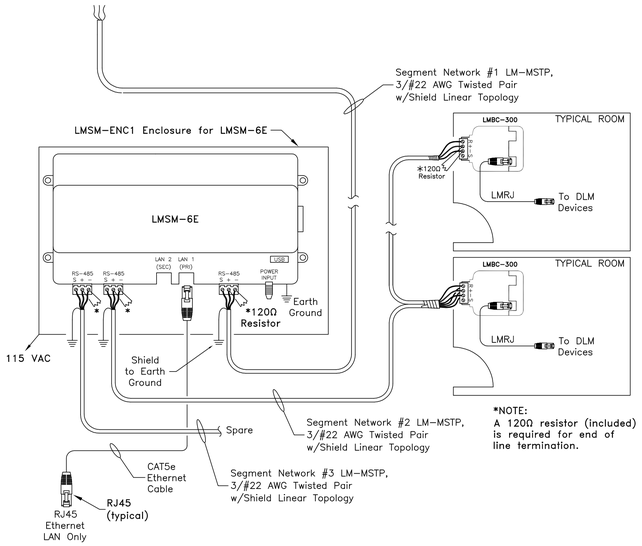




Note:
Maximum number of sensors per power pack depends on the model of sensor. See the product data sheet to determine the specific current consumption of each sensor.

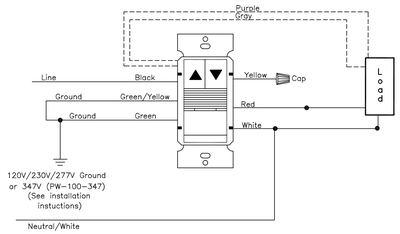
3 MULTIPLE OCCUPANCY SENSORS USING ONE POWER PACK

SCALE: NONE



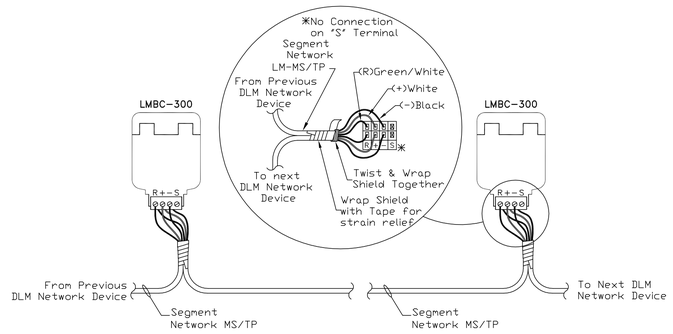
4 SEGMENT NETWORK DETAIL

SCALE: NONE



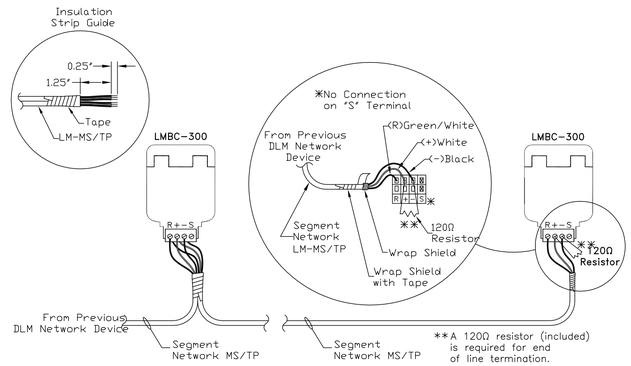
5 DW-311/PW-311 TYPICAL WIRING DIAGRAM

SCALE: NONE



6 TYPICAL LMBC-300 TO LMBC-300 WIRING

SCALE: NONE



7 TYPICAL LMBC-300 END OF LINE WIRING

SCALE: NONE

Comm. No. 4071.0000 ISSUE DATE 06/06/2017 - DD ESTIMATING SET 07/10/2017 - BID SET	Civil Engineer & Landscape Architect SRF Consulting Group, Inc.	Structural Engineer Mattson Macdonald Young structural engineers Bassett Creek Business Center 901 North 3rd Street, Suite 100 Minneapolis, MN 55401 612-827-7825 voice 612-827-0805 fax	Mechanical and Electrical Engineers emanuelson-podas consulting engineers 7705 Bush Lake Road Edina, MN 55439 (952) 930-0050 www.epinc.com	Foodservice Designer Boelter premier FOODSERVICE DESIGN, EQUIPMENT & SUPPLY	Owner City of Roseville Project Cedarholm Community Building Title Wattstopper Electrical Details	I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed engineer under the laws of the State of Minnesota. By: Title: Engineer Date: 07/10/2017 Registration Number: 40887	Drawing No. e5.0	HAGEN, CHRISTENSEN & McILWAIN ARCHITECTS 401 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407 TEL (612)904-1932 • FAX (612)904-7866

GENERAL CONSTRUCTION NOTES

G1. THE DESIGN DRAWINGS SHOWN HEREON INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF FOOD/BEVERAGE EQUIPMENT AND ARE REASONABLY EXACT, BUT EXTREME ACCURACY IS NOT GUARANTEED. DRAWINGS ARE FOR ASSISTANCE AND GUIDANCE OF THE CONTRACTOR. EXACT LOCATIONS AND LEVELS WILL BE GOVERNED BY THE BUILDING. SHOULD IT BECOME NECESSARY TO DEVIATE FROM THIS ARRANGEMENT, SUCH DEVIATION SHALL BE MADE WITHOUT EXPENSE TO THE OWNER OR PREMIER RESTAURANT EQUIPMENT COMPANY.

G2. ALL WORK, MATERIALS AND EQUIPMENT SHALL BE IN FULL ACCORDANCE WITH THE LATEST CODES, RULES AND REGULATIONS OF THE LOCAL JURISDICTIONAL AUTHORITIES, U.S. PUBLIC HEALTH DEPARTMENT, THE NATIONAL BOARD OF THE FIRE UNDERWRITERS AND ANY AND ALL LOCAL OR STATE ORDINANCES, THE STATE ACCIDENT COMMISSIONS SAFTEY ORDERS AND THE REGULATIONS OF THE STATE FIRE MARSHALL; AND WITH ANY PREVAILING RULES AND REGULATIONS PERTAINING TO ADEQUATE PROTECTION AND/OR GUARDING OF ANY MOVING PARTS OR OTHERWISE HAZARDOUS LOCATIONS.

G3. IT SHALL BECOME THE RESPONSIBILITY OF THE OWNER, ARCHITECT, ENGINEERS AND/OR THE GENERAL CONTRACTORS TO INSURE THAT PREMIER RESTAURANT EQUIPMENT COMPANY RECEIVES COPIES OF ALL ADDENDUMS AND CHANGES TO THE BUILDING'S PLANS PRIOR TO AND DURING CONSTRUCTION. PREMIER RESTAURANT EQUIPMENT CO. WILL NOT ASSUME ANY COSTS OR BACK CHARGES FROM OWNER AND/OR ANY TRADE BY FAILURE TO TRANSFER SAID INFORMATION.

G4. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY PREMIER RESTAURANT EQUIPMENT CO. A MINIMUM OF FIVE (5) WORKING DAYS BEFORE CONCRETE POUR FOR FIELD CHECK OF UTILITIES, I.E., FLOOR SINKS, WATER AND ELECTRICAL STUB-UP AND PVC CONDUITS.

G5. PRIOR TO INSTALLATION OF KITCHEN EQUIPMENT, THE GENERAL CONTRACTOR SHOULD HAVE CLEAR ACCESS TO THE KITCHEN OR BAR AREA, WITH ALL WALLS AND FLOORS COMPLETED WITH FINISHED MATERIAL.
IF THERE ARE ANY DELIVERY PROBLEMS WITH THE PARKING LOT, DRIVEWAY, RECEIVING DEPARTMENT OR ANY SPECIAL OPENING IN WALLS OR WINDOWS, COORDINATE WITH PREMIER RESTAURANT EQUIPMENT CO.

G6. ALL HORIZONTAL/VERTICAL DIMENSIONS ARE FROM FACE OF FINISHED WALL/FLOOR TO CENTERLINE OF ROUGH-IN OR FROM CENTERLINE OF ROUGH-IN TO CENTERLINE OF ROUGH-IN UNLESS OTHERWISE NOTED. ALL SYMBOLS FOR OUTLETS ON WALL ARE INDICATED AT A SPECIFIED HEIGHT. HEIGHT OF ROUGH-IN IS GIVEN FROM FINISHED FLOOR (NOT TOP OF FINISHED CURB) TO CENTERLINE OF ROUGH-IN.

G7. LAST DATED REVISION VOIDS AND SUPERSEDES ANY AND ALL PREVIOUS DRAWINGS WITH THE SAME SHEET NUMBER. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO RECOVER AND DISPOSE OF ALL PREVIOUSLY ISSUED PLANS FROM ALL SUB-CONTRACTORS.

G8. ALL BIDDERS SHALL FULLY INSPECT THE SITE AND EXISTING CONDITIONS INCLUDING ALL UTILITY SERVICES AND EXISTING ELECTRICAL WIRING AND PLUMBING PRIOR TO SUBMISSION OF BID.

G9. ALL BIDDERS SHALL VERIFY ALL DIMENSIONS, REQUIREMENTS, ETC., BEFORE ANY WORK BEGINS AND NOTE ANY DISCREPANCIES IN WRITING TO PREMIER RESTAURANT EQUIPMENT CO. PROCEEDING WITH THE WORK SHALL CONSTITUTE ACCEPTANCE BY THE BIDDER THAT DIMENSIONS AND CONDITIONS ARE CORRECT AND THE BIDDER SHALL ASSUME FULL RESPONSIBILITY OF THE SAME.

G10. ALL CONTRACTORS TO COORDINATE ALL WORK TO ALLOW ACCESSIBILITY AND USEABILITY BY OTHERS.

G11. DURING CONSTRUCTION, EACH TRADE SHALL BE RESPONSIBLE FOR REPAIRING OR PAYING FOR THE COST OF ANY DAMAGE CAUSED BY THEIR WORK.

G12. WHERE LOCAL CODES OR CONDITIONS CAUSE RELOCATION OF THE COMPRESSORS TO BE OTHER THAN DESIGNATED ON THE PLAN, PLEASE CONTACT PREMIER RESTAURANT EQUIPMENT CO. AT ONCE FOR AN ALTERNATE LOCATION.

G13. GENERAL CONTRACTOR IS TO PROVIDE A FINISHED RECESS IN FLOOR FOR DRAIN TROUGH'S AS REQUIRED. SEE PLAN AND DETAIL.

G14. GENERAL CONTRACTOR IS TO PROVIDE AN OPENING IN WALL WHERE INDICATED FOR VENTILATOR CONTROL PANEL(S) IF REQUIRED. MINIMUM WALL THICKNESS OF 8" THICK REQUIRED FOR FULL RECESS OF PANEL AND CONDUITS.
VERIFY WITH SHOP DRAWINGS FOR SIZES AND MOUNTING REQUIREMENTS.

G15. GENERAL CONTRACTOR IS TO UNCRATE AND MOUNT VENTILATOR CONTROL CABINET(S) IN WALL.

G16. GENERAL CONTRACTOR IS TO PROVIDE CURBS AND SUPPORTS ON ROOF FOR EXHAUST AND MAKE-UP AIR UNITS AND REFRIGERATION EQUIPMENT AS REQUIRED. PROVIDE ALL ROOF, CEILING, WALL AND FLOOR PENETRATIONS AND PROVIDE FOR UTILITY ACCESS IF REQUIRED FOR COMPLETE SYSTEMS INSTALLATIONS. AFTER INSTALLATION, SEAL ALL ROOF, CEILING, WALL AND FLOOR PENETRATIONS IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES. PROVIDE ALL DUCT FIRE SEPARATIONS, ENCLOSURES, WRAPPINGS, CLEANOUTS, ETC., IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND FIRE CODES.

G17. GENERAL CONTRACTOR IS TO PROVIDE TO PREMIER RESTAURANT EQUIPMENT CO. ALL MECHANICAL, ELECTRICAL AND ANY SPECIAL INSTALLATION REQUIREMENTS OF ALL OWNER SUPPLIED AND/OR EXISTING FOOD/BEVERAGE EQUIPMENT COVERED BY/OR INCLUDED IN THE DESIGN DRAWINGS.

G18. ALL KITCHEN AND BAR EQUIPMENT SHALL BE FURNISHED (UNLESS NOTED OTHERWISE) AND INSTALLED BY THE KITCHEN CONTRACTOR WITH PLUMBING, ELECTRICAL AND HVAC ROUGH-INS AND FINAL HOOK-UP BY THE APPROPRIATE TRADES. THE MILLWORK CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF KITCHEN AND BAR EQUIPMENT THAT IS TO BE HOUSED WITHIN THE MILLWORK FIXTURE WHICH IS WITHIN THE SCOPE OF HIS OR HER CONTRACT.

G19. ALL EXPOSED BASES TO BE FINISHED SAME AS FINISH FLOOR UNLESS OTHERWISE INDICATED. VERIFY FACE AND TOP FINISHED (WHERE BASES ARE EXPOSED) WITH ARCHITECT, GENERAL CONTRACTOR AND OWNER.

G20. WHERE NOISE OR VIBRATION PRODUCING EQUIPMENT IS LOCATED ADJACENT TO DINING AREAS, PROVISIONS SHOULD BE MADE TO "DOUBLE STUD" AND/OR SOUND PROOF COMMON WALL BY GENERAL CONTRACTOR.

G21. ALL WORK SHALL BE ERECTED SQUARE, PLUMB, LEVEL AND TRUE TO A LINE. WHERE NECESSARY MILLWORK SHALL BE SCRIBED TO FLOOR, WALL AND CEILINGS FOR A FINISHED INSTALLATION.

G22. GENERAL CONTRACTOR IS TO PROVIDE AND INSTALL THE FOLLOWING ITEMS A THRU G SHOWN ON THESE PLANS.

A. IF METAL STUDS ARE USED FOR WALL CONSTRUCTION, REFER TO "GENERAL CONSTRUCTION" SHEET(S) FOR TYPE AND LOCATION(S) OF WALL BACKING.

B. OPENINGS OR RECESSES IN FLOORS AND WALLS FOR INSTALLATION OF DRAINS, TROUGHS, CONTROL PANELS, ETC. REFER TO PLANS FOR LOCATION, SIZES AND DETAILS OF REQUIRED OPENINGS.

C. OPENINGS THRU FINISHED CEILING IF/AS REQUIRED AND THRU ROOF FOR CONNECTION OF KITCHEN EQUIPMENT TO ROOFTOP EQUIPMENT. THIS WORK SHALL INCLUDE BUT NOT BE LIMITED TO STRUCTURAL SUPPORTS IF/AS REQUIRED, LEVELED AND SQUARED CURBS AND FLASHING AGAINST LEAKS. VERIFY SIZES AND WEIGHTS OF ROOFTOP EQUIPMENT WITH MANUFACTURER'S SHOP DRAWINGS.

D. ALL ENCLOSURE PANELS FROM TOP OF WALK-IN COOLER(S)/FREEZER(S) AND EXHAUST VENTILATOR(S) TO FINISHED CEILING.

E. A TRANSIT LEVELED FINISHED FLOOR WITH INTEGRAL INSULATION FOR WALK-IN COOLER(S)/FREEZER(S) WHICH ARE DESIGNED TO SET UPON A FINISHED FLOOR.

F. A TRANSIT LEVELED AND TROWELED SMOOTH RECESSED FLOOR FOR WALK-IN COOLER(S)/FREEZER(S) WITH INTEGRAL FLOORS AND NO RAMPS. REFER TO PLANS FOR LOCATION(S) AND DETAILS.

G. WHERE REQUIRED BY LOCAL CODES, SPRINKLER HEADS IN WALK-IN COOLER(S)/ FREEZER(S) WILL BE PROTECTED FROM FREEZING.

G23. GENERAL CONTRACTOR IS TO CLEAR ALL EQUIPMENT OF ANY DEBRIS, DUST AND LITTER GENERATED BY THEIR SUB-CONTRACTORS.

G24. ALL DIMENSIONS LABELED "HOLD" OR "CRITICAL" MUST BE MAINTAINED TO THAT SPECIFIC FINISHED DIMENSION. ALL CORNERS MUST BE MAINTAINED AT TRUE 90 DEGREES OR AS SPECIFIED TO ACCEPT EQUIPMENT. ANY TRIM OR MODIFICATION NECESSARY TO MAKE EQUIPMENT FIT DUE TO NON-ADHERENCE TO SPECIFIED DIMENSION IS TO BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR AT THEIR EXPENSE.

G25. GENERAL CONTRACTOR IS TO PROVIDE APPROVED PLYWOOD OR STEEL BACKING BEHIND ALL WALL SHELVES, HAND SINKS, GLASS RACK SHELVES, HOSE/PRE-RINSES AND TABLE CANTILEVERS. SEE PLANS FOR ADDITIONAL BACKING AND LOCATIONS.

G26. GENERAL CONTRACTOR TO PROVIDE STRUCTURAL SUPPORT TO HANG VENTILATOR HOODS, BAR SOFFITS AND OTHER CEILING SUPPORTED EQUIPMENT.

G27. GENERAL CONTRACTOR TO PROVIDE AND INSTALL ALL PVC (OR EMT PER CODE) SLEEVE CHASES FOR REMOTE REFRIGERATION LINES AND/OR BEVERAGE LINES AS INDICATED IN THESE PLANS. PROVIDE ALL STRUCTURAL PENETRATIONS REQUIRED FOR COMPLETE INSTALLATION(S). SEAL ALL STRUCTURAL PENETRATIONS AFTER INSTALLATION(S) AS REQUIRED, INCLUDING ANY REQUIRED FIRE CAULKING AND/OR FIRE COLLARS. ANGLE OF SLEEVE ELBOW SHALL NOT BE MORE ACUTE THAN 60 DEGREES.

G28. GENERAL CONTRACTOR OR HIS SUBCONTRACTOR MUST TAKE CARE WITH MURATIC ACID & ITS FUMES AROUND WALK-IN COOLERS OR OTHER ALUMINUM EQUIPMENT – PROP DOORS OPEN UNTIL ACID IS DRY. ANY DAMAGE OR DISCOLORATION CAUSED BY THIS WORK WILL RESULT IN REPLACEMENT OF EQUIPMENT AT YOUR EXPENSE

PLUMBING EQUIPMENT NOTES

P1. THE WORK PERFORMED UNDER THE PLUMBING CONTRACT SHALL BE IN FULL ACCORDANCE WITH THE LATEST CODES, RULES AND REGULATIONS OF THE LOCAL AND/OR STATE ORDINANCES, HEALTH DEPARTMENT, FIRE MARSHALL OR ANY JURISDICTIONAL AUTHORITY.

P2. ALL PLUMBING ROUGH-INS AND CONNECTIONS SHOWN ON THIS PLAN ARE FOR FIXTURES AND EQUIPMENT SHOWN ON PREMIER RESTAURANT EQUIPMENT CO. PLANS ONLY. PLUMBING CONTRACTOR ALSO TO PROVIDE ANY ADDITIONAL FLOOR DRAINS AND BUILDING PLUMBING REQUIREMENTS. SEE ARCHITECT, MECHANICAL ENGINEERING PLANS, GENERAL CONTRACTOR OR OWNER.

P3. ALL HORIZONTAL DIMENSIONS SHOWN ARE CUMULATIVE FROM FINISHED FACE OR WALLS OR COLUMN GRID CENTERS OR FROM CENTERLINE OF ROUGH-IN TO CENTERLINE OF ROUGH-IN UNLESS OTHERWISE NOTED ON PLANS AND DETAILS.

P4. ALL VERTICAL DIMENSIONS ARE FROM FINISHED FLOOR TO CENTERLINE OF ROUGH-IN.

P5. ALL "STUB-UP" INDICATED TO STUB-UP A MAXIMUM OF 5" ABOVE FINISHED BASE OR FLOOR BUT NOT TO INTERFERE WITH THE INSTALLATION OF FIXTURES.

P6. ALL FLOOR SINKS INDICATED HALF-IN AND HALF-OUT OF BASE TO BE FLUSH WITH FINISHED FLOOR. ALL FULLY OR PARTIALLY EXPOSED FLOOR SINKS TO BE PROVIDED WITH COVERS BY PLUMBING CONTRACTOR. IN THE EVENT LOCAL CODES REQUIRE FLOOR SINKS TO BE ABOVE OR BELOW FINISHED FLOOR LEVEL, PLUMBER SHALL COMPLY WITH LOCAL CODES AND NOTIFY PREMIER RESTAURANT EQUIPMENT CO. IMMEDIATELY OF SUCH REQUIREMENTS.

P7. PLUMBER TO MAKE ALL EXTERNAL AND INTERNAL CONNECTIONS AND PROVIDE ALL PIPINGS, FITTINGS, VALVES & PARTS, PRESSURE REGULATORS, ETC., NECESSARY TO MAKE EQUIPMENT FUNCTIONAL.

P8. PLUMBER TO PROVIDE GATE VALVES ON ALL WATER AND GAS LINES AND WADE SHOCKSTOPS (NO. W5 OR EQUAL) ON GLASS FILLERS.

P9. PLUMBER TO PROVIDE FAUCETS AND DRAINS FOR JANITOR SINKS AND RESTROOM SINKS UNLESS SPECIFIED TO THE CONTRARY. CONTRACTOR SHALL SUPPLY TAIL PIECES, TRAPS, AND SINK DRAIN FITTINGS FOR KITCHEN EQUIPMENT UNLESS OTHERWISE SPECIFIED. FAUCETS AND LEVER DRAINS FOR KITCHEN EQUIPMENT FURNISHED BY PREMIER RESTAURANT EQUIPMENT CO. AND INSTALL BY PLUMBER UNLESS OTHERWISE SPECIFIED.

P10. PLUMBER TO PROVIDE ALL DRAIN LINES FOR SINKS, DISHWASHER, REFRIGERATION CONDENSATION, WALK IN COOLERS/FREEZERS, AND DIRECT & INDIRECT WASTE. DRAIN LINES TO BE NO SMALLER THAN STUB-OUT OF FIXTURE ITSELF AND TO BE RUN IN SUCH A MANNER AS TO NOT INTERFERE WITH EQUIPMENT.

P11. PLUMBING CONTRACTOR TO FURNISH AND/OR INSTALL PIPING AND FITTINGS, INCLUDING ALL NECESSARY SHUT-OFF VALVES, GATE VALVES, SHOCK ARRESTORS, TRAPS, TAIL PIECES, WATER LINE STRAINERS, GAS VALVES, PRESSURE REGULATORS FOR EQUIPMENT AND ETC.

P12. WATER PROVIDED TO COFFEE AND ICE MAKING EQUIPMENT MUST NOT FEED OFF WATER SOFTENERS UNLESS OTHERWISE NOTED. – SEE WATER QUALITY NOTES REGARDING STEAMERS.

P13. PLUMBER TO PROVIDE AND INSTALL AUTOMATIC GAS SHUT-OFF VALVE TO ALL COOKING EQUIPMENT. VALVE INSTALLATION TO BE COORDINATED BY PLUMBER & ELECTRICIAN WITH FIRE PROTECTION AGENCY.

P14. PLUMBING CONTRACTOR TO VERIFY MECHANICAL REQUIREMENTS FOR EXISTING EQUIPMENT AND EQUIPMENT SUPPLIED BY OTHERS OR OWNER.

P15. KITCHEN EQUIPMENT REFRIGERATION CONTRACTOR TO RUN AND EXTEND ALL INDIRECT DRAIN LINES FROM EVAPORATORS TO FLOOR SINKS AND TO INSULATE AND INSTALL HEAT TAPE ON DRAIN LINES FROM FREEZER COILS, UNLESS OTHERWISE NOTED. ALL LINES TO TERMINATE AT FLOOR SINKS WITH P-TRAPS AND AT LEAST 1" AIR GAP. (APPLIES TO WALK-IN'S ONLY)

P16. PLUMBING CONTRACTOR IS TO INSTALL QUICK DISCONNECTS AND SAFETY RESTRAINING DEVICES. PREMIER RESTAURANT EQUIPMENT CO. TO PROVIDE GAS QUICK DISCONNECT HOSES FOR MOBILE COOKING EQUIPMENT, UNLESS OTHERWISE NOTED.

P17. IF LOCATIONS OF PIPING, ETC. CAN NOT BE LOCATED AS PER PLANS BECAUSE OF BUILDING STRUCTURE, ETC., PLEASE NOTIFY PREMIER RESTAURANT EQUIPMENT CO. AT ONCE FOR CLARIFICATION.

P18. VERIFY ALL LOCAL HEALTH AND PLUMBING CODES IF WASTES SHOULD BE DIRECT OR INDIRECT.

P19. STEAM PRESSURE, IF REQUIRED, SHOWN ON ALL DRAWINGS IS FOR MINIMUM AT EQUIPMENT, NOT AT BOILER. PLUMBING CONTRACTOR TO DETERMINE PRESSURE DROPS IN LINES AS REQUIRED TO MAKE EQUIPMENT FUNCTION PROPERLY.

P20. PLUMING CONTRACTOR TO PROVIDE AND INSTALL PRESSURE REGULATORS FOR STEAM LINES, IF REQUIRED.

P21. PLUMBING CONTRACTOR, VERIFY WITH LOCAL CODES IF CLEAN WATER WASTES ARE REQUIRED TO BE RUN TO STORM SEWERS.

P22. PLUMBING CONTRACTOR TO SUPPLY GAS REGULATORS TO REGULATE GAS PRESSURE TO 6" WATER COLUMN PRESSURE FOR ALL COOKING EQUIPMENT UNLESS OTHERWISE SPECIFIED.

P23. ALL PIPING TO BE CONCEALED WITHIN WALL STUBBED OUT AT POINT OF CONNECTION.

P24. WATER CONSUMPTION FOR WATER-COOLED COMPRESSOR IS APPROXIMATELY 1.5 GPH PER 12,000 BTU'S FOR 1 TON.

P25. ALL STUB-OUTS TO BE PROPERLY SEALED TO PREVENT VERMIN INFESTATION.

P26. ALL PIPING UNDER EQUIPMENT TO BE FASTENED TO BOTTOM STRUCTURE OF EQUIPMENT TO MAXIMIZE CLEARANCE FOR CLEANING.

P27. PLUMBING CONTRACTOR TO LIGHT ALL PILOT LIGHTS ON ALL FOOD SERVICE EQUIPMENT PRIOR TO CALIBRATION AND TESTING OF EQUIPMENT BY SERVICE AGENCY.

P28. PLUMBING CONTRACTOR TO SUPPLY & INSTALL ALL MIXING VALVES FOR HAND SINKS & HOSE REELS.

VENTILATION EQUIPMENT NOTES

V1. UNLESS OTHER PROVISIONS ARE MADE AND/OR INDICATED ON PLAN, GENERAL AND/OR HVAC CONTRACTOR TO PROVIDE TEMPERED MAKE-UP AIR FOR EXHAUST HOODS IN ACCORDANCE WITH REQUIREMENTS INDICATED ON PREMIER RESTAURANT EQUIPMENT CO.'S FOODSERVICE AND/OR MECHANICAL ENGINEER'S DRAWINGS.

V2. H.V.A.C. CONTRACTOR TO PROVIDE MAKE-UP AIR SYSTEM AND HAVE SUFFICIENT CAPACITY TO MAKE UP 100% OF THE AIR BEING EXHAUSTED AND SHALL BE BALANCED TO MAKE UP 80-90% OF THAT AIR.

V3. MAKE-UP AIR SHALL BE DELIVERED IN THE PROXIMITY OF THE EXHAUST SYSTEM IN A MANNER AS NOT TO CREATE UNDUE AIR TURBULENCE IN THE WORK AREA UNLESS OTHERWISE INDICATED.

V4. MAKE-UP AIR SYSTEM SHALL BE CAPABLE OF DELIVERING AIR AT 70 DEGREES F., UNLESS OTHERWISE INDICATED.

V5. GENERAL CONTRACTOR TO CUT OR PROVIDE HOLES THROUGH CEILING, ROOF AND WALL FOR DUCTS, ETC. IN ACCORDANCE WITH LOCAL FIRE AND BUILDING CODES AND IN ACCORDANCE WITH DUCT SIZES SPECIFIED BY PREMIER RESTAURANT EQUIPMENT CO.'S FOODSERVICE OR MECHANICAL ENGINEER'S DRAWINGS. GENERAL CONTRACTOR IS ALSO TO PROVIDE ALL DUCT FIRE SEPARATIONS, ENCLOSURES, WRAPPINGS, ETC. AS MAY BE REQUIRED BY LOCAL BUILDING AND FIRE CODES.

V6. IN THE EVENT A COMPRESSOR ROOM IS NECESSARY, THERE SHALL BE PROVIDED TO THE ROOM, 1200 CFM OF AIR PER EVERY 1 HP OF COMPRESSOR (FOR REMOTE CONDENSER INSTALLATIONS, 400 CFM/HP) TO BE INTRODUCED TO THE COMPRESSOR ROOM AND BLOWN DOWN ACROSS THE FACE OF THE COMPRESSORS WITH PROPER GRILLS IN WALLS AND/OR DOOR TO EXHAUST SAME AMOUNT OF AIR FOR AIR COOLED COMPRESSORS ONLY. IF COMPRESSOR ROOM WILL EXCEED 100 DEGREES F. AT ANY TIME, THE AIR INTRODUCED IN MUST BE COOLED.

V7. H.V.A.C. CONTRACTOR TO VERIFY ALL HOOD EXHAUST REQUIREMENTS & DUCT SIZES WITH MECHANICAL ENGINEER'S DRAWINGS AND SPECIFICATIONS. CONTACT MECHANICAL ENGINEER(S) WITH CONFLICTING INFORMATION FOR RESOLUTION.

V8. HVAC CONTRACTOR IS TO PROVIDE DUCT WORK, FANS, VOLUME DAMPERS, BACKDRAFT DAMPERS FOR VENTILATORS AND DISHWASHER EXHAUST, CONNECT AT 6" ABOVE FINISHED CEILING UNLESS OTHERWISE INDICATED. FINAL CONNECTIONS BY H.V.A.C. CONTRACTOR.

V9. GENERAL CONTRACTOR TO PROVIDE SPRINKLERS IN ALL DUCT WORK AS REQUIRED BY LOCAL CODES. ANY FLOW VALVES OR TAMPER VALVES REQUIRED BY CODE FOR DUCT SPRINKLING TO BE PROVIDED BY SPRINKLER CONTRACTOR.

V10. ALL EXHAUST HOODS, UNLESS NOTED OTHERWISE, ARE SUPPLIED BY PREMIER, AND INSTALLED BY THE GENERAL CONTRACTOR.

V11. ALL CONTROLS FOR FANS AND MAKE-UP AIR BY HVAC UNLESS NOTED OTHERWISE.

ELECTRICAL EQUIPMENT NOTES

E1. THE WORK PERFORMED UNDER THE ELECTRICAL CONTRACT SHALL BE IN FULL ACCORDANCE WITH THE LATEST CODES, RULES AND REGULATIONS OF THE LOCAL AND/OR STATE ORDINANCES, HEALTH DEPARTMENT, FIRE MARSHALL OR ANY JURISDICTIONAL AUTHORITY.

E2. ELECTRICAL OUTLETS AND CONNECTIONS SHOWN ON THIS PLAN ARE FOR FIXTURES AND EQUIPMENT SHOWN ON PREMIER RESTAURANT EQUIPMENT CO.'S PLANS ONLY. SEE ARCHITECT'S AND ELECTRICAL ENGINEER'S PLANS FOR OTHER BUILDING ELECTRICAL REQUIREMENTS.

E3. ALL HORIZONTAL DIMENSIONS SHOWN ARE CUMULATIVE FROM FINISHED FACE OF WALLS OR FROM CENTERLINE OF ELECTRICAL BOX TO CENTERLINE OF ELECTRICAL BOX.

E4. ALL VERTICAL DIMENSIONS ARE FROM FINISHED FLOOR TO CENTERLINE OF ELECTRICAL BOX.

E5. ALL "STUB-UP" INDICATED, TO STUB-UP A MAXIMUM OF 5" ABOVE FINISHED FLOOR OR CONCRETE BASE BUT NOT TO INTERFERE WITH THE INSTALLATION OF FIXTURES.

E6. THE SYMBOLS ON THE ELECTRICAL PLAN ARE TO INDICATE THE LOCATION AND TYPE OF CONNECTION ONLY. ELECTRICAL CONTRACTOR TO PROVIDE CIRCUITS AND CONDUIT RUNS AS REQUIRED. PLANS ARE PROVIDED FOR THE SOLE PURPOSE OF INDICATING THE LOCATIONS OF ROUGH-IN AND TYPE OF CONNECTION FOR EQUIPMENT AND ELECTRICAL LOAD. SUB-CONTRACTORS MUST COMPLY WITH ALL CODES RELATED TO THE INSTALLATION, WIRING AND HOOK-UP OF EQUIPMENT. WHERE SYMBOLS ARE INDICATED FOR A SOLID CONNECTION, A 6'-0" SECTION OF SEALTIGHT FLEX CONDUIT SHOULD BE STUBBED OUT AT THE PROPER LOCATIONS AND SHALL BE CONNECTED TO "J" BOXES LOCATED IN A CONVENIENT POSITION. IF LOCAL CODES DO NOT PERMIT THIS METHOD, PLEASE CONTACT DESIGNER OR EQUIPMENT CONTRACTOR.

E7. ELECTRICAL CONTRACTOR TO PROVIDE CAPS AND CORDS FOR ALL ITEMS THAT ARE NOT STANDARD WITH MANUFACTURER, AND SHORTEN ANY CORDS AS REQUIRED, I.E., FRYERS, TOASTER, BUN WARMERS, WARMING CABINETS, ETC. REFER TO KITCHEN EQUIPMENT CONTRACTOR SPECIFICATION BOOK AND DRAWING SCHEDULE FOR EQUIPMENT REQUIREMENTS.

E8. MOTOR(S) SUPPLIER TO PROVIDE THERMAL OVERLOAD PROTECTION AND MAGNETIC STARTERS. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL REQUIRED DISCONNECTS FOR ALL MOTORS. ALL SYSTEMS ELECTRICAL HOOK-UP BY ELECTRICAL CONTRACTOR.

E9. ELECTRICAL CONTRACTOR TO CONNECT ALL ELECTRICAL EQUIPMENT AND FIXTURES AND DO ANY INTERNAL WIRING OF FIXTURES AT FIELD JOINTS. REFER TO KITCHEN EQUIPMENT CONTRACTOR SHOP DRAWINGS & SPECIFICATION BOOK FOR DRAWING SCHEDULE AND EQUIPMENT REQUIREMENTS.

E10. ELECTRICAL CONTRACTOR TO SIZE ALL ELECTRICAL JUNCTION BOXES, REFRIGERATION PULL BOXES, CONDUIT AND ELECTRICAL CONVENIENCE OUTLETS LOCATED IN WALL. FIXTURE FABRICATOR TO LOCATE ALL CONVENIENCE OUTLETS AND SWITCHES WHEN THEY ARE PART OF FIXTURE, BUT INTERNAL WIRING FOR SUCH BOXES TO BE INSTALLED AND SUPPLIED BY ELECTRICAL CONTRACTOR. WHEREVER ACCESS IS NOT AVAILABLE FOR THE ELECTRICAL FIXTURE, FABRICATOR IS TO INSTALL SUITABLE CONDUIT FOR THE RUNNING OF SUCH LINES. ELECTRICAL CONTRACTOR TO PROVIDE AND FIELD MOUNT ALL JUNCTION BOXES LOCATED IN ACCESS AREAS OF FIXTURES.

E11. ELECTRICAL CONTRACTOR TO PROVIDE POWER AT COMPRESSOR AREAS FOR COMPRESSORS AS LISTED ON KITCHEN EQUIPMENT SCHEDULE AND REFRIGERATION PLAN. IF AUTOMATIC DEFROST SYSTEMS ARE USED FOR WALK-IN COOLER(S)/FREEZER(S), PROVIDE 4-WIRE SERVICE FROM COMPRESSOR(S) TO UNIT. IF COMPRESSOR(S) ARE LOCATED OUTSIDE, ALL ELECTRICAL SHALL BE WEATHER PROOF. ELECTRICIAN TO PROVIDE CONTROL WIRING FOR SOLENOIDS AT COILS. ALL REFRIGERATION ELECTRICAL HOOK-UPS BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.

E12. ELECTRICAL CONTRACTOR TO PROVIDE POWER ON ROOF (WEATHER PROOF) AND CONNECT EXHAUST FANS AND MAKE-UP AIR FANS AND LOCATE SWITCHES WITH RED PILOT LIGHT WHERE SHOWN ON ELECTRICAL PLAN OR AS DIRECTED BY VENTILATION CONTRACTOR. ALL EXHAUST FANS AND MAKE-UP AIR FAN(S) FOR ANY ONE HOOD TO BE SIMULTANEOUSLY TURNED ON UNLESS OTHERWISE INDICATED.

E13. ELECTRICAL CONTRACTOR TO WIRE EXHAUST AND MAKE-UP FANS TO BREAKER UNLESS OTHERWISE SPECIFIED.

E14. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL SWITCHES FOR HOOD LIGHTS AND PROVIDE LIGHT BULBS AS REQUIRED.

E15. ELECTRICAL CONTRACTOR TO SUPPLY LIGHT BULBS FOR ANY EQUIPMENT AS REQUIRED.

E16. ELECTRICAL CONTRACTOR TO CONNECT LIGHTS, BLOWER COILS, DOOR HEATERS FOR WALK-IN COOLER(S)/FREEZER(S) AND PROVIDE LIGHT BULBS FOR LIGHTING FIXTURES. MOUNT LIGHT FIXTURES WHERE REQUIRED. NO WALK-IN INTERIOR CONDUIT RUNS ARE ALLOWED.

E17. ELECTRICAL CONTRACTOR TO PROVIDE STAINLESS STEEL COVER PLATES FOR ANY FULLY OR PARTIALLY EXPOSED PULL BOXES AND/OR ELECTRICAL ACCESS BOXES AND TO PROVIDE STAINLESS STEEL COVER PLATES FOR ALL CONVENIENCE OUTLETS.

E18. ELECTRICAL CONTRACTOR TO PROVIDE A SEPARATE CIRCUIT(S) WITH ISOLATED GROUND(S) FOR CASH REGISTER(S) AND/OR PRE-CHECK SYSTEM(S), PROVIDE SEPARATE OPEN CONDUIT AND JUNCTION BOXES FOR DATA LINES FOR ABOVE SYSTEM(S). PROVIDE A SEPARATE ELECTRICAL PANEL IF REQUIRED. VERIFY ALL SYSTEM REQUIREMENTS WITH OWNER AND/OR SYSTEMS SUPPLIER.

E19. ELECTRICAL CONTRACTOR TO VERIFY ELECTRICAL REQUIREMENTS WITH EXISTING EQUIPMENT AND EQUIPMENT SUPPLIED BY OTHERS AND/OR OWNER.

E20. ELECTRICAL CONTRACTOR TO WIRE MAIN GAS SHUT-OFF VALVE TO FIRE PROTECTION SYSTEM (IN-HOUSE OR REMOTE LOCATION), VENTILATOR EXHAUST AND MAKE-UP AIR FANS TO SHUT OFF GAS IN CASE OF FIRE.
VERIFY WITH LOCAL FIRE CODES HAVING JURISDICTION. COORDINATE WITH PLUMBING CONTRACTOR & FIRE PROTECTION CONTRACTOR.

E21. ELECTRICAL CONTRACTOR TO WIRE LIMIT SWITCH TO DISHWASHER CONVEYOR DRIVE IF REQUIRED.

E22. ELECTRICAL CONTRACTOR TO SUPPLY CONTACTOR OR LOW VOLTAGE SHUT-OFF FOR ELECTRICAL COOKING EQUIPMENT. INTER-WIRE WITH FIRE PROTECTION SYSTEM AND/OR REMOTE MONITORING SYSTEM TO SHUT OFF ELECTRIC COOKING EQUIPMENT IN CASE OF FIRE. VERIFY WITH LOCAL FIRE CODES.

E23. ELECTRICAL CONTRACTOR TO MAKE ALL FINAL CONNECTIONS TO EQUIPMENT AFTER EQUIPMENT IS IN PLACE.

E24. ANY ACCESS COVER REMOVED FOR PURPOSES OF MAKING INTERNAL FIELD JOINT ELECTRICAL CONNECTIONS MUST BE REPLACED WITH ALL FASTENERS INTACT.

E25. ELECTRICAL CONTRACTOR TO MOUNT SOLENOID(S) FOR REMOTE REFRIGERATED TABLES AS REQUIRED. SOLENOID(S) ARE SHIPPED LOOSE WITH EQUIPMENT. ELECTRICAL HOOK-UP BY ELECTRICAL CONTRACTOR.

E26. ELECTRICAL CONTRACTOR TO FIELD MOUNT SUPPLIED EQUIPMENT SWITCHES OR CONTROL PANELS AS REQUIRED. SEE KITCHEN EQUIPMENT CONTRACTOR SPECIFICATION BOOK AND DRAWING SCHEDULE FOR EQUIPMENT REQUIREMENTS.

E27. ELECTRICAL CONTRACTOR TO SUPPLY "MUD RING" EXTENSIONS ON ELECTRICAL BOXES AS REQUIRED THRU STAINLESS STEEL WALL PANELS UNDER EXHAUST HOODS AND EQUIPMENT BACKSPLASHES.

NOTES FOR ALL CONTRACTORS

A1. THE EQUIPMENT SPECIFICATION BOOKLET IS AN INTEGRAL PART OF THESE PLANS. THIS BOOK SHOULD BE USED TO INTERPRET PLAN REQUIREMENTS. IT CONTAINS INFORMATION THAT WILL AFFECT YOUR BID.

A2. ALL BIDDERS SHALL FULLY INSPECT THE SITE AND EXISTING CONDITIONS INCLUDING ALL UTILITY SERVICES AND EXISTING ELECTRICAL WIRING AND PLUMBING PRIOR TO SUBMISSION OF BID.

A3. ALL BIDDERS SHALL VERIFY ALL DIMENSIONS AND REQUIREMENTS, BEFORE ANY WORK BEGINS AND NOTE ANY DISCREPANCIES IN WRITING TO PREMIER RESTAURANT EQUIPMENT CO. PROCEEDING WITH THE WORK SHALL CONSTITUTE ACCEPTANCE BY THE BIDDER THAT DIMENSIONS AND CONDITIONS ARE CORRECT AND THE BIDDER SHALL ASSUME FULL RESPONSIBILITY FOR THE SAME, AND THE FOLLOWING:

- REPAIRING ANY DAMAGE CAUSED BY THEIR WORK.
- REPLACING ANY ACCESS PANELS REMOVED FOR THE PURPOSE OF MAKING UTILITY CONNECTIONS.
- RETURNING EQUIPMENT MOVED TO MAKE UTILITY CONNECTIONS TO ORIGINAL LOCATION.

SPECIAL NOTE:

THE ABOVE INFORMATION COVERS A WIDE ARRAY OF KITCHEN APPLICATIONS. THESE NOTES SUPPLEMENT THE UNDERLYING DRAWINGS, EQUIPMENT SPECIFICATION BOOKLET AND ANY OTHER ARCHITECTURAL / ENGINEERING / OWNER SUPPLIED INFORMATION. PREMIER RESTAURANT EQUIPMENT CO. ASSUMES NO RESPONSIBILITY FOR RELIANCE BY ANY PARTY FOR INFORMATION CONTAINED IN THESE NOTES. ANY QUESTIONS REGARDING THESE NOTES SHOULD BE DIRECTED TO PREMIER RESTAURANT EQUIPMENT CO.

DRAWING INDEX

SHEET #	DESCRIPTION
FS-0.0	FOODSERVICE COVER SHEET
FS-1.0	FOODSERVICE FIXTURE PLAN
FS-2.0	FOODSERVICE ROUGH-IN SCHEDULE
FS-2.1	FOODSERVICE DETAILS
FS-3.0	FOODSERVICE MECHANICAL ROUGH-IN PLAN
FS-4.0	FOODSERVICE ELECTRICAL ROUGH-IN PLAN
FS-5.0	FOODSERVICE SPECIAL CONDITIONS PLAN

Comm. No.
1758

ISSUE DATE
05/31/2017 – DESIGN DEVELOPMENT SET
07/10/2017 – BID SET

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Foodservice Designer
premier
Exceptional Design ■ Legendary Results
7120 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-8800 ■ fax: 763-544-7949
premiereq.com

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Foodservice Cover Sheet

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By:
Title: Architect Date:
Registration Number:

Drawing No.
fs0.0

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL. (612) 904-1332 • FAX (612) 904-7366

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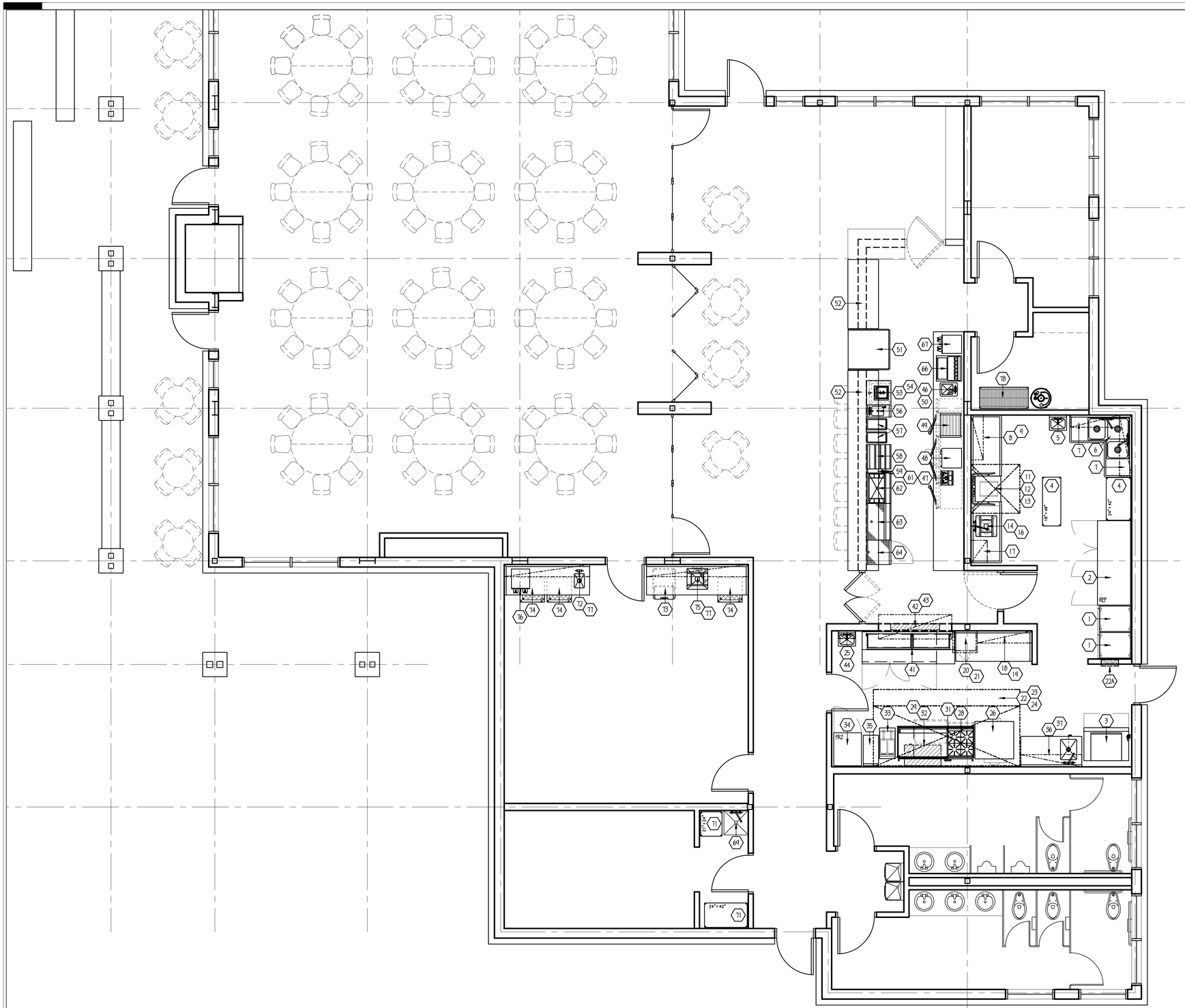

EQUIPMENT SCHEDULE

ITEM NO	QTY	EQUIPMENT	SUPPLIED BY	EQUIPMENT REMARKS
1	2	CABINET, HOLDING/PROOFING	PREMIER	
2	1	REFRIGERATOR, REACH-IN	PREMIER	
3	1	ICE MAKER W/ BIN	PREMIER	WITH WATER FILTER
4	2	SHELVING UNIT	PREMIER	
5	1	HAND SINK	PREMIER	
6	1	3-COMPARTMENT SINK	PREMIER	
7	2	WALL SHELF	PREMIER	
8	1	CLEAN DISHTABLE	PREMIER	
9	2	WALL SHELF	PREMIER	
10	–	SPARE NO.	–	
11	1	CONDENSATE HOOD	PREMIER	RECEIVING & INSTALLATION BY GC
12	1	EXHAUST FAN	PREMIER	
13	1	WAREWASHER, DOOR-TYPE	PREMIER	HIGH TEMP W/ BOOSTER
14	1	SOILED DISHTABLE	PREMIER	WITH PRE-RINSE FAUCET
15	–	SPARE NO.	–	
16	1	DISPOSER, GARBAGE – 2 H.P.	PREMIER	
17	1	DISHTABLE SORTING SHELF	PREMIER	
18	1	WORK TABLE	PREMIER	
19	1	WALL SHELF	PREMIER	
20	1	OVEN, MICROWAVE	PREMIER	
21	1	MICROWAVE SHELF	PREMIER	
22	1	EXHAUST HOOD WITH MAKE-UP PLENUM	PREMIER	RECEIVING & INSTALLATION BY GC
22A	1	EXHAUST HOOD CONTROL PANEL	PREMIER	
23	1	EXHAUST FAN	PREMIER	
24	1	MAKE UP AIR	PREMIER	
25	1	FIRE PROTECTION SYSTEM – WET CHEMICAL TYPE	PREMIER	
26	1	OVEN, CONVECTION, GAS – DOUBLE-DECK	PREMIER	
27	–	SPARE NO.	–	
28	1	HOT PLATE, COUNTER TOP	PREMIER	
29	1	GRIDDLE, GAS	PREMIER	
30	–	SPARE NO.	–	
31	1	REFRIGERATOR, SHORTY EQUIPMENT STAND	PREMIER	SELF-CONTAINED REFRIGERATION
32	1	CHEESEMELTER	PREMIER	WALL-MOUNTED
33	1	FRYER, DEEP FAT, GAS	PREMIER	
34	1	FREEZER, REACH-IN	PREMIER	
35	1	SET OFF TABLE	PREMIER	
36	1	WORKTABLE WITH SINK	PREMIER	
37	4	WALL SHELF	PREMIER	
38	–	SPARE NO.	–	
39	–	SPARE NO.	–	
40	–	SPARE NO.	–	
41	1	REFRIGERATED PREP. TABLE – 91"	PREMIER	SELF-CONTAINED REFRIGERATION
42	1	DOUBLE S/ST PASS SHELF	PREMIER	
43	1	HEAT LAMP	PREMIER	
44	1	HAND SINK	PREMIER	
45	–	SPARE NO.	–	
46	1	BACK COUNTER	OTHERS (G.C.)	
47	1	BACK BAR COOLER/BEER DISPENSER	PREMIER	SELF-CONTAINED REFRIGERATION
48	1	DISPLAY CASE, HEATED	PREMIER	
49	1	HOT DOG GRILL	PREMIER	
50	1	DROP-IN DUMP SINK	PREMIER	
51	1	COMBO NON-REFRIGERATED/REFRIGERATED SERVICE CASE	PREMIER	
52	1	BAR TOP	OTHERS	
53	1	UNDERBAR CASH STAND	PREMIER	
54	1	POS MACHINE	OWNER'S VENDOR	
55	–	SPARE NO.	–	
56	1	UNDERBAR HANDSINK	PREMIER	
57	2	SLIM JIM	OTHERS	
58	1	UNDERBAR LIQUOR DISPLAY – 24"	PREMIER	
59	1	SODA CHASE & GUN RACK	PREMIER	
60	–	SPARE NO.	–	
61	1	SODA GUN	OWNER'S VENDOR	
62	1	UNDERBAR ICE CHEST	PREMIER	WITH SPEEDRAIL
63	1	DRAINBOARD	PREMIER	WITH SPEEDRAIL
64	1	CABINET DRAINBOARD	PREMIER	
65	–	SPARE NO.	–	
66	1	SODA & ICE DISPENSER	OWNER'S VENDOR	
67	1	COFFEE BREWER	OWNER'S VENDOR	
68	–	SPARE NO.	–	
69	1	MOP SINK WITH FAUCET	OTHERS	
70	–	SPARE NO.	–	
71	2	SHELVING UNIT	PREMIER	
72	1	BEVERAGE COUNTER	PREMIER	WITH HAND SINK
73	1	ICE TRANSPORT CART	PREMIER	
74	5	DOLLY, DISHRACK	PREMIER	
75	1	GLASS FILLER STATION	PREMIER	
76	1	COFFEE BREWER	OWNER'S VENDOR	
77	4	WALL SHELF	PREMIER	
78	1	SODA SYSTEM	OWNER'S VENDOR	

Comm. No.
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ISSUE DATE
05/31/2017 – DESIGN DEVELOPMENT SET
07/10/2017 – BID SET

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Foodservice Designer
premier
Exceptional Design ■ Legendary Results
7120 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-8800 ■ fax: 763-544-7949
premiereq.com

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Foodservice Fixture Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By:
Title: Architect Date:
Registration Number:

Drawing No.
fs1.0

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7886

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EQUIPMENT SCHEDULE

ITEM NO	QTY	EQUIPMENT	SUPPLIED BY	EQUIPMENT REMARKS	VOLTS	PHASE	KW	AMPS	HP	DIRECT PLUG	NEMA	ELECTRICAL AFF (IN)	ELECTRICAL REMARKS	DIRECT DRAIN SIZE (IN)	DIRECT-DRAIN AFF (IN)	INDIR DRAIN SIZE (IN)	INDIRECT-DRAIN AFF (IN)	HOT WATER SIZE (IN)	HOT WATER GPH	HOT-WATER AFF (IN)	COLD WATER SIZE (IN)	COLD-WATER AFF (IN)	GAS SIZE (IN)	MBTUH	GAS AFF (IN)	PLUMBING REMARKS	HVAC MAKE-UP DUCT SIZE (IN)	HVAC MAKE-UP CFM	HVAC MAKE-UP SPWG	HVAC EXHAUST DUCT SIZE (IN)	HVAC EXHAUST CFM	HVAC EXHAUST SPWG	HVAC REMARKS
1	2	CABINET, HOLDING/PROOFING	PREMIER		120			16.7		X	5-20P	18"																					
2	1	REFRIGERATOR, REACH-IN	PREMIER		120	1		6.5		X	5-15P	80"																					
3	1	ICE MAKER W/ BIN	PREMIER	WITH WATER FILTER	240	1		10.8		X		72"				2) 3/4"	RFD				1/2"	84"				NOTE MC; PC TO RUN IW'S TO FD AS REQUIRED							
4	2	SHELVING UNIT	PREMIER																														
5	1	HAND SINK	PREMIER											1-1/2"	21"			1/2"		25"	1/2"	25"				PC TO INSTALL SINK, RUN WATER TO FAUCET, WASTE TO SINK AS REQUIRED							
6	1	3-COMPARTMENT SINK	PREMIER											3) 1-1/2"	15"			2) 1/2"		18"	2) 1/2"	18"				PC TO RUN WATER TO FAUCETS, WASTE TO SINKS							
7	2	WALL SHELF	PREMIER																														
8	1	CLEAN DISHTABLE	PREMIER																														
9	2	WALL SHELF	PREMIER																														
10	-	SPARE NO.	-																														
11	1	CONDENSATE HOOD	PREMIER	RECEIVING & INSTALLATION BY GC									SEE NOTE EG & MANUFACTURER'S SHOP DRAWINGS																			10" DIA.	800	.195"	SEE NOTE EG & MANUFACTURER'S SHOP DRAWINGS
12	1	EXHAUST FAN	PREMIER		120	1		6.0		X		NOTE	VERIFY LOCATION WITH ARCHITECT; EC TO INTERCONNECT TO DISHMACHINE AS REQUIRED																					
13	1	WAREWASHER, DOOR-TYPE	PREMIER	HIGH TEMP W/ BOOSTER	240	1	14.6	83.6	3/4	X		62"	EC TO RUN TO UNIT AS REQ'D	2"	6"			3/4"	52.2	62"						NOTE MD, ME, MF, PC TO RUN WATER AND WASTE TO DISHMACHINE/BOOSTER AS REQ'D							
14	1	SOILED DISHTABLE	PREMIER	WITH PRE-RINSE FAUCET														1/2"		18"	3/4"	18"				PC TO RUN WATER TO FAUCET & TEE CW TO DISPOSER (#16) AS REQ'D.							
15	-	SPARE NO.	-																														
16	1	DISPOSER, GARBAGE - 2 H.P.	PREMIER		120/240	1		17.4	2.0	X		24"	PC RUN TO MANUAL-REVERSING SW - SEE NOTE EC	2"	10"						1/2"	TEE				SEE NOTE MA, MB & DETAIL - RUN WATER & WASTE TO DISPOSER AS REQ'D							
17	1	DISHTABLE SORTING SHELF	PREMIER																														
18	1	WORK TABLE	PREMIER		120			20C		X		48"	EC TO PROVIDE CONVENIENCE DR ABOVE COUNTER WHERE SHOWN																				
19	1	WALL SHELF	PREMIER																														
20	1	OVEN, MICROWAVE	PREMIER		120	1	1.6	13.0		X	5-15	72"																					
21	1	MICROWAVE SHELF	PREMIER																														
22	1	EXHAUST HOOD WITH MAKE-UP PLENUM	PREMIER	RECEIVING & INSTALLATION BY GC	120	1		20C		X		120"/48"	FOR LIGHTS - SEE NOTE EH & MANUFACTURER'S SHOP DRAWINGS																TBD	TBD	TBD	TBD	TBD	TBD	RECEIVING & INSTALLATION BY GC - SEE NOTE EH & MANUFACTURER'S SHOP DRAWINGS
22A	1	EXHAUST HOOD CONTROL PANEL	PREMIER		120	1		15C		X		NOTE	EC TO WIRE FROM JB TO CONTROL (VFY. HEIGHT), MUA, EXHAUST FAN, FIRE SUPPRESSION, DUCT SENSORS & THERMOSTAT AS REQUIRED; SEE MANUF. SHOP DRAWINGS																				
23	1	EXHAUST FAN	PREMIER		TBD	1		TBD		X		NOTE	VERIFY LOCATION WITH ARCHITECT																				
24	1	MAKE UP AIR	PREMIER		TBD	1		TBD		X		NOTE	VERIFY LOCATION WITH ARCHITECT										TBD	TBD	NOTE	VERIFY LOCATION WITH ARCHITECT							
25	1	FIRE PROTECTION SYSTEM - WET CHEMICAL TYPE	PREMIER		120	1		20C		X		CLG.	SEE FIRE NOTES, DETAIL & MANUFACTURER'S SHOP DRAWINGS																				
26	1	OVEN, CONVECTION, GAS - DOUBLE-DECK	PREMIER		2) 120	1		6.0	1/3	X	5-15P	24"/48"	NOTE EJ. 6 FOOT CORD W/PLUG PROVIDED - ELECTRICAL PER SECTION, PROVIDE 2 DRS										3/4"	2) 50	18"	NOTE MG; PC TO FIELD MANIFOLD; NATURAL GAS 7" W.C.							
27	-	SPARE NO.	-																														
28	1	HOT PLATE, COUNTER TOP	PREMIER																				3/4"	132	18"	SEE NOTE MG. NATURAL GAS @ 4.0" W.C.							
29	1	GRIDDLE, GAS	PREMIER																				3/4"	120	18"	NOTE MG; 7" W.C. - NAT. GAS							
30	-	SPARE NO.	-																														
31	1	REFRIGERATOR, SHORTY EQUIPMENT STAND	PREMIER	SELF-CONTAINED REFRIGERATION	120	1		4.8	1/4	X	5-15P	24"	NOTE EJ - 8'''' CORD W/PLUG PROVIDED																				
32	1	CHEESEMELTER	PREMIER	WALL-MOUNTED																			1/2"	40	76"	4" W.C. NAT GAS - PC TO HARD-PIPE AS REQ'D.							
33	1	FRYER, DEEP FAT, GAS	PREMIER		120	1		20C		X		24"	NOTE EJ; EC TO PROVIDE CONV. DR IN CASE OWNER USES FILTER - FRYER REQUIRES NO ELEC.										3/4"	110	18"	SEE NOTE MG & DETAIL RI-1000. NAT. GAS. FURNISH & INSTALL REGULATOR TO PROVIDE 4" W.C. AT BURNER MANIFOLD.							
34	1	FREEZER, REACH-IN	PREMIER		120	1		7.2		X	5-15P	82"																					
35	1	SET OFF TABLE	PREMIER																														
36	1	WORKTABLE WITH SINK	PREMIER		120	1		20C		X		48"	EC TO PROVIDE CONVENIENCE DR ABOVE COUNTER WHERE SHOWN	2"	15"			1/2"		18"	1/2"	18"				PC TO RUN WATER TO FAUCET & WASTE TO SINK AS REQUIRED							
37	4	WALL SHELF	PREMIER																														
38	-	SPARE NO.	-																														
39	-	SPARE NO.	-																														
40	-	SPARE NO.	-																														
41	1	REFRIGERATED PREP. TABLE - 91"	PREMIER	SELF-CONTAINED REFRIGERATION	120	1		6.5	1/2	X	5-20P	18"	8' CORD W/ PLUG PROVIDED																				
42	1	DOUBLE S/ST PASS SHELF	PREMIER																														
43	1	HEAT LAMP	PREMIER		120	1	1.1	9.2		X		64"	EC TO WIRE FROM JB TO CONTROL AS REQUIRED																				
44	1	HAND SINK	PREMIER											1-1/2"	21"			1/2"		25"	1/2"	25"				PC TO INSTALL SINK, RUN WATER TO FAUCET, WASTE TO SINK AS REQUIRED							
45	-	SPARE NO.	-																														
46	1	BACK COUNTER	OTHERS (G.C.)		120	1		20C		X		54"	EC TO PROVIDE CONVENIENCE DR'S ABOVE COUNTER WHERE SHOWN																				
47	1	BACK BAR COOLER/BEER DISPENSER	PREMIER	SELF-CONTAINED REFRIGERATION	120	1		5.7	1/3	X	5-15P	12"	6 FOOT CORD W/ PLUG PROVIDED			3/4"	RFD									PC TO RUN IW TO FD							
48	1	DISPLAY CASE, HEATED	PREMIER		120	1	1.4	11.6		X	5-15P	54"																					
49	1	HOT DOG GRILL	PREMIER		120	1	1.2	10.0		X	5-15P	54"																					
50	1	DROP-IN DUMP SINK	PREMIER											1-1/2"	15"			1/2"		18"	1/2"	18"				PC TO RUN WATER TO FAUCET & WASTE TO SINK AS REQUIRED							
51	1	COMBO NON-REFRIGERATED/REFRIGERATED SERVICE CASE	PREMIER		120	1		12.0		X	5-15P	12"																					
52	1	BAR TOP	OTHERS																														
53	1	UNDERBAR CASH STAND	PREMIER																														
54	1	POS MACHINE	OWNER'S VENDOR		120	1		3.0		X		18"	SEE NOTE EL & EM - EC TO PROVIDE SYSTEM SERVICES AS REQ'D																				
55	-	SPARE NO.	-																														
56	1	UNDERBAR HANDSINK	PREMIER											1-1/2"	12"			1/2"		12"	1/2"	12"				PC TO RUN WATER TO FAUCET, WASTE TO SINK AS REQ'D.							
57	2	SLIM JIM	OTHERS		120	1		20C		X		24"	EC TO PROVIDE DR'S FOR CONVENIENCE & UNDERBAR LIGHTING WHERE SHOWN																				
58	1	UNDERBAR LIQUOR DISPLAY - 24"	PREMIER																														
59	1	SODA CHASE & GUN RACK	PREMIER													1/2"	RFD									PC TO RUN IW TO FD, SLEEVE FOR BEVERAGE LINES BY PC, COORD W/SODA VENDOR							
60	-	SPARE NO.	-																														
61	1	SODA GUN	OWNER'S VENDOR		120	1		20C		X		12"	FOR CARBONATOR AT BAR, IF REQ'D - VERIFY WITH OWNER'S VENDOR																				
62	1	UNDERBAR ICE CHEST	PREMIER	WITH SPEEDRAIL														3/4"	RFD							PC TO RUN IW TO FD							
63	1	DRAINBOARD	PREMIER	WITH SPEEDRAIL														1-1/2"	RFD							PC TO RUN IW TO FD							
64	1	CABINET DRAINBOARD	PREMIER															1-1/2"	RFD							PC TO RUN IW TO FD							
65	-	SPARE NO.	-																														
66	1	SODA & ICE DISPENSER	OWNER'S VENDOR		120	1		20 C		X	5-20P	10/48"	PROVIDE SERVICE ABOVE & BELOW COUNTER - VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR										2) 3/4"	RFD									PROVIDE SERVICE ABOVE & BELOW COUNTER - VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR - SLEEVES FOR SODA LINES AS SHOWN
67	1	COFFEE BREWER	OWNER'S VENDOR		120/240	1	6.0	28.8		X		48"	REQUIRES 3-WIRE PLUS GROUND - VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR																				
68	-	SPARE NO.	-																														
69	1	MOP SINK WITH FAUCET	OTHERS											2"	0"			1/2"		30"	1/2"	30"				SUPPLIED AND INSTALLED BY PLUMBING CONTRACTOR - VERIFY ALL REQUIREMENTS							
70	-	SPARE NO.	-																														
71	2	SHELVING UNIT	PREMIER																														
72	1	BEVERAGE COUNTER	PREMIER	WITH HAND SINK	120	1		20C		X		48"	EC TO PROVIDE CONVENIENCE DR'S ABOVE COUNTER WHERE SHOWN	1-1/2"	15"			1/2"		18"	1/2"	18"				PC TO RUN WATER TO FAUCET & WASTE TO SINK AS REQUIRED							
73	1	ICE TRANSPORT CART	PREMIER																														
74	5	DOLLY, DISHRACK	PREMIER																														
75	1	GLASS FILLER STATION	PREMIER		120	1		20C		X		48"	EC TO PROVIDE CONVENIENCE DR'S ABOVE COUNTER WHERE SHOWN	2"	15"						1/2"	18"				PC TO RUN WATER TO FAUCET & WASTE TO SINK AS REQUIRED							
76	1	COFFEE BREWER	OWNER'S VENDOR		120/240	1	6.0	28.8		X		48"	REQUIRES 3-WIRE PLUS GROUND - VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR																				
77	4	WALL SHELF	PREMIER																				1/2"	48"		VERIFY ALL REQ'MENTS WITH OWNER'S VENDOR							
78	1	SODA SYSTEM	OWNER'S VENDOR		2) 120	1		20C		X		84"	EC TO PROVIDE (2) QUAD-PLEX OUTLETS FOR CARBONATORS; VERIFY REQUIREMENTS W/OWNER'S VENDOR																				
																					1/2"	72"				VERIFY REQUIREMENTS W/OWNER'S VENDOR - SLEEVES FOR SODA LINES AS REQUIRED BY GC, COORD. WITH SODA VENDOR							

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Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Foodservice Designer
premier
Exceptional Design ■ Legendary Results
7120 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-8800 ■ fax: 763-544-7949
premiereq.com

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Foodservice Rough-In Schedule

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.

