WELL NO. 37 GAC TREATMENT FACILITY

FOR THE

CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS
JULY, 2012

ROCKFORD, IL
(SEE AREA MAP)

PROJECT LOCATION MAP
NO SCALE

WELL NO. 37
2100 HUFFMAN BLVD.

Rockford
Loves Park
Machesney Park
Cherry Valley
Roscoe
Rockton
Belvidere
Harlem
Guilford
Pecatonica
Winnebago
Riverside Blvd
Auburn St
Rural St
Broadway
Harrison Ave
Sandy Hollow Rd
Perryville
Spring Creek Rd
Alpine Rd
Bell School Rd
Rockton Rd
Blackhawk Rd
Cunningham Rd
Elevator Rd
Cherry Valley Rd
Pecatonica Rd
Winnebago Rd
Shirland Rd
Beloit Rd
Harlem Rd
Guilford Rd
Forest Hills Rd
Kishwaukee Rd
Meridian Rd
Perryville Rd
Rockton Ave
Riverside Blvd
Kishwaukee St
Mulford Rd
Sandy Hollow Rd
Harrison Ave
Broadway
Auburn St
Rural St

DRAFTING SYMBOLS

DETAIL NOTATION

A / 99-ASM5.01 — DETAIL LETTER; DRAWING THAT DETAIL IS SHOWN ON

SECTION NOTATION

1 / 99-ASM3.01 — SECTION NUMBER; DRAWING THAT SECTION IS SHOWN ON

SECTION SCALE 1 / 99-ASM3.01 — SECTION NUMBER; DRAWING THAT SECTION IS SHOWN ON

ELEVATION NOTATION

A / 99-ASM2.01 — ELEVATION LETTER; DRAWING THAT ELEVATION IS SHOWN ON

EQUIPMENT IDENTIFICATION

Type / Group — TYPE OF EQUIPMENT; EQUIPMENT GROUP

- NAME 9999 — ROOM IDENTIFICATION
- 101A — DOOR IDENTIFICATION
- 999 — WINDOW IDENTIFICATION
- 1 — KEY/SPECIFIC NOTE CALL-OUT
- X — PARTITION TYPE REFERENCE
- A — CENTER LINE OF BEAM-COLUMN FRAME SYSTEM
- M11 — POINTS OF VIEW BEING CONSIDERED MATCH LINE
- 3 — REVISION
- +EL 1000.00 — FINISH ELEVATION
- EL 1000.00 — SPOT ELEVATION
- EXISTING OBJECTS ARE SCREENED
- EXISTING OBJECTS TO BE ABANDONED
- EXISTING OBJECTS TO BE DEMOLISHED
- HIDDEN OBJECT
- FUTURE OBJECT
- OBJECT SUPPLIED BY OWNER

ARCHITECTURAL SYMBOLS

- EARTH
- SAND, PLASTER, STUCCO
- CONCRETE
- BRICK
- CONCRETE BLOCK
- ACOUSTIC BLOCK
- ASHLAR STONE VENEER
- METAL
- METAL LATH
- WOOD-FINISH
- WOOD-FRAMING
- PLYWOOD
- ACOUSTICAL TILE
- GYPSUM BOARD
- BATT INSULATION
- RIGID INSULATION
- CHECKERED PLATE
- HANDRAIL

TOPOGRAPHICAL SYMBOLS

- AREA OF THE SITE
- CORPORATE LIMITS
- PROPERTY LINE AND/OR RIGHT OF WAY
- RIGHT OF WAY MARKER
- CONSTRUCTION EASEMENT ON SEWER AND WATER PLANS
- PERMANENT EASEMENT ON SEWER AND WATER PLANS
- SECTION LINE
- CENTER LINE
- BENCH MARK
- SOIL BORING
- PROPERTY STAKE
- PRIVATE WELL
- EXISTING UTILITY POLE
- NEW UTILITY POLE
- BURIED TELEPHONE CABLE PEDESTAL
- SIGN
- LIGHT POLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- DECIDUOUS SHRUBS
- CONIFEROUS SHRUBS
- INTERMITTENT STREAM
- STREAM OR RIVER
- WETLAND AREA
- RAILROAD – LARGE SCALE
- BRIDGE
- EXISTING CULVERT
- SILT FENCE
- FENCE
- GUARD RAIL
- CURB, GUTTER AND INLET
- REJECT CURB
- 960 — CONTOUR LINES
- EXISTING DEPRESSION
- TOP OF CUT OR BERM

UNDERGROUND UTILITY SYMBOLS

- 6" W — NEW WATER MAIN AND VALVE MANHOLE
- 6" W — WATER MAIN AND VALVE IN ROAD BOX
- 6" W — EXISTING WATER MAIN AND FIRE HYDRANT
- 6" W — NEW WATER MAIN AND FIRE HYDRANT WITH AUXILIARY VALVE
- 6" S — EXISTING SANITARY SEWER AND MANHOLE
- 6" S — NEW SANITARY SEWER AND MANHOLE
- 6" ST — EXISTING STORM SEWER AND MANHOLE (I-INLET)
- 6" ST — NEW STORM SEWER AND MANHOLE (I-INLET)
- 6" F — FORCE MAIN
- F — VALVE MANHOLE ON FORCE MAIN
- S — WYE BRANCH
- S R — RISER
- S MR — MODIFIED RISER
- T — TELEPHONE OR TV CABLE AND MANHOLE
- 2" G — GAS MAIN
- E — UNDERGROUND ELECTRIC CABLE
- S W F — EXISTING WATER MAIN, SEWER MANHOLE, AND FORCE MAIN IN PROFILE
- S W F — NEW WATER MAIN, SEWER, MANHOLE AND FORCE MAIN IN PROFILE
- CULVERT IN PROFILE
- NEW GRADE LINE
- SLOPE INTERCEPT
- ORIGINAL GROUND IN PROFILE
- ROCK IN PROFILE
- SURVEY OR REFERENCE LINE
- 165' — POINT OF INTERSECTION
- POINT ON REFERENCE LINE
- BUILDING IN PROFILE
- DIRECTION OF TRAFFIC
- NOTATION FOR COMBUSTIBLE FLUIDS

PIPING SYMBOLS

- FLANGE JOINT
- GROOVED JOINT
- MECHANICAL JOINT
- PUSH – ON JOINT
- RUBBER EXPANSION JOINT
- SOLVENT WELD OR THREADED JOINT
- PIPE COUPLING WITH TENSION TIES
- SMALL DIAMETER PIPE
- WALL PIPE
- WALL SLEEVE
- FABRICATED WALL SLEEVE
- SHUT OFF VALVE
- FLOOR STAND IN PLAN
- STOP PLATE – EMBEDDED
- SLIDE GATE – EMBEDDED
- SLIDE GATE – SURFACE MOUNTED
- SLUICE GATE
- P/VR — PRESSURE/VACUUM RELIEF
- LIQUID RING COMPRESSOR
- OP — ORIFICE PLATE
- M — MANOMETER
- FD — FLOOR DRAIN
- RD — ROOF DRAIN
- HD — HUB DRAIN
- HOSE BIBB
- WATER HAMMER ARRESTER
- 8 — WATER SUPPLY/DRAINAGE FIXTURE UNITS
- THERMOMETER
- TRAP PRIMER
- YARD HYDRANT

PIPING DESIGNATIONS

- A — AIR
- CA — COMPRESSED AIR
- CW — COLD WATER
- CWR — COLD WATER RETURN
- CWS — COLD WATER SUPPLY
- DEW — DISINFECTED EFFLUENT WATER
- G — NATURAL GAS PIPING
- HW — HOT WATER
- HHWR — HEATING HOT WATER RETURN
- HHWS — HEATING HOT WATER SUPPLY
- LPC — LOW PRESSURE CONDENSATE
- LPS — LOW PRESSURE STEAM
- NPW — NONPOTABLE WATER
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- SPD — SUMP PUMP DISCHARGE
- SW — SOFT WATER
- VENT PIPE
- WASTE BELOW GRADE
- WASTE ABOVE GRADE
- STORM BELOW GRADE
- STORM ABOVE GRADE

VALVE SYMBOLS

- AIR PRESSURE RELIEF VALVE
- BALANCING VALVE
- BALL VALVE
- BALL CHECK VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- GAS SHUTOFF PLUG VALVE
- GATE VALVE
- GLOBE VALVE
- LP — LOW PRESSURE CHECK VALVE
- PRESSURE REDUCING VALVE
- PVR — PRESSURE RELIEF VALVE
- TELESCOPIC VALVE
- 3-WAY VALVE
- TRIPLE DUTY VALVE

PIPING SYMBOLS

- ELBOW DOWN
- ELBOW UP
- M — METER
- STRAINER
- TEE DOWN
- TEE UP
- UNION
- GAS PRESSURE REGULATOR
- PI — PRESSURE INDICATOR
- PT — PRESSURE TRANSMITTER
- TE — TEMPERATURE ELEMENT
- TI — TEMPERATURE INDICATOR
- TT — TEMPERATURE TRANSMITTER
- MANUAL AIR VENT
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- FLEXIBLE CONNECTOR

DATE:	REVISIONS	NO.

STANDARD SYMBOLS - 1

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PROJECT MGR. ANDY MULLENDORE

STRAND ASSOCIATES®

SHEET G0.3

ELECTRICAL SYMBOLS

LIGHTING

- FIXTURE SYMBOL (TYPICAL): A-INDICATES FIXTURE TYPE; 2-INDICATES CIRCUIT NUMBER; b-INDICATES SWITCHING; SOLID CIRCLE INDICATES ALWAYS ON
- INCANDESCENT, HID, SURFACE OR PENDANT
- INCANDESCENT, HID, WALL
- 1X4 FLUORESCENT, SURFACE OR PENDANT
- 1X8 FLUORESCENT, SURFACE OR PENDANT
- FLUORESCENT, WALL
- 1X4 FLUORESCENT, RECESSED
- 2X2 FLUORESCENT, RECESSED
- 2X4 FLUORESCENT, RECESSED
- CAN, FLUORESCENT OR HID
- EXIT, SURFACE, PENDANT OR RECESSED
- EXIT, WALL
- EMERGENCY LIGHTING

SWITCHES

- \$ — SINGLE POLE
- $\$_2$ — TWO POLE
- $\$_3$ — THREE WAY
- $\$_4$ — FOUR WAY
- $\$_K$ — KEYED
- $\$_D$ — DIMMER
- $\$_M$ — MANUAL MOTOR SWITCH (3 PHASE)
- $\$_{WP}$ — WEATHER PROOF
- $\$_P$ — SWITCH WITH PILOT LIGHT
- LC — LIGHTING CONTROL STATION
- RS — LOCKOUT STOP SWITCH
- DP — DOOR POSITION SWITCH
- PC — PHOTOCELL

EQUIPMENT AND WIRING

- GROUND ROD 10'-5/8" DIA. COPPER CLAD
- TRANSFORMER
- DISCONNECT, F=FUSED, B=CIRCUIT BREAKER, BLANK=NON-FUSED
- MOTOR STARTER MAGNETIC
- CIRCUIT BREAKER COMBINATION STARTER
- J — JUNCTION BOX
- T — LINE VOLTAGE THERMOSTAT
- T — LINE VOLTAGE THERMOSTAT W/REMOTE BULB
- P-01-01 — 480V LOAD, REFER TO MCC SCHEDULE FOR EQUIPMENT NUMBER
- VFD — VARIABLE FREQUENCY DRIVE

POWER SYMBOLS

- E — UNDERGROUND ELECTRIC
- OH — OVERHEAD ELECTRIC
- 2(X) — CIRCUIT NUMBER (TYPICAL); OTHERWISE SHOWN PANEL DESIGNATION (TYP.); DUPLEX, 125 VOLT, WP INDICATES WEATHERPROOF
- DUPLEX, 125 VOLT, ABOVE FURNITURE
- DOUBLE DUPLEX, 125 VOLT, ABOVE FURNITURE
- DOUBLE DUPLEX, 125 VOLT
- EWC — SINGLE CONVENIENCE, 125 VOLT FOR ELECTRIC WATER COOLER
- EXPLOSION-PROOF, ABOVE FURNITURE
- EXPLOSION-PROOF
- FIXED EQUIPMENT CONNECTION
- POWER OUTLET, VOLTAGE & AMPERAGE AS INDICATED
- AUTOMATIC TRANSFER SWITCH (ONE-LINE DIAGRAM)
- CIRCUIT BREAKER (ONE-LINE DIAGRAM)
- M — METER (ONE-LINE DIAGRAM)
- PANELBOARD

FIRE ALARM AND DETECTION SYMBOLS

- FACP — FIRE ALARM CONTROL PANEL
- FAAP — FIRE ANNUNCIATOR CONTROL PANEL
- STROBE; WALL MOUNT – ADA RATED; STROBE CANDELA RATING 80" AFF
- H — HORN STROBE; WALL MOUNT – ADA RATED; STROBE CANDELA RATING 80" AFF
- S — SPEAKER STROBE; WALL MOUNT – ADA RATED; STROBE CANDELA RATING 80" AFF
- FA H — HORN; WALL MOUNT – ADA RATED
- FA S — SPEAKER; WALL MOUNT – ADA RATED
- F — STROBE; CEILING MOUNT – ADA RATED; STROBE CANDELA RATING
- H — HORN STROBE; CEILING MOUNT – ADA RATED; STROBE CANDELA RATING
- S — SPEAKER STROBE; CEILING MOUNT – ADA RATED; STROBE CANDELA RATING
- ARA — AREA OF RESCUE ASSISTANCE
- EMERGENCY TELEPHONE SYSTEM
- H — HEAT DETECTOR; CEILING MOUNT
- Z — SMOKE DETECTOR; CEILING MOUNT
- Z R — ELEVATOR RECALL SMOKE DETECTOR
- NOX — NITROUS OXIDE SENSOR
- CO — CARBON MONOXIDE SENSOR
- DSD — SWITCH INDICATION; DUCT SMOKE DETECTOR; DUCT SIZE
- RTS — REMOTE TEST SWITCH; SWITCH INDICATION
- FIRE ALARM PULL STATION
- SFS — SPRINKLER FLOW SWITCH
- TM — SPRINKLER VALVE TAMPER SWITCH
- B — FIRE ALARM BELL

