

SECTION 015000 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

Latest Update: 08-09-2020 See Underlined Text for Edits.

(A/E shall edit specifications and blue text in header to meet project requirements. This includes but is not limited to updating Equipment and/or Material Model Numbers indicated in the specifications and adding any additional specifications that may be required by the project. Also turn off all “Under Lines”)

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection. **<EDIT FOR PARTICULAR PROJECT>**
- B. Temporary utilities include, but are not limited to, the following: **<EDIT FOR PARTICULAR PROJECT>**
1. Water service and distribution.
 2. Temporary electric power and light.
 3. Temporary heat.
 4. Ventilation.
 5. Telephone service.
 6. Sanitary facilities, including drinking water.
 7. Storm and sanitary sewer.
- C. Support facilities include, but are not limited to, the following: **<EDIT FOR PARTICULAR PROJECT>**
1. Field offices and storage sheds.
 2. Temporary roads and paving.
 3. Dewatering facilities and drains.
 4. Temporary enclosures.
 5. Hoists and temporary elevator use.
 6. Temporary project identification signs and bulletin boards.
 7. Waste disposal services.
 8. Rodent and pest control.
 9. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities include, but are not limited to, the following: **<EDIT FOR PARTICULAR PROJECT>**
1. Temporary fire protection.

2. Barricades, warning signs, and lights.
3. Sidewalk bridge or enclosure fence for the site.
4. Environmental protection.

1.3 SUBMITTALS

- A. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Within fifteen (15) days of the date established for commencement of the Work, submit a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 1. Building code requirements.
 2. Health and safety regulations.
 3. Utility company regulations.
 4. Police, fire department, and rescue squad rules.
 5. Environmental protection regulations.
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
 1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the University, change over from use of temporary service to use of permanent service.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 – PRODUCTS

2.1 MATERIALS **<EDIT MATERIALS REQUIRED FOR PARTICULAR PROJECT, DEPENDING ON TYPE OF TEMPORARY CONSTRUCTION>**

- A. General: Provide new materials. If acceptable to the University, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended. **<COORDINATION WITH OTHER SECTIONS.>**
- B. Lumber and Plywood: **<EDIT LIST FOR PARTICULAR PROJECT.>**
1. For job-built temporary offices, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.
 2. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sizes and thicknesses indicated.
 3. For fences and vision barriers, provide minimum three eighths (3/8) inch- (9.5-mm-) thick exterior plywood.
 4. For safety barriers, sidewalk bridges, and similar uses, provide minimum five eighths (5/8) inch- (16-mm-) thick exterior plywood.
- C. Gypsum Wallboard: Provide gypsum wallboard on interior walls of temporary offices.
- D. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary offices, shops, and sheds.
- E. Paint: **<EDIT LIST FOR PARTICULAR PROJECT.>**
1. For job-built temporary offices, shops, sheds, fences, and other exposed surfaces and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.
 2. For sign panels and applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer.
 3. For interior walls of temporary offices, provide two (2) coats interior latex-flat wall paint.
- F. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of fifteen (15) or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- G. Water: Provide potable water approved by local health authorities.
- H. Open-Mesh Fencing: Provide 0.120-inch- (3-mm-) thick, galvanized two (2) inch (50-mm) chain link fabric fencing six (6) feet (2 m) high with galvanized barbed-wire top strand and galvanized steel pipe posts, one and one half (1-1/2) inches (38 mm) I.D. for line posts and two and one half (2-1/2) inches (64 mm) I.D. for corner posts.

2.2 EQUIPMENT **<EDIT EQUIPMENT REQUIRED FOR PARTICULAR PROJECT, DEPENDING ON TYPE OF TEMPORARY FACILITY>**

- A. General: Provide new equipment. If acceptable to the University, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
- B. Water Hoses: Provide three quarter (3/4) inch (19-mm), heavy-duty, abrasion-resistant, flexible rubber hoses one hundred (100) feet (30 m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
- G. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- H. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- I. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION **<EDIT UTILITIES REQUIRED FOR PARTICULAR PROJECT, DEPENDING ON TYPE OF TEMPORARY FACILITY>**

- A. General: Coordinate with the University Operations and Maintenance Personnel to install temporary service or connect to existing service. Provide all necessary labor, materials and equipment for connections.
 - 1. Coordinate with the University for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
 - 3. Obtain easements to bring temporary utilities to the site where the University's easements cannot be used for that purpose.
 - 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the University. The University will not accept cost or use charges as a basis of claims for Change Orders.
- B. Water Service: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.
 - 1. Sterilization: Sterilize temporary water piping prior to use.
- C. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, and main distribution switch gear.
 - 1. Install electric power service underground, except where overhead service must be used.
 - 2. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.
- D. Temporary Lighting: When overhead floor or roof deck has been installed, provide temporary lighting with local switching.

1. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
- E. Temporary Heat: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
- F. Heating Facilities: Except where the University authorizes use of the permanent system, provide vented, self-contained, LP-gas or fuel-oil heaters with individual space thermostatic control.
 1. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.
- G. Temporary Telephones: Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office and first-aid station.
 1. Separate Telephone Lines: Provide additional telephone lines for the following:
 - a. Where an office has more than two (2) occupants, install a telephone for each additional occupant or pair of occupants.
 - b. Provide a dedicated telephone line for a fax machine in the field office.
 - c. Provide a separate line for the University's use.
 2. At each telephone, post a list of important telephone numbers.
- H. Sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
 1. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.
- I. Toilets: **<EDITOR TO OBTAIN APPROVAL FROM UMB>** Use of the University's existing toilet facilities will be permitted, so long as facilities are cleaned and maintained in a condition acceptable to the University. At Substantial Completion, restore these facilities to the condition prevalent at the time of initial use.
- J. Toilets: **<EDITOR TO OBTAIN APPROVAL FROM UMB>** Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.
 1. Provide separate facilities for male and female personnel.