By:

Title: Architect Date:

Registration Number:

Drawing No.
fs2.0

HAGEN, CHRISTENSEN & McILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1932 • FAX (612)904-7388

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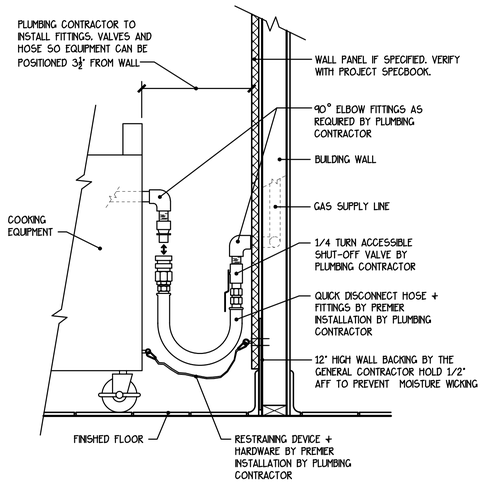

RI-1000 / KS-1 QUICK DISCONNECT DETAIL

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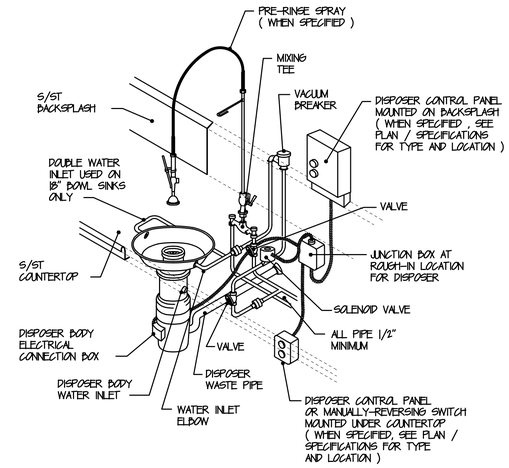

RI-1010 / KS-1 DISPOSER DETAIL

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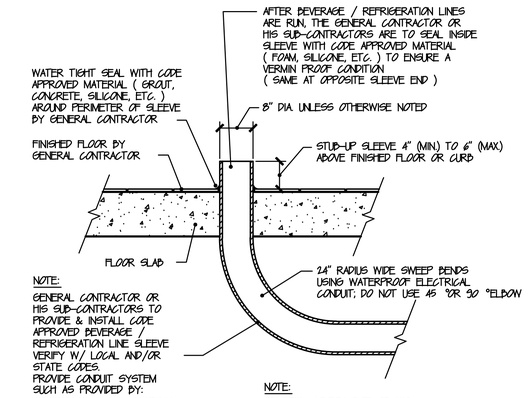

NOTE:
GENERAL CONTRACTOR OR HIS SUB-CONTRACTORS TO PROVIDE & INSTALL CODE APPROVED BEVERAGE / REFRIGERATION LINE SLEEVE VERIFY W./ LOCAL AND/OR STATE CODES.
PROVIDE CONDUIT SYSTEM SUCH AS PROVIDED BY:

BEVERAGE CHASE SYSTEMS
2321 WALCOTT STREET
FERNDALE, MI 48220
PHONE: 800-547-2810
FAX: 248-546-7567

NOTE:
GENERAL CONTRACTOR OR HIS SUB-CONTRACTORS ARE TO PROVIDE ANY REQUIRED CORE DRILLING AND SAW CUTTING FOR PENETRATIONS OR ACCESS FOR SLEEVE RUNS

GENERAL BEVERAGE / REFRIGERATION LINE NOTE:

GENERAL CONTRACTOR TO VERIFY AND COORDINATE WITH ALL BEV. SYSTEM / REFRIG. CONTRACTORS FOR ALL BEV. SYSTEM / REFRIG. INSTALLATIONS AND THEIR FINAL HOOK-UPS. ALL WORK TO CONFORM TO ALL PREVAILING LOCAL AND/OR STATE CODES.

RI-1200 / KS-1 BEVERAGE-REFRIGERATION LINE SLEEVE FLOOR PENETRATION DETAIL

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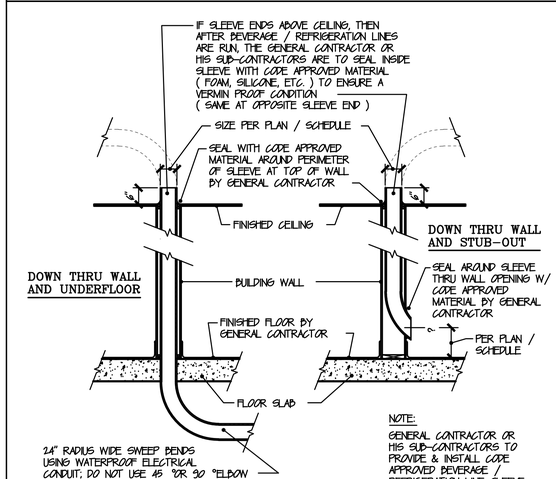

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NOTE:
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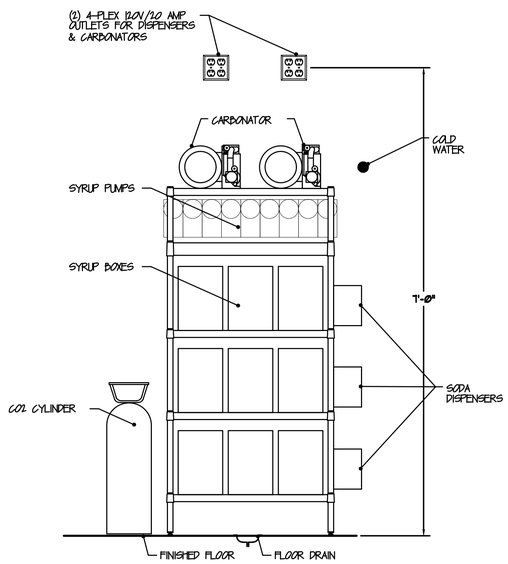
RI-1210 / KS-1 BEVERAGE-REFRIGERATION LINE SLEEVE THRU WALL DETAIL

N.T.S.



RI-1210 / KS-1 BAG-N-BOX ELEVATION

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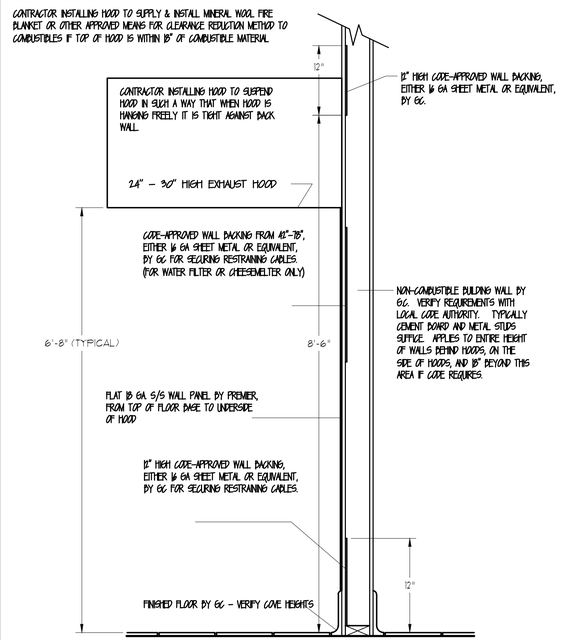

SC-1063 / KS-1 EXHAUST HOOD WALL DETAIL

@ COOKING WALLS W/ 24" - 30" HIGH HOOD & 9'-0" CEILING HEIGHT

N.T.S.

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Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
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10401 Bren Road East
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ph: 952-930-0050
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premierfsg.com

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Foodservice Details

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By:
Title: Architect Date:
Registration Number:

Drawing No.
fs2.1

HAGEN, CHRISTENSEN & MCILWAIN ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1332 • FAX (612)904-7388

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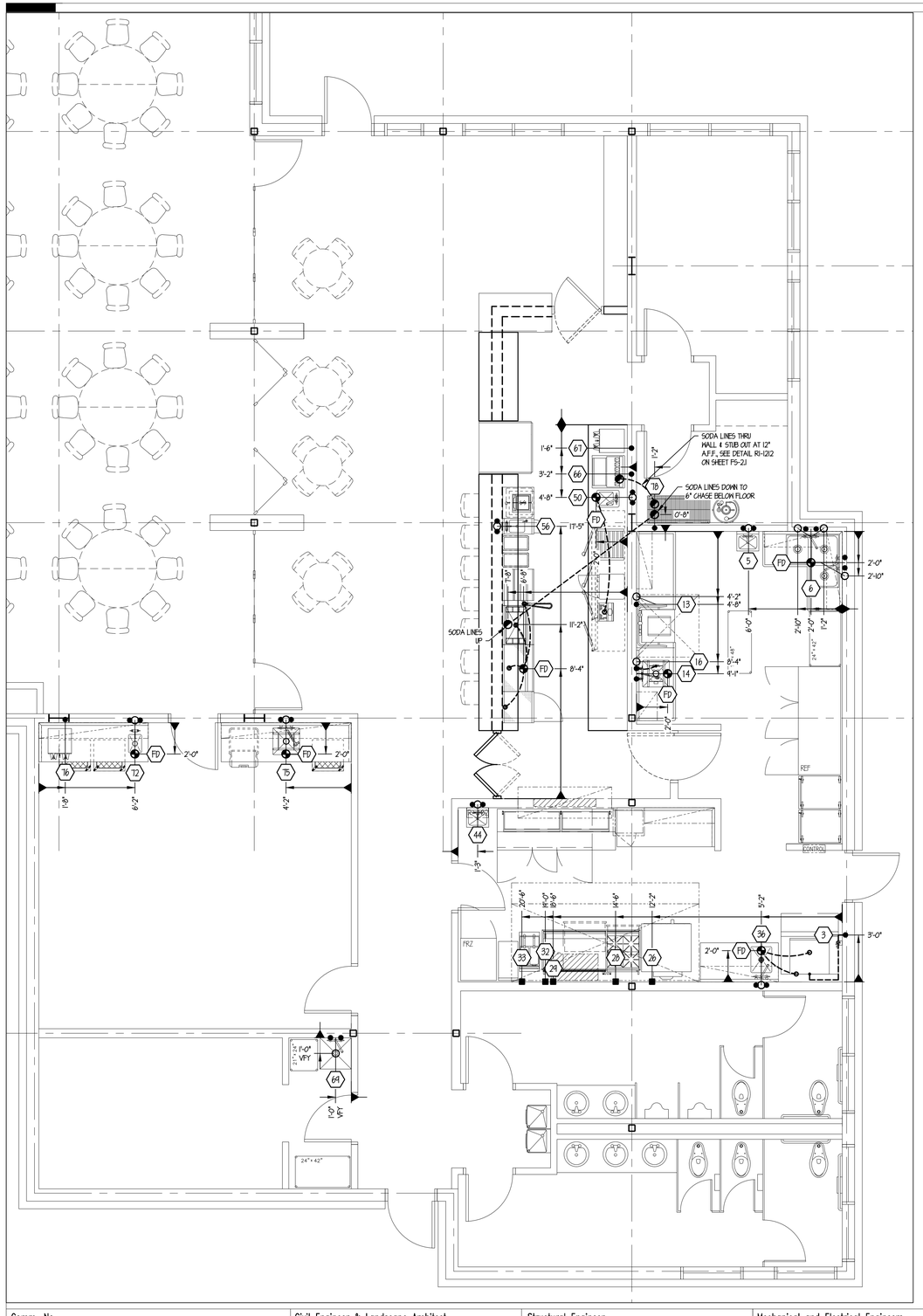

SCHEDULE MECHANICAL ROUGH-IN NOTES

MA. PLUMBING CONTRACTOR to provide and install back flow prevention device for this piece of equipment.

MB. PLUMBING CONTRACTOR to branch cold water from pre-rinse spray faucet or seperate cold water rough-in thru solenoid valve and vacuum breaker, to disposer throat, bowl or scrapping trough as shown.

MC. PREMIER will provide and the PLUMBING CONTRACTOR will install a water conditioner for this piece of equipment.

MD. Sensible and latent heat dissipation from the dishmachine are listed below. VENTILATE THE DISHROOM ACCORDINGLY.

Latent Heat	Sensible Heat
13,800 BTU/HR	5,900 BTU/HR

These values are to calculate ventilation required in ADDITION to exhaust listed in schedule. This heat is additional heat not exhausted thru the dishmachine exhaust vents.

ME. If water exceeds 5 grains of hardness, the dishmachine manufacturer recommends softened water be provided to the dishmachine and booster heater. The dishmachine will use 43 GPH of hot water and will operate approximately 12 hours per day. Verify hours of use with OWNER.

MF. This piece of equipment has special water quality requirements as set by the manufacturer. In order to minimize service problems a water treatment system (softener) is recommended when the TOTAL DISSOLVED SOLIDS (harmful concentrations of minerals) exceeds the manufactures recommended limits.

MG. PREMIER to provide and PLUMBING CONTRACTOR to install a gas quick-disconnect flexible hose for this piece of equipment. SEE DETAIL RI-1000

MH. Air cooled refrigeration equipment in an enclosed structure requires a minimum ventilation of 1,000 cfm per horsepower. Interior temperature of compressor enclosure should not exceed 90° F.

GENERAL MECHANICAL ROUGH-IN NOTES

1. High-pressure gas cannot be used. PLUMBING CONTRACTOR to regulate gas pressure to provide between 6" & 14" w.c. gas pressure before the regulator at the equipment. Then regulate the pressure down to pressure recommended by the appliance manufacturer.
2. All final connections shown on this drawing are actual requirements of the equipment and are shown in their approximate location.
3. Plumbing vent sizes and locations are to be determined by the PLUMBING CONTRACTOR.
4. Floor drains shown are for equipment use and general cleaning purposes, and are to be of the type indicated in symbols unless otherwise required by local codes.
5. PLUMBING CONTRACTOR to supply all valves, regulators, traps, tail pieces and other material required to make final connections. Stop valves shall be provided in all piping to kitchen and other equipment or fixtures ahead of operating lever handles or faucets.
6. All vertical dimensions are from finished floor to centerline of rough-in, unless noted otherwise.
7. PLUMBING CONTRACTOR to extend all indirect waste (I.W.) to floor drains or floor sinks EXCEPT walk-in refrigerator/freezer blower coil drain lines which will be extended to floor drains by REFRIGERATION CONTRACTOR. All indirect waste lines to be run in accordance with all local codes.
8. PLUMBING ENGINEER shall determine main gas line drops, sizes and routing to connection points. All gas rough-ins shown are connection points only.
9. PLUMBING CONTRACTOR to provide all gas fired equipment with individual manual shut-off valves.
10. REFRIGERATION CONTRACTOR shall install all refrigeration lines between blower coils and/or cold pans and remote compressors for all refrigeration equipment and/or ice machines.
11. PLUMBING CONTRACTOR to provide all PVC lines used for beverage and refrigeration runs. Provide a minimun of 24" sweep bends for all elbows, and verify size requirements with beverage/refrigeration supplier.
12. PLUMBING CONTRACTOR to provide and install all necessary fittings, piping nipples, steam regulators, bakelite handled steam valves (globe and/or gate), shut off valves, steam trap assemblies, etc., to provide complete operable system for steam cooking equipment, except where noted otherwise. All exposed fittings, etc. as stated above to be chrome plated.
13. GENERAL CONTRACTOR to provide all roof, ceiling, wall and floor holes and any required sleeves (for PVC pipe, beverage and/or refrigeration lines installed by others), and seal them in accordance with all applicable building codes. GENERAL CONTRACTOR to provide all duct fire separations, enclosures, wrappings, etc., in accordance with all applicable building and fire codes.
14. PLUMBING ENGINEER to verify and PLUMBING CONTRACTOR to provide any required grease traps/interceptors whether they are point-of-use, kitchen or building type, in accordance with all applicable building codes.
15. All dimensions are cumulative from an established building column line or wall as indicated.
16. Kitchen sink faucets and lever drains that are furnished loose by PREMIER are to be installed by the PLUMBING CONTRACTOR.
17. Health codes require that all plumbing be enclosed in walls or floor and that exposed piping runs be as short as possible. Exposed horizontal piping must be 6" above the floor and at least 1" off the wall. ALL EXPOSED PIPING TO BE CHROME PLATED.
18. Verify all requirements with MECHANICAL ENGINEER'S DRAWINGS. Refer to sheet FS/COVER SHEET for additional information.
19. PLUMBING CONTRACTOR to extend his piping at least 1" farther out of any wall below an exhaust hood that has a s/s insulated wall panel under it. Verify the existence of this panel with Premier or the project cut book.
20. PLUMBING CONTRACTOR to provide interconnection of piping for any equipment that comes in sections and must be assembled.
21. All exhaust hoods, unless noted otherwise, are supplied by Premier and installed by the GENERAL CONTRACTOR.

NOTE: ALL GAS-FIRED EQUIPMENT ON THIS PROJECT IS NATURAL GAS

MECHANICAL LEGEND

SYMBOL	ABBREV.	DESCRIPTION
●	HW	HOT WATER
●	CW	COLD WATER
●—○		HOOK-UP TO EQUIPMENT
○	W	DIRECT WASTE
○	IW	INDIRECT WASTE
◔	FD	FLOOR DRAIN
◉	FFD	FUNNEL FLOOR DRAIN
⊠	FS	FLOOR SINK
▣	FSHG	FLOOR SINK W/HALF GRATE
▣	FSFG	FLOOR SINK W/FULL GRATE
■	G	GAS
◎	CWR	CHILLED WATER RETURN
◕	S	STEAM SUPPLY
⊗	CR	CONDENSATE RETURN
▬	SDC	SUPPLY AIR DUCT
◪	EDC	EXHAUST AIR DUCT
◔		PVC FOR BEVERAGE LINES
•		PVC FOR REFRIGERATION LINES
⬡		SCHEDULE ITEM NUMBER

GENERAL ABBREVIATIONS

ABBRV.	DESCRIPTION
ARCH	ARCHITECT
GC	GENERAL CONTRACTOR
KEC	KITCHEN EQUIPMENT CONTRACTOR
MC	MECHANICAL CONTRACTOR
PC	PLUMBING CONTRACTOR
EC	ELECTRICAL CONTRACTOR
HVAC	HEATING / VENTILATION CONTRACTOR
RC	REFRIGERATION CONTRACTOR
PLBG	PLUMBING
ELEC	ELECTRICAL
AFF	ABOVE FINISHED FLOOR
CLG	CEILING
RFD	RUN TO FLOOR DRAIN/SINK
CONN	CONNECTION
V	VOLTS
PH	PHASE
A	AMPERES
C	CIRCUIT
W	WATTS
KW	KILOWATT
HP	HORSEPOWER
COMP	COMPRESSOR / CONDENSING UNIT
LCP	LOAD CENTER PANEL
BP	BREAKER PANEL

BEVERAGE-LINE NOTE

SODA LINE SLEEVES ARE 6" IN DIAMETER AND BY GC. SEE DETAILS RI-1100 & RI-1110 ON SHEET FS-2J COORDINATE WITH SODA VENDOR FOR EXACT ROUTING OF BEVERAGE LINES.

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Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
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Owner
City of Roseville
Project
Cedarholm Community Building
Title
Foodservice Mechanical Rough-In Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By:
Title: Architect Date:
Registration Number:

Drawing No.
fs3.0

HAGEN, CHRISTENSEN & McILWAIN ARCHITECTS
4201 CEDAR AVENUE SO. - MINNEAPOLIS, MN 55407
TEL (612)904-1332 - FAX (612)904-7306

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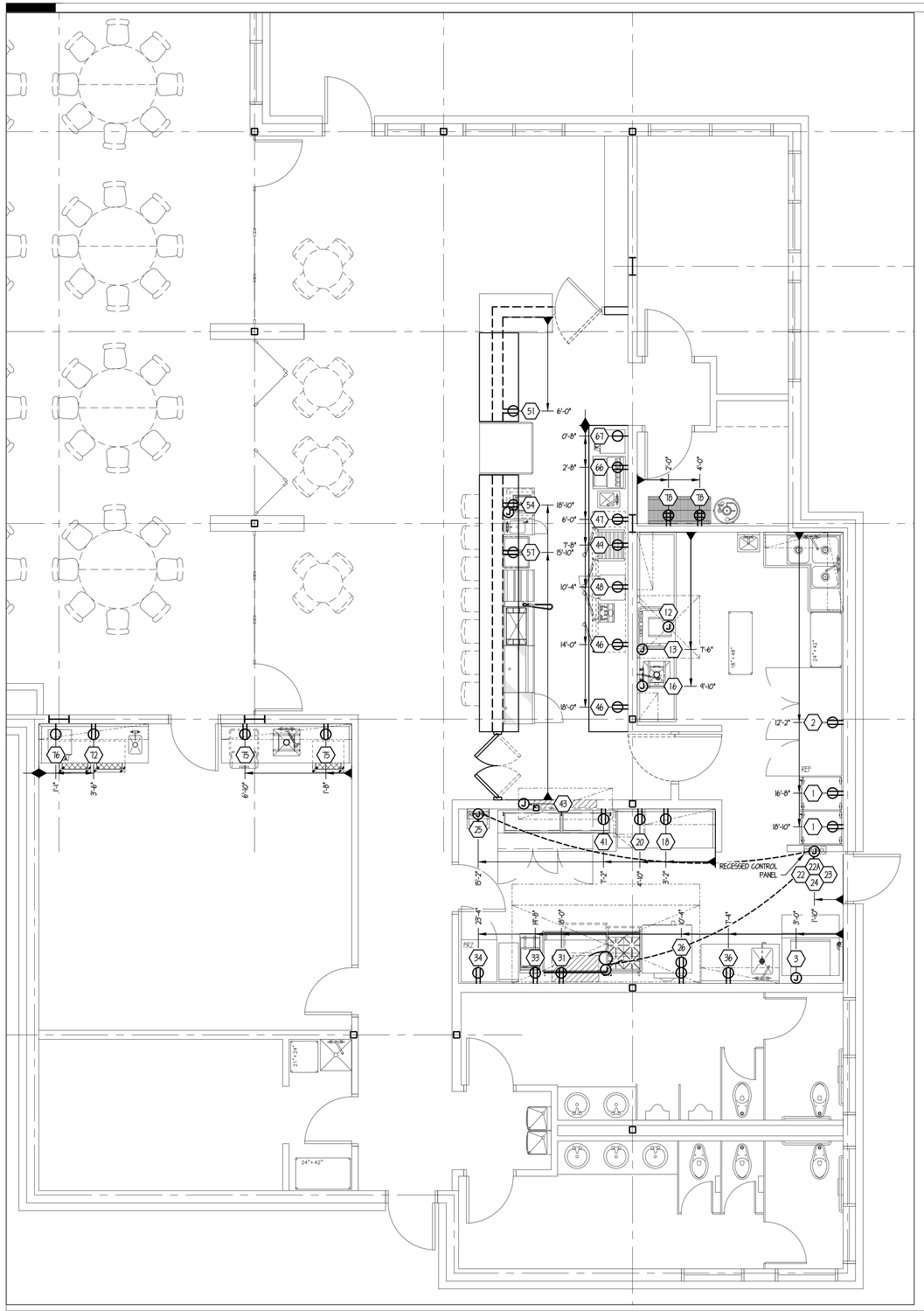


SCHEDULE ELECTRICAL ROUGH-IN NOTES

EA. ELECTRICAL CONTRACTOR to provide and install junction box(s) and receptacle(s) as shown on plan. All internwiring and conduit to comply with all applicable building codes.

