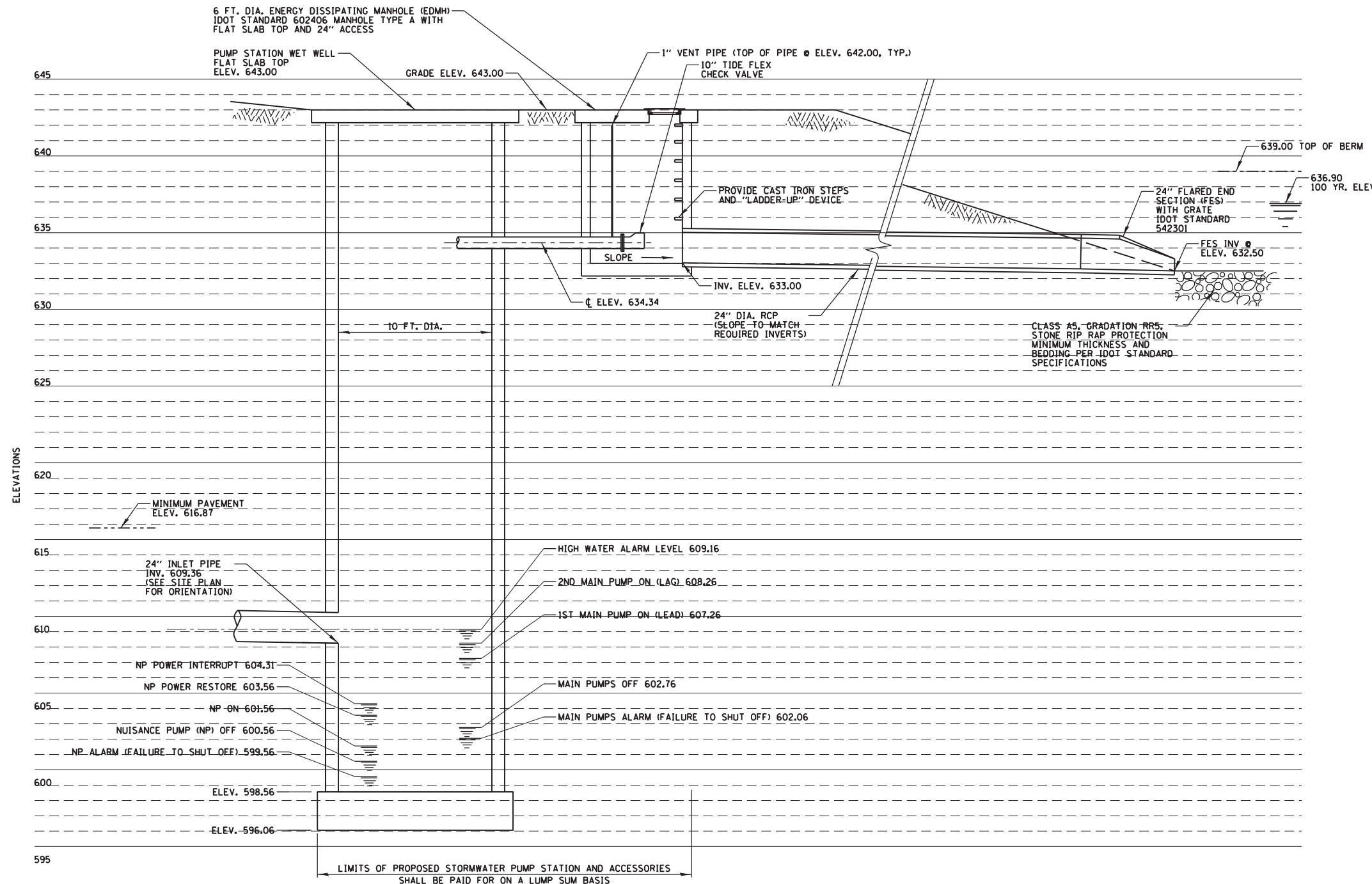
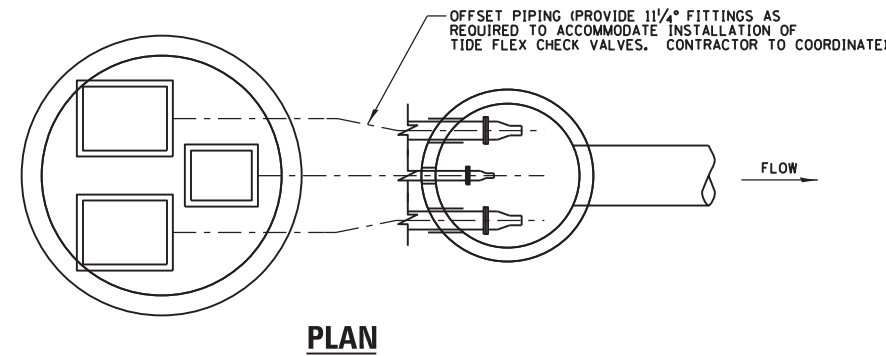


