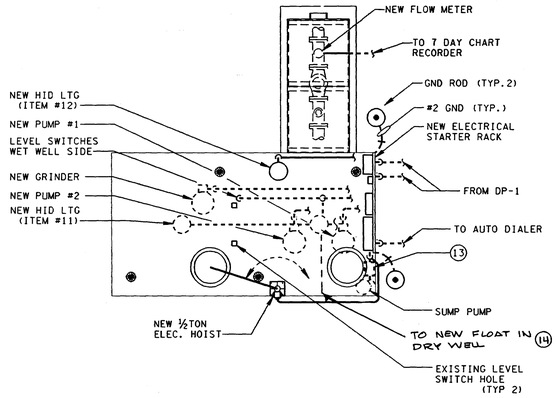
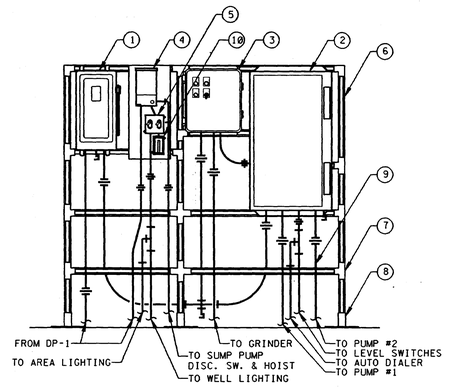


LIFT STATION
N.T.S.



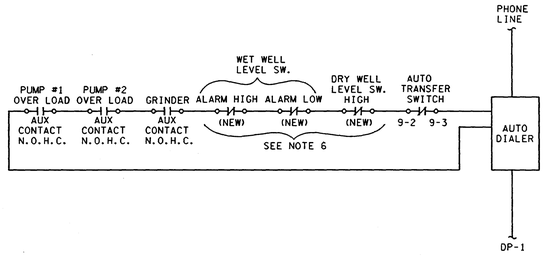
ELECTRICAL RACK
SCALE: ¾" = 1'-0"

BILL OF MATERIAL

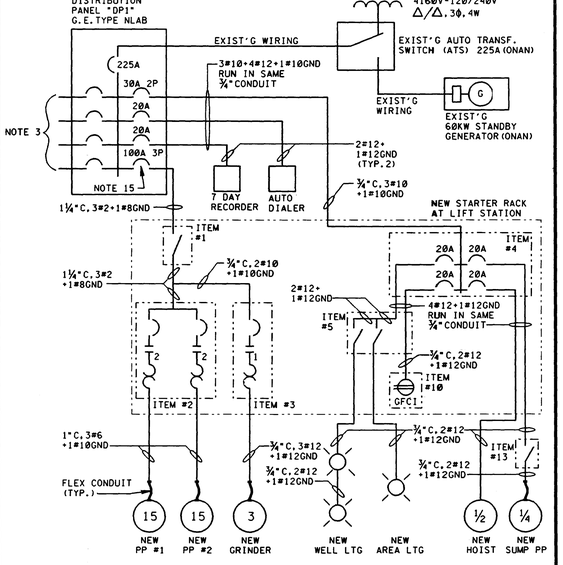
ITEM	DESCRIPTION
1	MAIN DISCONNECT: 100 AMP SAFETY SWITCH, 3 BLADE, NONFUSED. NEMA 4 (STAINLESS STEEL) ENCLOSURE.
2	PUMP 1 & 2 CONTROL PANEL: NEMA SIZE 2 AC DUPLEX MOTOR CONTROLLER (TWO NEMA SIZE 2 STARTERS AND AN AUTOMATIC ALTERNAOR), 240V, 3PH WITH 120V CONTROL AND A 200 VA TRANSFORMER, HAND-OFF-AUTO SELECTOR SWITCH, ELAPSED TIME METER AND INTERPOSING RELAY FOR SINGLE POLE CONTROL SWITCHES FOR EACH MOTOR. NEMA 4 (STAINLESS STEEL) ENCLOSURE. (SEE NOTE 7)
3	GRINDER STARTER/CONTROLLER: NEMA SIZE 1 AC MOTOR STARTER, 240V, 3PH WITH 120V CONTROL AND AN ELAPSED TIME METER; TO BE SUPPLIED BY THE GRINDER VENDOR AS PART OF THE GRINDER PACKAGE (SEE SPEC.). NEMA 4 (STAINLESS STEEL) ENCLOSURE.
4	FOUR CIRCUIT PANEL WITH FOUR 20AMP, 1 POLE CIRCUIT BREAKERS. NEMA 4 (STAINLESS STEEL) ENCLOSURE.
5	TWO GANG WEATHERPROOF DEVICE BOX WITH 2-20AMP 1 POLE SWITCHES AND WEATHERPROOF SWITCH COVER.
6	1⅝" SQUARE CHANNEL
7	CHANNEL FITTINGS
8	CHANNEL POST BASE
9	CONDUIT AND ASSOCIATED FITTINGS
10	SINGLE GANG WEATHERPROOF DEVICE BOX WITH A 20AMP GFCI RECEPTACLE AND WEATHERPROOF COVER.
11	WELL LIGHTING: (2 WELLS, 1 LIGHT EACH) 70W HPS EXPLOSION-PROOF LIGHT FIXTURE, CEILING MOUNTED WITH GUARD AND DOME REFLECTOR.
12	AREA LIGHTING: ONE 100W HPS STANCHION MOUNTED FIXTURE (WET LOCATION) M.H.=8'-0" AFF.
13	SINGLE GANG WEATHERPROOF DEVICE BOX WITH A 20AMP SWITCH AND WEATHERPROOF COVER.
14	CONTRACTOR TO PROVIDE NEW FLOAT DEVICE IN DRY WELL SET AT 2'-0" AFF. WIRE CONTACTS TO AUTO DIALER AS SHOWN