ED. ELECTRICAL CONTRACTOR to mount disposer control panel or manual-reversing switch, located as shown on plan, and internwire with solenoid valve, disposer and junction box.

EF. ELECTRICAL CONTRACTOR to wire exhaust hood light(s) and fan(s) to exhaust hood control panel.

EG. ELECTRICAL CONTRACTOR to wire condensate fan to VENT FAN CONTROL in dishmachine. Verify fan utility requirements.
- Duct work and fan motor provided by H.V.A.C.
- Duct riser from dishmachine to ceiling provided by PREMIER. (If applicable)

EH. ELECTRICAL CONTRACTOR to wire exhaust hood light(s) and fans to remote wall switch(es) and internwire fans with fire suppression system & microswitch as indicated on manufacturer's shop drawings and in fire notes. - Duct work, fan motor(s), and fan(s) furnished and installed by HVAC CONTRACTOR. Locate wall switches as shown on plan.

Where required, EC to wire fan(s) to duct temperature sensor(s) or to interlock(s) with cooking appliances as well as override wall switch(es) for the light(s) and fan(s). These devices are installed so that the hood fan(s) turn on when cooking equipment is turned on. Duct temperature sensor(s) furnished and installed in the duct by PREMIER, wired by ELECTRICAL CONTRACTOR.

EJ. ELECTRICAL CONTRACTOR to provide extension rings as required on all receptacles, such as under exhaust hoods that have a s/s insulated wall panel below (1" or 3" thick), or backsplashes (1" or 2" thick) on foodservice equipment.
Verify the existence and size of wall panels with Premier or the project cut book.

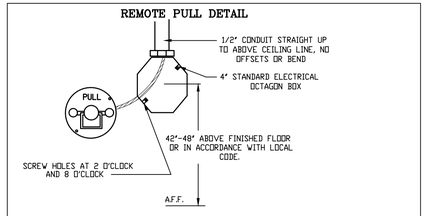
EL. ELECTRICAL CONTRACTOR to provide special seperate circuit with isolated ground for cash registers, pre-checkers, liquor systems, scales and labelers. (Vfy w/supplier)

EM. ELECTRICAL CONTRACTOR to provide junction boxes and conduit (for data lines) between cash registers, pre-checkers, liquor systems, scales, labelers and each of their master or centralized control station, printer or computer. Verify requirements with the owner and supplier of each system.

GENERAL ELECTRICAL ROUGH-IN NOTES

1. All final connections shown on this drawing are actual requirements of the equipment and are shown in their approximate location.
2. All vertical dimensions are from finished floor to centerline of rough-in, unless noted otherwise.
3. All dimensions are cumulative from an established building column line or wall as indicated.
4. Fabricated equipment containing a breaker panel (Load Center Panel) or equipment indicated so, shall be pre-wired by fabricator ready for field connection to one point by ELECTRICAL CONTRACTOR. Breaker panels will have ground fault protection.
5. ELECTRICAL CONTRACTOR to provide and install switches, starters, interlocks, cord & plug sets, disconnects, etc. for all equipment unless noted otherwise. All disconnects or lock-out devices, starters, etc. to meet N.E.C. and O.S.H.A. standards.
6. All receptacles shall be grounded per N.E.C. and O.S.H.A.
7. Fluorescent light fixtures and 100 watt vapor proof bullet type light fixture with metal guard on ceiling of all walk-in boxes provided by PREMIER and wired by ELECTRICAL CONTRACTOR. All light bulbs by ELECTRICAL CONTRACTOR. All horizontal wiring for walk- in boxes shall be run on the EXTERIOR of the walk-in box with all penetrations sealed light.
8. ELECTRICAL CONTRACTOR to provide control wiring and electrical service for remote refrigeration systems for walk-in boxes and/or ice machines. Also coordinate location for service with ELECTRICAL ENGINEER.
9. ELECTRICAL CONTRACTOR to provide wrap around heater cable on all evaporator drain lines in walk-in freezers.
10. Junction boxes between adjacent exhaust hood sections to be field wired together by ELECTRICAL CONTRACTOR to remote switch.
11. Electrical requirements for FIRE PROTECTION: Gas solenoid and/or shunt trip breakers and/or flow control alarm switches (for WET WATER SYSTEM) to be wired thru LIFE SAFETY SYSTEM by ELECTRICAL CONTRACTOR.
12. Verify all requirements with ELECTRICAL ENGINEER'S DRAWINGS. Refer to sheet FS/COVER SHEET for additional information.
13. ELECTRICAL CONTRACTOR to provide all lamps for all equipment.
14. ELECTRICAL CONTRACTOR to provide extension rings as required on all receptacles under exhaust hoods that have a s/s insulated wall panel below. Verify the existence of this panel with Premier or the project cut book.
15. ELECTRICAL CONTRACTOR to provide interconnection of wiring for any equipment that comes in sections and must be assembled.

REMOTE PULL DETAIL



NOTE:
PULL STATION SHOULD BE ACCESSIBLE IN THE EVENT OF A FIRE, LOCATED IN A PATH OF EGRESS, AND CLEARLY IDENTIFY THE HAZARD PROTECTED

NOTE: ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A 4"X4"X2" OCTAGEN BOX. BOX TO BE RECESSED IN SHEET ROCK 1/4".

ELECTRICAL LEGEND

SYMBOL	ABBREV.	DESCRIPTION
J	JB	JUNCTION BOX
DC	DC	DROP CORD (SEE SCHED)
	SR	SINGLE RECEPTACLE OUTLET
		SINGLE RECEPTACLE OUTLET (STUB-UP)
	DR	DUPLEX RECEPTACLE OUTLET
		DUPLEX RECEPTACLE OUTLET (STUB-UP)
	QR	QUADRUPLEX RECEPTACLE OUTLET
		QUADRUPLEX RECEPTACLE OUTLET (STUB-UP)
HU		HOOK-UP TO EQUIPMENT
SPSR	SPSR	SPECIAL PURPOSE OUTLET
SPSR		SPECIAL PURPOSE OUTLET (STUB-UP)
FSR	FSR	FLOOR SINGLE RECEPTACLE OUTLET
FDR	FDR	FLOOR DUPLEX RECEPTACLE OUTLET
FSPO	FSPO	FLOOR SPECIAL PURPOSE OUTLET
S	SM	SWITCH
		MOTOR
		LIGHT FIXTURE
		SOLENOID
TEL	TEL	TELEPHONE
67		SCHEDULE ITEM NUMBER

GENERAL ABBREVIATIONS

ABBRV.	DESCRIPTION
ARCH	ARCHITECT
GC	GENERAL CONTRACTOR
KEC	KITCHEN EQUIPMENT CONTRACTOR
MC	MECHANICAL CONTRACTOR
PC	PLUMBING CONTRACTOR
EC	ELECTRICAL CONTRACTOR
HVAC	HEATING / VENTILATION CONTRACTOR
RC	REFRIGERATION CONTRACTOR
PLBG	PLUMBING
ELEC	ELECTRICAL
AFF	ABOVE FINISHED FLOOR
CLG	CEILING
RFD	RUN TO FLOOR DRAIN/SINK
CONN	CONNECTION
V	VOLTS
PH	PHASE
A	AMPERES
C	CIRCUIT
W	WATTS
KW	KILOWATT
HP	HORSEPOWER
COMP	COMPRESSOR / CONDENSING UNIT
LCP	LOAD CENTER PANEL
BP	BREAKER PANEL

FIRE PROTECTION NOTE:

All of the following items are to be installed by the specified trades as directed by the FIRE PROTECTION CONTRACTOR:

1. PLUMBING CONTRACTOR shall install the gas shut-off valve provided with the fire-protection system.

2. ELECTRICAL CONTRACTOR shall, if the gas shut-off valve is electrically actuated, install the manual reset relay provided with the fire-protection system and wire the solenoid on the valve and the manual reset relay to the electrical switch provided with the fire-protection system.

3. ELECTRICAL CONTRACTOR shall supply and install a remote pull box and conduit as indicated in pull station detail.

4. ELECTRICAL CONTRACTOR shall provide, install, and connect to the electrical switch provided with the fire-protection system, a shunt-trip breaker, or other approved method, to shut off power to all electrical equipment and outlets located under the hood upon activation of the fire-protection system.

5. As required by local codes, ELECTRICAL CONTRACTOR shall wire dedicated make-up air fans to the electrical micro switch provided with the fire-protection system so that upon activation of the fire-protection system the make-up air fans will shut down automatically.

6. As required by local codes, if a building fire alarm system exists, BUILDING FIRE-ALARM CONTRACTOR shall provide a separate zone on the building-fire-alarm panel and wire to the electrical micro switch provided with the fire-protection system such that upon activation of the hood system a specific zone on the building-fire-alarm system shall activate.

7. If a PIRANHA system is specified, PLUMBING CONTRACTOR shall furnish and install a BB-SCSOI valve in the sprinkler-supply line immediately downstream from the main sprinkler-supply-line shut-off valve. PLUMBING CONTRACTOR shall furnish and install a dedicated water line from the BB-SCSOI valve to the Piranha Fire Protection System. This water line shall include a rye strainer, have a minimum size of ¾" diameter, and provide a simultaneous flowing water pressure of 30 to 100 psi.

The following items shall be installed if required by the JURISDICTION HAVING AUTHORITY:

8. ELECTRICAL CONTRACTOR shall wire exhaust fans to the electrical switch provided with the fire-protection system so that upon activation of the fire-protection system the exhaust fans will start up if the fan-control switch is in the off position and so that regardless of other conditions the exhaust fans shall continue running automatically.

9. ELECTRICAL CONTRACTOR shall wire exhaust fans to the electrical switch provided with the fire-protection system so that upon activation of the fire-protection system the exhaust fans will shut down automatically.

10. ELECTRICAL CONTRACTOR shall wire lights to the electrical switch provided with the fire-protection system so that upon activation of the fire-protection system the lights under the exhaust hood will shut down automatically.

Fire System Readiness for Testing:

1. All cooking appliances must be set in their permanent positions. It is not sufficient for the appliances to be just set underneath the hood.
2. The gas line piping must be complete from the gas main to the appliances and all individual appliances must be connected to the gas line.
3. If there are electrical cooking appliances or electrical outlets under the hood, the kitchen hood fire suppression system micro switch must be wired by the electrician to a shunt-trip breaker so in the event of activation of the system all electric under the hood will be shut off.
4. In the event there is a building-fire-alarm system, there must be a separate zone on the building-fire-alarm panel wired by the building-fire-alarm contractor to the kitchen-hood-fire-suppression micro-switch. In the event that the kitchen-hood system discharges, the fire suppression system will activate a specific zone on the building-fire-alarm system.
5. All exhaust fans and make-up air fans must be operational.
6. Make-up air fans must be wired by the electrician to the kitchen-hood-fire-supression micro switch so that in the event of activation of the system, the make-up air fans will shut down automatically.
7. Some Fire Departments require hood lights to shut down upon activation of the system. Check with the local fire jurisdiction to verify this potential requirement.

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Comm. No.
1758

ISSUE DATE
05/31/2017 - DESIGN DEVELOPMENT SET
07/10/2017 - BID SET

Civil Engineer & Landscape Architect
SRF Consulting Group, Inc.

Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

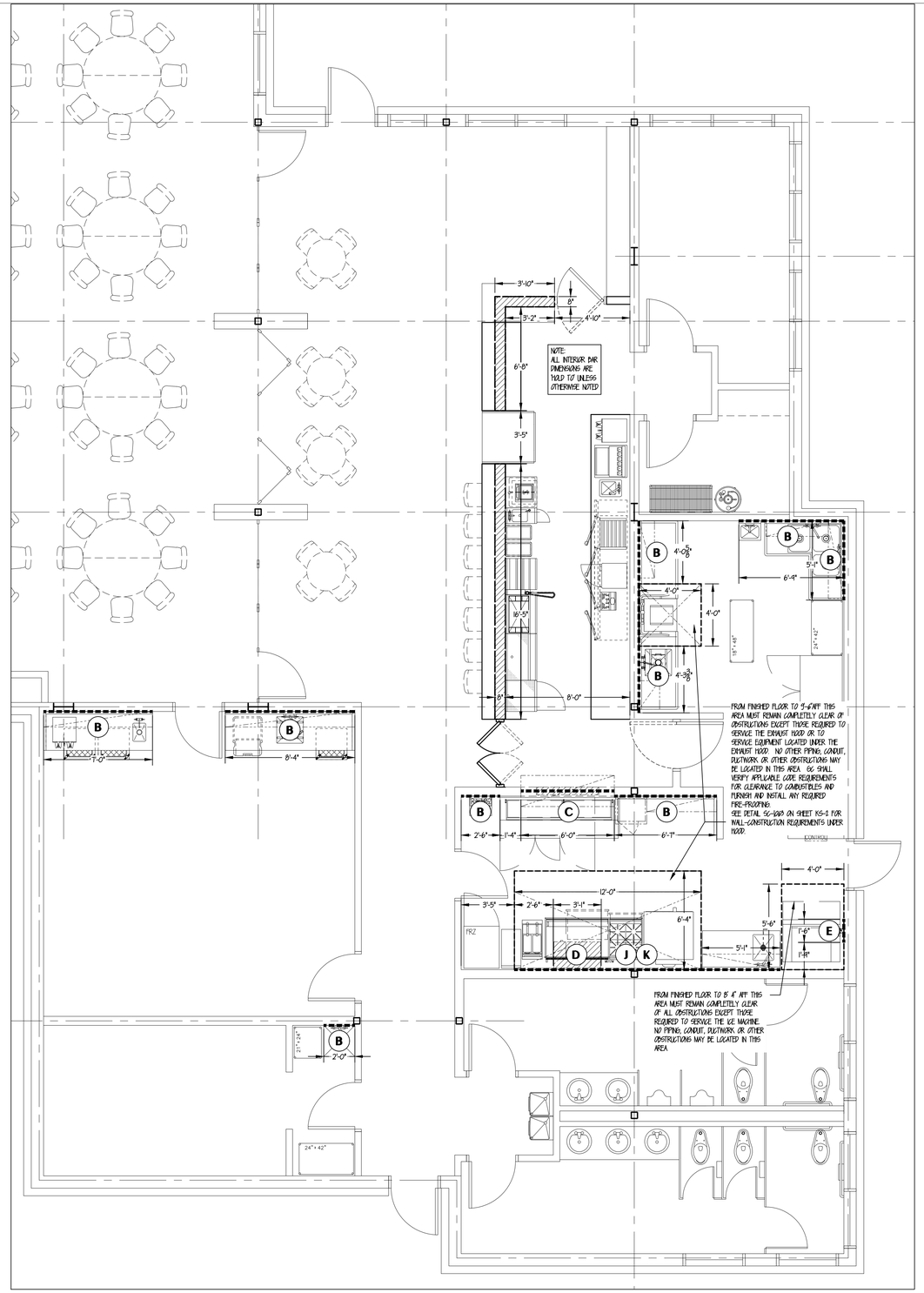
Foodservice Designer
premier
Exceptional Design ■ Legendary Results
7120 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-8800 ● fax: 763-544-7949
premierexq.com

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Foodservice Electrical Rough-In Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By:
Title: Architect Date:
Registration Number:

Drawing No.
fs4.0

HAGEN, CHRISTENSEN & MCILWAIN
ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)804-1332 • FAX (612)804-7388



WALL BACKING NOTES

NOTE: GENERAL CONTRACTOR HAS RESPONSIBILITY FOR MEETING LOCAL CODE APPROVAL OF WALL BACKING MATERIAL. WALL BACKING LISTED BELOW IS ONLY SUGGESTED USE. SOME CODE OFFICIALS DO NOT APPROVE FIRE TREATED PLYWOOD.

---------- SIGNIFIES WALL BACKING

GENERAL CONTRACTOR TO FURNISH & INSTALL 5/8" FIRE-TREATED PLYWOOD BEHIND GYPSUM BOARD, UNLESS OTHERWISE SPECIFIED, AT THE LOCATIONS INDICATED ON THE PLAN. IF DIMENSIONS PLACE THE BACKING BETWEEN STUDS, EXTEND BACKING TO THE NEXT FULL HEIGHT STUD.

HEIGHTS REQUIRED ARE AS FOLLOWS: (ALL MAY NOT APPLY)

- (A) FROM 25" TO 73" A.F.F. FOR HAND SINKS & SOAP AND TOWEL DISPENSERS
- (B) FROM 25" TO 96" A.F.F. FOR TABLES, WALL SHELVING AND CABINETS
- (C) DOWN 36" BELOW PASS-THRU OPENING, BOTH SIDES
- (D) FROM 42" TO 78" A.F.F. FOR WALL MOUNTED CHEESEMELTER OR STEAMER WATER FILTER SYSTEMS (SEE DETAIL SC-1063)
- (E) FROM 48" TO 96" FOR ICE MAKER WATER FILTER SYSTEMS
- (F) FROM FLOOR TO CEILING FOR REMOTE HIGH PRESSURE SPRAY STATION
- (G) FROM FLOOR TO CEILING FOR EXHAUST HOOD CONTROL PANEL
- (H) FROM FLOOR TO 37" A.F.F. FOR BOOTH TABLE CANTILEVER SUPPORT BRACKET (PROVIDE BACKING 30" WIDE AND AT 6'-0" O.C.)
- (J) FROM 102" TO 114" A.F.F. FOR WALL HOOD - SEE DETAIL SC-1063
- (K) FROM FLOOR TO 12" A.F.F. AT COOKING LINE FOR RESTRAINING DEVICES - SEE DETAIL SC-1063

Comm. No.
1758

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05/31/2017 - DESIGN DEVELOPMENT SET
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Civil Engineer & Landscape Architect
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Structural Engineer
Mattson Macdonald Young structural engineers
Bassett Creek Business Center
901 North 3rd Street, Suite 100
Minneapolis, MN 55401
612-827-7825 voice
612-827-0805 fax

Mechanical and Electrical Engineers
emanuelson-podas consulting engineers
10401 Bren Road East
Minnetonka, MN
55343
ph: 952-930-0050
fax: 952-930-0777
www.epinc.net

Foodservice Designer
premier
Exceptional Design ■ Legendary Results
7120 Northland Terrace, Minneapolis, MN 55428
ph: 763-544-8800 ● fax: 763-544-7949
premierequ.com

Owner
City of Roseville
Project
Cedarholm Community Building
Title
Foodservice Special Conditions Plan

I hereby certify that this drawing was prepared by me or under my direct supervision and that I am a duly licensed architect under the laws of the State of Minnesota.
By:
Title: Architect Date:
Registration Number:

Drawing No.
fs5.0

HAGEN, CHRISTENSEN & McILWAIN ARCHITECTS
4201 CEDAR AVENUE SO. • MINNEAPOLIS, MN 55407
TEL (612)904-1332 • FAX (612)904-7388

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HOOD INFORMATION – Job#3074604

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM							TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG.	
					TOTAL EXH. CFM	RISER(S)								END TO END	ROW
						WIDTH	LENG.	HEIGHT	DIA.	CFM	VEL.	S.P.			
1	Item #11	4830 VHB-G	4' 0.00"	700 Deg.	600			4"	10"	600	1100	-0.090"	0	430 SS 100%	ALONE	ALONE
2	Item #22	6030 ND-2-PSP-F	12' 0.00"	600 Deg.	2950			4"	18"	2950	1669	-0.920"	2430	430 SS Where Exposed	ALONE	ALONE

HOOD INFORMATION

HOOD NO.	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WGHT
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL	SWITCHES		
												TYPE	SIZE	MODEL #	QUANTITY		
1	Item #11						0									NO	166 LBS.
2	Item #22	Captrate Solo Filter	9	20"	16"	85% See Filter Spec.	10	L55 Series E26	NO	Left	12"x60"x30"	Ansul R102	3.0/3.0	DCV-1111	1 Light 1 Fan	YES	961 LBS.

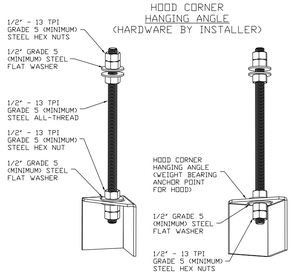
HOOD OPTIONS

HOOD NO.	TAG	OPTION
2	Item #22	BACKSPLASH 75.00" High X 156.00" Long X 3.00" Wide Insulated 430 SS Vertical
		BACK STANDOFF (FLAT) 3" Wide 156" Long
		RIGHT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS
		LEFT QUARTER END PANEL 23" Top Width, 0" Bottom Width, 23" High 430 SS
		STRUCTURAL FRONT PANEL
		INSULATION FOR BACK OF HOOD

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	PDS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG.	DIA.	CFM	S.P.
2	Item #22	Front	156"	14"	6"	MUA	12"	28"		810	0.244"
						MUA	12"	28"		810	0.244"
						MUA	12"	28"		810	0.244"

HOOD CORNER
HANGING ANGLE
(HARDWARE BY INSTALLER)



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

HVAC DISTRIBUTION NOTE

IT IS RECOMMENDED NOT TO INSTALL HIGH VELOCITY DIFFUSERS OR HVAC RETURNS WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

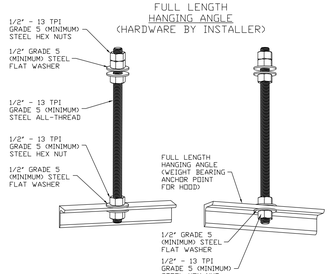
CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

FULL LENGTH
HANGING ANGLE
(HARDWARE BY INSTALLER)



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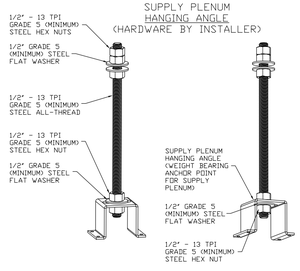
SUPPLY PLENUM
HANGING ANGLE
(HARDWARE BY INSTALLER)



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PATENT NUMBERS

AC-PSP (United States) - US Patent 7963830 B2
AC-PSP Wall (Canada) - CA Patent 2820509
AC-PSP Island (Canada) - CA Patent 2520330

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

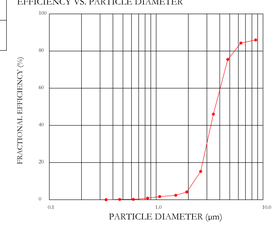
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

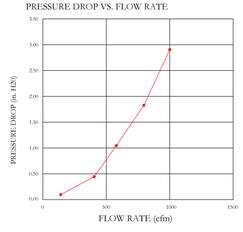
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05.