PUMP STATION OPERATION

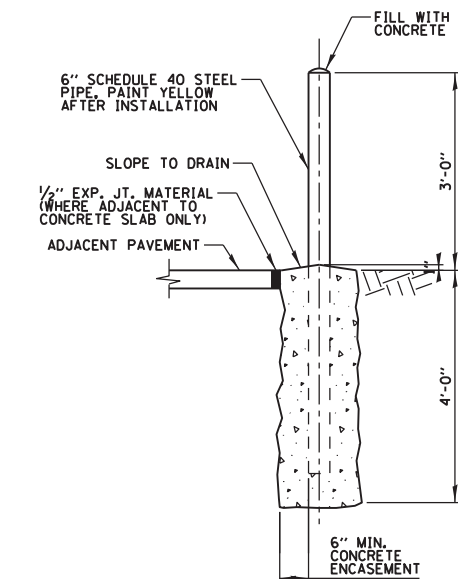
- GENERAL.** SYSTEM OPERATION SHALL BE BY MEANS OF A PUMP CONTROLLER IN COMBINATION WITH A MECHANICAL FLOAT WATER LEVEL SENSING SYSTEM. THE WATER LEVEL VARIATIONS IN THE WET WELL SHALL BE SENSED BY THE FLOAT SWITCHES AND SHALL START AND STOP THE PUMPS, AND PROVIDE A HIGH WATER LEVEL ALARM. THE OPERATING WATER LEVELS FOR THE PUMP CONTROLS INCLUDING THE PUMP OFF LEVELS, FIRST (LEAD) MAIN PUMP ON LEVEL, SECOND (LAG) MAIN PUMP ON LEVEL, NUISANCE PUMP ON AND POWER INTERRUPT AND ALARM LEVEL ARE SHOWN ON THE DRAWINGS.
- NUISANCE PUMP.** THE NUISANCE PUMP WILL OPERATE DURING NON-STORM EVENTS AND WILL BE USED TO PUMP OUT RESIDUAL AND SEEPAGE FLOWS ENTERING THE WET WELL. UPON RISING WATER LEVEL THE FLOAT SYSTEM SHALL SIGNAL TO START THE NUISANCE PUMP. WITH THE NUISANCE PUMP OPERATING, THE WATER LEVEL SHALL LOWER UNTIL THE SIGNAL IS GIVEN TO TURN OFF THE PUMP AT THE DESIGNATED NUISANCE PUMP OFF LEVEL. IF THE WATER LEVEL CONTINUES TO RISE WHEN THE NUISANCE PUMP IS OPERATING (I.E. OCCURRENCE OF STORM EVENT) AN OVERRIDE SIGNAL SHALL BE GIVEN TO INTERRUPT POWER TO THE NUISANCE PUMP SO THAT MAIN PUMP SP-1 AND SP-2 WILL TAKE OVER THE PUMPING OPERATION.
- MAIN PUMPS.** DURING A STORM EVENT AND UPON WATER LEVEL RISE, THE FLOAT SYSTEM SHALL SIGNAL TO START THE LEAD MAIN PUMP AT THE DESIGNATED FIRST MAIN PUMP ON LEVEL. WITH THE LEAD MAIN PUMP OPERATING, THE WATER LEVEL SHALL LOWER UNTIL THE SIGNAL IS GIVEN TO TURN OFF THE MAIN PUMP AT THE DESIGNATED MAIN PUMPS OFF LEVEL. THE ALTERNATING RELAY IN THE CONTROL PANEL SHALL INDEX ON STOPPING OF THE MAIN PUMP SO THAT THE LAG MAIN PUMP SHALL START ON THE NEXT MAIN PUMP OPERATION. IF THE WATER LEVEL CONTINUES TO RISE WHEN THE LEAD MAIN PUMP IS OPERATING, AN OVERRIDE SIGNAL SHALL BE GIVEN TO START THE LAG MAIN PUMP AT THE DESIGNATED SECOND MAIN PUMP ON LEVEL. BOTH LEAD AND LAG MAIN PUMPS SHALL OPERATE UNTIL THE WATER LEVEL IS LOWERED TO THE MAIN PUMPS OFF LEVEL. IF THE WATER LEVEL CONTINUES TO RISE WHEN BOTH MAIN PUMPS ARE OPERATING, A SIGNAL TO ACTIVATE THE ALARM SHALL BE GIVEN UPON REACHING THE DESIGNATED ALARM LEVEL. IF ONE MAIN PUMP SHOULD FAIL TO OPERATE, THE MAIN SECOND PUMP SHALL OPERATE ON THE OVERRIDE SIGNAL. ALL LEVEL SWITCHES SHALL BE MANUALLY ADJUSTABLE FOR LEVEL SETTING FROM THE SURFACE.
- AFTER STORM EVENT HAS PAST POWER SHALL BE RESTORED TO THE NUISANCE PUMP AND SYSTEM SHALL RETURN TO OPERATION DURING NON-STORM EVENT. POWER RESTORE FOR THE NUISANCE PUMP SHALL BE PROVIDED WITH AN ADJUSTABLE TIME DELAY RELAY (ADJUSTABLE BETWEEN ONE MINUTE AND FIVE MINUTES IN 15 SECOND INTERVALS) TO PREVENT NUISANCE PUMP ON-OFF HUNTING WHEN MAIN PUMPS ARE IN OPERATION.**

