0 00 00   Procurement and Contracting Requirements
1 00 00   General Requirements
2 00 00   Existing Conditions
3 00 00   Concrete
4 00 00   Masonry
5 00 00   Metals
6 00 00   Wood, Plastics, and Composites
7 00 00   Thermal and Moisture Protection
8 00 00   Openings
9 00 00   Finishes
10 00 00  Specialties
11 00 00  Equipment
12 00 00  Furnishings
13 00 00  Special Construction
14 00 00  Conveying Equipment
21 00 00  Fire Suppression
22 00 00  Plumbing
23 00 00  Heating, Ventilating, and Air Conditioning (HVAC)
25 00 00  Integrated Automation
26 00 00  Electrical
27 00 00  Communications
28 00 00  Electronic Safety and Security
31 00 00  Earthwork
32 00 00  Exterior Improvements
33 00 00  Utilities
34 00 00  Transportation
35 00 00  Waterway and Marine Construction
40 00 00  Process Integration
41 00 00  Material Processing and Handling Equipment
42 00 00  Process Heating, Cooling, and Drying Equipment
43 00 00  Process Gas and Liquid Handling, Purification, and Storage Equipment
44 00 00  Pollution and Waste Control Equipment
45 00 00  Industry-Specific Manufacturing Equipment
46 00 00  Water and Wastewater Equipment
MasterFormat is the specifications-writing standard for most commercial building design and construction projects in North America. It lists titles and section numbers for organizing data about construction requirements, products, and activities. By standardizing such information, MasterFormat facilitates communication among architects, specifiers, contractors and suppliers, which helps them meet building owners' requirements, timelines and budgets.

The numbers and titles presented here are identical to the numbers and titles contained in the MasterFormat® 2016 publication available for purchase from the Construction Specifications Institute (CSI) and Construction Specifications Canada (CSC).

Contents reflect MasterFormat titles and numbers as of April 2016. Consult http://www.masterformat.com/revisions/ for the most current additions and changes to MasterFormat.

MasterFormat numbers and titles are intentionally structured for anticipated growth and expansion in the future. CSI and CSC encourage all interested parties to provide input using the "Propose a Revision" link on http://www.masterformat.com/revisions/ so that as the built environment evolves so can MasterFormat. Updates to MasterFormat are made annually.

To learn more about MasterFormat training, certification and local chapter information from CSI go to http://www.csinet.org/ or from CSC go to http://www.csc-dcc.ca/. For information about licensing use of MasterFormat for commercial or educational purposes, contact CSI at http://www.csinet.org/, csi@csinet.org or by calling 800-689-2900.
00 00 00  Procurement and Contracting Requirements
  00 01 01  Project Title Page
  00 01 03  Project Directory
  00 01 05  Certifications Page
  00 01 07  Seals Page
  00 01 10  Table of Contents
  00 01 15  List of Drawing Sheets
  00 01 20  List of Schedules

00 10 00  Solicitation
  00 11 00  Advertisements and Invitations
    00 11 13  Advertisement for Bids
    00 11 15  Advertisement for Prequalification of Bidders
    00 11 16  Invitation to Bid
    00 11 19  Request for Proposal
    00 11 53  Request for Qualifications

00 20 00  Instructions for Procurement
  00 21 00  Instructions
    00 21 13  Instructions to Bidders
    00 21 16  Instructions to Proposers
  00 22 00  Supplementary Instructions
    00 22 13  Supplementary Instructions to Bidders
    00 22 16  Supplementary Instructions to Proposers

00 23 00  Procurement Definitions

00 24 00  Procurement Scopes
  00 24 13  Scopes of Bids
  00 24 13.13  Scopes of Bids (Multiple Contracts)
  00 24 13.16  Scopes of Bids (Multiple-Prime Contract)
  00 24 16  Scopes of Proposals
  00 24 16.13  Scopes of Proposals (Multiple Contracts)
  00 24 16.16  Scopes of Proposals (Multiple-Prime Contract)

00 25 00  Procurement Meetings
  00 25 13  Pre-Bid Meetings
  00 25 16  Pre-Proposal Meetings

00 26 00  Procurement Substitution Procedures

00 30 00  Available Information
  00 31 00  Available Project Information
    00 31 13  Preliminary Schedules
    00 31 13.13  Preliminary Project Schedule
    00 31 13.16  Preliminary Construction Schedule
    00 31 13.23  Preliminary Project Phases
    00 31 13.26  Preliminary Project Sequencing
    00 31 13.33  Preliminary Project Milestones
    00 31 16  Project Budget Information
    00 31 19  Existing Condition Information
    00 31 19.13  Movement and Vibration Information
| 00 31 19.16 | Acoustic Information       |
| 00 31 19.19 | Traffic Information        |
| 00 31 19.23 | Existing Structural Information |
| 00 31 21   | Survey Information        |
| 00 31 21.13 | Site Survey Information   |
| 00 31 21.16 | Measured Drawing Information |
| 00 31 21.19 | Photographic Information  |
| 00 31 24   | Environmental Assessment Information |
| 00 31 24.13 | Soil Contamination Report |
| 00 31 24.23 | Environmental Impact Study Report |
| 00 31 24.26 | Environmental Impact Report Evaluation |
| 00 31 24.29 | Record of Environmental Impact Decision |
| 00 31 24.33 | Environmental Impact Mitigation Report |
| 00 31 25   | Existing Material Information |
| 00 31 25.16 | Existing Concrete Information |
| 00 31 25.19 | Existing Masonry Information |
| 00 31 25.23 | Existing Metals Information |
| 00 31 25.26 | Existing Wood, Plastics, and Composites Information |
| 00 31 25.29 | Existing Thermal and Moisture Protection Information |
| 00 31 26   | Existing Hazardous Material Information |
| 00 31 26.23 | Existing Asbestos Information |
| 00 31 26.26 | Existing Lead Information |
| 00 31 26.29 | Existing Polychlorinate Biphenyl Information |
| 00 31 26.33 | Existing Mold Information |
| 00 31 26.36 | Existing Hazardous Waste Drum Information |
| 00 31 31   | Geophysical Data           |
| 00 31 31.13 | Seismic Investigations Information |
| 00 31 31.16 | Gravity Investigations Information |
| 00 31 31.19 | Magnetic Investigations Information |
| 00 31 31.23 | Electromagnetic Investigations Information |
| 00 31 31.26 | Electrical Resistivity Investigations Information |
| 00 31 31.29 | Magnetotelluric Investigations Information |
| 00 31 32   | Geotechnical Data          |
| 00 31 32.13 | Subsurface Drilling and Sampling Information |
| 00 31 32.16 | Material Testing Information |
| 00 31 32.19 | Exploratory Excavation Information |
| 00 31 32.23 | Geotechnical Monitoring Information |
| 00 31 43   | Permit Application         |
| 00 31 46   | Permits                    |

**00 40 00** **Procurement Forms and Supplements**

**00 41 00** **Bid Forms**

| 00 41 13   | Bid Form - Stipulated Sum (Single-Prime Contract) |
| 00 41 16   | Bid Form - Stipulated Sum (Multiple-Prime Contract) |
| 00 41 23   | Bid Form - Construction Management (Single-Prime Contract) |
| 00 41 26   | Bid Form - Construction Management (Multiple-Prime Contract) |
| 00 41 33   | Bid Form - Cost-Plus-Fee (Single-Prime Contract) |
| 00 41 36   | Bid Form - Cost-Plus-Fee (Multiple-Prime Contract) |
| 00 41 43   | Bid Form - Unit Price (Single-Prime Contract) |
| 00 41 46   | Bid Form - Unit Price (Multiple-Prime Contract) |
| 00 41 53   | Bid Form - Design/Build (Single-Prime Contract) |
| 00 41 56   | Bid Form - Design/Build (Multiple-Prime Contract) |
| 00 41 63   | Bid Form - Purchase Contract |
00 42 00  Proposal Forms
  00 42 13  Proposal Form - Stipulated Sum (Single-Prime Contract)
  00 42 16  Proposal Form - Stipulated Sum (Multiple-Prime Contract)
  00 42 23  Proposal Form - Construction Management (Single-Prime Contract)
  00 42 26  Proposal Form - Construction Management (Multiple-Prime Contract)
  00 42 33  Proposal Form - Cost-Plus-Fee (Single-Prime Contract)
  00 42 36  Proposal Form - Cost-Plus-Fee (Multiple-Prime Contract)
  00 42 43  Proposal Form - Unit Price (Single-Prime Contract)
  00 42 46  Proposal Form - Unit Price (Multiple-Prime Contract)
  00 42 53  Proposal Form - Design/Build (Single-Prime Contract)
  00 42 56  Proposal Form - Design/Build (Multiple-Prime Contract)
  00 42 63  Proposal Form - Purchase Contract
  00 42 73  Proposal Form - Performance Contract

00 43 00  Procurement Form Supplements
  00 43 13  Bid Security Form
  00 43 21  Allowance Form
  00 43 22  Unit Prices Form
  00 43 23  Alternates Form
  00 43 25  Substitution Request Form (During Procurement)
  00 43 26  Estimated Quantities Form
  00 43 27  Separate Prices Break-Out Form
  00 43 28  Tax Rebate Form
  00 43 33  Proposed Products Form
  00 43 36  Proposed Subcontractors Form
  00 43 39  Minority Business Enterprise Statement of Intent Form
  00 43 43  Wage Rates Form
  00 43 73  Proposed Schedule of Values Form
  00 43 83  Proposed Construction Schedule Form
  00 43 86  Proposed Work Plan Schedule Form
  00 43 93  Bid Submittal Checklist

00 45 00  Representations and Certifications
  00 45 13  Bidder’s Qualifications
  00 45 16  Proposer's Qualifications
  00 45 19  Non-Collusion Affidavit
  00 45 23  Statement of Disposal Facility
  00 45 26  Workers Compensation Certificate Schedule
  00 45 33  Non-Segregated Facilities Affidavit
  00 45 36  Equal Employment Opportunity Affidavit
  00 45 39  Minority Business Enterprise Affidavit
  00 45 43  Corporate Resolutions
  00 45 46  Governmental Certifications

00 50 00  Contracting Forms and Supplements

00 51 00  Notice of Award

00 52 00  Agreement Forms
  00 52 13  Agreement Form - Stipulated Sum (design/bid/build or design/negotiate/build)
  00 52 14  Subcontract Form - Stipulated Sum (design/bid/build or design/negotiate/build)
  00 52 16  Agreement Form - Cost-Plus (design/bid/build or design/negotiate/build)
00 52 17 Subcontract Form - Cost-Plus (design/bid/build or design/negotiate/build)
00 52 23 Agreement Form - Construction Manager as Agent or Advisor - Stipulated Sum
00 52 24 Subcontract Form - Construction Manager as Agent or Adviser - Stipulated Sum
00 52 26 Agreement Form - Construction Manager as Agent or Adviser - Cost-Plus
00 52 27 Subcontract Form - Construction Manager as Agent or Adviser - Cost-Plus
00 52 33 Agreement Form - Construction Manager at Risk - Stipulated Sum
00 52 34 Subcontract Form - Construction Manager at Risk - Stipulated Sum
00 52 36 Agreement Form - Construction Manager at Risk - Cost-Plus
00 52 37 Subcontract Form - Construction Manager at Risk - Cost-Plus
00 52 51 Public-Private Partnership Agreement
00 52 52 Agreement for Preliminary Services - Owner-Design/Builder
00 52 53 Agreement Form - Owner-Design/Builder - Stipulated Sum
00 52 54 Subcontract Form - Design/Build - Stipulated Sum
00 52 56 Agreement Form - Owner-Design/Builder - Cost-Plus
00 52 57 Subcontract Form - Design/Build - Cost-Plus
00 52 63 Agreement Form - Purchase - Stipulated Price
00 52 73 Agreement Form - Performance Contract
00 52 93 Agreement Form - Purchase - Stipulated Price
00 52 96 Agreement between Single-Purpose Entity and Owner - Integrated Project Delivery
00 52 97 Agreement between Single-Purpose Entity and Non-Owner - Integrated Project Delivery
00 52 98 Agreement between Single-Purpose Entity and Consultant - Integrated Project Delivery

00 54 00 Agreement Form Supplements
00 54 13 Supplementary Scope Statement
00 54 21 Allowances Schedule
00 54 22 Unit Prices Schedule
00 54 33 Digital/Electronic Data Protocol Exhibit
00 54 36 Building Information Modeling Exhibit

00 55 00 Notice to Proceed

00 60 00 Project Forms

00 61 00 Bond Forms
00 61 13 Performance and Payment Bond Form
00 61 13.13 Performance Bond Form
00 61 13.16 Payment Bond Form
00 61 16 Lien Bond Form
00 61 19 Maintenance Bond Form
00 61 23 Retainage Bond Form
00 61 26 Special Bond Form

00 62 00 Certificates and Other Forms
00 62 11 Submittal Transmittal Form
00 62 16 Certificate of Insurance Form
00 62 19 Infection Control Form
00 62 23 Construction Waste Diversion Form
00 62 33 Products Form
00 62 34 Recycled Content of Materials Form
00 62 39  Minority Business Enterprise Certification Form
00 62 73  Schedule of Values Form
00 62 76  Application for Payment Form
00 62 76.13  Sales Tax Form
00 62 76.16  Consent of Surety to Reduction of Retainage Form
00 62 79  Stored Material Form
00 62 83  Construction Schedule Form
00 62 86  Work Plan Schedule Form
00 62 89  Construction Equipment Form

00 63 00  Clarification and Modification Forms
00 63 13  Request for Interpretation Form
00 63 19  Clarification Form
00 63 25  Substitution Request Form (During Construction)
00 63 33  Supplemental Instruction Form
00 63 36  Field Order Form
00 63 43  Written Amendment Form
00 63 46  Construction Change Directive Form
00 63 49  Work Change Directive Form
00 63 53  Request for Proposal Form
00 63 54  Proposal Worksheet Summary Form
00 63 55  Proposal Worksheet Detail Form
00 63 57  Change Order Request Form
00 63 63  Change Order Form

00 65 00  Closeout Forms
00 65 13  Certificate of Compliance Form
00 65 16  Certificate of Substantial Completion Form
00 65 19  Certificate of Completion Form
00 65 19.13  Affidavit of Payment of Debts and Claims Form
00 65 19.16  Affidavit of Release of Liens Form
00 65 19.19  Consent of Surety to Final Payment Form
00 65 19.23  Acceptance Certificate Form
00 65 19.26  Final Settlement Certificate Form
00 65 36  Warranty Form
00 65 73  Statutory Declaration Form

00 70 00  Conditions of the Contract

00 71 00  Contracting Definitions

00 72 00  General Conditions
00 72 13  General Conditions - Stipulated Sum (Single-Prime Contract)
00 72 16  General Conditions - Stipulated Sum (Multiple-Prime Contract)
00 72 23  General Conditions - Construction Management (Single-Prime Contract)
00 72 26  General Conditions - Construction Management (Multiple-Prime Contract)
00 72 33  General Conditions - Cost Plus-Fee (Single-Prime Contract)
00 72 36  General Conditions - Cost-Plus-Fee (Multiple-Prime Contract)
00 72 43  General Conditions - Unit Price (Single-Prime Contract)
00 72 46  General Conditions - Unit Price (Multiple-Prime Contract)
00 72 53  General Conditions - Design/Build (Single-Prime Contract)
00 72 56  General Conditions - Design/Build (Multiple-Prime Contract)
00 72 73  General Conditions - Performance Contract
00 72 95  General Conditions - Integrated Project Delivery
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 73 00</td>
<td>Supplementary Conditions</td>
</tr>
<tr>
<td>00 73 16</td>
<td>Insurance Requirements</td>
</tr>
<tr>
<td>00 73 19</td>
<td>Health and Safety Requirements</td>
</tr>
<tr>
<td>00 73 23</td>
<td>Purchase Contracts</td>
</tr>
<tr>
<td>00 73 26</td>
<td>Assigned Contracts</td>
</tr>
<tr>
<td>00 73 33</td>
<td>Non-Segregated Facilities Requirements</td>
</tr>
<tr>
<td>00 73 36</td>
<td>Equal Employment Opportunity Requirements</td>
</tr>
<tr>
<td>00 73 39</td>
<td>Minority Business Enterprise Requirements</td>
</tr>
<tr>
<td>00 73 43</td>
<td>Wage Rate Requirements</td>
</tr>
<tr>
<td>00 73 46</td>
<td>Wage Determination Schedule</td>
</tr>
<tr>
<td>00 73 49</td>
<td>Labor Stabilization Agreement</td>
</tr>
<tr>
<td>00 73 53</td>
<td>Anti-Pollution Measures</td>
</tr>
<tr>
<td>00 73 63</td>
<td>Security Requirements</td>
</tr>
<tr>
<td>00 73 73</td>
<td>Statutory Requirements</td>
</tr>
<tr>
<td>00 73 83</td>
<td>Dispute Resolution</td>
</tr>
<tr>
<td>00 90 00</td>
<td>Revisions, Clarifications, and Modifications</td>
</tr>
<tr>
<td>00 91 00</td>
<td>Precontract Revisions</td>
</tr>
<tr>
<td>00 91 13</td>
<td>Addenda</td>
</tr>
<tr>
<td>00 91 16</td>
<td>Bid Revisions</td>
</tr>
<tr>
<td>00 91 19</td>
<td>Proposal Revisions</td>
</tr>
<tr>
<td>00 93 00</td>
<td>Record Clarifications and Proposals</td>
</tr>
<tr>
<td>00 93 13</td>
<td>Record Requests for Interpretation</td>
</tr>
<tr>
<td>00 93 19</td>
<td>Record Clarification Notices</td>
</tr>
<tr>
<td>00 93 53</td>
<td>Record Proposal Requests</td>
</tr>
<tr>
<td>00 93 54</td>
<td>Record Proposal Worksheet Summaries</td>
</tr>
<tr>
<td>00 93 57</td>
<td>Record Change Order Requests</td>
</tr>
<tr>
<td>00 94 00</td>
<td>Record Modifications</td>
</tr>
<tr>
<td>00 94 33</td>
<td>Record Minor Changes in the Work</td>
</tr>
<tr>
<td>00 94 36</td>
<td>Record Supplemental Instructions</td>
</tr>
<tr>
<td>00 94 39</td>
<td>Record Field Orders</td>
</tr>
<tr>
<td>00 94 43</td>
<td>Record Amendments</td>
</tr>
<tr>
<td>00 94 46</td>
<td>Record Construction Change Directives</td>
</tr>
<tr>
<td>00 94 49</td>
<td>Record Work Change Directives</td>
</tr>
<tr>
<td>00 94 63</td>
<td>Record Change Orders</td>
</tr>
<tr>
<td>01 00 00</td>
<td>General Requirements</td>
</tr>
<tr>
<td>01 10 00</td>
<td>Summary</td>
</tr>
<tr>
<td>01 11 00</td>
<td>Summary of Work</td>
</tr>
<tr>
<td>01 11 13</td>
<td>Work Covered by Contract Documents</td>
</tr>
<tr>
<td>01 11 16</td>
<td>Work by Owner</td>
</tr>
<tr>
<td>01 11 19</td>
<td>Purchase Contracts</td>
</tr>
<tr>
<td>01 12 00</td>
<td>Multiple Contract Summary</td>
</tr>
<tr>
<td>01 12 13</td>
<td>Summary of Contracts</td>
</tr>
<tr>
<td>01 12 16</td>
<td>Work Sequence</td>
</tr>
<tr>
<td>01 12 19</td>
<td>Contract Interface</td>
</tr>
<tr>
<td>01 14 00</td>
<td>Work Restrictions</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>01 14 13</td>
<td>Access to Site</td>
</tr>
<tr>
<td>01 14 16</td>
<td>Coordination with Occupants</td>
</tr>
<tr>
<td>01 14 19</td>
<td>Use of Site</td>
</tr>
<tr>
<td>01 14 33</td>
<td>Work in Rights-of-Way</td>
</tr>
<tr>
<td>01 18 00</td>
<td>Project Utility Sources</td>
</tr>
<tr>
<td>01 18 13</td>
<td>Utility Service Connections</td>
</tr>
<tr>
<td>01 20 00</td>
<td>Price and Payment Procedures</td>
</tr>
<tr>
<td>01 21 00</td>
<td>Allowances</td>
</tr>
<tr>
<td>01 21 13</td>
<td>Cash Allowances</td>
</tr>
<tr>
<td>01 21 16</td>
<td>Contingency Allowances</td>
</tr>
<tr>
<td>01 21 19</td>
<td>Testing and Inspecting Allowances</td>
</tr>
<tr>
<td>01 21 23</td>
<td>Installation Allowances</td>
</tr>
<tr>
<td>01 21 26</td>
<td>Product Allowances</td>
</tr>
<tr>
<td>01 21 29</td>
<td>Quantity Allowances</td>
</tr>
<tr>
<td>01 21 43</td>
<td>Time Allowances</td>
</tr>
<tr>
<td>01 22 00</td>
<td>Unit Prices</td>
</tr>
<tr>
<td>01 22 13</td>
<td>Unit Price Measurement</td>
</tr>
<tr>
<td>01 22 16</td>
<td>Unit Price Payment</td>
</tr>
<tr>
<td>01 23 00</td>
<td>Alternates</td>
</tr>
<tr>
<td>01 24 00</td>
<td>Value Analysis</td>
</tr>
<tr>
<td>01 24 13</td>
<td>Value Engineering</td>
</tr>
<tr>
<td>01 25 00</td>
<td>Substitution Procedures</td>
</tr>
<tr>
<td>01 25 13</td>
<td>Product Substitution Procedures</td>
</tr>
<tr>
<td>01 25 16</td>
<td>Execution Substitution Procedures</td>
</tr>
<tr>
<td>01 26 00</td>
<td>Contract Modification Procedures</td>
</tr>
<tr>
<td>01 26 13</td>
<td>Requests for Interpretation</td>
</tr>
<tr>
<td>01 26 19</td>
<td>Clarification Notices</td>
</tr>
<tr>
<td>01 26 33</td>
<td>Minor Changes in the Work</td>
</tr>
<tr>
<td>01 26 36</td>
<td>Supplemental Instructions</td>
</tr>
<tr>
<td>01 26 39</td>
<td>Field Orders</td>
</tr>
<tr>
<td>01 26 43</td>
<td>Amendments</td>
</tr>
<tr>
<td>01 26 46</td>
<td>Construction Change Directives</td>
</tr>
<tr>
<td>01 26 49</td>
<td>Work Change Directives</td>
</tr>
<tr>
<td>01 26 53</td>
<td>Proposal Requests</td>
</tr>
<tr>
<td>01 26 54</td>
<td>Proposal Worksheet Summaries</td>
</tr>
<tr>
<td>01 26 57</td>
<td>Change Order Requests</td>
</tr>
<tr>
<td>01 26 63</td>
<td>Change Orders</td>
</tr>
<tr>
<td>01 29 00</td>
<td>Payment Procedures</td>
</tr>
<tr>
<td>01 29 73</td>
<td>Schedule of Values</td>
</tr>
<tr>
<td>01 29 76</td>
<td>Progress Payment Procedures</td>
</tr>
<tr>
<td>01 29 83</td>
<td>Payment Procedures for Testing Laboratory Services</td>
</tr>
<tr>
<td>01 30 00</td>
<td>Administrative Requirements</td>
</tr>
<tr>
<td>01 31 00</td>
<td>Project Management and Coordination</td>
</tr>
<tr>
<td>01 31 13</td>
<td>Project Coordination</td>
</tr>
<tr>
<td>01 31 14</td>
<td>Facility Services Coordination</td>
</tr>
<tr>
<td>01 31 16</td>
<td>Multiple Contract Coordination</td>
</tr>
<tr>
<td>01 31 19</td>
<td>Project Meetings</td>
</tr>
</tbody>
</table>
01 31 19.13 Preconstruction Meetings
01 31 19.16 Site Mobilization Meetings
01 31 19.23 Progress Meetings
01 31 19.33 Preinstallation Meetings
01 31 23 Project Web Site
01 31 26 Electronic Communication Protocols

01 32 00 Construction Progress Documentation
01 32 13 Scheduling of Work
01 32 16 Construction Progress Schedule
01 32 16.13 Network Analysis Schedules
01 32 19 Submittals Schedule
01 32 23 Survey and Layout Data
01 32 26 Construction Progress Reporting
01 32 29 Periodic Work Observation
01 32 33 Photographic Documentation
01 32 36 Video Monitoring and Documentation
01 32 43 Purchase Order Tracking

01 33 00 Submittal Procedures
01 33 13 Certificates
01 33 16 Design Data
01 33 19 Field Test Reporting
01 33 23 Shop Drawings, Product Data, and Samples
01 33 26 Source Quality Control Reporting
01 33 29 Sustainable Design Reporting
01 33 29.01 Material Cost Summary Form
01 33 29.02 Wood-Containing Product List
01 33 29.03 Metal-Containing Product List
01 33 29.04 Material Content Form
01 33 29.05 New Product Source Form
01 33 29.06 Reused Product Form
01 33 29.07 Prohibited Content Installer Certification

01 35 00 Special Procedures
01 35 03 Conservation Treatment Procedures
01 35 13 Special Project Procedures
01 35 13.13 Special Project Procedures for Airport Facilities
01 35 13.16 Special Project Procedures for Detention Facilities
01 35 13.19 Special Project Procedures for Healthcare Facilities
01 35 13.26 Special Project Procedures for Clean Rooms
01 35 13.43 Special Project Procedures for Contaminated Sites
01 35 16 Alteration Project Procedures
01 35 23 Owner Safety Requirements
01 35 26 Governmental Safety Requirements
01 35 29 Health, Safety, and Emergency Response Procedures
01 35 29.13 Health, Safety, and Emergency Response Procedures for Contaminated Sites
01 35 33 Infection Control Procedures
01 35 43 Environmental Procedures
01 35 43.13 Environmental Procedures for Hazardous Materials
01 35 43.16 Environmental Procedures for Toxic Materials
01 35 46 Indoor Air Quality Procedures
01 35 53 Security Procedures
01 35 63 Sustainability Certification Project Requirements
01 35 66 Sustainability Certification Project Procedures
01 35 73  Delegated Design Procedures
01 35 91  Period Treatment Procedures

01 40 00  Quality Requirements

01 41 00  Regulatory Requirements
01 41 13  Codes
01 41 16  Laws
01 41 19  Rules
01 41 23  Fees
01 41 26  Permit Requirements

01 42 00  References
01 42 13  Abbreviations and Acronyms
01 42 16  Definitions
01 42 19  Reference Standards

01 43 00  Quality Assurance
01 43 13  Manufacturer Qualifications
01 43 16  Supplier Qualifications
01 43 19  Fabricator Qualifications
01 43 23  Installer Qualifications
01 43 26  Testing and Inspecting Agency Qualifications
01 43 29  Code-Required Special Inspector Qualifications
01 43 33  Manufacturer’s Field Services
01 43 36  Field Samples
01 43 39  Mockups

01 45 00  Quality Control
01 45 13  Source Quality Control Procedures
01 45 16  Field Quality Control Procedures
01 45 16.13  Contractor Quality Control
01 45 23  Testing and Inspecting Services
01 45 26  Plant Inspection Procedures
01 45 29  Testing Laboratory Services
01 45 33  Code-Required Special Inspections and Procedures

01 50 00  Temporary Facilities and Controls

01 51 00  Temporary Utilities
01 51 13  Temporary Electricity
01 51 16  Temporary Fire Protection
01 51 19  Temporary Fuel Oil
01 51 23  Temporary Heating, Cooling, and Ventilating
01 51 26  Temporary Lighting
01 51 29  Temporary Natural-Gas
01 51 33  Temporary Telecommunications
01 51 36  Temporary Water

01 52 00  Construction Facilities
01 52 13  Field Offices and Sheds
01 52 16  First Aid Facilities
01 52 19  Sanitary Facilities

01 53 00  Temporary Construction
01 53 13  Temporary Bridges
01 53 16  Temporary Decking
01 53 19  Temporary Overpasses
01 53 23  Temporary Ramps
01 53 26  Temporary Runarounds

01 54 00  Construction Aids
01 54 13  Temporary Elevators
01 54 16  Temporary Hoists
01 54 19  Temporary Cranes
01 54 23  Temporary Scaffolding and Platforms
01 54 26  Temporary Swing Staging

01 55 00  Vehicular Access and Parking
01 55 13  Temporary Access Roads
01 55 16  Haul Routes
01 55 19  Temporary Parking Areas
01 55 23  Temporary Roads
01 55 26  Traffic Control
01 55 29  Staging Areas

01 56 00  Temporary Barriers and Enclosures
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

01 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

01 66 00  Product Storage and Handling Requirements
01 66 13  Product Storage and Handling Requirements for Hazardous Materials
01 66 16  Product Storage and Handling Requirements for Toxic Materials

01 70 00  Execution and Closeout Requirements

01 71 00  Examination and Preparation
01 71 13  Mobilization
01 71 16  Acceptance of Conditions
01 71 23  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  Erection
01 73 19  Installation
01 73 23  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 75 00  Starting and Adjusting
01 75 13  Checkout Procedures
01 75 16  Startup Procedures

01 76 00  Protecting Installed Construction

01 77 00  Closeout Procedures
01 77 13  Preliminary Closeout Reviews
01 77 16  Final Closeout Review
01 77 19  Closeout Requirements

01 78 00  Closeout Submittals
01 78 13  Completion and Correction List
01 78 19  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  Final Site Survey
01 78 33  Bonds
01 78 36  Warranties
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

01 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 Integrated Automation Performance Requirements
01 86 26 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 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
<table>
<thead>
<tr>
<th>Level</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>92</td>
<td>Facility Operation</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Facility Operation Procedures</td>
</tr>
<tr>
<td>01</td>
<td>93</td>
<td>Facility Maintenance</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Facility Maintenance Procedures</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Recycling Programs</td>
</tr>
<tr>
<td>01</td>
<td>94</td>
<td>Facility Decommissioning</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Facility Decommissioning Procedures</td>
</tr>
<tr>
<td>02</td>
<td>00</td>
<td>Existing Conditions</td>
</tr>
<tr>
<td>02</td>
<td>01</td>
<td>Maintenance of Existing Conditions</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>Maintenance of Site Remediation</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>Maintenance of Underground Storage Tank Removal</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>Maintenance of Facility Remediation</td>
</tr>
<tr>
<td></td>
<td>86</td>
<td>Maintenance of Hazardous Waste Drum Handling</td>
</tr>
<tr>
<td>02</td>
<td>03</td>
<td>Conservation Treatment for Existing Period Conditions</td>
</tr>
<tr>
<td></td>
<td>01</td>
<td>Maintenance of Existing Period Conditions</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Mothballing Period Structures</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>Selective Demolition for Period Structures</td>
</tr>
<tr>
<td></td>
<td>42</td>
<td>Removal and Salvage of Period Construction Materials</td>
</tr>
<tr>
<td></td>
<td>43</td>
<td>Period Structure Relocating</td>
</tr>
<tr>
<td></td>
<td>44</td>
<td>Shoring and Support of Period Structures</td>
</tr>
<tr>
<td>02</td>
<td>05</td>
<td>Common Work Results for Existing Conditions</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Geosynthetics for Existing Conditions</td>
</tr>
<tr>
<td></td>
<td>13.19</td>
<td>Geotextiles for Existing Conditions</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Geomembranes for Existing Conditions</td>
</tr>
<tr>
<td></td>
<td>19.19</td>
<td>Geogrids for Existing Conditions</td>
</tr>
<tr>
<td>02</td>
<td>06</td>
<td>Schedules for Existing Conditions</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Geotechnical Baseline Report</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Geotechnical Data Report</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>Schedules for Subsurface Investigations</td>
</tr>
<tr>
<td></td>
<td>30.13</td>
<td>Boring or Test Pit Log Schedule</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>Schedules for Site Remediation</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>Schedules for Underground Storage Tank Removal</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>Schedules for Facility Remediation</td>
</tr>
<tr>
<td></td>
<td>86</td>
<td>Schedules for Hazardous Waste Drum Handling</td>
</tr>
<tr>
<td>02</td>
<td>08</td>
<td>Commissioning of Existing Conditions</td>
</tr>
<tr>
<td>02</td>
<td>20</td>
<td>Assessment</td>
</tr>
<tr>
<td>02</td>
<td>21</td>
<td>Surveys</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Site Surveys</td>
</tr>
<tr>
<td></td>
<td>13.13</td>
<td>Boundary and Survey Markers</td>
</tr>
<tr>
<td></td>
<td>13.23</td>
<td>Archeological and Historic Surveys</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Measured Drawings</td>
</tr>
<tr>
<td>02</td>
<td>22</td>
<td>Existing Conditions Assessment</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Movement and Vibration Assessment</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Acoustic Assessment</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Traffic Assessment</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>Accessibility Assessment</td>
</tr>
</tbody>
</table>
02 24 00  Environmental Assessment
  02 24 13  Natural Environment Assessment
  02 24 13.13  Air Assessment
  02 24 13.43  Water Assessment
  02 24 13.73  Land Assessment
  02 24 23  Chemical Sampling and Analysis of Soils
  02 24 43  Transboundary and Global Environmental Aspects Assessment

02 25 00  Existing 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  Polychlorinated 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 Selective Building Demolition
02 41 19.16 Selective Interior Demolition
02 41 19.19 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 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 Surface Removal Decontamination by Grinding
02 51 33.16 Surface Removal Decontamination by Sand Blasting
02 51 33.19 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 Anaerobic Processes Decontamination
02 54 19 Bioremediation Decontamination
02 54 19.13 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 55 00 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

02 57 00 Sinkhole Remediation
02 57 13 Sinkhole Remediation by Grouting
02 57 13.13 Sinkhole Remediation by Compaction Grouting
02 57 13.16 Sinkhole Remediation by Cap Grouting
02 57 16 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 60 00
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 63 00 Underground Storage Tank Removal

02 64 00 Water Remediation

02 64 00
02 65 00 Groundwater Treatment

02 65 00
02 66 00 Water Decontamination
02 66 13 Chemical Water Decontamination
02 66 16 Biological Water Decontamination
02 66 19 Electrolysis Water Decontamination

02 67 00 Facility Remediation

02 68 00 Transportation and Disposal of Hazardous Materials

02 68 00
02 69 00 Asbestos Remediation
02 69 13 Asbestos Abatement
02 69 13.13 Glovebag Asbestos Abatement
02 69 13.16 Precautions for Asbestos Abatement
02 69 13.19 Asbestos Floor Tile and Mastic Abatement
02 69 13.33 Asbestos Abatement for Utilities
02 69 16 Engineering Control of Asbestos Containing Materials
02 69 33 Removal and Disposal of Asbestos Containing Materials

02 70 00 Lead Remediation
02 70 13 Lead Hazard Control Activities
02 70 19 Lead-Based Paint Remediation
02 70 19.13 Lead-Based Paint Abatement
02 70 33 Removal and Disposal of Material Containing Lead
02 70 33.13 Lead-Based Paint Removal and Disposal

02 71 00 Polychlorinate Biphenyl Remediation
02 71 16 Handling of Lighting Ballasts and Lamps Containing PCBs and Mercury
02 71 33 Removal and Disposal of Polychlorinate Biphenyls
02 86 00  Hazardous Waste Drum Handling
02 87 00  Biohazard Remediation
  02 87 13  Mold Remediation
  02 87 13.13 Precautions for Mold Remediation
  02 87 13.16 Mold Remediation Preparation and Containment
  02 87 13.19 Mold Remediation Clearance Air Sampling
  02 87 13.33 Removal and Disposal of Materials with Mold
  02 87 16  Excrement Removal
  02 87 16.13 Bird Excrement Removal
  02 87 16.16 Rodent Excrement Removal

03 00 00  Concrete
03 01 00  Maintenance of Concrete
  03 01 10  Maintenance of Concrete Forming and Accessories
  03 01 20  Maintenance of Concrete Reinforcing
  03 01 23  Maintenance of Stressing Tendons
  03 01 30  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 Cleaning of Precast Concrete
    03 01 40.61 Resurfacing of Precast Concrete
    03 01 40.71 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 Rehabilitation of Cast Decks and Underlayment
    03 01 50.72 Strengthening of Cast Decks and Underlayment
  03 01 60  Maintenance of Grouting
  03 01 70  Maintenance of Mass Concrete
  03 01 80  Maintenance of Concrete Cutting and Boring

03 03 00  Conservation Treatment for Period Concrete
  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  Schedules for Cast-in-Place Concrete
    03 06 30.13 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  Schedules for Precast Concrete
03 06 40.13 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 Concrete Forming and Accessories

03 11 00 Concrete Forming
03 11 13 Structural Cast-in-Place Concrete Forming
03 11 13.13 Concrete Slip Forming
03 11 13.16 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 11 26 Permanent Tier Forming

03 15 00 Concrete Accessories
03 15 13 Waterstops
03 15 13.13 Non-Expanding Waterstops
03 15 13.16 Expanding Waterstops
03 15 13.19 Combination Expanding and Injection Hose Waterstops
03 15 13.21 Injection Hose Waterstops
03 15 16 Concrete Construction Joints
03 15 19 Cast-In Concrete Anchors
03 15 21 Termite Barrier

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 Organic Fiber-Reinforced Polymer Reinforcement Bars
03 21 21.16 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  Heavy-Duty Concrete Floor Finishing
03 35 19  Colored Concrete Finishing
03 35 23  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
03 35 46  Concrete Topical Treatments

03 37 00  **Specialty Placed Concrete**
03 37 13  Shotcrete
03 37 16  Pumped Concrete
03 37 19  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  Membrane Concrete Curing
03 39 23.13 Chemical Compound Membrane Concrete Curing
03 39 23.23 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  Tilt-Up Concrete
03 47 16  Lift-Slab Concrete

03 48 00  Precast Concrete Specialties
03 48 13  Precast Concrete Bollards
03 48 13.11 Precast Concrete Security Bollards
03 48 16  Precast Concrete Splash Blocks
03 48 19  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 Lightweight Cellular Insulating Concrete
03 52 16.16 Lightweight Aggregate Insulating Concrete

03 53 00  Concrete Topping
03 53 13  Emery-Aggregate Concrete Topping
03 53 16  Iron-Aggregate Concrete Topping
03 53 19  Concrete Overlayment

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
03 61 13  Dry-Pack Grouting

03 62 00  Non-Shrink Grouting
03 62 13  Non-Metallic Non-Shrink Grouting
03 62 16  Metallic Non-Shrink Grouting

