

| Section No. | Section Title | Issue Date | Section Description |
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|-------------|---------------|------------|---------------------|

### DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

|        |  |       |   |
|--------|--|-------|---|
| 000101 | Project Title Page   | 03/17 | Project Manual title page.  |
| 000107 | Seals Page   | 02/12 | For seals of design professionals on Project Manual.                |
| 000115 | List of Drawing Sheets                                       | 08/10 | List of Drawings.   |
| 000120 | List of Schedules  | 08/10 | For a list of separately bound schedules.                           |
| 001113 | Advertisement for Bids                                       | 08/10 | For use on public projects.   |
| 001115 | Advertisement for Prequalification of Bidders                | 08/10 | For use on public projects.   |
| 001116 | Invitation to Bid  | 08/10 | For use on private projects.  |
| 001153 | Request for Qualifications                                   | 02/12 | For use on public projects.   |
| 002113 | Instructions to Bidders                                      | 08/10 | Incorporates AIA A701 by reference.                                 |
| 002213 | Supplementary Instructions to Bidders                        | 08/10 | For use with AIA A701.  |
| 002513 | Prebid Meetings  | 08/10 | Sets date, time, place, and terms for prebid meetings.              |
| 002600 | Procurement Substitution Procedures                          | 08/10 | Substitution procedures during bidding.                             |
| 003113 | Preliminary Schedules  | 09/16 | Preliminary schedules.  |
| 003119 | Existing Condition Information                               | 08/10 | References documents for survey and as-built information.           |
| 003126 | Existing Hazardous Material Information                      | 08/10 | References documents for existing hazardous materials.              |
| 003132 | Geotechnical Data  | 06/17 | References documents for geotechnical data.                         |
| 003143 | Permit Application   | 08/10 | Indicates responsibility for building permit application.           |
| 004113 | Bid Form - Stipulated Sum (Single-Prime Contract)            | 02/12 | Fixed price, single prime.  |
| 004116 | Bid Form - Stipulated Sum (Multiple-Prime Contract)          | 02/12 | Fixed price, multiple prime.  |
| 004123 | Bid Form - Construction Management (Single-Prime Contract)   | 02/12 | Fixed price, construction management, single prime.                 |
| 004126 | Bid Form - Construction Management (Multiple-Prime Contract) | 02/12 | Fixed price, construction management, multiple prime.               |
| 004133 | Bid Form - Cost-Plus-Fee (Single-Prime Contract)             | 02/12 | Cost plus, with or without guaranteed maximum.                      |
| 004313 | Bid Security Forms   | 08/10 | References AIA A310.  |
| 004321 | Allowance Form   | 02/12 | Attachment for Bid Form.  |
| 004322 | Unit Prices Form   | 02/12 | Attachment for Bid Form.  |
| 004323 | Alternates Form  | 02/12 | Attachment for Bid Form.  |
| 004373 | Proposed Schedule of Values Form                             | 08/10 | Attachment for Bid Form.  |
| 004393 | Bid Submittal Checklist                                      | 02/12 | Attachment for Bid Form.  |
| 005100 | Notice of Award  | 02/12 | For notifying successful bidder.                                    |
| 006000 | Project Forms  | 03/17 | References Agreement, General Conditions, and administrative forms. |
| 009113 | Addenda  | 02/12 | For notifying bidders of changes.                                   |

### DIVISION 01 - GENERAL REQUIREMENTS

|        |                           |       |  |
|--------|---------------------------|-------|--|
| 010000 | General Requirements      | 09/15 | Evaluations: Role of Division 1 Sections, their preparation and coordination.  |
| 011000 | Summary                   | 09/15 | Summary of the Work, phased construction, purchase contracts, Owner-furnished products, access to site, and work restrictions. |
| 011200 | Multiple Contract Summary | 09/15 | Responsibilities of each contract for the Work, coordination, and temporary facilities and controls.                           |
| 012100 | Allowances                | 09/15 | Provisions for cash allowances including lump-sum, unit cost, contingency, and testing and inspecting allowances.              |

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| 012200      | Unit Prices  | 09/15      | Provisions for unit prices.  |
| 012300      | Alternates   | 09/15      | Provisions for change-of-scope and cost-comparison type alternates.  |
| 012500      | Substitution Procedures  | 09/15      | Procedural requirements for requests for substitutions during construction.  |
| 012600      | Contract Modification Procedures   | 09/15      | Procedural requirements for changes to the Contract.   |
| 012900      | Payment Procedures   | 09/15      | Administrative requirements for Contractor's Applications for Payment.   |
| 013100      | Project Management and Coordination  | 09/15      | Administrative requirements for project meetings; preconstruction, preinstallation, and project closeout conferences; RFIs; and project Web sites. |
| 013200      | Construction Progress Documentation  | 09/15      | Contractor's Construction Schedule including Gantt charts and CPM schedules; and web-based project software.                                       |
| 013233      | Photographic Documentation   | 09/15      | Construction photographs, video recordings, and web-based photographic documentation.  |
| 013300      | Submittal Procedures   | 09/15      | Procedures for Action and Informational Submittals including Delegated-Design Submittals and Submittals Schedule.                                  |
| 013516      | Alteration Project Procedures  | 06/13      | General protection and work procedures for remodeling, renovation, repair, and maintenance work.   |
| 014000      | Quality Requirements   | 09/15      | Quality-assurance and -control requirements, special tests and inspections, and Contractor's quality-control plan.                                 |
| 014200      | References   | 03/17      | Common definitions and terms; and acronyms and trade names of associations, government agencies, and other entities referenced in MasterSpec.      |
| U 015000    | Temporary Facilities and Controls  | 09/17      | Temporary utilities and facilities for construction support, security, and protection.   |
| 016000      | Product Requirements   | 09/15      | Administrative and procedural requirements for product, material, and equipment selection and handling; warranties; and comparable products.       |
| 017300      | Execution  | 09/15      | General requirements for product installation, cutting and patching, protection, field engineering, and progress cleaning.                         |
| 017419      | Construction Waste Management and Disposal   | 09/16      | Salvaging, recycling, and disposing of non-hazardous demolition and construction waste.  |
| 017700      | Closeout Procedures  | 03/17      | Contract closeout including Substantial Completion and Final Completion procedures, warranties, and final cleaning.                                |
| 017823      | Operation and Maintenance Data   | 09/15      | Emergency, operation, and maintenance manuals for products and equipment.  |
| 017839      | Project Record Documents   | 09/15      | Record record Drawings, Specifications, and Product Data.  |
| 017900      | Demonstration and Training   | 09/15      | Administrative and procedural requirements for instructing Owner's personnel in operation and maintenance.   |
| 018113.13   | Sustainable Design Requirements - LEED 2009 for New Construction and Major Renovations | 03/17      | General requirements and procedures for LEED 2009 for New Construction and Major Renovations.  |
| 018113.14   | Sustainable Design Requirements - LEED v4 BD+C   | 03/17      | General requirements and procedures for LEED v4 BD+C.  |
| 018113.16   | Sustainable Design Requirements - LEED 2009 for Commercial Interiors                   | 03/17      | General requirements and procedures for LEED 2009 for Commercial Interiors.  |
| 018113.17   | Sustainable Design Requirements - LEED v4 ID+C   | 03/17      | General requirements and procedures for LEED v4 ID+C.  |
| 018113.19   | Sustainable Design Requirements - LEED 2009 for Core and Shell Development             | 03/17      | General requirements and procedures for LEED 2009 for Core and Shell Development.  |
| 018113.23   | Sustainable Design Requirements - LEED 2009 for Schools                                | 03/17      | General requirements and procedures for LEED 2009 for Schools.   |

