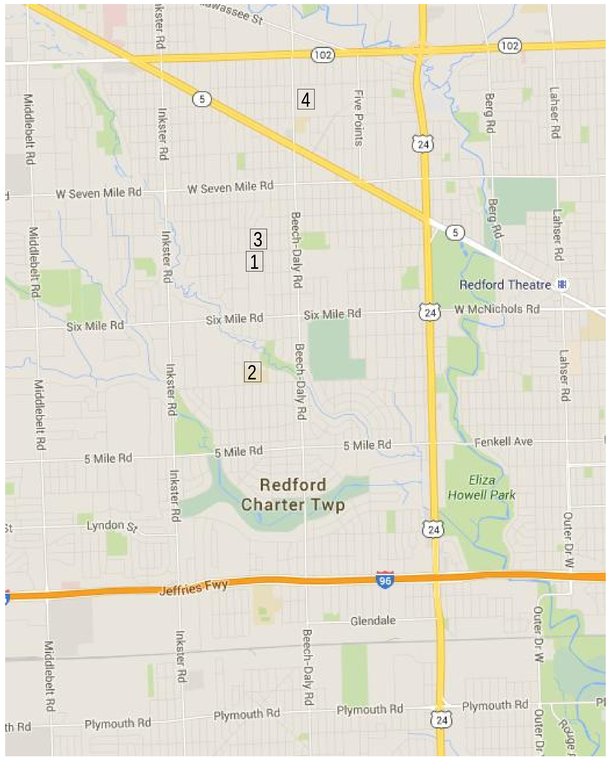
MI

Redford Union Schools Kitchen Improvements and Generators

Redford Union Schools

Redford, Michigan



1 **Redford Union High School**
17711 Kinloch Street Redford, MI 48240

2 **Hilbert Middle School**
26440 Puritan Avenue Redford, MI 48239

3 **MacGowan Elementary School**
18255 Kinloch Street Redford, MI 48240

4 **Beech Elementary School**
19990 Beech Daly Road Redford, MI 48240

ARCHITECTURAL

A1.21	PARTIAL PLANS
A1.22	BEECH ELEMENTARY PARTIAL PLANS AND DETAILS
A2.21	DETAILS, ENGINEERING SYMBOLS, AND MATERIALS SCHEDULE

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ME1.01	HILBERT MIDDLE SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES
ME1.02	MACGOWAN ELEMENTARY SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES - ALT No. 1
ME1.03	HIGH SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES
ME1.04	BEECH ELEMENTARY SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES

FOOD SERVICE

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FS3	PLUMBING/VENTILATION PLAN FOR FOOD SERVICE
FS4	FOOD SERVICE EQUIPMENT ELEVATION DETAILS
FS2	ELECTRICAL ROUGH-IN PLAN FOR FOOD SERVICE

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Redford Union Schools
17715 Brady Street Redford, MI 48240

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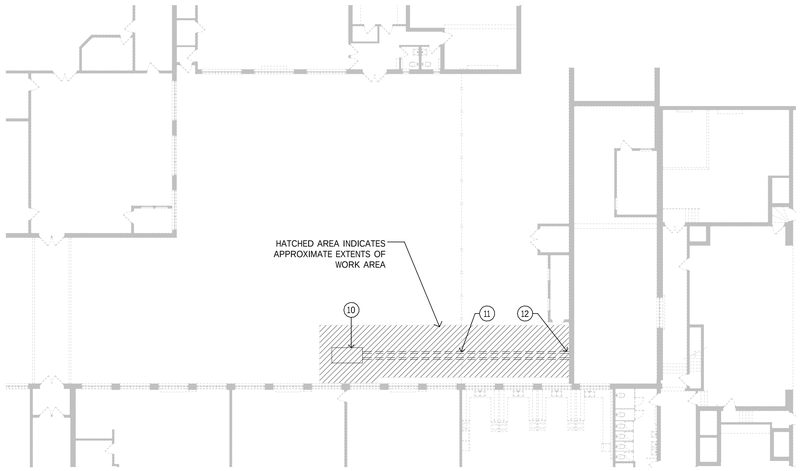
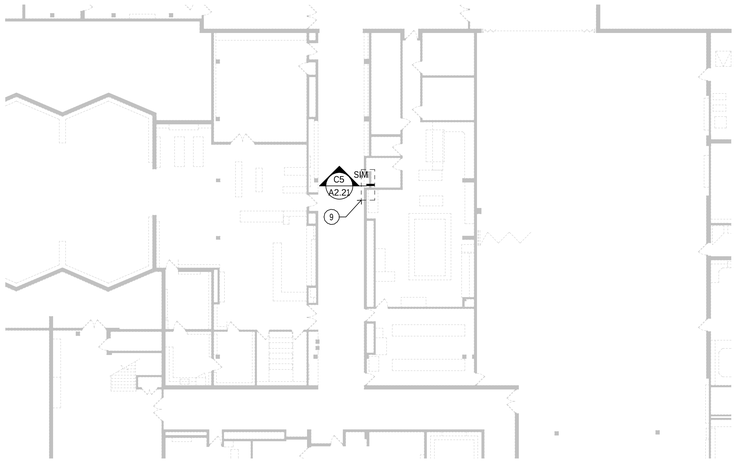
Comm No: 154007

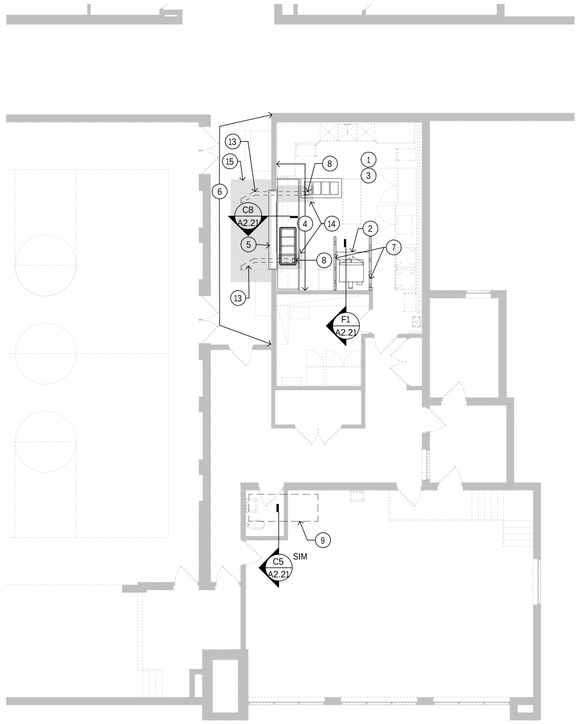
MI



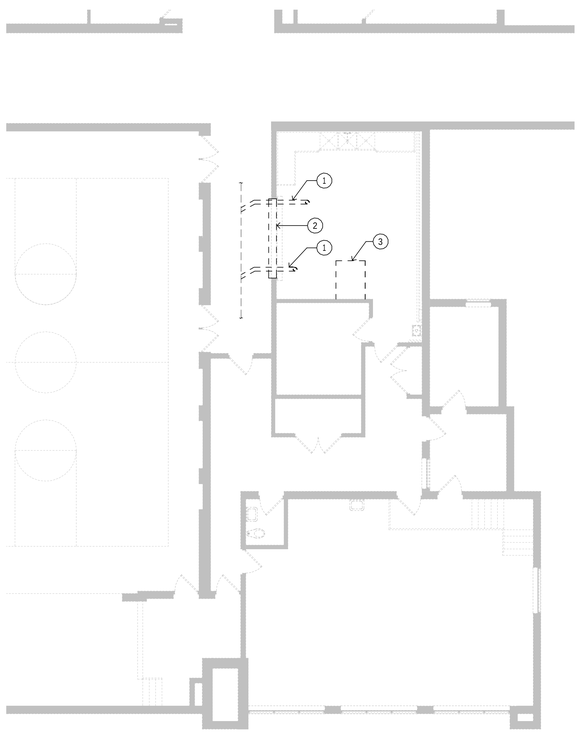
G7 PARTIAL FLOOR PLAN -HILBERT MIDDLE SCHOOL
1/16" = 1'-0"
0 12' 24'



H2 PARTIAL FLOOR PLAN - REDFORD UNION HIGH SCHOOL
1/16" = 1'-0"
0 12' 24'



D7 PARTIAL FLOOR PLAN - MACGOWAN ELEMENTARY
1/8" = 1'-0"
0 6' 12'



D4 PARTIAL DEMOLITION PLAN - MACGOWAN ELEMENTARY
1/8" = 1'-0"
0 6' 12'

FLOOR PLAN GENERAL NOTES:

1. REFER TO DETAILS OF CONSTRUCTION FOR:
   A. ABBREVIATIONS, MATERIAL SYMBOLS
   B. MOUNTING HEIGHTS
   C. LINTEL SCHEDULE
   D. MATERIAL FINISH/COLOR SCHEDULE
   E. WALL TYPES
   F. MARKER BD TYPES AND MOUNTING HTS

   THE ABOVE SECTIONS ARE LISTED FOR REFERENCE ONLY, AND ARE NOT EXCLUSIVE TO AREAS OF WORK. ALL DETAILS SHALL BE REVIEWED FOR SCOPE OF WORK.
2. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESSES ARE SHOWN NOMINAL, SEE WALL TYPES FOR ACTUAL THICKNESS.
3. ALL GYP. WALLS ARE TO BE 5 INCHES THICK UNLESS OTHERWISE NOTED.
4. ALL CONCRETE BLOCK WALLS ARE TO BE 8 INCHES THICK UNLESS OTHERWISE NOTED.
5. COORDINATE SIZE AND LOCATION OF ALL DUCT AND SHAFT OPENINGS IN WALLS AND FLOORS W/ MECH. AND ELEC. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS. SEE LINTEL SCHEDULE.
6. FIELD VERIFY ALL MILLWORK OPENINGS.
7. SET FLOOR DRAINS 3/4" BELOW FINISHED CONCRETE FLOORS UNLESS OTHERWISE NOTED. PROVIDE CONSISTENT SLOPE FROM WALL TO DRAIN BY SLOPING CONCRETE, MIN. 1/4" PER FOOT.
8. VERIFY LOCATION, SIZE AND QUANTITYOF ALL MECHANICAL AND ELECTRICAL EQUIPMENT PADS.
9. ALL DOOR/SIDELITE OPENINGS TO BEGIN 4" FROM ADJACENT WALL UNLESS OTHERWISE NOTED.

PARTIAL FLOOR PLANS KEY NOTES:

1. REFERENCE KITCHEN CONSULTANT SHEETS FOR EQUIPMENT INFORMATION. TYPICAL ALL AREAS.
2. LOCATION OF NEW HOOD. EXISTING CEILING IS 1" ROCK LATHE AND PLASTER WITH COLD-ROLLED STEEL FRAMING. CUT CEILING FOR INSTALLATION OF HOOD AND ASSOCIATED MECHANICAL COMPONENTS. REFER TO DETAIL __ FOR NEW STEEL FRAMING TO SUPPORT HOOD. PROVIDE ADDITIONAL METAL STUD FRAMING TO SUPPORT EXISTING CEILING SYSTEM AS NEEDED. VERIFY ALL CONDITIONS IN FIELD PRIOR TO BID.
3. REPAINT CEILING OF ENTIRE ROOM WITH EPOXY PAINT TO MATCH EXISTING. VERIFY THAT SURFACE IS PREPARED TO RECEIVE EPOXY PAINT FINISH.
4. REPAINT ENTIRE WALLS INDICATED WITH EPOXY PAINT TO MATCH EXISTING COLOR. VERIFY THAT SURFACE IS PREPARED TO RECEIVE EPOXY PAINT FINISH.
5. PROVIDE NEW COUNTER AT 31" A.F.F. REFER TO DETAIL FOR ADDITIONAL INFORMATION.
6. REPAINT THIS ENTIRE WALL AFTER INSTALLATION OF NEW SERVICE COUNTER IS COMPLETED. MATCH ADJACENT WALL COLORS.
7. PROVIDE STEEL ANGLES TO SUPPORT NEW HOOD.
8. REFER TO MECHANICAL PLANS FOR ADDITIONAL INFORMATION ON NEW FLOOR DRAIN IN THIS LOCATION.
9. LOCATION OF NEW GENERATOR TO BE MOUNTED ON ROOF. REFER TO ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION.
10. REFER TO ENGINEERING DRAWINGS FOR MORE INFORMATION ON NEW GROUND MOUNTED GENERATOR IN THIS LOCATION. RESTORE SOIL AND GRASS AS REQUIRED AFTER INSTALLATION.
11. REMOVE AND REINSTALL FENCE AS REQUIRED FOR INSTALLATION OF NEW GENERATOR AND CONNECTIONS.
12. PROVIDE WATERPROOF CAULKING AT ALL NEW WALL PENETRATIONS FOR GENERATOR CONNECTIONS.
13. BACKFILL AND POUR NEW CONCRETE. FURNISH AND INSTALL FINISH FLOOR MATERIAL TO MATCH EXISTING QUARRY TILE IN KITCHEN AND VCT IN HALLWAY. SUBMIT FINISH SAMPLES FOR APPROVAL.
14. PATCH MINIMUM OF 20 SQUARE FEET OF QUARRY TILE IN KITCHEN.
15. PATCH MINIMUM OF 70 SQUARE FEET OF VCT THIS AREA.

DEMOLITION LEGEND

- WALL TO REMAIN
- WALL TO BE REMOVED
- DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS NOTED OTHERWISE
- DESIGNATED ITEM TO REMAIN
- DESIGNATED ITEM TO BE REMOVED

DEMOLITION GENERAL NOTES

1. DEMOLITION NOTES AND PLANS ARE PROVIDED AS A GUIDE ONLY. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND EXAMINE DRAWINGS AND DETAILS TO DETERMINE EXTENT AND LIMITS OF DEMOLITION REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL ASPECTS OF DEMOLITION. CONTRACTOR TO REVIEW ALL DRAWINGS FOR ADDITIONAL DETAILS AND CONSTRUCTION SEQUENCING NOTES. MECHANICAL AND ELECTRICAL DEMOLITIONS ARE SHOWN ON MECHANICAL AND ELECTRICAL DRAWINGS.
3. REFER TO MECHANICAL AND ELECTRICAL FOR ADDITIONAL DEMOLITION NOTES.
4. CONTRACTOR TO COORDINATE DEMOLITION WITH DETAILS AND STRUCTURAL DRAWINGS TO INSTALL NEW LINTELS OR STRUCTURAL COMPONENTS TO SUPPORT EXISTING STRUCTURE.
5. PROVIDE AND COORDINATE ALL DEMOLITION AND RECONSTRUCTION WITH NEW WORK PLAN DIMENSIONS AND INSTALLATION OF NEW MATERIALS AND FINISHES, AS REQUIRED, WHETHER INDICATED ON DRAWINGS OR NOT.
6. PROVIDE SMOOTH AND CLEAN SUBSTRATE TO ALL AREAS RECEIVING NEW FINISHES. COORDINATE WORK WITH PLANS AND THE ROOM FINISH SCHEDULE.
7. ALL RELATED WOOD BLOCKING SUPPORT STRUCTURE, HARDWARE CONNECTION DEVICES, ADHESIVES, AND/OR MASTIC SHALL BE REMOVED FROM SURFACES AT ITEMS NOTED FOR REMOVAL. PROVIDE SURFACES ACCEPTABLE FOR PATCHING AND/OR NEW WORK.
8. DEMOLITION NOTES WITHOUT ARROWS INDICATE THAT THE NOTE APPLIES TO THE ENTIRE ROOM.

DEMOLITION PLAN KEY NOTES:

1. REFER TO ENGINEERING DRAWINGS FOR INFORMATION ON SAWCUTTING OF FLOOR FOR INSTALLATION OF NEW FLOOR DRAINS IN KITCHEN.
2. REMOVE EXISTING SERVICE COUNTER, SUBSTRATE, AND ADHESIVES AND/OR FASTENERS TO EXPOSE BARE CONCRETE MASONRY UNIT BELOW. PREPARE TO RECEIVE ADDITIONAL COURSE OF MASONRY AS NEEDED.
3. REMOVE CEILING AS NEEDED TO ACCOMMODATE NEW HOOD AND SUPPORTS IN THIS LOCATION.

A

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ARCHITECT under the laws of the State of MICHIGAN

Registration Number Arch Num Date Issue Date

Revisions		
Description	Date	Num

Comm: 154007
Date: September 21 2015
Drawn: Author
Check: Checker

North

PARTIAL PLANS

Scale: As indicated

A1.21

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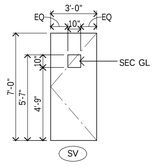
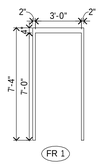
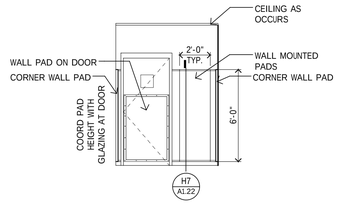


DOOR TYPES



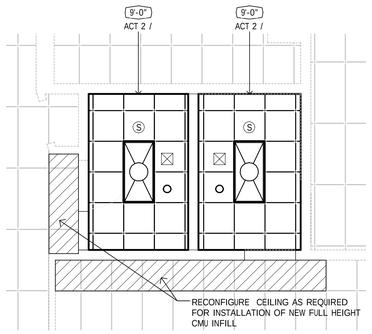
FRAME TYPES



B3 TYPICAL WALL PAD ELEVATION
1/4" = 1'-0"

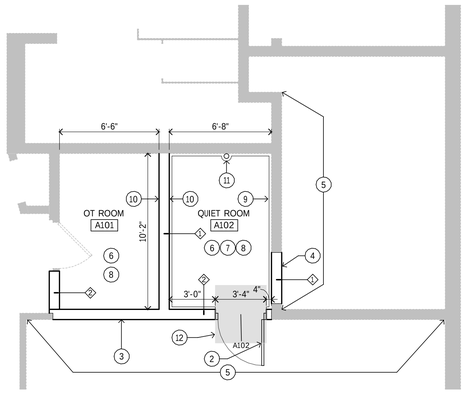
DOOR / OPENING SCHEDULE - BEECH ELEMENTARY															
DOOR	DOOR / OPENING						FRAME				MOUNTING CONDITIONS			HDW	
NO	TYPE	QTY	WIDTH	HEIGHT	MATL	LAB EL	TYPE	DEPTH	MATL	GL	HEAD	JAMB	SILL	GRP	REMARKS
A102	SV	1	3'-0"	7'-0"	WD	--	FR 1	--	H.M.	--					

MI

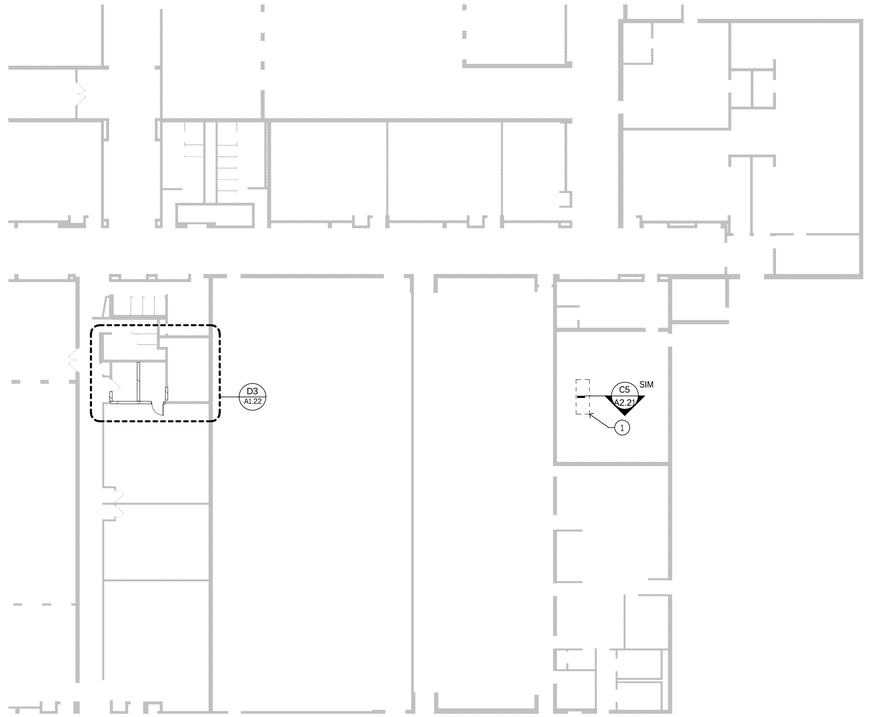


D1 BEECH ELEM. PARTIAL RCP
1/4" = 1'-0"

NOTE: CEILING HEIGHTS FOR NEW CEILINGS ARE NOTED FOR REFERENCE ONLY. NEW CEILING HEIGHT TO MATCH EXISTING HEIGHT. FIELD VERIFY.



D3 BEECH ELEMENTARY QUIET ROOM
1/4" = 1'-0"



D7 PARTIAL FLOOR PLAN - BEECH ELEMENTARY
1/16" = 1'-0"

FLOOR PLAN GENERAL NOTES:

1. REFER TO DETAILS OF CONSTRUCTION FOR:
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4. ALL CONCRETE BLOCK WALLS ARE TO BE 8 INCHES THICK UNLESS OTHERWISE NOTED.
5. COORDINATE SIZE AND LOCATION OF ALL DUCT AND SHAFT OPENINGS IN WALLS AND FLOORS W/ MECH. AND ELEC. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS. SEE LINTEL SCHEDULE.
6. FIELD VERIFY ALL MILLWORK OPENINGS.
7. SET FLOOR DRAINS 3/4" BELOW FINISHED CONCRETE FLOORS UNLESS OTHERWISE NOTED. PROVIDE CONSISTENT SLOPE FROM WALL TO DRAIN BY SLOPING CONCRETE, MIN. 1/4" PER FOOT.
8. VERIFY LOCATION, SIZE AND QUANTITYOF ALL MECHANICAL AND ELECTRICAL EQUIPMENT PADS.
9. ALL DOOR/SIDELITE OPENINGS TO BEGIN 4" FROM ADJACENT WALL UNLESS OTHERWISE NOTED.

PARTIAL FLOOR PLANS KEY NOTES:

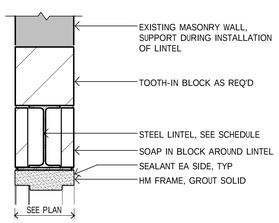
1. LOCATION OF NEW GENERATOR TO BE MOUNTED ON ROOF. REFER TO ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION.
2. NEW 36" WOOD DOOR WITH HOLLOW METAL FRAME IN THIS LOCATION.
3. INFILL WALL AT FORMER LOCATION OF WOOD FRAME WINDOW SYSTEM WITH CONCRETE BLOCK. ALIGN MORTAR JOINTS WITH EXISTING WALL JOINTS TO MINIMIZE CONTRAST BETWEEN EXISTING AND INFILL.
4. INFILL WALL AT FORMER LOCATION OF DOOR WITH CONCRETE BLOCK. ALIGN MORTAR JOINTS WITH EXISTING WALL JOINTS TO MINIMIZE CONTRAST BETWEEN EXISTING AND INFILL.
5. REPAINT ENTIRE WALL AFTER INFILLING OPENING. MATCH EXISTING PAINT COLOR.
6. PAINT ALL WALLS IN THIS ROOM.
7. INSTALL MATS AT ALL WALLS IN THIS ROOM.
8. REPAIR CEILING AS NEEDED AFTER CONSTRUCTION OF NEW WALL. SEE ENGINEERING DRAWINGS FOR INFORMATION ON RECONFIGURING LIGHTING, MECHANICAL, AND FIRE SAFETY REQUIREMENTS IN THIS ROOM.
9. INSTALL NEW FULL-LENGTH MIRROR IN THIS LOCATION.
10. PROVIDE VINYL COVE BASE ON EACH SIDE OF NEW WALL.
11. BUILD PADDING AROUND EXISTING PIPE.
12. PATCH VCT AT NEW DOOR TO MATCH EXISTING.

RCP LEGEND

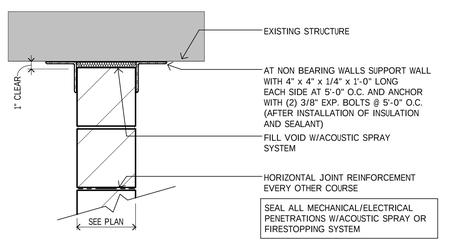
- CANLIGHT
- 2 X 2 LIGHT FIXTURE (IN CEILING GRID)
- 2 X 4 LIGHT FIXTURE (IN CEILING GRID)
- CEILING MOUNTED LIGHT FIXTURE
- SPEAKER
- AIR DIFFUSER (IN TILE)
- RETURN AIR GRILLE (IN TILE)

RCP GENERAL NOTES

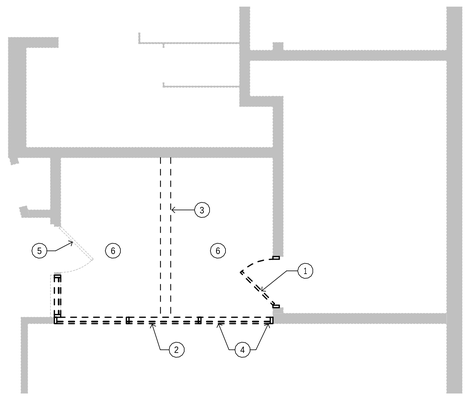
1. FOR WALLS THAT PENETRATE CEILINGS SEE WALL TYPES SHOWN ON THE FLOOR PLAN.
2. SPRINKLER HEADS ARE NOT SHOWN. LOCATE ALL SPRINKLER HEADS IN THE CENTER OF CEILING TILES.
3. FOR DIFFUSER AND RETURN GRILL SIZES, SEE MECHANICAL PLANS.
4. FOR LIGHT FIXTURE TYPES, SEE ELECTRICAL LIGHTING PLANS.
5. CEILINGS HEIGHTS INDICATED ON PLAN (E.G. 9'-0") ARE FROM FINISHED FLOOR OF LEVEL OF PLAN SHOWN OR INDICATED AS 109'-0".
6. ACOUSTICAL TILE CEILING GRID IS TO BE CENTERED IN RECTANGULAR ROOM OR CENTERED BETWEEN LONGEST WALLS OF IRREGULARLY SHAPED ROOMS UNLESS OTHERWISE NOTED.
7. VERIFY GYP. BD. CONTROL JOINT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.



F3 HEAD AT EXISTING WALL
1 1/2" = 1'-0"



F4 WALL TYPES #1 AND #2 AT HEAD
1 1/2" = 1'-0"



F7 PARTIAL DEMOLITION PLAN - BEECH
1/4" = 1'-0"

DEMOLITION LEGEND

- WALL TO REMAIN
- WALL TO BE REMOVED
- DOOR TO REMAIN
- DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS NOTED OTHERWISE
- DESIGNATED ITEM TO REMAIN
- DESIGNATED ITEM TO BE REMOVED

DEMOLITION GENERAL NOTES

1. DEMOLITION NOTES AND PLANS ARE PROVIDED AS A GUIDE ONLY. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND EXAMINE DRAWINGS AND DETAILS TO DETERMINE EXTENT AND LIMITS OF DEMOLITION REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
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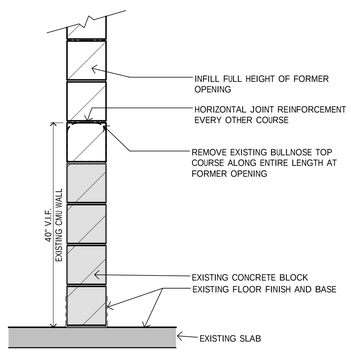
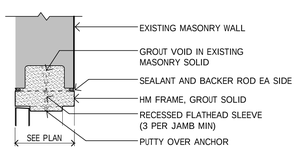
3. REFER TO MECHANICAL AND ELECTRICAL FOR ADDITIONAL DEMOLITION NOTES.
4. CONTRACTOR TO COORDINATE DEMOLITION WITH DETAILS AND STRUCTURAL DRAWINGS TO INSTALL NEW LINTELS OR STRUCTURAL COMPONENTS TO SUPPORT EXISTING STRUCTURE.
5. PROVIDE AND COORDINATE ALL DEMOLITION AND RECONSTRUCTION WITH NEW WORK PLAN DIMENSIONS AND INSTALLATION OF NEW MATERIALS AND FINISHES, AS REQUIRED, WHETHER INDICATED ON DRAWINGS OR NOT.
6. PROVIDE SMOOTH AND CLEAN SUBSTRATE TO ALL AREAS RECEIVING NEW FINISHES. COORDINATE WORK WITH PLANS AND THE ROOM FINISH SCHEDULE.
7. ALL RELATED WOOD BLOCKING SUPPORT STRUCTURE, HARDWARE CONNECTION DEVICES, ADHESIVES, AND/OR MASTIC SHALL BE REMOVED FROM SURFACES AT ITEMS NOTED FOR REMOVAL. PROVIDE SURFACES ACCEPTABLE FOR PATCHING AND/OR NEW WORK.
8. DEMOLITION NOTES WITHOUT ARROWS INDICATE THAT THE NOTE APPLIES TO THE ENTIRE ROOM.

DEMOLITION PLAN KEY NOTES:

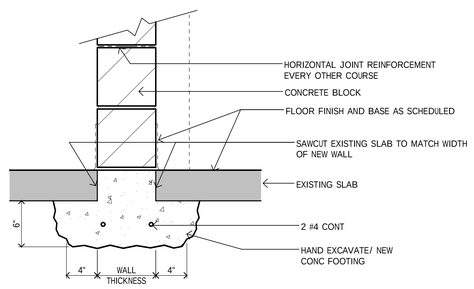
1. REMOVE EXISTING DOOR, FRAME, AND HARDWARE.
2. REMOVE EXISTING WOOD FRAMED WINDOW SYSTEM. PREPARE OPENING FOR INFILL AS NEEDED.
3. SAWCUT FLOOR, REFER TO DETAIL G4/A1.22. DEMOLISH CEILING DIRECTLY ABOVE THIS AREA AS REQUIRED TO FACILITATE INSTALLATION OF NEW WALL.
4. REMOVE PORTION OF WALL BELOW EXISTING WINDOW SYSTEM IN THIS LOCATION TO ACCOMMODATE NEW DOOR. REFER TO CONSTRUCTION PLAN FOR EXTENTS.
5. PROTECT EXISTING WOOD DOOR AND FRAME DURING DEMOLITION.
6. DEMOLISH EXISTING CEILING. SEE MECHANICAL AND ELECTRICAL FOR REMOVAL OF EXISTING FIXTURES AND DEVICES.



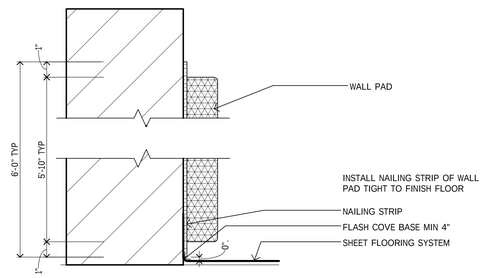
H1 WALL TYPE #2 BASE
1" = 1'-0"



H3 JAMB AT EXISTING WALL
1 1/2" = 1'-0"



H4 WALL TYPE #1 BASE AT NONBEARING
1 1/2" = 1'-0"



H7 WALL PAD INSTALLATION SECTION
3" = 1'-0"

A

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tel 248 284 0611
fax 248 284 0615
mail@woldae.com

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ARCHITECT under the laws of the State of MICHIGAN

Arch Name
Registration Number Arch Num Date Issue Date

Revisions		
Description	Date	Num

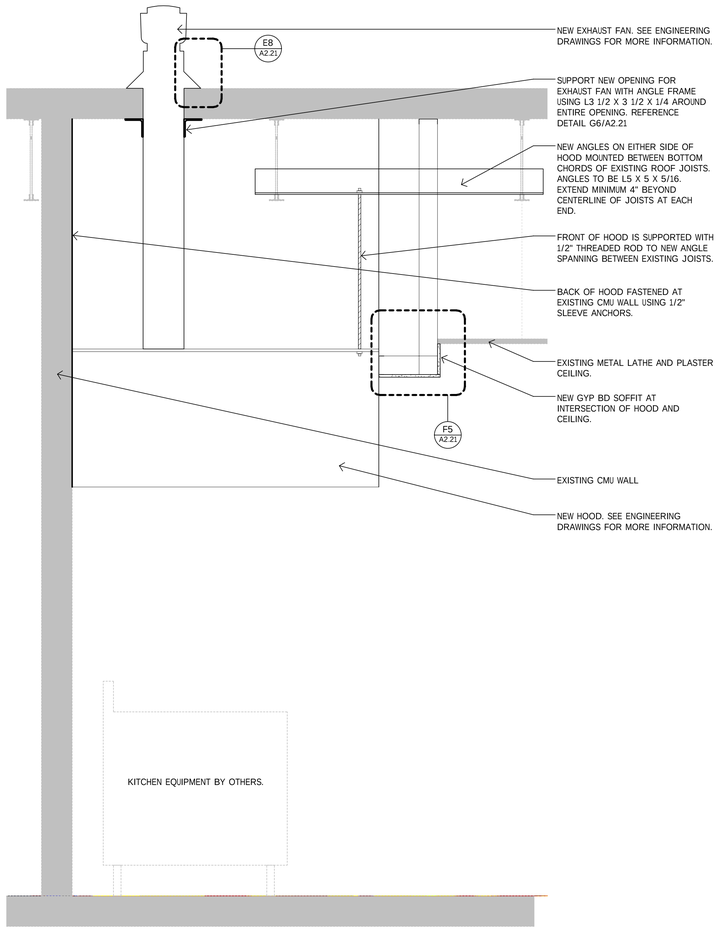
Comm: 154007
Date: September 21 2015
Drawn: Author
Check: Checker
North