03 63 00  Epoxy Grouting

03 64 00  Injection Grouting
03 64 23  Epoxy Injection Grouting

03 70 00  Mass Concrete

03 71 00  Mass Concrete for Raft Foundations
03 72 00  Mass Concrete for Dams
03 80 00  Concrete Cutting and Boring

03 81 00  Concrete Cutting
  03 81 13  Flat Concrete Sawing
  03 81 16  Track Mounted Concrete Wall Sawing
  03 81 19  Wire Concrete Wall Sawing
  03 81 23  Hand Concrete Wall Sawing
  03 81 26  Chain Concrete Wall Sawing

03 82 00  Concrete Boring
  03 82 13  Concrete Core Drilling

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  Stone Cleaning
  04 01 40.91  Stone Restoration
  04 01 50  Maintenance of Refractory Masonry
  04 01 60  Maintenance of Corrosion-Resistant Masonry
  04 01 70  Maintenance of Manufactured Masonry

04 03 00  Conservation Treatment for Period Masonry
  04 03 01  Maintenance for Period Masonry
  04 03 01.13  Period Masonry Cleaning
  04 03 05  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  Engineered Masonry Mortaring
  04 05 13.29  Refractory Masonry Mortaring
  04 05 13.91  Masonry Restoration Mortaring
  04 05 16  Masonry Grouting
  04 05 16.16  Chemical-Resistant Masonry Grouting
  04 05 16.26  Engineered Masonry Grouting
Masonry Anchorage and Reinforcing
Continuous Joint Reinforcing
Masonry Anchors
Masonry Reinforcing Bars
Stone Anchors
Masonry Strengthening
Masonry Accessories
Continuous Joint Reinforcing
Masonry Control and Expansion Joints
Masonry Embedded Flashing
Masonry Cavity Drainage, Weepholes, and Vents

Schedules for Masonry
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

Unit Masonry
Clay Unit Masonry
Brick Masonry
Brick Veneer Masonry
Surface-Bonded Brick Masonry
Ceramic Glazed Clay Masonry
Clay Tile Masonry
Structural Clay Tile Masonry
Glazed Structural Clay Tile Masonry
Terra Cotta Masonry

Concrete Unit Masonry
Concrete Unit Veneer Masonry
Surface-Bonded Concrete Unit Masonry
Insulated Concrete Unit Masonry
Architectural Concrete Unit Masonry
Exposed Aggregate Concrete Unit Masonry
Fluted Concrete Unit Masonry
Molded-Face Concrete Unit Masonry
Prefaced Concrete Unit Masonry
Sound-Absorbing Concrete Unit Masonry
Split-Face Concrete Unit Masonry
Autoclaved Aerated Concrete Unit Masonry
Interlocking Concrete Unit Masonry

Glass Unit Masonry
Vertical Glass Unit Masonry
Glass Unit Masonry Floors
Glass Unit Masonry Skylights

Adobe Unit Masonry
Site-Cast Adobe Unit Masonry
Manufactured Adobe Unit Masonry

Unit Masonry Panels
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 Truss-Supported Stone Cladding
  04 42 26 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 43 16 Stone Fabrications
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 Corrosion-Resistant Masonry
04 61 00 Chemical-Resistant Brick Masonry
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 Conservation Treatment for Period Structural Steel for Buildings
05 03 51  Conservation Treatment for Period Metal Stairs
05 03 58  Conservation Treatment for Period Column Covers
05 03 70  Conservation Treatment for Period Decorative Metal
05 03 71  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 Steel Joist Schedule
05 06 30  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  Structural Steel Framing
05 12 13  Architecturally-Exposed Structural Steel Framing
05 12 16  Fabricated Fireproofed Steel Columns
05 12 19  Buckling Restrained Braces
05 12 23  Structural Steel for Buildings
05 12 33  Structural Steel for Bridges

05 13 00  Structural Stainless-Steel Framing

05 14 00  Structural Aluminum Framing
05 14 13  Architecturally-Exposed Structural Aluminum 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  **Tension Rod and Cable Truss Assemblies**
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  Steel Joist Girder Framing
05 25 00  **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  Steel Form Decking
05 33 00  **Aluminum Decking**
05 33 13  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  Communications Metal Supports
05 45 23  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 17  Alternating Tread Stairs
05 51 19  Metal Grating Stairs
05 51 23 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 51 36.19 Metal Platforms
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 53 19 Expanded Metal Gratings
05 54 00 Metal Floor Plates
05 55 00 Metal Stair Treads and Nosings
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 Decorative Metal
05 71 00 Decorative Metal Stairs
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 Decorative Metal Castings
05 75 00 Decorative Formed Metal
05 76 00 Decorative Forged Metal
05 77 00 Decorative Extruded Metal
06 00 00 Wood, Plastics, and Composites
06 01 00 Maintenance of Wood, Plastics, and Composites
06 01 10 Maintenance of Rough Carpentry
06 01 10.71 Rough Carpentry Rehabilitation
06 01 10.91 Rough Carpentry Restoration
06 01 10.92 Rough Carpentry Preservation
06 01 20 Maintenance of Finish Carpentry
06 01 20.71 Finish Carpentry Rehabilitation
06 01 20.91  Finish Carpentry Restoration
06 01 20.92  Finish Carpentry Preservation
06 01 40  Maintenance of Architectural Woodwork
06 01 40.51  Architectural Woodwork Cleaning
06 01 40.61  Architectural Woodwork Refinishing
06 01 40.91  Architectural Woodwork Restoration
06 01 50  Maintenance of Structural Plastics
06 01 60  Maintenance of Plastic Fabrications
06 01 60.51  Plastic Cleaning
06 01 60.71  Plastic Rehabilitation
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
06 03 01.31  Period Wood Storage and Protection
06 03 05  Common Work Results for Period Wood
06 03 05.73  Long-term Period Wood Treatment
06 03 05.74  Eradication of Insects in Period Wood
06 03 05.75  Antiseptic Treatment of Period Wood
06 03 13  Conservation Treatment of Period Log Construction
06 03 13.23  Conservation Treatment for Period Heavy Timber
06 03 20  Conservation Treatment for Period Finish Carpentry
06 03 20.13  Period Exterior Finish Carpentry
06 03 20.23  Period Interior Finish Carpentry
06 03 40  Conservation Treatment for Period Architectural Woodwork
06 03 40.13  Period Exterior Architectural Woodwork
06 03 40.23  Period Interior Architectural Woodwork
06 05 00  Common Work Results for Wood, Plastics, and Composites
06 05 05  Selective Demolition for Wood, Plastics, and Composites
06 05 23  Wood, Plastic, and Composite Fastenings
06 05 73  Wood Treatment
06 05 73.13  Fire-Retardant Wood Treatment
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 Period Horizontal Log Work
06 13 16  Pole Construction
06 13 23  Heavy Timber Framing
06 13 26  Heavy Timber Trusses
06 13 33  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
06 15 16  Wood Roof Decking
06 15 19  Timber Decking
06 15 23  Laminated Wood Decking
06 15 33  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  Gypsum Sheathing
06 16 53  Moisture-Resistant Sheathing Board
06 16 63  Cementitious Sheathing

06 17 00  Shop-Fabricated Structural 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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>06 18 16</td>
<td>Glued-Laminated Columns</td>
</tr>
<tr>
<td>06 20 00</td>
<td><strong>Finish Carpentry</strong></td>
</tr>
<tr>
<td>06 20 13</td>
<td>Exterior Finish Carpentry</td>
</tr>
<tr>
<td>06 20 23</td>
<td>Interior Finish Carpentry</td>
</tr>
<tr>
<td>06 22 00</td>
<td><strong>Millwork</strong></td>
</tr>
<tr>
<td>06 22 13</td>
<td>Standard Pattern Wood Trim</td>
</tr>
<tr>
<td>06 25 00</td>
<td><strong>Prefinished Paneling</strong></td>
</tr>
<tr>
<td>06 25 13</td>
<td>Prefinished Hardboard Paneling</td>
</tr>
<tr>
<td>06 25 16</td>
<td>Prefinished Plywood Paneling</td>
</tr>
<tr>
<td>06 26 00</td>
<td><strong>Board Paneling</strong></td>
</tr>
<tr>
<td>06 26 13</td>
<td>Profile Board Paneling</td>
</tr>
<tr>
<td>06 40 00</td>
<td><strong>Architectural Woodwork</strong></td>
</tr>
<tr>
<td>06 40 13</td>
<td>Exterior Architectural Woodwork</td>
</tr>
<tr>
<td>06 40 23</td>
<td>Interior Architectural Woodwork</td>
</tr>
<tr>
<td>06 41 00</td>
<td><strong>Architectural Wood Casework</strong></td>
</tr>
<tr>
<td>06 41 13</td>
<td>Wood-Veneer-Faced Architectural Cabinets</td>
</tr>
<tr>
<td>06 41 16</td>
<td>Plastic-Laminate-Clad Architectural Cabinets</td>
</tr>
<tr>
<td>06 41 93</td>
<td>Cabinet and Drawer Hardware</td>
</tr>
<tr>
<td>06 42 00</td>
<td><strong>Wood Paneling</strong></td>
</tr>
<tr>
<td>06 42 13</td>
<td>Wood Board Paneling</td>
</tr>
<tr>
<td>06 42 14</td>
<td>Stile and Rail Wood Paneling</td>
</tr>
<tr>
<td>06 42 16</td>
<td>Flush Wood Paneling</td>
</tr>
<tr>
<td>06 42 19</td>
<td>Plastic-Laminate-Faced Wood Paneling</td>
</tr>
<tr>
<td>06 43 00</td>
<td><strong>Wood Stairs and Railings</strong></td>
</tr>
<tr>
<td>06 43 13</td>
<td>Wood Stairs</td>
</tr>
<tr>
<td>06 43 16</td>
<td>Wood Railings</td>
</tr>
<tr>
<td>06 44 00</td>
<td><strong>Ornamental Woodwork</strong></td>
</tr>
<tr>
<td>06 44 13</td>
<td>Wood Turnings</td>
</tr>
<tr>
<td>06 44 16</td>
<td>Wood Pilasters</td>
</tr>
<tr>
<td>06 44 19</td>
<td>Wood Grilles</td>
</tr>
<tr>
<td>06 44 23</td>
<td>Wood Corbels</td>
</tr>
<tr>
<td>06 44 26</td>
<td>Wood Cupolas</td>
</tr>
<tr>
<td>06 44 29</td>
<td>Wood Finials</td>
</tr>
<tr>
<td>06 44 33</td>
<td>Wood Mantels</td>
</tr>
<tr>
<td>06 44 36</td>
<td>Wood Pediment Heads</td>
</tr>
<tr>
<td>06 44 39</td>
<td>Wood Posts and Columns</td>
</tr>
<tr>
<td>06 46 00</td>
<td><strong>Wood Trim</strong></td>
</tr>
<tr>
<td>06 46 13</td>
<td>Wood Door and Window Casings</td>
</tr>
<tr>
<td>06 46 16</td>
<td>Wood Aprons</td>
</tr>
<tr>
<td>06 46 19</td>
<td>Wood Base and Shoe Moldings</td>
</tr>
<tr>
<td>06 46 23</td>
<td>Wood Chair Rails</td>
</tr>
<tr>
<td>06 46 26</td>
<td>Wood Cornices</td>
</tr>
<tr>
<td>06 46 29</td>
<td>Wood Fasciae and Soffits</td>
</tr>
<tr>
<td>06 46 33</td>
<td>Wood Stops, Stools, and Sills</td>
</tr>
<tr>
<td>06 46 91</td>
<td>Splicing of Wooden Components</td>
</tr>
<tr>
<td>06 48 00</td>
<td><strong>Wood Frames</strong></td>
</tr>
<tr>
<td>06 48 13</td>
<td>Exterior Wood Door Frames</td>
</tr>
</tbody>
</table>
06 48 16  Interior Wood Door Frames
06 48 19  Ornamental Wood Frames
06 48 23  Stick-Built Wood Windows
06 48 26  Wood-Veneer Frames

06 49 00  Wood Screens and Shutters
06 49 13  Wood Screens
06 49 16  Wood Blinds
06 49 19  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  Custom Ornamental Simulated Woodwork

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 72 23  Composite Stair 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
07 01 00  Operation and Maintenance of Thermal and Moisture Protection
    07 01 10  Maintenance of Dampproofing and Waterproofing
    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
    07 01 50  Maintenance of Membrane Roofing
    07 01 50.13  Roof Moisture Survey
    07 01 50.16  Roof Maintenance Program
    07 01 50.19  Preparation for Re-Roofing
    07 01 50.23  Roof Removal
    07 01 50.61  Roof Re-Coating
    07 01 50.81  Roof Replacement
    07 01 50.91  Roofing Restoration
    07 01 60  Maintenance of Flashing and Sheet Metal
    07 01 60.71  Flashing and Sheet Metal Rehabilitation
    07 01 60.91  Flashing and Sheet Metal Restoration
    07 01 60.92  Flashing and Sheet Metal Preservation
    07 01 70  Operation and Maintenance of Roof Specialties and Accessories
    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
    07 03 30.13  Conservation Treatment for Period Canvas Roofing
    07 03 30.16  Conservation Treatment for Period Board Roofing
    07 03 31.13  Conservation Treatment for Period Shingles and Shakes
    07 03 31.16  Conservation Treatment for Period Metal Shingles
    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
    07 03 32.13  Conservation Treatment for Period Clay Roof Tiles
    07 03 32.16  Conservation Treatment for Period Concrete Roof Tiles
    07 03 32.19  Conservation Treatment for Period Metal Roof Tiles
    07 03 33  Conservation Treatment for Period Natural Roof Coverings
    07 03 33.13  Conservation Treatment for Period Sod Roofing
    07 03 40  Conservation Treatment for Period Roofing and Siding Panels
    07 03 41  Conservative Treatment for Period Roof Panels
    07 03 41.13  Conservation Treatment for Period Metal Roof Panels
    07 03 41.23  Conservation Treatment for Period Wood Roof Panels
    07 03 46  Conservation Treatment for Period Wood Siding
    07 03 60  Conservation Treatment of Period Flashing and Sheet Metal
    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

07 05 00  Common Work Results for Thermal and Moisture Protection
    07 05 05  Selective Demolition for Thermal and Moisture Protection
    07 05 43  Cladding Support Systems
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 Firestopping Schedule
  07 06 90 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

07 15 00 Sheet Metal Waterproofing
  07 15 13 Sheet Lead Waterproofing

07 16 00 Cementitious and Reactive Waterproofing
  07 16 13 Polymer Modified Cement Waterproofing
  07 16 16 Crystalline Waterproofing
  07 16 19 Metal Oxide Waterproofing

07 17 00 Bentonite Waterproofing
  07 17 13 Bentonite Panel Waterproofing
  07 17 16 Bentonite Composite Sheet Waterproofing

07 18 00 Traffic Coatings
  07 18 13 Pedestrian Traffic Coatings
  07 18 16 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 19 29  Penetrating Polyester Water Repellents

07 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  Blown Insulation
  07 21 29  Sprayed Insulation
  07 21 53  Reflective Insulation

07 22 00  Roof and Deck Insulation
  07 22 13  Asphalitic 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

07 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  Wood Shingles and Shakes
  07 31 29.13  Wood Shingles
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 Steep-Slope Roofing

07 40 00  Roofing and Siding Panels

07 41 00  Roof Panels
07 41 13  Metal Roof Panels
07 41 16  Insulated 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  Insulated Metal Wall Panels
07 42 13.23  Metal Composite Material Wall Panels
07 42 23  Wood Wall Panels
07 42 26  Tile Wall Panels
07 42 29  Terra Cotta Wall Panels
07 42 33  Plastic Wall Panels
07 42 43  Composite Wall Panels
07 42 46  Cementitious Wall Panels
07 42 63  Fabricated Wall Panel Assemblies
07 42 93  Soffit Panels

07 44 00  Faced Panels
07 44 13  Aggregate Coated Panels
07 44 16  Porcelain Enameled Faced Panels
07 44 19  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
07 46 16  Aluminum Siding
07 46 19  Steel Siding
07 46 21 Zinc Siding
07 46 23 Wood Siding
07 46 24 Wood Shingle and Shake Siding
07 46 24.13 Wood Shingle Siding
07 46 24.16 Wood Shake Siding
07 46 26 Hardboard Siding
07 46 29 Plywood Siding
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 Atactic-Polypropylene-Modified Bituminous Membrane Roofing
  07 52 13.11 Cold Adhesive Applied Atactic-Polypropylene-Modified Bituminous Membrane Roofing
  07 52 13.13 Torch-Applied Atactic-Polypropylene-Modified Bituminous Membrane Roofing
  07 52 13.14 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 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 Ketone Ethylene Ester Roofing
  07 54 19 Polyvinyl-Chloride Roofing
  07 54 23 Thermoplastic-Polyolefin Roofing
  07 54 26 Nitrile-Butadiene-Polymer Roofing

07 55 00 Protected Membrane Roofing
  07 55 51 Built-Up Bituminous Protected Membrane Roofing
  07 55 52 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
07 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
07 62 00  Sheet Metal Flashing and Trim
07 63 00  Sheet Metal Roofing Specialties
07 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  Modified Bituminous Sheet Flashing
   07 65 19  Plastic Sheet Flashing
   07 65 23  Rubber Sheet Flashing
   07 65 26  Self-Adhering Sheet Flashing
07 70 00  Roof and Wall Specialties and Accessories
07 71 00  Roof Specialties
   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  Manufactured Roof Expansion Joints
   07 71 33  Manufactured Scuppers
07 72 00  Roof Accessories
   07 72 13  Manufactured Curbs
   07 72 23  Relief Vents
   07 72 26  Ridge Vents
   07 72 33  Roof Hatches
   07 72 36  Smoke Vents
   07 72 39  Operable Roof Vents
   07 72 43  Roof Walk Boards
   07 72 46  Roof Walkways
   07 72 53  Snow Guards
   07 72 63  Waste Containment Assemblies
   07 72 73  Vegetated Roof Systems
07 76 00  Roof Pavers
07 76 13  Roof Ballast Pavers
07 76 16  Roof Decking Pavers
07 77 00  Wall Specialties
07 80 00  Fire and Smoke Protection
07 81 00  Applied Fireproofing
07 81 13  Cement Aggregate Fireproofing
07 81 16  Cementitious Fireproofing
07 81 19  Foamed Magnesium-Oxychloride Fireproofing
07 81 23  Intumescent Fireproofing
07 81 26  Magnesium Cement Fireproofing
07 81 29  Mineral-Fiber Cementitious Fireproofing
07 81 33  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 Penetration Firestopping Devices
07 84 43  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 91 00  Preformed Joint Seals
07 91 13  Compression Seals
07 91 16  Joint Gaskets
07 91 23  Backer Rods
07 91 26  Joint Fillers
07 92 00  Joint Sealants
07 92 13  Elastomeric Joint Sealants
07 92 16  Rigid Joint Sealants
07 92 19  Acoustical Joint Sealants
07 95 00  Expansion Control
07 95 13  Expansion Joint Cover Assemblies
07 95 13.13 Interior Expansion Joint Cover Assemblies
07 95 13.16 Exterior Expansion Joint Cover Assemblies
07 95 13.19 Parking Deck Expansion Joint Cover Assemblies
07 95 53  Joint Slide Bearings
07 95 63  Bridge Expansion Joint Cover Assemblies
08 00 00  Openings
08 01 00  Operation and Maintenance of Openings
08 01 10  Operation and Maintenance of Doors and Frames
08 01 11  Operation and Maintenance of Metal Doors and Frames
08 01 14  Operation and Maintenance of Wood Doors
08 01 15  Operation and Maintenance of Plastic Doors
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08 01 16</td>
<td>Operation and Maintenance of Composite Doors</td>
</tr>
<tr>
<td>08 01 17</td>
<td>Operation and Maintenance of Integrated Door Opening Assemblies</td>
</tr>
<tr>
<td>08 01 30</td>
<td>Operation and Maintenance of Specialty Doors and Frames</td>
</tr>
<tr>
<td>08 01 32</td>
<td>Operation and Maintenance of Sliding Glass Doors</td>
</tr>
<tr>
<td>08 01 33</td>
<td>Operation and Maintenance of Coiling Doors and Grilles</td>
</tr>
<tr>
<td>08 01 34</td>
<td>Operation and Maintenance of Special Function Doors</td>
</tr>
<tr>
<td>08 01 35</td>
<td>Operation and Maintenance of Folding Doors and Grilles</td>
</tr>
<tr>
<td>08 01 36</td>
<td>Operation and Maintenance of Panel Doors</td>
</tr>
<tr>
<td>08 01 39</td>
<td>Operation and Maintenance of Traffic Doors</td>
</tr>
<tr>
<td>08 01 40</td>
<td>Operation and Maintenance of Entrances, Storefronts, and Curtain Walls</td>
</tr>
<tr>
<td>08 01 41</td>
<td>Operation and Maintenance of Entrances</td>
</tr>
<tr>
<td>08 01 42</td>
<td>Operation and Maintenance of Storefronts</td>
</tr>
<tr>
<td>08 01 44</td>
<td>Operation and Maintenance of Curtain Walls</td>
</tr>
<tr>
<td>08 01 50</td>
<td>Operation and Maintenance of Windows</td>
</tr>
<tr>
<td>08 01 51</td>
<td>Operation and Maintenance of Metal Windows</td>
</tr>
<tr>
<td>08 01 52</td>
<td>Operation and Maintenance of Wood Windows</td>
</tr>
<tr>
<td>08 01 52.61</td>
<td>Wood Window Repairs</td>
</tr>
<tr>
<td>08 01 52.71</td>
<td>Wood Window Rehabilitation</td>
</tr>
<tr>
<td>08 01 52.81</td>
<td>Wood Window Replacement</td>
</tr>
<tr>
<td>08 01 52.91</td>
<td>Wood Window Restoration</td>
</tr>
<tr>
<td>08 01 52.93</td>
<td>Historic Treatment of Wood Windows</td>
</tr>
<tr>
<td>08 01 53</td>
<td>Operation and Maintenance of Plastic Windows</td>
</tr>
<tr>
<td>08 01 54</td>
<td>Operation and Maintenance of Composite Windows</td>
</tr>
<tr>
<td>08 01 56</td>
<td>Operation and Maintenance of Special Function Windows</td>
</tr>
<tr>
<td>08 01 60</td>
<td>Operation and Maintenance of Skylights and Roof Windows</td>
</tr>
<tr>
<td>08 01 61</td>
<td>Operation and Maintenance of Roof Windows</td>
</tr>
<tr>
<td>08 01 62</td>
<td>Operation and Maintenance of Unit Skylights</td>
</tr>
<tr>
<td>08 01 63</td>
<td>Operation and Maintenance of Metal-Framed Skylights</td>
</tr>
<tr>
<td>08 01 64</td>
<td>Operation and Maintenance of Plastic-Framed Skylights</td>
</tr>
<tr>
<td>08 01 70</td>
<td>Operation and Maintenance of Hardware</td>
</tr>
<tr>
<td>08 01 71</td>
<td>Operation and Maintenance of Door Hardware</td>
</tr>
<tr>
<td>08 01 74</td>
<td>Operation and Maintenance of Access Control Hardware</td>
</tr>
<tr>
<td>08 01 75</td>
<td>Operation and Maintenance of Window Hardware</td>
</tr>
<tr>
<td>08 01 80</td>
<td>Maintenance of Glazing</td>
</tr>
<tr>
<td>08 01 81</td>
<td>Maintenance of Glass Glazing</td>
</tr>
<tr>
<td>08 01 84</td>
<td>Maintenance of Plastic Glazing</td>
</tr>
<tr>
<td>08 01 88</td>
<td>Maintenance of Special Function Glazing</td>
</tr>
<tr>
<td>08 01 90</td>
<td>Operation and Maintenance of Louvers and Vents</td>
</tr>
<tr>
<td>08 01 91</td>
<td>Operation and Maintenance of Louvers</td>
</tr>
<tr>
<td>08 01 92</td>
<td>Operation and Maintenance of Louvered Equipment Enclosures</td>
</tr>
<tr>
<td>08 01 95</td>
<td>Operation and Maintenance of Vents</td>
</tr>
</tbody>
</table>

### Conservation Treatment for Period Openings

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08 03 11</td>
<td>Conservation Treatment for Period Metal Doors and Frames</td>
</tr>
<tr>
<td>08 03 11.23</td>
<td>Conservation Treatment for Period Bronze Doors and Frames</td>
</tr>
<tr>
<td>08 03 14</td>
<td>Conservation Treatment for Period Wood Doors</td>
</tr>
<tr>
<td>08 03 14.23</td>
<td>Conservation Treatment for Period Metal-Faced Wood Doors</td>
</tr>
<tr>
<td>08 03 14.33</td>
<td>Conservation Treatment for Period Stile and Rail Wood Doors</td>
</tr>
<tr>
<td>08 03 30</td>
<td>Conservation Treatment for Period Specialty Doors and Frames</td>
</tr>
<tr>
<td>08 03 34</td>
<td>Conservation Treatment for Period Special Function Doors</td>
</tr>
<tr>
<td>08 03 34.59</td>
<td>Conservation Treatment for Period Vault Doors</td>
</tr>
<tr>
<td>08 03 50</td>
<td>Conservation Treatment for Period Windows</td>
</tr>
</tbody>
</table>
08 03 51 Conservation Treatment for Period Metal Windows
08 03 51.16 Conservation Treatment for Period Bronze Windows
08 03 51.23 Conservation Treatment for Period Steel Windows
08 03 52 Conservation Treatment for Period Wood Windows
08 03 70 Conservation Treatment for Period Hardware
08 03 71 Conservation Treatment for Period Door Hardware
08 03 75 Conservation Treatment for Period Window Hardware
08 03 90 Conservation Treatment for Period Louvers and Vents
08 03 91 Conservation Treatment for Period Louvers
08 03 95 Conservation Treatment for Period Vents

08 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

08 10 00 Doors and Frames

08 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 16.13 Aluminum Terrace 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 23.17 Plastic-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 33.13 Wood Terrace 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 Integrated Metal Door Opening Assemblies
08 17 23 Integrated Wood Door Opening Assemblies
08 17 33 Integrated Plastic Door Opening Assemblies
08 17 43 Integrated Composite Door Opening Assemblies

08 30 00 Specialty Doors and Frames

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  Overhead Coiling Smoke Curtains  
08 33 44  Overhead Coiling Fire Curtains  

08 34 00  Special Function Doors  
08 34 13  Cold Storage Doors  
08 34 16  Hangar Doors  
08 34 19  Industrial Doors  
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 73  Sound Control Door Assemblies  
08 34 73.13  Metal Sound Control Door Assemblies  
08 34 73.16  Wood Sound Control Door Assemblies  

08 35 00  Folding Doors and Grilles  
08 35 13  Folding Doors  
08 35 13.13  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  
08 38 16  Flexible Traffic Doors  
08 38 19  Rigid Traffic Doors  

08 39 00  Pressure-Resistant Doors  
08 39 13  Airtight Doors  
08 39 19  Watertight Doors  
08 39 53  Blast-Resistant Doors
08 40 00  Entrances, Storefronts, and Curtain Walls

08 41 00  Entrances and Storefronts
08 41 13  Aluminum-Framed Entrances and Storefronts
08 41 13.13 Fire-Rated Aluminum-Framed Entrances and Storefronts
08 41 16  Bronze-Framed Entrances and Storefronts
08 41 19  Stainless-Steel-Framed Entrances and Storefronts
08 41 23  Steel-Framed Entrances and Storefronts
08 41 26  All-Glass Entrances and Storefronts
08 41 26.13 Point Supported All-Glass Storefronts

08 42 00  Entrances
08 42 13  Aluminum-Framed Entrances
08 42 26  All-Glass Entrances
08 42 29  Automatic Entrances
08 42 29.13 Folding Automatic Entrances
08 42 29.23 Sliding Automatic Entrances
08 42 29.33 Swinging Automatic Entrances
08 42 33  Revolving Door Entrances
08 42 33.13 Security Revolving Door Entrances
08 42 36  Balanced Door Entrances
08 42 39  Pressure-Resistant Entrances
08 42 43  Intensive Care Unit/Critical Care Unit Entrances

08 43 00  Storefronts
08 43 11  Timber-Framed Storefronts
08 43 13  Aluminum-Framed Storefronts
08 43 13.13 Fire-Rated Aluminum Storefronts
08 43 16  Bronze-Framed Storefronts
08 43 19  Stainless-Steel-Framed Storefronts
08 43 23  Steel-Framed Storefronts
08 43 26  All-Glass Storefronts
08 43 27  Channel Glass Storefronts
08 43 29  Sliding Storefronts

08 44 00  Curtain Wall and Glazed Assemblies
08 44 11  Glazed Timber Curtain Walls
08 44 12  Glazed Composite Curtain Wall
08 44 12.13 Glazed Fiberglass Curtain Wall
08 44 13  Glazed Aluminum Curtain Walls
08 44 16  Glazed Bronze Curtain Walls
08 44 18  Glazed Steel Curtain Walls
08 44 19  Glazed Stainless-Steel Curtain Walls
08 44 23  Structural Sealant Glazed Curtain Walls
08 44 26  Structural Glass Curtain Walls
08 44 26.13 Glass Framed Point Supported Glass Curtain Walls
08 44 26.16 Metal Framed Point Supported Glass Curtain Walls
08 44 26.23 Cable Framed Point Supported Glass Curtain Walls
08 44 33  Sloped Glazing Assemblies

08 45 00  Translucent Wall and Roof Assemblies
08 45 13  Structured-Polycarbonate-Panel Assemblies
08 45 23  Fiberglass-Sandwich-Panel Assemblies

08 46 00  Window Wall 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 23.13  Hot-Rolled Steel Windows
    08 51 23.23  Cold-Rolled 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  Vinyl Windows
    08 53 66  Vinyl Window Screens
    08 53 69  Vinyl Storm Windows
  08 54 00  Composite Windows
    08 54 13  Fiberglass Windows
    08 54 66  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  Security Window Screens
    08 56 59  Service and Teller Window Units
    08 56 73  Sound Control Windows
    08 56 88  Interior Insulating Windows

08 60 00  Roof Windows and Skylights
  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  Pyramidal Metal-Framed Skylights
08 63 19  Vaulted Metal-Framed Skylights
08 63 23  Ridge Metal-Framed Skylights
08 63 53  Motorized Metal-Framed Skylights
08 64 00  Plastic-Framed Skylights
08 65 00  Glazed Canopies
08 65 13  Suspended Glazed Canopies
08 67 00  Skylight Protection and Screens
08 70 00  Hardware
08 71 00  Door Hardware
08 71 13  Automatic Door Operators
08 71 53  Security Door Hardware
08 75 00  Window Hardware
08 75 13  Automatic Window Equipment
08 75 16  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 81 23  Exterior Glass Glazing
08 81 26  Interior Glass Glazing
08 83 00  Mirrors
08 83 13  Mirrored Glass Glazing
08 83 16  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  Bird Control Film
08 87 33  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 Electronically Controlled Switchable Glass
08 88 39  Pressure-Resistant Glazing
08 88 49  Radiation-Resistant Glazing
08 88 53  Security Glazing
08 88 56  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  Louvered Equipment Enclosures
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 00 00  Finishes
09 01 00  Maintenance of Finishes
  09 01 20  Maintenance of Plaster and Gypsum Board
  09 01 20.91  Plaster Restoration
  09 01 30  Maintenance of Tiling
  09 01 30.91  Tile Restoration
  09 01 50  Maintenance of Ceilings
  09 01 50.91  Ceiling Restoration
  09 01 60  Maintenance of Flooring
  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
  09 01 90.52  Maintenance Repainting
  09 01 90.53  Maintenance Coatings
  09 01 90.61  Repainting
  09 01 90.91  Paint Restoration
  09 01 90.92  Coating Restoration
  09 01 90.93  Paint Preservation

09 03 00  Conservation Treatment of Period Finishes
  09 03 21  Conservation Treatment for Period Plaster Assemblies
  09 03 25  Conservation Treatment for Period Plastering
  09 03 25.23  Conservation Treatment for Period Lime-Based Plaster
  09 03 30  Conservation Treatment for Period Tile
  09 03 50  Conservation Treatment for Period Ceilings
  09 03 51  Conservation Treatment for Period Suspended Ceilings
  09 03 56  Conservation Treatment for Textured Ceilings
  09 03 56.16  Conservation Treatment for Period Metal-Panel Textured Ceilings
  09 03 60  Conservation Treatment for Period Flooring
  09 03 63  Conservation Treatment for Period Masonry Flooring
  09 03 63.13  Conservation Treatment for Period Brick Flooring
  09 03 63.40  Conservation Treatment for Period Stone Flooring
  09 03 64  Conservation Treatment for Period Wood Flooring
  09 03 64.29  Conservation Treatment for Period Wood Strip and Plank Flooring
  09 03 65  Conservation Treatment for Period Resilient Flooring
  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
09 03 90  Conservation Treatment for Period Painting and Coating
09 03 91  Conservation Treatment for Period Painted Surfaces
09 03 91.13 Conservation Treatment for Period Exterior Painting
09 03 91.23 Conservation Treatment for Period Interior Painting

09 05 00  Common Work Results for Finishes
09 05 05  Selective Demolition for Finishes
09 05 13  Common Finishes
09 05 61  Common Work Results for Flooring Preparation
09 05 61.13 Moisture Vapor Emission Control
09 05 71  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  Schedules for Tiling
09 06 50  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 Gypsum Board Shaft Wall Assemblies
09 21 16.33 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  Suspension Systems
09 22 26.23 Metal Suspension Systems
09 22 26.33 Plastic Suspension Systems
09 22 36  Lath
09 22 36.13 Gypsum Lath
09 22 36.23 Metal Lath
09 22 39  Veneer Plaster Base

09 23 00  Gypsum Plastering
09 23 13  Acoustical Gypsum Plastering
09 23 82  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  Lime Based Plastering
  09 25 26  Natural Clay Plastering

09 26 00  Veneer Plastering
  09 26 13  Gypsum Veneer Plastering

09 27 00  Plaster Fabrications
  09 27 13  Glass-Fiber-Reinforced Gypsum Fabrications
  09 27 23  Simulated Plaster Fabrications

09 28 00  Backing Boards and Underlayments
  09 28 13  Cementitious Backing Boards
  09 28 16  Glass-Mat Faced Gypsum Backing Boards
  09 28 19  Fibered Gypsum Backing Boards

09 29 00  Gypsum Board
  09 29 82  Gypsum Board Fireproofing

09 30 00  Tiling
  09 30 13  Ceramic Tiling
  09 30 16  Quarry Tiling
  09 30 19  Paver Tiling
  09 30 23  Glass Mosaic Tiling
  09 30 26  Plastic Tiling
  09 30 29  Metal Tiling
  09 30 33  Stone Tiling
  09 30 36  Concrete Tiling
  09 30 39  Brick Tiling

09 31 00  Thin-Set Tiling
  09 31 13  Thin-Set Ceramic Tiling
  09 31 16  Thin-Set Quarry Tiling
  09 31 19  Thin-Set Paver Tiling
  09 31 23  Thin-Set Glass Mosaic Tiling
  09 31 26  Thin-Set Plastic Tiling
  09 31 29  Thin-Set Metal Tiling
  09 31 33  Thin-Set Stone Tiling
  09 31 36  Thin-Set Concrete Tiling

09 32 00  Mortar-Bed Tiling
  09 32 13  Mortar-Bed Ceramic Tiling
  09 32 16  Mortar-Bed Quarry Tiling
  09 32 19  Mortar-Bed Paver Tiling
  09 32 23  Mortar-Bed Glass Mosaic Tiling
  09 32 26  Mortar-Bed Plastic Tiling
  09 32 29  Mortar-Bed Metal Tiling
  09 32 33  Mortar-Bed Stone Tiling
  09 32 36  Mortar-Bed Concrete Tiling

09 33 00  Conductive Tiling
  09 33 13  Conductive Ceramic Tiling
  09 33 16  Conductive Quarry Tiling
09 33 19  Conductive Paver Tiling
09 33 23  Conductive Glass Mosaic Tiling
09 33 26  Conductive Plastic Tiling
09 33 29  Conductive Metal Tiling
09 33 33  Conductive Stone Tiling
09 33 36  Conductive Concrete Tiling