INSTRUMENTATION EQUIPMENT

- AE — ANALYSIS ELEMENT
- AIT* — ANALYSIS INDICATING TRANSMITTER, *: DO=DISSOLVED OXYGEN, PH=PH, TRB=TURBIDITY, TSS=TOTAL SUSPENDED SOLIDS, GD=GAS DETECTOR, CA=CHLORINE ANALYZER, OP=OXYGEN PURITY, LEL=LOWER EXPLOSIVE LIMIT, PR=PROXIMITY, MST=MOISTURE
- CS 1,2 — CONTROL SWITCH; DEVICE TYPE (SEE MCC SCHEDULE)
- DE — DENSITY ELEMENT
- DIT — DENSITY INDICATING TRANSMITTER
- FE — FLOW ELEMENT
- FIT* — FLOW INDICATING TRANSMITTER, *: M=MAGNETIC, TM= THERMAL MASS DP=DIFFERENTIAL PRESSURE, U=ULTRASONIC
- FS* — FLOW SWITCH *: P=PADDLE, T=THERMAL, C=CAPACITANCE, A=AIR FLOW
- HS* — HAND SWITCH *: SS=SAFETY SWITCH
- IE OR EE — POWER ELEMENT (CURRENT XFMR, POTENTIAL XFMR)
- IS — CURRENT SWITCH
- JIT — POWER INDICATING TRANSMITTER
- KS — TIME SWITCH
- LE — LEVEL ELEMENT
- LIT* — LEVEL INDICATING TRANSMITTER, *: S=SUBMERSIBLE, U=ULTRASONIC, R=RING TYPE
- LS* — LEVEL SWITCH, *: C=CONDUCTANCE, F=BALL FLOAT, V=VIBRATING FORK, B=BUILDING FLOODING
- PDIT — DIFFERENTIAL PRESSURE INDICATING TRANSMITTER
- PE — PRESSURE ELEMENT
- PIT — PRESSURE INDICATING TRANSMITTER
- PS — PRESSURE SWITCH
- SS — SPEED SWITCH
- TC — TEMPERATURE CONTROLLER
- TE* — TEMPERATURE ELEMENT, *: R=RTD, T=THERMOCOUPLE
- TIT — TEMPERATURE INDICATING TRANSMITTER
- TK — TEMPERATURE CONTROL STATION
- TS — TEMPERATURE SWITCH
- TT — TEMPERATURE TRANSMITTER
- VE — VIBRATION ELEMENT
- VIT — VIBRATION INDICATING TRANSMITTER
- WE — WEIGHT ELEMENT
- WS — TORQUE SWITCH
- WT — WEIGHT TRANSMITTER (SCALE)
- YS — PRESENCE/ABSENCE DETECTOR
- ZS* — POSITION SWITCH, *: D=DOOR, L=LIMIT, P=PROXIMITY
- SOLENOID VALVE
- FIX — FIXED SECURITY CAMERA
- PTZ — FAN, TILT, ZOOM SECURITY CAMERA

TECHNOLOGY SYMBOLS

- DATA JACK
- PHONE JACK
- VOICE AND DATA JACKS
- VOIP — WALL MOUNT VOIP PHONE JACK 54" AFF
- SCADA NETWORK JACK
- DATA RACK
- COAX CABLE
- POWER POLE
- PA H — PA SYSTEM HORN SPEAKER; 10'-0" AFF
- PA S — PA SYSTEM SPEAKER
- A — SPEAKER; CEILING MOUNT A=SPEAKER TYPE
- K — KEY PAD
- GBD — GLASS BREAK DETECTOR
- MS — MOTION SENSOR
- P — PUSH BUTTON
- ES — ELECTRIC STRIKE
- ML — MAGNETIC LOCK
- I — INTERCOM STATION
- OS — OCCUPANCY SENSOR; SEE SPECIFICATION FOR SENSOR TYPE
- YE — CARD READER
- RVC — REMOTE VOLUME CONTROL

DUCTWORK SYMBOLS

- SUPPLY DUCT (UP OR SECTION)
- SUPPLY OR OUTSIDE AIR DUCT (DOWN/OR AWAY)
- EXHAUST DUCT (UP OR SECTION)
- EXHAUST OR RETURN DUCT (DOWN/OR AWAY)
- ROUND DUCTWORK UP
- ROUND DUCTWORK DOWN
- FLEXIBLE CANVAS CONNECTION
- TURNING VANES

DAMPER SYMBOLS

- M — AUTOMATIC DAMPER
- BDD — BACKDRAFT DAMPER
- MANUAL VOLUME DAMPER
- FD — 1-1/2 HR. FIRE DAMPER

FIELD MOUNTED CONTROLS

- T — THERMOSTAT
- H — ROOM HUMIDISTAT
- P — PRESSURE SENSOR
- S — ROOM SENSOR
- S — DUCT SMOKE DETECTOR
- PRESSURE GAUGE

ACTUATORS

- M — MOTOR (ELECTRIC)
- P — PNEUMATIC
- S — SOLENOID

EQUIPMENT SYMBOLS

- ACU — ACCUMULATOR
- AIR FLOW DIRECTION
- BASE MOUNTED PUMP
- BLOWER
- CEILING DIFFUSER WITH FLEXIBLE DUCT
- CENTRIFUGAL PUMP
- CONNECT TO EXISTING
- DT — DRIP TRAP
- DUCT BOOST COIL
- Type / Group — EQUIPMENT TAG
- FA — FLAME ARRESTER
- FC — FLAME CELL
- FT — FLAME TRAP ASSEMBLY
- G — GRINDER
- INLINE PUMP
- POSITIVE DISPLACEMENT PUMP
- ROOF EXHAUST FAN
- UNIT HEATER
- VARIABLE AIR VOLUME (VAV) BOX WITH ELECTRIC REHEAT COIL
- VARIABLE AIR VOLUME (VAV) BOX WITH HEATING HOT WATER REHEAT COIL
- FLOATING MIXER
- SCREW CONVEYOR

DATE:	REVISIONS	NO.

STANDARD SYMBOLS - 2

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GENERAL EQUIPMENT ABBREVIATIONS

AC	AIR COMPRESSOR
ACU	ACCUMULATOR
ADT	AUTOMATIC DRIP TRAP
AFT	AUTOMATIC FILTER
AOV	AIR OPERATED VALVE
AM	AROMIC MIXER
AST	AUTOMATIC STRAINER
BSLP	BLENDED SLUDGE PUMP
B	BLOWER
BC	BRIDGE CRANE
BFP	BELT FILTER PRESS
BFWP	BFP FEED PUMP
BFV	BUTTERFLY VALVE
BLP	BIOSOLIDS LOADING PUMP
BLR	BOILER
BP	BOOSTER PUMP
BSLMP	BLENDED SLUDGE MIXING PUMP
BSLP	BLENDED SLUDGE PUMP
BSTM	BIOSOLIDS STORAGE MIXER
BTP	BIOSOLIDS TRANSFER PUMP
CENT	CENTRIFUGE
CNTP	CENTRATE PUMP
CENTP	CENTRIFUGE FEED PUMP
CP	CHEMICAL PUMP
COMP	COMPRESSOR
CON	CONVEYOR
DBC	DEWATERED BIOSOLIDS CONVEYOR
DCP	DECANT PUMP
DEWP	DISINFECTED EFFLUENT PUMP
DP	DRAINAGE PUMP
DRLP	DIGESTER RECIRCULATION PUMP
DSLMP	DIGESTER MIXING PUMP
DSLTP	DIGESTED SLUDGE TRANSFER PUMP
DT	DRIP TRAP
DOW	DOWNWARD OPENING WEIR GATE
EFC	EXCESS FLOW CLARIFIER
EFP	EXCESS FLOW PUMP
EFSP	EXCESS FLOW SOLIDS PUMP
EP	EFFLUENT PUMP
FC	FINAL CLARIFIER
FCD	FINAL CLARIFIER DRIVE
FEP	FINAL EFFLUENT PUMP
FILT	FILTER
FM	FLOWMETER
FT	FLAME TRAP
GBT	GRAVITY BELT THICKENER
GC	GRIT CLASSIFIER
GFM	GAS FLOWMETER
GCS	GAS COMPRESSOR SKID
GP	GRIT PUMP
GRM	GRINDER
GT	GRIT TRAP
GBM	GAS UNIT HEATER
GW	GRIT WASHER
H	HOIST
HBT	HYDROPNEUMATIC BOOSTER TANK
HTX	HEAT EXCHANGER
IP	INFLUENT PUMP
MA	MOTORIZED ACTUATOR
MBV	MOTORIZED BALL VALVE
MFS	MECHANICAL FINE SCREEN
MIX	MIXER
MOV	MOTOR OPERATED VALVE
MP	MIXING PUMP
MPE	MISCELLANEOUS PROCESS EQUIPMENT
MST	MANUAL STRAINER
MT	MICROTURBINE
NRP	NITRATE RECYCLE PUMP
OCD	OVERHEAD COILING DOOR
OCE	ODOR CONTROL EQUIPMENT
ODE	OXIDATION DITCH EQUIPMENT
PC	PROGRESSIVE CAVITY PUMP
PCD	PRIMARY CLARIFIER DRIVE
PCFD	PRIMARY CLARIFIER FLOCCULATOR DRIVE
PF	POLYMER FEEDER
PFP	POLYMER FEED PUMP
PLWP	PLANT WATER PUMP
PRCP	PHOSPHORUS REMOVAL CHEMICAL PUMP
PRCT	PHOSPHORUS REMOVAL CHEMICAL TANK
PRLP	PRIMARY LIFT PUMP
PRFP	PROCESS RETURN FLOW PUMP
PRSP	PRIMARY SLUDGE PUMP
PTP	POLYMER TRANSFER PUMP
RAD	REFRIGERATED AIR DRYER
RASP	RETURN ACTIVATED SLUDGE PUMP
RDT	ROTARY DRUM THICKENER
RDTP	ROTARY DRUM THICKENER FEED PUMP
RM	RAPID MIXER
SA	SAMPLER
SBFP	SODIUM BISULFITE FEED PUMP
SBST	SODIUM BISULFITE STORAGE TANK
SCMP	SCUM PUMP
SCW	SCREENINGS WASHER
SEJ	SEWAGE EJECTOR
SG	SLIDE GATE
SHFP	SODIUM HYPOCHLORITE FEED PUMP
SHST	SODIUM HYPOCHLORITE STORAGE TANK
SLG	SLUICE GATE
SP	SUMP PUMP
SRT	SILOXANE REMOVAL TANK
SSC	SCREENINGS SCREW CONVEYOR
STCP	STRUVITE CHEMICAL PUMP
STG	STOP GATE
STR	STRAINER
SV	SOLENOID VALVE
SWP	SCREENINGS WASHER PRESS
TV	TELESCOPING VALVE
TWASP	TWAS PUMP
UV	ULTRAVIOLET DISINFECTION
WASP	WAS PUMP

FLUID ABBREVIATIONS

A	AIR
BSL	BLENDED SLUDGE
CA	COMPRESSED AIR
CNT	CENTRATE
CDG	COMPRESSED DIGESTER GAS
CLS	CHLORINE SOLUTION
CNT	CENTRATE
CW	COLD WATER
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DRAIN
DEW	DISINFECTED EFFLUENT WATER
DG	DIGESTER GAS
DIV	DIVERSION
DRL	DIGESTER RECIRCULATION
DS	DIGESTER SUPERNATANT
DSL	DIGESTED SLUDGE
DSL MIX	DIGESTER SLUDGE MIXER DISCHARGE
DSL MIS	DIGESTER SLUDGE MIXER SUCTION
EF	EXCESS FLOW
EFS	EXCESS FLOW SOLIDS
FE	FINAL EFFLUENT
F	FORCE MAIN
G	NATURAL GAS
GR	GRIT
GTS	GRAVITY THICKENER SUPERNATANT
HOCL	HYPOCHLORITE
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ML	MIXED LIQUOR
NAOH	SODIUM HYDROXIDE
NPW	NONPOTABLE WATER
OF	OVERFLOW
OC	ODOR CONTROL
PDP	PERFORATED DRAIN PIPE
PE	PLANT EFFLUENT
PEC	POLYELECTROLYTE CHEMICAL
PI	PLANT INFLUENT
PRC	PHOSPHORUS REMOVAL CHEMICAL
PRE	PRIMARY EFFLUENT
PRF	PROCESS RETURN FLOW
PRI	PRIMARY INFLUENT
PRS	PRIMARY SLUDGE
PSS	PLANT SANITARY SEWER
PW	POTABLE WATER
PWR	PROCESS WATER RETURN
PWS	PROCESS WATER SUPPLY
RAS	RETURN ACTIVATED SLUDGE
RW	RAW WASTEWATER
SAM	SAMPLE
SAN	SANITARY SEWER
SB	SODIUM BISULFITE
SCM	SCUM
SCMD	SCUM DECANT
SE	SECONDARY EFFLUENT
SH	SODIUM HYPOCHLORITE
SL	SLUDGE
SPD	SUMP PUMP DISCHARGE
ST	STORM SEWER
STC	STRUVITE CHEMICAL
SW	SERVICE WATER
SWS	SEAL WATER SUPPLY
TSL	THICKENED SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
V	VENT
W	POTABLE WATER
WAS	WASTE ACTIVATED SLUDGE
WML	WASTE MIXED LIQUOR

