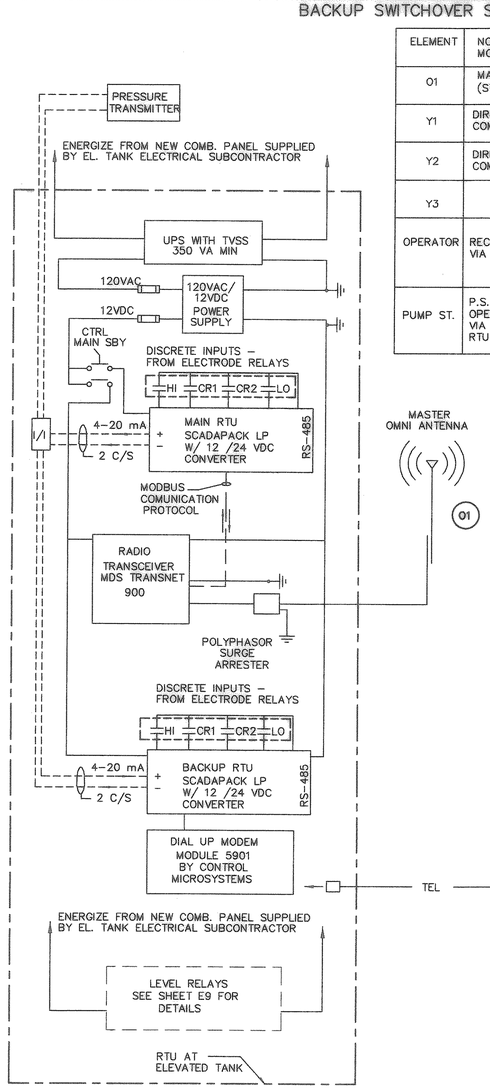
BACKUP SWITCHOVER SCHEME – MASTER RADIO/ANTENNA FAILURE

ELEMENT	NORMAL OPERATION MODE	BACKUP OPERATION MODE
O1	MASTER ANTENNA (STORE AND FORWARD)	N/A
Y1	DIRECTIONAL YAGI COMM WITH E.T. O1	SECONDARY MASTER ANTENNA. COMM TO Y3
Y2	DIRECTIONAL YAGI COMM WITH E.T. O1	N/A
Y3	N/A	DIRECTIONAL YAGI COMM WITH P.S. Y1
OPERATOR	RECEIVES ALARM VIA P.S. AUTODIALER	AT E.T. TURNS ON BACKUP RTU VIA S.S. AT CITY HALL SWITCH ANTENNA Y2 AND Y3 AT RADIO PORT
PUMP ST.	P.S. MODBUS NETWORK OPERATES OF E.T. LEVEL VIA MAIN RADIO LINKED RTU	P.S. MODBUS NETWORK OPERATES OF E.T. LEVEL VIA BACKUP TEL. LINKED RTU



1 RTU AT ELEVATED TANK
NO SCALE

NOTES – E.T. RTU:

E.T. RADIO INSIDE RTU TO BE CONFIGURED AS STORE AND FORWARD RADIO (1)