BEECH ELEMENTARY PARTIAL PLANS AND DETAILS

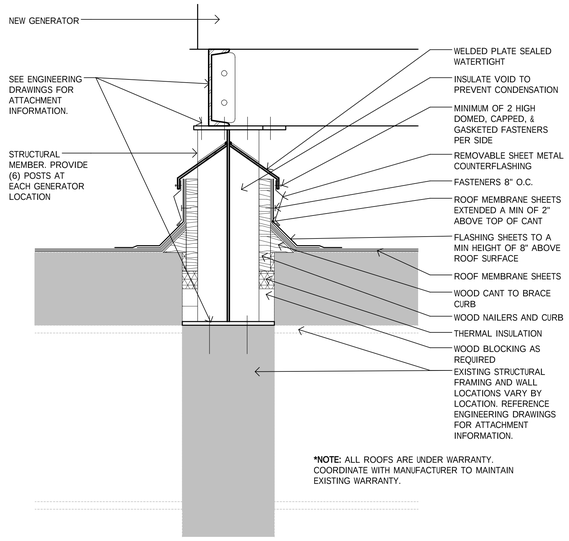
Scale: As indicated

A1.22

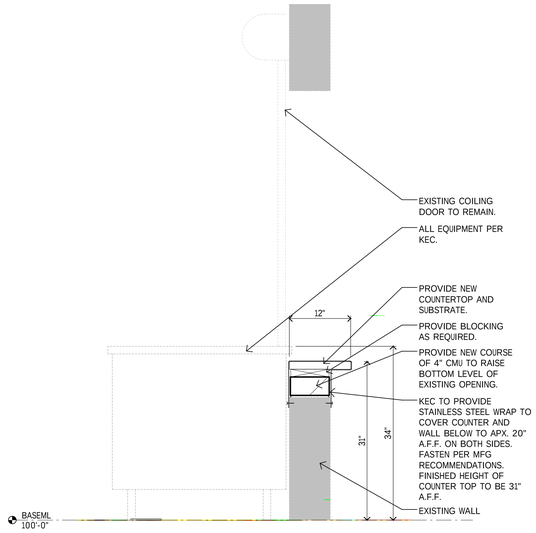
MI



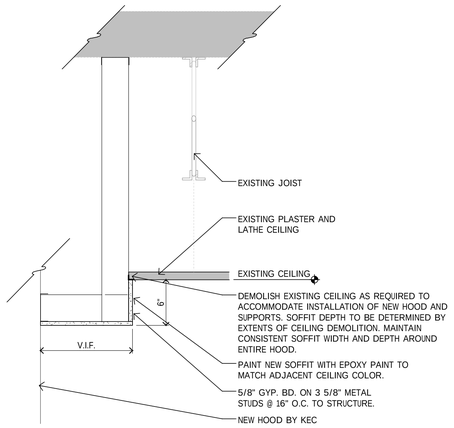
F1 SECTION AT NEW HOOD
1" = 1'-0"



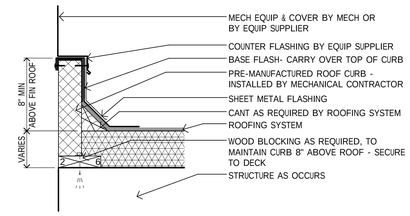
C5 SECTION AT STRUCTURAL ROOF PENETRATION, TYP.
1 1/2" = 1'-0"



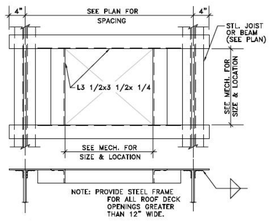
C8 SECTION AT SERVICE WINDOW
1" = 1'-0"



F5 GYPSUM BOARD SOFFIT AT NEW HOOD
1 1/2" = 1'-0"



E8 PENETRATION CURB AT EXHAUST FAN
1 1/2" = 1'-0"



F8 ROOF OPENING FRAME
1" = 1'-0"

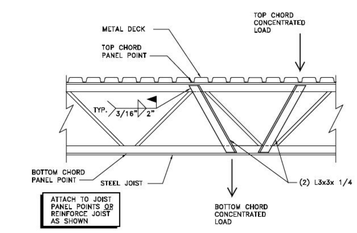
MATERIAL FINISH/ COLOR SCHEDULE

	Item	Manufacturer	Color/ Finish	Location Used
08 14 00	Wood Doors			
	Prefinished Stained Wood Door	Marshfield	Color to match existing doors	Beech Elementary
08 71 00	Finish Hardware			
	Butt Hinges-Interior	As specified	US26D on steel	Beech Elementary
	Pulls And Push Plates/ Bars	As specified	US32D on stainless steel	Beech Elementary
	Coordinators	As specified	USP on steel	Beech Elementary
	Closers	As specified	Sprayed AL on cast iron or aluminum	Beech Elementary
	Protective Plates	As specified	US32D on stainless Steel	Beech Elementary
	Overhead Stops	As specified	US26D on brass, bronze, or steel	Beech Elementary
	Magnetic Holders	As specified	Sprayed SA on cycolac	Beech Elementary
	Thresholds	As specified	Mill aluminum	Beech Elementary
	Miscellaneous	As specified	US26D on brass or bronze	Beech Elementary
09 30 00	Tile			
	Quarry Tile	As specified	Color to match existing	MacGowan Elementary
	Grout- Quarry tile	As specified	Color to match existing	MacGowan Elementary
09 65 00	Resilient Flooring			
	VCT 1	Armstrong	Color to match existing as selected from manufacturer's standard colors	MacGowan Elementary & Beech Elementary
	Vinyl Base	Roppe	Color to match existing as selected from manufacturer's standard colors	Beech Elementary
	Reducer/ Transition Strips	Roppe	Color to match existing as selected from manufacturer's standard colors	Beech Elementary
09 91 00	Paint			
	PT 5-Interior Misc. Metals	Sherwin Williams	Color to match existing door frames	Beech Elementary
	PT 6A-Walls	Sherwin Williams	Color(s) as needed to match existing	Beech Elementary
	PT 6B-Walls	Sherwin Williams	Color(s) as needed to match existing	MacGowan Elementary
	PT 7-Soffits	Sherwin Williams	Color to match ceiling	MacGowan Elementary
	PT 8-Ceilings	Sherwin Williams	Color to match existing	MacGowan Elementary
11 66 23	Gymnasium Equipment			
	Wall Pads	Porter	Color: 08 Beige	Beech Elementary

NOTE: ALL FINISHES LISTED ON THE MATERIAL FINISH/COLOR SCHEDULE ARE FOR REFERENCE ONLY, FINAL SELECTIONS WILL BE MADE DURING SHOP SUBMITTALS.

—	PANELBOARD		THREE PHASE MOTOR
	SPECIAL NEMA 230 VOLT RECEPTACLE	C	CONDUIT
	DUPLEX RECEPTACLE	MFG	MANUFACTURE
PB	PULL BOX	EM	EMERGENCY
S	SINGLE POLE SWITCH	NG	NATURAL GAS
	FUSED DISCONNECT SWITCH	WH	WATER HEATER
	HOME RUN	—G—	NATURAL GAS PIPING
EX	EXISTING		SHUT - OFF VALVE
PNL	PANEL		ELBOW DROPPING DOWN
ATS	AUTOMATIC TRANSFER SWITCH		VALVE IN RISER
E	ELECTRICAL		NATURE GAS METER
	POWER CONNECTION		NATURE GAS REGULATOR
	GROUND	FD	FLOOR DRAIN
GND	GROUND	—SAN—	SANITARY PIPING BELOW FLOOR

H5 MECHANICAL AND ELECTRICAL ENGINEERING SYMBOLS
1/8" = 1'-0"



H8 STEEL JOIST REINFORCEMENT
1" = 1'-0"

A

Redford Union Schools
Kitchen Improvements
and Generators

Redford Union High School
17711 Kinloch Street Redford, MI 48240
Hilbert Middle School
26440 Puritan Avenue Redford, MI 48239
MacGowan Elementary School
18255 Kinloch Street Redford, MI 48240
Beech Elementary School
19990 Beech Daly Road Redford, MI 48240

Redford Union Schools
17715 Brady Street Redford, MI 48240

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Clawson, MI 48017

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mail@woldae.com

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ARCHITECT under the laws of the State of MICHIGAN

Registration Number Arch Num Date Issue Date

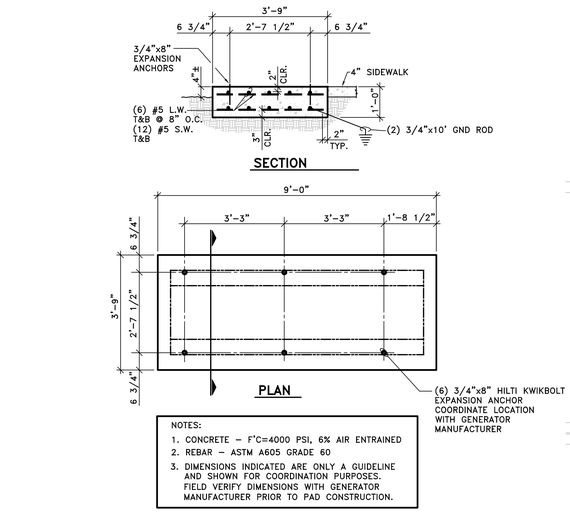
Revisions		
Description	Date	Num

Comm: 154007
Date: September 21 2015
Drawn: Author
Check: Checker

DETAILS, ENGINEERING SYMBOLS, AND MATERIALS SCHEDULE

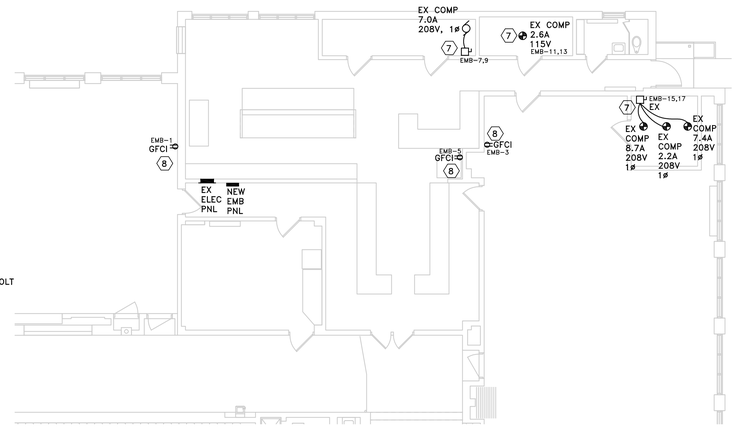
Scale: As indicated

A2.21

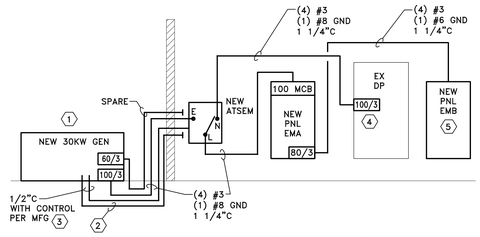


NOTES:
1. CONCRETE – F'C=4000 PSI, 6% AIR ENTRAINED
2. REBAR – ASTM A605 GRADE 60
3. DIMENSIONS INDICATED ARE ONLY A GUIDELINE AND SHOWN FOR COORDINATION PURPOSES. FIELD VERIFY DIMENSIONS WITH GENERATOR MANUFACTURER PRIOR TO PAD CONSTRUCTION.

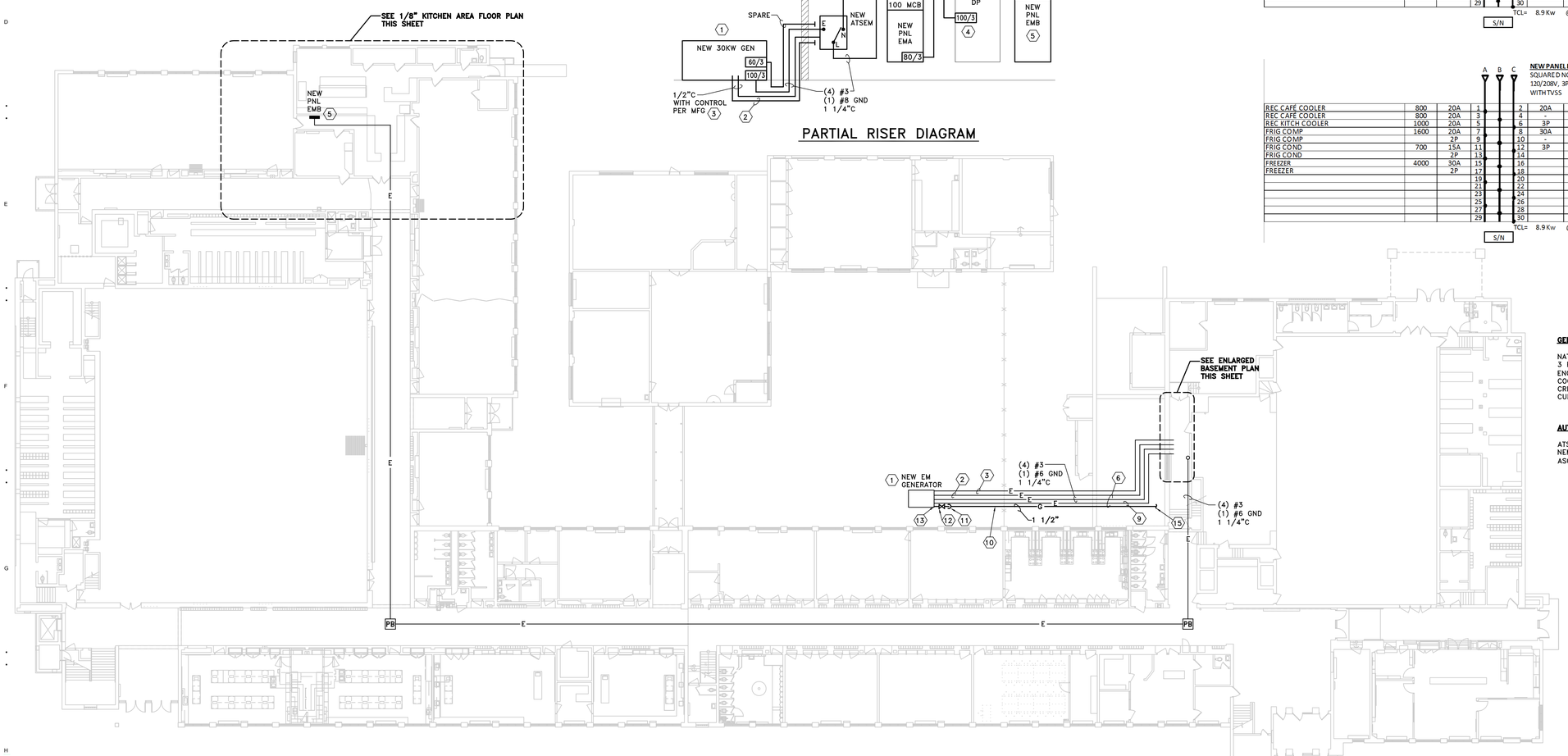
GENERATOR FOUNDATION PAD DETAIL
1/2"=1'-0"



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



PARTIAL RISER DIAGRAM



MASTER PLAN
1/16"=1'-0"

KEYED NOTES

1. FURNISH AND INSTALL NEW GENERATOR ON NEW CONCRETE FOUNDATION PAD PER DETAIL.
2. FURNISH AND INSTALL (2) 20A, 120 VOLT DEDICATED CIRCUITS TO THE GENERATOR FROM PANEL RPA FOR THE BLOCK HEATER AND BATTERY CHARGER.
3. FURNISH AND INSTALL CONTROL CABLE FROM ATS TO GENERATOR PER MANUFACTURES INSTALLATION INSTRUCTIONS.
4. FURNISH AND INSTALL A NEW 100 AMP, 3 POLE CIRCUIT BREAKER IN EXISTING PANEL DP AND ASSOCIATED FEED TO THE NEW ATS-EM. (4) #3, (1) #6 GND, 1 1/4"C.
5. FURNISH AND INSTALL NEW PANEL EMB SURFACE MOUNTED ADJACENT TO THE EXISTING PANEL.
6. THE DESIGN INTENT IS TO RUN THE ELECTRICAL CONDUIT AND GAS LINES FROM THE BASEMENT UNDERGROUND TO THE NEW GENERATOR. FIELD COORDINATE THE EXACT ROUTE.
7. INTERCEPT EXISTING CIRCUIT AND REFEED FROM A NEW PANEL "EM" CIRCUIT. FURNISH AND INSTALL A NEW LABEL ON LOAD/DISCONNECT INDICATING SOURCE AND CIRCUIT NUMBER. (IE EMA-3,5)
8. REPLACE EXISTING RECEPTACLE WITH A NEW RED DEVICE. RECIRCUIT TO NEW PANEL "EMA".
9. FURNISH AND INSTALL A SPARE 1" CONDUIT FROM THE GENERATOR TO THE ELECTRICAL ROOM.
10. ROUTE 1 1/2" NATURAL GAS PIPING FROM EXISTING NATURAL GAS PIPING LOCATED IN BASEMENT TO NEW EMERGENCY GENERATOR. UTILIZE 1 1/2" POLYETHYLENE PIPE BELOW GROUND AND TRANSITION TO SCHEDULE 40 STEEL PIPE ABOVE GROUND. TRANSITION POLYETHYLENE PIPE ABOVE GROUND TO SCHEDULE 40 STEEL PIPE UTILIZING AN APPROVED ADAPTER (TYPICAL AT BOTH LOCATIONS). NO POLYETHYLENE PIPING SHALL BE ROUTED ABOVE GROUND. PRIME AND PAINT ALL SCHEDULE 40 STEEL PIPING LOCATED OUTDOORS WITH RUST INHIBITOR PAINT, INCLUDING ZINC. COLOR OF PAINT TO BE SELECTED BY THE ARCHITECT.
11. TRANSITION FROM POLYETHYLENE PIPING BELOW GRADE TO SCHEDULE 40 STEEL PIPING ABOVE GROUND AT GENERATOR. SUPPORT ANY PIPING ABOVE GRADE AS NECESSARY WITH MIRO RS54 PIPING SUPPORTS WITH TOP CLAMP. PIPING SHALL BE SUPPORTED A MAXIMUM OF EVERY 10 FEET ABOVE GRADE.
12. PROVIDE 1 1/2" SHUT OFF VALVE AT GENERATOR.
13. CONNECT 1 1/2" SCHEDULE 40 PIPE TO FLEXIBLE GAS CONNECTION ON GENERATOR. REDUCE GAS PIPE SIZE AT GENERATOR AS REQUIRED. FIELD INSTALL Y-STRAINER AT GENERATOR AND INSTALL ALL GAS PIPING PER MANUFACTURER'S RECOMMENDATIONS. FIELD VERIFY EXACT GAS CONNECTION LOCATION ON GENERATOR.
14. FURNISH AND INSTALL GENERATOR REMOTE ANNUNCIATOR.
15. CONNECT NEW 1 1/2" PIPING INTO EXISTING 6" NATURAL GAS PIPING IN THE BASEMENT. EXISTING 6" NATURAL GAS PIPING SERVES THE BOILER. PROVIDE A NATURAL GAS REGULATOR AS REQUIRED FOR GENERATOR. THE MINIMUM NATURAL GAS PRESSURE OF THE GENERATOR IS 6" W.C. AND THE MAXIMUM PRESSURE IS 14" W.C. ROUTE REGULATOR VENTS TO THE OUTDOORS.