PLUMBING ABBREVIATIONS

AEW	APRON END WALL
BF	BLIND FLANGE
CA	COMPRESSED AIR
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CI	CAST IRON
CO	CLEAN OUT
COND	CONDENSATE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CW	COLD WATER
D	DRAIN
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DI	DUCTILE IRON
ESEW	EMERGENCY SHOWER EYEWASH
EW	EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
HB	HOSE BIBB
HD	HOSE DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HHWR	HEATING HOT WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HR	HOSE REEL
HWL	HIGH WATER LEVEL
HW	HOT WATER
HWR	HOT WATER RETURN
IE	INVERT ELEVATION
IWP	INDIRECT WASTE PIPE
L	LAVATORY
MB	MOP BASIN
MH	MANHOLE
MV	MIXED VALVE
PHW	PROCESS HOT WATER
P	PUMP
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVR	PRESSURE VACUUM RELIEF ASSEMBLY
QC	QUICK CONNECT
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RZBP	REDUCED ZONE BACKFLOW PREVENTER
S	SINK
SD	SHOWER DRAIN
SEJ	SEWAGE EJECTOR
SHR	SHOWER
SP	SUMP PUMP
SS	STAINLESS STEEL
SV	SOLENOID VALVE
SVS	SERVICE SINK
T	TANK
TD	TRENCH DRAIN
U	URINAL
V	VENT
VB	VACUUM BREAKER
VCP	VERIFIED CLAY PIPE
VTR	VENT THRU ROOF
W	WASTE PIPE
WCO	WALL CLEANOUT
WC	WATER CLOSET
WH	WATER HEATER
WS	WATER SOFTENER
WSFU	WATER SERVICE FIXTURE UNIT

GENERAL MISC ABBREVIATIONS

ACH	AIR CHANGES PER HOUR
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
AP	ACCESS PANEL
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COND	CONDENSATE
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DG	DOOR GRILLE
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EL	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FC	FAIL CLOSED
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FEET
GA	GAUGE
GPM	GALLONS PER MINUTE
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
OV	OUTLET VELOCITY
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE

HVAC EQUIPMENT ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
ARC	ARCHITECTURAL FINE TUBE RADIATION
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
BLR	BOILER
BB	BASEBOARD
C	CONVECTOR
CD	CEILING DIFFUSER
CHILL	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CWP	CHILLED WATER PUMP
DC	DIRT COOLER
DH	DEHUMIDIFIER
DL	DIRIM LOUVER
EBB	ELECTRIC BASEBOARD
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
EL	EXPANSION LOOP
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ERU	ENERGY RECOVERY UNIT
EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WALL HEATER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FR	FINNED TUBE RADIATION
FUR	FURNACE
GUH	GAS DUCT FURNACE
GRV	GRAVITY ROOF VENTILATOR
GUH	GAS UNIT HEATER
HC	HEATING COIL
HP	HEAT PUMP
HRP	HEAT RECOVERY PUMP
HU	HUMIDIFIER
HWH	HOT WATER UNIT HEATER
HWP	HOT WATER PUMP
HTX	HEAT EXCHANGER
ICF	INDUSTRIAL CEILING FAN
IR	INFRARED HEATER
L	LOUVER
MAU	MAKE-UP AIR UNIT
P	PUMP
PWP	PROCESS WATER PUMP
RF	RETURN FAN
RG	RETURN GRILLE
RR	REGISTER
RTU	ROOF TOP UNIT
SD	SUCTION DIFFUSER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
ST	STEAM TRAP
SUH	STEAM UNIT HEATER
TCP	TEMPERATURE CONTROL PANEL
TG	TRANSFER GRILLE
UH	UNIT HEATER
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME BOX
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
WSHP	WATER SOURCE HEAT PUMP
XT	EXPANSION TANK

ELECTRICAL ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
COL	COLUMN
CT	CURRENT TRANSFORMER
CTE	CORRECT TO EXISTING
CU	COPPER
CUH	CABINET UNIT HEATER
D	DEDICATED
DC	DIRECT CURRENT
DISC	DISCONNECT
DWG	DRAWING
E	EMERGENCY
EC	ELECTRICAL CONTRACTOR
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
EOL	END OF LINE DEVICE
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FLA	FULL LOAD AMPERES
FPCP	FIRE PUMP CONTROL PANEL
FR	FIRE RETARDANT
FT	FEET
FDA	FOOD AND DRUG ADMINISTRATION
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUND
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION (EQUIPMENT)
GFCI	GROUND FAULT CKT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
HACR	HEATING AND AIR CONDITIONING RATED
HP	HORSEPOWER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KCMIL	ONE THOUSAND CIRCULAR MILS
KO	KNOCKOUT
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATT
LP	LIGHTING PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MC	METAL CLAD
MCC	MOTOR CONTROL CENTER
MCB	MAIN CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANELBOARD
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOV	MOTOR OPERATED
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MW	MICROWAVE OR MEGAWATT
N	NEUTRAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NAC	NOTIFICATION APPLIANCE CIRCUIT PANEL
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NM	NONMETALLIC
NO	NORMALLY OPEN
NSF	NATIONAL SANITARY FOUNDATION
NTS	NOT TO SCALE
OCB	OIL CIRCUIT BREAKER
OL	OVERLOAD
OT	OVERTEMP
PR	PAIR
P	POLE
PB	PULL BOX
PC	PULL CORD
PH	PH SENSOR
ø	PHASE
PNL	PANELBOARD
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PTZ	PAN, TILT, ZOOM CAMERA
PVC	POLYVINYL CHLORIDE
PWR	POWER
RSC	RIGID GALVANIZED STEEL CONDUIT
RTS	REMOTE TEST SWITCH
RVNR	REDUCED VOLTAGE NON REVERSING
RVSS	REDUCED VOLTAGE SOLID STATE
SC	SHORT CIRCUIT
SCADA	SUPERVISORY CONTROL AND DATA
SCC	SUPERVISORY CONTROL CENTER
SE	SERVICE ENTRANCE
SEC	SECONDARY
SH	SHIELDED
SS	STAINLESS STEEL
STP	SHIELDED TWISTED PAIR
SV	SOLENOID VALVE
SW	SWITCH
TEL	TELEPHONE
TS2W	TWO SPEED TWO WINDING
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE OR WATT
WD	HIGH PRESSURE WASH DOWN
WL	WET LOCATION
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
Y	WYE

NO.	REVISIONS	DATE

STANDARD ABBREVIATIONS

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF JOLIET
WINNEBAGO COUNTY, ILLINOIS

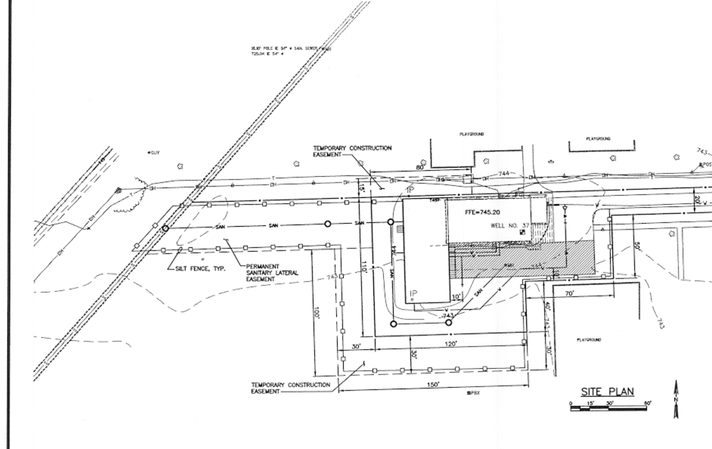
JOB NO.
1110.090
PROJECT MGR.
ANDY MULLENDORE

STRAND ASSOCIATES®

SHEET
G0.5

File: G:\MAD\1100 - 1199\1110\090\Acad\Drawings\G0.5.dwg Time: Jun 29, 2012 4:41am

BENCHMARK: BM-1: TOP NUT OF HYDRANT ON NORTH SIDE OF ENTRANCE DRIVE TO WELL. EL. 743.61.



LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW SIDEWALK/CONCRETE PAVEMENT
- EROSION CONTROL MAT
- STONE MULCH

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN ILLINOIS

CALL J.U.L.I.E.
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TOLL FREE

REQUIRES MIN. OF 48 HOURS NOTICE BEFORE YOU EXCAVATE. (EXCLUDING SAT., SUN., & HOL.)

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OVERALL SITE LOCATION, GRADING, AND LANDSCAPING PLAN

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF JOLIET
WINNEBAGO COUNTY, ILLINOIS

JOB NO.
1110.090
PROJECT MGR.
ANDY MULLENDORE

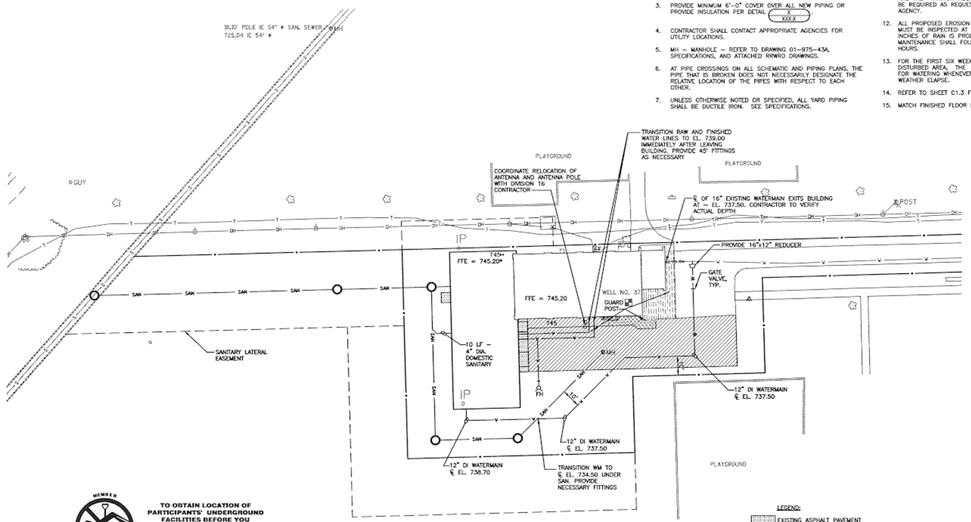
STRAND ASSOCIATES®

SHEET
C1.1

File: G:\MAD\1100 - 1199\1110\090\Acad\Drawings\C1.1.dwg Time: Jun 29, 2012 4:41am

GENERAL NOTES:

1. THESE DRAWINGS DO NOT INDICATE ALL PIPE FITTINGS REQUIRED TO INSTALL YARD PIPING AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND PROVIDING ALL REQUIRED FITTINGS.
2. LOCATIONS AND ELEVATIONS OF EXISTING PIPING, BUILDINGS, GAS SERVICE, ELECTRICAL SERVICE, AND OTHER SITE FEATURES ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY. REFER TO EXISTING WELL DRAWINGS. CONTRACTOR SHALL FIELD VERIFY DEPTHS AND LOCATIONS OF EXISTING PIPING PRIOR TO INSTALLING NEW PIPING THAT CONNECTS TO EXISTING.
3. PROVIDE MINIMUM 6'-0" COVER OVER ALL NEW PIPING OR PROVIDE INSULATION PER DETAIL X/XXX.
4. CONTRACTOR SHALL CONTACT APPROPRIATE AGENCIES FOR UTILITY LOCATIONS.
5. MH – MANHOLE – REFER TO DRAWING 01-975-43A, SPECIFICATIONS, AND ATTACHED RMWD DRAWINGS.
6. AT PIPE CROSSINGS ON ALL SCHEMATIC AND PIPING PLANS, THE PIPE THAT IS BROKEN DOES NOT NECESSARILY DESIGNATE THE RELATIVE LOCATION OF THE PIPES WITH RESPECT TO EACH OTHER.
7. UNLESS OTHERWISE NOTED OR SPECIFIED, ALL YARD PIPING SHALL BE DUCTILE IRON. SEE SPECIFICATIONS.
8. CONTRACTOR SHALL REPLACE PAVEMENT REMOVED OR DAMAGED DURING CONSTRUCTION. SAWCUT PAVEMENT AT JOINT. NOT ALL NEW PAVEMENT MAY BE SHOWN.
9. SILT FENCE AND STONE TRACKING PAD SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
10. BENCHMARK: BM-1: TOP NUT OF HYDRANT ON NORTH SIDE OF ENTRANCE DRIVE TO WELL. EL. 743.61. SEE SHEET C1.1 FOR LOCATION.
11. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED AS REQUESTED BY ENGINEER OR GOVERNING AGENCY.
12. ALL PROPOSED EROSION CONTROL MEASURES AND STRUCTURES MUST BE INSPECTED AT LEAST WEEKLY AND WHENEVER 0.5 INCHES OF RAIN IS PRODUCED WITHIN 24 HOURS. NECESSARY MAINTENANCE SHALL FOLLOW THE INSPECTIONS WITHIN 24 HOURS.
13. FOR THE FIRST SIX WEEKS AFTER INITIAL STABILIZATION OF A DISTURBED AREA, THE CONTRACTOR SHALL MAKE PROVISIONS FOR WATERING WHENEVER MORE THAN 7 DAYS OF DRY WEATHER ELAPSE.
14. REFER TO SHEET C1.3 FOR SANITARY SEWER DETAILS.
15. MATCH FINISHED FLOOR ELEVATION OF EXISTING BUILDING.