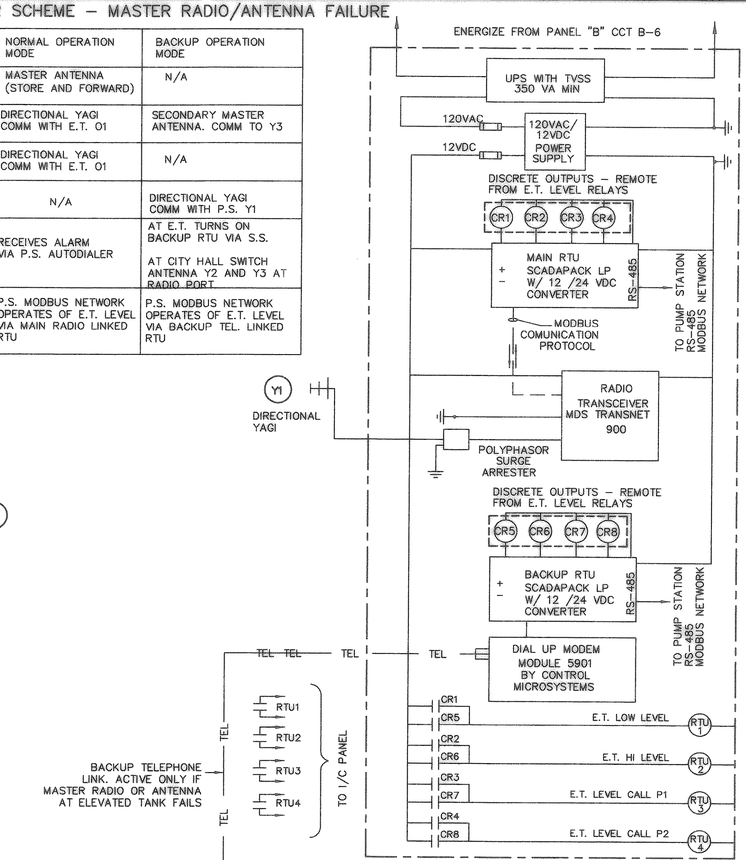
KEEP PHONE LINE DISCONNECTED UNDER NORMAL OPERATION. PLUG IN PHONE JACK INTO MODEM IF BACKUP RTU IS REQUIRED TO TAKE OVER CONTROL. BACKUP RTU PROGRAM SHALL DIAL UP PUMP STATION BACKUP RTU UPON INITIALIZATION.

NOTES – CITY HALL RTU:

IN NORMAL OPERATION YAGI ANTENNA Y2 SHALL BE CONNECTED TO RADIO AND AIMED AT E.T. OMNI MASTER.

IN BACKUP MODE (MASTER RADIO/ANTENNA FAILURE), YAGI ANTENNA Y3 THAT IS AIMED TO PUMP STATION SHALL BE CONNECTED TO RADIO.

BOTH Y2 AND Y3 TO BE INSTALLED ON SAME MAST.

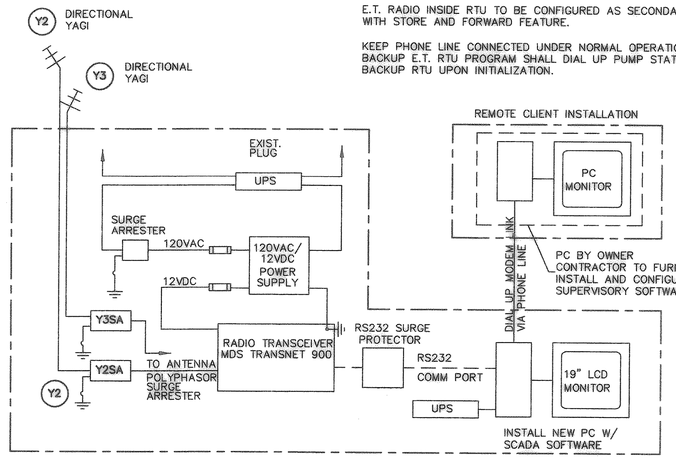


2 RTU IN PUMP STATION
NO SCALE

NOTES – P.S. RTU:

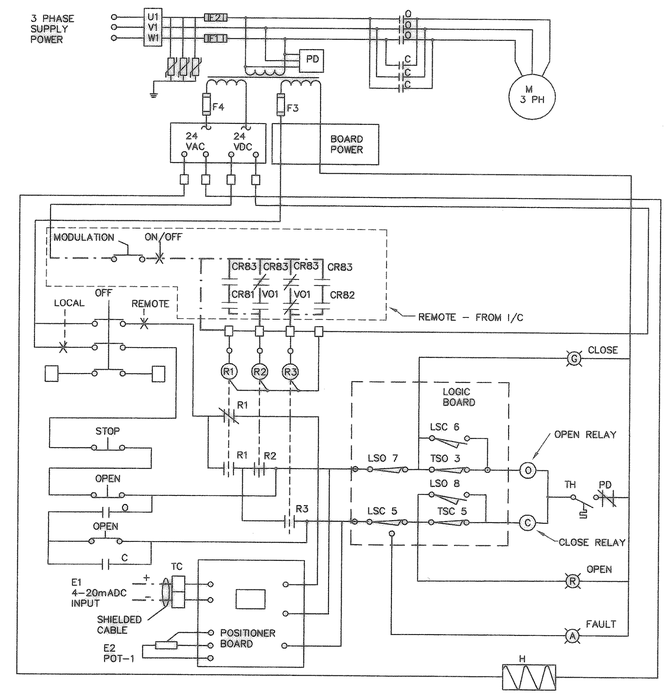
E.T. RADIO INSIDE RTU TO BE CONFIGURED AS SECONDARY MASTER WITH STORE AND FORWARD FEATURE.

