SKYLINE
ENGINEERING LLC

Billion Kia Auto Retail

Due to the original dealership being destroyed by fire, this auto retail store re-build was delivered as a fast-track design-build project featuring a new showroom and a new service shop, designed to Kia franchise Standards. The 30,000 SF two-story facility includes office spaces, a parts department, vehicle receiving and delivery, sales and consult rooms, training room, lounge & break rooms, data/records, lockers, restrooms and other support spaces. The drive-through service bay features include high-speed doors, service convenience outlets for various service systems including a pressure wash system.
(2012 - $4,000,000)

Project Data

Owner
Billion Kia

Location
Rapid City, SD

Building Type
Auto Retail and Service

Building Area
30,000 square feet

Mechanical Systems / Features
High Efficiency Packaged Rooftop Units
Infloor Radiant Heat
High Efficiency Boilers
Underfloor Vehicle Exhaust System
Demand Control Shop Ventilation
Domestic Water Distribution
Air Compressor Room Ventilation
Vehicle Power Wash System
Wet & Dry Fire Suppression

Electrical Systems / Features
High Efficiency Lighting
Interior/Exterior Lighting Controls
208V, 3-Phase, 600 Power Service
Security Infrastructure
Telecommunications Connectivity
Addressable Fire Alarm System

Construction Cost
Approx $4,000,000

Completion Date
2012

Mechanical Engineering

Mechanical HVAC system utilized high efficiency packaged roof top units for the office areas, showroom and vehicle pickup/dropoff areas heating and cooling loads. High efficiency, condensing boilers were incorporated for the infloor heating system in the maintenance/shop area as well as the service drop off bay. A modulation demand control was employed for the maintenance bay ventilation requirements, including variable speed exhaust and makeup air units. The maintenance bay included a distributed underfloor vehicle exhaust system that can accommodate ten vehicles simultaneously. Variable speed ventilation satisfies the rejected heat load of the air compressor room. In addition, a gas fired, vehicle power wash system with associated drainage and water recovery was used.

Electrical Engineering

The electrical engineering included new site lighting for auto retail and all interior and exterior lighting selection and design. Lighting controls facilitated minimal interior and exterior lighting for security and lighting contactors for ease of use. Exterior lighting modeling encouraged the owner to step away from the old Kia standards and greatly improved their “exterior showroom”.

Power for this new facility was provide by a single 600 amp, 208V, 3 phase service. No emergency power source was desired.

Systems design included data/tele communications systems wiring and connectivity, infrastructure for access and intrusion security systems, and an addressable fire detection system.