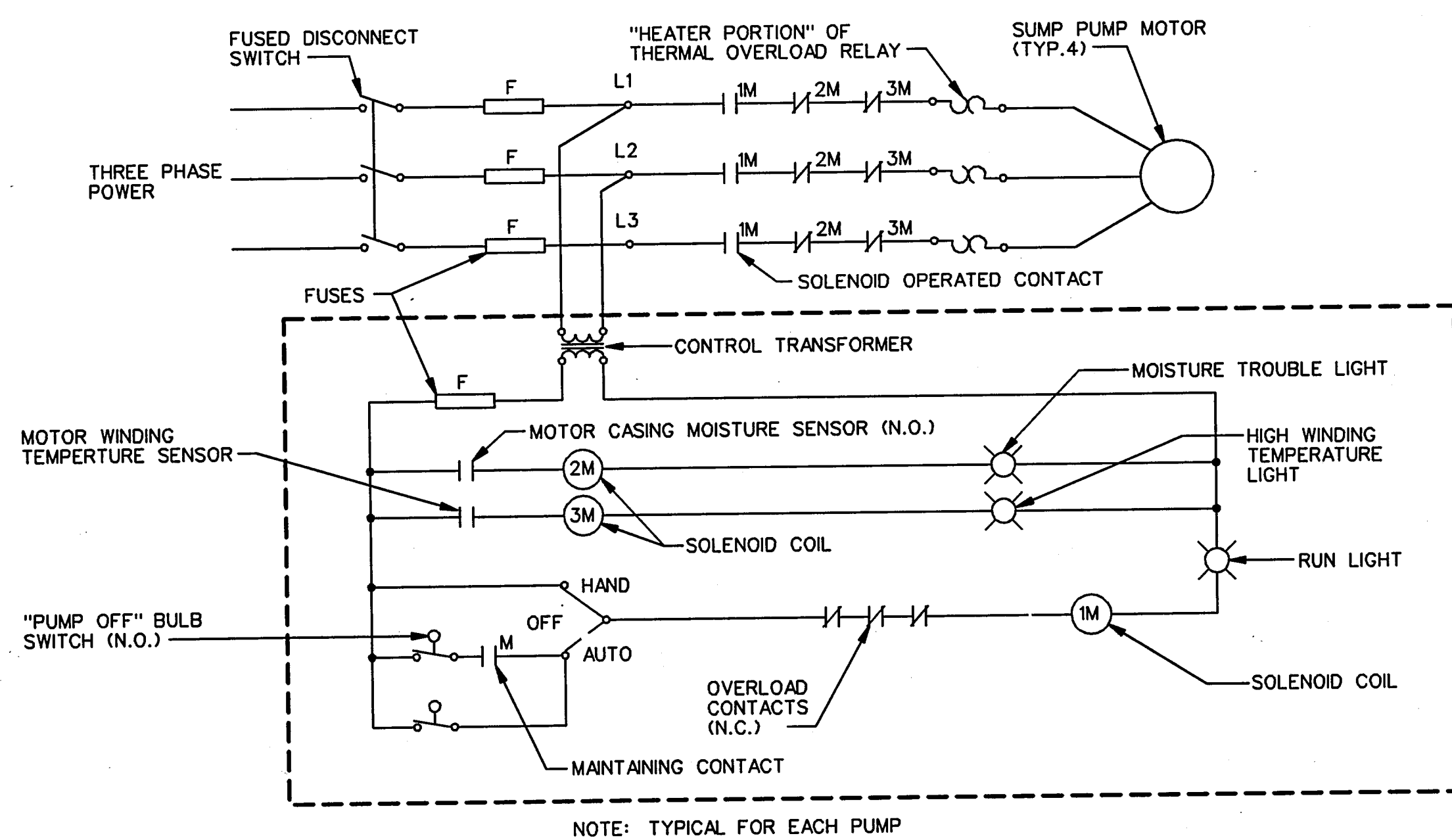


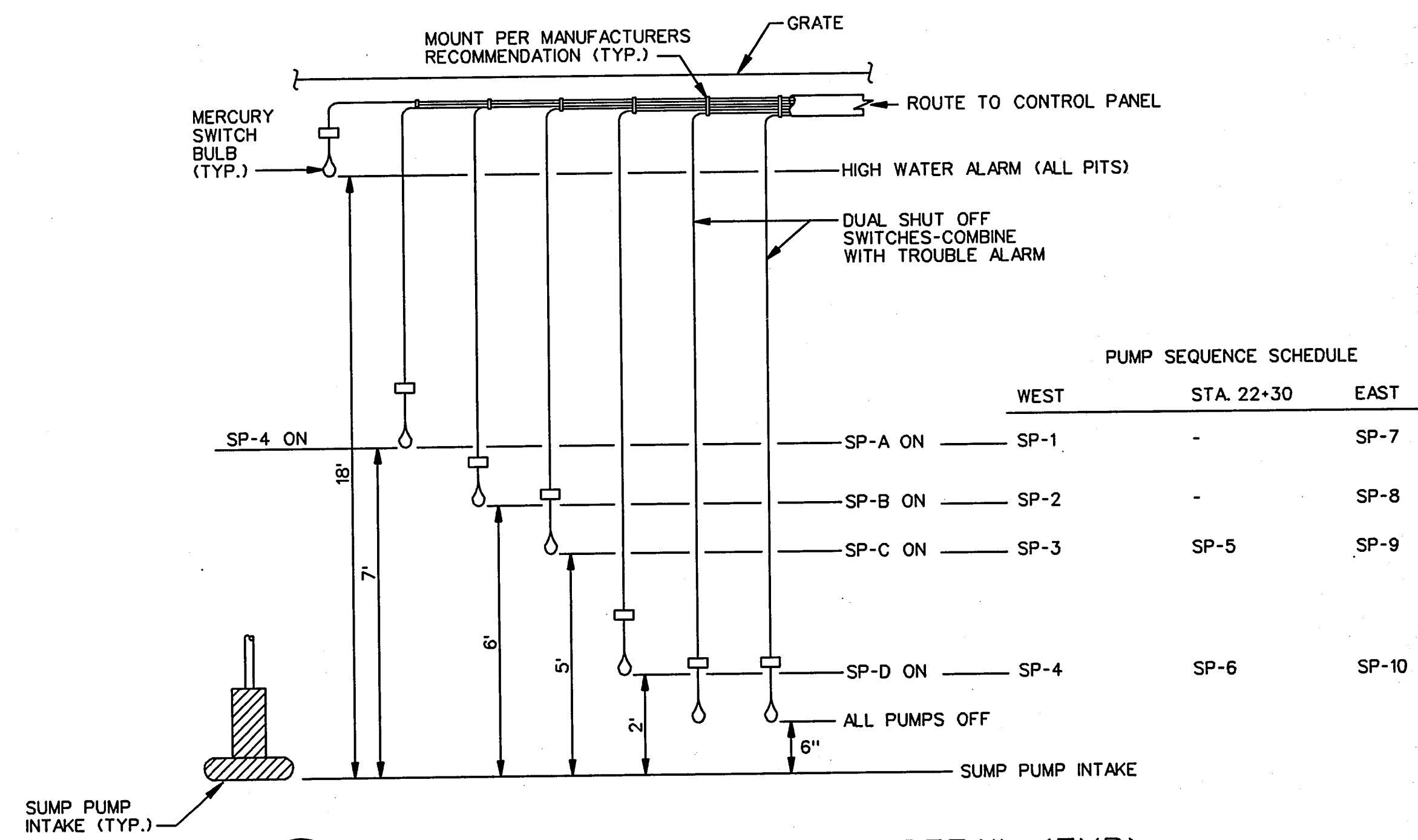
STORM WATER SEWAGE PUMP SCHEDULE									
MARK	LOCATION	TYPE	GPM	TDH (FT.)	ELECTRICAL			MANUFACTURER & MODEL	REMARKS
					HP	RPM	VOLT/PH		
SP-1	WEST PORTAL	SUBMERSIBLE NON-CLOG	3000	55	70	1750	460/3	ABS AFP 2001	SEE NOTE 1
SP-2	WEST PORTAL	SUBMERSIBLE NON-CLOG	3000	55	70	1750	460/3	ABS AFP 2001	
SP-3	WEST PORTAL	SUBMERSIBLE NON-CLOG	3000	55	70	1750	460/3	ABS AFP 2001	
SP-4	WEST PORTAL	SUBMERSIBLE NON-CLOG	300	55	10	1750	460/3	ABS AFP 1046	
SP-5	TUNNEL	SUBMERSIBLE NON-CLOG	500	40	10	1750	460/3	ABS AFP 1046	
SP-6	TUNNEL	SUBMERSIBLE NON-CLOG	500	40	10	1750	460/3	ABS AFP 1046	
SP-7	EAST PORTAL	SUBMERSIBLE NON-CLOG	3000	75	84	1750	460/3	ABS AFP 2001	
SP-8	EAST PORTAL	SUBMERSIBLE NON-CLOG	3000	75	84	1750	460/3	ABS AFP 2001	
SP-9	EAST PORTAL	SUBMERSIBLE NON-CLOG	3000	75	84	1750	460/3	ABS AFP 2001	
SP-10	EAST PORTAL	SUBMERSIBLE NON-CLOG	300	75	20	1750	460/3	ABS AFP 1044	

