## **MasterFormat®** Numbers & Titles

April 2014

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|           | 01 56 13     | Temporary Air Barriers                      |
|           | 01 56 16     | Temporary Dust Barriers                     |
|           | 01 56 19     | Temporary Noise Barriers                    |
|           | 01 56 23     | Temporary Barricades                        |
|           | 01 56 26     | Temporary Fencing                           |
|           | 01 56 29     | Temporary Protective Walkways               |
|           | 01 56 33     | Temporary Security Barriers                 |
|           | 01 56 36     | Temporary Security Enclosures               |
|           | 01 56 39     | Temporary Tree and Plant Protection         |
| 01        | 57 00        | Temporary Controls                          |
|           | 01 57 13     | Temporary Erosion and Sediment Control      |
|           | 01 57 16     | Temporary Pest Control                      |
|           | 01 57 19     | Temporary Environmental Controls            |
|           | 01 57 23     | Temporary Storm Water Pollution Control     |
|           | 01 57 26     | Site Watering for Dust Control              |
| 01        | 58 00        | Project Identification                      |
|           | 01 58 13     | Temporary Project Signage                   |
|           | 01 58 16     | Temporary Interior Signage                  |
| Ω4        | 60.00        | Product Requirements                        |
|           |              |   |

| 01         | 61 00                | Common Product Requirements                                       |
|------------|----------------------|---|
|            | 01 61 13             | Software Licensing Requirements                                   |
| 01         | 62 00                | Product Options   |
| 01         | 64 00                | Owner-Furnished Products  |
| 01         | 65 00                | Product Delivery Requirements                                     |
|            | 66 00                | Product Storage and Handling Requirements                         |
| ٠.         | 01 66 13             | Product Storage and Handling Requirements for Hazardous Materials |
|            | 01 66 16             | Product Storage and Handling Requirements for Toxic Materials     |
| <b>0</b> 1 | 70 00                | <b>Execution and Closeout Requirements</b>                        |
|            |                      | •   |
| U1         | 71 00                | Examination and Preparation                                       |
|            | 01 71 13             | Mobilization  |
|            | 01 71 16<br>01 71 23 | Acceptance of Conditions Field Engineering                        |
|            | 01 71 23.13          | Construction Layout   |
|            | 01 71 23.16          | Construction Surveying  |
|            | 01 71 33             | Protection of Adjacent Construction                               |
|            | 01 71 36             | Non-Destructive Concrete Examination                              |
| 01         | 73 00                | Execution   |
|            | 01 73 13             | Application   |
|            | 01 73 16<br>01 73 19 | Erection Installation   |
|            | 01 73 19             | Bracing and Anchoring   |
|            | 01 73 26             | Existing Products   |
|            | 01 73 29             | Cutting and Patching  |
| 01         | 74 00                | Cleaning and Waste Management                                     |
|            | 01 74 13             | Progress Cleaning   |
|            | 01 74 16             | Site Maintenance  |
|            | 01 74 19             | Construction Waste Management and Disposal                        |
|            | 01 74 23             | Final Cleaning  |
| 01         | <b>75 00</b>         | Starting and Adjusting  |
|            | 01 75 13             | Checkout Procedures   |
| Λ4         | 01 75 16             | Startup Procedures  |
|            | 76 00                | Protecting Installed Construction                                 |
| 01         | 77 00                | Closeout Procedures   |
|            | 01 77 13             | Preliminary Closeout Reviews                                      |
|            | 01 77 16<br>01 77 19 | Final Closeout Review Closeout Requirements                       |
| Λ1         | <b>78 00</b>         | Closeout Submittals   |
| UI         | 01 78 13             |   |
|            | 01 78 19             | Completion and Correction List Maintenance Contracts              |
|            | 01 78 23             | Operation and Maintenance Data                                    |
|            | 01 78 23.13          | Operation Data  |
|            | 01 78 23.16          | Maintenance Data  |
|            | 01 78 23.19          | Preventative Maintenance Instructions                             |
|            | 01 78 29<br>01 78 33 | Final Site Survey Bonds   |
|            | 01 78 36             | Warranties  |
|            | 017000               | Waltaniloo  |

|    | 01 78 39             | Project Record Documents   |
|----|----------------------|--|
|    | 01 78 43             | Spare Parts  |
|    | 01 78 46             | Extra Stock Materials  |
|    | 01 78 53             | Sustainable Design Closeout Documentation  |
| 01 | 79 00                | Demonstration and Training   |
| 01 | 80 00                | Performance Requirements   |
| 01 | 81 00                | Facility Performance Requirements  |
|    | 01 81 13             | Sustainable Design Requirements  |
|    | 01 81 16             | Facility Environmental Requirements  |
|    | 01 81 19             | Indoor Air Quality Requirements  |
| 01 | 82 00                | Facility Substructure Performance Requirements                                     |
|    | 01 82 13             | Foundation Performance Requirements  |
|    | 01 82 16             | Basement Construction Performance Requirements                                     |
| 01 | 83 00                | Facility Shell Performance Requirements  |
|    | 01 83 13             | Superstructure Performance Requirements  |
|    | 01 83 16             | Exterior Enclosure Performance Requirements  |
|    | 01 83 19             | Roofing Performance Requirements   |
| 01 | 84 00                | Interiors Performance Requirements   |
|    | 01 84 13             | Interior Construction Performance Requirements                                     |
|    | 01 84 16             | Stairways Performance Requirements   |
|    | 01 84 19             | Interior Finishes Performance Requirements   |
|    | 85 00                | Conveying Equipment Performance Requirements                                       |
| 01 | 86 00                | Facility Services Performance Requirements   |
|    | 01 86 13             | Fire Suppression Performance Requirements  |
|    | 01 86 16             | Plumbing Performance Requirements  |
|    | 01 86 19             | HVAC Performance Requirements  |
|    | 01 86 23<br>01 86 26 | Integrated Automation Performance Requirements Electrical Performance Requirements |
|    | 01 86 29             | Communications Performance Requirements  |
|    | 01 86 33             | Electronic Safety and Security Performance Requirements                            |
| 01 | 87 00                | Equipment and Furnishings Performance  |
| •  | 0. 00                | Requirements   |
|    | 01 87 13             | Equipment Performance Requirements   |
|    | 01 87 16             | Furnishings Performance Requirements   |
| 01 | 88 00                | Other Facility Construction Performance  |
|    |                      | Requirements   |
|    | 01 88 13             | Special Construction Performance Requirements                                      |
|    | 01 88 16             | Selective Construction Performance Requirements                                    |
| 01 | 89 00                | Site Construction Performance Requirements   |
|    | 01 89 13             | Site Preparation Performance Requirements  |
|    | 01 89 16             | Site Improvements Performance Requirements   |
|    | 01 89 19             | Site Plumbing Utilities Performance Requirements                                   |
|    | 01 89 23             | Site HVAC Utilities Performance Requirements                                       |
|    | 01 89 26             | Site Electrical Utilities Performance Requirements                                 |
| _  | 01 89 29             | Other Site Construction Performance Requirements                                   |
| 01 | 90 00                | Life Cycle Activities  |

| 01 | 91 00       | Commissioning                       |
|----|-------------|-------------------------------------|
|    | 01 91 13    | General Commissioning Requirements  |
|    | 01 91 16    | Facility Substructure Commissioning |
|    | 01 91 16.13 | Foundation Commissioning            |
|    | 01 91 16.53 | Basement Construction Commissioning |
|    | 01 91 19    | Facility Shell Commissioning        |
|    | 01 91 19.13 | Superstructure Commissioning        |
|    | 01 91 19.43 | Exterior Enclosure Commissioning    |
|    | 01 91 19.73 | Roofing Commissioning               |
|    | 01 91 23    | Interiors Commissioning             |
|    | 01 91 23.13 | Interior Construction Commissioning |
|    | 01 91 23.43 | Stairways Commissioning             |
|    | 01 91 23.73 | Interior Finishes Commissioning     |
| 01 | 92 00       | Facility Operation                  |
|    | 01 92 13    | Facility Operation Procedures       |
| 01 | 93 00       | Facility Maintenance                |
|    | 01 93 13    | Facility Maintenance Procedures     |
|    | 01 93 16    | Recycling Programs                  |
| 01 | 94 00       | Facility Decommissioning            |
|    | 01 94 13    | Facility Decommissioning Procedures |

| 02 00 00                   | Existing Conditions  |
|----------------------------|--|
| 02 01 00                   | Maintenance of Existing Conditions                                       |
| 02 01 50                   | Maintenance of Site Remediation  |
| 02 01 65                   | Maintenance of Underground Storage Tank Removal                          |
| 02 01 80                   | Maintenance of Facility Remediation                                      |
| 02 01 86                   | Maintenance of Hazardous Waste Drum Handling                             |
| 02 03 00                   | Conservation Treatment for Existing Period                               |
|                            | Conditions   |
| 02 03 01                   | Maintenance of Existing Period Conditions                                |
| 02 03 01.19<br>02 03 41    | Mothballing Period Structures Selective Demolition for Period Structures |
| 02 03 41                   | Removal and Salvage of Period Construction Materials                     |
| 02 03 43                   | Period Structure Relocating  |
| 02 03 44                   | Shoring and Support of Period Structures                                 |
| 02 05 00                   | <b>Common Work Results for Existing Conditions</b>                       |
| 02 05 19                   | Geosynthetics for Existing Conditions                                    |
| 02 05 19.13                | Geotextiles for Existing Conditions                                      |
| 02 05 19.16                | Geomembranes for Existing Conditions                                     |
| 02 05 19.19                | Geogrids for Existing Conditions   |
| <b>02 06 00</b> 02 06 13   | Schedules for Existing Conditions  |
| 02 06 13                   | Geotechnical Baseline Report Schedules for Subsurface Investigations     |
| 02 06 30.13                | Boring or Test Pit Log Schedule  |
| 02 06 50                   | Schedules for Site Remediation   |
| 02 06 65                   | Schedules for Underground Storage Tank Removal                           |
| 02 06 80                   | Schedules for Facility Remediation                                       |
| 02 06 86                   | Schedules for Hazardous Waste Drum Handling                              |
| 02 08 00                   | Commissioning of Existing Conditions                                     |
| 02 20 00                   | Assessment   |
| 02 21 00                   | Surveys  |
| 02 21 13                   | Site Surveys   |
| 02 21 13.13                | Boundary and Survey Markers  |
| 02 21 13.23<br>02 21 16    | Archeological and Historic Surveys  Measured Drawings                    |
| 02 22 00                   | Existing Conditions Assessment   |
| 02 22 13                   | Movement and Vibration Assessment  |
| 02 22 16                   | Acoustic Assessment  |
| 02 22 19                   | Traffic Assessment   |
| 02 22 23                   | Accessibility Assessment   |
| 02 24 00                   | Environmental Assessment   |
| 02 24 13                   | Natural Environment Assessment   |
| 02 24 13.13                | Air Assessment   |
| 02 24 13.43<br>02 24 13.73 | Water Assessment Land Assessment   |
| 02 24 13.73                | Chemical Sampling and Analysis of Soils                                  |
| 02 24 43                   | Transboundary and Global Environmental Aspects Assessment                |
| 02 25 00                   | Fxisting Material Assessment   |

| 02 25 16                   | Existing Concrete Assessment                                |
|----------------------------|---|
| 02 25 16.13                | Concrete Assessment Drilling                                |
| 02 25 19                   | Existing Masonry Assessment                                 |
| 02 25 19.13                | Masonry Assessment Drilling                                 |
| 02 25 23                   | Existing Metals Assessment                                  |
| 02 25 23.13                | Welding Investigations                                      |
| 02 25 26                   | Existing Wood, Plastics, and Composites Assessment          |
| 02 25 29                   | Existing Thermal and Moisture Protection Assessment         |
| 02 25 29.13                | Waterproofing Investigations                                |
| 02 25 29.23                | Roofing Investigations                                      |
| 02 26 00                   | Hazardous Material Assessment                               |
| 02 26 23                   | Asbestos Assessment   |
| 02 26 26                   | Lead Assessment   |
| 02 26 29                   | Polychlorinate Biphenyl Assessment                          |
| 02 26 33                   | Biological Assessment                                       |
| 02 26 33.13                | Mold Assessment   |
| 02 26 36                   | Hazardous Waste Drum Assessment                             |
| 02 30 00                   | Subsurface Investigation                                    |
| 02 31 00                   | Geophysical Investigations                                  |
| 02 31 13                   | Seismic Investigations                                      |
| 02 31 16                   | Gravity Investigations                                      |
| 02 31 19                   | Magnetic Investigations                                     |
| 02 31 23                   | Electromagnetic Investigations                              |
| 02 31 26                   | Electrical Resistivity Investigations                       |
| 02 31 29                   | Magnetotelluric Investigations                              |
| 02 32 00                   | Geotechnical Investigations                                 |
| 02 32 13                   | Subsurface Drilling and Sampling                            |
| 02 32 16                   | Material Testing  |
| 02 32 19                   | Exploratory Excavations                                     |
| 02 32 23                   | Geotechnical Monitoring Before Construction                 |
| 02 32 23.13                | Groundwater Monitoring Before Construction                  |
| 02 40 00                   | Demolition and Structure Moving                             |
| 02 41 00                   | Demolition  |
| 02 41 13                   | Selective Site Demolition                                   |
| 02 41 13.13                | Paving Removal  |
| 02 41 13.23                | Utility Line Removal  |
| 02 41 13.33                | Railtrack Removal   |
| 02 41 16                   | Structure Demolition  |
| 02 41 16.13                | Building Demolition   |
| 02 41 16.23                | Tower Demolition  |
| 02 41 16.33                | Bridge Demolition   |
| 02 41 16.43                | Dam Demolition  |
| 02 41 19                   | Selective Demolition  |
| 02 41 19.13<br>02 41 19.16 | Selective Building Demolition Selective Interior Demolition |
| 02 41 19.10                | Selective Facility Services Demolition                      |
| 02 41 19.33                | Selective Bridge Demolition                                 |
| 02 42 00                   | Removal and Salvage of Construction Materials               |
| 02 42 13                   | Deconstruction of Structures                                |
| 02 42 13.13                | Deconstruction of Buildings                                 |

| 02         | 43 00                      | Structure Moving   |
|------------|----------------------------|--|
|            | 02 43 13                   | Structure Relocation   |
|            | 02 43 13.13                | Building Relocation  |
|            | 02 43 16                   | Structure Raising  |
|            | 02 43 16.13                | Building Raising   |
| 02         | 2 50 00                    | Site Remediation   |
| 02         | 51 00                      | Physical Decontamination   |
|            | 02 51 13                   | Coagulation and Flocculation Decontamination   |
|            | 02 51 16                   | Reverse-Osmosis Decontamination  |
|            | 02 51 19                   | Solidification and Stabilization Decontamination   |
|            | 02 51 23                   | Mechanical Filtration Decontamination  |
|            | 02 51 26                   | Radioactive Decontamination  |
|            | 02 51 29                   | Surface Cleaning Decontamination   |
|            | 02 51 29.13                | High-Pressure Water Cleaning Decontamination   |
|            | 02 51 29.16                | Vacuum Sweeping Cleaning Decontamination   |
|            | 02 51 33                   | Surface Removal Decontamination  |
|            | 02 51 33.13<br>02 51 33.16 | Surface Removal Decontamination by Grinding Surface Removal Decontamination by Sand Blasting |
|            | 02 51 33.10                | Surface Removal Decontamination by Ultrasound  |
| 02         | 52 00                      | Chemical Decontamination   |
| _          | 02 52 13                   | Chemical Precipitation Decontamination   |
|            | 02 52 16                   | Ion Change Decontamination   |
|            | 02 52 19                   | Neutralization Decontamination   |
| 02         | 53 00                      | Thermal Decontamination  |
|            | 02 53 13                   | Incineration Decontamination   |
|            | 02 53 13.13                | Remediation of Contaminated Soils and Sludges by Incineration                                |
|            | 02 53 16                   | Thermal Desorption Decontamination   |
|            | 02 53 16.13                | Remediation of Contaminated Soils by Thermal Desorption                                      |
|            | 02 53 19                   | Vitrification Decontamination  |
| 02         | 54 00                      | Biological Decontamination   |
|            | 02 54 13                   | Aerobic Processes Decontamination  |
|            | 02 54 16<br>02 54 19       | Anaerobic Processes Decontamination  |
|            | 02 54 19.13                | Bioremediation Decontamination Bioremediation Using Landfarming                              |
|            | 02 54 19.16                | Bioremediation of Soils Using Windrow Composting   |
|            | 02 54 19.19                | Bioremediation Using Bacteria Injection  |
|            | 02 54 23                   | Soil Washing through Separation/Solubilization   |
|            | 02 54 26                   | Organic Decontamination  |
| 02         | <b>55 00</b>               | Remediation Soil Stabilization   |
| 02         | 56 00                      | Site Containment   |
|            | 02 56 13                   | Waste Containment  |
|            | 02 56 13.13                | Geomembrane Waste Containment  |
|            | 02 56 19                   | Gas Containment  |
|            | 02 56 19.13                | Fluid-Applied Gas Barrier  |
| <b>U</b> 2 | 57 00                      | Sinkhole Remediation   |
|            | 02 57 13                   | Sinkhole Remediation by Grouting   |
|            | 02 57 13.13<br>02 57 13.16 | Sinkhole Remediation by Compaction Grouting  |
|            | 02 57 13.16                | Sinkhole Remediation by Cap Grouting Sinkhole Remediation by Backfilling                     |

| 02 58 00                   | Snow Control   |
|----------------------------|--|
| 02 58 13                   | Snow Fencing   |
| 02 58 16                   | Snow Avalanche Control   |
| 02 60 00                   | Contaminated Site Material Removal   |
| 02 61 00                   | Removal and Disposal of Contaminated Soils   |
| 02 61 13                   | Excavation and Handling of Contaminated Material                                       |
| 02 61 23                   | Removal and Disposal of Polychlorinate Biphenyl Contaminated Soils                     |
| 02 61 26                   | Removal and Disposal of Asbestos Contaminated Soils                                    |
| 02 61 29                   | Removal and Disposal of Organically Contaminated Soils                                 |
| 02 62 00                   | Hazardous Waste Recovery Processes   |
| 02 62 13                   | Air and Steam Stripping  |
| 02 62 16                   | Soil Vapor Extraction  |
| 02 62 19                   | Soil Washing and Flushing  |
| 02 65 00                   | Underground Storage Tank Removal   |
| 02 66 00                   | Landfill Construction and Storage  |
| 02 70 00                   | Water Remediation  |
| 02 71 00                   | Groundwater Treatment  |
| 02 72 00                   | Water Decontamination  |
| 02 72 13                   | Chemical Water Decontamination   |
| 02 72 16                   | Biological Water Decontamination   |
| 02 72 19                   | Electrolysis Water Decontamination   |
| 02 80 00                   | Facility Remediation   |
| 02 81 00                   | <b>Transportation and Disposal of Hazardous Materials</b>                              |
| 02 82 00                   | Asbestos Remediation   |
| 02 82 13                   | Asbestos Abatement   |
| 02 82 13.13                | Glovebag Asbestos Abatement  |
| 02 82 13.16<br>02 82 13.19 | Precautions for Asbestos Abatement Asbestos Floor Tile and Mastic Abatement            |
| 02 82 16                   | Engineering Control of Asbestos Containing Materials                                   |
| 02 82 33                   | Removal and Disposal of Asbestos Containing Materials                                  |
| 02 83 00                   | Lead Remediation   |
| 02 83 13                   | Lead Hazard Control Activities   |
| 02 83 19                   | Lead-Based Paint Remediation   |
| 02 83 19.13                | Lead-Based Paint Abatement   |
| 02 83 33<br>02 83 33.13    | Removal and Disposal of Material Containing Lead Lead-Based Paint Removal and Disposal |
| 02 84 00                   | Polychlorinate Biphenyl Remediation  |
| 02 84 16                   | Handling of Lighting Ballasts and Lamps Containing PCBs and Mercury                    |
| 02 84 33                   | Removal and Disposal of Polychlorinate Biphenyls                                       |
| 02 85 00                   | Mold Remediation   |
| 02 85 13                   | Precautions for Mold Remediation   |
| 02 85 16                   | Mold Remediation Preparation and Containment   |
| 02 85 19                   | Mold Remediation Clearance Air Sampling  |
| 02 85 33                   | Removal and Disposal of Materials with Mold  |
| 02 86 00                   | Hazardous Waste Drum Handling  |

| 03 00 00                   | Concrete  |
|----------------------------|---|
|                            | Concrete  |
| 03 01 00                   | Maintenance of Concrete   |
| 03 01 10                   | Maintenance of Concrete Forming and Accessories                         |
| 03 01 20<br>03 01 23       | Maintenance of Concrete Reinforcing                                     |
| 03 01 23                   | Maintenance of Stressing Tendons  Maintenance of Cast-in-Place Concrete |
| 03 01 30.51                | Cleaning of Cast-in-Place Concrete                                      |
| 03 01 30.61                | Resurfacing of Cast-in-Place Concrete                                   |
| 03 01 30.71                | Rehabilitation of Cast-in-Place Concrete                                |
| 03 01 30.72                | Strengthening of Cast-in-Place Concrete                                 |
| 03 01 40                   | Maintenance of Precast Concrete   |
| 03 01 40.51<br>03 01 40.61 | Cleaning of Precast Concrete Resurfacing of Precast Concrete            |
| 03 01 40.01                | Rehabilitation of Precast Concrete                                      |
| 03 01 40.72                | Strengthening of Precast Concrete                                       |
| 03 01 50                   | Maintenance of Cast Decks and Underlayment                              |
| 03 01 50.51                | Cleaning Cast Decks and Underlayment                                    |
| 03 01 50.61                | Resurfacing of Cast Decks and Underlayment                              |
| 03 01 50.71<br>03 01 50.72 | Rehabilitation of Cast Decks and Underlayment                           |
| 03 01 60                   | Strengthening of Cast Decks and Underlayment Maintenance of Grouting    |
| 03 01 70                   | Maintenance of Mass Concrete  |
| 03 01 80                   | Maintenance of Concrete Cutting and Boring                              |
| 03 03 00                   | <b>Conservation Treatment for Period Concrete</b>                       |
| 03 03 30                   | Conservation Treatment for Period Cast-in-Place Concrete                |
| 03 03 31                   | Conservation Treatment for Period Structural Concrete                   |
| 03 03 33                   | Conservation Treatment for Period Architectural Concrete                |
| 03 05 00                   | Common Work Results for Concrete  |
| 03 05 05                   | Selective Demolition for Concrete                                       |
| 03 06 00                   | Schedules for Concrete  |
| 03 06 10                   | Schedules for Concrete Forming and Accessories                          |
| 03 06 20                   | Schedules for Concrete Reinforcing                                      |
| 03 06 20.13                | Concrete Beam Reinforcing Schedule                                      |
| 03 06 20.16                | Concrete Slab Reinforcing Schedule                                      |
| 03 06 30<br>03 06 30.13    | Schedules for Cast-in-Place Concrete Concrete Footing Schedule          |
| 03 06 30.16                | Concrete Column Schedule  |
| 03 06 30.19                | Concrete Slab Schedule  |
| 03 06 30.23                | Concrete Shaft Schedule   |
| 03 06 30.26                | Concrete Beam Schedule  |
| 03 06 40<br>03 06 40.13    | Schedules for Precast Concrete Precast Concrete Panel Schedule          |
| 03 06 50                   | Schedules for Cast Decks and Underlayment                               |
| 03 06 60                   | Schedules for Grouting  |
| 03 06 70                   | Schedules for Mass Concrete   |
| 03 06 80                   | Schedules for Concrete Cutting and Boring                               |
| 03 08 00                   | Commissioning of Concrete   |
| 03 10 00                   | <b>Concrete Forming and Accessories</b>                                 |
|                            |   |
| 03 11 00                   | Concrete Forming  |

| 03 11 13                   | Structural Cast-in-Place Concrete Forming  |
|----------------------------|--|
| 03 11 13.13<br>03 11 13.16 | Concrete Slip Forming Concrete Shoring   |
| 03 11 13.19                | Falsework  |
| 03 11 16                   | Architectural Cast-in Place Concrete Forming   |
| 03 11 16.13                | Concrete Form Liners   |
| 03 11 19                   | Insulating Concrete Forming  |
| 03 11 23                   | Permanent Stair Forming  |
| 03 15 00                   | Concrete Accessories   |
| 03 15 13                   | Waterstops   |
| 03 15 13.13                | Non-Expanding Waterstops   |
| 03 15 13.16<br>03 15 13.19 | Expanding Waterstops Combination Expanding and Injection Hose Waterstops                               |
| 03 15 13.19                | Injection Hose Waterstops  |
| 03 15 16                   | Concrete Construction Joints   |
| 03 15 19                   | Cast-In Concrete Anchors   |
| 03 20 00                   | Concrete Reinforcing   |
| 03 21 00                   | Reinforcement Bars   |
| 03 21 11                   | Plain Steel Reinforcement Bars   |
| 03 21 13                   | Galvanized Reinforcement Steel Bars  |
| 03 21 16                   | Epoxy-Coated Reinforcement Steel Bars  |
| 03 21 19                   | Stainless Steel Reinforcement Bars   |
| 03 21 21                   | Composite Reinforcement Bars   |
| 03 21 21.11                | Glass Fiber-Reinforced Polymer Reinforcement Bars  |
| 03 21 21.13<br>03 21 21.16 | Organic Fiber-Reinforced Polymer Reinforcement Bars Carbon Fiber-Reinforced Polymer Reinforcement Bars |
| 03 22 00                   | Fabric and Grid Reinforcing  |
| 03 22 13                   | Galvanized Welded Wire Fabric Reinforcing  |
| 03 22 16                   | Epoxy-Coated Welded Wire Fabric Reinforcing  |
| 03 22 19                   | Composite Grid Reinforcing   |
| 03 23 00                   | Stressed Tendon Reinforcing  |
| 03 24 00                   | Fibrous Reinforcing  |
| 03 25 00                   | Composite Reinforcing  |
| 03 25 13                   | Glass Fiber-Reinforced Polymer Reinforcing   |
| 03 25 16                   | Organic Fiber-Reinforced Polymer Reinforcing   |
| 03 25 19                   | Carbon Fiber-Reinforced Polymer Reinforcing  |
| 03 30 00                   | Cast-in-Place Concrete   |
| 03 30 53                   | Miscellaneous Cast-in-Place Concrete   |
| 03 31 00                   | Structural Concrete  |
| 03 31 13                   | Heavyweight Structural Concrete  |
| 03 31 16                   | Lightweight Structural Concrete  |
| 03 31 19                   | Shrinkage-Compensating Structural Concrete   |
| 03 31 23                   | High-Performance Structural Concrete   |
| 03 31 24                   | Ultra High-Performance Structural Concrete   |
| 03 31 26                   | Self-Compacting Concrete   |
| 03 33 00                   | Architectural Concrete   |
| 03 33 13                   | Heavyweight Architectural Concrete   |
| 03 33 16                   | Lightweight Architectural Concrete   |

| 03 34 00                    | Low Density Concrete  |
|-----------------------------|---|
| 03 35 00                    | Concrete Finishing  |
| 03 35 13                    | High-Tolerance Concrete Floor Finishing                             |
| 03 35 16<br>03 35 19        | Heavy-Duty Concrete Floor Finishing Colored Concrete Finishing      |
| 03 35 19                    | Exposed Aggregate Concrete Finishing                                |
| 03 35 26                    | Grooved Concrete Surface Finishing                                  |
| 03 35 29                    | Tooled Concrete Finishing   |
| 03 35 33                    | Stamped Concrete Finishing  |
| 03 35 43                    | Polished Concrete Finishing   |
| 03 35 43.13                 | Polished and Dyed Concrete Finishing                                |
| 03 35 43.16                 | Polished and Stained Concrete Finishing                             |
| <b>03 37 00</b><br>03 37 13 | Specialty Placed Concrete   |
| 03 37 13                    | Shotcrete Pumped Concrete   |
| 03 37 10                    | Pneumatically Placed Concrete                                       |
| 03 37 23                    | Roller-Compacted Concrete   |
| 03 37 26                    | Underwater Placed Concrete  |
| 03 38 00                    | Post-Tensioned Concrete   |
| 03 38 13                    | Post-Tensioned Concrete Preparation                                 |
| 03 38 16                    | Unbonded Post-Tensioned Concrete                                    |
| 03 38 19                    | Bonded Post-Tensioned Concrete                                      |
| 03 39 00                    | Concrete Curing   |
| 03 39 13                    | Water Concrete Curing   |
| 03 39 16                    | Sand Concrete Curing  |
| 03 39 23<br>03 39 23.13     | Membrane Concrete Curing Chemical Compound Membrane Concrete Curing |
| 03 39 23.13                 | Sheet Membrane Concrete Curing                                      |
| 03 40 00                    | Precast Concrete  |
| 03 41 00                    | Precast Structural Concrete   |
| 03 41 13                    | Precast Concrete Hollow Core Planks                                 |
| 03 41 16                    | Precast Concrete Slabs  |
| 03 41 23                    | Precast Concrete Stairs   |
| 03 41 33                    | Precast Structural Pretensioned Concrete                            |
| 03 41 36                    | Precast Structural Post-Tensioned Concrete                          |
| 03 45 00                    | Precast Architectural Concrete                                      |
| 03 45 13                    | Faced Architectural Precast Concrete                                |
| 03 45 33                    | Precast Architectural Pretensioned Concrete                         |
| 03 45 36                    | Precast Architectural Post-Tensioned Concrete                       |
| 03 47 00                    | Site-Cast Concrete  |
| 03 47 13<br>03 47 16        | Tilt-Up Concrete Lift-Slab Concrete                                 |
| 03 47 16                    |   |
|                             | Precast Concrete Specialties  |
| 03 48 13<br>03 48 16        | Precast Concrete Bollards Precast Concrete Splash Blocks            |
| 03 48 19                    | Precast Concrete Spiasir Blocks  Precast Concrete Stair Treads      |
| 03 48 26                    | Precast Concrete Parking Bumpers                                    |
| 03 48 33                    | Precast Pre-Framed Concrete Panels                                  |

| 03 48 43   | Precast Concrete Trim  |
|--|--|
| 03 49 00   | Glass-Fiber-Reinforced Concrete  |
| 03 49 13   | Glass-Fiber-Reinforced Concrete Column Covers  |
| 03 49 16   | Glass-Fiber-Reinforced Concrete Spandrels  |
| 03 49 43   | Glass-Fiber-Reinforced Concrete Trim   |
| 03 50 00   | Cast Decks and Underlayment  |
| 03 51 00   | Cast Roof Decks  |
| 03 51 13   | Cementitious Wood Fiber Decks  |
| 03 51 16   | Gypsum Concrete Roof Decks   |
| 03 52 00   | Lightweight Concrete Roof Insulation   |
| 03 52 13   | Composite Concrete Roof Insulation   |
| 03 52 16   | Lightweight Insulating Concrete  |
| 03 52 16.13<br>03 52 16.16   | Lightweight Cellular Insulating Concrete Lightweight Aggregate Insulating Concrete   |
| 03 53 00   | Concrete Topping   |
| 03 53 13   | Emery-Aggregate Concrete Topping   |
| 03 53 16   | Iron-Aggregate Concrete Topping  |
| 03 54 00   | Cast Underlayment  |
| 03 54 13   | Gypsum Cement Underlayment   |
| 03 54 16   | Hydraulic Cement Underlayment  |
| 03 60 00   | Grouting   |
|  |  |
| 03 61 00   | Cementitious Grouting  |
| <b>03 61 00</b><br>03 61 13  | Cementitious Grouting Dry-Pack Grouting  |
|  | <del>_</del>   |
| 03 61 13<br><b>03 62 00</b><br>03 62 13  | Dry-Pack Grouting  |
| 03 61 13<br><b>03 62 00</b><br>03 62 13<br>03 62 16  | Dry-Pack Grouting Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting  |
| 03 61 13<br><b>03 62 00</b><br>03 62 13  | Dry-Pack Grouting Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting   |
| 03 61 13<br>03 62 00<br>03 62 13<br>03 62 16<br>03 63 00<br>03 64 00   | Dry-Pack Grouting Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting  |
| 03 61 13  03 62 00  03 62 13  03 62 16  03 63 00  03 64 00  03 64 23   | Dry-Pack Grouting Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting   |
| 03 61 13<br>03 62 00<br>03 62 13<br>03 62 16<br>03 63 00<br>03 64 00   | Dry-Pack Grouting Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting  |
| 03 61 13  03 62 00  03 62 13  03 62 16  03 63 00  03 64 00  03 64 23   | Dry-Pack Grouting Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting   |
| 03 61 13 03 62 00 03 62 13 03 62 16 03 63 00 03 64 00 03 64 23 03 70 00  | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete   |
| 03 61 13 03 62 00 03 62 13 03 62 16 03 63 00 03 64 00 03 64 23 03 70 00 03 71 00   | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations  |
| 03 61 13 03 62 00 03 62 13 03 62 16 03 63 00 03 64 00 03 64 23 03 70 00 03 71 00 03 72 00  | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations Mass Concrete for Dams Concrete Cutting and Boring  |
| 03 61 13 03 62 00 03 62 13 03 62 16 03 63 00 03 64 00 03 64 23 03 70 00 03 71 00 03 72 00 03 80 00   | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations Mass Concrete for Dams  |
| 03 61 13 03 62 00 03 62 13 03 62 16 03 63 00 03 64 00 03 64 23 03 70 00 03 71 00 03 72 00 03 81 00 03 81 13 03 81 16                               | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations Mass Concrete for Dams Concrete Cutting and Boring Concrete Cutting Flat Concrete Sawing Track Mounted Concrete Wall Sawing  |
| 03 61 13 03 62 00 03 62 13 03 62 16 03 63 00 03 64 00 03 64 23 03 70 00 03 71 00 03 72 00 03 81 00 03 81 13 03 81 16 03 81 19                      | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations Mass Concrete for Dams Concrete Cutting and Boring Concrete Cutting Flat Concrete Sawing Track Mounted Concrete Wall Sawing Wire Concrete Wall Sawing                         |
| 03 61 13  03 62 00 03 62 13 03 62 16  03 63 00 03 64 00 03 64 23  03 70 00 03 71 00 03 72 00 03 81 00 03 81 13 03 81 16 03 81 19 03 81 23          | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations Mass Concrete for Dams Concrete Cutting and Boring Concrete Cutting Flat Concrete Sawing Track Mounted Concrete Wall Sawing Wire Concrete Wall Sawing Hand Concrete Wall Sawing                            |
| 03 61 13  03 62 00 03 62 13 03 62 16  03 63 00 03 64 00 03 64 23  03 70 00 03 71 00 03 72 00 03 81 00 03 81 13 03 81 16 03 81 19 03 81 23 03 81 26 | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations Mass Concrete for Dams Concrete Cutting and Boring Concrete Cutting Flat Concrete Sawing Track Mounted Concrete Wall Sawing Wire Concrete Wall Sawing Hand Concrete Wall Sawing Chain Concrete Wall Sawing |
| 03 61 13  03 62 00 03 62 13 03 62 16  03 63 00 03 64 00 03 64 23  03 70 00 03 71 00 03 72 00 03 81 00 03 81 13 03 81 16 03 81 19 03 81 23          | Non-Shrink Grouting Non-Metallic Non-Shrink Grouting Metallic Non-Shrink Grouting Epoxy Grouting Injection Grouting Epoxy Injection Grouting Mass Concrete Mass Concrete for Raft Foundations Mass Concrete for Dams Concrete Cutting and Boring Concrete Cutting Flat Concrete Sawing Track Mounted Concrete Wall Sawing Wire Concrete Wall Sawing Hand Concrete Wall Sawing                            |

| 04 00 00                   | Masonry   |
|----------------------------|---|
| 04 01 00                   | Maintenance of Masonry  |
| 04 01 20                   | Maintenance of Unit Masonry   |
| 04 01 20.41                | Unit Masonry Stabilization  |
| 04 01 20.51                | Unit Masonry Maintenance  |
| 04 01 20.52                | Unit Masonry Cleaning   |
| 04 01 20.91                | Unit Masonry Restoration  |
| 04 01 20.93                | Testing and Sampling Brick Units for Restoration                        |
| 04 01 40                   | Maintenance of Stone Assemblies   |
| 04 01 40.51                | Stone Maintenance   |
| 04 01 40.52<br>04 01 40.91 | Stone Cleaning Stone Restoration  |
| 04 01 50                   | Maintenance of Refractory Masonry                                       |
| 04 01 60                   | Maintenance of Corrosion-Resistant Masonry                              |
| 04 01 00                   | Maintenance of Manufactured Masonry                                     |
| 04 03 00                   |   |
|                            | Conservation Treatment for Period Masonry                               |
| 04 03 01<br>04 03 01.13    | Maintenance for Period Masonry  |
| 04 03 01.13                | Period Masonry Cleaning Common Work Results for Period Masonry          |
| 04 03 05.13                | Period Masonry Mortaring  |
| 04 03 05.16                | Period Masonry Grouting   |
| 04 03 05.19                | Period Masonry Anchorage and Reinforcing                                |
| 04 03 21                   | Conservation Treatment for Period Clay Unit Masonry                     |
| 04 03 21.19                | Clay Brick Conservation Treatment                                       |
| 04 03 21.21                | Terra Cotta Conservation Treatment                                      |
| 04 03 21.23                | Fiance Block Conservation Treatment                                     |
| 04 03 22                   | Conservation Treatment for Period Concrete Unit Masonry                 |
| 04 03 24                   | Conservation Treatment for Period Adobe Unit Masonry                    |
| 04 03 43                   | Conservation Treatment for Period Stone Masonry                         |
| 04 05 00                   | Common Work Results for Masonry   |
| 04 05 05                   | Selective Demolition for Masonry  |
| 04 05 13                   | Masonry Mortaring   |
| 04 05 13.16                | Chemical-Resistant Masonry Mortaring                                    |
| 04 05 13.19                | Epoxy Masonry Mortaring   |
| 04 05 13.23                | Surface Bonding Masonry Mortaring                                       |
| 04 05 13.26<br>04 05 13.29 | Engineered Masonry Mortaring Refractory Masonry Mortaring               |
| 04 05 13.29                | Masonry Restoration Mortaring   |
| 04 05 16                   | Masonry Grouting  |
| 04 05 16.16                | Chemical-Resistant Masonry Grouting                                     |
| 04 05 16.26                | Engineered Masonry Grouting   |
| 04 05 19                   | Masonry Anchorage and Reinforcing                                       |
| 04 05 19.13                | Continuous Joint Reinforcing  |
| 04 05 19.16                | Masonry Anchors   |
| 04 05 19.26                | Masonry Reinforcing Bars  |
| 04 05 19.29                | Stone Anchors   |
| 04 05 21                   | Masonry Strengthening   |
| 04 05 23                   | Masonry Accessories   |
| 04 05 23.13<br>04 05 23.16 | Masonry Control and Expansion Joints Masonry Embedded Flashing          |
| 04 05 23.16                | Masonry Embedded Flashing Masonry Cavity Drainage, Weepholes, and Vents |
| 04 06 00                   | Schedules for Masonry   |
| UT UU UU                   | ochedules for masonly   |

| 04 06 20<br>04 06 20.13<br>04 06 40<br>04 06 50<br>04 06 60<br>04 06 70<br><b>04 08 00</b> | Schedules for Unit Masonry Masonry Unit Schedule Schedules for Stone Assemblies Schedules for Refractory Masonry Schedules for Corrosion-Resistant Masonry Schedules for Manufactured Masonry Commissioning of Masonry |
|--|--|
| 04 20 00   | Unit Masonry   |
| 04 21 00   | Clay Unit Masonry  |
| 04 21 13   | Brick Masonry  |
| 04 21 13.13<br>04 21 13.23   | Brick Veneer Masonry Surface-Bonded Brick Masonry  |
| 04 21 16   | Ceramic Glazed Clay Masonry  |
| 04 21 19   | Clay Tile Masonry  |
| 04 21 23   | Structural Clay Tile Masonry   |
| 04 21 26   | Glazed Structural Clay Tile Masonry  |
| 04 21 29   | Terra Cotta Masonry  |
| 04 22 00   | Concrete Unit Masonry  |
| 04 22 00.13  | Concrete Unit Veneer Masonry   |
| 04 22 00.16  | Surface-Bonded Concrete Unit Masonry   |
| 04 22 19<br>04 22 23   | Insulated Concrete Unit Masonry  |
| 04 22 23<br>04 22 23.13  | Architectural Concrete Unit Masonry Exposed Aggregate Concrete Unit Masonry  |
| 04 22 23.16  | Fluted Concrete Unit Masonry   |
| 04 22 23.19  | Molded-Face Concrete Unit Masonry  |
| 04 22 23.23  | Prefaced Concrete Unit Masonry   |
| 04 22 23.26  | Sound-Absorbing Concrete Unit Masonry  |
| 04 22 23.29<br>04 22 26  | Split-Face Concrete Unit Masonry Autoclaved Aerated Concrete Unit Masonry  |
| 04 22 33   | Interlocking Concrete Unit Masonry   |
| 04 23 00   | Glass Unit Masonry   |
| 04 23 13   | Vertical Glass Unit Masonry  |
| 04 23 16   | Glass Unit Masonry Floors  |
| 04 23 19   | Glass Unit Masonry Skylights   |
| 04 24 00   | Adobe Unit Masonry   |
| 04 24 13   | Site-Cast Adobe Unit Masonry   |
| 04 24 16   | Manufactured Adobe Unit Masonry  |
| 04 25 00   | Unit Masonry Panels  |
| 04 25 13   | Metal-Supported Unit Masonry Panels  |
| 04 26 00   | Single-Wythe Unit Masonry  |
| 04 26 13   | Masonry Veneer   |
| 04 27 00   | Multiple-Wythe Unit Masonry  |
| 04 27 13   | Composite Unit Masonry   |
| 04 27 23   | Cavity Wall Unit Masonry   |
| 04 28 00   | Concrete Form Masonry Units  |
| 04 28 13   | Dry-Stacked, Concrete-Filled Masonry Units   |
| 04 28 23   | Mortar-Set, Concrete-Filled Masonry Units  |
| 04 29 00   | Engineered Unit Masonry  |
|  |  |

| 04 40 00             | Stone Assemblies  |
|----------------------|---|
| 04 41 00             | Dry-Placed Stone  |
| 04 42 00             | Exterior Stone Cladding   |
| 04 42 13             | Masonry-Supported Stone Cladding                                    |
| 04 42 16             | Steel-Stud-Supported Stone Cladding                                 |
| 04 42 19             | Strongback-Frame-Supported Stone Cladding                           |
| 04 42 23<br>04 42 26 | Truss-Supported Stone Cladding Grid-System-Supported Stone Cladding |
| 04 42 43             | Stone Panels for Curtain Walls                                      |
| 04 43 00             | Stone Masonry   |
| 04 43 13             | Stone Masonry Veneer  |
| 04 43 13.13          | Anchored Stone Masonry Veneer                                       |
| 04 43 13.16          | Adhered Stone Masonry Veneer  |
| 04 50 00             | Refractory Masonry  |
| 04 51 00             | Flue Liner Masonry  |
| 04 52 00             | Combustion Chamber Masonry  |
| 04 53 00             | Castable Refractory Masonry   |
| 04 54 00             | Refractory Brick Masonry  |
| 04 57 00             | Masonry Fireplaces  |
| 04 57 33             | Modular Masonry Fireplaces  |
| 04 60 00             | <b>Corrosion-Resistant Masonry</b>                                  |
| 04 61 00             | <b>Chemical-Resistant Brick Masonry</b>                             |
| 04 62 00             | Vitrified Clay Liner Plate  |
| 04 70 00             | Manufactured Masonry  |
| 04 71 00             | Manufactured Brick Masonry  |
| 04 71 13             | Calcium Silicate Manufactured Brick Masonry                         |
| 04 72 00             | Cast Stone Masonry  |
| 04 73 00             | Manufactured Stone Masonry  |
| 04 73 13             | Calcium Silicate Manufactured Stone Masonry                         |

| 05 00 00   | Metals   |
|--|--|
| 05 01 00   | Maintenance of Metals  |
| 05 01 10   | Maintenance of Structural Metal Framing  |
| 05 01 20   | Maintenance of Metal Joists  |
| 05 01 30   | Maintenance of Metal Decking   |
| 05 01 40   | Maintenance of Cold-Formed Metal Framing   |
| 05 01 50   | Maintenance of Metal Fabrications  |
| 05 01 70   | Maintenance of Decorative Metal  |
| 05 01 70.91  | Historic Treatment of Decorative Metal   |
| 05 03 00   | Conservation Treatment for Period Metals   |
| 05 03 12   | Conservation Treatment for Period Structural Steel   |
| 05 03 12.13  | Conservation Treatment for Period Architecturally Exposed Steel  |
| 05 03 12.23<br>05 03 51  | Conservation Treatment for Period Structural Steel for Buildings Conservation Treatment for Period Metal Stairs  |
| 05 03 51   | Conservation Treatment for Period Column Covers  |
| 05 03 70   | Conservation Treatment for Period Decorative Metal   |
| 05 03 70   | Conservation Treatment for Period Decorative Metal Stairs  |
| 05 03 73   | Conservation Treatment for Period Decorative Metal Railings  |
| 05 03 75   | Conservation Treatment for Period Decorative Formed Metal  |
| 05 03 76   | Conservation Treatment for Period Decorative Forged Metal  |
| 05 05 00   | Common Work Results for Metals   |
| 05 05 05   | Selective Demolition for Metals  |
| 05 05 13   | Shop-Applied Coatings for Metal  |
| 05 05 19   | Post-Installed Concrete Anchors  |
| 05 05 23   | Metal Fastenings   |
| 05 05 53   | Security Metal Fastenings  |
| 05 06 00   | Schedules for Metals   |
| 05 06 10   | Schedules for Structural Metal Framing   |
| 05 06 10.13  | Steel Column Schedule  |
| 05 06 10.16  | Steel Beam Schedule  |
| 05 06 20   | Schedules for Metal Joists   |
| 05 06 20.13<br>05 06 30  | Steel Joist Schedule Schedules for Metal Decking   |
| 05 06 40   | Schedules for Cold-Formed Metal Framing  |
| 05 06 50   | Schedules for Metal Fabrications   |
| 05 06 70   | Schedules for Decorative Metal   |
| 05 08 00   | Commissioning of Metals  |
| 05 10 00   | •  |
|  | Structural Metal Framing   |
| 05 12 00   |  |
| 05 12 13   | Structural Steel Framing   |
|  | Structural Steel Framing Architecturally-Exposed Structural Steel Framing  |
| 05 12 16   | Structural Steel Framing Architecturally-Exposed Structural Steel Framing Fabricated Fireproofed Steel Columns   |
| 05 12 16<br>05 12 19   | Structural Steel Framing Architecturally-Exposed Structural Steel Framing Fabricated Fireproofed Steel Columns Buckling Restrained Braces  |
| 05 12 16<br>05 12 19<br>05 12 23   | Structural Steel Framing Architecturally-Exposed Structural Steel Framing Fabricated Fireproofed Steel Columns Buckling Restrained Braces Structural Steel for Buildings   |
| 05 12 16<br>05 12 19<br>05 12 23<br>05 12 33                                       | Structural Steel Framing Architecturally-Exposed Structural Steel Framing Fabricated Fireproofed Steel Columns Buckling Restrained Braces Structural Steel for Buildings Structural Steel for Bridges  |
| 05 12 16<br>05 12 19<br>05 12 23<br>05 12 33<br><b>05 13 00</b>                    | Structural Steel Framing Architecturally-Exposed Structural Steel Framing Fabricated Fireproofed Steel Columns Buckling Restrained Braces Structural Steel for Buildings Structural Steel for Bridges Structural Stainless-Steel Framing                             |
| 05 12 16<br>05 12 19<br>05 12 23<br>05 12 33<br><b>05 13 00</b><br><b>05 14 00</b> | Structural Steel Framing Architecturally-Exposed Structural Steel Framing Fabricated Fireproofed Steel Columns Buckling Restrained Braces Structural Steel for Buildings Structural Steel for Bridges Structural Stainless-Steel Framing Structural Aluminum Framing |
| 05 12 16<br>05 12 19<br>05 12 23<br>05 12 33<br><b>05 13 00</b>                    | Structural Steel Framing Architecturally-Exposed Structural Steel Framing Fabricated Fireproofed Steel Columns Buckling Restrained Braces Structural Steel for Buildings Structural Steel for Bridges Structural Stainless-Steel Framing                             |

| 05 15 00                    | Wire Rope Assemblies                                    |
|-----------------------------|---|
| 05 15 13                    | Aluminum Wire Rope Assemblies                           |
| 05 15 16                    | Steel Wire Rope Assemblies                              |
| 05 15 19                    | Stainless-Steel Wire Rope Assemblies                    |
| 05 16 00                    | Structural Cabling                                      |
| 05 16 13                    | Cable Bow Truss Assemblies                              |
| 05 16 33                    | Bridge Cabling  |
| 05 17 00                    | Structural Rod Assemblies                               |
| 05 19 00                    | <b>Tension Rod and Cable Truss Assemblies</b>           |
| 05 19 13                    | Façade Support Truss Assemblies                         |
| 05 19 19                    | Canopy Support Truss Assemblies                         |
| 05 20 00                    | Metal Joists  |
| 05 21 00                    | Steel Joist Framing                                     |
| 05 21 13                    | Deep Longspan Steel Joist Framing                       |
| 05 21 16                    | Longspan Steel Joist Framing                            |
| 05 21 19                    | Open Web Steel Joist Framing                            |
| 05 21 23<br><b>05 25 00</b> | Steel Joist Girder Framing                              |
|                             | Aluminum Joist Framing                                  |
| 05 30 00                    | Metal Decking   |
| 05 31 00                    | Steel Decking   |
| 05 31 13                    | Steel Floor Decking                                     |
| 05 31 23                    | Steel Roof Decking                                      |
| 05 31 33<br><b>05 33 00</b> | Steel Form Decking                                      |
| 05 33 13                    | Aluminum Decking Aluminum Floor Decking                 |
| 05 33 23                    | Aluminum Roof Decking                                   |
| 05 34 00                    | Acoustical Metal Decking                                |
| 05 35 00                    | Raceway Decking Assemblies                              |
| 05 36 00                    | Composite Metal Decking                                 |
| 05 36 13                    | Composite Steel Plate and Elastomer Decking             |
| 05 40 00                    | Cold-Formed Metal Framing                               |
| 05 41 00                    | Structural Metal Stud Framing                           |
| 05 42 00                    | Cold-Formed Metal Joist Framing                         |
| 05 42 13                    | Cold-Formed Metal Floor Joist Framing                   |
| 05 42 23                    | Cold-Formed Metal Roof Joist Framing                    |
| 05 43 00                    | Slotted Channel Framing                                 |
| 05 44 00                    | Cold-Formed Metal Trusses                               |
| 05 44 13                    | Cold-Formed Metal Roof Trusses                          |
| 05 45 00                    | Metal Support Assemblies                                |
| 05 45 13                    | Mechanical Metal Supports                               |
| 05 45 16                    | Electrical Metal Supports                               |
| 05 45 19<br>05 45 23        | Communications Metal Supports Healthcare Metal Supports |
|                             |   |
| 05 50 00                    | Metal Fabrications                                      |

| 05 51 00    | Metal Stairs                          |
|-------------|---------------------------------------|
| 05 51 13    | Metal Pan Stairs                      |
| 05 51 16    | Metal Floor Plate Stairs              |
| 05 51 19    | Metal Grating Stairs                  |
| 05 51 13    | Metal Fire Escapes                    |
| 05 51 33    | Metal Ladders                         |
| 05 51 33.13 | Vertical Metal Ladders                |
| 05 51 33.16 | Inclined Metal Ladders                |
| 05 51 33.23 | Alternating Tread Ladders             |
| 05 51 36    | Metal Walkways                        |
| 05 51 36.13 | Metal Catwalks                        |
| 05 51 36.16 | Metal Ramps                           |
| 05 52 00    | Metal Railings                        |
| 05 52 13    | Pipe and Tube Railings                |
| 05 53 00    | Metal Gratings                        |
| 05 53 13    | Bar Gratings                          |
| 05 53 16    | Plank Gratings                        |
| 05 54 00    | Metal Floor Plates                    |
| 05 55 00    | <b>Metal Stair Treads and Nosings</b> |
| 05 55 13    | Metal Stair Treads                    |
| 05 55 16    | Metal Stair Nosings                   |
| 05 56 00    | Metal Castings                        |
| 05 58 00    | Formed Metal Fabrications             |
| 05 58 13    | Column Covers                         |
| 05 58 16    | Formed Metal Enclosures               |
| 05 58 19    | Heating/Cooling Unit Covers           |
| 05 58 23    | Formed Metal Guards                   |
| 05 59 00    | Metal Specialties                     |
| 05 59 13    | Metal Balconies                       |
| 05 59 63    | Detention Enclosures                  |
| 05 70 00    | <b>Decorative Metal</b>               |
| 05 71 00    | <b>Decorative Metal Stairs</b>        |
| 05 71 13    | Fabricated Metal Spiral Stairs        |
| 05 73 00    | Decorative Metal Railings             |
| 05 73 13    | Glazed Decorative Metal Railings      |
| 05 73 16    | Wire Rope Decorative Metal Railings   |
| 05 74 00    | <b>Decorative Metal Castings</b>      |
| 05 75 00    | <b>Decorative Formed Metal</b>        |
| 05 76 00    | Decorative Forged Metal               |
| 05 77 00    | Decorative Extruded Metal             |
| 05 // 00    | Decorative Extruded inetal            |

## Wood, Plastics, and Composites 06 00 00 Maintenance of Wood, Plastics, and Composites 06 01 00 06 01 10 Maintenance of Rough Carpentry 06 01 10.71 Rough Carpentry Rehabilitation Rough Carpentry Restoration 06 01 10.91 06 01 10.92 Rough Carpentry Preservation 06 01 20 Maintenance of Finish Carpentry Finish Carpentry Rehabilitation 06 01 20.71 Finish Carpentry Restoration 06 01 20.91 06 01 20.92 Finish Carpentry Preservation Maintenance of Architectural Woodwork 06 01 40 06 01 40.51 **Architectural Woodwork Cleaning** Architectural Woodwork Refinishing 06 01 40.61 06 01 40.91 Architectural Woodwork Restoration 06 01 50 Maintenance of Structural Plastics Maintenance of Plastic Fabrications 06 01 60 06 01 60.51 Plastic Cleaning Plastic Rehabilitation 06 01 60.71 06 01 60.91 Plastic Restoration 06 01 60.92 Plastic Preservation 06 01 70 Maintenance of Structural Composites 06 01 80 Maintenance of Composite Assemblies 06 01 80.51 Composite Cleaning 06 01 80.71 Composite Rehabilitation 06 01 80.91 Composite Restoration 06 01 80.92 Composite Preservation 06 03 00 Conservation Treatment for Period Wood 06 03 01 Maintenance for Period Wood Period Wood Storage and Protection 06 03 01.31 Common Work Results for Period Wood 06 03 05 06 03 05.73 Long-term Period Wood Treatment Eradication of Insects in Period Wood 06 03 05.74 06 03 05.75 Antiseptic Treatment of Period Wood Conservation Treatment of Period Log Construction 06 03 13 06 03 13.23 Conservation Treatment for Period Heavy Timber 06 03 20 Conservation Treatment for Period Finish Carpentry Period Exterior Finish Carpentry 06 03 20.13 Period Interior Finish Carpentry 06 03 20.23 Conservation Treatment for Period Architectural Woodwork 06 03 40 Period Exterior Architectural Woodwork 06 03 40.13 Period Interior Architectural Woodwork 06 03 40.23 Common Work Results for Wood, Plastics, and 06 05 00 Composites 06 05 05 Selective Demolition for Wood, Plastics, and Composites Wood, Plastic, and Composite Fastenings 06 05 23 06 05 73 Wood Treatment Fire-Retardant Wood Treatment 06 05 73.13 06 05 73.33 Preservative Wood Treatment 06 05 73.91 Long-Term Wood Treatment 06 05 73.93 Eradication of Insects in Wood 06 05 73.96 Antiseptic Treatment of Wood 06 05 83 **Shop-Applied Wood Coatings**

| 06 06 00                | Schedules for Wood, Plastics, and Composites           |
|-------------------------|--|
| 06 06 10                | Schedules for Rough Carpentry                          |
| 06 06 10.13             | Nailing Schedule                                       |
| 06 06 10.16             | Wood Beam Schedule                                     |
| 06 06 10.19             | Plywood Shear Wall Schedule                            |
| 06 06 10.23             | Plywood Web Joist Schedule                             |
| 06 06 10.26             | Wood Truss Schedule                                    |
| 06 06 20                | Schedules for Finish Carpentry                         |
| 06 06 40                | Schedules for Architectural Woodwork                   |
| 06 06 50                | Schedules for Structural Plastics                      |
| 06 06 60                | Schedules for Plastic Fabrications                     |
| 06 06 70                | Schedules for Structural Composites                    |
| 06 06 80                | Schedules for Composite Assemblies                     |
| 06 08 00                | Commissioning of Wood, Plastics, and Composites        |
| 06 10 00                | Rough Carpentry  |
| 06 10 53                | Miscellaneous Rough Carpentry                          |
| 06 10 63                | Exterior Rough Carpentry                               |
| 06 11 00                | Wood Framing   |
| 06 11 13                | Engineered Wood Products                               |
| 06 11 16                | Mechanically Graded Lumber                             |
| 06 12 00                | Structural Panels                                      |
| 06 12 13                | Cementitious Reinforced Panels                         |
| 06 12 16                | Stressed Skin Panels                                   |
|                         |  |
| 06 13 00                | Heavy Timber Construction                              |
| 06 13 13                | Log Construction                                       |
| 06 13 13.91<br>06 13 16 | Period Horizontal Log Work Pole Construction           |
| 06 13 16                | Heavy Timber Framing                                   |
| 06 13 26                | Heavy Timber Trusses                                   |
| 06 13 20                | Heavy Timber Trusses Heavy Timber Pier Construction    |
| 06 14 00                | Treated Wood Foundations                               |
|                         |  |
| 06 15 00                | Wood Decking   |
| 06 15 13                | Wood Floor Decking                                     |
| 06 15 13.91             | Carvel Planking Wood Boot Dooking                      |
| 06 15 16                | Wood Roof Decking                                      |
| 06 15 19                | Timber Decking   |
| 06 15 23<br>06 15 33    | Laminated Wood Decking                                 |
|                         | Wood Patio Decking                                     |
| 06 16 00                | Sheathing  |
| 06 16 13                | Insulating Sheathing                                   |
| 06 16 23                | Subflooring  |
| 06 16 26                | Underlayment   |
| 06 16 33                | Wood Board Sheathing                                   |
| 06 16 36                | Wood Panel Product Sheathing                           |
| 06 16 43<br>06 16 53    | Gypsum Sheathing Moisture Resistant Sheathing Reard    |
| 06 16 53<br>06 16 63    | Moisture-Resistant Sheathing Board                     |
| 06 17 00                | Cementitious Sheathing Shop-Fabricated Structural Wood |
| um i/ UU                | anoo-radicated annomial wood                           |

|     | 06 17 13 | Laminated Veneer Lumber                      |
|-----|----------|--|
|     | 06 17 19 | Cross-Laminated Timber                       |
|     | 06 17 23 | Parallel Strand Lumber                       |
|     | 06 17 33 | Wood I-Joists                                |
|     | 06 17 36 | Metal-Web Wood Joists                        |
|     | 06 17 43 | Rim Boards                                   |
|     | 06 17 53 | Shop-Fabricated Wood Trusses                 |
| 06  | 18 00    | Glued-Laminated Construction                 |
|     | 06 18 13 | Glued-Laminated Beams                        |
|     | 06 18 16 | Glued-Laminated Columns                      |
| 06  | 20 00    | Finish Carpentry                             |
|     | 06 20 13 | Exterior Finish Carpentry                    |
|     | 06 20 23 | Interior Finish Carpentry                    |
| ne. | 22 00    | Millwork                                     |
| UU  | 06 22 13 | Standard Pattern Wood Trim                   |
| 06  |          |  |
| OO  | 25 00    | Prefinished Paneling                         |
|     | 06 25 13 | Prefinished Hardboard Paneling               |
|     | 06 25 16 | Prefinished Plywood Paneling                 |
| 06  | 26 00    | Board Paneling                               |
|     | 06 26 13 | Profile Board Paneling                       |
| 06  | 40 00    | Architectural Woodwork                       |
|     | 06 40 13 | Exterior Architectural Woodwork              |
|     | 06 40 23 | Interior Architectural Woodwork              |
| 06  | 41 00    | Architectural Wood Casework                  |
|     | 06 41 13 | Wood-Veneer-Faced Architectural Cabinets     |
|     | 06 41 16 | Plastic-Laminate-Clad Architectural Cabinets |
|     | 06 41 93 | Cabinet and Drawer Hardware                  |
| 06  | 42 00    | Wood Paneling                                |
|     | 06 42 13 | Wood Board Paneling                          |
|     | 06 42 14 | Stile and Rail Wood Paneling                 |
|     | 06 42 16 | Flush Wood Paneling                          |
|     | 06 42 19 | Plastic-Laminate-Faced Wood Paneling         |
| 06  | 43 00    | Wood Stairs and Railings                     |
|     | 06 43 13 | Wood Stairs                                  |
|     | 06 43 16 | Wood Railings                                |
| 06  | 44 00    | Ornamental Woodwork                          |
|     | 06 44 13 | Wood Turnings                                |
|     | 06 44 16 | Wood Pilasters                               |
|     | 06 44 19 | Wood Grilles                                 |
|     | 06 44 23 | Wood Corbels                                 |
|     | 06 44 26 | Wood Cupolas                                 |
|     | 06 44 29 | Wood Finials                                 |
|     | 06 44 33 | Wood Mantels                                 |
|     | 06 44 36 | Wood Pediment Heads                          |
|     | 06 44 39 | Wood Posts and Columns                       |
| 06  | 46 00    | Wood Trim                                    |
| -   | 06 46 13 | Wood Door and Window Casings                 |

| 06 46 16             | Wood Aprons                                      |
|----------------------|--|
| 06 46 19             | Wood Base and Shoe Moldings                      |
| 06 46 23             | Wood Chair Rails                                 |
| 06 46 26             | Wood Cornices                                    |
| 06 46 29             | Wood Stone Stools and Sills                      |
| 06 46 33<br>06 46 91 | Wood Stops, Stools, and Sills                    |
|                      | Splicing of Wooden Components  Wood Frames       |
| 06 48 00             | Exterior Wood Door Frames                        |
| 06 48 13             |  |
| 06 48 16<br>06 48 19 | Interior Wood Door Frames Ornamental Wood Frames |
| 06 48 23             |  |
| 06 48 26             | Wood-Veneer Frames                               |
| 06 49 00             | Wood Screens and Exterior Wood Shutters          |
| 06 49 13             | Wood Screens                                     |
| 06 49 16             |  |
| 06 49 19             | Exterior Wood Shutters                           |
| 06 50 00             | Structural Plastics                              |
| 06 51 00             | Structural Plastic Shapes and Plates             |
| 06 51 13             | Plastic Lumber                                   |
| 06 52 00             | Plastic Structural Assemblies                    |
| 06 53 00             | Plastic Decking                                  |
| 06 53 13             | Solid Plastic Decking                            |
| 06 60 00             | Plastic Fabrications                             |
| 06 61 00             | Cast Polymer Fabrications                        |
| 06 61 13             | Simulated Stone Fabrications                     |
| 06 61 16             | Solid Surfacing Fabrications                     |
| 06 63 00             | Plastic Railings                                 |
| 06 64 00             | Plastic Paneling                                 |
| 06 64 13             | Plastic Lattice Paneling                         |
| 06 65 00             | Plastic Trim                                     |
| 06 66 00             | <b>Custom Ornamental Simulated Woodwork</b>      |
| 06 70 00             | Structural Composites                            |
| 06 71 00             | Structural Composite Shapes and Plates           |
| 06 71 13             | Composite Lumber                                 |
| 06 72 00             | Composite Structural Assemblies                  |
| 06 72 13             | Composite Joist Assemblies                       |
| 06 73 00             | Composite Decking                                |
| 06 73 13             | Composite Structural Decking                     |
| 06 74 00             | Composite Gratings                               |
| 06 74 13             | Fiberglass Reinforced Gratings                   |
| 06 80 00             | Composite Fabrications                           |
| 06 81 00             | Composite Railings                               |
| 06 81 13             | Glass-Fiber-Reinforced Plastic Railings          |

| 06 82 00 | Composite Trim                 |  |
|----------|--------------------------------|--|
| 06 83 00 | Composite Paneling             |  |
| 06 83 13 | Resin Composite Paneling       |  |
| 06 83 16 | Fiberglass Reinforced Paneling |  |