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MEMBER ALL UTILITIES TO PROTECT

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NO.	REVISIONS	DATE

SITE PLAN

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

JOB NO. 1110.006

PROJECT MGR. ANDY MULLENDORE

STRAND ASSOCIATES®

SHEET C1.2

File: S:\MAD\1100--1199\1110\006\Acad\Drawings\C1.2.dwg Time: Jun 20, 2012 – 4:41pm

GENERAL NOTES:

1. THESE DRAWINGS DO NOT INDICATE ALL PIPE FITTINGS REQUIRED TO INSTALL YARD PIPING AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND PROVIDING ALL REQUIRED FITTINGS.
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14. REFER TO SHEET C1.3 FOR SANITARY SEWER DETAILS.
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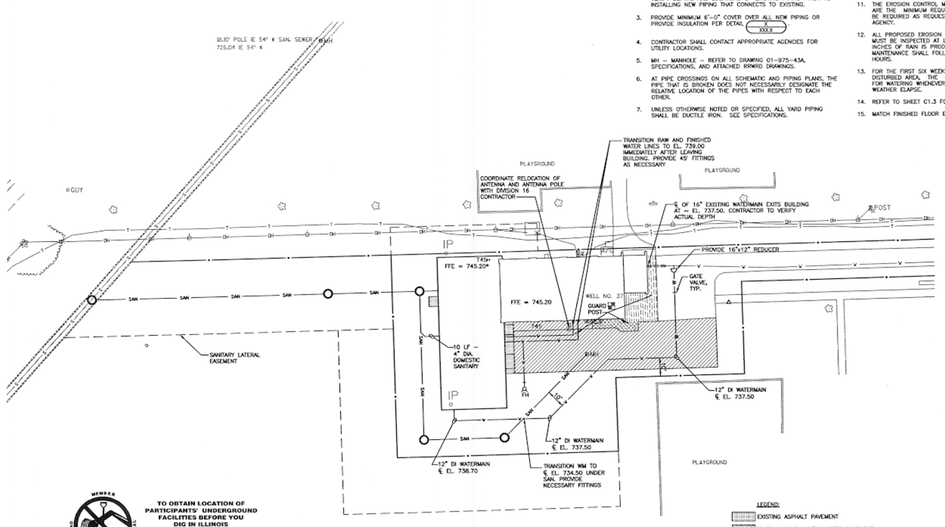

LEGEND:

- EXISTING ASPHALT PAVEMENT
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NO.	REVISIONS	DATE

SITE PLAN

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

JOB NO. 1110.006

PROJECT MGR. ANDY MULLENDORE

STRAND ASSOCIATES®

SHEET C1.2

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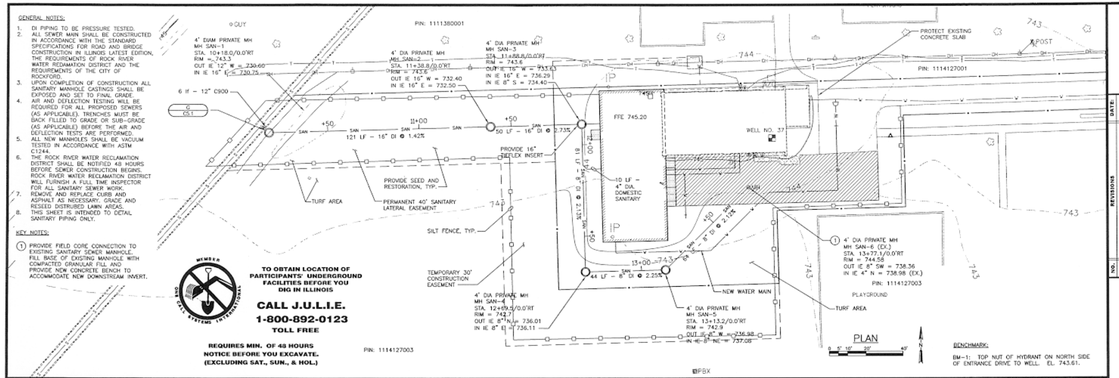
GENERAL NOTES:

1. DI PIPING TO BE PRESSURE TESTED.
2. ALL SEWER MAIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS LATEST EDITION, THE REQUIREMENTS OF ROCK RIVER WATER RECLAMATION DISTRICT AND THE REQUIREMENTS OF THE CITY OF ROCKFORD.
3. UPON COMPLETION OF CONSTRUCTION ALL MANHOLE COVERS CASTINGS SHALL BE EXPOSED AND SET TO FINAL GRADE.
4. AIR AND DEFLECTION TESTING WILL BE REQUIRED FOR ALL PROPOSED SEWERS (AS APPLICABLE). TRENCHES MUST BE BACK FILLED TO GRADE OR SUB-GRADE (AS APPLICABLE) BEFORE THE AIR AND DEFLECTION TESTS ARE PERFORMED.
5. ALL NEW MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH ASTM C-1244.
6. THE ROCK RIVER WATER RECLAMATION DISTRICT SHALL BE NOTIFIED 48 HOURS BEFORE SEWER CONSTRUCTION BEGINS. ROCK RIVER WATER RECLAMATION DISTRICT WILL FURNISH A FULL TIME INSPECTOR FOR ALL SANITARY SEWER WORK.
7. ALL DISTURBED PAVEMENT, AND ASPHALT AS NECESSARY, GRADE AND RESEED DISTRIBUTED LAWN AREAS.
8. THIS SHEET IS INTENDED TO DETAIL SANITARY PIPING ONLY.

KEY NOTES:

1. PROVIDE FIELD CORE CONNECTION TO EXISTING SANITARY SEWER MANHOLE. FILL BASE OF EXISTING MANHOLE WITH PEA GRAVEL GRANULAR FILL AND PROVIDE NEW CONCRETE BENCH TO ACCOMMODATE NEW DOWNSTREAM INVERT.



MISS DIGGER

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TOLL FREE

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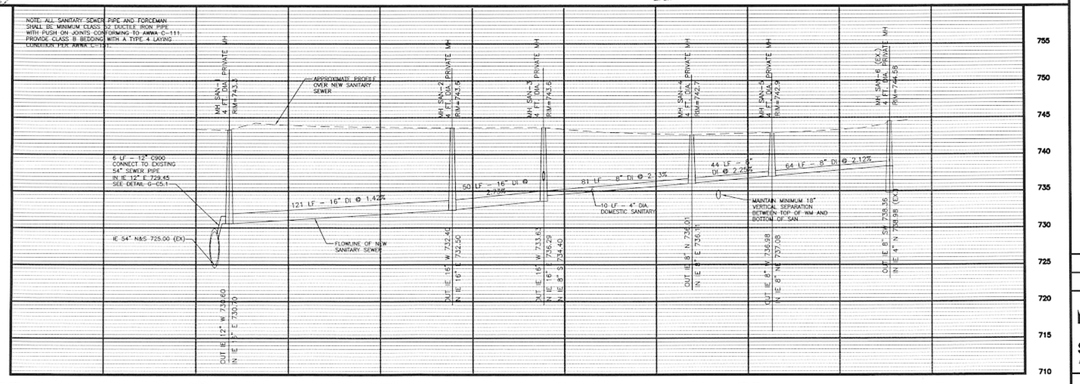

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NO.	REVISIONS	DATE

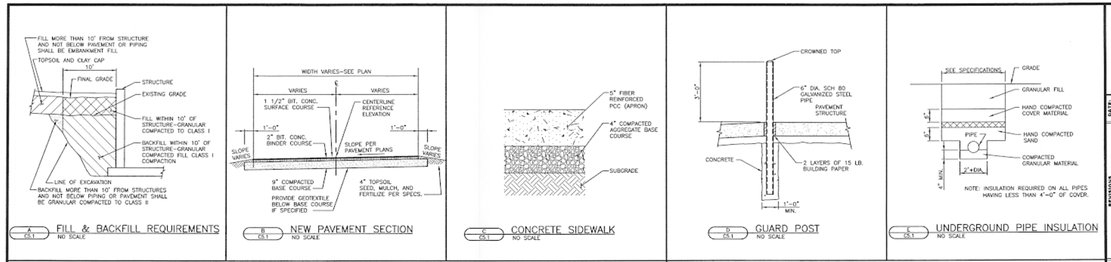
SANITARY PIPING PLAN AND PROFILE

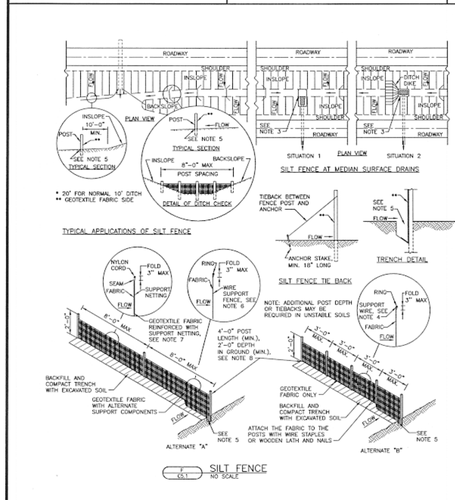
WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

JOB NO. 1110.006
PROJECT MGR. ANDY MULLENDORE

STRAND ASSOCIATES®

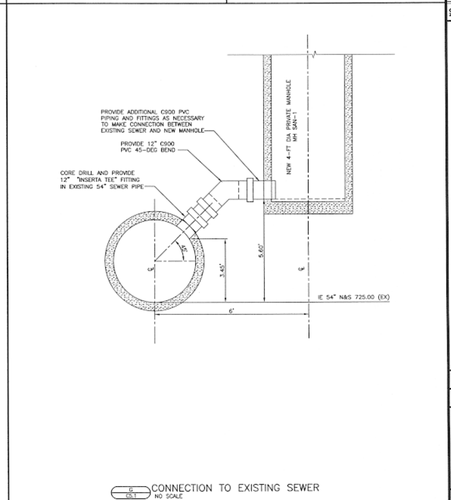
SHEET C1.3





NOTES:

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
2. WHEN POSSIBLE THE SILT FENCE SHALL BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.
3. CROSS BRACE WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
4. MINIMUM 14 GAGE WIRE REQUIRED. FOLD FABRIC 3" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C-C.
5. EXCAVATE TRENCH A MINIMUM OF 4" WIDE AND 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
6. WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C TO C.
7. GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 1/4" OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.
8. STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.2 LBS/LINEAR FOOT WITHOUT ANCHORS, OR EQUIVALENT. PROVIDE PROJECTING ANCHORS AS REQUIRED. WOOD POSTS SHALL BE A MINIMUM SIZE OF 4" DIAMETER, OR 2 1/2"x3 1/2". EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 1 1/8"x1 1/8" OAK OR HICKORY.
9. ALTERNATES "A" AND "B" ARE EQUAL AND EITHER MAY BE USED.



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NO.	REVISIONS	DATE

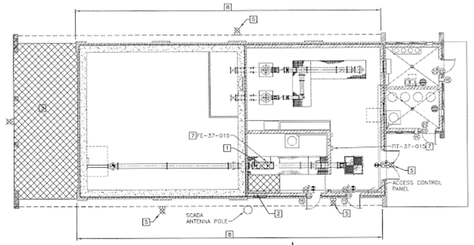
SITE DETAILS

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

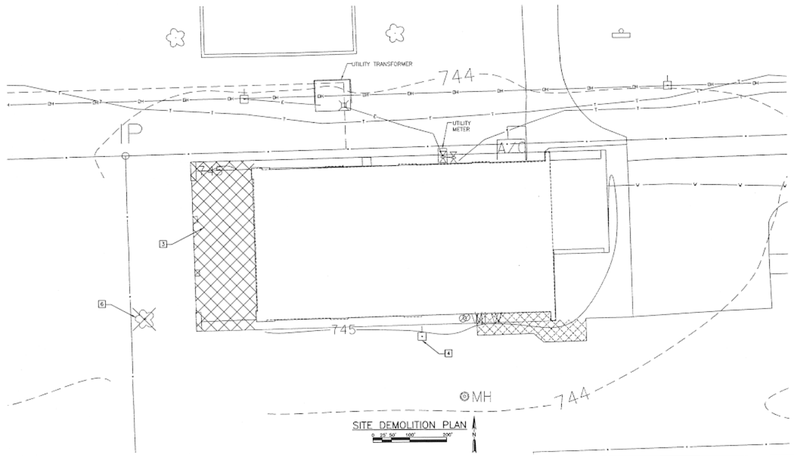
JOB NO. 1110.006
PROJECT MGR. ANDY MULLENDORE

STRAND ASSOCIATES®

SHEET C5.1



DEMOLITION PLAN



SITE DEMOLITION PLAN

GENERAL NOTES:

1. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIALS ASSOCIATED WITH THE ITEMS BEING REMOVED. ALL ELECTRICAL DEVICES, MATERIALS, AND EQUIPMENT NOT BEING REUSED SHALL BE REMOVED.
2. SEAL AND CAP ALL EXISTING CONDUIT PENETRATIONS THAT ARE NOT BEING REUSED. ALL CONDUIT PENETRATIONS BETWEEN INDOOR SPACES SHALL BE SEALED TO MAINTAIN THE INTERIOR SPACE. ALL PENETRATIONS SHALL BE SEALED TO MAINTAIN THE EXISTING FIRE RATING.
3. ALL DISTURBED AREAS CREATED BY REMOVAL OF EQUIPMENT/DEVICE SHALL BE PATCHED AND PAINTED TO MATCH EXISTING.

DEMOLITION NOTES:

1. REMOVE PIPING TO NEAREST FLANGE AS NECESSARY.
2. REMOVE FLOORING AS NECESSARY FOR NEW PIPE TRENCH.
3. REMOVE ENTIRE EXISTING OPEN SHELTER STRUCTURE INCLUDING BUT NOT LIMITED TO ROOF STRUCTURE, PIER/WALL SUPPORTS, FLOOR SLAB AND FOUNDATIONS.
4. TEMPORARILY REMOVE/RELOCATE ANTENNA AND POLE AS REQUIRED FOR INSTALLATION OF NEW PIPING ASSOCIATED WITH THE TREATMENT EQUIPMENT. SEE SHEET E1.1 FOR ADDITIONAL INFORMATION.
5. DISCONNECT AND REMOVE LIGHT FIXTURES AND ASSOCIATED CONDUIT AND WIRING. NEW LIGHT FIXTURES SHALL BE INSTALLED AS SHOWN ON SHEET E1.1.
6. REMOVE TREE AND STUMP.
7. EXISTING MAGNETIC FLOW METER AND ASSOCIATED TRANSMITTER SHALL BE DISCONNECTED AND RELOCATED TO THE NEW TREATMENT ROOM AS SHOWN ON SHEETS ASM1.2 AND E1.1. EXISTING WIRING BETWEEN FLOW ELEMENT AND TRANSMITTER SHALL BE REUSED.
8. REMOVE EXISTING METAL FASCIA AND SOFFIT AND REPLACE W/ NEW PER (B / ASM1.1)

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SITE AND FLOOR DEMOLITION PLANS

WELL NO. 37 GAC TREATMENT FACILITY
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WINNEBAGO COUNTY, ILLINOIS

JOB NO. 1110.006
PROJECT MGR. ANDY MULLENDORE

STRAND ASSOCIATES®

SHEET D1.1

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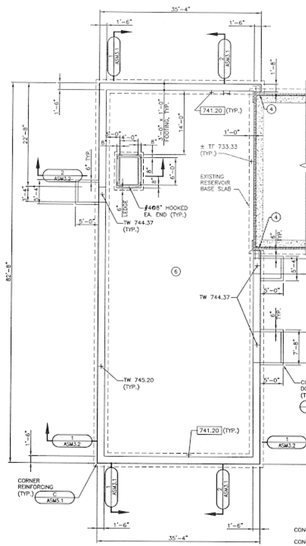
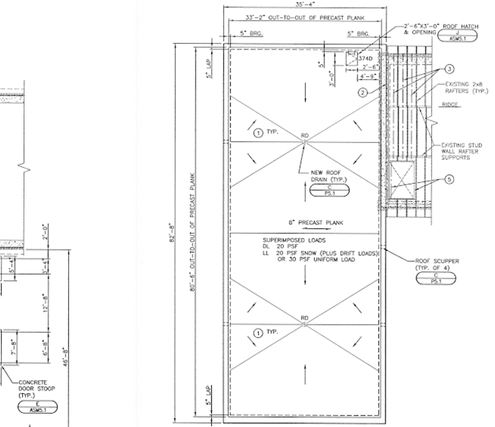


FOUNDATION PLAN



ROOF PLAN

GENERAL NOTES:

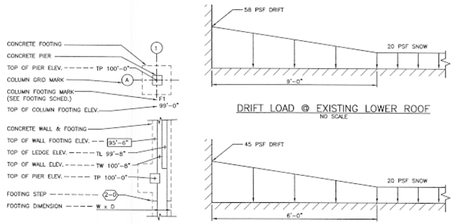
1. NEW ROOF SYSTEM CONSISTS OF FULLY ADHERED EPDM ROOFING OVER TAPERED INSULATION MINIMUM 2" THICK AT ROOF DRAINS. SLOPE TO ROOF DRAINS AT 1/4" PER FOOT MINIMUM.
2. SEE HVAC AND PLUMBING DRAWINGS FOR ADDITIONAL PENETRATIONS THROUGH ROOF NOT SHOWN.

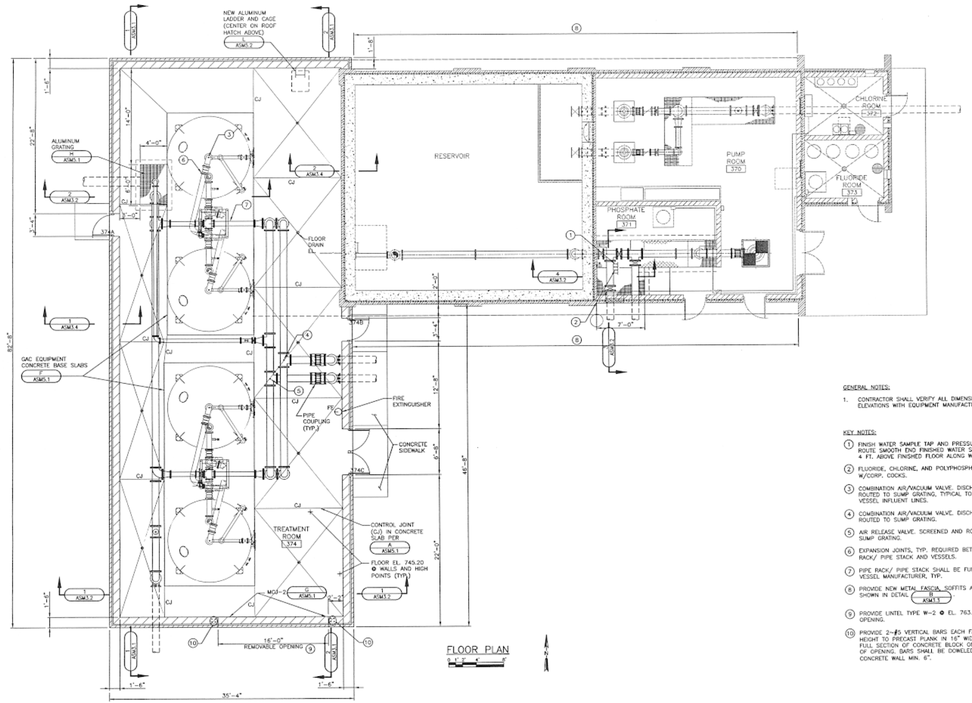
KEY NOTES:

1. PROVIDE INSULATION TAPERED CRICKETS WITH MIN. 1/4" PER FOOT SLOPE.
2. NEW 2x6 LEDGER BOARD AGAINST NEW WALL.
3. REMOVE EXISTING PLYWOOD ROOF SHEATHING AND SHINGLES AS REQUIRED TO INSTALL NEW 2x8 WOOD RAFTERS TO REINFORCE ROOF.
4. PROVIDE #5@12" x 2'-6" (OR HOOKED AS SHOWN) DOWELS EACH FACE. ADHERE ANCHORED 6" INTO EXISTING CONCRETE FOR HEIGHT OF FOUNDATION WALL.
5. REMOVE EXISTING SKYLIGHT AND FLASHING. MOVE TO THE EAST AND RENOSTAL AS REQUIRED TO PROVIDE PROPER CLEARANCES AT NEW WALL FOR FLASHING. FILL WEST EDGE OF OPENING WITH 2x8 FRAMING AND PLYWOOD AS REQUIRED. PROVIDE NEW FLASHING AND SHINGLES AROUND OPENING AS NEEDED.
6. NEW 6" CONCRETE FIBER REINFORCED SLAB. PROVIDE CONTROL JOINTS PER (A / ASM1.1) AS
7. SHOWN ON SHEET ASM1.2 OR 16" O.C. MAX. PROVIDE CONSTRUCTION JOINTS PER (A / ASM1.1)
8. IF REQUIRED. SEE EQUIPMENT BASES ON FLOOR PLAN.

DRIFT LOAD @ EXISTING LOWER ROOF
NO SCALE

DRIFT LOAD @ PARAPET
NO SCALE





FLOOR PLAN

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH EQUIPMENT MANUFACTURERS.

KEY NOTES:

1. FINISH WATER SAMPLE TAP AND PRESSURE GAUGE. ROUTE SMOOTH END FINISHED WATER SAMPLE TAP 4 FT. ABOVE FINISHED FLOOR ALONG WEST WALL.
2. FLUORIDE, CHLORINE, AND POLYPHOSPHATE TAPS W/CORP. COCKS.
3. COMBINATION AIR/VACUUM VALVE. DISCHARGE ROUTED TO SUMP GRATING, TYPICAL TO ALL 4 VESSEL INFLUENT LINES.
4. COMBINATION AIR/VACUUM VALVE. DISCHARGE ROUTED TO SUMP GRATING.
5. AIR RELEASE VALVE. SCREENED AND ROUTED TO SUMP GRATING.
6. EXPANSION JOINTS, TYP. REQUIRED BETWEEN PIPE RACK/ PIPE STACK AND VESSELS.
7. PIPE RACK/ PIPE STACK SHALL BE FURNISHED BY VESSEL MANUFACTURER, TYP.
8. PROVIDE NEW METAL FASCIA, SOFFITS AND TRIM AS SHOWN IN DETAIL
9. PROVIDE LINTEL TYPE W-2 @ EL. 763.20 OVER OPENING.
10. PROVIDE 2-#5 VERTICAL BARS EACH FACE FULL HEIGHT TO PRECAST PLANK IN 16" WIDE GROUTED FULL SECTION OF CONCRETE BLOCK ON EACH SIDE OF OPENING. BARS SHALL BE DOWELED INTO CONCRETE WALL MIN. 6".

NO.	REVISIONS	DATE

OVERALL FLOOR PLAN

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WINNEBAGO COUNTY, ILLINOIS

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PROJECT MGR. ANDY MULLENDORE

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SHEET ASM1.2

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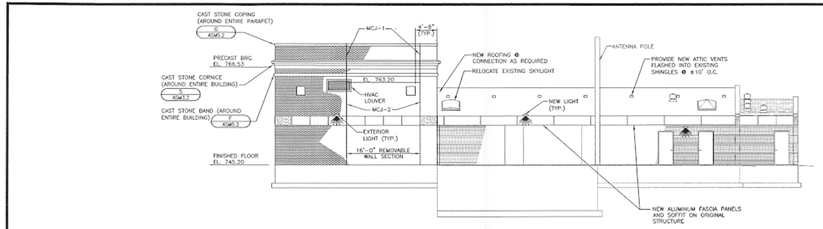
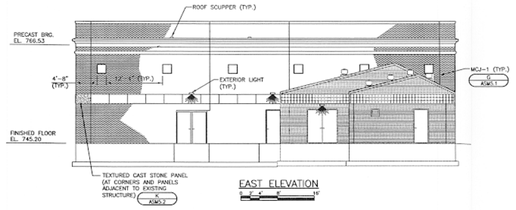


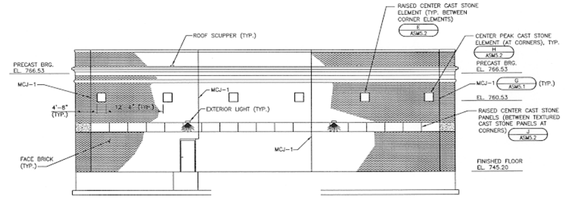
SOUTH ELEVATION

GENERAL NOTES:

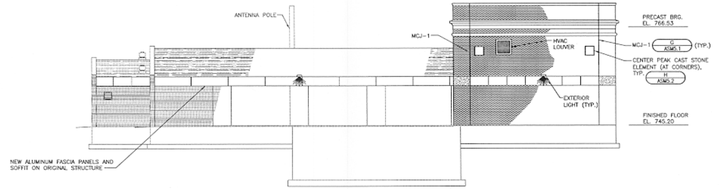
1. APPLY ANTI-GRAFFITTI COATING TO ALL NEW AND EXISTING EXTERIOR MASONRY SURFACES.
2. SEE TYPICAL WALL SECTIONS AND DETAILS FOR HEIGHTS AND LAYOUT OF CAST STONE ELEMENTS.



EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION

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ELEVATIONS

WELL NO. 37 GAC TREATMENT FACILITY
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SHEET ASM2.1

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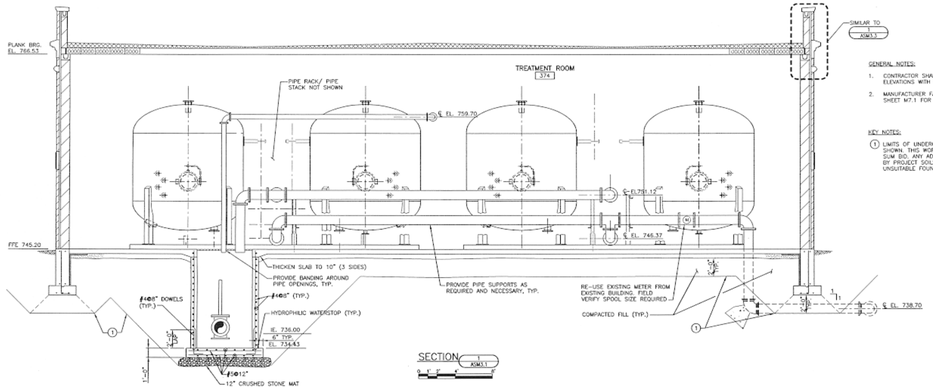
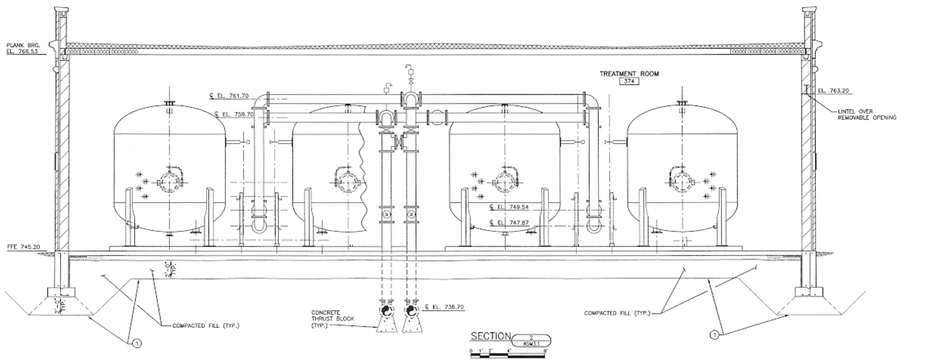


GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH EQUIPMENT MANUFACTURERS.
2. MANUFACTURER FACE PIPING NOT SHOWN. SEE SHEET M7.1 FOR REQUIREMENTS.

KEY NOTES:

1. LIMITS OF UNDERCUT EXCAVATION AND BACKFILL ARE SHOWN. THIS WORK SHALL BE INCLUDED IN LUMP SUM BID. ANY ADDITIONAL UNDERCUTTING REQUIRED BY PROJECT SOILS ENGINEER WILL HANDLE WITH UNSUITABLE FOUNDATION MATERIAL ALLOWANCE.



DATE	REVISION	NO.