GENERAL MECHANICAL NOTE:

COORDINATE NATURAL GAS SHUT DOWN A MINIMUM OF TWO WEEKS IN ADVANCE WITH OWNER. ASSUME PREMIUM TIME FOR NATURAL GAS SHUT DOWN TO TIE IN FOR NEW NATURAL GAS GENERATOR.

NEW PANEL EMA
SQUARE D NQ 100A MCB
120/208V, 3P, 4W SURFACE MOUNT
WITH TVSS

PANEL EMB	8900	80A	1	2		
PANEL EMB			3	4		
PANEL EMB		3P	5	6		
SPARE		20A	7	8		
SPARE		20A	9	10		
SPARE		20A	11	12		
SPARE		20A	13	14		
			15	16		
			17	18		
			19	20		
			21	22		
			23	24		
			25	26		
			27	28		
			29	30		

TCL= 8.9 Kw @ 208v 3P= 24.8 AMPS

S/N

NEW PANEL EMB
SQUARE D NQ 100A MLO
120/208V, 3P, 4W SURFACE MOUNT
WITH TVSS

REC CAFE COOLER	800	20A	1	2	20A	SPARE
REC CAFE COOLER	800	20A	3	4	-	SPARE
REC KITCH COOLER	1000	20A	5	6	3P	SPARE
FRIG COMP	1600	20A	7	8	30A	SPARE
FRIG COMP		2P	9	10	-	SPARE
FRIG COND	700	15A	11	12	3P	SPARE
FRIG COND		2P	13	14		
FREEZER	4000	30A	15	16		
FREEZER		2P	17	18		
			19	20		
			21	22		
			23	24		
			25	26		
			27	28		
			29	30		

TCL= 8.9 Kw @ 208v 3P= 24.8 AMPS

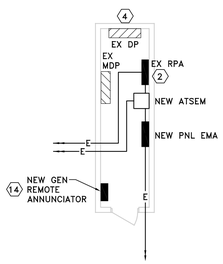
S/N

GENERATOR SCHEDULE

NATURAL GAS CUMMINS POWER GENERATOR. 30KW, 120/208 VOLT, 3 PHASE, 60 Hz. ALUMINUM, POWDER COATED SANDSTONE ENCLOSURE. (1) 100A/3P, (1) 60A/3P OUTPUT CIRCUIT BREAKERS. COOLANT HEATER, BATTERY CHARGER. REMOTE MONITORING DEVICE. CRITICAL SILENCE MUFFLER.
CUMMINS #C30-N6

AUTOMATIC TRANSFER SWITCH SCHEDULE

ATS-EM-104 AMP, 120/208 VOLT, 3 PHASE WITH SOLID NEUTRAL. NEMA 1 ENCLOSURE.
ASCO #300-3-104-C-1-C-120/208V3#4W-60Hz



ENLARGED BASEMENT PLAN
1/8"=1'-0"

Redford Union Schools Kitchen Improvements and Generators

Redford Union High School
17711 Kinloch Street Redford, MI 48240
Hilbert Middle School
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Beech Elementary School
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714 East Midland Street
Bay City, Michigan 48706
(989) 894-4300 · Fax (989) 894-9930
www.macmillanassociates.com

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ENGINEER under the laws of the State of Michigan

Douglas F. Reckinger

Registration Number 31668 Date 07/30/85

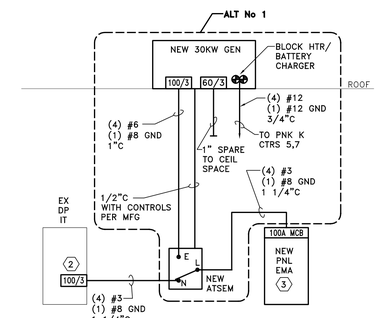
Revisions		
Description	Date	Num

Comm: 154007
Date: SEPTEMBER 21, 2015
Drawn: DCT
Check: EAB
North

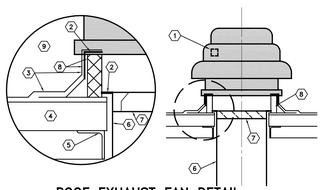
HILBERT MIDDLE SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES

Scale: As indicated

ME1.01



PARTIAL RISER DIAGRAM



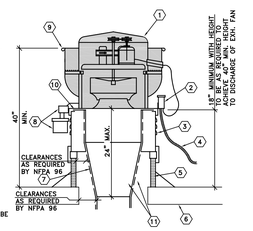
ROOF EXHAUST FAN DETAIL

NO SCALE

1. DISCONNECT SWITCH
2. GASKET SEAL
3. ROOFING AND FLASHING BY G.C.
4. ROOF CONSTRUCTION
5. STRUCTURAL STEEL SUPPORT SEE STRUCTURAL DRAWINGS
6. EXHAUST DUCT
7. BACKDRAFT DAMPER
8. INSULATED ROOF CURB BY M.C. (PREFABRICATED)-SEE DRAWINGS FOR CURB HEIGHT
9. VERIFY ROOF PITCH-THE MECHANICAL TRADE SHALL FURNISH BLOCKING AS NECESSARY TO LEVEL CURB AND EXHAUST FAN

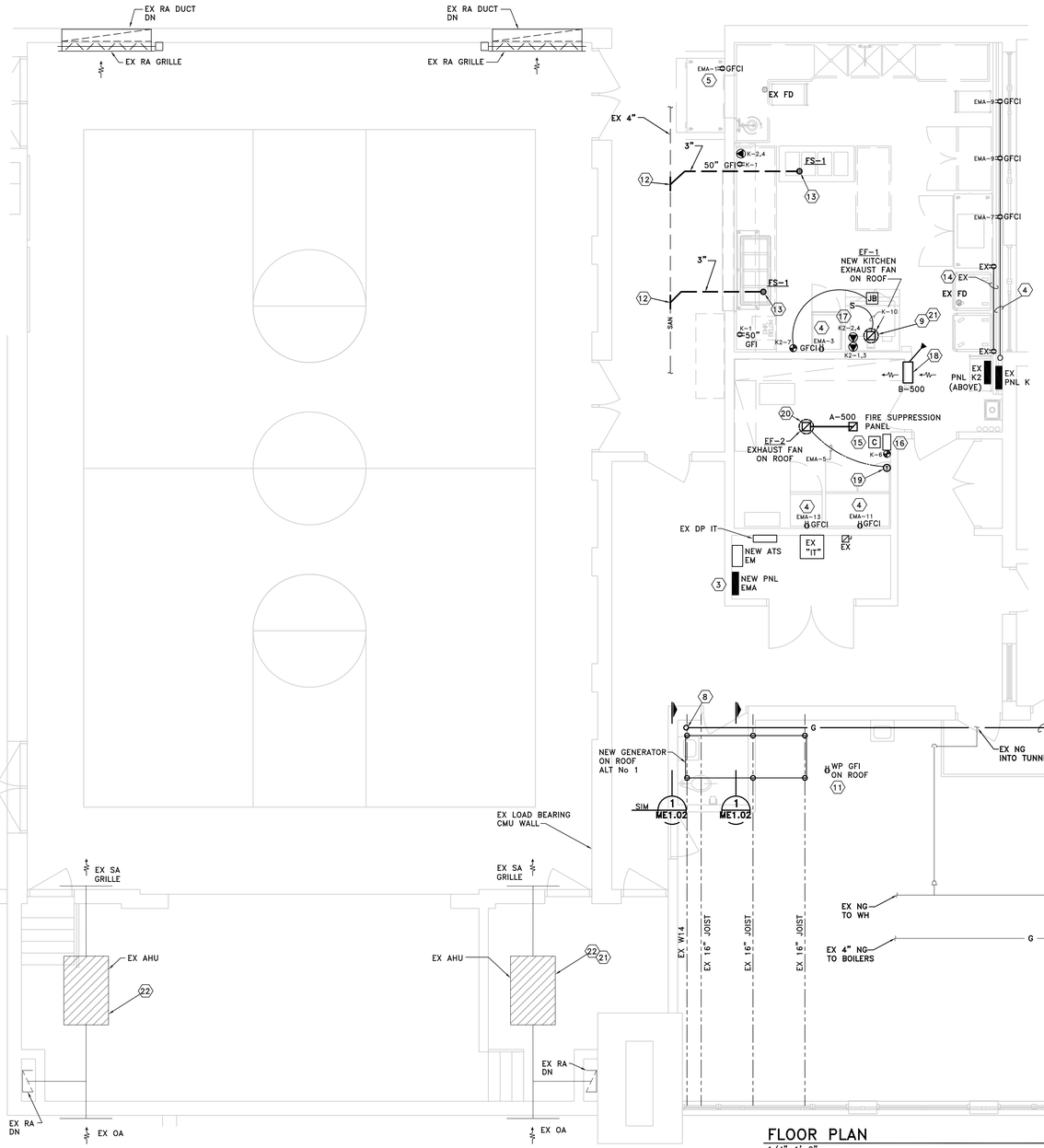
1. UPBLAST ROOF EXHAUST FAN UL LISTED FOR GREASE REMOVAL AND TESTED UNDER HIGH TEMPERATURE EXHAUST (300°F) AND ABNORMAL FLARE-UP (600°F) CONDITIONS.
2. NEMA 3R DISCONNECT SWITCH FURNISHED AND FIELD WIRED BY ELECTRICAL TRADES TO MOTOR TO DISCONNECT THROUGH BREATHER TUBE.
3. VENTED CURB EXTENSION.
4. LIQUID TIGHT FLEXIBLE CONDUIT BY ELECTRICAL TRADES.
5. MINIMUM 12" HIGH INSULATED ROOF CURB.
6. ROOF DECK.
7. MIN. 18 GA. WELDED LIQUID-TIGHT S.S. DUCTWORK INSTALLED TO MIN. 18" ABOVE ROOF DECK.
8. REMOVABLE GREASE TRAP TO DRAIN CONNECTION PIPE.
9. MINIMUM 40" HEIGHT ABOVE ROOF DECK TO DISCHARGE OF EXHAUST FAN.
10. HINGED CURB CAP TO ALLOW ENTIRE FAN TO SWING AWAY FOR ACCESS TO DUCT AND FAN WHEEL.
11. DUCT TRANSITION TO EXH. FAN THROAT TO BE MAX. 24" FROM FAN OPENING. EXH. DUCTWORK SHALL HAVE A MINIMUM 2 HOUR RATED ENCLOSURE AS NOTED IN SPECIFICATION & TO MEET ALL STATE, LOCAL, & NFPA-96 REQUIREMENTS.

   NOTE: FAN INSTALLATION, CONSTRUCTION, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 96 AND ALL LOCAL AND STATE CODES.



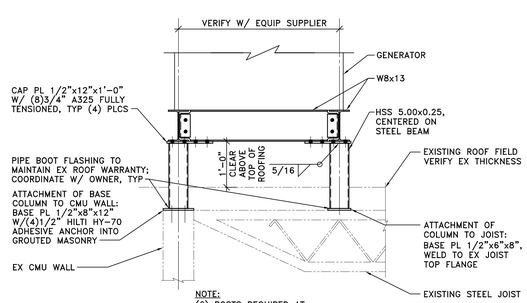
KITCHEN HOOD EXHAUST FAN DETAIL

NO SCALE



FLOOR PLAN

1/4"=1'-0"



NOTE:
(6) POSTS REQUIRED AT EACH GENERATOR LOCATION

1 GENERATOR FRAMING DETAIL – ALT No 1

ME1.02 3/4"=1'-0"

2015-9004-ME-GEN-FRAMING.dwg

EXISTING PANEL K
KINNEY 240A MLO
120/240V, 3P, 4W

	SPARE		20A	1	2	20A		COOLER WALL PLUG SW	1
	HOOD VENT FAN		20A	3	4	20A		KITCHEN FREEZER	1
1	EXISTING		20A	5	6	20A		N. WALL PLUG MILK COOLER	1
1	EXISTING		20A	7	8	20A		CEILING LTS S	
	KITCHEN LTS EM		20A	9	10	20A		SPARE	
	W. WALL/SE COUNTER PLUGS		20A	11	12	20A		GARBAGE GRINDER	

TCL= 0 Kw @ 208v 3P= 0 AMPS

S/N

REVISED PANEL K
KINNEY100A MLO
120/240V, 3P, 4W

2	REC	300	20A	1	2	25A	4000	HOT FOOD TABLE	4
	HOOD VENT FAN	360	20A	3	4	2P		HOT FOOD TABLE	4
2	GEN BLOCK HEATER	600	20A	5	6	20A		FIRE SUPPRESSION PANEL	2
2	GEN BATTERY CHARGER	600	20A	7	8	20A		CEILING LTS S	
	KITCHEN LTS EM		20A	9	10	20A	1200	EXHAST FAN EF-1	2
	W. WALL/SE COUNTER PLUGS		20A	11	12	20A		GARBAGE GRINDER	

TCL= 7.06 Kw @ 208v 3P= 19.7 AMPS

S/N

NEW PANELEMA
SQUARED NQ 100A MCB
120/208V, 3P, 4W
WITH TVSS

REC MILK COOLER	800	20A	1	2	20A		SPARE
REC FRIG	300	20A	3	4	20A		SPARE
STORAGE ROOM EF	400	20A	5	6	20A		SPARE
REC MILK COOLER	800	20A	7	8	20A		SPARE
REC M FRIG	800	20A	9	10	20A		SPARE
REC FREEZER (E1)	1000	20A	11	12	20A		SPARE
REC FREEZER (E2)	1000	20A	13	14	20A		SPARE
			15	16			
			17	18			
			19	20			
			21	22			
			23	24			
			25	26			
			27	28			
			29	30			

TCL= 5.1 Kw @ 208v 3P= 14.2 AMPS

S/N

EXISTING PANEL K2
100A MLO
120/240V, 1P, 3W

3	OVEN (E9)	7000	40A	1	2	40A	7000	OVEN (E9)	3
3	OVEN (E9)		2P	3	4	29		OVEN (E9)	3
	BUN MAKER		20A	5	6	20A		OVEN	
2	HOOD LTS/CONTROLS E10	100	20A	7	8			BLANK	

TCL= 14.1 Kw @ 240v 1P= 58.8 AMPS

S/N

PANEL SCHEDULE – KEYED NOTES

1. DISCONNECT AND REMOVE EXISTING CIRCUIT BACK TO THE SOURCE INCLUDING ALL CONDUCTORS AND RACEWAY. EXISTING LOAD SHALL BE FED FROM THE NEW EMERGENCY PANEL EMA. UPDATE PANEL SCHEDULE ACCORDINGLY.
2. UTILIZE SPARE CIRCUIT BREAKER TO FEED NEW LOAD.
3. DISCONNECT AND REMOVE EXISTING OVEN LOAD BACK TO THE SOURCE INCLUDING ALL CONDUIT AND WIRE. REPLACE EXISTING CIRCUIT BREAKER WITH NEW TO POWER NEW LOAD.
4. FURNISH AND INSTALL NEW CIRCUIT BREAKER TO FEED NEW LOAD.

