

Spencer Radio Building

1107 11th St. SW
Spencer, IA 51301

Project: BG-8S31(000)—80-21

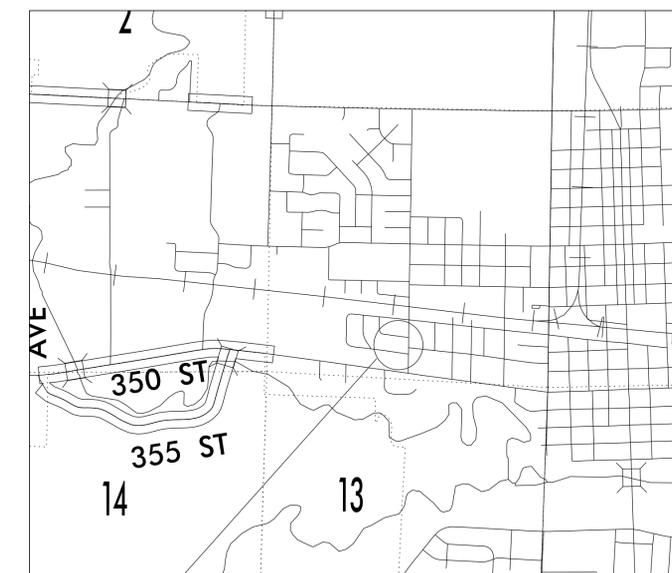


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02	A-1 SITE & BUILDING PLANS
03	A-2 ELEVATIONS
04	ME101 PLANS & DETAILS - MECHANICAL & ELECTRICAL

OFFICE OF SUPPORT SERVICES
800 LINCOLN WAY, AMES, IOWA 50010

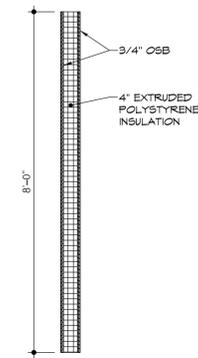
	I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered architect under the laws of the state of Iowa.
	Printed or typed name _____
	Signature _____ Date _____
	Registration expires _____ Date issued _____
	Pages or sheets covered by this seal: _____ _____ _____



PROJECT LOCATION
SCALE: 1"=1 MILE

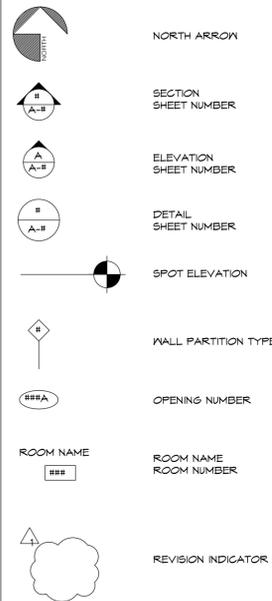


WALL TYPES:

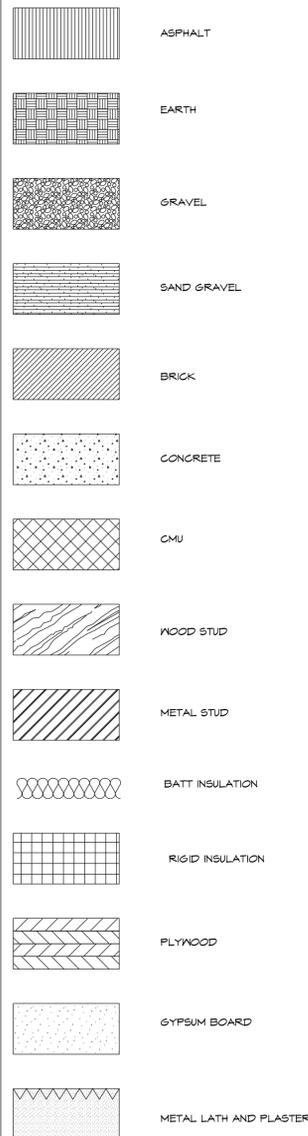


TYPE "1"
SCALE: 1/2"=1'-0"

SYMBOLS LEGEND:



MATERIALS LEGEND:



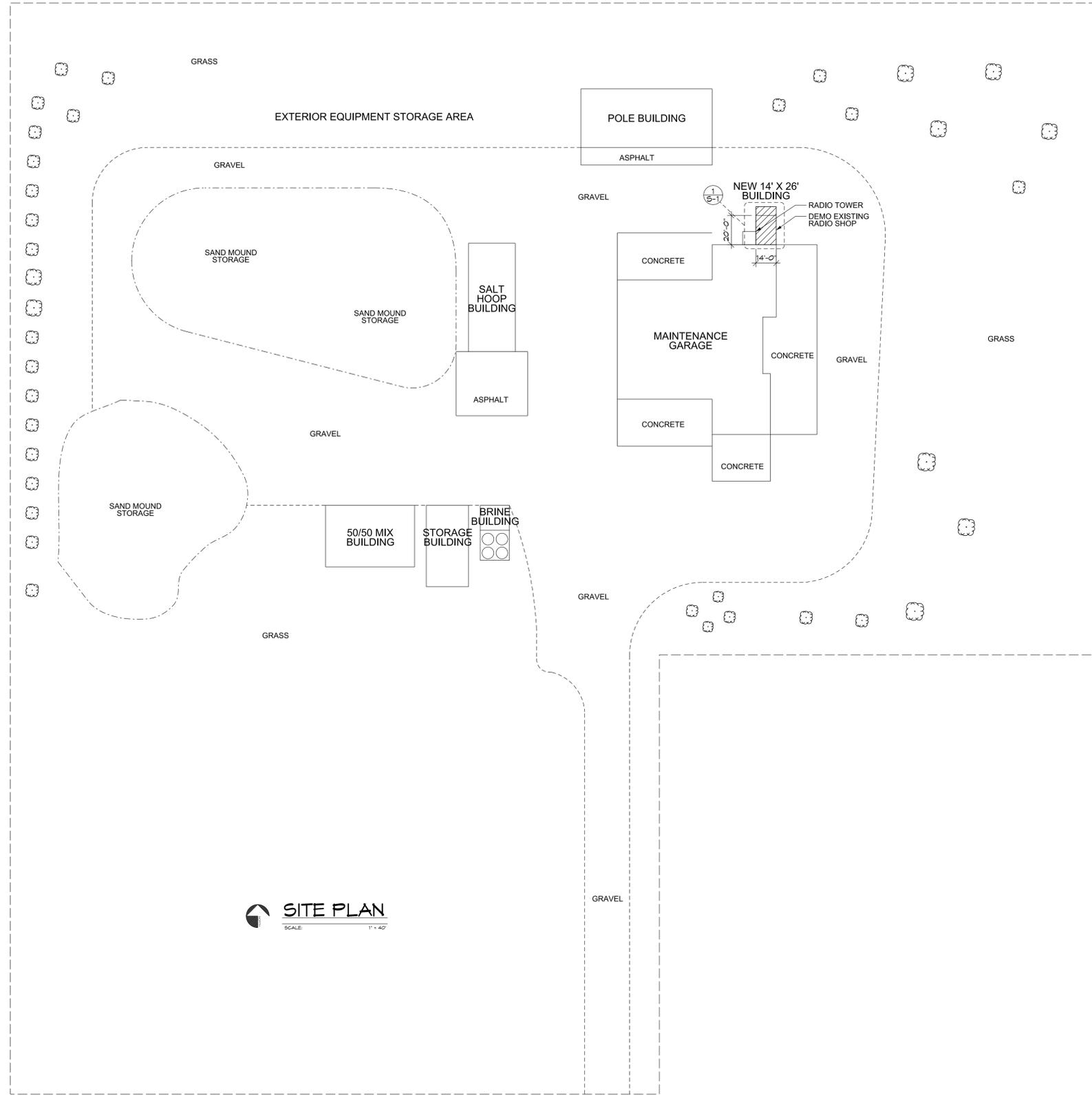
ABBREVIATIONS:

A	ASTRAGAL	O	OVERALL
A ADJ	ADJUSTABLE	OA	ON CENTER
AFB	ABOVE FINISH FLOOR	OC	OUTSIDE DIAMETER
AHU	AIR HANDLING UNIT	OD	OFFICE
ALUM	ALUMINUM	OFF	OFFICE
A	AND	OH	OPPOSITE HAND
APPROX	APPROXIMATE	OPG	OPENING
ARCH	ARCHITECT	OPP	OPPOSITE
B	BASE	P	PAINT, PANEL MOLDING
B BLDG	BUILDING	PL	PLASTIC LAMINATE
BLKS	BLOCKING	PLYMD	PLYWOOD
BO	BY OTHERS	PNL	PANEL
BOT	BOTTOM	FR	FAIR
BRD	BOARD	PT	POINT
BRK	BRICK	PTD	PAINTED
BASMT	BASEMENT	PTN	PARTITION
BUR	BUILT-UP ROOFING	PVC	POLYVINYL CHLORIDE
C	CARPET, GORNICE	Q	QUARRY TILE
CB	CATCH BASIN	QT	QUARRY TILE
CFMF	COLD FORMED METAL FRAMING	R	RISER, CHAIR RAIL, RADIUS
CH	CEILING HEIGHT	RD	ROOF DRAIN
CI	CAST IRON	RE	REFER TO
CJ	CONTROL JOINT	REF	REFERENCE, REFRIGERATOR
CL	CENTER LINE, CLOSET	RENF	REINFORCED
CLOS	CLOSET	RESIL	RESILIENT
CLR	CLEAR	RO	ROUGH OPENING
CMU	CONCRETE MASONRY UNIT	REQ	REQUIRED
COL	COLUMN	REV	REVISION
CONC	CONCRETE	RM	ROOM
CONT	CONTINUOUS	S	SOLID GORE, SKIM COAT
CORR	CORRIDOR	SC	SECTION
CP	CEILING PAINT	SF	SQUARE FEET
CT	CERAMIC TILE	SH	SHELVES
CVB	COVERED VINYL BASE	SHR	SHOWER
D	DOOR, DRYER	SIM	SIMILAR
DBL	DOUBLE	SLR	SEALER
DEPT	DEPTH	SPEC	SPECIFICATION
DF	DRINKING FOUNTAIN	SQ	SQUARE
DH	DOUBLE HUNG	SS	STAINLESS STEEL, SERVICE SINK
DIAG	DIAGONAL	ST	STONE
DIAM	DIAMETER	STL	STEEL
DM	DIMENSION	STN	STAINED
DISP	DISPOSAL	STOR	STORAGE
DTL	DETAIL	STRUC	STRUCTURAL
DA	DISHWASHER	T	TREAD, DOOR OPENING, OR WINDOW TRIM
DWG	DRAWING	TEL	TELEPHONE
E	EACH	TEMP	TEMPERED
EA	EXTERIOR INSULATION FINISH SYSTEM	TF	TRANSPARENT FINISH
EIFS	EXTERIOR INSULATION FINISH SYSTEM	THK	THICKNESS
EJ	EXPANSION JOINT	TOC	TOP OF CONCRETE
ELEV	ELEVATION	TOX	TOP OF WALL
ELEG	ELECTRICAL	- X	TYPE X
ELEV	ELEVATOR	TYP	TYPICAL
EMER	EMERGENCY	U	UNLESS OTHERWISE NOTED
EQ	EQUAL	UR	URINAL
EQUIP	EQUIPMENT	V	VINYL COMPOSITION TILE
EXIST	EXISTING	VGT	VERTICAL
EXT	EXTERIOR	VERT	VERTICAL
F	FLOOR DRAIN	VEST	VESTIBULE
FD	FLOOR DRAIN	VIF	VERIFY IN FIELD
FE	FIRE EXTINGUISHER	VT	VINYL TILE
FF	FINISHED FLOOR, FACTORY FINISH	W	WASHER
FN	FINISH	W	WITH
FL	FLOOR	WC	WATER CLOSET, WALL COVERING
FOV	FACE OF WALL	WD	WOOD
FT	FOOT	WF	WOOD FLOORING
FTG	FOOTING	WO	WITHOUT
G	GAUGE	WP	WATERPROOF
GA	GALVANIZED	WR	WATER RESISTANT
GALV	GALVANIZED	WT	WEIGHT
GC	GENERAL CONTRACTOR		
GL	GLASS/GLAZING		
GYP	GYP SUM		
GYP BD	GYP SUM BOARD		
H	HOSE BIB		
HB	HOSE BIB		
HDP	HARDWARE		
HDVD	HARDWOOD		
HM	HOLLOW METAL		
HOR	HORIZONTAL		
HR	HEIGHT		
HT	HEATING, VENTILATION, AIR CONDITIONING		
HVAC	HEATING, VENTILATION, AIR CONDITIONING		
I	INSIDE DIAMETER		
ID	INSIDE DIAMETER		
INS	INSULATE (D)		
INT	INTERIOR		
J	JANITOR		
JAN	JANITOR		
JT	JOINT		
K	KITCHEN		
KIT	KITCHEN		
L	LABORATORY		
LAB	LABORATORY		
LAM	LAMINATE		
LAV	LAVATORY		
LT	LIGHT		
LT GA	LIGHT GAUGE		
LVR	LOUVER		
M	MIRROR		
M	MIRROR		
MANUF	MANUFACTURER FINISH		
MAX	MAXIMUM		
MB	MARBLE		
MC	MECHANICAL CONTRACTOR		
MDO	MEDIUM DENSITY OVERLAY		
MECH	MECHANICAL		
MEMB	MEMBRANE		
MFR	MANUFACTURER		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MLDG	MOLDING		
MO	MASONRY OPENING		
MTD	MOUNTED		
MTL	METAL		
N	NATURAL FINISH		
NATF	NATURAL FINISH		
NC	NOT IN CONTRACT		
NOM	NOMINAL		
NS	NO SILL		
NSF	NET SQUARE FOOTAGE		
NTS	NOT TO SCALE		
NUM	NUMBER		