SECTIONS - 1

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

JOB NO.
1110.006

PROJECT MGR.
ANDY MULLENDORE

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SHEET
ASM3.1

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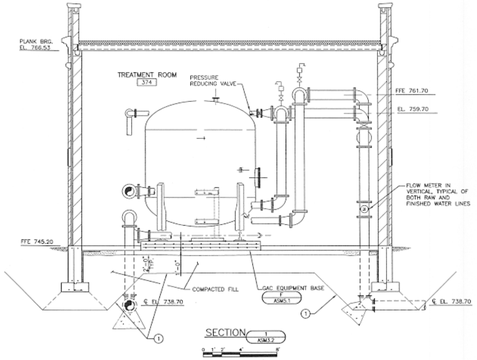
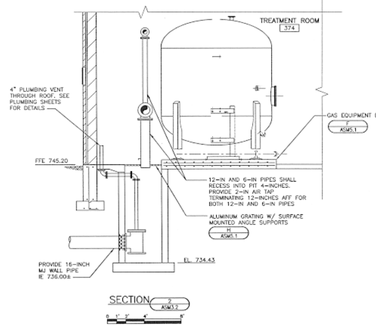


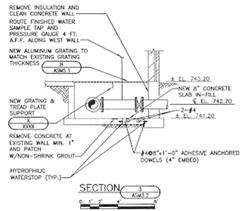


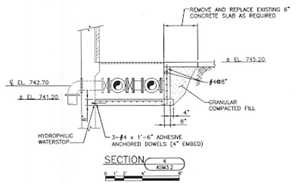
GENERAL NOTES:

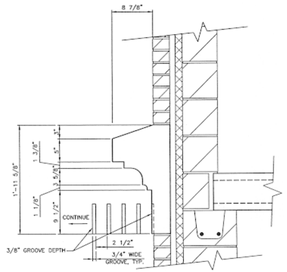
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH EQUIPMENT MANUFACTURERS.
2. MANUFACTURER FACE PIPING NOT SHOWN.

KEY NOTES:

1. LIMITS OF UNDERCUT EXCAVATION AND BACKFILL ARE SHOWN. THIS WORK SHALL BE INCLUDED IN LUMP SUM BID. ANY ADDITIONAL UNDERCUTTING REQUIRED BY PROJECT SOILS ENGINEER WILL HANDLE WITH UNSUITABLE FOUNDATION MATERIAL ALLOWANCE.







DATE	REVISION	NO.

SECTIONS - 2

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
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1110.006

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SHEET
ASM3.2

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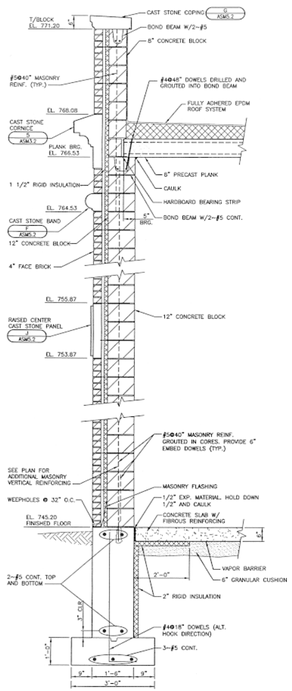
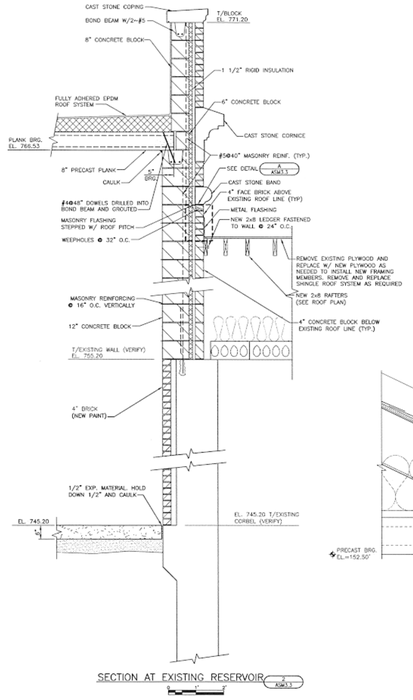


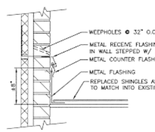
TYPICAL WALL SECTION



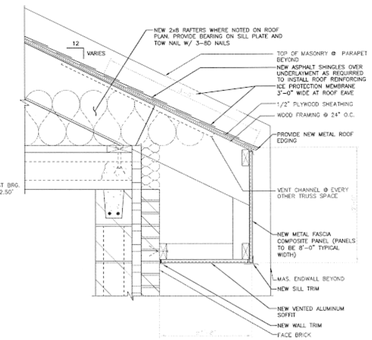
SECTION AT EXISTING RESERVOIR

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH EQUIPMENT MANUFACTURERS.
2. MANUFACTURER FACE PIPING NOT SHOWN.



FLASHING DETAIL



EAVE DETAIL

NO.	REVISIONS	DATE

WALL SECTIONS

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
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SHEET ASM3.3

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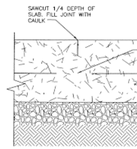
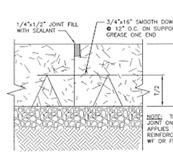
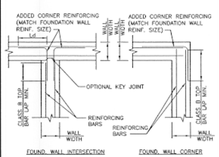


A ASM5.1 TYPICAL SLAB SAWN JOINT
NO SCALE



B ASM5.1 SLAB ON GRADE JOINT
NO SCALE



C ASM5.1 FOUNDATION WALL CORNER REINFORCEMENT
NO SCALE

NON-SHRINK GROUT (BLOWER BASES AND ENGINE GENERATOR BASES SHALL NOT BE GROUTED AND ISOLATORS SHALL BE USED BETWEEN FRAME AND BASE)

BOLT AS REQUIRED BY MANUFACTURER ADJUST WITH DOUBLE NUT

3/4" CHAMFER

CONCRETE BASE

3 1/2" MIN. AS SHOWN, OR AS REQ'D. TO MATCH PIPING

ROUGHEN 6" PERIMETER TO 1/4" AMPLITUDE

CONCRETE FLOOR

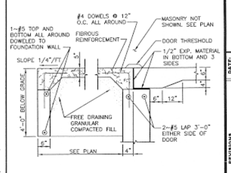
EQUIPMENT BASE

CONC. FLOOR #3@6" CW.

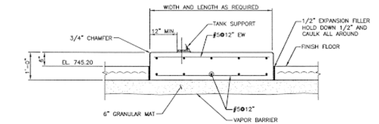
NOTES:

1. CONTRACTOR PAD BY CONTRACTOR SUPPLYING EQUIPMENT.
2. ANCHOR CONCRETE BASE TO FLOOR WITH 1/2" EXPANSION BOLTS @ 18" O.C., MINIMUM 4 PER PAD. IF CONCRETE PAD IS LESS THAN 10" HIGH, ANCHOR EQUIPMENT PAD DIRECTLY TO CONCRETE FLOOR.
3. APPLY BONDING AGENT TO FLOOR PRIOR TO PLACING CONCRETE PAD.

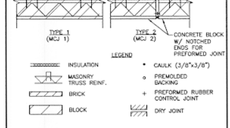
D ASM5.1 CONCRETE EQUIPMENT PAD
NO SCALE



E ASM5.1 CONCRETE STOOP
NO SCALE



F ASM5.1 GAC EQUIPMENT BASE
NO SCALE



G ASM5.1 MASONRY CONTROL JOINT
NO SCALE

NOTES:

1. PROVIDE 4"x3"x3/8" ALUMINUM SUPPORT ANGLE ACROSS OPENINGS. BOLT ENDS OF ANGLE TO SIDES OF OPENINGS WITH S.S. EXP. BOLTS. LOCATE ANCHOR BOLTS MIN. 4" FROM EDGES OF OPENING.
2. CUT GRATING SUPPORT ANGLES TO PROVIDE CLEARANCE FOR STOP PLATE GROOVES.
3. APPLY BITUMINOUS PAINT COATING TO ALUMINUM SURFACES IN CONTACT WITH CONCRETE.

SIZE	SUPPORT ANGLE	MAX. SPAN
1"x3/16" 1-3/4"x3/16" 2"x3/16"	1 1/4"x1 3/4"x1/4" 2"x2"x1/4" 2"x2"x1/4"	2'-6" 5'-0" 6'-0"

5/8"# SS EXP. BOLT (CONCRETE), OR SS RESIN ANCHORED THREADED ROD W/ SST SCREENS (MASONRY) @ 18" O.C.

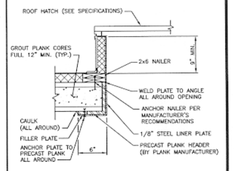
SERRATED SURFACE GRATING

STRAP ANCHORS @ 2' O.C.

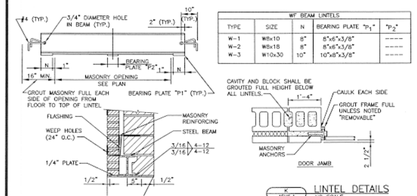
ALUMINUM SUPPORT ANGLE

ALUMINUM ANGLE 2 1/2"x1 1/2"x1/4"

H ASM5.1 ALUMINUM GRATING
NO SCALE



I ASM5.1 ROOF HATCH
NO SCALE



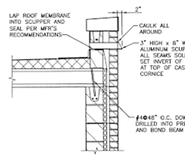
WF BEAM LINTELS				
TYPE	SIZE	N	BEARING PLATE "P1"	"P2"
W-1	W8x10	8"	8"x6"x3/8"	----
W-2	W8x18	8"	8"x6"x3/8"	----
W-3	W10x30	10"	10"x8"x3/8"	----

J ASM5.1 LINTEL DETAILS
NO SCALE

TYPE	MISCELLANEOUS LINTELS
TYPE B-1 8" OR 12" BLOCK TO 5'-0" CLR SPAN	LINTEL BLOCK — 2-#5 CONTINUOUS
TYPE B-2	FLASHING — 4"x3 1/2"x5/16"; ∠3 1/2"x3 1/2"x3/8"; 3/16" 4-12; 3/16" 4-12; 2-#5; WEEPHOLES 24" O.C.; 3/16" 4-12; 3/16" 4-12; 1/4" ℄
TYPE A-2 14" CAVITY WALL TO 4'-0" CLR SPAN	∠3 1/2"x3 1/2"x5/16"; ∠3"x3"x5/16"; 3/16" 4-12; 3/16" 4-12; 3/16" 4-12; 3/16" 4-12; 1/4" ℄

NOTES:

1. LINTELS ARE REQUIRED OVER ALL MASONRY OPENINGS.
2. LINTELS SHALL HAVE A MINIMUM BEARING OF 8".
3. GROUT MASONRY FULL 16" EACH SIDE OF OPENINGS UNDER ALL LINTELS TO FLOOR.
4. LINTEL ASSEMBLIES IN EXTERIOR WALLS SHALL BE HOT-DIPPED GALVANIZED.



K ASM5.1 SCUPPER DETAIL

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NO.	REVISIONS	DATE

ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 1

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
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SHEET ASM5.1

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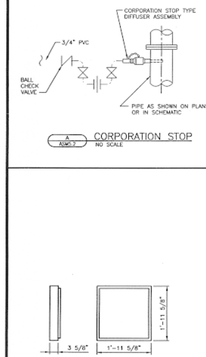
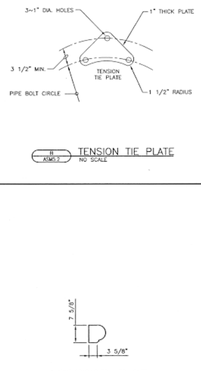
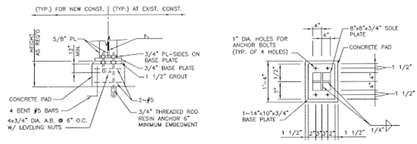


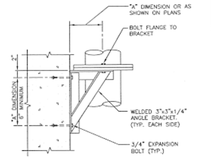
A ASM5.2 CORPORATION STOP
NO SCALE



B ASM5.2 TENSION TIE PLATE
NO SCALE



C ASM5.2 PIPE SUPPORT
NO SCALE

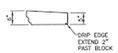


D ASM5.2 WALL MOUNT PIPE SUPPORT
NO SCALE

E ASM5.2 RAISED CENTER CAST STONE ELEMENT

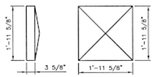
* JOINT SPACING TO MATCH CAST STONE PANELS OR AS REQUIRED TO MATCH CONTROL JOINT SPACING

F ASM5.2 CAST STONE BAND



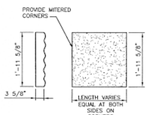
* JOINT SPACING TO MATCH CAST STONE PANELS OR AS REQUIRED TO MATCH CONTROL JOINT SPACING

G ASM5.2 CAST STONE COPING

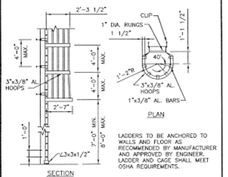


H ASM5.2 CENTER PEAK CAST STONE ELEMENT

I ASM5.2 RAISED CENTER CAST STONE PANEL



J ASM5.2 TEXTURED CAST STONE PANEL



LADDERS TO BE ANCHORED TO WALLS AND FLOOR AS RECOMMENDED BY MANUFACTURER AND APPROVED BY ENGINEER. LADDER AND CAGE SHALL MEET OSHA REQUIREMENTS.

K ASM5.2 ALUMINUM LADDER AND CAGE
NO SCALE

NO.	REVISIONS	DATE

ARCHITECTURAL/STRUCTURAL/MECHANICAL DETAILS - 2

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

JOB NO. 1110.006
PROJECT MGR. ANDY MULLENDORE

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SHEET ASM5.2

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DOOR SCHEDULE

DOOR NUMBER	SIZE	MATERIAL	DOOR TYPE ACTIVE	DOOR TYPE INACTIVE	DOOR SWING ACTIVE	DOOR SWING INACTIVE	FRAME TYPE	FRAME MATERIAL	LABEL	HARDWARE GROUP ACTIVE	HARDWARE GROUP INACTIVE	LINTEL TYPE	NOTES
374A	3'-0" X 7'-0"	FRP	F		RHR		1	FRP		1		A-1	
374B	3'-0" X 7'-0"	FRP	F		RHR		1	FRP		3		A-1	2
374C	(2) 3'-0" X 7'-0"	FRP	F	F	RHR	LHR	2	FRP		1	2	L-1	
374D	2'-6" X 3'-0"	AL	RH		SL		RH	AL					

LEGEND:

MATERIAL
AL = ALUMINUM
FRP = FIBERGLASS

TYPE
F = FLUSH (NO GLASS)
RH = ROOF HATCH

SWING
LH = LEFT HAND
RH = RIGHT HAND
LHR = LEFT HAND REVERSE
RHR = RIGHT HAND REVERSE
SL = SINGLE LEAF
DL = DOUBLE LEAF

NOTES:
1. SEE SPECIFICATIONS FOR HARDWARE GROUPS.
2. PROVIDE ELECTRIC STRIKE AND PROXIMITY CARD SYSTEM.
3. SEE DETAIL NUMBER 1 FOR LINTEL TYPES AND DETAILS.