GENERATOR SCHEDULE – ALT No 1

NATURAL GAS CUMMINS POWER GENERATOR. 30KW, 120/208 VOLT, 3 PHASE, 60 Hz. ALUMINUM, POWDER COATED SANDSTONE ENCLOSURE. (1) 100A/3P, (1) 60A/3P OUTPUT CIRCUIT BREAKERS. COOLANT HEATER, BATTERY CHARGER. REMOTE MONITORING DEVICE. CRITICAL SILENCE MUFFLER. CUMMINS #C30-N6

AUTOMATIC TRANSFER SWITCH SCHEDULE – ALT No 1

100 AMP, 120/208 VOLT, 3 PHASE WITH SOLID NEUTRAL. NEMA 1 ENCLOSURE.
ASCO #300-3-104-C-1-C-120/208V3#4W-60Hz

KEYED NOTES

1. ALT No 1 FURNISH AND INSTALL NEW EMERGENCY GENERATOR ON THE ROOF. REFER TO STRUCTURAL DETAILS.
2. ALT No 1 UTILIZE EXISTING SPARE CIRCUIT BREAKER TO FEED NEW ATSEM. BASE BID FURNISH AND INSTALL PANEL EMA FED FROM EX DPIT.
3. ALT No 1 FURNISH AND INSTALL NEW PANEL EMA AND ATSEM SURFACE MOUNTED. BASE BID FURNISH AND INSTALL PANEL EMA FED FROM EX DPIT.
4. FURNISH AND INSTALL NEW SURFACE MOUNTED EMT CONDUIT PAINTED TO MATCH EXISTING WALL COLOR. RUN VERTICALLY DOWN WALL THEN HORIZONTAL UNDER WINDOWS.
5. INTERCEPT EXISTING RECEPTACLE CIRCUIT AND REFEED FROM NEW PANEL. REPLACE EXISTING RECEPTACLE WITH A NEW RED RECEPTACLE. INSTALL NEW STAINLESS STEEL COVER PLATE.
6. ALT No 1 ROUTE 1 1/2" SCHEDULE 40 STEEL PIPING FROM EXISTING NATURAL GAS PIPING LOCATED IN MECHANICAL ROOM TO NEW EMERGENCY GENERATOR. SUPPORT PIPING HIGH IN SPACE ABOVE DOORS FROM WALL OR ROOF JOIST. PIPING SHALL BE SUPPORTED A MAXIMUM OF EVERY 10 FEET HORIZONTALLY.
7. ALT No 1 CONNECT NEW 1 1/2" PIPING INTO EXISTING 4" WITH VALVE AT CONNECTION TO EXISTING NATURAL GAS PIPING. CONNECT DOWNSTREAM OF GAS METER. PROVIDE GAS REGULATOR FOR GENERATOR AS REQUIRED. THE MINIMUM GAS PRESSURE OF GENERATOR IS 6"W.C. AND MAXIMUM IS 14"W.C. ROUTE REGULATOR VENTS TO THE OUTDOORS
8. ALT No 1 ROUTE 1 1/2" NATURAL GAS PIPING UP THROUGH ROOF TO NEW EMERGENCY GENERATOR. REDUCE GAS PIPE SIZE AT GENERATOR AS REQUIRED. FIELD INSTALL Y-STRAINER AT GENERATOR AND INSTALL GAS PIPING PER MANUFACTURER'S RECOMMENDATIONS. FIELD VERIFY EXACT GAS CONNECTION LOCATION AT GENERATOR. INSTALL 1 1/2" NATURAL GAS SHUT OFF VALVE AT GENERATOR. PRIME AND PAINT ALL SCHEDULE 40 STEEL PIPING LOCATED OUTDOORS WITH RUST INHIBITOR PAINT, INCLUDING ZINC. PAINT COLOR TO BE SELECTED BY ARCHITECT.
9. CONNECT NEW 8"X 8"EXHAUST DUCT TO EXHAUST COLLAR ON NEW KITCHEN HOOD AND ROUTE 8"X8" WELDED EXHAUST DUCT UP TO NEW EXHAUST FAN ON ROOF. ROUTE DUCT STRAIGHT DOWN FROM EXHAUST FAN TO EXHAUST HOOD CONNECTION. WRAP DUCTWORK WITH DUCT WRAP PER SPECIFICATIONS AND PER NFPA 96. COORDINATE FINAL SWITCH LOCATION WITH KITCHEN EQUIPMENT CONTRACTOR.
10. ALT No 1 FURNISH AND INSTALL GENERATOR REMOTE ANNUNCIATOR.
11. ALT No 1 FURNISH AND INSTALL A WEATHERPROOF GFI RECEPTACLE AT THE GENERATOR. WIRE TO LOCAL RECEPTACLE CIRCUIT.
12. CONNECT NEW 3" SANITARY PIPING TO EXISTING SANITARY BELOW FLOOR. FIELD VERIFY EXACT LOCATION OF EXISTING SANITARY PIPING. THE GENERAL CONTRACTOR SHALL CUT AND PATCH FLOOR AS NECESSARY.
13. ROUTE 1/2" DRAIN PIPING FROM FOOD SERVICE EQUIPMENT AND AIR GAP AT FLOOR DRAIN.
14. EXISTING CONDUIT AND RECEPTACLES SHALL REMAIN TO POWER THE HOT CARTS.
15. FURNISH AND INSTALL A 60 AMP 6 POLE CONTACTOR WITH 24 VOLT COIL. RUN KITCHEN OVEN CIRCUITS K2-1,3/K2-2,4/K2-8 THRU CONTACTOR. WIRE CONTACTOR TO THE FIRE SUPPRESSION PANEL TO AUTOMATICALLY SHUT DOWN THE LOADS UNDER THE HOOD.
16. PROVIDE A FIRE ALARM SYSTEM CONNECTION TO THE NEW FIRE SUPPRESSION PANEL.
17. FURNISH AND INSTALL SURFACE EMT CONDUIT PAINTED TO MATCH WALL AND (2) 230V OVEN RECEPTACLES. COORDINATE NEMA CONFIGURATION WITH OVENS.
18. INSTALL (2) 16"X20" TYPE "B" TRANSFER AIR GRILLES IN WALL AT 12" ABOVE FINISHED FLOOR. INSTALL GRILLE ON BOTH SIDES OF OPENING. INSTALL NEW DFD-110 DYNAMIC FIRE DAMPER TO FIT WITHIN OPENING. OPENING SHALL ACT AS TRANSFER AIR OPENING. CUT OPENINGS IN WALL AS NECESSARY. PATCH, REPAIR AND PAINT WALL AS NECESSARY TO REPAIR ANY DAMAGE DURING INSTALLATION.
19. INSTALL NEW COOLING ONLY THERMOSTAT FOR NEW EXHAUST FAN, EF-2. LABEL COVER OF THERMOSTAT 'EXHAUST FAN'. LABEL SHALL BE TYPEWRITTEN.
20. ROUTE A 12"X12" EXHAUST DUCT FROM NEW EXHAUST FAN TO NEW TYPE 'A' EXHAUST GRILLE IN CEILING. EXHAUST SHALL BE BALANCED TO 500 CFM. PATCH, REPAIR AND PAINT CEILING AS NECESSARY TO INSTALL NEW FAN AND DUCTWORK. PAINT CEILING TO MATCH ADJACENT FINISH.
21. INTERLOCK NEW EXHAUST FAN, EF-1 WITH EXISTING GYM UNIT. THE TEMPERATURE CONTROL CONTRACTOR SHALL VERIFY OPERATION OF EXISTING AIR HANDLING UNIT AND PROVIDE A CONTROLLER, RELAYS, WIRING, POWER, ETC. AS NECESSARY TO PROVIDE SEQUENCE OF OPERATION AS STATED. IT IS THE INTENT TO HAVE THE EXISTING GYM UNITS OPERATE AS ORIGINALLY INTENDED, BUT ADD CONTROLS TO ACTIVATE A GYM UNIT TO PROVIDE MAKE-UP AIR FOR KITCHEN HOOD. THE SEQUENCE OF OPERATIONS SHALL BE AS FOLLOWS WHEN THE EXHAUST FAN SWITCH FOR EF-1 IS TURNED 'ON', (1) EXISTING GYM UNIT SHALL BE ACTIVATED. THE EXISTING HEATING HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE SETPOINT. IT IS NOT THE INTENT TO MODIFY THE EXISTING SEQUENCE OF OPERATIONS, ONLY TO ALLOW (1) EXISTING UNIT TO OPERATE WHEN KITCHEN EXHAUST FAN IS OPERATED. ALSO TIE FIRE SUPPRESSION PANEL TO MAU FOR AUTOMATIC SHUT DOWN.
22. PROVIDE A PRE-DEMOLITION AIR TESTING REPORT ON BOTH EXISTING GYM UNITS. TEST AND BALANCE CONTRACTOR SHALL VERIFY TOTAL SUPPLY AIRFLOW, OUTDOOR AIRFLOW, RETURN AIRFLOW, TOTAL STATIC PRESSURE, EXTERNAL STATIC PRESSURE, SHEAVE MAKE/SIZE/BORE, NUMBER OF BELTS MAKE/SIZE, MOTOR HP, FAN RPM, SUPPLY FAN MOTOR MANUFACTURER/TYPE, AMPERAGE, VOLTAGE, ACTUAL MOTOR AMPERAGE AND VOLTAGE, AIR HANDLER UNIT MAKE, MODEL AND SERIAL NUMBER OF BOTH EXISTING UNITS. SEND ALL INFORMATION TO ENGINEER FOR REVIEW BEFORE COMMENCING ANY CONTROL WORK.

EXHAUST FAN SCHEDULE

EF-1: GREENHECK #CUBE-101-4 CENTRIFUGAL BELT DRIVEN ROOF MOUNTED UPBLAST EXHAUST FAN, 800 CFM AT 0.75 SP, 8.3 SONES, 1481 FAN RPM, 0.22 BPH, 1/4 HP, 115 VOLT, 1 PHASE MOTOR. FURNISH MINIMUM 12" HIGH INSULATED PREFABRICATED ROOF CURB WITH CANT TO MATCH ROOF INSULATION. ALSO INCLUDE HINGE KIT, MOTOR HEAT GUARD, MOTOR HEAT GUARD, DRAIN CONNECTION AND GREASE TRAP, NEMA-1 DISCONNECT SWITCH, MOUNTED AND WIRED. FAN SHALL BE U.L. 762 LISTED. FAN TO BE U.L. 705 LISTED.

EF-2: GREENHECK #G-098-A CENTRIFUGAL DIRECT DRIVE ROOF MOUNTED EXHAUST FAN, 500 CFM AT 0.5" SP, 11 SONES, 1725 FAN RPM, ¼ HP, 115 VOLT MOTOR WITH MINIMUM 12" HIGH INSULATED PREFABRICATED ROOF CURB WITH CANT TO MATCH ROOF INSULATION, GALVANIZED BIRDSCREEN, GRAVITY BACKDRAFT DAMPER, FACTORY MOUNTED NEMA 1 DISCONNECT SWITCH MOUNTED AND WIRED, INTERNAL CONDUIT CHASE, AND SPEED CONTROLLER FOR MOUNTING INSIDE FAN HOUSING TO ALLOW AIR BALANCING OF EXHAUST FAN. FAN TO BE U.L.-705 LISTED. 500 CFM TOTAL SHALL BE BALANCED TO EXHAUST GRILLES OR INLETS. PROVIDE LUXPRO LV3 COOLING ONLY LINE VOLTAGE SINGLE STAGE/SINGLE POLE THERMOSTAT WITH ADJUSTABLE DIAL FROM 50 DEG F – 90 DEG F THERMOSTAT RATED FOR 120V/22 AMPS.

NOTES:
1. EXHAUST FANS SHALL BE RATED FOR CONTINUOUS OPERATION.
2. ALL EXHAUST FANS 120 VOLT SHALL BE FURNISHED WITH A FACTORY MOUNTED DISCONNECT SWITCH BY THE MECHANICAL TRADES. EXHAUST FAN SHALL BE ACTIVATED BY SWITCH THAT IS LOCATED ON THE HOOD.
3. FOR KITCHEN EXHAUST FAN, FURNISH A 12" HIGH ROOF CURB WITH VENTED ROOF CURB EXTENSION TO GIVE A MINIMUM OF 40" DISCHARGE HEIGHT OF FAN ABOVE FINISHED ROOF MEMBRANE TO MEET NFPA 96 REQUIREMENTS. FOR EACH EXHAUST FAN TO GIVE A MINIMUM 14" CLEAR FROM FINISHED ROOF MEMBRANE TO LOWEST EDGE OF ROOF CURB TOP. THE MECHANICAL TRADE SHALL FURNISH, SET IN PLACE, LEVEL AND FASTEN ROOF CURB TO ROOF DECK AND SUPPORT STEEL. THE GENERAL TRADE SHALL MAKE ALL FINAL ROOFING AND FLASHING INSTALLATION.

GENERAL MECHANICAL NOTE:

COORDINATE NATURAL GAS SHUT DOWN A MINIMUM OF TWO WEEKS IN ADVANCE WITH OWNER. ASSUME PREMIUM TIME FOR NATURAL GAS SHUT DOWN TO TIE IN FOR NEW NATURAL GAS GENERATOR.

PLUMBING FIXTURE SCHEDULE

FS-1: FLOOR SINK: ZURN ZN-1910-2 FLOOR SINK, 8"X 8"X6" DEEP, CAST IRON SQUARE FLOOR SINK WITH A.R.E. INTERIOR, ALUMINUM DOME STRAINER AND NICKEL BRONZE FRAME AND 1/2 NICKEL BRONZE GRATE. FURNISH A DEEP SEAL TRAP AND TRAP SEALER

TRAP SEALER: EACH FLOOR DRAIN SHALL HAVE A MEANS OF MAINTAINING THE WATER SEAL IN THE TRAP BY MEANS OF TRAP SEALER. THE SEAL 2692 QUAD CLOSE TRAP SEAL DEVICE BY JAY R. SMITH MFT. CO. FOR FLOOR DRAIN. SIZE OF TRAP SEALER SHALL MATCH INTERNAL PIPE SIZE DIAMETER. FLOW RATES FOR TRAP SEAL ARE AS FOLLOWS: 2" – 8 GPM, 3" – 24 GPM, (LARGER FLOW DUE TO TRAP SEAL BEING LOWER IN DRAIN BODY). 3.5" – 14 GPM (TRAP SEAL INSTALLED IN STRAINER), 4" – 35 GPM.

ROOF CURB SCHEDULE

PATE OR THYCURB HEAVY GAUGE GALVANIZED STEEL, INSULATED, 12" MINIMUM HEIGHT WITH TREATED WOOD NAILER, ANGLED AS REQUIRED BY ROOF PITCH TO PROVIDE HORIZONTAL TOP, AND RAISED CANT , IF REQUIRED, TO MATCH THICKNESS OF ROOF INSULATION. ROOF CURBS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR FOR INSTALLATION BY THE GENERAL CONTRACTOR. (INCLUDING ALL LEVELING, FLASHING, ROOFING, ETC). PROVIDE:

FOR PIPE PENETRATION: PLASTIC COUNTERFLASHING WITH STEP BOOT AND STAINLESS STEEL CLAMPS.

FOR PIPE SUPPORT: HEAVY GAUGE ALUMINUM COUNTERFLASHING WITH GALVANIZED STEEL CHANNEL TRACK FITTINGS, WASHERS AND NUTS TO PERMIT BOTH VERTICAL AND HORIZONTAL ADJUSTMENT. MAXIMUM SPACING OF SUPPORTS TO BE SAME AS HANGER SPACING.

DIFFUSER AND GRILLE SCHEDULE

TYPE A: CEILING EXHAUST AIR GRILLE: PRICE 80DAL-TB OR EQUAL TITUS SQUARE CEILING EGG CRATE RETURN GRILLE, WITH 22"X22" NECK, ALL STEEL CONSTRUCTION, 1/2" X 1/2" X 1/2" SQUARES, BAKED-ON ENAMEL FINISH WITH COLOR SELECTED BY ARCHITECT, FRAME DRYWALL CEILING.

TYPE B: WALL RETURN OR EXHAUST GRILLE: PRICE 530DL (530DS) OR EQUAL TITUS WALL RETURN OR EXHAUST GRILLE, ALL STEEL CONSTRUCTION, BAKED-ON ENAMEL FINISH WITH COLOR BY ARCHITECT. ONE SET OF HORIZONTAL BLADES SET AT 35 DEGREES.