## 07 00 00 Thermal and Moisture Protection **Operation and Maintenance of Thermal and Moisture** 07 01 00 Protection Maintenance of Dampproofing and Waterproofing 07 01 10 07 01 10.81 Waterproofing Replacement 07 01 20 Maintenance of Thermal Protection 07 01 30 Maintenance of Steep Slope Roofing 07 01 40 Maintenance of Roofing and Siding Panels Maintenance of Membrane Roofing 07 01 50 07 01 50.13 **Roof Moisture Survey** 07 01 50.16 Roof Maintenance Program Preparation for Re-Roofing 07 01 50.19 07 01 50.23 Roof Removal 07 01 50.61 Roof Re-Coating 07 01 50.81 Roof Replacement Roofing Restoration 07 01 50.91 07 01 60 Maintenance of Flashing and Sheet Metal Flashing and Sheet Metal Rehabilitation 07 01 60.71 07 01 60.91 Flashing and Sheet Metal Restoration Flashing and Sheet Metal Preservation 07 01 60.92 Operation and Maintenance of Roof Specialties and Accessories 07 01 70 07 01 80 Maintenance of Fire and Smoke Protection 07 01 90 Maintenance of Joint Protection 07 01 90.71 Joint Sealant Rehabilitation 07 01 90.81 Joint Sealant Replacement 07 03 00 Conservation Treatment for Period Roofing 07 03 30 Conservation Treatment for Period Steep Slope Roofing Conservation Treatment for Period Canvas Roofing 07 03 30.13 Conservation Treatment for Period Board Roofing 07 03 30.16 Conservation Treatment for Period Shingles and Shakes 07 03 31 Conservation Treatment for Period Metal Shingles 07 03 31.16 07 03 31.26 Conservation Treatment for Period Slate Shingles 07 03 31.29 Conservation Treatment for Period Wood Shingles and Shakes 07 03 32 Conservation Treatment for Period Roof Tiles Conservation Treatment for Period Clay Roof Tiles 07 03 32.13 Conservation Treatment for Period Concrete Roof Tiles 07 03 32.16 07 03 32.19 Conservation Treatment for Period Metal Roof Tiles Conservation Treatment for Period Natural Roof Coverings 07 03 33 07 03 33.13 Conservation Treatment for Period Sod Roofing Conservation Treatment for Period Roofing and Siding Panels 07 03 40 Conservative Treatment for Period Roof Panels 07 03 41 Conservation Treatment for Period Metal Roof Panels 07 03 41.13 07 03 41.23 Conservation Treatment for Period Wood Roof Panels 07 03 46 Conservation Treatment for Period Wood Siding Conservation Treatment of Period Flashing and Sheet Metal 07 03 60 07 03 61 Conservation Treatment for Period Sheet Metal Roofing 07 03 61.13 Conservation Treatment for Period Standing Seam Sheet Metal Roofing 07 03 61.16 Conservation Treatment for Period Batten Seam Sheet Metal Roofing 07 03 61.19 Conservation Treatment for Period Flat Seam Sheet Metal Roofing Common Work Results for Thermal and Moisture 07 05 00 **Protection**

| 07 05 05                 | Selective Demolition for Thermal and Moisture Protection        |
|--------------------------|---|
| 07 05 53                 | Fire and Smoke Assembly Identification                          |
| 07 06 00                 | Schedules for Thermal and Moisture Protection                   |
| 07 06 10                 | Schedules for Dampproofing and Waterproofing                    |
| 07 06 20                 | Schedules for Thermal Protection                                |
| 07 06 30                 | Schedules for Steep Slope Roofing                               |
| 07 06 40                 | Schedules for Roofing and Siding Panels                         |
| 07 06 50                 | Schedules for Membrane Roofing                                  |
| 07 06 60                 | Schedules for Flashing and Sheet Metal                          |
| 07 06 70                 | Schedules for Roof Specialties and Accessories                  |
| 07 06 80                 | Schedules for Fire and Smoke Protection                         |
| 07 06 80.13              | Fireproofing Schedule   |
| 07 06 80.16<br>07 06 90  | Firestopping Schedule Schedules for Joint Protection            |
| 07 06 90.13              | Joint Sealant Schedule  |
| 07 08 00                 | Commissioning of Thermal and Moisture Protection                |
| 07 10 00                 |   |
|                          | Dampproofing and Waterproofing                                  |
| 07 11 00                 | Dampproofing  |
| 07 11 13                 | Bituminous Dampproofing   |
| 07 11 16                 | Cementitious Dampproofing                                       |
| 07 11 19                 | Sheet Dampproofing  |
| 07 12 00                 | Built-Up Bituminous Waterproofing                               |
| 07 12 13                 | Built-Up Asphalt Waterproofing                                  |
| 07 12 16                 | Built-Up Coal Tar Waterproofing                                 |
| 07 13 00                 | Sheet Waterproofing   |
| 07 13 13                 | Bituminous Sheet Waterproofing                                  |
| 07 13 26                 | Self-Adhering Sheet Waterproofing                               |
| 07 13 52                 | Modified Bituminous Sheet Waterproofing                         |
| 07 13 53                 | Elastomeric Sheet Waterproofing                                 |
| 07 13 54                 | Thermoplastic Sheet Waterproofing                               |
| 07 14 00                 | Fluid-Applied Waterproofing                                     |
| 07 14 13                 | Hot Fluid-Applied Rubberized Asphalt Waterproofing              |
| 07 14 14                 | Hot Fluid-Applied Polyurea Waterproofing                        |
| 07 14 16                 | Cold Fluid-Applied Waterproofing                                |
| <b>07 15 00</b> 07 15 13 | Sheet Metal Waterproofing Sheet Lead Waterproofing              |
| <b>07 16 00</b>          | ·   |
| 07 16 00                 | Cementitious and Reactive Waterproofing                         |
| 07 16 13                 | Polymer Modified Cement Waterproofing Crystalline Waterproofing |
| 07 16 16                 | Metal Oxide Waterproofing                                       |
| 07 17 00                 | Bentonite Waterproofing   |
| 07 17 00                 | Bentonite Water proofing  Bentonite Panel Waterproofing         |
| 07 17 13<br>07 17 16     | Bentonite Composite Sheet Waterproofing                         |
| <b>07 18 00</b>          |   |
|                          | Traffic Coatings  |
| 07 18 13<br>07 18 16     | Pedestrian Traffic Coatings Vehicular Traffic Coatings          |
|                          | -   |
| 07 19 00                 | Water Repellents  |

|    | 07 19 13                | Acrylic Water Repellents                               |
|----|-------------------------|--|
|    | 07 19 16                | Silane Water Repellents                                |
|    | 07 19 19                | Silicone Water Repellents                              |
|    | 07 19 23                | Siloxane Water Repellents                              |
|    | 07 19 26                | Stearate Water Repellents                              |
| 07 | <sup>'</sup> 20 00      | Thermal Protection                                     |
| 07 | 21 00                   | Thermal Insulation                                     |
|    | 07 21 13                | Board Insulation                                       |
|    | 07 21 13.13             | Foam Board Insulation                                  |
|    | 07 21 13.16             | Fibrous Board Insulation                               |
|    | 07 21 13.19             | Mineral Board Insulation                               |
|    | 07 21 16                | Blanket Insulation                                     |
|    | 07 21 19                | Foamed-In-Place Insulation                             |
|    | 07 21 23                | Loose-Fill Insulation                                  |
|    | 07 21 26<br>07 21 29    | Blown Insulation                                       |
|    | 07 21 29 07 21 53       | Sprayed Insulation Reflective Insulation               |
| 07 |                         |  |
| U/ | 22 00                   | Roof and Deck Insulation                               |
|    | 07 22 13                | Asphaltic Perlite Concrete Deck                        |
|    | 07 22 16                | Roof Board Insulation                                  |
| 07 | 24 00                   | Exterior Insulation and Finish Systems                 |
|    | 07 24 13                | Polymer-Based Exterior Insulation and Finish System    |
|    | 07 24 16                | Polymer-Modified Exterior Insulation and Finish System |
|    | 07 24 19                | Water-Drainage Exterior Insulation and Finish System   |
|    | 07 24 23                | Direct-Applied Finish Systems                          |
| _  | <sup>'</sup> 25 00      | Weather Barriers                                       |
| 07 | 26 00                   | Vapor Retarders  |
|    | 07 26 13                | Above-Grade Vapor Retarders                            |
|    | 07 26 16                | Below-Grade Vapor Retarders                            |
|    | 07 26 23                | Below-Grade Gas Retarders                              |
| 07 | 27 00                   | Air Barriers   |
|    | 07 27 13                | Modified Bituminous Sheet Air Barriers                 |
|    | 07 27 16                | Sheet Metal Membrane Air Barriers                      |
|    | 07 27 19                | Plastic Sheet Air Barriers                             |
|    | 07 27 23                | Board Product Air Barriers                             |
|    | 07 27 26                | Fluid-Applied Membrane Air Barriers                    |
|    | 07 27 36                | Sprayed Foam Air Barrier                               |
| 07 | 30 00                   | Steep Slope Roofing                                    |
|    | 07 30 91                | Canvas Roofing   |
| 07 | 31 00                   | Shingles and Shakes                                    |
|    | 07 31 13                | Asphalt Shingles                                       |
|    | 07 31 13.13             | Fiberglass-Reinforced Asphalt Shingles                 |
|    | 07 31 16                | Metal Shingles   |
|    | 07 31 19                | Mineral-Fiber Cement Shingles                          |
|    | 07 31 23                | Porcelain Enamel Shingles                              |
|    | 07 31 26                | Slate Shingles   |
|    | 07 31 29<br>07 31 29.13 | Wood Shingles and Shakes Wood Shingles                 |
|    | 01 01 20.10             | **************************************                 |

|    | 07 31 29.16                | Wood Shakes   |
|----|----------------------------|---|
|    | 07 31 33                   | Composite Rubber Shingles                             |
|    | 07 31 53                   | Plastic Shakes  |
| 07 | 32 00                      | Roof Tiles  |
|    | 07 32 13                   | Clay Roof Tiles                                       |
|    | 07 32 14                   | Ceramic and Porcelain Roof Tiles                      |
|    | 07 32 16                   | Concrete Roof Tiles                                   |
|    | 07 32 19                   | Metal Roof Tiles                                      |
|    | 07 32 23                   | Mineral-Fiber Cement Roof Tiles                       |
|    | 07 32 26                   | Plastic Roof Tiles                                    |
|    | 07 32 29                   | Rubber Tiles/Panels                                   |
| 07 | 33 00                      | Natural Roof Coverings                                |
| -  | 07 33 13                   | Sod Roofing   |
|    | 07 33 16                   | Thatched Roofing                                      |
|    | 07 33 63                   | Vegetated Roofing                                     |
| Ω7 | 40 00                      |   |
|    |                            | Roofing and Siding Panels                             |
| 07 | 41 00                      | Roof Panels   |
|    | 07 41 13                   | Metal Roof Panels                                     |
|    | 07 41 23                   | Wood Roof Panels                                      |
|    | 07 41 33                   | Plastic Roof Panels                                   |
|    | 07 41 43                   | Composite Roof Panels                                 |
|    | 07 41 63                   | Fabricated Roof Panel Assemblies                      |
| 07 | 42 00                      | Wall Panels   |
|    | 07 42 13                   | Metal Wall Panels                                     |
|    | 07 42 13.13                | Formed Metal Wall Panels                              |
|    | 07 42 13.16                | Metal Plate Wall Panels                               |
|    | 07 42 13.19<br>07 42 13.23 | Insulated Metal Wall Panels                           |
|    | 07 42 13.23                | Metal Composite Material Wall Panels Wood Wall Panels |
|    | 07 42 23                   | Terracotta Wall Panels                                |
|    | 07 42 23                   | Plastic Wall Panels                                   |
|    | 07 42 43                   | Composite Wall Panels                                 |
|    | 07 42 43                   | Fabricated Wall Panel Assemblies                      |
|    | 07 42 93                   | Soffit Panels   |
| 07 | 44 00                      | Faced Panels  |
| U1 | 07 44 13                   | Aggregate Coated Panels                               |
|    | 07 44 16                   | Porcelain Enameled Faced Panels                       |
|    | 07 44 10                   | Tile-Faced Panels                                     |
|    | 07 44 23                   | Ceramic-Tile-Faced Panels                             |
|    | 07 44 33                   | Metal Faced Panels                                    |
|    | 07 44 53                   | Glass-Fiber-Reinforced Cementitious Panels            |
|    | 07 44 56                   | Mineral-Fiber-Reinforced Cementitious Panels          |
|    | 07 44 63                   | Fabricated Faced Panel Assemblies                     |
| 07 | 46 00                      | Siding  |
| O1 | 07 46 16                   | Aluminum Siding                                       |
|    | 07 46 19                   | Steel Siding  |
|    | 07 46 19                   | Wood Siding   |
|    | 07 46 26                   | Hardboard Siding                                      |
|    | 07 46 29                   | Plywood Siding  |
|    | 0. 10 20                   | ,   |

| 07 46 33                   | Plastic Siding  |
|----------------------------|---|
| 07 46 43                   | Composition Siding  |
| 07 46 46                   | Fiber-Cement Siding   |
| 07 46 63                   | Fabricated Panel Assemblies with Siding   |
| 07 50 00                   | Membrane Roofing  |
| 07 51 00                   | Built-Up Bituminous Roofing   |
| 07 51 13                   | Built-Up Asphalt Roofing  |
| 07 51 13.13                | Cold-Applied Built-Up Asphalt Roofing   |
| 07 51 16                   | Built-Up Coal Tar Roofing   |
| 07 51 23                   | Glass-Fiber-Reinforced Asphalt Emulsion Roofing   |
| 07 52 00                   | Modified Bituminous Membrane Roofing  |
| 07 52 13<br>07 52 13.11    | Atactic-Polypropylene-Modified Bituminous Membrane Roofing Cold Adhesive Applied Atactic-Polypropylene-Modified Bituminous Membrane                       |
|                            | Roofing   |
| 07 52 13.13<br>07 52 13.14 | Torch-Applied Atactic-Polypropylene-Modified Bituminous Membrane Roofing Mechanically Fastened Atactic-Polypropylene-Modified Bituminous Membrane Roofing |
| 07 52 16                   | Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing  |
| 07 52 16.11                | Cold Adhesive Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing  |
| 07 52 16.12                | Hot-Mopped Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing   |
| 07 52 16.13                | Torch-Applied Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing  |
| 07 52 16.14                | Mechanically Fastened Styrene-Butadiene-Styrene Modified Bituminous<br>Membrane Roofing   |
| 07 53 00                   | Elastomeric Membrane Roofing  |
| 07 53 13                   | Chlorinated-Polyethylene Roofing  |
| 07 53 16                   | Chlorosulfonate-Polyethylene Roofing  |
| 07 53 23                   | Ethylene-Propylene-Diene-Monomer Roofing  |
| 07 53 29                   | Polyisobutylene Roofing   |
| 07 54 00                   | Thermoplastic Membrane Roofing  |
| 07 54 13                   | Copolymer-Alloy Roofing   |
| 07 54 16                   | Ethylene-Interpolymer Roofing   |
| 07 54 19                   | Polyvinyl-Chloride Roofing Thermanication Rolls in Roofing  |
| 07 54 23<br>07 54 26       | Thermoplastic-Polyolefin Roofing  |
|                            | Nitrile-Butadiene-Polymer Roofing   |
| 07 55 00                   | Protected Membrane Roofing  |
| 07 55 51<br>07 55 52       | Built-Up Bituminous Protected Membrane Roofing Modified Bituminous Protected Membrane Roofing   |
| 07 55 53                   | Elastomeric Protected Membrane Roofing  |
| 07 55 54                   | Thermoplastic Protected Membrane Roofing  |
| 07 55 56                   | Fluid-Applied Protected Membrane Roofing  |
| 07 55 56.13                | Hot-Applied Rubberized Asphalt Protected Membrane Roofing   |
| 07 55 63                   | Vegetated Protected Membrane Roofing  |
| 07 56 00                   | Fluid-Applied Roofing   |
| 07 57 00                   | Coated Foamed Roofing   |
| 07 57 13                   | Sprayed Polyurethane Foam Roofing   |
| 07 58 00                   | Roll Roofing  |
| 07 60 00                   | Flashing and Sheet Metal  |

| <b>07</b> | 61 00                | Sheet Metal Roofing                                       |
|-----------|----------------------|---|
|           | 07 61 13             | Standing Seam Sheet Metal Roofing                         |
|           | 07 61 16             | Batten Seam Sheet Metal Roofing                           |
|           | 07 61 19             | Flat Seam Sheet Metal Roofing                             |
|           | 62 00                | Sheet Metal Flashing and Trim                             |
| <b>07</b> | 63 00                | Sheet Metal Roofing Specialties                           |
| <b>07</b> | 64 00                | Sheet Metal Wall Cladding                                 |
|           | 07 64 13             | Standing Seam Sheet Metal Wall Cladding                   |
|           | 07 64 16             | Batten Seam Sheet Metal Wall Cladding                     |
|           | 07 64 19             | Flat Seam Sheet Metal Wall Cladding                       |
| 07        | 65 00                | Flexible Flashing   |
|           | 07 65 13             | Laminated Sheet Flashing                                  |
|           | 07 65 16<br>07 65 19 | Modified Bituminous Sheet Flashing Plastic Sheet Flashing |
|           | 07 65 23             | Rubber Sheet Flashing                                     |
|           | 07 65 26             | Self-Adhering Sheet Flashing                              |
| 07        | 70 00                | Roof and Wall Specialties and                             |
| •         | . 0 00               | Accessories   |
| ٥7        | 71 00                | Roof Specialties  |
| U1        | 07 71 13             | Manufactured Copings                                      |
|           | 07 71 16             | Manufactured Counterflashing Systems                      |
|           | 07 71 19             | Manufactured Gravel Stops and Fasciae                     |
|           | 07 71 23             | Manufactured Gutters and Downspouts                       |
|           | 07 71 23.13          | Gutter Debris Guards                                      |
|           | 07 71 26             | Reglets   |
|           | 07 71 29<br>07 71 33 | Manufactured Roof Expansion Joints Manufactured Scuppers  |
| ٥7        | <b>72 00</b>         | Roof Accessories  |
| U1        | 07 72 13             | Manufactured Curbs  |
|           | 07 72 13             | Relief Vents  |
|           | 07 72 26             | Ridge Vents   |
|           | 07 72 33             | Roof Hatches  |
|           | 07 72 36             | Smoke Vents   |
|           | 07 72 43             | Roof Walk Boards  |
|           | 07 72 46             | Roof Walkways   |
|           | 07 72 53<br>07 72 63 | Snow Guards Waste Containment Assemblies                  |
| 07        | <b>76 00</b>         | Roof Pavers   |
| U1        | 07 76 13             | Roof Ballast Pavers                                       |
|           | 07 76 16<br>07 76 16 | Roof Decking Pavers                                       |
| 07        | 77 00                | Wall Specialties  |
|           | 80 00                | Fire and Smoke Protection                                 |
|           | 81 00                |   |
| U/        | 07 81 13             | Applied Fireproofing Cement Aggregate Fireproofing        |
|           | 07 81 13             | Cementitious Fireproofing                                 |
|           | 07 81 19             | Foamed Magnesium-Oxychloride Fireproofing                 |

| 07 81 23<br>07 81 26<br>07 81 29<br>07 81 33   | Intumescent Fireproofing Magnesium Cement Fireproofing Mineral-Fiber Cementitious Fireproofing Mineral-Fiber Fireproofing  |
|--|--|
| 07 82 00   | Board Fireproofing   |
| 07 82 13   | Calcium-Silicate Board Fireproofing  |
| 07 82 16   | Slag-Fiber Board Fireproofing  |
| 07 84 00   | Firestopping   |
| 07 84 13   | Penetration Firestopping   |
| 07 84 13.13  | Penetration Firestopping Mortars   |
| 07 84 13.16<br>07 84 43  | Penetration Firestopping Devices Joint Firestopping  |
| 07 84 53   | Building Perimeter Firestopping  |
| 07 86 00   | Smoke Seals  |
|  |  |
| 07 87 00   | Smoke Containment Barriers   |
|  |  |
| 07 90 00   | Joint Protection   |
|  |  |
| 07 90 00   | Joint Protection   |
| <b>07 90 00 07 91 00</b> 07 91 13 07 91 16   | Joint Protection Preformed Joint Seals   |
| <b>07 90 00 07 91 00</b> 07 91 13 07 91 16 07 91 23  | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods   |
| <b>07 90 00 07 91 00</b> 07 91 13 07 91 16 07 91 23 07 91 26   | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers   |
| <b>07 90 00 07 91 00</b> 07 91 13 07 91 16 07 91 23  | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers Joint Sealants  |
| <b>07 90 00 07 91 00</b> 07 91 13 07 91 16 07 91 23 07 91 26 <b>07 92 00</b> 07 92 13  | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers Joint Sealants Elastomeric Joint Sealants   |
| <b>07 90 00 07 91 00</b> 07 91 13 07 91 16 07 91 23 07 91 26 <b>07 92 00</b> 07 92 13 07 92 16   | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers Joint Sealants Elastomeric Joint Sealants Rigid Joint Sealants  |
| <b>07 90 00 07 91 00</b> 07 91 13 07 91 16 07 91 23 07 91 26 <b>07 92 00</b> 07 92 13 07 92 16 07 92 19                                      | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers Joint Sealants Elastomeric Joint Sealants Rigid Joint Sealants Acoustical Joint Sealants  |
| 07 90 00<br>07 91 00<br>07 91 13<br>07 91 16<br>07 91 23<br>07 91 26<br>07 92 00<br>07 92 13<br>07 92 16<br>07 92 19<br>07 95 00             | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers Joint Sealants Elastomeric Joint Sealants Rigid Joint Sealants Acoustical Joint Sealants Expansion Control                                  |
| 07 90 00<br>07 91 00<br>07 91 13<br>07 91 16<br>07 91 23<br>07 91 26<br>07 92 00<br>07 92 13<br>07 92 16<br>07 92 19<br>07 95 00<br>07 95 13 | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers Joint Sealants Elastomeric Joint Sealants Rigid Joint Sealants Acoustical Joint Sealants Expansion Control Expansion Joint Cover Assemblies |
| 07 90 00<br>07 91 00<br>07 91 13<br>07 91 16<br>07 91 23<br>07 91 26<br>07 92 00<br>07 92 13<br>07 92 16<br>07 92 19<br>07 95 00             | Joint Protection Preformed Joint Seals Compression Seals Joint Gaskets Backer Rods Joint Fillers Joint Sealants Elastomeric Joint Sealants Rigid Joint Sealants Acoustical Joint Sealants Expansion Control                                  |

## **Openings** 08 00 00 **Operation and Maintenance of Openings** 08 01 00 Operation and Maintenance of Doors and Frames 08 01 10 08 01 11 Operation and Maintenance of Metal Doors and Frames 08 01 14 Operation and Maintenance of Wood Doors Operation and Maintenance of Plastic Doors 08 01 15 08 01 16 Operation and Maintenance of Composite Doors 08 01 17 Operation and Maintenance of Integrated Door Opening Assemblies 08 01 30 Operation and Maintenance of Specialty Doors and Frames 08 01 32 Operation and Maintenance of Sliding Glass Doors Operation and Maintenance of Coiling Doors and Grilles 08 01 33 08 01 34 Operation and Maintenance of Special Function Doors 08 01 35 Operation and Maintenance of Folding Doors and Grilles 08 01 36 Operation and Maintenance of Panel Doors 08 01 39 Operation and Maintenance of Traffic Doors Operation and Maintenance of Entrances, Storefronts, and Curtain Walls 08 01 40 08 01 41 Operation and Maintenance of Entrances 08 01 42 Operation and Maintenance of Storefronts 08 01 44 Operation and Maintenance of Curtain Walls 08 01 50 Operation and Maintenance of Windows 08 01 51 Operation and Maintenance of Metal Windows Operation and Maintenance of Wood Windows 08 01 52 Wood Window Repairs 08 01 52.61 Wood Window Rehabilitation 08 01 52.71 08 01 52.81 Wood Window Replacement 08 01 52.91 Wood Window Restoration 08 01 52.93 Historic Treatment of Wood Windows 08 01 53 Operation and Maintenance of Plastic Windows 08 01 54 Operation and Maintenance of Composite Windows Operation and Maintenance of Special Function Windows 08 01 56 08 01 60 Operation and Maintenance of Skylights and Roof Windows 08 01 61 Operation and Maintenance of Roof Windows 08 01 62 Operation and Maintenance of Unit Skylights Operation and Maintenance of Metal-Framed Skylights 08 01 63 08 01 64 Operation and Maintenance of Plastic-Framed Skylights 08 01 70 Operation and Maintenance of Hardware 08 01 71 Operation and Maintenance of Door Hardware 08 01 74 Operation and Maintenance of Access Control Hardware 08 01 75 Operation and Maintenance of Window Hardware 08 01 80 Maintenance of Glazing 08 01 81 Maintenance of Glass Glazing 08 01 84 Maintenance of Plastic Glazing 08 01 88 Maintenance of Special Function Glazing 08 01 90 Operation and Maintenance of Louvers and Vents 08 01 91 Operation and Maintenance of Louvers 08 01 92 Operation and Maintenance of Louvered Equipment Enclosures

## 08 03 00 Conservation Treatment for Period Openings

Operation and Maintenance of Vents

08 01 95

08 03 11 Conservation Treatment for Period Metal Doors and Frames 08 03 11.13 Conservation Treatment for Period Metal Doors and Frames

|    | 08 03 11.23                | Conservation Treatment for Period Bronze Doors and Frames                                      |
|----|----------------------------|--|
|    | 08 03 14                   | Conservation Treatment for Period Wood Doors   |
|    | 08 03 14.23                | Conservation Treatment for Period Metal-Faced Wood Doors                                       |
|    | 08 03 14.33                | Conservation Treatment for Period Stile and Rail Wood Doors                                    |
|    | 08 03 30                   | Conservation Treatment for Period Specialty Doors and Frames                                   |
|    | 08 03 34                   | Conservation Treatment for Period Special Function Doors                                       |
|    | 08 03 34.59                | Conservation Treatment for Period Vault Doors  |
|    | 08 03 50                   | Conservation Treatment for Period Windows  |
|    | 08 03 51                   | Conservation Treatment for Period Metal Windows  |
|    | 08 03 51.16<br>08 03 51.23 | Conservation Treatment for Period Bronze Windows   |
|    | 08 03 51.23                | Conservation Treatment for Period Steel Windows Conservation Treatment for Period Wood Windows |
|    | 08 03 70                   | Conservation Treatment for Period Hardware   |
|    | 08 03 70                   | Conservation Treatment for Period Door Hardware  |
|    | 08 03 75                   | Conservation Treatment for Period Window Hardware  |
|    | 08 03 73                   | Conservation Treatment for Period Louvers and Vents  |
|    | 08 03 90                   | Conservation Treatment for Period Louvers  |
|    | 08 03 95                   | Conservation Treatment for Period Louvers  Conservation Treatment for Period Vents             |
| 00 |                            |  |
| Uδ | 05 00                      | Common Work Results for Openings   |
|    | 08 05 05                   | Selective Demolition for Openings  |
| 08 | 06 00                      | Schedules for Openings   |
|    | 08 06 10                   | Door Schedule  |
|    | 08 06 10.13                | Door Type Schedule   |
|    | 08 06 10.16                | Frame Type Schedule  |
|    | 08 06 40                   | Schedules for Entrances, Storefronts, and Curtain Walls  |
|    | 08 06 41                   | Entrance Schedule  |
|    | 08 06 42                   | Storefront Schedule  |
|    | 08 06 50                   | Window Schedule  |
|    | 08 06 60                   | Skylight Schedule  |
|    | 08 06 70                   | Hardware Schedule  |
|    | 08 06 71                   | Door Hardware Schedule   |
|    | 08 06 80                   | Glazing Schedule   |
|    | 08 06 90                   | Louver and Vent Schedule   |
| 08 | 08 00                      | Commissioning of Openings  |
| 80 | 3 10 00                    | Doors and Frames   |
| na | 11 00                      | Metal Doors and Frames   |
| •  | 08 11 13                   | Hollow Metal Doors and Frames  |
|    | 08 11 13.13                | Standard Hollow Metal Doors and Frames   |
|    | 08 11 13.16                | Custom Hollow Metal Doors and Frames   |
|    | 08 11 16                   | Aluminum Doors and Frames  |
|    | 08 11 19                   | Stainless-Steel Doors and Frames   |
|    | 08 11 23                   | Bronze Doors and Frames  |
|    | 08 11 63                   | Metal Screen and Storm Doors and Frames  |
|    | 08 11 63.13                | Steel Screen and Storm Doors and Frames  |
|    | 08 11 63.23                | Aluminum Screen and Storm Doors and Frames   |
|    | 08 11 66                   | Metal Screen Doors and Frames  |
|    | 08 11 66.13                | Steel Screen Doors and Frames  |
|    | 08 11 66.23                | Aluminum Screen Doors and Frames   |
|    | 08 11 69                   | Metal Storm Doors and Frames   |
|    | 08 11 69.13                | Steel Storm Doors and Frames   |

| 08 11 69.23 | Aluminum Storm Doors and Frames  |
|-------------|--|
| 08 11 73    | Sliding Metal Fire Doors   |
| 08 11 74    | Sliding Metal Grilles  |
| 08 12 00    | Metal Frames   |
| 08 12 13    | Hollow Metal Frames  |
| 08 12 13.13 | Standard Hollow Metal Frames   |
| 08 12 13.53 | Custom Hollow Metal Frames   |
| 08 12 16    | Aluminum Frames  |
| 08 12 19    | Stainless-Steel Frames   |
| 08 12 23    | Bronze Frames  |
| 08 13 00    | Metal Doors  |
| 08 13 13    | Hollow Metal Doors   |
| 08 13 13.13 | Standard Hollow Metal Doors  |
| 08 13 13.53 | Custom Hollow Metal Doors  |
| 08 13 16    | Aluminum Doors   |
| 08 13 19    | Stainless-Steel Doors  |
| 08 13 23    | Bronze Doors   |
| 08 13 73    | Sliding Metal Doors  |
| 08 13 76    | Bifolding Metal Doors  |
| 08 14 00    | Wood Doors   |
| 08 14 13    | Carved Wood Doors  |
| 08 14 16    | Flush Wood Doors   |
| 08 14 23    | Clad Wood Doors  |
| 08 14 23.13 | Metal-Faced Wood Doors   |
| 08 14 23.16 | Plastic-Laminate-Faced Wood Doors  |
| 08 14 23.19 | Molded-Hardboard-Faced Wood Doors  |
| 08 14 29    | Prefinished Wood Doors   |
| 08 14 33    | Stile and Rail Wood Doors  |
| 08 14 66    | Wood Screen Doors  |
| 08 14 69    | Wood Storm Doors   |
| 08 14 73    | Sliding Wood Doors   |
| 08 14 76    | Bifolding Wood Doors   |
| 08 15 00    | Plastic Doors  |
| 08 15 13    | Laminated Plastic Doors  |
| 08 15 16    | Solid Plastic Doors  |
| 08 15 66    | Plastic Screen Doors   |
| 08 15 69    | Plastic Storm Doors  |
| 08 15 73    | Sliding Plastic Doors  |
| 08 15 76    | Bifolding Plastic Doors  |
| 08 16 00    | Composite Doors  |
| 08 16 13    | Fiberglass Doors   |
| 08 16 73    | Sliding Composite Doors  |
| 08 16 76    | Bifolding Composite Doors  |
| 08 17 00    | Integrated Door Opening Assemblies   |
| 08 17 13    |  |
| 08 17 13    | Integrated Metal Door Opening Assemblies   |
| 08 17 33    | Integrated Wood Door Opening Assemblies Integrated Plastic Door Opening Assemblies |
| 08 17 43    | Integrated Composite Door Opening Assemblies                                       |
|             |  |
| 08 30 00    | <b>Specialty Doors and Frames</b>  |

| 08 31 00                    | Access Doors and Panels  |
|-----------------------------|--|
| 08 31 13                    | Access Doors and Frames  |
| 08 31 13.53                 | Security Access Doors and Frames                               |
| 08 31 16                    | Access Panels and Frames                                       |
| 08 32 00                    | Sliding Glass Doors  |
| 08 32 13                    | Sliding Aluminum-Framed Glass Doors                            |
| 08 32 16                    | Sliding Plastic-Framed Glass Doors                             |
| 08 32 19                    | Sliding Wood-Framed Glass Doors                                |
| 08 33 00                    | Coiling Doors and Grilles                                      |
| 08 33 13                    | Coiling Counter Doors  |
| 08 33 16                    | Coiling Counter Grilles  |
| 08 33 23                    | Overhead Coiling Doors   |
| 08 33 23.13                 | Overhead Rapid Coiling Doors                                   |
| 08 33 26                    | Overhead Coiling Grilles                                       |
| 08 33 33                    | Side Coiling Doors   |
| 08 33 36                    | Side Coiling Grilles   |
| 08 33 43<br>08 33 44        | Overhead Coiling Smoke Curtains Overhead Coiling Fire Curtains |
|                             | _  |
| 08 34 00                    | Special Function Doors   |
| 08 34 13                    | Cold Storage Doors   |
| 08 34 16                    | Hangar Doors<br>Industrial Doors                               |
| 08 34 19<br>08 34 33        | Lightproof Doors   |
| 08 34 36                    | Darkroom Doors   |
| 08 34 46                    | Radio-Frequency-Interference Shielding Doors                   |
| 08 34 49                    | Radiation Shielding Doors and Frames                           |
| 08 34 49.13                 | Neutron Shielding Doors and Frames                             |
| 08 34 53                    | Security Doors and Frames                                      |
| 08 34 56                    | Security Gates   |
| 08 34 58                    | File Room Doors and Frames                                     |
| 08 34 59                    | Vault Doors and Day Gates                                      |
| 08 34 63                    | Detention Doors and Frames                                     |
| 08 34 63.13                 | Steel Detention Doors and Frames                               |
| 08 34 63.16                 | Steel Plate Detention Doors and Frames                         |
| 08 34 63.33<br>08 34 73     | Detention Door Frame Protection Sound Control Door Assemblies  |
|                             |  |
| <b>08 35 00</b><br>08 35 13 | Folding Doors and Grilles                                      |
| 08 35 13.13                 | Folding Doors Accordion Folding Doors                          |
| 08 35 13.23                 | Accordion Folding Fire Doors                                   |
| 08 35 13.33                 | Panel Folding Doors  |
| 08 35 16                    | Folding Grilles  |
| 08 35 16.13                 | Accordion Folding Grilles                                      |
| 08 36 00                    | Panel Doors  |
| 08 36 13                    | Sectional Doors  |
| 08 36 16                    | Single-Panel Doors   |
| 08 36 19                    | Multi-Leaf Vertical Lift Doors                                 |
| 08 36 23                    | Telescoping Vertical Lift Doors                                |
| 08 38 00                    | Traffic Doors  |
| 08 38 13                    | Flexible Strip Doors   |

| Flexible Traffic Doors  |
|---|
| Rigid Traffic Doors   |
| Pressure-Resistant Doors  |
| Airtight Doors  |
| Watertight Doors  |
| Blast-Resistant Doors   |
| Entrances, Storefronts, and Curtain Walls   |
| Entrances and Storefronts   |
| Aluminum-Framed Entrances and Storefronts   |
| Fire-Rated Aluminum-Framed Entrances and Storefronts  |
| Bronze-Framed Entrances and Storefronts   |
| Stainless-Steel-Framed Entrances and Storefronts  |
| Steel-Framed Entrances and Storefronts  |
| All-Glass Entrances and Storefronts   |
| Entrances   |
| All-Glass Entrances   |
| Automatic Entrances   |
| Folding Automatic Entrances   |
| Sliding Automatic Entrances Swinging Automatic Entrances  |
| Revolving Door Entrances  |
| Security Revolving Door Entrances   |
| Balanced Door Entrances   |
| Pressure-Resistant Entrances  |
| Intensive Care Unit/Critical Care Unit Entrances  |
| Storefronts   |
| Timber-Framed Storefronts   |
| Aluminum-Framed Storefronts   |
| Fire-Rated Aluminum Storefronts   |
| Bronze-Framed Storefronts   |
| Stainless-Steel-Framed Storefronts  |
| Steel-Framed Storefronts  |
| All-Glass Storefronts   |
| Channel Glass Storefronts   |
| Sliding Storefronts   |
| Curtain Wall and Glazed Assemblies  |
| Glazed Timber Curtain Walls   |
| Glazed Composite Curtain Wall   |
| Glazed Fiberglass Curtain Wall  |
| Glazed Aluminum Curtain Walls Glazed Bronze Curtain Walls   |
|   |
|   |
| Glazed Steel Curtain Walls  |
| Glazed Steel Curtain Walls<br>Glazed Stainless-Steel Curtain Walls  |
| Glazed Steel Curtain Walls Glazed Stainless-Steel Curtain Walls Structural Sealant Glazed Curtain Walls   |
| Glazed Steel Curtain Walls Glazed Stainless-Steel Curtain Walls Structural Sealant Glazed Curtain Walls Structural Glass Curtain Walls                                  |
| Glazed Steel Curtain Walls Glazed Stainless-Steel Curtain Walls Structural Sealant Glazed Curtain Walls   |
| Glazed Steel Curtain Walls Glazed Stainless-Steel Curtain Walls Structural Sealant Glazed Curtain Walls Structural Glass Curtain Walls Point Supported Structural Glass |
|   |

| 08 45 23             | Fiberglass-Sandwich-Panel Assemblies                    |
|----------------------|---|
| 08 50 00             | Windows   |
| 08 51 00             | Metal Windows   |
| 08 51 13             | Aluminum Windows  |
| 08 51 16             | Bronze Windows  |
| 08 51 19             | Stainless-Steel Windows                                 |
| 08 51 23             | Steel Windows   |
| 08 51 66             | Metal Window Screens                                    |
| 08 51 69             | Metal Storm Windows                                     |
| 08 52 00             | Wood Windows  |
| 08 52 13             | Metal-Clad Wood Windows                                 |
| 08 52 16             | Plastic-Clad Wood Windows                               |
| 08 52 66             | Wood Window Screens                                     |
| 08 52 69             | Wood Storm Windows                                      |
| 08 53 00             | Plastic Windows   |
| 08 53 13<br>08 53 66 | Vinyl Window Scroops                                    |
| 08 53 69             | Vinyl Window Screens<br>Vinyl Storm Windows             |
| 08 54 00             | Composite Windows                                       |
| 08 54 13             | Fiberglass Windows                                      |
| 08 54 66             | Fiberglass Windows Fiberglass Window Screens            |
| 08 54 69             | Fiberglass Storm Windows                                |
| 08 55 00             | Pressure-Resistant Windows                              |
| 08 55 13             | Tornado-Resistant Windows                               |
| 08 55 23             | Blast-Resistant Windows                                 |
| 08 56 00             | Special Function Windows                                |
| 08 56 19             | Pass Windows  |
| 08 56 46             | Radio-Frequency-Interference Shielding Windows          |
| 08 56 49             | Radiation Shielding Windows                             |
| 08 56 53             | Security Windows  |
| 08 56 56<br>08 56 59 | Security Window Screens Service and Teller Window Units |
| 08 56 63             | Detention Windows                                       |
| 08 56 66             | Detention Windows  Detention Window Screens             |
| 08 56 73             | Sound Control Windows                                   |
| 08 56 88             | Interior Insulating Windows                             |
| 08 60 00             | <b>Roof Windows and Skylights</b>                       |
| 08 61 00             | Roof Windows  |
| 08 61 13             | Metal Roof Windows                                      |
| 08 61 16             | Wood Roof Windows                                       |
| 08 62 00             | Unit Skylights  |
| 08 62 13             | Domed Unit Skylights                                    |
| 08 62 16             | Pyramidal Unit Skylights                                |
| 08 62 19             | Vaulted Unit Skylights                                  |
| 08 62 23             | Tubular Skylights                                       |
| 08 63 00             | Metal-Framed Skylights                                  |
| 08 63 13             | Domed Metal-Framed Skylights                            |

| 08 63 16<br>08 63 19<br>08 63 23 | Pyramidal Metal-Framed Skylights<br>Vaulted Metal-Framed Skylights<br>Ridge Metal-Framed Skylights |
|----------------------------------|--|
| 08 63 53                         | Motorized Metal-Framed Skylights   |
| 08 64 00                         | Plastic-Framed Skylights   |
| 08 67 00                         | <b>Skylight Protection and Screens</b>   |
| 08 70 00                         | Hardware   |
| 08 71 00                         | Door Hardware  |
| 08 71 13                         | Automatic Door Operators   |
| 08 71 53                         | Security Door Hardware   |
| 08 71 63                         | Detention Door Hardware  |
| 08 74 00                         | Access Control Hardware  |
| 08 74 13                         | Card Key Access Control Hardware   |
| 08 74 16                         | Keypad Access Control Hardware   |
| 08 74 19                         | Biometric Identity Access Control Hardware   |
| 08 75 00                         | Window Hardware  |
| 08 75 13<br>08 75 16             | Automatic Window Equipment Window Operators  |
| 08 78 00                         | Special Function Hardware  |
| 08 79 00                         | Hardware Accessories   |
| 08 79 13                         | Key Storage Equipment  |
|                                  |  |
| 08 80 00                         | Glazing  |
| 08 81 00                         | Glass Glazing  |
| 08 81 13                         | Decorative Glass Glazing   |
| 08 83 00                         | Mirrors  |
| 08 83 13<br>08 83 16             | Mirrored Glass Glazing Mirrored Plastic Glazing  |
| 08 84 00                         | Plastic Glazing  |
| 08 84 13                         | Decorative Plastic Glazing   |
| 08 85 00                         | Glazing Accessories  |
| 08 87 00                         | Glazing Surface Films  |
| 08 87 13                         | Solar Control Films  |
| 08 87 23                         | Safety and Security Films  |
| 08 87 23.13                      | Safety Films   |
| 08 87 23.16                      | Security Films   |
| 08 87 26<br>08 87 33             | Bird Control Film Decorative Films   |
| 08 88 00                         | Special Function Glazing   |
| 08 88 13                         | Fire-Resistant Glazing   |
| 08 88 19                         | Hurricane-Resistant Glazing  |
| 08 88 23                         | Cable Suspended Glazing  |
| 08 88 33                         | Transparent Mirrored Glazing   |
| 08 88 36                         | Switchable Glass   |
| 08 88 36.16<br>08 88 39          | Electronically Controlled Switchable Glass Pressure-Resistant Glazing                              |
| 08 88 49                         | Radiation-Resistant Glazing  |
|                                  | •  |

| 08 88 53<br>08 88 56 | Security Glazing Ballistics-Resistant Glazing |
|----------------------|---|
| 08 90 00             | Louvers and Vents                             |
| 08 91 00             | Louvers                                       |
| 08 91 13             | Motorized Wall Louvers                        |
| 08 91 16             | Operable Wall Louvers                         |
| 08 91 19             | Fixed Louvers                                 |
| 08 91 26             | Door Louvers                                  |
| 08 92 00             | <b>Louvered Equipment Enclosures</b>          |
| 08 95 00             | Vents   |
| 08 95 13             | Soffit Vents                                  |
| 08 95 16             | Wall Vents                                    |
| 08 95 33             | Explosion Vents                               |
| 08 95 43             | Flood Vents                                   |

09 05 71

## 09 00 00 **Finishes** 09 01 00 **Maintenance of Finishes** 09 01 20 Maintenance of Plaster and Gypsum Board 09 01 20.91 Plaster Restoration Maintenance of Tiling 09 01 30 09 01 30.91 Tile Restoration Maintenance of Ceilings 09 01 50 Ceiling Restoration 09 01 50.91 Maintenance of Flooring 09 01 60 09 01 60.91 Flooring Restoration 09 01 70 Maintenance of Wall Finishes 09 01 70.91 Wall Finish Restoration 09 01 80 Maintenance of Acoustic Treatment 09 01 90 Maintenance of Painting and Coating 09 01 90.51 Paint Cleaning Maintenance Repainting 09 01 90.52 Maintenance Coatings 09 01 90.53 09 01 90.61 Repainting Paint Restoration 09 01 90.91 Coating Restoration 09 01 90.92 Paint Preservation 09 01 90.93 Conservation Treatment of Period Finishes 09 03 00 09 03 21 Conservation Treatment for Period Plaster Assemblies 09 03 25 Conservation Treatment for Period Plastering Conservation Treatment for Period Lime-Based Plaster 09 03 25.23 09 03 30 Conservation Treatment for Period Tile 09 03 50 Conservation Treatment for Period Ceilings Conservation Treatment for Period Suspended Ceilings 09 03 51 Conservation Treatment for Textured Ceilings 09 03 56 Conservation Treatment for Period Metal-Panel Textured Ceilings 09 03 56.16 Conservation Treatment for Period Flooring 09 03 60 Conservation Treatment for Period Masonry Flooring 09 03 63 09 03 63.13 Conservation Treatment for Period Brick Flooring 09 03 63.40 Conservation Treatment for Period Stone Flooring Conservation Treatment for Period Wood Flooring 09 03 64 Conservation Treatment for Period Wood Strip and Plank Flooring 09 03 64.29 Conservation Treatment for Period Resilient Flooring 09 03 65 09 03 65.16 Conservation Treatment for Period Resilient Sheet Flooring 09 03 66 Conservation Treatment for Period Terrazzo Flooring 09 03 70 Conservation Treatment for Period Wall Finishes 09 03 72 Conservation Treatment for Period Wall Coverings Conservation Treatment for Period Painting and Coating 09 03 90 Conservation Treatment for Period Painted Surfaces 09 03 91 Conservation Treatment for Period Exterior Painting 09 03 91.13 Conservation Treatment for Period Interior Painting 09 03 91.23 09 05 00 Common Work Results for Finishes 09 05 05 Selective Demolition for Finishes 09 05 13 Common Finishes Common Work Results for Flooring Preparation 09 05 61 Moisture Vapor Emission Control 09 05 61.13 Acoustic Underlayment

| 09 06 00                    | Schedules for Finishes  |
|-----------------------------|---|
| 09 06 00.13                 | Room Finish Schedule  |
| 09 06 20                    | Schedules for Plaster and Gypsum Board  |
| 09 06 30<br>09 06 50        | Schedules for Tiling Schedules for Ceilings                                     |
| 09 06 60                    | Schedules for Flooring  |
| 09 06 70                    | Schedules for Wall Finishes   |
| 09 06 80                    | Schedules for Acoustical Treatment  |
| 09 06 90                    | Schedules for Painting and Coating  |
| 09 06 90.13                 | Paint Schedule  |
| 09 08 00                    | Commissioning of Finishes   |
| 09 20 00                    | Plaster and Gypsum Board  |
| 09 21 00                    | Plaster and Gypsum Board Assemblies   |
| 09 21 13                    | Plaster Assemblies  |
| 09 21 16                    | Gypsum Board Assemblies   |
| 09 21 16.23<br>09 21 16.33  | Gypsum Board Shaft Wall Assemblies Gypsum Board Area Separation Wall Assemblies |
| 09 22 00                    | Supports for Plaster and Gypsum Board   |
| 09 22 13                    | Metal Furring   |
| 09 22 13.13                 | Metal Channel Furring   |
| 09 22 13.23                 | Resilient Channel Furring   |
| 09 22 16                    | Non-Structural Metal Framing  |
| 09 22 16.13                 | Non-Structural Metal Stud Framing   |
| 09 22 26<br>09 22 26.23     | Suspension Systems Metal Suspension Systems                                     |
| 09 22 26.33                 | Plastic Suspension Systems  |
| 09 22 36                    | Lath  |
| 09 22 36.13                 | Gypsum Lath   |
| 09 22 36.23<br>09 22 39     | Metal Lath Veneer Plaster Base  |
| 09 23 00                    |   |
| 09 23 13                    | Gypsum Plastering Acoustical Gypsum Plastering                                  |
| 09 23 13                    | Fireproof Gypsum Plastering   |
| 09 24 00                    | Cement Plastering   |
| 09 24 13                    | Adobe Finish  |
| 09 24 23                    | Cement Stucco   |
| 09 24 33                    | Cement Parging  |
| 09 25 00                    | Other Plastering  |
| 09 25 13                    | Acrylic Plastering  |
| 09 25 13.13                 | Acrylic Plaster Finish  |
| 09 25 23<br>09 25 26        | Lime Based Plastering   |
|                             | Natural Clay Plastering   |
| <b>09 26 00</b><br>09 26 13 | Veneer Plastering   |
|                             | Gypsum Veneer Plastering  |
| <b>09 27 00</b> 09 27 13    | Plaster Fabrications Class Fiber Reinforced Gypsum Fabrications                 |
| 09 27 13                    | Glass-Fiber-Reinforced Gypsum Fabrications Simulated Plaster Fabrications       |
| 09 28 00                    | Backing Boards and Underlayments  |
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| 09 28 13<br>09 28 16<br>09 28 19<br><b>09 29 00</b><br>09 29 82<br><b>09 30 00</b><br>09 30 13<br>09 30 16<br>09 30 19<br>09 30 23<br>09 30 26<br>09 30 29  | Cementitious Backing Boards Glass-Mat Faced Gypsum Backing Boards Fibered Gypsum Backing Boards Gypsum Board Gypsum Board Fireproofing Tiling Ceramic Tiling Quarry Tiling Paver Tiling Glass Mosaic Tiling Plastic Tiling Metal Tiling  |
|---|--|
| 09 30 33<br>09 30 36  | Stone Tiling Concrete Tiling   |
| 09 30 39  | Brick Tiling   |
| 09 31 00  | Thin-Set Tiling  |
| 09 31 13<br>09 31 16<br>09 31 19<br>09 31 23<br>09 31 26<br>09 31 29<br>09 31 33<br>09 31 36<br><b>09 32 00</b>   | Thin-Set Ceramic Tiling Thin-Set Quarry Tiling Thin-Set Paver Tiling Thin-Set Glass Mosaic Tiling Thin-Set Plastic Tiling Thin-Set Metal Tiling Thin-Set Stone Tiling Thin-Set Concrete Tiling Mortar-Bed Tiling   |
| 00 22 42  |  |
| 09 32 13<br>09 32 16  | Mortar-Bed Ceramic Tiling  |
| 09 32 13<br>09 32 16<br>09 32 19  |  |
| 09 32 16<br>09 32 19<br>09 32 23  | Mortar-Bed Ceramic Tiling<br>Mortar-Bed Quarry Tiling<br>Mortar-Bed Paver Tiling<br>Mortar-Bed Glass Mosaic Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26  | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling  |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29  | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling  |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33  | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling  |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36  | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33  | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling  Conductive Tiling  |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16   | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Quarry Tiling  |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19   | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Quarry Tiling Conductive Paver Tiling  |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23   | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Glass Mosaic Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23<br>09 33 23   | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Glass Mosaic Tiling Conductive Plastic Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23   | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Glass Mosaic Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23<br>09 33 26<br>09 33 29   | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Glass Mosaic Tiling Conductive Plastic Tiling Conductive Metal Tiling Conductive Stone Tiling Conductive Concrete Tiling  |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23<br>09 33 26<br>09 33 29<br>09 33 33<br>09 33 36<br><b>09 34 00</b>                          | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Plastic Tiling Conductive Plastic Tiling Conductive Metal Tiling Conductive Stone Tiling Conductive Concrete Tiling Conductive Concrete Tiling Conductive Concrete Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23<br>09 33 26<br>09 33 29<br>09 33 33<br>09 33 36<br><b>09 34 00</b><br>09 34 13              | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Plastic Tiling Conductive Plastic Tiling Conductive Metal Tiling Conductive Stone Tiling Conductive Concrete Tiling Waterproofing-Membrane Tiling Waterproofing-Membrane Ceramic Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23<br>09 33 23<br>09 33 29<br>09 33 33<br>09 33 36<br><b>09 34 00</b><br>09 34 13<br>09 34 16  | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Plastic Tiling Conductive Plastic Tiling Conductive Metal Tiling Conductive Stone Tiling Conductive Concrete Tiling Waterproofing-Membrane Tiling Waterproofing-Membrane Ceramic Tiling Waterproofing-Membrane Quarry Tiling    |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23<br>09 33 26<br>09 33 29<br>09 33 33<br>09 33 36<br><b>09 34 00</b><br>09 34 13              | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Plastic Tiling Conductive Plastic Tiling Conductive Metal Tiling Conductive Stone Tiling Conductive Concrete Tiling Waterproofing-Membrane Tiling Waterproofing-Membrane Ceramic Tiling   |
| 09 32 16<br>09 32 19<br>09 32 23<br>09 32 26<br>09 32 29<br>09 32 33<br>09 32 36<br><b>09 33 00</b><br>09 33 13<br>09 33 16<br>09 33 19<br>09 33 23<br>09 33 23<br>09 33 29<br>09 33 29<br>09 33 36<br><b>09 34 1</b> 3<br>09 34 16<br>09 34 19 | Mortar-Bed Ceramic Tiling Mortar-Bed Quarry Tiling Mortar-Bed Paver Tiling Mortar-Bed Glass Mosaic Tiling Mortar-Bed Plastic Tiling Mortar-Bed Metal Tiling Mortar-Bed Stone Tiling Mortar-Bed Concrete Tiling Conductive Tiling Conductive Ceramic Tiling Conductive Quarry Tiling Conductive Paver Tiling Conductive Glass Mosaic Tiling Conductive Plastic Tiling Conductive Metal Tiling Conductive Stone Tiling Conductive Concrete Tiling Waterproofing-Membrane Tiling Waterproofing-Membrane Quarry Tiling Waterproofing-Membrane Paver Tiling |

| 09 34 33    | Waterproofing-Membrane Stone Tiling              |
|-------------|--|
| 09 34 36    | Waterproofing-Membrane Concrete Tiling           |
| 09 35 00    | Chemical-Resistant Tiling                        |
| 09 35 13    | Chemical-Resistant Ceramic Tiling                |
| 09 35 16    | Chemical-Resistant Quarry Tiling                 |
| 09 35 19    | Chemical-Resistant Paver Tiling                  |
| 09 35 23    | Chemical-Resistant Glass Mosaic Tiling           |
| 09 35 26    | Chemical-Resistant Plastic Tiling                |
| 09 35 29    | Chemical-Resistant Metal Tiling                  |
| 09 35 33    | Chemical-Resistant Stone Tiling                  |
| 09 35 36    | Chemical-Resistant Concrete Tiling               |
| 09 50 00    | Ceilings   |
| 09 51 00    | Acoustical Ceilings                              |
| 09 51 13    | Acoustical Panel Ceilings                        |
| 09 51 14    | Acoustical Fabric-Faced Panel Ceilings           |
| 09 51 23    | Acoustical Tile Ceilings                         |
| 09 51 26    | Acoustical Wood Ceilings                         |
| 09 51 33    | Acoustical Metal Pan Ceilings                    |
| 09 51 33.13 | Acoustical Snap-in Metal Pan Ceilings            |
| 09 51 53    | Direct-Applied Acoustical Ceilings               |
| 09 53 00    | <b>Acoustical Ceiling Suspension Assemblies</b>  |
| 09 53 13    | Curved Profile Ceiling Suspension Assemblies     |
| 09 53 23    | Metal Acoustical Ceiling Suspension Assemblies   |
| 09 53 33    | Plastic Acoustical Ceiling Suspension Assemblies |
| 09 54 00    | Specialty Ceilings                               |
| 09 54 13    | Open Metal Mesh Ceilings                         |
| 09 54 16    | Luminous Ceilings                                |
| 09 54 19    | Mirror Panel Ceilings                            |
| 09 54 23    | Linear Metal Ceilings                            |
| 09 54 26    | Suspended Wood Ceilings                          |
| 09 54 33    | Decorative Panel Ceilings                        |
| 09 54 36    | Suspended Decorative Grids                       |
| 09 54 43    | Stretched-Fabric Ceiling Systems                 |
| 09 54 46    | Fabric-Wrapped Ceiling Panels                    |
| 09 54 53    | Fiberglass Reinforced Panel Ceilings             |
| 09 56 00    | Textured Ceilings                                |
| 09 56 13    | Gypsum-Panel Textured Ceilings                   |
| 09 56 16    | Metal-Panel Textured Ceilings                    |
| 09 57 00    | Special Function Ceilings                        |
| 09 57 53    | Security Ceiling Assemblies                      |
| 09 58 00    | Integrated Ceiling Assemblies                    |
| 09 60 00    | Flooring   |
| 09 61 00    | Flooring Treatment                               |
| 09 61 13    | Slip-Resistant Flooring Treatment                |
| 09 61 19    | Concrete Floor Staining                          |
| 09 61 36    | Static-Resistant Flooring Treatment              |
| 09 62 00    | Specialty Flooring                               |
|             |  |

| Laminate Flooring Bamboo Flooring Leather Flooring Cork Flooring Acid-Resistant Flooring Acoustic Flooring Synthetic Turf Flooring Metal Flooring Aluminum Flooring Stainless Steel Flooring Structural Glass Flooring Masonry Flooring Brick Flooring Chemical-Resistant Brick Flooring Stone Flooring  |
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| Composition Stone Flooring   |
| Wood Flooring Wood Block Flooring Wood Composition Flooring Wood Parquet Flooring Acrylic-Impregnated Wood Parquet Flooring Wood Strip and Plank Flooring Laminated Wood Flooring Resilient Wood Flooring Assemblies Wood Athletic Flooring  |
| Resilient Flooring   |
| Resilient Base and Accessories Resilient Stair Treads and Risers Resilient Stair Nosings Resilient Accessories Resilient Carpet Transitions Resilient Sheet Flooring Vinyl Sheet Flooring Rubber Sheet Flooring PVC-Free Sheet Flooring Vinyl Composition Tile Flooring Vinyl Tile Flooring Rubber Tile Flooring Vinyl Tile Flooring Static-Control Resilient Flooring Conductive Resilient Flooring Static-Dissipative Resilient Flooring Static-Resistant Resilient Flooring Linoleum Flooring Resilient Athletic Flooring Portland Cement Terrazzo Flooring |
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| 09 66 13.16<br>09 66 13.19<br>09 66 13.23<br>09 66 13.26<br>09 66 13.33<br>09 66 16<br>09 66 16.13<br>09 66 16.16<br>09 66 23<br>09 66 23.13<br>09 66 23.16<br>09 66 33.19<br>09 66 33.13<br>09 66 33.13<br>09 66 33.16<br>09 66 33.19 | Monolithic Terrazzo Flooring Bonded Terrazzo Flooring Palladina Terrazzo Flooring Rustic Terrazzo Flooring Structural Terrazzo Flooring Terrazzo Floor Tile Portland Cement Terrazzo Floor Tile Plastic-Matrix Terrazzo Floor Tile Resinous Matrix Terrazzo Flooring Polyacrylate Modified Cementitious Terrazzo Flooring Epoxy-Resin Terrazzo Flooring Polyester-Resin Terrazzo Flooring Conductive Terrazzo Flooring Conductive Epoxy-Resin Terrazzo Conductive Polyester-Resin Terrazzo Flooring Conductive Plastic-Matrix Terrazzo Flooring |
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| 09 67 00   | Fluid-Applied Flooring  |
| 09 67 13   | Elastomeric Liquid Flooring   |
| 09 67 13.33  | Conductive Elastomeric Liquid Flooring  |
| 09 67 16   | Epoxy-Marble Chip Flooring  |
| 09 67 19<br>09 67 23   | Magnesium-Oxychloride Flooring  |
| 09 67 26   | Resinous Flooring Quartz Flooring   |
| 09 67 66   | Fluid-Applied Athletic Flooring   |
| 09 68 00   | Carpeting   |
| 09 68 13   | Tile Carpeting  |
| 09 68 16   | Sheet Carpeting   |
| 09 69 00   | Access Flooring   |
| 09 69 13   | Rigid-Grid Access Flooring  |
| 09 69 16   | Snap-on Stringer Access Flooring  |
| 09 69 19   | Stringerless Access Flooring  |
| 09 69 33   | Low-Profile Fixed Height Access Flooring  |
| 09 69 53   | Access Flooring Accessories   |
| 09 69 56   | Access Flooring Stairs and Stringers  |
| 09 70 00   | Wall Finishes   |
| 09 72 00   | Wall Coverings  |
| 09 72 13   | Cork Wall Coverings   |
| 09 72 16   | Vinyl-Coated Fabric Wall Coverings  |
| 09 72 16.13<br>09 72 16.16   | Flexible Vinyl Wall Coverings Rigid-Sheet Vinyl Wall Coverings  |
| 09 72 10:10  | Textile Wall Coverings  |
| 09 72 23   | Wallpapering  |
| 09 73 00   | Wall Carpeting  |
| 09 74 00   | Flexible Wood Sheets  |
| 09 74 13   | Wood Wall Coverings   |
| 09 74 16   | Flexible Wood Veneers   |
| 09 75 00   | Stone Facing  |
| 09 75 13   | Stone Wall Facing   |
| 09 75 19   | Stone Trim  |
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| 09 76 00                   | Plastic Blocks   |
|----------------------------|--|
| 09 77 00                   | Special Wall Surfacing                                   |
| 09 77 13                   | Stretched-Fabric Wall Systems                            |
| 09 77 23                   | Fabric-Wrapped Panels                                    |
| 09 77 33                   | Terrazzo Wall Finish                                     |
| 09 77 53                   | Vegetated Wall Systems                                   |
| 09 78 00                   | Interior Wall Paneling                                   |
| 09 78 13                   | Metal Interior Wall Paneling                             |
| 09 78 16                   | Stone-Faced Interior Wall Paneling                       |
| 09 80 00                   | Acoustic Treatment                                       |
| 09 81 00                   | Acoustic Insulation                                      |
| 09 81 13                   | Acoustic Board Insulation                                |
| 09 81 16                   | Acoustic Blanket Insulation                              |
| 09 81 29                   | Sprayed Acoustic Insulation                              |
| 09 83 00                   | Acoustic Finishes  |
| 09 83 13                   | Acoustic Wall Coating                                    |
| 09 83 16<br>09 83 22       | Acoustic Ceiling Coating                                 |
| 09 84 00                   | Acoustic Poom Components                                 |
| 09 84 13                   | Acoustic Room Components Fixed Sound-Absorptive Panels   |
| 09 84 14                   | Acoustic Stretched-Fabric Wall Systems                   |
| 09 84 16                   | Fixed Sound-Reflective Panels                            |
| 09 84 23                   | Moveable Sound-Absorptive Panels                         |
| 09 84 26                   | Moveable Sound-Reflective Panels                         |
| 09 84 33                   | Sound-Absorbing Wall Units                               |
| 09 84 36                   | Sound-Absorbing Ceiling Units                            |
| 09 90 00                   | Painting and Coating                                     |
| 09 91 00                   | Painting   |
| 09 91 13                   | Exterior Painting  |
| 09 91 23                   | Interior Painting  |
| 09 93 00                   | Staining and Transparent Finishing                       |
| 09 93 13                   | Exterior Staining and Finishing                          |
| 09 93 13.13<br>09 93 13.53 | Exterior Staining Exterior Finishing                     |
| 09 93 23                   | Interior Staining and Finishing                          |
| 09 93 23.13                | Interior Staining  |
| 09 93 23.53                | Interior Finishing                                       |
| 09 94 00                   | Decorative Finishing                                     |
| 09 94 13                   | Textured Finishing                                       |
| 09 94 16                   | Faux Finishing   |
| 09 94 19                   | Multicolor Interior Finishing  High-Porformance Coatings |
| 09 96 00                   | High-Performance Coatings                                |
| 09 96 13<br>09 96 23       | Abrasion-Resistant Coatings Graffiti-Resistant Coatings  |
| 09 96 26                   | Marine Coatings  |
| 09 96 33                   | High-Temperature-Resistant Coatings                      |
| 09 96 35                   | Chemical-Resistant Coatings                              |

| 09 96 43    | Fire-Retardant Coatings        |
|-------------|--------------------------------|
| 09 96 46    | Intumescent Painting           |
| 09 96 53    | Elastomeric Coatings           |
| 09 96 56    | Epoxy Coatings                 |
| 09 96 59    | High-Build Glazed Coatings     |
| 09 96 63    | Textured Plastic Coatings      |
| 09 96 66    | Aggregate Wall Coatings        |
| 09 97 00    | Special Coatings               |
| 09 97 13    | Steel Coatings                 |
| 09 97 13.13 | Interior Steel Coatings        |
| 09 97 13.23 | Exterior Steel Coatings        |
| 09 97 23    | Concrete and Masonry Coatings  |
| 09 97 26    | Cementitious Coatings          |
| 09 97 26.13 | Interior Cementitious Coatings |
| 09 97 26.23 | Exterior Cementitious Coatings |
| 09 97 35    | Dry Erase Coatings             |

