

PART 1 - GENERAL**1.1 SUMMARY**

- A. Provide packaged diesel engine generator system.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Operation and Maintenance Data: Submit manufacturer's operation and maintenance data, including operating instructions, list of spare parts and maintenance schedule.

1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Compliance: NFPA 110.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Packaged Engine Generator System Characteristics:
 - 1. Ratings: Voltage, frequency, and power output ratings suitable for use.
 - 2. Maximum Transfer Time to Assume Full Load: Suitable for service.
 - 3. Fuel Supply: 48 hours of operation.
 - 4. Type: Standby-rated automatically started diesel engine coupled to an AC generator unit.
 - 5. Type: Standby-rated manually started diesel engine coupled to an AC generator unit.
- B. Packaged Engine Generator System Components:
 - 1. Engine: NFPA 37.
 - 2. Engine Fuel: Diesel fuel oil grade DF-2.
 - 3. Cooling System: Closed-loop, liquid-cooled, radiator mounted on generator set base.
 - 4. Fuel Supply System: NFPA 30, 37; day tank, redundant high-level fuel shutoff, fuel piping and storage tank.
 - 5. Engine Exhaust System: Muffler type suitable for use.
 - 6. Combustion Air-Intake System: Filter type air intake silencer, intake duct and connections.
 - 7. Starting System: Electric with negative ground.
 - 8. Control and Monitoring: Operating and safety indications, protective devices, basic system controls, engine gages.
 - 9. Generator, Exciter, and Voltage Regulator: NEMA MG 1, direct drive.
 - 10. Load Bank: Permanent outdoor, remotely controlled, forced-air cooled, resistive/reactive unit.
 - 11. Outdoor Generator Set Enclosure: Weatherproof steel housing, louvers, dampers.
 - 12. Transfer Switches: Manual 3-pole, applicable to service required.

13. Transfer Switches: Manual 4-pole, applicable to service required.
14. Transfer Switches: Automatic 3-pole, applicable to service required.
15. Transfer Switches: Automatic 4-pole, applicable to service required.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials in proper relation with adjacent construction and with uniform appearance for exposed work. Coordinate with work of other sections. Comply with applicable regulations and code requirements. Provide proper clearances for servicing.
- B. Maintain indicated fire ratings of walls, partitions, ceilings and floors at penetrations. Seal with firestopping to maintain fire rating.
- C. Clearly label and tag all components.
- D. Test and balance all systems for proper operation.
- E. Restore damaged finishes. Clean and protect work from damage.
- F. Instruct Owner's personnel in proper operation of systems.

END OF SECTION