Redford Union Schools Kitchen Improvements and Generators

Redford Union High School
17711 Kinloch Street Redford, MI 48240
Hilbert Middle School
2544B Puritan Avenue Redford, MI 48239
MacGowan Elementary School
18255 Kinloch Street Redford, MI 48240
Beech Elementary School
19990 Beech Daly Road Redford, MI 48240

REDFORD UNION SCHOOLS
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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed

ENGINEER

under the laws of the State of Michigan

Douglas F. Reckinger

Registration Number 31668 Date 07/30/85

Revisions		
Description	Date	Num

Comm: 154007
Date: SEPTEMBER 21, 2015
Drawn: DCT
Check: EAB
North

MACGOWAN ELEMENTARY SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES

Scale: As indicated

ME1.02

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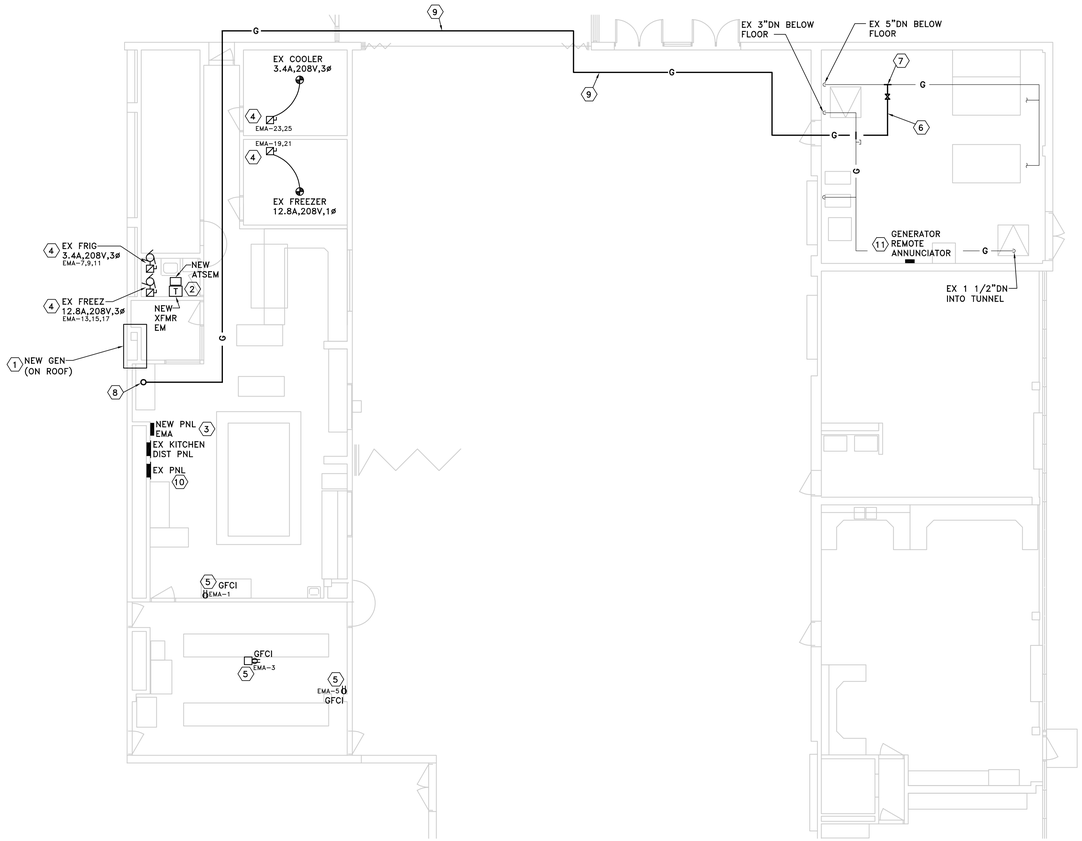


FLOOR PLAN

1/8"=1'-0"

KEYED NOTES

1. FURNISH AND INSTALL NEW EMERGENCY GENERATOR ON THE ROOF. REFER TO STRUCTURAL DETAILS.
2. FURNISH AND INSTALL NEW WALL MOUNT TRANSFORMER WITH NEW ATS-EM BELOW. SQUARE D #EE30T211H-WMB361362
3. FURNISH AND INSTALL NEW PANEL EMA SURFACE MOUNTED ADJACENT TO EXISTING KITCHENS DIST. PANEL.
4. INTERCEPT EXISTING CIRCUIT AND REFEED FROM NEW PANEL.
5. INTERCEPT EXISTING RECEPTACLE CIRCUIT AND REFEED FROM NEW PANEL. REPLACE EXISTING RECEPTACLES WITH A NEW RED RECEPTACLE. PROVIDE NEW STAINLESS STEEL COVER PLATE.
6. ROUTE 1 1/2" SCHEDULE 40 STEEL PIPING FROM EXISTING NATURAL GAS PIPING LOCATED IN MECHANICAL ROOM TO NEW EMERGENCY GENERATOR. SUPPORT PIPING HIGH IN MECHANICAL ROOM ABOVE DOORS FROM WALL OR ROOF JOIST. PIPING SHALL BE SUPPORTED A MAXIMUM OF EVERY 10 FEET HORIZONTALLY.
7. CONNECT NEW 1 1/2" PIPING INTO EXISTING 5'. UTILIZE A 1 1/2" SHUT OFF VALVE AT CONNECTION TO EXISTING NATURAL GAS PIPING. PROVIDE A NATURAL GAS REGULATOR AS REQUIRED FOR GENERATOR. THE MINIMUM NATURAL GAS PRESSURE OF THE GENERATOR IS 6"W.C. AND THE MAXIMUM PRESSURE IS 14"W.C. ROUTE REGULATOR VENTS TO THE OUTDOORS.
8. ROUTE 1 1/2" NATURAL GAS PIPING UP THROUGH ROOF TO NEW EMERGENCY GENERATOR. REDUCE GAS PIPE SIZE AT GENERATOR AS REQUIRED. FIELD INSTALL Y-STRAINER AT GENERATOR AND INSTALL GAS PIPING PER MANUFACTURER'S RECOMMENDATIONS. FIELD VERIFY EXACT GAS CONNECTION LOCATION AT GENERATOR. INSTALL 1 1/2" NATURAL GAS SHUT OFF VALVE AT GENERATOR. PRIME AND PAINT ALL SCHEDULE 40 STEEL PIPING LOCATED OUTDOORS WITH RUST INHIBITOR PAINT, INCLUDING ZINC. COLOR OF PAINT TO BE SELECTED BY ARCHITECT.
9. ROUTE ALL NATURAL GAS PIPING ABOVE CEILING. FIELD VERIFY EXACT ROUTE. REMOVE AND REPLACE CEILING TILE OR T-BAR GRID AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND REPLACING ANY DAMAGED CEILING TILE.
10. FURNISH AND INSTALL (2) 20A, 120 VOLT DEDICATED CIRCUITS TO THE GENERATOR FROM PANEL A FOR THE BLOCK HEATER AND BATTERY CHARGER.
11. FURNISH AND INSTALL GENERATOR REMOTE ANNUNCIATOR.

EXISTING KITCHEN DIST. PANEL

SQUARE D QMB SAFEFLEX, 208V, 3ø

	1	30A/3P	EX LOAD
	2	30A/3P	EX LOAD
	3	30A/3P	EX LOAD
	4	30A/3P	EX LOAD
	5	30A/3P	EX LOAD
	6	60A/3P	EX LOAD
1	7	30A/3P	EX COOLER
1	8	30A/3P	EX FREEZER
	9	30A/3P	EX LOAD
	10	30A/3P	EX LOAD
	11	30A/3P	EX LOAD
	12	60A/3P	EX LOAD

REVISED KITCHEN DIST. PANEL

SQUARE D QMB SAFEFLEX, 208V, 3ø

	1	30A/3P	EX LOAD
	2	30A/3P	EX LOAD
	3	30A/3P	EX LOAD
	4	30A/3P	EX LOAD
	5	30A/3P	EX LOAD
	6	60A/3P	EX LOAD
2	7	60A/3P	ATS-EM
	8	30A/3P	SPARE
	9	30A/3P	EX LOAD
	10	30A/3P	EX LOAD
	11	30A/3P	EX LOAD
	12	30A/3P	EX LOAD

PANEL KEYED NOTES

1. DISCONNECT AND REMOVE EXISTING LOAD.
2. FURNISH AND INSTALL A NEW FUSIBLE SWITCH TO FEED NEW LOAD.

GENERATOR SCHEDULE

NATURAL GAS CUMMINS POWER GENERATOR. 30KW, 120/208 VOLT, 3 PHASE, 60 Hz. ALUMINUM, POWDER COATED SANDSTONE ENCLOSURE. (2) 60A/3P OUTPUT CIRCUIT BREAKERS. COOLANT HEATER, BATTERY CHARGER. REMOTE MONITORING DEVICE. CRITICAL SILENCE MUFFLER.
CUMMINS #C30-N6

AUTOMATIC TRANSFER SWITCH SCHEDULE

104 AMP, 120/208 VOLT, 3 PHASE WITH SOLID NEUTRAL. NEMA 1 ENCLOSURE.
ASCO #300-3-104-C-1-C-120/208V3#4W-60Hz

GENERAL MECHANICAL NOTE:

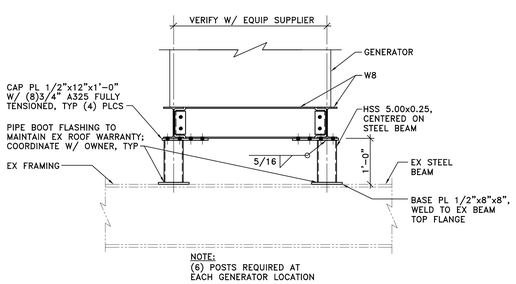
COORDINATE NATURAL GAS SHUT DOWN A MINIMUM OF TWO WEEKS IN ADVANCE WITH OWNER. ASSUME PREMIUM TIME FOR NATURAL GAS SHUT DOWN TO TIE IN FOR NEW NATURAL GAS GENERATOR.

NEW PANELEMA
SQUARE D NQ,60A MCB
120/208V, 3P, 4W
WITH TVSS

REC KITCHEN	600	20A	1	2			
REC SERVING	600	20A	3	4			
REC SERVING	600	20A	5	6			
COOLER COMPRESSOR	1500	30A	7	8			
COOLER COMPRESSOR			9	10			
COOLER COMPRESSOR		3P	11	12			
FREEZER COMPRESSOR	5000	30A	13	14			
FREEZER COMPRESSOR			15	16			
FREEZER COMPRESSOR		3P	17	18			
FREEZER CONDENSOR	3000	20A	19	20			
FREEZER CONDENSOR		2P	21	22			
COOLER CONDENSOR	1000	20A	23	24			
COOLER CONDENSOR		2P	25	26			
			27	28			
			29	30			

TCL= 12.3 Kw @ 208v 3P= 34.2 AMPS

S/N

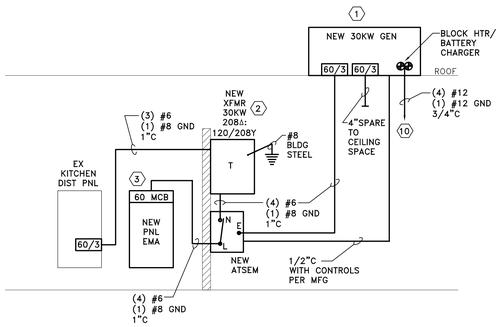


NOTE:
(6) POSTS REQUIRED AT
EACH GENERATOR LOCATION

GENERATOR FRAMING DETAIL

3/4"=1'-0"

2015-9004-A1.dwg



PARTIAL RISER DIAGRAM

Redford Union Schools
Kitchen Improvements
and Generators

Redford Union High School
17711 Kinloch Street Redford, MI 48240
Hilbert Middle School
25440 Puritan Avenue Redford, MI 48239
MacGowan Elementary School
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Beech Elementary School
19990 Beech Daly Road Redford, MI 48240

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed
ENGINEER
under the laws of the State of **Michigan**

Douglas F. Reckinger

Registration Number 31668 Date 07/30/86

Revisions		
Description	Date	Num

Comm: 154007
Date: SEPTEMBER 21, 2015
Drawn: DCT
Check: EAB
North

HIGH SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES

Scale: As indicated

ME1.03

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NEW PANEL EMA
SQUARE D NQ, 100A MCB
120/208V, 3P, 4W
WITH TVSS

WALK IN FREEZER	5000	20A	1	2	60A	8400	EMB
WALK IN FREEZER			3	4			EMB
WALK IN FREEZER		3P	5	6	3P		EMB
WALK IN COOLER	4000	15A	7	8			
WALK IN COOLER			9	10			
WALK IN COOLER		3P	11	12			
COOLER LIGHTS	200	20A	13	14			
SPARE		20A	15	16			
SPARE		20A	17	18			
SPARE		20A	19	20			
SPARE		20A	21	22			
SPARE		20A	23	24			
SPARE		20A	25	26			
			27	28			
			29	30			

TCL= 17.6 Kw @ 208v 3P= 49 AMPS

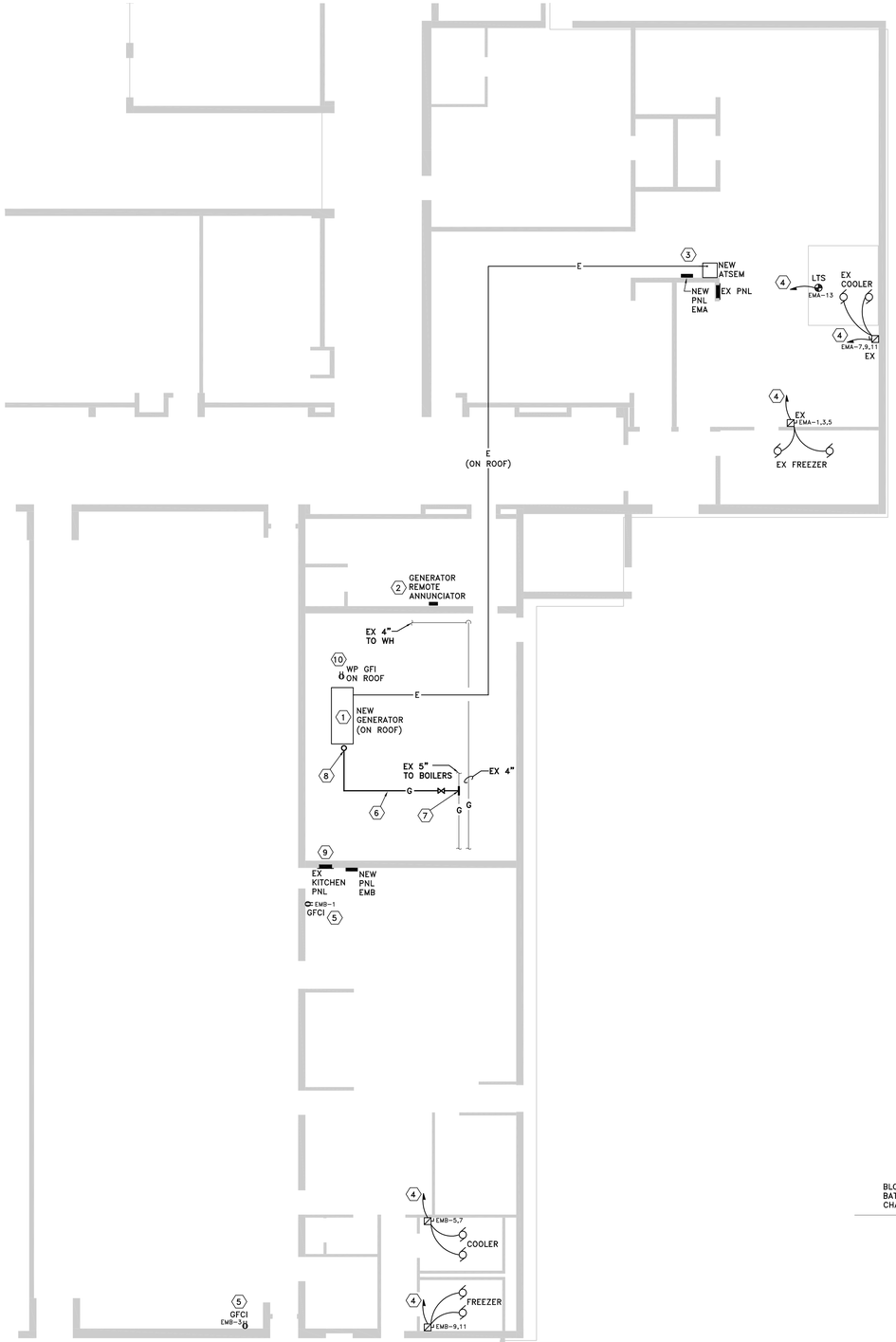
S/N

NEW PANEL EMB
SQUARE D NQ, 100A MLO
120/208V, 3P, 4W
WITH TVSS

REC KITCHEN FRIG	1200	20A	1	2			
REC KITCHEN FRIG	1200	20A	3	4			
KITCHEN COOLER	3000	20A	5	6			
KITCHEN COOLER		2P	7	8			
KITCHEN FREEZER	3000	20A	9	10			
KITCHEN FREEZER		2P	11	12			
SPARE		20A	13	14			
			15	16			
		3P	17	18			
SPARE		20A	19	20			
			21	22			
		3P	23	24			
SPARE		20A	25	26			
SPARE		20A	27	28			
SPARE		20A	29	30			

TCL= 8.4 Kw @ 208v 3P= 23.4 AMPS

S/N



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

KEYED NOTES

1. FURNISH AND INSTALL NEW EMERGENCY GENERATOR ON THE ROOF. REFER TO STRUCTURAL DETAILS.
2. FURNISH AND INSTALL GENERATOR REMOTE ANNUNCIATOR.
3. FURNISH AND INSTALL NEW PANEL EMA AND ATSEM SURFACE MOUNTED ADJACENT TO EXISTING KITCHENS DIST. PANEL.
4. INTERCEPT EXISTING CIRCUIT AND REFEED FROM NEW PANEL.
5. INTERCEPT EXISTING RECEPTACLE CIRCUIT AND REFEED FROM NEW PANEL. REPLACE EXISTING RECEPTACLES WITH A NEW RED RECEPTACLE. INSTALL A NEW STAINLESS STEEL COVER PLATE.
6. ROUTE 1 1/2" SCHEDULE 40 STEEL PIPING FROM EXISTING NATURAL GAS PIPING LOCATED IN MECHANICAL ROOM TO NEW EMERGENCY GENERATOR. SUPPORT PIPING HIGH IN SPACE ABOVE DOORS FROM WALL OR ROOF JOIST. PIPING SHALL BE SUPPORTED A MAXIMUM OF EVERY 10 FEET HORIZONTALLY.
7. CONNECT NEW 1 1/2" PIPING INTO EXISTING. UTILIZE A 1 1/2" SHUT OFF VALVE AT CONNECTION TO EXISTING NATURAL GAS PIPING. PROVIDE A GAS REGULATOR AS REQUIRED FOR GENERATOR. THE MINIMUM NATURAL GAS PRESSURE OF THE GENERATOR IS 6" W.C. AND THE MAXIMUM PRESSURE IS 14"W.C. ROUTE REGULATOR VENTS TO THE OUTDOORS.
8. ROUTE 1 1/2" NATURAL GAS PIPING UP THROUGH ROOF TO NEW EMERGENCY GENERATOR. REDUCE GAS PIPE SIZE AT GENERATOR AS REQUIRED. FIELD INSTALL Y-STRAINER AT GENERATOR AND INSTALL GAS PIPING PER MANUFACTURER'S RECOMMENDATIONS. FIELD VERIFY EXACT GAS CONNECTION LOCATION AT GENERATOR. INSTALL 1 1/2" NATURAL GAS SHUT OFF VALVE AT GENERATOR. PRIME AND PAINT ALL SCHEDULE 40 STEEL PIPING LOCATED OUTDOORS WITH RUST INHIBITOR PAINT, INCLUDING ZINC. PAINT COLOR TO BE SELECTED BY ARCHITECT.
9. PROVIDE (2) DEDICATED 20 AMP 1 POLE CIRCUITS FROM THE EXISTING KITCHEN PANEL TO FEED THE BATTERY CHARGER AND BLOCK HEATER.
10. FURNISH AND INSTALL A GFI RECEPTACLE ON ROOF WIRED TO THE EXISTING BOILER ROOM RECEPTACLE CIRCUIT.
11. INSTALL ROOF CONDUIT A MINIMUM OF 5 1/2" ABOVE ROOF. PROVIDE SUPPORT AS REQUIRED TO MEET NEC.