| 10 01 00  10 01 10  10 01 10  10 01 10  10 01 20  Operation and Maintenance of Information Specialties Operation and Maintenance of Interior Specialties Operation and Maintenance of Interior Specialties Operation and Maintenance of Interior Specialties Operation and Maintenance of Safety Specialties Operation and Maintenance of Storage Specialties Operation and Maintenance of Other Specialties Operation and Maintenance of Other Specialties Selective Demolition for Specialties Schedules for Specialties Schedules for Information Specialties Schedules for Information Specialties Schedules for Information Specialties Schedules for Interior Specialties Schedules for Interior Specialties Schedules for Safety Specialties Schedules for Storage Specialties Schedules for Storage Specialties Schedules for Storage Specialties Schedules for Storage Specialties Schedules for Other Specialties Schedules for Storage Specialties Schedules for Storag | 10 00 00  | Specialties   |
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| 10 01 10 10 01 20 Operation and Maintenance of Information Specialties Operation and Maintenance of Interior Specialties Operation and Maintenance of Fireplaces and Stoves Operation and Maintenance of Safety Specialties Operation and Maintenance of Storage Specialties Operation and Maintenance of Cother Specialties Operation and Maintenance of Cother Specialties Selective Demolition for Specialties Selective Demolition for Specialties Schedules for Specialties Schedules for Specialties Schedules for Information Specialties Schedules for Information Specialties Schedules for Information Specialties Schedules for Interior Specialties Schedules for Interior Specialties Schedules for Interior Specialties Schedules for Interior Specialties Schedules for Storage Specialties Schedules for Storage Specialties Schedules for Storage Specialties Schedules for Other Specialt | 10 01 00  | <b>Operation and Maintenance of Specialties</b>   |
| 10 01 40 Operation and Maintenance of Safety Specialties Operation and Maintenance of Storage Specialties Operation and Maintenance of Storage Specialties Operation and Maintenance of Other Specialties Operation and Maintenance of Storage Specialties Operation and Maintenance of Other Specialties Operation and Specialties Operation of Specialties Operation of Specialties Operation of Specialties Operation Specialties Operation of Specia |   | Operation and Maintenance of Information Specialties  |
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| 10 01 70 Operation and Maintenance of Exterior Specialties Operation and Maintenance of Other Specialties 10 05 00 Common Work Results for Specialties 10 06 00 Selective Demolition for Specialties 10 06 10 Schedules for Information Specialties 10 06 10.13 Exterior Signage Schedule 10 06 10.16 Interior Signage Schedule 10 06 20 Schedules for Interior Specialties 10 06 20.13 Toilet, Bath, and Laundry Accessory Schedule 10 06 30 Schedules for Fireplaces and Stoves 10 06 40 Schedules for Safety Specialties 10 06 50 Schedules for Storage Specialties 10 06 70 Schedules for Storage Specialties 10 06 80 Schedules for Other Specialties 10 10 80 Commissioning of Specialties 10 11 10 Unit Interior Specialties 10 11 13.33 Modular-Support-Mounted Chalkboards 10 11 16.33 Fixed Chalkboards 10 11 16.34 Interior Specialties 10 11 16.35 Interior Specialties 10 11 123.33 Rail-Mounted Markerboards 10 11 123.33 Fixed Chalkboards 10 11 23.33 Fixed Tackboards 10 11 23.33 Fixed Tackboards 10 11 23.34 Portable Markerboards 10 11 23.35 Portable Tackboards 10 11 23.36 Portable Tackboards 10 11 23.37 Portable Tackboards 10 11 33.31 Portable Tackboards 10 11 33.43 Portable Tackboards 10 11 34 Visual Display Units 10 11 36 Visual Display Units 10 11 37 Visual Display Units 10 11 38 Visual Display Units 10 11 39 Visual Display Units 10 11 46 Visual Display Units   |   | •   |
| 10 01 80 Operation and Maintenance of Other Specialties 10 05 00 Common Work Results for Specialties 10 06 00 Schedules for Specialties 10 06 10 Schedules for Information Specialties 10 06 10.13 Exterior Signage Schedule 10 06 10.16 Interior Signage Schedule 10 06 20 Schedules for Interior Specialties 10 06 20.13 Toilet, Bath, and Laundry Accessory Schedule 10 06 30 Schedules for Interior Specialties 10 06 40 Schedules for Safety Specialties 10 06 50 Schedules for Storage Specialties 10 06 70 Schedules for Storage Specialties 10 06 80 Schedules for Other Specialties 10 08 00 Commissioning of Specialties 10 11 10 00 Information Specialties 10 11 13 Sixed Chalkboards 10 11 13.23 Modular-Support-Mounted Chalkboards 10 11 16.13 Fixed Chalkboards 10 11 16.23 Modular-Support-Mounted Markerboards 10 11 16.33 Rail-Mounted Chalkboards 10 11 16.34 Rail-Mounted Markerboards 10 11 16.35 Electronic Markerboards 10 11 23.13 Fixed Tackboards 10 11 23.23 Modular-Support-Mounted Tackboards 10 11 23.33 Fixed Tackboards 10 11 23.33 Fixed Tackboards 10 11 23.34 Fixed Tackboards 10 11 23.35 Fixed Tackboards 10 11 23.37 Fixed Tackboards 10 11 23.38 Rail-Mounted Tackboards 10 11 23.39 Fixed Tackboards 10 11 23.31 Fixed Tackboards 10 11 33.31 Fixed Tackboards 10 11 33.32 Vertical-Sliding Visual Display Units 10 11 39 Visual Display Units 10 11 39 Visual Display Units 10 11 39 Visual Display Units 10 11 46 Visual Display Units 10 11 46 Visual Display Hanels 10 11 46 Visual Display Units   |   |   |
| 10 05 00 10 06 00 Selective Demolition for Specialties Selective Demolition for Specialties 10 06 00 Schedules for Specialties Schedules for Information Specialties Exterior Signage Schedule 10 06 10.13 Exterior Signage Schedule 10 06 20.13 Toilet, Bath, and Laundry Accessory Schedule Schedules for Interior Specialties Toilet, Bath, and Laundry Accessory Schedule Schedules for Fireplaces and Stoves Schedules for Safety Specialties Schedules for Storage Specialties Schedules for Storage Specialties Schedules for Other Specialties Schedules for Other Specialties Commissioning of Specialties  10 08 00 Commissioning of Specialties Information Specialties  Visual Display Units Chalkboards Schedules for Other Specialties Information Specialties  Portable Chalkboards Modular-Support-Mounted Chalkboards Rail-Mounted Chalkboards Markerboards Schedules for Other Specialties Information Specialties  Information Specialties  Visual Display Units Chalkboards Modular-Support-Mounted Chalkboards Rail-Mounted Chalkboards Dotto Harkerboards Rail-Mounted Markerboards Rail-Mounted Markerboards Tackboards Tackboar |   |   |
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| 10 06 00  10 06 10.13 10 06 10.13 10 06 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10.16 11 00 10 10 11 00 10 10 11 00 10 11 00 10 11 11 13.13 11 13.13 11 13.13 11 13.14 11 13.13 11 13.15 11 13.13 11 13.33 11 13 13.33 11 13 13 13 13 14 14 14 15 15 14 15 14 15 15 14 15 14 15 15 14 15 15 14 15 14 15 15 15 14 15 15 15 14 15 15 15 14 15 15 15 14 15 15 15 14 15 15 15 14 15 15 15 14 15 15 15 14 15 15 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15   |   | • • • • • • • • • • • • • • • • • • •   |
| 10 06 10. Schedules for Information Specialties 10 06 10.13 Exterior Signage Schedule 10 06 10.16 Interior Signage Schedule 10 06 20 Schedules for Interior Specialties 10 06 20.13 Toilet, Bath, and Laundry Accessory Schedule 10 06 30 Schedules for Fireplaces and Stoves 10 06 40 Schedules for Safety Specialties 10 06 50 Schedules for Storage Specialties 10 06 70 Schedules for Storage Specialties 10 06 80 Schedules for Other Specialties 10 08 00 Commissioning of Specialties 10 10 10 00 Information Specialties 10 11 13.13 Fixed Chalkboards 10 11 13.23 Modular-Support-Mounted Chalkboards 10 11 16.13 Fixed Markerboards 10 11 16.23 Modular-Support-Mounted Markerboards 10 11 16.33 Rail-Mounted Markerboards 10 11 16.34 Portable Markerboards 10 11 123.13 Fixed Tackboards 10 11 23.23 Modular-Support-Mounted Tackboards 10 11 23.33 Rail-Mounted Tackboards 10 11 23.33 Rail-Mounted Tackboards 10 11 23.43 Portable Tackboards 10 11 33.13 Horizontal-Sliding Visual Display Units Vertical-Sliding Visual Display Units Visual Display Rails Visual Display Fabrics  |   |   |
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| 10 06 50 Schedules for Storage Specialties 10 06 70 Schedules for Exterior Specialties 10 08 00 Commissioning of Specialties 10 10 00 Information Specialties 10 11 10 Visual Display Units 10 11 13 Chalkboards 10 11 13.23 Modular-Support-Mounted Chalkboards 10 11 13.43 Portable Chalkboards 10 11 16.13 Fixed Markerboards 10 11 16.23 Modular-Support-Mounted Markerboards 10 11 16.33 Rail-Mounted Markerboards 10 11 16.43 Portable Markerboards 10 11 16.53 Electronic Markerboards 10 11 23.13 Fixed Tackboards 10 11 23.33 Rail-Mounted Tackboards 10 11 23.43 Portable Darkerboards 10 11 33.33 Rail-Mounted Markerboards 10 11 13.34 Portable Markerboards 10 11 13.35 Fixed Tackboards 10 11 23.37 Fixed Tackboards 10 11 23.38 Rail-Mounted Tackboards 10 11 23.49 Portable Tackboards 10 11 33.40 Portable Tackboards 10 11 33.41 Horizontal-Sliding Visual Display Units 10 11 33.23 Vertical-Sliding Visual Display Units 10 11 39 Visual Display Rails 10 11 43 Visual Display Rails 10 11 43 Visual Display Wall Panels Visual Display Fabrics  |   | ·   |
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| 10 11 33 Sliding Visual Display Units 10 11 33.13 Horizontal-Sliding Visual Display Units 10 11 33.23 Vertical-Sliding Visual Display Units 10 11 36 Visual Display Conference Units 10 11 39 Visual Display Rails 10 11 43 Visual Display Wall Panels 10 11 46 Visual Display Fabrics   | 10 11 16<br>10 11 16.13<br>10 11 16.23<br>10 11 16.33<br>10 11 16.43<br>10 11 16.53<br>10 11 23<br>10 11 23.13  | Markerboards Fixed Markerboards Modular-Support-Mounted Markerboards Rail-Mounted Markerboards Portable Markerboards Electronic Markerboards Tackboards Fixed Tackboards  |
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| 10 11 39 Visual Display Rails 10 11 43 Visual Display Wall Panels 10 11 46 Visual Display Fabrics  | 10 11 16<br>10 11 16.13<br>10 11 16.23<br>10 11 16.33<br>10 11 16.43<br>10 11 16.53<br>10 11 23.13<br>10 11 23.23<br>10 11 23.23<br>10 11 23.43<br>10 11 33<br>10 11 33   | Markerboards Fixed Markerboards Modular-Support-Mounted Markerboards Rail-Mounted Markerboards Portable Markerboards Electronic Markerboards Tackboards Fixed Tackboards Modular-Support-Mounted Tackboards Rail-Mounted Tackboards Portable Tackboards Sliding Visual Display Units Horizontal-Sliding Visual Display Units  |
| 10 11 43 Visual Display Wall Panels 10 11 46 Visual Display Fabrics  | 10 11 16<br>10 11 16.13<br>10 11 16.23<br>10 11 16.33<br>10 11 16.43<br>10 11 16.53<br>10 11 23.13<br>10 11 23.13<br>10 11 23.23<br>10 11 23.33<br>10 11 23.43<br>10 11 33.13<br>10 11 33.13  | Markerboards Fixed Markerboards Modular-Support-Mounted Markerboards Rail-Mounted Markerboards Portable Markerboards Electronic Markerboards Tackboards Fixed Tackboards Modular-Support-Mounted Tackboards Rail-Mounted Tackboards Portable Tackboards Sliding Visual Display Units Horizontal-Sliding Visual Display Units Vertical-Sliding Visual Display Units  |
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| 10 12 00 Display Cases   | 10 11 16<br>10 11 16.13<br>10 11 16.23<br>10 11 16.33<br>10 11 16.43<br>10 11 16.53<br>10 11 23.13<br>10 11 23.13<br>10 11 23.23<br>10 11 23.33<br>10 11 23.43<br>10 11 33.13<br>10 11 33.13<br>10 11 33.23<br>10 11 36<br>10 11 39                         | Markerboards Fixed Markerboards Modular-Support-Mounted Markerboards Rail-Mounted Markerboards Portable Markerboards Electronic Markerboards Tackboards Fixed Tackboards Modular-Support-Mounted Tackboards Rail-Mounted Tackboards Portable Tackboards Sliding Visual Display Units Horizontal-Sliding Visual Display Units Vertical-Sliding Visual Display Units Visual Display Conference Units Visual Display Rails   |
|  | 10 11 16<br>10 11 16.13<br>10 11 16.23<br>10 11 16.33<br>10 11 16.43<br>10 11 16.53<br>10 11 23.13<br>10 11 23.13<br>10 11 23.23<br>10 11 23.33<br>10 11 23.43<br>10 11 33.13<br>10 11 33.13<br>10 11 33.23<br>10 11 36<br>10 11 39<br>10 11 43<br>10 11 43 | Markerboards Fixed Markerboards Modular-Support-Mounted Markerboards Rail-Mounted Markerboards Portable Markerboards Electronic Markerboards Tackboards Fixed Tackboards Modular-Support-Mounted Tackboards Rail-Mounted Tackboards Portable Tackboards Sliding Visual Display Units Horizontal-Sliding Visual Display Units Vertical-Sliding Visual Display Units Visual Display Conference Units Visual Display Rails Visual Display Wall Panels Visual Display Fabrics |

| 10 13 00   | Directories   |
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| 10 13 13   | Electronic Directories  |
| 10 13 23   | Illuminated Directories   |
| 10 14 00   | Signage   |
| 10 14 16   | Plaques   |
| 10 14 19   | Dimensional Letter Signage  |
| 10 14 23<br>10 14 23.13  | Panel Signage Engraved Panel Signage  |
| 10 14 25.15  | Post and Panel/Pylon Signage  |
| 10 14 33   | Illuminated Panel Signage   |
| 10 14 43   | Photoluminescent Signage  |
| 10 14 53   | Traffic Signage   |
| 10 14 53.13  | Transportation Reference Markers  |
| 10 14 63   | Electronic Message Signage  |
| 10 14 64<br>10 14 66   | Audible Signage   |
| 10 14 66   | Floating Signage Tactile Signage  |
| 10 17 00   |   |
| 10 17 00   | Telephone Specialties Telephone Directory Units   |
| 10 17 13   | Telephone Enclosures  |
| 10 17 16.13  | Telephone Stalls  |
| 10 17 16.16  | Telephone Alcoves   |
| 10 17 19   | Telephone Shelving  |
| 10 18 00   | Informational Kiosks  |
| 10 20 00   | Interior Specialties  |
|  |   |
| 10 21 00   |   |
|  | Compartments and Cubicles Toilet Compartments   |
| <b>10 21 00</b> 10 21 13 10 21 13.13   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments   |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments   |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments   |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19<br>10 21 13.23   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments   |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments   |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19<br>10 21 13.23<br>10 21 13.40<br>10 21 16<br>10 21 16.13   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments   |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19<br>10 21 13.23<br>10 21 13.40<br>10 21 16<br>10 21 16.13<br>10 21 16.16  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments  |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19<br>10 21 13.23<br>10 21 13.40<br>10 21 16.13<br>10 21 16.13<br>10 21 16.16<br>10 21 16.19  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments   |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19<br>10 21 13.23<br>10 21 13.40<br>10 21 16<br>10 21 16.13<br>10 21 16.16  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments  |
| 10 21 00<br>10 21 13<br>10 21 13.13<br>10 21 13.16<br>10 21 13.19<br>10 21 13.23<br>10 21 13.40<br>10 21 16.13<br>10 21 16.13<br>10 21 16.16<br>10 21 16.19<br>10 21 16.23   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments   |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16.13  10 21 16.16  10 21 16.19  10 21 16.23  10 21 23  10 21 23.13   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains   |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16.13  10 21 16.16  10 21 16.19  10 21 16.23  10 21 23  10 21 23.13  10 21 23.13  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains Cubicle Track and Hardware  |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16.13  10 21 16.16  10 21 16.19  10 21 16.23  10 21 16.40  10 21 23.13  10 21 23.16  10 21 26   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains Cubicle Track and Hardware Room Darkening Curtains and Tracks   |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16.13  10 21 16.16  10 21 16.19  10 21 16.23  10 21 16.40  10 21 23  10 21 23.13  10 21 23.16  10 21 26  10 22 00   | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains Cubicle Track and Hardware Room Darkening Curtains and Tracks  Partitions   |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16  10 21 16.13  10 21 16.16  10 21 16.23  10 21 16.40  10 21 23  10 21 23.13  10 21 23.16  10 21 26  10 22 00  10 22 13                                  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains Cubicle Track and Hardware Room Darkening Curtains and Tracks  Partitions Wire Mesh Partitions  |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16  10 21 16.13  10 21 16.16  10 21 16.19  10 21 16.23  10 21 16.40  10 21 23  10 21 23.13  10 21 23.16  10 21 26  10 22 00  10 22 13  10 22 14           | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains Cubicle Track and Hardware Room Darkening Curtains and Tracks  Partitions Wire Mesh Partitions Expanded Metal Partitions  |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16  10 21 16.13  10 21 16.16  10 21 16.23  10 21 16.40  10 21 23  10 21 23.13  10 21 23.16  10 21 26  10 22 00  10 22 13                                  | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains Cubicle Track and Hardware Room Darkening Curtains and Tracks  Partitions Wire Mesh Partitions  |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16.13  10 21 16.16  10 21 16.19  10 21 16.23  10 21 16.40  10 21 23  10 21 23.13  10 21 23.16  10 21 26  10 22 00  10 22 13  10 22 14  10 22 16           | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains Cubicle Track and Hardware Room Darkening Curtains and Tracks  Partitions Wire Mesh Partitions Expanded Metal Partitions Folding Gates  |
| 10 21 00  10 21 13  10 21 13.13  10 21 13.16  10 21 13.19  10 21 13.23  10 21 13.40  10 21 16.13  10 21 16.16  10 21 16.19  10 21 16.23  10 21 16.40  10 21 23  10 21 23.13  10 21 23.16  10 21 26  10 22 00  10 22 13  10 22 14  10 22 16  10 22 19 | Compartments and Cubicles Toilet Compartments Metal Toilet Compartments Plastic-Laminate-Clad Toilet Compartments Plastic Toilet Compartments Particleboard Toilet Compartments Stone Toilet Compartments Stone Toilet Compartments Shower and Dressing Compartments Metal Shower and Dressing Compartments Plastic-Laminate-Clad Shower and Dressing Compartments Plastic Shower and Dressing Compartments Particleboard Shower and Dressing Compartments Stone Shower and Dressing Compartments Cubicle Curtains and Track Cubicle Curtains and Track Cubicle Track and Hardware Room Darkening Curtains and Tracks  Partitions Wire Mesh Partitions Expanded Metal Partitions Folding Gates Demountable Partitions |

|    | 10 22 19.43             | Demountable Composite Partitions                         |
|----|-------------------------|--|
|    | 10 22 19.53             | Demountable Gypsum Partitions                            |
|    | 10 22 23                | Portable Partitions, Screens, and Panels                 |
|    | 10 22 23.13             | Wall Screens   |
|    | 10 22 23.23             | Movable Panel Systems                                    |
|    | 10 22 33                | Accordion Folding Partitions                             |
|    | 10 22 36                | Coiling Partitions                                       |
|    | 10 22 39                | Folding Panel Partitions                                 |
| 40 | 10 22 43                | Sliding Partitions                                       |
| 10 | 25 00                   | Service Walls  |
|    | 10 25 13                | Patient Bed Service Walls                                |
|    | 10 25 16                | Modular Service Walls                                    |
| 10 | 26 00                   | Wall and Door Protection                                 |
|    | 10 26 13                | Corner Guards  |
|    | 10 26 16                | Bumper Guards  |
|    | 10 26 16.13             | Bumper Rails   |
|    | 10 26 16.16             | Protective Corridor Handrails                            |
|    | 10 26 23                | Protective Wall Covering                                 |
|    | 10 26 23.13             | Impact Resistant Wall Protection                         |
|    | 10 26 23.16             | Fiberglass Reinforced Protective Wall Covering           |
|    | 10 26 33                | Door and Frame Protection                                |
|    | 10 26 41                | Bullet Resistant Panels                                  |
| 10 | 28 00                   | Toilet, Bath, and Laundry Accessories                    |
|    | 10 28 13                | Toilet Accessories                                       |
|    | 10 28 13.13             |  |
|    | 10 28 13.19             |  |
|    | 10 28 13.53             | Security Toilet Accessories Detention Toilet Accessories |
|    | 10 28 13.63<br>10 28 16 | Bath Accessories   |
|    | 10 28 16.13             |  |
|    | 10 28 19                | Tub and Shower Enclosures                                |
|    | 10 28 19.16             | Shower Doors   |
|    | 10 28 19.19             | Tub Doors  |
|    | 10 28 23                | Laundry Accessories                                      |
|    | 10 28 23.13             | Built-In Íroning Boards                                  |
|    | 10 28 23.16             | Clothes Drying Racks                                     |
| 10 | 30 00                   | Fireplaces and Stoves                                    |
|    |                         |  |
| 10 | 31 00                   | Manufactured Fireplaces                                  |
|    | 10 31 13                | Manufactured Fireplace Chimneys                          |
|    | 10 31 16                | Manufactured Fireplace Forms                             |
| 10 | 32 00                   | Fireplace Specialties                                    |
|    | 10 32 13                | Fireplace Dampers  |
|    | 10 32 16                | Fireplace Inserts  |
|    | 10 32 19                | Fireplace Screens  |
|    | 10 32 23                | Fireplace Doors  |
|    | 10 32 26                | Fireplace Water Heaters                                  |
| 10 | 35 00                   | Stoves   |
|    | 10 35 13                | Heating Stoves   |
|    | 10 35 23                | Cooking Stoves   |
|    | . 5 55 25               |  |

| 10 40 00                | Safety Specialties                                 |
|-------------------------|--|
| 10 41 00                | <b>Emergency Access and Information Cabinets</b>   |
| 10 41 13                | Fire Department Plan Cabinets                      |
| 10 41 16                | Emergency Key Cabinets                             |
| 10 43 00                | Emergency Aid Specialties                          |
| 10 43 13                | Defibrillator Cabinets                             |
| 10 43 16<br>10 43 21    | First Aid Cabinets Accessibility Evacuation Chairs |
| 10 43 21                | Respiration Equipment                              |
| 10 43 33                | Breathing Air Replenishment Systems                |
| 10 44 00                | Fire Protection Specialties                        |
| 10 44 13                | Fire Protection Cabinets                           |
| 10 44 13.53             | Security Fire Extinguisher Cabinets                |
| 10 44 16                | Fire Extinguishers                                 |
| 10 44 16.13             | Portable Fire Extinguishers                        |
| 10 44 16.16<br>10 44 19 | Wheeled Fire Extinguisher Units Fire Blankets      |
| 10 44 43                | Fire Extinguisher Accessories                      |
| 10 45 00                | Photoluminescent Exit Specialties                  |
| 10 50 00                | Storage Specialties                                |
| 10 51 00                | Lockers  |
| 10 51 13                | Metal Lockers                                      |
| 10 51 16                | Wood Lockers                                       |
| 10 51 23                | Plastic-Laminate-Clad Lockers                      |
| 10 51 26                | Plastic Lockers                                    |
| 10 51 26.13             | Recycled Plastic Lockers                           |
| 10 51 29<br>10 51 33    | Phenolic Lockers Glass Lockers                     |
| 10 51 43                | Wire Mesh Storage Lockers                          |
| 10 51 53                | Locker Room Benches                                |
| 10 55 00                | Postal Specialties                                 |
| 10 55 13                | Central Mail Delivery Boxes                        |
| 10 55 13.13             | Cluster Box Units                                  |
| 10 55 16                | Mail Collection Boxes                              |
| 10 55 19                | Receiving Boxes                                    |
| 10 55 23<br>10 55 23.13 | Mail Boxes Apartment Mail Boxes                    |
| 10 55 23.16             | Mail Box Directories                               |
| 10 55 23.19             | Mail Box Key Keepers                               |
| 10 55 26                | Parcel Lockers                                     |
| 10 55 33                | Data Distribution Boxes                            |
| 10 55 36<br>10 55 91    | Package Depositories Mail Chutes                   |
| 10 56 00                | Storage Assemblies                                 |
| 10 56 13                | Metal Storage Shelving                             |
| 10 56 13.13             | End-Panel-Support Metal Storage Shelving           |
| 10 56 13.16             | Post-and-Shelf Metal Storage Shelving              |
| 10 56 13.19             | Post-and-Beam Metal Storage Shelving               |
| 10 56 13.23             | Cantilever Metal Storage Shelving                  |

|             | 10 56 16  | Fabricated Wood Storage Shelving  |
|-------------|---|---|
|             | 10 56 17  | Wall-Mounted Standards and Shelving   |
|             | 10 56 19  | Plastic Storage Shelving  |
|             | 10 56 19.13   | Recycled Plastic Storage Shelving   |
|             | 10 56 23  | Wire Storage Shelving   |
|             | 10 56 26  | Mobile Storage Shelving   |
|             | 10 56 26.13   | Manual Mobile Storage Shelving  |
|             | 10 56 26.23   | Motorized Mobile Storage Shelving   |
|             | 10 56 29  | Storage Racks   |
|             | 10 56 29.13   | Flow Storage Racks  |
|             | 10 56 29.16   | Pallet Storage Racks  |
|             | 10 56 29.19   | Movable-Shelf Storage Racks   |
|             | 10 56 29.23   | Stacker Storage Racks   |
|             | 10 56 29.26   | Cantilever Storage Racks  |
|             | 10 56 29.29   | Drive-In Storage Racks  |
|             | 10 56 29.33<br>10 56 29.43  | Drive-Through Storage Racks Wine Storage Racks  |
|             | 10 56 33  | Mercantile Storage Assemblies   |
| 40          |   |   |
| IU          | 57 00   | Wardrobe and Closet Specialties   |
|             | 10 57 13  | Hat and Coat Racks  |
|             | 10 57 16  | Boot Racks  |
|             | 10 57 23  | Closet and Utility Shelving   |
|             | 10 57 23.13   | Wire Closet and Utility Shelving  |
|             | 10 57 23.16   | Plastic-Laminate-Clad Closet and Utility Shelving   |
|             | 10 57 23.19   | Wood Closet and Utility Shelving  |
|             | 10 57 33  | Closet and Utility Shelving Hardware  |
|             | 10 57 36  | Closet Doors  |
|             | 10 57 36.13<br>10 57 36.16  | Sliding Closet Doors<br>Bifold Closet Doors   |
| 40          |   |   |
| 10          | <b>70 00</b>  | Exterior Specialties  |
| <b>10</b> ' | 71 00   | Exterior Protection   |
|             | 10 71 13  | Exterior Sun Control Devices  |
|             | 10 71 13.13   | Exterior Shutters   |
|             | 10 71 13.19   | Rolling Exterior Shutters   |
|             | 10 71 13.23   | Coiling Exterior Shutters   |
|             | 10 71 13.26   | Decorative Exterior Shutters  |
|             | 10 71 13.29   | Side-Hinged Exterior Shutters   |
|             | 10 71 13.43   | Fixed Sun Screens   |
|             | 10 71 12 52   | Exterior Daylighting Devices  |
|             | 10 71 13.53   |   |
|             | 10 71 16  | Storm Panels  |
|             | 10 71 16<br>10 71 16.13   | Storm Panels Demountable Storm Panels   |
|             | 10 71 16<br>10 71 16.13<br>10 71 16.16  | Storm Panels Demountable Storm Panels Movable Storm Panels  |
|             | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19  | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers   |
| 40          | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19<br>10 71 19.16   | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers Removable Flood Barriers  |
| 10          | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19<br>10 71 19.16<br><b>73 00</b>   | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers Removable Flood Barriers Protective Covers  |
| 10          | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19<br>10 71 19.16<br><b>73 00</b><br>10 73 13                                     | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers Removable Flood Barriers Protective Covers Awnings  |
| 10          | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19<br>10 71 19.16<br><b>73 00</b><br>10 73 13<br>10 73 16                         | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers Removable Flood Barriers  Protective Covers Awnings Canopies                                |
| 10          | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19<br>10 71 19.16<br><b>73 00</b><br>10 73 13<br>10 73 16<br>10 73 23             | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers Removable Flood Barriers  Protective Covers Awnings Canopies Car Shelters                   |
| 10          | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19<br>10 71 19.16<br><b>73 00</b><br>10 73 13<br>10 73 16<br>10 73 23<br>10 73 26 | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers Removable Flood Barriers  Protective Covers Awnings Canopies Car Shelters Walkway Coverings |
| 10          | 10 71 16<br>10 71 16.13<br>10 71 16.16<br>10 71 19<br>10 71 19.16<br><b>73 00</b><br>10 73 13<br>10 73 16<br>10 73 23             | Storm Panels Demountable Storm Panels Movable Storm Panels Flood Barriers Removable Flood Barriers  Protective Covers Awnings Canopies Car Shelters                   |

| 10 74 00 | <b>Manufactured Exterior Specialties</b> |
|----------|--|
| 10 74 13 | Exterior Clocks                          |
| 10 74 23 | Cupolas                                  |
| 10 74 26 | Spires                                   |
| 10 74 29 | Steeples                                 |
| 10 74 33 | Weathervanes                             |
| 10 74 43 | Below-Grade Egress Assemblies            |
| 10 74 46 | Window Wells                             |
| 10 75 00 | Flagpoles                                |
| 10 75 13 | Automatic Flagpoles                      |
| 10 75 16 | Ground-Set Flagpoles                     |
| 10 75 19 | Nautical Flagpoles                       |
| 10 75 23 | Wall-Mounted Flagpoles                   |
| 10 80 00 | Other Specialties                        |
| 10 81 00 | Pest Control Devices                     |
| 10 81 13 | Bird Control Devices                     |
| 10 81 16 | Insect Control Devices                   |
| 10 81 19 | Rodent Control Devices                   |
| 10 82 00 | Grilles and Screens                      |
| 10 82 13 | Exterior Grilles and Screens             |
| 10 82 19 | Exterior Sound Screens                   |
| 10 82 23 | Interior Grilles and Screens             |
| 10 83 00 | Flags and Banners                        |
| 10 83 13 | Flags                                    |
| 10 83 16 | Banners                                  |
| 10 84 00 | Gas Lighting                             |
| 10 84 13 | Exterior Gas Lighting                    |
| 10 84 16 | Interior Gas Lighting                    |
| 10 86 00 | Security Mirrors and Domes               |
| 10 88 00 | Scales                                   |
| 10 00 00 | Julios                                   |

| 11 00 00                | Equipment   |
|-------------------------|---|
| 11 01 00                | Operation and Maintenance of Equipment  |
| 11 01 10                | Operation and Maintenance of Vehicle and Pedestrian Equipment   |
| 11 01 20                | Operation and Maintenance of Commercial Equipment   |
| 11 01 30                | Operation and Maintenance of Residential Equipment  |
| 11 01 40                | Operation and Maintenance of Foodservice Equipment  |
| 11 01 50                | Operation and Maintenance of Educational and Scientific Equipment   |
| 11 01 56                | Operation and Maintenance of Observatory Equipment  |
| 11 01 60<br>11 01 70    | Operation and Maintenance of Entertainment and Recreation Equipment Operation and Maintenance of Healthcare Equipment |
| 11 01 70                | Operation and Maintenance of Facility Maintenance and Operation   |
| 11 01 00                | Equipment   |
| 11 01 90                | Operation and Maintenance of Other Equipment  |
| 11 05 00                | Common Work Results for Equipment   |
| 11 05 05                | Selective Demolition for Equipment  |
| 11 05 13                | Common Motor Requirements for Equipment   |
| 11 06 00                | Schedules for Equipment   |
| 11 06 10                | Schedules for Vehicle and Pedestrian Equipment  |
| 11 06 20                | Schedules for Commercial Equipment  |
| 11 06 30                | Schedules for Residential Equipment   |
| 11 06 40                | Schedules for Foodservice Equipment   |
| 11 06 40.13<br>11 06 50 | Foodservice Equipment Schedule Schedules for Educational and Scientific Equipment                                     |
| 11 06 60                | Schedules for Entertainment and Recreation Equipment  |
| 11 06 70                | Schedules for Healthcare Equipment  |
| 11 06 70.13             | Healthcare Equipment Schedule   |
| 11 06 80                | Schedules for Facility Maintenance and Operation Equipment  |
| 11 06 90                | Schedules for Other Equipment   |
| 11 08 00                | Commissioning of Equipment  |
| 11 10 00                | Vehicle and Pedestrian Equipment  |
| 11 11 00                | Vehicle Service Equipment   |
| 11 11 13                | Compressed-Air Vehicle Service Equipment  |
| 11 11 19                | Vehicle Lubrication Equipment   |
| 11 11 23                | Tire-Changing Equipment   |
| 11 11 26                | Vehicle-Washing Equipment   |
| 11 11 36                | Vehicle Charging Equipment  |
| 11 12 00                | Parking Control Equipment   |
| 11 12 13                | Parking Key and Card Control Units  |
| 11 12 16<br>11 12 23    | Parking Ticket Dispensers Parking Meters  |
| 11 12 26                | Parking Fee Collection Equipment  |
| 11 12 26.13             | Parking Fee Coin Collection Equipment   |
| 11 12 33                | Parking Gates   |
| 11 12 33.13             | Lift Arm Parking Gates  |
| 11 12 33.16             | Sliding Parking Gates   |
| 11 12 33.19             | Swinging Parking Gates  |
| 11 13 00                | Loading Dock Equipment  |
| 11 13 13                | Loading Dock Bumpers  |

|     | 11 13 16   | Loading Dock Seals and Shelters  |
|-----|--|--|
|     | 11 13 16.13  | Loading Dock Seals   |
|     | 11 13 16.23  | Loading Dock Shelters  |
|     | 11 13 16.33  | Loading Dock Rail Shelters   |
|     | 11 13 19   | Stationary Loading Dock Equipment  |
|     | 11 13 19.13  | Loading Dock Levelers  |
|     | 11 13 19.23  | Stationary Loading Dock Lifts  |
|     | 11 13 19.26  | Loading Dock Truck Lifts   |
|     | 11 13 19.33  | Loading Dock Truck Restraints  |
|     | 11 13 23   | Portable Dock Equipment  |
|     | 11 13 23.13  | Portable Dock Lifts  |
|     | 11 13 23.16  | Portable Dock Ramps  |
|     | 11 13 23.19  | Portable Dock Bridges  |
|     | 11 13 23.23  | Portable Dock Platforms  |
|     | 11 13 26   | Loading Dock Lights  |
| 11  | 14 00  | Pedestrian Control Equipment   |
| • • | 11 14 13   | Pedestrian Gates   |
|     |  |  |
|     | 11 14 13.13  | Portable Posts and Railings  |
|     | 11 14 13.16  | Rotary Gates   |
|     | 11 14 13.19  | Turnstiles   |
|     | 11 14 26   | Pedestrian Fare Collection Equipment   |
|     | 11 14 26.13  | Pedestrian Coin Fare Collection Equipment  |
|     | 11 14 43   | Pedestrian Detection Equipment   |
|     | 11 14 43.13  | Electronic Detection and Counting Systems  |
|     | 11 14 53   | Pedestrian Security Equipment  |
| 11  | 20 00  | Commercial Equipment   |
|     |  |  |
| 11  | 21 00  | Retail and Service Equipment   |
| 11  | 21 00  | Retail and Service Equipment   |
| 11  | 11 21 13   | Cash Registers and Checking Equipment  |
| 11  | 11 21 13<br>11 21 23   | Cash Registers and Checking Equipment Vending Equipment  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13  | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19  | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73<br>11 21 73.13  | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73<br>11 21 73.13<br>11 21 73.16   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73<br>11 21 73.13<br>11 21 73.13   | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73.13<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23  | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23  | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors  |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73.13<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23<br>11 21 73.26<br>11 21 73.33                                     | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors Coin-Operated Laundry Equipment   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73.13<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.33<br>11 21 73.43                      | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors Coin-Operated Laundry Equipment Hanging Garment Conveyors   |
| 11  | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73.13<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23<br>11 21 73.26<br>11 21 73.33                                     | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors Coin-Operated Laundry Equipment   |
|     | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73.13<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.33<br>11 21 73.43                      | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors Coin-Operated Laundry Equipment Hanging Garment Conveyors   |
|     | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73.13<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.43<br>11 21 83          | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors Coin-Operated Laundry Equipment Hanging Garment Conveyors Photo Processing Equipment                                    |
|     | 11 21 13<br>11 21 23<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.43<br>11 21 83             | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors Coin-Operated Laundry Equipment Hanging Garment Conveyors Photo Processing Equipment  Banking Equipment                 |
|     | 11 21 13<br>11 21 23.13<br>11 21 23.16<br>11 21 23.19<br>11 21 23.36<br>11 21 24<br>11 21 33<br>11 21 43<br>11 21 53<br>11 21 63<br>11 21 73.13<br>11 21 73.16<br>11 21 73.19<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.23<br>11 21 73.33<br>11 21 73.43<br>11 21 83<br>22 00<br>11 22 13 | Cash Registers and Checking Equipment Vending Equipment Merchandise Vending Machines Reverse Vending Machines Video Rental Vending Machines Token Vending Machines Money Changing Machines Checkroom Equipment Weighing and Wrapping Equipment Barber and Beauty Shop Equipment Refrigerated Display Equipment Commercial Laundry and Dry Cleaning Equipment Dry Cleaning Equipment Drying and Conditioning Equipment Finishing Equipment Commercial Ironing Equipment Commercial Washers and Extractors Coin-Operated Laundry Equipment Hanging Garment Conveyors Photo Processing Equipment  Banking Equipment Vault Equipment |

| 11   | 22 13.26<br>22 16<br>22 16.13  | Time Capsules Teller and Service Equipment Teller Equipment Systems   |
|--|--|---|
|  | 22 16.16   | Automatic Banking Systems   |
|  | 22 16.19<br>22 16.23   | Money Handling Equipment Money Depositories   |
|  | 22 16.26   | Money Cart Pass-Through   |
| 11   | 22 16.29   | Package Transfer Units  |
|  | 22 16.33   | Deal Trays  |
| 11 25  |  | Hospitality Equipment   |
|  | 25 13  | Registration Equipment  |
| 11 28  |  | Office Equipment  |
|  | 1 28 13  | Computers   |
|  | 28 16  | Printers  |
|  | 28 23  | Copiers   |
| 11 29  |  | Postal, Packaging, and Shipping Equipment   |
|  | 29 23<br>  29 33   | Packaging Equipment   |
|  | 1 29 55  | Shipping Equipment Postal Equipment   |
|  |  |   |
| 11 3   |  | Residential Equipment   |
|  | 30 13  | Residential Appliances  |
|  | 30 13.13<br>30 13.23   | Residential Kitchen Appliances Residential Laundry Appliances   |
|  | 30 33  | Retractable Stairs  |
|  | 30 34  | Residential Ceiling Fans  |
| 11 32  | 00   | Unit Kitchens   |
| 11   | 32 13  | Metal Unit Kitchens   |
|  | 32 16  | Wood Unit Kitchens  |
| 11   | l 32 19  | Plastic-Laminate-Clad Unit Kitchens   |
| 11 4   | 0 00   | Foodservice Equipment   |
| 11 41  | 00   | Foodservice Storage Equipment   |
|  | 41 13  | Refrigerated Food Storage Cases   |
| 11   | 41 23  | Walk-In Coolers   |
|  | 1 41 26  | Walk-In Freezers  |
|  | 1 41 33  | Foodservice Shelving  |
| 11 42  | 00   | Food Preparation Equipment  |
|  |  |   |
|  | 42 13  | Food Preparation Appliances   |
| 11   | 42 16  | Food Preparation Surfaces   |
| 11<br><b>11 43</b>                                 | 42 16<br><b>00</b>   | Food Preparation Surfaces Food Delivery Carts and Conveyors   |
| 11<br><b>11 43</b><br>11                           | 42 16<br><b>00</b><br>43 13  | Food Preparation Surfaces Food Delivery Carts and Conveyors Food Delivery Carts   |
| 11<br><b>11 43</b><br>11                           | 42 16<br><b>00</b><br>43 13<br>43 16                                 | Food Preparation Surfaces Food Delivery Carts and Conveyors Food Delivery Carts Food Delivery Conveyors   |
| 11 43<br>11 43<br>11<br>11 44                      | 42 16<br><b>00</b><br>43 13<br>43 16<br><b>00</b>                    | Food Preparation Surfaces Food Delivery Carts and Conveyors Food Delivery Carts Food Delivery Conveyors Food Cooking Equipment  |
| 11 43<br>11 43<br>11<br>11 44<br>11                | 42 16<br><b>00</b><br>43 13<br>43 16<br><b>00</b><br>44 13           | Food Preparation Surfaces Food Delivery Carts and Conveyors Food Delivery Carts Food Delivery Conveyors Food Cooking Equipment Commercial Ranges  |
| 11 43<br>11 43<br>11<br>11<br>11 44                | 42 16<br><b>00</b><br>43 13<br>43 16<br><b>00</b><br>44 13<br>44 16  | Food Preparation Surfaces Food Delivery Carts and Conveyors Food Delivery Carts Food Delivery Conveyors Food Cooking Equipment Commercial Ranges Commercial Ovens   |
| 11 43<br>11 43<br>11<br>11 44<br>11<br>11 46       | 42 16<br>00<br>43 13<br>43 16<br>00<br>44 13<br>44 16<br>00          | Food Preparation Surfaces Food Delivery Carts and Conveyors Food Delivery Carts Food Delivery Conveyors Food Cooking Equipment Commercial Ranges Commercial Ovens Food Dispensing Equipment                       |
| 11 43<br>11 44<br>11<br>11 44<br>11<br>11 46       | 42 16<br>00<br>43 13<br>43 16<br>00<br>44 13<br>44 16<br>00<br>46 13 | Food Preparation Surfaces  Food Delivery Carts and Conveyors  Food Delivery Carts  Food Delivery Conveyors  Food Cooking Equipment  Commercial Ranges  Commercial Ovens  Food Dispensing Equipment  Bar Equipment |
| 11 43<br>11 43<br>11<br>11 44<br>11<br>11 46<br>11 | 42 16<br>00<br>43 13<br>43 16<br>00<br>44 13<br>44 16<br>00          | Food Preparation Surfaces Food Delivery Carts and Conveyors Food Delivery Carts Food Delivery Conveyors Food Cooking Equipment Commercial Ranges Commercial Ovens Food Dispensing Equipment                       |

| 11 46 23                    | Coffee and Espresso Equipment  |
|-----------------------------|--|
| 11 46 83<br><b>11 48 00</b> | Ice Machines Foodservice Cleaning and Disposal Equipment               |
| 11 48 13                    | Commercial Dishwashers   |
| 11 50 00                    | Educational and Scientific Equipment                                   |
| 11 51 00                    | Library Equipment  |
| 11 51 13                    | Automated Book Storage and Retrieval Systems                           |
| 11 51 16                    | Book Depositories  |
| 11 51 19<br>11 51 23        | Book Theft Protection Equipment Library Stack Systems                  |
| 11 51 23.13                 | Metal Library Shelving   |
| 11 52 00                    | Audio-Visual Equipment   |
| 11 52 13                    | Projection Screens   |
| 11 52 13.13<br>11 52 13.16  | Fixed Projection Screens Portable Projection Screens                   |
| 11 52 13.19                 | Rear Projection Screens  |
| 11 52 16                    | Projectors   |
| 11 52 16.13<br>11 52 16.16  | Movie Projectors Slide Projectors                                      |
| 11 52 16.19                 | Overhead Projectors  |
| 11 52 16.23                 | Opaque Projectors  |
| 11 52 16.26<br>11 52 19     | Video Projectors Players and Recorders                                 |
| 11 52 23                    | Audio-Visual Equipment Supports  |
| 11 53 00                    | Laboratory Equipment   |
| 11 53 13                    | Laboratory Fume Hoods  |
| 11 53 13.13<br>11 53 16     | Recirculating Laboratory Fume Hoods                                    |
| 11 53 16                    | Laboratory Incubators Laboratory Equipment Washers                     |
| 11 53 19                    | Laboratory Sterilizers   |
| 11 53 23                    | Laboratory Refrigerators   |
| 11 53 26                    | Laboratory Freezers  |
| 11 53 29<br>11 53 33        | Laboratory Controlled-Environment Cabinets Emergency Safety Appliances |
| 11 53 43                    | Service Fittings and Accessories                                       |
| 11 53 53                    | Biological Safety Cabinets   |
| 11 55 00                    | Planetarium Equipment  |
| 11 55 13<br>11 55 16        | Planetarium Projectors Planetarium Pendulums                           |
| 11 56 00                    | Observatory Equipment  |
| 11 56 13                    | Telescopes   |
| 11 56 16                    | Telescope Mounts   |
| 11 56 19                    | Telescope Drive Mechanisms   |
| 11 56 23                    | Telescope Domes  |
| 11 57 00                    | Vocational Shop Equipment  |
| 11 59 00                    | Exhibit Equipment  |
| 11 60 00                    | Entertainment and Recreation Equipment                                 |
| 11 61 00                    | Broadcast, Theater, and Stage Equipment                                |

|     | 11 61 13                | Acoustical Shells                              |
|-----|-------------------------|--|
|     | 11 61 23                | Folding and Portable Stages                    |
|     | 11 61 33                | Rigging Systems and Controls                   |
|     | 11 61 33.11             | Lighting Rigging Systems                       |
|     | 11 61 33.16             | Scenery Rigging Systems                        |
|     | 11 61 33.19             | Curtain Systems                                |
|     | 11 61 43                | Stage Curtains                                 |
| 11  | 62 00                   | Musical Equipment                              |
|     | 11 62 13                | Bells  |
|     | 11 62 16                | Carillons                                      |
|     | 11 62 19                | Organs   |
| 11  | 66 00                   | Athletic Equipment                             |
| • • | 11 66 13                | Exercise Equipment                             |
|     | 11 66 23                | Gymnasium Equipment                            |
|     | 11 66 23.13             | Basketball Equipment                           |
|     | 11 66 23.23             | Volleyball Equipment                           |
|     | 11 66 23.33             | Interior Tennis Equipment                      |
|     | 11 66 23.43             | Interior Track and Field Equipment             |
|     | 11 66 23.53             | Wall Padding                                   |
|     | 11 66 23.56             | Mat Storage                                    |
|     | 11 66 43                | Interior Scoreboards                           |
|     | 11 66 53                | Gymnasium Dividers                             |
|     | 11 66 53.13             | Batting/Golf Cages                             |
| 11  | 67 00                   | Recreational Equipment                         |
|     | 11 67 13                | Bowling Alley Equipment                        |
|     | 11 67 23                | Shooting Range Equipment                       |
|     | 11 67 33                | Climbing Walls                                 |
|     | 11 67 43                | Table Games Equipment                          |
|     | 11 67 43.13             | Pool Tables                                    |
|     | 11 67 43.23             | Ping-Pong Tables                               |
|     | 11 67 53                | Game Room Equipment                            |
|     | 11 67 53.13             | Video Games                                    |
|     | 11 67 53.23             | Pinball Machines                               |
| 11  | 68 00                   | Play Field Equipment and Structures            |
|     | 11 68 13                | Playground Equipment                           |
|     | 11 68 16                | Play Structures                                |
|     | 11 68 23                | Exterior Court Athletic Equipment              |
|     | 11 68 23.13             | Exterior Basketball Equipment                  |
|     | 11 68 23.23             | Exterior Volleyball Equipment                  |
|     | 11 68 23.33             | Tennis Equipment                               |
|     | 11 68 33                | Athletic Field Equipment                       |
|     | 11 68 33.13             | Football Field Equipment                       |
|     | 11 68 33.23             | Soccer and Field Hockey Equipment              |
|     | 11 68 33.33             | Baseball Field Equipment                       |
|     | 11 68 33.43<br>11 68 43 | Track and Field Equipment Exterior Scoreboards |
|     |                         |  |
| 11  | 70 00                   | Healthcare Equipment                           |
| 11  | 71 00                   | Medical Sterilizing Equipment                  |
|     | 72 00                   |  |
| 1 1 |                         | Examination and Treatment Equipment            |
|     | 11 72 13                | Examination Equipment                          |

| 11 72 53                | Treatment Equipment                             |
|-------------------------|---|
| 11 73 00                | Patient Care Equipment                          |
| 11 73 13                | Psychiatric Seclusion Room Padding              |
| 11 74 00                | Dental Equipment                                |
| 11 75 00                | Optical Equipment                               |
|                         | • • •   |
| 11 76 00                | Operating Room Equipment                        |
| 11 77 00                | Radiology Equipment                             |
| 11 78 00                | Mortuary Equipment                              |
| 11 78 13                | Mortuary Refrigerators                          |
| 11 78 16                | Crematorium Equipment                           |
| 11 78 19                | Mortuary Lifts Thorony Equipment                |
| 11 79 00                | Therapy Equipment                               |
| 11 80 00                | Facility Maintenance and Operation              |
|                         | Equipment                                       |
| 11 81 00                | Facility Maintenance Equipment                  |
| 11 81 13                | Floor and Wall Cleaning Equipment               |
| 11 81 16                | Housekeeping Carts                              |
| 11 81 19                | Vacuum Cleaning Systems                         |
| 11 81 23                | Façade Access Equipment                         |
| 11 81 23.13<br>11 81 29 | Window Washing Systems Facility Fall Protection |
| 11 82 00                | Facility Solid Waste Handling Equipment         |
| 11 82 13                | Solid Waste Bins                                |
| 11 82 19                | Packaged Incinerators                           |
| 11 82 23                | Recycling Equipment                             |
| 11 82 26                | Facility Waste Compactors                       |
| 11 82 29                | Composting Equipment                            |
| 11 82 33<br>11 82 36    | Facility Waste Shredders Facility Waste Balers  |
|                         |   |
| 11 90 00                | Other Equipment                                 |
| 11 91 00                | Religious Equipment                             |
| 11 91 13                | Baptisteries                                    |
| 11 92 00                | Agricultural Equipment                          |
| 11 92 13                | Milkers   |
| 11 92 16<br>11 92 19    | Stock Feeders Stock Waterers                    |
| 11 92 23                | Agricultural Waste Clean-Up Equipment           |
| 11 93 00                | Horticultural Equipment                         |
| 11 93 13                | Hydroponic Growing Systems                      |
| 11 93 16                | Seeders   |
| 11 93 19                | Transplanters                                   |
| 11 93 23                | Potting Machines                                |
| 11 93 26                | Flat Fillers                                    |
| 11 93 29                | Baggers Sail Mivers                             |
| 11 93 33                | Soil Mixers                                     |

| Veterinary Equipment<br>Arts and Crafts Equipment |
|---|
| Kilns   |
| Security Equipment                                |
| Deal Drawers                                      |
| Gun Ports   |
| Valuable Material Storage                         |
| <b>Detention Equipment</b>                        |
| Detention Pass-Through Doors                      |
| Detention Gun Lockers                             |
| Detention Room Padding                            |
|   |

| 12.00.00   | Eurnichings   |
|--|---|
| 12 00 00   | Furnishings   |
| 12 01 00   | Operation and Maintenance of Furnishings  |
| 12 01 10   | Operation and Maintenance of Art  |
| 12 01 20<br>12 01 30   | Operation and Maintenance of Window Treatments  |
| 12 01 30   | Operation and Maintenance of Casework Operation and Maintenance of Furnishings and Accessories  |
| 12 01 40   | Operation and Maintenance of Furniture  |
| 12 01 60   | Operation and Maintenance of Multiple Seating   |
| 12 01 90   | Operation and Maintenance of Other Furnishings  |
| 12 05 00   | Common Work Results for Furnishings   |
| 12 05 05   | Selective Demolition for Furnishings  |
| 12 05 13   | Fabrics   |
| 12 06 00   | Schedules for Furnishings   |
| 12 06 10   | Schedules for Art   |
| 12 06 20   | Schedules for Window Treatments   |
| 12 06 20.13<br>12 06 30  | Window Treatment Schedule Schedules for Casework  |
| 12 06 30.13  | Manufactured Casework Schedule  |
| 12 06 40   | Schedules for Furnishings and Accessories   |
| 12 06 40.13  | Furnishings Schedule  |
| 12 06 50   | Schedules for Furniture   |
| 12 06 60   | Schedules for Multiple Seating  |
| 12 06 90   | Schedules for Other Furnishings   |
| 77 118 1111  | Commissioning of Filthishings   |
| 12 08 00   | Commissioning of Furnishings  |
| 12 10 00   | Art   |
|  | _   |
| 12 10 00   | Art   |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16   | Art Murals Photo Murals Sculptured Brick Panels   |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals  |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23<br>12 11 26   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals  |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23<br>12 11 26<br>12 11 33   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil  |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23<br>12 11 26<br>12 11 33<br>12 12 00   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations   |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23<br>12 11 26<br>12 11 33<br>12 12 00<br>12 12 13   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings  |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23<br>12 11 26<br>12 11 33<br>12 12 00<br>12 12 13<br>12 12 16   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings   |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23<br>12 11 26<br>12 11 33<br>12 12 00<br>12 12 13   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings  |
| 12 10 00<br>12 11 00<br>12 11 13<br>12 11 16<br>12 11 23<br>12 11 26<br>12 11 33<br>12 12 00<br>12 12 13<br>12 12 16<br>12 12 19   | Art Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings  |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 00 12 12 13 12 12 16 12 12 19 12 12 23  | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries  |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 00 12 12 13 12 12 16 12 12 19 12 12 23 12 12 26 12 14 00 12 14 13                                     | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings Sculptures Carved Sculpture  |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 00 12 12 13 12 12 16 12 12 19 12 12 23 12 12 26 12 14 00 12 14 13 12 14 16                            | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings Sculptures Carved Sculpture Cast Sculpture   |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 00 12 12 13 12 12 16 12 12 19 12 12 23 12 12 26 12 14 13 12 14 16 12 14 19                            | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings Sculptures Carved Sculpture Cast Sculpture Constructed Sculpture                                   |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 10 12 12 13 12 12 16 12 12 19 12 12 23 12 12 26 12 14 00 12 14 13 12 14 16 12 14 19 12 14 23          | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings Sculptures Carved Sculpture Cast Sculpture Constructed Sculpture Relief Art                        |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 00 12 12 13 12 12 16 12 12 19 12 12 23 12 12 26 12 14 00 12 14 13 12 14 16 12 14 19 12 14 23 12 17 00 | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings Sculptures Carved Sculpture Cast Sculpture Constructed Sculpture Relief Art Art Glass              |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 00 12 12 13 12 12 16 12 12 19 12 12 23 12 12 26 12 14 13 12 14 16 12 14 19 12 14 23 12 17 00 12 17 13 | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings Sculptures Carved Sculpture Cast Sculpture Constructed Sculpture Relief Art Art Glass Etched Glass |
| 12 10 00 12 11 00 12 11 13 12 11 16 12 11 23 12 11 26 12 11 33 12 12 00 12 12 13 12 12 16 12 12 19 12 12 23 12 12 26 12 14 00 12 14 13 12 14 16 12 14 19 12 14 23 12 17 00 | Murals Photo Murals Sculptured Brick Panels Brick Murals Ceramic Tile Murals Trompe l'oeil Wall Decorations Commissioned Paintings Framed Paintings Framed Prints Tapestries Wall Hangings Sculptures Carved Sculpture Cast Sculpture Constructed Sculpture Relief Art Art Glass              |

| 12 20 00                   | Window Trootmonts  |
|----------------------------|--|
|                            | Window Treatments  |
| 12 21 00                   | Window Blinds  |
| 12 21 13<br>12 21 13.13    | Horizontal Louver Blinds Metal Horizontal Louver Blinds  |
| 12 21 13.13                | Wood Horizontal Louver Blinds                            |
| 12 21 13.33                | Plastic Horizontal Louver Blinds                         |
| 12 21 16                   | Vertical Louver Blinds                                   |
| 12 21 16.13<br>12 21 16.23 | Metal Vertical Louver Blinds Wood Vertical Louver Blinds |
| 12 21 16.23                | Plastic Vertical Louver Blinds                           |
| 12 21 23                   | Roll-Down Blinds   |
| 12 21 26                   | Black-Out Blinds   |
| 12 22 00                   | <b>Curtains and Drapes</b>                               |
| 12 22 13                   | Draperies  |
| 12 22 16                   | Drapery Track and Accessories                            |
| 12 23 00                   | Interior Shutters  |
| 12 23 13                   | Wood Interior Shutters                                   |
| 12 24 00                   | Window Shades  |
| 12 24 13                   | Roller Window Shades                                     |
| 12 24 16                   | Pleated Window Shades                                    |
| 12 24 16.13<br>12 24 16.16 | Z-Pleated Window Shades<br>Cellular Shades               |
| 12 24 16.19                | Roman Shades   |
| 12 25 00                   | <b>Window Treatment Operating Hardware</b>               |
| 12 25 09                   | Window Treatment Control System                          |
| 12 25 13                   | Motorized Drapery Rods                                   |
| 12 26 00                   | Interior Daylighting Devices                             |
| 12 30 00                   | Casework   |
| 12 31 00                   | Manufactured Metal Casework                              |
| 12 31 16                   | Manufactured Metal Sandwich Panel Casework               |
| 12 32 00                   | Manufactured Wood Casework                               |
| 12 32 13                   | Manufactured Wood-Veneer-Faced Casework                  |
| 12 32 16                   | Manufactured Plastic-Laminate-Clad Casework              |
| 12 34 00                   | Manufactured Plastic Casework                            |
| 12 34 16                   | Manufactured Solid-Plastic Casework                      |
| 12 35 00                   | Specialty Casework                                       |
| 12 35 17                   | Bank Casework  |
| 12 35 25                   | Hospitality Casework                                     |
| 12 35 30<br>12 35 30.13    | Residential Casework Kitchen Casework                    |
| 12 35 30.13                | Bathroom Casework  |
| 12 35 30.43                | Dormitory Casework                                       |
| 12 35 33                   | Utility Room Casework                                    |
| 12 35 36                   | Mailroom Casework  |
| 12 35 39                   | Commercial Kitchen Casework                              |
| 12 35 50<br>12 35 50.13    | Educational/Library Casework Educational Casework        |
| 12 35 50.53                | Library Casework   |

|      | 12 35 50.56   | Built-In Study Carrels   |
|------|---|--|
|      | 12 35 53  | Laboratory Casework  |
|      | 12 35 53.13   | Metal Laboratory Casework  |
|      | 12 35 53.16   | Plastic-Laminate-Clad Laboratory Casework  |
|      | 12 35 53.19   | Wood Laboratory Casework   |
|      | 12 35 53.23   | Solid-Plastic Laboratory Casework  |
|      | 12 35 59  | Display Casework   |
|      | 12 35 70  | Healthcare Casework  |
|      | 12 35 70.13   | Hospital Casework  |
|      | 12 35 70.16   | Nurse Station Casework   |
|      | 12 35 70.19   | Exam Room Casework   |
|      | 12 35 70.74   | Dental Casework  |
|      | 12 35 83  | Performing Arts Casework   |
|      | 12 35 91  | Religious Casework   |
| 12   | 36 00   | Countertops  |
|      | 12 36 13  | Concrete Countertops   |
|      | 12 36 16  | Metal Countertops  |
|      | 12 36 19  | Wood Countertops   |
|      | 12 36 23  | Plastic Countertops  |
|      | 12 36 23.13   | Plastic-Laminate-Clad Countertops  |
|      | 12 36 26  | Glass Countertops  |
|      | 12 36 40  | Stone Countertops  |
|      | 12 36 53  | Laboratory Countertops   |
|      |   |  |
|      | 12 36 61  | Simulated Stone Countertops  |
|      | 12 36 61.13   | Cultured Marble Countertops  |
|      | 12 36 61.16<br>12 36 61.19  | Solid Surfacing Countertops Quartz Agglomerate Countertops   |
|      | 12 36 71  | Paper-Composite Countertops  |
| 40   |   |  |
| 12   | 40 00   | Furnishings and Accessories  |
| 12   | 41 00   | Office Accessories   |
|      | 12 41 13  | Desk Accessories   |
| 12   | 42 00   | Table Accessories  |
| -    | # <i>/</i> \/\\   | Table Accessores   |
|      |   |  |
|      | 12 42 13  | Ceramics   |
|      | 12 42 13<br>12 42 16  | Ceramics<br>Flatware   |
|      | 12 42 13<br>12 42 16<br>12 42 16.13   | Ceramics<br>Flatware<br>Silverware   |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19   | Ceramics Flatware Silverware Hollowware  |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23   | Ceramics Flatware Silverware Hollowware Glassware  |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26   | Ceramics Flatware Silverware Hollowware Glassware Table Linens   |
| 12   | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13  | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery  |
| 12 4 | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b>  | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps   |
| 12 4 | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13  | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps   |
| 12 4 | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.13   | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps  |
| 12   | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.13<br>12 43 13.16  | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps Table Lamps  |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.13<br>12 43 13.16<br>12 43 13.19   | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps Table Lamps Floor Lamps  |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.13<br>12 43 13.16<br>12 43 13.19<br><b>44 00</b>   | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps Table Lamps Floor Lamps Floor Lamps Bath Furnishings                       |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.13<br>12 43 13.16<br>12 43 13.19<br><b>44 00</b><br>12 44 13                               | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps Table Lamps Floor Lamps Floor Lamps Bath Furnishings Bath Linens           |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.13<br>12 43 13.16<br>12 43 13.19<br><b>44 00</b><br>12 44 13<br>12 44 13                   | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps Table Lamps Floor Lamps Floor Lamps Bath Furnishings Bath Mats             |
|      | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.16<br>12 43 13.19<br><b>44 00</b><br>12 44 13<br>12 44 13.13<br>12 44 13.13<br>12 44 13.13 | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps Table Lamps Floor Lamps Floor Lamps Bath Furnishings Bath Mats Bath Towels |
| 12 4 | 12 42 13<br>12 42 16<br>12 42 16.13<br>12 42 19<br>12 42 23<br>12 42 26<br>12 42 26.13<br><b>43 00</b><br>12 43 13<br>12 43 13.13<br>12 43 13.16<br>12 43 13.19<br><b>44 00</b><br>12 44 13<br>12 44 13                   | Ceramics Flatware Silverware Hollowware Glassware Table Linens Napery Portable Lamps Lamps Desk Lamps Table Lamps Floor Lamps Floor Lamps Bath Furnishings Bath Mats             |

| 12 45 13  | Bed Linens  |
|---|---|
| 12 45 13.13   | Blankets  |
| 12 45 13.16   | Comforters  |
| 12 45 16  | Pillows   |
| 12 46 00  | Furnishing Accessories  |
| 12 46 13  | Ash Receptacles   |
| 12 46 16  | Bowls   |
| 12 46 19<br>12 46 23  | Clocks Decorative Crafts  |
| 12 46 26  | Decorative Craits  Decorative Screens   |
| 12 46 29  | Vases   |
| 12 46 33  | Waste Receptacles   |
| 12 48 00  | Rugs and Mats   |
| 12 48 13  | Entrance Floor Mats and Frames  |
| 12 48 13.13   | Entrance Floor Mats   |
| 12 48 13.16   | Entrance Floor Mat Frames   |
| 12 48 16  | Entrance Floor Grilles  |
| 12 48 19  | Entrance Floor Gratings   |
| 12 48 23  | Entrance Floor Grids  |
| 12 48 26  | Entrance Tile   |
| 12 48 43  | Floor Mats  |
| 12 48 43.13<br>12 48 43.23  | Chair Mats<br>Anti-Fatigue Floor Mats   |
| 12 48 43.26   | Fall-Cushioning Floor Mats  |
| 12 48 53  | Rugs  |
| 12 48 53.13   | Runners   |
|   |   |
| 12 48 53.16   | Oriental Rugs   |
|   |   |
| 12 48 53.16   | Oriental Rugs   |
| 12 48 53.16<br><b>12 50 00</b>  | Oriental Rugs Furniture   |
| 12 48 53.16<br><b>12 50 00</b><br><b>12 51 00</b><br>12 51 16<br>12 51 16.13  | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16 12 51 16.13 12 51 16.16   | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16 12 51 16.13 12 51 16.16 12 51 16.19   | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods   |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16 12 51 16.13 12 51 16.16 12 51 16.19 12 51 19  | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets   |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16 12 51 16.13 12 51 16.16 12 51 16.19   | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods   |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16 12 51 16.13 12 51 16.16 12 51 16.19 12 51 19 12 51 19.13  | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16  12 51 16.13  12 51 16.16  12 51 16.19  12 51 19  12 51 19.13  12 51 19.16  | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16  12 51 16.13  12 51 16.16  12 51 16.19  12 51 19  12 51 19.13  12 51 19.16  12 51 23  12 51 83 <b>12 52 00</b>  | Oriental Rugs Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16  12 51 16.13  12 51 16.16  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 23  12 51 83 <b>12 52 00</b> 12 52 13  | Purniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16.13  12 51 16.16  12 51 16.19  12 51 19.13  12 51 19.13  12 51 23  12 51 83 <b>12 52 00</b> 12 52 13  12 52 19   | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating   |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16  12 51 16.13  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 19.16  12 51 23  12 51 83 <b>12 52 00</b> 12 52 13  12 52 19  12 52 23  | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16  12 51 16.13  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 19.16  12 51 23  12 51 83 <b>12 52 00</b> 12 52 13  12 52 19  12 52 23  12 52 70  | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating Healthcare Seating   |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16  12 51 16.13  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 23  12 51 23  12 51 83 <b>12 52 00</b> 12 52 13  12 52 23  12 52 70  12 52 83   | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating Healthcare Seating Custom Seating  |
| 12 48 53.16 <b>12 50 00 12 51 00</b> 12 51 16  12 51 16.13  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 23  12 51 23  12 51 83 <b>12 52 00</b> 12 52 13  12 52 19  12 52 23  12 52 70  12 52 83 <b>12 53 00</b>                   | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating Healthcare Seating Custom Seating Retail Furniture   |
| 12 48 53.16  12 50 00  12 51 00  12 51 16  12 51 16.13  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 19.16  12 51 23  12 51 23  12 52 13  12 52 19  12 52 13  12 52 23  12 52 70  12 52 83  12 53 00  12 53 83                     | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating Healthcare Seating Custom Seating Retail Furniture Custom Retail Furniture   |
| 12 48 53.16  12 50 00  12 51 00  12 51 16  12 51 16.13  12 51 16.16  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 23  12 51 23  12 51 83  12 52 00  12 52 13  12 52 19  12 52 23  12 52 70  12 52 83  12 53 00  12 53 83  12 54 00 | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating Healthcare Seating Custom Seating Retail Furniture Custom Retail Furniture Hospitality Furniture                           |
| 12 48 53.16  12 50 00  12 51 00  12 51 16  12 51 16.13  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 19.16  12 51 23  12 51 83  12 52 00  12 52 13  12 52 19  12 52 23  12 52 70  12 52 83  12 53 00  12 53 83  12 54 00  12 54 13 | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating Healthcare Seating Custom Seating Retail Furniture Custom Retail Furniture Hospitality Furniture Hotel and Motel Furniture |
| 12 48 53.16  12 50 00  12 51 00  12 51 16  12 51 16.13  12 51 16.16  12 51 16.19  12 51 19  12 51 19  12 51 19.13  12 51 23  12 51 23  12 51 83  12 52 00  12 52 13  12 52 19  12 52 23  12 52 70  12 52 83  12 53 00  12 53 83  12 54 00 | Furniture Office Furniture Case Goods Metal Case Goods Wood Case Goods Plastic-Laminate-Clad Case Goods Filing Cabinets Lateral Filing Cabinets Vertical Filing Cabinets Office Tables Custom Office Furniture Seating Chairs Upholstered Seating Office Seating Healthcare Seating Custom Seating Retail Furniture Custom Retail Furniture Hospitality Furniture                           |

| 12 55 00                   | Detention Furniture                                 |
|----------------------------|---|
| 12 55 13                   | Detention Bunks                                     |
| 12 55 16                   | Detention Desks                                     |
| 12 55 19                   | Detention Stools                                    |
| 12 55 23                   | Detention Tables                                    |
| 12 55 26                   | Detention Safety Clothes Hooks                      |
| 12 55 83                   | Custom Detention Furniture                          |
| 12 55 86                   | Detention Control Room Furniture                    |
| 12 56 00                   | Institutional Furniture                             |
| 12 56 23                   | Religious Furniture                                 |
| 12 56 33                   | Classroom Furniture                                 |
| 12 56 33.13<br>12 56 33.23 | Fixed Classroom Tables Classroom Computer Furniture |
| 12 56 39                   | Lecterns  |
| 12 56 43                   | Dormitory Furniture                                 |
| 12 56 51                   | Library Furniture                                   |
| 12 56 51.13                | Book Shelves  |
| 12 56 51.16                | Study Carrels                                       |
| 12 56 51.19                | Index Card File Cabinets                            |
| 12 56 52<br>12 56 53       | Audio-Visual Furniture Laboratory Furniture         |
| 12 56 70                   | Healthcare Furniture                                |
| 12 56 83                   | Custom Institutional Furniture                      |
| 12 56 86                   | Institutional Control Room Furniture                |
| 12 57 00                   | Industrial Furniture                                |
| 12 57 13                   | Welding Benches                                     |
| 12 57 16                   | Welding Screens                                     |
| 12 57 19                   | Laser Containment Screens                           |
| 12 57 83                   | Custom Industrial Furniture                         |
| 12 57 86                   | Industrial Control Room Furniture                   |
| 12 58 00                   | Residential Furniture                               |
| 12 58 13                   | Couches and Loveseats                               |
| 12 58 13.13                | Futons  |
| 12 58 16                   | Residential Chairs                                  |
| 12 58 16.13                | Reclining Chairs                                    |
| 12 58 19<br>12 58 23       | Dining Tables and Chairs Coffee Tables              |
| 12 58 25                   | Entertainment Centers                               |
| 12 58 29                   | Beds  |
| 12 58 29.13                | Daybeds   |
| 12 58 33                   | Dressers  |
| 12 58 33.13                | Armoires  |
| 12 58 36                   | Nightstands   |
| 12 58 83                   | Custom Residential Furniture                        |
| 12 59 00                   | Systems Furniture                                   |
| 12 59 13                   | Panel-Hung Component System Furniture               |
| 12 59 16                   | Free-Standing Component System Furniture            |
| 12 59 19                   | Beam System Furniture                               |
| 12 59 23                   | Desk System Furniture                               |
| 12 59 83                   | Custom Systems Furniture                            |

| <b>12 60 00</b> 12 61 00 | Multiple Seating Fixed Audience Seating |
|--------------------------|---|
| 12 61 13                 | Upholstered Audience Seating            |
| 12 61 16                 | Molded-Plastic Audience Seating         |
| 12 62 00                 | Portable Audience Seating               |
| 12 62 13                 | Folding Chairs                          |
| 12 62 16                 | Interlocking Chairs                     |
| 12 62 19                 | Stacking Chairs                         |
| 12 62 23                 | Portable Bleachers                      |
| 12 63 00                 | Stadium and Arena Seating               |
| 12 63 13                 | Stadium and Arena Bench Seating         |
| 12 63 23                 | Stadium and Arena Seats                 |
| 12 64 00                 | Booths and Tables                       |
| 12 65 00                 | Multiple-Use Fixed Seating              |
| 12 66 00                 | Telescoping Stands                      |
| 12 66 13                 | Telescoping Bleachers                   |
| 12 66 23                 | Telescoping Chair Platforms             |
| 12 67 00                 | Pews and Benches                        |
| 12 67 13                 | Pews                                    |
| 12 67 23                 | Benches                                 |
| 12 68 00                 | Seat and Table Assemblies               |
| 12 68 13                 | Pedestal Tablet Arm Chairs              |
| 12 90 00                 | Other Furnishings                       |
| 12 92 00                 | Interior Planters and Artificial Plants |
| 12 92 13                 | Interior Artificial Plants              |
| 12 92 33                 | Interior Planters                       |
| 12 92 43                 | Interior Landscaping Accessories        |
| 12 93 00                 | Interior Public Space Furnishings       |
| 12 93 13                 | Bicycle Racks                           |
| 12 93 14                 | Bicycle Lockers                         |
| 12 93 23                 | Trash and Litter Receptacles            |