09 34 00  Waterproofing-Membrane Tiling
09 34 13  Waterproofing-Membrane Ceramic Tiling
09 34 16  Waterproofing-Membrane Quarry Tiling
09 34 19  Waterproofing-Membrane Paver Tiling
09 34 23  Waterproofing-Membrane Glass Mosaic Tiling
09 34 26  Waterproofing-Membrane Plastic Tiling
09 34 29  Waterproofing-Membrane Metal 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  Acoustical Ceiling Suspension Assemblies
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 29  Suspended Plastic 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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>09 56 00</td>
<td>Textured Ceilings</td>
</tr>
<tr>
<td>09 56 13</td>
<td>Gypsum-Panel Textured Ceilings</td>
</tr>
<tr>
<td>09 56 16</td>
<td>Metal-Panel Textured Ceilings</td>
</tr>
<tr>
<td>09 57 00</td>
<td>Special Function Ceilings</td>
</tr>
<tr>
<td>09 57 53</td>
<td>Security Ceiling Assemblies</td>
</tr>
<tr>
<td>09 58 00</td>
<td>Integrated Ceiling Assemblies</td>
</tr>
<tr>
<td>09 60 00</td>
<td>Flooring</td>
</tr>
<tr>
<td>09 61 00</td>
<td>Flooring Treatment</td>
</tr>
<tr>
<td>09 61 13</td>
<td>Slip-Resistant Flooring Treatment</td>
</tr>
<tr>
<td>09 61 19</td>
<td>Concrete Floor Staining</td>
</tr>
<tr>
<td>09 61 36</td>
<td>Static-Resistant Flooring Treatment</td>
</tr>
<tr>
<td>09 62 00</td>
<td>Specialty Flooring</td>
</tr>
<tr>
<td>09 62 13</td>
<td>Asphaltic Plank Flooring</td>
</tr>
<tr>
<td>09 62 19</td>
<td>Laminate Flooring</td>
</tr>
<tr>
<td>09 62 23</td>
<td>Bamboo Flooring</td>
</tr>
<tr>
<td>09 62 26</td>
<td>Leather Flooring</td>
</tr>
<tr>
<td>09 62 29</td>
<td>Cork Flooring</td>
</tr>
<tr>
<td>09 62 35</td>
<td>Acid-Resistant Flooring</td>
</tr>
<tr>
<td>09 62 48</td>
<td>Acoustic Flooring</td>
</tr>
<tr>
<td>09 62 53</td>
<td>Synthetic Turf Flooring</td>
</tr>
<tr>
<td>09 62 63</td>
<td>Metal Flooring</td>
</tr>
<tr>
<td>09 62 63.13</td>
<td>Aluminum Flooring</td>
</tr>
<tr>
<td>09 62 63.16</td>
<td>Stainless Steel Flooring</td>
</tr>
<tr>
<td>09 62 83</td>
<td>Structural Glass Flooring</td>
</tr>
<tr>
<td>09 63 00</td>
<td>Masonry Flooring</td>
</tr>
<tr>
<td>09 63 13</td>
<td>Brick Flooring</td>
</tr>
<tr>
<td>09 63 13.35</td>
<td>Chemical-Resistant Brick Flooring</td>
</tr>
<tr>
<td>09 63 40</td>
<td>Stone Flooring</td>
</tr>
<tr>
<td>09 63 43</td>
<td>Composition Stone Flooring</td>
</tr>
<tr>
<td>09 64 00</td>
<td>Wood Flooring</td>
</tr>
<tr>
<td>09 64 16</td>
<td>Wood Block Flooring</td>
</tr>
<tr>
<td>09 64 19</td>
<td>Wood Composition Flooring</td>
</tr>
<tr>
<td>09 64 23</td>
<td>Wood Parquet Flooring</td>
</tr>
<tr>
<td>09 64 23.13</td>
<td>Acrylic-Impregnated Wood Parquet Flooring</td>
</tr>
<tr>
<td>09 64 29</td>
<td>Wood Strip and Plank Flooring</td>
</tr>
<tr>
<td>09 64 33</td>
<td>Laminated Wood Flooring</td>
</tr>
<tr>
<td>09 64 53</td>
<td>Resilient Wood Flooring Assemblies</td>
</tr>
<tr>
<td>09 64 66</td>
<td>Wood Athletic Flooring</td>
</tr>
<tr>
<td>09 65 00</td>
<td>Resilient Flooring</td>
</tr>
<tr>
<td>09 65 13</td>
<td>Resilient Base and Accessories</td>
</tr>
<tr>
<td>09 65 13.13</td>
<td>Resilient Base</td>
</tr>
<tr>
<td>09 65 13.23</td>
<td>Resilient Stair Treads and Risers</td>
</tr>
<tr>
<td>09 65 13.26</td>
<td>Resilient Stair Nosings</td>
</tr>
<tr>
<td>09 65 13.33</td>
<td>Resilient Accessories</td>
</tr>
<tr>
<td>09 65 13.36</td>
<td>Resilient Carpet Transitions</td>
</tr>
<tr>
<td>09 65 16</td>
<td>Resilient Sheet Flooring</td>
</tr>
<tr>
<td>09 65 16.23</td>
<td>Vinyl Sheet Flooring</td>
</tr>
<tr>
<td>09 65 16.33</td>
<td>Rubber Sheet Flooring</td>
</tr>
<tr>
<td>09 65 16.43</td>
<td>PVC-Free Sheet Flooring</td>
</tr>
</tbody>
</table>
09 65 19  Resilient Tile Flooring
09 65 19.19  Vinyl Composition Tile Flooring
09 65 19.23  Vinyl Tile Flooring
09 65 19.33  Rubber Tile Flooring
09 65 19.43  Polyester Composition Tile Flooring
09 65 33  Conductive Resilient Flooring
09 65 36  Static-Control Resilient Flooring
09 65 36.13  Static-Dissipative Resilient Flooring
09 65 36.16  Static-Resistant Resilient Flooring
09 65 43  Linoleum Flooring
09 65 66  Resilient Athletic Flooring

09 66 00  Terrazzo Flooring
09 66 13  Portland Cement Terrazzo Flooring
09 66 13.13  Sand Cushion Terrazzo Flooring
09 66 13.16  Monolithic Terrazzo Flooring
09 66 13.19  Bonded Terrazzo Flooring
09 66 13.23  Palladina Terrazzo Flooring
09 66 13.26  Rustic Terrazzo Flooring
09 66 13.33  Structural Terrazzo Flooring
09 66 16  Terrazzo Floor Tile
09 66 16.13  Portland Cement Terrazzo Floor Tile
09 66 16.16  Plastic-Matrix Terrazzo Floor Tile
09 66 23  Resinous Matrix Terrazzo Flooring
09 66 23.13  Polyacrylate Modified Cementitious Terrazzo Flooring
09 66 23.16  Epoxy-Resin Terrazzo Flooring
09 66 23.19  Polyester-Resin Terrazzo Flooring
09 66 33  Conductive Terrazzo Flooring
09 66 33.13  Conductive Epoxy-Resin Terrazzo
09 66 33.16  Conductive Polyester-Resin Terrazzo Flooring
09 66 33.19  Conductive Plastic-Matrix Terrazzo Flooring

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  Magnesium-Oxychloride Flooring
09 67 23  Resinous Flooring
09 67 26  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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>09 72 16</td>
<td>Vinyl-Coated Fabric Wall Coverings</td>
</tr>
<tr>
<td>09 72 16.13</td>
<td>Flexible Vinyl Wall Coverings</td>
</tr>
<tr>
<td>09 72 16.16</td>
<td>Rigid-Sheet Vinyl Wall Coverings</td>
</tr>
<tr>
<td>09 72 19</td>
<td>Textile Wall Coverings</td>
</tr>
<tr>
<td>09 72 23</td>
<td>Wallpapering</td>
</tr>
<tr>
<td>09 73 00</td>
<td><strong>Wall Carpeting</strong></td>
</tr>
<tr>
<td>09 74 00</td>
<td><strong>Flexible Wood Sheets</strong></td>
</tr>
<tr>
<td>09 74 13</td>
<td>Wood Wall Coverings</td>
</tr>
<tr>
<td>09 74 16</td>
<td>Flexible Wood Veneers</td>
</tr>
<tr>
<td>09 75 00</td>
<td><strong>Stone Facing</strong></td>
</tr>
<tr>
<td>09 75 13</td>
<td>Stone Wall Facing</td>
</tr>
<tr>
<td>09 75 19</td>
<td>Stone Trim</td>
</tr>
<tr>
<td>09 75 19.13</td>
<td>Stone Base</td>
</tr>
<tr>
<td>09 75 19.23</td>
<td>Stone Window Stools</td>
</tr>
<tr>
<td>09 75 23</td>
<td>Simulated Stone Wall Facing</td>
</tr>
<tr>
<td>09 76 00</td>
<td><strong>Plastic Blocks</strong></td>
</tr>
<tr>
<td>09 77 00</td>
<td><strong>Special Wall Surfacing</strong></td>
</tr>
<tr>
<td>09 77 13</td>
<td>Stretched-Fabric Wall Systems</td>
</tr>
<tr>
<td>09 77 23</td>
<td>Fabric-Wrapped Panels</td>
</tr>
<tr>
<td>09 77 33</td>
<td>Terrazzo Wall Finish</td>
</tr>
<tr>
<td>09 77 53</td>
<td>Vegetated Wall Systems</td>
</tr>
<tr>
<td>09 78 00</td>
<td><strong>Interior Wall Paneling</strong></td>
</tr>
<tr>
<td>09 78 13</td>
<td>Metal Interior Wall Paneling</td>
</tr>
<tr>
<td>09 78 16</td>
<td>Stone-Faced Interior Wall Paneling</td>
</tr>
<tr>
<td>09 78 19</td>
<td>Cementitious Interior Wall Paneling</td>
</tr>
<tr>
<td>09 78 23</td>
<td>Phenolic Interior Wall Paneling</td>
</tr>
<tr>
<td>09 80 00</td>
<td><strong>Acoustic Treatment</strong></td>
</tr>
<tr>
<td>09 81 00</td>
<td><strong>Acoustic Insulation</strong></td>
</tr>
<tr>
<td>09 81 13</td>
<td>Acoustic Board Insulation</td>
</tr>
<tr>
<td>09 81 16</td>
<td>Acoustic Blanket Insulation</td>
</tr>
<tr>
<td>09 81 29</td>
<td>Sprayed Acoustic Insulation</td>
</tr>
<tr>
<td>09 83 00</td>
<td><strong>Acoustic Finishes</strong></td>
</tr>
<tr>
<td>09 83 13</td>
<td>Acoustic Wall Coating</td>
</tr>
<tr>
<td>09 83 16</td>
<td>Acoustic Ceiling Coating</td>
</tr>
<tr>
<td>09 83 22</td>
<td>Acoustic Drapery</td>
</tr>
<tr>
<td>09 84 00</td>
<td><strong>Acoustic Room Components</strong></td>
</tr>
<tr>
<td>09 84 13</td>
<td>Fixed Sound-Absorptive Panels</td>
</tr>
<tr>
<td>09 84 14</td>
<td>Acoustic Stretched-Fabric Wall Systems</td>
</tr>
<tr>
<td>09 84 16</td>
<td>Fixed Sound-Reflective Panels</td>
</tr>
<tr>
<td>09 84 23</td>
<td>Moveable Sound-Absorptive Panels</td>
</tr>
<tr>
<td>09 84 26</td>
<td>Moveable Sound-Reflective Panels</td>
</tr>
<tr>
<td>09 84 33</td>
<td>Sound-Absorbing Wall Units</td>
</tr>
<tr>
<td>09 84 36</td>
<td>Sound-Absorbing Ceiling Units</td>
</tr>
<tr>
<td>09 90 00</td>
<td><strong>Painting and Coating</strong></td>
</tr>
<tr>
<td>09 91 00</td>
<td><strong>Painting</strong></td>
</tr>
<tr>
<td>09 91 13</td>
<td>Exterior Painting</td>
</tr>
<tr>
<td>09 91 23</td>
<td>Interior Painting</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>09 93 00</td>
<td>Staining and Transparent Finishing</td>
</tr>
<tr>
<td>09 93 13</td>
<td>Exterior Staining and Finishing</td>
</tr>
<tr>
<td>09 93 13.13</td>
<td>Exterior Staining</td>
</tr>
<tr>
<td>09 93 13.53</td>
<td>Exterior Finishing</td>
</tr>
<tr>
<td>09 93 23</td>
<td>Interior Staining and Finishing</td>
</tr>
<tr>
<td>09 93 23.13</td>
<td>Interior Staining</td>
</tr>
<tr>
<td>09 93 23.53</td>
<td>Interior Finishing</td>
</tr>
<tr>
<td>09 94 00</td>
<td>Decorative Finishing</td>
</tr>
<tr>
<td>09 94 13</td>
<td>Textured Finishing</td>
</tr>
<tr>
<td>09 94 16</td>
<td>Faux Finishing</td>
</tr>
<tr>
<td>09 94 19</td>
<td>Multicolor Interior Finishing</td>
</tr>
<tr>
<td>09 94 23</td>
<td>Gilding</td>
</tr>
<tr>
<td>09 96 00</td>
<td>High-Performance Coatings</td>
</tr>
<tr>
<td>09 96 13</td>
<td>Abrasion-Resistant Coatings</td>
</tr>
<tr>
<td>09 96 23</td>
<td>Graffiti-Resistant Coatings</td>
</tr>
<tr>
<td>09 96 26</td>
<td>Marine Coatings</td>
</tr>
<tr>
<td>09 96 33</td>
<td>High-Temperature-Resistant Coatings</td>
</tr>
<tr>
<td>09 96 35</td>
<td>Chemical-Resistant Coatings</td>
</tr>
<tr>
<td>09 96 43</td>
<td>Fire-Retardant Coatings</td>
</tr>
<tr>
<td>09 96 46</td>
<td>Intumescent Painting</td>
</tr>
<tr>
<td>09 96 53</td>
<td>Elastomeric Coatings</td>
</tr>
<tr>
<td>09 96 56</td>
<td>Epoxy Coatings</td>
</tr>
<tr>
<td>09 96 59</td>
<td>High-Build Glazed Coatings</td>
</tr>
<tr>
<td>09 96 63</td>
<td>Textured Plastic Coatings</td>
</tr>
<tr>
<td>09 96 66</td>
<td>Aggregate Wall Coatings</td>
</tr>
<tr>
<td>09 97 00</td>
<td>Special Coatings</td>
</tr>
<tr>
<td>09 97 13</td>
<td>Steel Coatings</td>
</tr>
<tr>
<td>09 97 13.13</td>
<td>Interior Steel Coatings</td>
</tr>
<tr>
<td>09 97 13.23</td>
<td>Exterior Steel Coatings</td>
</tr>
<tr>
<td>09 97 13.24</td>
<td>Steel Water Storage Tank Painting</td>
</tr>
<tr>
<td>09 97 23</td>
<td>Concrete and Masonry Coatings</td>
</tr>
<tr>
<td>09 97 23.24</td>
<td>Concrete Water Storage Tank Painting</td>
</tr>
<tr>
<td>09 97 26</td>
<td>Cementitious Coatings</td>
</tr>
<tr>
<td>09 97 26.13</td>
<td>Interior Cementitious Coatings</td>
</tr>
<tr>
<td>09 97 26.23</td>
<td>Exterior Cementitious Coatings</td>
</tr>
<tr>
<td>09 97 35</td>
<td>Dry Erase Coatings</td>
</tr>
<tr>
<td>10 00 00</td>
<td>Specialties</td>
</tr>
<tr>
<td>10 01 00</td>
<td>Operation and Maintenance of Specialties</td>
</tr>
<tr>
<td>10 01 10</td>
<td>Operation and Maintenance of Information Specialties</td>
</tr>
<tr>
<td>10 01 20</td>
<td>Operation and Maintenance of Interior Specialties</td>
</tr>
<tr>
<td>10 01 30</td>
<td>Operation and Maintenance of Fireplaces and Stoves</td>
</tr>
<tr>
<td>10 01 40</td>
<td>Operation and Maintenance of Safety Specialties</td>
</tr>
<tr>
<td>10 01 50</td>
<td>Operation and Maintenance of Storage Specialties</td>
</tr>
<tr>
<td>10 01 70</td>
<td>Operation and Maintenance of Exterior Specialties</td>
</tr>
<tr>
<td>10 01 80</td>
<td>Operation and Maintenance of Other Specialties</td>
</tr>
<tr>
<td>10 05 00</td>
<td>Common Work Results for Specialties</td>
</tr>
<tr>
<td>10 05 05</td>
<td>Selective Demolition for Specialties</td>
</tr>
<tr>
<td>10 06 00</td>
<td>Schedules for Specialties</td>
</tr>
<tr>
<td>10 06 10</td>
<td>Schedules for Information Specialties</td>
</tr>
</tbody>
</table>
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 Exterior Specialties
10 06 80 Schedules for Other Specialties

10 08 00 Commissioning of Specialties

10 10 00 Information Specialties

10 11 00 Visual Display Units
10 11 13 Chalkboards
10 11 13.13 Fixed Chalkboards
10 11 13.23 Modular-Support-Mounted Chalkboards
10 11 13.33 Rail-Mounted Chalkboards
10 11 13.43 Portable Chalkboards
10 11 16 Markerboards
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 Tackboards
10 11 23.13 Fixed Tackboards
10 11 23.23 Modular-Support-Mounted Tackboards
10 11 23.33 Rail-Mounted Tackboards
10 11 23.43 Portable Tackboards
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 12 00 Display Cases

10 13 00 Directories
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 Panel Signage
10 14 23.13 Engraved Panel Signage
10 14 26 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 Audible Signage
10 14 66 Floating Signage
10 14 67 Tactile Signage

10 17 00 Telephone Specialties
10 17 13 Telephone Directory Units
10 17 16 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
10 21 13 Toilet Compartments
10 21 13.13 Metal Toilet Compartments
10 21 13.14 Stainless-Steel Toilet Compartments
10 21 13.16 Plastic-Laminate-Clad Toilet Compartments
10 21 13.17 Phenolic-Core Toilet Compartments
10 21 13.19 Plastic Toilet Compartments
10 21 13.23 Particleboard Toilet Compartments
10 21 13.40 Stone Toilet Compartments
10 21 16 Shower and Dressing Compartments
10 21 16.13 Metal Shower and Dressing Compartments
10 21 16.14 Stainless-Steel Shower and Dressing Compartments
10 21 16.16 Plastic-Laminate-Clad Shower and Dressing Compartments
10 21 16.17 Phenolic-Core Shower and Dressing Compartments
10 21 16.19 Plastic Shower and Dressing Compartments
10 21 16.23 Particleboard Shower and Dressing Compartments
10 21 16.40 Stone Shower and Dressing Compartments
10 21 23 Cubicle Curtains and Track
10 21 23.13 Cubicle Curtains
10 21 23.16 Cubicle Track and Hardware
10 21 26 Room Darkening Curtains and Tracks

10 22 00 Partitions
10 22 13 Wire Mesh Partitions
10 22 14 Expanded Metal Partitions
10 22 16 Folding Gates
10 22 19 Demountable Partitions
10 22 19.13 Demountable Metal Partitions
10 22 19.23 Demountable Wood Partitions
10 22 19.33 Demountable Plastic 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
10 22 39.13 Folding Glass-Panel Partitions
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 Commercial Toilet Accessories
  10 28 13.19 Healthcare Toilet Accessories
  10 28 13.53 Security Toilet Accessories
  10 28 13.63 Detention Toilet Accessories
  10 28 16  Bath Accessories
  10 28 16.13 Residential Bath Accessories
  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 Ironing Boards
  10 28 23.16 Clothes Drying Racks
  10 28 26  Hygiene and Custodial Accessories

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

10 40 00  Safety Specialties

10 41 00  Emergency Access and Information Cabinets
  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  First Aid Cabinets
  10 43 21  Accessibility Evacuation Chairs
  10 43 31  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 Wheeled Fire Extinguisher Units
   10 44 19  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 13.13 Coin-Operated 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  Phenolic Lockers
   10 51 33  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  Mail Boxes
   10 55 23.13 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  Package Depositories
   10 55 91  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 Drive-Through Storage Racks
10 56 29.43 Wine Storage Racks
10 56 33 Mercantile Storage Assemblies

10 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 Sliding Closet Doors
10 57 36.16 Bifold Closet Doors

10 70 00 Exterior Specialties
10 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 13.53 Exterior Daylighting Devices
10 71 16 Storm Panels
10 71 16.13 Demountable Storm Panels
10 71 16.16 Movable Storm Panels
10 71 19 Flood Barriers
10 71 19.16 Removable Flood Barriers

10 73 00 Protective Covers
10 73 13 Awnings
10 73 13.13 Metal Awnings
10 73 13.23 Fabric Awnings
10 73 13.36 Point Supported Glass Awnings
10 73 16 Canopies
10 73 16.13 Metal Canopies
10 73 16.23 Fabric Canopies
10 73 16.33 Glazed Canopies
10 73 16.36 Point Supported Glass Canopies
10 73 23 Car Shelters
10 73 26 Walkway Coverings
10 73 26.13 Metal Walkway Coverings
10 73 26.23 Fabric Walkway Coverings
10 73 26.33 Glazed Walkway Coverings
10 73 26.36 Point Supported Glass Walkway Coverings
10 73 33 Marquees
10 73 43 Transportation Stop Shelters
10 74 00  Manufactured Exterior Specialties
   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 75 26  Roof-Mounted Flagpoles
   10 75 29  Plaza-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

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  Operation and Maintenance of Entertainment and Recreation Equipment
   11 01 70  Operation and Maintenance of Healthcare Equipment
   11 01 80  Operation and Maintenance of Facility Maintenance and Operation 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 Foodservice Equipment Schedule
  11 06 50  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 06 90.11 Schedules for Detention 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 11 36.13 Commercial Electric Vehicle Charging Unit
  11 11 36.16 Residential Electric Vehicle Charging Unit

11 12 00  Parking Control Equipment
  11 12 13  Parking Key and Card Control Units
  11 12 16  Parking Ticket Dispensers
  11 12 23  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 13.16  Rotary Gates
   11 14 13.19  Turnstiles
   11 14 16  Pedestrian Control Devices
   11 14 19  Portable Posts and Railings
   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 15 00  Security Control Equipment

11 20 00  Commercial Equipment

11 21 00  Retail and Service Equipment
   11 21 13  Cash Registers and Checking Equipment
   11 21 23  Vending Equipment
   11 21 23.13  Merchandise Vending Machines
   11 21 23.16  Reverse Vending Machines
   11 21 23.19  Video Rental Vending Machines
   11 21 23.36  Token Vending Machines
   11 21 24  Money Changing Machines
   11 21 33  Checkroom Equipment
   11 21 43  Weighing and Wrapping Equipment
   11 21 53  Barber and Beauty Shop Equipment
   11 21 63  Refrigerated Display Equipment
   11 21 73  Commercial Laundry and Dry Cleaning Equipment
   11 21 73.13  Dry Cleaning Equipment
   11 21 73.16  Drying and Conditioning Equipment
   11 21 73.19  Finishing Equipment
   11 21 73.23  Commercial Ironing Equipment
   11 21 73.26  Commercial Washers and Extractors
   11 21 73.33  Coin-Operated Laundry Equipment
   11 21 73.43  Hanging Garment Conveyors
   11 21 83  Photo Processing Equipment

11 22 00  Banking Equipment
   11 22 13  Vault Equipment
   11 22 13.13  Safe Deposit Boxes
   11 22 13.16  Safes
   11 22 13.23  Vault Ventilators
   11 22 13.26  Time Capsules
   11 22 16  Teller and Service Equipment
   11 22 16.13  Teller Equipment Systems
   11 22 16.16  Automatic Banking Systems
   11 22 16.19  Money Handling Equipment
   11 22 16.23  Money Depositories
   11 22 16.26  Money Cart Pass-Through
   11 22 16.29  Package Transfer Units
   11 22 16.33  Deal Trays

11 25 00  Hospitality Equipment
   11 25 13  Registration Equipment

11 28 00  Office Equipment
11 28 13 Computers
11 28 16 Printers
11 28 23 Copiers
11 29 00 Postal, Packaging, and Shipping Equipment
  11 29 23 Packaging Equipment
  11 29 33 Shipping Equipment
  11 29 55 Postal Equipment
11 30 00 Residential Equipment
  11 30 13 Residential Appliances
  11 30 13.13 Residential Kitchen Appliances
  11 30 13.23 Residential Laundry Appliances
  11 30 33 Retractable Stairs
  11 30 34 Residential Ceiling Fans
11 32 00 Unit Kitchens
  11 32 13 Metal Unit Kitchens
  11 32 16 Wood Unit Kitchens
  11 32 19 Plastic-Laminate-Clad Unit Kitchens
11 40 00 Foodservice Equipment
11 41 00 Foodservice Storage Equipment
  11 41 13 Refrigerated Food Storage Cases
  11 41 23 Walk-In Coolers
  11 41 26 Walk-In Freezers
  11 41 33 Foodservice Shelving
11 42 00 Food Preparation Equipment
  11 42 13 Food Preparation Appliances
  11 42 16 Food Preparation Surfaces
11 43 00 Food Delivery Carts and Conveyors
  11 43 13 Food Delivery Carts
  11 43 16 Food Delivery Conveyors
11 44 00 Food Cooking Equipment
  11 44 13 Commercial Ranges
  11 44 16 Commercial Ovens
11 46 00 Food Dispensing Equipment
  11 46 13 Bar Equipment
  11 46 16 Service Line Equipment
  11 46 19 Soda Fountain Equipment
  11 46 23 Coffee and Espresso Equipment
  11 46 83 Ice Machines
11 48 00 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 Book Theft Protection Equipment
  11 51 23 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  Fixed Projection Screens
   11 52 13.16  Portable Projection Screens
   11 52 13.19  Rear Projection Screens
   11 52 16  Projectors
   11 52 16.13  Movie Projectors
   11 52 16.16  Slide Projectors
   11 52 16.19  Overhead Projectors
   11 52 16.23  Opaque Projectors
   11 52 16.26  Video Projectors
   11 52 19  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  Recirculating Laboratory Fume Hoods
   11 53 16  Laboratory Incubators
   11 53 17  Laboratory Equipment Washers
   11 53 19  Laboratory Sterilizers
   11 53 23  Laboratory Refrigerators
   11 53 26  Laboratory Freezers
   11 53 29  Laboratory Controlled-Environment Cabinets
   11 53 33  Emergency Safety Appliances
   11 53 43  Service Fittings and Accessories
   11 53 53  Biological Safety Cabinets

11 55 00  Planetarium Equipment
   11 55 13  Planetarium Projectors
   11 55 16  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  Track and Field Equipment
11 68 43  Exterior Scoreboards

11 70 00  Healthcare Equipment
11 71 00  Medical Sterilizing Equipment
11 72 00  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
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  Window Washing Systems
  11 81 29  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  Facility Waste Shredders
  11 82 36  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  Stock Feeders
  11 92 19  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
  11 93 33  Soil Mixers
11 94 00  Veterinary Equipment
11 95 00  Arts and Crafts Equipment
  11 95 13  Kilns
11 97 00  Security Equipment
  11 97 13  Deal Drawers
  11 97 16  Gun Ports
  11 97 23  Valuable Material Storage
11 98 00  Detention Equipment
  11 98 11  Detention Equipment General Requirements
  11 98 12  Detention Doors and Frames
  11 98 13  Detention Pass-Through Doors
  11 98 14  Detention Door Hardware
11 98 16 Detention Equipment Fasteners
11 98 19 Detention Room Padding
11 98 21 Detention Windows
11 98 23 Detention Window Screens

12 00 00 Furnishings

12 01 00 Operation and Maintenance of Furnishings
  12 01 10 Operation and Maintenance of Art
  12 01 20 Operation and Maintenance of Window Treatments
  12 01 30 Operation and Maintenance of Casework
  12 01 40 Operation and Maintenance of Furnishings and Accessories
  12 01 50 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 Window Treatment Schedule
  12 06 30 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

12 08 00 Commissioning of Furnishings

12 10 00 Art

12 11 00 Murals
  12 11 13 Photo Murals
  12 11 16 Sculptured Brick Panels
  12 11 23 Brick Murals
  12 11 26 Ceramic Tile Murals
  12 11 33 Trompe l’oeil

12 12 00 Wall Decorations
  12 12 13 Commissioned Paintings
  12 12 16 Framed Paintings
  12 12 19 Framed Prints
  12 12 23 Tapestries
  12 12 26 Wall Hangings

12 14 00 Sculptures
  12 14 13 Carved Sculpture
  12 14 16 Cast Sculpture
  12 14 19 Constructed Sculpture
  12 14 23 Relief Art

12 17 00 Art Glass
12 17 13 Etched Glass
12 17 16 Stained Glass
12 19 00 Religious Art
12 20 00 Window Treatments
12 21 00 Window Blinds
  12 21 13 Horizontal Louver Blinds
  12 21 13.13 Metal Horizontal Louver Blinds
  12 21 13.23 Wood Horizontal Louver Blinds
  12 21 13.33 Plastic Horizontal Louver Blinds
  12 21 16 Vertical Louver Blinds
  12 21 16.13 Metal Vertical Louver Blinds
  12 21 16.23 Wood Vertical Louver Blinds
  12 21 16.33 Plastic Vertical Louver Blinds
  12 21 23 Roll-Down Blinds
  12 21 26 Black-Out Blinds
12 22 00 Curtains and Drapes
  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 Z-Pleated Window Shades
  12 24 16.16 Cellular Shades
  12 24 16.19 Roman Shades
12 25 00 Window Treatment Operating Hardware
  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 34 19 Manufactured Solid Surface Casework
12 35 00 Specialty Casework
  12 35 17 Bank Casework
  12 35 25 Hospitality Casework
  12 35 30 Residential Casework
  12 35 30.13 Kitchen Casework
  12 35 30.23 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 Educational/Library Casework
12 35 50.13 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 Solid Surfacing Countertops
12 36 61.19 Quartz Agglomerate Countertops
12 36 71 Paper-Composite Countertops

12 40 00 Furnishings and Accessories
12 41 00 Office Accessories
12 41 13 Desk Accessories

12 42 00 Table Accessories
12 42 13 Ceramics
12 42 16 Flatware
12 42 16.13 Silverware
12 42 19 Hollowware
12 42 23 Glassware
12 42 26 Table Linens
12 42 26.13 Napery

12 43 00 Portable Lamps
12 43 13 Lamps
12 43 13.13 Desk Lamps
12 43 13.16 Table Lamps
12 43 13.19 Floor Lamps

12 44 00 Bath Furnishings
12 44 13 Bath Linens
12 44 13.13 Bath Mats
12 44 13.16 Bath Towels
12 44 16 Shower Curtains

12 45 00 Bedroom Furnishings
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 Clocks
12 46 23 Decorative Crafts
12 46 26 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 Chair Mats
12 48 43.23 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 50 00 Furniture

12 51 00 Office Furniture
12 51 16 Case Goods
12 51 16.13 Metal Case Goods
12 51 16.16 Wood Case Goods
12 51 16.19 Plastic-Laminate-Clad Case Goods
12 51 19 Filing Cabinets
12 51 19.13 Lateral Filing Cabinets
12 51 19.16 Vertical Filing Cabinets
12 51 23 Office Tables
12 51 83 Custom Office Furniture

12 52 00 Seating
12 52 13 Chairs
12 52 19 Upholstered Seating
12 52 23 Office Seating
12 52 70 Healthcare Seating
12 52 83 Custom Seating

12 53 00 Retail Furniture
12 53 83 Custom Retail Furniture

12 54 00 Hospitality Furniture
12 54 13  Hotel and Motel Furniture  
12 54 16  Restaurant Furniture  
12 54 83  Custom 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  Fixed Classroom Tables  
12 56 33.23  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  Audio-Visual Furniture  
12 56 53  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  Dining Tables and Chairs  
12 58 23  Coffee Tables  
12 58 26  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

**12 60 00  Multiple Seating**

**12 61 00  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  Operation and Maintenance of Special Construction**
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 Operation and Maintenance of Integrated Construction
13 01 49 Operation and Maintenance of Radiation Protection
13 01 50 Operation and Maintenance of Special Instrumentation
13 01 51 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 20 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 Wave Generating Equipment
  13 14 23 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
13 18 16 Ice Rink Dasher Boards
13 19 00 Kennels and Animal Shelters
13 19 13 Kennel Enclosures and Gates
13 19 16 Kennel Feeding Devices
13 19 19 Animal Washing Tubs
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 Walk-in Coolers
13 21 26.16 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 16 Saunas
13 24 26 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 Athletic and Recreational Special Construction
13 28 13 Indoor Soccer Boards
13 28 16 Safety Netting
13 28 19 Arena Football Boards
13 28 26 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 Multiple-Walled Air-Supported Structures
13 31 23 Tensioned Fabric Structures
13 31 33 Framed Fabric Structures
13 32 00  Space Frames
   13 32 13  Metal Space Frames
   13 32 23  Wood Space Frames
13 33 00  Geodesic Structures
   13 33 13  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  Bleachers
   13 34 18  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  Traditional Rammed Earth Walls
   13 35 13.23  Stabilized Insulated Rammed Earth Walls
13 36 00  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  Building Modules
   13 42 13  Bathroom Unit Modules
   13 42 25  Hospitality Unit Modules
   13 42 33  Apartment Unit Modules
   13 42 43  Dormitory Unit Modules
   13 42 46  Education Unit Modules
   13 42 63  Detention Cell Modules
   13 42 63.13  Precast-Concrete Detention Cell Modules
   13 42 63.16  Steel Detention Cell Modules
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  Operation and Maintenance of Conveying Equipment
  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  Operation and Maintenance of Lifts
  14 01 40.71 Lift Rehabilitation
  14 01 70  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
  14 06 10  Schedules for Dumbwaiters
  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
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 10 00</td>
<td><strong>Dumbwaiters</strong></td>
</tr>
<tr>
<td>14 11 00</td>
<td>Manual Dumbwaiters</td>
</tr>
<tr>
<td>14 12 00</td>
<td>Electric Dumbwaiters</td>
</tr>
<tr>
<td>14 14 00</td>
<td>Hydraulic Dumbwaiters</td>
</tr>
<tr>
<td>14 20 00</td>
<td><strong>Elevators</strong></td>
</tr>
<tr>
<td>14 21 00</td>
<td>Electric Traction Elevators</td>
</tr>
<tr>
<td>14 21 13</td>
<td>Electric Traction Freight Elevators</td>
</tr>
<tr>
<td>14 21 23</td>
<td>Electric Traction Passenger Elevators</td>
</tr>
<tr>
<td>14 21 23.13</td>
<td>Machine Room Electric Traction Passenger Elevators</td>
</tr>
<tr>
<td>14 21 23.16</td>
<td>Machine Room-Less Electric Traction Passenger Elevators</td>
</tr>
<tr>
<td>14 21 33</td>
<td>Electric Traction Residential Elevators</td>
</tr>
<tr>
<td>14 21 43</td>
<td>Electric Traction Service Elevators</td>
</tr>
<tr>
<td>14 24 00</td>
<td>Hydraulic Elevators</td>
</tr>
<tr>
<td>14 24 13</td>
<td>Hydraulic Freight Elevators</td>
</tr>
<tr>
<td>14 24 23</td>
<td>Hydraulic Passenger Elevators</td>
</tr>
<tr>
<td>14 24 33</td>
<td>Hydraulic Residential Elevators</td>
</tr>
<tr>
<td>14 24 43</td>
<td>Hydraulic Service Elevators</td>
</tr>
<tr>
<td>14 26 00</td>
<td>Limited-Use/Limited-Application Elevators</td>
</tr>
<tr>
<td>14 27 00</td>
<td>Custom Elevator Cabs and Doors</td>
</tr>
<tr>
<td>14 27 13</td>
<td>Custom Elevator Cab Finishes</td>
</tr>
<tr>
<td>14 27 16</td>
<td>Custom Elevator Doors</td>
</tr>
<tr>
<td>14 28 00</td>
<td>Elevator Equipment and Controls</td>
</tr>
<tr>
<td>14 28 16</td>
<td>Elevator Controls</td>
</tr>
<tr>
<td>14 28 19</td>
<td>Elevator Equipment</td>
</tr>
<tr>
<td>14 28 19.13</td>
<td>Elevator Safety Equipment</td>
</tr>
<tr>
<td>14 28 19.16</td>
<td>Elevator Hoistway Equipment</td>
</tr>
<tr>
<td>14 30 00</td>
<td><strong>Escalators and Moving Walks</strong></td>
</tr>
<tr>
<td>14 31 00</td>
<td>Escalators</td>
</tr>
<tr>
<td>14 32 00</td>
<td>Moving Walks</td>
</tr>
<tr>
<td>14 33 00</td>
<td>Moving Ramps</td>
</tr>
<tr>
<td>14 33 13</td>
<td>Motorized Ramps</td>
</tr>
<tr>
<td>14 33 16</td>
<td>Powered Ramps</td>
</tr>
<tr>
<td>14 40 00</td>
<td><strong>Lifts</strong></td>
</tr>
<tr>
<td>14 41 00</td>
<td>People Lifts</td>
</tr>
<tr>
<td>14 41 13</td>
<td>Counterbalanced People Lifts</td>
</tr>
<tr>
<td>14 41 16</td>
<td>Endless-Belt People Lifts</td>
</tr>
<tr>
<td>14 41 19</td>
<td>Stairway Chairlifts</td>
</tr>
<tr>
<td>14 42 00</td>
<td>Wheelchair Lifts</td>
</tr>
<tr>
<td>14 42 13</td>
<td>Inclined Wheelchair Lifts</td>
</tr>
<tr>
<td>14 42 16</td>
<td>Vertical Wheelchair Lifts</td>
</tr>
<tr>
<td>14 43 00</td>
<td>Platform Lifts</td>
</tr>
<tr>
<td>14 43 13</td>
<td>Orchestra Lifts</td>
</tr>
<tr>
<td>14 43 16</td>
<td>Stage Lifts</td>
</tr>
<tr>
<td>14 44 00</td>
<td>Sidewalk Lifts</td>
</tr>
</tbody>
</table>
14 45 00  Vehicle Lifts
   14 45 13  Vehicle Service Lifts
   14 45 23  Vehicle Parking Lifts
14 46 00  Material 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  Entertainment Turntables
   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
14 90 00  Other Conveying Equipment
14 91 00  Facility Chutes
   14 91 13  Coal Chutes
   14 91 23  Escape Chutes
   14 91 33  Laundry and Linen Chutes
   14 91 82  Trash Chutes
14 92 00  Pneumatic Tube Systems
14 93 00  Slide Pole Systems
   14 93 13  Firehouse Slide Poles
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 Selective Demolition for Fire Suppression
21 05 13 Common Motor Requirements for Fire-Suppression Equipment
21 05 16 Expansion Fittings and Loops for Fire-Suppression Piping
21 05 17 Sleeves and Sleeve Seals 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 Vibration and Seismic Controls for Fire-Suppression Piping and Equipment
21 05 48.13 Vibration Controls for Fire-Suppression Piping and Equipment
21 05 53 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 Fire-Suppression Hose Reels
21 12 19 Fire-Suppression Hose Racks
21 12 23 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 Combined Dry-Pipe and Preaction Sprinkler Systems
21 13 26 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 13.13 High-Pressure, Carbon-Dioxide Fire-Extinguishing Systems
21 21 13.16 Low-Pressure, Carbon-Dioxide Fire-Extinguishing Systems
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 34 00  Fire Pump Accessories
   21 34 13  Pressure Maintenance 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 17  Sleeves and Sleeve Seals 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  Vibration and Seismic Controls for Plumbing Piping and Equipment
22 05 48.13  Vibration Controls for Plumbing Piping and Equipment
22 05 53  Identification for Plumbing Piping and Equipment
22 05 73  Facility Drainage Manholes
22 05 76  Facility Drainage Piping Cleanouts

22 06 00  Schedules for Plumbing
  22 06 10  Schedules for Plumbing Piping and Pumps
  22 06 10.13  Plumbing Pump Schedule
  22 06 12  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 09 63  Medical Gas Alarms