GENERAL NOTES:

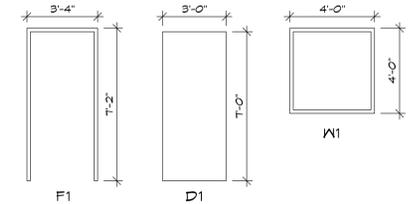
1. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (AIA DOCUMENT A201 LATEST EDITION) WILL APPLY TO THIS CONTRACT
2. DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONAL INFORMATION
3. THE CONTRACTOR SHALL REVIEW PLANS AND THE AREA OF CONSTRUCTION CAREFULLY TO ENSURE FULL UNDERSTANDING OF EXACT SCOPE OF WORK
4. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD AND NOTIFY THE DESIGNER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK. NO CHANGES SHALL BE MADE TO ANY PLAN WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGNER
5. THE CONTRACTOR SHALL FURNISH A SYSTEM OF TEMPORARY LIGHTS AND WATER THROUGHOUT THE SPACE UNDER CONSTRUCTION, IF REQUIRED
6. THE CONTRACTOR SHALL REMOVE FROM THE BUILDING ALL RUBBISH AND WASTE MATERIALS FOR WORK
7. ALL DRAWINGS AND CONSTRUCTION NOTES ARE COMPLEMENTARY AND WHAT IS CALLED FOR BY ONE WILL BE AS BINDING AS IF CALLED BY ALL
8. THE CONTRACTOR SHALL OBTAIN FULL KNOWLEDGE BY PERSONAL AND CAREFUL EXAMINATION OF ALL EXISTING CONDITIONS AT THE SITE AND OF ALL REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR HEREBY ACCEPTS ALL SUCH CONDITIONS AND REQUIREMENTS AND HEREBY ASSUMES ALL RESPONSIBILITY AND COSTS RESULTING FROM HIM/HER FAILURE TO OBTAIN KNOWLEDGE OF THEM
9. WHERE THE TERM "OR EQUAL" IS USED IN SPECIFICATIONS, IT SHALL BE UNDERSTOOD THAT THE REFERENCE IS MADE TO THE RULING AND JUDGEMENT OF THE DESIGNER AND SHALL BE SUBMITTED TO THE DESIGNER FOR REVIEW PRIOR TO SUBSTITUTION CUT OFF DATE