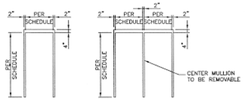
ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	N. WALL	E. WALL	S. WALL	W. WALL	CEILING TYPE	CEILING HGT.	NOTES
370	PUMP ROOM									1
371	PHOSPHATE ROOM	F1/F2								1,2
372	CHLORINE ROOM									1
373	FLUORIDE ROOM									1
374	TREATMENT ROOM	F1		W1	W1/W2	W1	W1	C1	21'-4"	

LEGEND:

FLOOR CODE	FLOOR DESCRIPTION	BASE CODE	BASE DESCRIPTION	WALL CODE	WALL DESCRIPTION	CEILING CODE	CEILING DESCRIPTION
F1	PAINT CONCRETE			W1	PAINT CONCRETE BLOCK	C1	PAINT PRECAST CONCRETE PLANK
F2	PAINT EXISTING CONCRETE			W2	PAINT EXISTING BLOCK		

NOTES:
1. TOUCH-UP PAINT ON WALLS, CEILING, FLOORS AND PIPING WHERE PAINT IS DAMAGED DURING CONSTRUCTION.
2. OVER COAT EXISTING PAINTED FLOOR.



FRAME TYPES
NO SCALE

DOOR TYPES
NO SCALE

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DOOR, WINDOW, AND FINISH SCHEDULES AND DETAILS

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SHEET ASM6.1

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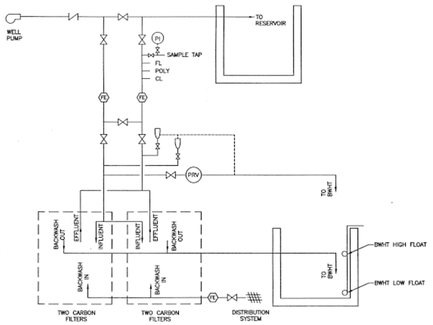
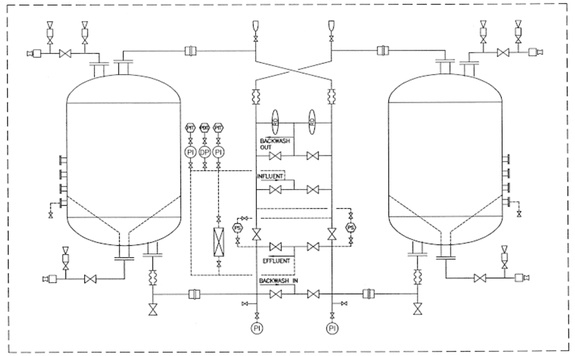
LEGEND:

- AIR RELEASE OR AIR/VACUUM VALVE (SEE SPECS)
- CARBON ACCEPTANCE CANISTER
- CHECK VALVE
- ISOLATION VALVE
- FLUSH CONNECTION
- PRV PRESSURE REDUCING VALVE
- PI PRESSURE GAUGE
- QUICK HOSE DISCONNECT
- RUPTURE DISC
- RUBBER EXPANSION JOINT
- STRAINER
- WELL PUMP





TWO CARBON FILTERS (TYP. OF 2)

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GAC SCHEMATIC

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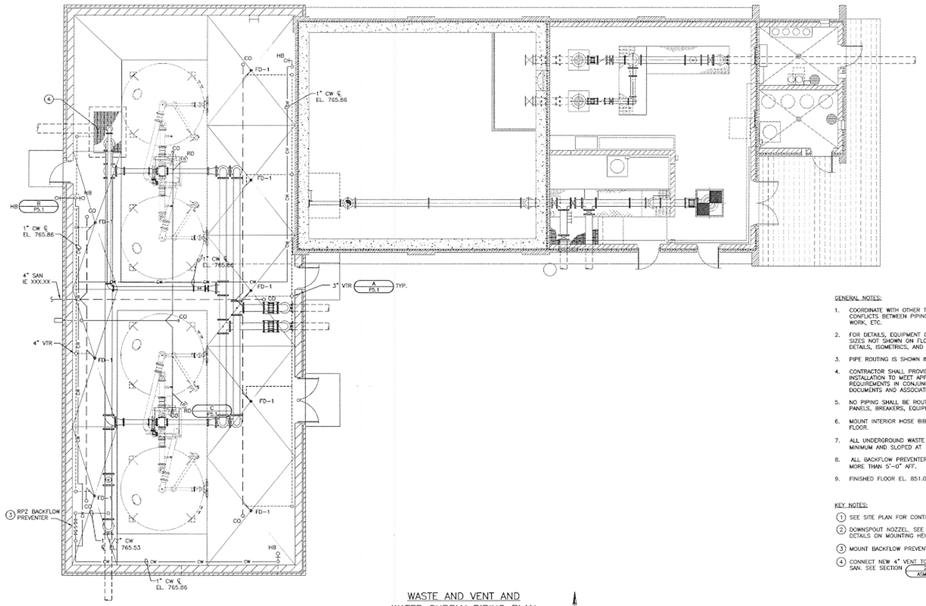
SHEET ASM7.1

File: S:\MAD\1100--1199\1110\006\Acad\Drawings\ASM7.1.dwg Time: Jun 20, 2012 4:42pm



WASTE AND VENT AND WATER SUPPLY PIPING PLAN

GENERAL NOTES:

1. COORDINATE WITH OTHER TRADES TO ELIMINATE CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
2. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON FLOOR PLANS, REFER TO DETAILS, ISOMETRICS, AND SCHEDULES.
3. PIPE ROUTING IS SHOWN IN APPROXIMATE LOCATION.
4. CONTRACTOR SHALL PROVIDE EQUIPMENT AND INSTALLATION TO MEET APPLICABLE CODE REQUIREMENTS IN CONJUNCTION WITH THESE DRAWING DOCUMENTS AND ASSOCIATED SPECIFICATIONS.
5. NO PIPING SHALL BE ROUTED ABOVE ANY ELECTRICAL PANELS, BREAKERS, EQUIPMENT, ETC.
6. MOUNT INTERIOR HOSE BIBS 2'-0" ABOVE FINISHED FLOOR.
7. ALL UNDERGROUND WASTE PIPING SHALL BE 4" MINIMUM AND SLOPED AT 1/8 INCH PER FOOT.
8. ALL BACKFLOW PREVENTERS SHALL BE INSTALLED NO MORE THAN 5'-0" AFF.
9. FINISHED FLOOR EL. 851.00.

KEY NOTES:

1. SEE SITE PLAN FOR CONTINUATION.
2. DOWNSPOUT NOZZEL. SEE SPECIFICATIONS FOR DETAILS ON MOUNTING HEIGHT.
3. MOUNT BACKFLOW PREVENTER 3'-0" AFF.
4. CONNECT NEW 4" VENT TO TOP OF TEE FOR 16-INCH SAN. SEE SECTION ASM1.2 FOR DETAILS.

NO.	REVISIONS	DATE

WASTE AND VENT AND WATER SUPPLY PIPING PLAN

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

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SHEET P1.1

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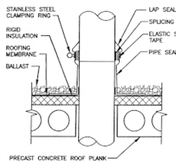
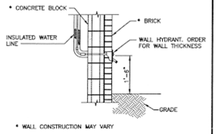
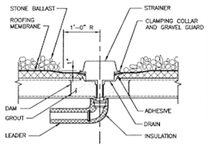


A / P5.1 COLD PIPE ROOF PENETRATION
NO SCALE



B / P5.1 HOSE BIBB
NO SCALE



C / P5.1 ROOF DRAIN
NO SCALE

NO.	REVISIONS	DATE

PLUMBING DETAILS

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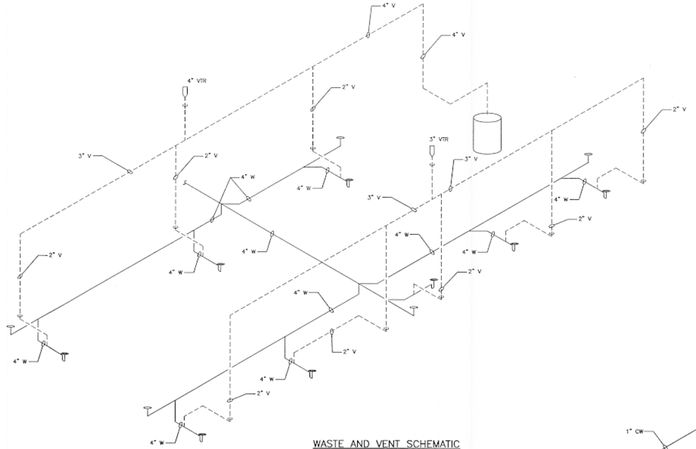
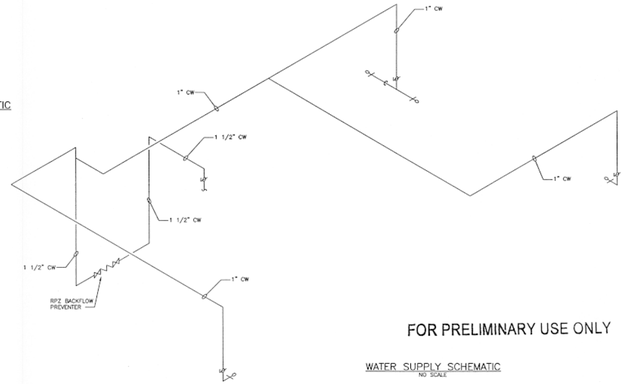


WASTE AND VENT SCHEMATIC
NO SCALE



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WATER SUPPLY SCHEMATIC
NO SCALE

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WASTE AND VENT AND WATER SUPPLY SCHEMATICS

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SHEET P7.1

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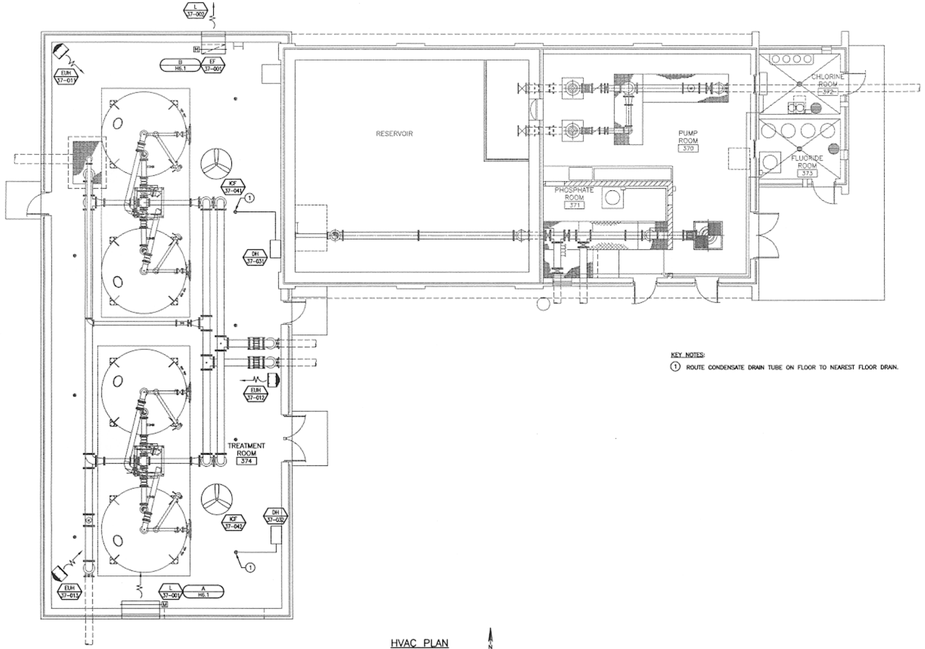

KEY NOTES:

1. ROUTE CONDENSATE DRAIN TUBE ON FLOOR TO NEAREST FLOOR DRAIN.

HVAC PLAN

DATE:
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HVAC PLAN

WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

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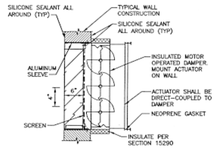
SHEET H1.1



A H6.1 WALL LOUVER AND DAMPER
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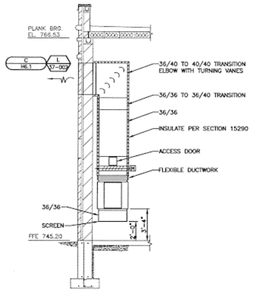
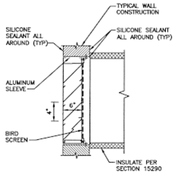


B H6.1 INLINE EXHAUST FAN
NO SCALE



C H6.1 WALL LOUVER AND DUCTWORK
NO SCALE

FAN SCHEDULE

UNIT NO. EF--	SERVICE	GREENHECK MODEL NO.	AIRFLOW (CFM)	EXT. S.P. (IN. W.G.)	MOTOR SIZE (HP)	FAN TYPE	MOTOR TYPE	DRIVE	SOUND POWER (SONES)	ELECTRICAL VOLTAGE	PHASE	STARTER BY	DISCONNECT BY	OPERATING WEIGHT (LBS.)	REMARKS
37-001	TREATMENT ROOM	BSQ-240	5500	0.5	1	INLINE	TEFC	BELT	14.1	120	1	DIV 16	DIV 16	382	

WALL LOUVER SCHEDULE

UNIT NO. L--	LOCATION	SERVICE	GREENHECK MODEL NO.	AIRFLOW (CFM)	WIDTH (IN)	HEIGHT (IN)	BLADE DEPTH (IN)	MAX. APD (IN. WG)	MAX. FACE VEL. (FPM)	FREE AREA (SQ. FT.)	SCREEN TYPE	SCREEN LOCATION	TOP ELEVATION	REMARKS
37-001	TREATMENT ROOM	EF-37-001 (INTAKE)	ESD-635	5500	64	32	6	0.077	717	7.67	INSECT	INTERIOR	763.86	
37-002	TREATMENT ROOM	EF-37-001 (EXHAUST)	ESD-635	5500	40	40	6	0.099	864	6.37	BIRD	INTERIOR	763.86	

INDUSTRIAL CEILING FAN SCHEDULE

UNIT NO. EUH--	SERVICE	TPI INDUSTRIAL MODEL NO.	AIRFLOW (CFM)	RPM	FAN TYPE	ELECTRICAL VOLTAGE	PHASE	AMPS	REMARKS
37-041	TREATMENT ROOM	IHR-56R	21000	310	REVERSIBLE	115	1	0.9	1 2
37-042	TREATMENT ROOM	IHR-56R	21000	310	REVERSIBLE	115	1	0.9	1 2

1. PROVIDE A MODEL HR-RSS-3 WALL MOUNTED COMMON CONTROL SWITCH FOR CONTROL OF BOTH CEILING FANS.
2. PROVIDE A 24" DOWN ROD.