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 17  Gray-Water Piping
  22 11 19  Domestic Water Piping Specialties
  22 11 23  Domestic Water Pumps
  22 11 23.13  Domestic-Water Packaged Booster Pumps
  22 11 23.23  Domestic-Water In-Line Pumps
  22 11 23.26  Close-Coupled, Horizontally Mounted, In-Line Centrifugal Domestic-Water Pumps
  22 11 23.29  Close-Coupled, Vertically Mounted, In-Line Centrifugal Domestic-Water Pumps
  22 11 23.33  Separately Coupled, In-Line Centrifugal Domestic-Water Pumps
  22 11 23.36  Separately Coupled, Horizontally Mounted, In-Line Centrifugal Domestic-Water Pumps
  22 11 23.43  Domestic-Water, Base-Mounted Pumps
  22 11 63  Gray-Water Pumps

22 12 00  Facility Potable-Water Storage Tanks
  22 12 13  Facility Roof-Mounted, Potable-Water Storage Tanks
  22 12 16  Facility Elevated, Potable-Water Storage Tanks
  22 12 19  Facility Ground-Mounted, Potable-Water Storage Tanks
  22 12 21  Facility Underground Potable-Water Storage Tanks
  22 12 23  Facility Indoor Potable-Water Storage Tanks
  22 12 23.13  Facility Steel, Indoor Potable-Water Storage Pressure Tanks
  22 12 23.16  Facility Steel, Indoor Potable-Water Storage Non-Pressure Tanks
  22 12 23.23  Facility Plastic, Indoor Potable-Water Storage Pressure Tanks
22 12 23.26 Facility Plastic, Indoor Potable-Water Storage Non-Pressure Tanks

22 13 00 Facility Sanitary Sewerage
22 13 13 Facility Sanitary Sewers
22 13 16 Sanitary Waste and Vent Piping
22 13 19 Sanitary Waste Piping Specialties
22 13 19.13 Sanitary Drains
22 13 19.23 Fats, Oils, and Grease Disposal Systems
22 13 19.26 Grease Removal Devices
22 13 19.33 Backwater Valves
22 13 19.36 Air-Admittance Valves
22 13 23 Sanitary Waste Interceptors
22 13 26 Sanitary Waste Separators
22 13 29 Sanitary Sewerage Pumps
22 13 29.13 Wet-Pit-Mounted, Vertical Sewerage Pumps
22 13 29.16 Submersible Sewerage Pumps
22 13 29.23 Sewerage Pump Reverse-Flow Assemblies
22 13 29.33 Sewerage Pump Basins and Pits
22 13 33 Packaged, Submersible Sewerage Pump Units
22 13 36 Packaged, Wastewater Pump Units
22 13 43 Facility Packaged Sewage Pumping Stations
22 13 43.13 Facility Dry-Well Packaged Sewage Pumping Stations
22 13 43.16 Facility Wet-Well Packaged Sewage Pumping Stations
22 13 63 Facility Gray Water Tanks

22 14 00 Facility Storm Drainage
22 14 13 Facility Storm Drainage Piping
22 14 16 Rainwater Leaders
22 14 19 Sump Pump Discharge Piping
22 14 23 Storm Drainage Piping Specialties
22 14 26 Facility Storm Drains
22 14 26.13 Roof Drains
22 14 26.16 Facility Area Drains
22 14 26.19 Facility Trench Drains
22 14 29 Sump Pumps
22 14 29.13 Wet-Pit-Mounted, Vertical Sump Pumps
22 14 29.16 Submersible Sump Pumps
22 14 29.19 Sump-Pump Basins and Pits
22 14 33 Packaged, Pedestal Drainage Pump Units
22 14 36 Packaged, Submersible, Drainage Pump Units
22 14 53 Rainwater Storage Tanks
22 14 63 Facility Storm-Water Retention 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 General Service Packaged Rotary-Screw Air Compressors
22 15 19.23 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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 31 16</td>
<td>Commercial Domestic Water Softeners</td>
</tr>
<tr>
<td><strong>22 32 00</strong></td>
<td><strong>Domestic Water Filtration Equipment</strong></td>
</tr>
<tr>
<td>22 32 13</td>
<td>Domestic-Water Bag-Type Filters</td>
</tr>
<tr>
<td>22 32 16</td>
<td>Domestic-Water Freestanding Cartridge Filters</td>
</tr>
<tr>
<td>22 32 19</td>
<td>Domestic-Water Off-Floor Cartridge Filters</td>
</tr>
<tr>
<td>22 32 23</td>
<td>Domestic-Water Carbon Filters</td>
</tr>
<tr>
<td>22 32 26</td>
<td>Domestic-Water Sand Filters</td>
</tr>
<tr>
<td>22 32 26.13</td>
<td>Domestic-Water Circulating Sand Filters</td>
</tr>
<tr>
<td>22 32 26.16</td>
<td>Domestic-Water Multimedia Sand Filters</td>
</tr>
<tr>
<td>22 32 26.19</td>
<td>Domestic-Water Greensand Filters</td>
</tr>
<tr>
<td><strong>22 33 00</strong></td>
<td><strong>Electric Domestic Water Heaters</strong></td>
</tr>
<tr>
<td>22 33 13</td>
<td>Instantaneous Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 13.13</td>
<td>Flow-Control, Instantaneous Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 13.16</td>
<td>Thermostat-Control, Instantaneous Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 30</td>
<td>Residential, Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 30.13</td>
<td>Residential, Small-Capacity Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 30.16</td>
<td>Residential, Storage Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 30.23</td>
<td>Residential, Collector-to-Tank, Solar-Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 30.26</td>
<td>Residential, Collector-to-Tank, Heat-Exchanger-Coil, Solar-Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 33</td>
<td>Light-Commercial Electric Domestic Water Heaters</td>
</tr>
<tr>
<td>22 33 36</td>
<td>Commercial Domestic Water Electric Booster Heaters</td>
</tr>
<tr>
<td>22 33 36.13</td>
<td>Commercial Domestic Water Electric Booster Heaters</td>
</tr>
<tr>
<td>22 33 36.16</td>
<td>Commercial Storage Electric Domestic Water Heaters</td>
</tr>
<tr>
<td><strong>22 34 00</strong></td>
<td><strong>Fuel-Fired Domestic Water Heaters</strong></td>
</tr>
<tr>
<td>22 34 13</td>
<td>Instantaneous, Tankless, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 30</td>
<td>Residential Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 30.13</td>
<td>Residential, Atmospheric, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 30.16</td>
<td>Residential, Direct-Vent, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 30.19</td>
<td>Residential, Power-Vent, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 36</td>
<td>Commercial Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 36.13</td>
<td>Commercial, Atmospheric, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 36.16</td>
<td>Commercial, Power-Burner, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 36.19</td>
<td>Commercial, Power-Vent, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 36.23</td>
<td>Commercial, High-Efficiency, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 36.26</td>
<td>Commercial, Coil-Type, Finned-Tube, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 36.29</td>
<td>Commercial, Grid-Type, Finned-Tube, Gas Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 46</td>
<td>Oil-Fired Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 46.13</td>
<td>Large-Capacity, Oil-Fired Domestic Water Heaters</td>
</tr>
<tr>
<td>22 34 56</td>
<td>Dual-Fuel-Fired Domestic Water Heaters</td>
</tr>
<tr>
<td><strong>22 35 00</strong></td>
<td><strong>Domestic Water Heat Exchangers</strong></td>
</tr>
<tr>
<td>22 35 13</td>
<td>Instantaneous Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 13.13</td>
<td>Heating-Fluid-in-Coil, Instantaneous Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 13.16</td>
<td>Domestic-Water-in-Coil, Instantaneous Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 23</td>
<td>Circulating, Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 23.13</td>
<td>Circulating, Compact Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 23.16</td>
<td>Circulating, Storage Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 29</td>
<td>Noncirculating, Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 29.13</td>
<td>Noncirculating, Compact Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 29.16</td>
<td>Noncirculating, Storage Domestic Water Heat Exchangers</td>
</tr>
<tr>
<td>22 35 36</td>
<td>Domestic Water Brazed-Plate Heat Exchangers</td>
</tr>
</tbody>
</table>
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  Residential Water Closets
22 41 13.16  Residential Urinals
22 41 13.19  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 45 00  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 45 36  Emergency Fixture Water-Tempering Equipment

83
22 46 00  Security Plumbing Fixtures
   22 46 13  Security Water Closets and Urinals
   22 46 13.13  Security Water Closets
   22 46 13.16  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 47 00  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

22 50 00  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 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

22 60 00  Gas and Vacuum Systems for Laboratory
          and Healthcare Facilities

22 61 00  Compressed-Air Systems for Laboratory and
          Healthcare Facilities
   22 61 13  Compressed-Air Piping for Laboratory and Healthcare Facilities
   22 61 13.53  Laboratory Compressed-Air Piping
   22 61 13.70  Healthcare Compressed-Air Piping
   22 61 13.74  Dental Compressed-Air Piping
   22 61 19  Compressed-Air Equipment for Laboratory and Healthcare Facilities
   22 61 19.53  Laboratory Compressed-Air Equipment
   22 61 19.70  Healthcare Compressed-Air Equipment
   22 61 19.74  Dental Compressed-Air Equipment

22 62 00  Vacuum Systems for Laboratory and Healthcare
          Facilities
   22 62 13  Vacuum Piping for Laboratory and Healthcare Facilities
   22 62 13.53  Laboratory Vacuum Piping
   22 62 13.70  Healthcare, Surgical Vacuum Piping
   22 62 13.74  Dental Vacuum Piping
   22 62 19  Vacuum Equipment for Laboratory and Healthcare Facilities
   22 62 19.53  Laboratory Vacuum Equipment
   22 62 19.70  Healthcare Vacuum Equipment
22 62 19.74  Dental Vacuum and Evacuation Equipment
22 62 23  Waste Anesthesia-Gas Piping
22 63 00  **Gas Systems for Laboratory and Healthcare Facilities**
  22 63 13  Gas Piping for Laboratory and Healthcare Facilities
  22 63 13.53  Laboratory Gas Piping
  22 63 13.70  Healthcare Gas Piping
  22 63 19  Gas Storage Tanks for Laboratory and Healthcare Facilities
  22 63 19.53  Laboratory Gas Storage Tanks
  22 63 19.70  Healthcare Gas Storage Tanks
22 66 00  **Chemical-Waste Systems for Laboratory and Healthcare Facilities**
  22 66 53  Laboratory Chemical-Waste and Vent Piping
  22 66 70  Healthcare Chemical-Waste and Vent Piping
  22 66 83  Chemical-Waste Tanks
  22 66 83.13  Chemical-Waste Dilution Tanks
  22 66 83.16  Chemical-Waste Neutralization Tanks
22 67 00  **Processed Water Systems for Laboratory and Healthcare Facilities**
  22 67 13  Processed Water Piping for Laboratory and Healthcare Facilities
  22 67 13.13  Distilled-Water Piping
  22 67 13.16  Reverse-Osmosis Water Piping
  22 67 13.19  Deionized-Water Piping
  22 67 19  Processed Water Equipment for Laboratory and Healthcare Facilities
  22 67 19.13  Distilled-Water Equipment
  22 67 19.16  Reverse-Osmosis Water Equipment
  22 67 19.19  Deionized-Water Equipment
23 00 00  **Heating, Ventilating, and Air Conditioning (HVAC)**
23 01 00  **Operation and Maintenance of HVAC Systems**
  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
  23 01 50  Operation and Maintenance of Central Heating Equipment
  23 01 60  Operation and Maintenance of Central Cooling Equipment
  23 01 60.71  Refrigerant Recovery/Recycling
  23 01 70  Operation and Maintenance of Central HVAC Equipment
  23 01 80  Operation and Maintenance of Decentralized HVAC Equipment
  23 01 90  Diagnostic Systems for HVAC
23 05 00  **Common Work Results for HVAC**
  23 05 05  Selective Demolition for Heating, Ventilating, and Air Conditioning (HVAC)
  23 05 13  Common Motor Requirements for HVAC Equipment
  23 05 16  Expansion Fittings and Loops for HVAC Piping
  23 05 17  Sleeves and Sleeve Seals for HVAC Piping
  23 05 19  Meters and Gages for HVAC Piping
  23 05 23  General-Duty Valves for HVAC Piping
  23 05 29  Hangers and Supports for HVAC Piping and Equipment
  23 05 33  Heat Tracing for HVAC Piping
  23 05 48  Vibration and Seismic Controls for HVAC
23 05 48.13 Vibration Controls for HVAC
23 05 53 Identification for HVAC Piping and Equipment
23 05 63 Anti-Microbial Coatings for HVAC Ducts and Equipment
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
23 06 20.13 Hydronic Pump Schedule
23 06 30 Schedules for HVAC Air Distribution
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 50.23 HVAC Air Cleaning Device Schedule
23 06 60 Schedules for Central Heating Equipment
23 06 60.13 Heating Boiler Schedule
23 06 60.16 Schedules for Central Cooling Equipment
23 06 70 Schedules for Central HVAC Equipment
23 06 70.13 Indoor, Central-Station Air-Handling Unit Schedule
23 06 70.16 Packaged Outdoor HVAC Equipment Schedule
23 06 80 Schedules for Decentralized HVAC Equipment
23 06 80.13 Decentralized Unitary HVAC Equipment Schedule
23 06 80.16 Convection Heating and Cooling Unit Schedule
23 06 80.19 Radiant Heating Unit Schedule

23 07 00 HVAC Insulation
23 07 13 Duct Insulation
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 23.11 Control Valves
23 09 23.12 Control Dampers
23 09 23.13 Energy Meters
23 09 23.14 Flow Instruments
23 09 23.16 Gas Instruments
23 09 23.17 Level Instruments
23 09 23.18 Leak Detection Instruments
23 09 23.19 Moisture Instruments
23 09 23.21 Motion Instruments
23 09 23.22 Position Instruments
23 09 23.23 Pressure Instruments
23 09 23.24 Speed Instruments
23 09 23.27 Temperature Instruments
23 09 23.33 Vibration Instruments
23 09 23.43 Weather Stations
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
23 09 93.11 Sequence of Operation for HVAC DDC

23 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 12 26 Facility Liquefied-Petroleum Gas 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 Glass-Fiber-Reinforced-Plastic, Underground Fuel-Oil, Storage Tanks
23 13 13.33 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 13 26 Facility Aboveground Liquefied-Petroleum Gas Storage Tanks

23 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 Hydronic Pumps
23 21 23.13 In-Line Centrifugal Hydronic Pumps
23 21 23.16 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 25 33  HVAC Makeup-Water Filtration Equipment
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 38  Duct Security Bars
   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  High-Volume, Low-Speed Propeller Fans
23 35 00  Special Exhaust Systems
   23 35 13  Dust Collection Systems
   23 35 13.13 Sawdust Collection Systems
   23 35 16  Engine Exhaust Systems
   23 35 16.13 Positive-Pressure Engine Exhaust Systems
   23 35 16.16 Mechanical Engine Exhaust Systems
   23 35 33  Listed Kitchen Ventilation Exhaust System
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 13.43 Security 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  HVAC Air Cleaning Devices
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 19  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 13.11 Draft Control Fans
   23 51 13.13 Draft-Induction Fans
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 51 13.16</td>
<td>Vent Dampers</td>
</tr>
<tr>
<td>23 51 13.19</td>
<td>Barometric Dampers</td>
</tr>
<tr>
<td>23 51 16</td>
<td>Fabricated Breechings and Accessories</td>
</tr>
<tr>
<td>23 51 19</td>
<td>Fabricated Stacks</td>
</tr>
<tr>
<td>23 51 23</td>
<td>Gas Vents</td>
</tr>
<tr>
<td>23 51 33</td>
<td>Insulated Sectional Chimneys</td>
</tr>
<tr>
<td>23 51 43</td>
<td>Flue-Gas Filtration Equipment</td>
</tr>
<tr>
<td>23 51 43.13</td>
<td>Gaseous Filtration</td>
</tr>
<tr>
<td>23 51 43.16</td>
<td>Particulate Filtration</td>
</tr>
<tr>
<td><strong>23 52 00</strong></td>
<td><strong>Heating Boilers</strong></td>
</tr>
<tr>
<td>23 52 13</td>
<td>Electric Boilers</td>
</tr>
<tr>
<td>23 52 16</td>
<td>Condensing Boilers</td>
</tr>
<tr>
<td>23 52 16.13</td>
<td>Stainless-Steel Condensing Boilers</td>
</tr>
<tr>
<td>23 52 16.16</td>
<td>Aluminum Condensing Boilers</td>
</tr>
<tr>
<td>23 52 17</td>
<td>Low Mass Boilers</td>
</tr>
<tr>
<td>23 52 19</td>
<td>Pulse Combustion Boilers</td>
</tr>
<tr>
<td>23 52 23</td>
<td>Cast-Iron Boilers</td>
</tr>
<tr>
<td>23 52 33</td>
<td>Water-Tube Boilers</td>
</tr>
<tr>
<td>23 52 33.13</td>
<td>Finned Water-Tube Boilers</td>
</tr>
<tr>
<td>23 52 33.14</td>
<td>Flexible Water-Tube Boilers</td>
</tr>
<tr>
<td>23 52 33.16</td>
<td>Steel Water-Tube Boilers</td>
</tr>
<tr>
<td>23 52 33.19</td>
<td>Copper Water-Tube Boilers</td>
</tr>
<tr>
<td>23 52 39</td>
<td>Fire-Tube Boilers</td>
</tr>
<tr>
<td>23 52 39.13</td>
<td>Scotch Marine Boilers</td>
</tr>
<tr>
<td>23 52 39.16</td>
<td>Steel Fire-Tube Boilers</td>
</tr>
<tr>
<td>23 52 83</td>
<td>Boiler Blowdown Systems</td>
</tr>
<tr>
<td><strong>23 53 00</strong></td>
<td><strong>Heating Boiler Feedwater Equipment</strong></td>
</tr>
<tr>
<td>23 53 13</td>
<td>Boiler Feedwater Pumps</td>
</tr>
<tr>
<td>23 53 16</td>
<td>Deaerators</td>
</tr>
<tr>
<td><strong>23 54 00</strong></td>
<td><strong>Furnaces</strong></td>
</tr>
<tr>
<td>23 54 13</td>
<td>Electric-Resistance Furnaces</td>
</tr>
<tr>
<td>23 54 16</td>
<td>Fuel-Fired Furnaces</td>
</tr>
<tr>
<td>23 54 16.13</td>
<td>Gas-Fired Furnaces</td>
</tr>
<tr>
<td>23 54 16.16</td>
<td>Oil-Fired Furnaces</td>
</tr>
<tr>
<td><strong>23 55 00</strong></td>
<td><strong>Fuel-Fired Heaters</strong></td>
</tr>
<tr>
<td>23 55 13</td>
<td>Fuel-Fired Duct Heaters</td>
</tr>
<tr>
<td>23 55 13.13</td>
<td>Oil-Fired Duct Heaters</td>
</tr>
<tr>
<td>23 55 13.16</td>
<td>Gas-Fired Duct Heaters</td>
</tr>
<tr>
<td>23 55 23</td>
<td>Gas-Fired Radiant Heaters</td>
</tr>
<tr>
<td>23 55 23.13</td>
<td>Low-Intensity Gas-Fired Radiant Heaters</td>
</tr>
<tr>
<td>23 55 23.16</td>
<td>High-Intensity Gas-Fired Radiant Heaters</td>
</tr>
<tr>
<td>23 55 33</td>
<td>Fuel-Fired Unit Heaters</td>
</tr>
<tr>
<td>23 55 33.13</td>
<td>Oil-Fired Unit Heaters</td>
</tr>
<tr>
<td>23 55 33.16</td>
<td>Gas-Fired Unit Heaters</td>
</tr>
<tr>
<td><strong>23 56 00</strong></td>
<td><strong>Solar Energy Heating Equipment</strong></td>
</tr>
<tr>
<td>23 56 13</td>
<td>Heating Solar Collectors</td>
</tr>
<tr>
<td>23 56 13.13</td>
<td>Heating Solar Flat-Plate Collectors</td>
</tr>
<tr>
<td>23 56 13.16</td>
<td>Heating Solar Concentrating Collectors</td>
</tr>
<tr>
<td>23 56 13.19</td>
<td>Heating Solar Vacuum-Tube Collectors</td>
</tr>
<tr>
<td>23 56 16</td>
<td>Packaged Solar Heating Equipment</td>
</tr>
<tr>
<td>23 56 23</td>
<td>Solar Air-Heating Panels</td>
</tr>
</tbody>
</table>
23 57 00  Heat Exchangers for HVAC
23 57 13  Steam-to-Steam Heat Exchangers
23 57 16  Steam-to-Water Heat Exchangers
23 57 19  Liquid-to-Liquid Heat Exchangers
23 57 19.13  Plate-Type, Liquid-to-Liquid Heat Exchangers
23 57 19.16  Shell-Type, Liquid-to-Liquid Heat Exchangers
23 57 33  Direct Geothermal Heat Exchangers

23 60 00  Central Cooling Equipment

23 60 00  Central Cooling Equipment

23 60 00  Central Cooling Equipment

23 60 00  Central Cooling Equipment

23 61 00  Refrigerant Compressors
23 61 13  Centrifugal Refrigerant Compressors
23 61 16  Reciprocating Refrigerant Compressors
23 61 19  Scroll Refrigerant Compressors
23 61 23  Rotary-Screw Refrigerant Compressors

23 62 00  Packaged Compressor and Condenser Units
23 62 13  Packaged Air-Cooled Refrigerant Compressor and Condenser Units
23 62 23  Packaged Water-Cooled Refrigerant Compressor and Condenser Units
23 62 46  Packaged Variable-Refrigerant-Flow Air-Conditioning Systems

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  Water-Cooled Centrifugal Water Chillers
23 64 19  Reciprocating Water Chillers
23 64 23  Scroll Water Chillers
23 64 23.13  Air-Cooled Scroll Water Chillers
23 64 23.16  Water-Cooled Scroll Water Chillers
23 64 26  Rotary-Screw Water Chillers
23 64 26.13  Air-Cooled, Rotary-Screw Water Chillers
23 64 26.16  Water-Cooled, Rotary-Screw Water Chillers
23 64 33  Modular Water Chillers
23 64 33.13  Air-Cooled, Modular Water Chillers
23 64 33.16  Water-Cooled, Modular 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 14  Induced-Draft Cooling Towers
23 65 14.13  Open-Circuit, Induced-Draft Counterflow Cooling Towers
23 65 14.14  Open-Circuit, Induced-Draft Crossflow Cooling Towers
23 65 14.16  Closed-Circuit, Induced-Draft Counterflow Cooling Towers
23 65 14.17  Closed-Circuit, Induced-Draft Combined-Flow 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    Pressurized-Water Thermal Storage Tanks  
  23 71 16    Chilled-Water Thermal Storage  
  23 71 19    Ice Storage  
  23 71 19.13    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 74 00    Packaged Outdoor HVAC Equipment  
  23 74 13    Packaged, Outdoor, Central-Station Air-Handling Units  
  23 74 16    Packaged Rooftop Air-Conditioning Units  
  23 74 16.11    Packaged, Small-Capacity, Rooftop Air-Conditioning Units  
  23 74 16.12    Packaged, Intermediate-Capacity, Rooftop Air-Conditioning Units  
  23 74 16.13    Packaged, Large-Capacity, Rooftop Air-Conditioning 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 75 00    Custom-Packaged Outdoor HVAC Equipment  
  23 75 13    Custom-Packaged, Outdoor, Central-Station Air-Handling Units  
  23 75 16    Custom-Packaged, Rooftop Air-Conditioning Units  
  23 75 23    Custom-Packaged, Outdoor, Heating and Ventilating Makeup-Air Units  
  23 75 33    Custom-Packaged, Outdoor, Heating and Cooling Makeup Air-Conditioners  
23 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  
23 80 00    Decentralized HVAC Equipment  
23 81 00    Decentralized Unitary HVAC Equipment
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 81 13</td>
<td>Packaged Terminal Air-Conditioners</td>
</tr>
<tr>
<td>23 81 13.11</td>
<td>Packaged Terminal Air-Conditioners, Through-Wall Units</td>
</tr>
<tr>
<td>23 81 13.12</td>
<td>Packaged Terminal Air-Conditioners, Freestanding Units</td>
</tr>
<tr>
<td>23 81 13.13</td>
<td>Packaged Terminal Air-Conditioners, Outdoor, Wall-Mounted Units</td>
</tr>
<tr>
<td>23 81 16</td>
<td>Room Air-Conditioners</td>
</tr>
<tr>
<td>23 81 19</td>
<td>Self-Contained Air-Conditioners</td>
</tr>
<tr>
<td>23 81 19.13</td>
<td>Small-Capacity Self-Contained Air-Conditioners</td>
</tr>
<tr>
<td>23 81 19.16</td>
<td>Large-Capacity Self-Contained Air-Conditioners</td>
</tr>
<tr>
<td>23 81 23</td>
<td>Computer-Room Air-Conditioners</td>
</tr>
<tr>
<td>23 81 23.11</td>
<td>Small-Capacity, Computer-Room Air-Conditioners, Floor Mounted Units</td>
</tr>
<tr>
<td>23 81 23.12</td>
<td>Large-Capacity, Computer-Room Air-Conditioners, Floor-Mounted Units</td>
</tr>
<tr>
<td>23 81 23.13</td>
<td>Computer-Room Air-Conditioners, Ceiling Mounted Units</td>
</tr>
<tr>
<td>23 81 23.14</td>
<td>Computer-Room Air-Conditioners, Console Units</td>
</tr>
<tr>
<td>23 81 23.16</td>
<td>Computer-Room Air-Conditioners, Rack Mounted, Space-Cooling Units</td>
</tr>
<tr>
<td>23 81 23.18</td>
<td>Computer-Room, Rack-Cooling Equipment</td>
</tr>
<tr>
<td>23 81 26</td>
<td>Split-System Air-Conditioners</td>
</tr>
<tr>
<td>23 81 26.13</td>
<td>Small-Capacity Split-System Air-Conditioners</td>
</tr>
<tr>
<td>23 81 26.16</td>
<td>Large-Capacity Split-System Air-Conditioners</td>
</tr>
<tr>
<td>23 81 29</td>
<td>Variable Refrigerant Flow HVAC Systems</td>
</tr>
<tr>
<td>23 81 43</td>
<td>Air-Source Unitary Heat Pumps</td>
</tr>
<tr>
<td>23 81 46</td>
<td>Water-Source Unitary Heat Pumps</td>
</tr>
<tr>
<td>23 81 49</td>
<td>Ground-Source Unitary Heat Pumps</td>
</tr>
</tbody>
</table>

**23 82 00 Convection Heating and Cooling Units**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 82 13</td>
<td>Valance Heating and Cooling Units</td>
</tr>
<tr>
<td>23 82 14</td>
<td>Chilled Beams</td>
</tr>
<tr>
<td>23 82 16</td>
<td>Air Coils</td>
</tr>
<tr>
<td>23 82 16.11</td>
<td>Hydronic Air Coils</td>
</tr>
<tr>
<td>23 82 16.12</td>
<td>Steam Air Coils</td>
</tr>
<tr>
<td>23 82 16.13</td>
<td>Refrigerant Air Coils</td>
</tr>
<tr>
<td>23 82 16.14</td>
<td>Electric-Resistance Air Coils</td>
</tr>
<tr>
<td>23 82 19</td>
<td>Fan Coil Units</td>
</tr>
<tr>
<td>23 82 23</td>
<td>Unit Ventilators</td>
</tr>
<tr>
<td>23 82 26</td>
<td>Induction Units</td>
</tr>
<tr>
<td>23 82 29</td>
<td>Radiators</td>
</tr>
<tr>
<td>23 82 33</td>
<td>Convectors</td>
</tr>
<tr>
<td>23 82 36</td>
<td>Finned-Tube Radiation Heaters</td>
</tr>
<tr>
<td>23 82 39</td>
<td>Unit Heaters</td>
</tr>
<tr>
<td>23 82 39.13</td>
<td>Cabinet Unit Heaters</td>
</tr>
<tr>
<td>23 82 39.16</td>
<td>Propeller Unit Heaters</td>
</tr>
<tr>
<td>23 82 39.19</td>
<td>Wall and Ceiling Unit Heaters</td>
</tr>
<tr>
<td>23 82 41</td>
<td>Water-to-Water Heat Pumps</td>
</tr>
</tbody>
</table>

**23 83 00 Radiant Heating Units**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 83 13</td>
<td>Radiant-Heating Electric Cables</td>
</tr>
<tr>
<td>23 83 13.16</td>
<td>Radiant-Heating Electric Mats</td>
</tr>
<tr>
<td>23 83 16</td>
<td>Radiant-Heating Hydronic Piping</td>
</tr>
<tr>
<td>23 83 23</td>
<td>Radiant-Heating Electric Panels</td>
</tr>
<tr>
<td>23 83 33</td>
<td>Electric Radiant Heaters</td>
</tr>
</tbody>
</table>

**23 84 00 Humidity Control Equipment**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23 84 13</td>
<td>Humidifiers</td>
</tr>
<tr>
<td>23 84 13.13</td>
<td>Heated-Pan Humidifiers</td>
</tr>
<tr>
<td>23 84 13.16</td>
<td>Wetted-Element Humidifiers</td>
</tr>
<tr>
<td>23 84 13.19</td>
<td>Atomizing Humidifiers</td>
</tr>
</tbody>
</table>
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  Hangers and Supports for Integrated Automation
25 05 28.33  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  Schedules for Integrated Automation Network Gateways
25 06 13  Schedules for Integrated Automation Control and Monitoring Network
25 06 14  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  Neutral-Protocol Integration Network Gateways
25 12 23  Client-Server Information/Database Integration Network Gateways

25 13 00  Integrated Automation Control and Monitoring
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 13 13</td>
<td>Integrated Automation Control and Monitoring Network Supervisory Control</td>
</tr>
<tr>
<td>25 13 16</td>
<td>Integrated Automation Control and Monitoring Network Integration Panels</td>
</tr>
<tr>
<td>25 13 19</td>
<td>Integrated Automation Control and Monitoring Network Interoperability</td>
</tr>
<tr>
<td>25 14 00</td>
<td><strong>Integrated Automation Local Control Units</strong></td>
</tr>
<tr>
<td>25 14 13</td>
<td>Integrated Automation Remote Control Panels</td>
</tr>
<tr>
<td>25 14 16</td>
<td>Integrated Automation Application-Specific Control Panels</td>
</tr>
<tr>
<td>25 14 19</td>
<td>Integrated Automation Terminal Control Units</td>
</tr>
<tr>
<td>25 14 23</td>
<td>Integrated Automation Field Equipment Panels</td>
</tr>
<tr>
<td>25 15 00</td>
<td><strong>Integrated Automation Software</strong></td>
</tr>
<tr>
<td>25 15 13</td>
<td>Integrated Automation Software for Network Gateways</td>
</tr>
<tr>
<td>25 15 16</td>
<td>Integrated Automation Software for Control and Monitoring Networks</td>
</tr>
<tr>
<td>25 15 19</td>
<td>Integrated Automation Software for Local Control Units</td>
</tr>
<tr>
<td>25 30 00</td>
<td><strong>Integrated Automation Instrumentation and Terminal Devices</strong></td>
</tr>
<tr>
<td>25 31 00</td>
<td>Integrated Automation Instrumentation and Terminal Devices for Facility Equipment</td>
</tr>
<tr>
<td>25 32 00</td>
<td>Integrated Automation Instrumentation and Terminal Devices for Conveying Equipment</td>
</tr>
<tr>
<td>25 33 00</td>
<td>Integrated Automation Instrumentation and Terminal Devices for Fire-Suppression Systems</td>
</tr>
<tr>
<td>25 34 00</td>
<td>Integrated Automation Instrumentation and Terminal Devices for Plumbing</td>
</tr>
<tr>
<td>25 35 00</td>
<td>Integrated Automation Instrumentation and Terminal Devices for HVAC</td>
</tr>
<tr>
<td>25 35 13</td>
<td>Integrated Automation Actuators and Operators</td>
</tr>
<tr>
<td>25 35 16</td>
<td>Integrated Automation Sensors and Transmitters</td>
</tr>
<tr>
<td>25 35 19</td>
<td>Integrated Automation Control Valves</td>
</tr>
<tr>
<td>25 35 23</td>
<td>Integrated Automation Control Dampers</td>
</tr>
<tr>
<td>25 35 26</td>
<td>Integrated Automation Compressed Air Supply</td>
</tr>
<tr>
<td>25 36 00</td>
<td>Integrated Automation Instrumentation and Terminal Devices for Electrical Systems</td>
</tr>
<tr>
<td>25 36 13</td>
<td>Integrated Automation Power Meters</td>
</tr>
<tr>
<td>25 36 16</td>
<td>Integrated Automation KW Transducers</td>
</tr>
<tr>
<td>25 36 19</td>
<td>Integrated Automation Current Sensors</td>
</tr>
<tr>
<td>25 36 23</td>
<td>Integrated Automation Battery Monitors</td>
</tr>
<tr>
<td>25 36 26</td>
<td>Integrated Automation Lighting Relays</td>
</tr>
<tr>
<td>25 36 29</td>
<td>Integrated Automation UPS Monitors</td>
</tr>
<tr>
<td>25 37 00</td>
<td>**Integrated Automation Instrumentation and Terminal Devices for Communications Systems</td>
</tr>
<tr>
<td>25 38 00</td>
<td>**Integrated Automation Instrumentation and Terminal Devices for Electronic Safety and Security Systems</td>
</tr>
<tr>
<td>25 50 00</td>
<td><strong>Integrated Automation Facility Controls</strong></td>
</tr>
</tbody>
</table>
25 51 00  Integrated Automation Control of Facility Equipment
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  Integrated Automation Control Sequences
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 Storing Equipment
  26 01 40  Operation and Maintenance of Electrical Protection Systems
  26 01 40.13 Operation and Maintenance of Lightning Protection Systems
  26 01 50  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  Low-Voltage Electrical Power Conductors and Cables  
26 05 19.13  Undercarpet Electrical Power Cables  
26 05 19.23  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  Boxes for Electrical Systems  
26 05 33.23  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 44  Sleeves and Sleeve Seals for Electrical Raceways and Cabling  
26 05 46  Poles for Electrical Systems  
26 05 48  Vibration and Seismic Controls for Electrical Systems  
26 05 48.16  Seismic Controls for Electrical Systems  
26 05 53  Identification for Electrical Systems  
26 05 73  Power System Studies  
26 05 73.13  Short-Circuit Studies  
26 05 73.16  Coordination Studies  
26 05 73.19  Arc-Flash Hazard Analysis  
26 05 73.23  Load Flow Studies  
26 05 73.26  Stability Studies  
26 05 73.29  Harmonic-Analysis Studies  
26 05 76  Photometric Studies  
26 05 83  Wiring Connections  

26 06 00  Schedules for Electrical  
26 06 10  Schedules for Medium-Voltage Electrical Distribution  
26 06 20  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  Wiring Device Schedule  
26 06 30  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  Manual Modular Dimming Controls
26 09 36.16  Integrated Multipreset Modular Dimming Controls
26 09 36.19  Standalone Multipreset Modular Dimming
26 09 43  Network Lighting Controls
26 09 43.13  Digital-Network Lighting Controls
26 09 43.16  Addressable Luminaire Lighting Controls
26 09 43.19  Wireless Network Lighting Controls
26 09 43.23  Relay-Based Lighting Controls
26 09 61  Theatrical Lighting Controls

26 10 00  Medium-Voltage Electrical Distribution

26 11 00  Substations
26 11 13  Primary Unit Substations
26 11 16  Secondary Unit Substations
26 11 16.11  Secondary Unit Substations with Switchgear Secondary
26 11 16.12  Secondary Unit Substations with Switchboard Secondary
26 11 16.13  Secondary Unit Substations with Motor Control Center Secondary

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 15 00  Medium-Voltage Enclosed Bus Assemblies
26 15 13  Medium-Voltage Busways
26 15 16  Medium-Voltage Cablebus

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

26 20 00  Low-Voltage Electrical Distribution

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 17  Low-Voltage Transformers for Nonlinear Loads
  26 22 18  Low-Voltage Transformers for Load Centers
  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 16.16  Electronically Operated Circuit-Breaker Panelboards
  26 24 19  Motor-Control Centers
26 25 00  Low-Voltage Enclosed Bus Assemblies
  26 25 13  Low-Voltage Busways
  26 25 16  Low-Voltage Cablebus Systems
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  Indoor Service Poles
  26 27 26  Wiring Devices
  26 27 33  Power Distribution Units
  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  Enclosed Circuit Breakers
  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  Full-Service Controllers for Fire Pump Electric-Motor Drivers
  26 29 33.16  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 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  Steam-Turbine Generators
  26 32 19  Hydro-Turbine Generators
26 32 23  Wind Energy Equipment
26 32 23.13  Horizontal-Axis Wind Turbines
26 32 23.16  Vertical-Axis Wind Turbines
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
26 33 13  Batteries
26 33 16  Battery Racks
26 33 19  Battery Units
26 33 23  Central Battery Equipment
26 33 23.13  Central Battery Equipment for Emergency Lighting
26 33 33  Static Power Converters
26 33 43  Battery Chargers
26 33 46  Battery Monitoring
26 33 53  Static Uninterruptible Power Supply

26 35 00  Power Filters and Conditioners
26 35 13  Capacitors
26 35 16  Chokes and Inductors
26 35 23  Electromagnetic-Interference Filters
26 35 26  Harmonic Filters
26 35 33  Power Factor Correction Equipment
26 35 33.13  Medium-Voltage Power Factor Correction Equipment
26 35 33.16  Low-Voltage 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 Circuits

26 50 00  Lighting

26 51 00  Interior Lighting
26 51 13  Incandescent Interior Lighting
26 51 16  Fluorescent Interior Lighting
26 51 19  LED Interior Lighting
26 51 23  HID Interior Lighting

26 52 00  Safety Lighting
26 52 13  Emergency and Exit Lighting
26 52 13.13  Emergency Lighting
26 52 13.16  Exit Signs

26 54 00  Classified Location Lighting
26 54 13  Incandescent Classified Location Lighting
26 54 16  Fluorescent Classified Location Lighting
26 54 19  LED 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 68  Athletic Field Lighting
26 55 70  Healthcare Lighting
26 55 83  Broadcast Lighting

26 56 00  Exterior Lighting
26 56 13  Lighting Poles and Standards
26 56 17  Fluorescent Exterior Lighting
26 56 18  Incandescent Exterior Lighting
26 56 19  LED Exterior Lighting
26 56 21  HID Exterior 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 11  Cameras for Audio-Visual Systems
27 05 13  Communications Services
27 05 13.13  Dialtone Services
27 05 13.23  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  Pathways for Communications Systems
27 05 29  Hangers and Supports for Communications Systems
27 05 33  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 44 Sleeves and Sleeve Seals for Communications Pathways and Cabling
27 05 46 Utility Poles for Communications Systems
27 05 48 Vibration and Seismic Controls for Communications Systems
27 05 48.16 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 Schedules for Audio-Video Communications
27 06 50 Schedules for Distributed Communications and Monitoring