OFFICE OF SUPPORT SERVICES
800 LINCOLN WAY
AMES, IOWA 50010 (515)235-1298

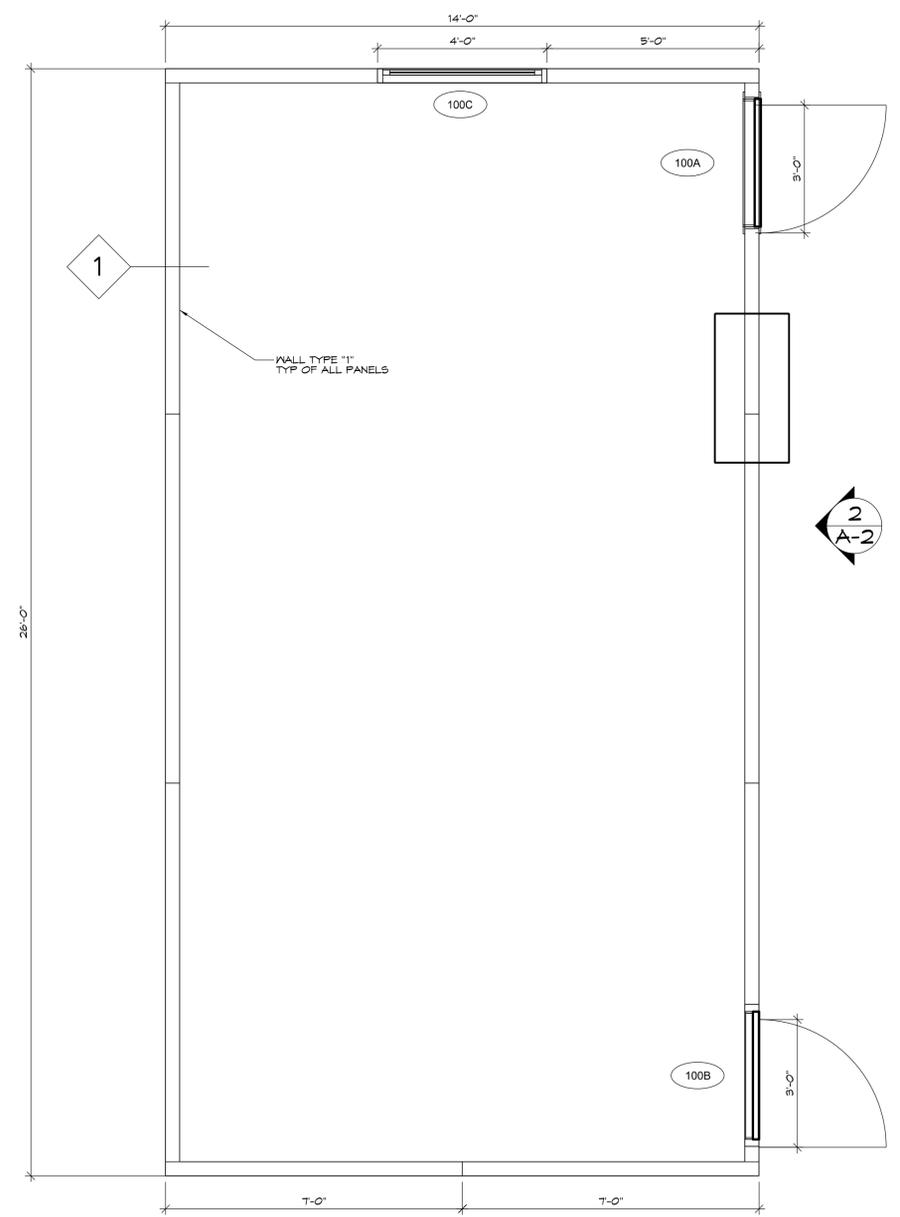


DOOR, FRAME, & WINDOW SCHEDULE

NO.	OPENING		DOOR/WINDOW				FRAME				HARDWARE GROUP	REMARKS			
	W	H	TYPE	MATL	THK	GLZ	FINISH	TYPE	MATL	WIDTH			HEIGHT	FINISH	GLZ
100A	3'-0"	7'-0"	D1	STL	1-3/4"	---	PT-1	F1	STL	3'-4"	7'-2"	PT-1	---	HW-31	DOT TO PROVIDE AND INSTALL DOOR HARDWARE
100B	3'-0"	7'-0"	D1	STL	1-3/4"	---	PT-1	F1	STL	3'-4"	7'-2"	PT-1	---	HW-31	DOT TO PROVIDE AND INSTALL DOOR HARDWARE
100C	4'-0"	4'-0"	W1	VNL	2-1/2"	31X31	---	W1	VNL	4'-0"	4'-0"	---	---	---	---