ELECTRIC HEATER SCHEDULE

UNIT NO. EUH--	LOCATION	G-MARK MODEL NO.	CAPACITY (WATTS)	CAPACITY (BTU)	ELECTRICAL VOLTAGE	PHASE	FLA	DISCONNECT BY	REMARKS
37-011	TREATMENT ROOM	MUH-07	7500	25,600	208	3	20.8	DIV. 16	
37-012	TREATMENT ROOM	MUH-07	7500	25,600	208	3	20.8	DIV. 16	
37-013	TREATMENT ROOM	MUH-07	7500	25,600	208	3	20.8	DIV. 16	

DEHUMIDIFIER SCHEDULE

UNIT NO. DH--	SERVICE	H-E DRY MODEL NO.	CAPACITY (LBS/DAY)	AIRFLOW (CFM)	ELECTRICAL VOLTAGE	PHASE	FLA	REMARKS
37-031	TREATMENT ROOM	195	143	540	120	1	12	
37-032	TREATMENT ROOM	195	143	540	120	1	12	

DESIGN CONDITIONS

APPLICABLE BUILDING CODE: 2009 INTERNATIONAL BUILDING CODE		SUMMER EXTERIOR: 91°F DB / 75°F WB WINTER EXTERIOR: -10°F DB		
OCCUPANCY TYPE	VENTILATION	SUMMER INTERIOR (DB/WB)	WINTER INTERIOR (DB)	REMARKS
TREATMENT ROOM	6 ACH, INTERMITTENT	---	60	

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HVAC SCHEDULES AND DETAILS

WELL NO. 37 GAC TREATMENT FACILITY
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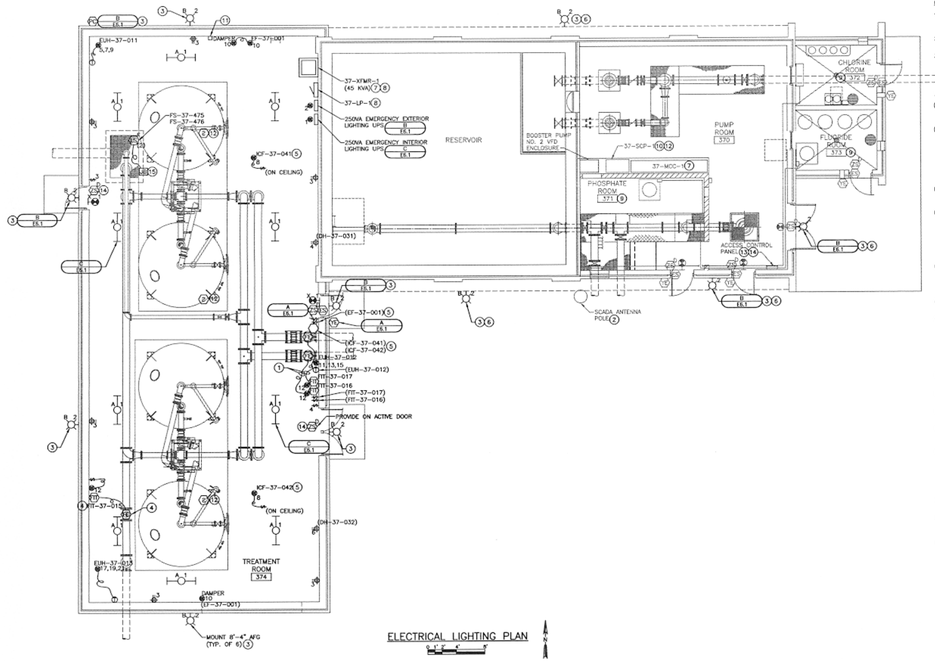

ELECTRICAL LIGHTING PLAN

GENERAL NOTES:

1. REFER TO SECTION 16990 OF THE SPECIFICATIONS FOR WIRING REQUIREMENTS ASSOCIATED WITH THE SCADA SYSTEM.
2. THERMOSTATS LOCATED ON EXTERIOR WALLS SHALL BE PROVIDED WITH INSULATED BASES.
3. LIGHT FIXTURES IN THE TREATMENT ROOM SHALL BE MOUNTED 16'-0" AFF UNLESS OTHERWISE NOTED.

KEY NOTES:

1. CONTRACTOR SHALL INSTALL MANUFACTURER PROVIDED CABLE IN 3/4" CONDUIT FROM FLOW ELEMENT TO FLOW TRANSMITTER.
2. EXISTING ANTENNA AND ANTENNA POLE SHALL BE RELOCATED TO ACCOMMODATE INSTALLATION OF NEW PIPING ASSOCIATED WITH NEW TREATMENT EQUIPMENT. EXTEND EXISTING CONDUIT AS REQUIRED. PROVIDE NEW ANTENNA CABLE TO MATCH EXISTING AS REQUIRED. SPLICING OF EXISTING ANTENNA CABLE IS NOT ALLOWED. ANTENNA SHALL BE ORIENTED TO MATCH EXISTING ORIENTATION OF ANTENNA AND ANTENNA POLE WITH DIVISION 13.
3. ALL EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED THROUGH THE PHOTOCELL LOCATED ON NORTH WALL OF TREATMENT ROOM 374.
4. EXISTING FLOW METER SHALL BE RELOCATED FROM THE PHOSPHATE ROOM AS SHOWN ON SHEET D1.1. EXISTING WIRING BETWEEN THE FLOW ELEMENT AND TRANSMITTER SHALL BE REUSED. TRANSMITTER SHALL BE LOCATED SUCH THAT THE EXISTING WIRING CONDUIT DOES NOT HAVE TO BE EXTENDED. EXISTING WIRING SHALL BE INSTALLED IN 3/4" CONDUIT.
5. INDUSTRIAL CEILING FAN SPEED CONTROLLER AND REVERSING SWITCH SHALL BE FURNISHED AS SPECIFIED IN DIVISION 13 AND INSTALLED AND WIRED BY DIVISION 26. PROVIDE POWER TO CONTROLLER OF THE TWO CEILING FANS IN THE TREATMENT ROOM.
6. LIGHT FIXTURES SHALL BE MOUNTED AT THE SAME HEIGHT AS EXISTING.
7. PROVIDE 20/3 CIRCUIT BREAKER BUCKET, MCC BUCKET DOOR, OPERATING HANDLE, ETC. IN 6" SPACE LOCATED ABOVE BOOSTER PUMP #1 (BP-70) STARTER BUCKET FOR POWER TO NEW 45 KVA TRANSFORMER IN TREATMENT ROOM. PROVIDE 3-#4 PLUS GROUND IN 1" CONDUIT FROM MCC TO TRANSFORMER. EXISTING MCC IS MANUFACTURED BY SQUARE D, MODEL 5 WITH 65 KAIC RATING.
8. PROVIDE 4-#1/0 PLUS #6 GROUND IN 2" CONDUIT FROM TRANSFORMER TO LIGHTING PANEL 37-LP-1.
9. ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED NEMA 4X.
10. SEE SPECIFICATION SECTION 16940 FOR MODIFICATIONS ASSOCIATED WITH 37-SCP-1.
11. PROVIDE CURRENT SWITCH MANUFACTURED BY HAWKEYE, MODEL H600 INV, OR EQUAL IN NEMA 12 ENCLOSURE FOR EF-37-001 RUN SIGNAL AT SCADA.
12. SMOKE DETECTORS IN THIS SPACE SHALL BE WIRED IN PARALLEL (POWER AND CONTROL WIRING). SMOKE DETECTORS SHALL BE POWERED FROM AN EXISTING 5 AMP, 120V RATED FUSE IN 37-SCP-1. PROVIDE 2-#14 PLUS GROUND IN 3/4"Ø CONDUIT FROM SMOKE DETECTORS TO 37-SCP-1. SEE SPECIFICATION 16990 FOR CONTROL WIRING REQUIREMENTS.
13. SEE SPECIFICATION SECTION 16720 FOR REQUIRED MODIFICATIONS IN THE EXISTING CONTROL PANEL.
14. DOOR SWITCH SHALL BE CONNECTED TO EXISTING 8 CHANNEL I/O MODULE LOCATED IN EXISTING ACCESS CONTROL PANEL.
15. PROVIDE JUNCTION BOX MOUNTED TO UNISTRUT FOR TERMINATION OF FLOAT CABLES. PROVIDE SQUARE BASE FOR ANCHORING UNISTUT TO THE FLOOR.

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ELECTRICAL LIGHTING AND POWER PLAN
WELL NO. 37 GAC TREATMENT FACILITY
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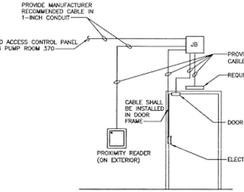
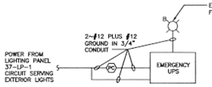
STRAND ASSOCIATES®
SHEET E1.1



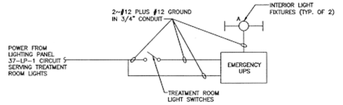
A / EL1 ACCESS CONTROL SYSTEM INSTALLATION DETAIL
NO SCALE

NOTES:

1. ALL CABLES SHALL BE INSTALLED WITHIN CONDUIT.
2. CONTRACTOR SHALL USE MANUFACTURER'S RECOMMENDED CONDUCTORS AND QUANTITIES TO EACH DEVICE.
3. PROXIMITY READER SHALL RECESSED IN EXTERIOR WALL AND SEALED WITH SHATTER-PROOF GLASS TO MATCH EXISTING.



B / EL1 EMERGENCY FIXTURES (EXTERIOR) WIRING BLOCK DIAGRAM
NO SCALE



C / EL1 EMERGENCY FIXTURES (INTERIOR) WIRING BLOCK DIAGRAM
NO SCALE

LIGHTING PANEL 37- LP-1

Service:	120/208V, 3φ, 4W							Mounting:							
Main Breaker:	150A MCB				Enclosure: NEMA 12			Main Bus:					SURFACE COPPER		
Location:	TREATMENT ROOM 374							SCBC:					10 KAIC		
Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Poles	Amps	Room Number/Description		
LIGHTING-TREATMENT ROOM	20	1	1	1200			300			2	1	20	LIGHTING-EXTERIOR		
RECEPTACLES-TREATMENT ROOM	30	1	3		1080			1440		4	1	20	374-37-051		
	30	3	5			2500			1440	6	1	20	374-37-052		
EUH-37-011	/	/	7	2500			216			8	1	30	KF-37-041 & KF-37-042		
	/	/	9		2500			1320		10	1	30	EF-37-001 & DAMPERS		
	30	3	11			2500			300	12	1	20	FS-37-475, FS-37-476, FS-37-017		
EUH-37-012	/	/	13	2500			0			14	1	30	SPARE		
	/	/	15		2500			0		16	1	30	SPARE		
	30	3	17			2500			0	18	1	30	SPARE		
	/	/	19	2500			0			20	1	30	SPARE		
	/	/	21		2500			0		22	1	30	SPARE		
SPARE	20	1	23	0			0			24	1	30	SPARE		
SPARE	30	1	25		0			0		26	1	30	SPARE		
SPARE	20	1	27			0			0	28	1	30	SPARE		
SPARE	20	1	29			0			0	30	1	30	SPARE		
Total Load per Phase (per Side (VA)				8890	8580	7500	1572	3360	1740						
Total Load Phase A (VA):	9112	VA											Total Connected Load (A):	84	A
Total Load Phase B (VA):	11940	VA											Total Connected Load + 25%	105	A
Total Load Phase C (VA):	9240	VA											Spare 20%	36	A
Total Connected Load (VA):	30292	VA											Feeder Load	121	A

FIXTURE SCHEDULE

Fixture Type	Manufacturer/Cat#	Model Number	Lamp Type	Mounting	Remarks
A	Metalux	VT4-42-MDR-DRV-EB9181-U	4-32W T8	Pendant	
B	McGraw-Edison	1ST-0502-LED-C-E35.3.02.T0-MFGRMT	LED	WALL	Initial lumen output shall be 3,996.
X	Sure-Lites	LPX70-0001/SD	AC LED	CEILING	Provide self-diagnostics option with cadmium battery as required to power fixture for a minimum of 90 minutes.

FOR PRELIMINARY USE ONLY

DATE:
REVISIONS
NO.

ELECTRICAL SCHEDULES AND DETAILS
WELL NO. 37 GAC TREATMENT FACILITY
CITY OF ROCKFORD
WINNEBAGO COUNTY, ILLINOIS

JOB NO. 1110.005
PROJECT MGR. ANDY MULLENDORE
STRAND ASSOCIATES®
SHEET E6.1