GENERAL MECHANICAL NOTE:

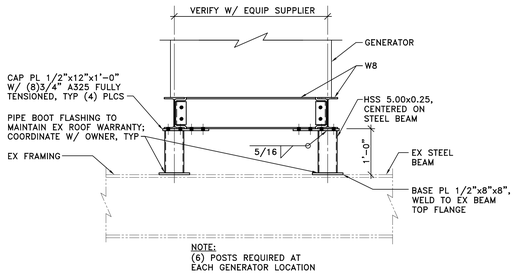
COORDINATE NATURAL GAS SHUT DOWN A MINIMUM OF TWO WEEKS IN ADVANCE WITH OWNER. ASSUME PREMIUM TIME FOR NATURAL GAS SHUT DOWN TO TIE IN FOR NEW NATURAL GAS GENERATOR.

GENERATOR SCHEDULE

NATURAL GAS CUMMINS POWER GENERATOR. 30KW, 120/208 VOLT, 3 PHASE, 60 Hz. ALUMINUM, POWDER COATED SANDSTONE ENCLOSURE. (1) 100A/3P, (1) 60A/3P OUTPUT CIRCUIT BREAKERS. COOLANT HEATER, BATTERY CHARGER. REMOTE MONITORING DEVICE. CRITICAL SILENCE MUFFLER.
CUMMINS #C30-N6

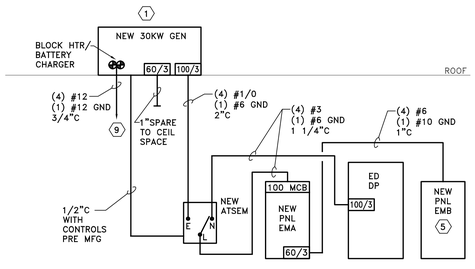
AUTOMATIC TRANSFER SWITCH SCHEDULE

100 AMP, 120/208 VOLT, 3 PHASE WITH SOLID NEUTRAL. NEMA 1 ENCLOSURE.
ASCO #300-3-104-C-1-C-120/208V3#4W-60Hz



NOTE:
(6) POSTS REQUIRED AT EACH GENERATOR LOCATION

GENERATOR FRAMING DETAIL
3/4"=1'-0"
2015-9004-A1.dwg



PARTIAL RISER DIAGRAM

Redford Union Schools Kitchen Improvements and Generators

Redford Union High School
17711 Kinloch Street Redford, MI 48240
Hilbert Middle School
25440 Puritan Avenue Redford, MI 48239
MacGowan Elementary School
18255 Kinloch Street Redford, MI 48240
Beech Elementary School
19990 Beech Daly Road Redford, MI 48240

REDFORD UNION SCHOOLS
17715 Brady Street
Redford, MI 48240

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ENGINEER under the laws of the State of Michigan

Douglas F. Reckinger

Registration Number 31668 Date 07/30/85

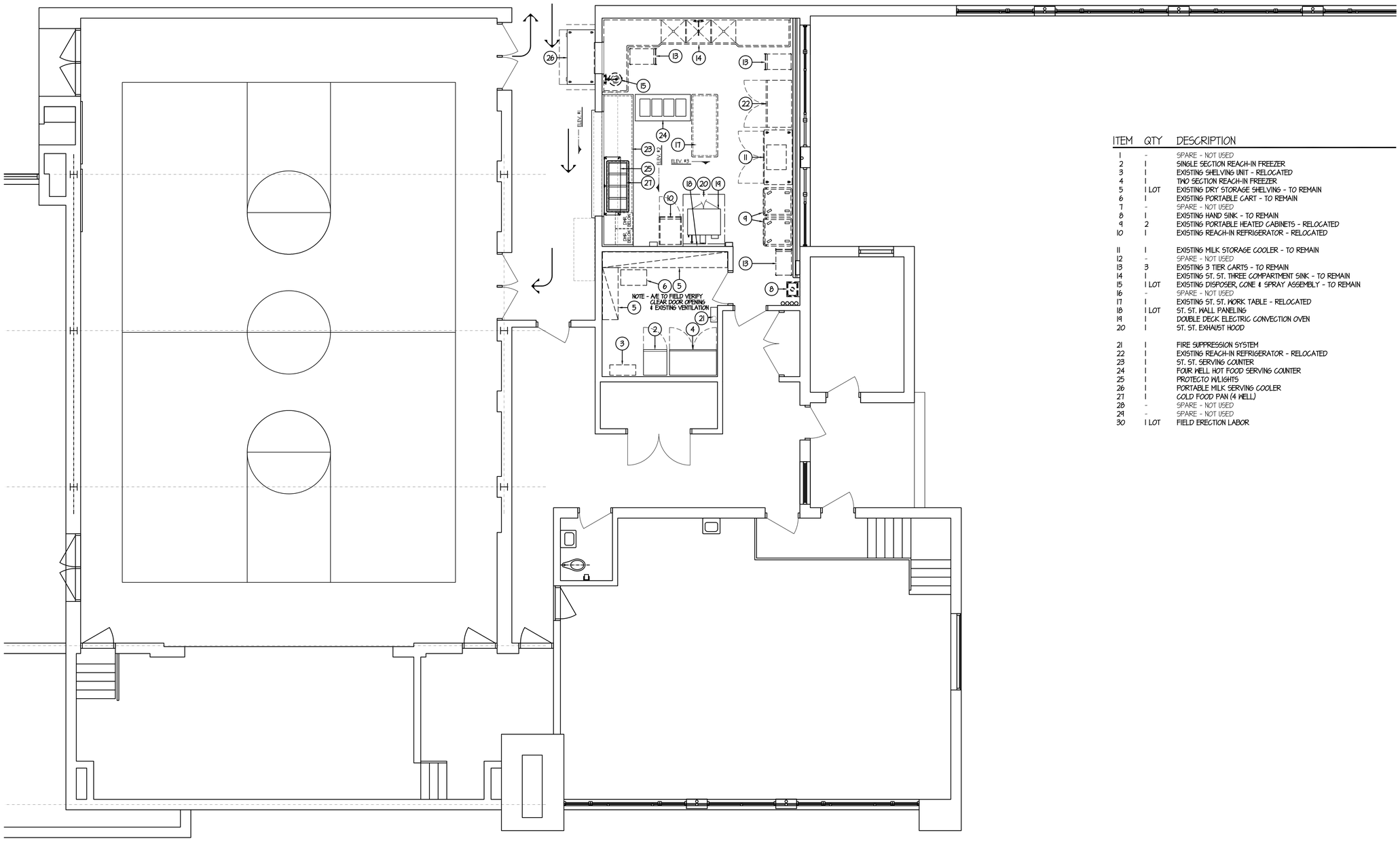
Revisions		
Description	Date	Num

Comm: 154007
Date: SEPTEMBER 21, 2015
Drawn: DCT
Check: EAB
North

BEECH ELEMENTARY SCHOOL GENERATOR PLAN DETAILS AND SCHEDULES

Scale: As indicated

ME1.04



ITEM	QTY	DESCRIPTION
1	-	SPARE - NOT USED
2	1	SINGLE SECTION REACH-IN FREEZER
3	1	EXISTING SHELVING UNIT - RELOCATED
4	1	TWO SECTION REACH-IN FREEZER
5	1 LOT	EXISTING DRY STORAGE SHELVING - TO REMAIN
6	1	EXISTING PORTABLE CART - TO REMAIN
7	-	SPARE - NOT USED
8	1	EXISTING HAND SINK - TO REMAIN
9	2	EXISTING PORTABLE HEATED CABINETS - RELOCATED
10	1	EXISTING REACH-IN REFRIGERATOR - RELOCATED
11	1	EXISTING MILK STORAGE COOLER - TO REMAIN
12	-	SPARE - NOT USED
13	3	EXISTING 3 TIER CARTS - TO REMAIN
14	1	EXISTING ST. ST. THREE COMPARTMENT SINK - TO REMAIN
15	1 LOT	EXISTING DISPOSER, CONE & SPRAY ASSEMBLY - TO REMAIN
16	-	SPARE - NOT USED
17	1	EXISTING ST. ST. WORK TABLE - RELOCATED
18	1 LOT	ST. ST. WALL PANELING
19	1	DOUBLE DECK ELECTRIC CONVECTION OVEN
20	1	ST. ST. EXHAUST HOOD
21	1	FIRE SUPPRESSION SYSTEM
22	1	EXISTING REACH-IN REFRIGERATOR - RELOCATED
23	1	ST. ST. SERVING COUNTER
24	1	FOUR WELL HOT FOOD SERVING COUNTER
25	1	PROTECTO INLIGHTS
26	1	PORTABLE MILK SERVING COOLER
27	1	COLD FOOD PAN (4 WELL)
28	-	SPARE - NOT USED
29	-	SPARE - NOT USED
30	1 LOT	FIELD ERECTION LABOR

MI

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Check: EFW

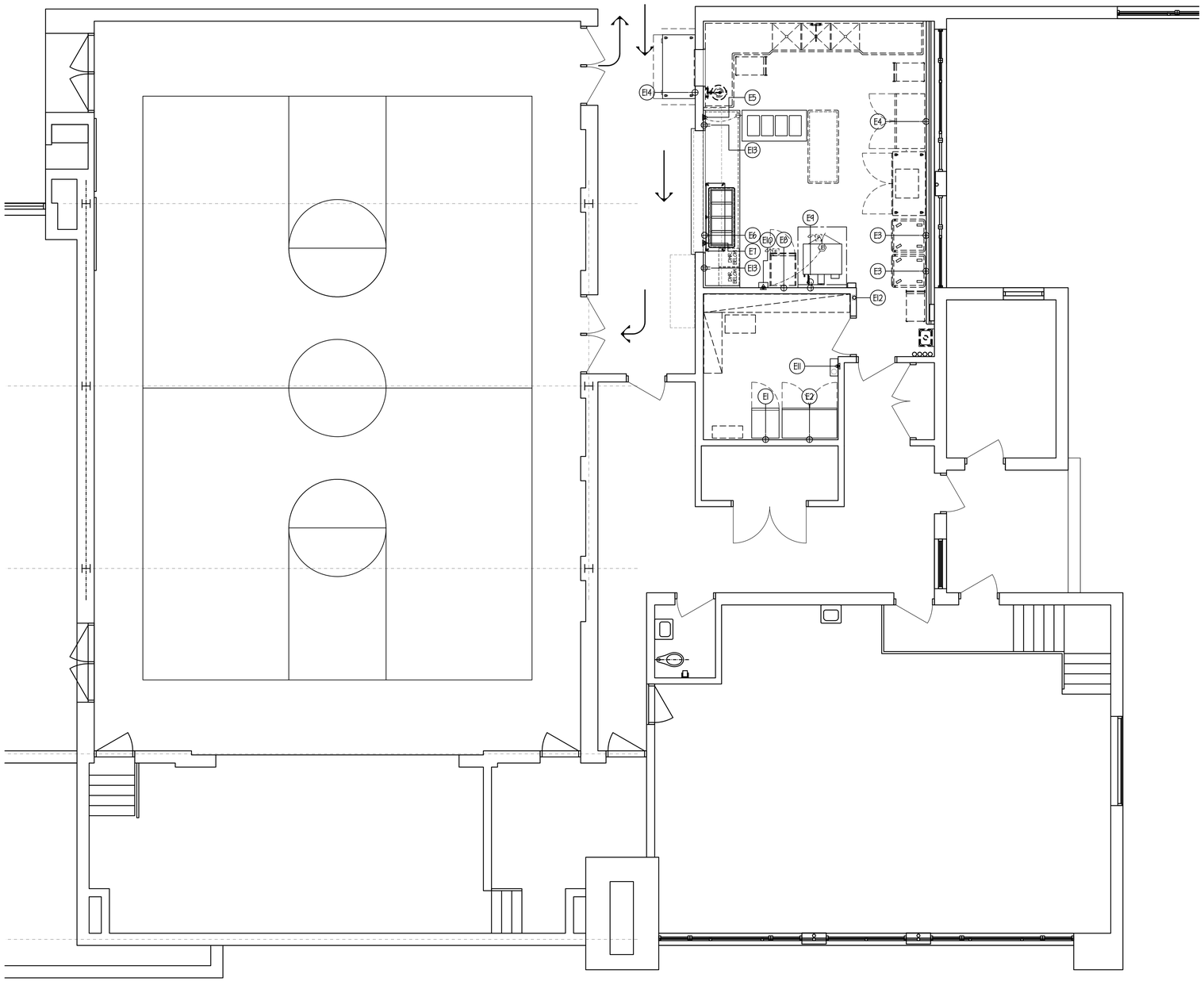
North

FOOD SERVICE EQUIPMENT LAYOUT AND SCHEDULE

Scale:

FS1

MI



ELECTRICAL NOTES

- **E1** 7.2 AMP (LOAD) 120V-1 ph. SINGLE RECEPTACLE FLUSH IN WALL 7'-3" A.F.F. FOR SINGLE SECTION FREEZER.
- **E2** 11.0 AMP (LOAD) 120V-1 ph. SINGLE RECEPTACLE FLUSH IN WALL 7'-3" A.F.F. FOR TWO SECTION FREEZER.
- **E3** 20 AMP (CIRCUIT) 120V-1 ph. SINGLE RECEPTACLE FLUSH IN WALL 18" A.F.F. FOR EXISTING HOT CARTS. FIELD VERIFY EXISTING EQUIPMENT FOR EXACT REQUIREMENTS.
- **E4** 10.0 AMP (LOAD) 120V-1 ph. SINGLE RECEPTACLE FLUSH IN WALL 18" A.F.F. FOR EXISTING REFRIGERATOR. FIELD VERIFY EXISTING EQUIPMENT FOR EXACT REQUIREMENTS.
- **E5** 19.2 AMP (LOAD) 208V-1 ph. COND. CONN. OUT OF WALL, ELEC. TRADES TO CONNECT TO SINGLE RECEPTACLE PRE-WIRED IN COUNTER FOR HOT FOOD TABLE.
- **E6** 7.8 AMP (LOAD) 120V-1 ph. SINGLE RECEPTACLE FLUSH IN WALL 18" A.F.F. FOR COLD FOOD PAN.
- **E7** 1.0 AMP (LOAD) 120V-1 ph. COND. CONN. OUT OF WALL 18" A.F.F. FOR PROTECTO W/LIGHTS.
- **E8** 10.0 AMP (LOAD) 120V-1 ph. SINGLE RECEPTACLE FLUSH IN WALL 18" A.F.F. FOR EXISTING REFRIGERATOR. FIELD VERIFY EXISTING EQUIPMENT FOR EXACT REQUIREMENTS.
- **E9** TWO (2) 34.0 AMP (LOAD) 208V-1 ph. SINGLE RECEPTACLES FLUSH IN WALL 36" A.F.F. FOR DOUBLE DECK CONVECTION OVEN.
- **E10** 20 AMP (CIRCUIT) 120V-1ph. COND. CONN. OUT OF WALL FOR HOOD SYSTEM, LIGHTS & TEMPERATURE SENSOR. HOOD LIGHTS PRE-WIRED BY F.S.E.G. TO J.B. ON TOP w/ FINAL CONN. BY ELECT. TRADES. LIGHT & FAN CONTROL SWITCHES & BOX FURN. BY F.S.E.G. & INST'D BY ELECT. TRADES. ELECT. TRADES TO PROVIDE POWER & INTER-WIRING TO EXHAUST FANS/MAKE-UP AIR UNITS.
- **E11** 6.0 AMP (LOAD) 120V-1 ph. COND. CONN. OUT OF WALL 84" A.F.F. FOR FIRE SUPPRESSION SYSTEM. SEE DETAIL THIS SHEET.
- **E12** 4" J-BOX FURN. & INST'D. BY ELEC. TRADES, FLUSH IN WALL 48" A.F.F. FOR FIRE SYSTEM REMOTE PULL STATION BY F.S.E.G. - SEE DETAIL THIS SHEET.
- **E13** 20 AMP (CIRCUIT) 120V-1 ph. DUPLEX RECEPTACLE FLUSH IN WALL 50" A.F.F. FOR GENERAL USE. FIELD VERIFY EXISTING OUTLET LOCATIONS, RE-USE WHERE POSSIBLE
- **E14** 4.8 AMP (LOAD) 120V-1 ph. SINGLE RECEPTACLE FLUSH IN WALL 18" A.F.F. FOR MILK COOLER.