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|-------------|--|------------|---|
| 018113.33   | Sustainable Design Requirements - IgCC         | 06/14      | General requirements and procedures for IgCC.         |
| 018113.43   | Sustainable Design Requirements - ASHRAE 189.1 | 06/14      | General requirements and procedures for ASHRAE 189.1. |
| 018113.53   | Sustainable Design Requirements - Green Globes | 06/14      | General requirements and procedures for Green Globes. |

### DIVISION 02 - EXISTING CONDITIONS

|        |                      |       |  |
|--------|----------------------|-------|--|
| 024116 | Structure Demolition | 12/13 | Demolition of existing buildings, structures, and associated site improvements.                      |
| 024119 | Selective Demolition | 06/14 | Demolition of selected portions of existing buildings, structures, and associated site improvements. |

### DIVISION 03 - CONCRETE

|        |                                      |       |  |
|--------|--------------------------------------|-------|--|
| 033000 | Cast-In-Place Concrete               | 06/17 | General building and structural applications; concrete mixtures, formwork, reinforcing, finishing, and curing. |
| 033053 | Miscellaneous Cast-In-Place Concrete | 06/17 | Cast-in-place concrete for limited applications.   |

### DIVISION 05 - METALS

|        |                         |       |   |
|--------|-------------------------|-------|---|
| 055000 | Metal Fabrications      | 12/16 | Metal items (not sheet metal) made from iron and steel shapes, stainless steel, and non-ferrous metals. |
| 055313 | Bar Gratings            | 06/14 | Metal bar gratings and frames.  |
| 055316 | Plank Gratings          | 06/14 | Metal plank gratings and frames.  |
| 055319 | Expanded Metal Gratings | 06/14 | Expanded metal gratings and frames.   |
| 057100 | Decorative Metal Stairs | 03/17 | Architectural steel stairs.   |

### DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

|        |                                |       |  |
|--------|--------------------------------|-------|--|
| 061000 | Rough Carpentry                | 12/16 | Wood framing, furring, frounds, nailers, and blocking.       |
| 061053 | Miscellaneous Rough Carpentry  | 03/17 | Minor wood framing, furring, grounds, nailers, and blocking. |
| 067413 | Fiberglass Reinforced Gratings | 02/12 | Fiberglass bar gratings and frames.                          |

### DIVISION 07 - THERMAL AND MOISTURE PROTECTION

|        |                               |       |  |
|--------|-------------------------------|-------|--|
| 076200 | Sheet Metal Flashing and Trim | 09/14 | Custom-fabricated roof and wall flashings and roof-drainage systems, and manufactured through-wall flashing and reglets.                               |
| 077200 | Roof Accessories              | 12/16 | Roof curbs, equipment supports, roof hatches, heat and smoke vents, gravity ventilators, pipe supports, roof walkways, and preformed flashing sleeves. |
| 078413 | Penetration Firestopping      | 06/14 | Systems installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers.   |
| 079200 | Joint Sealants                | 06/14 | Elastomeric joint sealants including, silicone, urethane, STPE, polysulfide, butyl, and latex.   |

### DIVISION 08 - OPENINGS

|           |                                     |       |  |
|-----------|-------------------------------------|-------|--|
| 083113    | Access Doors and Frames             | 03/14 | Wall and ceiling units.  |
| 083113.53 | Security Access Doors and Frames    | 03/14 | Medium-, high-, and maximum-security units for walls and ceilings.           |
| 083473.13 | Metal Sound Control Door Assemblies | 11/11 | Assemblies consisting of steel doors, steel frames, and sound control seals. |

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| Section No. | Section Title                      | Issue Date | Section Description   |
|-------------|------------------------------------|------------|---|
| 083473.16   | Wood Sound Control Door Assemblies | 06/14      | Assemblies consisting of wood doors, steel frames, and sound control seals. |
| 089116      | Operable Wall Louvers              | 09/16      | Operable (adjustable) metal louvers including those with insulated blades.  |
| 089119      | Fixed Louvers                      | 09/16      | Fixed metal louvers.  |

### DIVISION 09 - FINISHES

|        |                                     |       |  |
|--------|-------------------------------------|-------|--|
| 099113 | Exterior Painting                   | 06/17 | Exterior painting.   |
| 099123 | Interior Painting                   | 03/17 | Interior painting.   |
| 099600 | High-Performance Coatings           | 09/14 | Tile-like coatings for use on exterior and interior substrates.      |
| 099633 | High-Temperature-Resistant Coatings | 06/14 | Heat-resistant coatings for use on exterior and interior substrates. |

### DIVISION 10 - SPECIALTIES

|        |                          |       |   |
|--------|--------------------------|-------|---|
| 104413 | Fire Protection Cabinets | 06/17 | Fire-protection cabinets and security fire-protection cabinets. |
| 104416 | Fire Extinguishers       | 06/17 | Portable and wheeled fire extinguishers.                        |

### DIVISION 11 - EQUIPMENT

|        |                       |       |   |
|--------|-----------------------|-------|---|
| 115313 | Laboratory Fume Hoods | 03/17 | Hoods and hood stands, including work tops. |
|--------|-----------------------|-------|---|