- K. Wash Facilities: **<EDIT FOR PARTICULAR PROJECT>** Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition.
1. Provide safety showers, eyewash fountains, and similar facilities for convenience, safety, and sanitation of personnel.
- L. Sewers and Drainage: Provide temporary connections to remove effluent that can be discharged lawfully. If drainage facilities cannot be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.
1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 2. Connect temporary sewers to the municipal system, as directed by Baltimore City sewer department officials.
 3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.
- M. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.
- 3.3 SUPPORT FACILITIES INSTALLATION **<COORDINATE WITH UMB TO DESIGNATE STAGING AREA AND AREA FOR FIELD OFFICES, ETC.>**
- A. Locate field offices, storage sheds, and other temporary construction and support facilities for easy access. **<EDIT FOR PARTICULAR PROJECT>**
1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the University.
- B. Provide incombustible construction for offices, shops, and sheds **<EDIT FOR PARTICULAR PROJECT>** located within the construction area or within 30 feet (9 m) of building lines. Comply with requirements of NFPA 241.
- C. Field Offices: **<EXCLUDE WHEN FIELD OFFICE NOT PROVIDED>** Provide insulated, weather tight temporary offices of sufficient size to accommodate required office personnel at the Project Site. Keep the office clean and orderly for use for small progress meetings. Furnish and equip offices as follows:
1. Furnish with a desk and chairs, a four (4) drawer file cabinet, plan table, plan rack, and a six (6) shelf bookcase.

2. Equip with a water cooler and include a table and chairs for progress meetings, private toilet complete with water closet, lavatory, and medicine cabinet unit with a mirror.
- D. Storage and Fabrication Trailers: **<EXCLUDE WHEN STORAGE TRAILERS NOT PROVIDED>** Install storage and fabrication trailers sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service.
- E. Temporary Paving: **<EDIT FOR PARTICULAR PROJECT>** Construct and maintain temporary roads and paving to support the indicated loading adequately and to withstand exposure to traffic during the construction period. Locate temporary paving for roads, storage areas, and parking where the same permanent facilities will be located. Review proposed modifications to permanent paving with the University.
1. Paving: Comply with Division 2 Section "Hot-Mixed Asphalt Paving" for construction and maintenance of temporary paving. **<COORDINATE WITH DIVISION 2>**
 2. Coordinate temporary paving development with sub grade grading, compaction, installation and stabilization of sub base, and installation of base and finish courses of permanent paving.
 3. Install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas without damage or deterioration when occupied by the University.
 4. Delay installation of the final course of permanent asphalt concrete paving until immediately before Substantial Completion. Coordinate with weather conditions to avoid unsatisfactory results.
 5. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.
- F. Dewatering Facilities and Drains: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 2 Sections. **<COORDINATE WITH DIVISION 2>** Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.
- G. Temporary Enclosures: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of twenty five (25) sq. ft. (2.3 sq. m) or less with plywood or similar materials.
 3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 4. Where temporary wood or plywood enclosure exceeds one hundred (100) sq. ft. (9.2 sq. m) in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.
- H. Temporary Lifts and Hoists: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- I. Temporary Elevator Use: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** Refer to Architectural Specifications for elevators. **<COORDINATE WITH DIVISION 14>**
- J. Project Identification and Temporary Signs: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
1. Project Identification Signs: Engage an experienced sign painter to apply graphics. Comply with details indicated.
 2. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
- K. Temporary Exterior Lighting: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** Install exterior yard and sign lights so signs are visible when Work is being performed.
- L. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80°F (27°C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.
- M. Rodent and Pest Control: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at

Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

- N. Stairs: **<DELETE IF NOT REQUIRED FOR PARTICULAR PROJECT>** Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished, permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the University.
- B. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell. Store combustible materials in containers in fire-safe locations.
 2. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Smoking is not permitted anywhere on project sites.
 3. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- C. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
- D. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- E. Enclosure Fence: Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.
- <EDITOR TO SELECT ONE OF THESE>**
1. Provide open-mesh, chain link fencing with posts set in a compacted mixture of gravel and earth.

2. Provide plywood fence, eight (8) feet (2.5 m) high, framed with four (4) 2 x 4-inch (50-by-100-mm) rails, and preservative-treated wood posts spaced not more than eight (8) feet (2.5 m) apart.
- F. Covered Walkway: Erect a structurally adequate, protective covered walkway for passage of persons along the adjacent public street. Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction.
1. Construct covered walkways using scaffold or shoring framing. Provide wood plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage. Extend the back wall beyond the structure to complete the enclosure fence. Paint and maintain in a manner acceptable to the University.
- G. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- H. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a twenty four (24) hour basis where required to achieve indicated results and to avoid possibility of damage.
 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal: Unless the University requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary,

restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are the Contractor's property. The University reserves the right to take possession of project identification signs.
2. Remove temporary paving not intended for or acceptable for in the University's opinion, integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority.
3. At Substantial Completion, clean and renovate permanent facilities used during the construction period including, but not limited to, the following:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION 015000