27 08 00 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 Communications Cable Management and Ladder Rack
27 11 26 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 Dialtone Services Cabling
27 13 43.23 T1 Services Cabling
27 13 43.33 DSL Services Cabling
27 13 43.43 Cable Services Cabling
27 13 43.53 Satellite Services Cabling

27 15 00 Communications Horizontal Cabling
27 15 01 Communications Horizontal Cabling Applications
27 15 01.11 Conductors and Cables for Electronic Safety and Security
27 15 01.13 Video Surveillance Communications Conductors and Cables
27 15 01.15 Access Control Communications Conductors and Cables
27 15 01.16 Voice Communications Horizontal Cabling
27 15 01.17 Intrusion Detection Communications Conductors and Cables
27 15 01.19 Fire Alarm Communications Conductors and Cables
27 15 01.23 Audio-Video Communications Horizontal Cabling
27 15 01.39 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 Antennas Communications Horizontal Cabling
27 15 13 Communications Copper Horizontal Cabling
27 15 23 Communications Optical Fiber Horizontal Cabling
27 15 33 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
27 21 26  Data Communications Network Management
27 21 29  Data Communications Switches and Hubs
27 21 33  Data Communications Wireless Access Points

27 22 00  Data Communications Hardware
27 22 13  Data Communications Mainframes
27 22 16  Data Communications Storage and Backup
27 22 19  Data Communications Servers
27 22 23  Data Communications Desktops
27 22 26  Data Communications Laptops
27 22 29  Data Communications Handhelds

27 24 00  Data Communications Peripheral Data Equipment
27 24 13  Printers
27 24 16  Scanners
27 24 19  External Drives
27 24 23  Audio-Video Devices
27 24 26  Virtual Reality Equipment
27 24 29  Disaster Recovery Equipment

27 25 00  Data Communications Software
27 25 13  Virus Protection Software
27 25 16  Application Suites
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
27 31 00  Voice Communications Switching and Routing 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

27 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
27 41 00 Audio-Video Systems
27 41 13 Architecturally Integrated Audio-Video Equipment
27 41 16 Integrated Audio-Video Systems and Equipment
27 41 16.25 Integrated Audio-Video Systems and Equipment for Restaurants and Bars
27 41 16.28 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 Integrated Audio-Video Systems and Equipment for Religious Facilities
27 41 16.61 Integrated Audio-Video Systems and Equipment for Theaters
27 41 16.62 Integrated Audio-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  Educational Intercommunications and Program Systems
27 51 23.63  Detention Intercommunications and Program Systems
27 51 23.70  Healthcare Intercommunications and Program Systems
27 51 26  Assistive Listening Systems
27 51 29  Emergency Communications Systems

27 52 00  Healthcare Communications and Monitoring Systems
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 Access Control
28 01 10.51  Maintenance and Administration of Access Control
28 01 10.71  Revisions and Upgrades of Access Control
28 01 20  Operation and Maintenance of Video Surveillance
28 01 20.51  Maintenance and Administration of Video Surveillance
28 01 20.71  Revisions and Upgrades of Video Surveillance
28 01 30  Operation and Maintenance of Security Detection, Alarm, and Monitoring
28 01 30.51  Maintenance and Administration of Security Detection, Alarm, and Monitoring
28 01 30.71  Revisions and Upgrades of Security Detection, Alarm, and Monitoring
28 01 50  Operation and Maintenance of Specialized Systems
28 01 50.51  Maintenance and Administration of Specialized Systems
28 01 50.71  Revisions and Upgrades of Specialized Systems
28 01 60  Operation and Maintenance of Mass Notification
28 01 60.51  Maintenance and Administration of Mass Notification
28 01 60.71  Revisions and Upgrades of Mass Notification
28 01 70  Operation and Maintenance of Life Safety
28 01 70.51  Maintenance and Administration of Life Safety
28 01 70.71  Revisions and Upgrades of Life Safety
28 01 80  Operation and Maintenance of Fire Detection and Alarm
28 01 80.51  Maintenance and Administration of Fire Detection and Alarm
28 01 80.71  Revisions and Upgrades of Fire Detection and Alarm

28 05 00  Common Work Results for Electronic Safety and Security
28 05 07  Power Sources for Electronic Safety and Security
28 05 07.11  Power Sources for Access Control
28 05 07.13  Power Sources for Video Surveillance
28 05 07.15  Power Sources for Intrusion Detection
28 05 07.17  Power Sources for Fire Detection and Alarm
28 05 07.19  Solar Power Sources for Electronic Safety and Security
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 05 07.21</td>
<td>Poe Power Sources for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 07.23</td>
<td>Uninterruptible Power Supply</td>
</tr>
<tr>
<td>28 05 07.25</td>
<td>Power Source Monitoring</td>
</tr>
<tr>
<td>28 05 07.27</td>
<td>Power Source Monitoring Appliances</td>
</tr>
<tr>
<td>28 05 07.29</td>
<td>Power Source Monitoring Software</td>
</tr>
<tr>
<td>28 05 09</td>
<td>Surge Protection for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 09.11</td>
<td>Surge Protection for Access Control</td>
</tr>
<tr>
<td>28 05 09.13</td>
<td>Surge Protection for Video Surveillance</td>
</tr>
<tr>
<td>28 05 09.15</td>
<td>Surge Protection for Intrusion Detection</td>
</tr>
<tr>
<td>28 05 09.17</td>
<td>Surge Protection for Fire Detection and Alarm</td>
</tr>
<tr>
<td>28 05 11</td>
<td>Cyber Security Requirements for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 13</td>
<td>Servers, Workstations and Storage for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 13.11</td>
<td>General Requirements for Servers, Workstations and Storage</td>
</tr>
<tr>
<td>28 05 15</td>
<td>Servers for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 17</td>
<td>Workstations for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 19</td>
<td>Storage Appliances for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 19.11</td>
<td>Digital Video Recorders</td>
</tr>
<tr>
<td>28 05 19.13</td>
<td>Hybrid Digital Video Recorders</td>
</tr>
<tr>
<td>28 05 19.15</td>
<td>Network Video Recorders</td>
</tr>
<tr>
<td>28 05 21</td>
<td>Network Attached Storage for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 23</td>
<td>Storage Area Network for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 25</td>
<td>Cloud Based Storage for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 27</td>
<td>Archival Systems for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 27.11</td>
<td>Digital Tape Storage</td>
</tr>
<tr>
<td>28 05 27.13</td>
<td>Storage Media</td>
</tr>
<tr>
<td>28 05 29</td>
<td>Storage Management Software for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 31</td>
<td>Communications Equipment for Electronic Safety and Security</td>
</tr>
<tr>
<td>28 05 33</td>
<td>Safety and Security Network Communications Equipment</td>
</tr>
<tr>
<td>28 05 33.11</td>
<td>Security Data Communications Firewalls</td>
</tr>
<tr>
<td>28 05 33.13</td>
<td>Security Data Communications Routers</td>
</tr>
<tr>
<td>28 05 33.15</td>
<td>Security Data Communications Power-Over-Ethernet Switches</td>
</tr>
<tr>
<td>28 05 33.17</td>
<td>Security Data Communications Non-Power-Over-Ethernet Switches</td>
</tr>
<tr>
<td>28 05 33.19</td>
<td>Security Data Communications Media Converters</td>
</tr>
<tr>
<td>28 05 35</td>
<td>Security Data Communications Wireless Transmission Equipment</td>
</tr>
<tr>
<td>28 05 35.11</td>
<td>Microwave Transmission Equipment</td>
</tr>
<tr>
<td>28 05 37</td>
<td>Security Voice Communications -Distributed Antenna System</td>
</tr>
<tr>
<td>28 05 37.11</td>
<td>Bi-Directional Amplifiers</td>
</tr>
<tr>
<td>28 05 37.13</td>
<td>Repeaters</td>
</tr>
<tr>
<td>28 05 37.15</td>
<td>Remote Repeaters</td>
</tr>
<tr>
<td>28 05 39</td>
<td>Antennas</td>
</tr>
<tr>
<td>28 05 39.11</td>
<td>Donor Antennas</td>
</tr>
<tr>
<td>28 05 39.13</td>
<td>Multi-Band Antennas</td>
</tr>
<tr>
<td>28 05 39.15</td>
<td>Band Specific Antennas</td>
</tr>
<tr>
<td>28 05 39.17</td>
<td>Radiating Coaxial Cable</td>
</tr>
<tr>
<td>28 05 39.19</td>
<td>Other Antennas</td>
</tr>
<tr>
<td>28 05 41</td>
<td>Signal Controllers</td>
</tr>
<tr>
<td>28 05 41.11</td>
<td>Splitters</td>
</tr>
<tr>
<td>28 05 41.13</td>
<td>Directional Couplers</td>
</tr>
<tr>
<td>28 05 43</td>
<td>Security Voice Communications Private Mobile Radio System</td>
</tr>
<tr>
<td>28 05 43.11</td>
<td>Base Station</td>
</tr>
<tr>
<td>28 05 43.13</td>
<td>Handheld Radio</td>
</tr>
<tr>
<td>28 05 45</td>
<td>Systems Integration and Interconnection Requirements</td>
</tr>
<tr>
<td>28 05 45.11</td>
<td>Mechanical</td>
</tr>
<tr>
<td>28 05 45.13</td>
<td>Electrical</td>
</tr>
</tbody>
</table>
28 05 45.15 Information
28 05 48 Vibration and Seismic Controls for Electronic Safety and Security
28 05 53 Identification for Electronic Safety and Security

28 06 00 Schedules for Electronic Safety and Security
28 06 10 Schedules for Access Control
28 06 20 Schedules for Video Surveillance
28 06 30 Schedules for Security Detection, Alarm, and Monitoring
28 06 40 Schedules for Detention Monitoring and Control
28 06 50 Schedules for Information Management and Display
28 06 60 Schedules for Mass Notification
28 06 70 Schedules for Life Safety
28 06 80 Schedules for Fire Detection and Alarm

28 08 00 Commissioning of Electronic Safety and Security
28 08 11 Testing for Baseline Performance Criteria

28 10 00 Access Control
28 11 00 Access Control Global Applications
28 12 00 General Requirements for Access Control Systems
28 13 00 Access Control Software and Database Management
   28 13 11 Access Control Software
   28 13 11.11 Access Control Operating Systems
   28 13 11.13 Access Control Application Services
   28 13 11.15 Access Control Mobile Applications
   28 13 13 Access Control Software Interfaces

28 14 00 Access Control System Hardware
   28 14 11 Access Control Network Controllers
   28 14 13 Access Control Door Controllers
   28 14 15 Access Control Inputs and Outputs
   28 14 17 Access Control Printers and Encoders
   28 14 19 Access Control Enclosures

28 15 00 Access Control Hardware Devices
   28 15 11 Integrated Credential Readers and Field Entry Management
   28 15 11.11 Standard Card Readers
   28 15 11.13 Keypads
   28 15 11.15 Biometric Identity Devices
   28 15 11.17 Combination Reader Devices
   28 15 13 Access Control Credentials
   28 15 13.11 Access Control Cards
   28 15 13.13 Wireless Key Fobs
   28 15 15 Electrified Locking Devices & Accessories
   28 15 15.11 Direct Interface Integrated Locking Devices
   28 15 15.13 Wireless Integrated Locking Devices
   28 15 15.15 Intelligent Ethernet Integrated Locking Devices
   28 15 15.17 Status Monitoring and Egress Devices
   28 15 17 Egress Management Devices
   28 15 17.11 Magnetic Lock Delayed Egress Devices
   28 15 17.13 Panic Hardware Delayed Egress Devices
   28 15 19 Access Control Remote Devices
   28 15 19.11 Smart Phone Interface Requirements
   28 15 19.13 Wireless Access Control Devices
   28 15 21 Telephone Entry Systems
<table>
<thead>
<tr>
<th>MasterFormat® 2016 – Numbers and Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 15 23</td>
</tr>
<tr>
<td>28 15 23.11</td>
</tr>
<tr>
<td>28 15 23.13</td>
</tr>
<tr>
<td>28 15 23.15</td>
</tr>
<tr>
<td>28 15 23.17</td>
</tr>
<tr>
<td>28 15 25</td>
</tr>
<tr>
<td>28 15 27</td>
</tr>
<tr>
<td><strong>28 16 00</strong></td>
</tr>
<tr>
<td>28 16 11</td>
</tr>
<tr>
<td>28 16 13</td>
</tr>
<tr>
<td>28 16 15</td>
</tr>
<tr>
<td>28 16 17</td>
</tr>
<tr>
<td>28 16 19</td>
</tr>
<tr>
<td>28 16 21</td>
</tr>
<tr>
<td>28 16 23</td>
</tr>
<tr>
<td>28 16 25</td>
</tr>
<tr>
<td>28 16 27</td>
</tr>
<tr>
<td>28 16 29</td>
</tr>
<tr>
<td>28 16 31</td>
</tr>
<tr>
<td><strong>28 17 00</strong></td>
</tr>
<tr>
<td>28 17 11</td>
</tr>
<tr>
<td>28 17 13</td>
</tr>
<tr>
<td>28 17 15</td>
</tr>
<tr>
<td>28 17 17</td>
</tr>
<tr>
<td><strong>28 18 00</strong></td>
</tr>
<tr>
<td>28 18 11</td>
</tr>
<tr>
<td>28 18 13</td>
</tr>
<tr>
<td>28 18 15</td>
</tr>
<tr>
<td>28 18 17</td>
</tr>
<tr>
<td><strong>28 19 00</strong></td>
</tr>
<tr>
<td>28 19 11</td>
</tr>
<tr>
<td>28 19 13</td>
</tr>
<tr>
<td>28 19 15</td>
</tr>
<tr>
<td><strong>28 20 00</strong></td>
</tr>
<tr>
<td>28 21 00</td>
</tr>
<tr>
<td>28 21 11</td>
</tr>
<tr>
<td>28 21 13</td>
</tr>
<tr>
<td>28 21 13.11</td>
</tr>
<tr>
<td>28 21 15</td>
</tr>
<tr>
<td>28 21 17</td>
</tr>
<tr>
<td>28 21 19</td>
</tr>
<tr>
<td>28 21 21</td>
</tr>
<tr>
<td><strong>28 23 00</strong></td>
</tr>
<tr>
<td>28 23 11</td>
</tr>
<tr>
<td>28 23 13</td>
</tr>
<tr>
<td><strong>28 25 00</strong></td>
</tr>
<tr>
<td><strong>28 27 00</strong></td>
</tr>
<tr>
<td><strong>28 30 00</strong></td>
</tr>
</tbody>
</table>
28 31 00  Intrusion Detection
   28 31 11  Building Intrusion Detection
   28 31 11.11  Building Intrusion Detection Control, Gui, and Logic Systems
   28 31 11.13  Building Intrusion Detection Remote Devices and Sensors
   28 31 21  Area and Perimeter Intrusion Detection
   28 31 21.11  Fiber Optic Area and Perimeter Security Systems
   28 31 21.13  Microwave Area and Perimeter Security Systems
   28 31 21.15  Integrated Video Area and Perimeter Security Systems
   28 31 21.17  Fixed Optical Beam Area and Perimeter Security Systems
   28 31 21.19  Lidar Area and Perimeter Security Systems
   28 31 21.21  Coaxial Area and Perimeter Security Systems
   28 31 21.23  Area and Perimeter Intrusion Detection Devices and Sensors
   28 31 31  Intrusion Detection Interfaces
   28 31 31.11  Intrusion Detection Interfaces to Security Monitoring and Control
   28 31 31.13  Intrusion Detection Interfaces to Access Control System
   28 31 31.15  Intrusion Detection Interfaces to Video Surveillance
   28 31 31.17  Intrusion Detection Interfaces to Information Management and Presentation
   28 31 31.19  Intrusion Detection Interfaces to Mass Notification
   28 31 31.21  Intrusion Detection Interfaces to Life Safety
   28 31 31.23  Intrusion Detection Interfaces to Fire Alarm
   28 31 31.25  Intrusion Detection Interfaces to Temperature Controls

28 33 00  Security Monitoring and Control
   28 33 11  Electronic Structural Monitoring Systems
   28 33 13  Security Operations and Monitoring Center
   28 33 15  Security Monitoring and Control Software
   28 33 17  Security Monitoring and Control Services

28 35 00  Tracking Systems
   28 35 11  Asset Tracking Systems
   28 35 11.11  Rf Asset Tracking Systems
   28 35 11.13  GPS Asset Tracking Systems
   28 35 11.15  Cellular Asset Tracking Systems
   28 35 13  Personnel Tracking Systems
   28 35 13.11  Rf Personnel Tracking Systems
   28 35 13.13  GPS Personnel Tracking Systems
   28 35 13.15  Cellular Personnel Tracking Systems

28 37 00  Audio Monitoring
   28 37 11  Audio Monitoring Devices

28 40 00  Life Safety

28 41 00  Radiation Detection and Alarm
   28 41 11  Radiation Detection and Alarm Control, Gui, and Logic Systems
   28 41 13  Radiation Detection and Alarm Integrated Audio Evacuation Systems
   28 41 15  Radiation Detection Sensors
   28 41 17  Radiation Dosimeters

28 42 00  Gas Detection and Alarm
   28 42 11  Gas Detection and Alarm Control, Gui, and Logic Systems
   28 42 13  Gas Detection and Alarm Integrated Audio Evacuation Systems
   28 42 15  Gas Detection Sensors

28 43 00  Fuel Oil Detection and Alarm
   28 43 11  Fuel Oil Detection and Alarm Control, Gui, and Logic Systems
   28 43 13  Fuel Oil Detection and Alarm Integrated Audio Evacuation Systems
28 43 15 Fuel Oil Detection Sensors

28 44 00 Refrigerant Detection and Alarm
28 44 11 Refrigerant Detection and Alarm Control, Gui, and Logic Systems
28 44 13 Refrigerant Detection and Alarm Integrated Audio Evacuation Systems
28 44 15 Refrigerant Detection Sensors

28 45 00 Water Detection and Alarm
28 45 11 Water Detection and Alarm Control, Gui, and Logic Systems
28 45 13 Water Detection Sensors
28 45 15 Building Envelope Water Detection and Alarm

28 46 00 Fire Detection and Alarm
28 46 10 Detection and Initiation
28 46 11 Fire Sensors and Detectors
28 46 11.11 Linear Heat Detection Sensors
28 46 11.13 Spot-Type Heat Detection Sensors
28 46 11.15 Duct Smoke Detection Sensors
28 46 11.17 Beam Smoke Detection Sensors
28 46 11.19 Video Smoke Detection Sensors
28 46 11.21 Carbon-Monoxide Detection Sensors
28 46 11.23 Combination Sensors
28 46 11.25 Air Sampling Systems
28 46 11.27 Other Sensors
28 46 12 Other Initiating Devices
28 46 12.11 Fire Alarm Pull Stations
28 46 12.13 Fire Alarm Level Detector Switches
28 46 12.15 Fire Alarm Flow Switches
28 46 12.17 Fire Alarm Pressure Sensors
28 46 12.19 Sprinkler Supervisory Devices
28 46 20 Fire Alarm
28 46 21.11 Addressable Fire-Alarm Systems
28 46 21.13 Conventional Fire-Alarm Systems
28 46 21.15 Protected Premise Systems
28 46 21.17 Proprietary Systems
28 46 21.19 Central Station Systems
28 46 21.21 Remote Station Systems
28 46 21.23 Public Emergency Alarm Reporting Systems
28 46 22 Network Command Centers, Printers and Peripherals for Fire Systems
28 46 23 Fire Alarm Notification Appliances
28 46 23.11 Fire Alarm Horns and Strobes
28 46 23.13 Fire Alarm Speakers
28 46 23.15 Fire Alarm Low Frequency Sounders
28 46 23.17 Wide Band Sounders
28 46 24 Fire Detection and Alarm Emergency Control Function Interfaces
28 46 24.11 Fire Detection and Alarm Interfaces to Remote Monitoring
28 46 24.13 Fire Detection and Alarm Interfaces to Access Control Hardware
28 46 24.15 Fire Detection and Alarm Interfaces to Access Control System
28 46 24.17 Fire Detection and Alarm Interfaces to Intrusion Detection
28 46 24.19 Fire Detection and Alarm Interfaces to Video Surveillance
28 46 24.21 Fire Detection and Alarm Interfaces to Elevator Control
28 46 24.23 Other Fire Detection and Alarm Interfaces

28 47 00 Mass Notification
28 47 11 General Requirements for Mass Notification
28 47 13 Mass Notification Software
28 47 15 Mass Notification Control Panels
28 47 17  Notification Devices and Methods
28 47 17.11  Notification Appliances and Methods Indoors
28 47 17.13  Notification Appliances and Methods Outdoors
28 47 17.15  Notification Appliances and Methods Distributed Recipient
28 47 17.17  Notification Appliances and Methods Public Methods
28 47 21  Mass Notification System Interfaces
28 47 21.11  Notification Interfaces to Access Control Systems
28 47 21.13  Notification Interfaces to Video Surveillance Systems
28 47 21.15  Notification Interfaces to Security Detection, Alarm, and Monitoring
28 47 21.17  Notification Interfaces to Security Monitoring and Control
28 47 21.19  Notification Interfaces to Life Safety Systems
28 47 21.21  Notification Interfaces to Fire Detection and Alarm
28 47 21.23  Notification Interfaces to Detention Systems
28 47 21.25  Notification Interfaces to Emergency Response Systems
28 47 21.27  Notification Interfaces to Network and Facilities Monitoring
28 47 21.29  Notification Interfaces to Web Intelligence
28 47 21.31  Notification Interfaces to Traffic Management and Monitoring Systems
28 47 21.33  Notification Interfaces to Emergency Response Systems
28 47 21.35  Notification Interfaces to Other External Subsystems

28 48 00  Emergency Response Systems
28 48 23  Computer Aided Dispatch

28 49 00  Electronic Personal Protection Systems
28 49 11  Electronic Personal Safety Detection Systems
28 49 13  Electronic Personal Safety Alarm Annunciation and Control Systems
28 49 15  Electronic Personal Safety Interfaces to Remote Monitoring
28 49 17  Electronic Personal Safety Emergency Aid Devices

28 50 00  Specialized Systems

28 51 00  Information Management & Presentation
28 51 11  Information Management & Presentation Architecture
28 51 13  Data and Information Management
28 51 15  Information Interfaces to Connected Subsystems
28 51 15.11  Information Interfaces to Access Control Systems
28 51 15.13  Information Interfaces to Video Surveillance Systems
28 51 15.15  Information Interfaces to Security Detection, Alarm, and Monitoring
28 51 15.17  Information Interfaces to Security Monitoring and Control
28 51 15.19  Information Interfaces to Mass Notification Systems
28 51 15.21  Information Interfaces to Life Safety Systems
28 51 15.23  Information Interfaces to Fire Detection and Alarm
28 51 15.25  Information Interfaces to Detention Systems
28 51 15.27  Information Interfaces to Emergency Response Systems
28 51 15.29  Information Interfaces to License Plate Recognition Systems
28 51 15.31  Information Interfaces to Facial Recognition Systems
28 51 15.33  Information Interfaces to Remote Data Structures
28 51 15.35  Information Interfaces to Network and Facilities Monitoring
28 51 15.37  Information Interfaces to Crowd Sourcing
28 51 15.39  Information Interfaces to Web Intelligence
28 51 15.41  Information Interfaces to Traffic Management and Monitoring Systems
28 51 15.43  Information Interfaces to Environmental Monitoring Systems
28 51 15.45  Information Interfaces to Directly Connected Sensors
28 51 15.47  Information Interfaces to Other Safety and Security Subsystems
28 51 15.49  Information Interfaces to Other External Subsystems
28 51 17  Data Presentation
28 51 17.11  Maps
28 51 17.13 Visualization
28 51 17.15 Events/Alarms/Incidents
28 51 17.17 Video Workspace
28 51 17.19 Dispatch/Notification
28 51 17.21 Review and Investigation
28 51 17.23 Reporting
28 51 19 Control Room and Monitoring Equipment
28 51 19.11 Display/Workstations
28 51 19.13 Video Walls
28 51 19.15 Audio Equipment
28 51 19.17 Remote Displays

28 52 00 Detention Security Systems
28 52 11 Detention Monitoring and Control Systems
28 52 13 Detention Interfaces to Connected Subsystems
28 52 13.11 Detention Interfaces to Access Control Systems
28 52 13.13 Detention Interfaces to Video Surveillance Systems
28 52 13.15 Detention Interfaces to Security Detention, Alarm, and Monitoring
28 52 13.17 Detention Interfaces to Security Monitoring and Control
28 52 13.19 Detention Interfaces to Duress Alarm Systems
28 52 13.21 Detention Interfaces to Distributed Television Systems
28 52 13.23 Detention Interfaces to Perimeter Security Systems
28 52 15 Video Support Systems for Detention
28 52 15.11 Video Interrogation System
28 52 15.13 Video Arraignment System
28 52 15.15 Video Visitation System

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 Maintenance of Excavation Support and Protection
31 01 60 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 Maintenance of Tunneling and Mining
31 01 70.61 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 Geotextiles for Earthwork
31 05 19.16 Geomembranes for Earthwork
31 05 19.19 Geogrids for Earthwork
31 05 19.23 Geosynthetic Clay Liners
31 05 19.26 Geocomposites
31 05 19.29 Geonets
31 05 23 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  Backfill Material Schedule
31 06 40  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  Caisson Schedule
31 06 70  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  Groundwater Monitoring During Construction
31 09 16  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  Selective Tree and Shrub Removal and Trimming
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
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
31 22 19.13  Spreading and Grading Topsoil
31 23 00  Excavation and Fill
31 23 13  Subgrade Preparation
31 23 16  Excavation
31 23 16.13  Trenching
31 23 16.16  Structural Excavation for Minor Structures
31 23 16.26  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  Geofoam
31 23 33  Trenching and Backfilling

31 24 00  Embankments
31 24 13  Roadway Embankments
31 24 16  Railway Embankments

31 25 00  Erosion and Sedimentation Controls
31 25 14  Stabilization Measures for Erosion and Sedimentation Control
31 25 14.13  Hydraulically-Applied Erosion Control
31 25 14.16  Rolled Erosion Control Mats and Blankets
31 25 24  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

31 30 00  Earthwork Methods

31 31 00  Soil Treatment
31 31 13  Rodent Control
31 31 13.16  Rodent Control Bait Systems
31 31 13.19  Rodent Control Traps
31 31 13.23  Rodent Control Electronic Systems
31 31 13.26  Rodent Control Repellants
31 31 16  Termite Control
31 31 16.13  Chemical Termite Control
31 31 16.16  Termite Control Bait Systems
31 31 16.19  Termite Control Barriers
31 31 19  Vegetation Control
31 31 19.13  Chemical Vegetation Control
31 31 33  Sanitary Vacuum System Piping

31 32 00  Soil Stabilization
31 32 13  Soil Mixing Stabilization
31 32 13.13  Asphalt Soil Stabilization
31 32 13.16  Cement Soil Stabilization
31 32 13.19  Lime Soil Stabilization
31 32 13.23  Fly-Ash Soil Stabilization
31 32 13.26  Lime-Fly-Ash Soil Stabilization
31 32 16  Chemical Treatment Soil Stabilization
31 32 16.13  Polymer Emulsion Soil Stabilization
31 32 17  Water Injection Soil Stabilization
31 32 19  Geosynthetic Soil Stabilization and Layer Separation
31 32 19.13  Geogrid Soil Stabilization
31 32 19.16  Geotextile Soil Stabilization
31 32 19.19  Geogrid Layer Separation
31 32 19.23  Geotextile Layer Separation
31 32 23  Pressure Grouting Soil Stabilization
31 32 23.13  Cementitious Pressure Grouting Soil Stabilization
31 32 23.16  Chemical Pressure Grouting Soil Stabilization
31 32 33   Shotcrete Soil Slope Stabilization
31 32 36   Soil Nailing
31 32 36.13  Driven Soil Nailing
31 32 36.16  Grouted Soil Nailing
31 32 36.19  Corrosion-Protected Soil Nailing
31 32 36.23  Jet-Grouted Soil Nailing
31 32 36.26  Launched Soil Nailing

31 33 00  Rock Stabilization
31 33 13   Rock Bolting and Grouting
31 33 23   Rock Slope Netting
31 33 26   Rock Slope Wire Mesh
31 33 33   Shotcrete Rock Slope Stabilization
31 33 43   Vegetated Rock Slope Stabilization

31 34 00  Soil Reinforcement
31 34 19   Geosynthetic Soil Reinforcement
31 34 19.13  Geogrid Soil Reinforcement
31 34 19.16  Geotextile Soil Reinforcement
31 34 23   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  Geogrid Slope Protection
31 35 19.16  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  Cast-In-Place Concrete Slope Paving
31 35 23.16  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  
31 41 33  Trench Shielding  
31 43 00  Concrete Raising  
31 43 13  Pressure Grouting  
31 43 13.13  Concrete Pressure Grouting  
31 43 13.16  Polyurethane Pressure Grouting  
31 43 16  Compaction Grouting  
31 43 19  Mechanical Jacking  
31 45 00  Vibroflotation and Densification  
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  Excavation Support and Protection  
31 51 00  Anchor Tiebacks  
31 51 13  Excavation Soil Anchors  
31 51 16  Excavation Rock Anchors  
31 52 00  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  Pozzolan-Bentonite Slurry Walls  
31 56 13.29  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  Special Foundations and Load-Bearing Elements  
31 62 00  Driven Piles  
31 62 13  Concrete Piles
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 62 13.13</td>
<td>Cast-in-Place Concrete Piles</td>
</tr>
<tr>
<td>31 62 13.16</td>
<td>Concrete Displacement Piles</td>
</tr>
<tr>
<td>31 62 13.19</td>
<td>Precast Concrete Piles</td>
</tr>
<tr>
<td>31 62 13.23</td>
<td>Prestressed Concrete Piles</td>
</tr>
<tr>
<td>31 62 13.26</td>
<td>Pressure-Injected Footings</td>
</tr>
<tr>
<td>31 62 16</td>
<td>Steel Piles</td>
</tr>
<tr>
<td>31 62 16.13</td>
<td>Sheet Steel Piles</td>
</tr>
<tr>
<td>31 62 16.16</td>
<td>Steel H Piles</td>
</tr>
<tr>
<td>31 62 16.19</td>
<td>Unfilled Tubular Steel Piles</td>
</tr>
<tr>
<td>31 62 19</td>
<td>Timber Piles</td>
</tr>
<tr>
<td>31 62 23</td>
<td>Composite Piles</td>
</tr>
<tr>
<td>31 62 23.13</td>
<td>Concrete-Filled Steel Piles</td>
</tr>
<tr>
<td>31 62 23.16</td>
<td>Wood and Cast-In-Place Concrete Piles</td>
</tr>
<tr>
<td>31 63 00</td>
<td><strong>Bored Piles</strong></td>
</tr>
<tr>
<td>31 63 13</td>
<td>Bored and Augered Test Piles</td>
</tr>
<tr>
<td>31 63 16</td>
<td>Auger Cast Grout Piles</td>
</tr>
<tr>
<td>31 63 19</td>
<td>Bored and Socketed Piles</td>
</tr>
<tr>
<td>31 63 19.13</td>
<td>Rock Sockets for Piles</td>
</tr>
<tr>
<td>31 63 23</td>
<td>Bored Concrete Piles</td>
</tr>
<tr>
<td>31 63 23.13</td>
<td>Bored and Belled Concrete Piles</td>
</tr>
<tr>
<td>31 63 23.16</td>
<td>Bored Friction Concrete Piles</td>
</tr>
<tr>
<td>31 63 26</td>
<td>Drilled Caissons</td>
</tr>
<tr>
<td>31 63 26.13</td>
<td>Fixed End Caisson Piles</td>
</tr>
<tr>
<td>31 63 26.16</td>
<td>Concrete Caissons for Marine Construction</td>
</tr>
<tr>
<td>31 63 29</td>
<td>Drilled Concrete Piers and Shafts</td>
</tr>
<tr>
<td>31 63 29.13</td>
<td>Uncased Drilled Concrete Piers</td>
</tr>
<tr>
<td>31 63 29.16</td>
<td>Cased Drilled Concrete Piers</td>
</tr>
<tr>
<td>31 63 33</td>
<td>Drilled Micropiles</td>
</tr>
<tr>
<td>31 64 00</td>
<td><strong>Caissons</strong></td>
</tr>
<tr>
<td>31 64 13</td>
<td>Box Caissons</td>
</tr>
<tr>
<td>31 64 16</td>
<td>Excavated Caissons</td>
</tr>
<tr>
<td>31 64 19</td>
<td>Floating Caissons</td>
</tr>
<tr>
<td>31 64 23</td>
<td>Open Caissons</td>
</tr>
<tr>
<td>31 64 26</td>
<td>Pneumatic Caissons</td>
</tr>
<tr>
<td>31 64 29</td>
<td>Sheeted Caissons</td>
</tr>
<tr>
<td>31 66 00</td>
<td><strong>Special Foundations</strong></td>
</tr>
<tr>
<td>31 66 13</td>
<td>Special Piles</td>
</tr>
<tr>
<td>31 66 13.13</td>
<td>Rammed Aggregate Piles</td>
</tr>
<tr>
<td>31 66 15</td>
<td>Helical Foundation Piles</td>
</tr>
<tr>
<td>31 66 16</td>
<td>Special Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.13</td>
<td>Anchored Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.23</td>
<td>Concrete Cribbing Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.26</td>
<td>Metal Cribbing Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.33</td>
<td>Manufactured Modular Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.43</td>
<td>Mechanically Stabilized Earth Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.46</td>
<td>Slurry Diaphragm Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.53</td>
<td>Soldier-Beam Foundation Walls</td>
</tr>
<tr>
<td>31 66 16.56</td>
<td>Permanently-Anchored Soldier-Beam Foundation Walls</td>
</tr>
<tr>
<td>31 66 19</td>
<td>Refrigerated Foundations</td>
</tr>
<tr>
<td>31 68 00</td>
<td><strong>Foundation Anchors</strong></td>
</tr>
<tr>
<td>31 68 13</td>
<td>Rock Foundation Anchors</td>
</tr>
<tr>
<td>31 68 16</td>
<td>Helical Foundation Anchors</td>
</tr>
</tbody>
</table>
31 70 00  Tunneling and Mining
31 71 00  Tunnel Excavation
   31 71 13  Shield Driving Tunnel Excavation
   31 71 16  Tunnel Excavation by Drilling and Blasting
   31 71 19  Tunnel Excavation by Tunnel Boring Machine
   31 71 23  Tunneling by Cut and Cover
31 72 00  Tunnel Support Systems
   31 72 13  Rock Reinforcement and Initial Support
   31 72 16  Steel Ribs and Lagging
31 73 00  Tunnel Grouting
   31 73 13  Cement Tunnel Grouting
   31 73 16  Chemical Tunnel Grouting
31 74 00  Tunnel Construction
   31 74 13  Cast-in-Place Concrete Tunnel Lining
   31 74 16  Precast Concrete Tunnel Lining
   31 74 19  Shotcrete Tunnel Lining
31 75 00  Shaft Construction
   31 75 13  Cast-in-Place Concrete Shaft Lining
   31 75 16  Precast Concrete Shaft Lining
31 77 00  Submersible Tube Tunnels
   31 77 13  Trench Excavation for Submerged Tunnels
   31 77 16  Tube Construction (Outfitting Tunnel Tubes)
   31 77 19  Floating and Laying Submerged Tunnels
32 00 00  Exterior Improvements
32 01 00  Operation and Maintenance of Exterior Improvements
   32 01 11  Paving Cleaning
   32 01 11.51 Rubber and Paint Removal from Paving
   32 01 11.52 Rubber Removal from Paving
   32 01 11.53 Paint Removal from Paving
   32 01 13  Flexible Paving Surface Treatment
   32 01 13.61 Slurry Seal (Latex Modified)
   32 01 13.62 Asphalt Surface Treatment
   32 01 16  Flexible Paving Rehabilitation
   32 01 16.71 Cold Milling Asphalt Paving
   32 01 16.72 Asphalt Paving Reuse
   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
   32 01 17.61 Sealing Cracks in Asphalt Paving
   32 01 17.62 Stress-Absorbing Membrane Interlayer
   32 01 19  Rigid Paving Surface Treatment
   32 01 19.61 Sealing of Joints in Rigid Paving
   32 01 19.62 Patching of Rigid Paving
   32 01 23  Base Course Reconditioning
   32 01 26  Rigid Paving Rehabilitation
   32 01 26.71 Grooving of Concrete Paving
   32 01 26.72 Grinding of Concrete Paving
   32 01 26.73 Milling of Concrete Paving

118
32 01 26.74 Concrete Overlays
32 01 26.75 Concrete Paving Reuse
32 01 29 Rigid Paving Repair
32 01 29.61 Partial Depth Patching of Rigid Paving
32 01 29.62 Concrete Paving Raising
32 01 29.63 Subsealing and Stabilization
32 01 30 Operation and Maintenance of Site Improvements
32 01 30.13 Snow Removal
32 01 80 Operation and Maintenance of Irrigation
32 01 90 Operation and Maintenance of Planting
32 01 90.13 Fertilizing
32 01 90.16 Amending Soils
32 01 90.19 Mowing
32 01 90.23 Pruning
32 01 90.26 Watering
32 01 90.29 Topsoil Preservation
32 01 90.33 Tree and Shrub Preservation

32 05 00 Common Work Results for Exterior Improvements
32 05 05 Selective Demolition for Exterior Improvements
32 05 13 Soils for Exterior Improvements
32 05 16 Aggregates for Exterior Improvements
32 05 19 Geosynthetics for Exterior Improvements
32 05 19.13 Geotextiles for Exterior Improvements
32 05 19.16 Geomembranes for Exterior Improvements
32 05 19.19 Geogrids for Exterior Improvements
32 05 23 Cement and Concrete for Exterior Improvements
32 05 33 Common Work Results for Planting