| 13 00 00             | Special Construction   |
|----------------------|--|
| 13 01 00             | <b>Operation and Maintenance of Special Construction</b>   |
| 13 01 10             | Operation and Maintenance of Special Facility Components   |
| 13 01 11             | Operation and Maintenance of Swimming Pools  |
| 13 01 12             | Operation and Maintenance of Fountains   |
| 13 01 13             | Operation and Maintenance of Aquariums   |
| 13 01 14             | Operation and Maintenance of Amusement Park Structures and Equipment                                   |
| 13 01 18             | Operation and Maintenance of Ice Rinks   |
| 13 01 20             | Operation and Maintenance of Special Purpose Rooms   |
| 13 01 21             | Operation and Maintenance of Controlled Environment Rooms  |
| 13 01 23             | Operation and Maintenance of Planetariums  |
| 13 01 30             | Operation and Maintenance of Special Structures  |
| 13 01 40<br>13 01 49 | Operation and Maintenance of Integrated Construction Operation and Maintenance of Radiation Protection |
| 13 01 49             | Operation and Maintenance of Special Instrumentation   |
| 13 01 50             | Operation and Maintenance of Stress Instrumentation  |
| 13 01 52             | Operation and Maintenance of Seismic Instrumentation   |
| 13 01 53             | Operation and Maintenance of Meteorological Instrumentation  |
| 13 05 00             | Common Work Results for Special Construction   |
| 13 05 05             | Selective Demolition for Special Construction  |
| 13 06 00             | Schedules for Special Construction   |
| 13 06 10             | Schedules for Special Facility Components  |
| 13 06 10             | Schedules for Special Purpose Rooms  |
| 13 06 30             | Schedules for Special Structures   |
| 13 06 40             | Schedules for Integrated Construction  |
| 13 06 50             | Schedules for Special Instrumentation  |
| 13 08 00             | Commissioning of Special Construction  |
| 13 08 10             | Commissioning of Special Facility Components   |
| 13 08 11             | Commissioning of Swimming Pools  |
| 13 08 12             | Commissioning of Fountains   |
| 13 08 13             | Commissioning of Aquariums   |
| 13 08 14             | Commissioning of Amusement Park Structures and Equipment   |
| 13 08 18             | Commissioning of Ice Rinks   |
| 13 08 20             | Commissioning of Special Purpose Rooms   |
| 13 08 21             | Commissioning of Controlled Environment Rooms  |
| 13 08 23             | Commissioning of Planetariums  |
| 13 08 30             | Commissioning of Special Structures  |
| 13 08 40             | Commissioning of Integrated Construction   |
| 13 08 50             | Commissioning of Special Instrumentation   |
| 13 10 00             | Special Facility Components  |
| 13 11 00             | Swimming Pools   |
| 13 11 13             | Below-Grade Swimming Pools   |
| 13 11 23             | On-Grade Swimming Pools  |
| 13 11 33             | Elevated Swimming Pools  |
| 13 11 43             | Recirculating Gutter Systems   |
| 13 11 46             | Swimming Pool Accessories  |
| 13 11 49             | Swimming Pool Cleaning Equipment   |

| 13 11 53                   | Movable Pool Bulkheads                                |
|----------------------------|---|
| 13 11 56                   | Movable Pool Floors                                   |
| 13 12 00                   | Fountains   |
| 13 12 13                   | Exterior Fountains                                    |
| 13 12 23                   | Interior Fountains                                    |
| 13 13 00                   | Aquariums   |
| 13 14 00                   | Amusement Park Structures and Equipment               |
| 13 14 13                   | Water Slides  |
| 13 14 16<br>13 14 23       | Wave Generating Equipment  Amusement Park Rides       |
| -                          |   |
| 13 15 00                   | Specialty Element Construction                        |
| 13 17 00                   | Tubs and Pools  |
| 13 17 13                   | Hot Tubs  |
| 13 17 23                   | Therapeutic Pools                                     |
| 13 17 33                   | Whirlpool Tubs  |
| 13 18 00                   | Ice Rinks   |
| 13 18 13                   | Ice Rink Floor Systems Ice Rink Dasher Boards         |
| 13 18 16                   |   |
| 13 19 00                   | Kennels and Animal Shelters                           |
| 13 19 13<br>13 19 16       | Kennel Enclosures and Gates                           |
|                            | Kennel Feeding Devices                                |
| 13 20 00                   | Special Purpose Rooms                                 |
| 13 21 00                   | Controlled Environment Rooms                          |
| 13 21 13                   | Clean Rooms   |
| 13 21 16                   | Hyperbaric Rooms                                      |
| 13 21 23                   | Insulated Rooms                                       |
| 13 21 26                   | Cold Storage Rooms                                    |
| 13 21 26.13<br>13 21 26.16 | Walk-in Coolers<br>Walk-in Freezers                   |
| 13 21 29                   | Constant Temperature Rooms                            |
| 13 21 48                   | Sound-Conditioned Rooms                               |
| 13 22 00                   | Office Shelters and Booths                            |
| 13 23 00                   | Planetariums  |
| 13 24 00                   | Special Activity Rooms                                |
| 13 24 00                   | Saunas  |
| 13 24 16                   | Steam Baths   |
| 13 24 66                   | Athletic Rooms  |
| 13 26 00                   | Fabricated Rooms                                      |
| 13 26 13                   | Storm Shelter Rooms                                   |
| 13 27 00                   | Vaults  |
| 13 27 16                   | Modular Fire Vaults                                   |
| 13 27 53                   | Security Vaults                                       |
| 13 27 53.13                | Modular Concrete Security Vaults                      |
| 13 27 53.16                | Modular Metal-Clad Laminated Security Vaults          |
| 13 28 00                   | <b>Athletic and Recreational Special Construction</b> |
| 13 28 13                   | Indoor Soccer Boards                                  |
| 13 28 16                   | Safety Netting  |

| 13 28 19<br>13 28 26       | Arena Football Boards<br>Floor Sockets                                 |
|----------------------------|--|
| 13 28 33                   | Athletic and Recreational Court Walls                                  |
| 13 28 66                   | Demountable Athletic Surfaces  |
| 13 30 00                   | Special Structures   |
| 13 31 00                   | Fabric Structures  |
| 13 31 13                   | Air-Supported Fabric Structures  |
| 13 31 13.13                | Single-Walled Air-Supported Structures                                 |
| 13 31 13.16<br>13 31 23    | Multiple-Walled Air-Supported Structures Tensioned Fabric Structures   |
| 13 31 23                   | Framed Fabric Structures   |
|                            | _  |
| 13 32 00                   | Space Frames   |
| 13 32 13<br>13 32 23       | Metal Space Frames   |
| 13 32 23<br>13 33 00       | Wood Space Frames  Geodesic Structures                                 |
| 13 33 13                   | Geodesic Structures Geodesic Domes                                     |
| 13 34 00                   | Fabricated Engineered Structures                                       |
| 13 34 13                   | Glazed Structures  |
| 13 34 13.13                | Greenhouses  |
| 13 34 13.16                | Solariums  |
| 13 34 13.19                | Swimming Pool Enclosures   |
| 13 34 13.23                | Sunrooms   |
| 13 34 13.26                | Conservatories   |
| 13 34 16                   | Grandstands and Bleachers  |
| 13 34 16.13                | Grandstands  |
| 13 34 16.53<br>13 34 18    | Bleachers Post Frame Building Systems                                  |
| 13 34 19                   | Metal Building Systems   |
| 13 34 23                   | Fabricated Structures  |
| 13 34 23.13                | Portable and Mobile Buildings  |
| 13 34 23.14                | Fabricated Classroom Buildings   |
| 13 34 23.16                | Fabricated Control Booths  |
| 13 34 23.19                | Fabricated Dome Structures   |
| 13 34 23.23                | Fabricated Substation Control Rooms                                    |
| 13 34 56                   | Observatories  |
| 13 35 00                   | Rammed Earth Construction  |
| 13 35 13                   | Rammed Earth Walls   |
| 13 35 13.13<br>13 35 13.23 | Traditional Rammed Earth Walls Stabilized Insulated Rammed Earth Walls |
| <b>13 36 00</b>            | Towers   |
| 13 36 13                   | Metal Towers   |
| 13 36 13.13                | Steel Towers   |
| 13 36 23                   | Wood Towers  |
| 13 40 00                   | Integrated Construction  |
| 13 42 00                   |  |
| 13 42 00                   | Building Modules Bathroom Unit Modules                                 |
| 13 42 13                   | Hospitality Unit Modules   |
| 13 42 25                   | Apartment Unit Modules   |
| 13 42 33                   | Dormitory Unit Modules   |
| 10 72 70                   | Dominiony of the Michael Co  |

| 13 42 46<br>13 42 63<br>13 42 63.13<br>13 42 63.16 |  |
|--|--|
| 13 44 00   | Modular Mezzanines                                       |
| 13 47 00   | Facility Protection                                      |
| 13 47 13   | Cathodic Protection                                      |
| 13 47 13.13  | Cathodic Protection for Underground and Submerged Piping |
| 13 47 13.16  | Cathodic Protection for Underground Storage Tanks        |
| 13 47 13.19  | Cathodic Protection for Concrete Reinforcing             |
| 13 48 00   | Sound, Vibration, and Seismic Control                    |
| 13 48 13   | Manufactured Sound and Vibration Control Components      |
| 13 48 23   | Fabricated Sound and Vibration Control Assemblies        |
| 13 48 53   | Manufactured Seismic Control Components                  |
| 13 48 63   | Fabricated Seismic Control Assemblies                    |
| 13 49 00   | Radiation Protection                                     |
| 13 49 13   | Integrated X-Ray Shielding Assemblies                    |
| 13 49 16   | Modular X-Ray Shielding Rooms                            |
| 13 49 23   | Integrated RFI/EMI Shielding Assemblies                  |
| 13 49 26   | Modular RFI/EMI Shielding Rooms                          |
| 13 50 00   | Special Instrumentation                                  |
| 13 51 00   | Stress Instrumentation                                   |
| 13 52 00   | Seismic Instrumentation                                  |
| 13 53 00   | Meteorological Instrumentation                           |
| 13 53 13   | Solar Instrumentation                                    |
| 13 53 23   | Wind Instrumentation                                     |

| 14 00 00                | Conveying Equipment   |
|-------------------------|---|
| 14 01 00                | <b>Operation and Maintenance of Conveying Equipment</b>     |
| 14 01 10                | Operation and Maintenance of Dumbwaiters                    |
| 14 01 10.71             | Dumbwaiter Rehabilitation                                   |
| 14 01 20                | Operation and Maintenance of Elevators                      |
| 14 01 20.71             | Elevator Rehabilitation                                     |
| 14 01 30                | Operation and Maintenance of Escalators and Moving Walks    |
| 14 01 30.71             | Escalators and Moving Walks Rehabilitation                  |
| 14 01 40<br>14 01 40.71 | Operation and Maintenance of Lifts Lift Rehabilitation      |
| 14 01 40.71             | Operation and Maintenance of Turntables                     |
| 14 01 80                | Operation and Maintenance of Scaffolding                    |
| 14 01 90                | Operation and Maintenance of Other Conveying Equipment      |
| 14 05 00                | Common Work Results for Conveying Equipment                 |
| 14 05 05                | Selective Demolition for Conveying Equipment                |
| 14 06 00                |   |
|                         | Schedules for Conveying Equipment Schedules for Dumbwaiters |
| 14 06 10<br>14 06 20    | Schedules for Elevators                                     |
| 14 06 20.13             | Elevator Equipment Schedule                                 |
| 14 06 30                | Schedules for Escalators and Moving Walks                   |
| 14 06 40                | Schedules for Lifts   |
| 14 06 40.13             | Lift Schedule   |
| 14 06 70                | Schedules for Turntables                                    |
| 14 06 80                | Schedules for Scaffolding                                   |
| 14 06 90                | Schedules for Other Conveying Equipment                     |
| 14 08 00                | Commissioning of Conveying Equipment                        |
| 14 08 10                | Commissioning of Dumbwaiters                                |
| 14 08 20                | Commissioning of Elevators                                  |
| 14 08 30                | Commissioning of Escalators and Moving Walks                |
| 14 08 40                | Commissioning of Lifts                                      |
| 14 08 70                | Commissioning of Turntables                                 |
| 14 08 80                | Commissioning of Scaffolding                                |
| 14 10 00                | Dumbwaiters   |
| 14 11 00                | Manual Dumbwaiters  |
| 14 12 00                | Electric Dumbwaiters  |
| 14 14 00                | Hydraulic Dumbwaiters                                       |
| 14 20 00                | Elevators   |
| 14 21 00                | Electric Traction Elevators                                 |
| 14 21 13                | Electric Traction Freight Elevators                         |
| 14 21 23                | Electric Traction Passenger Elevators                       |
| 14 21 23.13             | Machine Room Electric Traction Passenger Elevators          |
| 14 21 23.16             | Machine Room-Less Electric Traction Passenger Elevators     |
| 14 21 33                | Electric Traction Residential Elevators                     |
| 14 21 43                | Electric Traction Service Elevators                         |
| 14 24 00                | Hydraulic Elevators   |
| 14 24 13                | Hydraulic Freight Elevators                                 |
| 14 24 23                | Hydraulic Passenger Elevators                               |

| 14 24 33                   | Hydraulic Residential Elevators                       |
|----------------------------|---|
| 14 24 43                   | Hydraulic Service Elevators                           |
| 14 26 00                   | Limited-Use/Limited-Application Elevators             |
| 14 27 00                   | Custom Elevator Cabs and Doors                        |
| 14 27 13                   | Custom Elevator Cab Finishes                          |
| 14 27 16                   | Custom Elevator Doors                                 |
| 14 28 00                   | Elevator Equipment and Controls                       |
| 14 28 16                   | Elevator Controls                                     |
| 14 28 19                   | Elevator Equipment                                    |
| 14 28 19.13<br>14 28 19.16 | Elevator Safety Equipment Elevator Hoistway Equipment |
| 14 30 00                   | Escalators and Moving Walks                           |
|                            | _   |
| 14 31 00                   | Escalators  |
| 14 32 00                   | Moving Walks  |
| 14 33 00                   | Moving Ramps  |
| 14 33 13                   | Motorized_Ramps                                       |
| 14 33 16                   | Powered Ramps   |
| 14 40 00                   | Lifts   |
| 14 41 00                   | People Lifts  |
| 14 41 13                   | Counterbalanced People Lifts                          |
| 14 41 16                   | Endless-Belt People Lifts                             |
| 14 42 00                   | Wheelchair Lifts                                      |
| 14 42 13                   | Inclined Wheelchair Lifts                             |
| 14 42 16                   | Vertical Wheelchair Lifts                             |
| 14 43 00                   | Platform Lifts  |
| 14 43 13                   | Orchestra Lifts                                       |
| 14 43 16                   | Stage Lifts   |
| 14 44 00                   | Sidewalk Lifts  |
| 14 45 00                   | Vehicle Lifts   |
| 14 70 00                   | Turntables  |
| 14 71 00                   | Industrial Turntables                                 |
| 14 71 11                   | Vehicle Turntables                                    |
| 14 72 00                   | Hospitality Turntables                                |
| 14 72 25                   | Restaurant Turntables                                 |
| 14 73 00                   | Exhibit Turntables                                    |
| 14 73 59                   | Display Turntables                                    |
| 14 74 00                   | <b>Entertainment Turntables</b>                       |
| 14 74 61                   | Stage Turntables                                      |
| 14 80 00                   | Scaffolding   |
| 14 81 00                   | Suspended Scaffolding                                 |
| 14 81 13                   | Beam Scaffolding                                      |
| 14 81 16                   | Carriage Scaffolding                                  |
| 14 81 19                   | Hook Scaffolding                                      |
| 14 82 00                   | Rope Climbers   |

| 14 82 13   | Manual Rope Climbers  |
|--|---|
| 14 82 16   | Powered Rope Climbers   |
| 14 83 00   | Elevating Platforms   |
| 14 83 13   | Telescoping Platform Lifts  |
| 14 83 13.13  | Electric and Battery Telescoping Platform Lifts   |
| 14 83 13.16  | Pneumatic Telescoping Platform Lifts  |
| 14 83 16   | Scissor Lift Platforms  |
| 14 83 19   | Multi-Axis Platform Lifts   |
| 14 84 00   | Powered Scaffolding   |
| 14 84 13   | Window Washing Scaffolding  |
| 14 84 23   | Window Washing Hoists   |
|  | <u> </u>  |
| 14 90 00   | <b>Other Conveying Equipment</b>  |
| <b>14 90 00</b> 14 91 00                                 |   |
|  | <b>Other Conveying Equipment</b>  |
| 14 91 00   | Other Conveying Equipment Facility Chutes   |
| <b>14 91 00</b> 14 91 13                                 | Other Conveying Equipment Facility Chutes Coal Chutes   |
| <b>14 91 00</b> 14 91 13 14 91 23                        | Other Conveying Equipment Facility Chutes Coal Chutes Escape Chutes                                       |
| 14 91 00<br>14 91 13<br>14 91 23<br>14 91 33             | Other Conveying Equipment Facility Chutes Coal Chutes Escape Chutes Laundry and Linen Chutes              |
| 14 91 00<br>14 91 13<br>14 91 23<br>14 91 33<br>14 91 82 | Other Conveying Equipment Facility Chutes Coal Chutes Escape Chutes Laundry and Linen Chutes Trash Chutes |

| 21 00 00             | Fire Suppression  |
|----------------------|---|
| 21 01 00             | Operation and Maintenance of Fire Suppression   |
| 21 01 10             | Operation and Maintenance of Water-Based Fire-Suppression Systems   |
| 21 01 20             | Operation and Maintenance of Fire-Extinguishing Systems   |
| 21 01 30             | Operation and Maintenance of Fire-Suppression Equipment   |
| 21 05 00             | Common Work Results for Fire Suppression  |
| 21 05 05<br>21 05 13 | Selective Demolition for Fire Suppression  Common Motor Requirements for Fire-Suppression Equipment                               |
| 21 05 16             | Expansion Fittings and Loops for Fire-Suppression Piping  |
| 21 05 19             | Meters and Gages for Fire-Suppression Systems   |
| 21 05 23             | General-Duty Valves for Water-Based Fire-Suppression Piping   |
| 21 05 29             | Hangers and Supports for Fire-Suppression Piping and Equipment  |
| 21 05 33             | Heat Tracing for Fire-Suppression Piping  |
| 21 05 48<br>21 05 53 | Vibration and Seismic Controls for Fire-Suppression Piping and Equipment Identification for Fire-Suppression Piping and Equipment |
| 21 06 00             | Schedules for Fire Suppression  |
| 21 06 10             | Schedules for Water-Based Fire-Suppression Systems  |
| 21 06 20             | Schedules for Fire-Extinguishing Systems  |
| 21 06 30             | Schedules for Fire-Suppression Equipment  |
| 21 07 00             | Fire Suppression Systems Insulation   |
| 21 07 16             | Fire-Suppression Equipment Insulation   |
| 21 07 19             | Fire-Suppression Piping Insulation  |
| 21 08 00             | Commissioning of Fire Suppression   |
| 21 09 00             | Instrumentation and Control for Fire-Suppression  |
|                      | Systems   |
| 21 10 00             | Water-Based Fire-Suppression Systems  |
| 21 11 00             | Facility Fire-Suppression Water-Service Piping  |
| 21 11 16             | Facility Fire Hydrants  |
| 21 11 19             | Fire-Department Connections   |
| 21 12 00             | Fire-Suppression Standpipes   |
| 21 12 13             | Fire-Suppression Hoses and Nozzles  |
| 21 12 16<br>21 12 19 | Fire-Suppression Hose Reels Fire-Suppression Hose Racks   |
| 21 12 13             | Fire-Suppression Hose Valves  |
| 21 13 00             | Fire-Suppression Sprinkler Systems  |
| 21 13 13             | Wet-Pipe Sprinkler Systems  |
| 21 13 16             | Dry-Pipe Sprinkler Systems  |
| 21 13 19             | Preaction Sprinkler Systems   |
| 21 13 23<br>21 13 26 | Combined Dry-Pipe and Preaction Sprinkler Systems Deluge Fire-Suppression Sprinkler Systems                                       |
| 21 13 29             | Water Spray Fixed Systems   |
| 21 13 36             | Antifreeze Sprinkler Systems  |
| 21 13 39             | Foam-Water Systems  |
| 21 16 00             | Fire-Suppression Pressure Maintenance Pumps   |
| 21 20 00             | Fire-Extinguishing Systems  |

| 21 21 00 | Carbon-Dioxide Fire-Extinguishing Systems               |
|----------|---|
| 21 21 13 | Carbon-Dioxide Fire-Extinguishing Piping                |
| 21 21 16 | Carbon-Dioxide Fire-Extinguishing Equipment             |
| 21 22 00 | Clean-Agent Fire-Extinguishing Systems                  |
| 21 22 13 | Clean-Agent Fire-Extinguishing Piping                   |
| 21 22 16 | Clean-Agent Fire-Extinguishing Equipment                |
| 21 23 00 | Wet-Chemical Fire-Extinguishing Systems                 |
| 21 23 13 | Wet-Chemical Fire-Extinguishing Piping                  |
| 21 23 16 | Wet-Chemical Fire-Extinguishing Equipment               |
| 21 24 00 | Dry-Chemical Fire-Extinguishing Systems                 |
| 21 24 13 | Dry-Chemical Fire-Extinguishing Piping                  |
| 21 24 16 | Dry-Chemical Fire-Extinguishing Equipment               |
| 21 30 00 | Fire Pumps  |
| 21 31 00 | Centrifugal Fire Pumps                                  |
| 21 31 13 | Electric-Drive, Centrifugal Fire Pumps                  |
| 21 31 16 | Diesel-Drive, Centrifugal Fire Pumps                    |
| 21 32 00 | Vertical-Turbine Fire Pumps                             |
| 21 32 13 | Electric-Drive, Vertical-Turbine Fire Pumps             |
| 21 32 16 | Diesel-Drive, Vertical-Turbine Fire Pumps               |
| 21 33 00 | Positive-Displacement Fire Pumps                        |
| 21 33 13 | Electric-Drive, Positive-Displacement Fire Pumps        |
| 21 33 16 | Diesel-Drive, Positive-Displacement Fire Pumps          |
| 21 40 00 | Fire-Suppression Water Storage                          |
| 21 41 00 | Storage Tanks for Fire-Suppression Water                |
| 21 41 13 | Pressurized Storage Tanks for Fire-Suppression Water    |
| 21 41 16 | Elevated Storage Tanks for Fire-Suppression Water       |
| 21 41 19 | Roof-Mounted Storage Tanks for Fire-Suppression Water   |
| 21 41 23 | Ground Suction Storage Tanks for Fire-Suppression Water |
| 21 41 26 | Underground Storage Tanks for Fire-Suppression Water    |
| 21 41 29 | Storage Tanks for Fire-Suppression Water Additives      |

| 22 00 00                | Plumbing  |
|-------------------------|---|
| 22 01 00                | Operation and Maintenance of Plumbing   |
| 22 01 10                | Operation and Maintenance of Plumbing Piping and Pumps                        |
| 22 01 10.16             | Video Piping Inspections  |
| 22 01 10.51             | Plumbing Piping Cleaning  |
| 22 01 10.61             | Plumbing Piping Repairs   |
| 22 01 10.62             | Plumbing Piping Relining  |
| 22 01 30                | Operation and Maintenance of Plumbing Equipment                               |
| 22 01 40                | Operation and Maintenance of Plumbing Fixtures                                |
| 22 01 50                | Operation and Maintenance of Pool and Fountain Plumbing Systems               |
| 22 01 60                | Operation and Maintenance of Laboratory and Healthcare Systems                |
| 22 05 00                | Common Work Results for Plumbing  |
| 22 05 05                | Selective Demolition for Plumbing   |
| 22 05 13                | Common Motor Requirements for Plumbing Equipment                              |
| 22 05 16                | Expansion Fittings and Loops for Plumbing Piping                              |
| 22 05 19                | Meters and Gages for Plumbing Piping  |
| 22 05 23                | General-Duty Valves for Plumbing Piping                                       |
| 22 05 29                | Hangers and Supports for Plumbing Piping and Equipment                        |
| 22 05 33                | Heat Tracing for Plumbing Piping  |
| 22 05 48<br>22 05 53    | Vibration and Seismic Controls for Plumbing Piping and Equipment              |
| 22 05 73                | Identification for Plumbing Piping and Equipment Facility Drainage Manholes   |
| 22 05 76                | Facility Drainage Mainoles Facility Drainage Piping Cleanouts                 |
| 22 06 00                |   |
|                         | Schedules for Plumbing  |
| 22 06 10<br>22 06 10.13 | Schedules for Plumbing Piping and Pumps Plumbing Pump Schedule                |
| 22 06 10.13             | Schedules for Facility Potable Water Storage                                  |
| 22 06 15                | Schedules for General Service Compressed-Air Equipment                        |
| 22 06 30                | Schedules for Plumbing Equipment  |
| 22 06 30.13             | Domestic Water Heater Schedule  |
| 22 06 40                | Schedules for Plumbing Fixtures   |
| 22 06 40.13             | Plumbing Fixture Schedule   |
| 22 06 50                | Schedules for Pool and Fountain Plumbing Systems                              |
| 22 06 60                | Schedules for Laboratory and Healthcare Systems                               |
| 22 07 00                | Plumbing Insulation   |
| 22 07 16                | Plumbing Equipment Insulation   |
| 22 07 19                | Plumbing Piping Insulation  |
| 22 08 00                | Commissioning of Plumbing   |
| 22 09 00                | Instrumentation and Control for Plumbing                                      |
| 22 10 00                | Plumbing Piping   |
| 22 11 00                | Facility Water Distribution   |
| 22 11 13                | Facility Water Distribution Piping  |
| 22 11 16                | Domestic Water Piping   |
| 22 11 19                | Domestic Water Piping Specialties   |
| 22 11 13                | Domestic Water Pumps  |
| 22 11 23.13             | Domestic-Water Packaged Booster Pumps   |
| 22 11 23.23             | Close-Coupled, In-Line, Sealless Centrifugal Domestic-Water Pumps             |
| 22 11 23.26             | Close-Coupled, Horizontally Mounted, In-Line Centrifugal Domestic-Water Pumps |

|             | 22 11 23.29<br>22 11 23.33<br>22 11 23.36   | Close-Coupled, Vertically Mounted, In-Line Centrifugal Domestic-Water Pumps<br>Separately Coupled, In-Line Centrifugal Domestic-Water Pumps<br>Separately Coupled, Horizontally Mounted, In-Line Centrifugal Domestic-Water<br>Pumps   |
|-------------|---|--|
| 22          | 12 00<br>22 12 13<br>22 12 16<br>22 12 19<br>22 12 21<br>22 12 23<br>22 12 23.13<br>22 12 23.16<br>22 12 23.23<br>22 12 23.23   | Facility Potable-Water Storage Tanks Facility Roof-Mounted, Potable-Water Storage Tanks Facility Elevated, Potable-Water Storage Tanks Facility Ground-Mounted, Potable-Water Storage Tanks Facility Underground Potable-Water Storage Tanks Facility Indoor Potable-Water Storage Tanks Facility Steel, Indoor Potable-Water Storage Pressure Tanks Facility Steel, Indoor Potable-Water Storage Non-Pressure Tanks Facility Plastic, Indoor Potable-Water Storage Pressure Tanks Facility Plastic, Indoor Potable-Water Storage Non-Pressure Tanks   |
| <b>22</b> ' | 13 00   | Facility Sanitary Sewerage   |
|             | 22 13 13<br>22 13 16<br>22 13 19<br>22 13 19.13<br>22 13 19.23<br>22 13 19.33<br>22 13 19.36<br>22 13 23<br>22 13 29<br>22 13 29.13<br>22 13 29.13<br>22 13 29.13<br>22 13 29.23<br>22 13 29.33<br>22 13 33<br>22 13 43.13<br>22 13 43.16<br>22 13 53<br>22 13 63 | Facility Sanitary Sewers Sanitary Waste and Vent Piping Sanitary Waste Piping Specialties Sanitary Drains Fats, Oils, and Grease Disposal Systems Grease Removal Devices Backwater Valves Air-Admittance Valves Sanitary Waste Interceptors Sanitary Waste Separators Sanitary Weste Separators Sanitary Sewerage Pumps Wet-Pit-Mounted, Vertical Sewerage Pumps Submersible Sewerage Pumps Sewerage Pump Reverse-Flow Assemblies Sewerage Pump Basins and Pits Packaged, Submersible Sewerage Pump Units Packaged, Wastewater Pump Units Facility Packaged Sewage Pumping Stations Facility Dry-Well Packaged Sewage Pumping Stations Facility Septic Tanks Facility Gray Water Tanks |
| <b>22</b> · | 14 00   | Facility Storm Drainage  |
|             | 22 14 13<br>22 14 16<br>22 14 19<br>22 14 23<br>22 14 26<br>22 14 26.13<br>22 14 26.16<br>22 14 26.19<br>22 14 29.13<br>22 14 29.13<br>22 14 29.16<br>22 14 29.19<br>22 14 33<br>22 14 36   | Facility Storm Drainage Piping Rainwater Leaders Sump Pump Discharge Piping Storm Drainage Piping Specialties Facility Storm Drains Roof Drains Facility Area Drains Facility Trench Drains Sump Pumps Wet-Pit-Mounted, Vertical Sump Pumps Submersible Sump Pumps Sump-Pump Basins and Pits Packaged, Pedestal Drainage Pump Units Packaged, Submersible, Drainage Pump Units   |

| 22 14 53                   | Rainwater Storage Tanks   |
|----------------------------|---|
| 22 15 00                   | General Service Compressed-Air Systems  |
| 22 15 13                   | General Service Compressed-Air Piping   |
| 22 15 16                   | General Service Compressed-Air Valves   |
| 22 15 19                   | General Service Packaged Air Compressors and Receivers  |
| 22 15 19.13                | General Service Packaged Reciprocating Air Compressors  |
| 22 15 19.16                | General Service Packaged Liquid-Ring Air Compressors  |
| 22 15 19.19<br>22 15 19.23 | General Service Packaged Rotary-Screw Air Compressors General Service Packaged Sliding-Vane Air Compressors                   |
| 22 30 00                   | Plumbing Equipment  |
| 22 31 00                   | Domestic Water Softeners  |
| 22 31 13                   | Residential Domestic Water Softeners  |
| 22 31 16                   | Commercial Domestic Water Softeners   |
| 22 32 00                   | Domestic Water Filtration Equipment   |
| 22 32 13                   | Domestic-Water Bag-Type Filters   |
| 22 32 16                   | Domestic-Water Freestanding Cartridge Filters   |
| 22 32 19                   | Domestic-Water Off-Floor Cartridge Filters  |
| 22 32 23                   | Domestic-Water Carbon Filters   |
| 22 32 26                   | Domestic-Water Sand Filters   |
| 22 32 26.13                | Domestic-Water Circulating Sand Filters   |
| 22 32 26.16                | Domestic-Water Multimedia Sand Filters  |
| 22 32 26.19                | Domestic-Water Greensand Filters  |
| 22 33 00                   | Electric Domestic Water Heaters   |
| 22 33 13                   | Instantaneous Electric Domestic Water Heaters   |
| 22 33 13.13<br>22 33 13.16 | Flow-Control, Instantaneous Electric Domestic Water Heaters Thermostat Control, Instantaneous Electric Domestic Water Heaters |
| 22 33 13.10                | Thermostat-Control, Instantaneous Electric Domestic Water Heaters Residential, Electric Domestic Water Heaters                |
| 22 33 30.13                | Residential, Small-Capacity Electric Domestic Water Heaters   |
| 22 33 30.16                | Residential, Storage Electric Domestic Water Heaters  |
| 22 33 30.23                | Residential, Collector-to-Tank, Solar-Electric Domestic Water Heaters   |
| 22 33 30.26                | Residential, Collector-to-Tank, Heat-Exchanger-Coil, Solar-Electric Domestic Water Heaters                                    |
| 22 33 33                   | Light-Commercial Electric Domestic Water Heaters  |
| 22 33 36                   | Commercial Domestic Water Electric Booster Heaters  |
| 22 33 36.13                | Commercial Domestic Water Electric Booster Heaters  |
| 22 33 36.16                | Commercial Storage Electric Domestic Water Heaters  |
| 22 34 00                   | Fuel-Fired Domestic Water Heaters   |
| 22 34 13                   | Instantaneous, Tankless, Gas Domestic Water Heaters   |
| 22 34 30<br>22 34 30.13    | Residential Gas Domestic Water Heaters  |
| 22 34 30.13                | Residential, Atmospheric, Gas Domestic Water Heaters Residential, Direct-Vent, Gas Domestic Water Heaters                     |
| 22 34 30.19                | Residential, Power-Vent, Gas Domestic Water Heaters   |
| 22 34 36                   | Commercial Gas Domestic Water Heaters   |
| 22 34 36.13                | Commercial, Atmospheric, Gas Domestic Water Heaters   |
| 22 34 36.16                | Commercial, Power-Burner, Gas Domestic Water Heaters  |
| 22 34 36.19<br>22 34 36.23 | Commercial, Power-Vent, Gas Domestic Water Heaters Commercial, High-Efficiency, Gas Domestic Water Heaters                    |
| 22 34 36.23<br>22 34 36.26 | Commercial, Coil-Type, Finned-Tube, Gas Domestic Water Heaters  |
| 22 34 36.29                | Commercial, Grid-Type, Finned-Tube, Gas Domestic Water Heaters  |
| 22 34 46                   | Oil-Fired Domestic Water Heaters  |
| 22 34 46.13                | Large-Capacity, Oil-Fired Domestic Water Heaters  |
|                            |   |

| 22 34 56                   | Dual-Fuel-Fired Domestic Water Heaters                                     |
|----------------------------|--|
| 22 35 00                   | Domestic Water Heat Exchangers   |
| 22 35 13                   | Instantaneous Domestic Water Heat Exchangers                               |
| 22 35 13.13                | Heating-Fluid-in-Coil, Instantaneous Domestic Water Heat Exchangers        |
| 22 35 13.16                | Domestic-Water-in-Coil, Instantaneous Domestic Water Heat Exchangers       |
| 22 35 13.19                | Heating-Fluid-in-U-Tube-Coil, Instantaneous Domestic Water Heat Exchangers |
| 22 35 23                   | Circulating, Domestic Water Heat Exchangers                                |
| 22 35 23.13                | Circulating, Compact Domestic Water Heat Exchangers                        |
| 22 35 23.16                | Circulating, Storage Domestic Water Heat Exchangers                        |
| 22 35 29                   | Noncirculating, Domestic Water Heat Exchangers                             |
| 22 35 29.13                | Noncirculating, Compact Domestic Water Heat Exchangers                     |
| 22 35 29.16                | Noncirculating, Storage Domestic Water Heat Exchangers                     |
| 22 35 36                   | Domestic Water Brazed-Plate Heat Exchangers                                |
| 22 35 39                   | Domestic Water Frame-and-Plate Heat Exchangers                             |
| 22 35 43                   | Domestic Water Heat Reclaimers   |
| 22 36 00                   | Domestic Water Preheaters  |
| 22 36 13                   | Solar Domestic Water Preheaters  |
| 22 36 23                   | Geothermal Domestic Water Preheaters                                       |
| 22 40 00                   | Plumbing Fixtures  |
|                            |  |
| 22 41 00                   | Residential Plumbing Fixtures  |
| 22 41 13                   | Residential Water Closets, Urinals, and Bidets                             |
| 22 41 13.13<br>22 41 13.16 | Residential Water Closets Residential Urinals                              |
| 22 41 13.10                | Residential Bidets   |
| 22 41 16                   | Residential Lavatories and Sinks   |
| 22 41 16.13                | Residential Lavatories   |
| 22 41 16.16                | Residential Sinks  |
| 22 41 19                   | Residential Bathtubs   |
| 22 41 23                   | Residential Showers  |
| 22 41 26                   | Residential Disposers  |
| 22 41 36                   | Residential Laundry Trays  |
| 22 41 39                   | Residential Faucets, Supplies, and Trim                                    |
| 22 42 00                   | Commercial Plumbing Fixtures   |
| 22 42 13                   | Commercial Water Closets, Urinals, and Bidets                              |
| 22 42 13.13                | Commercial Water Closets   |
| 22 42 13.16                | Commercial Urinals   |
| 22 42 16                   | Commercial Lavatories and Sinks  |
| 22 42 16.13                | Commercial Lavatories  |
| 22 42 16.16                | Commercial Sinks   |
| 22 42 19                   | Commercial Bathtubs  |
| 22 42 23                   | Commercial Showers   |
| 22 42 26                   | Commercial Disposers   |
| 22 42 29                   | Shampoo Bowls  |
| 22 42 33                   | Wash Fountains   |
| 22 42 36                   | Commercial Laundry Trays   |
| 22 42 39                   | Commercial Faucets, Supplies, and Trim                                     |
| 22 42 43                   | Flushometers   |
| 22 43 00                   | Healthcare Plumbing Fixtures   |
| 22 43 13                   | Healthcare Water Closets   |
| 22 43 16                   | Healthcare Sinks   |

|           | 22 43 19                   | Healthcare Bathtubs   |
|-----------|----------------------------|---|
|           | 22 43 23                   | Healthcare Showers  |
|           | 22 43 39                   | Healthcare Faucets  |
|           | 22 43 43                   | Healthcare Plumbing Fixture Flushometers                          |
| 22 4      | <b>45 00</b>               | Emergency Plumbing Fixtures                                       |
|           | 22 45 13                   | Emergency Showers   |
|           | 22 45 16                   | Eyewash Equipment   |
|           | 22 45 19                   | Self-Contained Eyewash Equipment                                  |
|           | 22 45 23                   | Personal Eyewash Equipment  |
|           | 22 45 26                   | Eye/Face Wash Equipment   |
|           | 22 45 29                   | Hand-Held Emergency Drench Hoses                                  |
|           | 22 45 33                   | Combination Emergency Fixture Units                               |
| 22        | 22 45 36                   | Emergency Fixture Water-Tempering Equipment                       |
| 22 4      | 46 00                      | Security Plumbing Fixtures  |
|           | 22 46 13                   | Security Water Closets and Urinals                                |
|           | 22 46 13.13<br>22 46 13.16 | Security Water Closets Security Urinals                           |
|           | 22 46 16                   | Security Lavatories and Sinks                                     |
|           | 22 46 16.13                | Security Lavatories   |
|           | 22 46 16.16                | Security Sinks  |
|           | 22 46 19                   | Security Showers  |
|           | 22 46 39                   | Security Faucets, Supplies, and Trim                              |
|           | 22 46 43                   | Security Plumbing Fixture Flushometers                            |
|           | 22 46 53                   | Security Plumbing Fixture Supports                                |
| 22 4      | <b>47 00</b>               | Drinking Fountains and Water Coolers                              |
|           | 22 47 13                   | Drinking Fountains  |
|           | 22 47 16                   | Pressure Water Coolers  |
|           | 22 47 19                   | Water-Station Water Coolers                                       |
|           | 22 47 23                   | Remote Water Coolers  |
| <b>22</b> | <b>50 00</b>               | Pool and Fountain Plumbing Systems                                |
| 22 !      | 51 00                      | Swimming Pool Plumbing Systems                                    |
|           | 22 51 13                   | Swimming Pool Piping  |
|           | 22 51 16                   | Swimming Pool Pumps   |
|           | 22 51 19                   | Swimming Pool Water Treatment Equipment                           |
|           | 22 51 23                   | Swimming Pool Equipment Controls                                  |
| 22 5      | 52 00                      | Fountain Plumbing Systems   |
|           | 22 52 13                   | Fountain Piping   |
|           | 22 52 16                   | Fountain Pumps  |
|           | 22 52 19                   | Fountain Water Treatment Equipment                                |
|           | 22 52 23                   | Fountain Equipment Controls                                       |
| <b>22</b> | 60 00                      | Gas and Vacuum Systems for Laboratory                             |
|           |                            | and Healthcare Facilities   |
| 22.6      | 61 00                      |   |
| 22 (      | 01 00                      | Compressed-Air Systems for Laboratory and                         |
|           | 00.04.46                   | Healthcare Facilities   |
|           | 22 61 13                   | Compressed-Air Piping for Laboratory and Healthcare Facilities    |
|           | 22 61 13.53<br>22 61 13.70 | Laboratory Compressed-Air Piping Healthcare Compressed-Air Piping |
|           | 22 61 13.74                | Dental Compressed-Air Piping  Dental Compressed-Air Piping        |

| 22 61 19<br>22 61 19.53<br>22 61 19.70<br>22 61 19.74   | Compressed-Air Equipment for Laboratory and Healthcare Facilities Laboratory Compressed-Air Equipment Healthcare Compressed-Air Equipment Dental Compressed-Air Equipment   |
|---|---|
| 22 62 00  | Vacuum Systems for Laboratory and Healthcare  |
|   | Facilities  |
| 22 62 13<br>22 62 13.53<br>22 62 13.70<br>22 62 13.74<br>22 62 19<br>22 62 19.53<br>22 62 19.70 | Vacuum Piping for Laboratory and Healthcare Facilities Laboratory Vacuum Piping Healthcare, Surgical Vacuum Piping Dental Vacuum Piping Vacuum Equipment for Laboratory and Healthcare Facilities Laboratory Vacuum Equipment Healthcare Vacuum Equipment                                     |
| 22 62 19.74<br>22 62 23   | Dental Vacuum and Evacuation Equipment Waste Anesthesia-Gas Piping  |
| 22 63 00  | Gas Systems for Laboratory and Healthcare Facilities  |
| 22 63 13<br>22 63 13.53<br>22 63 13.70<br>22 63 19<br>22 63 19.53<br>22 63 19.70                | Gas Piping for Laboratory and Healthcare Facilities Laboratory Gas Piping Healthcare Gas Piping Gas Storage Tanks for Laboratory and Healthcare Facilities Laboratory Gas Storage Tanks Healthcare Gas Storage Tanks  |
| 22 66 00  | Chemical-Waste Systems for Laboratory and   |
|   | Healthcare Facilities   |
| 22 66 53<br>22 66 70<br>22 66 83<br>22 66 83.13<br>22 66 83.16                                  | Laboratory Chemical-Waste and Vent Piping Healthcare Chemical-Waste and Vent Piping Chemical-Waste Tanks Chemical-Waste Dilution Tanks Chemical-Waste Neutralization Tanks  |
| 22 67 00  | Processed Water Systems for Laboratory and  |
| 22 67 13<br>22 67 13.13<br>22 67 13.16<br>22 67 13.19<br>22 67 19<br>22 67 19.13<br>22 67 19.16 | Healthcare Facilities Processed Water Piping for Laboratory and Healthcare Facilities Distilled-Water Piping Reverse-Osmosis Water Piping Deionized-Water Piping Processed Water Equipment for Laboratory and Healthcare Facilities Distilled-Water Equipment Reverse-Osmosis Water Equipment |
| 22 67 19.16<br>22 67 19.19  | Reverse-Osmosis Water Equipment Deionized-Water Equipment   |

23 00 00

## Heating, Ventilating, and Air **Conditioning (HVAC) Operation and Maintenance of HVAC Systems** 23 01 00 23 01 10 Operation and Maintenance of Facility Fuel Systems 23 01 20 Operation and Maintenance of HVAC Piping and Pumps 23 01 30 Operation and Maintenance of HVAC Air Distribution 23 01 30.51 **HVAC Air-Distribution System Cleaning** Operation and Maintenance of Central Heating Equipment 23 01 50 23 01 60 Operation and Maintenance of Central Cooling Equipment Refrigerant Recovery/Recycling 23 01 60.71 Operation and Maintenance of Central HVAC Equipment 23 01 70 Operation and Maintenance of Decentralized HVAC Equipment 23 01 80 Diagnostic Systems for HVAC 23 01 90 23 05 00 Common Work Results for HVAC Selective Demolition for Heating, Ventilating, and Air Conditioning (HVAC) 23 05 05 23 05 13 Common Motor Requirements for HVAC Equipment Expansion Fittings and Loops for HVAC Piping 23 05 16 23 05 19 Meters and Gages for HVAC Piping 23 05 23 General-Duty Valves for HVAC Piping Hangers and Supports for HVAC Piping and Equipment 23 05 29 23 05 33 Heat Tracing for HVAC Piping Vibration and Seismic Controls for HVAC 23 05 48 Identification for HVAC Piping and Equipment 23 05 53 Anti-Microbial Coatings for HVAC Ducts and Equipment 23 05 63 23 05 66 Anti-Microbial Ultraviolet Emitters for HVAC Ducts and Equipment 23 05 93 Testing, Adjusting, and Balancing for HVAC 23 06 00 Schedules for HVAC 23 06 10 Schedules for Facility Fuel Service Systems 23 06 20 Schedules for HVAC Piping and Pumps Hydronic Pump Schedule 23 06 20.13 Schedules for HVAC Air Distribution 23 06 30 23 06 30.13 **HVAC Fan Schedule** 23 06 30.16 Air Terminal Unit Schedule 23 06 30.19 Air Outlet and Inlet Schedule 23 06 30.23 **HVAC Air Cleaning Device Schedule** 23 06 50 Schedules for Central Heating Equipment 23 06 50.13 Heating Boiler Schedule 23 06 60 Schedules for Central Cooling Equipment 23 06 60.13 Refrigerant Condenser Schedule 23 06 60.16 Packaged Water Chiller Schedule 23 06 70 Schedules for Central HVAC Equipment Indoor, Central-Station Air-Handling Unit Schedule 23 06 70.13 Packaged Outdoor HVAC Equipment Schedule 23 06 70.16 Schedules for Decentralized HVAC Equipment 23 06 80 Decentralized Unitary HVAC Equipment Schedule 23 06 80.13 23 06 80.16 Convection Heating and Cooling Unit Schedule 23 06 80.19 Radiant Heating Unit Schedule

**HVAC Insulation** 

**Duct Insulation** 

23 07 00

23 07 13

|            | 23 07 16                   | HVAC Equipment Insulation   |
|------------|----------------------------|---|
|            | 23 07 19                   | HVAC Piping Insulation  |
| 23         | 08 00                      | Commissioning of HVAC   |
| 23         | 09 00                      | Instrumentation and Control for HVAC  |
|            | 23 09 13                   | Instrumentation and Control Devices for HVAC  |
|            | 23 09 13.13                | Actuators and Operators   |
|            | 23 09 13.23                | Sensors and Transmitters  |
|            | 23 09 13.33                | Control Valves  |
|            | 23 09 13.43                | Control Dampers   |
|            | 23 09 23                   | Direct-Digital Control System for HVAC  |
|            | 23 09 33                   | Electric and Electronic Control System for HVAC   |
|            | 23 09 43                   | Pneumatic Control System for HVAC   |
|            | 23 09 53                   | Pneumatic and Electric Control System for HVAC  |
|            | 23 09 93                   | Sequence of Operations for HVAC Controls  |
| <b>2</b> 3 | 3 10 00                    | Facility Fuel Systems   |
| 23         | 11 00                      | Facility Fuel Piping  |
|            | 23 11 13                   | Facility Fuel-Oil Piping  |
|            | 23 11 16                   | Facility Gasoline Piping  |
|            | 23 11 23                   | Facility Natural-Gas Piping   |
|            | 23 11 26                   | Facility Liquefied-Petroleum Gas Piping   |
| 23         | 12 00                      | Facility Fuel Pumps   |
|            | 23 12 13                   | Facility Fuel-Oil Pumps   |
|            | 23 12 16                   | Facility Gasoline Dispensing Pumps  |
| 23         | 13 00                      | Facility Fuel-Storage Tanks   |
|            | 23 13 13                   | Facility Underground Fuel-Oil, Storage Tanks  |
|            | 23 13 13.13                | Double-Wall Steel, Underground Fuel-Oil, Storage Tanks  |
|            | 23 13 13.16                | Composite, Steel, Underground Fuel-Oil, Storage Tanks   |
|            | 23 13 13.19                | Jacketed, Steel, Underground Fuel-Oil, Storage Tanks  |
|            | 23 13 13.23<br>23 13 13.33 | Glass-Fiber-Reinforced-Plastic, Underground Fuel-Oil, Storage Tanks Fuel-Oil Storage Tank Pumps |
|            | 23 13 23                   | Facility Aboveground Fuel-Oil, Storage Tanks  |
|            | 23 13 23.13                | Vertical, Steel, Aboveground Fuel-Oil, Storage Tanks  |
|            | 23 13 23.16                | Horizontal, Steel, Aboveground Fuel-Oil, Storage Tanks  |
|            | 23 13 23.19                | Containment-Dike, Steel, Aboveground Fuel-Oil, Storage Tanks                                    |
|            | 23 13 23.23                | Insulated, Steel, Aboveground Fuel-Oil, Storage Tanks   |
|            | 23 13 23.26                | Concrete-Vaulted, Steel, Aboveground Fuel-Oil, Storage Tanks                                    |
| 23         | 3 20 00                    | HVAC Piping and Pumps   |
| 23         | 21 00                      | Hydronic Piping and Pumps   |
|            | 23 21 13                   | Hydronic Piping   |
|            | 23 21 13.13                | Underground Hydronic Piping   |
|            | 23 21 13.23                | Aboveground Hydronic Piping   |
|            | 23 21 13.33                | Ground-Loop Heat-Pump Piping  |
|            | 23 21 16                   | Hydronic Piping Specialties   |
|            | 23 21 23<br>23 21 23.13    | Hydronic Pumps In-Line Centrifugal Hydronic Pumps   |
|            | 23 21 23.13                | Base-Mounted, Centrifugal Hydronic Pumps  |
|            | 23 21 23.19                | Vertical-Mounted, Double-Suction Centrifugal Hydronic Pumps                                     |
|            | 23 21 23.23                | Vertical-Turbine Hydronic Pumps   |
|            | 23 21 29                   | Automatic Condensate Pump Units   |

| 23 22 00    | Steam and Condensate Piping and Pumps                     |
|-------------|---|
| 23 22 13    | Steam and Condensate Heating Piping                       |
| 23 22 13.13 | Underground Steam and Condensate Heating Piping           |
| 23 22 13.23 | Aboveground Steam and Condensate Heating Piping           |
| 23 22 16    | Steam and Condensate Heating Piping Specialties           |
| 23 22 23    | Steam Condensate Pumps                                    |
| 23 22 23.13 | Electric-Driven Steam Condensate Pumps                    |
| 23 22 23.23 | Pressure-Powered Steam Condensate Pumps                   |
| 23 23 00    | Refrigerant Piping  |
| 23 23 13    | Refrigerant Piping Valves                                 |
| 23 23 16    | Refrigerant Piping Specialties                            |
| 23 23 19    | Refrigerant Safety Relief Valve Discharge Piping          |
| 23 23 23    | Refrigerants  |
| 23 24 00    | Internal-Combustion Engine Piping                         |
| 23 24 13    | Internal-Combustion Engine Remote-Radiator Coolant Piping |
| 23 24 16    | Internal-Combustion Engine Exhaust Piping                 |
| 23 25 00    | HVAC Water Treatment                                      |
|             |   |
| 23 25 13    | Water Treatment for Closed-Loop Hydronic Systems          |
| 23 25 16    | Water Treatment for Open Hydronic Systems                 |
| 23 25 19    | Water Treatment for Steam System Feedwater                |
| 23 25 23    | Water Treatment for Humidification Steam System Feedwater |
| 23 30 00    | HVAC Air Distribution                                     |
| 23 31 00    | HVAC Ducts and Casings                                    |
| 23 31 13    | Metal Ducts   |
| 23 31 13.13 | Rectangular Metal Ducts                                   |
| 23 31 13.16 | Round and Flat-Oval Spiral Ducts                          |
| 23 31 13.19 | Metal Duct Fittings                                       |
| 23 31 16    | Nonmetal Ducts  |
| 23 31 16.13 | Fibrous-Glass Ducts                                       |
| 23 31 16.16 | Thermoset Fiberglass-Reinforced Plastic Ducts             |
| 23 31 16.19 | PVC Ducts   |
| 23 31 16.26 | Concrete Ducts  |
| 23 31 19    | HVAC Casings  |
| 23 32 00    | Air Plenums and Chases                                    |
| 23 32 13    | Fabricated, Metal Air Plenums                             |
| 23 32 33    | Air-Distribution Ceiling Plenums                          |
| 23 32 36    | Air-Distribution Floor Plenums                            |
| 23 32 39    | Air-Distribution Wall Plenums                             |
| 23 32 43    | Air-Distribution Chases Formed by General Construction    |
| 23 32 48    | Acoustical Air Plenums                                    |
| 23 33 00    | Air Duct Accessories                                      |
| 23 33 13    | Dampers   |
| 23 33 13.13 | Volume-Control Dampers                                    |
| 23 33 13.16 | Fire Dampers  |
| 23 33 13.19 | Smoke-Control Dampers                                     |
| 23 33 13.23 | Backdraft Dampers   |
| 23 33 19    | Duct Silencers  |
| 23 33 23    | Turning Vanes   |
| 23 33 33    | Duct-Mounting Access Doors                                |
| 23 33 43    | Flexible Connectors                                       |

| 23 33 46                | Flexible Ducts  |
|-------------------------|---|
| 23 33 53                | Duct Liners   |
| 23 34 00                | HVAC Fans   |
| 23 34 13                | Axial HVAC Fans   |
| 23 34 16                | Centrifugal HVAC Fans   |
| 23 34 23                | HVAC Power Ventilators  |
| 23 34 33                | Air Curtains  |
| 23 34 39                | Air Destratification Fans                                       |
| 23 35 00                |   |
|                         | Special Exhaust Systems   |
| 23 35 13<br>23 35 13.13 | Dust Collection Systems   |
| 23 35 16                | Sawdust Collection Systems                                      |
| 23 35 16.13             | Engine Exhaust Systems Positive-Pressure Engine Exhaust Systems |
| 23 35 16.16             | Mechanical Engine Exhaust Systems                               |
| 23 36 00                | Air Terminal Units  |
|                         |   |
| 23 36 13                | Constant-Air-Volume Units                                       |
| 23 36 16                | Variable-Air-Volume Units                                       |
| 23 37 00                | Air Outlets and Inlets  |
| 23 37 13                | Diffusers, Registers, and Grilles                               |
| 23 37 16                | Fabric Air Distribution Devices                                 |
| 23 37 23                | HVAC Gravity Ventilators  |
| 23 37 23.13             | HVAC Gravity Dome Ventilators                                   |
| 23 37 23.16             | HVAC Gravity Louvered-Penthouse Ventilators                     |
| 23 37 23.19             | HVAC Gravity Upblast Ventilators                                |
| 23 38 00                | Ventilation Hoods   |
| 23 38 13                | Commercial-Kitchen Hoods  |
| 23 38 13.13             | Listed Commercial-Kitchen Hoods                                 |
| 23 38 13.16             | Standard Commercial-Kitchen Hoods                               |
| 23 38 16                | Fume Hoods  |
| 23 40 00                | <b>HVAC Air Cleaning Devices</b>                                |
| 23 41 00                | Particulate Air Filtration                                      |
| 23 41 13                | Panel Air Filters   |
| 23 41 16                | Renewable-Media Air Filters                                     |
| 23 41 19                | Washable Air Filters  |
| 23 41 23                | Extended Surface Filters  |
| 23 41 33                | High-Efficiency Particulate Filtration                          |
| 23 41 43                | Ultra-Low Penetration Filtration                                |
| 23 41 46                | Super Ultra-Low Penetration Filtration                          |
| 23 42 00                | Gas-Phase Air Filtration  |
| 23 42 13                | Activated-Carbon Air Filtration                                 |
| 23 42 16                | Chemically-Impregnated Adsorption Air Filtration                |
| 23 42 10                | Catalytic-Adsorption Air Filtration                             |
|                         |   |
| 23 43 00                | Electronic Air Cleaners   |
| 23 43 13                | Washable Electronic Air Cleaners                                |
| 23 43 16                | Agglomerator Electronic Air Cleaners                            |
| 23 43 23                | Self-Contained Electronic Air Cleaners                          |
| 23 50 00                | Central Heating Equipment                                       |
| 23 51 00                | Breechings, Chimneys, and Stacks                                |

|    | 23 51 13                   | Draft Control Devices                    |
|----|----------------------------|--|
|    | 23 51 13.13<br>23 51 13.16 | Draft-Induction Fans Vent Dampers        |
|    | 23 51 13.19                | Barometric Dampers                       |
|    | 23 51 16                   | Fabricated Breechings and Accessories    |
|    | 23 51 19                   | Fabricated Stacks                        |
|    | 23 51 23                   | Gas Vents                                |
|    | 23 51 33                   | Insulated Sectional Chimneys             |
|    | 23 51 43                   | Flue-Gas Filtration Equipment            |
|    | 23 51 43.13                | Gaseous Filtration                       |
|    | 23 51 43.16                | Particulate Filtration                   |
| 23 | 52 00                      | Heating Boilers                          |
|    | 23 52 13                   | Electric Boilers                         |
|    | 23 52 16                   | Condensing Boilers                       |
|    | 23 52 16.13                | Stainless-Steel Condensing Boilers       |
|    | 23 52 16.16                | Aluminum Condensing Boilers              |
|    | 23 52 17                   | Low Mass Boilers                         |
|    | 23 52 19                   | Pulse Combustion Boilers                 |
|    | 23 52 23                   | Cast-Iron Boilers                        |
|    | 23 52 33                   | Water-Tube Boilers                       |
|    | 23 52 33.13                | Finned Water-Tube Boilers                |
|    | 23 52 33.16                | Steel Water-Tube Boilers                 |
|    | 23 52 33.19                | Copper Water-Tube Boilers                |
|    | 23 52 39                   | Fire-Tube Boilers                        |
|    | 23 52 39.13                | Scotch Marine Boilers                    |
|    | 23 52 39.16                | Steel Fire-Tube Boilers                  |
|    | 23 52 83                   | Boiler Blowdown Systems                  |
| 23 | 53 00                      | Heating Boiler Feedwater Equipment       |
|    | 23 53 13                   | Boiler Feedwater Pumps                   |
|    | 23 53 16                   | Deaerators                               |
| 23 | 54 00                      | Furnaces                                 |
|    | 23 54 13                   | Electric-Resistance Furnaces             |
|    | 23 54 16                   | Fuel-Fired Furnaces                      |
|    | 23 54 16.13                | Gas-Fired Furnaces                       |
|    | 23 54 16.16                | Oil-Fired Furnaces                       |
| 23 | 55 00                      | Fuel-Fired Heaters                       |
|    | 23 55 13                   | Fuel-Fired Duct Heaters                  |
|    | 23 55 13.13                | Oil-Fired Duct Heaters                   |
|    | 23 55 13.16                | Gas-Fired Duct Heaters                   |
|    | 23 55 23                   | Gas-Fired Radiant Heaters                |
|    | 23 55 23.13                | Low-Intensity Gas-Fired Radiant Heaters  |
|    | 23 55 23.16                | High-Intensity Gas-Fired Radiant Heaters |
|    | 23 55 33                   | Fuel-Fired Unit Heaters                  |
|    | 23 55 33.13                | Oil-Fired Unit Heaters                   |
|    | 23 55 33.16                | Gas-Fired Unit Heaters                   |
| 23 | 56 00                      | Solar Energy Heating Equipment           |
|    | 23 56 13                   | Heating Solar Collectors                 |
|    | 23 56 13.13                | Heating Solar Flat-Plate Collectors      |
|    | 23 56 13.16                | Heating Solar Concentrating Collectors   |
|    | 23 56 13.19                | Heating Solar Vacuum-Tube Collectors     |
|    | 23 56 16                   | Packaged Solar Heating Equipment         |

| 23 56 23  23 57 00  23 57 13  23 57 16  23 57 19  23 57 19.13  23 57 19.16  23 57 33 | Solar Air-Heating Panels  Heat Exchangers for HVAC  Steam-to-Steam Heat Exchangers Steam-to-Water Heat Exchangers Liquid-to-Liquid Heat Exchangers Plate-Type, Liquid-to-Liquid Heat Exchangers Shell-Type, Liquid-to-Liquid Heat Exchangers Direct Geoexchange Heat Exchangers |
|--|---|
| 23 60 00   | Central Cooling Equipment   |
| 23 61 00   | Refrigerant Compressors   |
| 23 61 13   | Centrifugal Refrigerant Compressors   |
| 23 61 13.13  | Non-Condensable Gas Purge Equipment   |
| 23 61 16<br>23 61 19   | Reciprocating Refrigerant Compressors Scroll Refrigerant Compressors  |
| 23 61 23   | Rotary-Screw Refrigerant Compressors  |
| 23 62 00   |   |
| 23 62 13   | Packaged Compressor and Condenser Units Packaged Air-Cooled Refrigerant Compressor and Condenser Units  |
| 23 62 23   | Packaged Water-Cooled Refrigerant Compressor and Condenser Units  |
| 23 63 00   | Refrigerant Condensers  |
| 23 63 13   | Air-Cooled Refrigerant Condensers   |
| 23 63 23   | Water-Cooled Refrigerant Condensers   |
| 23 63 33   | Evaporative Refrigerant Condensers  |
| 23 64 00   | Packaged Water Chillers   |
| 23 64 13   | Absorption Water Chillers   |
| 23 64 13.13  | Direct-Fired Absorption Water Chillers  |
| 23 64 13.16  | Indirect-Fired Absorption Water Chillers  |
| 23 64 16   | Centrifugal Water Chillers  |
| 23 64 16.13  | Air-Cooled Centrifugal Water Chillers   |
| 23 64 16.16<br>23 64 19  | Water-Cooled Centrifugal Water Chillers Reciprocating Water Chillers  |
| 23 64 23   | Scroll Water Chillers   |
| 23 64 26   | Rotary-Screw Water Chillers   |
| 23 65 00   | Cooling Towers  |
| 23 65 13   | Forced-Draft Cooling Towers   |
| 23 65 13.13  | Open-Circuit, Forced-Draft Cooling Towers   |
| 23 65 13.16  | Closed-Circuit, Forced-Draft Cooling Towers   |
| 23 65 16   | Natural-Draft Cooling Towers  |
| 23 65 23   | Field-Erected Cooling Towers  |
| 23 65 33   | Liquid Coolers  |
| 23 70 00   | Central HVAC Equipment  |
| 23 71 00   | Thermal Storage   |
| 23 71 13   | Thermal Heat Storage  |
| 23 71 13.13  | Room Storage Heaters for Thermal Storage  |
| 23 71 13.16  | Heat-Pump Boosters for Thermal Storage  |
| 23 71 13.19  | Central Furnace Heat-Storage Units  |
| 23 71 13.23<br>23 71 16  | Pressurized-Water Thermal Storage Tanks Chilled-Water Thermal Storage   |
| 23 71 10   | Chilled-Water Thermal Storage Ice Storage   |
| 23 71 19   | Internal Ice-on-Coil Thermal Storage  |
|  |   |

|      | 23 71 19.16                                      | External Ice-on-Coil Thermal Storage   |
|------|--|--|
|      | 23 71 19.19                                      | Encapsulated-Ice Thermal Storage   |
|      | 23 71 19.23                                      | Ice-Harvesting Thermal Storage   |
|      | 23 71 19.26                                      | Ice-Slurry Thermal Storage   |
| 23   | 72 00  | Air-to-Air Energy Recovery Equipment   |
|      | 23 72 13   | Heat-Wheel Air-to-Air Energy-Recovery Equipment  |
|      | 23 72 16   | Heat-Pipe Air-to-Air Energy-Recovery Equipment   |
|      | 23 72 19   | Fixed-Plate Air-to-Air Energy-Recovery Equipment   |
|      | 23 72 23   | Packaged Air-to-Air Energy-Recovery Units  |
| 23   | 73 00  | Indoor Central-Station Air-Handling Units  |
|      | 23 73 13   | Modular Indoor Central-Station Air-Handling Units  |
|      | 23 73 23   | Custom Indoor Central-Station Air-Handling Units   |
|      | 23 73 33   | Indoor Indirect Fuel-Fired Heating and Ventilating Units   |
|      | 23 73 33.13                                      | Indoor Indirect Oil-Fired Heating and Ventilating Units  |
|      | 23 73 33.16                                      | Indoor Indirect Gas-Fired Heating and Ventilating Units  |
|      | 23 73 39   | Indoor, Direct Gas-Fired Heating and Ventilating Units   |
| 23 7 | 74 00  | Packaged Outdoor HVAC Equipment  |
|      | 23 74 13   | Packaged, Outdoor, Central-Station Air-Handling Units  |
|      | 23 74 23   | Packaged, Outdoor, Heating-Only Makeup-Air Units   |
|      | 23 74 23.13                                      | Packaged, Direct-Fired, Outdoor, Heating-Only Makeup-Air Units   |
|      | 23 74 23.16                                      | Packaged, Indirect-Fired, Outdoor, Heating-Only Makeup-Air Units   |
|      | 23 74 33   | Dedicated Outdoor-Air Units  |
| 23 7 | 75 00  | Custom-Packaged Outdoor HVAC Equipment   |
|      | 23 75 13   | Custom-Packaged, Outdoor, Central-Station Air-Handling Units   |
|      | 23 75 23   | Custom-Packaged, Outdoor, Heating and Ventilating Makeup-Air Units   |
|      | 23 75 33   | Custom-Packaged, Outdoor, Heating and Cooling Makeup Air-  |
|      | 20 70 00   | Conditioners   |
| 23 7 | 76 00  | Evaporative Air-Cooling Equipment  |
|      | 23 76 13   | Direct Evaporative Air Coolers   |
|      | 23 76 16   | Indirect Evaporative Air Coolers   |
|      | 23 76 19   | Combined Direct and Indirect Evaporative Air Coolers   |
| 22   |  |  |
|      | 80 00  | Decentralized HVAC Equipment   |
| 23 8 | 81 00  | Decentralized Unitary HVAC Equipment   |
|      | 23 81 13   | Packaged Terminal Air-Conditioners   |
|      | 23 81 16   | Room Air-Conditioners  |
|      | 23 81 19   | Self-Contained Air-Conditioners  |
|      | 23 81 19.13                                      | Small-Capacity Self-Contained Air-Conditioners   |
|      | 23 81 19.16                                      | Large-Capacity Self-Contained Air-Conditioners   |
|      | 23 81 23   | Computer-Room Air-Conditioners   |
|      | 23 81 26   | Split-System Air-Conditioners  |
|      | 23 81 26.13                                      | Small-Capacity Split-System Air-Conditioners   |
|      | 23 81 26.16                                      | Large-Capacity Split-System Air-Conditioners   |
|      |  | Variable Retrigerant Flow HVAC Systems   |
|      | 23 81 29   | Variable Refrigerant Flow HVAC Systems   |
|      | 23 81 43   | Air-Source Unitary Heat Pumps  |
|      | 23 81 43<br>23 81 46                             | Air-Source Unitary Heat Pumps Water-Source Unitary Heat Pumps  |
| 23 8 | 23 81 43   | Air-Source Unitary Heat Pumps Water-Source Unitary Heat Pumps Convection Heating and Cooling Units                                   |
| 23 8 | 23 81 43<br>23 81 46<br><b>82 00</b><br>23 82 13 | Air-Source Unitary Heat Pumps Water-Source Unitary Heat Pumps Convection Heating and Cooling Units Valance Heating and Cooling Units |
| 23 8 | 23 81 43<br>23 81 46<br><b>82 00</b>             | Air-Source Unitary Heat Pumps Water-Source Unitary Heat Pumps Convection Heating and Cooling Units                                   |

| 23 82 19    | Fan Coil Units                             |
|-------------|--|
| 23 82 23    | Unit Ventilators                           |
| 23 82 26    | Induction Units                            |
| 23 82 29    | Radiators                                  |
| 23 82 33    | Convectors                                 |
| 23 82 36    | Finned-Tube Radiation Heaters              |
| 23 82 39    | Unit Heaters                               |
| 23 82 39.13 | Cabinet Unit Heaters                       |
| 23 82 39.16 | Propeller Unit Heaters                     |
| 23 82 39.19 | Wall and Ceiling Unit Heaters              |
| 23 82 41    | Water-to-Water Heat Pumps                  |
| 23 83 00    | Radiant Heating Units                      |
| 23 83 13    | Radiant-Heating Electric Cables            |
| 23 83 13.16 | Radiant-Heating Electric Mats              |
| 23 83 16    | Radiant-Heating Hydronic Piping            |
| 23 83 23    | Radiant-Heating Electric Panels            |
| 23 83 33    | Electric Radiant Heaters                   |
| 23 84 00    | <b>Humidity Control Equipment</b>          |
| 23 84 13    | Humidifiers                                |
| 23 84 13.13 | Heated-Pan Humidifiers                     |
| 23 84 13.16 | Wetted-Element Humidifiers                 |
| 23 84 13.19 | Atomizing Humidifiers                      |
| 23 84 13.23 | Direct-Steam-Injection Humidifiers         |
| 23 84 13.26 | Jacketed, Steam Humidifiers                |
| 23 84 13.29 | Self-Contained Steam Humidifiers           |
| 23 84 13.33 | Portable Humidifiers                       |
| 23 84 16    | Mechanical Dehumidification Units          |
| 23 84 16.13 | Outdoor, Mechanical Dehumidification Units |
| 23 84 16.16 | Indoor, Mechanical Dehumidification Units  |
| 23 84 16.33 | Portable Dehumidifiers                     |
| 23 84 19    | Desiccant Dehumidification Units           |