### DIVISION 21 - FIRE SUPPRESSION

|           |  |       |   |
|-----------|--|-------|---|
| 210513    | Common Motor Requirements for Fire Suppression Equipment                 | 09/16 | Universal default values for small and medium, ac motors.                                     |
| 210517    | Sleeves and Sleeve Seals for Fire-Suppression Piping                     | 09/16 | Sleeves and sleeve seals for piping at floor and wall penetrations.                           |
| 210518    | Escutcheons for Fire-Suppression Piping                                  | 09/16 | Escutcheons and floor plates for piping at ceiling, floor, and wall penetrations.             |
| 210523    | General-Duty Valves for Fire Protection Piping                           | 06/12 | Valves common to most fire-protection piping.   |
| 210529    | Hangers and Supports for Fire Suppression Piping and Equipment           | 03/17 | Single and multiple hangers, framing systems, and stands and supports.                        |
| 210533    | Heat Tracing for Fire-Suppression Piping                                 | 12/16 | Electric cables for freeze protection.  |
| 210548    | Vibration and Seismic Controls for Fire-Suppression Piping and Equipment | 09/11 | Vibration isolation devices and seismic restraints.   |
| 210548.13 | Vibration Controls for Fire-Suppression Piping and Equipment             | 09/11 | Vibration isolation devices.  |
| 210553    | Identification for Fire-Suppression Piping and Equipment                 | 12/12 | Labels, stencils, and tags.   |
| 210700    | Fire-Suppression Systems Insulation                                      | 03/15 | Equipment and pipe insulation.  |
| 211100    | Facility Fire-Suppression Water-Service Piping                           | 09/16 | Fire suppression piping and specialties outside the building.                                 |
| 211116    | Facility Fire Hydrants   | 06/12 | AWWA and UL listed dry- and wet-barrel fire hydrants.   |
| 211119    | Fire Department Connections  | 06/12 | Exposed-, flush-, and yard-type fire-department connections.                                  |
| 211200    | Fire-Suppression Standpipes  | 09/16 | Piping, specialties, valves, hose valves, and hose stations.                                  |
| 211213    | Fire-Suppression Hoses and Nozzles                                       | 06/12 | Hoses, reels, and racks for rack- and reel-type hose stations; and fire-suppression monitors. |
| 211313    | Wet-Pipe Sprinkler Systems   | 09/16 | Piping, specialties, valves, and sprinklers for wet-pipe sprinkler systems.                   |
| 211316    | Dry-Pipe Sprinkler Systems   | 09/16 | Piping, specialties, valves, and sprinklers for dry-pipe and preaction sprinkler systems.     |

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| Section No. | Section Title  | Issue Date | Section Description   |
|-------------|--|------------|---|
| 211339      | Foam-Water Systems                                       | 12/16      | Fixed, low-expansion, AFFF systems for flammable-liquid fires.  |
| 212113.13   | High-Pressure, Carbon-Dioxide Fire-Extinguishing Systems | 09/16      | Piping, fittings, and specialties for systems that deliver carbon dioxide for fire extinguishing and suppression. |
| 212113.16   | Low-Pressure, Carbon-Dioxide Fire-Extinguishing Systems  | 09/16      | Piping, fittings, and specialties for systems that deliver carbon dioxide for fire extinguishing and suppression. |
| 212200      | Clean-Agent Fire-Extinguishing Systems                   | 09/16      | Piping, containers, detection and alarms, and controls for clean-agent systems.                                   |
| 213113      | Electric-Drive, Centrifugal Fire Pumps                   | 12/16      | End-suction, in-line, and split-case fire pumps; accessories, specialties, and flowmeter systems.                 |
| 213116      | Diesel-Drive, Centrifugal Fire Pumps                     | 12/16      | End-suction, in-line, and split-case fire pumps; accessories, specialties, and flowmeter systems.                 |
| 213213      | Electric-Drive, Vertical-Turbine Fire Pumps              | 12/16      | Fire pumps, accessories, specialties, and flowmeter systems.  |
| 213216      | Diesel-Drive, Vertical-Turbine Fire Pumps                | 12/16      | Fire pumps, accessories, specialties, and flowmeter systems.  |
| 213413      | Pressure-Maintenance Pumps                               | 09/16      | Multistage, regenerative turbine, submersible, and vertical-turbine pumps; pump controllers.                      |

### DIVISION 22 - PLUMBING

|             |  |       |   |
|-------------|--|-------|---|
| 220513      | Common Motor Requirements for Plumbing Equipment                 | 09/16 | Universal default values for small and medium, ac motors.                                 |
| 220516      | Expansion Fittings and Loops for Plumbing Piping                 | 06/13 | Expansion joints and expansion-compensation devices for plumbing piping.                  |
| 220517      | Sleeves and Sleeve Seals for Plumbing Piping                     | 09/16 | Sleeves and sleeve seals for piping at floor and wall penetrations.                       |
| 220518      | Escutcheons for Plumbing Piping                                  | 09/16 | Escutcheons and floor plates for piping at ceiling, floor, and wall penetrations.         |
| 220519      | Meters and Gages for Plumbing Piping                             | 09/15 | Temperature, pressure, and flow.  |
| U 220523.12 | Ball Valves for Plumbing Piping                                  | 09/17 | Ball valves common to multiple systems.   |
| U 220523.13 | Butterfly Valves for Plumbing Piping                             | 09/17 | Butterfly valves common to multiple systems.  |
| U 220523.14 | Check Valves for Plumbing Piping                                 | 09/17 | Check valves common to multiple systems.  |
| U 220523.15 | Gate Valves for Plumbing Piping                                  | 09/17 | Gate valves common to multiple systems.   |
| 220529      | Hangers and Supports for Plumbing Piping and Equipment           | 03/17 | Single and multiple hangers, framing systems, and stands and supports.                    |
| 220533      | Heat Tracing for Plumbing Piping                                 | 03/10 | Electric cables for freeze protection, snow and ice melting, and temperature maintenance. |
| 220548      | Vibration and Seismic Controls for Plumbing Piping and Equipment | 09/11 | Vibration isolation devices and seismic restraints.                                       |
| 220548.13   | Vibration Controls for Plumbing Piping and Equipment             | 09/11 | Vibration isolation devices.  |
| 220553      | Identification for Plumbing Piping and Equipment                 | 03/13 | Labels, stencils, and tags.   |
| 220716      | Plumbing Equipment Insulation                                    | 03/15 | Insulation materials, jackets, and installation accessories for plumbing equipment.       |
| 220719      | Plumbing Piping Insulation                                       | 03/15 | Insulation materials, jackets, and installation accessories for plumbing piping.          |
| U 221113    | Facility Water Distribution Piping                               | 09/17 | Utility service, domestic, and fire-protection water, specialties, and valves.            |
| U 221116    | Domestic Water Piping  | 09/17 | Potable-water distribution within the building.   |
| 221117      | Gray-Water Piping  | 12/16 | Non-potable water piping.   |
| U 221119    | Domestic Water Piping Specialties                                | 09/17 | Specialties, valves, and fittings for domestic water piping.                              |
| U 221123.13 | Domestic-Water Packaged Booster Pumps                            | 09/17 | Water-pressure boosters, simplex and multi-plex; constant- and variable speed pumps.      |
| 221123.21   | Inline, Domestic-Water Pumps                                     | 12/16 | In-line separately coupled, close-coupled, centrifugal pumps.                             |