KEEP PHONE LINE CONNECTED UNDER NORMAL OPERATION. BACKUP E.T. RTU PROGRAM SHALL DIAL UP PUMP STATION BACKUP RTU UPON INITIALIZATION.

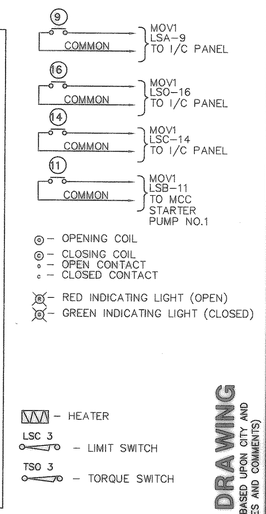


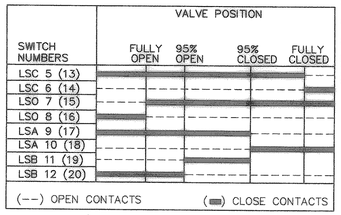
3 RTU IN CITY HALL
NO SCALE

COMMUNICATION SCHEMATIC

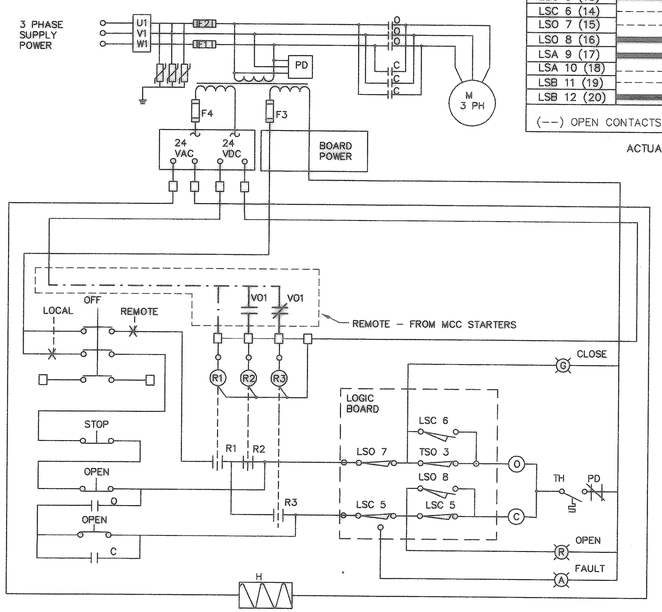


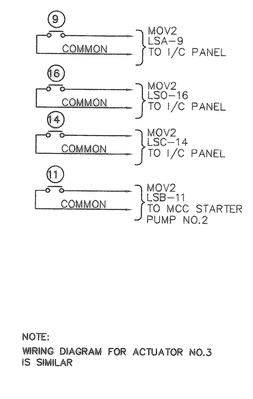
ACTUATOR SCHEMATIC – PUMP NO.1





ACTUATOR SWITCH DIAGRAM





NOTE:
WIRING DIAGRAM FOR ACTUATOR NO.3 IS SIMILAR

ACTUATOR SCHEMATIC – PUMPS NO. 2–3

No.	DATE	REVISION	BY
1	10/31/03	ADDENDUM NO.1	

Freeman-Millican, Inc.
ENGINEERS – ARCHITECTS – PLANNERS
9500 FOREST LN. DALLAS, TX 214.503.0555

RECORD DRAWING
(ALL REVISIONS ARE BASED UPON CITY AND CONTRACTOR NOTES AND COMMENTS)

CITY OF HEATH
PUMP STATION NO. 1

WIRING DETAILS

STATE OF TEXAS
DAMIR LULO
86370
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DAMIR LULO, P.E. NO. 86370 ON 01.19.2005.

SCALE: NO SCALE
IF SHEET IS IN 11"x17" FORMAT, DRAWINGS ARE AT 1/2 OF NOTED SCALE.

PROJECT No.:	02150
DATE:	JAN. 2005
DESIGNED:	DL
DRAWN:	FMI
CHECKED:	JTM

SHEET
E5
TOTAL SHEETS: 35