| 25 00 00                   | Integrated Automation   |
|----------------------------|---|
| 25 01 00                   | Operation and Maintenance of Integrated Automation  |
| 25 01 10                   | Operation and Maintenance of Integrated Automation Network Equipment  |
| 25 01 20                   | Operation and Maintenance of Integrated Equipment   |
| 25 01 30                   | Operation and Maintenance of Integrated Automation Instrumentation and Terminal Devices                                     |
| 25 01 90                   | Diagnostic Systems for Integrated Automation  |
| 25 05 00                   | Common Work Results for Integrated Automation   |
| 25 05 05                   | Selective Demolition for Integrated Automation  |
| 25 05 13                   | Conductors and Cables for Integrated Automation   |
| 25 05 26                   | Grounding and Bonding for Integrated Automation   |
| 25 05 28                   | Pathways for Integrated Automation  |
| 25 05 28.29<br>25 05 28.33 | Hangers and Supports for Integrated Automation Conduits and Backboxes for Integrated Automation                             |
| 25 05 28.36                | Cable Trays for Integrated Automation   |
| 25 05 28.39                | Surface Raceways for Integrated Automation  |
| 25 05 48                   | Vibration and Seismic Controls for Integrated Automation  |
| 25 05 53                   | Identification for Integrated Automation  |
| 25 06 00                   | Schedules for Integrated Automation   |
| 25 06 11                   | Schedules for Integrated Automation Network   |
| 25 06 12<br>25 06 13       | Schedules for Integrated Automation Network Gateways Schedules for Integrated Automation Control and Monitoring Network     |
| 25 06 13<br>25 06 14       | Schedules for Integrated Automation Control and Monitoring Network  Schedules for Integrated Automation Local Control Units |
| 25 06 30                   | Schedules for Integrated Automation Instrumentation and Terminal  |
|                            | Devices   |
| 25 08 00                   | Commissioning of Integrated Automation  |
| 25 10 00                   | Integrated Automation Network   |
|                            | Equipment   |
| 25 11 00                   | Integrated Automation Network Devices   |
| 25 11 13                   | Integrated Automation Network Servers   |
| 25 11 16                   | Integrated Automation Network Routers, Bridges, Switches, Hubs, and   |
|                            | Modems  |
| 25 11 19                   | Integrated Automation Network Operator Workstations   |
| 25 12 00                   | Integrated Automation Network Gateways  |
| 25 12 13                   | Hardwired Integration Network Gateways  |
| 25 12 16                   | Direct-Protocol Integration Network Gateways  |
| 25 12 19<br>25 12 23       | Neutral-Protocol Integration Network Gateways Client-Server Information/Database Integration Network Gateways               |
| <b>25 13 00</b>            | Integrated Automation Control and Monitoring  |
| 23 13 00                   | Network   |
| 25 13 13                   |   |
| 20 10 10                   | Integrated Automation Control and Monitoring Network Supervisory Control  |
| 25 13 16                   | Integrated Automation Control and Monitoring Network Integration Panels   |
| 25 13 19                   | Integrated Automation Control and Monitoring Network Interoperability   |
| 25 14 00                   | Integrated Automation Local Control Units   |
| 25 14 13                   | Integrated Automation Remote Control Panels   |
| 25 14 16                   | Integrated Automation Application-Specific Control Panels   |

| 25 14 19<br>25 14 23 | Integrated Automation Terminal Control Units Integrated Automation Field Equipment Panels |
|----------------------|---|
| <b>25 15 00</b>      | Integrated Automation Software  |
| 25 15 13             | Integrated Automation Software for Network Gateways                                       |
| 25 15 16             | Integrated Automation Software for Control and Monitoring Networks                        |
| 25 15 19             | Integrated Automation Software for Local Control Units                                    |
| 25 30 00             | Integrated Automation Instrumentation   |
|                      | and Terminal Devices  |
| 25 31 00             | <b>Integrated Automation Instrumentation and Terminal</b>                                 |
|                      | Devices for Facility Equipment  |
| 25 32 00             | <b>Integrated Automation Instrumentation and Terminal</b>                                 |
|                      | Devices for Conveying Equipment   |
| 25 33 00             | Integrated Automation Instrumentation and Terminal  |
|                      | Devices for Fire-Suppression Systems  |
| 25 34 00             | <b>Integrated Automation Instrumentation and Terminal</b>                                 |
|                      | Devices for Plumbing  |
| 25 35 00             | <b>Integrated Automation Instrumentation and Terminal</b>                                 |
|                      | Devices for HVAC  |
| 25 35 13             | Integrated Automation Actuators and Operators   |
| 25 35 16             | Integrated Automation Sensors and Transmitters  |
| 25 35 19<br>25 35 23 | Integrated Automation Control Valves Integrated Automation Control Dampers                |
| 25 35 25<br>25 35 26 | Integrated Automation Control Dampers Integrated Automation Compressed Air Supply         |
| 25 36 00             | Integrated Automation Instrumentation and Terminal  |
|                      | Devices for Electrical Systems  |
| 25 36 13             | Integrated Automation Power Meters  |
| 25 36 16             | Integrated Automation KW Transducers  |
| 25 36 19             | Integrated Automation Current Sensors   |
| 25 36 23             | Integrated Automation Battery Monitors  |
| 25 36 26<br>25 36 29 | Integrated Automation Lighting Relays Integrated Automation UPS Monitors                  |
| <b>25 37 00</b>      | Integrated Automation Instrumentation and Terminal  |
| 20 01 00             | Devices for Communications Systems  |
| 25 38 00             | <b>Integrated Automation Instrumentation and Terminal</b>                                 |
|                      | <b>Devices for Electronic Safety and Security Systems</b>                                 |
| 25 50 00             | Integrated Automation Facility Controls   |
| 25 51 00             | <b>Integrated Automation Control of Facility Equipment</b>                                |
| 25 52 00             | Integrated Automation Control of Conveying  |
|                      | Equipment   |
| 25 53 00             | Integrated Automation Control of Fire-Suppression   |
|                      | Systems   |
| 25 54 00             | Integrated Automation Control of Plumbing   |

| 25 55 00 | Integrated Automation Control of HVAC                |
|----------|--|
| 25 56 00 | Integrated Automation Control of Electrical Systems  |
| 25 57 00 | Integrated Automation Control of Communications      |
|          | Systems  |
| 25 58 00 | Integrated Automation Control of Electronic Safety   |
|          | and Security Systems                                 |
| 25 90 00 | <b>Integrated Automation Control Sequences</b>       |
| 25 91 00 | Integrated Automation Control Sequences for Facility |
|          | Equipment  |
| 25 92 00 | Integrated Automation Control Sequences for          |
|          | Conveying Equipment                                  |
| 25 93 00 | Integrated Automation Control Sequences for Fire-    |
|          | Suppression Systems                                  |
| 25 94 00 | Integrated Automation Control Sequences for          |
|          | Plumbing   |
| 25 95 00 | Integrated Automation Control Sequences for HVAC     |
| 25 96 00 | Integrated Automation Control Sequences for          |
|          | Electrical Systems                                   |
| 25 97 00 | Integrated Automation Control Sequences for          |
|          | Communications Systems                               |
| 25 98 00 | Integrated Automation Control Sequences for          |
|          | Electronic Safety and Security Systems               |
|          |  |

| 26 00 00                   | Electrical   |
|----------------------------|--|
| 26 01 00                   | Operation and Maintenance of Electrical Systems  |
| 26 01 10                   | Operation and Maintenance of Medium-Voltage Electrical Distribution                                    |
| 26 01 20                   | Operation and Maintenance of Low-Voltage Electrical Distribution                                       |
| 26 01 26                   | Maintenance Testing of Electrical Systems  |
| 26 01 30                   | Operation and Maintenance of Facility Electrical Power Generating and                                  |
| 00.04.40                   | Storing Equipment  |
| 26 01 40<br>26 01 50       | Operation and Maintenance of Electrical Protection Systems Operation and Maintenance of Lighting       |
| 26 01 50.51                | Luminaire Relamping  |
| 26 01 50.81                | Luminaire Replacement  |
| 26 05 00                   | Common Work Results for Electrical   |
| 26 05 05                   | Selective Demolition for Electrical  |
| 26 05 13                   | Medium-Voltage Cables  |
| 26 05 13.13                | Medium-Voltage Open Conductors   |
| 26 05 13.16                | Medium-Voltage, Single- and Multi-Conductor Cables   |
| 26 05 19<br>26 05 19.13    | Low-Voltage Electrical Power Conductors and Cables Undercarpet Electrical Power Cables                 |
| 26 05 19.13                | Manufactured Wiring Assemblies   |
| 26 05 23                   | Control-Voltage Electrical Power Cables  |
| 26 05 26                   | Grounding and Bonding for Electrical Systems   |
| 26 05 29                   | Hangers and Supports for Electrical Systems  |
| 26 05 33                   | Raceway and Boxes for Electrical Systems   |
| 26 05 33.13                | Conduit for Electrical Systems   |
| 26 05 33.16<br>26 05 33.23 | Boxes for Electrical Systems Surface raceways for Electrical Systems                                   |
| 26 05 36                   | Cable Trays for Electrical Systems   |
| 26 05 39                   | Underfloor Raceways for Electrical Systems   |
| 26 05 43                   | Underground Ducts and Raceways for Electrical Systems  |
| 26 05 46                   | Utility Poles for Electrical Systems   |
| 26 05 48                   | Vibration and Seismic Controls for Electrical Systems  |
| 26 05 53                   | Identification for Electrical Systems  |
| 26 05 73                   | Overcurrent Protective Device Coordination Study   |
| 26 05 83                   | Wiring Connections   |
| 26 06 00                   | Schedules for Electrical   |
| 26 06 10<br>26 06 20       | Schedules for Medium-Voltage Electrical Distribution Schedules for Low-Voltage Electrical Distribution |
| 26 06 20.13                | Electrical Switchboard Schedule  |
| 26 06 20.16                | Electrical Panelboard Schedule   |
| 26 06 20.19                | Electrical Motor-Control Center Schedule   |
| 26 06 20.23                | Electrical Circuit Schedule  |
| 26 06 20.26<br>26 06 30    | Wiring Device Schedule Schedules for Facility Electrical Power Generating and Storing Equipment        |
| 26 06 40                   | Schedules for Electrical Protection Systems  |
| 26 06 50                   | Schedules for Lighting   |
| 26 06 50.13                | Lighting Panelboard Schedule   |
| 26 06 50.16                | Lighting Fixture Schedule  |
| 26 08 00                   | Commissioning of Electrical Systems  |
| 26 09 00                   | Instrumentation and Control for Electrical Systems   |
| 26 09 13                   | Electrical Power Monitoring  |
|                            | -  |

| 26 09 15                   | Peak Load Controllers   |
|----------------------------|---|
| 26 09 16                   | Electrical Controls and Relays  |
| 26 09 17                   | Programmable Controllers  |
| 26 09 19                   | Enclosed Contactors   |
| 26 09 23                   | Lighting Control Devices  |
| 26 09 26                   | Lighting Control Panelboards  |
| 26 09 33                   | Central Dimming Controls  |
| 26 09 33.13                | Multichannel Remote-Controlled Dimmers  |
| 26 09 33.16                | Remote-Controlled Dimming Stations  |
| 26 09 36                   | Modular Dimming Controls  |
| 26 09 36.13<br>26 09 36.16 | Manual Modular Dimming Controls Integrated Multipreset Modular Dimming Controls |
| 26 09 43                   | Network Lighting Controls   |
| 26 09 43.13                | Digital-Network Lighting Controls   |
| 26 09 43.16                | Addressable Fixture Lighting Control  |
| 26 09 43.19                | Wireless Network Lighting Controls  |
| 26 09 61                   | Theatrical Lighting Controls  |
| 26 10 00                   | <b>Medium-Voltage Electrical Distribution</b>                                   |
| 26 11 00                   | Substations   |
|                            |   |
| 26 11 13                   | Primary Unit Substations  |
| 26 11 16                   | Secondary Unit Substations  |
| 26 12 00                   | Medium-Voltage Transformers   |
| 26 12 13                   | Liquid-Filled, Medium-Voltage Transformers                                      |
| 26 12 16                   | Dry-Type, Medium-Voltage Transformers   |
| 26 12 19                   | Pad-Mounted, Liquid-Filled, Medium-Voltage Transformers                         |
| 26 13 00                   | Medium-Voltage Switchgear   |
| 26 13 13                   | Medium-Voltage Circuit Breaker Switchgear                                       |
| 26 13 16                   | Medium-Voltage Fusible Interrupter Switchgear                                   |
| 26 13 19                   | Medium-Voltage Vacuum Interrupter Switchgear                                    |
| 26 13 23                   | Medium-Voltage Metal-Enclosed Switchgear  |
| 26 13 26                   | Medium-Voltage Metal-Clad Switchgear  |
| 26 13 29                   | Medium-Voltage Compartmentalized Switchgear                                     |
| 26 16 00                   | Medium-Voltage Metering   |
| 26 18 00                   | Medium-Voltage Circuit Protection Devices                                       |
| 26 18 13                   | Medium-Voltage Cutouts  |
| 26 18 16                   | Medium-Voltage Fuses  |
| 26 18 19                   | Medium-Voltage Lightning Arresters  |
| 26 18 23                   | Medium-Voltage Surge Arresters  |
| 26 18 26                   | Medium-Voltage Reclosers  |
| 26 18 29                   | Medium-Voltage Enclosed Bus   |
| 26 18 33                   | Medium-Voltage Enclosed Fuse Cutouts  |
| 26 18 36                   | Medium-Voltage Enclosed Fuses   |
| 26 18 39                   | Medium-Voltage Motor Controllers  |
| <b>26 20 00</b>            | Low-Voltage Electrical Transmission   |
| 26 21 00                   | Low-Voltage Electrical Service Entrance   |
| 26 21 13                   | Low-Voltage Overhead Electrical Service Entrance                                |
| 26 21 16                   | Low-Voltage Underground Electrical Service Entrance                             |
| 26 22 00                   | Low-Voltage Transformers  |

| 26 22 13                   | Low-Voltage Distribution Transformers   |
|----------------------------|---|
| 26 22 16                   | Low-Voltage Buck-Boost Transformers   |
| 26 22 19                   | Control and Signal Transformers   |
| 26 23 00                   | Low-Voltage Switchgear  |
| 26 23 13                   | Paralleling Low-Voltage Switchgear  |
| 26 24 00                   | Switchboards and Panelboards  |
| 26 24 13                   | Switchboards  |
| 26 24 16                   | Panelboards   |
| 26 24 19                   | Motor-Control Centers   |
| 26 25 00                   | Enclosed Bus Assemblies   |
| 26 26 00                   | Power Distribution Units  |
| 26 27 00                   | Low-Voltage Distribution Equipment  |
| 26 27 13                   | Electricity Metering  |
| 26 27 16                   | Electrical Cabinets and Enclosures  |
| 26 27 19                   | Multi-Outlet Assemblies   |
| 26 27 23                   |   |
| 26 27 26                   | Wiring Devices  |
| 26 27 73                   | Door Chimes   |
| 26 28 00                   | Low-Voltage Circuit Protective Devices  |
| 26 28 13                   | Fuses   |
| 26 28 16                   | Enclosed Switches and Circuit Breakers  |
| 26 28 16.13                |   |
| 26 28 16.16                | Enclosed Switches   |
| 26 29 00                   | Low-Voltage Controllers   |
| 26 29 13                   | Enclosed Controllers  |
| 26 29 13.13                | Across-the-Line Motor Controllers   |
| 26 29 13.16                | Reduced-Voltage Motor Controllers   |
| 26 29 23                   | Variable-Frequency Motor Controllers  |
| 26 29 33                   | Controllers for Fire Pump Drivers   |
| 26 29 33.13<br>26 29 33.16 | Full-Service Controllers for Fire Pump Electric-Motor Drivers  Limited-Service Controllers for Fire Pump Electric-Motor Drivers |
| 26 29 33.19                | Controllers for Fire Pump Diesel Engine Drivers   |
| 26 30 00                   | Facility Electrical Power Generating and  |
| 20 00 00                   |   |
|                            | Storing Equipment   |
| 26 31 00                   | Photovoltaic Collectors   |
| 26 32 00                   | Packaged Generator Assemblies   |
| 26 32 13                   | Engine Generators   |
| 26 32 13.13                | Diesel-Engine-Driven Generator Sets   |
| 26 32 13.16                | Gas-Engine-Driven Generator Sets  |
| 26 32 13.26                | Gas-Turbine Engine-Driven Generators  |
| 26 32 16<br>26 32 19       | Steam-Turbine Generators Hydro-Turbine Generators   |
| 26 32 23                   | Wind Energy Equipment   |
| 26 32 26                   | Frequency Changers  |
| 26 32 29                   | Rotary Converters   |
| 26 32 33                   | Rotary Uninterruptible Power Units  |
| 26 32 36                   | Resistive Load Banks  |
| 26 33 00                   | Battery Equipment   |
| _0 00 00                   | -arrai y -qarpiriarra   |

| 26 33 13             | Batteries  |
|----------------------|--|
| 26 33 16             | Battery Racks  |
| 26 33 19             | Battery Units  |
| 26 33 23             | Central Battery Equipment  |
| 26 33 33             | Static Power Converters  |
| 26 33 43             | Battery Chargers   |
| 26 33 46<br>26 33 53 | Battery Monitoring Static Uninterruptible Dower Supply                                 |
| <b>26 35 00</b>      | Static Uninterruptible Power Supply  Power Filters and Conditioners                    |
|                      |  |
| 26 35 13<br>26 35 16 | Capacitors Chokes and Inductors  |
| 26 35 23             | Electromagnetic-Interference Filters   |
| 26 35 26             | Harmonic Filters   |
| 26 35 33             | Power Factor Correction Equipment  |
| 26 35 36             | Slip Controllers   |
| 26 35 43             | Static-Frequency Converters  |
| 26 35 46             | Radio-Frequency-Interference Filters   |
| 26 35 53             | Voltage Regulators   |
| 26 36 00             | Transfer Switches  |
| 26 36 13             | Manual Transfer Switches   |
| 26 36 23             | Automatic Transfer Switches  |
| 26 40 00             | Electrical Protection  |
| 26 41 00             | Facility Lightning Protection  |
| 26 41 13             | Lightning Protection for Structures  |
| 26 41 13.13          | Lightning Protection for Buildings   |
| 26 41 16             | Lightning Prevention and Dissipation   |
| 26 41 19             | Early Streamer Emission Lightning Protection   |
| 26 41 23             | Lightning Protection Surge Arresters and Suppressors                                   |
| 26 43 00             | Surge Protective Devices   |
| 26 43 13             | Surge Protective Devices for Low-Voltage Electrical Power Circuitsrical Power Circuits |
| 26 50 00             | Lighting   |
| 26 51 00             | Interior Lighting  |
| 26 51 13             | Interior Lighting Fixtures, Lamps, And Ballasts  |
| 26 52 00             | Emergency Lighting   |
| 26 53 00             | Exit Signs   |
| 26 54 00             | Classified Location Lighting   |
| 26 55 00             | Special Purpose Lighting   |
| 26 55 23             | Outline Lighting   |
| 26 55 29             | Underwater Lighting  |
| 26 55 33             | Hazard Warning Lighting  |
| 26 55 36             | Obstruction Lighting   |
| 26 55 39             | Helipad Lighting   |
| 26 55 53             | Security Lighting  |
| 26 55 59             | Display Lighting   |
| 26 55 61             | Theatrical Lighting  |
| 26 55 63             | Detention Lighting   |

| 26 55 70<br>26 55 83 | Healthcare Lighting<br>Broadcast Lighting |
|----------------------|---|
| 26 56 00             | Exterior Lighting                         |
| 26 56 13             | Lighting Poles and Standards              |
| 26 56 16             | Parking Lighting                          |
| 26 56 19             | Roadway Lighting                          |
| 26 56 23             | Area Lighting                             |
| 26 56 26             | Landscape Lighting                        |
| 26 56 29             | Site Lighting                             |
| 26 56 33             | Walkway Lighting                          |
| 26 56 36             | Flood Lighting                            |
| 26 56 68             | Exterior Athletic Lighting                |

| 27 00 00                | Communications  |
|-------------------------|---|
| 27 01 00                | Operation and Maintenance of Communications   |
|                         | Systems   |
| 27 01 10                | Operation and Maintenance of Structured Cabling and Enclosures  |
| 27 01 20                | Operation and Maintenance of Data Communications  |
| 27 01 30                | Operation and Maintenance of Voice Communications   |
| 27 01 40                | Operation and Maintenance of Audio-Video Communications   |
| 27 01 50                | Operation and Maintenance of Distributed Communications and Monitoring  |
| 27 05 00                | Common Work Results for Communications  |
| 27 05 05                | Selective Demolition for Communications   |
| 27 05 13<br>27 05 13.13 | Communications Services   |
| 27 05 13.13             | Dialtone Services T1 Services   |
| 27 05 13.33             | DSL Services  |
| 27 05 13.43             | Cable Services  |
| 27 05 13.53             | Satellite Services  |
| 27 05 26                | Grounding and Bonding for Communications Systems  |
| 27 05 28<br>27 05 29    | Pathways for Communications Systems Hangers and Supports for Communications Systems                           |
| 27 05 29                | Conduits and Backboxes for Communications Systems   |
| 27 05 36                | Cable Trays for Communications Systems  |
| 27 05 39                | Surface Raceways for Communications Systems   |
| 27 05 43                | Underground Ducts and Raceways for Communications Systems   |
| 27 05 46                | Utility Poles for Communications Systems  |
| 27 05 48                | Vibration and Seismic Controls for Communications Systems   |
| 27 05 53                | Identification for Communications Systems   |
| 27 06 00                | Schedules for Communications  |
| 27 06 10                | Schedules for Structured Cabling and Enclosures   |
| 27 06 20                | Schedules for Data Communications   |
| 27 06 30                | Schedules for Voice Communications  |
| 27 06 40<br>27 06 50    | Schedules for Audio-Video Communications Schedules for Distributed Communications and Monitoring              |
| <b>27 08 00</b>         |   |
|                         | Commissioning of Communications   |
| 27 10 00                | Structured Cabling  |
| 27 11 00                | Communications Equipment Room Fittings  |
| 27 11 13                | Communications Entrance Protection  |
| 27 11 16                | Communications Cabinets, Racks, Frames, and Enclosures  |
| 27 11 19                | Communications Termination Blocks and Patch Panels  |
| 27 11 23<br>27 11 26    | Communications Cable Management and Ladder Rack Communications Rack Mounted Power Protection and Power Strips |
| 27 13 00                | Communications Backbone Cabling   |
| 27 13 13                | Communications Copper Backbone Cabling  |
| 27 13 13.13             | Communications Copper Cable Splicing and Terminations   |
| 27 13 23                | Communications Optical Fiber Backbone Cabling   |
| 27 13 23.13             | Communications Optical Fiber Splicing and Terminations  |
| 27 13 33                | Communications Coaxial Backbone Cabling   |
| 27 13 33.13             | Communications Coaxial Splicing and Terminations  |
| 27 13 43                | Communications Services Cabling   |

|           | 27 13 43.13<br>27 13 43.23<br>27 13 43.33<br>27 13 43.43   | Dialtone Services Cabling T1 Services Cabling DSL Services Cabling Cable Services Cabling  |
|-----------|--|--|
|           | 27 13 43.53  | Satellite Services Cabling   |
| <b>27</b> | 15 00  | Communications Horizontal Cabling  |
|           | 27 15 01   | Communications Horizontal Cabling Applications   |
|           | 27 15 01.16<br>27 15 01.19   | Voice Communications Horizontal Cabling  |
|           | 27 15 01.19  | Data Communications Horizontal Cabling Audio-Video Communications Horizontal Cabling   |
|           | 27 15 01.29  | Patient Monitoring and Telemetry Communications Horizontal Cabling   |
|           | 27 15 01.43  | Nurse Call and Intercom Communications Horizontal Cabling  |
|           | 27 15 01.46  | Paging Communications Horizontal Cabling   |
|           | 27 15 01.49  | Intermediate Frequency/Radio Frequency Communications Horizontal Cabling   |
|           | 27 15 01.53<br>27 15 13  | Antennas Communications Horizontal Cabling   |
|           | 27 15 13   | Communications Copper Horizontal Cabling Communications Optical Fiber Horizontal Cabling   |
|           | 27 15 23   | Communications Coaxial Horizontal Cabling  |
|           | 27 15 43   | Communications Faceplates and Connectors   |
| 27        | 16 00  | Communications Connecting Cords, Devices, and  |
|           |  | Adapters   |
|           | 27 16 13   | Communications Custom Cable Assemblies   |
|           | 27 16 16   | Communications Media Converters, Adapters, and Transceivers  |
|           | 27 16 19   | Communications Patch Cords, Station Cords, and Cross Connect Wire  |
| 27        | 20 00  | Data Communications  |
| 27        | 21 00  | Data Communications Network Equipment  |
|           | 27 21 13   | Data Communications Firewalls  |
|           | 27 21 16   | Data Communications Routers, CSU/DSU, Multiplexers, Codecs, and  |
|           |  | Modems   |
|           |  | Data Communications Network Management   |
|           | 27 21 26   |  |
|           | 27 21 29   | Data Communications Switches and Hubs  |
| 07        | 27 21 29<br>27 21 33   | Data Communications Switches and Hubs Data Communications Wireless Access Points   |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b>   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware   |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes  |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup   |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware  Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers  |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware  Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops   |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware  Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers  |
|           | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware  Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds   |
|           | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware  Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops   |
|           | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29<br><b>24 00</b><br>27 24 13<br>27 24 16   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds  Data Communications Peripheral Data Equipment Printers Scanners   |
|           | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29<br><b>24 00</b><br>27 24 13<br>27 24 16<br>27 24 19   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds  Data Communications Peripheral Data Equipment Printers Scanners External Drives   |
|           | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29<br><b>24 00</b><br>27 24 13<br>27 24 16<br>27 24 19<br>27 24 23   | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds  Data Communications Peripheral Data Equipment Printers Scanners External Drives Audio-Video Devices   |
|           | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29<br><b>24 00</b><br>27 24 13<br>27 24 16<br>27 24 19<br>27 24 23<br>27 24 26                             | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds  Data Communications Peripheral Data Equipment Printers Scanners External Drives Audio-Video Devices Virtual Reality Equipment   |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29<br><b>24 00</b><br>27 24 13<br>27 24 16<br>27 24 19<br>27 24 23<br>27 24 26<br>27 24 29                 | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds  Data Communications Peripheral Data Equipment Printers Scanners External Drives Audio-Video Devices Virtual Reality Equipment Disaster Recovery Equipment                               |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29<br><b>24 00</b><br>27 24 13<br>27 24 16<br>27 24 19<br>27 24 23<br>27 24 26<br>27 24 29<br><b>25 00</b> | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds  Data Communications Peripheral Data Equipment Printers Scanners External Drives Audio-Video Devices Virtual Reality Equipment Disaster Recovery Equipment  Data Communications Software |
| 27        | 27 21 29<br>27 21 33<br><b>22 00</b><br>27 22 13<br>27 22 16<br>27 22 19<br>27 22 23<br>27 22 26<br>27 22 29<br><b>24 00</b><br>27 24 13<br>27 24 16<br>27 24 19<br>27 24 23<br>27 24 26<br>27 24 29                 | Data Communications Switches and Hubs Data Communications Wireless Access Points  Data Communications Hardware Data Communications Mainframes Data Communications Storage and Backup Data Communications Servers Data Communications Desktops Data Communications Laptops Data Communications Handhelds  Data Communications Peripheral Data Equipment Printers Scanners External Drives Audio-Video Devices Virtual Reality Equipment Disaster Recovery Equipment                               |

|            | 27 25 19             | Email Software  |
|------------|----------------------|---|
|            | 27 25 23             | Graphics/Multimedia Software  |
|            | 27 25 26             | Customer Relationship Management Software                             |
|            | 27 25 29             | Operating System Software   |
|            | 27 25 33             | Database Software   |
|            | 27 25 37             | Virtual Private Network Software                                      |
|            | 27 25 39             | Internet Conferencing Software  |
| 27         | 26 00                | Data Communications Programming and Integration                       |
|            |                      | Services  |
|            | 27 26 13             | Web Development   |
|            | 27 26 16             | Database Development  |
|            | 27 26 19             | Application Development   |
|            | 27 26 23             | Network Integration Requirements                                      |
|            | 27 26 26             | Data Communications Integration Requirements                          |
| 27         | 30 00                | Voice Communications  |
|            | 31 00                | Voice Communications Switching and Routing                            |
| <b>Z</b> I | 31 00                | _   |
|            | 07.04.40             | Equipment   |
|            | 27 31 13             | PBX/ Key Systems  |
|            | 27 31 23             | Internet Protocol Voice Switches                                      |
| 27         | 32 00                | Voice Communications Terminal Equipment                               |
|            | 27 32 13             | Telephone Sets  |
|            | 27 32 16             | Wireless Transceivers   |
|            | 27 32 23             | Elevator Telephones   |
|            | 27 32 26             | Ring-Down Emergency Telephones  |
|            | 27 32 29             | Facsimiles and Modems   |
|            | 27 32 36             | TTY Equipment   |
| _          | 27 32 43             | Radio Communications Equipment  |
| <b>27</b>  | 33 00                | Voice Communications Messaging  |
|            | 27 33 16             | Voice Mail and Auto Attendant   |
|            | 27 33 23             | Interactive Voice Response  |
|            | 27 33 26             | Facsimile Servers   |
| 27         | 34 00                | Call Accounting   |
|            | 27 34 13             | Toll Fraud Equipment and Software                                     |
|            | 27 34 16             | Telemanagement Software   |
| 27         | 35 00                | Call Management   |
|            | 27 35 13             | Digital Voice Announcers  |
|            | 27 35 16             | Automatic Call Distributors   |
|            | 27 35 19             | Call Status and Management Displays                                   |
|            | 27 35 23             | Dedicated 911 Systems   |
| 27         | 40 00                | Audio-Video Communications  |
|            | 41 00                | Audio-Video Systems   |
| 21         | 27 41 13             | Architecturally Integrated Audio-Video Equipment                      |
|            | 27 41 13             | Integrated Audio-Video Systems and Equipment                          |
|            | 27 41 16 27 41 16.25 | Integrated Audio-Video Systems and Equipment for Restaurants and Bars |
|            | 27 41 16.23          | Integrated Audio-Video Systems and Equipment for Conference Rooms     |
|            | 27 41 16.29          | Integrated Audio-Video Systems and Equipment for Board Rooms          |
|            | 27 41 16 51          | Integrated Audio-Video Systems and Equipment for Classrooms           |

| 27 41 16.52<br>27 41 16.61 | Integrated Audio-Video Systems and Equipment for Religious Facilities Integrated Audio-Video Systems and Equipment for Theaters |
|----------------------------|---|
| 27 41 16.61                | Integrated Addio-Video Systems and Equipment for Auditoriums  |
| 27 41 16.63                | Integrated Audio-Video Systems and Equipment for Stadiums and Arenas  |
| 27 41 19                   | Portable Audio-Video Equipment  |
| 27 41 23                   | Audio-Video Accessories   |
| 27 41 33                   | Master Antenna Television Systems   |
| 27 41 43                   | Audio-Video Conferencing  |
| 27 42 00                   | Electronic Digital Systems  |
| 27 42 13                   | Point of Sale Systems   |
| 27 42 16                   | Transportation Information Display Systems  |
| 27 42 19                   | Public Information Systems  |
| 27 50 00                   | Distributed Communications and  |
|                            | Monitoring Systems  |
| 27 51 00                   | Distributed Audio-Video Communications Systems  |
| 27 51 13                   | Paging Systems  |
| 27 51 13.13                | Overhead Paging Systems   |
| 27 51 16                   | Public Address Systems  |
| 27 51 19                   | Sound Masking Systems   |
| 27 51 23                   | Intercommunications and Program Systems   |
| 27 51 23.20                | Commercial Intercommunications and Program Systems  |
| 27 51 23.30                | Residential Intercommunications and Program Systems   |
| 27 51 23.50<br>27 51 23.63 | Educational Intercommunications and Program Systems  Detention Intercommunications and Program Systems                          |
| 27 51 23.70                | Healthcare Intercommunications and Program Systems  |
| 27 51 26                   | Assistive Listening Systems   |
| 27 52 00                   | <b>Healthcare Communications and Monitoring Systems</b>   |
| 27 52 13                   | Patient Monitoring and Telemetry Systems  |
| 27 52 16                   | Telemedicine Systems  |
| 27 52 19                   | Healthcare Imaging Systems  |
| 27 52 23                   | Nurse Call/Code Blue Systems  |
| 27 53 00                   | Distributed Systems   |
| 27 53 13                   | Clock Systems   |
| 27 53 13.13                | Wireless Clock Systems  |
| 27 53 16                   | Infrared and Radio Frequency Tracking Systems   |
| 27 53 19                   | Internal Cellular, Paging, and Antenna Systems  |

| 28 00 00   | Electronic Safety and Security  |
|--|---|
| 28 01 00   | Operation and Maintenance of Electronic Safety and  |
|  | Security  |
| 28 01 10   | Operation and Maintenance of Electronic Access Control and Intrusion Detection  |
| 28 01 10.51  | Maintenance and Administration of Electronic Access Control and Intrusion Detection   |
| 28 01 10.71<br>28 01 20<br>28 01 30<br>28 01 30.51   | Revisions and Upgrades of Electronic Access Control and Intrusion Detection Operation and Maintenance of Electronic Surveillance Operation and Maintenance of Electronic Detection and Alarm Maintenance and Administration of Electronic Detection and Alarm   |
| 28 01 30.71<br>28 01 40<br>28 01 40.51<br>28 01 40.71  | Revisions and Upgrades of Electronic Detection and Alarm Operation and Maintenance of Electronic Monitoring and Control Maintenance and Administration of Electronic Monitoring and Control Revisions and Upgrades of Electronic Monitoring and Control   |
| 28 05 00   | Common Work Results for Electronic Safety and   |
|  | Security  |
| 28 05 05<br>28 05 13<br>28 05 13.13<br>28 05 13.16<br>28 05 13.19<br>28 05 13.23<br>28 05 26<br>28 05 28<br>28 05 28.29<br>28 05 28.33<br>28 05 28.39<br>28 05 28.39<br>28 05 48<br>28 05 53<br>28 06 10<br>28 06 10<br>28 06 20<br>28 06 30 | Selective Demolition for Electronic Safety and Security Conductors and Cables for Electronic Safety and Security CCTV Communications Conductors and Cables Access Control Communications Conductors and Cables Intrusion Detection Communications Conductors and Cables Fire Alarm Communications Conductors and Cables Grounding and Bonding for Electronic Safety and Security Pathways for Electronic Safety and Security Hangers and Supports for Electronic Safety and Security Conduits and Backboxes for Electronic Safety and Security Cable Trays for Electronic Safety and Security Surface Raceways for Electronic Safety and Security Vibration and Seismic Controls for Electronic Safety and Security Identification for Electronic Safety and Security Schedules for Electronic Safety and Security Schedules for Electronic Sarety and Intrusion Detection Schedules for Electronic Surveillance Schedules for Electronic Detection and Alarm |
| 28 06 40   | Schedules for Electronic Monitoring and Control   |
| 28 08 00   | Commissioning of Electronic Safety and Security   |
| 28 10 00   | <b>Electronic Access Control and Intrusion</b>  |
|  | Detection   |
| 28 13 00<br>28 13 13<br>28 13 16<br>28 13 19<br>28 13 26<br>28 13 26.11<br>28 13 33<br>28 13 33.16<br>28 13 33.26  | Access Control Access Control Global Applications Access Control Systems and Database Management Access Control Systems Infrastructure Access Control Remote Devices Wireless Access Control Devices Access Control Interfaces Access Control Interfaces to Access Control Hardware Access Control Interfaces to Intrusion Detection  |

|           | 28 13 33.33             | Access Control Interfaces to Video Surveillance                   |
|-----------|-------------------------|---|
|           | 28 13 33.36             | Access Control Interfaces to Fire Alarm                           |
|           | 28 13 43                | Access Control Identification Management Systems                  |
|           | 28 13 53<br>28 13 53.13 | Security Access Detection   |
|           | 28 13 53.16             | Security Access Metal Detectors Security Access X-Ray Equipment   |
|           | 28 13 53.10             | Security Access Explosive Detection Equipment                     |
|           | 28 13 53.29             | Security Access Sniffing Equipment                                |
|           | 28 13 63                | Access Control Vehicle Identification System                      |
|           | 6 00                    | Intrusion Detection   |
|           | 28 16 13                | Intrusion Detection Control, GUI, and Logic Systems               |
|           | 28 16 16                | Intrusion Detection Systems Infrastructure                        |
|           | 28 16 19                | Intrusion Detection Remote Devices and Sensors                    |
|           | 28 16 33                | Intrusion Detection Interfaces                                    |
|           | 28 16 33.13             | Intrusion Detection Interfaces to Remote Monitoring               |
|           | 28 16 33.16             | Intrusion Detection Interfaces to Access Control Hardware         |
|           | 28 16 33.23             | Intrusion Detection Interfaces to Access Control System           |
|           | 28 16 33.33             | Intrusion Detection Interfaces to Video Surveillance              |
|           | 28 16 33.36             | Intrusion Detection Interfaces to Fire Alarm                      |
|           | 28 16 43                | Perimeter Security Systems  |
| <b>28</b> | 20 00                   | Electronic Surveillance   |
| 28 2      | 3 00                    | Video Surveillance  |
|           | 28 23 13                | Video Surveillance Control and Management Systems                 |
|           | 28 23 16                | Video Surveillance Monitoring and Supervisory Interfaces          |
|           | 28 23 19                | Digital Video Recorders and Analog Recording Devices              |
|           | 28 23 23                | Video Surveillance Systems Infrastructure                         |
|           | 28 23 26                | Video Surveillance Remote Positioning Equipment                   |
|           | 28 23 29                | Video Surveillance Remote Devices and Sensors                     |
| 28 2      | <b>26 00</b>            | Electronic Personal Protection Systems                            |
|           | 28 26 13                | Electronic Personal Safety Detection Systems                      |
|           | 28 26 16                | Electronic Personal Safety Alarm Annunciation and Control Systems |
|           | 28 26 19                | Electronic Personal Safety Interfaces to Remote Monitoring        |
|           | 28 26 23                | Electronic Personal Safety Emergency Aid Devices                  |
| 28        | 30 00                   | <b>Electronic Detection and Alarm</b>                             |
|           | 1 00                    | Fire Detection and Alarm  |
|           | 28 31 11                | Digital, Addressable Fire-Alarm Systems                           |
|           | 28 31 12                | Zoned (DC Loop) Fire-Alarm Systems                                |
|           | 28 31 13                | Fire Detection and Alarm Control, GUI, and Logic Systems          |
|           | 28 31 23                | Fire Detection and Alarm Annunciation Panels and Fire Stations    |
|           | 28 31 33                | Fire Detection and Alarm Interfaces                               |
|           | 28 31 33.13             | Fire Detection and Alarm Interfaces to Remote Monitoring          |
|           | 28 31 33.16             | Fire Detection and Alarm Interfaces to Access Control Hardware    |
|           | 28 31 33.23             | Fire Detection and Alarm Interfaces to Access Control System      |
|           | 28 31 33.26             | Fire Detection and Alarm Interfaces to Intrusion Detection        |
|           | 28 31 33.33             | Fire Detection and Alarm Interfaces to Video Surveillance         |
|           | 28 31 33.43             | Fire Detection and Alarm Interfaces to Elevator Control           |
|           | 28 31 43                | Fire Detection Sensors  |
|           | 28 31 46                | Smoke Detection Sensors   |
|           | 28 31 49                | Carbon-Monoxide Detection Sensors                                 |
|           | 28 31 53                | Fire Alarm Initiating Devices                                     |

| 28 31 53.13 | Fire Alarm Pull Stations   |
|-------------|--|
| 28 31 53.23 | Fire Alarm Level Detectors Switches  |
| 28 31 53.33 | Fire Alarm Flow Switches   |
| 28 31 53.43 | Fire Alarm Pressure Sensors  |
| 28 31 63    | Fire Alarm Integrated Audio Visual Evacuation Systems                      |
| 28 31 63.13 | Fire Alarm Horns and Strobes   |
| 28 32 00    | Radiation Detection and Alarm  |
| 28 32 13    | Radiation Detection and Alarm Control, GUI, and Logic Systems              |
| 28 32 23    | Radiation Detection and Alarm Integrated Audio Evacuation Systems          |
| 28 32 33    | Radiation Detection Sensors  |
| 28 32 43    | Radiation Dosimeters   |
| 28 33 00    | Gas Detection and Alarm  |
| 28 33 13    | Gas Detection and Alarm Control, GUI, and Logic Systems                    |
| 28 33 23    | Gas Detection and Alarm Integrated Audio Evacuation Systems                |
| 28 33 33    | Gas Detection Sensors  |
| 28 34 00    | Fuel-Oil Detection and Alarm   |
| 28 34 13    | Fuel-Oil Detection and Alarm Control, GUI, and Logic Systems               |
| 28 34 23    | Fuel-Oil Detection and Alarm Integrated Audio Evacuation Systems           |
| 28 34 33    | Fuel-Oil Detection Sensors   |
| 28 35 00    | Refrigerant Detection and Alarm  |
| 28 35 13    | Refrigerant Detection and Alarm Control, GUI, and Logic Systems            |
| 28 35 23    | Refrigerant Detection and Alarm Integrated Audio Evacuation Systems        |
| 28 35 33    | Refrigerant Detection Sensors  |
| 28 36 00    | Water Detection and Alarm  |
| 28 36 13    | Water Detection and Alarm Control, GUI, and Logic Systems                  |
| 28 36 33    | Water Detection Sensors  |
| 28 36 43    | Building Envelope Water Detection and Alarm                                |
| 28 39 00    | Mass Notification Systems  |
| 28 40 00    |  |
|             | Electronic Monitoring and Control  |
| 28 41 00    | Electronic Structural Monitoring Systems                                   |
| 28 46 00    | Electronic Detention Monitoring and Control Systems                        |
| 28 46 13    | Hard-Wired Detention Monitoring and Control Systems                        |
| 28 46 16    | Relay-Logic Detention Monitoring and Control Systems                       |
| 28 46 19    | PLC Electronic Detention Monitoring and Control Systems                    |
| 28 46 23    | Computer-Based Detention Monitoring and Control Systems                    |
| 28 46 26    | Discreet-Logic Detention Monitoring and Control Systems                    |
| 28 46 29    | Discreet-Distributed Intelligence Detention Monitoring and Control Systems |

| 31 00 00                   | Earthwork  |
|----------------------------|--|
| 31 01 00                   | Maintenance of Earthwork   |
| 31 01 10                   | Maintenance of Clearing  |
| 31 01 20                   | Maintenance of Earth Moving  |
| 31 01 40                   | Maintenance of Shoring and Underpinning  |
| 31 01 50<br>31 01 60       | Maintenance of Excavation Support and Protection  Maintenance of Special Foundations and Load Bearing Elements |
| 31 01 62                   | Maintenance of Driven Piles  |
| 31 01 62.61                | Driven Pile Repairs  |
| 31 01 63                   | Maintenance of Bored and Augered Piles   |
| 31 01 63.61                | Bored and Augered Pile Repairs   |
| 31 01 70<br>31 01 70.61    | Maintenance of Tunneling and Mining Tunnel Leak Repairs  |
| 31 05 00                   | Common Work Results for Earthwork  |
| 31 05 05                   | Selective Demolition for Earthwork   |
| 31 05 13                   | Soils for Earthwork  |
| 31 05 16                   | Aggregates for Earthwork   |
| 31 05 19                   | Geosynthetics for Earthwork  |
| 31 05 19.13<br>31 05 19.16 | Geotextiles for Earthwork Geomembranes for Earthwork   |
| 31 05 19.19                | Geogrids for Earthwork   |
| 31 05 19.23                | Geosynthetic Clay Liners   |
| 31 05 19.26<br>31 05 19.29 | Geocomposites<br>Geonets   |
| 31 05 19.29                | Cement and Concrete for Earthwork  |
| 31 06 00                   | Schedules for Earthwork  |
| 31 06 10                   | Schedules for Clearing   |
| 31 06 20                   | Schedules for Earth Moving   |
| 31 06 20.13                | Trench Dimension Schedule  |
| 31 06 20.16<br>31 06 40    | Backfill Material Schedule Schedules for Shoring and Underpinning  |
| 31 06 50                   | Schedules for Excavation Support and Protection  |
| 31 06 60                   | Schedules for Special Foundations and Load Bearing Elements  |
| 31 06 60.13                | Driven Pile Schedule   |
| 31 06 60.16<br>31 06 70    | Caisson Schedule Schedules for Tunneling and Mining  |
| 31 08 00                   | Commissioning of Earthwork   |
| 31 08 13                   | Pile Load Testing  |
| 31 08 13.13                | Dynamic Pile Load Testing  |
| 31 08 13.16                | Static Pile Load Testing   |
| 31 09 00                   | Geotechnical Instrumentation and Monitoring of   |
|                            | Earthwork  |
| 31 09 13                   | Geotechnical Instrumentation and Monitoring  |
| 31 09 13.13<br>31 09 16    | Groundwater Monitoring During Construction Foundation Performance Instrumentation                              |
| 31 09 16.26                | Bored and Augered Pile Load Tests  |
| 31 10 00                   | Site Clearing  |
| 31 11 00                   | Clearing and Grubbing  |
| 31 12 00                   | Selective Clearing   |

| 31 | 13 00                      | <b>Selective Tree and Shrub Removal and Trimming</b>                           |
|----|----------------------------|--|
|    | 31 13 13                   | Selective Tree and Shrub Removal   |
|    | 31 13 16                   | Selective Tree and Shrub Trimming  |
| 31 | 14 00                      | Earth Stripping and Stockpiling  |
|    | 31 14 13                   | Soil Stripping and Stockpiling   |
|    | 31 14 13.13                | Soil Stripping   |
|    | 31 14 13.16                | Soil Stockpiling   |
|    | 31 14 13.23                | Topsoil Stripping and Stockpiling  |
|    | 31 14 16                   | Sod Stripping and Stockpiling  |
|    | 31 14 16.13                | Sod Stripping  |
| 24 | 31 14 16.16                | Sod Stockpiling  |
| 31 | 20 00                      | Earth Moving   |
| 31 | 21 00                      | Off-Gassing Mitigation   |
|    | 31 21 13                   | Radon Mitigation   |
|    | 31 21 13.13                | Radon Venting  |
|    | 31 21 16                   | Methane Mitigation   |
|    | 31 21 16.13                | Methane Venting  |
| 31 | 22 00                      | Grading  |
|    | 31 22 13                   | Rough Grading  |
|    | 31 22 16                   | Fine Grading   |
|    | 31 22 16.13                | Roadway Subgrade Reshaping   |
|    | 31 22 19                   | Finish Grading   |
| 24 | 31 22 19.13                | Spreading and Grading Topsoil  |
| 31 | 23 00                      | Excavation and Fill  |
|    | 31 23 13                   | Subgrade Preparation   |
|    | 31 23 16<br>31 23 16.13    | Excavation Trenching   |
|    | 31 23 16.16                | Structural Excavation for Minor Structures                                     |
|    | 31 23 16.16                | Rock Removal   |
|    | 31 23 19                   | Dewatering   |
|    | 31 23 23                   | Fill   |
|    | 31 23 23.13                | Backfill   |
|    | 31 23 23.23                | Compaction   |
|    | 31 23 23.33                | Flowable Fill  |
|    | 31 23 23.43<br>31 23 33    | Geofoam Transhing and Bookfilling  |
| 24 |                            | Trenching and Backfilling  |
| 31 | 24 00                      | Embankments  |
|    | 31 24 13                   | Roadway Embankments  |
| 24 | 31 24 16                   | Railway Embankments  |
| 31 | <b>25 00</b>               | Erosion and Sedimentation Controls   |
|    | 31 25 14                   | Stabilization Measures for Erosion and Sedimentation Control                   |
|    | 31 25 14.13<br>31 25 14.16 | Hydraulically-Applied Erosion Control Rolled Erosion Control Mats and Blankets |
|    | 31 25 14.10                | Structural Measures for Erosion and Sedimentation Control                      |
|    | 31 25 24.13                | Rock Barriers  |
|    | 31 25 34                   | Retention Measures for Erosion and Sedimentation Controls                      |
|    | 31 25 34.13                | Rock Basins  |
| 21 | 30 00                      | Earthwork Methods  |
|    |                            |  |
| 31 | 31 00                      | Soil Treatment   |

|            | 31 31 13<br>31 31 13.16<br>31 31 13.19<br>31 31 13.23<br>31 31 13.26<br>31 31 16.13<br>31 31 16.16<br>31 31 16.19<br>31 31 19.13   | Rodent Control Rodent Control Bait Systems Rodent Control Traps Rodent Control Electronic Systems Rodent Control Repellants Termite Control Chemical Termite Control Termite Control Bait Systems Termite Control Barriers Vegetation Control Chemical Vegetation Control   |
|------------|--|---|
| 31         | 32 00  | Soil Stabilization  |
|            | 31 32 13<br>31 32 13.13<br>31 32 13.16<br>31 32 13.19<br>31 32 13.23<br>31 32 13.26<br>31 32 16.13<br>31 32 17<br>31 32 19.13<br>31 32 19.13<br>31 32 19.13<br>31 32 19.19<br>31 32 19.23<br>31 32 23.13<br>31 32 23.13<br>31 32 23.16<br>31 32 36.13<br>31 32 36.13<br>31 32 36.19<br>31 32 36.23 | Soil Mixing Stabilization Asphalt Soil Stabilization Cement Soil Stabilization Lime Soil Stabilization Fly-Ash Soil Stabilization Lime-Fly-Ash Soil Stabilization Chemical Treatment Soil Stabilization Polymer Emulsion Soil Stabilization Water Injection Soil Stabilization Geosynthetic Soil Stabilization Geogrid Soil Stabilization Geogrid Soil Stabilization Geogrid Layer Separation Geotextile Layer Separation Pressure Grouting Soil Stabilization Cementitious Pressure Grouting Soil Stabilization Chemical Pressure Grouting Soil Stabilization Shotcrete Soil Slope Stabilization Soil Nailing Driven Soil Nailing Grouted Soil Nailing Grouted Soil Nailing Jet-Grouted Soil Nailing |
| 24         | 31 32 36.26  | Launched Soil Nailing   |
| <b>3</b> 1 | <b>33 00</b> 31 33 13  | Rock Stabilization Rock Bolting and Grouting  |
|            | 31 33 23   | Rock Slope Netting  |
|            | 31 33 26   | Rock Slope Wire Mesh  |
|            | 31 33 33<br>31 33 43   | Shotcrete Rock Slope Stabilization Vegetated Rock Slope Stabilization   |
| 31         | 34 00  | Soil Reinforcement  |
| 0.         | 31 34 19   | Geosynthetic Soil Reinforcement   |
|            | 31 34 19.13  | Geogrid Soil Reinforcement  |
|            | 31 34 19.16<br>31 34 23  | Geotextile Soil Reinforcement Fiber Soil Reinforcement  |
|            | 31 34 23.13  | Geosynthetic Fiber Soil Reinforcement   |
| 31         | 35 00  | Slope Protection  |
|            | 31 35 19   | Geosynthetic Slope Protection   |
|            | 31 35 19.13<br>31 35 19.16   | Geogrid Slope Protection Geotextile Slope Protection  |

|            | 31 35 19.19                | Slope Protection with Mulch Control Netting                       |
|------------|----------------------------|---|
|            | 31 35 23                   | Slope Protection with Slope Paving                                |
|            | 31 35 23.13<br>31 35 23.16 | Cast-In-Place Concrete Slope Paving Precast Concrete Slope Paving |
|            | 31 35 23.19                | Concrete Unit Masonry Slope Paving                                |
|            | 31 35 26                   | Containment Barriers  |
|            | 31 35 26.13                | Clay Containment Barriers   |
|            | 31 35 26.16                | Geomembrane Containment Barriers                                  |
|            | 31 35 26.23                | Bentonite Slurry Trench   |
| 31         | 36 00                      | Gabions   |
|            | 31 36 13                   | Gabion Boxes  |
|            | 31 36 19                   | Gabion Mattresses   |
|            | 31 36 19.13                | Vegetated Gabion Mattresses                                       |
| 31         | 37 00                      | Riprap  |
|            | 31 37 13                   | Machined Riprap   |
|            | 31 37 16                   | Non-Machined Riprap   |
|            | 31 37 16.13                | Rubble-Stone Riprap   |
|            | 31 37 16.16                | Concrete Unit Masonry Riprap                                      |
|            | 31 37 16.19                | Sacked Sand-Cement Riprap   |
| 31         | 40 00                      | Shoring and Underpinning  |
| 31         | 41 00                      | Shoring   |
|            | 31 41 13                   | Timber Shoring  |
|            | 31 41 16                   | Sheet Piling  |
|            | 31 41 16.13                | Steel Sheet Piling  |
|            | 31 41 16.16                | Plastic Sheet Piling  |
|            | 31 41 19                   | Metal Hydraulic Shoring   |
|            | 31 41 19.13                | Aluminum Hydraulic Shoring  |
|            | 31 41 23                   | Pneumatic Shoring   |
| 24         | 31 41 33                   | Trench Shielding  |
| 31         | 43 00                      | Concrete Raising  |
|            | 31 43 13                   | Pressure Grouting   |
|            | 31 43 13.13<br>31 43 13.16 | Concrete Pressure Grouting Polyurethane Pressure Grouting         |
|            | 31 43 16                   | Compaction Grouting   |
|            | 31 43 19                   | Mechanical Jacking  |
| 31         | 45 00                      | Vibroflotation and Densification                                  |
| ٠.         | 31 45 13                   | Vibroflotation  |
|            | 31 45 16                   | Densification   |
| 31         | 46 00                      | Needle Beams  |
| •          | 31 46 13                   | Cantilever Needle Beams   |
| 31         | 48 00                      | Underpinning  |
| •          | 31 48 13                   | Underpinning Piers  |
|            | 31 48 19                   | Bracket Piers   |
|            | 31 48 23                   | Jacked Piers  |
|            | 31 48 33                   | Micropile Underpinning  |
| 31         | 50 00                      | <b>Excavation Support and Protection</b>                          |
|            |                            |   |
| <b>3</b> 1 | 51 00                      | Anchor Tiebacks   |
|            | 31 51 13                   | Excavation Soil Anchors   |
|            | 31 51 16                   | Excavation Rock Anchors   |

| 31 | <b>52 00</b>  | Cofferdams  |
|----|---|---|
|    | 31 52 13  | Sheet Piling Cofferdams   |
|    | 31 52 16  | Timber Cofferdams   |
|    | 31 52 19  | Precast Concrete Cofferdams   |
| 31 | 53 00   | Cribbing and Walers   |
|    | 31 53 13  | Timber Cribwork   |
| 31 | 54 00   | Ground Freezing   |
| 31 | 56 00   | Slurry Walls  |
| •  | 31 56 13  | Bentonite Slurry Walls  |
|    | 31 56 13.13   | Soil-Bentonite Slurry Walls   |
|    | 31 56 13.16   | Cement-Bentonite Slurry Walls   |
|    | 31 56 13.19   | Slag-Cement-Bentonite Slurry Walls  |
|    | 31 56 13.23   | Soil-Cement-Bentonite Slurry Walls  |
|    | 31 56 13.26<br>31 56 13.29  | Pozzolan-Bentonite Slurry Walls Organically-Modified Bentonite Slurry Walls   |
|    | 31 56 16  | Attipulgite Slurry Walls  |
|    | 31 56 16.13   | Soil-Attipulgite Slurry Walls   |
|    | 31 56 19  | Slurry-Geomembrane Composite Slurry Walls   |
|    | 31 56 23  | Lean Concrete Slurry Walls  |
|    | 31 56 26  | Bio-Polymer Trench Drain  |
| 31 | 60 00   | <b>Special Foundations and Load-Bearing</b>   |
| -  |   | _ <u>:</u>  |
|    |   | Elements  |
| 31 | 62 00   | Driven Piles  |
|    | 31 62 13  | Concrete Piles  |
|    | 31 62 13.13   | Cast-in-Place Concrete Piles  |
|    | 31 62 13.16   | Concrete Displacement Piles Precast Concrete Piles  |
|    | 31 62 13.19<br>31 62 13.23  | Prestressed Concrete Piles  |
|    | 31 62 13.26   | Pressure-Injected Footings  |
|    | 31 62 16  | Steel Piles   |
|    | 31 62 16.13   |   |
|    |   | Sheet Steel Piles   |
|    | 31 62 16.16   | Steel H Piles   |
|    | 31 62 16.16<br>31 62 16.19  | Steel H Piles<br>Unfilled Tubular Steel Piles   |
|    | 31 62 16.16<br>31 62 16.19<br>31 62 19  | Steel H Piles<br>Unfilled Tubular Steel Piles<br>Timber Piles   |
|    | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23  | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles   |
|    | 31 62 16.16<br>31 62 16.19<br>31 62 19  | Steel H Piles<br>Unfilled Tubular Steel Piles<br>Timber Piles   |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16  | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles   |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13   | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles   |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b>  | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles   |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13  | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles  |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13<br>31 63 16<br>31 63 19<br>31 63 19.13   | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles Auger Cast Grout Piles Bored and Socketed Piles Rock Sockets for Piles   |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13<br>31 63 16<br>31 63 19<br>31 63 19.13<br>31 63 23   | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles Auger Cast Grout Piles Bored and Socketed Piles Rock Sockets for Piles Bored Concrete Piles  |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13<br>31 63 16<br>31 63 19<br>31 63 19.13<br>31 63 23<br>31 63 23.13                                  | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles Auger Cast Grout Piles Bored and Socketed Piles Rock Sockets for Piles Bored Concrete Piles Bored and Belled Concrete Piles  |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13<br>31 63 16<br>31 63 19<br>31 63 19.13<br>31 63 23<br>31 63 23.13<br>31 63 23.13                   | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles Auger Cast Grout Piles Bored and Socketed Piles Rock Sockets for Piles Bored Concrete Piles Bored and Belled Concrete Piles Bored Friction Concrete Piles  |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13<br>31 63 16<br>31 63 19<br>31 63 19.13<br>31 63 23.13<br>31 63 23.13<br>31 63 23.16<br>31 63 26    | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles Auger Cast Grout Piles Bored and Socketed Piles Rock Sockets for Piles Bored Concrete Piles Bored Test Piles Bored Files Bored Concrete Piles Bored Friction Concrete Piles Drilled Caissons       |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13<br>31 63 16<br>31 63 19<br>31 63 19.13<br>31 63 23.13<br>31 63 23.13<br>31 63 23.16<br>31 63 26.13 | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles Auger Cast Grout Piles Bored and Socketed Piles Rock Sockets for Piles Bored Concrete Piles Bored and Belled Concrete Piles Bored Friction Concrete Piles  |
| 31 | 31 62 16.16<br>31 62 16.19<br>31 62 19<br>31 62 23<br>31 62 23.13<br>31 62 23.16<br><b>63 00</b><br>31 63 13<br>31 63 16<br>31 63 19<br>31 63 19.13<br>31 63 23.13<br>31 63 23.13<br>31 63 23.16<br>31 63 26    | Steel H Piles Unfilled Tubular Steel Piles Timber Piles Composite Piles Concrete-Filled Steel Piles Wood and Cast-In-Place Concrete Piles Bored Piles Bored and Augered Test Piles Auger Cast Grout Piles Bored and Socketed Piles Rock Sockets for Piles Bored Concrete Piles Bored And Belled Concrete Piles Bored Friction Concrete Piles Drilled Caissons Fixed End Caisson Piles |

| 31 63 29.16  | Cased Drilled Concrete Piers   |
|--|--|
| 31 63 33   | Drilled Micropiles   |
| 31 64 00   | Caissons   |
| 31 64 13   | Box Caissons   |
| 31 64 16   | Excavated Caissons   |
| 31 64 19   | Floating Caissons  |
| 31 64 23   | Open Caissons  |
| 31 64 26<br>31 64 29   | Pneumatic Caissons Sheeted Caissons  |
| 31 66 00   |  |
| 31 66 13   | Special Foundations Special Piles  |
| 31 66 13.13  | Rammed Aggregate Piles   |
| 31 66 15   | Helical Foundation Piles   |
| 31 66 16   | Special Foundation Walls   |
| 31 66 16.13  | Anchored Foundation Walls  |
| 31 66 16.23  | Concrete Cribbing Foundation Walls   |
| 31 66 16.26<br>31 66 16.33   | Metal Cribbing Foundation Walls  Manufactured Modular Foundation Walls   |
| 31 66 16.43  | Mechanically Stabilized Earth Foundation Walls   |
| 31 66 16.46  | Slurry Diaphragm Foundation Walls  |
| 31 66 16.53  | Soldier-Beam Foundation Walls  |
| 31 66 16.56<br>31 66 19  | Permanently-Anchored Soldier-Beam Foundation Walls Refrigerated Foundations  |
| 31 68 00   | Foundation Anchors   |
| 31 68 13   | Rock Foundation Anchors  |
| 31 68 16   | Helical Foundation Anchors   |
|  |  |
| 31 70 00   | Tunneling and Mining   |
| 31 70 00<br>31 71 00   | Tunneling and Mining   |
| 31 71 00   | Tunnel Excavation  |
| <b>31 71 00</b> 31 71 13   | Tunnel Excavation Shield Driving Tunnel Excavation   |
| 31 71 00   | Tunnel Excavation  |
| <b>31 71 00</b> 31 71 13 31 71 16  | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting  |
| 31 71 00<br>31 71 13<br>31 71 16<br>31 71 19   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine   |
| 31 71 00<br>31 71 13<br>31 71 16<br>31 71 19<br>31 71 23<br>31 72 00<br>31 72 13   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support  |
| 31 71 00<br>31 71 13<br>31 71 16<br>31 71 19<br>31 71 23<br>31 72 00<br>31 72 13<br>31 72 16   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging   |
| 31 71 00<br>31 71 13<br>31 71 16<br>31 71 19<br>31 71 23<br>31 72 00<br>31 72 13<br>31 72 16<br>31 73 00   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting   |
| 31 71 00<br>31 71 13<br>31 71 16<br>31 71 19<br>31 71 23<br>31 72 00<br>31 72 13<br>31 72 16<br>31 73 00<br>31 73 13   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting  |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting   |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16 31 74 00  | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction   |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16 31 74 00 31 74 13   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining  |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16 31 74 00 31 74 13 31 74 16  | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Precast Concrete Tunnel Lining   |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16 31 74 00 31 74 13 31 74 16 31 74 19   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Precast Concrete Tunnel Lining Shotcrete Tunnel Lining   |
| 31 71 00  31 71 13  31 71 16  31 71 19  31 71 23  31 72 00  31 72 13  31 72 16  31 73 00  31 73 13  31 73 16  31 74 00  31 74 13  31 74 16  31 74 19  31 75 00   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Precast Concrete Tunnel Lining Shotcrete Tunnel Lining Shaft Construction  |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16 31 74 00 31 74 13 31 74 16 31 74 19   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Precast Concrete Tunnel Lining Shaft Construction Cast-in-Place Concrete Shaft Lining  |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16 31 74 00 31 74 13 31 74 16 31 74 19 31 75 00 31 75 13 31 75 16                                      | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Shotcrete Tunnel Lining Shaft Construction Cast-in-Place Concrete Shaft Lining Precast Concrete Shaft Lining   |
| 31 71 00 31 71 13 31 71 16 31 71 19 31 71 23 31 72 00 31 72 13 31 72 16 31 73 00 31 73 13 31 73 16 31 74 00 31 74 13 31 74 16 31 74 19 31 75 00 31 75 13   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Precast Concrete Tunnel Lining Shotcrete Tunnel Lining Shaft Construction Cast-in-Place Concrete Shaft Lining Precast Concrete Shaft Lining Precast Concrete Shaft Lining  |
| 31 71 00  31 71 13  31 71 16  31 71 19  31 71 23  31 72 00  31 72 13  31 72 16  31 73 00  31 73 13  31 73 16  31 74 00  31 74 13  31 74 16  31 74 19  31 75 00  31 75 13  31 75 16  31 77 00           | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Shotcrete Tunnel Lining Shaft Construction Cast-in-Place Concrete Shaft Lining Precast Concrete Shaft Lining   |
| 31 71 00  31 71 13  31 71 16  31 71 19  31 71 23  31 72 00  31 72 13  31 72 16  31 73 00  31 73 13  31 73 16  31 74 00  31 74 13  31 74 19  31 75 00  31 75 13   | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Precast Concrete Tunnel Lining Shaft Construction Cast-in-Place Concrete Shaft Lining  |
| 31 71 00  31 71 13  31 71 16  31 71 19  31 71 23  31 72 00  31 72 13  31 72 16  31 73 00  31 73 13  31 73 16  31 74 00  31 74 13  31 74 16  31 74 19  31 75 00  31 75 13  31 75 16  31 77 00  31 77 13 | Tunnel Excavation Shield Driving Tunnel Excavation Tunnel Excavation by Drilling and Blasting Tunnel Excavation by Tunnel Boring Machine Tunneling by Cut and Cover Tunnel Support Systems Rock Reinforcement and Initial Support Steel Ribs and Lagging Tunnel Grouting Cement Tunnel Grouting Chemical Tunnel Grouting Tunnel Construction Cast-in-Place Concrete Tunnel Lining Precast Concrete Tunnel Lining Shotcrete Tunnel Lining Shaft Construction Cast-in-Place Concrete Shaft Lining Precast Concrete Shaft Lining Precast Concrete Shaft Lining Submersible Tube Tunnels Trench Excavation for Submerged Tunnels |

## **Exterior Improvements** 32 00 00 **Operation and Maintenance of Exterior Improvements** 32 01 00 Paving Cleaning 32 01 11 Rubber and Paint Removal from Paving 32 01 11.51 32 01 11.52 Rubber Removal from Paving 32 01 11.53 Paint Removal from Paving Flexible Paving Surface Treatment 32 01 13 Slurry Seal (Latex Modified) 32 01 13.61 **Asphalt Surface Treatment** 32 01 13.62 32 01 16 Flexible Paving Rehabilitation Cold Milling Asphalt Paving 32 01 16.71 Asphalt Paving Reuse 32 01 16.72 32 01 16.73 In Place Cold Reused Asphalt Paving 32 01 16.74 In Place Hot Reused Asphalt Paving 32 01 16.75 Heater Scarifying of Asphalt Paving 32 01 17 Flexible Paving Repair Sealing Cracks in Asphalt Paving 32 01 17.61 Stress-Absorbing Membrane Interlayer 32 01 17.62 Rigid Paving Surface Treatment 32 01 19 Sealing of Joints in Rigid Paving 32 01 19.61 32 01 19.62 Patching of Rigid Paving 32 01 23 Base Course Reconditioning 32 01 26 Rigid Paving Rehabilitation **Grooving of Concrete Paving** 32 01 26.71 32 01 26.72 Grinding of Concrete Paving 32 01 26.73 Milling of Concrete Paving 32 01 26.74 **Concrete Overlays** 32 01 26.75 Concrete Paving Reuse 32 01 29 Rigid Paving Repair Partial Depth Patching of Rigid Paving 32 01 29.61 Concrete Paving Raising 32 01 29.62 Subsealing and Stabilization 32 01 29.63 32 01 30 Operation and Maintenance of Site Improvements 32 01 30.13 **Snow Removal** Operation and Maintenance of Irrigation 32 01 80 Operation and Maintenance of Planting 32 01 90 32 01 90.13 Fertilizing 32 01 90.16 **Amending Soils** 32 01 90.19 Mowing 32 01 90.23 Pruning Watering 32 01 90.26 **Topsoil Preservation** 32 01 90.29 Tree and Shrub Preservation 32 01 90.33 32 05 00 Common Work Results for Exterior Improvements Selective Demolition for Exterior Improvements 32 05 05 32 05 13 Soils for Exterior Improvements 32 05 16 Aggregates for Exterior Improvements Geosynthetics for Exterior Improvements 32 05 19