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|-------------|--|------------|--|
| 221216      | Facility Elevated, Potable-Water Storage Tanks         | 12/16      | Above-ground water storage.  |
| 221219      | Facility Ground-Mounted, Potable-Water Storage Tanks   | 12/16      | Surface-mounted water storage.   |
| 221313      | Facility Sanitary Sewers                               | 06/15      | Sanitary sewerage and underground structures outside the building.   |
| 221316      | Sanitary Waste and Vent Piping                         | 12/16      | Soil, waste, and vent piping within the building.  |
| 221319      | Sanitary Waste Piping Specialties                      | 12/16      | Backwater and air admittance valves, cleanouts, sanitary assemblies, FOG systems, and sanitary drainage specialties. |
| U 221319.13 | Sanitary Drains  | 09/17      | Floor and trench drains, and channel drain systems.  |
| 221323      | Sanitary Waste Interceptors                            | 12/16      | Grease, oil, and sand interceptors for sewerage systems outside the building.  |
| 221329      | Sanitary Sewerage Pumps                                | 03/17      | Effluent pumps; automatic, packaged; basins and covers.  |
| 221343      | Facility Packaged Sewage Pumping Stations              | 03/10      | Pump, compressor, tank, and controls.  |
| 221353      | Facility Septic Tanks                                  | 03/10      | Tank, distribution box, and drainage pipe.   |
| 221363      | Facility Gray-Water Storage Tanks                      | 03/15      | Above-ground gray-water storage.   |
| 221413      | Facility Storm Drainage Piping                         | 09/16      | Stormwater piping within the building.   |
| 221423      | Storm Drainage Piping Specialties                      | 09/16      | Roof drains, cleanouts, trench drains, channel drains, and piping specialties.                                       |
| 221429      | Sump Pumps   | 03/17      | Submersible, wet-pit volute, and package drainage-pump units; basins and covers.                                     |
| 221463      | Facility Storm-Water Retention Tanks                   | 03/15      | Above-ground storm-water storage.  |
| 221513      | General-Service Compressed-Air Piping                  | 12/12      | Nonmedical piping, equipment, and accessories.   |
| 221519      | General-Service Packaged Air Compressors and Receivers | 09/11      | Nonmedical air compressors, filters, and dryers.   |
| U 223100    | Domestic Water Softeners                               | 09/17      | Domestic and general use, not treatment.   |
| 223200      | Domestic Water Filtration Equipment                    | 09/13      | Separators; and bag, cartridge, carbon, sand, and greensand filters.   |
| 223300      | Electric, Domestic-Water Heaters                       | 12/16      | Household and commercial; tankless, instantaneous, and storage types.  |
| 223400      | Fuel-Fired, Domestic-Water Heaters                     | 03/15      | Household and commercial; gas and oil fired; instantaneous and storage types.  |
| 223500      | Domestic-Water Heat Exchangers                         | 06/16      | Steam and hot-water heat exchangers; instantaneous and storage types.  |
| 224100      | Residential Plumbing Fixtures                          | 03/15      | Residential water closets, lavatories, sinks, bathtubs, and shower receptors and basins.                             |
| U 224213.13 | Commercial Water Closets                               | 09/17      | Commercial water closets, supports, flushometer valves, and supplies.  |
| 224213.16   | Commercial Urinals                                     | 03/15      | Commercial urinals, supports, and flushometer valves.  |
| 224216.13   | Commercial Lavatories                                  | 03/17      | Commercial lavatories, supports, faucets, traps, and supplies.   |
| 224216.16   | Commercial Sinks                                       | 06/17      | Commercial sinks, supports, faucets, traps, and supplies.  |
| 224223      | Commercial Showers                                     | 03/15      | Shower receptors, basins, enclosures, faucets, and heads.  |
| 224233      | Wash Fountains   | 03/15      | Stone, metal, and plastic wash fountains.  |
| 224300      | Healthcare Plumbing Fixtures                           | 03/15      | Plumbing fixtures for healthcare facilities.   |
| 224500      | Emergency Plumbing Fixtures                            | 09/13      | Individual and combination emergency eyewash and shower units.   |
| 224600      | Security Plumbing Fixtures                             | 03/15      | Detention facility plumbing fixtures.  |
| 224713      | Drinking Fountains                                     | 03/15      | Pedestal, antifreeze pedestal, wheelchair accessible, wall mounted.  |
| 224716      | Pressure Water Coolers                                 | 03/16      | Freestanding, wall mounted, and wheelchair accessible.   |
| 224723      | Remote Water Coolers                                   | 03/15      | Remote water chillers.   |

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| 226113      | Compressed-Air Piping for Laboratory and Healthcare Facilities    | 09/16      | Piping for nonmedical laboratory air, medical air, dental air, instrument air, and medical laboratory air.                                     |
| 226119      | Compressed-Air Equipment for Laboratory and Healthcare Facilities | 09/11      | Compressors, filters, and dryers for laboratory and healthcare facilities.   |
| 226213      | Vacuum Piping for Laboratory and Healthcare Facilities            | 12/16      | Piping for laboratory vacuum, medical surgical vacuum, waste anesthetic gas, dental vacuum, oral evacuation, and healthcare laboratory vacuum. |
| 226219      | Vacuum Equipment for Laboratory and Healthcare Facilities         | 09/11      | Vacuum producers and accessories for laboratory and healthcare facilities.   |
| 226313      | Gas Piping for Laboratory and Healthcare Facilities               | 06/16      | Piping for CO <sub>2</sub> , helium, NO <sub>2</sub> , and O <sub>2</sub> .  |
| 226400      | Medical Gas Alarms  | 03/10      | Alarms for medical gas systems.  |
| 226600      | Chemical-Waste Systems for Laboratory and Healthcare Facilities   | 06/15      | Single- and double-wall piping and specialties, neutralization tanks, and leak detection.  |
| 226700      | Processed Water Systems for Laboratory and Healthcare Facilities  | 12/16      | Pipe, fittings, and specialties for deionized, distilled, and reverse osmosis water.   |