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96
NSF STANDARD #2
UL STANDARD #1046
INT. MECH. CODE (IMC)
ULC-S649

GENERAL NOTES

INSTALLATION

ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.

ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.

ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER MECHANICAL CONTRACTORS'S PLANS.

COOKING EQUIPMENT TO SHUTOFF IN EVENT OF FIRE.

EXHAUST FANS TO TURN ON IN EVENT OF FIRE.

ALL LIGHTS FIXTURE SHOWN INSTALLED BY CAPTIVE-AIRE ARE FACTORY PREWIRED. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.

LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.

SEISMIC RESTAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.

INSTALLING CONTRACTORS ASSUME ALL RELATED REPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.

ALL WALLS THAT COME WITHIN 18" OF HOOD MUST BE METAL STUDS. WOOD STUDS NOT ALLOWED

GREASE DUCTS SERVING TYPE I HOODS SHALL BE CONSTRUCTED OF STEEL NOT LESS THAN 0.055 INCH (1.4MM) (NO. 16 GAGE) IN THICKNESS OR STAINLESS STEEL NOT LESS THAN 0.044 INCH (1.1MM) (NO. 18 GAGE) IN THICKNESS. **EXCEPTION:** LISTED & LABELED FACTORY BUILT KITCHEN GREASE DUCTS SHALL BE INSTALLED IN ACCORDANCE WITH IMC SECTION 304.1

BALANCE

KITCHEN HOODS MUST BE BALANCED WITH KITCHEN.

KITCHEN SHALL BE SLIGHT NEGATIVE WITH RESPECT TO DINING AREA.

RESTAURANT SHALL BE SLIGHT POSITIVE WITH RESPECT TO AMBIENT PRESSURE.

ADDITIONAL

WRITTEN HOOD DIMENSIONS HAVE PRECEDENCE OVER SCALE.

SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH UL 710 AND NFPA 96 AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

ETL SANITATION LISTED

ETL LISTED FILE# 3054804-001

COMPLETE INSTALLATION OPERATION & MAINTENANCE MANUALS CAN BE DOWNLOADED FROM CAPTIVE AIRE'S WEBSITE: www.captiveaire.com

These products and others are available for demonstration at the Minneapolis, MN display center

FOR QUESTIONS OR FURTHER INFORMATION, CONTACT CAPTIVEAIRE – REGION 75 – VENPRO OFFICE @ PHONE 877-881-7582 OR FAX 919-747-5666
14505 21st Ave. N, Ste. 222
PLYMOUTH, MN 55441
REG75@CAPTIVEAIRE.COM

PRODUCTION WILL BEGIN ONCE APPROVED DRAWINGS ARE RECEIVED.

Please confirm accuracy of submittals, shipping information and jobsite readiness PRIOR to release. Changes after release will be subject to cancellation or rescheduling.

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted ☐
Approved with NO Exception Taken ☐
Revise and Resubmit ☐

SIGNATURE _____

Your Title _____ Date _____

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVE-AIRE
www.captiveaire.com
Minnesota Office
14505 21st Ave. N., Suite 222, Plymouth, MN. 55447 PHONE: (763) 432-5354 FAX: (919) 747-5666 EMAIL: reg75@captiveaire.com

Cedarholm Community Building
ROSEVILLE, MN, 55113

DATE: 7/7/2017

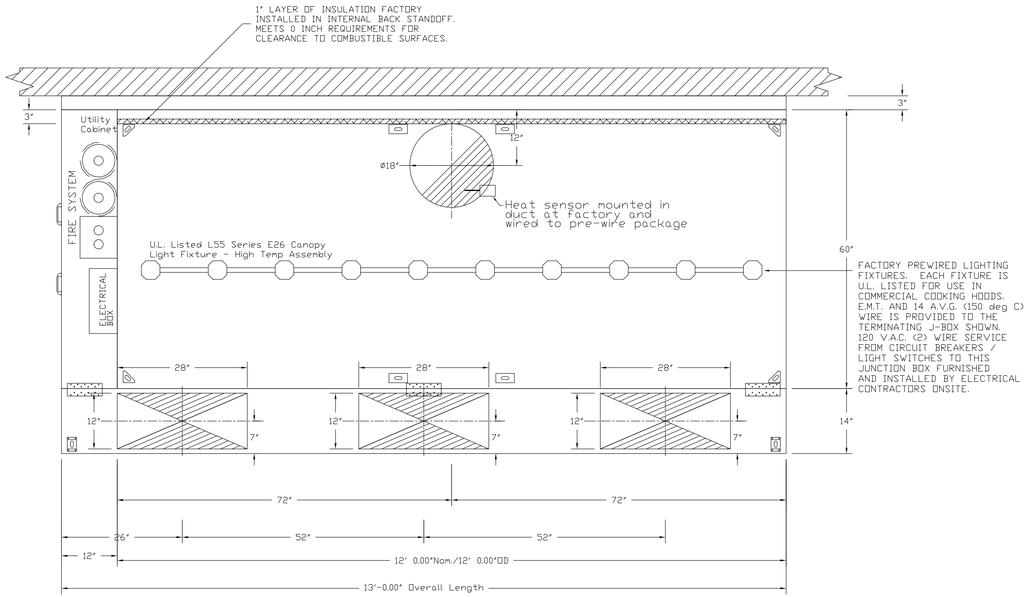
DWG.#: 70717CED_TS

DRAWN BY: TSS_75

SCALE: NTS

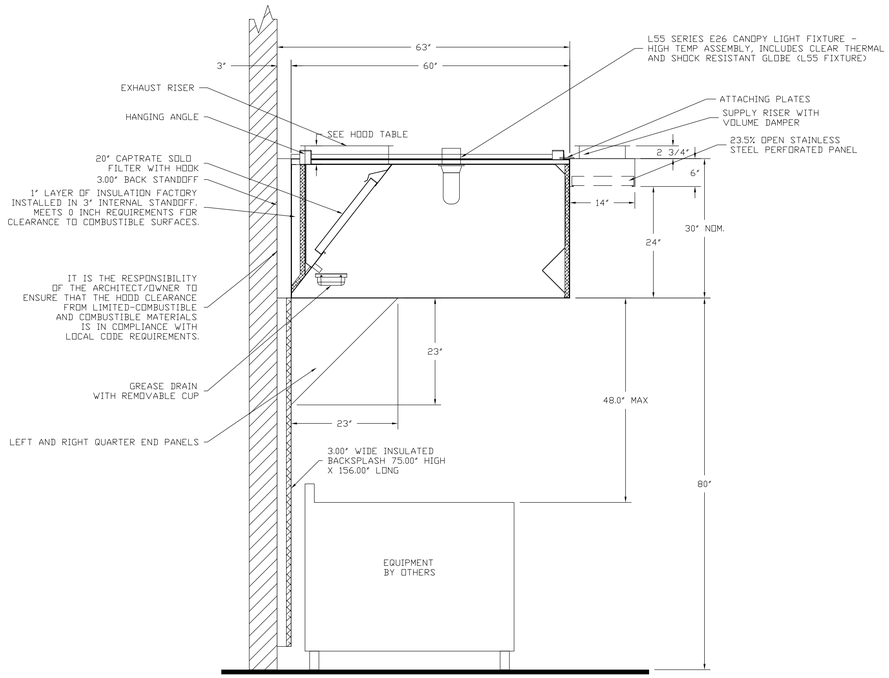
JOB #3074604

SHEET NO. 1

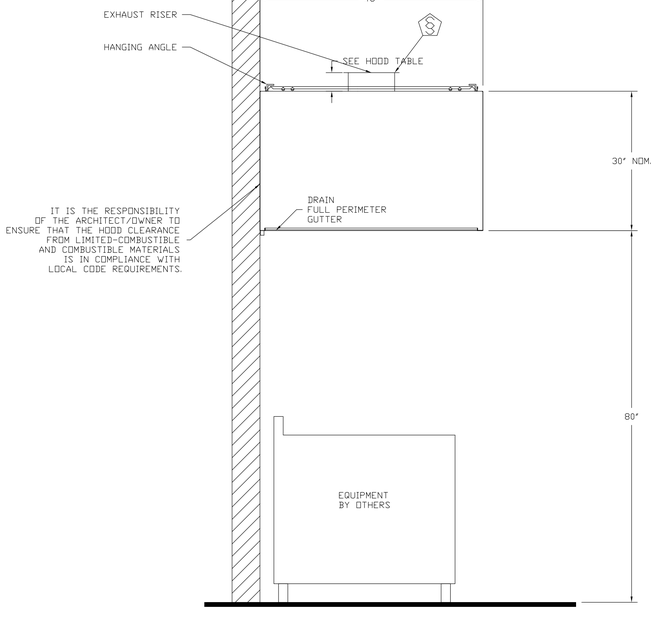


PLAN VIEW - Hood #2 (Item #22)
12' 0.00" LONG 6030ND-2-PSP-F

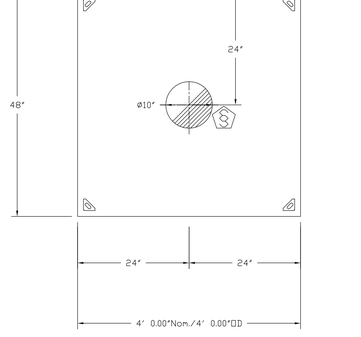
NOTE: Additional hanging angles provided for hoods 12' and longer.



SECTION VIEW - MODEL 6030ND-2-PSP-F
HOOD - #2 (Item #22)



SECTION VIEW - MODEL 4830VHB-G
HOOD - #1 (Item #11)



PLAN VIEW - Hood #1 (Item #11)
4' 0.00" LONG 4830VHB-G

100% OF THE MAKE-UP AIR CANNOT BE SUPPLIED THROUGH THE HOOD PLENUM. SEE HOOD SCHEDULES FOR CFM QUANTITIES.

FACTORY RISERS CAN BE MOVED UPON REQUEST. IF FIELD CUT IS DESIRED CONTRACTOR TAKES FULL RESPONSIBILITY FOR PROPER PLACEMENT NOT TO VOID LISTING AND ENSURE PROPER CAPTURE/CONTAINMENT

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CUSTOMER APPROVAL TO MANUFACTURE:

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DATE: 7/7/2017

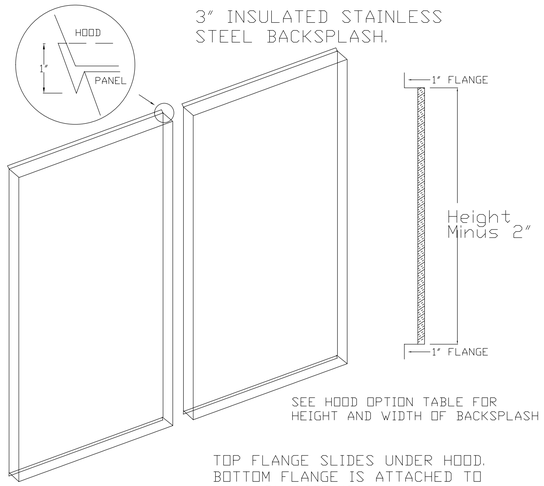
DWG.#: 70717CED_TS

DRAWN BY: TSS_75

SCALE: NTS

JOB #3074604

SHEET NO. 2

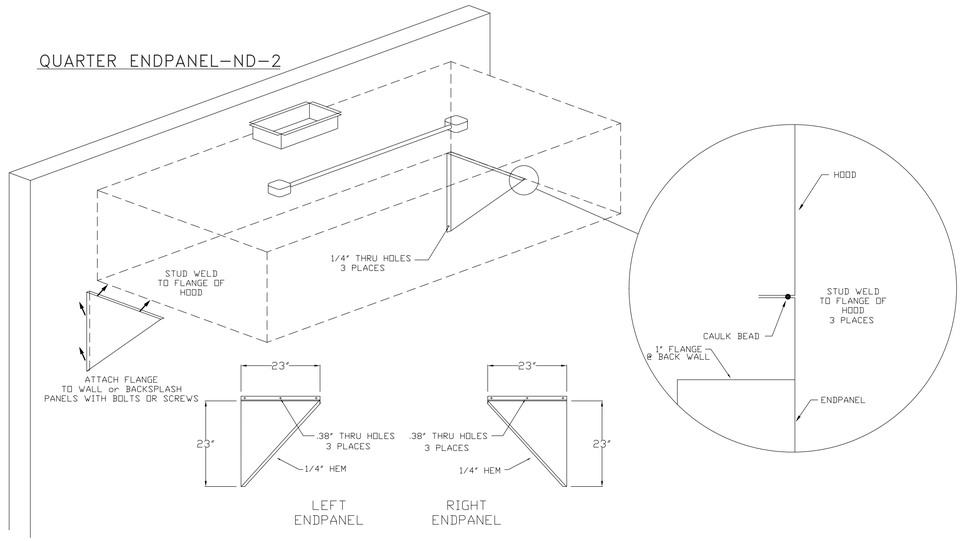


3" INSULATED STAINLESS STEEL BACKSPLASH.

SEE HOOD OPTION TABLE FOR HEIGHT AND WIDTH OF BACKSPLASH

TOP FLANGE SLIDES UNDER HOOD. BOTTOM FLANGE IS ATTACHED TO WALL BY SCREWS.

QUARTER ENDPANEL–ND–2



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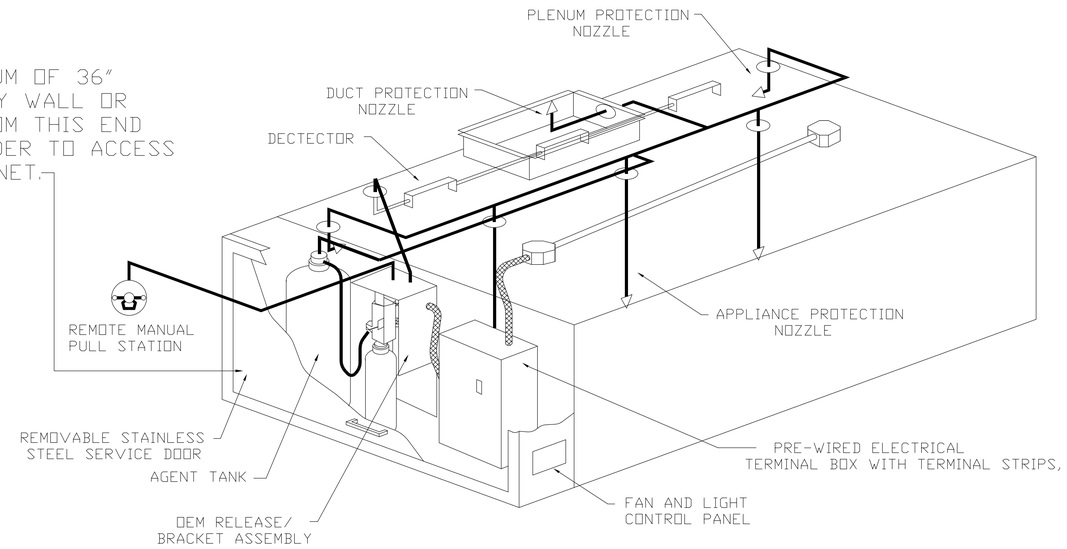
SHEET NO. 3

NOTES
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

TYPICAL ANSUL R-102 SYSTEM LAYOUT

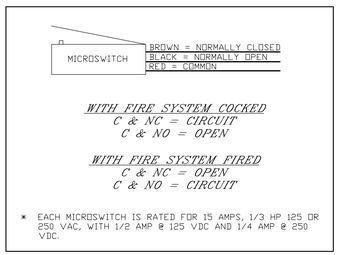
NOTE:
MUST HAVE A MINIMUM OF 36" CLEARANCE FROM ANY WALL OR TALL APPLIANCE FROM THIS END OF THE HOOD IN ORDER TO ACCESS THE INSIDE OF CABINET.



PER NFPA 96 & NFPA 17A, IF BUILDING DOES NOT HAVE AN ALARM SYSTEM, AN AUDIBLE OR VISUAL INDICATOR NEEDS TO BE PROVIDED. THIS IS BY OTHERS

CAPTIVE-AIRE SYSTEMS ASSUMES RESPONSIBILITY FOR THE PRE-PIPING OF THE FIRE SYSTEM BASED UPON THE COOKING EQUIPMENT INFORMATION WE RECEIVE. IT IS THE CUSTOMER'S RESPONSIBILITY TO VERIFY THE COOKING EQUIPMENT LOCATION, SPACING, AND COOKING SURFACE DIMENSIONS. THE CUSTOMER IS RESPONSIBLE FOR ADDITIONAL CHARGES AS A RESULT OF COOKING EQUIPMENT LAYOUT CHANGES AFTER THE RELEASE OF AN ORDER, UNION LABOR CHARGES, OR ADDITIONAL TRIPS MADE BY THE FIRE SYSTEM DISTRIBUTOR CAUSED BY JOBSITE DELAYS.

MECHANICAL GAS VALVE FURNISHED BY FIRE SYSTEM DISTRIBUTOR. VALVE GIVEN TO CUSTOMERS MECHANICAL CONTRACTOR FOR INSTALLATION PRIOR TO FINAL FIELD HOOK UP OF SYSTEM. (INSTALLATION OF VALVE - CUSTOMER EXPENSE)

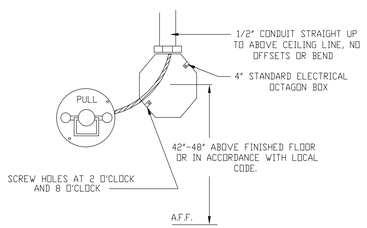


WITH FIRE SYSTEM COCKED
C & NC = CIRCUIT
C & NO = OPEN

WITH FIRE SYSTEM FIRED
C & NC = OPEN
C & NO = CIRCUIT

* EACH MICROSWITCH IS RATED FOR 15 AMPS, 1/3 HP 125 OR 250 VAC, WITH 1/2 AMP @ 125 VDC AND 1/4 AMP @ 250 VDC.

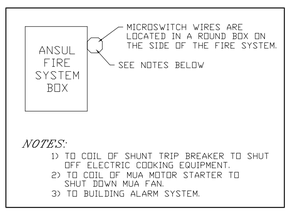
ANSUL PULL STATION DETAIL



NOTE:
PULL STATION SHOULD BE ACCESSIBLE IN THE EVENT OF A FIRE, LOCATED IN A PATH OF EGRESS, AND CLEARLY IDENTIFY THE HAZARD PROTECTED

NOTE: ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A 4"X4"X2" OCTAGON BOX. BOX TO BE RECESSED IN SHEET ROCK 1/4".

MICROSWITCH FURNISHED. SHUNT TRIP BREAKERS AND ALL OTHER ELECTRIC SHUTDOWNS & WIRING BY OTHERS



NOTES:
1) TO COIL OF SHUNT TRIP BREAKER TO SHUT OFF ELECTRIC COOKING EQUIPMENT.
2) TO COIL OF MUA MOTOR STARTER TO SHUT DOWN MUA FAN.
3) TO BUILDING ALARM SYSTEM.

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DRAWN BY: TSS_75
SCALE: NTS
JOB #3074604

SHEET NO. 4

EXHAUST FAN INFORMATION – Job#3074604

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	WEIGHT (LBS.)	SONES
1	Item #12	DU30HFA	600	0.500	1200	0.250	0.0870	1	115	3.8	65	7.6
2	Item #23	DU200HFA	2950	1.500	1151	5.000	1.6360	3	208	15.0	205	18.4

CONDENSER DETAILS

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CONDENSER NO.	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX. FUSE SIZE	MIN. WIRE SIZE	SEER
4	Item #24 W/Cooling	A2-D.500-20D-MPU	1	3	208-230	3 PHASE	60 Hz	14.5 Amps	11.9 Amps	20 Amps	14 AWG	14
			2	5	208-230	3 PHASE	60 Hz	21.4 Amps	17.4 Amps	30 Amps	12 AWG	14

MUA FAN INFORMATION – Job#3074604

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	COOLING COIL ENTERING DB TEMP.	COOLING COIL ENTERING WB TEMP.	COOLING COIL LEAVING DB TEMP.	COOLING COIL LEAVING WB TEMP.	COOLING COIL TOTAL CAPACITY	COOLING COIL SENSIBLE CAPACITY	COOLING COIL LATENT CAPACITY	WEIGHT (LBS.)	SONES	BURNER EFFICIENCY(%)
3	Item #24	A2-D.500-20D	20MF-2-MOD	A2-D.500	2000	3550	0.500	1384	3.000	1.5000	3	208	9.5								812	12.8	92
4	Item #24 W/Cooling	A2-D.500-20D-MPU	20MF-2-MOD	A2-D.500	2000	3550	0.500	1506	5.000	1.8890	3	208	15.0	91.0°F	74.0°F	74.5°F	68.3°F	77.5 MBH	63.1 MBH	14.4 MBH	1804	14.6	92

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE
3	Item #24	416739	383400	100 deg F	7 in. w.c. - 14 in. w.c.	Natural
4	Item #24 W/Cooling	416739	383400	100 deg F	7 in. w.c. - 14 in. w.c.	Natural

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. - Descr.)
2	Item #23	1 - Grease Box
		1 - Upblast Fan Wheel Access Port
3	Item #24	1 - AC Interlock Relay - 24VAC Coil
		1 - Motorized Backdraft Damper for A2-D Housing
		1 - Control panel enclosure heater. Recommended for winter design temperature less than 0°F.
		1 - Convenience Outlet (GFCI), 15 amp - Requires Separate 120V Connection. Includes receptacle and J box.
		1 - Low Fire Start
		1 - Inlet Pressure Gauge, 0-35"
		1 - Manifold Pressure Gauge, -5 to 15" wc
		1 - Freezestat (10)
		1 - Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) - Three Phase Only
4	Item #24 W/Cooling	1 - AC Interlock Relay - 24VAC Coil
		1 - Motorized Backdraft Damper for A2-D Housing
		1 - Control panel enclosure heater. Recommended for winter design temperature less than 0°F.
		1 - Convenience Outlet (GFCI), 15 amp - Requires Separate 120V Connection. Includes receptacle and J box.
		1 - Low Fire Start
		1 - Inlet Pressure Gauge, 0-35"
		1 - Manifold Pressure Gauge, -5 to 15" wc
		1 - Freezestat (10)
		1 - Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) - Three Phase Only
		1 - Cooling Thermostat and Relay (Not req for evap)
		1 - 8 Ton 2 Circuit (3/5) Modular Packaged Cooling Option for Size 2 MUA (2,900 to 4,800 cfm), 208V/230V, 3 phase. Cooling Thermostat or Programmable Stat Required for Proper Operation.
		1 - Full Crating For Commercial Heater
		1 - Downturn Plenum for Size 2 DX Coil Module

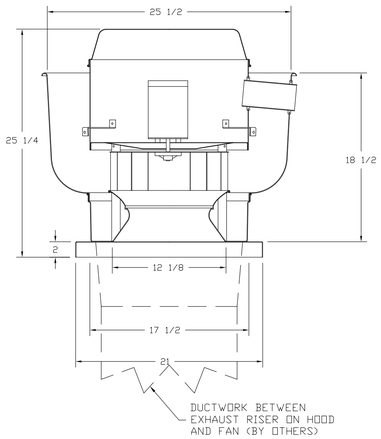
FAN ACCESSORIES

FAN UNIT NO.	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	Item #12							
2	Item #23	YES						
3	Item #24						YES	
4	Item #24 W/Cooling						YES	

CURB ASSEMBLIES

NO.	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	30 LBS	Curb	19.500"W x 19.500"L x 22.000"H
2	# 2	34 LBS	Curb	26.500"W x 26.500"L x 26.000"H Vented Hinged
3	# 3	88 LBS	Curb	31.000"W x 79.000"L x 24.000"H Insulated
4	# 4	76 LBS	Curb	31.000"W x 145.000"L x 24.000"H Insulated

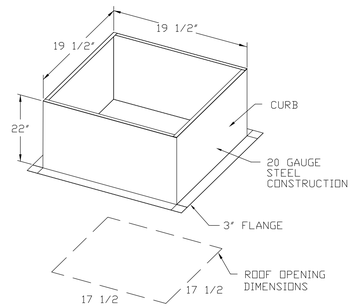
FAN #1 DU30HFA - EXHAUST FAN (ITEM #12)



FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)

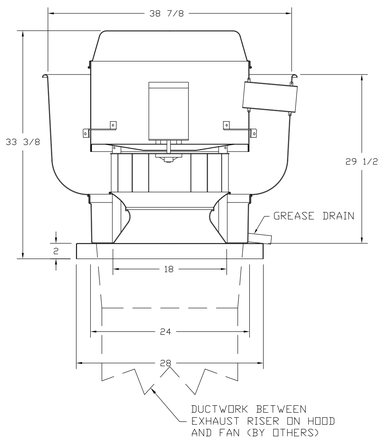
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

FAN #2 DU200HFA - EXHAUST FAN (ITEM #23)



FEATURES:

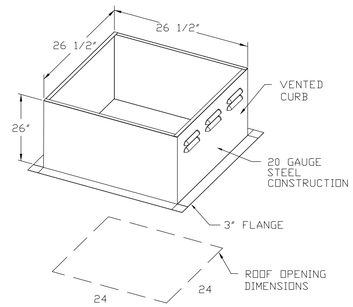
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

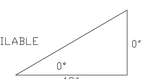
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

GREASE BOX
UPBLAST FAN WHEEL ACCESS PORT



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.



SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

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NOTE: TO ELECTRICAL CONTRACTOR

ELECTRICIAN TO VERIFY PROPER AMP DRAW AND FAN ROTATION ON COMPLETION OF ELECTRICAL WIRING AND INSTALLATION OF EXHAUST AND SUPPLY FANS.

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DRAWN BY: TSS_75
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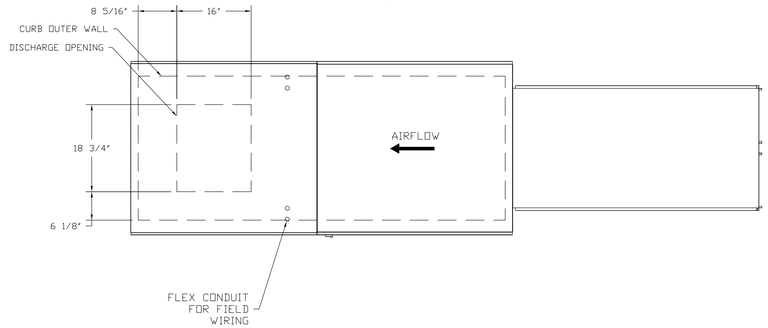
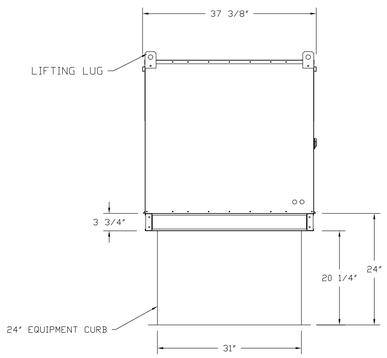
JOB #3074604
SHEET NO. 5

FAN #3 A2-D.500-20D - HEATER (ITEM #24)
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" DIRECT DRIVE FAN
2. INTAKE HOOD WITH EZ FILTERS.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. COOLING INTERLOCK RELAY. 24VAC COIL. 120V CONTACTS. LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
5. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER AND UNTEMPERED UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LF120S ACTUATOR INCLUDED
6. CONTROL PANEL ENCLOSURE HEATER, INCLUDES 200W, 120V HEATER AND THERMOSTAT (10 DEGREE SETTING). REQUIRES CONVENIENCE OUTLET OPTION (POWER BY OTHERS). RECOMMENDED FOR WINTER DESIGN TEMPERATURE LESS THAN 0°F.
7. GFCI 15 AMP CONVENIENCE OUTLET FOR HEATER ENCLOSURE. POWER SUPPLY BY OTHERS - INCLUDES RECEPTACLE AND J BOX.
8. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
9. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE
10. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE
11. FREEZESTAT WITH 10' SENSOR. FACTORY SET AT 35°F AND 10 MINUTES.
12. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.

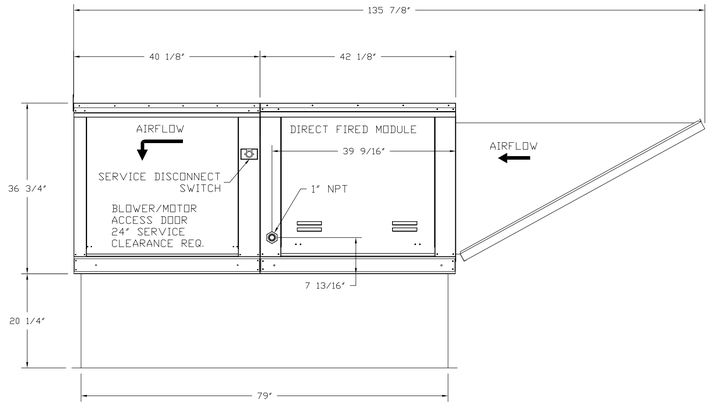
SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = -30°F. TEMP. RISE = 100°F.
BTUs CALCULATED OFF STANDARD AIR DENSITY
OUTPUT BTUs AT ALTITUDE OF 0.0 ft. = 383400
INPUT BTUs AT ALTITUDE OF 0.0 ft. = 416739





ROOF OPENING 2" SMALLER THAN CURB DIMENSION.



HOOK UP AND START UP OF THE HEATED MAKE-UP AIR UNIT IS TO BE DONE BY A LICENSED CONTRACTOR. THE MAKE UP AIR UNIT MUST HAVE A START UP PROCEDURE PERFORMED. IF A START UP PROCEDURE IS NOT PERFORMED THE WARRANTY WILL BE VOID AND CAPTIVEAIRE WILL NOT BE RESPONSIBLE FOR ANY PROBLEMS RELATED TO THE PERFORMANCE OF THE UNIT.

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Cedarholm Community Building
ROSEVILLE, MN, 55113

DATE: 7/7/2017
DWG.#: 70717CED_TS
DRAWN BY: TSS_75
SCALE: NTS
JOB #3074604

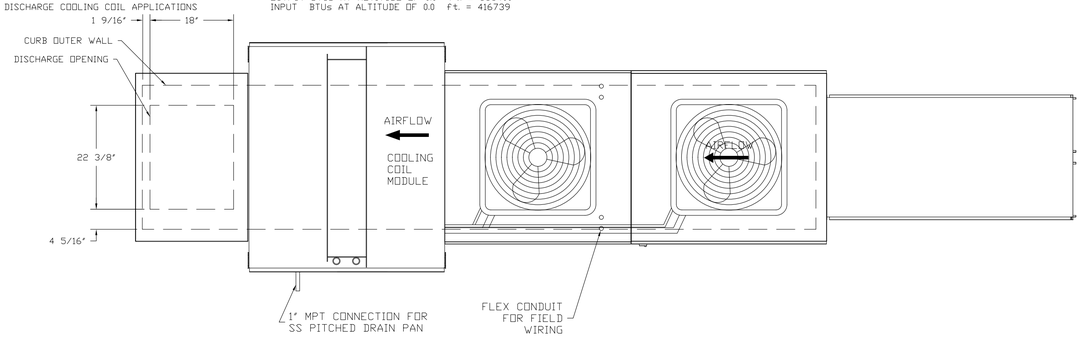
SHEET NO. 6

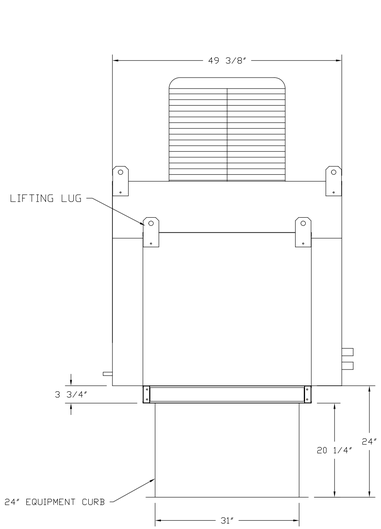
FAN #4 A2-D.500-20D-MPU - HEATER (ITEM #24 W/COOLING)
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" DIRECT DRIVE FAN
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. COOLING INTERLOCK RELAY. 24VAC COIL. 120V CONTACTS. LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
5. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER AND UNTEMPERED UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE. LF120S ACTUATOR INCLUDED
6. CONTROL PANEL ENCLOSURE HEATER, INCLUDES 200W, 120V HEATER AND THERMOSTAT (10 DEGREE SETTING). REQUIRES CONVENIENCE OUTLET OPTION (POWER BY OTHERS). RECOMMENDED FOR WINTER DESIGN TEMPERATURE LESS THAN 0°F.
7. GFCI 15 AMP CONVENIENCE OUTLET FOR HEATER ENCLOSURE. POWER SUPPLY BY OTHERS - INCLUDES RECEPTACLE AND J BOX.
8. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
9. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE
10. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE
11. FREEZESTAT WITH 10' SENSOR. FACTORY SET AT 35°F AND 10 MINUTES.
12. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
13. DX COOLING INTAKE AIR THERMOSTAT AND RELAYS MOUNTED IN UNIT - SET POINT FOR THERMOSTAT SHOULD BE 85°F.
14. 8 TON, DUAL CIRCUIT (3/5) MODULAR PACKAGED COOLING OPTION FOR SIZE 2 MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING. (2,900 TO 4,800 CFM) NOT BUILT WITH OPPOSITE SIDE CONTROLS OR OPPOSITE AIRFLOW DIRECTION. CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY. COIL = 3EZ1101D
15. FULL CRATING FOR COMMERCIAL HEATERS FOR SHIPPING.
16. DOWNTURN PLENUM FOR SIZE 2 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS

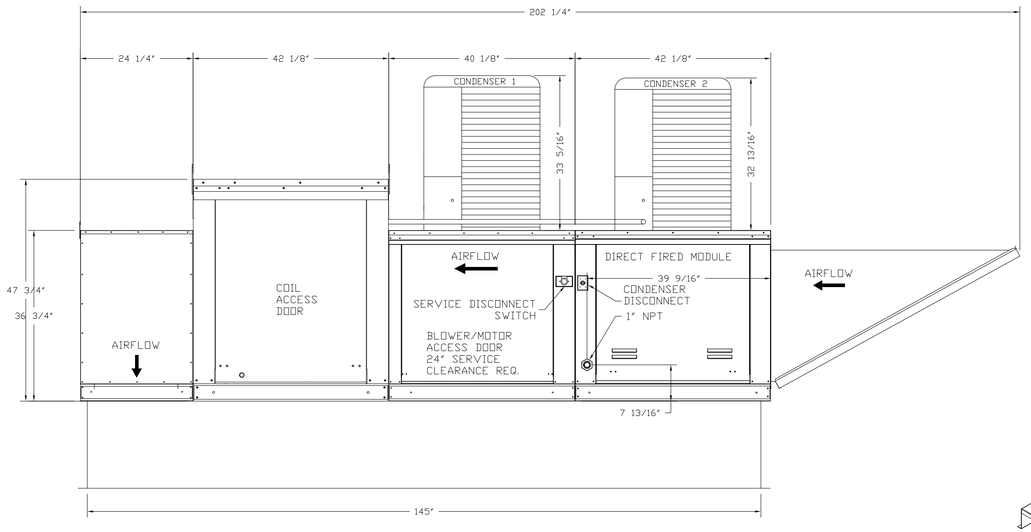
OPTIONAL MAU WITH FACTORY INSTALLED COOLING

SUPPLY SIDE HEATER INFORMATION:

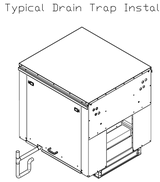
WINTER TEMPERATURE = -30°F. TEMP. RISE = 100°F.
BTUs CALCULATED OFF STANDARD AIR DENSITY
OUTPUT BTUs AT ALTITUDE OF 0.0 ft. = 383400
INPUT BTUs AT ALTITUDE OF 0.0 ft. = 416739



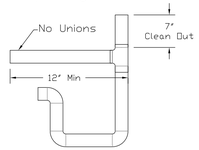




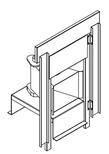
Typical Drain Trap Install



Recommended Cooling Coil Drain Trap Configuration



Notes:
1) 1" diameter PVC Pipe only
2) Use only low profile couplings
3) Add clean out as shown



Direct Fired (DF) Profile Plate Assembly

Direct Fired Profile Plate Specifications:
Description:
Direct fired burners shall have patented NO2 Patent No 10,584,887 self-adjusting profile plates designed to ensure proper air/fuel ratio and maintain the burner. Profile plates shall allow burners to achieve turndown by sensing changes in pressure to a maximum of 5ppm of carbon monoxide (CO) over the entire turndown range.

Application:
Spring-loaded burner profile plates are engineered to automatically react to the momentum of a fresh air stream, without the need for complex electronics to electronically adjust them. With this feature, all DF units are designed for demand control ventilation (DCV) requirements.

Certifications:
All profile plate assembly shall be designed in the DF series ETL listing and comply with combined safety standards ANSI Z83.4/CSA 3.7 and ANSI Z83.18/CSA 2.22 for direct fired heaters and recirculating DF heaters.

General Construction:
-Profile plates shall be constructed of 304 stainless steel.
-Profile plates shall be [illegible] tone construction [illegible]
-Design shall incorporate [illegible]
-Spring hinges shall be rated for [illegible]

COMPLETE INSTALLATION
[illegible]
FROM CAPTIVE AIRE'S WEBSITE:
www.captiveaire.com
[illegible]

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ROSEVILLE, MN, 55113

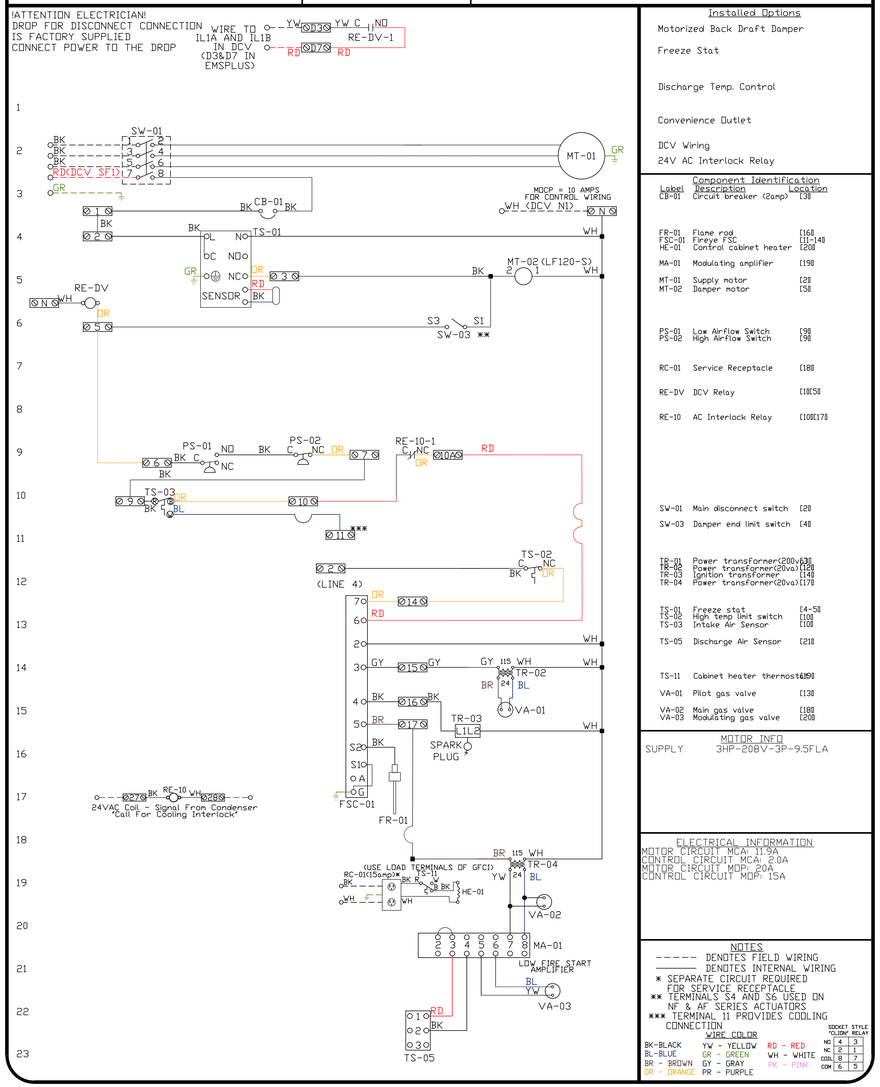
DATE: 7/7/2017
DWG.#: 70717CED_TS
DRAWN BY: TSS_75
SCALE: NTS
JOB #3074604

SHEET NO. 7

Direct Fired Heater Wiring

JOB 3074604 - Cedarholm Community Building

DRAWING NUMBER DF3074604-3 | SHIP DATE 7/7/2017 | MODEL A2-D.500-20D



Installed Options

Motorized Back Draft Damper

Freeze Stat

Discharge Temp. Control

Convenience Outlet

DCV Wiring

24V AC Interlock Relay

Component Identification

Label	Description	Location
CB-01	Circuit breaker (2amp)	[3B
FR-01	Flame rod	[16B
FSC-01	Freeye FSC	[11-14B
HE-01	Control cabinet heater	[20B
MA-01	Modulating amplifier	[19B
MT-01	Supply motor	[2B
MT-02	Damper motor	[5B
PS-01	Low Airflow Switch	[9B
PS-02	High Airflow Switch	[9B
RC-01	Service Receptacle	[18B
RE-DV	DCV Relay	[10B[5B
RE-10	AC Interlock Relay	[10B[17B
SW-01	Main disconnect switch	[2B
SW-03	Damper end limit switch	[4B
TR-01	Power transformer(200v)	[3B
TR-02	Power transformer(20va)	[12B
TR-03	Ignition transformer	[14B
TR-04	Power transformer(20va)	[17B
TS-01	Freeze stat	[4-5B
TS-02	High temp limit switch	[10B
TS-03	Intake Air Sensor	[10B
TS-05	Discharge Air Sensor	[21B
TS-11	Cabinet heater thermostat	[19B
VA-01	Pilot gas valve	[13B
VA-02	Main gas valve	[18B
VA-03	Modulating gas valve	[20B

MOTOR INFO

SUPPLY 3HP-208V-3P-9.5FLA

ELECTRICAL INFORMATION

MOTOR CIRCUIT MCA: 11.9A
CONTROL CIRCUIT MCA: 2.0A
MOTOR CIRCUIT MOP: 20A
CONTROL CIRCUIT MOP: 15A

NOTES

----- DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING
* SEPARATE CIRCUIT REQUIRED FOR SERVICE RECEPTACLE.
** TERMINALS S4 AND S6 USED ON NF & AF SERIES ACTUATORS
*** TERMINAL 11 PROVIDES COOLING CONNECTION

WIRE COLOR

BK-BLACK YW - YELLOW RD - RED
BL-BLUE GR - GREEN WH - WHITE
BR - BROWN GY - GRAY PK - PINK
OR - ORANGE PR - PURPLE

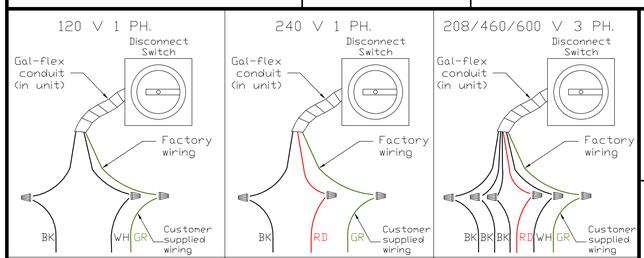
SOCKET STYLE "CLIXN" RELAY

NO	4	3
NC	2	1
COIL	8	7
COM	6	5

Installation Wiring

JOB 3074604 - Cedarholm Community Building

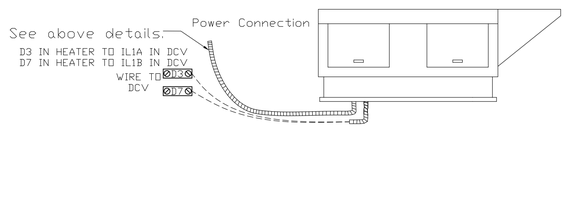
DRAWING NUMBER RP3074604-3 | SHIP DATE 7/7/2017 | MODEL A2-D.500-20D



POWER FROM DEDICATED BREAKER

BK
WH

SEPARATE CIRCUIT REQUIRED FOR SERVICE RECEPTACLE (15amp)