Cement and Concrete for Exterior Improvements

Geotextiles for Exterior Improvements

Geogrids for Exterior Improvements

Geomembranes for Exterior Improvements

32 05 19.13

32 05 19.16 32 05 19.19

32 05 23

| Common Work Results for Planting  Schedules for Exterior Improvements  Schedules for Bases, Ballasts, and Paving Pedestrian Walkway Schedule Schedules for Site Improvements Retaining Wall Schedule Schedules for Irrigation Irrigation Piping Schedule Schedules for Planting Planting Schedule  Commissioning of Exterior Improvements  |
|--|
| Bases, Ballasts, and Paving  |
| Base Courses Subgrade Modifications Lime-Treated Subgrades Bituminous-Treated Subgrades Subbase Courses Sand-Clay Subbase Courses Aggregate Subbase Courses Aggregate Base Courses Sand-Clay Base Courses Base Course Drainage Layers Asphaltic Base Courses Plant Mix Asphaltic Base Courses Road Mix Asphaltic Base Courses Bituminous-Stabilized Base Courses Lime Treated Base Courses Lime-Fly Ash-Treated Base Courses Cement-Treated Base Courses Portland Cement-Stabilized Base Courses Concrete Base Courses Soil-Cement Concrete Base Courses Lean Concrete Base Courses Hydraulic Cement Concrete Base Courses Shell Base Course |
| Flexible Paving  |
| Preparatory Coats Tack Coats Asphaltic Tack Coats Prime Coats Asphaltic Prime Coats Asphalt Paving Plant-Mix Asphalt Paving Road-Mix Asphalt Paving Cold-Mix Asphalt Paving Reinforced Asphalt Paving Fiber-Modified Asphalt Paving Polymer-Modified Asphalt Paving Granulated Rubber-Modified Asphalt Paving Athletic Asphalt Paving Asphalt Paving Wearing Courses   |
|  |

|    | 32 12 19.13   | Road-Mix Asphalt Paving Wearing Courses  |
|----|---|--|
|    | 32 12 19.16   | Resin-Modified Asphalt Paving Wearing Courses  |
|    |   | , , ,  |
|    | 32 12 19.19   | Porous Friction Asphalt Paving Wearing Courses   |
|    | 32 12 33  | Flexible Paving Surface Treatments   |
|    | 32 12 36  | Seal Coats   |
|    | 32 12 36.13   | Asphaltic Seal and Fog Coats   |
|    | 32 12 36.16   | Coal Tar Seal Coats  |
|    | 32 12 36.19   | Coal Tar Seal Coats with Unvulcanized Rubber   |
|    | 32 12 36.23   | Fuel-Resistant Sealers   |
|    | 32 12 43  | Porous Flexible Paving   |
|    | 32 12 73  | •  |
|    |   | Asphalt Paving Joint Sealants  |
| 32 | 13 00   | Rigid Paving   |
|    | 32 13 13  | Concrete Paving  |
|    | 32 13 13.13   | Exposed Aggregate Concrete Paving  |
|    | 32 13 13.16   | Power-Compacted Concrete Paving  |
|    | 32 13 13.17   | Roller-Compacted Concrete Paving   |
|    |   | ·  |
|    | 32 13 13.19   | Prestressed Concrete Paving  |
|    | 32 13 13.23   | Concrete Paving Surface Treatment  |
|    | 32 13 13.26   | Stained Concrete Paving  |
|    | 32 13 13.33   | Plain Concrete Paving  |
|    | 32 13 16  | Decorative Concrete Paving   |
|    | 32 13 16.13   | Patterned Concrete Paving  |
|    | 32 13 16.19   | Imprinted Concrete Paving  |
|    | 32 13 16.23   | Stamped Concrete Paving  |
|    | 32 13 43  | Pervious Concrete Paving   |
|    | 32 13 73  | Concrete Paving Joint Sealants   |
|    | 32 13 73.13   | Fuel-Resistant Concrete Paving Joint Sealants  |
|    | 32 13 73.13   |  |
|    | 22 12 72 16   | Field Molded Concrete Daving Joint Scalants  |
|    | 32 13 73.16   | Field-Molded Concrete Paving Joint Sealants  |
|    | 32 13 73.19   | Compression Concrete Paving Joint Sealants   |
| 32 |   |  |
| 32 | 32 13 73.19   | Compression Concrete Paving Joint Sealants Unit Paving   |
| 32 | 32 13 73.19<br><b>14 00</b><br>32 14 13   | Compression Concrete Paving Joint Sealants Unit Paving Precast Concrete Unit Paving  |
| 32 | 32 13 73.19<br><b>14 00</b><br>32 14 13<br>32 14 13.13  | Compression Concrete Paving Joint Sealants Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving  |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13 32 14 13.13 32 14 13.16   | Compression Concrete Paving Joint Sealants Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs   |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13.13 32 14 13.16 32 14 13.19  | Compression Concrete Paving Joint Sealants Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving   |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13 32 14 13.13 32 14 13.16 32 14 13.19 32 14 16  | Compression Concrete Paving Joint Sealants Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving   |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13 32 14 13.13 32 14 13.16 32 14 13.19 32 14 16 32 14 23   | Compression Concrete Paving Joint Sealants Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving   |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13 32 14 13.13 32 14 13.16 32 14 13.19 32 14 16 32 14 23 32 14 26  | Compression Concrete Paving Joint Sealants  Unit Paving  Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving   |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13 32 14 13.13 32 14 13.16 32 14 13.19 32 14 16 32 14 23   | Compression Concrete Paving Joint Sealants Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving   |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13 32 14 13.13 32 14 13.16 32 14 13.19 32 14 16 32 14 23 32 14 26  | Compression Concrete Paving Joint Sealants  Unit Paving  Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving  |
| 32 | 32 13 73.19 <b>14 00</b> 32 14 13.13 32 14 13.16 32 14 13.19 32 14 16 32 14 23 32 14 26 32 14 29 32 14 40   | Compression Concrete Paving Joint Sealants  Unit Paving  Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving   |
|    | 32 13 73.19 <b>14 00</b> 32 14 13  32 14 13.16  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43   | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving   |
|    | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.16  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing   |
|    | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13   | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing  |
|    | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.16  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing   |
|    | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13   | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving  Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing   |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 40  32 15 50   | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement  |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 40  32 15 50  16 00  | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways   |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.16  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 40  32 15 50  16 00  32 16 13  | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways Curbs and Gutters   |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.16  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 40  32 15 50  16 00  32 16 13  32 16 13.13  | Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways Cast-In-Place Concrete Curbs and Gutters  |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.16  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 40  32 15 50  16 00  32 16 13  32 16 13.13  32 16 13.16  | Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways Cast-In-Place Concrete Curbs and Gutters Steel Faced Curbs  |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 13  32 15 40  32 15 50  16 00  32 16 13  32 16 13.13  32 16 13.16  32 16 13.23                 | Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways Curbs and Gutters Cast-In-Place Concrete Curbs and Gutters Steel Faced Curbs Precast Concrete Curbs and Gutters   |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 13  32 15 40  32 15 50  16 00  32 16 13.13  32 16 13.13  32 16 13.13  32 16 13.23  32 16 13.33 | Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways Curbs and Gutters Cast-In-Place Concrete Curbs and Gutters Steel Faced Curbs Precast Concrete Curbs and Gutters Asphalt Curbs   |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 13  32 15 50  16 00  32 16 13.13  32 16 13.13  32 16 13.13  32 16 13.33  32 16 13.43           | Compression Concrete Paving Joint Sealants  Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways Curbs and Gutters Cast-In-Place Concrete Curbs and Gutters Steel Faced Curbs Precast Concrete Curbs and Gutters Asphalt Curbs Stone Curbs |
| 32 | 32 13 73.19  14 00  32 14 13  32 14 13.13  32 14 13.19  32 14 16  32 14 23  32 14 26  32 14 29  32 14 40  32 14 43  15 00  32 15 13  32 15 13  32 15 40  32 15 50  16 00  32 16 13.13  32 16 13.13  32 16 13.13  32 16 13.23  32 16 13.33 | Unit Paving Precast Concrete Unit Paving Interlocking Precast Concrete Unit Paving Precast Concrete Unit Paving Slabs Porous Precast Concrete Unit Paving Brick Unit Paving Asphalt Unit Paving Wood Paving Recycled-Rubber Paving Stone Paving Porous Unit Paving Aggregate Surfacing Cinder Surfacing Crushed Stone Surfacing Aggregate-Turf Pavement Curbs, Gutters, Sidewalks, and Driveways Curbs and Gutters Cast-In-Place Concrete Curbs and Gutters Steel Faced Curbs Precast Concrete Curbs and Gutters Asphalt Curbs   |

| 32 16 33                   | Driveways   |
|----------------------------|---|
| 32 17 00                   | Paving Specialties  |
| 32 17 13                   | Parking Bumpers   |
| 32 17 13.13                | Metal Parking Bumpers   |
| 32 17 13.16<br>32 17 13.19 | Plastic Parking Bumpers Precast Concrete Parking Bumpers      |
| 32 17 13.13                | Rubber Parking Bumpers  |
| 32 17 13.26                | Wood Parking Bumpers  |
| 32 17 16                   | Speed Bumps   |
| 32 17 23                   | Pavement Markings   |
| 32 17 23.13<br>32 17 23.23 | Painted Pavement Markings Raised Pavement Markings            |
| 32 17 23.23                | Plastic Pavement Markings                                     |
| 32 17 26                   | Tactile Warning Surfacing                                     |
| 32 17 29                   | Pavement Embedded Warning Lights                              |
| 32 17 43                   | Pavement Snow Melting Systems                                 |
| 32 18 00                   | Athletic and Recreational Surfacing                           |
| 32 18 13                   | Synthetic Grass Surfacing                                     |
| 32 18 16                   | Synthetic Resilient Surfacing                                 |
| 32 18 16.13                | Playground Protective Surfacing                               |
| 32 18 23<br>32 18 23.13    | Athletic Surfacing Baseball Field Surfacing                   |
| 32 18 23.16                | Natural Baseball Field Surfacing                              |
| 32 18 23.19                | Synthetic Baseball Field Surfacing                            |
| 32 18 23.23                | Field Sport Surfacing   |
| 32 18 23.26<br>32 18 23.29 | Natural Field Sport Surfacing Synthetic Field Sport Surfacing |
| 32 18 23.33                | Running Track Surfacing                                       |
| 32 18 23.36                | Natural Running Track Surfacing                               |
| 32 18 23.39                | Synthetic Running Track Surfacing                             |
| 32 18 23.43<br>32 18 23.53 | Recreational Court Surfacing Tennis Court Surfacing           |
| 32 18 23.56                | Natural Tennis Court Surfacing                                |
| 32 18 23.59                | Synthetic Tennis Court Surfacing                              |
| 32 30 00                   | Site Improvements   |
| 32 31 00                   | Fences and Gates  |
| 32 31 11                   | Gate Operators  |
| 32 31 13                   | Chain Link Fences and Gates                                   |
| 32 31 13.23                | Recreational Court Fences and Gates                           |
| 32 31 13.26<br>32 31 13.29 | Tennis Court Fences and Gates Tennis Court Wind Breaker       |
| 32 31 13.33                | Chain Link Backstops  |
| 32 31 13.53                | High-Security Chain Link Fences and Gates                     |
| 32 31 16                   | Welded Wire Fences and Gates                                  |
| 32 31 17<br>32 31 19       | Expanded Metal Fences and Gates                               |
| 32 31 19                   | Decorative Metal Fences and Gates Plastic Fences and Gates    |
| 32 31 26                   | Wire Fences and Gates   |
| 32 31 26.11                | Wire Fences with Wood Posts                                   |
| 32 31 26.13                | Wire Fences with Steel Posts                                  |
| 32 31 29                   | Wood Fences and Gates   |
| 32 31 32                   | Composite Fences and Gates                                    |

| 32 31 53                | Cattle Guards   |
|-------------------------|---|
| 32 31 56                | Wild Life Deterrent Fence   |
| 32 32 00                | Retaining Walls   |
| 32 32 13                | Cast-in-Place Concrete Retaining Walls                                    |
| 32 32 16                | Precast Concrete Retaining Walls  |
| 32 32 19                | Unit Masonry Retaining Walls  |
| 32 32 23<br>32 32 23.13 | Segmental Retaining Walls Segmental Concrete Unit Masonry Retaining Walls |
| 32 32 23.16             | Manufactured Modular Walls  |
| 32 32 26                | Metal Crib Retaining Walls  |
| 32 32 29                | Timber Retaining Walls  |
| 32 32 34                | Reinforced Soil Retaining Walls   |
| 32 32 36                | Gabion Retaining Walls  |
| 32 32 43                | Soldier-Beam Retaining Walls  |
| 32 32 53                | Stone Retaining Walls   |
| 32 33 00                | Site Furnishings  |
| 32 33 13                | Site Bicycle Racks  |
| 32 33 14                | Site Bicycle Lockers  |
| 32 33 23                | Site Trash and Litter Receptacles Site Manufactured Planters              |
| 32 33 33<br>32 33 43    | Site Seating and Tables   |
| 32 33 43.13             | Site Seating and Tables   |
| 32 33 43.53             | Site Tables   |
| 32 34 00                | Fabricated Bridges  |
| 32 34 13                | Fabricated Pedestrian Bridges   |
| 32 34 23                | Fabricated Roadway Bridges  |
| 32 34 33                | Fabricated Railway Bridges  |
| 32 35 00                | Screening Devices   |
| 32 35 13                | Screens and Louvers   |
| 32 35 16                | Sound Barriers  |
| 32 35 23                | Fire Barriers   |
| 32 35 26                | Blast Barriers  |
| 32 39 00                | Manufactured Site Specialties   |
| 32 39 13<br>32 39 33    | Manufactured Metal Bollards Artificial Rock Fabrications                  |
|                         |   |
| 32 70 00                | Wetlands  |
| 32 71 00                | Constructed Wetlands  |
| 32 72 00                | Wetlands Restoration  |
| 32 80 00                | Irrigation  |
| 32 81 00                | Irrigation Components   |
| 32 81 13                | Irrigation Intake Screens   |
| 32 82 00                | Irrigation Pumps  |
| 32 84 00                | Planting Irrigation   |
| 32 84 13                | Drip Irrigation   |
| 32 84 23                | Underground Sprinklers  |
| 32 86 00                | Agricultural Irrigation   |

| 32 90 00                | Planting                                    |
|-------------------------|---|
| 32 91 00                | Planting Preparation                        |
| 32 91 13                | Soil Preparation                            |
| 32 91 13.13             | Hydro-Punching                              |
| 32 91 13.16             | Mulching                                    |
| 32 91 13.19             | Planting Soil Mixing                        |
| 32 91 13.23             | Structural Soil Mixing                      |
| 32 91 13.26             | Planting Beds                               |
| 32 91 16                | Planting Soil Stabilization                 |
| 32 91 16.13             | Blanket Planting Soil Stabilization         |
| 32 91 16.16             | Mat Planting Soil Stabilization             |
| 32 91 16.19             | Netting Planting Soil Stabilization         |
| 32 91 19<br>32 91 19.13 | Landscape Grading                           |
|                         | Topsoil Placement and Grading               |
| 32 92 00                | Turf and Grasses                            |
| 32 92 13                | Hydro-Mulching                              |
| 32 92 16                | Plugging                                    |
| 32 92 19                | Seeding                                     |
| 32 92 19.13             | Mechanical Seeding                          |
| 32 92 19.16             | Hydraulic Seeding                           |
| 32 92 23                | Sodding                                     |
| 32 92 26                | Sprigging                                   |
| 32 92 26.13             | Stolonizing                                 |
| 32 93 00                | Plants                                      |
| 32 93 13                | Ground Covers                               |
| 32 93 23                | Plants and Bulbs                            |
| 32 93 33                | Shrubs                                      |
| 32 93 43                | Trees                                       |
| 32 93 93                | Exterior Artificial Plants                  |
| 32 94 00                | Planting Accessories                        |
| 32 94 13                | Landscape Edging                            |
| 32 94 16                | Landscape Timbers                           |
| 32 94 19                | Landscape Surfacing                         |
| 32 94 33                | Planters                                    |
| 32 94 43                | Tree Grates                                 |
| 32 94 46                | Tree Grids                                  |
| 32 95 00                | <b>Exterior Planting Support Structures</b> |
| 32 96 00                | Transplanting                               |
| 32 96 13                | Ground Cover Transplanting                  |
| 32 96 23                | Plant and Bulb Transplanting                |
| 32 96 33                | Shrub Transplanting                         |
| 32 96 43                | Tree Transplanting                          |
| JZ JU 4J                | Tree transplanting                          |

## 33 00 00 **Utilities** 33 01 00 **Operation and Maintenance of Utilities** Operation and Maintenance of Water Utilities 33 01 10 33 01 10.71 Water Utility Storage Tank Rehabilitation Operation and Maintenance of Wells 33 01 20 33 01 30 Operation and Maintenance of Sewer Utilities Sewer and Manhole Testing 33 01 30.13 TV Inspection of Sewer Pipelines 33 01 30.16 Cleaning of Sewers 33 01 30.41 Cleaning of Manholes 33 01 30.42 Maintenance of Sewer Utilities 33 01 30.51 Pond and Reservoir Maintenance 33 01 30.52 33 01 30.61 Sewer and Pipe Joint Sealing 33 01 30.62 Manhole Grout Sealing Rehabilitation of Sewer Utilities 33 01 30.71 33 01 30.72 Relining Sewers Operation and Maintenance of Fuel Distribution Lines 33 01 50 Cleaning Fuel-Storage Tanks 33 01 50.51 Lining of Steel Fuel-Storage Tanks 33 01 50.71 Operation and Maintenance of Hydronic and Steam Energy Utilities 33 01 60 33 01 70 Operation and Maintenance of Electrical Utilities Operation and Maintenance of Communications Utilities 33 01 80 **Common Work Results for Utilities** 33 05 00 33 05 05 Selective Demolition for Utilities 33 05 13 Manholes and Structures 33 05 13.13 Manhole Grade Adjustment 33 05 16 **Utility Structures** 33 05 16.13 **Precast Concrete Utility Structures** Rebuilding Utility Structures 33 05 16.53 Pressure Piping Tied Joint Restraint System 33 05 19 Trenchless Utility Installation 33 05 23 Utility Horizontal Directional Drilling 33 05 23.13 Utility Pipe Jacking 33 05 23.16 Microtunnelina 33 05 23.19 **Utility Pipe Ramming** 33 05 23.23 **Utility Impact Moling** 33 05 23.26 Cable Trenching and Plowing 33 05 23.29 Utility Identification 33 05 26 33 05 26.13 **Utility Identification Signs** 33 05 26.16 **Utility Identification Markers** 33 05 26.19 **Utility Identification Flags** 33 05 26.23 **Utility Identification Trace Wires** 33 06 00 Schedules for Utilities 33 06 10 Schedules for Water Utilities 33 06 20 Schedules for Wells Schedules for Sanitary Sewerage Utilities 33 06 30 Schedules for Storm Drainage Utilities 33 06 40 33 06 40.13 Storm Drainage Schedule 33 06 50 Schedules for Fuel Distribution Utilities 33 06 60 Schedules for Hydronic and Steam Energy Utilities Schedules for Electrical Utilities 33 06 70 33 06 80 Schedules for Communications Utilities

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| 33 09 80                | Instrumentation and Control for Communications Utilities  |
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| 33 11 13.16             | Cast Iron Public Water Utility Distribution Piping  |
| 33 11 13.23             | Plastic Public Water Utility Distribution Piping  |
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| 33 11 13.33<br>33 11 16 | Site Water Utility Distribution Piping  |
| 33 11 19                | Fire Suppression Utility Water Distribution Piping  |
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| 33 12 00                | Water Utility Distribution Equipment  |
| 33 12 13                | Water Service Connections   |
| 33 12 13.13             | Water Supply Backflow Preventer Assemblies  |
| 33 12 16<br>33 12 19    | Water Utility Distribution Valves Water Utility Distribution Fire Hydrants                                  |
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| 33 13 00                | Disinfecting of Water Utility Distribution  |
| 33 16 00                | Water Utility Storage Tanks   |
| 33 16 13                | Aboveground Water Utility Storage Tanks   |
| 33 16 13.13             | Steel Aboveground Water Utility Storage Tanks   |
| 33 16 13.16             | Prestressed Concrete Aboveground Water Utility Storage Tanks  |
| 33 16 13.19             | Plastic Aboveground Water Utility Storage Tanks   |
| 33 16 16                | Underground Water Utility Storage Tanks   |
| 33 16 19                | Elevated Water Utility Storage Tanks  |
| 33 20 00                | Wells   |
| 33 21 00                | Water Supply Wells  |
| 33 21 13                | Public Water Supply Wells   |
| 33 21 16                | Irrigation Water Wells  |
| 33 22 00                | Test Wells  |

| 33 23 00                   | Extraction Wells   |
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| 33 24 00                   | Monitoring Wells   |
| 33 24 13                   | Groundwater Monitoring Wells   |
| 33 25 00                   | Recharge Wells   |
| 33 26 00                   | Relief Wells   |
| 33 29 00                   | Well Abandonment   |
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| 33 30 00                   | Sanitary Sewerage Utilities  |
| 33 31 00                   | Sanitary Utility Sewerage Piping   |
| 33 31 13                   | Public Sanitary Utility Sewerage Piping  |
| 33 31 16                   | Industrial Waste Utility Sewerage Piping   |
| 33 32 00                   | Wastewater Utility Pumping Stations  |
| 33 32 13                   | Packaged Utility Lift Stations   |
| 33 32 13.13                | Packaged Sewage Lift Stations, Wet Well Type   |
| 33 32 16<br>33 32 16.13    | Packaged Utility Wastewater Pumping Stations Packaged Sewage Grinder Pumping Units               |
| 33 32 10.13                | Public Utility Wastewater Pumping Stations   |
| 33 33 00                   | Low Pressure Utility Sewerage  |
| 33 33 13                   | Sanitary Utility Sewerage  |
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| 33 34 00                   | Sanitary Utility Sewerage Force Mains  |
| 33 34 13                   | Sanitary Utility Sewerage Inverted Siphons   |
| 33 36 00                   | Utility Septic Tanks   |
| 33 36 13                   | Utility Septic Tank and Effluent Wet Wells   |
| 33 36 13.13                | Concrete Utility Septic Tank   |
| 33 36 13.16                | Fiberglass Utility Septic Tank   |
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| 33 36 16<br>33 36 16.13    | Utility Septic Tank Effluent Pumps   |
| 33 36 16.16                | Utility Septic Tank High-Head Effluent Pump Utility Septic Tank Effluent Pump Package            |
| 33 36 19                   | Utility Septic Tank Effluent Filter  |
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| 33 36 33                   | Utility Septic Tank Drainage Field   |
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| 33 37 00                   | Overflow Control   |
| 33 37 13                   | Bending Weirs  |
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| 33 37 23                   | Flow Regulators  |
| 33 37 33                   | Swirl Concentrators  |
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| 33 38 00                   | Treatment Lagoons  |
| 33 38 13                   | Municipal Wastewater Treatment Lagoons   |
| 33 38 16                   | Industrial Waste Lagoons   |
| 33 38 23                   | Agricultural Waste Lagoons   |
| 33 38 26                   | Residential Sewerage Lagoons   |
| 33 39 00                   | Sanitary Utility Sewerage Structures   |

| 33 39 13                   | Sanitary Utility Sewerage Manholes, Frames, and Covers |
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| 33 39 23                   | Sanitary Utility Sewerage Cleanouts                    |
| 33 40 00                   | Storm Drainage Utilities                               |
| 33 41 00                   | Storm Utility Drainage Piping                          |
| 33 41 13                   | Public Storm Utility Drainage Piping                   |
| 33 42 00                   | Culverts   |
| 33 42 13                   |  |
| 33 42 13.13                | Pipe Culverts  |
| 33 42 13.13                | Public Pipe Culverts Concrete Culverts                 |
| 33 42 16.13                | Precast Concrete Culverts                              |
| 33 42 16.16                | Cast-in-Place Concrete Culverts                        |
| 33 44 00                   | Storm Utility Water Drains                             |
| 33 44 13                   |  |
| 33 44 13.13                | Utility Area Drains Catchbasins                        |
| 33 44 16                   | Utility Trench Drains                                  |
| 33 44 19                   | Utility Storm Water Treatment                          |
| 33 44 19.13                | In-Line Utility Storm Water Filters                    |
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| 33 44 19.19                | Utility Oil and Gas Separators                         |
| 33 45 00                   | Storm Utility Drainage Pumps                           |
| 33 46 00                   | Subdrainage  |
| 33 46 13                   | Foundation Drainage                                    |
| 33 46 13.13                | Foundation Drainage Piping                             |
| 33 46 13.16                | Geocomposite Foundation Drainage                       |
| 33 46 16                   | Subdrainage Piping                                     |
| 33 46 16.13                | Subdrainage Piping                                     |
| 33 46 16.16                | Geocomposite Subdrainage                               |
| 33 46 16.19                | Pipe Underdrains                                       |
| 33 46 19                   | Underslab Drainage                                     |
| 33 46 19.13                | Underslab Drainage Piping                              |
| 33 46 19.16                | Geocomposite Underslab Drainage                        |
| 33 46 23                   | Drainage Layers  |
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| 33 46 26                   | Geotextile Subsurface Drainage Filtration              |
| 33 46 33                   | Retaining Wall Drainage                                |
| 33 47 00                   | Ponds and Reservoirs                                   |
|                            |  |
| 33 47 13<br>33 47 13.13    | Pond and Reservoir Liners Pond Liners                  |
| 33 47 13.13                | Reservoir Liners                                       |
| 33 47 16                   | Pond and Reservoir Covers                              |
| 33 47 16.13                | Pond Covers  |
| 33 47 16.53                | Reservoir Covers                                       |
| 33 47 19                   | Water Ponds and Reservoirs                             |
| 33 47 19.13                | Water Distribution Ponds                               |
| 33 47 19.16                | Water Retainage Reservoirs                             |
| 33 47 19.23                | Cooling Water Ponds                                    |
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| 33 47 26.13                | Stabilization Ponds                                    |
| 33 47 26.16                | Retention Basins                                       |

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|----|----------------------------|--|
| 33 | 49 00                      | Storm Drainage Structures  |
|    | 33 49 13                   | Storm Drainage Manholes, Frames, and Covers                            |
|    | 33 49 22                   | Storm Drainage Water Detention Structures                              |
|    | 33 49 23                   | Storm Drainage Water Retention Structures                              |
|    | 33 49 23.13                | Underground Storm Drainage Water Retention Tanks                       |
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| 33 | 50 00                      | Fuel Distribution Utilities  |
| 33 | 51 00                      | Natural-Gas Distribution   |
|    | 33 51 13                   | Natural-Gas Piping   |
|    | 33 51 33                   | Natural-Gas Metering   |
| 33 | 52 00                      | Liquid Fuel Distribution   |
|    | 33 52 13                   | Fuel-Oil Distribution  |
|    | 33 52 13.13                | Fuel-Oil Piping  |
|    | 33 52 13.23                | Fuel-Oil Pumps   |
|    | 33 52 16<br>33 52 16.13    | Gasoline Distribution  |
|    | 33 52 16.13                | Gasoline Piping Gasoline Pumps   |
|    | 33 52 19                   | Diesel Fuel Distribution   |
|    | 33 52 19.13                | Diesel Fuel Piping   |
|    | 33 52 19.23                | Diesel Fuel Pumps  |
|    | 33 52 43                   | Aviation Fuel Distribution   |
|    | 33 52 43.13<br>33 52 43.16 | Aviation Fuel Piping Aviation Fuel Connections                         |
|    | 33 52 43.19                | Aviation Fuel Grounding  |
|    | 33 52 43.23                | Aviation Fuel Pumps  |
| 33 | 56 00                      | Fuel-Storage Tanks   |
|    | 33 56 13                   | Aboveground Fuel-Storage Tanks   |
|    | 33 56 16                   | Underground Fuel-Storage Tanks   |
|    | 33 56 43                   | Aviation Fuel-Storage Tanks  |
|    | 33 56 43.13                | Aboveground Aviation Fuel Storage Tanks                                |
|    | 33 56 43.16<br>33 56 53    | Underground Aviation Fuel-Storage Tanks Compressed Gases Storage Tanks |
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| 33 | 60 00                      | Hydronic and Steam Energy Utilities                                    |
| 33 | 61 00                      | Hydronic Energy Distribution   |
|    | 33 61 13                   | Underground Hydronic Energy Distribution                               |
|    | 33 61 23                   | Aboveground Hydronic Energy Distribution                               |
|    | 33 61 33                   | Hydronic Energy Distribution Metering                                  |
| 33 | 63 00                      | Steam Energy Distribution  |
|    | 33 63 13                   | Underground Steam and Condensate Distribution Piping                   |
|    | 33 63 23                   | Aboveground Steam and Condensate Distribution Piping                   |
|    | 33 63 33                   | Steam Energy Distribution Metering                                     |
| 33 | <b>70 00</b>               | Electrical Utilities   |
| 33 | 71 00                      | <b>Electrical Utility Transmission and Distribution</b>                |
|    | 33 71 13                   | Electrical Utility Towers  |
|    | 33 71 13.13                | Precast Concrete Electrical Utility Towers                             |
|    | 33 71 13.23<br>33 71 13.33 | Steel Electrical Utility Towers Wood Electrical Utility Towers         |
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|      | 33 71 16  | Electrical Utility Poles  |
|------|---|---|
|      | 33 71 16.13   | Precast Concrete Electrical Utility Poles   |
|      | 33 71 16.23   | Steel Electrical Utility Poles  |
|      | 33 71 16.33   | Wood Electrical Utility Poles   |
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|      | 33 71 23  | Insulators and Fittings   |
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|      | 33 71 23.16   | Post Insulators   |
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|      | 33 71 26<br>33 71 26.13   | Transmission and Distribution Equipment   |
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|      | 33 71 26.23   | Current Transformers  |
|      | 33 71 26.26   | Potential Transformers  |
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|      | 33 71 36.13   | Overhead Extra-High-Voltage Wiring  |
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|      | 33 71 39.23   | Underground High-Voltage Wiring   |
|      | 33 71 39.33   | Underwater High-Voltage Wiring  |
|      | 33 71 49  | Medium-Voltage Wiring   |
|      | 33 71 49.13   | Overhead Medium-Voltage Wiring  |
|      | 33 71 49.23   | Underground Medium-Voltage Wiring   |
|      | 33 71 49.33   | Underwater Medium-Voltage Wiring Direct-Current Transmission  |
|      | 33 71 53  |   |
|      | 33 71 73<br>33 71 73.33   | Electrical Utility Services Electric Meters   |
|      |   |   |
|      | 33 /1 83  | Transmission and Distribution Specialties   |
| 33.  | 33 71 83<br><b>72 00</b>  | Transmission and Distribution Specialties   |
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| 33   | <b>72 00</b><br>33 72 13  | Utility Substations Deadend Structures  |
| 33   | <b>72 00</b><br>33 72 13<br>33 72 23  | Utility Substations Deadend Structures Structural Bus Supports  |
| 33   | <b>72 00</b> 33 72 13 33 72 23 33 72 23.13  | Utility Substations Deadend Structures Structural Bus Supports Bus Support Insulators   |
| 33   | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26  | Utility Substations Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies   |
| 33   | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26<br>33 72 26.13   | Utility Substations Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies  |
| 33   | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26<br>33 72 26.13<br>33 72 26.16  | Utility Substations Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies Copper Substation Bus Assemblies   |
| 33   | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26<br>33 72 26.13   | Utility Substations Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies  |
| 33   | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26<br>33 72 26.13<br>33 72 26.16<br>33 72 33<br>33 72 33.13<br>33 72 33.16  | Utility Substations Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies Copper Substation Bus Assemblies Control House Equipment   |
| 33   | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26<br>33 72 26.13<br>33 72 26.16<br>33 72 33<br>33 72 33.13<br>33 72 33.13<br>33 72 33.23   | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  |
| 33 7 | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 33.13<br>33 72 33.13<br>33 72 33.23<br>33 72 33.23  | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering   |
| 33   | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 33.13<br>33 72 33.13<br>33 72 33.23<br>33 72 33.23<br>33 72 33.23<br>33 72 33.23  | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  |
| 33 7 | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 26.16<br>33 72 33.13<br>33 72 33.16<br>33 72 33.23<br>33 72 33.26<br>33 72 33.33<br>33 72 33.36   | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  Cable Trays for Utility Substations   |
| 33 7 | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 26.16<br>33 72 33.13<br>33 72 33.13<br>33 72 33.23<br>33 72 33.23<br>33 72 33.26<br>33 72 33.33<br>33 72 33.36<br>33 72 33.43   | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  Cable Trays for Utility Substations  Substation Backup Batteries  |
| 33 7 | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 33.13<br>33 72 33.16<br>33 72 33.26<br>33 72 33.26<br>33 72 33.26<br>33 72 33.33<br>33 72 33.36<br>33 72 33.43<br>33 72 33.43   | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  Cable Trays for Utility Substations  Substation Backup Batteries  Substation Converter Stations   |
|      | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 33.13<br>33 72 33.16<br>33 72 33.23<br>33 72 33.26<br>33 72 33.33<br>33 72 33.36<br>33 72 33.46<br>33 72 33.46<br>33 72 33.46<br>33 72 33.46<br>33 72 43  | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  Cable Trays for Utility Substations  Substation Backup Batteries  Substation Converter Stations  Substation Control Wiring  |
|      | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 33.13<br>33 72 33.13<br>33 72 33.23<br>33 72 33.26<br>33 72 33.26<br>33 72 33.33<br>33 72 33.43<br>33 72 33.43<br>33 72 33.43<br>33 72 33.43<br>33 72 33.43<br>33 72 33.43<br>33 72 33.43   | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  Cable Trays for Utility Substations  Substation Backup Batteries  Substation Converter Stations  Substation Control Wiring  Utility Transformers  |
|      | 72 00<br>33 72 13<br>33 72 23<br>33 72 23.13<br>33 72 26.13<br>33 72 26.16<br>33 72 33.13<br>33 72 33.16<br>33 72 33.26<br>33 72 33.26<br>33 72 33.33<br>33 72 33.36<br>33 72 33.46<br>33 72 33.43<br>33 72 33.43<br>33 72 33.43<br>33 72 33.46<br>33 72 33.46 | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  Cable Trays for Utility Substations  Substation Backup Batteries  Substation Converter Stations  Substation Control Wiring  Utility Transformers  Liquid-Filled Utility Transformers  |
| 33   | 72 00 33 72 13 33 72 23 33 72 23.13 33 72 26.13 33 72 26.16 33 72 33.13 33 72 33.16 33 72 33.23 33 72 33.26 33 72 33.36 33 72 33.43 33 72 33.43 33 72 33.43 33 72 33.46 33 72 33.47 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48 33 72 33.48   | Utility Substations  Deadend Structures  Structural Bus Supports  Bus Support Insulators  Substation Bus Assemblies  Aluminum Substation Bus Assemblies  Copper Substation Bus Assemblies  Control House Equipment  Relays  Substation Control Panels  Power-Line Carriers  Substation Metering  Raceway and Boxes for Utility Substations  Cable Trays for Utility Substations  Substation Backup Batteries  Substation Converter Stations  Substation Control Wiring  Utility Transformers  Liquid-Filled Utility Transformers  Dry-Type Utility Transformers   |
| 33   | 72 00 33 72 13 33 72 23 33 72 23.13 33 72 26.13 33 72 26.16 33 72 33.13 33 72 33.16 33 72 33.23 33 72 33.26 33 72 33.36 33 72 33.43 33 72 33.43 33 72 33.43 33 72 33.43 33 72 33.43 33 72 33.43 33 72 33.45 33 72 33.45 33 72 33.45 33 72 33.45 33 72 33.45 33 72 33.45 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46   | Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies Copper Substation Bus Assemblies Control House Equipment Relays Substation Control Panels Power-Line Carriers Substation Metering Raceway and Boxes for Utility Substations Cable Trays for Utility Substations Substation Backup Batteries Substation Converter Stations Substation Control Wiring Utility Transformers Liquid-Filled Utility Transformers Dry-Type Utility Transformers High-Voltage Switchgear and Protection Devices   |
| 33   | 72 00 33 72 13 33 72 23 33 72 23.13 33 72 26.13 33 72 26.16 33 72 33.13 33 72 33.16 33 72 33.26 33 72 33.26 33 72 33.36 33 72 33.46 33 72 33.46 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 73 13 33 73 13 33 73 13 33 73 13 33 73 13  | Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies Copper Substation Bus Assemblies Control House Equipment Relays Substation Control Panels Power-Line Carriers Substation Metering Raceway and Boxes for Utility Substations Cable Trays for Utility Substations Substation Backup Batteries Substation Converter Stations Substation Control Wiring Utility Transformers Liquid-Filled Utility Transformers Dry-Type Utility Transformers High-Voltage Switchgear and Protection Devices Air High-Voltage Circuit Breaker  |
| 33   | 72 00 33 72 13 33 72 23 33 72 23.13 33 72 26.13 33 72 26.16 33 72 33.13 33 72 33.16 33 72 33.26 33 72 33.26 33 72 33.36 33 72 33.43 33 72 33.46 33 72 33.47 33 72 33.48 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 72 33.46 33 75 13 33 75 16   | Utility Substations Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies Copper Substation Bus Assemblies Control House Equipment Relays Substation Control Panels Power-Line Carriers Substation Metering Raceway and Boxes for Utility Substations Cable Trays for Utility Substations Substation Backup Batteries Substation Converter Stations Substation Control Wiring Utility Transformers Liquid-Filled Utility Transformers Dry-Type Utility Transformers High-Voltage Switchgear and Protection Devices Air High-Voltage Circuit Breaker Oil High-Voltage Circuit Breaker |
| 33   | 72 00 33 72 13 33 72 23 33 72 23.13 33 72 26.13 33 72 26.16 33 72 33.13 33 72 33.16 33 72 33.26 33 72 33.26 33 72 33.36 33 72 33.46 33 72 33.46 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 72 33.47 33 73 13 33 73 13 33 73 13 33 73 13 33 73 13  | Deadend Structures Structural Bus Supports Bus Support Insulators Substation Bus Assemblies Aluminum Substation Bus Assemblies Copper Substation Bus Assemblies Control House Equipment Relays Substation Control Panels Power-Line Carriers Substation Metering Raceway and Boxes for Utility Substations Cable Trays for Utility Substations Substation Backup Batteries Substation Converter Stations Substation Control Wiring Utility Transformers Liquid-Filled Utility Transformers Dry-Type Utility Transformers High-Voltage Switchgear and Protection Devices Air High-Voltage Circuit Breaker  |

|            | 33 75 23                   | Vacuum High-Voltage Circuit Breaker                       |
|------------|----------------------------|---|
|            | 33 75 36                   | High-Voltage Utility Fuses                                |
|            | 33 75 39                   | High-Voltage Surge Arresters                              |
|            | 33 75 43                   | Shunt Reactors  |
| 33.        | 77 00                      | Medium-Voltage Utility Switchgear and Protection          |
| <b>J</b> J | 11 00                      |   |
|            |                            | Devices   |
|            | 33 77 13                   | Air Medium-Voltage Circuit Breaker                        |
|            | 33 77 16                   | Oil Medium-Voltage Circuit Breaker                        |
|            | 33 77 19                   | Gas Medium-Voltage Circuit Breaker                        |
|            | 33 77 23                   | Vacuum Medium-Voltage Circuit Breaker                     |
|            | 33 77 26                   | Medium-Voltage Utility Fusible Interrupter Switchgear     |
|            | 33 77 33                   | Medium-Voltage Utility Cutouts                            |
|            | 33 77 36                   | Medium-Voltage Utility Fuses                              |
|            | 33 77 39                   | Medium-Voltage Utility Surge Arresters                    |
|            | 33 77 53                   | Medium-Voltage Utility Reclosers                          |
| 22.        | <b>79 00</b>               |   |
| 33         |                            | Site Grounding  |
|            | 33 79 13                   | Site Improvements Grounding                               |
|            | 33 79 13.13                | Electric Fence Grounding                                  |
|            | 33 79 16                   | Tower Grounding   |
|            | 33 79 16.13                | Communications Tower Grounding                            |
|            | 33 79 16.16                | Antenna Tower Grounding                                   |
|            | 33 79 19                   | Utilities Grounding                                       |
|            | 33 79 19.13                | Electrical Utilities Grounding                            |
|            | 33 79 19.16                | Communications Utilities Grounding                        |
|            | 33 79 23                   | Utility Substation Grounding                              |
|            | 33 79 83                   | Site Grounding Conductors                                 |
|            | 33 79 83.13                | Grounding Wire, Bar, and Rod                              |
|            | 33 79 83.16                | Chemical Rod  |
|            | 33 79 83.23                | Conductive Concrete                                       |
|            | 33 79 83.33<br>33 79 83.43 | Earth Grounding Enhancement Deep Earth Grounding          |
|            | 33 79 93                   | Site Lightning Protection                                 |
|            | 33 79 93.13                | Lightning Strike Counters                                 |
|            | 33 79 93.16                | Lightning Strike Warning Devices                          |
| 22         |                            |   |
| 33         | 80 00                      | Communications Utilities                                  |
| 33         | 81 00                      | Communications Structures                                 |
|            | 33 81 13                   | Communications Transmission Towers                        |
|            | 33 81 16                   | Antenna Towers  |
|            | 33 81 19                   | Communications Utility Poles                              |
|            | 33 81 23                   | Aerial Cable Installation Hardware                        |
|            | 33 81 26                   | Communications Underground Ducts, Manholes, and Handholes |
|            | 33 81 29                   | Communications Vaults, Pedestals, and Enclosures          |
|            | 33 81 33                   | Communications Blowers, Fans, and Ventilation             |
| 22         |                            |   |
| 33         | 82 00                      | Communications Distribution                               |
|            | 33 82 13                   | Copper Communications Distribution Cabling                |
|            | 33 82 13.13                | Copper Splicing and Terminations                          |
|            | 33 82 23                   | Optical Fiber Communications Distribution Cabling         |
|            | 33 82 23.13                | Optical Fiber Splicing and Terminations                   |
|            | 33 82 33                   | Coaxial Communications Distribution Cabling               |
|            | 33 82 33.13                | Coaxial Splicing and Terminations                         |

| 33 82 43 | Grounding and Bonding for Communications Distribution |
|----------|---|
| 33 82 46 | Cable Pressurization Equipment                        |
| 33 82 53 | Cleaning, Lubrication, and Restoration Chemicals      |
| 33 83 00 | Wireless Communications Distribution                  |
| 33 83 13 | Laser Transmitters and Receivers                      |
| 33 83 16 | Microwave Transmitters and Receivers                  |
| 33 83 19 | Infrared Transmitters and Receivers                   |
| 33 83 23 | UHF/VHF Transmitters and Antennas                     |

| <b>34 00 00</b> 34 01 00   | Transportation Operation and Maintenance of Transportation  |
|--|---|
| 34 01 13   | Operation and Maintenance of Roadways   |
| 34 01 23   | Operation and Maintenance of Railways   |
| 34 01 23.13<br>34 01 23.81   | Track Crosstic Poplacement  |
| 34 01 33   | Track Crosstie Replacement Operation and Maintenance of Airfields   |
| 34 01 43   | Operation and Maintenance of Bridges  |
| 34 05 00   | Common Work Results for Transportation  |
| 34 05 05   | Selective Demolition for Transportation   |
| 34 05 13   | Common Work Results for Roadways  |
| 34 05 23   | Common Work Results for Railways  |
| 34 05 33   | Common Work Results for Airports  |
| 34 05 43   | Common Work Results for Bridges   |
| 34 06 00   | Schedules for Transportation  |
| 34 06 13   | Schedules for Roadways  |
| 34 06 23   | Schedules for Railways  |
| 34 06 33<br>34 06 43   | Schedules for Airfields Schedules for Bridges   |
| <b>34 08 00</b>  | Commissioning of Transportation   |
| 34 08 13   | Commissioning of Transportation  Commissioning of Roadways  |
| 34 08 23   | Commissioning of Railways   |
| 34 08 33   | Commissioning of Airfields  |
| 34 08 43   | Commissioning of Bridges  |
| 34 10 00   | Guideways/Railways  |
|  |   |
| 34 11 00   | Rail Tracks   |
| 34 11 13   | Rail Tracks Track Rails   |
| 34 11 13<br>34 11 13.13  | Rail Tracks Track Rails Light Rail Track  |
| 34 11 13<br>34 11 13.13<br>34 11 13.23   | Rail Tracks Track Rails Light Rail Track Heavy Rail Track   |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16   | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails  |
| 34 11 13<br>34 11 13.13<br>34 11 13.23   | Rail Tracks Track Rails Light Rail Track Heavy Rail Track   |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail  |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints  |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork  |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail   |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork  |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23<br>34 11 23.13<br>34 11 23.16<br>34 11 23.23<br>34 11 23.23  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail   |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23<br>34 11 23.13<br>34 11 23.16<br>34 11 23.23<br>34 11 23.26<br>34 11 26  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail  |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23<br>34 11 23.13<br>34 11 23.23<br>34 11 23.26<br>34 11 26.13  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail Track Rail Ballast   |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23<br>34 11 23.13<br>34 11 23.16<br>34 11 23.23<br>34 11 23.26<br>34 11 26.13<br>34 11 26.13  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail Track Rail Ballast Track Rail Subballast   |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23<br>34 11 23.13<br>34 11 23.23<br>34 11 23.26<br>34 11 26.13  | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail Track Rail Ballast   |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 19<br>34 11 23<br>34 11 23.13<br>34 11 23.16<br>34 11 23.23<br>34 11 23.26<br>34 11 26.13<br>34 11 26.13<br>34 11 26.16<br>34 11 29<br>34 11 33<br>34 11 33.13    | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail Track Rail Ballast Track Rail Subballast Embedded Track Rail Track Cross Ties Concrete Track Cross Ties                            |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 123<br>34 11 23.13<br>34 11 23.16<br>34 11 23.23<br>34 11 23.26<br>34 11 26.13<br>34 11 26.16<br>34 11 29<br>34 11 33<br>34 11 33.13<br>34 11 33.13               | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail Track Rail Subballast Track Rail Subballast Embedded Track Rail Track Cross Ties Concrete Track Cross Ties                         |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.19<br>34 11 19<br>34 11 23.13<br>34 11 23.13<br>34 11 23.16<br>34 11 23.23<br>34 11 23.26<br>34 11 26.13<br>34 11 26.13<br>34 11 26.16<br>34 11 29<br>34 11 33<br>34 11 33.13<br>34 11 33.13 | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail Track Rail Ballast Track Rail Subballast Embedded Track Rail Track Cross Ties Concrete Track Cross Ties Resilient Track Cross Ties |
| 34 11 13<br>34 11 13.13<br>34 11 13.23<br>34 11 16<br>34 11 16.13<br>34 11 16.16<br>34 11 16.19<br>34 11 123<br>34 11 23.13<br>34 11 23.16<br>34 11 23.23<br>34 11 23.26<br>34 11 26.13<br>34 11 26.16<br>34 11 29<br>34 11 33<br>34 11 33.13<br>34 11 33.13               | Rail Tracks Track Rails Light Rail Track Heavy Rail Track Welded Track Rails In-Track Butt-Welded Track Rail Pressure-Welded Track Rail Thermite-Welded Track Rail Track Rail Joints Special Trackwork Ballasted Special Track Rail Direct-Fixation Track Running Rail Precurved Running Rail Ballasted Track Rail Track Rail Subballast Track Rail Subballast Embedded Track Rail Track Cross Ties Concrete Track Cross Ties                         |

| 34 11 39<br>34 11 39.13    | Track Collector Pans<br>Fiberglass Track Collector Pans   |
|----------------------------|---|
| 34 11 93                   | Track Appurtenances and Accessories                       |
| 34 12 00                   | Monorails   |
| 34 12 13                   | Elevated Monorails  |
| 34 12 16                   | On-Grade Monorails  |
| 34 12 19                   | Below-Grade Monorails                                     |
| 34 12 23                   | Maglev Monorail   |
| 34 12 63                   | Monorail Track  |
| 34 13 00                   | Funiculars  |
| 34 13 13                   | Inclined Railway  |
| 34 14 00                   | Cable Transportation                                      |
| 34 14 13                   | Aerial Tramways   |
| 34 14 19                   | Gondolas  |
| 34 14 26                   | Funitels  |
| 34 14 33                   | Chairlifts  |
| 34 14 39                   | Surface Lifts   |
| 34 14 46                   | Ropeway Tows  |
| 34 14 53                   | Cable Car Systems   |
| 34 20 00                   | Traction Power  |
| 34 21 00                   | Traction Power Distribution                               |
| 34 21 13                   | High Power Static Frequency Converters                    |
| 34 21 16                   | Traction Power Substations                                |
| 34 21 16.13                | AC Traction Power Substations                             |
| 34 21 16.16                | DC Traction Power Substations                             |
| 34 21 19                   | Traction Power Switchgear                                 |
| 34 21 19.13<br>34 21 19.16 | AC Traction Power Switchgear DC Traction Power Switchgear |
| 34 21 19.10                | Frequency Changer   |
| 34 21 23                   | Traction Power Transformer-Rectifier Units                |
| 34 23 00                   | Overhead Traction Power                                   |
| 34 23 13                   | Traction Power Poles                                      |
| 34 23 16                   | Overhead Cable Suspension                                 |
| 34 23 23                   | Overhead Traction Power Cables                            |
| 34 24 00                   | Third Rail Traction Power                                 |
| 34 24 13                   | Bottom-Contact Third Rail                                 |
| 34 24 16                   | Side-Contact Third Rail                                   |
| 34 24 19                   | Top-Contact Third Rail                                    |
| 34 40 00                   |   |
| 34 40 00                   | Transportation Signaling and Contro                       |
|                            | Equipment   |
| 34 41 00                   | Roadway Signaling and Control Equipment                   |
| 34 41 13                   | Traffic Signals   |
| 34 41 16                   | Traffic Control Equipment                                 |
| 34 41 23                   | Roadway Monitoring Equipment                              |
| 34 41 33                   | In Roadway Warning Lights                                 |
| 34 42 00                   | Railway Signaling and Control Equipment                   |
| 34 42 13                   | Railway Signals   |

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| pment |
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|            | 34 54 16.13<br>34 54 16.16<br>34 54 16.23<br>34 54 26<br>34 54 26.13<br>34 54 26.16<br>34 54 33 | Passenger Ticket Vending Machines Passenger Addfare Machines Passenger Intermodal Transfer Machines Passenger Fare Collection Equipment Passenger Coin Fare Collection Equipment Passenger Electronic Fare Collection Equipment Passenger Fare Gates |
|------------|---|--|
| 34         | 70 00   | <b>Transportation Construction and</b>   |
|            |   | Equipment  |
| 34         | 71 00   | Roadway Construction   |
|            | 34 71 13  | Vehicle Barriers   |
|            | 34 71 13.13   | Vehicle Median Barriers  |
|            | 34 71 13.16<br>34 71 13.19  | Vehicle Crash Barriers Vehicle Traffic Barriers  |
|            | 34 71 13.19   | Vehicle Guide Rails  |
|            | 34 71 13.29   | Vehicle Barrier Fenders  |
|            | 34 71 16  | Impact Attenuating Devices   |
|            | 34 71 19  | Vehicle Delineators  |
|            | 34 71 19.13   | Fixed Vehicle Delineators  |
| <b>~</b> 4 | 34 71 19.16   | Flexible Vehicle Delineators   |
| 34         | 72 00   | Railway Construction   |
|            | 34 72 13<br>34 72 16  | Railway Line   |
| 24         |   | Railway Siding   |
| <b>34</b>  | 73 00   | Airfield Construction  |
|            | 34 73 13<br>34 73 16  | Aircraft Tiedowns  |
|            | 34 73 16.13   | Airfield Grounding Aircraft Static Grounding   |
|            | 34 73 19  | Jet Blast Barriers   |
|            | 34 73 23  | Manufactured Airfield Control Towers   |
|            | 34 73 26  | Manufactured Helipads  |
| 34         | 75 00   | Roadway Equipment  |
|            | 34 75 13  | Operable Roadway Equipment   |
|            | 34 75 13.13   | Active Vehicle Barriers  |
| 34         | 76 00   | Railway Equipment  |
|            | 34 76 13  | Roadway Crossing Control Equipment   |
| 34         | 77 00   | Transportation Equipment   |
|            | 34 77 13  | Passenger Boarding Bridges   |
|            | 34 77 13.13   | Fixed Aircraft Passenger Boarding Bridges  |
|            | 34 77 13.16   | Movable Aircraft Passenger Boarding Bridges  |
|            | 34 77 13.23<br>34 77 33   | Ship Passenger Boarding Bridges Baggage Scanning Equipment   |
|            | 34 77 36  | Baggage Scales   |
|            | 34 77 39  | Baggage Conveying Equipment  |
| 34         | 78 00   | Weighing Equipment   |
| <b>5 T</b> | 34 78 13  | Truck Scales   |
|            | 34 78 16  | Weighbridges   |
|            | 34 78 23  | Railroad Car Scales  |
|            | 34 78 33  | Crane Scales   |

| 34 80 00    | Bridges                                |
|-------------|--|
| 34 81 00    | Bridge Machinery                       |
| 34 81 13    | Single-Swing Bridge Machinery          |
| 34 81 16    | Double-Swing Bridge Machinery          |
| 34 81 19    | Cantilever Bridge Machinery            |
| 34 81 23    | Lift Bridge Machinery                  |
| 34 81 26    | Sliding Bridge Machinery               |
| 34 81 29    | Pontoon Bridge Machinery               |
| 34 81 32    | Bascule Bridge Machinery               |
| 34 82 00    | Bridge Specialties                     |
| 34 82 13    | Bridge Vibration Dampers               |
| 34 82 13.13 | Visco Elastic Bridge Vibration Dampers |
| 34 82 13.16 | Tuned-Mass Bridge Vibration Dampers    |
| 34 82 19    | Bridge Pier Protection                 |
| 34 82 19.13 | Bridge Pier Ice Shields                |

| 35 00 00                   | Waterway and Marine Construction   |
|----------------------------|--|
| 35 01 00                   | Operation and Maintenance of Waterway and Marine   |
| 05.04.00                   | Construction   |
| 35 01 30<br>35 01 40       | Operation and Maintenance of Coastal Construction Operation and Maintenance of Waterway Construction |
| 35 01 40.51                | Waterway Dredging  |
| 35 01 40.92                | Preservation of Water Courses  |
| 35 01 50                   | Operation and Maintenance of Marine Construction   |
| 35 01 50.51<br>35 01 50.71 | Marine Dredging Channel Excavation, Cleaning and Deepening   |
| 35 01 30.71                | Operation and Maintenance of Dams  |
| 35 05 00                   | Common Work Results for Waterway and Marine  |
|                            | Construction   |
| 35 05 05                   | Selective Demolition for Waterway and Marine Construction  |
| 35 05 30                   | Common Work Results for Coastal Construction   |
| 35 05 40                   | Common Work Results for Waterway Construction  |
| 35 05 50                   | Common Work Results for Marine Construction  |
| 35 05 70                   | Common Work Results for Dams   |
| 35 06 00                   | Schedules for Waterway and Marine Construction   |
| 35 06 30<br>35 06 40       | Schedules for Coastal Construction Schedules for Waterway Construction                               |
| 35 06 50                   | Schedules for Marine Construction  |
| 35 06 70                   | Schedules for Dams   |
| 35 08 00                   | <b>Commissioning of Waterway and Marine Construction</b>   |
| 35 08 30                   | Commissioning of Coastal Construction  |
| 35 08 40                   | Commissioning of Waterway Construction   |
| 35 08 50                   | Commissioning of Marine Construction   |
| 35 08 70                   | Commissioning of Dams  |
| 35 10 00                   | Waterway and Marine Signaling and  |
|                            | Control Equipment  |
| 35 11 00                   | Signaling and Control Equipment for Waterways  |
| 35 11 13                   | Signaling Equipment for Waterways  |
| 35 11 53                   | Control Equipment for Waterways  |
| 35 12 00                   | Marine Signaling and Control Equipment   |
| 35 12 13<br>35 12 13.13    | Marine Signaling Equipment   |
| 35 12 13.13                | Lighthouse Equipment  Marine Navigation Equipment  |
| 35 12 53                   | Marine Control Equipment   |
| 35 13 00                   | Signaling and Control Equipment for Dams   |
| 35 13 13                   | Signaling Equipment for Dams   |
| 35 13 53                   | Control Equipment for Dams   |
| 35 20 00                   | Waterway and Marine Construction and   |
|                            | Equipment  |
| 35 20 13                   | Hydraulic Fabrications   |
| 35 20 13.13                | Hydraulic Bifurcation Panels   |
| 35 20 13.16                | Hydraulic Bulkheads  |

| 35 20 13.19<br>35 20 13.23<br>35 20 13.26<br>35 20 16<br>35 20 16.13<br>35 20 16.19<br>35 20 16.33<br>35 20 16.39<br>35 20 16.53<br>35 20 16.59<br>35 20 16.59<br>35 20 19.13<br>35 20 19.23<br>35 20 23.33<br>35 20 23.33 | Hydraulic Manifolds Hydraulic Penstocks Hydraulic Trashracks Hydraulic Gates Hydraulic Spillway Crest Gates Hydraulic Head Gates Hydraulic Sluice Gates Hydraulic Miter Gates Hydraulic Sector Gates Hydraulic Tainter Gates and Anchorages Hydraulic Vertical Lift Gates Hydraulic Closure Gates Hydraulic Valves Hydraulic Butterfly Valves Hydraulic Regulating Valves Dredging Mechanical Dredging Integrated Dredging and Dewatering |
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| 35 30 00   | <b>Coastal Construction</b>   |
| 35 31 00   | Shoreline Protection  |
| 35 31 16   | Seawalls  |
| 35 31 16.13<br>35 31 16.16   | Concrete Seawalls Segmental Seawalls  |
| 35 31 16.19  | Steel Sheet Piling Seawalls   |
| 35 31 16.23  | Timber Seawalls   |
| 35 31 16.40  | Stone Seawalls  |
| 35 31 19   | Revetments  |
| 35 31 19.13  | Sacked Cement-Sand Revetments   |
| 35 31 19.16  | Concrete Unit Masonry Revetments  |
| 35 31 19.36  | Gabion Revetments   |
| 35 31 19.40  | Stone Revetments  |
| 35 31 23   | Breakwaters   |
| 35 31 23.13  | Rubble Mound Breakwaters  |
| 35 31 23.16  | Precast Breakwater Modules  |
| 35 31 26<br>35 31 26.13  | Jetties Concrete Jetties  |
| 35 31 26.16  | Concrete Unit Masonry Jetties   |
| 35 31 26.36  | Gabion Jetties  |
| 35 31 26.40  | Stone Jetties   |
| 35 31 29   | Groins  |
| 35 31 29.13  | Concrete Groins   |
| 35 31 29.16  | Concrete Unit Masonry Groins  |
| 35 31 29.26  | Steel Groins  |
| 35 31 29.36  | Gabion Groins   |
| 35 31 29.40  | Stone Groins  |
| 35 32 00   | Artificial Reefs  |
| 35 32 13   | Scrap Material Artificial Reefs   |
| 35 32 13.13<br>35 32 13.19   | Scrap Concrete Artificial Reefs Scrap Steel Artificial Reefs  |
| 35 32 13.19  | Sunken Ship Artificial Reefs  |
| 35 32 16   | Constructed Artificial Reefs  |
| 35 32 16.13  | Constructed Concrete Artificial Reefs   |
|  |   |