### DIVISION 23 - HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

|             |  |       |   |
|-------------|--|-------|---|
| 230130.52   | Existing HVAC Air Distribution System Cleaning     | 03/16 | Cleaning existing HVAC air-distribution equipment, ducts, plenums, air outlets and inlets, and duct accessories.                |
| 230513      | Common Motor Requirements for HVAC Equipment       | 09/16 | Universal default values for small and medium, ac motors.   |
| 230516      | Expansion Fittings and Loops for HVAC Piping       | 06/13 | Expansion joints and expansion-compensation devices for HVAC piping.  |
| 230517      | Sleeves and Sleeve Seals for HVAC Piping           | 06/16 | Sleeves and sleeve seals for piping at floor and wall penetrations.   |
| 230518      | Escutcheons for HVAC Piping                        | 09/16 | Escutcheons and floor plates for piping at ceiling, floor, and wall penetrations.   |
| 230519      | Meters and Gages for HVAC Piping                   | 09/15 | Temperature, pressure, and flow.  |
| 230523.11   | Globe Valves for HVAC Piping                       | 09/15 | Globe valves common to multiple systems.  |
| U 230523.12 | Ball Valves for HVAC Piping                        | 09/17 | Ball valves common to multiple systems.   |
| 230523.13   | Butterfly Valves for HVAC Piping                   | 09/15 | Butterfly valves common to multiple systems.  |
| 230523.14   | Check Valves for HVAC Piping                       | 09/15 | Check valves common to multiple systems.  |
| 230523.15   | Gate Valves for HVAC Piping                        | 09/15 | Gate valves common to multiple systems.   |
| 230523.16   | Plug Valves for HVAC Piping                        | 03/13 | Plug valves common to multiple systems.   |
| 230529      | Hangers and Supports for HVAC Piping and Equipment | 03/17 | Single and multiple hangers, framing systems, and stands and supports.  |
| 230533      | Heat Tracing for HVAC Piping                       | 03/10 | Electric cables for freeze protection.  |
| 230548      | Vibration and Seismic Controls for HVAC            | 09/11 | Vibration isolation devices and seismic restraints.   |
| 230548.13   | Vibration Controls for HVAC                        | 09/11 | Vibration isolation devices.  |
| 230553      | Identification for HVAC Piping and Equipment       | 03/13 | Labels, stencils, and tags.   |
| U 230566    | Antimicrobial Ultraviolet Lamp Systems for HVAC    | 09/17 | Antimicrobial ultraviolet lamp systems for mounting in air-handling units, fan coil units, and packaged unitary HVAC equipment. |
| 230593      | Testing, Adjusting, and Balancing for HVAC         | 06/16 | Air distribution and hydronic systems.  |
| 230713      | Duct Insulation                                    | 03/15 | Insulation materials, jackets, and installation accessories for HVAC ducts.   |
| 230716      | HVAC Equipment Insulation                          | 03/15 | Insulation materials, jackets, and installation accessories for HVAC equipment.   |
| 230719      | HVAC Piping Insulation                             | 03/15 | Insulation materials, jackets, and installation accessories for HVAC piping.  |
| 230923      | Direct Digital Control (DDC) System for HVAC       | 09/16 | Direct digital control system for monitoring and controlling HVAC systems.  |
| U 230923.11 | Control Valves                                     | 09/17 | Control valves and actuators that connect to direct digital control systems.  |

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| Section No. | Section Title                                   | Issue Date | Section Description   |
|-------------|---|------------|---|
| 230923.12   | Control Dampers                                 | 12/15      | Control dampers and actuators that connect to direct digital control systems.   |
| 230923.13   | Energy Meters                                   | 03/15      | Thermal and electric power energy meters that connect to direct digital control systems.  |
| 230923.14   | Flow Instruments                                | 03/15      | Airflow and liquid flow sensors, switches and transmitters, and water meters that connect to direct digital control systems.      |
| 230923.16   | Gas Instruments                                 | 03/15      | Carbon dioxide, oxygen, and VOC gas detection instruments and control devices that connect to direct digital control systems.     |
| 230923.17   | Level Instruments                               | 03/13      | Liquid level switches, sensors, and transmitters that connect to direct digital control systems.                                  |
| 230923.18   | Leak Detection Instruments                      | 03/13      | Leak detection switches (point type) and leak detector switches (cable type) that connect to direct digital control systems.      |
| 230923.19   | Moisture Instruments                            | 03/13      | Humidity and moisture sensors and transmitters that connect to direct digital control systems.                                    |
| 230923.21   | Motion Instruments                              | 03/13      | PIR, ultrasonic, and dual-technology type motion detection instruments that connect to direct digital control systems.            |
| 230923.22   | Position Instruments                            | 03/13      | Limit switches that connect to direct digital control systems.  |
| 230923.23   | Pressure Instruments                            | 03/13      | Air and liquid pressure sensors, switches, and transmitters that connect to direct digital control systems.                       |
| 230923.24   | Speed Instruments                               | 03/13      | Speed switches that connect to direct digital control systems.  |
| 230923.27   | Temperature Instruments                         | 03/13      | Air, liquid, and steam temperature sensors, switches, transmitters and thermotats that connect to direct digital control systems. |
| 230923.33   | Vibration Instruments                           | 03/13      | Vibration switches that connect to direct digital control systems.  |
| 230923.43   | Weather Stations                                | 03/13      | Weather stations that connect to direct digital control systems.  |
| 230993.11   | Sequence of Operations for HVAC DDC             | 03/13      | Direct digital control sequences for HVAC systems.  |
| 231113      | Facility Fuel-Oil Piping                        | 09/16      | Fuel-oil piping, valves, specialties; leak-detection and monitoring systems for No. 2 fuel oil.                                   |
| 231123      | Facility Natural-Gas Piping                     | 09/16      | Natural gas piping and specialties.   |
| 231126      | Facility Liquefied-Petroleum Gas Piping         | 12/16      | LP gas piping, specialties, and storage equipment.  |
| 231213      | Facility Fuel-Oil Pumps                         | 03/13      | Simplex, duplex, and triplex transfer pumps; submersible storage tank pumps; and fuel-oil maintenance systems.                    |
| 231313      | Facility Underground Fuel-Oil Storage Tanks     | 12/16      | Steel and FRP UST; accessories; liquid-level gage system; and leak-detection systems.   |
| 231323      | Facility Aboveground Fuel-Oil Storage Tanks     | 12/16      | Vertical, horizontal, containment-dike, insulated, and concrete vaulted steel AST.  |
| 232113      | Hydronic Piping                                 | 06/17      | Pipes, tubes, and fittings for heating and cooling water piping.  |
| 232113.13   | Underground Hydronic Piping                     | 09/16      | Underground piping outside the building.  |
| 232113.33   | Ground-Loop Heat-Pump Piping                    | 03/11      | Horizontal and vertical, direct-buried, ground-loop piping.   |
| U 232116    | Hydronic Piping Specialties                     | 09/17      | Specialties and special-duty valves for heating and cooling water piping.   |
| 232123      | Hydronic Pumps                                  | 03/16      | Base mounted and in-line; close coupled and separately coupled.   |
| 232213      | Steam and Condensate Heating Piping             | 03/16      | Pipes, tubes, and fittings for LP and HP steam piping.  |
| 232216      | Steam and Condensate Heating Piping Specialties | 06/16      | Specialties and special-duty valves for LP and HP steam piping.   |