32 06 00 Schedules for Exterior Improvements
32 06 10 Schedules for Bases, Ballasts, and Paving
32 06 10.13 Pedestrian Walkway Schedule
32 06 30 Schedules for Site Improvements
32 06 30.13 Retaining Wall Schedule
32 06 80 Schedules for Irrigation
32 06 80.13 Irrigation Piping Schedule
32 06 90 Schedules for Planting
32 06 90.13 Planting Schedule

32 08 00 Commissioning of Exterior Improvements

32 10 00 Bases, Ballasts, and Paving

32 11 00 Base Courses
32 11 13 Subgrade Modifications
32 11 13.13 Lime-Treated Subgrades
32 11 13.16 Bituminous-Treated Subgrades
32 11 16 Subbase Courses
32 11 16.13 Sand-Clay Subbase Courses
32 11 16.16 Aggregate Subbase Courses
32 11 23 Aggregate Base Courses
32 11 23.13 Sand-Clay Base Courses
32 11 23.23 Base Course Drainage Layers
32 11 26 Asphaltic Base Courses
32 11 26.13 Plant Mix Asphaltic Base Courses
32 11 26.16 Road Mix Asphaltic Base Courses
32 11 26.19 Bituminous-Stabilized Base Courses
32 11 29  Lime Treated Base Courses
32 11 29.13 Lime-Fly Ash-Treated Base Courses
32 11 33  Cement-Treated Base Courses
32 11 33.13 Portland Cement-Stabilized Base Courses
32 11 36  Concrete Base Courses
32 11 36.11 Soil-Cement Concrete Base Courses
32 11 36.13 Lean Concrete Base Courses
32 11 36.16 Plain Cement Concrete Base Courses
32 11 36.19 Hydraulic Cement Concrete Base Courses
32 11 39  Shell Base Course

32 12 00  Flexible Paving
32 12 13  Preparatory Coats
32 12 13.13 Tack Coats
32 12 13.16 Asphaltic Tack Coats
32 12 13.19 Prime Coats
32 12 13.23 Asphaltic Prime Coats
32 12 16  Asphalt Paving
32 12 16.13 Plant-Mix Asphalt Paving
32 12 16.16 Road-Mix Asphalt Paving
32 12 16.19 Cold-Mix Asphalt Paving
32 12 16.23 Reinforced Asphalt Paving
32 12 16.26 Fiber-Modified Asphalt Paving
32 12 16.29 Polymer-Modified Asphalt Paving
32 12 16.33 Granulated Rubber-Modified Asphalt Paving
32 12 16.36 Athletic Asphalt Paving
32 12 19  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 73.16 Field-Molded Concrete Paving Joint Sealants
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 13 73.19</td>
<td>Compression Concrete Paving Joint Sealants</td>
</tr>
<tr>
<td>32 14 00</td>
<td>Unit Paving</td>
</tr>
<tr>
<td>32 14 13</td>
<td>Precast Concrete Unit Paving</td>
</tr>
<tr>
<td>32 14 13.13</td>
<td>Interlocking Precast Concrete Unit Paving</td>
</tr>
<tr>
<td>32 14 13.16</td>
<td>Precast Concrete Unit Paving Slabs</td>
</tr>
<tr>
<td>32 14 13.19</td>
<td>Porous Precast Concrete Unit Paving</td>
</tr>
<tr>
<td>32 14 16</td>
<td>Brick Unit Paving</td>
</tr>
<tr>
<td>32 14 23</td>
<td>Asphalt Unit Paving</td>
</tr>
<tr>
<td>32 14 26</td>
<td>Wood Paving</td>
</tr>
<tr>
<td>32 14 29</td>
<td>Rubber Paving</td>
</tr>
<tr>
<td>32 14 33</td>
<td>Plastic Paving</td>
</tr>
<tr>
<td>32 14 33.13</td>
<td>Permeable Plastic Paving</td>
</tr>
<tr>
<td>32 14 40</td>
<td>Stone Paving</td>
</tr>
<tr>
<td>32 14 43</td>
<td>Porous Unit Paving</td>
</tr>
<tr>
<td>32 15 00</td>
<td>Aggregate Surfacing</td>
</tr>
<tr>
<td>32 15 13</td>
<td>Cinder Surfacing</td>
</tr>
<tr>
<td>32 15 40</td>
<td>Crushed Stone Surfacing</td>
</tr>
<tr>
<td>32 15 50</td>
<td>Aggregate-Turf Pavement</td>
</tr>
<tr>
<td>32 16 00</td>
<td>Curbs, Gutters, Sidewalks, and Driveways</td>
</tr>
<tr>
<td>32 16 13</td>
<td>Curbs and Gutters</td>
</tr>
<tr>
<td>32 16 13.13</td>
<td>Cast-In-Place Concrete Curbs and Gutters</td>
</tr>
<tr>
<td>32 16 13.16</td>
<td>Steel Faced Curbs</td>
</tr>
<tr>
<td>32 16 13.23</td>
<td>Precast Concrete Curbs and Gutters</td>
</tr>
<tr>
<td>32 16 13.33</td>
<td>Asphalt Curbs</td>
</tr>
<tr>
<td>32 16 13.43</td>
<td>Stone Curbs</td>
</tr>
<tr>
<td>32 16 23</td>
<td>Sidewalks</td>
</tr>
<tr>
<td>32 16 33</td>
<td>Driveways</td>
</tr>
<tr>
<td>32 17 00</td>
<td>Paving Specialties</td>
</tr>
<tr>
<td>32 17 13</td>
<td>Parking Bumpers</td>
</tr>
<tr>
<td>32 17 13.13</td>
<td>Metal Parking Bumpers</td>
</tr>
<tr>
<td>32 17 13.16</td>
<td>Plastic Parking Bumpers</td>
</tr>
<tr>
<td>32 17 13.19</td>
<td>Precast Concrete Parking Bumpers</td>
</tr>
<tr>
<td>32 17 13.23</td>
<td>Rubber Parking Bumpers</td>
</tr>
<tr>
<td>32 17 13.26</td>
<td>Wood Parking Bumpers</td>
</tr>
<tr>
<td>32 17 16</td>
<td>Manufactured Traffic-Calming Devices</td>
</tr>
<tr>
<td>32 17 23</td>
<td>Pavement Markings</td>
</tr>
<tr>
<td>32 17 23.13</td>
<td>Painted Pavement Markings</td>
</tr>
<tr>
<td>32 17 23.23</td>
<td>Raised Pavement Markings</td>
</tr>
<tr>
<td>32 17 23.33</td>
<td>Plastic Pavement Markings</td>
</tr>
<tr>
<td>32 17 26</td>
<td>Tactile Warning Surfacing</td>
</tr>
<tr>
<td>32 17 29</td>
<td>Pavement Embedded Warning Lights</td>
</tr>
<tr>
<td>32 17 43</td>
<td>Pavement Snow Melting Systems</td>
</tr>
<tr>
<td>32 18 00</td>
<td>Athletic and Recreational Surfacing</td>
</tr>
<tr>
<td>32 18 13</td>
<td>Synthetic Grass Surfacing</td>
</tr>
<tr>
<td>32 18 16</td>
<td>Synthetic Resilient Surfacing</td>
</tr>
<tr>
<td>32 18 16.13</td>
<td>Playground Protective Surfacing</td>
</tr>
<tr>
<td>32 18 23</td>
<td>Athletic Surfacing</td>
</tr>
<tr>
<td>32 18 23.13</td>
<td>Baseball Field Surfacing</td>
</tr>
<tr>
<td>32 18 23.16</td>
<td>Natural Baseball Field Surfacing</td>
</tr>
<tr>
<td>32 18 23.19</td>
<td>Synthetic Baseball Field Surfacing</td>
</tr>
<tr>
<td>32 18 23.23</td>
<td>Field Sport Surfacing</td>
</tr>
<tr>
<td>32 18 23.26</td>
<td>Natural Field Sport Surfacing</td>
</tr>
</tbody>
</table>
32 18 23.29  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  Recreational Court Surfacing
32 18 23.53  Tennis Court Surfacing
32 18 23.56  Natural Tennis Court Surfacing
32 18 23.59  Synthetic Tennis Court Surfacing
32 18 23.63  Equestrian 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  Tennis Court Fences and Gates
  32 31 13.29  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  Expanded Metal Fences and Gates
  32 31 19  Decorative Metal Fences and Gates
  32 31 19.53  Decorative Metal Security Fences and Gates
  32 31 23  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  Segmental Retaining Walls
  32 32 23.13  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
  32 33 33  Site Manufactured Planters
  32 33 43  Site Seating and Tables
  32 33 43.13  Site Seating
  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  Manufactured Metal Bollards
   32 39 13.11  Manufactured Metal Security Bollards
   32 39 16  Manufactured Fire Pits
   32 39 33  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  Landscape Grading
   32 91 19.13  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 Exterior Planting Support Structures

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

33 00 00 Utilities

33 01 00 Operation and Maintenance of Utilities
  33 01 10 Operation and Maintenance of Water Utilities
  33 01 10.51 Water Utility Intake Cleaning and Maintenance
  33 01 10.52 Reservoir Maintenance
  33 01 10.53 Flushing of Water Utility Piping
  33 01 10.54 Cleaning of Water Utility Piping
  33 01 10.56 Cleaning of Water Utility Storage Tanks
  33 01 10.57 Disinfection of Water Supply Wells
  33 01 10.58 Disinfection of Water Utility Piping Systems
  33 01 10.59 Disinfection of Water Utility Storage Tanks
  33 01 10.81 Water Supply Well Abandonment
  33 01 10.91 Rehabilitation of Water Supply Wells
  33 01 10.92 Redevelopment of Water Supply Wells
  33 01 12 Inspection and Testing of Water Utilities
    33 01 12.11 Leakage Detection
    33 01 12.13 Electrical Continuity Testing
  33 01 30 Operation and Maintenance of Sewer Utilities
    33 01 30.11 Television Inspection of Sewers
    33 01 30.13 Dye Testing of Sewers
    33 01 30.16 Smoke Testing
    33 01 30.23 Pipe Bursting
    33 01 30.41 Cleaning of Sewers
    33 01 30.42 Cleaning of Manholes
    33 01 30.43 Removal of Protruding Service Connection
    33 01 30.44 Chemical Treatment of Roots in Sewer Lines
    33 01 30.61 Packer Injection Grouting
    33 01 30.72 Cured-in-place Pipe Lining
    33 01 30.73 Cured-in-Place Point Repair
    33 01 30.74 Cured-in-Place Lateral Lining
    33 01 30.77 Cured-in-Place Lateral Shortliners
33 01 30.79  Fold-and-Form Pipe Lining
33 01 30.81  Manhole Rehabilitation
33 01 30.82  Epoxy Lining for Concrete Manholes
33 01 30.84  Manhole Inserts
33 01 30.86  Manhole Rim Adjustment
33 01 34  Operation and Maintenance of Onsite Wastewater Disposal Systems
33 01 34.13  Septic Tank Solids Removal
33 01 34.14  Septic Tank Maintenance
33 01 34.19  Septic Tank Abandonment
33 01 34.33  Maintenance of Onsite Sand Filters
33 01 50  Operation and Maintenance of Hydrocarbon Utilities
33 01 50.53  Cleaning of Hydrocarbon Conveyance Piping
33 01 50.56  Cleaning of Hydrocarbon Storage Tanks
33 01 50.73  Relining of Hydrocarbon Conveyance Piping
33 01 50.76  Relining of Steel Hydrocarbon Storage Tanks
33 01 50.81  Hydrocarbon Well Abandonment
33 01 50.91  Rehabilitation of Hydrocarbon Wells
33 01 60  Operation and Maintenance of Hydronic and Steam Energy Utilities
33 01 70  Operation and Maintenance of Electrical Utilities
33 01 70.51  Electrical Utility Visual Inspection
33 01 70.52  Electrical Utility Thermographic Surveys
33 01 70.53  Electrical Utility Insulation Testing
33 01 70.54  Electrical Utility Insulating Oil/Fluid Analysis
33 01 80  Operation and Maintenance of Communications Utilities
33 01 80.51  Communication Utility Visual Inspection
33 01 80.52  Communication Utility Thermographic Surveys

33 05 00  Common Work Results for Utilities

33 05 05  Buried Piping Installation
33 05 05.11  Installing Bell-and-Spigot Joints
33 05 05.13  Installing Push-on Joints
33 05 05.15  Installing Butt-and-Strap Joints
33 05 05.16  Installing Mechanical Joints
33 05 05.18  Installing Restrained Joints
33 05 05.19  Fusing Joints
33 05 05.31  Hydrostatic Testing
33 05 05.33  Infiltration and Exfiltration Testing
33 05 05.36  Vacuum Testing
33 05 05.41  Air Testing
33 05 05.43  Mandrel Testing
33 05 05.46  Lamp Testing
33 05 07  Trenchless Installation of Utility Piping
33 05 07.13  Utility Directional Drilling
33 05 07.23  Utility Boring and Jacking
33 05 07.24  Casing Piping for Utility Jacking
33 05 07.33  Tunnelling
33 05 07.36  Microtunnelling
33 05 07.43  Utility Impact Moling
33 05 07.53  Cable Trenching and Plowing
33 05 09  Piping Specials for Utilities
33 05 09.13  Couplings for Utility Piping
33 05 09.23  Adapters for Utility Piping
33 05 09.33  Thrust Restraint for Utility Piping
33 05 09.43  Tappling Sleeves and Saddles for Utility Piping
33 05 11  Aluminum Utility Pipe
33 05 12  Brass Utility Pipe
33 05 16  Cast-Iron Utility Pipe
33 05 17  Copper Utility Pipe and Tubing
33 05 19  Ductile-Iron Utility Pipe
33 05 21  High-Alloy Nickel Utility Pipe and Tubing
33 05 23  Stainless Steel Utility Pipe and Tubing
33 05 23.13 Duplex and Super-Duplex Stainless Steel Utility Pipe
33 05 23.23 300- and 400-Series Stainless Steel Utility Pipe
33 05 23.33 Special-Fabrication Stainless Steel Utility Pipe and Tubing
33 05 24  Steel Utility Pipe
33 05 24.13 Steel Pipe and Tubing for Air and Gas Service
33 05 24.23 Steel Pipe for Water Service
33 05 24.26 Steel Pipe and Tubing for Utility Liquid Service
33 05 24.33 Steel Pipe for Bulk Materials Conveyance
33 05 27  Corrugated Metal Utility Pipe
33 05 27.13 Corrugated Metal Culvert Pipe
33 05 27.23 Corrugated Metal Slotted Pipe
33 05 27.33 Corrugated Metal Culvert Arch Pipe
33 05 31  Thermoplastic Utility Pipe
33 05 31.11 Polyvinyl Chloride Gravity Sewer Pipe
33 05 31.13 Polyvinyl Chloride Pressure Pipe
33 05 31.16 Polyvinyl Chloride Pressure Pipe for Water Transmission and Distribution (AWWA C900 and AWWA C905)
33 05 31.19 Fusible Polyvinyl Chloride Pipe
33 05 31.21 Ribbed Polyvinyl Chloride Gravity Pipe
33 05 31.23 Dual-Wall Polyvinyl Chloride Profile Pipe
33 05 31.26 Polyvinyl Chloride Sleeve Pipe
33 05 31.27 Polyvinyl Chloride Perforated Drainage Pipe
33 05 31.29 Polyvinyl Chloride Electrical Duct
33 05 31.33 ABS Utility Pipe
33 05 33  Polyethylene Utility Pipe
33 05 33.13 Corrugated-Wall, Smooth Interior HDPE Gravity Pipe
33 05 33.23 Polyethylene Pressure Pipe and Tubing (AWWA C901 and AWWA C906)
33 05 33.33 Corrugated, Perforated HDPE Drainage Pipe
33 05 33.36 Corrugated, Non-Perforated HDPE Drainage Pipe
33 05 33.53 HDPE Gas Utility Pipe
33 05 33.56 Medium-Density Polyethylene Gas Utility Pipe
33 05 33.63 HDPE Communication Duct
33 05 36  Fiberglass-Reinforced Plastic Utility Pipe
33 05 36.13 Fiberglass-Reinforced Plastic Pipe for Utility Air, Gas, and Odor Service
33 05 36.23 Fiberglass-Reinforced Plastic Pipe for Utility Liquid Service
33 05 36.33 Fiberglass-Reinforced Plastic Pipe for Electrical Service
33 05 37  Centrifugally Cast Fiberglass-Reinforced Polymer Mortar Utility Pipe
33 05 39  Concrete Pipe
33 05 39.11 Concrete Pressure Pipe, Steel-Cylinder Type (AWWA C300)
33 05 39.13 Prestressed Concrete Pressure Pipe, Steel-Cylinder Type (AWWA C301)
33 05 39.16 Reinforced Concrete Pressure Pipe, Non-cylinder Type (AWWA C302)
33 05 39.17 Concrete Pressure Pipe, Bar-Wrapped Steel-Cylinder Type (AWWA C303)
33 05 39.23 Reinforced Concrete Low-Head Pressure Utility Pipe
33 05 39.33 Non-Reinforced Concrete Sewer and Culvert Pipe
33 05 39.36 Non-Reinforced Concrete Irrigation and Drainage Pipe
33 05 39.41 Reinforced Concrete Pipe for Sewers and Culverts
33 05 39.43 Perforated Concrete Utility Pipe
33 05 39.46 Reinforced Concrete Elliptical Pipe for Sewers and Culverts
33 05 39.49 Reinforced Concrete Box Sections for Sewers and Culverts
33 05 39.63 Concrete Pipe Closures
33 05 39.66 Concrete Pipe Thrust Restraints
33 05 39.69 Concrete Pipe Wall Fittings
33 05 41 Vitrified Clay Utility Pipe
33 05 43 Ceramic Drainage Tile
33 05 46 Asbestos Cement Utility Pipe
33 05 61 Concrete Manholes
33 05 63 Concrete Vaults and Chambers
33 05 66 Concrete Distribution Chambers
33 05 69 Concrete Trenchways
33 05 71 Cleanouts
33 05 73 Polyethylene Manholes
33 05 76 Fiberglass Manholes
33 05 77 Fiberglass Metering Manholes
33 05 81 Metallic Castings for Utility Structures
33 05 83 Non-Metallic Accessories for Utility Structures
33 05 93 Common Motor Requirements for Utilities
33 05 96 Vibration and Seismic Controls for Utilities
33 05 97 Identification and Signage for Utilities
33 05 97.13 Signage for Utilities
33 05 97.16 Markers for Utility Identification
33 05 97.23 Underground Utility Warning Tape
33 05 97.33 Utility Identification Flags

33 06 00 Schedules for Utilities
33 06 05 Schedules for Utility Piping
33 06 10 Schedules for Water Utilities
33 06 30 Schedules for Sanitary Sewerage Utilities
33 06 40 Schedules for Stormwater Utilities
33 06 40.13 Stormwater Drainage System Schedules
33 06 50 Schedules for Hydrocarbon Utilities
33 06 60 Schedules for Hydronic and Steam Energy Utilities
33 06 70 Schedules for Electrical Utilities
33 06 80 Schedules for Communications Utilities

33 08 00 Commissioning of Utilities
33 08 10 Commissioning of Water Utilities
33 08 30 Commissioning of Sanitary Sewerage Utilities
33 08 40 Commissioning of Stormwater Utilities
33 08 50 Commissioning of Hydrocarbon Utilities
33 08 60 Commissioning of Hydronic and Steam Energy Utilities
33 08 70 Commissioning of Electrical Utilities
33 08 80 Commissioning of Communications Utilities

33 09 00 Instrumentation and Control for Utilities
33 09 01 Utility Meter Registers
33 09 01.13 Mechanical Registers
33 09 01.23 Pulse Registers
33 09 01.33 Encoder Registers
33 09 02 Touch-based Utility Meter Reading Equipment
33 09 03 Handheld Radio Frequency Utility Meter Reading Equipment
33 09 04 Mobile Radio Frequency Utility Meter Reading Equipment
33 09 05 Fixed-Network Radio Frequency Utility Meter Reading Equipment
33 09 06 Satellite Radio Frequency Utility Meter Reading Equipment
33 09 07 Power Line Communication Utility Meter Reading Equipment
33 09 08 Wireless Local Area Network Utility Meter Reading Equipment
33 09 09 Data Acquisition and Hosting Software
33 09 10 Instrumentation and Control for Water Utilities
33 09 30 Instrumentation and Control for Sanitary Sewerage Utilities
33 09 40 Instrumentation and Control for Stormwater Utilities
33 09 50 Instrumentation and Control for Hydrocarbon Utilities
33 09 53 Leak Detection for Hydrocarbon Systems
33 09 60 Instrumentation and Control for Hydronic and Steam Energy Utilities
33 09 70 Instrumentation and Control for Electrical Utilities
33 09 80 Instrumentation and Control for Communications Utilities

33 10 00 Water Utilities

33 11 00 Groundwater Sources
33 11 11 Test Wells
33 11 13 Potable Water Supply Wells
33 11 16 Irrigation Wells
33 11 19 Aquifer Recharging Wells
33 11 33 Vertically Suspended Dry-Location Centrifugal Well Pumps
33 11 36 Submersible Centrifugal Well Pumps
33 11 39 Jet-Type Well Pumps
33 11 53 Monitoring Wells

33 12 00 Surface Water Sources
33 12 11 Intake Structure Systems
33 12 13 Intake Cribs
33 12 16 Intake Drop and Riser Shafts
33 12 31 Reservoir Weight-tensioned, Defined Sump Floating Covers
33 12 31.13 Reservoir Weight-tensioned, Defined Sump Polyethylene-reinforced Floating Covers
33 12 31.23 Reservoir Weight-tensioned, Defined Sump Polypropylene-reinforced Floating Covers
33 12 33 Reservoir Mechanically-tensioned Polyethylene-reinforced Floating Covers
33 12 33.13 Reservoir Mechanically-tensioned Polyethylene-reinforced Floating Covers
33 12 36 Reservoir Short-term Floating Covers
33 12 39 Reservoir Ball Floating Covers
33 12 43 Floats for Reservoir Floating Covers
33 12 46 Appurtenances for Reservoir Floating Covers
33 12 53 Reservoir Flexible Baffle Curtains

33 14 00 Water Utility Transmission and Distribution
33 14 11 Water Utility Transmission Piping
33 14 13 Public Water Utility Distribution Piping
33 14 16 Site Water Utility Distribution Piping
33 14 17 Site Water Utility Service Laterals
33 14 19 Valves and Hydrants for Water Utility Service
33 14 23 Enclosures for Water Utility Piping and Valves
33 14 23.11 Heated, Insulated Aluminum Enclosures for Water Utility Piping and Valves
33 14 23.13 Heated, Insulated Fiberglass Enclosures for Water Utility Piping and Valves
33 14 23.16 Unheated, Insulated Aluminum Enclosures for Water Utility Piping and Valves
33 14 23.17 Unheated, Insulated Fiberglass Enclosures for Water Utility Piping and Valves
33 14 23.23 Fiberglass Artificial Rock Enclosures for Water Utility Piping and Valves
33 14 23.26 Plastic Artificial Rock Enclosures for Water Utility Piping and Valves
33 14 23.33 Enclosures for Water Utility Air Valves
33 14 43 Packaged Pumping Systems for Water Utility Service

33 16 00 Water Utility Storage Tanks
33 16 11 Elevated Composite Water Storage Tanks
33 16 13 Elevated Pillar-Type Steel Water Storage Tanks
33 16 16 Multi-Column Elevated Steel Water Storage Tanks
33 16 19 Elevated Spheroid Steel Water Storage Tanks
33 16 23 Ground-Level Steel Water Storage Tanks
33 16 31 Ground-Level AWWA D110 Type I Prestressed Concrete Water Storage Tanks
33 16 32 Ground-Level AWWA D110 Type II Prestressed Concrete Water Storage Tanks
33 16 33 Ground-Level AWWA D110 Type III Prestressed Concrete Water Storage Tanks
33 16 36 Ground-Level Reinforced Concrete Water Storage Tanks
33 16 53 Ground-Level Metal Water Storage Cisterns
33 16 56 Ground-Level Plastic Water Storage Cisterns
33 16 61 Underground Concrete Water Storage Cisterns
33 16 63 Underground Non-Metallic Water Storage Cisterns
33 16 66 Underground Plastic Modular Water Storage Cisterns
33 16 93 Water Storage Tank Interior Curtain Walls
33 16 96 Water Storage Tank Appurtenances

33 19 00 Water Utility Metering Equipment
33 19 13 Positive Displacement Water Meters
33 19 13.13 Oscillating Piston Water Meters
33 19 13.23 Nutating Disc Water Meters
33 19 16 Velocity-Type Water Meters
33 19 16.13 Single-Jet Water Meters
33 19 16.16 Multi-Jet Water Meters
33 19 16.23 Turbine Water Meters
33 19 16.26 Fire-Type Turbine Water Meters
33 19 16.29 Portable Fire Hydrant-Type Turbine Water Meters
33 19 16.33 Propeller Water Meters
33 19 19 Compound Water Meters
33 19 23 Magnetic Water Meters
33 19 26 Ultrasonic Water Meters
33 19 29 Pre-paid Water Meters

33 30 00 Sanitary Sewerage

33 31 00 Sanitary Sewerage Piping
33 31 11 Public Sanitary Sewerage Gravity Piping
33 31 13 Site Sanitary Sewerage Gravity Piping
33 31 16 Site Sanitary Sewerage Gravity Service Laterals
33 31 19 Small-Diameter Sanitary Sewerage Gravity Piping
33 31 23 Sanitary Sewerage Force Main Piping
33 31 26 Sanitary Pressure Sewer Piping
33 31 29 STEP System Piping

33 32 00 Sanitary Sewerage Equipment
33 32 11 Field-Erected Wastewater Pumping Stations
33 32 13 Packaged Wastewater Pumping Stations
| 33 32 16 | Packaged Wastewater Grinder Pump Assemblies |
| 33 32 19 | Septic Tank Effluent Pumps |
| 33 32 26 | Pneumatic Sewage Ejectors |
| 33 32 33 | Wastewater Collection Vacuum Stations |
| 33 32 36 | Pneumatic Wastewater Vacuum Valve Sumps |

### 33 34 00 Onsite Wastewater Disposal

- 33 34 13 Septic Tanks
  - 33 34 13.13 Concrete Septic Tanks
  - 33 34 13.23 Fiberglass Septic Tanks
  - 33 34 13.33 Polyethylene Septic Tanks
- 33 34 16 Septic Tank Effluent Filters
  - 33 34 16.13 Septic Tank Gravity Effluent Filters
  - 33 34 16.16 Septic Tank Pressurized Effluent Filters
- 33 34 19 Septic Tank Accessories
- 33 34 23 Onsite Aerobic Equipment
- 33 34 33 Onsite Intermittent Wastewater Filtration Systems
- 33 34 36 Onsite Recirculating Wastewater Filtration Systems
- 33 34 51 Drainage Field System
- 33 34 53 Distribution Chambers
  - 33 34 53.13 Drainage Field Concrete Distribution Chambers
  - 33 34 53.23 Drainage Field Fiberglass Distribution Chambers
  - 33 34 53.33 Drainage Field Polyethylene Distribution Chambers
- 33 34 56 Drainage Field Dosing Chambers
- 33 34 57 Drainage Field Infiltration Chambers

### 33 36 00 Wastewater Utility Storage Tanks

- 33 36 23 Ground-Level Steel Wastewater Storage Tanks
- 33 36 31 Ground-Level AWWA D110 Type I Prestressed Concrete Wastewater Storage Tanks
- 33 36 32 Ground-Level AWWA D110 Type II Prestressed Concrete Wastewater Storage Tanks
- 33 36 33 Ground-Level AWWA D110 Type III Prestressed Concrete Wastewater Storage Tanks
- 33 36 36 Ground-Level Reinforced Concrete Wastewater Storage Tanks
- 33 36 43 Underground Reinforced Concrete Wastewater Storage Tanks
- 33 36 53 Wastewater Storage Tunnel Systems

### 33 37 00 Overflow Control

- 33 37 13 Bending Weirs
- 33 37 16 Spring-loaded Weirs
- 33 37 23 Flow Regulators
- 33 37 33 Swirl Concentrators
- 33 37 36 Vortex-Type Hydrodynamic Separators
- 33 37 43 Netting Systems
- 33 37 46 End-of-Pipe In-water Storage Systems

### 33 40 00 Stormwater Utilities

#### 33 41 00 Subdrainage

- 33 41 13 Foundation Drainage
- 33 41 13.13 Foundation Drainage Piping
- 33 41 13.16 Geocomposite Foundation Drainage
- 33 41 16 Subdrainage Piping
- 33 41 16.16 Geocomposite Subdrainage
33 41 16.19 Pipe Underdrains
33 41 19 Underslab Drainage
33 41 19.13 Underslab Drainage Piping
33 41 19.16 Geocomposite Underslab Drainage
33 41 23 Drainage Layers
33 41 23.16 Gravel Drainage Layers
33 41 23.19 Geosynthetic Drainage Layers
33 41 33 Retaining Wall Drainage
33 41 43 Synthetic-Media French Drains

33 42 00 Stormwater Conveyance
33 42 11 Stormwater Gravity Piping
33 42 13 Stormwater Culverts
33 42 16 Stormwater Force Main Piping
33 42 23 Headwalls and Endwalls for Stormwater Piping
33 42 26 End Sections for Stormwater Piping
33 42 26.11 Aluminum End Sections for Stormwater Piping
33 42 26.13 Steel End Sections for Stormwater Piping
33 42 26.16 Corrugated Metal End Sections for Stormwater Piping
33 42 26.23 Concrete End Sections for Stormwater Piping
33 42 31 Stormwater Area Drains and Inlets
33 42 33 Stormwater Curbside Drains and Inlets
33 42 36 Stormwater Trench Drains
33 42 41 Gratings and Frames for Stormwater Drainage Inlets
33 42 41.11 Aluminum Gratings and Frames for Stormwater Drainage Inlets
33 42 41.21 Brass Gratings and Frames for Stormwater Drainage Inlets
33 42 41.31 Cast-Iron Gratings and Frames for Stormwater Drainage Inlets
33 42 41.41 Chrome Gratings and Frames for Stormwater Drainage Inlets
33 42 41.51 Steel Gratings and Frames for Stormwater Drainage Inlets
33 42 41.61 Fiberglass Gratings and Frames for Stormwater Drainage Inlets

33 44 00 Stormwater Utility Equipment
33 44 11 Field-Erected Stormwater Pumping Stations
33 44 13 Packaged Stormwater Pumping Stations
33 44 21 Stormwater Downspout Filters
33 44 23 Inline Stormwater Filters
33 44 26 Stormwater Catch Basin Insert Filters
33 44 27 Stormwater Trench Drain Insert Filters
33 44 31 Stormwater Membrane Filtration
33 44 33 Stormwater Trash and Debris Guards
33 44 36 Oil and Stormwater Separators
33 44 43 Vortex-Type Hydrodynamic Separators
33 44 53 Stormwater Area Drainage Pop-up Relief Valves

33 46 00 Stormwater Management
33 46 11 Stormwater Ponds
33 46 11.13 Stormwater Detention Ponds
33 46 11.23 Stormwater Retention Ponds
33 46 11.33 Fire Protection Ponds
33 46 11.43 Cooling Water Ponds
33 46 16 Outlet Structures for Stormwater Ponds
33 46 16.13 Stormwater Pond Concrete Outlet Structures
33 46 16.23 Stormwater Pond Fiberglass Outlet Structures
33 46 23 Modular Buried Stormwater Storage Units
33 46 39 Rain Barrels
33 46 53 Stormwater Leaching Pits
33 46 56 Tree Box Filters
33 46 59 Concrete Modular Biofiltration Cells
33 46 63 Swale Protection Prefilters

33 50 00 Hydrocarbon Utilities

33 51 00 Hydrocarbon Sources
33 51 13 Appraisal Wells for Liquid Hydrocarbons
33 51 16 Appraisal Wells for Gaseous Hydrocarbons
33 51 23 Production Wells for Liquid Hydrocarbons
33 51 26 Production Wells for Gaseous Hydrocarbons
33 51 33 Liquid Injection Wells
33 51 36 Gas Injection Wells
33 51 39 Monitoring Wells
33 51 53 Reciprocating Pumpjack
33 51 56 Submersible Liquid Hydrocarbon Pumps

33 52 00 Hydrocarbon Transmission and Distribution
33 52 13 Liquid Hydrocarbon Piping
33 52 16 Gas Hydrocarbon Piping
33 52 16.13 Steel Natural Gas Piping
33 52 16.23 Medium Density Polyethylene Piping for Natural Gas
33 52 16.26 High Density Polyethylene Piping for Natural Gas
33 52 19 Hydrocarbon Piping Handling
33 52 19.13 Hydrocarbon Piping Stringing, Storing, and Stacking
33 52 23 Hydrocarbon Piping Welding
33 52 23.13 Liquid Hydrocarbon Piping Welding
33 52 23.16 Gas Hydrocarbon Piping Welding
33 52 26 Hydrocarbon Piping Pigging
33 52 26.13 Hydrocarbon Piping Pig Launchers
33 52 26.16 Hydrocarbon Piping Pig Receivers
33 52 26.23 Pigs for Hydrocarbon Piping

33 53 00 Hydrocarbon Utility Pressure Regulation
33 53 13 Liquid Hydrocarbon Pressure Regulation
33 53 16 Gas Hydrocarbon Pressure Regulation

33 54 00 Hydrocarbon Utility Safety Equipment
33 54 13 Liquid Hydrocarbon Leak Detection Equipment
33 54 16 Gas Hydrocarbon Leak Detection Equipment
33 54 23 Hydrocarbon Pipeline Venting
33 54 23.13 Liquid Hydrocarbon Pipeline Venting
33 54 23.16 Gas Hydrocarbon Pipeline Venting

33 56 00 Hydrocarbon Storage
33 56 13 Aboveground Hydrocarbon Storage Tanks
33 56 21 Ground-Level Fixed Roof Hydrocarbon Storage Tanks
33 56 21.13 Double-Wall Ground-Level Fixed Roof Metallic Hydrocarbon Storage Tanks
33 56 21.16 Single-Wall Ground-Level Fixed Roof Metallic Hydrocarbon Storage Tanks
33 56 21.23 Single-Wall Ground-Level Fixed Roof Non-Metallic Hydrocarbon Storage Tanks
33 56 21.26 Double-Wall Ground-Level Fixed Roof Non-Metallic Hydrocarbon Storage Tanks
33 56 23 Ground-Level External Floating Roof Hydrocarbon Storage Tanks
33 56 26 Ground-Level Internal Floating Roof Hydrocarbon Storage Tanks
33 56 33 Underground Hydrocarbon Storage
33 56 33.13 Double-Wall Metallic Underground Hydrocarbon Storage Tanks
33 56 33.23 Single-Wall Metallic Underground Hydrocarbon Storage Tanks
33 56 33.26 Single-Wall Non-Metallic Underground Hydrocarbon Storage Tanks
33 56 33.29 Double-Wall Non-Metallic Underground Hydrocarbon Storage Tanks
33 56 33.43 Underground Hydrocarbon Storage Caverns
33 56 43 Aviation Fuel Storage Tanks
33 56 43.13 Ground-Level Aviation Fuel Storage Tanks
33 56 43.53 Underground Aviation Fuel Storage Tanks
33 56 53 Compressed Gaseous Hydrocarbon Storage Tanks
33 56 60 Moveable Hydrocarbon Storage Tanks
33 56 93 Hydrocarbon Tank Linings
33 56 96 Hydrocarbon Storage Tank Appurtenances

33 57 00 Bulk Hydrocarbons Receiving/Dispensing Equipment
33 59 00 Hydrocarbon Utility Metering
  33 59 11 Diaphragm/Bellows Hydrocarbons Meters
  33 59 13 Hydrocarbons Rotary Meters
  33 59 16 Hydrocarbons Turbine Meters
  33 59 19 Hydrocarbons Orifice Meters
  33 59 23 Hydrocarbons Ultrasonic Flow Meters
  33 59 26 Hydrocarbons Coriolis Meters
  33 59 43 Liquid Hydrocarbon Sampling and Quality Analysis Instrumentation
  33 59 46 Gas Hydrocarbon Sampling and Quality Analysis Instrumentation

33 60 00 Hydronic and Steam Energy Utilities
33 61 00 Hydronic Energy Distribution
  33 61 13 Buried Hydronic Energy Distribution
  33 61 23 Ground-Level Hydronic Energy Distribution
  33 61 27 Prefabricated Energy Distribution
  33 61 29 Pre-Engineered, Field-Assembled 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 13.13 Shallow-Trench Steam Distribution Piping
  33 63 13.16 Utilidor Steam Distribution Piping
  33 63 23 Ground-Level Steam and Condensate Distribution Piping
  33 63 33 Steam Energy Distribution Metering

33 70 00 Electrical Utilities
33 71 00 Electrical Utility Transmission and Distribution
  33 71 13 Electrical Utility Towers
  33 71 13.13 Precast Concrete Electrical Utility Towers
  33 71 13.23 Steel Electrical Utility Towers
  33 71 13.33 Wood Electrical Utility Towers
  33 71 16 Electrical 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
  33 71 19 Electrical Underground Ducts, Ductbanks, and Manholes
  33 71 19.13 Electrical Manholes and Handholes
  33 71 19.23 Trenched Electrical Underground Duct and Ductbanks
  33 71 19.33 Trenchless Electrical Underground Duct and Ductbanks
  33 71 23 Insulators and Fittings
  33 71 23.13 Suspension Insulators
33 71 23.16 Post Insulators
33 71 23.23 Potheads
33 71 26 Transmission and Distribution Equipment
33 71 26.13 Capacitor Banks
33 71 26.16 Coupling Capacitors
33 71 26.23 Current Transformers
33 71 26.26 Potential Transformers
33 71 36 Extra-High-Voltage Transmission Wiring
33 71 36.13 Overhead Extra-High-Voltage Transmission Wiring
33 71 39 High-Voltage Transmission Wiring
33 71 39.13 Overhead High-Voltage Transmission Wiring
33 71 39.23 Underground High-Voltage Transmission Wiring
33 71 39.33 Underwater High-Voltage Transmission Wiring
33 71 49 Medium-Voltage Transmission Wiring
33 71 49.13 Overhead Medium-Voltage Transmission Wiring
33 71 49.23 Underground Medium-Voltage Transmission Wiring
33 71 49.33 Underwater Medium-Voltage Transmission Wiring
33 71 53 Direct-Current Transmission
33 71 73 Electrical Utility Services
33 71 83 Transmission and Distribution Specialties

