23 09 93.10 – HVAC Control Schematics

1. Introduction

   A. The HVAC Control Schematics in this guideline are commonly used by Duke University. They are being provided as a preferred design base reference. They are not meant to be used as the only permitted control schematics. Exceptions for the HVAC systems other than those provided in the guideline may be allowed with Duke FMD approval.

   B. The guideline depicts Duke preferred system layouts and along with locations of typical control instruments, sensors, dampers, system safeties, etc.

   C. References: Duke University Construction Standards, Section 25 95 00 Integrated Automation Control Sequence for HVAC.

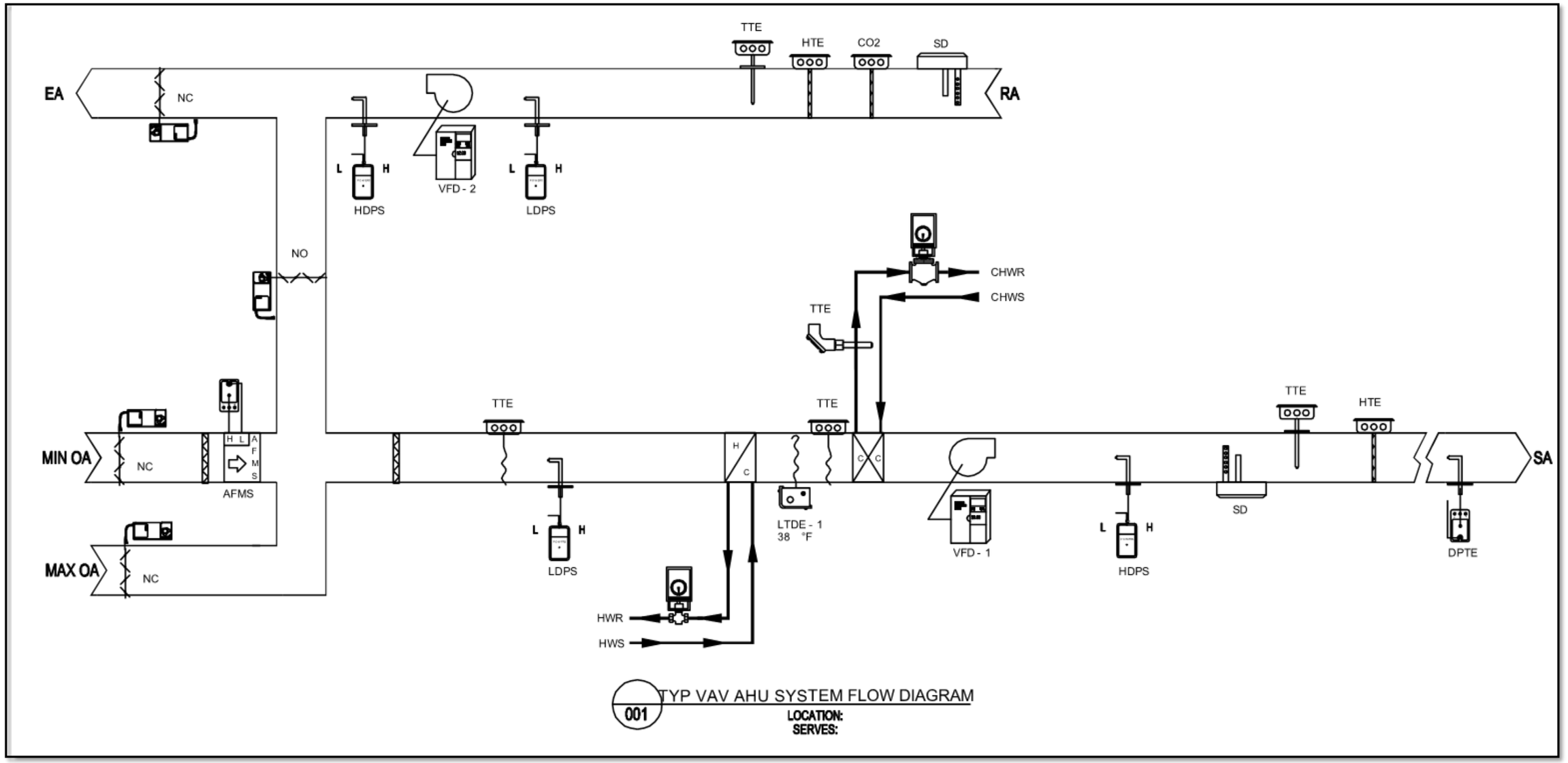
2. Index

3. HVAC System Control Schematics

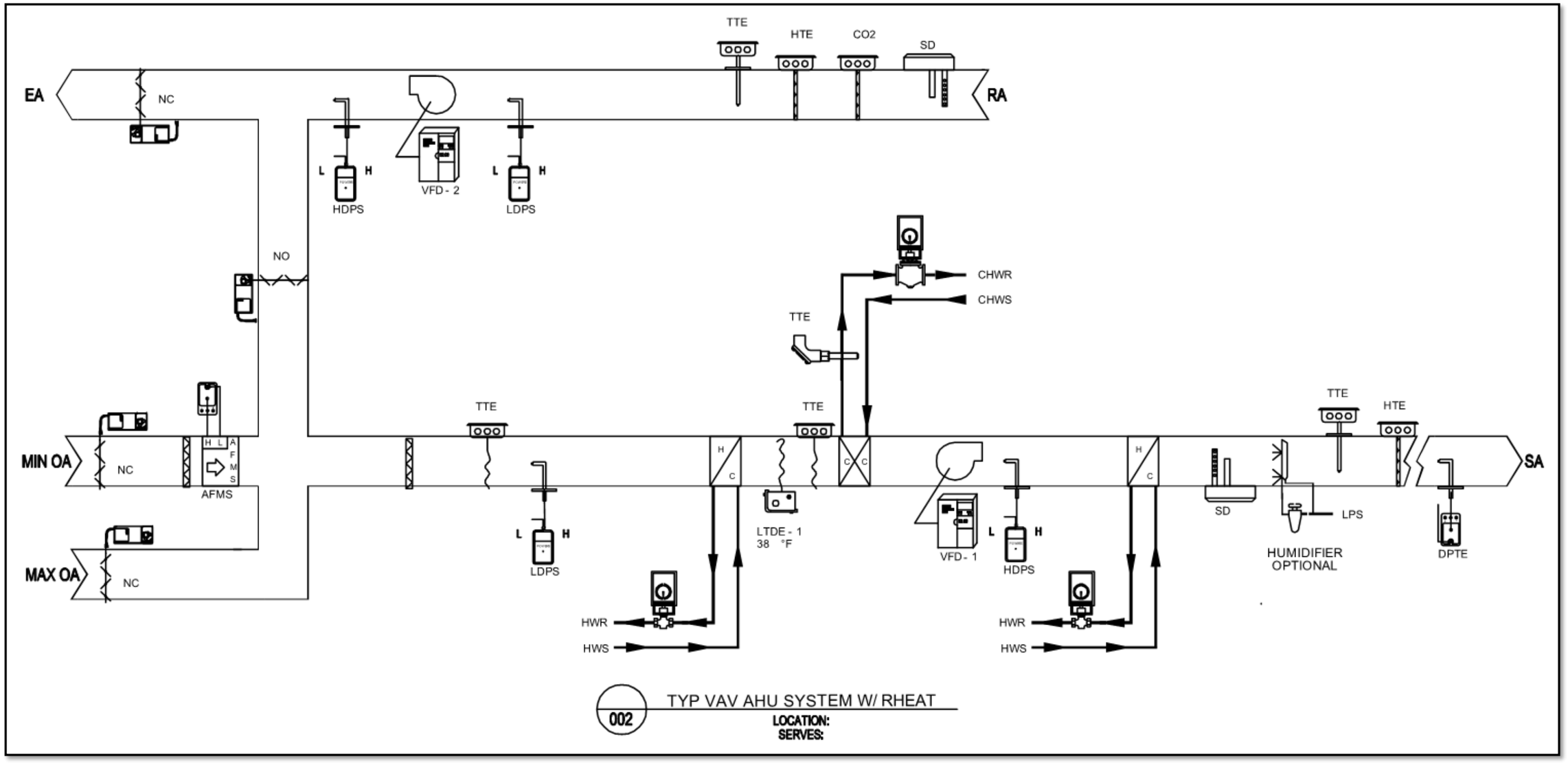
Note: Refer to below diagrams

HVAC System Control Schematics Legend			
Symbol	Description	Symbol	Description
TTE	Temperature Transmitter	SD	Ductwork Smoke Detector
HTE	Humidity Transmitter	CO2	Carbon Dioxide Sensor
LTDE	Low Temperature Device	AFMS	Airflow Monitor Station
LDPS	Low Differential Pressure Switch	VFD	Variable Frequency Drive
HDPS	High Differential Pressure Switch	DPTE	Differential Pressure Transmitter

A. Typical VAV Air Handling Unit



B. Typical VAV Air Handling Unit with Reheat But No Heat Recovery



C. Typical 100% Outside Air Handling Unit