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| Section No. | Section Title   | Issue Date | Section Description  |
|-------------|---|------------|--|
| 232223      | Steam Condensate Pumps                                    | 03/16      | Electric driven and pressure powered; single and duplex pumps with receivers.                                      |
| 232300      | Refrigerant Piping  | 12/16      | Piping, specialties, and refrigerant.  |
| 232500      | HVAC Water Treatment                                      | 06/13      | Auto and manual systems for hydronic systems and steam feedwater systems.  |
| 232513      | Water Treatment for Closed-Loop Hydronic Systems          | 03/13      | Auto and manual systems for closed-loop hydronic systems.  |
| 232516      | Water Treatment for Open-Loop Hydronic Systems            | 03/13      | Auto and manual systems for open-loop hydronic systems.  |
| 232519      | Water Treatment for Steam System Feedwater                | 03/13      | Auto and manual systems for steam feedwater systems.   |
| 232523      | Water Treatment for Humidification Steam System Feedwater | 03/13      | Automatic systems for humidification steam feedwater systems.  |
| 232533      | HVAC Makeup-Water Filtration Equipment                    | 03/13      | Water filtration systems for HVAC makeup water systems.  |
| U 233113    | Metal Ducts   | 09/17      | Rectangular and round, single- and double-wall ducts, including hangers and supports.                              |
| 233116      | Nonmetal Ducts  | 06/17      | Fibrous-glass, PVC, and FRP ducts, hangers, and supports. Does not include fabric.                                 |
| 233119      | HVAC Casings  | 03/15      | Factory and field fabricated; single and double wall.  |
| 233300      | Air Duct Accessories                                      | 09/16      | Volume dampers, fire and smoke dampers, vanes, duct silencers, and hardware.                                       |
| 233346      | Flexible Ducts  | 12/16      | Non-insulated and insulated flexible ducts and flexible duct connectors.   |
| U 233413    | Axial HVAC Fans   | 09/17      | Tubeaxial and vaneaxial fans.  |
| 233416      | Centrifugal HVAC Fans                                     | 03/13      | BI & FC indoor type; tubular and in-line units.  |
| 233423      | HVAC Power Ventilators                                    | 03/13      | Roof, wall, and ceiling-mounting ventilators.  |
| 233433      | Air Curtains  | 03/16      | Fans over entrances with and without heating.  |
| N 233439    | High-Volume, Low-Speed Fans                               | 09/17      | Large diameter, high-volume, low-speed ceiling fans.   |
| 233533      | Listed Kitchen Ventilation System Exhaust Ducts           | 03/14      | Listed grease ducts.   |
| 233600      | Air Terminal Units  | 03/17      | Single-duct, dual-duct, fan-powered, induction, and diffuser types.  |
| 233713.13   | Air Diffusers   | 09/14      | Round, rectangular, perforated, and linear diffusers.  |
| 233713.23   | Registers and Grilles                                     | 09/14      | Fixed and adjustable registers and grilles.  |
| 233713.43   | Security Registers and Grilles                            | 09/14      | Security registers and grilles.  |
| 233716      | Fabric Air-Distribution Devices                           | 12/14      | Continuous tubular fabric air diffusers, connectors, and accessories.  |
| U 233723    | HVAC Gravity Ventilators                                  | 09/17      | Unpowered ventilators and louver penthouses.   |
| 233813      | Commercial-Kitchen Hoods                                  | 12/16      | Type I and Type II, Standard and Listed hoods.   |
| U 234100    | Particulate Air Filtration                                | 09/17      | Disposable, extended surface, and roll types.  |
| U 234133    | High-Efficiency Particulate Air Filtration                | 09/17      | High-efficiency particulate air filters, ultralow-penetration air (ULPA) filters, filter frames, and filter gages. |
| 234200      | Gas-Phase Air Filtration                                  | 12/16      | Gas adsorbent and rechargeable media, trays and housings, frames, and filter gages.                                |
| 234300      | Electronic Air Cleaners                                   | 06/17      | Electronic air cleaners, access housings, service frames, and filter gages.  |
| 235113.11   | Draft Control Fans  | 09/13      | Induced-draft fans.  |
| 235113.16   | Vent Dampers  | 09/13      | Barometric dampers.  |
| 235116      | Fabricated Breechings and Accessories                     | 09/13      | Refractory-lined breechings and field-fabricated breechings.   |
| 235123      | Gas Vents   | 09/13      | Listed double-wall vents.  |
| 235133      | Insulated Sectional Chimneys                              | 09/13      | Double-wall and refractory-lined chimneys; fabricated chimneys.  |

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| Section No. | Section Title   | Issue Date | Section Description   |
|-------------|---|------------|---|
| 235213      | Electric Boilers  | 03/16      | HW and steam; HP and LP.  |
| 235216      | Condensing Boilers  | 03/16      | Packaged condensing boilers for small applications.   |
| 235223      | Cast-Iron Boilers   | 03/16      | HW and steam; gas and oil fired.  |
| 235233      | Water-Tube Boilers  | 03/15      | HW and steam; gas and oil fired.  |
| 235239      | Fire-Tube Boilers   | 03/15      | HW and steam; gas and oil fired.  |
| 235313      | Boiler Feedwater Pumps                                      | 03/16      | Condensate and vacuum pumps and receivers.  |
| 235316      | Deaerators  | 09/14      | Spray, packed column, and package tray.   |
| 235413      | Electric-Resistance Furnaces                                | 03/16      | Electric furnaces.  |
| 235416.13   | Gas-Fired Furnaces  | 03/16      | Gas-fired furnaces.   |
| 235416.16   | Oil-Fired Furnaces  | 03/15      | Oil-fired furnaces.   |
| 235513.16   | Gas-Fired Duct Heaters                                      | 03/15      | Natural gas and propane, duct-mounted units.  |
| 235523.13   | Low-Intensity, Gas-Fired, Radiant Heaters                   | 09/13      | Low intensity, gas-fired, indoor and outdoor radiant heaters.                               |
| 235523.16   | High-Intensity, Gas-Fired, Radiant Heaters                  | 03/15      | High-intensity, gas-fired, indoor and outdoor radiant heaters and patio heaters.            |
| 235533.13   | Oil-Fired Unit Heaters                                      | 09/13      | Fuel-oil unit heaters with propeller and centrifugal fans.                                  |
| 235533.16   | Gas-Fired Unit Heaters                                      | 09/13      | Natural gas and propane unit heaters with propeller and centrifugal fans.                   |
| 235613.13   | Heating, Flat-Plate, Solar Collectors                       | 03/13      | Liquid-type, medium-temperature, glazed solar panels.                                       |
| 235613.19   | Heating, Solar, Vacuum-Tube Collectors                      | 03/13      | Liquid-type, vacuum-tube solar collectors, accessories, and mountings.                      |
| 235700      | Heat Exchangers for HVAC                                    | 03/16      | Steam to water and water to water; shell-and-tube and flat-plate types.                     |
| 236200      | Packaged Compressor and Condenser Units                     | 03/15      | Air and water cooled.   |
| 236313      | Air-Cooled Refrigerant Condensers                           | 03/15      | Remote forced-air, condenser, and fan units.  |
| U 236333    | Evaporative Refrigerant Condensers                          | 09/17      | Induced- and forced-draft evaporative refrigerant condensers.                               |
| 236413.13   | Direct-Fired Absorption Water Chillers                      | 03/15      | Natural-gas, propane, and oil fired; water cooled; two stages; and a brush-cleaning system. |
| 236413.16   | Indirect-Fired Absorption Water Chillers                    | 03/16      | Steam and hot-water generated; one and two stage.   |
| 236416      | Centrifugal Water Chillers                                  | 09/16      | Hermetic and open; direct and gear drives; water and air cooled.                            |
| 236423.13   | Air-Cooled, Scroll Water Chillers                           | 09/16      | Packaged, air-cooled, scroll water chillers.  |
| 236423.16   | Water-Cooled, Scroll Water Chillers                         | 09/16      | Packaged, water-cooled, scroll water chillers.  |
| 236426.13   | Air-Cooled, Rotary-Screw Water Chillers                     | 09/16      | Packaged, air-cooled indoor and outdoor rotary-screw water chillers.                        |
| 236426.16   | Water-Cooled, Rotary-Screw Water Chillers                   | 09/16      | Water-cooled, single- and multiple-compressor units.  |
| 236513.13   | Open-Circuit, Forced-Draft Cooling Towers                   | 03/16      | Factory-assembled, open-circuit, forced-draft, towers.                                      |
| 236513.16   | Closed-Circuit, Forced-Draft Cooling Towers                 | 03/16      | Factory-assembled, closed-circuit, forced-draft, towers.                                    |
| 236514.13   | Open-Circuit, Induced-Draft, Counterflow Cooling Towers     | 03/16      | Factory-assembled, open-circuit, induced-draft, counterflow towers.                         |
| 236514.14   | Open-Circuit, Induced-Draft, Crossflow Cooling Towers       | 03/16      | Factory-assembled, open-circuit, induced-draft, crossflow towers.                           |
| 236514.16   | Closed-Circuit, Induced-Draft, Counterflow Cooling Towers   | 03/16      | Factory-assembled, closed-circuit, induced-draft, counterflow towers.                       |
| 236514.17   | Closed-Circuit, Induced-Draft, Combined-Flow Cooling Towers | 03/16      | Factory-assembled, closed-circuit, induced-draft, combined-flow towers.                     |
| U 237213    | Heat Wheel Air-To-Air Energy Recovery Units                 | 09/17      | Rotary heat wheel, sensible-only or total heat transfer heat exchangers.                    |