33 72 00 Utility Substations
33 72 13 Deadend Structures
33 72 23 Structural Bus Supports
33 72 23.13 Bus Support Insulators
33 72 26 Substation Bus Assemblies
33 72 26.13 Aluminum Substation Bus Assemblies
33 72 26.16 Copper Substation Bus Assemblies
33 72 33 Control House Equipment
33 72 33.13 Relays
33 72 33.16 Substation Control Panels
33 72 33.23 Power-Line Carriers
33 72 33.26 Substation Metering
33 72 33.43 Substation DC Supply
33 72 43 Substation Control Wiring
33 72 53 Shunt Reactors
33 72 63 Substation Disconnect Switches
33 72 63.13 Vertical Break Disconnect Switches
33 72 63.16 Double End Break Disconnect Switches
33 72 63.19 Double End Break "Vee" Disconnect Switches
33 72 63.21 Center Break Disconnect Switches
33 72 63.23 Center Break "Vee" Disconnect Switches
33 72 63.26 Single Side Break Disconnect Switches
33 72 63.27 Vertical Reach Disconnect Switches
33 72 63.29 Grounding for Substation Disconnect Switches
33 72 63.31 Hook Sticks

33 73 00 Utility Transformers
33 73 13 Liquid-Filled Utility Transformers
33 73 23 Dry-Type Utility Transformers

33 74 00 Extra High Voltage (EHV) Switchgear and protection devices
33 74 13 Air EHV Circuit Breaker
33 74 16 Oil EHV Circuit Breaker
33 74 19  Gas EHV Circuit Breaker
33 74 30  EHV Disconnect switch
33 74 36  EHV Utility Fuses
33 74 39  EHV Surge Arresters
33 74 40  EHV Rod Gap
33 74 43  EVH Shunt Reactors
33 74 43.13 EHV Shunt Reactor Banks
33 74 43.16 EHV Current Limiting Reactors

33 75 00  High-Voltage Switchgear and Protection Devices
33 75 13  Air High-Voltage Circuit Breaker
33 75 16  Oil High-Voltage Circuit Breaker
33 75 19  Gas High-Voltage Circuit Breaker
33 75 23  Vacuum High-Voltage Circuit Breaker
33 75 30  High-Voltage Disconnect Switch
33 75 36  High-Voltage Utility Fuses
33 75 39  High-Voltage Surge Arresters
33 75 40  High-Voltage Rod Gap

33 77 00  Medium-Voltage Utility Switchgear and Protection 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 30  Medium-Voltage Disconnect Switch
33 77 33  Medium-Voltage Utility Cutouts
33 77 36  Medium-Voltage Utility Fuses
33 77 39  Medium-Voltage Utility Surge Arresters
33 77 40  Medium-Voltage Rod Gap
33 77 53  Medium-Voltage Utility Reclosers

33 78 00  Substation Converter Stations
33 79 00  Site Grounding
33 79 13  Site Improvement Grounding
33 79 13.13 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 93  Site Lightning Protection
33 79 93.13 Lightning Arrestors
33 79 93.16 Lightning Strike Counters
33 79 93.19 Lightning Strike Warning Devices

33 80 00  Communications Utilities
33 81 00  Communications Structures
33 81 13  Monopole Communications Towers
33 81 16  Lattice Communications Towers
33 81 19  Guyed Communications Towers
33 81 21  Concealed Communications Towers
33 81 23  Broadcast Communications Towers
33 81 27  Aerial Cable Installation Hardware
33 81 29  Communications Vaults, Pedestals, and Enclosures
33 81 63  Cell Site Shelter Equipment
33 81 63.16 DC Rectifiers
33 81 63.19 Backup Batteries
33 81 63.23 Baseband Microwave Processing
33 81 63.26 Base Station Transceivers
33 81 63.43 Remote Monitoring

33 82 00  Communications Transmission and Distribution
33 82 13  Copper Communications Transmission and Distribution Cabling
33 82 13.13 Copper Splicing and Terminations
33 82 23  Optical Fiber Communications Transmission and Distribution Cabling
33 82 23.13 Optical Fiber Splicing and Terminations
33 82 33  Coaxial Communications Transmission and Distribution Cabling
33 82 33.13 Coaxial Splicing and Terminations
33 82 43  Grounding and Bonding for Communications Transmission and Distribution
33 82 46  Cable Pressurization Equipment
33 82 53  Cleaning, Lubrication, and Restoration Chemicals
33 82 63  Shelter Equipment
33 82 63.13 Transceivers
33 82 63.16 Control Panels
33 82 63.23 Power-Line Carriers
33 82 63.43 Backup Batteries

33 83 00  Wireless Communications Transmission and Distribution
33 83 13  Laser Transmitters and Receivers
33 83 16  Microwave Transmitters and Receivers
33 83 17  Microwave Antennas
33 83 17.13 Microwave Waveguides
33 83 19  Infrared Transmitters and Receivers
33 83 23  Radio Antennas

34 00 00  Transportation
34 01 00  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 Track Removal and Salvage
34 01 23.81 Track Crosstie Replacement
34 01 33  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  Schedules for Airfields
34 06 43  Schedules for Bridges

**34 08 00  Commissioning of Transportation**
34 08 13  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  Track Rails
34 11 13.13  Light Rail Track
34 11 13.23  Heavy Rail Track
34 11 16  Welded Track Rails
34 11 16.13  In-Track Butt-Welded Track Rail
34 11 16.16  Pressure-Welded Track Rail
34 11 16.19  Thermite-Welded Track Rail
34 11 19  Track Rail Joints
34 11 23  Special Trackwork
34 11 23.13  Ballasted Special Track Rail
34 11 23.16  Direct-Fixation Track
34 11 23.23  Running Rail
34 11 23.26  Precurved Running Rail
34 11 26  Ballasted Track Rail
34 11 26.13  Track Rail Ballast
34 11 26.16  Track Rail Subballast
34 11 29  Embedded Track Rail
34 11 33  Track Cross Ties
34 11 33.13  Concrete Track Cross Ties
34 11 33.16  Timber Track Cross Ties
34 11 33.19  Resilient Track Cross Ties
34 11 36  Track Rail Fasteners
34 11 36.13  Direct-Fixation Fasteners
34 11 39  Track Collector Pans
34 11 39.13  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 AC Traction Power Switchgear
34 21 19.16 DC Traction Power Switchgear
34 21 19.23 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 Transportation Signaling and Control 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
34 42 13.13 General Railway Signal Requirements
34 42 13.16 Signal Solid State Coded Track Circuits
34 42 16 Train Control Wires and Cables
34 42 19 Vital Interlocking Logic Controllers
34 42 23 Railway Control Equipment
34 42 23.13 Mainline Train Control Room Equipment
34 42 23.16 Yard Train Control Room Equipment
34 42 23.19 Integrated Control Equipment
34 42 23.23 Interlocking Railway Control Equipment
34 42 26 Rail Network Equipment
34 42 29 Station Agent Equipment
34 42 33 Yard Management Equipment
34 42 36 Supervisory Control and Data Acquisition

34 43 00 Airfield Signaling and Control Equipment
34 43 13 Airfield Signals and Lighting
34 43 13.09 Airport Rotating Beacons
34 43 13.10 Hazard Beacons
34 43 13.11 Airport Beacon Towers
34 43 13.12 Airport Obstruction Lights
34 43 13.13 Airfield Runway Identification Lights
34 43 13.16 Airfield Runway and Taxiway Inset Lighting
34 43 13.19 Adhesive for Inset Lighting & Wiring
34 43 13.23 Airfield Short-Approach Lighting Equipment
34 43 13.26 Airfield Omni-Directional-Approach Lighting Equipment
34 43 13.29 Airfield Low-Intensity-Approach Lighting Equipment
34 43 13.33 Airfield High-Intensity-Approach Lighting Equipment
34 43 13.36 Airfield Precision-Approach Path Indicator Equipment
34 43 16 Airfield Landing Equipment
34 43 16.13 Microwave Airfield Landing Equipment
34 43 16.16 Instrument Airfield Landing Equipment
34 43 16.19 Airfield Visual-Approach Slope Indicator Equipment
34 43 19 Airfield Traffic Control Tower Equipment
34 43 23 Weather Observation Equipment
34 43 23.13 Automatic Weather Observation Equipment
34 43 23.16 Airfield Wind Cones
34 43 26 Airfield Control Equipment
34 43 26.13 Airfield Lighting Control Equipment
34 43 26.16 Airfield Lighting PLC Control Equipment
34 43 26.19 Airfield Lighting Regulator Assembly

34 48 00 Bridge Signaling and Control Equipment
34 48 13 Operating Bridge Signals
34 48 16 Operating Bridge Control Equipment

34 50 00 Transportation Fare Collection Equipment

34 52 00 Vehicle Fare Collection
34 52 16 Vehicle Ticketing Equipment
34 52 16.13 Vehicle Ticket Vending Machines
34 52 26 Vehicle Fare Collection Equipment
34 52 26.13 Vehicle Coin Fare Collection Equipment
34 52 26.16 Vehicle Electronic Fare Collection Equipment
34 52 33 Vehicle Fare Gates

34 54 00 Passenger Fare Collection
34 54 16 Passenger Ticketing Equipment
34 54 16.13 Passenger Ticket Vending Machines
34 54 16.16 Passenger Addfare Machines
34 54 16.23 Passenger Intermodal Transfer Machines
34 54 26 Passenger Fare Collection Equipment
34 54 26.13 Passenger Coin Fare Collection Equipment
34 54 26.16 Passenger Electronic Fare Collection Equipment
34 54 33 Passenger Fare Gates

34 70 00 Transportation Construction and Equipment

34 71 00 Roadway Construction
34 71 13 Vehicle Barriers
34 71 13.13 Vehicle Median Barriers
34 71 13.16 Vehicle Crash Barriers
34 71 13.19 Vehicle Traffic Barriers
34 71 13.26 Vehicle Guide Rails
34 71 13.29 Vehicle Barrier Fenders

139
34 71 16  Impact Attenuating Devices
34 71 19  Vehicle Delineators
34 71 19.13  Fixed Vehicle Delineators
34 71 19.16  Flexible Vehicle Delineators
34 72 00  Railway Construction
34 72 13  Railway Line
34 72 16  Railway Siding
34 73 00  Airfield Construction
34 73 13  Aircraft Tiedowns
34 73 16  Airfield Grounding
34 73 16.13  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  Ship Passenger Boarding Bridges
34 77 33  Baggage Scanning Equipment
34 77 36  Baggage Scales
34 77 39  Baggage Conveying Equipment
34 78 00  Weighing Equipment
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 Dampsers
34 82 13.13  Visco Elastic Bridge Vibration Dampsers
34 82 13.16  Tuned-Mass Bridge Vibration Dampsers
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 Construction
  35 01 30 Operation and Maintenance of Coastal Construction
  35 01 40 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 Marine Dredging
  35 01 50.71 Channel Excavation, Cleaning and Deepening
  35 01 70 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 Schedules for Coastal Construction
  35 06 40 Schedules for Waterway Construction
  35 06 50 Schedules for Marine Construction
  35 06 70 Schedules for Dams

35 08 00 Commissioning of Waterway and Marine Construction
  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 Marine Signaling Equipment
  35 12 13.13 Lighthouse Equipment
  35 12 33 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 21 00 General Fabrications for Waterways
  35 21 13 Hydraulic Bifurcation Panels
  35 21 16 Hydraulic Bulkheads
  35 21 19 Hydraulic Manifolds
35 21 23  Penstocks
35 21 33  Trash Racks
35 21 36  Debris Cages

**35 22 00  Hydraulic Gates**
- 35 22 13  Spillway Crest Gates
- 35 22 19  Hydraulic Head Gates
- 35 22 26  Sluice Gates
- 35 22 33  Miter Gates
- 35 22 39  Sector Gates
- 35 22 46  Tainter Gates
- 35 22 53  Vertical Lift Hydraulic Gates
- 35 22 59  Hydraulic Closure Gates
- 35 22 63  Through-Levee Access Gates

**35 24 00  Dredging**
- 35 24 13  Suction Dredging
- 35 24 13.11  Training Suction Dredging
- 35 24 13.13  Cutter Suction Dredging
- 35 24 13.16  Auger Suction Dredging
- 35 24 13.23  Jet-Lift Dredging
- 35 24 13.26  Air-Lift Dredging
- 35 24 21  Bucket Dredging
- 35 24 23  Clamshell Dredging
- 35 24 26  Backhoe/Dipper Dredging
- 35 24 33  Water Injection Dredging
- 35 24 36  Pneumatic Dredging
- 35 24 43  Bed-Levelling Dredging
- 35 24 46  Krabbelaar Dredging
- 35 24 53  Waterway Snag Removal

**35 30 00  Coastal Construction**

**35 31 00  Shoreline Protection**
- 35 31 16  Seawalls
- 35 31 16.13  Concrete Seawalls
- 35 31 16.16  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  Jetties
- 35 31 26.13  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
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 31 29.16</td>
<td>Concrete Unit Masonry Groins</td>
</tr>
<tr>
<td>35 31 29.26</td>
<td>Steel Groins</td>
</tr>
<tr>
<td>35 31 29.36</td>
<td>Gabion Groins</td>
</tr>
<tr>
<td>35 31 29.40</td>
<td>Stone Groins</td>
</tr>
<tr>
<td><strong>35 32 00</strong></td>
<td><strong>Artificial Reefs</strong></td>
</tr>
<tr>
<td>35 32 13</td>
<td>Scrap Material Artificial Reefs</td>
</tr>
<tr>
<td>35 32 13.13</td>
<td>Scrap Concrete Artificial Reefs</td>
</tr>
<tr>
<td>35 32 13.19</td>
<td>Scrap Steel Artificial Reefs</td>
</tr>
<tr>
<td>35 32 13.33</td>
<td>Sunken Ship Artificial Reefs</td>
</tr>
<tr>
<td>35 32 16</td>
<td>Constructed Artificial Reefs</td>
</tr>
<tr>
<td>35 32 16.13</td>
<td>Constructed Concrete Artificial Reefs</td>
</tr>
<tr>
<td>35 32 16.19</td>
<td>Constructed Steel Artificial Reefs</td>
</tr>
<tr>
<td><strong>35 40 00</strong></td>
<td><strong>Waterway Construction and Equipment</strong></td>
</tr>
<tr>
<td><strong>35 41 00</strong></td>
<td><strong>Levees</strong></td>
</tr>
<tr>
<td>35 41 13</td>
<td>Landside Levee Berms</td>
</tr>
<tr>
<td>35 41 13.13</td>
<td>Stability Landside Levee Berms</td>
</tr>
<tr>
<td>35 41 13.16</td>
<td>Seepage Landside Levee Berms</td>
</tr>
<tr>
<td>35 41 16</td>
<td>Levee Cutoff Trenches</td>
</tr>
<tr>
<td>35 41 19</td>
<td>Levee Relief Wells</td>
</tr>
<tr>
<td><strong>35 42 00</strong></td>
<td><strong>Waterway Bank Protection</strong></td>
</tr>
<tr>
<td>35 42 13</td>
<td>Piling Bank Protection</td>
</tr>
<tr>
<td>35 42 13.19</td>
<td>Steel Sheet Piling Bank Protection</td>
</tr>
<tr>
<td>35 42 13.23</td>
<td>Timber Piling Bank Protection</td>
</tr>
<tr>
<td>35 42 13.26</td>
<td>Plastic Piling Bank Protection</td>
</tr>
<tr>
<td>35 42 29</td>
<td>Grout-Bag Bank Protection</td>
</tr>
<tr>
<td>35 42 34</td>
<td>Soil Reinforcement Bank Protection</td>
</tr>
<tr>
<td>35 42 35</td>
<td>Slope Protection Bank Protection</td>
</tr>
<tr>
<td>35 42 36</td>
<td>Gabion Bank Protection</td>
</tr>
<tr>
<td>35 42 37</td>
<td>Riprap Bank Protection</td>
</tr>
<tr>
<td>35 42 53</td>
<td>Wall Bank Protection</td>
</tr>
<tr>
<td>35 42 53.16</td>
<td>Concrete Unit Masonry Wall Bank Protection</td>
</tr>
<tr>
<td>35 42 53.19</td>
<td>Segmental Wall Bank Protection</td>
</tr>
<tr>
<td>35 42 53.40</td>
<td>Stone Wall Bank Protection</td>
</tr>
<tr>
<td><strong>35 43 00</strong></td>
<td><strong>Waterway Scour Protection</strong></td>
</tr>
<tr>
<td>35 43 29</td>
<td>Grout-Bag Scour Protection</td>
</tr>
<tr>
<td>35 43 34</td>
<td>Soil Reinforcement Scour Protection</td>
</tr>
<tr>
<td>35 43 35</td>
<td>Slope Protection Scour Protection</td>
</tr>
<tr>
<td>35 43 36</td>
<td>Gabion Scour Protection</td>
</tr>
<tr>
<td>35 43 37</td>
<td>Riprap Scour Protection</td>
</tr>
<tr>
<td>35 43 53</td>
<td>Wall Scour Protection</td>
</tr>
<tr>
<td>35 43 53.13</td>
<td>Concrete Unit Masonry Wall Scour Protection</td>
</tr>
<tr>
<td>35 43 53.16</td>
<td>Segmental Wall Scour Protection</td>
</tr>
<tr>
<td>35 43 53.40</td>
<td>Stone Wall Scour Protection</td>
</tr>
<tr>
<td><strong>35 49 00</strong></td>
<td><strong>Waterway Structures</strong></td>
</tr>
<tr>
<td>35 49 13</td>
<td>Floodwalls</td>
</tr>
<tr>
<td>35 49 13.13</td>
<td>Concrete Floodwalls</td>
</tr>
<tr>
<td>35 49 13.16</td>
<td>Masonry Floodwalls</td>
</tr>
<tr>
<td>35 49 23</td>
<td>Waterway Locks</td>
</tr>
<tr>
<td>35 49 23.13</td>
<td>Concrete Waterway Locks</td>
</tr>
<tr>
<td>35 49 23.23</td>
<td>Piling Waterway Locks</td>
</tr>
<tr>
<td>35 49 26</td>
<td>Floodgate Machinery</td>
</tr>
</tbody>
</table>
35 50 00  Marine Construction and Equipment
35 51 00  Floating Construction
  35 51 13  Floating Piers
  35 51 13.23  Floating Wood Piers
  35 51 13.26  Floating Plastic Piers
  35 51 23  Pontoons
35 52 00  Offshore Platform Construction
  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
35 59 00  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  Buoys
  35 59 23.13  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
  35 59 33  Marine Bollards and Cleats
  35 59 33.13  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
35 70 00  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
Concrete Buttress Dams

**Auxiliary Dam Structures**
- Fish Ladders
- Concrete Fish Ladders

**Process Interconnections**

**Operation and Maintenance of Process Interconnections**
- Operation and Maintenance of Gas and Vapor Process Piping
- Operation and Maintenance of Liquids Process Piping
- Operation and Maintenance of Solid and Mixed Materials Piping and Chutes
- Operation and Maintenance of Process Piping and Equipment Protection
- Operation and Maintenance of Process Control and Process Facility Enterprise Management Systems
- Operation and Maintenance of Instrumentation for Process Systems
- Operation and Maintenance of Primary Control Devices

**Common Work Results for Process Interconnections**
- Exposed Piping Installation
- Couplings, Adapters, and Specials for Process Piping
- Hangers and Supports for Process Piping
- Wall Pipes, Floor Pipes, and Pipe Sleeves
- Aluminum Process Pipe
- Brass Process Pipe
- Bronze Process Pipe
- Copper Process Pipe and Tubing
- Ductile Iron Process Pipe
- High-Alloy Nickel Process Pipe and Tubing
- Stainless Steel Process Pipe and Tubing
- Duplex and Super-Duplex Stainless Steel Process Pipe
- 300- and 400-Series Stainless Steel Process Pipe
- Special-Fabrication Stainless Steel Process Pipe and Tubing
- Steel Process Pipe
- Steel Pipe and Tubing for Air and Gas Service
- Steel Pipe for Water Service
- Steel Pipe and Tubing for Process Liquid Service
- Steel Pipe for Bulk Materials Conveyance
- Other Metals Process Pipe
- Titanium Process Pipe
- Tantalum Process Pipe
- Zirconium Process Pipe
- Thermoplastic Process Pipe
- Polyvinyl Chloride Process Pipe
- Chlorinated Polyvinyl Chloride Process Pipe
- ABS Process Pipe
- Polypropylene Process Pipe
- PVDF Process Pipe
- High-Purity Plastic Process Pipe
- Flexible Plastic Tubing
- High-Density Polyethylene Process Pipe
- Fiberglass-Reinforced Plastic Process Pipe
- 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 05 39.13 Concrete Pressure Water Pipe
40 05 39.23 Concrete Gravity and Drainage Process Pipe
40 05 51 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
40 05 57.53 Pneumatic Actuators
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 Ball Valves
40 05 63.13 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 Valves for Pump Control and Check Service
40 05 65.11 Angle Valves
40 05 65.13 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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 05 67.23</td>
<td>Pressure Vacuum Breaker Backflow Preventers</td>
</tr>
<tr>
<td>40 05 67.26</td>
<td>Atmospheric Vacuum Breaker Backflow Preventers</td>
</tr>
<tr>
<td>40 05 67.29</td>
<td>Hose Connection Vacuum Breaker Backflow Preventers</td>
</tr>
<tr>
<td>40 05 67.33</td>
<td>Backpressure Valves</td>
</tr>
<tr>
<td>40 05 67.36</td>
<td>Pressure-Regulating Valves</td>
</tr>
<tr>
<td>40 05 67.39</td>
<td>Pressure-Relief Valves</td>
</tr>
<tr>
<td>40 05 67.41</td>
<td>Direct-Acting Surge Relief Valves for Water Service</td>
</tr>
<tr>
<td>40 05 67.43</td>
<td>Pilot-Operated Surge Relief Valves for Water Service</td>
</tr>
<tr>
<td>40 05 67.44</td>
<td>Pilot-Operated Surge Arrestor Valves for Water Service</td>
</tr>
<tr>
<td>40 05 67.46</td>
<td>Electronic Surge Anticipator Valves for Water Service</td>
</tr>
<tr>
<td>40 05 67.47</td>
<td>Surge Relief Valves for Wastewater Service</td>
</tr>
<tr>
<td>40 05 67.49</td>
<td>Electronic Surge Anticipator Valves for Wastewater Service</td>
</tr>
<tr>
<td>40 05 71</td>
<td>Solids Handling Valves</td>
</tr>
<tr>
<td>40 05 71.13</td>
<td>Duckbill Check Valves</td>
</tr>
<tr>
<td>40 05 71.16</td>
<td>Flap Gates</td>
</tr>
<tr>
<td>40 05 71.23</td>
<td>Mud Valves</td>
</tr>
<tr>
<td>40 05 71.33</td>
<td>Telescoping Valves</td>
</tr>
<tr>
<td>40 05 73</td>
<td>Special-Application Process Valves</td>
</tr>
<tr>
<td>40 05 73.13</td>
<td>Altitude Valves</td>
</tr>
<tr>
<td>40 05 73.16</td>
<td>Float Valves</td>
</tr>
<tr>
<td>40 05 73.23</td>
<td>Anti-Cavitation Valves</td>
</tr>
<tr>
<td>40 05 74</td>
<td>Flexible-Closure Valves</td>
</tr>
<tr>
<td>40 05 74.13</td>
<td>Diaphragm Valves</td>
</tr>
<tr>
<td>40 05 74.23</td>
<td>Pinch Valves</td>
</tr>
<tr>
<td>40 05 76</td>
<td>Hot-Tapping Valves and Appurtenances</td>
</tr>
<tr>
<td>40 05 76.13</td>
<td>Tapping Sleeves and Valves</td>
</tr>
<tr>
<td>40 05 76.16</td>
<td>Tapping Machines</td>
</tr>
<tr>
<td>40 05 76.23</td>
<td>Line Stops</td>
</tr>
<tr>
<td>40 05 78</td>
<td>Air Valves for Water and Wastewater Service</td>
</tr>
<tr>
<td>40 05 78.11</td>
<td>Air Release Valves for Water Service</td>
</tr>
<tr>
<td>40 05 78.13</td>
<td>Air/Vacuum Valves for Water Service</td>
</tr>
<tr>
<td>40 05 78.16</td>
<td>Vacuum-Breaking Valves for Water Service</td>
</tr>
<tr>
<td>40 05 78.19</td>
<td>Combination Air Valves for Water Service</td>
</tr>
<tr>
<td>40 05 78.21</td>
<td>Air Release Valves for Wastewater Service</td>
</tr>
<tr>
<td>40 05 78.23</td>
<td>Air/Vacuum Valves for Wastewater Service</td>
</tr>
<tr>
<td>40 05 78.26</td>
<td>Vacuum-Breaking Valves for Wastewater Service</td>
</tr>
<tr>
<td>40 05 78.29</td>
<td>Combination Air Valves for Wastewater Service</td>
</tr>
<tr>
<td>40 05 81</td>
<td>Hydrants and Hose Bibbs for Process Service</td>
</tr>
<tr>
<td>40 05 81.13</td>
<td>Fire Hydrants</td>
</tr>
<tr>
<td>40 05 81.23</td>
<td>Yard Hydrants</td>
</tr>
<tr>
<td>40 05 81.26</td>
<td>Freeze-Proof Yard Hydrants</td>
</tr>
<tr>
<td>40 05 81.33</td>
<td>Hose Bibbs</td>
</tr>
<tr>
<td>40 05 82</td>
<td>Solenoid Valves for Process Service</td>
</tr>
<tr>
<td>40 05 89</td>
<td>Valve Accessories</td>
</tr>
<tr>
<td>40 05 89.13</td>
<td>Basket Strainers for Process Service</td>
</tr>
<tr>
<td>40 05 89.23</td>
<td>Needle Valves</td>
</tr>
<tr>
<td>40 05 89.33</td>
<td>Quick-Connect Couplers</td>
</tr>
<tr>
<td>40 05 93</td>
<td>Common Motor Requirements for Process Equipment</td>
</tr>
<tr>
<td>40 05 96</td>
<td>Vibration and Seismic Controls for Process Equipment</td>
</tr>
<tr>
<td>40 05 97</td>
<td>Identification for Process Equipment</td>
</tr>
</tbody>
</table>

**40 06 00** Schedules for Process Interconnections

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 06 10</td>
<td>Schedules for Gas and Vapor Process Piping and Ductwork</td>
</tr>
<tr>
<td>40 06 20</td>
<td>Schedules for Liquids Process Piping</td>
</tr>
<tr>
<td>40 06 30</td>
<td>Schedules for Solid and Mixed Materials Piping and Chutes</td>
</tr>
</tbody>
</table>
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 Oxygen Gas Process Piping
40 16 39 Ozone Gas Process Piping
40 16 43 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  Scum and Floatables Process Piping
40 23 44  Primary Sludge Process Piping
40 23 46  Waste Sludge Process Piping
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

40 26 00  Liquid Polymer Piping
40 30 00  Solid and Mixed Materials Piping and Chutes

40 32 00  Bulk Materials Piping and Chutes
40 32 10  Abrasive Materials Piping and Chutes
40 32 50  Nonabrasive Materials Piping and Chutes

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  Process Piping and Equipment Protection

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  Process Equipment Electrical Conductance Heat Tracing
40 41 23.19  Process Equipment Gas Heat Tracing
40 41 23.23  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  Cryogenic Temperature Process Equipment Insulation
40 42 23.16  Low Temperature Process Equipment Insulation
40 42 23.19  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 Process Control and Enterprise Management Systems
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 Antennas
40 66 66 Monopoles and Towers
40 66 73 Satellite Communication Equipment

40 67 00 Control System Equipment Panels and Racks
40 67 13 Computer Equipment Racks
40 67 16 Free-Standing Panels
40 67 19 Wall-Mounted Panels
40 67 23 Control System Consoles
40 67 33 Panel Wiring
<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Panel-Mounted Controls</td>
<td>40 67 63 Control Panel-Mounted Uninterruptible Power Supply</td>
</tr>
<tr>
<td>Process Control Software</td>
<td>40 68 00 Process Control Software</td>
</tr>
<tr>
<td></td>
<td>40 68 13 Process Control (HMI) Software</td>
</tr>
<tr>
<td></td>
<td>40 68 23 Reporting Software</td>
</tr>
<tr>
<td></td>
<td>40 68 26 Online Performance Monitoring Systems Software</td>
</tr>
<tr>
<td></td>
<td>40 68 33 Maintenance Management Software</td>
</tr>
<tr>
<td></td>
<td>40 68 36 Laboratory Information System Software</td>
</tr>
<tr>
<td></td>
<td>40 68 39 Energy Management Software</td>
</tr>
<tr>
<td></td>
<td>40 68 43 Load Management Software</td>
</tr>
<tr>
<td></td>
<td>40 68 63 Configuration of HMI Software</td>
</tr>
<tr>
<td></td>
<td>40 68 66 Programming of Controller Software</td>
</tr>
<tr>
<td></td>
<td>40 68 93 Computer Operating Systems Software</td>
</tr>
<tr>
<td>Packaged Control Systems</td>
<td>40 69 00 Packaged Control Systems</td>
</tr>
<tr>
<td></td>
<td>40 69 13 Control System Simulators</td>
</tr>
<tr>
<td></td>
<td>40 69 23 Burner Management Systems</td>
</tr>
<tr>
<td></td>
<td>40 69 26 Safety Instrumented Control Systems</td>
</tr>
<tr>
<td></td>
<td>40 69 33 Fire and Gas Monitoring/Protection Systems for Industrial Applications</td>
</tr>
<tr>
<td>Instrumentation for Process Systems</td>
<td>40 70 00 Instrumentation for Process Systems</td>
</tr>
<tr>
<td>Flow Measurement</td>
<td>40 71 00 Flow Measurement</td>
</tr>
<tr>
<td></td>
<td>40 71 13 Magnetic Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 13.13 Inline Magnetic Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 13.23 Insertion-Type Magnetic Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23 Differential Pressure-Type Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.13 Venturi Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.16 Flow Tubes</td>
</tr>
<tr>
<td></td>
<td>40 71 23.19 Flow Nozzle-Type Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.23 Orifice Plate Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.26 Integral Orifice Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.29 Orifice Meter Runs</td>
</tr>
<tr>
<td></td>
<td>40 71 23.33 Elbow Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.36 Pitot Tube and Averaging Pitot Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.39 V-Cone Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.43 Differential Pressure-Type Flow Transmitters</td>
</tr>
<tr>
<td></td>
<td>40 71 23.46 Flow Computers</td>
</tr>
<tr>
<td></td>
<td>40 71 33 Propeller Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 36 Turbine Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 43 Variable Area Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 46 Target Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 49 Vortex-Shedding Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 53 Positive Displacement Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 63 Doppler Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 66 Transit Time Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 69 Open Channel Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 73 Coriolis Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 76 Thermal Flow Meters</td>
</tr>
<tr>
<td></td>
<td>40 71 79 Flow Switches</td>
</tr>
<tr>
<td></td>
<td>40 71 83 Sight Flow Indicators</td>
</tr>
<tr>
<td></td>
<td>40 71 86 Flow Metering Weirs</td>
</tr>
<tr>
<td>Level Measurement</td>
<td>40 72 00 Level Measurement</td>
</tr>
<tr>
<td></td>
<td>40 72 13 Ultrasonic Level Meters (Continuous and Point-Type)</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>40 72 23</td>
<td>Radar Level Meters</td>
</tr>
<tr>
<td>40 72 26</td>
<td>Laser Level Meters</td>
</tr>
<tr>
<td>40 72 29</td>
<td>Nuclear Level Meters</td>
</tr>
<tr>
<td>40 72 33</td>
<td>Capacitance Type Level Meters (Continuous and Point Type)</td>
</tr>
<tr>
<td>40 72 36</td>
<td>RF Admittance Level Meters (Continuous and Point Type)</td>
</tr>
<tr>
<td>40 72 43</td>
<td>Pressure and Differential Pressure Type Level Meters</td>
</tr>
<tr>
<td>40 72 46</td>
<td>Bubbler Systems</td>
</tr>
<tr>
<td>40 72 53</td>
<td>Magnetic and Magnetostrictive Level Meters</td>
</tr>
<tr>
<td>40 72 63</td>
<td>Displacement-Type Level Meters</td>
</tr>
<tr>
<td>40 72 73</td>
<td>Sight Level Gauges</td>
</tr>
<tr>
<td>40 72 76</td>
<td>Level Switches</td>
</tr>
<tr>
<td>40 72 83</td>
<td>Leak Detection Systems</td>
</tr>
</tbody>
</table>

**40 73 00 Pressure, Strain, and Force Measurement**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 73 13</td>
<td>Pressure and Differential Pressure Gauges</td>
</tr>
<tr>
<td>40 73 16</td>
<td>Manometers</td>
</tr>
<tr>
<td>40 73 23</td>
<td>Absolute-Pressure Transmitters</td>
</tr>
<tr>
<td>40 73 26</td>
<td>Gauge-Pressure Transmitters</td>
</tr>
<tr>
<td>40 73 29</td>
<td>Differential Pressure Transmitters</td>
</tr>
<tr>
<td>40 73 33</td>
<td>Multi-Variable Pressure/Temperature Transmitters</td>
</tr>
<tr>
<td>40 73 36</td>
<td>Pressure and Differential Pressure Switches</td>
</tr>
<tr>
<td>40 73 43</td>
<td>Force Measurement Devices</td>
</tr>
<tr>
<td>40 73 46</td>
<td>Load Cells</td>
</tr>
<tr>
<td>40 73 53</td>
<td>Torque Measurement Devices</td>
</tr>
<tr>
<td>40 73 63</td>
<td>Diaphragm Seals</td>
</tr>
</tbody>
</table>

**40 74 00 Temperature Measurement**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 74 13</td>
<td>Resistance Temperature Devices</td>
</tr>
<tr>
<td>40 74 16</td>
<td>Thermocouples</td>
</tr>
<tr>
<td>40 74 23</td>
<td>Radiation Pyrometers</td>
</tr>
<tr>
<td>40 74 33</td>
<td>Thermistors</td>
</tr>
<tr>
<td>40 74 36</td>
<td>Diode Temperature Measurement Devices</td>
</tr>
<tr>
<td>40 74 43</td>
<td>Bimetallic Thermometers</td>
</tr>
<tr>
<td>40 74 46</td>
<td>Fluid Expansion Thermometers</td>
</tr>
<tr>
<td>40 74 49</td>
<td>Change-of-State Temperature Measurement Devices</td>
</tr>
<tr>
<td>40 74 53</td>
<td>Cryogenic Temperature Sensors</td>
</tr>
<tr>
<td>40 74 63</td>
<td>Temperature Transmitters</td>
</tr>
<tr>
<td>40 74 66</td>
<td>Temperature Switches</td>
</tr>
<tr>
<td>40 74 69</td>
<td>Thermowells, Protection Tubes, and Test Thermowells</td>
</tr>
</tbody>
</table>

**40 75 00 Process Liquid Analytical Measurement**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 75 05</td>
<td>Multi-Parameter Analyzer Systems</td>
</tr>
<tr>
<td>40 75 13</td>
<td>pH/ORP Analyzers</td>
</tr>
<tr>
<td>40 75 16</td>
<td>Conductivity Analyzers</td>
</tr>
<tr>
<td>40 75 19</td>
<td>Moisture Analyzers</td>
</tr>
<tr>
<td>40 75 21</td>
<td>Chlorine Analyzers</td>
</tr>
<tr>
<td>40 75 21.13</td>
<td>Free-Chlorine Analyzers</td>
</tr>
<tr>
<td>40 75 21.23</td>
<td>Residual-Chlorine Analyzers</td>
</tr>
<tr>
<td>40 75 23</td>
<td>Chlorine Dioxide Analyzer</td>
</tr>
<tr>
<td>40 75 26</td>
<td>Dissolved Chlorine Dioxide Analyzers</td>
</tr>
<tr>
<td>40 75 29</td>
<td>Dissolved Ammonia Analyzers</td>
</tr>
<tr>
<td>40 75 33</td>
<td>Fluoride Analyzers</td>
</tr>
<tr>
<td>40 75 43</td>
<td>Dissolved Oxygen Analyzers</td>
</tr>
</tbody>
</table>
40 75 46  Dissolved Ozone Analyzers
40 75 53  Turbidity Analyzers
40 75 56  Suspended Solids/Sludge Density Analyzers
40 75 59  Liquid Density Analyzers
40 75 63  Monochloramine Analyzers
40 75 66  Nitrogen Analyzers
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 16  Proximity Measurement Devices
40 77 19  Vibration Velocity Measurement Devices
40 77 23  Vibration Monitoring Systems
40 77 26  Position, Speed, and Motion Measurement Devices

40 78 00  Panel Mounted Instruments
40 78 13  Indicators and Meters
40 78 16  Indicating Lights
40 78 19  Switches and Push Buttons
40 78 23  Potentiometers and Manual Controllers
40 78 26  Chart Recorders
40 78 33  Annunciators
40 78 43  Single-Loop Controllers
40 78 53  Relays
40 78 56  Isolators, Intrinsically-Safe Barriers, and Surge Suppressors
40 78 59  Power Supplies
40 78 63  Alarm Dialers

40 79 00  Miscellaneous Instruments, Calibration Equipment,
Instrument Valves, and Fittings

- 40 79 13 Nuclear Mass-Measuring Scales
- 40 79 23 Instrument Calibration Equipment
- 40 79 26 Instrument Programming Equipment
- 40 79 33 Current-to-Pressure Converters
- 40 79 36 Voltage-to-Pressure Converters
- 40 79 39 Signal Conditioners and Converters
- 40 79 43 Deadweight Testers
- 40 79 46 Flame Scanners
- 40 79 63 Instrument Tubing
- 40 79 66 Instrument Valve Manifolds, Valves, and Fittings

40 80 00 Commissioning of Process Systems

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 and Handling Equipment
  - 41 01 52 Operation and Maintenance of Bulk Materials Storage
  - 41 01 52.13 Storage Bin and Hopper Cleaning
  - 41 01 52.16 Silo Cleaning

- 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 20 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 Commissioning of Material Processing and Handling
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 Bulk Material Pulverizers
41 11 49 Bulk Material Screens
41 11 53 Bulk Material Shredders
41 11 56 Bulk Material Sieves