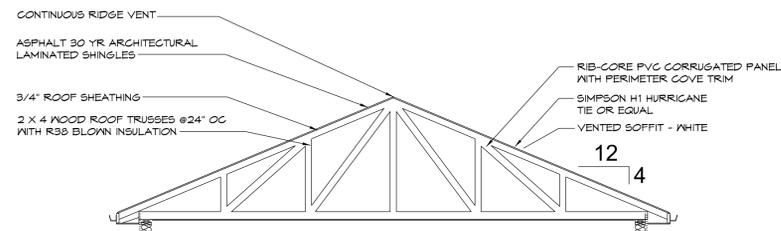
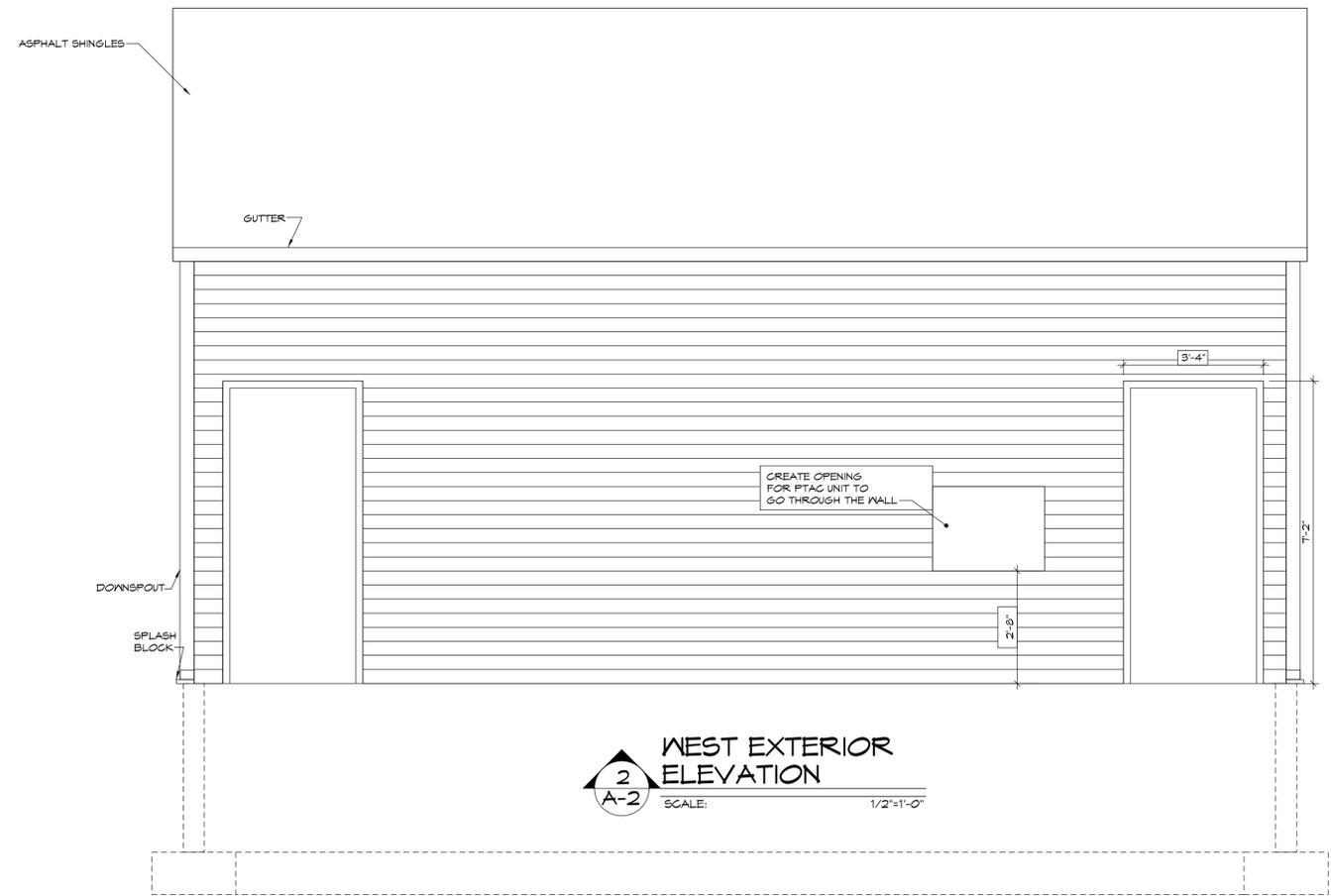
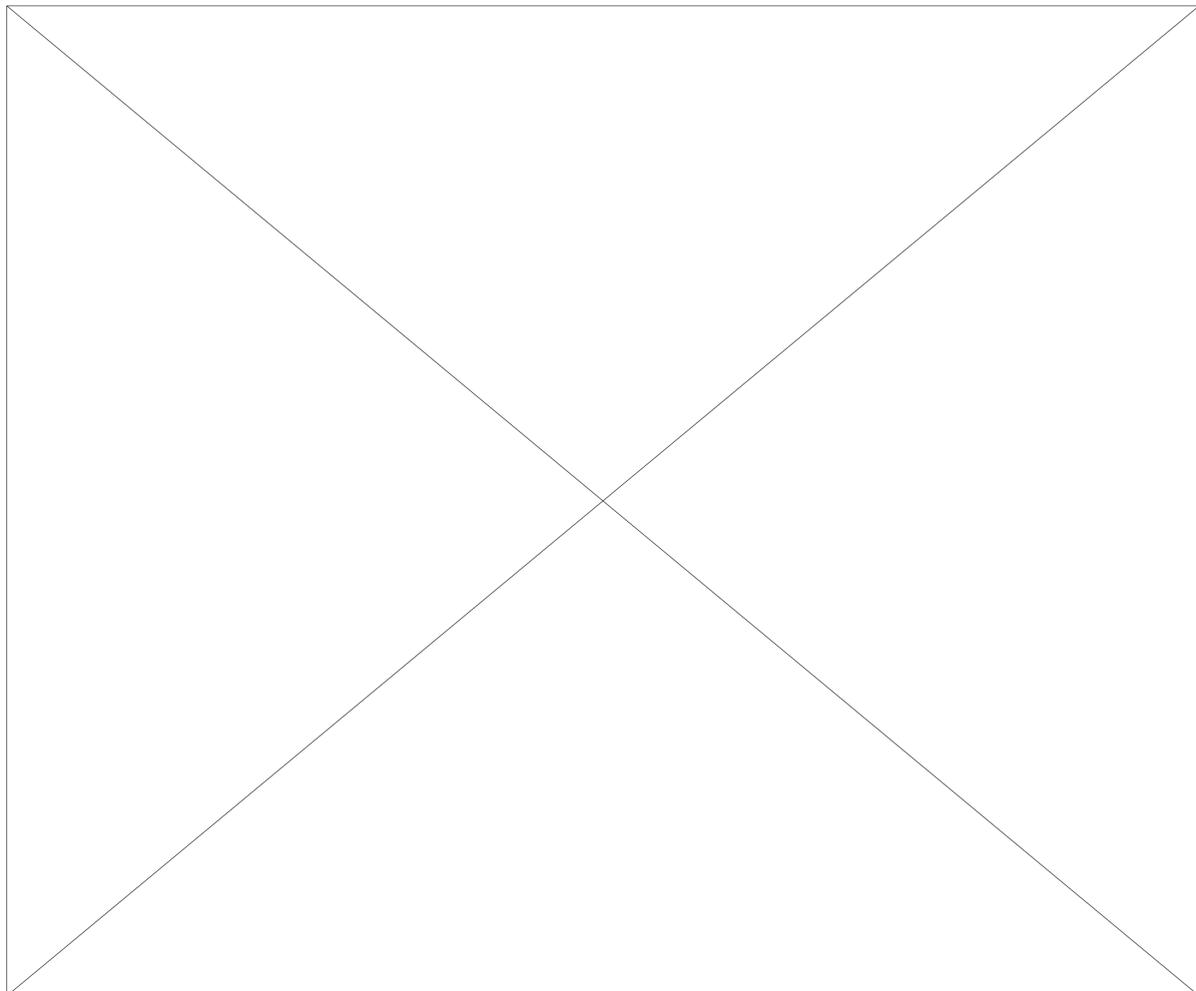
DOOR & WINDOW ELEVATIONS
SCALE: 1/4" = 1'-0"



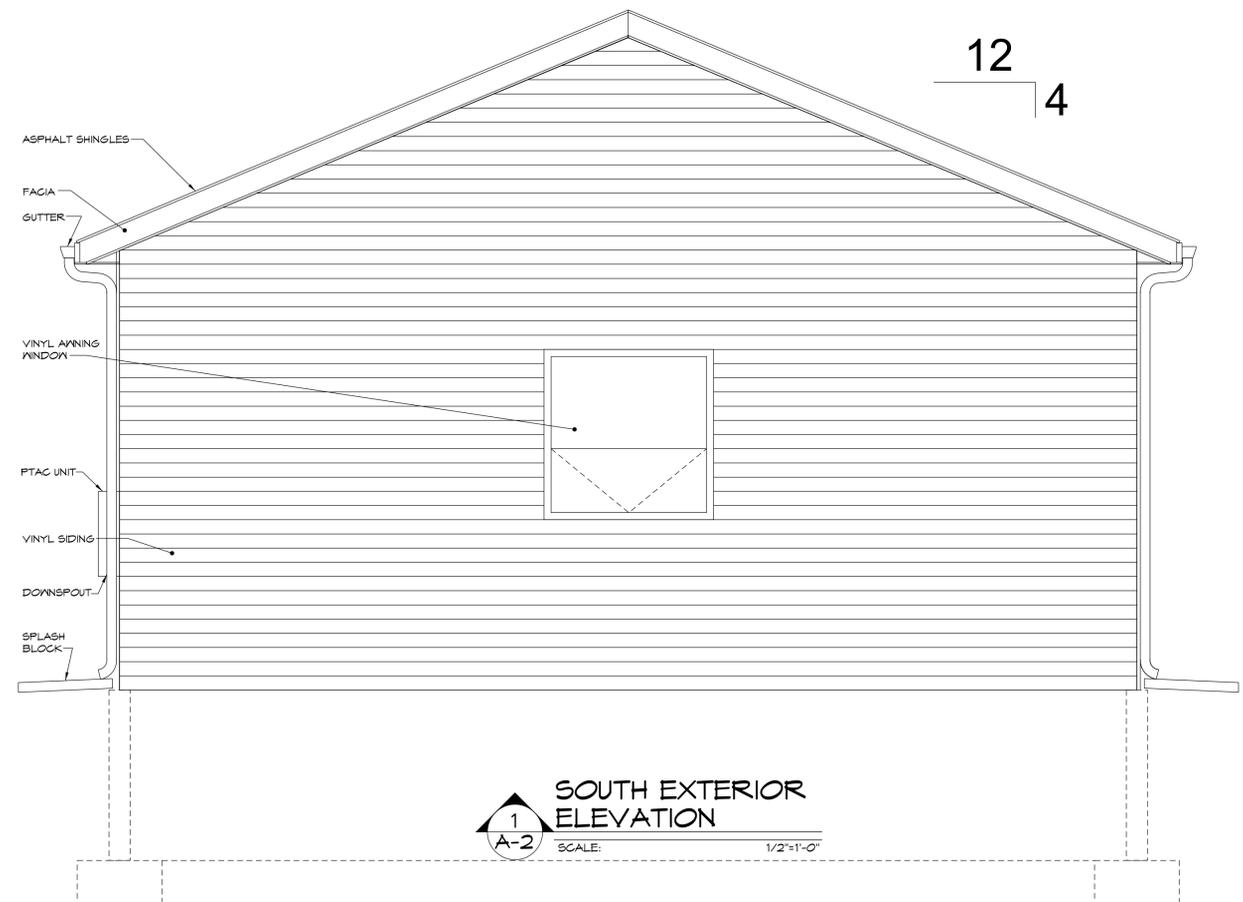
1 FLOOR PLAN
SCALE: 1/2" = 1'-0"



DISTRICT: 03
COUNTY: CLAY
PROJECT NUMBER: BG-1S21(000)--80-21
SPENCER, IOWA
RADIO BUILDING
SITE & BUILDING PLAN
IOWADOT
SMARTER | SIMPLER | CUSTOMER DRIVEN
OFFICE OF SUPPORT SERVICES
800 LINCOLN WAY
AMES, IOWA 50010 (515)235-1299
DATE: FEB 2016
DRAWN BY: A SMELSER
APPROVED: J BURNES
REVISIONS:
02 SHEET OF 04
A-1



TYPICAL TRUSS
SCALE: 1/2"=1'-0"



SOUTH EXTERIOR ELEVATION
SCALE: 1/2"=1'-0"

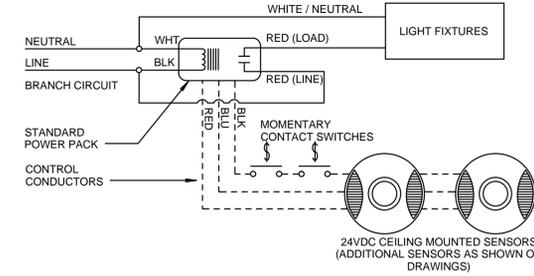
LIGHTING CONTROL DEVICE SCHEDULE		
SYM ID	BASIS OF DESIGN	DESCRIPTION
CEILING MOUNT SENSOR		
OS1	WATTSTOPPER DT-300 & BZ-50	CEILING MOUNT, DUAL TECHNOLOGY OCCUPANCY/VACANCY SENSOR WITH POWER PACK. MINOR MOTION COVERAGE 25' RADIUS FROM SENSOR.
OS1A	WATTSTOPPER DT-300	SIMILAR TO OS1 EXCEPT WITHOUT POWER PACK
MOMENTARY CONTACT SWITCH		
MC	-	SPST MOMENTARY CONTACT SWITCH

PTAC SCHEDULE													ELECTRICAL		
DESIGNATION	SERVES	MANUFACTURER	MODEL	MOUNTING	TOTAL COOLING CAPACITY (BTUH)	ELECTRIC HEAT CAPACITY (KW)	AIRFLOW DRY, HI-LOW (CFM)	REVERSIBLE CYCLE HEAT (BTU)	REFRIGERANT	EER	MINIMUM AMBIENT (°F)	VOLTS/PHASE	UNIT		
													FLA	MCA	PLUG
PTAC-1	RADIO	AMANA	PTH153G50A	WALL	14,400	5	410/320	17,100	R-410A	9.7	24	240/1	22.1	27.6	6-30P

NOTES:
 1. UNIT AUTOMATICALLY SWITCHES TO ELECTRIC HEAT AT APPROXIMATELY 24° F.
 2. PROVIDE WALL SLEEVE.
 3. PROVIDE CONDENSATE DISPERSION SYSTEM.

LIGHTING FIXTURE SCHEDULE					
TYPE	MANUFACTURER & MODEL NUMBER	LAMPS	BALLAST/DRIVER	PWR	DESCRIPTION
F1	CREE LS8-80L-40K-10V	4000K 8000 LM, CRI 80+	ELECTRONIC DRIVER	88W	8' LINEAR LED STRIP, SURFACE MOUNTED. 22 GAUGE STEEL, DRY/DAMP LOCATION RATED, DLC QUALIFIED. 100,000 HR MINIMUM PROJECTED L80. 10 YEAR MANUFACTURER SUPPLIED WARRANTY.
F2	LITHONIA WST LED-2-10A700/40K-SR2-MVOL T-PE-DBLXD	4000K 4000 LM	ELECTRONIC DRIVER	47W	DIE-CAST ALUMINUM HOUSING AND HINGED, GASKETED DOOR FRAME WITH CLEAR, TEMPERED GLASS LENS AND FULL CUT-OFF ANODIZED ALUMINUM REFLECTOR. HOUSING FINISHED WITH ELECTROSTATICALLY APPLIED AND BAKED BLACK POLYESTER POWDER COAT. INTERGRAL BUTTON TYPE PHOTOCELL. 100,000 HR PROJECTED L70. 5 YEAR MANUFACTURER WARRANTY.
X1	DUAL-LITE SESRW	RED LEDS	NA	3W	RED LED EXIT SIGN. DIE-CAST ALUMINUM HOUSING WITH TEXTURED WHITE FINISH. UNIVERSAL MOUNTING PLATE FOR CEILING, WALL, OR END INSTALLATION, AND SNAP IN DIRECTIONAL CHEVRONS ALLOW FIXTURE TO BE INSTALLED IN ANY APPLICATION. CONFORMS TO UL 924 I, NFPA 70, AND NFPA 101 STANDARDS. 3 YEAR MANUFACTURER WARRANTY ON FIXTURE AND LIFETIME MANUFACTURER WARRANTY ON LEDS.

RADIO SHOP PANEL (PANEL R)									
SHORT CIRCUIT RATING: 10,000 AMPS					MAIN BREAKER: 60 AMP				
INSTALLATION: SURFACE					240/120 VOLTS				
SIZE OF MAIN: 100 AMP					1 PHASE, 3 WIRE				
DESCRIPTION	PHASE WIRES, GND CONDUIT SIZE	LOAD (VA)	BKR	P H	BKR	LOAD (VA)	PHASE WIRES, GND CONDUIT SIZE	DESCRIPTION	
1 RECEPT	(2) #12, #12G, 3/4"	360	1P-20A	A	1P-20A	540	(2) #12, #12G, 3/4"	RECEPT	2
3 RECEPT	(2) #12, #12G, 3/4"	720	1P-20A	B	1P-20A	446	(2) #12, #12G, 3/4"	LIGHTING	4
5 PTAC	(2) #10, #10G, 3/4"	2652	2P-30A	A	2P-60A	-	(3) #6, #10G, 3/4"	SPD	6
7 SPARE		2652	2P-30A	B	2P-60A	-		SPD	8
9 SPARE			1P-20A	A	1P-20A			SPARE	10
11 SPARE			1P-20A	B	1P-20A			SPARE	12
13 SPARE			1P-20A	A	1P-20A			SPARE	14
15 SPARE			1P-20A	B	1P-20A			SPARE	16
17 SPARE			1P-20A	A	1P-20A			SPARE	18



4 MANUAL ON / AUTO OFF SENSOR
SCALE: NONE

- GENERAL NOTES**
- ENTITIES DRAWN WITH THIS LINETYPE (——) INDICATES EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
 - ENTITIES DRAWN WITH THIS LINETYPE (---) INDICATES NEW WORK UNLESS OTHERWISE NOTED.
 - ALL WORK REQUIRING THE SHUTDOWN OF POWER EQUIPMENT AFFECTING AREAS OUTSIDE OF THE CONSTRUCTION ZONE MUST BE PERFORMED AFTER HOURS.
- KEYED NOTES**
- RADIO SHOP DISC: PROVIDE NEMA 3R, 240/120V, 1 PHASE, 3 WIRE, 60A FUSIBLE DISCONNECT, FUSED AT 60A, 30KA MIN SCRR. MOUNT ADJACENT TO MAIN SERVICE DISC, EXPAND UNI-STRUT FRAMEWORK AS NECESSARY. TAP (3)-#4 & (1)-#10 GND OFF THE MAIN SERVICE DISC BY ADDING AN ADDITIONAL SET OF LUGS TO THE LOAD SIDE OF THE DISC. FEED CONDUCTORS TO THE RADIO SHOP DISC IN 1" RGS.
 - PROVIDE 12" GROUNDING BUSBAR BELOW AND TO THE SOUTH OF NEW RADIO SHOP PANEL. CONNECT TO PANEL GROUND WITH #8 AWG, GROUND ROD WITH #4 AWG, AND TO THE NEW FOUNDATION'S CONCRETE ENCASED REBAR WITH #4 AWG.
 - DEMOLISH POWER FEED (3-#10 IN 1" C) TO EXISTING RADIO SHOP BUILDING FED FROM PANEL E LOCATED IN THE MAIN UTILITY ROOM. DEMOLISH ONLY CONDUITS EXTERIOR TO THE GARAGE. LABEL INTERIOR CONDUITS AS SPARE.
 - EXISTING 1-1/4" COMMUNICATION CONDUIT. DEMOLISH CONDUIT BACK TOWARD GARAGE AS NECESSARY TO ALLOW FOR NEW STUB UP INTO NEW BUILDING. EXISTING CABLES AND TERMINATION BLOCKS ARE TO BE RE-INSTALLED ON SOUTH WALL IN WEST CORNER. TAKE PRECAUTIONS TO ENSURE EQUIPMENT IS NOT DAMAGED DURING DEMOLITION OR CONSTRUCTION.
 - NEMA 6-30R RECEPTACLE. INSTALL AT +40" AFF. COORDINATE EXACT LOCATION WITH PTAC-1.
 - RADIO SHOP PANEL POWER FEED: PROVIDE 3-#4 & #10G IN 1-1/4" CONDUIT. HAND TRENCH AROUND RADIO TOWER TAKING CARE TO NOT DAMAGE COMMUNICATION OR GROUNDING CABLES.
 - MAIN UTILITY ROOM. LOCATION OF MDP, PANEL A, B, E, AND ORIGIN OF (4) COMMUNICATION CABLES FED TO EXISTING RADIO SHOP.
 - PROVIDE TYPE 2 SPD FOR RADIO SHOP PANEL. LOCATE ADJACENT TO OR JUST BELOW PANEL.