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| Section No. | Section Title  | Issue Date | Section Description   |
|-------------|--|------------|---|
| 237216      | Heat Pipe Air-To-Air Energy Recovery Units   | 06/17      | Heat pipe, sensible heat, heat exchangers utilizing passive-refrigerant heat transfer.  |
| 237219      | Fixed Plate Air-To-Air Energy Recovery Units   | 06/17      | Fixed plate, sensible and total heat transfer heat exchangers.  |
| N 237223.13 | Packaged Indoor Heat Wheel Energy Recovery Units   | 09/17      | Heat wheel heat exchangers in packaged, indoor, energy-recovery units.  |
| N 237223.19 | Packaged Indoor Fixed Plate Energy Recovery Units  | 09/17      | Sensible and total heat, fixed-plate heat exchangers in packaged, indoor, energy-recovery units.                                    |
| 237313.13   | Indoor, Basic Air-Handling Units   | 03/17      | Units consisting of fans, coils, dampers, filters, control devices, and accessories.  |
| 237313.16   | Indoor, Semi-Custom Air-Handling Units   | 03/17      | Units consisting of fans, coils, dampers, filters, control devices, and accessories.  |
| 237333.16   | Indoor, Indirect, Gas-Fired Heating and Ventilating Units  | 12/16      | Indirect, gas-fired H&V units mounted inside the building.  |
| 237339      | Indoor, Direct-Fired Heating and Ventilating Units   | 12/16      | Indoor, direct gas-fired H&V units.   |
| U 237343.16 | Outdoor, Semi-Custom Air-Handling Units  | 09/17      | Units consisting of fans, coils, dampers, filters, control devices, and accessories.  |
| 237416.11   | Packaged, Small-Capacity, Rooftop Air-Conditioning Units   | 09/16      | Packaged, air-cooled, rooftop HVAC, 6 tons and smaller.   |
| 237416.13   | Packaged, Large-Capacity, Rooftop Air-Conditioning Units   | 09/16      | Packaged, air-cooled, rooftop HVAC 7.5 tons and greater.  |
| 237423.13   | Packaged, Direct-Fired, Outdoor, Heating-Only Makeup-Air Units                                   | 12/16      | Outdoor, direct gas-fired H&V units.  |
| 237423.16   | Packaged, Indirect-Fired, Outdoor, Heating-Only Makeup-Air Units                                 | 12/16      | Outdoor, indirect gas-fired H&V units.  |
| 237433      | Dedicated Outdoor-Air Units  | 12/16      | Units capable of 100 percent outdoor air with heating and cooling.  |
| 238113.11   | Packaged Terminal Air-Conditioners, Through-Wall Units   | 03/15      | Through-the-wall; cooling only; heat pump; cooling plus hot-water heating, electric heating, and gas-fired heating.                 |
| 238113.12   | Packaged Terminal Air-Conditioners, Freestanding Units   | 03/15      | Freestanding or through-the-wall; cooling only; heat pump; cooling plus hot-water heating, electric heating, and gas-fired heating. |
| 238113.13   | Packaged Terminal Air-Conditioners, Outdoor, Wall-Mounted Units                                  | 03/15      | Outdoor, wall-mounted; cooling only; heat pump; cooling plus hot-water heating, electric heating, and gas-fired heating.            |
| U 238119    | Self-Contained Air-Conditioners  | 09/17      | Packaged cooling, heating, filters, and controls; cabinet suitable for exposed installations.                                       |
| 238123.11   | Small Capacity (6 Tons (21 kW) and Smaller), Computer-Room Air-Conditioners, Floor-Mounted Units | 03/17      | Floor-mounted water and air cooled, air conditioning systems for data centers.  |
| 238123.12   | Large Capacity (7 Tons (25 kW) and Larger), Computer-Room Air-Conditioners, Floor-Mounted Units  | 03/17      | Floor-mounted water and air cooled, air conditioning systems for data centers.  |
| 238123.13   | Computer-Room Air-Conditioners, Ceiling-Mounted Units  | 03/17      | Ceiling-mounted water and air cooled, air conditioning systems for data centers.  |
| 238123.14   | Computer-Room Air-Conditioners, Console Units  | 03/17      | Console water and air cooled, air conditioning systems for data centers.  |
| 238123.18   | Computer-Room, Rack-Cooling Equipment  | 03/15      | Water and air cooled, pumped-refrigerant, air conditioning systems for data centers.  |
| 238126      | Split-System Air-Conditioners  | 09/16      | Air-distribution equipment separate from refrigeration equipment; cabinet suitable for exposed installations.                       |
| 238129      | Variable-Refrigerant-Flow HVAC Systems   | 03/17      | Variable-refrigerant-flow HVAC systems, components, and operations, including delegated design.                                     |
| 238146      | Water-Source Unitary Heat Pumps  | 03/15      | Concealed horizontal and vertical units.  |
| 238146.13   | Water-To-Air Heat Pumps  | 03/17      | Concealed horizontal and vertical units; vertical-stack; and exposed-console units.   |
| 238213      | Valance Heating and Cooling Units  | 03/13      | Electric and hot water radiant heaters and heating and cooling panels.  |