NOTES:
1. MANUFACTURERS STANDARD PACKAGED SUMP CONTROLLER SHALL BE COMPLETE WITH NEMA TYPE 4X CONTROL PANEL, NEMA TYPE 6 INDIVIDUAL COMBINATION MOTOR STARTERS/DISCONNECTS AND WIRING/CONDUIT.

GENERATOR FUEL PUMP SCHEDULE					
MARK	TYPE	SIZE & TYPE	IMPELLER	RPM	BHP
FP-1	SUBMERSIBLE	1/2X 1X 6 ESP	1129A10X06YA	1750	1/2



1 SUMP PUMP CONTROL SCHEMATIC
P147 NO SCALE



2 SUMP PUMP LEVEL CONTROL DETAIL (TYP.)
P147 NO SCALE

PUMP SEQUENCE SCHEDULE		
WEST	STA. 22+30	EAST
SP-A ON	SP-1	SP-7
SP-B ON	SP-2	SP-8
SP-C ON	SP-3	SP-9
SP-D ON	SP-4	SP-10
	SP-5	
	SP-6	
	ALL PUMPS OFF	

SEQUENCE OF OPERATION:

PROVIDE EACH PUMP WITH AN H-O-A SWITCH AT THE PUMP CONTROL PANEL. THE FOLLOWING SEQUENCE OCCURS FOR EACH SWITCH POSITION.

AUTO POSITION

- AS THE SUMP PIT WATER LEVEL RISES ABOVE 6IN. THE "ALL PUMPS OFF" BULB SWITCH CLOSSES.
- AS THE SUMP PIT WATER LEVEL RISES ABOVE 2 FT. THE "SP-D" BULB SWITCH CLOSSES AND THE RELATED PUMP STARTS.
- OPERATION 2 IS REPEATED FOR "SP-C", "SP-B" AND "SP-A" BULB SWITCHES AS WATER LEVEL REACHES TABLE LEVELS RESPECTIVELY.
- AS WATER LEVEL REACHES 18 FT. THE HIGH WATER ALARM IS ACTIVATED.
- ALL PUMPS STARTED WILL REMAIN ON UNTIL THE SUMP PIT WATER LEVEL IS LOWERED TO 1FT. OR UNTIL OVERLOAD CONTACTS ARE OPENED, OR UNTIL MANUALLY DISCONNECTED.

OFF POSITION

- PUMPS ARE OFF REGARDLESS OF WATER LEVEL WHEN ALL PUMP CONTROLS ARE IN THE OFF POSITION.
- EACH PUMP MAY BE INDIVIDUALLY PLACED IN THE OFF POSITION, DISABLING THE PUMP.

HAND POSITION

- PUMPS ARE ON REGARDLESS OF WATER LEVEL WHEN PUMP CONTROLS ARE IN THE HAND POSITION.
- EACH PUMP MAY BE INDIVIDUALLY PLACED IN THE HAND POSITION, ENABLING THE PUMP.



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MIKE L. ASHCRAFT, P.E., 56590 ON SEPTEMBER 9, 1996

FINAL RECORD DRAWING
Date: 12/25/99

No.	REVISION	BY	DATE
TEXAS TURNPIKE AUTHORITY ADDISON AIRPORT TUNNEL			
TUNNEL FIRE PROTECTION, PLUMBING SCHEDULES & CONTROL DIAGRAMS			
HDR Engineering, Inc.			SECTION XIII
DRAWN: WTD	DATE: 12/05/96	DESIGNED: MLA	DATE: 08/28/96
CHECKED: KG	DATE: 08/28/96	SCALE: NONE	
CONTRACT No. DNT-260 SHEET P152 OF 166			