SUBSURFACE OPERATION PLAN

- BEFORE COMMENCING ACTIVITY AT THE SITE THE CONTRACTOR SHALL PREPARE AN "OPERATION PLAN" DRAWING SHOWING THE SEQUENCE OF OPERATION AND TIMING THAT IS PROPOSED FOR THE SUBSURFACE WORK. THIS PLAN DRAWING SHALL BE EXCLUSIVE OF ALL OTHER PLANS AND SCHEDULES REQUIRED UNDER THE CONTRACT. THE PLAN SHALL SHOW IN PLAN AND PROFILE SUPPLEMENTED BY SKETCHES, TEXT AND BAR DIAGRAMS THE EXTENT AND SEQUENCE OF WORK REQUIRED FOR THE SUBSURFACE CONSTRUCTION. THE PLAN SHALL SHOW ALL EXCAVATION, SHEETING, PROTECTION, DEWATERING PROCEDURES, UTILITIES SUPPORT, DRAINS AND ALL OTHER FEATURES REQUIRED TO PERFORM THE SUBSURFACE OPERATION. THE PLAN SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW. INsofar AS POSSIBLE ALL INFORMATION SHALL BE SHOWN ON THE PLAN FOR CONVENIENCE OF INTERPRETATION UNDER FIELD CONDITIONS. THE PLAN SHALL BE SEALED BY AN ILLINOIS REGISTERED STRUCTURAL ENGINEER.**
- ALL SHEETING/SHORING AND EARTH RETENTION/PROTECTION OF THE EXCAVATIONS, AROUND THE PROJECT WORK SITE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.**



SECTION A-A (M3)



SEE SITE DRAWING FOR LOCATION

BOLLARD DETAIL

N.T.S.

USER NAME = pmagnelli	DESIGNED JPC	REVISED -
DRAWN KWB	CHECKED JPC	REVISED -
PLOT SCALE = 8'	DATE - 10/17/2012	REVISED -
PLOT DATE = 10/17/2012		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	0105 WRS&HB	COOK	605	199
				CONTRACT NO. 60G37
ILLINOIS FED. AID PROJECT				