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| Section No. | Section Title                              | Issue Date | Section Description  |
|-------------|--|------------|--|
| 238214      | Chilled Beams                              | 09/16      | Passive and active units.  |
| 238216.11   | Hydronic Air Coils                         | 03/15      | Hydronic coils not integral to AHUs.   |
| 238216.12   | Steam Air Coils                            | 03/13      | Steam coils not integral to AHUs.  |
| 238216.13   | Refrigerant Air Coils                      | 03/15      | Refrigerant coils not integral to AHUs.  |
| 238216.14   | Electric-Resistance Air Coils              | 03/13      | Electric-resistance coils not integral to AHUs.  |
| 238219      | Fan Coil Units                             | 06/16      | Hot water, steam, and electric heating; chilled or DX cooling.                                     |
| 238223      | Unit Ventilators                           | 03/17      | Hot water, steam, and electric heating; chilled or DX cooling.                                     |
| 238229      | Radiators                                  | 03/13      | Flat-pipe steel radiators for hot-water, steam, and electric heating systems.                      |
| 238233      | Convectors                                 | 03/16      | Convectors for hot-water, steam, and electric heating systems.                                     |
| 238236      | Finned-Tube Radiation Heaters              | 03/16      | HW, steam, and electric baseboard and finned-tube radiation heaters.                               |
| 238239.13   | Cabinet Unit Heaters                       | 03/17      | Cabinet unit heaters with hot-water, steam, and electric-resistance coils.                         |
| 238239.16   | Propeller Unit Heaters                     | 03/16      | Propeller unit heaters with hot-water, steam, and electric-resistance coils.                       |
| 238239.19   | Wall and Ceiling Unit Heaters              | 03/15      | Wall and ceiling electric unit heaters.  |
| 238313      | Radiant-Heating Electric Cables            | 03/13      | Electric cables for ceilings and floors, snow and ice melting, and freezer-floor frost prevention. |
| 238316      | Radiant-Heating Hydronic Piping            | 12/15      | Embedded pipes, tubes, manifolds, fittings, piping specialties, and controls.                      |
| 238323      | Radiant-Heating Electric Panels            | 03/13      | Factory-fabricated panels.   |
| 238413.16   | Wetted-Element Humidifiers                 | 06/16      | Water-pressure atomizing humidifiers.  |
| 238413.19   | Atomizing Humidifiers                      | 06/16      | Water-pressure or compress-air types.  |
| 238413.23   | Direct-Steam-Injection Humidifiers         | 06/16      | Externally-supplied steam.   |
| 238413.29   | Self-Contained Steam Humidifiers           | 06/16      | Electric resistance, electrode cylinder, and gas-fired steam generator humidifiers.                |
| 238413.36   | Heat Exchanger Humidifiers                 | 06/16      | Steam-to-steam humidifiers.  |
| 238416.13   | Outdoor, Mechanical Dehumidification Units | 12/16      | Outdoor, refrigerant-type mechanical dehumidification equipment.                                   |
| 238416.16   | Indoor, Mechanical Dehumidification Units  | 12/16      | Indoor, refrigerant-type mechanical dehumidification equipment.                                    |

### DIVISION 26 - ELECTRICAL

|        |                                   |       |  |
|--------|-----------------------------------|-------|--|
| 262933 | Controllers for Fire-Pump Drivers | 12/16 | Full- and limited-service, electric-driver controllers; and diesel-driver controllers. |
|--------|-----------------------------------|-------|--|

### DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

|           |                                 |       |  |
|-----------|---------------------------------|-------|--|
| 284400    | Refrigerant Detection and Alarm | 09/16 | Monitors, alarms, breathing apparatus, and ventilation equipment interlocks. |
| 284621.13 | Conventional Fire-Alarm Systems | 09/16 | Small systems for buildings relying on zoned fire-alarm concept.             |

### DIVISION 31 - EARTHWORK

|          |               |       |   |
|----------|---------------|-------|---|
| 311000   | Site Clearing | 02/13 | Clearing, grubbing, vegetation protection, stripping and stockpiling topsoil and rock, and disconnecting utilities. |
| U 312000 | Earth Moving  | 09/17 | Excavating, filling and backfilling, compacting, and grading.   |
| 312319   | Dewatering    | 12/16 | Temporary construction dewatering requirements for ground-water control.  |

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| Section No.                                | Section Title  | Issue Date | Section Description   |
|--|--|------------|---|
| <b>DIVISION 32 - EXTERIOR IMPROVEMENTS</b> |  |            |   |
| 321216                                     | Asphalt Paving                                       | 06/16      | Paving, overlays, surface treatments, asphalt curbs, asphalt traffic-calming devices, cold milling, and hot-mix patching. |
| 321223                                     | Imprinted Asphalt                                    | 06/16      | Embossing patterns in new or existing asphalt pavement.   |
| 321313                                     | Concrete Paving                                      | 03/15      | Concrete curbs and gutters, walks, driveways, parking lots, and miscellaneous paving.                                     |
| 321713                                     | Parking Bumpers                                      | 06/16      | Wheel stops applied to asphalt or concrete pavement.  |
| 321716                                     | Manufactured Traffic-Calming Devices                 | 06/16      | Preformed rubber or plastic traffic-calming devices applied to asphalt or concrete pavement.                              |
| 321723                                     | Pavement Markings                                    | 06/16      | Painted markings applied to asphalt or concrete pavement.   |
| 323113                                     | Chain Link Fences and Gates                          | 12/16      | Standard chain-link fencing systems with swing or horizontal-slide gates and gate operators.                              |
| 328400                                     | Planting Irrigation                                  | 12/16      | Heads, pipes, and controls.   |
| <b>DIVISION 33 - UTILITIES</b>             |  |            |   |
| 330500                                     | Common Work Results for Utilities                    | 03/11      | Basic piping materials and methods.   |
| 331113                                     | Potable Water Supply Wells                           | 09/16      | Drilled and driven wells and well pumps.  |
| U 334200                                   | Stormwater Conveyance                                | 09/17      | Gravity and forced storm piping, underground structures, and specialties.   |
| 334600                                     | Subdrainage  | 03/10      | Drainage for foundations, underslabs, plaza decks, retaining walls, and landscaped areas.                                 |
| 336313                                     | Underground Steam and Condensate Distribution Piping | 12/16      | Underground piping serving one or more buildings.   |

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