Installed Options

DCV Connections

NOTES

WIRE COLOR

BK - BLACK YW - YELLOW
BL - BLUE GR - GREEN
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

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Cedarholm Community Building
ROSEVILLE, MN, 55113

DATE: 7/7/2017

DWG.#: 70717CED_TS

DRAWN BY: TSS_75

SCALE: NTS

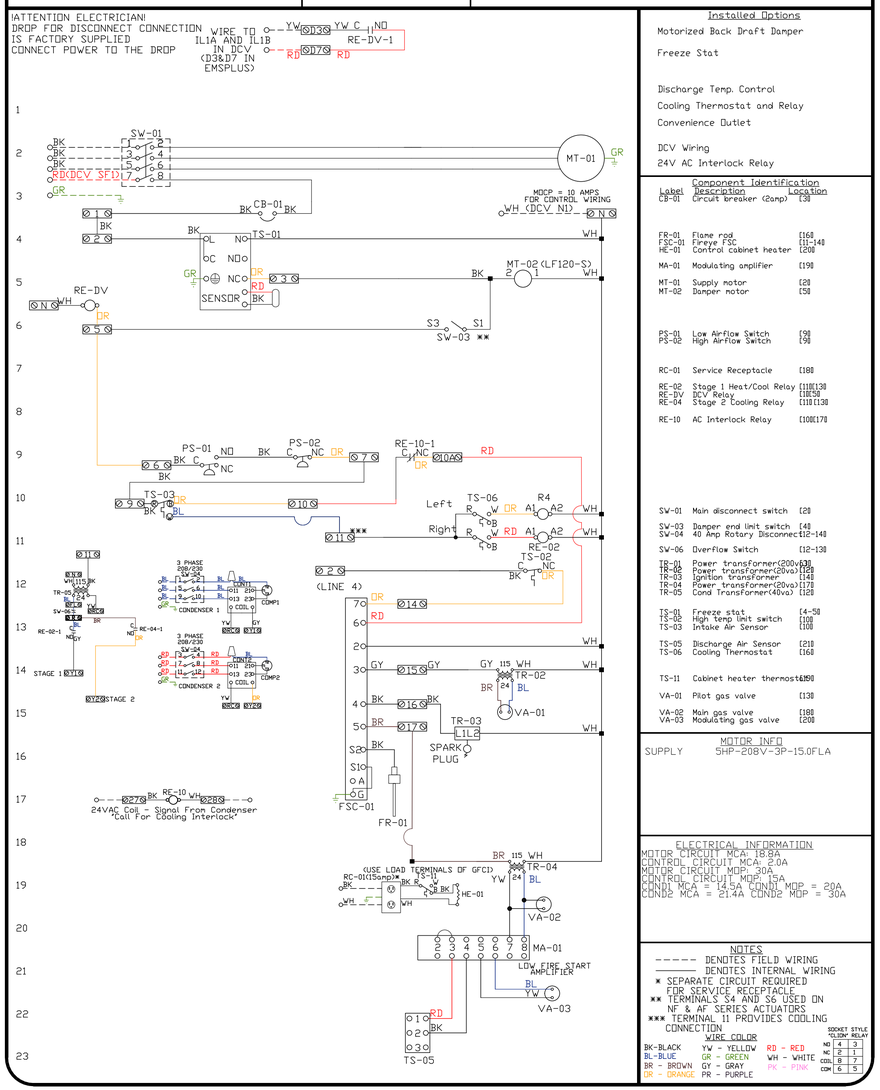
JOB #3074604

SHEET NO. 8

Direct Fired Heater Wiring

JOB 3074604 - Cedarholm Community Building

DRAWING NUMBER DF3074604-4 | SHIP DATE 7/7/2017 | MODEL A2-D.500-20D-MPU



Installed Options

Motorized Back Draft Damper

Freeze Stat

Discharge Temp. Control

Cooling Thermostat and Relay

Convenience Outlet

DCV Wiring

24V AC Interlock Relay

Component Identification

Label	Description	Location
CB-01	Circuit breaker (2amp)	[3B]
FR-01	Flame rod	[16B]
FSC-01	Fireye FSC	[11-14B]
HE-01	Control cabinet heater	[20B]
MA-01	Modulating amplifier	[19B]
MT-01	Supply motor	[2B]
MT-02	Damper motor	[5B]
PS-01	Low Airflow Switch	[9B]
PS-02	High Airflow Switch	[9B]
RC-01	Service Receptacle	[18B]
RE-02	Stage 1 Heat/Cool Relay	[11B][13B]
RE-DV	DCV Relay	[18C,5B]
RE-04	Stage 2 Cooling Relay	[11B][13B]
RE-10	AC Interlock Relay	[10B][17B]
SW-01	Main disconnect switch	[2B]
SW-03	Damper end limit switch	[4B]
SW-04	40 Amp Rotary Disconnect	[12-14B]
SW-06	Overflow Switch	[12-13B]
TR-01	Power transformer(200va)	[3B]
TR-02	Power transformer(20va)	[12B]
TR-03	Ignition transformer	[14B]
TR-04	Power transformer(20va)	[17B]
TR-05	Cond Transformer(40va)	[12B]
TS-01	Freeze stat	[4-5B]
TS-02	High temp limit switch	[10B]
TS-03	Intake Air Sensor	[10B]
TS-05	Discharge Air Sensor	[21B]
TS-06	Cooling Thermostat	[16B]
TS-11	Cabinet heater thermostat	[19B]
VA-01	Pilot gas valve	[13B]
VA-02	Main gas valve	[18B]
VA-03	Modulating gas valve	[20B]

MOTOR INFO

SUPPLY 5HP-208V-3P-15.0FLA

ELECTRICAL INFORMATION

MOTOR CIRCUIT MCA: 18.8A
CONTROL CIRCUIT MCA: 2.0A
MOTOR CIRCUIT MOP: 30A
CONTROL CIRCUIT MOP: 15A
COND1 MCA = 14.5A COND1 MOP = 20A
COND2 MCA = 21.4A COND2 MOP = 30A

NOTES

------ DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING
* SEPARATE CIRCUIT REQUIRED FOR SERVICE RECEPTACLE
** TERMINALS S4 AND S6 USED ON NF & AF SERIES ACTUATORS
*** TERMINAL 11 PROVIDES COOLING CONNECTION

WIRE COLOR

BK-BLACK	YW - YELLOW	RD - RED
BL-BLUE	GR - GREEN	WH - WHITE
BR - BROWN	GY - GRAY	PK - PINK
OR - ORANGE	PR - PURPLE	

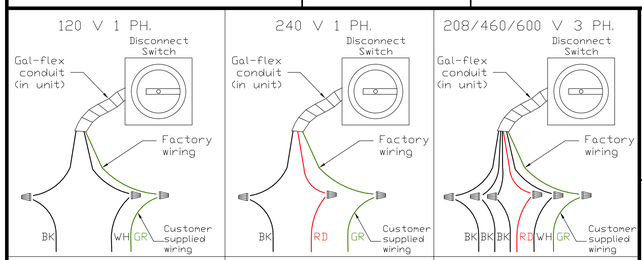
SOCKET STYLE "CLICK" RELAY

NO	4	3
NC	2	1
COIL	8	7
COM	6	5

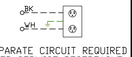
Installation Wiring

JOB 3074604 - Cedarholm Community Building

DRAWING NUMBER RP3074604-4 | SHIP DATE 7/7/2017 | MODEL A2-D.500-20D-MPU

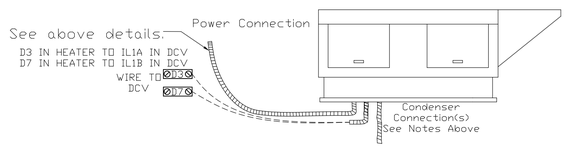


POWER FROM DEDICATED BREAKER



SEPARATE CIRCUIT REQUIRED FOR SERVICE RECEPTACLE (15amp)

DO NOT CONNECT CONDENSER POWER DROPS TO KITCHEN CONTROL PACKAGE STARTERS OR VFDS



Installed Options

DCV Connections

Condenser Staging = 2 Cond 2 Stages

NOTES

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	PR - PURPLE
RD - RED	PK - PINK
WH - WHITE	

OPTIONAL MAU WIRING

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DATE: 7/7/2017

DWG.#: 70717CED_TS

DRAWN BY: TSS_75

SCALE: NTS

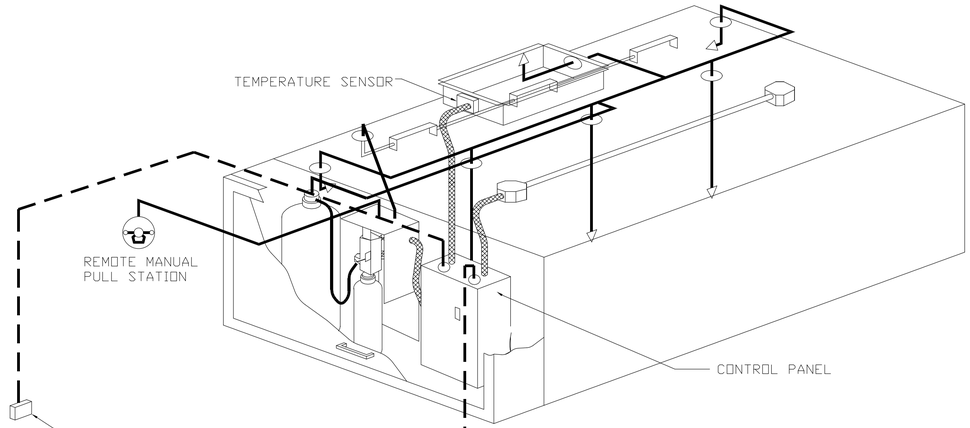
JOB #3074604

SHEET NO. 9

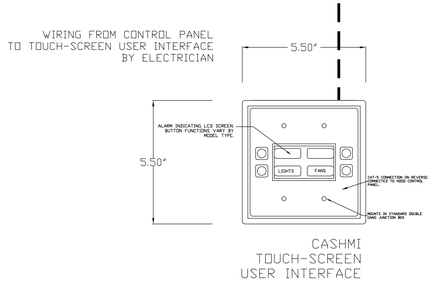
ELECTRICAL PACKAGES – Job#3074604

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	?	H.P.	VOLT	FLA
1	Item #22A	DCV-1111	Utility Cabinet Left	08 - Ship Loose w/ Prewire	1 Light 1 Fan	Smart Controls DCV	Item #23	Exhaust	3	5.000	208	15.0
							Item #24	Supply	3	3.000	208	9.5

ELECTRICAL CONTROLS PACKAGE MOUNTED IN UTILITY CABINET WITH RECESSED WALL-MOUNT SWITCHES SHIPPED LOOSE



Room Temperature Sensor
-Install on wall in a safe location, free of influence from external heat sources. Should be of average kitchen temperature away from appliances.
Operation
-If exhaust duct sensor detects a temperature rise of 10 degrees (adjustable) over the kitchen space temp, the fans will automatically turn on.
Automatic Mode
-Preferred method of operation instead of manually activating the FANS button



CASHMI
TOUCH-SCREEN
USER INTERFACE

RECESSED WALL-MOUNT

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Cedarholm Community Building
ROSEVILLE, MN, 55113

DATE: 7/7/2017
DWG.#: 70717CED_TS
DRAWN BY: TSS_75
SCALE: NTS
JOB #3074604
SHEET NO. 10

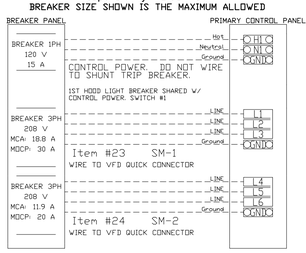
JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE
3074604	DCV-1111		INSTALL
	JOB NAME: Cedarholm Community Building	DATE: 7/7/2017	DWG NO: ECP #1-1

DESCRIPTION OF OPERATION:
Demand Control Ventilation, w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY THREE PHASE MOTOR REQUIRED! Room temperature sensor shipped loose for field installation.Verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

BREAKER PANEL TO PRIMARY CONTROL PANEL

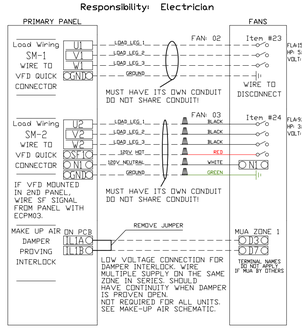
Responsibility: Electrician

BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



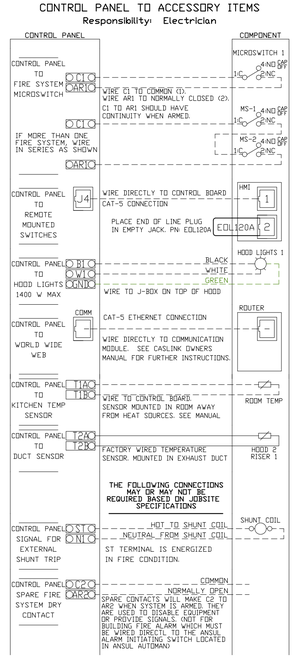
CONTROL PANEL TO FANS

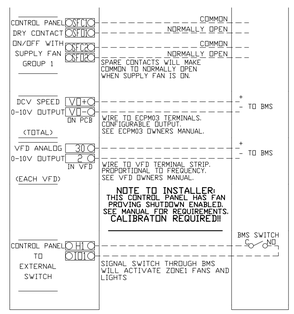
Responsibility: Electrician

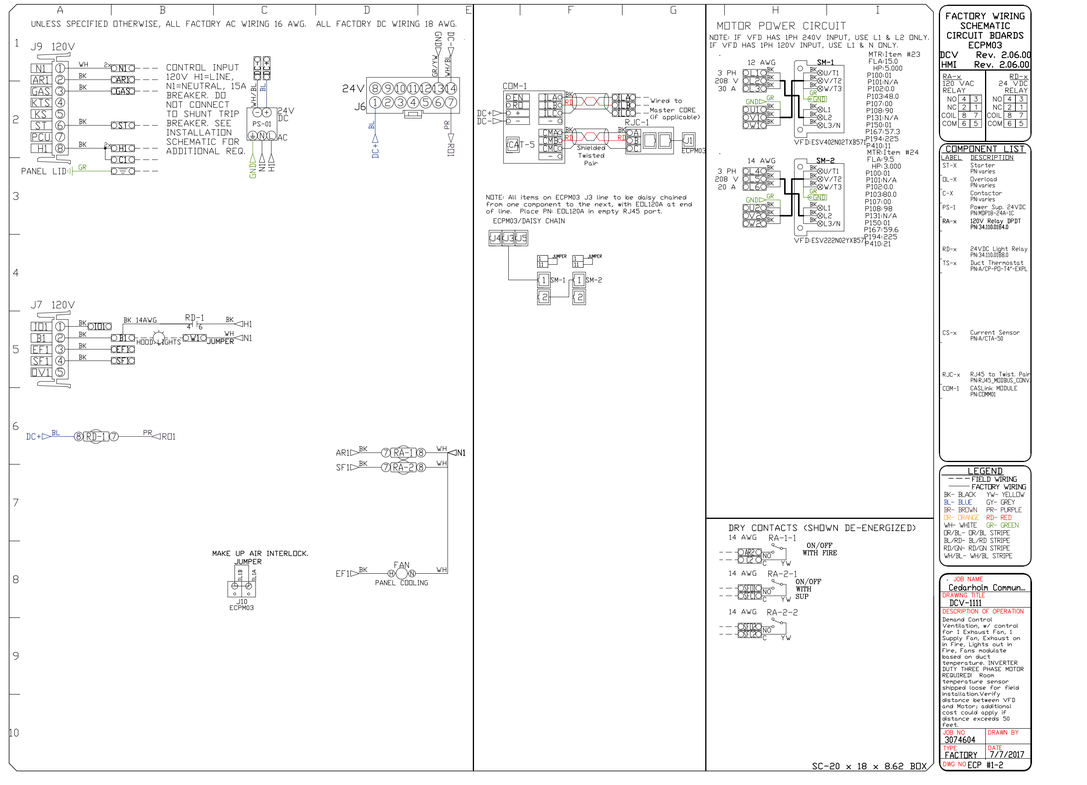


CONTROL PANEL TO ACCESSORY ITEMS

Responsibility: Electrician







FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPM03
DCV Rev. 2.06.00
HMI Rev. 2.06.00

RA-x 120 VAC RELAY	RD-x 24 VDC RELAY
NO 4 3	NO 4 3
NC 2 1	NC 2 1
COIL 8 7	COIL 8 7
COM 6 5	COM 6 5

COMPONENT LIST

LABEL	DESCRIPTION
ST-X	Starter Fixtures
OL-X	Overload Fixtures
C-X	Contactor Fixtures
PS-1	Power Sup. 24VDC PN:MDR-20A-1C
RA-x	120V Relay DPDT PN:3A10B1BA3
RD-x	24VDC Light Relay PN:3A10B1BB3
TS-x	Duct Thermostat PN:ACP-RD-14-CWL
CS-x	Current Sensor PN:ACTA-50
RJC-x	RJ45 to Twist Pair PN:RJ45_MODBD_CONV
CDM-1	CASLink MODULE PN:CDM01

LEGEND
FIELD WIRING
FACTORY WIRING
BK- BLACK YW- YELLOW
BL- BLUE GY- GREY
BR- BROWN PR- PURPLE
OR- ORANGE RD- RED
WH- WHITE GR- GREEN
DR/BL- DR/BL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

JOB NAME: Cedarholm Commun...
DRAWING TITLE: DCV-1111
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JOB NO	DRAWN BY
3074604	
TYPE	DATE
FACTORY	7/7/2017
DWG NO	ECP #1-2

Field Connection to Router or Ethernet Switch
OR Factory Wired Connection to Cellular Kit

CASlink Monitor and Control

- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
- Hood control panel to allow remote changes to system setting such as: VFD frequencies, ECM speeds, temperature set points, fan and wash schedules, etc.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire Systen	MONITOR
Building Pressures	MONITOR
Prep Time Button	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

SC Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire Systen	MONITOR
Building Pressures	MONITOR
Fans Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

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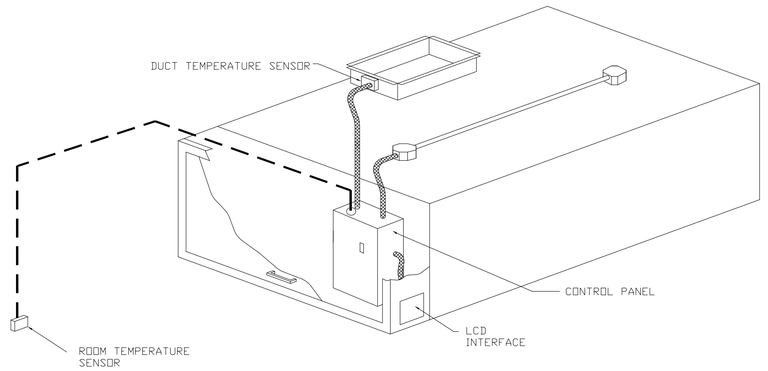
SHEET NO.
11

Demand Control Ventilation Hood Control Panel Specifications:

- Controls shall be listed by ETL (UL 508A) and shall comply with demand ventilation system turndown requirements outlined in IECC 403.2.8 (2015).
- The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.
- Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of stainless steel.
- A digital controller shall be provided to activate the hood exhaust fans dynamically based on a fixed differential between the ambient and duct temperatures sensors. This function shall meet the requirements of IMC 5.7.1.1.
- A digital controller shall provide adjustable hysteresis settings to prevent cycling of the fans after the cooking appliances have been turned off and/or the heat in the exhaust system is reduced.
- A digital controller shall provide an adjustable minimum fan run-time setting to prevent fan cycling.
- Variable Frequency Drives (VFDs) shall be provided for fans as required. The digital controller shall modulate the VFDs between a minimum setpoint and a maximum setpoint on demand. The duct temperature sensor input(s) to the digital controller shall be used to calculate the speed reference signal.
- The VFD speed range of operation shall be from 0% to 100% for the system, with the actual minimum speed set as required to meet minimum ventilation requirements.
- An internal algorithm to the digital controller shall modulate supply fan VFD speed proportional to all exhaust fans that are located in the same fan group as the supply fan.
- The system shall operate in PREP MODE during light cooking load or COOL DOWN MODE when sufficient heat remains underneath the hood system after cooking operations have completed. Operation during either of these periods will disable the supply fans and provide an exhaust fan speed that is equal to the minimum ventilation requirement.
- A digital controller shall disable the supply fan(s), activate the exhaust fan(s), activate the appliance shunt trip, and disable an electric gas valve automatically when fire condition is detected on a covered hood.
- A digital controller shall allow for external BMS fan control via Dry Contact (external control shall not override fan operation logic as required by code).
- An LCD interface shall be provided with the following features:
  a. On/Off push button fan & light switch activation
  b. Integrated gas valve reset for electronic gas valves (no reset relay required)
  c. VFD Fault display with audible & visual alarm notification
  d. Duct temperature sensor failure detection with audible & visual alarm notification
  e. Mis-wired duct temperature sensor detection with audible & visual alarm notification
  f. A single low voltage Cat-5 RJ45 wiring connection
  g. An energy savings indicator that utilizes measured kWh from the VFDs



TYPICAL HOOD CONTROL PANEL INSTALLATION

Sequence of Operations:

The hood control panel is capable of operating in one or more of the following states at any given time:

- Automatic: The system operates based on the differential between room temperature and the temperature at the hood cavity or exhaust duct collar. Fans activate at a configurable temperature differential threshold. Depending on the job configuration each fan zone can be configured as static or dynamic. These terms refer to whether a variable motor (such as EC Motors or VFD driven motors) modulate with temperature. If the panel is equipped with variable speed fans and the zone is defined as "dynamic", these will modulate within a user-defined range based on the temperature differential. Panels equipped with variable speed fans and a fan zone defined as "static", fans will run at a set speed calculated for the drive. Demand control ventilation systems are capable of modulating exhaust and make up air fan speeds per the requirements outlined in IECC 403.2.8.
- Manual: The system operates based on human input from an HMI.
- Schedule: A weekly schedule can be set to run fans for a specified period throughout the day. There are three occupied times per day to allow for the user to set up a time that is suitable to their needs. Any time that is within the defined occupied time, the system will run at modulation mode and follow the fan procedure algorithm based on temperature during this time. During unoccupied time, the system will have an extra offset to prevent unintended activation of the system during a time where the system is not being occupied.
- Other: The system operates based on the input from an external source (DDC, BMS or hard-wired interlock)

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System Design Verification (SDV)

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

Any field related discrepancies that are discovered during the SDV will be brought to the attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has to resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepancy that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.

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