

LIFT STATION CONTROL PANEL INSTALLATION & STARTUP SCHEDULE FORM

The purpose of this form is to assist the contractor in expediting the installation of the lift station control panel and its startup. This form will walk the contractor through the entire construction process.

STEP 1 – PRECONSTRUCTION MEETING:

Contractor shall receive this form at the preconstruction meeting. Form can be download from www.leegov.com/utilities/design-manual/forms.

Date of Completion_____

STEP 2 – SUBMIT SHOP DRAWINGS:

Contractor shall submit control panel and all electrical equipment shop drawings for review. Minimum review time for shop drawing review by the County is two weeks.

Date of Completion_____

STEP 3 –CONTROL PANEL PREINSTALLATION INSPECTION:

Upon delivery of the control panel to the contractor, **PRIOR to installation of the control panel**, control panel shall be inspected by Lee County Telemetry Staff to ensure it has been manufactured according to standard Lee County control panel drawings and has not been damaged in delivery. Lee County does not accept liability or assume risk for manufacturing deficiencies both seen and unseen, or damage sustained to the control panel whether seen or unseen at the time of inspection. The purpose of this inspection is to ensure the control panel is correct and not damaged prior to installation. All damage to the panel, especially to the exterior, will be assessed by Lee County Telemetry Staff or Utilities Inspector. Based on their decision panel or subcomponent will either be replaced or repaired. Replacement or repairs are required to be complete prior to scheduling the next step below? Note, all internal panel components will have to conform to Lee County Lift Station Specifications; these items should need no field manipulation to operate correctly. Lee County Telemetry Staff will require 4 days prior notice to schedule inspection.

Date of Completion_____

STEP 4 – PRE-STARTUP INSPECTION & CONTROLS PROGRAMMING:

AFTER control panel has been installed and completely wired, and power turned on, a Pre-Startup Inspection can be schedule via your Lee County Utilities Inspector with the Lee County Telemetry Staff. The Lee County Telemetry Staff will install the County’s Telemetry Modem, program the set points and verify the level.

Date of Completion_____

STEP 5 – COMPLETED STARTUP CHECKLIST: (see attached)

See the attached form for Startup Checklist. The purpose of the Startup Checklist is to ensure all of the items necessary to Functionally Test the control panel are present.

Date of Completion_____, **Attach Completed Startup Checklist**

STEP 6 – SCHEDULE STARTUP INSPECTION:

AFTER completion of Steps 1 through 5 above, you can schedule the Control Panel Startup with the Lee County Telemetry Staff via your Lee County Utilities Inspector. Note you will have to provide this form and the completed Startup Checklist to the Lee County Utilities Inspector in order for them to schedule the startup. **It will take a minimum of two weeks for the startup to be scheduled.** The purpose of this step is to ensure the control panel installation is completed and that the startup will be focused specifically on functional testing and not troubleshooting installation issues. Startups only occur on Tuesday, Wednesday, or Thursday. Startups start 10:00am.

STEP 7 – FINAL INSPECTION:

Upon successful completion of Startup a Final Inspection can be scheduled with the Lee County Utilities Inspector. If you do not successfully pass your Startup Inspection you will have to reschedule another Startup Inspection after you have fixed/repared/improved the noted deficiencies discovered during the Startup Inspection. **It will take a minimum of two weeks for the follow up startup to be scheduled.** The purpose of this step is to ensure the control panel installation is functional prior to putting the lift station into service. **Note, startups will be rescheduled due to rain.**

STARTUP CHECKLIST

SITE:

- Is a continuous fence installed around the lift station with a gate
- No tripping hazards are present that could cause staff to fall into the wet well or open control panel
- Is gravel present at the site to reduce tripping hazards and keeping staff from standing on conductive wet ground
- Is the water meter installed w/backflow preventer
- Is the access drive to the lift station complete
- Have the locks been installed on the wet well hatch and gate

ELECTRICAL:

- Is there 3ft of clearance around the control panel per National Electrical Code
- Copy of the Final Electrical Trade Permit Inspection
- Wet well level transducer installed at the right depth and with minimal excess wire neatly coiled and hanging in wet well
- Are all electrical terminations tidy in the termination boxes, junction boxes, instruments, and control panels
- Is FPL or LCEC power at your meter can
- Is FPL or LCEC meter installed in the meter can
- Copy of the manufacturer's signed equipment installation and startup form for each and every pump, w/field derived pump curve, draw down data, and amps
- If a variable frequency drive (VFD) is present, copy of the manufacturer's signed equipment installation and startup form for each and every VFD, also a copy of the VFD parameters for each VFD on one thumb drive in the native format of the VFD manufacturer
- As part of the pump manufacturer's startup have the pumps been:
 - Bumped to check for proper rotation
 - Have the pumps been run
- Have the controls been checked out by the contractor

GENERATOR:

- If the generator fuel tank capacity is greater than 499 gallons, has the contractor registered the fuel tank with FDEP
- If the generator fuel tank capacity is greater than 499 gallons, and the tank registered with FDEP, has FDEP performed the fuel tank inspection and passed the installation

- Copy of the manufacturer signed equipment installation and startup form for the generator
- As part of the generator manufacturer's startup:
 - Has the coolant level been checked
 - Has the oil level been checked
 - Other, been checked
 - Copy of generator load bank test results
 - Has the generator been run:
 - Under a load
 - Under a full INDUCTIVE load (meaning have the pumps been run)
 - Batteries installed
 - Fuel installed
 - Has the onboard main generator breaker been adjusted
- Copy of the manufacturer signed equipment installation and startup form for the automatic transfer switch (ATS)
- As part of the ATS manufacturer's startup has the ATS transferred power from:
 - Utility to generator under load
 - Generator to utility under load

CONTRACTOR INSTALLATION OF THE ODOR CONTROL SYSTEM:

- Are the electrical components of the odor control system connected
- Has the water been connected and tested.
- As part of the contractor's installation of the odor control system have the following been completed:
 - Inspection of all piping for leaks
 - Odor Control Manufacturer MAY return to start up the Odor Control and then MAY later be scheduled to return to add media and connect temporary pump, when site has been used long enough create odor

ODOR CONTROL SYSTEM STARTUP:

It should be noted that the odor control system startup is not part of this checklist as typically the lift station must be in operation for a while to develop a source of hydrogen sulfide to keep the biological elements in the odor control system alive. After the odor control system startup is performed the following must be provided:

- Copy of the manufacturers signed equipment installation and startup form for the odor control system
- O&M manuals
- One thumb drive with a copy of the PLC program installed in the odor control system in the native format of the PLC programming language

NOTES: