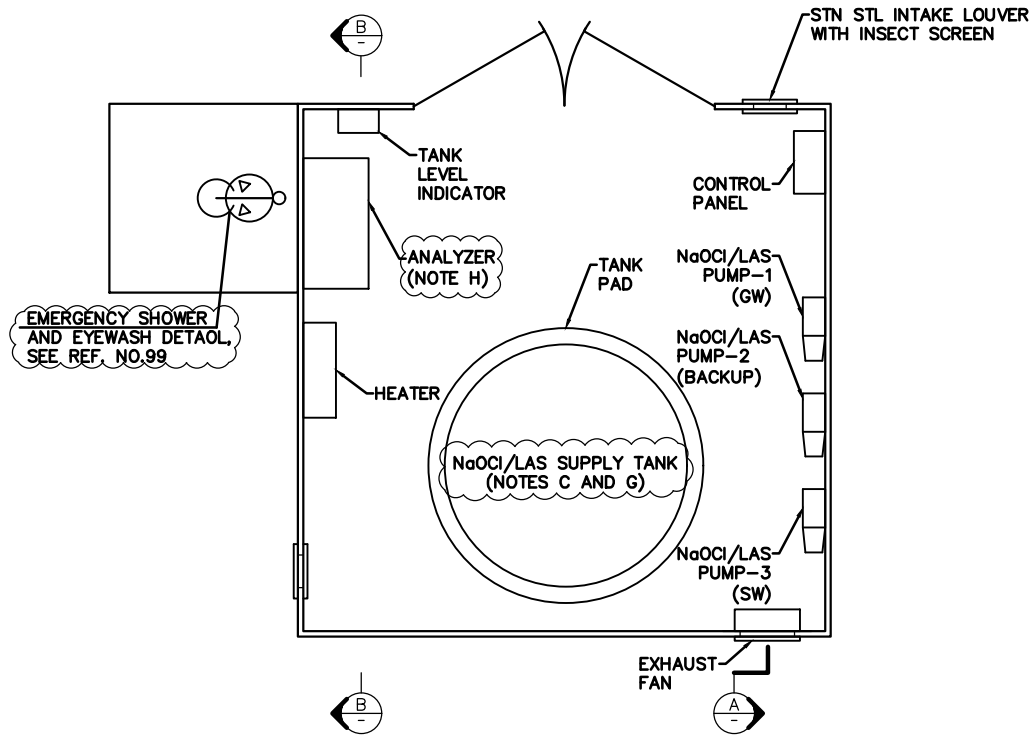
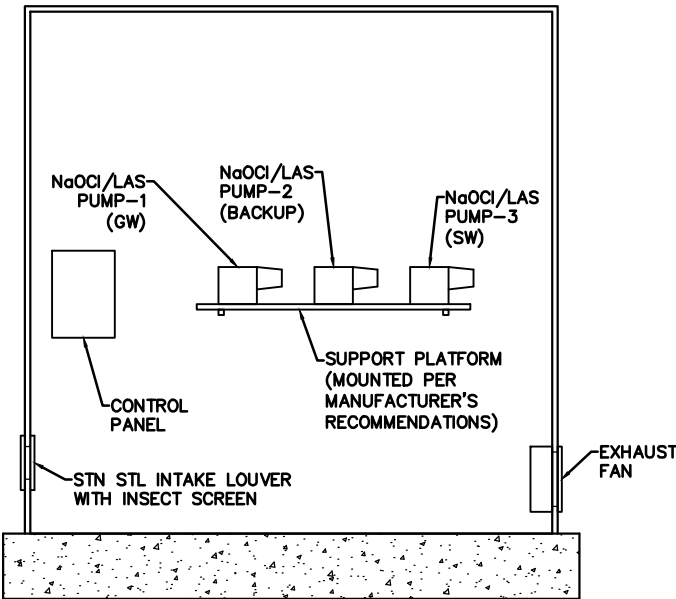


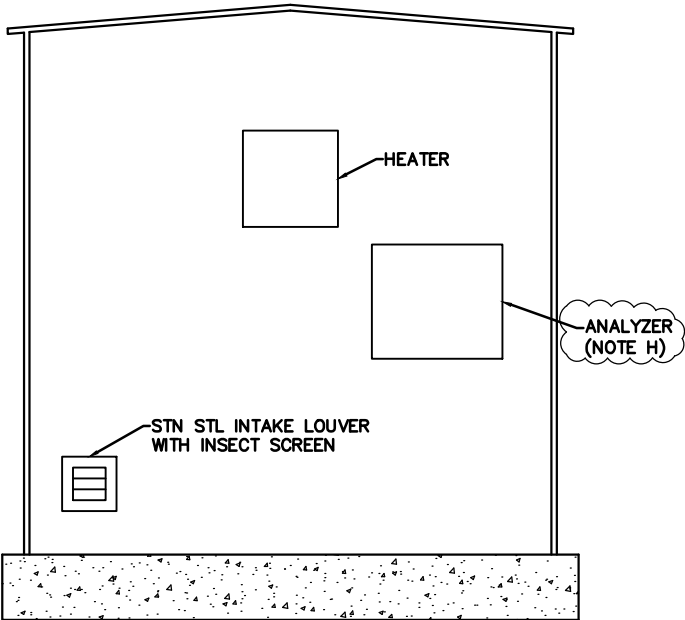
No.	Date	Revisions	App.



**TYPICAL NaOCl/LAS ROOM LAYOUT**  
SCALE: NTS (NOTE B)



**SECTION A-A**  
SCALE: NTS



**SECTION B-B**  
SCALE: NTS

**DESIGN ENGINEER NOTES:**

- LIQUID AMMONIUM SULFATE (LAS)/SODIUM HYPOCHLORITE (NaOCl) SYSTEM SHOWN IS FOR SURFACE WATER AND GROUNDWATER DOSING. HOWEVER, THE SYSTEMS SHALL OPERATE INDEPENDENTLY UNDER NORMAL OPERATION. THE GROUNDWATER AND SURFACE WATER LAS/NaOCl SYSTEMS MUST HAVE SEPARATE LAS/NaOCl INJECTION LINES.
- EXACT LOCATION OF EQUIPMENT MAY VARY GIVEN SITE CONSTRAINTS.
- NUMBER AND CAPACITY OF LAS/NaOCl PUMPS AND VOLUME OF LAS/NaOCl SUPPLY TANK WILL DEPEND ON PLANT CAPACITY AND REQUIRED LAS/NaOCl DOSAGE. MORE THAN THREE PUMPS MAY BE NECESSARY.
- DESIGN ENGINEER IS TO SIZE TANKS, PUMPS AND PIPING TO MEET SYSTEM DEMAND.
- IF SITE ALLOWS, INSTALL A FLOOR DRAIN IN THE BUILDING AND EMERGENCY SHOWER AND EYEWASH STATION CONNECTED TO EXISTING STORM OR SANITARY SEWER.
- DESIGN ENGINEER IS TO SIZE VENT LINE, EXHAUST FAN, HEATER, AND MISCELLANEOUS EQUIPMENT.
- NaOCl AND LAS SYSTEMS MUST BE CONTAINED IN SEPARATE ROOMS OR FRP BUILDINGS.
- NUMBER AND LOCATION OF CHEMICAL ANALYZERS WILL DEPEND ON TYPE OF ANALYZER SELECTED. ANALYZER MAY TEST FOR FREE AMMONIA ONLY, TOTAL CHLORINE ONLY, OR FREE AMMONIA AND TOTAL CHLORINE.

**NOTES:**

- PROVIDE SODIUM HYPOCHLORITE (BLEACH) EQUIPMENT PER TECHNICAL SPECIFICATION SECTION 11261- "SODIUM HYPOCHLORITE (BLEACH) CHLORINATION SYSTEM."
- PROVIDE LIQUID AMMONIUM SULFATE (LAS) EQUIPMENT PER TECHNICAL SPECIFICATION SECTION 11262- "LIQUID AMMONIUM SULFATE (LAS) SYSTEM."
- PROVIDE CHLORINE ANALYZERS PER TECHNICAL SPECIFICATION SECTION 11301- "CHLORINE ANALYZERS" OR PER TECHNICAL SPECIFICATION SECTION 11303- "CHEMICAL ANALYZERS."
- PROVIDE AMMONIA ANALYZERS PER TECHNICAL SPECIFICATION SECTION 11302- "AMMONIA ANALYZERS" OR PER TECHNICAL SPECIFICATION SECTION 11303- "CHEMICAL ANALYZERS."
- PROVIDE EMERGENCY EYEWASH AND SHOWER EQUIPMENT PER TECHNICAL SPECIFICATION SECTION 11700- "EMERGENCY EYEWASH AND SHOWER EQUIPMENT."
- PROVIDE CHEMICAL STORAGE TANKS AND EQUIPMENT PER TECHNICAL SPECIFICATION SECTION 13202- "POLYETHYLENE CHEMICAL STORAGE TANKS."
- PROVIDE CHEMICAL PIPING PER TECHNICAL SPECIFICATION SECTION 15100- "CHEMICAL PIPING."
- PROVIDE A BELLOWS TRANSITION FITTING OR APPROVED EQUAL ON ALL FITTINGS BELOW THE LIQUID LEVEL AS CALLED FOR IN TECHNICAL SPECIFICATION SECTION 13202 - "POLYETHYLENE CHEMICAL STORAGE TANKS".

**North Harris County  
REGIONAL WATER  
Authority**

TYPICAL SODIUM  
HYPOCHLORITE & LIQUID  
AMMONIA SULFATE ROOM  
LAYOUT

APPROVED BY: *Shanabgini*  
DESIGN MANAGER

EFF. DATE: 12/22/2020      REF. NO. 81