

April 29, 2024

pile cap supported by fifteen (15) concrete piles per support frame. The concrete piles for duct support steel are also estimated to be of 18" diameter concrete extending approximately 60' below grade.

The conceptual design, layout, and material quantities for the fabric filter are developed per the plan and elevation views of the component provided within the vendor (SEI-Group) quote. The proposed structural layout plan and elevation views for the fabric filter structure are shown in drawings SKS001 and SKS002 respectively. The fabric filter buildings are located in the available space towards the South of the units. It is assumed that inlet branch lines are added to the existing flue duct at the elbows upstream of the stack for each unit at the existing elevations. The outlet from the fabric filter structures would branch into the existing flue gas ducts just upstream of the reducers and prior to the main lines entering the stack.

The structural estimate includes the material quantities for the gas flue ductwork, duct support steel, steel, foundation concrete, and concrete reinforcement. The fabric filter building steel quantities are included in the vendor cost estimate and hence not included here. The ductwork quantities are developed based on the lengths calculated in the conceptual layout and the perimeter for the assumed duct cross section. The calculated surface area is then multiplied by an estimated weight per square footage value which is a proprietary metric developed based on experiential data from multiple past projects to develop the total tonnage of gas flue duct steel. The ductwork is assumed to be supported by support steel frames that are approximately 126' in height. The total length of the ductwork is multiplied by an estimated weight per cubic foot value which is a proprietary metric developed based on experiential data from multiple past projects to develop the total tonnage of support steel below the ductwork.

The foundation is assumed to be constructed using reinforced concrete spread footings on piles. The fabric filter building foundation is assumed to consist of spread footings on piles. Each spread footing consists of a pedestal and pile cap with five (5) piles per footing. The piles are estimated to be of 18" diameter concrete extending approximately 60' below grade. The foundation for the duct supports is estimated to be a 5' pile cap supported by fifteen (15) concrete piles per support frame. The concrete piles for duct support steel are also estimated to be of 18" diameter concrete extending approximately 60' below grade.

5.1.2.4 Mechanical

Both the ESP and fabric filter options include 2x100% air compressors per unit and a single receiver per unit. The size of the air compressors are much larger in the fabric filter option. Air piping has been