NOTES

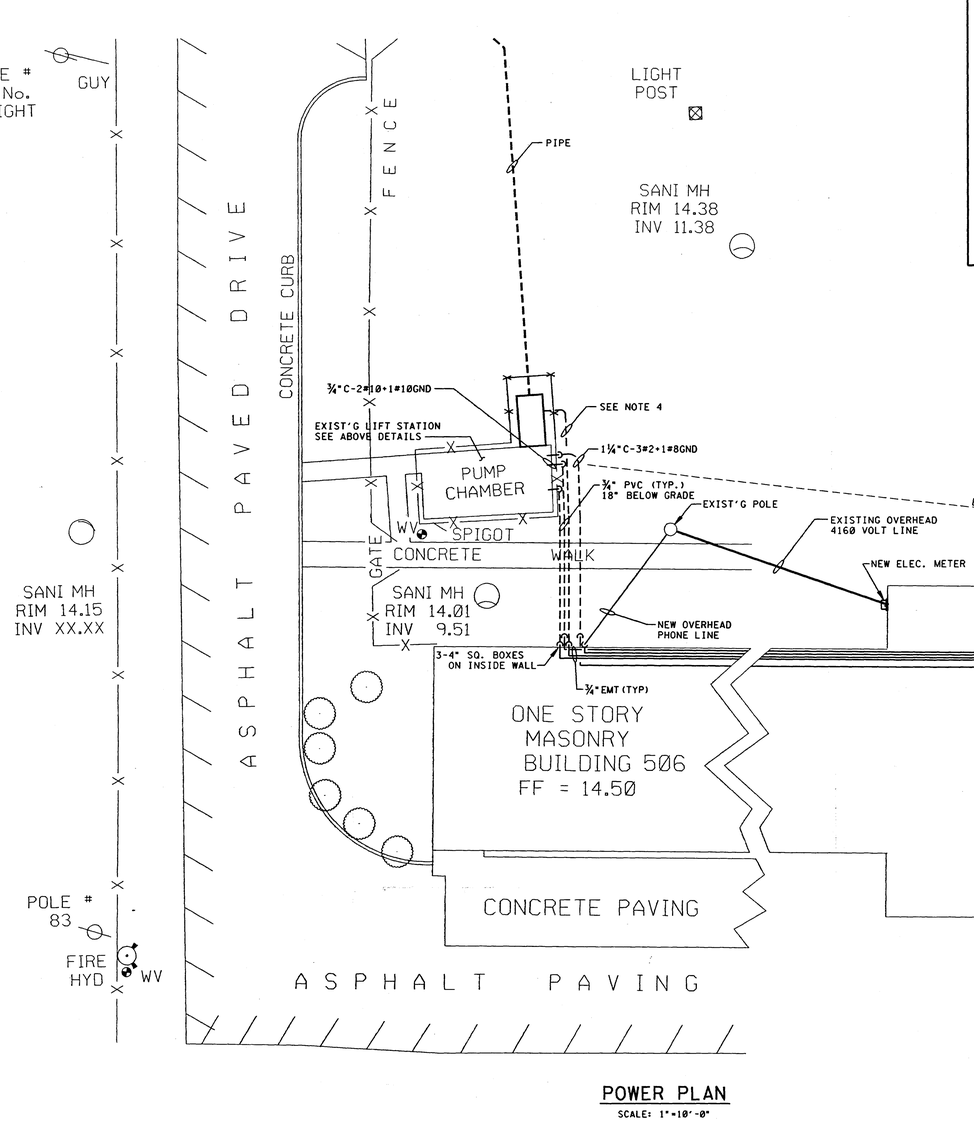
1. FOR COMPLETE LIST OF REFERENCE DRAWINGS, SEE TITLE SHEET, DWG. T1.
2. ALL ELECTRICAL INSTALLATIONS SHALL BE COMPLETED IN A WORKMANLIKE MANNER IN CONFORMANCE WITH ELECTRICAL SPECIFICATION FOR THIS CONTRACT, THE NATIONAL ELECTRICAL CODE, ALL LOCAL CODES AND REGULATIONS, AND ALL APPLICABLE DRAWINGS AND DETAILS.
3. ALL BRANCH CIRCUIT WIRING TO EXISTING SEWAGE TREATMENT FACILITY EQUIPMENT TO BE DISCONNECTED & REMOVED. UNDERGROUND CONDUITS ONLY MAY REMAIN BUT THEY SHALL BE CAPPED.
4. RECORDER INSTRUMENT WIRES TO BE 2#14 TWISTED PAIR WITH OUTER JACKET FOR WET LOCATION & 300V INSULATION ON WIRES.
5. AUTO DIALER TROUBLE ALARM SHALL SEND SIGNAL UNDER FOLLOWING CONDITIONS TO CARNEYS POINT TOWNSHIP SEWERAGE AUTHORITY:
   - LIQUID LEVELS - ALARM HI & ALARM LOW WET WELL / HI DRY WELL — VIA FLYGT LEVEL SWITCHES TYPE ENH-10
   - PUMP OR GRINDER FAILURE - VIA OVERLOAD AUX. CONTACTS
   - POWER FAILURE - VIA SIGNAL FROM AUTO TRANSFER SWITCH
6. EXISTING LEVEL CONTROL HAS THREE (3) FLOAT TYPE LEVEL SWITCHES; LOW, HIGH & HIGH HIGH. IN ADDITION TWO (2) NEW LEVEL SWITCHES ARE TO BE ADDED TO THE WET WELL SIDE AT A LEVEL ABOVE HIGH HIGH AND BELOW LOW. ANOTHER SWITCH SHALL BE ADDED IN THE DRY WELL SIDE AND SET AT THE HIGH POINT OF THE SUMP PIT. WIRE LEVEL SWITCHES PER AUTO DIALER BLOCK DIAGRAM.
7. PUMP CONTROL SEQUENCE OR OPERATION SHALL BE; HIGH LEVEL SWITCH TURNS ON ONE PUMP. IF THE LEVEL CONTINUES TO RISE, LEVEL SWITCH HIGH HIGH TURNS ON THE SECOND PUMP. THE PUMP OR PUMP WILL TURN OFF WHEN THE LOW LEVEL SWITCH HAS BEEN SATISFIED. IF THE SYSTEM CAN NOT MANTAIN LEVELS INSIDE THESE PARAMETERS NOTE 5 WILL APPLY (SENDING AN ALARM SIGNAL TO CARNEYS POINT TOWNSHIP SEWERAGE AUTHORITY).