NOTE...

ALL ADDITIONAL RECEPTACLES, CONN.'s, WIRING, ETC. TO BE SHOWN BY ELECT. ENGINEER.

ALL 120v DUPLEX RECEPTACLES WITHIN KITCHEN AREAS & WITHIN 72" OF A SINK MUST BE GFCI PROTECTED BY ELECT. TRADES.

ELECT. TRADES TO FURN. & INSTALL ALL LINE DISCONNECT SWITCHES AS REQUIRED TO MEET STATE & LOCAL CODE.

GENERAL NOTES for ROUGH-IN PLAN

THIS PLAN IS TO BE USED FOR BIDDING PURPOSES ONLY & MUST BE REDRAWN BY FOOD SERVICE EQUIP. CONTR. USING ARCHITECTS FINAL WORKING DRAWINGS (ARCH., ELECT., PLUMB. & VENT.). F.S.EQ. CONTR. SHALL FURNISH FULLY DIMENSIONED ROUGH-IN PLAN FOR ELECTRICAL, PLUMBING, VENTILATION, DEPRESSION & WALL OPENINGS WITHIN 30 DAYS AFTER AWARD OF CONTRACT. PLANS ARE TO BE REDRAWN & NOT TRACED-OFF OF ORIGINAL DRAWINGS.

FOOD SERVICE EQUIP. CONTR. IS TO ASSIST ELECTRICAL TRADES DURING PERIOD WHILE FINAL ROUGH-IN CONNECTIONS ARE BEING MADE. F.S.EQ. CONTR. SHALL FURNISH ALL NECESSARY WIRING DETAILS AS REQUIRED. F.S.EQ. CONTR. ALSO TO HAVE FIELD SUPERVISOR ON JOBSITE AT TIME OF FINAL CONN'S.

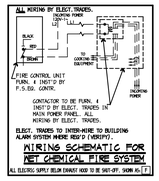
FOOD SERVICE EQUIP. CONTR. SHALL CONTACT ELECTRICAL ENGINEER BEFORE DRAWING ROUGH-PLAN TO VERIFY EXACT VOLTAGES AVAILABLE ON JOBSITE. THIS CHECK MUST BE MADE TO INSURE PROPER VOLTAGES TO ALL EQUIPMENT.

ELECTRICAL ROUGH-IN CODE

J.B.	JUNCTION BOX
	ELECTRICAL CONDUIT
	CONNECTION
H.P.	HORSEPOWER
KW.	KILOWATT
W.	WATT
V.	VOLT
1ph.	SINGLE PHASE
3ph.	THREE PHASE
	DUPLEX RECEPTACLE
	SINGLE RECEPTACLE
	DUPLEX FLOOR RECEPTACLE
	SINGLE FLOOR RECEPTACLE
	FUSED DISCONNECT SWITCH
	SWITCH
A.F.F.	ABOVE FINISH FLOOR

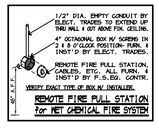
GENERAL NOTE for ROUGH-IN PLAN

ALL SERVICES SHOWN WITH SYMBOLS CENTERED ON WALL SHOULD BE BROUGHT TO THAT POINT CONCEALED IN WALL & STUBBED-OUT AT HEIGHT SHOWN ON THIS PLAN OR F.S.EQ. CONTR'S FINAL DIMENSIONED ROUGH-IN PLAN. DO NOT STUB OUT OF FLOOR & RUN EXPOSED ON WALL.

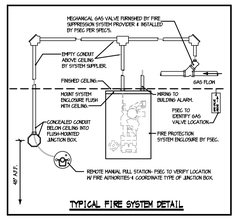


WIRING SCHEMATIC FOR WET CHEMICAL FIRE SYSTEM

ALL ELECTRIC SUPPLY BELOW CONNECT HOOD TO BE SHUT-OFF. SHOWN AS



REMOTE FIRE PULL STATION for WET CHEMICAL FIRE SYSTEM



TYPICAL FIRE SYSTEM DETAIL

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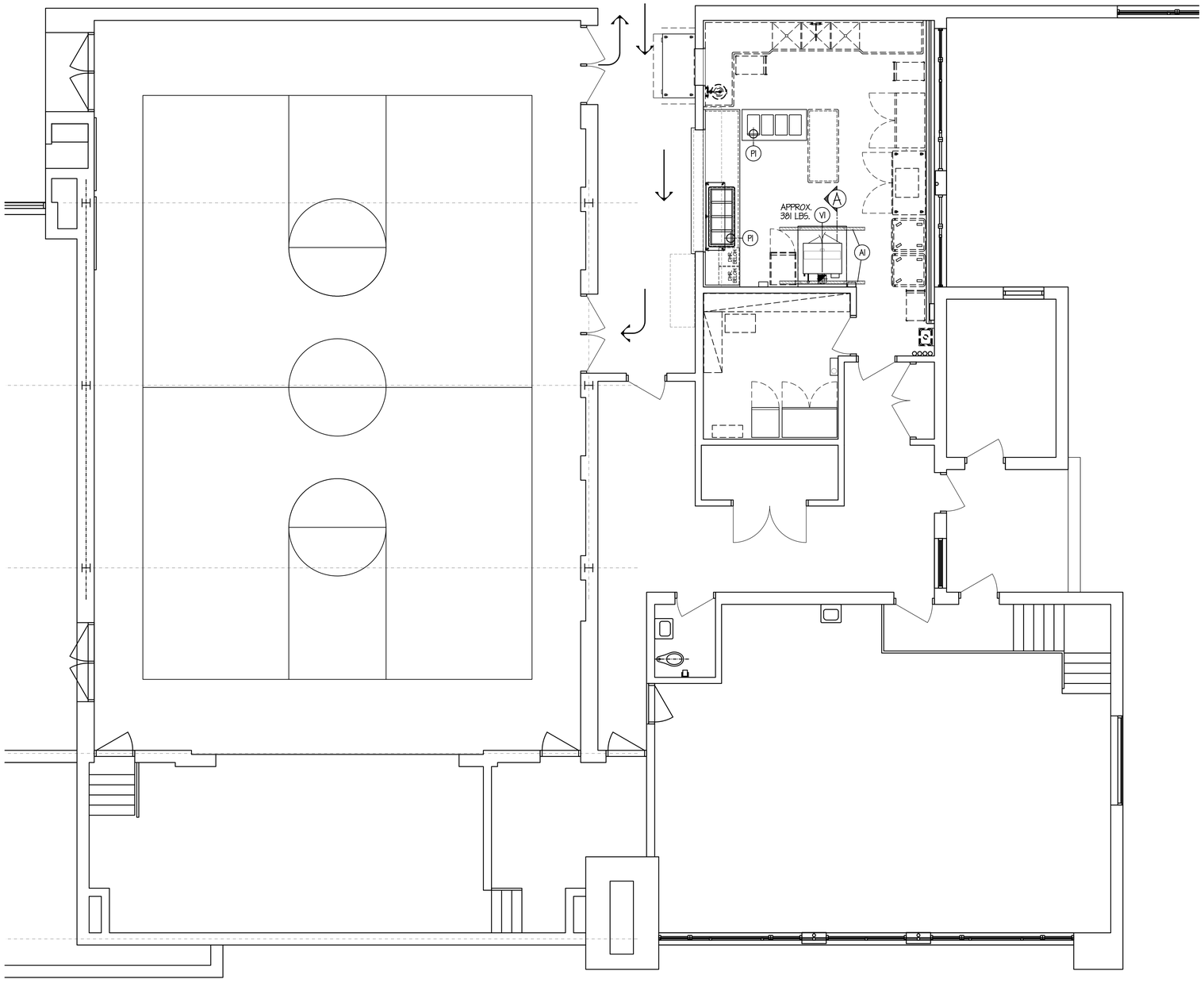
ELECTRICAL ROUGH-IN PLAN FOR FOOD SERVICE

Scale:

FS2

MI



PLUMBING NOTES

(PI) 8-1/2" DIA. I.W. - TYPE #6. SEE SCHEDULE THIS SHEET.

NOTE...

PLUMB. TRADES TO RUN ALL DRAIN/WASTE/CONDENSATE LINES FROM EQUIPMENT TO NEAREST F.D./F.S./I.W./H.O.

ALL ADDITIONAL PIPING, DRAINS, F.D.'s, ETC. TO BE SHOWN BY MECH. ENGINEER.

ALL ADDITIONAL P.R.V.s, ATMOSPHERIC V.B.s, V.B.s, SHUT-OFF VALVES, SHOCK-STOPS, ETC., TO BE FURN. & INST'D BY PLUMB. TRADES.

VENTILATION NOTES

(VI) 8" x 8" EXHAUST DUCT- 720 CFM (MIN) TOTAL @ -0.346" S.P. AT DUCT COLLAR.
NOTE... DUCTWORK STATIC MUST BE ADDED.

ARCHITECTURAL NOTES

(AI) (2) TWO HANGER CHANNELS FURN. & INST'D BY ARCH. TRADES- SECURED TO BUILDING STRUCTURAL TO SUPPORT EXHAUST HOODS (WEIGHTS AS SHOWN). F.S.E.C. TO VERIFY ALL SIZES & LOCATIONS.

GENERAL NOTES for ROUGH-IN PLAN

THIS PLAN IS TO BE USED FOR BIDDING PURPOSES ONLY & MUST BE REDRAWN BY FOOD SERVICE EQUIP. CONTR. USING ARCHITECTS FINAL WORKING DRAWINGS (ARCH., ELECT., PLUMB. & VENT.). F.S.EQ. CONTR. SHALL FURNISH FULLY DIMENSIONED ROUGH-IN PLAN FOR ELECTRICAL, PLUMBING, VENTILATION, DEPRESSION & WALL OPENINGS WITHIN 30 DAYS AFTER AWARD OF CONTRACT. PLANS ARE TO BE REDRAWN & NOT TRACED-OFF OF ORIGINAL DRAWINGS.

FOOD SERVICE EQUIP. CONTR. IS TO ASSIST PLUMBING TRADES DURING PERIOD WHILE FINAL ROUGH-IN CONNECTIONS ARE BEING MADE. F.S.EQ. CONTR. SHALL FURNISH ALL NECESSARY PIPING DETAILS AS REQUIRED. F.S.EQ. CONTR. ALSO TO HAVE FIELD SUPERVISOR ON JOBSITE AT TIME OF FINAL CONN'S.

FOOD SERVICE EQUIP. CONTR. SHALL CONTACT PLUMB. ENGINEER BEFORE DRAWING ROUGH-IN PLAN TO VERIFY TYPE OF GAS ON JOBSITE. WHEN STEAM IS AVAILABLE, PRESSURE IS TO BE VERIFIED AND ALL EQUIPMENT TO BE FURNISHED ACCORDINGLY.

GENERAL NOTE for ROUGH-IN PLAN

ALL SERVICES SHOWN WITH SYMBOLS CENTERED ON WALL SHOULD BE BROUGHT TO THAT POINT CONCEALED IN WALL & STUBBED-OUT AT HEIGHT SHOWN ON THIS PLAN OR F.S.EQ. CONTR'S FINAL DIMENSIONED ROUGH-IN PLAN. DO NOT STUB OUT OF FLOOR & RUN EXPOSED ON WALL.

FLOOR DRAIN SCHEDULE

ALL BY PLUMB. TRADES- TYPICAL SIZES SHOWN.

TYPE #1: 6" DIA. W/ FULL NICKLE-BRONZE STRAINER. FLUSH W/ FINISH FLOOR.

TYPE #2: 6" DIA. W/ FULL NICKLE-BRONZE STRAINER & 4" HIGH NICKLE-BRONZE FUNNEL. FLUSH W/ FINISH FLOOR.

TYPE #3: 12" x 12" x 8 1/2" DEEP W/ FULL NICKLE-BRONZE GRATE TOP, ACID RESISTANT INTERIOR & PERFORATED REMOVABLE ENAMELED BASKET. FLUSH W/ FINISH FLOOR.

TYPE #4: 12" x 12" x 10" DEEP W/ FULL ST. ST. REMOVABLE GRATE TOP & REMOVABLE ST. ST. PERFORATED BASKET. FLUSH W/ FINISH FLOOR.

INDIRECT WASTE SCHEDULE

ALL BY PLUMB. TRADES- TYPICAL SIZES SHOWN.

TYPE #5: 6" DIA. W/ FULL NICKLE-BRONZE STRAINER & 4" HIGH NICKLE-BRONZE FUNNEL.

TYPE #6: 8 1/2" DIA. W/ WHITE PORCELIN INTERIOR & NICKLE-BRONZE INTERIOR DOME STRAINER.

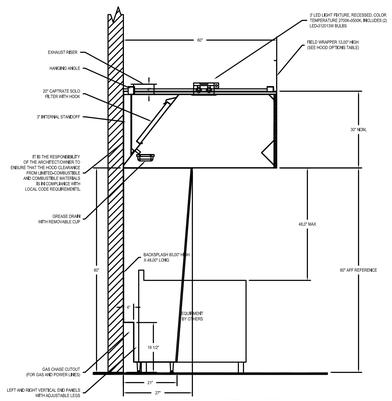
TYPE #7: 12" x 12" x 10" DEEP NO GRATE TOP W/ ACID RESISTANT INTERIOR & NICKLE-BRONZE INTERIOR DOME STRAINER.

TYPE #8: 12" x 12" x 10" DEEP W/ 1/4 CUT-OUT NICKLE-BRONZE GRATE TOP, ACID RESISTANT INTERIOR & NICKLE-BRONZE INTERIOR DOME STRAINER.

PLUMBING ROUGH-IN CODE

H.W.	HOT WATER
C.W.	COLD WATER
W.	WASTE
I.W.	INDIRECT WASTE
F.D.	FLOOR DRAIN
F.T.F.D.	FUNNEL-TYPE FLOOR DRAIN
	FLOOR SINK
G.	GAS (NATURAL)
A.F.F.	ABOVE FINISH FLOOR

SYMBOL DENOTES DRAIN/WASTE/CONDENSATE LINE OF VARIOUS SIZE, TO BE FURNISHED & INSTALLED BY PLUMB. TRADES- TO RUN FROM EQUIPMENT TO NEAREST F.D./F.S./I.W./H.O. VERIFY EXACT SIZE WITH FSEC FINAL CUT-OUT BOOKLET.



SECTION VIEW - MODEL 6030ND-2
HOOD - #1

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PLUMBING/ VENTILATION PLAN FOR FOOD SERVICE

Scale:

FS3

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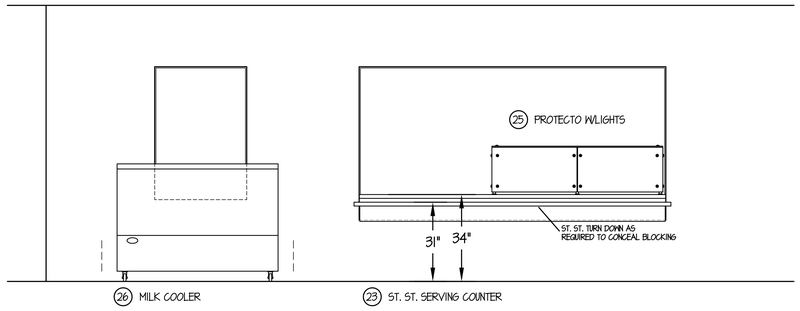
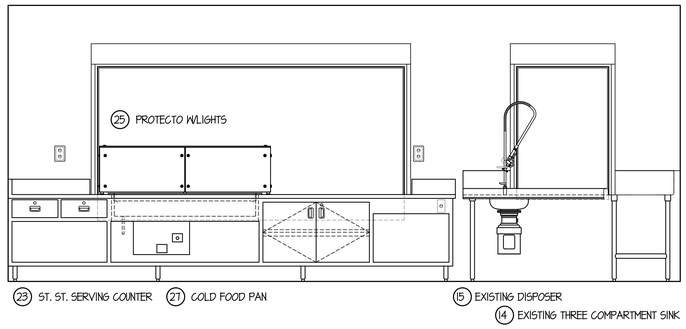


ELEVATION NO. 1
SCALE 1/2"=1'-0"



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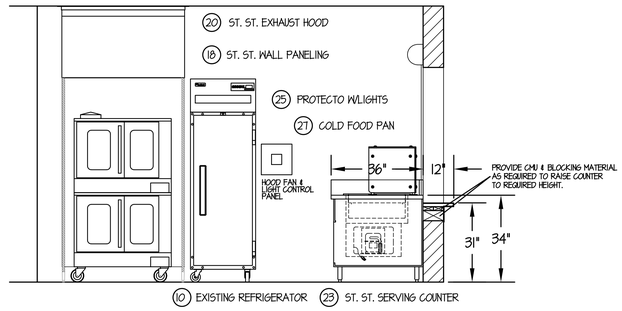

ELEVATION NO. 3
SCALE 1/2"=1'-0"

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FOOD SERVICE EQUIPMENT ELEVATION DETAILS

Scale:

FS4

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