35 32 16.19 Constructed Steel Artificial Reefs 35 40 00 Waterway Construction and Equipment 35 41 00 Levees Landside Levee Berms 35 41 13 35 41 13.13 Stability Landside Levee Berms 35 41 13.16 Seepage Landside Levee Berms 35 41 16 Levee Cutoff Trenches 35 41 19 Levee Relief Wells 35 42 00 Waterway Bank Protection 35 42 13 Piling Bank Protection 35 42 13.19 Steel Sheet Piling Bank Protection 35 42 13.23 Timber Piling Bank Protection 35 42 13.26 Plastic Piling Bank Protection 35 42 29 **Grout-Bag Bank Protection** 35 42 34 Soil Reinforcement Bank Protection 35 42 35 Slope Protection Bank Protection 35 42 36 Gabion Bank Protection 35 42 37 Riprap Bank Protection 35 42 53 Wall Bank Protection 35 42 53.16 Concrete Unit Masonry Wall Bank Protection Segmental Wall Bank Protection 35 42 53.19 Stone Wall Bank Protection 35 42 53.40 35 43 00 Waterway Scour Protection **Grout-Bag Scour Protection** 35 43 29 Soil Reinforcement Scour Protection 35 43 34 35 43 35 Slope Protection Scour Protection 35 43 36 Gabion Scour Protection 35 43 37 Riprap Scour Protection 35 43 53 Wall Scour Protection Concrete Unit Masonry Wall Scour Protection 35 43 53.13 Segmental Wall Scour Protection 35 43 53.16 35 43 53.40 Stone Wall Scour Protection 35 49 00 Waterway Structures 35 49 13 Floodwalls 35 49 13.13 Concrete Floodwalls 35 49 13.16 Masonry Floodwalls 35 49 23 Waterway Locks Concrete Waterway Locks 35 49 23.13 Piling Waterway Locks 35 49 23.23 Floodgate Machinery 35 49 26 35 50 00 Marine Construction and Equipment 35 51 00 Floating Construction Floating Piers 35 51 13 35 51 13.23 Floating Wood Piers 35 51 13.26 Floating Plastic Piers 35 51 23 **Pontoons Offshore Platform Construction** 35 52 00 35 52 13 Fixed Offshore Platform Construction 35 52 23 Semi-Submersible Offshore Platform Construction

| 35 52 33                | Floating Offshore Platform Construction                          |
|-------------------------|--|
| 35 53 00                | Underwater Construction  |
| 35 53 23                | Underwater Harbor Deepening                                      |
| 35 53 33                | Underwater Pipeline Construction                                 |
| 35 53 43                | Underwater Foundation Construction                               |
| 35 53 53                | Underwater Structures Construction                               |
| 35 53 63                | Underwater Waterproofing   |
| <b>35 59 00</b>         | Marine Specialties   |
| 35 59 13                | Marine Fenders   |
| 35 59 13.13             | Prestressed Concrete Marine Fender Piling                        |
| 35 59 13.16             | Resilient Foam-Filled Marine Fenders                             |
| 35 59 13.19             | Rubber Marine Fenders  |
| 35 59 23<br>35 59 23.13 | Buoys<br>Mooring Buoys   |
| 35 59 23.16             | Anchor Pendant Buoys   |
| 35 59 23.19             | Navigation Buoys   |
| 35 59 29                | Mooring Devices  |
| 35 59 29.13             | Quick-Release Mooring Hooks                                      |
| 35 59 29.16             | Laser Docking Systems  |
| 35 59 29.19             | Capstans  Marina Ballanda and Clasta                             |
| 35 59 33<br>35 59 33.13 | Marine Bollards and Cleats Cast-Steel Marine Bollards and Cleats |
| 35 59 33.16             | Cast-Iron Marine Bollards and Cleats                             |
| 35 59 33.19             | Stainless-Steel Marine Bollards and Cleats                       |
| 35 59 33.23             | Plastic Marine Bollards and Cleats                               |
| 35 59 93                | Marine Chain and Accessories                                     |
| 35 59 93.13             | Marine Chain   |
| 35 59 93.16             | Marine Shackles  |
| 35 59 93.19             | Marine Chain Tensioners  |
| <b>35 70 00</b>         | Dam Construction and Equipment                                   |
| 35 71 00                | Gravity Dams   |
| 35 71 13                | Concrete Gravity Dams  |
| 35 71 16                | Masonry Gravity Dams   |
| 35 71 19                | Rockfill Gravity Dams  |
| 35 72 00                | Arch Dams  |
| 35 72 13                | Concrete Arch Dams   |
| 35 73 00                | Embankment Dams  |
| 35 73 13                | Earth Embankment Dam   |
| 35 73 16                | Rock Embankment Dams   |
| 35 74 00                | Buttress Dams  |
| 35 74 13                | Concrete Buttress Dams   |
| 35 79 00                | Auxiliary Dam Structures   |
| 35 79 13                | Fish Ladders   |
| 35 79 13 13             | Concrete Fish Ladders  |

| 40 00 00                   | Process Interconnections  |
|----------------------------|---|
| 40 01 00                   | Operation and Maintenance of Process  |
| 400100                     | Interconnections  |
| 40.04.40                   |   |
| 40 01 10                   | Operation and Maintenance of Gas and Vapor Process Piping                                       |
| 40 01 20                   | Operation and Maintenance of Liquids Process Piping   |
| 40 01 30                   | Operation and Maintenance of Solid and Mixed Materials Piping and Chutes                        |
| 40 01 40                   | Operation and Maintenance of Process Piping and Equipment Protection                            |
| 40 01 60                   | Operation and Maintenance of Process Control and Process Facility Enterprise Management Systems |
| 40 01 70                   | Operation and Maintenance of Instrumentation for Process Systems                                |
| 40 01 90                   | Operation and Maintenance of Primary Control Devices  |
| 40 05 00                   | Common Work Results for Process Interconnections  |
| 40 05 05                   | Exposed Piping Installation   |
| 40 05 06                   | Couplings, Adapters, and Specials for Process Piping  |
| 40 05 07                   | Hangers and Supports for Process Piping   |
| 40 05 09                   | Wall Pipes, Floor Pipes, and Pipe Sleeves   |
| 40 05 11                   | Aluminum Process Pipe   |
| 40 05 12                   | Brass Process Pipe  |
| 40 05 12                   | Bronze Process Pipe   |
| 40 05 17                   | Copper Process Pipe and Tubing  |
| 40 05 17                   | Ductile Iron Process Pipe   |
| 40 05 19                   | High-Alloy Nickel Process Pipe and Tubing   |
| 40 05 21                   | Stainless Steel Process Pipe and Tubing   |
| 40 05 23.13                | Duplex and Super-Duplex Stainless Steel Process Pipe  |
| 40 05 23.13                | 300- and 400-Series Stainless Steel Process Pipe  |
| 40 05 23.33                | Special-Fabrication Stainless Steel Process Pipe and Tubing                                     |
| 40 05 24                   | Steel Process Pipe  |
| 40 05 24.13                | Steel Pipe and Tubing for Air and Gas Service   |
| 40 05 24.23                | Steel Pipe for Water Service  |
| 40 05 24.26                | Steel Pipe and Tubing for Process Liquid Service  |
| 40 05 24.33                | Steel Pipe for Bulk Materials Conveyance  |
| 40 05 26                   | Other Metals Process Pipe   |
| 40 05 26.13                | Titanium Process Pipe   |
| 40 05 26.23                | Tantalum Process Pipe   |
| 40 05 26.33                | Zirconium Process Pipe  |
| 40 05 31                   | Thermoplastic Process Pipe  |
| 40 05 31.13                | Polyvinyl Chloride Process Pipe   |
| 40 05 31.23                | Chlorinated Polyvinyl Chloride Process Pipe   |
| 40 05 31.33<br>40 05 31.43 | ABS Process Pipe Polypropylene Process Pipe   |
| 40 05 31.53                | PVDF Process Pipe   |
| 40 05 31.63                | High-Purity Plastic Process Pipe  |
| 40 05 31.83                | Flexible Plastic Tubing   |
| 40 05 33                   | High-Density Polyethylene Process Pipe  |
| 40 05 36                   | Fiberglass-Reinforced Plastic Process Pipe  |
| 40 05 36.13                | Fiberglass-Reinforced Plastic Pipe for Process Air, Gas, and Odor Service                       |
| 40 05 36.23                | Fiberglass-Reinforced Plastic Pipe for Process Liquid Service                                   |
| 40 05 37                   | Centrifugally Cast Fiberglass-Reinforced Polymer Mortar Process Pipe                            |
| 40 05 38                   | PTFE Process Pipe   |
| 40 05 39                   | Concrete Pipe   |

| 40 OF 20 42             | Congrete Processes Water Pine   |
|-------------------------|---|
| 40 05 39.13             | Concrete Pressure Water Pipe Concrete Cravity and Prainage Process Pipe           |
| 40 05 39.23<br>40 05 51 | Concrete Gravity and Drainage Process Pipe Common Requirements for Process Valves |
|                         | •   |
| 40 05 53                | Process Valves Four-inch Diameter and Larger                                      |
| 40 05 56                | Process Valves, Smaller than Four-inch Diameter                                   |
| 40 05 57                | Actuators for Process Valves and Gates  |
| 40 05 57.13             | Manual Actuators  |
| 40 05 57.23             | Electric Motor Actuators  |
| 40 05 57.33             | Hydraulic Cylinder Actuators  |
| 40 05 57.43             | Hydraulic Actuator Systems Pneumatic Actuators                                    |
| 40 05 57.53<br>40 05 59 | Hydraulic Gates   |
| 40 05 59.13             | Stop Plates   |
| 40 05 59.16             | Stop Logs   |
| 40 05 59.21             | Aluminum Slide Gates  |
| 40 05 59.23             | Stainless Steel Slide Gates   |
| 40 05 59.26             | Fiberglass-Reinforced Plastic Slide Gates   |
| 40 05 59.33             | Cast Iron Slide Gates   |
| 40 05 59.43             | Butterfly Gates   |
| 40 05 61                | Gate Valves   |
| 40 05 61.13             | Solid Wedge Metal-Seated Gate Valves  |
| 40 05 61.16             | Double Disc Metal-Seated Gate Valves  |
| 40 05 61.23             | Resilient-Seated Gate Valves  |
| 40 05 61.43             | Knife Gate Valves   |
| 40 05 62                | Plug Valves   |
| 40 05 62.13             | Eccentric Plug Valves for Gas Service   |
| 40 05 62.16             | Eccentric Plug Valves for Liquid Service  |
| 40 05 63<br>40 05 63.13 | Ball Valves AWWA Metal-Seated Ball Valves   |
| 40 05 63.16             | AWWA Resilient-Seated Ball Valves   |
| 40 05 63.33             | Metallic Ball Valves  |
| 40 05 63.43             | Plastic Ball Valves   |
| 40 05 64                | Butterfly Valves  |
| 40 05 64.13             | Metal-Seated Butterfly Valves   |
| 40 05 64.16             | AWWA Resilient-Seated Butterfly Valves  |
| 40 05 64.23             | Metallic Industrial Butterfly Valves  |
| 40 05 64.26             | Plastic Industrial Butterfly Valves   |
| 40 05 64.33             | Butterfly Valves in Air or Gas Service  |
| 40 05 64.36             | High-Performance Butterfly Valves in Air or Gas Service                           |
| 40 05 64.43             | Dampers for Corrosive Gas Service   |
| 40 05 65<br>40 05 65.11 | Valves for Pump Control and Check Service Angle Valves                            |
| 40 05 65.11             | Cone Valves   |
| 40 05 65.16             | Globe Valves  |
| 40 05 65.23             | Swing Check Valves  |
| 40 05 65.26             | Tilting Disc Check Valves   |
| 40 05 65.29             | Double-Disk Check Valves  |
| 40 05 67                | Specialized Pressure and Flow-Control Valves                                      |
| 40 05 67.13             | Reduced-Pressure Zone Backflow Preventers for Process Service                     |
| 40 05 67.16             | Double Check Valve Assembly Backflow Preventers for Process Service               |
| 40 05 67.23             | Pressure Vacuum Breaker Backflow Preventers                                       |
| 40 05 67.26             | Atmospheric Vacuum Breaker Backflow Preventers                                    |
| 40 05 67.29             | Hose Connection Vacuum Breaker Backflow Preventers                                |
| 40 05 67.33             | Backpressure Valves   |
| 40 05 67.36             | Pressure-Regulating Valves  |

| 40 05 67.39                | Pressure-Relief Valves  |
|----------------------------|---|
| 40 05 67.41                | Direct-Acting Surge Relief Valves for Water Service                               |
| 40 05 67.43                | Pilot-Operated Surge Relief Valves for Water Service                              |
| 40 05 67.44                | Pilot-Operated Surge Arrestor Valves for Water Service                            |
| 40 05 67.46                | Electronic Surge Anticipator Valves for Water Service                             |
| 40 05 67.47                | Surge Relief Valves for Wastewater Service  |
| 40 05 67.49                | Electronic Surge Anticipator Valves for Wastewater Service                        |
| 40 05 71                   | Solids Handling Valves  |
| 40 05 71.13                | Duckbill Check Valves   |
| 40 05 71.16                | Flap Gates  |
| 40 05 71.23                | Mud Valves  |
| 40 05 71.33                | Telescoping Valves  |
| 40 05 73                   | Special-Application Process Valves  |
| 40 05 73.13                | Altitude Valves   |
| 40 05 73.16                | Float Valves  |
| 40 05 73.23                | Anti-Cavitation Valves  |
| 40 05 74                   | Flexible-Closure Valves   |
| 40 05 74.13                | Diaphragm Valves  |
| 40 05 74.23                | Pinch Valves  |
| 40 05 76                   | Hot-Tapping Valves and Appurtenances  |
| 40 05 76.13                | Tapping Sleeves and Valves  |
| 40 05 76.16                | Tapping Machines  |
| 40 05 76.23                | Line Stops  |
| 40 05 78                   | Air Valves for Water and Wastewater Service                                       |
| 40 05 78.11                | Air Release Valves for Water Service  |
| 40 05 78.13                | Air/Vacuum Valves for Water Service   |
| 40 05 78.16<br>40 05 78.19 | Vacuum-Breaking Valves for Water Service Combination Air Valves for Water Service |
| 40 05 78.19                | Air Release Valves for Wastewater Service   |
| 40 05 78.23                | Air/Vacuum Valves for Wastewater Service  |
| 40 05 78.26                | Vacuum-Breaking Valves for Wastewater Service                                     |
| 40 05 78.29                | Combination Air Valves for Wastewater Service                                     |
| 40 05 81                   | Hydrants and Hose Bibbs for Process Service                                       |
| 40 05 81.13                | Fire Hydrants   |
| 40 05 81.23                | Yard Hydrants   |
| 40 05 81.26                | Freeze-Proof Yard Hydrants  |
| 40 05 81.33                | Hose Bibbs  |
| 40 05 82                   | Solenoid Valves for Process Service   |
| 40 05 89                   | Valve Accessories   |
| 40 05 89.13                | Basket Strainers for Process Service  |
| 40 05 89.23                | Needle Valves   |
| 40 05 89.33                | Quick-Connect Couplers  |
| 40 05 93                   | Common Motor Requirements for Process Equipment                                   |
| 40 05 96                   | Vibration and Seismic Controls for Process Equipment                              |
| 40 06 00                   | Schedules for Process Interconnections  |
| 40 06 10                   | Schedules for Gas and Vapor Process Piping and Ductwork                           |
| 40 06 20                   | Schedules for Liquids Process Piping  |
| 40 06 30                   | Schedules for Solid and Mixed Materials Piping and Chutes                         |
| 40 06 40                   | Schedules for Process Piping and Equipment Protection                             |
| 40 06 60                   | Schedules for Process Control and Process Facility Enterprise                     |
|                            | Management Systems  |
| 40 06 70                   | Schedules of Instrumentation for Process Systems                                  |
| 40 06 90                   | Schedules for Primary Control Devices   |
|                            | -   |

| 40 10 00             | Gas and Vapor Process Piping and                      |
|----------------------|---|
|                      | Ductwork  |
| 40 11 00             | Steam Process Piping                                  |
| 40 11 13             | Low-Pressure Steam Process Piping                     |
| 40 11 16             | Intermediate-Pressure Steam Process Piping            |
| 40 11 19             | High-Pressure Steam Process Piping                    |
| 40 11 23             | Condensate Process Piping for Process Applications    |
| 40 12 00             | Compressed Air Process Piping                         |
| 40 12 13             | Compressed Air Process Piping for Breathing Service   |
| 40 12 23             | Low-Pressure Compressed Air Process Piping            |
| 40 12 53             | High-Pressure Compressed Air Process Piping           |
| 40 13 00             | Process Ductwork                                      |
| 40 15 00             | Combustion System Gas Piping                          |
| 40 15 13             | Combustion Air Piping                                 |
| 40 15 16             | Oxygen Combustion System Gas Piping                   |
| 40 15 19             | Flue-Gas Combustion System Piping                     |
| 40 15 23             | Exothermic-Gas Combustion System Piping               |
| 40 15 26             | Endothermic-Gas Combustion System Piping              |
| 40 15 29             | Dissociated-Ammonia-Gas Combustion System Piping      |
| 40 16 00             | Specialty and High-Purity Gases Piping                |
| 40 16 13             | Ammonia Gas Piping                                    |
| 40 16 16             | Boron Gas Piping                                      |
| 40 16 17             | Chlorine Gas Piping                                   |
| 40 16 26             | Diborane Gas Piping                                   |
| 40 16 29             | Fluorine Gas Piping                                   |
| 40 16 33             | Hydrogen Sulfide Gas Piping                           |
| 40 16 36             | Nitrous-Oxide Gas Process Piping                      |
| 40 16 37<br>40 16 39 | Oxygen Gas Process Piping                             |
| 40 16 39             | Ozone Gas Process Piping Phosphine Gas Piping         |
| 40 16 46             | Silane Gas Piping                                     |
| 40 16 49             | Sulfur-Dioxide Gas Piping                             |
| 40 16 53             | Specialty Gas Mixtures Piping                         |
| 40 16 56             | High-Purity Gas Piping Components                     |
| 40 17 00             | Welding and Cutting Gases Piping                      |
| 40 17 13             | Acetylene Welding and Cutting Piping                  |
| 40 17 16             | Acetylene-Hydrogen Mix Welding and Cutting Piping     |
| 40 17 19             | Methylacetylene-Propadiene Welding and Cutting Piping |
| 40 17 23             | Oxygen Welding and Cutting Piping                     |
| 40 17 26             | Inert Gas Welding and Cutting Piping                  |
| 40 18 00             | Vacuum Systems Process Piping                         |
| 40 18 13             | Low-Vacuum Systems Process Piping                     |
| 40 18 23             | Chlorine Gas Vacuum System Piping                     |
| 40 18 53             | High-Vacuum Systems Process Piping                    |
| 40 20 00             | Liquids Process Piping                                |
| 40 21 00             | Liquid Fuel Process Piping                            |
| 40 21 13             | Bio Fuels Process Piping                              |
|                      | . •   |

|            | 40 21 13.13 | Bioalcohols Process Piping                                  |
|------------|-------------|---|
|            | 40 21 13.23 | Biodiesel Fuel Process Piping                               |
|            | 40 21 13.26 | Green Diesel Fuel Process Piping                            |
|            | 40 21 13.33 | Biomass-to-Liquid (BTL) Fuel Process Piping                 |
|            | 40 21 13.43 | Gas-to-Liquid (GTL) Fuel Process Piping                     |
|            | 40 21 16    | Gasoline Process Piping                                     |
|            | 40 21 19    | Diesel Process Piping                                       |
|            | 40 21 23    | Fuel-Oils Process Piping                                    |
|            | 40 21 23.13 | No. 1 Fuel-Oil Process Piping                               |
|            | 40 21 23.23 | No. 2 Fuel-Oil Process Piping                               |
|            | 40 21 23.26 | Kerosene Process Piping                                     |
|            | 40 21 23.29 | Tar Fuels Process Piping                                    |
|            | 40 21 23.43 | No. 4 Fuel-Oil Process Piping                               |
|            | 40 21 23.53 | No. 5 Fuel-Oil Process Piping                               |
|            | 40 21 23.63 | No. 6 Fuel-Oil Process Piping                               |
| 40         | 22 00       | Petroleum Products Piping                                   |
|            | 40 22 10    | Heavy-Fractions Petroleum Products Piping                   |
|            | 40 22 13    | Liquefied Petroleum Gas (LPG) Process Piping                |
|            | 40 22 16    | Lubricating Oils Process Piping                             |
|            | 40 22 23    | Petrochemicals Process Piping                               |
|            | 40 22 50    | Light-Fractions Petroleum Products Piping                   |
| 40         | 23 00       | Water and Wastewater Process Piping                         |
|            | 40 23 13    | Deionized Water Process Piping                              |
|            | 40 23 16    | Distilled-Water Process Piping                              |
|            | 40 23 19    | Non-Potable Plant Water Process Piping                      |
|            | 40 23 23    | Potable Water Process Piping                                |
|            | 40 23 29    | Recirculated Water Process Piping                           |
|            | 40 23 33    | Reverse-Osmosis Water Process Piping                        |
|            | 40 23 40    | Sanitary Wastewater Process Piping                          |
|            | 40 23 41    | Grit Process Piping   |
|            | 40 23 43    | ·   |
|            | 40 23 43    | Scum and Floatables Process Piping                          |
|            | 40 23 44    | Primary Sludge Process Piping                               |
|            |             | Waste Sludge Process Piping Thickened Sludge Process Piping |
| 40         | 40 23 48    | Thickened Sludge Process Piping                             |
| 40         | 24 00       | Specialty Liquid Chemicals Piping                           |
|            | 40 24 13    | Alcohol Piping  |
|            | 40 24 14    | Liquid Chlorine and Sodium Hypochlorite Piping              |
|            | 40 24 16    | Gel Piping  |
|            | 40 24 19    | Slurries Process Piping                                     |
|            | 40 24 23    | Thixotropic Liquid Piping                                   |
| 40         | 25 00       | Liquid Acids and Bases Piping                               |
|            | 40 25 10    | Liquid Acids Piping   |
|            | 40 25 50    | Liquid Bases Piping   |
| <b>4</b> 0 | 26 00       | Liquid Polymer Piping                                       |
|            |             |   |
| 40         | 30 00       | Solid and Mixed Materials Piping and                        |
|            |             | Chutes  |
| <b>4</b> 0 | 32 00       | Bulk Materials Piping and Chutes                            |
| . 5        | 40 32 10    | Abrasive Materials Piping and Chutes                        |
|            | 40 32 10    | Nonabrasive Materials Piping and Chutes                     |
|            | TU UL UU    | rionaprasive ivialenais i ibina and OHULES                  |

| 40 33 00                   | Bulk Materials Valves  |
|----------------------------|--|
| 40 33 13                   | Airlock Bulk Materials Valves  |
| 40 33 16                   | Blind Bulk Materials Valves  |
| 40 33 26                   | Diverter Bulk Materials Valves   |
| 40 33 29                   | Double or Single Dump Bulk Materials Valves  |
| 40 33 39                   | Swing Bulk Materials Valves  |
| 40 33 43                   | Specialty Bulk Materials Valves  |
| 40 34 00                   | Pneumatic Conveying Lines  |
| 40 34 10                   | Dense Phase Pneumatic Conveying Lines  |
| 40 34 50                   | Dilute Phase Pneumatic Conveying Lines   |
| 40 40 00                   | <b>Process Piping and Equipment Protection</b>   |
| 40 41 00                   | Process Piping and Equipment Heat Tracing  |
| 40 41 13                   | Process Piping Heat Tracing  |
| 40 41 13.13                | Process Piping Electrical Resistance Heat Tracing  |
| 40 41 13.16                | Process Piping Electrical Conductance Heat Tracing   |
| 40 41 13.19                | Process Piping Gas Heat Tracing  |
| 40 41 13.23                | Process Piping Steam Heat Tracing  |
| 40 41 13.26                | Process Piping Thermal Fluids Heat Tracing   |
| 40 41 23                   | Process Equipment Heat Tracing   |
| 40 41 23.13                | Process Equipment Electrical Resistance Heat Tracing   |
| 40 41 23.16<br>40 41 23.19 | Process Equipment Electrical Conductance Heat Tracing Process Equipment Gas Heat Tracing           |
| 40 41 23.19                | Process Equipment Steam Heat Tracing   |
| 40 41 23.26                | Process Equipment Thermal Fluids Heat Tracing  |
| 40 42 00                   | Process Piping and Equipment Insulation  |
| 40 42 13                   | Process Piping Insulation  |
| 40 42 13.13                | Cryogenic Temperature Process Piping Insulation  |
| 40 42 13.16                | Low Temperature Process Piping Insulation  |
| 40 42 13.19                | Intermediate Temperature Process Piping Insulation   |
| 40 42 13.23                | High Temperature Process Piping Insulation   |
| 40 42 13.26                | Process Piping Insulation for Specialty Applications   |
| 40 42 23                   | Process Equipment Insulation   |
| 40 42 23.13<br>40 42 23.16 | Cryogenic Temperature Process Equipment Insulation   |
| 40 42 23.10                | Low Temperature Process Equipment Insulation Intermediate Temperature Process Equipment Insulation |
| 40 42 23.23                | High Temperature Process Equipment Insulation  |
| 40 42 23.26                | Process Equipment Insulation for Specialty Applications  |
| 40 46 00                   | Process Corrosion Protection   |
| 40 46 16                   | Coatings and Wrappings for Process Corrosion Protection  |
| 40 46 42                   | Cathodic Process Corrosion Protection  |
| 40 47 00                   | Refractories   |
| 40 47 13                   | Silica Refractories  |
| 40 47 16                   | Alumina Refractories   |
| 40 47 19                   | Carbon and Graphite Refractories   |
| 40 47 23                   | Castable Refractories  |
| 40 47 26                   | Rammed Refractories  |
| 40 47 29                   | Refractory Concrete  |
| 40 60 00                   | Process Control and Enterprise   |
|                            | Management Systems   |
|                            |  |

| 40 61 00              | <b>Process Control and Enterprise Management Systems</b>          |
|-----------------------|---|
|                       | General Provisions  |
| 40 61 13              | Process Control System General Provisions                         |
| 40 61 16              | Enterprise Management System General Provisions                   |
| 40 61 21              | Process Control System Testing                                    |
| 40 61 26              | Process Control System Training                                   |
| 40 61 93              | Process Control System Input/Output List                          |
| 40 61 96              | Process Control Descriptions                                      |
| 40 62 00              | Computer System Hardware and Ancillaries                          |
| 40 62 13              | Server Computers  |
| 40 62 16              | Operator Workstation Computers                                    |
| 40 62 19              | Industrial Computers  |
| 40 62 21              | Desktop Computers   |
| 40 62 23              | Mobile Computers  |
| 40 62 26              | Laptop Computers  |
| 40 62 29              | Tablet Computers and Mobile Devices                               |
| 40 62 33              | Printers  |
| 40 62 43              | Large Display Screens   |
| 40 62 63              | Operator Interface Terminals (OIT)                                |
| 40 63 00              | Control System Equipment  |
| 40 63 13              | Distributed Process Control Systems                               |
| 40 63 43              | Programmable Logic Controllers                                    |
| 40 63 83              | Remote Terminal Units   |
| 40 66 00              | Network and Communication Equipment                               |
| 40 66 13              | Switches and Routers  |
| 40 66 16              | Firewall Hardware   |
| 40 66 19              | Media Converters  |
| 40 66 23              | Frame Relay Equipment   |
| 40 66 26              | Device Network Equipment  |
| 40 66 33              | Metallic and Fiber-Optic Communication Cabling and Connectors     |
| 40 66 36              | Process Instrumentation Networks                                  |
| 40 66 43              | Wireless Network Systems  |
| 40 66 53              | Multiple Address Radio Equipment                                  |
| 40 66 56              | Point-to-Point Radio Equipment                                    |
| 40 66 63<br>40 66 66  | Antennas Manapalas and Towers                                     |
| 40 66 73              | Monopoles and Towers Satellite Communication Equipment            |
| 40 67 00              | · ·   |
|                       | Control System Equipment Panels and Racks                         |
| 40 67 13              | Computer Equipment Racks  |
| 40 67 16              | Free-Standing Panels Wall-Mounted Panels                          |
| 40 67 19<br>40 67 23  | Control System Consoles   |
| 40 67 23              | Panel Wiring  |
| 40 67 63              | Control Panel-Mounted Uninterruptible Power Supply                |
| 40 68 00              | Process Control Software  |
|                       |   |
| 40 68 13              | Process Control (HMI) Software                                    |
| 40 68 23<br>40 68 26  | Reporting Software Online Performance Monitoring Systems Software |
| 40 68 33              | Maintenance Management Software                                   |
| <del>-1</del> 0 00 00 | mantonano managomont dditwaid                                     |

|            | 40 68 36         | Laboratory Information System Software   |
|------------|------------------|--|
|            | 40 68 39         | Energy Management Software   |
|            | 40 68 43         | Load Management Software   |
|            | 40 68 63         | Configuration of HMI Software  |
|            | 40 68 66         | Programming of Controller Software   |
|            | 40 68 93         | Computer Operating Systems Software  |
| <b>۸</b> ۵ | 69 00            | Packaged Control Systems   |
| 70         |                  |  |
|            | 40 69 13         | Control System Simulators  |
|            | 40 69 23         | Burner Management Systems  |
|            | 40 69 26         | Safety Instrumented Control Systems  |
|            | 40 69 33         | Fire and Gas Monitoring/Protection Systems for Industrial Applications         |
| 40         | 70 00            | Instrumentation for Process Systems  |
| 40         | 71 00            | Flow Measurement   |
| - •        | 40 71 13         | Magnetic Flow Meters   |
|            | 40 71 13.13      | Inline Magnetic Flow Meters  |
|            | 40 71 13.23      | Insertion-Type Magnetic Flow Meters  |
|            | 40 71 23         | Differential Pressure-Type Flow Meters   |
|            | 40 71 23.13      | Venturi Flow Meters  |
|            | 40 71 23.16      | Flow Tubes   |
|            | 40 71 23.19      | Flow Nozzle-Type Flow Meters   |
|            | 40 71 23.23      | Orifice Plate Flow Meters  |
|            | 40 71 23.26      | Integral Orifice Flow Meters   |
|            | 40 71 23.29      | Orifice Meter Runs   |
|            | 40 71 23.33      | Elbow Flow Meters  |
|            | 40 71 23.36      | Pitot Tube and Averaging Pitot Flow Meters                                     |
|            | 40 71 23.39      | V-Cone Flow Meters   |
|            | 40 71 23.43      | Differential Pressure-Type Flow Transmitters                                   |
|            | 40 71 23.46      | Flow Computers   |
|            | 40 71 33         | Propeller Flow Meters  |
|            | 40 71 36         | Turbine Flow Meters  |
|            | 40 71 43         | Variable Area Flow Meters  |
|            | 40 71 46         | Target Flow Meters   |
|            | 40 71 49         | Vortex-Shedding Flow Meters  |
|            | 40 71 53         | Positive Displacement Flow Meters  |
|            | 40 71 63         | Doppler Flow Meters  |
|            | 40 71 66         | Transit Time Flow Meters   |
|            | 40 71 69         | Open Channel Flow Meters   |
|            | 40 71 73         | Coriolis Flow Meters   |
|            | 40 71 76         | Thermal Flow Meters  |
|            | 40 71 79         | Flow Switches  |
|            | 40 71 83         | Sight Flow Indicators  |
|            | 40 71 86         | Flow Metering Weirs  |
| <b>4</b> 0 | 72 00            | Level Measurement  |
| 70         | 40 72 13         | Ultrasonic Level Meters (Continuous and Point-Type)                            |
|            | 40 72 13         | Radar Level Meters   |
|            | 40 72 23         | Laser Level Meters   |
|            |                  |  |
|            | 40 72 29         | Nuclear Level Meters  Conscitute Type Level Meters (Continuous and Boint Type) |
|            | 40 72 33         | Capacitance Type Level Meters (Continuous and Point Type)                      |
|            | 40 72 36         | RF Admittance Level Meters (Continuous and Point Type)                         |
|            | <i>4</i> 0 72 43 | Pressure and Differential Pressure Type Level Meters                           |

| 72 46             | Bubbler Systems   |
|-------------------|---|
|                   | Magnetic and Magnetostrictive Level Meters  |
|                   | Displacement-Type Level Meters  |
|                   | Sight Level Gauges  |
| 72 76             | Level Switches  |
| 72 83             | Leak Detection Systems  |
| 0                 | Pressure, Strain, and Force Measurement   |
|                   | Pressure and Differential Pressure Gauges   |
|                   | Manometers  |
| 73 23             | Absolute-Pressure Transmitters  |
| 73 26             | Gauge-Pressure Transmitters   |
| 73 29             | Differential Pressure Transmitters  |
| 73 33             | Multi-Variable Pressure/Temperature Transmitters  |
| 73 36             | Pressure and Differential Pressure Switches   |
| 73 43             | Force Measurement Devices   |
| 73 46             | Load Cells  |
| 73 53             | Torque Measurement Devices  |
| 73 63             | Diaphragm Seals   |
| 0                 | Temperature Measurement   |
|                   | Resistance Temperature Devices  |
| <sup>7</sup> 4 16 | Thermocouples   |
| 74 23             | Radiation Pyrometers  |
| 74 33             | Thermistors   |
| 74 36             | Diode Temperature Measurement Devices   |
| 74 43             | Bimetallic Thermometers   |
| 74 46             | Fluid Expansion Thermometers  |
| 74 49             | Change-of-State Temperature Measurement Devices   |
| 74 53             | Cryogenic Temperature Sensors   |
| 74 63             | Temperature Transmitters  |
|                   | Temperature Switches  |
| 74 69             | Thermowells, Protection Tubes, and Test Thermowells   |
| 0                 | Process Liquid Analytical Measurement   |
| 75 05             | Multi-Parameter Analyzer Systems  |
| 75 13             | pH/ORP Analyzers  |
| 75 16             | Conductivity Analyzers  |
|                   | Moisture Analyzers  |
|                   | Chlorine Analyzers  |
|                   | Free-Chlorine Analyzers   |
|                   | Residual-Chlorine Analyzers   |
|                   | Chlorine Dioxide Analyzer   |
|                   | Dissolved Chlorine Dioxide Analyzers  |
|                   | Dissolved Ammonia Analyzers   |
|                   | Fluoride Analyzers  |
|                   | Dissolved Oxygen Analyzers  |
|                   | Dissolved Ozone Analyzers   |
|                   | Turbidity Analyzers Suspended Solids/Sludge Density Analyzers   |
|                   | Liquid Density Analyzers  |
|                   | Monochloramine Analyzers  |
|                   | Nitrogen Analyzers  |
|                   | 72 53<br>72 63<br>72 76<br>73 76<br>73 16<br>73 26<br>73 33 36<br>73 36<br>73 36<br>73 36<br>74 4 36<br>74 4 49<br>74 4 66<br>75 16<br>75 21.13<br>75 23<br>75 25 26<br>75 25 26<br>75 26<br>75 27 28<br>75 28<br>76 28<br>77 3 36<br>77 4 4 36<br>77 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 |

|     | 40 75 69   | Phosphorous Analyzers   |
|-----|--|---|
|     | 40 75 73   | Particle Counters   |
|     | 40 75 76   | Total Organic Carbon Analyzers  |
|     | 40 75 79   | Total Organics Analyzers  |
|     | 40 75 83   | Hardness Analyzers  |
|     | 40 75 86   | Alkalinity Analyzer   |
| 40  | 76 00  | Process Gas Analytical Measurement  |
| . • | 40 76 05   | Continuous Emissions Monitoring Systems   |
|     | 40 76 13   | Oxygen Gas Analyzers  |
|     | 40 76 16   | Ozone Analyzers   |
|     | 40 76 23   | Combustible Gas Monitors  |
|     | 40 76 26   | Chlorine Gas Analyzers  |
|     | 40 76 29   | Ammonia Gas Analyzers   |
|     | 40 76 33   | Hydrogen Sulfide Monitors   |
|     | 40 76 36   | Sulfur Dioxide Analyzers  |
|     | 40 76 39   | Carbon Dioxide Analyzers  |
|     | 40 76 43   | Carbon Monoxide Analyzers   |
|     | 40 76 53   | Dewpoint/Moisture Analyzers   |
|     | 40 76 56   | Gas Density Analyzers   |
|     | 40 76 63   | Flue Gas Analyzers  |
|     | 40 76 66   | NO/NOX Analyzers  |
|     | 40 76 73   | Hydrocarbon Analyzers   |
|     | 40 76 76   | Gas Chromatograph Analyzers   |
|     | 40 76 79   | Vapor Pressure Analyzers  |
|     | 40 76 83   | Mass Spectrometers  |
| 40  | 77 00  | Position and Motion Measurement   |
|     |  |   |
|     | 40 77 13   | Acceleration Measurement Devices  |
|     | 40 77 13<br>40 77 16   | Acceleration Measurement Devices Proximity Measurement Devices  |
|     | 40 77 16   | Proximity Measurement Devices   |
|     | 40 77 16<br>40 77 19   | Proximity Measurement Devices Vibration Velocity Measurement Devices  |
|     | 40 77 16   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems   |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices   |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b>   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices Panel Mounted Instruments   |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices Panel Mounted Instruments Indicators and Meters   |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices Panel Mounted Instruments Indicators and Meters Indicating Lights   |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons  |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers  |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders  |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators   |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers   |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays  |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays Isolators, Intrinsically-Safe Barriers, and Surge Suppressors  |
| 40  | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53<br>40 78 56   | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays  |
|     | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53<br>40 78 59<br>40 78 63                             | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays Isolators, Intrinsically-Safe Barriers, and Surge Suppressors Power Supplies Alarm Dialers   |
|     | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53<br>40 78 56<br>40 78 59                             | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays Isolators, Intrinsically-Safe Barriers, and Surge Suppressors Power Supplies Alarm Dialers  Miscellaneous Instruments, Calibration Equipment,  |
|     | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53<br>40 78 56<br>40 78 59<br>40 78 63<br><b>79 00</b> | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays Isolators, Intrinsically-Safe Barriers, and Surge Suppressors Power Supplies Alarm Dialers  Miscellaneous Instruments, Calibration Equipment, Instrument Valves, and Fittings  |
|     | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53<br>40 78 56<br>40 78 59<br>40 78 63<br><b>79 00</b> | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays Isolators, Intrinsically-Safe Barriers, and Surge Suppressors Power Supplies Alarm Dialers  Miscellaneous Instruments, Calibration Equipment, Instrument Valves, and Fittings Nuclear Mass-Measuring Scales                                  |
|     | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53<br>40 78 56<br>40 78 59<br>40 78 63<br><b>79 00</b> | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays Isolators, Intrinsically-Safe Barriers, and Surge Suppressors Power Supplies Alarm Dialers  Miscellaneous Instruments, Calibration Equipment, Instrument Valves, and Fittings Nuclear Mass-Measuring Scales Instrument Calibration Equipment |
|     | 40 77 16<br>40 77 19<br>40 77 23<br>40 77 26<br><b>78 00</b><br>40 78 13<br>40 78 16<br>40 78 19<br>40 78 23<br>40 78 26<br>40 78 33<br>40 78 43<br>40 78 53<br>40 78 56<br>40 78 59<br>40 78 63<br><b>79 00</b> | Proximity Measurement Devices Vibration Velocity Measurement Devices Vibration Monitoring Systems Position, Speed, and Motion Measurement Devices  Panel Mounted Instruments Indicators and Meters Indicating Lights Switches and Push Buttons Potentiometers and Manual Controllers Chart Recorders Annunciators Single-Loop Controllers Relays Isolators, Intrinsically-Safe Barriers, and Surge Suppressors Power Supplies Alarm Dialers  Miscellaneous Instruments, Calibration Equipment, Instrument Valves, and Fittings Nuclear Mass-Measuring Scales                                  |

| 40 79 36<br>40 79 39<br>40 79 43 | Voltage-to-Pressure Converters Signal Conditioners and Converters Deadweight Testers |
|----------------------------------|--|
| 40 79 46                         | Flame Scanners   |
| 40 79 63                         | Instrument Tubing  |
| 40 79 66                         | Instrument Valve Manifolds, Valves, and Fittings                                     |
| 40 80 00                         | <b>Commissioning of Process Systems</b>  |
| 40 90 00                         | Primary Control Devices  |
| 40 91 00                         | Primary Control Valves   |
| 40 91 13                         | Electrically-Operated Primary Control Valves   |
| 40 91 16                         | Hydraulically-Operated Primary Control Valves  |
| 40 91 19                         | Pneumatically-Operated Primary Control Valves  |
| 40 91 23                         | Solenoid Primary Control Valves  |
| 40 91 26                         | Specialty Primary Control Valves   |
| 40 92 00                         | Self-Contained Flow Controllers  |
| 40 93 00                         | Linear Actuators and Positioners   |
| 40 94 00                         | Self-Contained Pressure Regulators   |
| 40 95 00                         | Rotary Actuators   |
| 40 96 00                         | Saturable Core Reactors  |
| 40 97 00                         | Variable Frequency Drives  |

| 41 00 00             | Material Processing and Handling                                    |
|----------------------|---|
|                      | Equipment   |
| 41 01 00             | Operation and Maintenance of Material Processing                    |
| 0. 00                | and Handling Equipment  |
| 41 01 10             | Operation and Maintenance of Bulk Material Processing Equipment     |
| 41 01 20             | Operation and Maintenance of Piece Material Handling Equipment      |
| 41 01 30             | Operation and Maintenance of Manufacturing Equipment                |
| 41 01 40             | Operation and Maintenance of Container Processing and Packaging     |
| 41 01 50             | Operation and Maintenance of Material Storage                       |
| 41 01 60             | Operation and Maintenance of Mobile Plant Equipment                 |
| 41 05 00             | Common Work Results for Material Processing and                     |
|                      | Handling Equipment  |
| 41 05 05             | Selective Demolition for Material Processing and Handling Equipment |
| 41 06 00             | Schedules for Material Processing and Handling                      |
|                      | Equipment   |
| 41 06 10             | Schedules for Bulk Material Processing Equipment                    |
| 41 06 10             | Schedules for Piece Material Handling Equipment                     |
| 41 06 30             | Schedules for Manufacturing Equipment                               |
| 41 06 40             | Schedules for Container Processing and Packaging                    |
| 41 06 50             | Schedules for Material Storage                                      |
| 41 06 60             | Schedules for Mobile Plant Equipment                                |
| 41 08 00             | <b>Commissioning of Material Processing and Handling</b>            |
|                      | Equipment   |
| 41 08 10             | Commissioning of Bulk Material Processing Equipment                 |
| 41 08 20             | Commissioning of Piece Material Handling Equipment                  |
| 41 08 30             | Commissioning of Manufacturing Equipment                            |
| 41 08 40             | Commissioning of Container Processing and Packaging                 |
| 41 08 50             | Commissioning of Material Storage                                   |
| 41 08 60             | Commissioning of Mobile Plant Equipment                             |
| 41 10 00             | Bulk Material Processing Equipment                                  |
| 41 11 00             | Bulk Material Sizing Equipment                                      |
| 41 11 13             | Bulk Material Agglomerators   |
| 41 11 16             | Bulk Material Air Mill Classifiers                                  |
| 41 11 19             | Bulk Material Centrifuges   |
| 41 11 23             | Bulk Material Crushers  |
| 41 11 26             | Bulk Material Cyclones  |
| 41 11 29             | Bulk Material Fluid Bed Separators                                  |
| 41 11 33             | Bulk Material Grinders  |
| 41 11 36             | Bulk Material Homogenizers  |
| 41 11 39             | Bulk Material Lump Breakers   |
| 41 11 43             | Bulk Material Mills   |
| 41 11 46<br>41 11 40 | Bulk Material Pulverizers Bulk Material Screens                     |
| 41 11 49<br>41 11 53 | Bulk Material Screens  Bulk Material Shredders                      |
| 41 11 56             | Bulk Material Sieves  |
| 41 12 00             | Bulk Material Conveying Equipment                                   |
| 7 1 1 <b>4 00</b>    | Dank material Centeying Equipment                                   |

|    | 41 12 13    | Bulk Material Conveyors                      |
|----|-------------|--|
|    | 41 12 13.13 | Airslide Bulk Material Conveyors             |
|    | 41 12 13.16 | Auger Bulk Material Conveyors                |
|    | 41 12 13.19 | Belt Bulk Material Conveyors                 |
|    | 41 12 13.23 | Container Bulk Material Conveyors            |
|    | 41 12 13.26 | Drag Chain Bulk Material Conveyors           |
|    | 41 12 13.29 | Hopper Bulk Material Conveyors               |
|    | 41 12 13.33 | Reciprocating Bulk Material Conveyors        |
|    | 41 12 13.36 | Screw Bulk Material Conveyors                |
|    | 41 12 13.39 | Stacking and Reclaim Bulk Material Conveyors |
|    | 41 12 13.43 | Trough Bulk Material Conveyors               |
|    | 41 12 13.46 | Tube Bulk Material Conveyors                 |
|    | 41 12 13.49 | Vibratory Bulk Material Conveyors            |
|    | 41 12 13.53 | Weigh-Belt Bulk Material Conveyors           |
|    | 41 12 16    | Bucket Elevators                             |
|    | 41 12 19    | Pneumatic Conveyors                          |
|    | 41 12 19.13 | Dense Phase Pneumatic Conveyors              |
|    | 41 12 19.16 | Dilute Phase Pneumatic Conveyors             |
| 41 | 13 00       | Bulk Material Feeders                        |
|    | 41 13 13    | Bin Activators/Live Bin Bottoms              |
|    | 41 13 23    | Feeders                                      |
|    | 41 13 23.13 | Airlock Bulk Material Feeders                |
|    | 41 13 23.16 | Apron Bulk Material Feeders                  |
|    | 41 13 23.19 | Rotary-Valve Bulk Material Feeders           |
|    | 41 13 23.23 | Screw Bulk Material Feeders                  |
|    | 41 13 23.26 | Vibratory Bulk Material Feeders              |
|    | 41 13 23.29 | Volumetric Bulk Material Feeders             |
|    | 41 13 23.33 | Weigh Bulk Material Feeders                  |
| 41 | 14 00       | Batching Equipment                           |
|    | 41 14 13    | Bag-Handling Batching Equipment              |
|    | 41 14 16    | Batch Cars/Transports                        |
|    | 41 14 19    | Batch Hoppers                                |
|    | 41 14 23    | Bulk Bag-Handling Batching Equipment         |
|    | 41 14 26    | Blenders                                     |
|    | 41 14 29    | Drum-Handling Batching Equipment             |
|    |             |  |
|    | 41 14 33    | Mixers                                       |
|    | 41 14 36    | Weigh Scales                                 |
| 41 | 20 00       | Piece Material Handling Equipment            |
| 41 | 21 00       | Conveyors                                    |
| •  | 41 21 13    | Automatic Guided Vehicle Systems             |
|    | 41 21 23    | Piece Material Conveyors                     |
|    | 41 21 23.13 | Belt Piece Material Conveyors                |
|    | 41 21 23.16 | Container Piece Material Conveyors           |
|    | 41 21 23.10 | Drag-Chain Piece Material Conveyors          |
|    | 41 21 23.19 | Hopper Piece Material Conveyors              |
|    | 41 21 23.26 | Monorail Piece Material Conveyors            |
|    | 41 21 23.20 | Power and Free Piece Material Conveyors      |
|    | 41 21 23.29 | Reciprocating Piece Material Conveyors       |
|    | 41 21 23.36 | Roller Piece Material Conveyors              |
|    | 41 21 23.39 | Vibratory Piece Material Conveyors           |
|    | 41 21 23.43 | Walking-Beam Piece Material Conveyors        |
|    | 41 21 23 46 | Weigh-Belt Piece Material Conveyors          |
|    |             |  |

| 41 21 23.53<br>41 21 26<br>41 21 29<br>41 21 33<br>41 21 36<br>41 21 39<br>41 21 39.13<br><b>41 22 00</b><br>41 22 13.13<br>41 22 13.16<br>41 22 13.19<br>41 22 13.23<br>41 22 13.29<br>41 22 23.3<br>41 22 23.13<br>41 22 23.16<br>41 22 23.19<br>41 22 23.23 | Postal Conveyors Piece Material Diverter Gates Piece Material Gravity Slides Piece Material Transfer Cars Piece Material Turntables Piece Material Feeders Piece Material Vibratory Feeders  Cranes and Hoists  Cranes Bridge Cranes Gantry Cranes Jib Cranes Mobile Cranes Tower Cranes Specialty Cranes Hoists Fixed Hoists Portable Hoists Monorail Hoists Specialty Hoists |
|--|--|
| 41 22 33   | Derricks   |
| 41 23 00   | Lifting Devices  |
| 41 23 13   | Clamps   |
| 41 23 16<br>41 23 19   | Grabs<br>Hooks   |
| 41 23 23   | Lifts  |
| 41 23 26   | Slings   |
| 41 23 29   | Spreader Bars/Beams  |
| 41 23 33   | Tongs  |
| 41 24 00   | <b>Specialty Material Handling Equipment</b>   |
| 41 24 13   | Aeration Devices   |
| 41 24 16   | Bin Vibrators  |
| 41 24 19   | Dehydrators  |
| 41 24 23   | Hydrators  |
| 41 24 26   | Hydraulic Power Systems  |
| 41 24 29   | Lubrication Systems  |
| 41 24 33   | Magnetic Separators  |
| 41 24 36   | Metal Detectors  |
| 41 24 39<br>41 24 43   | Railcar Movers Turnheads/Distributors  |
| 41 24 45   | Sorting Machines   |
| 41 24 46.13  | Postal Sorting Machines  |
| 41 30 00   | Manufacturing Equipment  |
|  | <u> </u>   |
| 41 31 00   | Manufacturing Lines and Equipment  |
| 41 31 13   | Manufacturing Lines  |
| 41 31 13.13<br>41 31 13.16   | Assembly Lines Casting Lines   |
| 41 31 13.19  | Coating Lines  |
| 41 31 13.23  | Converting Lines   |
| 41 31 13.26  | Disassembly Lines  |
| 41 31 13.29  | Extrusion Lines  |

|    | 41 31 13.33<br>41 31 13.36 | Machining Lines Molding Lines                        |
|----|----------------------------|--|
|    | 41 31 13.39                | Finishing/Painting Lines                             |
|    | 41 31 13.43                | Painting Lines                                       |
|    | 41 31 13.46                | Pickling Lines                                       |
|    | 41 31 13.49<br>41 31 13.53 | Plating Lines Polishing Lines                        |
|    | 41 31 13.56                | Press Lines  |
|    | 41 31 13.59                | Rolling/Calendaring Lines                            |
|    | 41 31 13.63                | Web Processing Lines                                 |
|    | 41 31 16                   | Pick and Place Systems                               |
|    | 41 31 19                   | Manufacturing-Line Robots                            |
|    | 41 31 23                   | Specialty Assembly Machines                          |
| 41 | 32 00                      | Forming Equipment                                    |
|    | 41 32 13                   | Bending Equipment                                    |
|    | 41 32 16                   | Blow-Molding Equipment                               |
|    | 41 32 19                   | Brake-Forming Equipment                              |
|    | 41 32 23                   | Cold-Forming Equipment                               |
|    | 41 32 26                   | Die-Casting Equipment                                |
|    | 41 32 29                   | Drawing Equipment                                    |
|    | 41 32 33                   | Electroforming Equipment                             |
|    | 41 32 36                   | Forging Equipment                                    |
|    | 41 32 39                   | Extruding Equipment                                  |
|    | 41 32 43                   | Metal-Spinning Equipment                             |
|    | 41 32 46                   | Piercing Equipment                                   |
|    | 41 32 49                   | Powder Metal-Forming Equipment                       |
|    | 41 32 53                   | Pressing Equipment                                   |
|    | 41 32 56                   | Roll-Forming Equipment                               |
|    | 41 32 59<br>41 32 63       | Shearing Equipment                                   |
|    | 41 32 66                   | Spinning Equipment Stretching/Leveling Equipment     |
|    | 41 32 69                   | Swaging Equipment                                    |
| 11 | 33 00                      |  |
| 41 |                            | Machining Equipment                                  |
|    | 41 33 13<br>41 33 16       | Automatic Screw Machining Equipment Boring Equipment |
|    | 41 33 19                   | Broaching Equipment                                  |
|    | 41 33 23                   | Drilling Equipment                                   |
|    | 41 33 26                   | Electro-Discharge Machining Equipment                |
|    | 41 33 29                   | Grinding Equipment                                   |
|    | 41 33 33                   | Hobbing Equipment                                    |
|    | 41 33 36                   | Lapping Equipment                                    |
|    | 41 33 39                   | Lathe Equipment                                      |
|    | 41 33 43                   | Leveling Equipment                                   |
|    | 41 33 46                   | Machining Center Equipment                           |
|    | 41 33 53                   | Milling Equipment                                    |
|    | 41 33 53.13                | Horizontal Milling Equipment                         |
|    | 41 33 53.16                | Vertical Milling Equipment                           |
|    | 41 33 60                   | Multi-Axis Machine Equipment                         |
|    | 41 33 63                   | Planing Equipment                                    |
|    | 41 33 66                   | Reaming Equipment                                    |
|    | 41 33 69                   | Routing Equipment                                    |

|            | 41 33 73<br>41 33 76   | Sawing Equipment Shaping Equipment   |
|------------|--|--|
|            | 41 33 79   | Threading Equipment  |
| <b>1</b> 1 | 34 00  | Finishing Equipment  |
| 71         | 41 34 13   | Anodizing Equipment  |
|            | 41 34 16   | Barrel Tumbling Equipment  |
|            | 41 34 23   | Coating Equipment  |
|            | 41 34 23.13  | Diffusion Coating Equipment  |
|            | 41 34 23.16  | Dipping Coating Equipment  |
|            | 41 34 23.19  | Film Coating Equipment   |
|            | 41 34 23.23  | Phosphatizing Coating Equipment  |
|            | 41 34 23.26  | Plasma Coating Equipment   |
|            | 41 34 23.29  | Hardface Welding Coating Equipment   |
|            | 41 34 23.33  | Spray Painting Booth   |
|            | 41 34 26   | Deburring Equipment  |
|            | 41 34 36   | Electroplating Equipment   |
|            | 41 34 46   | Grinding Equipment   |
|            | 41 34 49   | Honing Equipment   |
|            | 41 34 53   | Lapping Equipment  |
|            | 41 34 56<br>41 34 59   | Shot Peening Equipment Superfinishing/Polishing Equipment  |
| 44         |  |  |
| 41         | 35 00  | Dies and Molds   |
|            | 41 35 13   | Dies<br>Drawing Dies   |
|            | 41 35 13.13<br>41 35 13.16   | Drawing Dies Extrusion Dies  |
|            | 41 35 13.16  | Press Dies   |
|            |  |  |
|            | 41.00 107.0  | ROTATY DIES  |
|            | 41 35 13.23<br>41 35 13.26   | Rotary Dies<br>Rule Dies   |
|            |  | •  |
| 41         | 41 35 13.26  | Rule Dies<br>Molds   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b>  | Rule Dies Molds Assembly and Testing Equipment   |
| 41         | 41 35 13.26<br>41 35 33  | Rule Dies<br>Molds   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13  | Rule Dies Molds Assembly and Testing Equipment Applicators   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13<br>41 36 13.13<br>41 36 13.16<br>41 36 13.19   | Rule Dies Molds Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16   | Rule Dies Molds Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19   | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment  |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13<br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19<br>41 36 19.13  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19<br>41 36 19.13<br>41 36 19.16   | Rule Dies Molds Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment  |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19   | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment  |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19   | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23<br>41 36 19.26  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment  |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 19.19<br>41 36 19.13<br>41 36 19.16<br>41 36 19.23<br>41 36 19.23<br>41 36 19.29<br>41 36 19.33<br>41 36 23  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23<br>41 36 19.26<br>41 36 19.29<br>41 36 19.33<br>41 36 23.13   | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Torches   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23<br>41 36 19.29<br>41 36 19.29<br>41 36 19.33<br>41 36 23.13<br>41 36 23.16  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Torches High-Pressure Water Cutting Equipment   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23<br>41 36 19.26<br>41 36 19.29<br>41 36 19.29<br>41 36 19.33<br>41 36 23.13<br>41 36 23.16<br>41 36 23.19  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Torches High-Pressure Water Cutting Equipment Laser Cutting Equipment   |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23<br>41 36 19.26<br>41 36 19.29<br>41 36 19.29<br>41 36 23.13<br>41 36 23.13<br>41 36 23.16<br>41 36 23.23  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Torches High-Pressure Water Cutting Equipment Laser Cutting Equipment Plasma Cutting Equipment  |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23<br>41 36 19.26<br>41 36 19.29<br>41 36 19.29<br>41 36 19.33<br>41 36 23.13<br>41 36 23.13<br>41 36 23.13<br>41 36 23.19<br>41 36 23.23<br>41 36 26  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Equipment Cutting Torches High-Pressure Water Cutting Equipment Laser Cutting Equipment Plasma Cutting Equipment Process Tools  |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.13<br>41 36 19.19<br>41 36 19.23<br>41 36 19.26<br>41 36 19.29<br>41 36 19.33<br>41 36 23.13<br>41 36 23.13<br>41 36 23.13<br>41 36 23.15<br>41 36 23.19<br>41 36 26.13  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Equipment Cutting Torches High-Pressure Water Cutting Equipment Laser Cutting Equipment Plasma Cutting Equipment Process Tools Air Process Tools                        |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 16<br>41 36 19.13<br>41 36 19.16<br>41 36 19.19<br>41 36 19.23<br>41 36 19.26<br>41 36 19.29<br>41 36 19.29<br>41 36 19.33<br>41 36 23.13<br>41 36 23.13<br>41 36 23.13<br>41 36 23.19<br>41 36 23.23<br>41 36 26  | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Equipment Cutting Torches High-Pressure Water Cutting Equipment Laser Cutting Equipment Plasma Cutting Equipment Process Tools  |
| 41         | 41 35 13.26<br>41 35 33<br><b>36 00</b><br>41 36 13.13<br>41 36 13.16<br>41 36 13.19<br>41 36 19.13<br>41 36 19.13<br>41 36 19.13<br>41 36 19.23<br>41 36 19.26<br>41 36 19.29<br>41 36 19.29<br>41 36 19.33<br>41 36 23.13<br>41 36 26.13<br>41 36 26.13<br>41 36 26.16 | Rule Dies Molds  Assembly and Testing Equipment Applicators Adhesive Applicators Lubricant Applicators Sealer Applicators Fixtures and Jigs Joining Equipment Adhesive Joining Equipment Arc-Welding Equipment Brazing Equipment Resistance-Welding Equipment Riveting Equipment Sintering Equipment Soldering Equipment Cutting Equipment Cutting Equipment Cutting Torches High-Pressure Water Cutting Equipment Laser Cutting Equipment Plasma Cutting Equipment Process Tools Air Process Tools Electric Process Tools |

|     | 41 36 29<br>41 36 29.13    | Manufacturing Measurement and Testing Equipment Gages, Rules, and Blocks |
|-----|----------------------------|--|
|     | 41 36 29.16                | Penetrant Measurement and Testing Equipment                              |
|     | 41 36 29.19                | Laser Measurement and Testing Equipment                                  |
|     | 41 36 29.23                | Magnaflux Measurement and Testing Equipment                              |
|     | 41 36 29.26                | Optical Comparators  |
|     | 41 36 29.29<br>41 36 29.33 | Profilometers Radiograph Measurement and Testing Equipment               |
|     | 41 36 29.36                | Surface Tables   |
|     | 41 36 29.39                | Ultrasonic Measurement and Testing Equipment                             |
|     | 41 36 29.43                | Test Weigh Scales  |
| 41  | 40 00                      | Container Processing and Packaging                                       |
| 41  | 41 00                      | Container Filling and Sealing  |
|     | 41 41 13                   | Bulk Container Fillers/Packers   |
|     | 41 41 16                   | Container Cappers  |
|     | 41 41 19                   | Container Fillers  |
|     | 41 41 19.13                | Bag Fillers  |
|     | 41 41 19.16                | Box Fillers  |
|     | 41 41 19.19                | Bottle Fillers   |
| 4.4 | 41 41 23                   | Container Sealers  |
| 41  | 42 00                      | Container Packing Equipment  |
|     | 41 42 13                   | Box Packing Equipment  |
|     | 41 42 13.13<br>41 42 13.16 | Box Makers Box Packers   |
|     | 41 42 16                   | Bulk Material Loaders  |
|     | 41 42 16.13                | Container Bulk Material Loaders  |
|     | 41 42 16.23                | Truck Bulk Material Loaders  |
|     | 41 42 16.26                | Railcar Bulk Material Loaders  |
|     | 41 42 16.29                | Ship Bulk Material Loaders   |
|     | 41 42 16.33                | Barge Bulk Material Loaders  |
|     | 41 42 19                   | Carton Packers   |
|     | 41 42 23                   | Carton Sealers   |
|     | 41 42 26<br>41 42 29       | Carton Shrink Wrappers Carton Stackers                                   |
| 11  | 43 00                      |  |
| 41  |                            | Shipping Packaging   |
|     | 41 43 13                   | Banding/Strapping Equipment  |
|     | 41 43 16<br>41 43 16.13    | Barcode Equipment Barcode Readers  |
|     | 41 43 16.16                | Barcode Printers   |
|     | 41 43 19                   | Labeling Equipment   |
|     | 41 43 23                   | Pallet Stacking/Wrapping Equipment                                       |
| 41  | 50 00                      | Material Storage   |
|     | 51 00                      | Automatic Material Storage   |
| т.  | 41 51 13                   | Automatic Storage/Automatic Retrieval Systems                            |
| 41  | 52 00                      | Bulk Material Storage  |
| Τ.  | 41 52 13                   | Bins and Hoppers   |
|     | 41 52 13.13                | Fixed Bins and Hoppers   |
|     | 41 52 13.23                | Portable Bins and Hoppers  |
|     | 41 52 13.33                | Bulk Material Containers   |
|     | 41 52 13.43                | Returnable Bins and Hoppers  |
|     | 41 52 13 53                | Throwaway Bins and Hoppers   |

|            | 41 52 16                | Silos  |
|------------|-------------------------|--|
|            | 41 52 16.13             | Concrete Silos   |
|            | 41 52 16.16             | Concrete Masonry Unit Silos                              |
|            | 41 52 16.19<br>41 52 19 | Steel Silos Material Storaga Tanka                       |
|            | 41 52 19                | Material Storage Tanks Horizontal Material Storage Tanks |
|            | 41 52 19.13             | Vertical Material Storage Tanks                          |
|            | 41 52 19.33             | Portable Material Storage Tanks                          |
| 41         | 53 00                   | Storage Equipment and Systems                            |
| • •        | 41 53 13                | Storage Cabinets   |
|            | 41 53 16                | Container Storage Systems                                |
|            | 41 53 19                | Flat Files   |
|            | 41 53 23                | Storage Racks  |
|            | 41 53 23.13             | Mobile Storage Racks                                     |
|            | 41 53 26                | Mezzanine Storage Systems                                |
| <b>4</b> 1 | 60 00                   | <b>Mobile Plant Equipment</b>                            |
|            | 61 00                   |  |
| 41         |                         | Mobile Earth Moving Equipment                            |
|            | 41 61 13                | Backhoes   |
|            | 41 61 16<br>41 61 19    | Bulldozers   |
|            | 41 61 23                | Compactors Excavators                                    |
|            | 41 61 26                | Graders  |
|            | 41 61 29                | Payloaders   |
|            | 41 61 33                | Trenchers  |
| 11         | 62 00                   | Trucks   |
| 71         | 41 62 13                | Cement Mixer Trucks                                      |
|            | 41 62 16                | Dump Trucks  |
|            | 41 62 19                | Flatbed Trucks   |
|            | 41 62 23                | Forklift Trucks  |
|            | 41 62 26                | Pickup Trucks  |
|            | 41 62 29                | Tank Trucks  |
| 41         | 63 00                   | General Vehicles   |
| •          | 41 63 13                | Bicycles   |
|            | 41 63 16                | Carts  |
|            | 41 63 19                | Maintenance Vehicles                                     |
|            | 41 63 23                | Utility Vehicles   |
|            | 41 63 26                | Vans   |
|            | 41 63 29                | Wagons   |
| 41         | 64 00                   | Rail Vehicles  |
|            | 41 64 13                | Locomotives  |
|            | 41 64 13.13             | Diesel Locomotives                                       |
|            | 41 64 13.23             | Electric Locomotives                                     |
|            | 41 64 16                | Mobile Railcar Movers                                    |
| 41         | <b>65 00</b>            | Mobile Support Equipment                                 |
|            | 41 65 13                | Mobile Air Compressors                                   |
|            | 41 65 16                | Mobile Generators  |
|            | 41 65 19                | Mobile Welders   |
| 41         | 66 00                   | Miscellaneous Mobile Equipment                           |
|            | 41 66 13                | Mobile Boring and Drilling Rigs                          |

| 41 66 16 | Mobile Lifts and Cherrypickers      |
|----------|-------------------------------------|
| 41 66 19 | Mobile Paving Equipment             |
| 41 66 23 | Mobile Sweepers/Vacuums             |
| 41 67 00 | Plant Maintenance Equipment         |
| 41 67 13 | Plant Lube Oil System               |
| 41 67 16 | Plant Fall Protection Equipment     |
| 41 67 19 | Plant Safety Equipment              |
| 41 67 23 | Plant Maintenance Tools             |
| 41 67 26 | Plant Maintenance Washing Equipment |

| 42 00 00             | Process Heating, Cooling, and Drying   |
|----------------------|--|
|                      | Equipment  |
| 42 01 00             | Operation and Maintenance of Process Heating,  |
|                      | Cooling, and Drying Equipment  |
| 42 01 10             | Operation and Maintenance of Process Heating Equipment   |
| 42 01 20             | Operation and Maintenance of Process Cooling Equipment   |
| 42 01 30             | Operation and Maintenance of Process Drying Equipment  |
| 42 05 00             | Common Work Results for Process Heating, Cooling,  |
|                      | and Drying Equipment   |
| 42 05 05             | Selective Demolition for Process Heating, Cooling, and Drying Equipment                            |
| 42 06 00             | Schedules for Process Heating, Cooling, and Drying   |
|                      | Equipment  |
| 42 06 10             | Schedules for Process Heating Equipment  |
| 42 06 20             | Schedules for Process Cooling Equipment  |
| 42 06 30             | Schedules for Process Drying Equipment   |
| 42 08 00             | Commissioning of Process Heating, Cooling, and   |
|                      | Drying Equipment   |
| 42 08 10             | Commissioning of Heating Equipment   |
| 42 08 20<br>42 08 30 | Commissioning of Cooling Equipment   |
|                      | Commissioning of Drying Equipment  |
| 42 10 00             | Process Heating Equipment  |
| 42 11 00             | Process Boilers  |
| 42 11 13             | Low-Pressure Process Boilers   |
| 42 11 16<br>42 11 19 | Intermediate-Pressure Process Boilers  |
| 42 11 19             | High-Pressure Process Boilers Specialty Process Boilers  |
| 42 12 00             | Process Heaters  |
| 42 12 13             | Electric Process Heaters   |
| 42 12 16             | Fuel-Fired Process Heaters   |
| 42 12 19             | Thermoelectric Process Heaters   |
| 42 12 23             | Solar Process Heaters  |
| 42 12 26             | Specialty Process Heaters  |
| 42 13 00             | Industrial Heat Exchangers and Recuperators  |
| 42 13 13             | Industrial Gas-to-Gas Heat Exchangers  |
| 42 13 16<br>42 13 19 | Industrial Liquid-to-Gas/Gas-to-Liquid Heat Exchangers Industrial Liquid-to-Liquid Heat Exchangers |
| 42 13 23             | Industrial Cas Radiation Heat Exchangers   |
| 42 13 26             | Industrial Solar Radiation Heat Exchangers   |
| 42 14 00             | Industrial Furnaces  |
| 42 14 13             | Annealing Furnaces   |
| 42 14 16             | Atmosphere Generators  |
| 42 14 19             | Industrial Baking Furnaces   |
| 42 14 23             | Industrial Brazing Furnaces  |
| 42 14 26<br>42 14 29 | Industrial Calcining Furnaces Industrial Heat-Treating Furnaces                                    |
| 12 17 20             | madethar riode riodening ramadoo   |

| 42 14 33    | Industrial Melting Furnaces                 |
|-------------|---|
| 42 14 33.13 | Ceramics and Glass Melting Furnaces         |
| 42 14 33.16 | Ferrous Melting Furnaces                    |
| 42 14 33.19 | Non-Ferrous Melting Furnaces                |
| 42 14 36    | Primary Refining Furnaces                   |
| 42 14 43    | Reactor Furnaces                            |
| 42 14 46    | Industrial Reheat Furnaces                  |
| 42 14 53    | Industrial Sintering Furnaces               |
| 42 14 56    | Industrial Vacuum Furnaces                  |
| 42 15 00    | Industrial Ovens                            |
| 42 15 13    | Industrial Drying Ovens                     |
| 42 15 16    | Industrial Curing Ovens                     |
| 42 15 19    | Industrial Specialty Ovens                  |
| 42 20 00    | Process Cooling Equipment                   |
| 42 21 00    | Process Cooling Towers                      |
| 42 21 13    | Open-Circuit Process Cooling Towers         |
| 42 21 16    | Closed-Circuit Process Cooling Towers       |
| 42 22 00    | Process Chillers and Coolers                |
| 42 22 13    | Centrifugal Process Chillers and Coolers    |
| 42 22 16    | Reciprocating Process Chillers and Coolers  |
| 42 22 19    | Refrigerant Process Chillers and Coolers    |
| 42 22 23    | Rotary Process Chillers and Coolers         |
| 42 22 26    | Thermoelectric Process Chillers and Coolers |
| 42 23 00    | <b>Process Condensers and Evaporators</b>   |
| 42 23 13    | Process Condensers                          |
| 42 23 16    | Process Cooling Evaporators                 |
| 42 23 19    | Process Humidifiers                         |
| 42 30 00    | Process Drying Equipment                    |
| 42 31 00    | Gas Dryers and Dehumidifiers                |
| 42 31 13    | Drying Evaporators                          |
| 42 31 16    | Desiccant Equipment                         |
| 42 31 19    | Regenerative Dryers                         |
| 42 31 23    | Refrigerant Dryers                          |
| 42 32 00    | Material Dryers                             |
| 42 32 13    | Centrifugal Material Dryers                 |
| 42 32 16    | Conveyor Material Dryers                    |
| 42 32 19    | Flash Material Dryers                       |
| 42 32 23    | Fluid-Bed Material Dryers                   |
| 42 32 26    | Material Roasters                           |
| 42 32 29    | Rotary-Kiln Material Dryers                 |
| 42 32 33    | Spray Material Dryers                       |
| 42 32 36    | Tower Material Dryers                       |
| 42 32 39    | Vacuum Material Dryers                      |
| 42 32 43    | Specialty Material Dryers                   |

| 43 00 00                | Process Gas and Liquid Handling,  |
|-------------------------|---|
|                         | Purification, and Storage Equipment   |
| 43 01 00                | Operation and Maintenance of Process Gas and Liquid   |
|                         | Handling, Purification, and Storage Equipment   |
| 43 01 10<br>43 01 10.13 | Operation and Maintenance of Gas Handling Equipment Gas Blowers Maintenance and Rehabilitation                            |
| 43 01 10.16             | Gas Compressors Maintenance and Rehabilitation  |
| 43 01 20<br>43 01 20.13 | Operation and Maintenance of Liquid Handling Equipment Liquid Pumps Maintenance and Rehabilitation                        |
| 43 01 20.16             | Liquid Process Equipment Maintenance and Rehabilitation   |
| 43 01 30<br>43 01 40    | Operation and Maintenance of Gas and Liquid Hi-Purification Equipment Operation and Maintenance of Gas and Liquid Storage |
| 43 01 40.13             | Non-pressurized Tanks Cleaning, Maintenance, and Rehabilitation   |
| 43 01 40.16             | Pressurized Tanks Cleaning, Maintenance, and Rehabilitation   |
| 43 05 00                | Common Work Results for Process Gas   |
|                         | and Liquid Handling, Purification, and  |
|                         | Storage Equipment   |
| 43 05 05                | Selective Demolition for Process Gas and Liquid Handling, Purification,   |
| 43 05 10                | and Storage Equipment.  Common Work Results for Gas Handling Equipment  |
| 43 05 20                | Common Work Results for Liquid Handling Equipment   |
| 43 05 30<br>43 05 40    | Common Work Results for Gas and Liquid Hi-Purification Equipment Common Work Results for Gas and Liquid Storage           |
| <b>43 06 00</b>         | Schedules for Process Gas and Liquid Handling,  |
| 10 00 00                | Purification, and Storage Equipment   |
| 43 06 10                | Schedules for Gas Handling Equipment  |
| 43 06 20                | Schedules for Cooland Liquid His Durification Equipment   |
| 43 06 30<br>43 06 40    | Schedules for Gas and Liquid Hi-Purification Equipment Schedules for Gas and Liquid Storage                               |
| 43 08 00                | Commissioning of Process Gas and Liquid Handling,   |
|                         | Purification, and Storage Equipment   |
| 43 08 10                | Commissioning of Gas Handling Equipment   |
| 43 08 20<br>43 08 30    | Commissioning of Liquid Handling Equipment  Commissioning of Gas and Liquid Purification Equipment                        |
| 43 08 40                | Commissioning of Gas and Liquid Storage   |
| 43 10 00                | Gas Handling Equipment  |
| 43 11 00                | Gas Fans, Blowers, Pumps and Boosters   |
| 43 11 11                | Direct Drive Single Stage Centrifugal Blowers   |
| 43 11 12<br>43 11 13    | Integrally Geared Single Stage Centrifugal Blowers Separately Geared Single Stage Centrifugal Blowers                     |
| 43 11 14                | Direct Drive Integral Shaft Single Stage Centrifugal Blowers  |
| 43 11 17                | Horizontally Split Multistage Centrifugal Blowers   |
| 43 11 18<br>43 11 19    | Vertically Split Multistage Centrifugal Blowers Centrifugal Fans  |
| 43 11 23                | Axial Blowers   |