8. ABOVE GROUND CONDUIT MINIMUM SIZE SHALL BE ¾" (RGS OUTSIDE) AND (EMT INSIDE). UNDERGROUND CONDUIT MINIMUM SIZE SHALL BE 1½" PVC (EXCEPT WHERE NOTED).
9. MINIMUM WIRE SIZE FOR POWER WIRING SHALL BE #12 AWG AND MINIMUM WIRE SIZE FOR CONTROL SHALL BE #14 AWG. (ALL WIRE SHALL BE 90°C RATED)
10. CONNECTIONS IN JUNCTION BOXES AND ALL OTHER SPLICES, WHERE NECESSARY, SHALL BE MADE WITH SOLDERLESS CONNECTORS PER MANUFACTURERS INSTRUCTIONS.
11. ALL WIRE AND CABLES SHALL BE PULLED INTO THEIR CONDUITS BY APPLICATION OF A SUITABLE COMMERCIAL PULLING COMPOUND, "POLY-EAS" FOR POLYETHYLENE INSULATION. THE PULLING DISTANCE SHALL NOT EXCEED THE EQUIVALENT OF A 300 FOOT STRAIGHT RUN, OR A PULL SHALL CONTAIN NOT MORE THAN THE EQUIVALENT OF FOUR (4) 90° BENDS WIHTOUT A PULL BOX OR APPROVED CONDUIT FITTING.
12. ALL UNUSED OPENINGS IN FITTINGS, BOXES, ETC., SHALL BE PLUGGED WITH A CONDUIT PLUG. DURING CONSTRUCTION ALL OPENINGS SHALL BE KEPT CLOSED TO PREVENT MOISTURE AND FOREIGN MATERIAL, SUCH AS DIRT AND DEBRIS, FROM ENTERING THE CONDUIT SYSTEM.
13. JOINTS BETWEEN ALUMINUM AND STEEL COMPONENTS SHALL BE MADE BY COATING THE THREADS WITH ZINC PETROLEUM JELLY COMPOUND OR ZINC CHROMATE. RED LEAD SHALL NOT BE USED.
14. ALL FIELD DRILLED HOLES, CUT EDGES AND WELDED AREAS OF GALVANIZED STEEL SHALL BE DEBURRED AND TOUCHED UP WITH GALVO-WELD PAINT. STEEL NOT FURNISHED GALVANIZED SHALL BE PAINTED.
15. REPLACE THE EXISTING 60A, 3 POLE BRANCH CIRCUIT BREAKER SERVING THE WASTEWATER LIFT STATION WITH A NEW 100A, 3 POLE BRANCH CIRCUIT BREAKER.