- LEGEND**
- ⊕ DUPLEX RECEPTACLE - WALL MOUNTED
 - ⊕ DUPLEX RECEPTACLE - ABOVE COUNTERTOP
 - ⊕ QUADRAPLEX RECEPTACLE - WALL MOUNTED
 - ⊕ WP/GF ANNOTATIONS - WP DENOTES WEATHERPROOF, GF DENOTES GROUND FAULT
 - ⊕ FUSED DISCONNECT SWITCH
 - ⊕ ELECTRICAL PANELBOARD
 - ⊕ MC LOW VOLTAGE MOMENTARY CONTROL SWITCH
 - ⊕ (x) CEILING MOUNTED OCCUPANCY SENSOR. ANNOTATIONS - (x) DENOTES OCCUPANCY SENSOR SWITCH NUMBER. REFER TO SCHEDULE.
 - LINEAR SURFACE MOUNT LIGHT FIXTURE
 - ⊕ EXTERIOR WALL PACK LIGHTING FIXTURE
 - ⊕ WALL MOUNTED, SINGLE FACE EXIT SIGN. ARROW INDICATES DIRECTION OF TRAVEL, SHADED SECTION INDICATES FRONT WITH NO ARROWS
 - ELECTRICAL CIRCUITING IN WALL, UNDERFLOOR OR ABOVE CEILING
 - EXISTING ELECTRICAL CIRCUITING IN WALL, UNDERFLOOR OR ABOVE CEILING
 - ELECTRICAL CIRCUITING UNDERGROUND
 - ELECTRICAL CIRCUITING "HOMERUN" TO PANELBOARD (TYPICAL FOR ALL TYPES)

IOWA DEPARTMENT OF TRANSPORTATION
 SPENCER RADIO SHOP
 IOWA DOT PROJECT NO: BG-8S30(000) -- 80-21

REVISION _____ DATE _____

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

Signature _____ Date _____

ROBERT A. HEDGEPEETH, P.E.
 My license renewal date is December 31, 2017

Pages or sheets covered by this seal.
 ME101

Date Issued: 04/29/2016

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

Signature _____ Date _____

SUSAN R. OLTROGGE, P.E.
 My license renewal date is December 31, 2017

Pages or sheets covered by this seal.
 ME101

Date Issued: 04/29/2016

SHEET TITLE
PLANS & DETAILS - MECHANICAL & ELECTRICAL

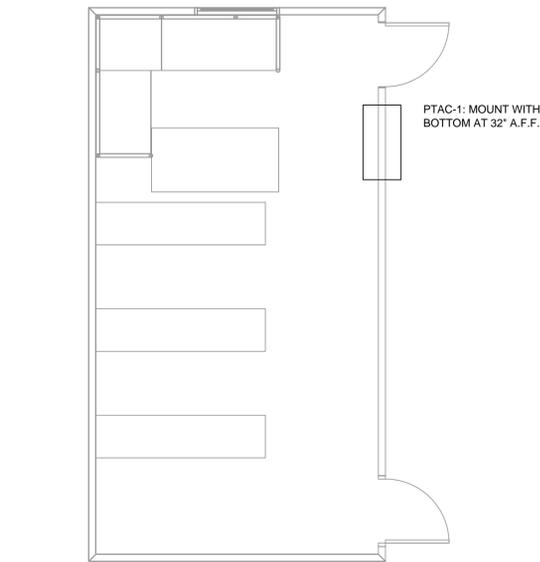
PROJECT LOCATION
 DES MOINES, IOWA

PROJECT NUMBER
 16014

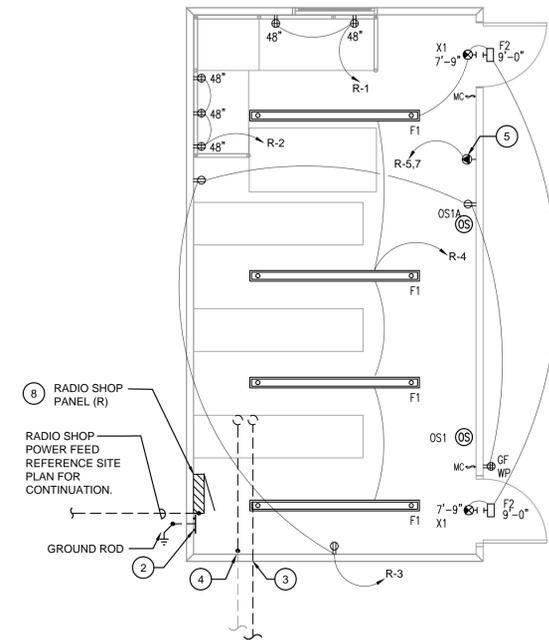
ISSUE DATE
 ISSUE FOR BID: 04.29.2016

SHEET NUMBER

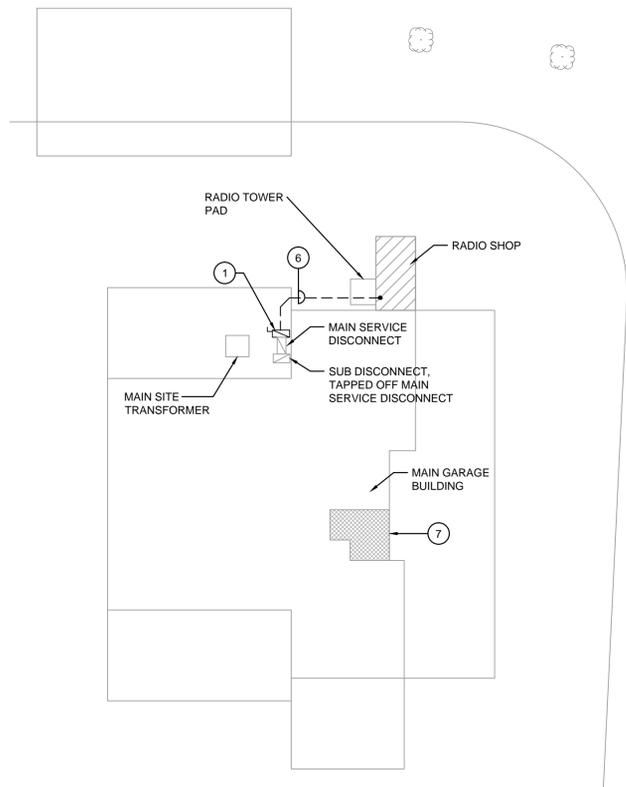
ME101



3 MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



2 ELECTRICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



1 SITE PLAN
SCALE: 1" = 30'-0"

File: J:\16014 - IA DOT Spencer Radio Shop\6-Contract Dwg's\ME101.dwg
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