|    | 43 11 26                   | Axial Fans  |
|----|----------------------------|---|
|    | 43 11 31                   | Rotary Helical Screw Blowers  |
|    | 43 11 33                   | Rotary Lobe Blowers   |
|    | 43 11 34                   | Regenerative Rotary Blowers   |
|    | 43 11 36                   | Rotary Vane Blowers   |
|    | 43 11 41                   | Gas-handling Venturi Jet Pumps  |
|    | 43 11 43                   | Gas-handling Vacuum Pumps   |
|    | 43 11 46                   | Gas Boosters  |
| 43 | 12 00                      | Gas Compressors   |
|    | 43 12 11                   | Centrifugal Compressors   |
|    | 43 12 13                   | Diagonal or Mixed-flow Compressors  |
|    | 43 12 16                   | Axial-flow Compressors  |
|    | 43 12 33                   | Single-acting Reciprocating Compressors   |
|    | 43 12 34                   | Double-acting Reciprocating Compressors   |
|    | 43 12 37                   | Diaphragm Reciprocating Compressors   |
|    | 43 12 51                   | Rotary Screw Compressors  |
|    | 43 12 53                   | Rotary Vane Compressors   |
|    | 43 12 56                   | Rotary Liquid-ring Compressors  |
| 40 | 43 12 57                   | Rotary Scroll Compressors   |
| 43 | 13 00                      | Gas Process Equipment   |
|    | 43 13 13                   | Gas Blenders  |
|    | 43 13 19                   | Gas Mixers  |
|    | 43 13 23                   | Gas Pressure Regulators   |
|    | 43 13 31                   | Gas Separation Equipment  |
|    | 43 13 33                   | Gas Dehydration Equipment   |
|    | 43 13 36<br>43 13 39       | Combined Gas Separation and Dehydration Equipment Gas Recovery and Condensing Equipment |
|    | 43 13 43                   | Waste Gas Burner System   |
|    | 43 13 46                   | Gas Control and Safety Equipment  |
| 12 | 15 00                      | Process Air and Gas Filters   |
| 43 | 43 15 13                   | Blower Intake and Turbine Air Filters   |
|    | 43 15 13.13                | Static Prefilters   |
|    | 43 15 13.16                | Static Final Filters  |
|    | 43 15 13.19                | Static HEPA Filters   |
|    | 43 15 13.23                | Pulse Filters   |
|    | 43 15 33                   | Grease Filters  |
|    | 43 15 43                   | Mist Eliminators  |
|    | 43 15 63                   | High-temperature Air Filters  |
|    | 43 15 73                   | Multiple-application Air Filters  |
|    | 43 15 73.11                | Air Filter Media  |
|    | 43 15 73.12<br>43 15 73.13 | Permanent Washable Filters Poly-ring Air Filters  |
|    | 43 15 73.15                | Rigid Cell Filters  |
|    | 43 15 73.17                | Automatic Roll-type Air Filters   |
|    | 43 15 76                   | Chemical Media for Air and Gas Filters  |
| 43 | 20 00                      | Liquid Handling Equipment   |
|    | 22 00                      | · · · · · · · · · · · · · · · · · · ·   |
| 43 |                            | Liquid Agration Davison   |
|    | 43 22 13                   | Liquid Agitators  |
|    | 43 22 16<br>43 22 19       | Liquid Agitators  |
|    | 73 ZZ 18                   | Liquid Blenders   |

| 43 22 23    | Liquid Centrifuges   |
|-------------|--|
| 43 22 26    | Liquid Deaerators  |
| 43 22 29    | Drum Handling Liquid Process Equipment   |
| 43 22 33    | Liquid Emulsifiers   |
| 43 22 36    | Liquid Evaporators   |
| 43 22 39    | Liquid Feeders   |
| 43 22 56    | Liquid Process Mixers  |
| 43 22 59    | Liquid Process Pressure Regulators   |
| 43 22 63    | Liquid Separation Towers   |
| 43 22 66    | Liquid Weigh Systems   |
| 43 22 69    | Liquid Grease Receiving and Dewatering Systems   |
| 43 22 73    | Liquid Fillers   |
|             | ·  |
| 43 22 76    | Liquid Screeners   |
| 43 22 79    | Liquid Clarifiers  |
| 43 22 83    | Liquid Classifiers   |
| 43 22 86    | Liquid Homogenizers  |
| 43 22 89    | Liquid Presses   |
| 43 22 96    | Liquid Versators   |
| 43 22 99    | Liquid Votators  |
| 43 23 00    | Dry Location Liquid Pumps  |
| 43 23 13    | Overhung Horizontal Centrifugal Pumps  |
| 43 23 13.13 | Overhung Flexibly-coupled Horizontal Axial Flow Centrifugal Pumps                          |
| 43 23 13.14 | Overhung Flexibly-coupled Horizontal Frame-mounted Centrifugal Pumps                       |
| 43 23 13.17 | Overhung Flexibly-coupled Horizontal Foot-mounted Centrifugal Pumps                        |
| 43 23 13.19 | Overhung Flexibly-coupled Horizontal Foot-mounted Self-priming Centrifugal                 |
|             | Pumps  |
| 43 23 13.21 | Overhung Flexibly-coupled Horizontal Centerline-mounted Centrifugal Pumps                  |
| 43 23 13.23 | Overhung Flexibly-coupled, Magnetic Drive, Sealless Horizontal Centrifugal                 |
|             | Pumps  |
| 43 23 13.24 | Overhung Close-coupled High-speed Integral Gear Centrifugal Pumps                          |
| 43 23 13.27 | Overhung Close-coupled Horizontal Centrifugal Pumps  |
| 43 23 13.29 | Overhung Close-coupled Sealless with Canned Motor Horizontal Centrifugal Pumps             |
| 43 23 21    | Between-Bearings Impeller Centrifugal Pumps  |
| 43 23 21.13 | Between-bearings Impeller, One- and Two-stage Axially-split Centrifugal Pumps              |
| 43 23 21.14 | Between-bearings Impeller, One- and Two-stage, Radially-split Centrifugal Pumps            |
| 43 23 21.17 | Between-bearings Impeller, Multiple-stage, Axially-split Centrifugal Pumps                 |
| 43 23 21.19 | Between-bearings Impeller, Multiple-stage, Radially-split Centrifugal Pumps                |
| 43 23 21.21 | Between-bearings Impeller, Multiple-stage, Radially-split, Single Casing Centrifugal Pumps |
| 43 23 21.23 | Between-bearings Impeller, Multiple-stage, Radially-split, Double Casing                   |
|             | Centrifugal Pumps  |
| 43 23 31    | Vertical Centrifugal Pumps   |
| 43 23 31.13 | Overhung Flexibly-coupled Vertical Centrifugal Pumps                                       |
| 43 23 31.14 | Overhung Flexibly-coupled Vertical Inline Centrifugal Pumps                                |
| 43 23 31.17 | Overhung Flexibly-coupled Vertical End-suction Centrifugal Pumps                           |
| 43 23 31.19 | Overhung Flexibly-coupled, Magnetic Drive, Sealless Vertical Centrifugal Pumps             |
| 43 23 31.21 | Overhung Close-coupled Vertical Inline Centrifugal Pumps                                   |
| 43 23 31.23 | Overhung Close-coupled Vertical End Suction Centrifugal Pumps                              |
| 43 23 31.24 | Overhung Close-coupled Sealless with Canned Motor Vertical Centrifugal Pumps               |
| 43 23 31.27 | Overhung Rigidly-coupled Vertical Inline Centrifugal Pumps                                 |
| 43 23 31.29 | Overhung Close-coupled Vertical Centrifugal Pumps  |
| 43 23 51    | Vane Pumps   |

| 40.00.50                   | Distant Durants  |
|----------------------------|--|
| 43 23 53                   | Piston Pumps   |
| 43 23 53.13                | Piston Axial Rotary Pumps  |
| 43 23 53.23                | Piston Radial Rotary Pumps   |
| 43 23 53.33                | Circumferential Single-Piston Rotary Pumps   |
| 43 23 53.36                | Circumferential Multiple-Piston Rotary Pumps   |
| 43 23 54                   | Flexible Member Pumps  |
| 43 23 54.13                | Flexible Tube Rotary Pumps   |
| 43 23 54.23                | Flexible Vane Rotary Pumps   |
| 43 23 54.33                | Flexible Liner Rotary Pumps  |
| 43 23 56                   | Gear Pumps   |
| 43 23 56.13                | External Gear Rotary Pumps   |
| 43 23 56.23                | Internal Gear Rotary Pumps   |
| 43 23 57                   | Progressing Cavity Pumps   |
|                            |  |
| 43 23 58                   | Lobe Pumps   |
| 43 23 58.13                | Single-Lobe Rotary Pumps   |
| 43 23 58.23                | Multiple-Lobe Rotary Pumps   |
| 43 23 59                   | Screw Pumps  |
| 43 23 59.13                | Single-Screw Rotary Pumps  |
| 43 23 59.23                | Multiple-Screw Rotary Pumps  |
| 43 23 71                   | Air-Operated Diaphragm Reciprocating Pumps   |
| 43 23 71.13                | Air-Operated Diaphragm Simplex Single-Acting Reciprocating Pumps   |
| 43 23 71.23                | Air-Operated Diaphragm Simplex Double-Acting Reciprocating Pumps   |
| 43 23 71.33                | Air-Operated Diaphragm Duplex Single-acting Reciprocating Pumps  |
| 43 23 71.43                | Air-Operated Diaphragm Duplex Double-acting Reciprocating Pumps  |
| 43 23 72                   | Air-Operated Bellows Reciprocating Pumps   |
| 43 23 72.13                | Air-Operated Bellows Simplex Single-Acting Reciprocating Pumps   |
| 43 23 72.23                | Air-Operated Bellows Simplex Double-Acting Reciprocating Pumps   |
| 43 23 72.33                | Air-Operated Bellows Duplex Single-Acting Reciprocating Pumps  |
| 43 23 72.43                | Air-Operated Bellows Duplex Double-Acting Reciprocating Pumps  |
| 43 23 73                   | Air-Operated Piston Reciprocating Pumps  |
| 43 23 73.13                | Air-Operated Piston Simplex Single-Acting Reciprocating Pumps  |
| 43 23 73.23                | Air-Operated Piston Simplex Double-Acting Reciprocating Pumps  |
| 43 23 73.33                | Air-Operated Piston Duplex Single-Acting Reciprocating Pumps   |
| 43 23 73.43                | Air-Operated Piston Duplex Double-Acting Reciprocating Pumps   |
| 43 23 74                   | Steam Horizontal Reciprocating Pumps   |
| 43 23 74.13                | Steam Horizontal Double-Acting Piston Simplex Reciprocating Pumps  |
| 43 23 74.23                | Steam Horizontal Double-Acting Piston Duplex Reciprocating Pumps   |
| 43 23 74.33                | Steam Horizontal Double-Acting Plunger Simplex Reciprocating Pumps   |
| 43 23 74.43                | Steam Horizontal Double-Acting Plunger Duplex Reciprocating Pumps  |
| 43 23 75                   | Steam Vertical Reciprocating Pumps   |
| 43 23 75.13                | Steam Vertical Double-Acting Piston Simplex Reciprocating Pumps  |
| 43 23 75.23                | Steam Vertical Double-Acting Piston Duplex Reciprocating Pumps   |
| 43 23 75.33                | Steam Vertical Double-Acting Plunger Simplex Reciprocating Pumps   |
| 43 23 75.43                | Steam Vertical Double-acting Plunger Duplex Reciprocating Pumps  |
| 43 23 76                   | Power Horizontal Reciprocating Pumps   |
| 43 23 76.11                | Power Horizontal Single-Acting Piston Simplex Reciprocating Pumps  |
| 43 23 76.12                | Power Horizontal Single-Acting Piston Duplex Reciprocating Pumps   |
| 43 23 76.13                | Power Horizontal Single-Acting Piston Multiplex Reciprocating Pumps  |
| 43 23 76.21                | Power Horizontal Single-Acting Plunger Simplex Reciprocating Pumps   |
| 43 23 76.22                | Power Horizontal Single-Acting Plunger Duplex Reciprocating Pumps  |
| 43 23 76.23                | Power Horizontal Single-Acting Plunger Multiplex Reciprocating Pumps   |
| 43 23 76.31                | Power Horizontal Double-Acting Piston Simplex Reciprocating Pumps  |
| 43 23 76.32<br>43 23 76.33 | Power Horizontal Double-Acting Piston Duplex Reciprocating Pumps Power Horizontal Double-Acting Piston Multiplex Reciprocating Pumps   |
| 43 23 76.33                | Power Horizontal Double-Acting Planger Simplex Reciprocating Pumps  Power Horizontal Double-Acting Plunger Simplex Reciprocating Pumps |
| 70 20 10.41                | Tower Honzonian Double-Adding Fullips  |

| 43 23 76.42                | Power Horizontal Double-Acting Plunger Duplex Reciprocating Pumps  |
|----------------------------|--|
| 43 23 76.43                | Power Horizontal Double-Acting Plunger Multiplex Reciprocating Pumps   |
| 43 23 77                   | Power Vertical Reciprocating Pumps   |
| 43 23 77.11                | Power Vertical Single-Acting Piston Simplex Reciprocating Pumps  |
| 43 23 77.12                | Power Vertical Single-Acting Piston Duplex Reciprocating Pumps   |
| 43 23 77.13                | Power Vertical Single-Acting Piston Multiplex Reciprocating Pumps  |
| 43 23 77.21                | Power Vertical Single-Acting Plunger Simplex Reciprocating Pumps   |
| 43 23 77.22                | Power Vertical Single-Acting Plunger Duplex Reciprocating Pumps  |
| 43 23 77.23                | Power Vertical Single-Acting Plunger Multiplex Reciprocating Pumps   |
| 43 23 77.31                | Power Vertical Double-Acting Piston Simplex Reciprocating Pumps  |
| 43 23 77.32                | Power Vertical Double-Acting Piston Duplex Reciprocating Pumps   |
| 43 23 77.33                | Power Vertical Double-Acting Piston Multiplex Reciprocating Pumps  |
| 43 23 77.41                | Power Vertical Double-Acting Plunger Simplex Reciprocating Pumps   |
| 43 23 77.42                | Power Vertical Double-Acting Plunger Duplex Reciprocating Pumps  |
| 43 23 77.43                | Power Vertical Double-Acting Plunger Multiplex Reciprocating Pumps   |
| 43 23 78                   | Controlled Volume Horizontal Reciprocating Pumps   |
| 43 23 78.11                | Controlled Volume Horizontal Packed Plunger Simplex Reciprocating Pumps  |
| 43 23 78.12                | Controlled Volume Horizontal Packed Plunger Duplex Reciprocating Pumps   |
| 43 23 78.13                | Controlled Volume Horizontal Packed Plunger Multiplex Reciprocating Pumps  |
| 43 23 78.21                | Controlled Volume Horizontal Packed Piston Simplex Reciprocating Pumps   |
| 43 23 78.22                | Controlled Volume Horizontal Packed Piston Duplex Reciprocating Pumps  |
| 43 23 78.23<br>43 23 78.31 | Controlled Volume Horizontal Packed Piston Multiplex Reciprocating Pumps Controlled Volume Horizontal Mechanically-Coupled Diaphragm Simplex |
| 43 23 70.31                | Reciprocating Pumps  |
| 43 23 78.32                | Controlled Volume Horizontal Mechanically-Coupled Diaphragm Duplex   |
| 43 23 70.32                | Reciprocating Pumps  |
| 43 23 78.33                | Controlled Volume Horizontal Mechanically-Coupled Diaphragm Multiplex  |
| 40 20 70.00                | Reciprocating Pumps  |
| 43 23 78.34                | Controlled Volume Horizontal Hydraulically-Coupled Diaphragm Simplex   |
|                            | Reciprocating Pumps  |
| 43 23 78.35                | Controlled Volume Horizontal Hydraulically-Coupled Diaphragm Duplex  |
|                            | Reciprocating Pumps  |
| 43 23 78.36                | Controlled Volume Horizontal Hydraulically-Coupled Diaphragm Multiplex   |
|                            | Reciprocating Pumps  |
| 43 23 79                   | Controlled Volume Vertical Reciprocating Pumps   |
| 43 23 79.11                | Controlled Volume Vertical Packed Plunger Simplex Reciprocating Pumps  |
| 43 23 79.12                | Controlled Volume Vertical Packed Plunger Duplex Reciprocating Pumps   |
| 43 23 79.13                | Controlled Volume Vertical Packed Plunger Multiplex Reciprocating Pumps  |
| 43 23 79.21                | Controlled Volume Vertical Packed Piston Simplex Reciprocating Pumps   |
| 43 23 79.22                | Controlled Volume Vertical Packed Piston Duplex Reciprocating Pumps  |
| 43 23 79.23                | Controlled Volume Vertical Packed Piston Multiplex Reciprocating Pumps   |
| 43 23 79.31                | Controlled Volume Vertical Mechanically-Coupled Diaphragm Simplex  |
| 42 22 70 22                | Reciprocating Pumps  Controlled Valume Vertical Mechanically Coupled Disphrage Dupley  |
| 43 23 79.32                | Controlled Volume Vertical Mechanically-Coupled Diaphragm Duplex Reciprocating Pumps   |
| 43 23 79.33                | Controlled Volume Vertical Mechanically-Coupled Diaphragm Multiplex  |
| 43 23 79.33                | Reciprocating Pumps  |
| 43 23 79.34                | Controlled Volume Vertical Hydraulically-Coupled Diaphragm Simplex   |
| 10 20 10.01                | Reciprocating Pumps  |
| 43 23 79.35                | Controlled Volume Vertical Hydraulically-Coupled Diaphragm Duplex  |
| .5 20 7 5.50               | Reciprocating Pumps  |
| 43 23 79.36                | Controlled Volume Vertical Hydraulically-Coupled Diaphragm Multiplex   |
|                            | Reciprocating Pumps  |
| 43 24 00                   | Suspended Liquid Pumps   |
| 43 24 11                   | Vertically Suspended Single-Casing Submersible Centrifugal Pumps   |
| TO 27 11                   | Totalogny Odopondod Omgio Odomg Odomorololo Odminugar i umps   |

|    | 43 24 13                   | Vertically Suspended Single-Casing Discharge-through-column Centrifugal  |
|----|----------------------------|--|
|    | 10.04.10.10                | Pumps  |
|    | 43 24 13.13                | Vertically Suspended Single-Casing Discharge-through-column Diffuser   |
|    | 43 24 13.23                | Centrifugal Pumps Vertically Suspended Single-Casing Discharge-through-column Volute Centrifugal                       |
|    | 43 24 13.23                | Pumps  |
|    | 43 24 13.33                | Vertically Suspended Single-Casing Discharge-through-column Axial Flow   |
|    |                            | Centrifugal Pumps  |
|    | 43 24 16                   | Vertically Suspended Single-casing Separate Discharge (Sump)   |
|    |                            | Centrifugal Pumps  |
|    | 43 24 16.13                | Vertically Suspended Single-Casing Separate Discharge (Sump) Line Shaft  |
|    |                            | Centrifugal Pumps  |
|    | 43 24 16.23                | Vertically Suspended Single-Casing Separate Discharge (Sump) Cantilever  |
|    | 43 24 21                   | Centrifugal Pumps Vertically Supported Double Cooling Centrifugal Rumps  |
|    | 43 24 21.13                | Vertically Suspended Double-Casing Centrifugal Pumps Vertically Suspended Double-Casing Diffuser Centrifugal Pumps     |
|    | 43 24 21.23                | Vertically Suspended Double-Casing Volute Centrifugal Pumps  |
|    | 43 24 26                   | Vertically Suspended Inline Casing Diffuser Centrifugal Pumps  |
|    | 43 24 41                   | Archimedes Screw Pumps   |
|    | 43 24 41.13                | Positive-Displacement Inclined Open Archimedes Screw-type Pumps  |
|    | 43 24 41.23                | Positive-Displacement Inclined Closed-casing Archimedes Screw-type Pumps   |
| 43 | 25 00                      | Submersible/Immersible Liquid Pumps  |
|    | 43 25 13                   | Overhung Close-Coupled Submersible Centrifugal Pumps   |
|    | 43 25 13.13                | Overhung Close-Coupled Submersible Diffuser Centrifugal Pumps  |
|    | 43 25 13.23                | Overhung Close-Coupled Submersible Volute Centrifugal Pumps  |
|    | 43 25 50                   | Positive Displacement Submersible Liquid Pumps   |
| 43 | 26 00                      | Specialized Liquid Pumps   |
|    | 43 26 13                   | Submersible Grinder Pumps  |
|    | 43 26 30                   | Regenerative Centrifugal Pumps   |
|    | 43 26 30.13                | Overhung Impeller Regenerative Turbine Pumps   |
|    | 43 26 30.21                | Overhung Impeller Single-Stage Regenerative Turbine Pumps  |
|    | 43 26 30.23                | Overhung Impeller Two-Stage Regenerative Turbine Pumps   |
|    | 43 26 30.26<br>43 26 30.27 | Between-Bearings Impeller Regenerative Turbine Pumps Between-Bearings Impeller Single-Stage Regenerative Turbine Pumps |
|    | 43 26 30.27                | Between-Bearings Impeller Two-Stage Regenerative Turbine Pumps   |
|    | 43 26 40                   | Regenerative Turbine Pumps   |
|    | 43 26 60                   | Regenerative Vacuum Pumps  |
|    | 43 26 70                   | Rotating-Case Pumps  |
| 43 | 27 00                      | Process Liquid Filters   |
| 73 | 43 27 13                   | Cyclonic Liquid Filters  |
|    | 43 27 16                   | Centrifugal Horizontal Pressure Leaf Liquid Filters  |
|    | 43 27 19                   | Press Liquid Filters   |
|    | 43 27 23                   | Liquid Bag Filters   |
|    | 43 27 33                   | Mechanically Cleaned Liquid Filters  |
|    | 43 27 43                   | Tubular Backwashing Liquid Filters   |
|    | 43 27 53                   | Vacuum Belt Liquid Filters   |
|    | 43 27 63                   | Woven Media Liquid Filters   |
|    | 43 27 63.13                | Disc Liquid Filters  |
|    | 43 27 63.23                | Rotating Drum Liquid Filters   |
|    | 43 27 63.33                | Layer Liquid Filters   |
|    | 43 27 63.43                | Candle Liquid Filters  |
|    | 43 27 63.53                | Vertical Leaf Liquid Filters   |

|      | 43 27 73<br>43 27 73.13    | Nonwoven Media Liquid Filters<br>Surface Liquid Filters  |
|------|----------------------------|--|
|      | 43 27 73.23                | Depth Liquid Filters   |
| 43   | 30 00                      | <b>Gas and Liquid Purification Equipment</b>   |
| 43 3 | 31 00                      | Gas and Liquid Purification Filtration Equipment   |
|      | 43 31 13                   | Gas and Liquid Purification Filters  |
|      | 43 31 13.13                | Activated Carbon-Gas and Liquid Purification Filters   |
|      | 43 31 13.16                | Gas and Liquid Purification Filter Presses   |
|      | 43 31 13.19                | High-Purity Cartridge Gas and Liquid Purification Filters  |
|      | 43 31 13.23                | Membrane Diaphragm Gas and Liquid Purification Filters   |
|      | 43 31 13.26                | Multimedia Gas and Liquid Purification Filters  Protrectment Contridge Cas and Liquid Purification Filters |
|      | 43 31 13.29<br>43 31 13.33 | Pretreatment Cartridge Gas and Liquid Purification Filters Ultrafilter Units                               |
| 43 ' | 32 <b>00</b>               | Gas and Liquid Purification Process Equipment  |
| TJ ( | 43 32 13                   | Gas and Liquid Purification Process Beds   |
|      | 43 32 13.13                | Anion-Gas and Liquid Purification Process Beds   |
|      | 43 32 13.16                | Cation-Gas and Liquid Purification Process Beds  |
|      | 43 32 23                   | Gas and Liquid Purification Process Clarifier Systems  |
|      | 43 32 26                   | Gas and Liquid Purification Decarbonators  |
|      | 43 32 29                   | Electronic Deionization Purification Units   |
|      | 43 32 33                   | External Regeneration Systems  |
|      | 43 32 36                   | Mixed-Bed Ion-Exchange Vessels   |
|      | 43 32 39                   | Gas and Liquid Purification Mixed Beds   |
|      | 43 32 39.13                | Externally Regenerable Gas and Liquid Purification Mixed Beds  |
|      | 43 32 39.16                | In-Situ Regenerable Gas and Liquid Purification Mixed Beds   |
|      | 43 32 53                   | Packed-Bed Ion-Exchange Vessels  |
|      | 43 32 56                   | Reverse-Osmosis Purification Units   |
|      | 43 32 59                   | Gas and Liquid Purification Scrubbers  |
|      | 43 32 63                   | Ultraviolet Sterilizers  |
|      | 43 32 66                   | Vacuum Degasifiers   |
|      | 43 32 69                   | Chemical Feed Systems  |
|      | 43 32 73                   | Ozonation Equipment  |
|      | 43 32 76                   | Chlorination Equipment   |
|      | 40 00                      | Gas and Liquid Storage   |
| 43 4 | 41 00                      | Non-pressurized Tanks and Vessels  |
|      | 43 41 11                   | Bolted Steel Tanks   |
|      | 43 41 13                   | Welded Steel Tanks   |
|      | 43 41 13.13                | Glass-lined Welded Steel Tanks   |
|      | 43 41 13.23                | Rubber-lined Welded Steel Tanks  |
|      | 43 41 13.33                | Epoxy-lined Welded Steel Tanks Ceramic-lined Welded Steel Tanks  |
|      | 43 41 13.43<br>43 41 23    | Stainless Steel Tanks  |
|      | 43 41 26                   | Aluminum Tanks   |
|      | 43 41 31                   | Metallic Specialty Tanks   |
|      | 43 41 41                   | Polyvinyl Chloride Tanks   |
|      | 43 41 43                   | Polyethylene Tanks   |
|      | 43 41 45                   | Fiberglass Reinforced Plastic Tanks  |
|      | 43 41 53                   | Wood Stave Tanks   |
|      | 43 41 63                   | Precast Concrete Tanks   |
|      | 43 41 73                   | Ceramic Tanks  |
|      |                            |  |

| 43 41 83 | Non-metallic Specialty Tanks                 |
|----------|--|
| 43 42 00 | Pressurized Tanks and Vessels                |
| 43 42 11 | Cast Iron Pressure Tanks                     |
| 43 42 13 | Ductile Iron Pressure Tanks                  |
| 43 42 21 | Welded Steel Pressure Tanks                  |
| 43 42 23 | Glass-lined Steel Pressure Tanks             |
| 43 42 26 | Welded Steel Gas Storage Sphere              |
| 43 42 33 | Stainless Steel Pressure Tanks               |
| 43 42 36 | Aluminum Pressure Tanks                      |
| 43 42 41 | Metallic Specialty Pressure Tanks            |
| 43 42 53 | Fiberglass Reinforced Plastic Pressure Tanks |
| 43 42 83 | Non-metallic Specialty Pressure Tanks        |

| 44 00 00             | Pollution and Waste Control   |
|----------------------|---|
|                      | Equipment   |
| 44 01 00             | Operation and Maintenance of Pollution  |
|                      | and Waste Control Equipment   |
| 44 01 10             | • • • • • • • • • • • • • • • • • • •   |
| 44 01 10             | Operation and Maintenance of Air Pollution Control Operation and Maintenance of Noise Pollution Control |
| 44 01 30             | Operation and Maintenance of Odor Control Equipment   |
| 44 01 40             | Operation and Maintenance of Water Pollution Control Equipment  |
| 44 01 50             | Operation and Maintenance of Solid Waste Control and Reuse  |
| 44 01 60             | Operation and Maintenance of Waste Thermal Processing Equipment   |
| 44 05 00             | Common Work Results for Pollution and   |
|                      | Waste Control Equipment   |
| 44 05 05             | Selective Demolition for Pollution and Waste Control Equipment  |
| 44 06 00             | Schedules for Pollution and Waste Contro  |
| 44 00 00             |   |
|                      | Equipment   |
| 44 06 10             | Schedules for Air Pollution Control   |
| 44 06 20             | Schedules for Noise Pollution Control   |
| 44 06 30<br>44 06 40 | Schedules for Odor Control Equipment Schedules for Water Pollution Control Equipment                    |
| 44 06 50             | Schedules for Solid Waste Control and Reuse   |
| 44 06 60             | Schedules for Waste Thermal Processing Equipment  |
| 44 08 00             | Commissioning of Pollution and Waste  |
| <del>11</del> 00 00  |   |
|                      | Control Equipment   |
| 44 08 10             | Commissioning of Air Pollution Control  |
| 44 08 20             | Commissioning of Noise Pollution Control  |
| 44 08 30             | Commissioning of Odor Control Equipment Commissioning Water Pollution Control Equipment                 |
| 44 08 40<br>44 08 50 | Commissioning Water Foliation Control Equipment  Commissioning Solid Waste Control and Reuse            |
| 44 08 60             | Commissioning Solid Waste Control and Redse  Commissioning of Waste Thermal Processing Equipment        |
| 44 10 00             | Air Pollution Control   |
| 44 11 00             | Particulate Control Equipment   |
| 44 11 13             | Fugitive Dust Control   |
| 44 11 16             | Fugitive Dust Barrier Systems   |
| 44 11 19             | Atmospheric Air Quality Monitoring Equipment  |
| 44 11 20             | Gravitational Separators  |
| 44 11 31             | Venturi Scrubbing Equipment   |
| 44 11 33             | Spray Tower/Chamber Scrubbing Equipment   |
| 44 11 36             | Cyclone Scrubbing Equipment   |
| 44 11 51             | Pulse Jet Fabric Filtration Equipment   |
| 44 11 53             | Reverse Flow Fabric Filtration Equipment  |
| 44 11 54             | Shake/Deflate Fabric Filtration Equipment   |
| 44 11 56<br>44 11 59 | Cartridge Filtration Equipment Disposable Dry Filtration Equipment                                      |
| <del></del>          | Dioposabio Dry i ilitation Equipment  |

| 44 11 71 | Cyclone Dust Collection Equipment                  |
|----------|--|
| 44 11 73 | Multicylone Dust Collection Equipment              |
| 44 11 76 | Mist Elimination Equipment                         |
| 44 11 93 | Wet Electrostatic Precipitator Equipment           |
| 44 11 96 | Dry Plate Electrostatic Precipitator Equipment     |
| 44 13 00 | <b>Gaseous Air Pollution Control Equipment</b>     |
| 44 13 11 | Spray Tower/Chamber Absorption Equipment           |
| 44 13 13 | Packed Tower/Chamber Absorption Equipment          |
| 44 13 14 | Tray Tower Absorption Equipment                    |
| 44 13 16 | Jet Bubbling Reactor Equipment                     |
| 44 13 17 | Venturi Absorption Equipment                       |
| 44 13 20 | Vacuum Extraction Systems                          |
| 44 13 31 | Powdered Injection Adsorption Equipment            |
| 44 13 33 | Fluidized Bed Adsorption Equipment                 |
| 44 13 34 | Fixed Bed Adsorption Equipment                     |
| 44 13 36 | Rotary Bed Adsorption Equipment                    |
| 44 13 39 | Radial Bed Adsorption Equipment                    |
| 44 13 51 | Thermal Oxidation Equipment                        |
| 44 13 53 | Catalytic Oxidation Equipment                      |
| 44 13 56 | Flare Oxidation Equipment                          |
| 44 13 59 | Claus Sulfur Recovery Equipment                    |
| 44 13 71 | Thermal Reduction Equipment                        |
| 44 13 73 | Catalytic Reduction Equipment                      |
| 44 13 76 | Non-catalytic Reduction Equipment                  |
| 44 13 77 | Selective Non-catalytic Reduction Equipment        |
| 44 13 81 | Condensation Systems                               |
| 44 13 83 | Contact Condensing Equipment                       |
| 44 13 86 | Solvent Recovery Equipment                         |
| 44 13 91 | Biofilter Media                                    |
| 44 13 93 | Fixed Bed Biofilter Equipment                      |
| 44 13 96 | Fixed Bed Biotrickling Filter Equipment            |
| 44 13 97 | Fixed Bed Bioscrubbing Equipment                   |
| 44 20 00 | Noise Pollution Control                            |
|          |  |
| 44 21 00 | Noise Pollution Control Equipment                  |
| 44 21 13 | Fixed Noise Abatement Barriers                     |
| 44 21 16 | Flexible Noise Abatement Barriers                  |
| 44 21 19 | Portable Noise Abatement Barriers                  |
| 44 21 23 | Noise Pollution Silencers                          |
| 44 21 26 | Frequency Cancellers                               |
| 44 30 00 | Odor Control                                       |
| 44 31 00 | Odor Treatment Equipment                           |
| 44 31 11 | Wet Chemical Packed Tower Odor Control Equipment   |
| 44 31 13 | Chemical Mist System Odor Control Equipment        |
| 44 31 16 | Activated Carbon Adsorption Odor Control Equipment |
| 44 31 19 | Packaged Odor Control Systems                      |
| 44 31 21 | Odor Control Biofilters                            |
| 44 31 28 | Odor Control Biofilter Aeration Floor              |
| 44 31 29 | Odor Control Biofilter Media                       |
| 44 31 31 | Odor Control Biotrickling Filter Equipment         |
|          |  |

| 44 31 33             | Odor Control Bioscrubbing Equipment                               |
|----------------------|---|
| 44 31 41             | Odor Control Vapor Combustion Equipment                           |
| 44 31 83             | Adjusting and Balancing Odor Control Systems                      |
| 44 32 00             | Odor Dispersing and Masking/Counteracting                         |
|                      | Equipment   |
| 44 32 13             | Odor Dispersing Exhaust Stacks                                    |
| 44 32 13.13          | Fan-equipped Odor Dispersing Exhaust Stacks                       |
| 44 32 23             | Odor Masking/Counteracting Equipment                              |
|                      |   |
| 44 40 00             | Water Pollution Control Equipment                                 |
| 44 41 00             | Water Pollution Containment and Cleanup Equipment                 |
| 44 41 13             | Spill Cleanup   |
| 44 41 21             | Containment Booms   |
| 44 41 23             | Marine Spill Accessories  |
| 44 41 31             | Spill Decks   |
| 44 41 32             | Drum Containment Units  |
| 44 41 33             | Containment Pallets   |
| 44 41 34             | Prefabricated Spill Containment Curbing                           |
| 44 41 36             | Prefabricated Spill Containment Berms                             |
| 44 41 37             | Prefabricated Berms for Tank Containment                          |
| 44 41 41             | Collapsible Storage Tanks   |
| 44 50 00             | Solid Waste Control and Reuse                                     |
| 44 51 00             | Solid Waste Collection, Transfer, and Hauling                     |
| 77 31 00             |   |
| 44.54.40             | Equipment Salid Waste Bartolia Containore                         |
| 44 51 13             | Solid Waste Portable Containers                                   |
| 44 51 16             | Solid Waste Stationary Containers                                 |
| 44 51 23             | Solid Waste Transfer Trailers                                     |
| 44 53 00             | Solid Waste Processing Equipment                                  |
| 44 53 11             | Live-floor Storage Bins   |
| 44 53 13             | Refuse Cranes and Accessories                                     |
| 44 53 16             | Solid Waste Screens   |
| 44 53 21             | Car Crushers  |
| 44 53 23             | Shears and Guillotines  |
| 44 53 26             | Shredders and Grinders  |
| 44 53 27             | Perforators   |
| 44 53 31             | Bag Breakers  |
| 44 53 33             | Granulators   |
| 44 53 36             | Crumb Rubber Systems  |
| 44 53 39             | Briquetters   |
| 44 53 41             | Vibratory Table Separation Equipment                              |
| 44 53 43<br>44 53 44 | Ferrous Metals Separation Equipment                               |
| 44 53 44<br>44 53 46 | Eddy Current Separators   |
| 44 53 49             | Single-stream Materials Separation Equipment Ballistic Separators |
| 44 53 49<br>44 53 51 |   |
| 44 53 51             | Air Classifying Equipment Air Knives                              |
| 44 53 52             | Optical Sorting Equipment   |
| 44 53 56             | Packaged Sorting Stations   |
| 44 53 59             | Packaged Reclaimer Stations                                       |
|                      | . actagos recolamos canono  |

| 44 68 00               | Synthesis Gas Cleanup and Handling Equipment          |
|------------------------|---|
| 44 67 00               | Heat Recovery Equipment for Waste Thermal Processing  |
| 44 66 00               | Hazardous Waste and Medical Waste Incinerators        |
|                        | Pyrolysis Equipment                                   |
| <b>44</b> 65 <b>00</b> | Plasma Arc Gasification Equipment                     |
| 44 64 43<br>44 64 53   | Entrained Flow Gasification Equipment                 |
| 44 64 33               | Fluidized Bed Gasification Equipment                  |
| 44 64 23               | Co-current Fixed Bed Gasification Equipment           |
| 44 64 13               | Counter-current Fixed Bed Gasification Equipment      |
| 44 64 00               | Gasification Equipment                                |
| 44 63 00               | Rotary Kiln Incinerators                              |
| 44 62 00               | Fluidized Bed Combustion Equipment                    |
| 44 61 36               | Post-combustion Non-ferrous Metals Recovery Equipment |
| 44 61 33               | Post-combustion Ferrous Metals Recovery Equipment     |
| 44 61 31               | Ash Handling Equipment                                |
| 44 61 29               | Modular Combustion System Equipment                   |
| 44 61 26               | Refuse-derived Fuel Combustion Equipment              |
| 44 61 23               | Refuse-derived Fuel Feed Equipment                    |
| 44 61 16               | Mass Burn Combustion Equipment                        |
| 44 61 13               | Waste Receiving, Management, and Feed Equipment       |
| 44 61 00               | Waste-to-Energy Plants                                |
| 44 60 00               | Waste Thermal Processing Equipment                    |
| 44 55 73               | Compost Liquid Extraction Equipment                   |
| 44 55 43               | Compost Pad System                                    |
| 44 55 33               | In-vessel Composing Equipment                         |
| 44 55 26               | Compost Mixing and Blending Equipment                 |
| 44 55 23               | Compost Pile Turning Equipment                        |
| 44 55 16               | Compost Shredding Equipment                           |
| 44 55 13               | Compost Screening Equipment                           |
| 44 55 11               | Electromechanical Composters                          |
| 44 55 00               | Composting Equipment                                  |
| 44 53 73               | Solid Waste Liquid Extraction Equipment               |
| 44 53 64               | Bagging Equipment Wrappers                            |
| 44 53 63<br>44 53 64   | Solid Waste Baling Equipment                          |
| 44 53 61               | Solid Waste Compactors                                |
| 44 E2 C4               | Calid Maata Compactors                                |

| 45  | 5 00 00              | Industry-Specific Manufacturing  |
|-----|----------------------|--|
|     |                      | Equipment  |
| 45  | 05 00                | Common Work Results for Industry-Specific  |
|     |                      | Manufacturing Equipment  |
|     | 45 05 05             | Selective Demolition for Industry-Specific Manufacturing Equipment                                     |
| 45  | 08 00                | Commissioning of Industry-Specific Manufacturing   |
|     |                      | Equipment  |
| 45  | 11 00                | Oil and Gas Extraction Equipment   |
| 70  | 45 11 01             | Operation and Maintenance of Oil and Gas Extraction Equipment  |
|     | 45 11 06             | Schedules for Oil and Gas Extraction Equipment   |
|     |                      | 5 12 99 User-Defined Oil and Gas Extraction Equipment  |
| 45  | 13 00                | Mining Machinery and Equipment   |
|     | 45 13 01             | Operation and Maintenance of Mining Machinery and Equipment  |
|     | 45 13 06             | Schedules for Mining Machinery and Equipment   |
|     | 45 13 10 to 4        | 5 14 99 User-Defined Mining Machinery and Equipment  |
| 45  | 15 00                | Food Manufacturing Equipment   |
|     | 45 15 01             | Operation and Maintenance of Food Manufacturing Equipment  |
|     | 45 15 06             | Schedules for Food Manufacturing Equipment   |
|     |                      | 5 16 99 User-Defined Food Manufacturing Equipment  |
| 45  | 17 00                | Beverage and Tobacco Manufacturing Equipment   |
|     | 45 17 01             | Operation and Maintenance of Beverage and Tobacco Manufacturing<br>Equipment                           |
|     | 45 17 06             | Schedules for Beverage and Tobacco Manufacturing Equipment   |
|     |                      | 5 18 99 User-Defined Beverage and Tobacco Manufacturing Equipment                                      |
| 45  | 19 00                | Textiles and Apparel Manufacturing Equipment   |
|     | 45 19 01             | Operation and Maintenance of Textiles and Apparel Manufacturing<br>Equipment                           |
|     | 45 19 06             | Schedules for Textiles and Apparel Manufacturing Equipment   |
| 4 = |                      | 5 20 99 User-Defined Textiles and Apparel Manufacturing Equipment                                      |
| 45  | 21 00                | Leather and Allied Product Manufacturing Equipment   |
|     | 45 21 01             | Operation and Maintenance of Leather and Allied Product Manufacturing Equipment                        |
|     | 45 21 06             | Schedules for Leather and Allied Product Manufacturing Equipment                                       |
|     | 45 21 10 to 4        | Equipment  |
| 45  | 23 00                | Wood Product Manufacturing Equipment   |
|     | 45 23 01             | Operation and Maintenance of Wood Product Manufacturing Equipment                                      |
|     | 45 23 06             | Schedules for Wood Product Manufacturing Equipment   |
| A E |                      | 5 24 99 User-Defined Wood Product Manufacturing Equipment  |
| 45  | <b>25 00</b>         | Paper Manufacturing Equipment  |
|     | 45 25 01<br>45 25 06 | Operation and Maintenance of Paper Manufacturing Equipment Schedules for Paper Manufacturing Equipment |
|     |                      | 5 26 99 User-Defined Paper Manufacturing Equipment   |
| 45  | <b>27 00</b>         | Printing and Related Manufacturing Equipment   |
| 73  | 45 27 01             | Operation and Maintenance of Printing and Related Manufacturing Equipment                              |

| 43  | 45 00                 | Electrical Equipment, Appliance, and Component Manufacturing Equipment  |
|-----|-----------------------|---|
| A E |                       | 10 to 45 44 99 User-Defined Computer and Electronic Product Manufacturing Equipment   |
|     | 45 43<br>45 43        | O6 Schedules for Computer and Electronic Product Manufacturing Equipment  |
|     | 45 43                 | Operation and Maintenance of Computer and Electronic Product  Manufacturing Equipment   |
|     | 45 40                 | Equipment National Maintenance (Communication of Floridae)  |
| 45  | 43 00                 | Computer and Electronic Product Manufacturing   |
|     | 45 41                 | 10 to 45 42 99 User-Defined Machinery Manufacturing Equipment   |
|     | 45 41                 | •   |
| 73  | 45 41                 |   |
| 45  | 45 39<br>41 <b>00</b> | Machinery Manufacturing Equipment   |
|     | 45 39<br>45 30        | O6 Schedules for Fabricated Metal Product Manufacturing Equipment  10 to 45 40 99 User-Defined Fabricated Metal Product Manufacturing Equipment |
|     | 4E 00                 | Equipment OS School Los for Fabricated Matal Braduct Manufacturing Equipment  |
|     | 45 39                 | Operation and Maintenance of Fabricated Metal Product Manufacturing   |
| 45  | 39 00                 | Fabricated Metal Product Manufacturing Equipment  |
|     |                       | 10 to 45 38 99 User-Defined Primary Metal Manufacturing Equipment   |
|     | 45 37<br>45 37        |   |
| 45  | <b>37 00</b>          | Primary Metal Manufacturing Equipment   |
| 4 - | 27.00                 | Equipment   |
|     | <i>4</i> 5 35         | 10 to 45 36 99 User-Defined Nonmetallic Mineral Product Manufacturing   |
|     | 45 35                 | · ·   |
|     | 45 35                 | Operation and Maintenance of Nonmetallic Mineral Product Manufacturing<br>Equipment   |
|     | AE OF                 | Equipment Operation and Maintenance of Normatallia Mineral Braduat Manufacturing  |
| 45  | 35 00                 | Nonmetallic Mineral Product Manufacturing   |
| 45  |                       | 10 to 45 34 99 User-Defined Plastics and Rubber Manufacturing Equipment   |
|     | 45 33                 | O6 Schedules for Plastics and Rubber Manufacturing Equipment  |
|     | <del>-10 00</del>     | Equipment   |
| 43  | <b>33 00</b> 45 33    | Plastics and Rubber Manufacturing Equipment Operation and Maintenance of Plastics and Rubber Manufacturing                                      |
| 15  |                       | 10 to 45 32 99 User-Defined Chemical Manufacturing Equipment  |
|     | 45 31                 | <b>9</b> 1 1  |
|     | 45 31                 | Operation and Maintenance of Chemical Manufacturing Equipment   |
| 45  | 31 00                 | Chemical Manufacturing Equipment  |
|     | <i>4</i> 5 29         | 10 to 45 30 99 User-Defined Petroleum and Coal Products Manufacturing Equipment   |
|     | 45 29                 | O6 Schedules for Petroleum and Coal Products Manufacturing Equipment  |
|     | <del>4</del> 3 23     | Manufacturing Equipment   |
|     | 45 29                 | Equipment Operation and Maintenance of Petroleum and Coal Products  |
| 45  | 29 00                 | Petroleum and Coal Products Manufacturing   |
| 45  |                       | 10 to 45 28 99 User-Defined Printing and Related Manufacturing Equipment  |
|     | 45 27                 | 3 1 1   |

|    | 45 45 01     | Operation and Maintenance of Electrical Equipment, Appliance, and Component Manufacturing Equipment |
|----|--------------|---|
|    | 45 45 06     | Schedules for Electrical Equipment, Appliance, and Component  Manufacturing Equipment               |
|    | 45 45 10 to  | 45 46 99 User-Defined Electrical Equipment, Appliance, and Component Manufacturing Equipment        |
| 45 | 47 00        | Transportation Manufacturing Equipment  |
|    | 45 47 01     | Operation and Maintenance of Transportation Manufacturing Equipment                                 |
|    | 45 47 06     | Schedules for Transportation Manufacturing Equipment  |
|    | 45 47 10 to  | 45 48 99 User-Defined Transportation Manufacturing Equipment  |
| 45 | 49 00        | Furniture and Related Product Manufacturing   |
|    |              | Equipment   |
|    | 45 49 01     | Operation and Maintenance of Furniture and Related Product Manufacturing Equipment                  |
|    | 45 49 06     | Schedules for Furniture and Related Product Manufacturing Equipment                                 |
|    | 45 49 10 to  | 45 50 99 User-Defined Furniture and Related Product Manufacturing                                   |
| 4- | <b>54.00</b> | Equipment   |
| 45 | 51 00        | Other Manufacturing Equipment   |
|    | 45 51 01     | Operation and Maintenance of Other Manufacturing Equipment  |
|    | 45 51 06     | Schedules for Other Manufacturing Equipment   |
|    | 45 51 10 to  | 45 52 99 User-Defined Other Manufacturing Equipment   |

| 46 (                  | 00 00  | Water and Wastewater Equipment   |
|-----------------------|--|--|
| 46 0                  | 01 00  | <b>Operation and Maintenance of Water and</b>  |
|                       |  | Wastewater Equipment   |
| 4<br>4<br>4<br>4      | 16 01 07<br>16 01 20<br>16 01 30<br>16 01 40<br>16 01 50<br>16 01 60<br>16 01 70 | Operation and Maintenance of Packaged Treatment Equipment Operation and Maintenance of Preliminary Treatment Equipment Operation and Maintenance of Chemical Feed Equipment Operation and Maintenance of Clarification and Mixing Equipment Operation and Maintenance of Secondary Treatment Equipment Operation and Maintenance of Advanced Treatment Equipment Operation and Maintenance of Residuals Handling and Treatment |
| 46 0                  | <b>)5 00</b>   | Common Work Results for Water and  |
|                       |  | Wastewater Equipment   |
| 4                     | 16 05 05   | Selective Demolition for Water and Wastewater Equipment  |
| <b>46</b> 0           | 06 00  | Schedules for Water and Wastewater   |
|                       |  | Equipment  |
| 4<br>4<br>4<br>4      | 16 06 07<br>16 06 20<br>16 06 30<br>16 06 40<br>16 06 50<br>16 06 60<br>16 06 70 | Schedules for Packaged Treatment Equipment Schedules for Preliminary Treatment Equipment Schedules for Chemical Feed Equipment Schedules for Clarification and Mixing Equipment Schedules for Secondary Treatment Equipment Schedules for Advanced Treatment Equipment Schedules for Residuals Handling and Treatment  |
|                       | 7 00   | Packaged Water and Wastewater  |
|                       |  | Treatment Equipment  |
|                       | 16 07 13<br>16 07 53   | Packaged Water Treatment Equipment Packaged Wastewater Treatment Equipment   |
| <b>46</b> 0           | 00 80  | <b>Commissioning of Water and Wastewater</b>   |
|                       |  | Equipment  |
| 4<br>4<br>4<br>4<br>4 | 16 08 07<br>16 08 20<br>16 08 30<br>16 08 40<br>16 08 50<br>16 08 60<br>16 08 70 | Commissioning of Packaged Treatment Equipment Commissioning of Preliminary Treatment Equipment Commissioning of Chemical Feed Equipment Commissioning of Clarification and Mixing Equipment Commissioning of Secondary Treatment Equipment Commissioning of Advanced Treatment Equipment Commissioning of Residuals Handling and Treatment   |
| 46 2                  | 20 00  | Water and Wastewater Preliminary   |
|                       |  | Treatment Equipment  |
| 4<br>4                | <b>I 00</b><br>I6 21 11<br>I6 21 13<br>I6 21 16<br>I6 21 17                      | Screening Equipment Climber-type Bar Screens Chain-and-Rake Bar Screens Flexible Rake Bar Screens Catenary Bar Screens   |

| 46 21 19 | Continuous Belt Screens                                     |
|----------|---|
| 46 21 23 | Cylindrical Bar Screens                                     |
| 46 21 26 | Step Screens  |
| 46 21 33 | Rotary Drum Screens   |
| 46 21 39 | Spiral Screens  |
| 46 21 43 | Band Screens  |
| 46 21 46 | Disc Screens  |
| 46 21 51 | Traveling Water Screens                                     |
| 46 21 53 | Perforated Plate Screens                                    |
| 46 21 56 | Wedge Wire Screens  |
| 46 21 57 | Element Screens   |
| 46 21 71 | Trash Raking Equipment                                      |
| 46 21 73 | Screenings Washing and Compacting Equipment                 |
| 46 21 76 | Vacuum Screenings Conveying Equipment                       |
| 46 21 79 | Screenings Storage Containers                               |
| 46 21 83 | Septage Receiving Equipment                                 |
| 46 23 00 | Grit Removal and Handling Equipment                         |
| 46 23 13 | Chain-and-Bucket Grit Removal Equipment                     |
| 46 23 16 | Chain-and-Flight Grit Removal Equipment                     |
| 46 23 23 | Vortex Grit Removal Equipment                               |
| 46 23 27 | Cyclone Degritters  |
| 46 23 33 | Aerated Grit Removal Equipment                              |
| 46 23 43 | Inline Baffled Grit Removal Equipment                       |
| 46 23 53 | Traveling Bridge Grit Removal Equipment                     |
| 46 23 63 | Grit Classifying and Washing Equipment                      |
| 46 23 66 | Grit Storage Containers                                     |
| 46 24 00 | Grinding and Shredding Equipment                            |
| 46 24 13 | Macerators  |
| 46 24 16 | Comminutors   |
| 46 24 23 | Inline Grinders   |
| 46 24 33 | Open-channel Grinders                                       |
| 46 24 36 | Modular Grinding-Screening-Compacting Equipment             |
| 46 25 00 | Oil and Grease Separation and Removal Equipment             |
| 46 25 13 |   |
| 46 25 16 | Coalescing Oil-Water Separators                             |
| 46 25 23 | API Oil-Water Separators Grease Traps                       |
| 46 25 33 | Dissolved Air Flotation Grease and Oil Separation Equipment |
| 46 25 41 | Helical Scum Skimming and Removal Equipment                 |
| 46 25 43 | Tipping Trough Scum Skimming and Removal Equipment          |
| 46 25 46 | Chain and Flight Scum Collection and Removal Equipment      |
| 46 25 47 | Floating Scum Skimming and Removal Equipment                |
|          |   |
| 46 30 00 | Water and Wastewater Chemical Feed                          |
|          | Equipment   |
| 46 31 00 | Gas Chemical Feed Equipment                                 |
| 46 31 11 | Chlorine Gas Feed Equipment                                 |
| 46 31 13 | Sulfur Dioxide Gas Feed Equipment                           |
| 46 31 16 | Ammonia Gas Feed Equipment                                  |
| 46 31 23 | Gas Storage, Weighing, and Leak Detection Equipment         |

|     | 46 31 26             | Emergency Gas Treatment Systems   |
|-----|----------------------|---|
|     | 46 31 33             | Chlorine Dioxide Reactors   |
|     | 46 31 43             | Carbon Dioxide Gas Feed Equipment   |
|     | 46 31 53             | Ozone Generating and Feed Equipment   |
|     | 46 31 56             | Liquid Oxygen Storage and Feed Equipment                                    |
|     | 46 31 59             | Cleaning Requirements for Oxygen Service                                    |
|     | 46 31 83             | Gas Chemical Feed Accessories and Safety Equipment                          |
| 46  | 33 00                | Liquid Chemical Feed Equipment  |
|     | 46 33 13             | Sodium Hypochlorite Generating Equipment                                    |
|     | 46 33 23             | Liquid Chemical Weighing Equipment  |
|     | 46 33 33             | Polymer Blending and Feed Equipment   |
|     | 46 33 41             | Liquid Chemical Feed System Coordination and Integration                    |
|     | 46 33 42             | Diaphragm-type Metering Pumps   |
|     | 46 33 44             | Peristaltic Metering Pumps  |
|     | 46 33 46             | Progressing Cavity Metering Pumps   |
|     | 46 33 48             | Lobe Metering Pumps   |
|     | 46 33 53             | Drum Pumps  |
|     | 46 33 66             | Liquid Chemical Transfer Pumps  |
|     | 46 33 73             | Liquid Chemical Diffusers   |
|     | 46 33 83             | Liquid Chemical Feed Accessories and Safety Equipment                       |
| 46  | 36 00                | Dry Chemical Feed Equipment   |
|     | 46 36 11             | Dry Chemical Feed System Coordination and Integration                       |
|     | 46 36 13             | Storage Silos   |
|     | 46 36 23             | Dry Chemical Weighing Equipment   |
|     | 46 36 33             | Volumetric Feed Equipment   |
|     | 46 36 36             | Gravimetric Feed Equipment  |
|     | 46 36 43             | Lime Slaking Equipment  |
|     | 46 36 53             | Chemical Tablet Feeding Equipment   |
|     | 46 36 83             | Dry Chemical Feed Accessories and Safety Equipment                          |
| 46  | 40 00                | Water and Wastewater Clarification and                                      |
| . • |                      | Mixing Equipment  |
| 40  | 44.00                | <b>—</b>  |
| 46  | 41 00                | Mixing Equipment  |
|     | 46 41 11             | Rapid Mixers  |
|     | 46 41 13             | Inline Blender-type Rapid Mixers  |
|     | 46 41 16             | Induction-type Rapid Mixing Equipment                                       |
|     | 46 41 17             | Inline Static Mixers  |
|     | 46 41 21             | Jet Mixing Equipment  |
|     | 46 41 23             | Submersible Mixers  |
|     | 46 41 26             | Floating Mechanical Mixers Paddle Mixers                                    |
|     | 46 41 27             | Paddle Mixers Pin Mixers  |
|     | 46 41 29<br>46 41 31 |   |
|     | 46 41 33             | Vertical Reel Flocculation Equipment Horizontal Reel Flocculation Equipment |
|     | 46 41 34             | • •   |
|     | 46 41 36             | Vertical Turbine Flocculation Equipment Walking-beam Flocculation Equipment |
|     | 46 41 38             | Horizontal Oscillating Flocculation Equipment                               |
|     | 46 41 41             | Top-entering Tank Mixers  |
|     | 46 41 43             | Side-entry Tank Mixers  |
|     | 46 41 46             | Portable Tank Mixers  |

| 46 43 00 | Clarifier Equipment                                   |
|----------|---|
| 46 43 11 | Chain-and-Flight Clarifier Equipment                  |
| 46 43 14 | Traveling Bridge Clarifier Equipment                  |
| 46 43 16 | Differential Head Clarifier Equipment                 |
| 46 43 18 | Oscillating Scraper-type Clarifier Equipment          |
| 46 43 21 | Circular Clarifier Equipment                          |
| 46 43 53 | Solids Contact Clarifier Equipment                    |
| 46 43 61 | Flocculating Clarifier, Pulsating Sludge Blanket Type |
| 46 43 63 | Dissolved Air Flotation Equipment for Water Treatment |
| 46 43 66 | Ballasted High-rate Clarifier Equipment               |
| 46 43 67 | High rate Clarification/Thickening Equipment          |
| 46 43 73 | Tube Settlers   |
| 46 43 76 | Inclined Plate Settlers                               |
| 46 46 00 | Sediment Removal Equipment                            |
| 46 46 13 | Tipping Sediment Flushing Tanks                       |
| 46 46 16 | Flushing Gates  |
| 46 46 23 | Water Cannon  |
| 46 46 26 | Nozzle Systems  |
| 46 50 00 |   |
| 40 30 00 | Water and Wastewater Secondary                        |
|          | Treatment Equipment                                   |
| 46 51 00 | Air and Gas Diffusion Equipment                       |
| 46 51 11 | Fixed Mechanical Aerators                             |
| 46 51 13 | Floating Mechanical Aerators                          |
| 46 51 16 | Submersible Aspirating Aerator Equipment              |
| 46 51 17 | Jet Aeration Equipment                                |
| 46 51 21 | Coarse Bubble Diffusers                               |
| 46 51 23 | Swing-type Channel Aeration Equipment                 |
| 46 51 26 | Shear Box Diffusers                                   |
| 46 51 31 | Flexible Membrane Tube Diffusers                      |
| 46 51 33 | Flexible Membrane Disc Diffusers                      |
| 46 51 36 | Ceramic Disc Fine Bubble Diffusers                    |
| 46 51 43 | Floating Membrane Diffusers                           |
| 46 51 46 | Membrane Diffusers                                    |
| 46 51 53 | Cascading Aerators                                    |
| 46 51 63 | Pure-oxygen Generating Equipment                      |
| 46 53 00 | Biological Treatment Systems                          |
| 46 53 13 | Rotating Biological Contactors                        |
| 46 53 23 | Trickling Filter Rotary Distributor Equipment         |
| 46 53 24 | Trickling Filter Media                                |
| 46 53 26 | Bio-towers  |
| 46 53 33 | Moving-bed Biological Reactors                        |
| 46 53 36 | Integrated Fixed-film Activated Sludge Equipment      |
| 46 53 41 | Intermittent Sand Filters for Wastewater Treatment    |
| 46 53 43 | Deep-bed Denitrification Filters                      |
| 46 53 46 | Biologically Activated Filters                        |
| 46 53 49 | Membrane Biological Reactors                          |
| 46 53 53 | Sequencing Batch Reactors                             |
| 46 53 61 | Oxidation Ditch Equipment                             |

46 53 63 **Vertical Loop Reactors** 46 60 00 Water and Wastewater Advanced **Treatment Equipment Filtration Equipment** 46 61 00 46 61 13 Filter Media 46 61 16 Filter Surface Wash Agitators Filter Air Scour Equipment 46 61 17 46 61 19 Wash Water Troughs 46 61 21 **Pressure Filters** 46 61 23 **Gravity Filters** 46 61 26 High-rate Sand Filters 46 61 29 Traveling Bridge Filters Microfiltration and Ultrafiltration Membrane Equipment 46 61 33 46 61 41 Disc Cloth Filters 46 61 43 Rotary Drum Cloth Filters Automatic Backwash Cloth Filter Equipment 46 61 46 46 61 53 Cartridge Filters **Bag Filters** 46 61 63 46 61 73 **Automatic Straining Equipment** 46 63 00 **Demineralization Equipment** Ion-exchange Vessel Media 46 63 11 46 63 13 Mixed Bed Ion-exchange Vessel Systems Packed Bed Ion-exchange Vessel Systems 46 63 16 Electrodialysis Reversal Equipment 46 63 17 46 63 23 Reverse-Osmosis and Nanofiltration Membrane Equipment Multiple-effect Distillation Equipment 46 63 31 Desalination Mechanical Vapor Compression Equipment 46 63 33 46 63 34 Desalination Thermal Vapor Compression Equipment 46 63 36 Desalination Multi-stage Flash Equipment Desalination Falling Film Evaporators 46 63 41 Desalination Rising Film Evaporators 46 63 43 Desalination Forced-circulation Crystallizing Equipment 46 63 53 Desalination Spray Dry Evaporation Equipment 46 63 63 Demineralization Energy Recovery Equipment 46 63 73 46 66 00 Ultraviolet Equipment 46 66 13 Closed-vessel Low-pressure/Low-intensity Ultraviolet Treatment Equipment Closed-vessel Low-pressure/High-intensity Ultraviolet Treatment 46 66 16 Equipment Closed-vessel Medium-pressure Ultraviolet Treatment Equipment 46 66 23 46 66 53 Open-channel Low-pressure/Low-intensity Ultraviolet Treatment Equipment Open-channel Low-pressure/High-intensity Ultraviolet Treatment 46 66 56 Equipment Open-channel Medium-pressure Ultraviolet Treatment Equipment 46 66 63 Water and Wastewater Residuals Handling 46 70 00 and Treatment

| 46 | 71 00    | Residuals Thickening Equipment                            |
|----|----------|---|
|    | 46 71 13 | Circular Gravity Thickeners                               |
|    | 46 71 16 | Gravity Belt Thickeners                                   |
|    | 46 71 23 | Dissolved Air Flotation Thickening Equipment              |
|    | 46 71 33 | Rotary Drum Thickening Equipment                          |
|    | 46 71 36 | Centrifuge Thickening Equipment                           |
|    | 46 71 43 | Disc Thickeners   |
|    | 46 71 46 | Thickening Screw Press                                    |
|    | 46 71 53 | Scum Concentrator Equipment                               |
| 46 | 73 00    | Residuals Stabilization                                   |
|    | 46 73 11 | Radial Beam Fixed Digester Covers                         |
|    | 46 73 12 | Dual Deck Truss-type Fixed Digester Covers                |
|    | 46 73 14 | Radial Beam Floating Digester Covers                      |
|    | 46 73 16 | Dual Deck Truss-type Floating Digester Covers             |
|    | 46 73 17 | Radial Beam Floating Gas-holding Digester Covers          |
|    | 46 73 18 | Dual Deck Truss-type Floating Gas-holding Digester Covers |
|    | 46 73 19 | Digester Appurtenances                                    |
|    | 46 73 21 | Aerobic Digester Aeration Equipment                       |
|    | 46 73 24 | Autothermal Thermophilic Aerobic Digestion Equipment      |
|    | 46 73 26 | Egg-shaped Digesters                                      |
|    | 46 73 31 | External Draft Tube Digester Mixing System                |
|    | 46 73 32 | Internal Draft Tube Digester Mixing System                |
|    | 46 73 33 | Confined Gas Mixing System                                |
|    | 46 73 34 | Unconfined Gas Mixing System                              |
|    | 46 73 41 | Digester Heating Equipment                                |
|    | 46 73 63 | Residuals Pasteurization Equipment                        |
| 46 | 76 00    | Residuals Dewatering Equipment                            |
|    | 46 76 13 | Vacuum Filters  |
|    | 46 76 21 | Belt Filter Presses                                       |
|    | 46 76 23 | Plate-and-Frame Filter Presses                            |
|    | 46 76 26 | Rotary Presses  |
|    | 46 76 27 | Screw Presses   |
|    | 46 76 33 | Dewatering Centrifuges                                    |
|    | 46 76 53 | Belt Dryers   |
|    | 46 76 60 | Direct-heat Residuals Drying Equipment                    |
|    | 46 76 70 | Indirect-heat Residuals Drying Equipment                  |
| 46 | 78 00    | Thermal Treatment of Residuals                            |
|    | 46 78 13 | Multiple-hearth Sludge Incinerators                       |
|    | 46 78 23 | Fluidized-bed Sludge Incinerators                         |
|    | 46 78 33 | Ash Handling Equipment                                    |
|    | 46 78 41 | Recuperative Air Preheating Equipment                     |
|    | 46 78 46 | Regenerative Thermal Oxidizers                            |
|    | 46 78 47 | Waste Heat Recovery Boilers                               |
|    | 46 78 49 | Waste Heat Recovery Heat Exchangers                       |
|    | 46 78 73 | Thermal Oxidation Equipment                               |

| 48 00 00<br>48 01 00       | Electrical Power Generation  Operation and Maintenance for Electrical Power                     |
|----------------------------|---|
| 40 01 00                   | Generation  |
| 48 01 10                   | Operation and Maintenance of Electrical Power Generation Equipment                              |
| 48 01 70                   | Operation and Maintenance of Electrical Power Generation Testing                                |
| 48 05 00                   | Common Work Results for Electrical Power  |
|                            | Generation  |
| 48 05 05                   | Selective Demolition for Electrical Power Generation  |
| 48 06 00                   | Schedules for Electrical Power Generation   |
| 48 06 10<br>48 06 70       | Schedules for Electrical Power Generation Equipment   |
| 48 08 00                   | Schedules for Electrical Power Generation Testing  Commissioning of Electrical Power Generation |
| 48 09 00                   | Instrumentation and Control for Electrical Power  |
| 40 03 00                   | Generation  |
| 48 10 00                   | Electrical Power Generation Equipment   |
| 48 11 00                   | Fossil Fuel Plant Electrical Power Generation   |
|                            | Equipment   |
| 48 11 13                   | Fossil Fuel Electrical Power Plant Boilers  |
| 48 11 16                   | Fossil Fuel Electrical Power Plant Condensers   |
| 48 11 19                   | Fossil Fuel Electrical Power Plant Steam Turbines   |
| 48 11 23<br>48 11 26       | Fossil Fuel Electrical Power Plant Gas Turbines Fossil Fuel Electrical Power Plant Generators   |
| 48 12 00                   | Nuclear Fuel Plant Electrical Power Generation  |
|                            | Equipment   |
| 48 12 13                   | Nuclear Fuel Reactors   |
| 48 12 13.13                | Nuclear Fuel Fission Reactors   |
| 48 12 13.16<br>48 12 23    | Nuclear Fuel Fusion Reactors  Nuclear Fuel Electrical Power Plant Steam Generators              |
| 48 12 26                   | Nuclear Fuel Electrical Power Plant Condensers  |
| 48 12 29                   | Nuclear Fuel Electrical Power Plant Turbines  |
| 48 12 33                   | Nuclear Fuel Electrical Power Generators  |
| 48 13 00                   | Hydroelectric Plant Electrical Power Generation   |
| 40.40.40                   | Equipment Turking Page 1 Notes Turking 1  |
| 48 13 13<br>48 13 16       | Hydroelectric Power Plant Water Turbines Hydroelectric Power Plant Electrical Power Generators  |
| 48 14 00                   | Solar Energy Electrical Power Generation Equipment  |
| 48 14 13                   | Solar Energy Collectors   |
| 48 14 13.13                | Amorphous Solar Energy Collectors   |
| 48 14 13.16<br>48 14 13.19 | Plate Cell Solar Energy Collectors Vacuum Tube Solar Energy Collectors                          |
| 48 15 00                   | Wind Energy Electrical Power Generation Equipment   |
| 48 15 13                   | Wind Turbines   |
| 48 15 16                   | Wind Energy Electrical Power Generators   |
| 48 16 00                   | Geothermal Energy Electrical Power Generation   |
|                            | Equipment   |

| 48 16 13 | Geothermal Energy Heat Pumps                           |
|----------|--|
| 48 16 16 | Geothermal Energy Condensers                           |
| 48 16 19 | Geothermal Energy Steam Turbines                       |
| 48 16 23 | Geothermal Energy Electrical Power Generators          |
| 48 17 00 | Electrochemical Energy Electrical Power Generation     |
|          | Equipment  |
| 48 17 13 | Electrical Power Generation Batteries                  |
| 48 18 00 | Fuel Cell Electrical Power Generation Equipment        |
| 48 18 13 | Electrical Power Generation Fuel Cells                 |
| 48 18 16 | Hydrogen Control Equipment                             |
| 48 19 00 | Electrical Power Control Equipment                     |
| 48 19 13 | Electrical Power Generation Battery Charging Equipment |
| 48 19 16 | Electrical Power Generation Inverters                  |
| 48 19 19 | Electrical Power Generation Solar Tracking Equipment   |
| 48 19 23 | Electrical Power Generation Transformers               |
| 48 19 26 | Electrical Power Generation Voltage Regulators         |
| 48 70 00 | Electrical Power Generation Testing                    |
| 48 71 00 | Electrical Power Generation Test Equipment             |
| 48 71 13 | Electrical Power Generation Corona Test Equipment      |
| 48 71 16 | Electrical Power Generation Current Test Equipment     |
| 48 71 19 | Electrical Power Generation Power Test Equipment       |
| 48 71 23 | Electrical Power Generation Resistance Test Equipment  |
| 48 71 26 | Electrical Power Generation Voltage Test Equipment     |