AUTO DIALER BLOCK DIAGRAM



ONE LINE DIAGRAM



POWER PLAN
SCALE: 1"=10'-0"

HORIZONTAL SCALE
0 5 10 15 20 30
1"=10'

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

FOSTER WHEELER USA CORPORATION
PERRYVILLE CORPORATE PARK, CLINTON, N.J.

UNITED STATES ARMY GARRISON FORT DIX
DIRECTORATE OF PUBLIC WORKS
FORT DIX, NEW JERSEY 08640

DRAWN	AKJr
DESIGNED	AKJr
CHECKED	AK
FP&P DIV	
ENV DIV	
O & M DIV	
RECOMMENDED: CHIEF ENGINEERING PLANS & SERVICES	
APPROVED: REGIONAL DIRECTORATE OF PUBLIC WORKS	

NEW WASTEWATER LIFT STATION AND FORCED MAIN
SIEVERS-SANDBERG US ARMY RESERVE CENTER
PEDRICKTOWN, NEW JERSEY

USING AGENCY: DOIM

ELECTRICAL - POWER PLAN & ONE LINE DIAGRAM

SCALE: 1"-10'
DATE: SEPT. 20, 1996
PR. NR: GM-00036-5P
DRAWING NUMBER: E-1
SHEET 18 OF 18

NJ013-0125

13-05-37389

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