41 12 00 Bulk Material Conveying 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 Reclalm 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 23.19 Drag-Chain Piece Material Conveyors
41 21 23.23 Hopper Piece Material Conveyors
41 21 23.26 Monorail Piece Material Conveyors
41 21 23.29 Power and Free Piece Material Conveyors
41 21 23.33 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 Postal Conveyors
41 21 26 Piece Material Diverter Gates
41 21 29 Piece Material Gravity Slides
41 21 33 Piece Material Transfer Cars
41 21 36 Piece Material Turntables
41 21 39 Piece Material Feeders
41 21 39.13 Piece Material Vibratory Feeders

41 22 00 Cranes and Hoists
41 22 13 Cranes
41 22 13.13 Bridge Cranes
41 22 13.16 Gantry Cranes
41 22 13.19 Jib Cranes
41 22 13.23 Mobile Cranes
41 22 13.26 Tower Cranes
41 22 13.29 Specialty Cranes
41 22 23 Hoists
41 22 23.13 Fixed Hoists
41 22 23.16 Portable Hoists
41 22 23.19 Monorail Hoists
41 22 23.23 Specialty Hoists
41 22 33 Derricks

41 23 00 Lifting Devices
41 23 13 Clamps
41 23 16 Grabs
41 23 19 Hooks
41 23 23 Lifts
41 23 26  Slings
41 23 29  Spreader Bars/Beams
41 23 33  Tongs

41 24 00  Specialty Material Handling Equipment
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  Railcar Movers
41 24 43  Turnheads/Distributors
41 24 46  Sorting Machines
41 24 46.13 Postal Sorting Machines

41 30 00  Manufacturing Equipment
41 31 00  Manufacturing Lines and Equipment
41 31 13  Manufacturing Lines
41 31 13.13 Assembly Lines
41 31 13.16 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 Machining Lines
41 31 13.36 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 Plating Lines
41 31 13.53 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  Shearing Equipment
41 32 63  Spinning Equipment
41 32 66  Stretching/Leveling Equipment
41 32 69  Swaging Equipment

41 33 00  Machining Equipment
41 33 13  Automatic Screw Machining Equipment
41 33 16  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  Sawing Equipment
41 33 76  Shaping Equipment
41 33 79  Threading Equipment

41 34 00  Finishing Equipment
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  Shot Peening Equipment
41 34 59  Superfinishing/Polishing Equipment

41 35 00  Dies and Molds
41 35 13  Dies
41 35 13.13 Drawing Dies
41 35 13.16 Extrusion Dies
41 35 13.19 Press Dies
41 35 13.23 Rotary Dies
41 35 13.26 Rule Dies
41 35 33 Molds

41 36 00 Assembly and Testing Equipment
  41 36 13 Applicators
  41 36 13.13 Adhesive Applicators
  41 36 13.16 Lubricant Applicators
  41 36 13.19 Sealer Applicators
  41 36 16 Fixtures and Jigs
  41 36 19 Joining Equipment
  41 36 19.13 Adhesive Joining Equipment
  41 36 19.16 Arc-Welding Equipment
  41 36 19.19 Brazing Equipment
  41 36 19.23 Resistance-Welding Equipment
  41 36 19.26 Riveting Equipment
  41 36 19.29 Sintering Equipment
  41 36 19.33 Soldering Equipment
  41 36 23 Cutting Equipment
  41 36 23.13 Cutting Torches
  41 36 23.16 High-Pressure Water Cutting Equipment
  41 36 23.19 Laser Cutting Equipment
  41 36 23.23 Plasma Cutting Equipment
  41 36 26 Process Tools
  41 36 26.13 Air Process Tools
  41 36 26.16 Electric Process Tools
  41 36 26.19 Hydraulic Process Tools
  41 36 26.23 Manual Process Tools
  41 36 29 Manufacturing Measurement and Testing Equipment
  41 36 29.13 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 Profilometers
  41 36 29.33 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
  41 41 23 Container Sealers

41 42 00 Container Packing Equipment
  41 42 13 Box Packing Equipment
  41 42 13.13 Box Makers
  41 42 13.16 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 Carton Shrink Wrappers
41 42 29 Carton Stackers

41 43 00 Shipping Packaging
41 43 13 Banding/Strapping Equipment
41 43 16 Barcode Equipment
41 43 16.13 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

41 51 00 Automatic Material Storage
41 51 13 Automatic Storage/Automatic Retrieval Systems

41 52 00 Bulk Material Storage
41 52 16.13 Concrete Flat-Bottom Silos
41 52 16.16 Concrete Masonry Flat-Bottom Silos
41 52 16.23 Concrete Cone-Bottom Silos
41 52 16.26 Concrete Masonry Cone-Bottom Silos
41 52 16.29 Steel Cone-Bottom Silos
41 52 19 Bulk Materials Storage Tanks
41 52 19.13 Stationary Bulk Materials Storage Tanks
41 52 19.33 Mobile Bulk Materials Storage Tanks
41 52 41 Pneumatic, Block-Distributed Materials Fluidizing System for Flat-Bottom Bins and Silos
41 52 43 Aerated Trough Materials Fluidizing System for Flat-Bottom Bins and Silos
41 52 46 Pad-Mounted Aerated Disc Materials Fluidizing System for Cone-Bottom Bins and Silos

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

41 60 00 Mobile Plant Equipment

41 61 00 Mobile Earth Moving Equipment
41 61 13 Backhoes
41 61 16 Bulldozers
41 61 19 Compactors
41 61 23 Excavators
41 61 26 Graders
41 61 29 Payloaders
41 61 33 Trenchers

41 62 00 Trucks
<table>
<thead>
<tr>
<th>Numbers and Titles</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>41 62 13</td>
<td>Cement Mixer Trucks</td>
</tr>
<tr>
<td>41 62 16</td>
<td>Dump Trucks</td>
</tr>
<tr>
<td>41 62 19</td>
<td>Flatbed Trucks</td>
</tr>
<tr>
<td>41 62 23</td>
<td>Forklift Trucks</td>
</tr>
<tr>
<td>41 62 26</td>
<td>Pickup Trucks</td>
</tr>
<tr>
<td>41 62 29</td>
<td>Tank Trucks</td>
</tr>
<tr>
<td><strong>41 63 00</strong></td>
<td><strong>General Vehicles</strong></td>
</tr>
<tr>
<td>41 63 13</td>
<td>Bicycles</td>
</tr>
<tr>
<td>41 63 16</td>
<td>Carts</td>
</tr>
<tr>
<td>41 63 19</td>
<td>Maintenance Vehicles</td>
</tr>
<tr>
<td>41 63 23</td>
<td>Utility Vehicles</td>
</tr>
<tr>
<td>41 63 26</td>
<td>Vans</td>
</tr>
<tr>
<td>41 63 29</td>
<td>Wagons</td>
</tr>
<tr>
<td><strong>41 64 00</strong></td>
<td><strong>Rail Vehicles</strong></td>
</tr>
<tr>
<td>41 64 13</td>
<td>Locomotives</td>
</tr>
<tr>
<td>41 64 13.13</td>
<td>Diesel Locomotives</td>
</tr>
<tr>
<td>41 64 13.23</td>
<td>Electric Locomotives</td>
</tr>
<tr>
<td>41 64 16</td>
<td>Mobile Railcar Movers</td>
</tr>
<tr>
<td><strong>41 65 00</strong></td>
<td><strong>Mobile Support Equipment</strong></td>
</tr>
<tr>
<td>41 65 13</td>
<td>Mobile Air Compressors</td>
</tr>
<tr>
<td>41 65 16</td>
<td>Mobile Generators</td>
</tr>
<tr>
<td>41 65 19</td>
<td>Mobile Welders</td>
</tr>
<tr>
<td><strong>41 66 00</strong></td>
<td><strong>Miscellaneous Mobile Equipment</strong></td>
</tr>
<tr>
<td>41 66 13</td>
<td>Mobile Boring and Drilling Rigs</td>
</tr>
<tr>
<td>41 66 16</td>
<td>Mobile Lifts and Cherrypickers</td>
</tr>
<tr>
<td>41 66 19</td>
<td>Mobile Paving Equipment</td>
</tr>
<tr>
<td>41 66 23</td>
<td>Mobile Sweepers/Vacuums</td>
</tr>
<tr>
<td><strong>41 67 00</strong></td>
<td><strong>Plant Maintenance Equipment</strong></td>
</tr>
<tr>
<td>41 67 13</td>
<td>Plant Lube Oil System</td>
</tr>
<tr>
<td>41 67 16</td>
<td>Plant Fall Protection Equipment</td>
</tr>
<tr>
<td>41 67 19</td>
<td>Plant Safety Equipment</td>
</tr>
<tr>
<td>41 67 23</td>
<td>Plant Maintenance Tools</td>
</tr>
<tr>
<td>41 67 26</td>
<td>Plant Maintenance Washing Equipment</td>
</tr>
<tr>
<td><strong>42 00 00</strong></td>
<td><strong>Process Heating, Cooling, and Drying Equipment</strong></td>
</tr>
<tr>
<td><strong>42 01 00</strong></td>
<td><strong>Operation and Maintenance of Process Heating, Cooling, and Drying Equipment</strong></td>
</tr>
<tr>
<td>42 01 10</td>
<td>Operation and Maintenance of Process Heating Equipment</td>
</tr>
<tr>
<td>42 01 20</td>
<td>Operation and Maintenance of Process Cooling Equipment</td>
</tr>
<tr>
<td>42 01 30</td>
<td>Operation and Maintenance of Process Drying Equipment</td>
</tr>
<tr>
<td><strong>42 05 00</strong></td>
<td><strong>Common Work Results for Process Heating, Cooling, and Drying Equipment</strong></td>
</tr>
<tr>
<td>42 05 05</td>
<td>Selective Demolition for Process Heating, Cooling, and Drying Equipment</td>
</tr>
<tr>
<td><strong>42 06 00</strong></td>
<td><strong>Schedules for Process Heating, Cooling, and Drying Equipment</strong></td>
</tr>
<tr>
<td>42 06 10</td>
<td>Schedules for Process Heating Equipment</td>
</tr>
</tbody>
</table>
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 Commissioning of Cooling Equipment
42 08 30 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 Intermediate-Pressure Process Boilers
42 11 19 High-Pressure Process Boilers
42 11 23 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 Industrial Liquid-to-Gas/Gas-to-Liquid Heat Exchangers
42 13 19 Industrial Liquid-to-Liquid Heat Exchangers
42 13 23 Industrial Gas 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 Industrial Calcining Furnaces
42 14 29 Industrial Heat-Treating Furnaces
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  Process Condensers and Evaporators
  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  Operation and Maintenance of Gas Handling Equipment
  43 01 10.13  Gas Blowers Maintenance and Rehabilitation
  43 01 10.16  Gas Compressors Maintenance and Rehabilitation
  43 01 20  Operation and Maintenance of Liquid Handling Equipment
  43 01 20.13  Liquid Pumps Maintenance and Rehabilitation
  43 01 20.16  Liquid Process Equipment Maintenance and Rehabilitation
  43 01 30  Operation and Maintenance of Gas and Liquid Hi-Purification Equipment
  43 01 40  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, and Storage Equipment.
  43 05 10  Common Work Results for Gas Handling Equipment
43 05 20 Common Work Results for Liquid Handling Equipment
43 05 30 Common Work Results for Gas and Liquid Hi-Purification Equipment
43 05 40 Common Work Results for Gas and Liquid Storage

43 06 00 Schedules for Process Gas and Liquid Handling, Purification, and Storage Equipment
43 06 10 Schedules for Gas Handling Equipment
43 06 20 Schedules for Liquid Handling Equipment
43 06 30 Schedules for Gas and Liquid Hi-Purification Equipment
43 06 40 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 Commissioning of Liquid Handling Equipment
43 08 30 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 Integrally Geared Single Stage Centrifugal Blowers
43 11 13 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 Vertically Split Multistage Centrifugal Blowers
43 11 19 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
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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>43 13 31</td>
<td>Gas Separation Equipment</td>
</tr>
<tr>
<td>43 13 33</td>
<td>Gas Dehydration Equipment</td>
</tr>
<tr>
<td>43 13 36</td>
<td>Combined Gas Separation and Dehydration Equipment</td>
</tr>
<tr>
<td>43 13 39</td>
<td>Gas Recovery and Condensing Equipment</td>
</tr>
<tr>
<td>43 13 43</td>
<td>Waste Gas Burner System</td>
</tr>
<tr>
<td>43 13 46</td>
<td>Gas Control and Safety Equipment</td>
</tr>
<tr>
<td>43 15 00</td>
<td><strong>Process Air and Gas Filters</strong></td>
</tr>
<tr>
<td>43 15 13</td>
<td>Blower Intake and Turbine Air Filters</td>
</tr>
<tr>
<td>43 15 13.13</td>
<td>Static Prefilters</td>
</tr>
<tr>
<td>43 15 13.16</td>
<td>Static Final Filters</td>
</tr>
<tr>
<td>43 15 13.19</td>
<td>Static HEPA Filters</td>
</tr>
<tr>
<td>43 15 13.23</td>
<td>Pulse Filters</td>
</tr>
<tr>
<td>43 15 33</td>
<td>Grease Filters</td>
</tr>
<tr>
<td>43 15 43</td>
<td>Mist Eliminators</td>
</tr>
<tr>
<td>43 15 63</td>
<td>High-temperature Air Filters</td>
</tr>
<tr>
<td>43 15 73</td>
<td>Multiple-application Air Filters</td>
</tr>
<tr>
<td>43 15 73.11</td>
<td>Air Filter Media</td>
</tr>
<tr>
<td>43 15 73.12</td>
<td>Permanent Washable Filters</td>
</tr>
<tr>
<td>43 15 73.13</td>
<td>Poly-ring Air Filters</td>
</tr>
<tr>
<td>43 15 73.15</td>
<td>Rigid Cell Filters</td>
</tr>
<tr>
<td>43 15 73.17</td>
<td>Automatic Roll-type Air Filters</td>
</tr>
<tr>
<td>43 15 76</td>
<td>Chemical Media for Air and Gas Filters</td>
</tr>
<tr>
<td>43 20 00</td>
<td><strong>Liquid Handling Equipment</strong></td>
</tr>
<tr>
<td>43 22 00</td>
<td><strong>Liquid Process Equipment</strong></td>
</tr>
<tr>
<td>43 22 13</td>
<td>Liquid Aeration Devices</td>
</tr>
<tr>
<td>43 22 16</td>
<td>Liquid Agitators</td>
</tr>
<tr>
<td>43 22 19</td>
<td>Liquid Blenders</td>
</tr>
<tr>
<td>43 22 23</td>
<td>Liquid Centrifuges</td>
</tr>
<tr>
<td>43 22 26</td>
<td>Liquid Deaerators</td>
</tr>
<tr>
<td>43 22 29</td>
<td>Drum Handling Liquid Process Equipment</td>
</tr>
<tr>
<td>43 22 33</td>
<td>Liquid Emulsifiers</td>
</tr>
<tr>
<td>43 22 36</td>
<td>Liquid Evaporators</td>
</tr>
<tr>
<td>43 22 39</td>
<td>Liquid Feeders</td>
</tr>
<tr>
<td>43 22 56</td>
<td>Liquid Process Mixers</td>
</tr>
<tr>
<td>43 22 59</td>
<td>Liquid Process Pressure Regulators</td>
</tr>
<tr>
<td>43 22 63</td>
<td>Liquid Separation Towers</td>
</tr>
<tr>
<td>43 22 66</td>
<td>Liquid Weigh Systems</td>
</tr>
<tr>
<td>43 22 69</td>
<td>Liquid Grease Receiving and Dewatering Systems</td>
</tr>
<tr>
<td>43 22 73</td>
<td>Liquid Fillers</td>
</tr>
<tr>
<td>43 22 76</td>
<td>Liquid Screeners</td>
</tr>
<tr>
<td>43 22 79</td>
<td>Liquid Clarifiers</td>
</tr>
<tr>
<td>43 22 83</td>
<td>Liquid Classifiers</td>
</tr>
<tr>
<td>43 22 86</td>
<td>Liquid Homogenizers</td>
</tr>
<tr>
<td>43 22 89</td>
<td>Liquid Presses</td>
</tr>
<tr>
<td>43 22 96</td>
<td>Liquid Versators</td>
</tr>
<tr>
<td>43 22 99</td>
<td>Liquid Votators</td>
</tr>
<tr>
<td>43 23 00</td>
<td><strong>Dry Location Liquid Pumps</strong></td>
</tr>
<tr>
<td>43 23 13</td>
<td>Overhung Horizontal Centrifugal Pumps</td>
</tr>
<tr>
<td>43 23 13.13</td>
<td>Overhung Flexibly-coupled Horizontal Axial Flow Centrifugal Pumps</td>
</tr>
<tr>
<td>43 23 13.14</td>
<td>Overhung Flexibly-coupled Horizontal Frame-mounted Centrifugal Pumps</td>
</tr>
</tbody>
</table>
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
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 Power Horizontal Double-Acting Piston Duplex Reciprocating Pumps
43 23 76.33 Power Horizontal Double-Acting Piston Multiplex Reciprocating Pumps
43 23 76.41 Power Horizontal Double-Acting Plunger Simplex Reciprocating Pumps
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 Controlled Volume Horizontal Packed Piston Multiplex Reciprocating Pumps
43 23 78.31 Controlled Volume Horizontal Mechanically-Coupled Diaphragm Simplex Reciprocating Pumps
### MasterFormat 2016 – Numbers and Titles

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>43 23 78.32</td>
<td>Controlled Volume Horizontal Mechanically-Coupled Diaphragm Duplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 78.33</td>
<td>Controlled Volume Horizontal Mechanically-Coupled Diaphragm Multiplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 78.34</td>
<td>Controlled Volume Horizontal Hydraulically-Coupled Diaphragm Simplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 78.35</td>
<td>Controlled Volume Horizontal Hydraulically-Coupled Diaphragm Duplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 78.36</td>
<td>Controlled Volume Horizontal Hydraulically-Coupled Diaphragm Multiplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79</td>
<td>Controlled Volume Vertical Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.11</td>
<td>Controlled Volume Vertical Packaged Plunger Simplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.12</td>
<td>Controlled Volume Vertical Packaged Plunger Duplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.13</td>
<td>Controlled Volume Vertical Packaged Plunger Multiplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.21</td>
<td>Controlled Volume Vertical Packaged Piston Simplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.22</td>
<td>Controlled Volume Vertical Packaged Piston Duplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.23</td>
<td>Controlled Volume Vertical Packaged Piston Multiplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.31</td>
<td>Controlled Volume Vertical Mechanically-Coupled Diaphragm Simplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.32</td>
<td>Controlled Volume Vertical Mechanically-Coupled Diaphragm Duplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.33</td>
<td>Controlled Volume Vertical Mechanically-Coupled Diaphragm Multiplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.34</td>
<td>Controlled Volume Vertical Hydraulically-Coupled Diaphragm Simplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.35</td>
<td>Controlled Volume Vertical Hydraulically-Coupled Diaphragm Duplex Reciprocating Pumps</td>
</tr>
<tr>
<td>43 23 79.36</td>
<td>Controlled Volume Vertical Hydraulically-Coupled Diaphragm Multiplex Reciprocating Pumps</td>
</tr>
</tbody>
</table>

#### 43 24 00 Suspended Liquid Pumps

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>43 24 11</td>
<td>Vertically Suspended Single-Casing Discharge-through-column Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 13</td>
<td>Vertically Suspended Single-Casing Discharge-through-column Diffuser Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 13.23</td>
<td>Vertically Suspended Single-Casing Discharge-through-column Volute Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 13.33</td>
<td>Vertically Suspended Single-Casing Discharge-through-column Axial Flow Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 16</td>
<td>Vertically Suspended Single-casing Separate Discharge (Sump) Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 16.13</td>
<td>Vertically Suspended Single-Casing Separate Discharge (Sump) Line Shaft Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 16.23</td>
<td>Vertically Suspended Single-Casing Separate Discharge (Sump) Cantilever Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 21</td>
<td>Vertically Suspended Double-Casing Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 21.13</td>
<td>Vertically Suspended Double-Casing Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 21.23</td>
<td>Vertically Suspended Double-Casing Volute Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 26</td>
<td>Vertically Suspended Inline Casing Diffuser Centrifugal Pumps</td>
</tr>
<tr>
<td>43 24 41</td>
<td>Archimedes Screw Pumps</td>
</tr>
<tr>
<td>43 24 41.13</td>
<td>Positive-Displacement Inclined Open Archimedes Screw-type Pumps</td>
</tr>
<tr>
<td>43 24 41.23</td>
<td>Positive-Displacement Inclined Closed-casing Archimedes Screw-type Pumps</td>
</tr>
</tbody>
</table>

#### 43 25 00 Submersible/Immersible Liquid Pumps

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>43 25 13</td>
<td>Overhung Close-Coupled Submersible Centrifugal Pumps</td>
</tr>
</tbody>
</table>
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 Between-Bearings Impeller Regenerative Turbine Pumps
43 26 30.27 Between-Bearings Impeller Single-Stage Regenerative Turbine Pumps
43 26 30.29 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
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 Nonwoven Media Liquid Filters
43 27 73.13 Surface Liquid Filters
43 27 73.23 Depth Liquid Filters

43 30 00 Gas and Liquid Purification Equipment

43 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
43 31 13.29 Pretreatment Cartridge Gas and Liquid Purification Filters
43 31 13.33 Ultrafilter Units

43 32 00 Gas and Liquid Purification Process Equipment
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

43 40 00  Gas and Liquid Storage

43 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
43 41 13.43 Ceramic-lined Welded Steel Tanks
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  Operation and Maintenance of Air Pollution Control
44 01 20  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 Control Equipment**

44 06 10 Schedules for Air Pollution Control
44 06 20 Schedules for Noise Pollution Control
44 06 30 Schedules for Odor Control Equipment
44 06 40 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 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
44 08 40 Commissioning Water Pollution Control Equipment
44 08 50 Commissioning Solid Waste Control and Reuse
44 08 60 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 Cartridge Filtration Equipment
44 11 59 Disposable Dry Filtration Equipment
44 11 71 Cyclone Dust Collection Equipment
44 11 73 Multicyclone 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 **Gaseous Air Pollution Control Equipment**

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 Equipment

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  Ferrous Metals Separation Equipment
44 53 44  Eddy Current Separators
44 53 46  Single-stream Materials Separation Equipment
44 53 49  Ballistic Separators
44 53 51  Air Classifying Equipment
44 53 52  Air Knives
44 53 53  Optical Sorting Equipment
44 53 56  Packaged Sorting Stations
44 53 59  Packaged Reclaimer Stations
44 53 61  Solid Waste Compactors
44 53 63  Solid Waste Baling Equipment
44 53 64  Bagging Equipment
44 53 66  Wrappers
44 53 73  Solid Waste Liquid Extraction Equipment

44 55 00  Composting Equipment

44 55 11  Electromechanical Composters
44 55 13  Compost Screening Equipment
44 55 16  Compost Shredding Equipment
44 55 23  Compost Pile Turning Equipment
44 55 26  Compost Mixing and Blending Equipment
44 55 33  In-vessel Composting Equipment
44 55 43  Compost Pad System
44 55 73  Compost Liquid Extraction Equipment
44 60 00 Waste Thermal Processing Equipment
44 61 00 Waste-to-Energy Plants
44 61 13 Waste Receiving, Management, and Feed Equipment
44 61 16 Mass Burn Combustion Equipment
44 61 23 Refuse-derived Fuel Feed Equipment
44 61 26 Refuse-derived Fuel Combustion Equipment
44 61 29 Modular Combustion System Equipment
44 61 31 Ash Handling Equipment
44 61 33 Post-combustion Ferrous Metals Recovery Equipment
44 61 36 Post-combustion Non-ferrous Metals Recovery Equipment
44 62 00 Fluidized Bed Combustion Equipment
44 63 00 Rotary Kiln Incinerators
44 64 00 Gasification Equipment
44 64 13 Counter-current Fixed Bed Gasification Equipment
44 64 23 Co-current Fixed Bed Gasification Equipment
44 64 33 Fluidized Bed Gasification Equipment
44 64 43 Entrained Flow Gasification Equipment
44 64 53 Plasma Arc Gasification Equipment
44 65 00 Pyrolysis Equipment
44 66 00 Hazardous Waste and Medical Waste Incinerators
44 67 00 Heat Recovery Equipment for Waste Thermal Processing
44 68 00 Synthesis Gas Cleanup and Handling Equipment
45 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
45 11 01 Operation and Maintenance of Oil and Gas Extraction Equipment
45 11 06 Schedules for Oil and Gas Extraction Equipment
45 11 10 User-Defined Oil and Gas Extraction Equipment
45 12 00 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 User-Defined Mining Machinery and Equipment
45 14 00 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
45 15 10 User-Defined Food Manufacturing Equipment
45 16 00 User-Defined Food Manufacturing Equipment
45 17 00 Beverage and Tobacco Manufacturing Equipment
  45 17 01 Operation and Maintenance of Beverage and Tobacco Manufacturing Equipment
  45 17 06 Schedules for Beverage and Tobacco Manufacturing Equipment
  45 17 10 User-Defined Beverage and Tobacco Manufacturing Equipment
45 18 00 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 Equipment
  45 19 06 Schedules for Textiles and Apparel Manufacturing Equipment
  45 19 10 User-Defined Textiles and Apparel Manufacturing Equipment
45 20 00 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 User-Defined Leather and Allied Product Manufacturing Equipment
45 22 00 User-Defined Leather and Allied Product Manufacturing 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
  45 23 10 User-Defined Wood Product Manufacturing Equipment
45 24 00 User-Defined Wood Product Manufacturing Equipment
45 25 00 Paper Manufacturing Equipment
  45 25 01 Operation and Maintenance of Paper Manufacturing Equipment
  45 25 06 Schedules for Paper Manufacturing Equipment
  45 25 10 User-Defined Paper Manufacturing Equipment
45 26 00 User-Defined Paper Manufacturing Equipment
45 27 00 Printing and Related Manufacturing Equipment
  45 27 01 Operation and Maintenance of Printing and Related Manufacturing Equipment
  45 27 06 Schedules for Printing and Related Manufacturing Equipment
  45 27 10 User-Defined Printing and Related Manufacturing Equipment
45 28 00 User-Defined Printing and Related Manufacturing Equipment
45 29 00 Petroleum and Coal Products Manufacturing Equipment
  45 29 01 Operation and Maintenance of Petroleum and Coal Products Manufacturing Equipment
  45 29 06 Schedules for Petroleum and Coal Products Manufacturing Equipment
  45 29 10 User-Defined Petroleum and Coal Products Manufacturing Equipment
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 30 00</td>
<td>User-Defined Petroleum and Coal Products Manufacturing Equipment</td>
</tr>
<tr>
<td>45 31 00</td>
<td>Chemical Manufacturing Equipment</td>
</tr>
<tr>
<td>45 31 01</td>
<td>Operation and Maintenance of Chemical Manufacturing Equipment</td>
</tr>
<tr>
<td>45 31 06</td>
<td>Schedules for Chemical Manufacturing Equipment</td>
</tr>
<tr>
<td>45 31 10</td>
<td>User-Defined Chemical Manufacturing Equipment</td>
</tr>
<tr>
<td>45 32 00</td>
<td>User-Defined Chemical Manufacturing Equipment</td>
</tr>
<tr>
<td>45 33 00</td>
<td>Plastics and Rubber Manufacturing Equipment</td>
</tr>
<tr>
<td>45 33 01</td>
<td>Operation and Maintenance of Plastics and Rubber Manufacturing Equipment</td>
</tr>
<tr>
<td>45 33 06</td>
<td>Schedules for Plastics and Rubber Manufacturing Equipment</td>
</tr>
<tr>
<td>45 33 10</td>
<td>User-Defined Plastics and Rubber Manufacturing Equipment</td>
</tr>
<tr>
<td>45 34 00</td>
<td>User-Defined Plastics and Rubber Manufacturing Equipment</td>
</tr>
<tr>
<td>45 35 00</td>
<td>Nonmetallic Mineral Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 35 01</td>
<td>Operation and Maintenance of Nonmetallic Mineral Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 35 06</td>
<td>Schedules for Nonmetallic Mineral Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 35 10</td>
<td>User-Defined Nonmetallic Mineral Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 36 00</td>
<td>User-Defined Nonmetallic Mineral Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 37 00</td>
<td>Primary Metal Manufacturing Equipment</td>
</tr>
<tr>
<td>45 37 01</td>
<td>Operation and Maintenance of Primary Metal Manufacturing Equipment</td>
</tr>
<tr>
<td>45 37 06</td>
<td>Schedules for Primary Metal Manufacturing Equipment</td>
</tr>
<tr>
<td>45 37 10</td>
<td>User-Defined Primary Metal Manufacturing Equipment</td>
</tr>
<tr>
<td>45 38 00</td>
<td>User-Defined Primary Metal Manufacturing Equipment</td>
</tr>
<tr>
<td>45 39 00</td>
<td>Fabricated Metal Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 39 01</td>
<td>Operation and Maintenance of Fabricated Metal Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 39 06</td>
<td>Schedules for Fabricated Metal Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 39 10</td>
<td>User-Defined Fabricated Metal Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 40 00</td>
<td>User-Defined Fabricated Metal Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 41 00</td>
<td>Machinery Manufacturing Equipment</td>
</tr>
<tr>
<td>45 41 01</td>
<td>Operation and Maintenance of Machinery Manufacturing Equipment</td>
</tr>
<tr>
<td>45 41 06</td>
<td>Schedules for Machinery Manufacturing Equipment</td>
</tr>
<tr>
<td>45 41 10</td>
<td>User-Defined Machinery Manufacturing Equipment</td>
</tr>
<tr>
<td>45 42 00</td>
<td>User-Defined Machinery Manufacturing Equipment</td>
</tr>
<tr>
<td>45 43 00</td>
<td>Computer and Electronic Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 43 01</td>
<td>Operation and Maintenance of Computer and Electronic Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 43 06</td>
<td>Schedules for Computer and Electronic Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 43 10</td>
<td>User-Defined Computer and Electronic Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 44 00</td>
<td><strong>User-Defined Computer and Electronic Product</strong> Manufacturing Equipment</td>
</tr>
<tr>
<td>45 45 00</td>
<td><strong>Electrical Equipment, Appliance, and Component</strong> Manufacturing Equipment</td>
</tr>
<tr>
<td>45 45 01</td>
<td>Operation and Maintenance of Electrical Equipment, Appliance, and Component Manufacturing Equipment</td>
</tr>
<tr>
<td>45 45 06</td>
<td>Schedules for Electrical Equipment, Appliance, and Component Manufacturing Equipment</td>
</tr>
<tr>
<td>45 45 10</td>
<td>User-Defined Electrical Equipment, Appliance, and Component Manufacturing Equipment</td>
</tr>
<tr>
<td>45 46 00</td>
<td><strong>User-Defined Electrical Equipment, Appliance, and Component</strong> Manufacturing Equipment</td>
</tr>
<tr>
<td>45 47 00</td>
<td><strong>Transportation Manufacturing Equipment</strong></td>
</tr>
<tr>
<td>45 47 01</td>
<td>Operation and Maintenance of Transportation Manufacturing Equipment</td>
</tr>
<tr>
<td>45 47 06</td>
<td>Schedules for Transportation Manufacturing Equipment</td>
</tr>
<tr>
<td>45 47 10</td>
<td>User-Defined Transportation Manufacturing Equipment</td>
</tr>
<tr>
<td>45 48 00</td>
<td><strong>User-Defined Transportation Manufacturing Equipment</strong></td>
</tr>
<tr>
<td>45 49 00</td>
<td><strong>Furniture and Related Product Manufacturing Equipment</strong></td>
</tr>
<tr>
<td>45 49 01</td>
<td>Operation and Maintenance of Furniture and Related Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 49 06</td>
<td>Schedules for Furniture and Related Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 49 10</td>
<td>User-Defined Furniture and Related Product Manufacturing Equipment</td>
</tr>
<tr>
<td>45 50 00</td>
<td><strong>User-Defined Furniture and Related Product</strong> Manufacturing Equipment</td>
</tr>
<tr>
<td>45 52 00</td>
<td><strong>User-Defined Other Manufacturing Equipment</strong></td>
</tr>
<tr>
<td>45 53 00</td>
<td><strong>Biopharmaceutical Manufacturing Equipment</strong></td>
</tr>
<tr>
<td>46 00 00</td>
<td><strong>Water and Wastewater Equipment</strong></td>
</tr>
<tr>
<td>46 01 00</td>
<td>Operation and Maintenance of Water and Wastewater Equipment</td>
</tr>
<tr>
<td>46 01 07</td>
<td>Operation and Maintenance of Packaged Treatment Equipment</td>
</tr>
<tr>
<td>46 01 20</td>
<td>Operation and Maintenance of Preliminary Treatment Equipment</td>
</tr>
<tr>
<td>46 01 30</td>
<td>Operation and Maintenance of Chemical Feed Equipment</td>
</tr>
<tr>
<td>46 01 40</td>
<td>Operation and Maintenance of Clarification and Mixing Equipment</td>
</tr>
<tr>
<td>46 01 50</td>
<td>Operation and Maintenance of Secondary Treatment Equipment</td>
</tr>
<tr>
<td>46 01 60</td>
<td>Operation and Maintenance of Advanced Treatment Equipment</td>
</tr>
<tr>
<td>46 01 70</td>
<td>Operation and Maintenance of Residuals Handling and Treatment</td>
</tr>
<tr>
<td>46 05 00</td>
<td><strong>Common Work Results for Water and Wastewater Equipment</strong></td>
</tr>
<tr>
<td>46 05 05</td>
<td>Selective Demolition for Water and Wastewater Equipment</td>
</tr>
<tr>
<td>46 06 00</td>
<td><strong>Schedules for Water and Wastewater Equipment</strong></td>
</tr>
<tr>
<td>46 06 07</td>
<td>Schedules for Packaged Treatment Equipment</td>
</tr>
</tbody>
</table>
46 06 20  Schedules for Preliminary Treatment Equipment
46 06 30  Schedules for Chemical Feed Equipment
46 06 40  Schedules for Clarification and Mixing Equipment
46 06 50  Schedules for Secondary Treatment Equipment
46 06 60  Schedules for Advanced Treatment Equipment
46 06 70  Schedules for Residuals Handling and Treatment

46 07 00  Packaged Water and Wastewater Treatment Equipment
46 07 13  Packaged Water Treatment Equipment
46 07 53  Packaged Wastewater Treatment Equipment

46 08 00  Commissioning of Water and Wastewater Equipment
46 08 07  Commissioning of Packaged Treatment Equipment
46 08 20  Commissioning of Preliminary Treatment Equipment
46 08 30  Commissioning of Chemical Feed Equipment
46 08 40  Commissioning of Clarification and Mixing Equipment
46 08 50  Commissioning of Secondary Treatment Equipment
46 08 60  Commissioning of Advanced Treatment Equipment
46 08 70  Commissioning of Residuals Handling and Treatment

46 20 00  Water and Wastewater Preliminary Treatment Equipment

46 21 00  Screening Equipment
46 21 11  Climber-type Bar Screens
46 21 13  Chain-and-Rake Bar Screens
46 21 16  Flexible Rake Bar Screens
46 21 17  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  Coalescing Oil-Water Separators
46 25 16  API Oil-Water Separators
46 25 23  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

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
46 41 27  Paddle Mixers
46 41 29  Pin Mixers
46 41 31  Vertical Reel Flocculation Equipment
46 41 33  Horizontal Reel Flocculation Equipment
46 41 34  Vertical Turbine Flocculation Equipment
46 41 36  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  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
46 61 00  Filtration Equipment
46 61 13  Filter Media
46 61 16  Filter Surface Wash Agitators
46 61 17  Filter Air Scour Equipment
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
46 61 33  Microfiltration and Ultrafiltration Membrane Equipment
46 61 41  Disc Cloth Filters
46 61 43  Rotary Drum Cloth Filters
46 61 46  Automatic Backwash Cloth Filter Equipment
46 61 53  Cartridge Filters
46 61 63  Bag Filters
46 61 73  Automatic Straining Equipment
46 63 00  Demineralization Equipment
46 63 11  Ion-exchange Vessel Media
46 63 13  Mixed Bed Ion-exchange Vessel Systems
46 63 16  Packed Bed Ion-exchange Vessel Systems
46 63 17  Electrodialysis Reversal Equipment
46 63 23  Reverse-Osmosis and Nanofiltration Membrane Equipment
46 63 31  Multiple-effect Distillation Equipment
46 63 32  Water Vapor Compression Distillation Equipment
46 63 33  Desalination Mechanical Vapor Compression Equipment
46 63 34  Desalination Thermal Vapor Compression Equipment
46 63 36  Desalination Multi-stage Flash Equipment
46 63 41  Desalination Falling Film Evaporators
46 63 43  Desalination Rising Film Evaporators
46 63 53  Desalination Forced-circulation Crystallizing Equipment
46 63 63  Desalination Spray Dry Evaporation Equipment
46 63 73  Demineralization Energy Recovery Equipment

46 66 00  Ultraviolet Equipment
46 66 13  Closed-vessel Low-pressure/Low-intensity Ultraviolet Treatment Equipment
46 66 16  Closed-vessel Low-pressure/High-intensity Ultraviolet Treatment Equipment
46 66 23  Closed-vessel Medium-pressure Ultraviolet Treatment Equipment
46 66 53  Open-channel Low-pressure/Low-intensity Ultraviolet Treatment Equipment
46 66 56  Open-channel Low-pressure/High-intensity Ultraviolet Treatment Equipment
46 66 63  Open-channel Medium-pressure Ultraviolet Treatment Equipment

46 70 00  Water and Wastewater Residuals Handling 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  Electrical Power Generation
48 01 00  Operation and Maintenance for Electrical Power 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  Schedules for Electrical Power Generation Equipment
48 06 70  Schedules for Electrical Power Generation Testing

48 08 00  Commissioning of Electrical Power Generation

48 09 00  Instrumentation and Control for Electrical Power 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  Fossil Fuel Electrical Power Plant Gas Turbines
48 11 26  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 Nuclear Fuel Fusion Reactors
48 12 23 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 Equipment
48 13 13 Hydroelectric Power Plant Water Turbines
48 13 16 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 Plate Cell Solar Energy Collectors
48 14 13.19 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 30 00 Combined Heat and Power Generation

48 31 00 Combustion Combined Heat and Power Generation
48 31 13 Natural Gas-Fueled Combined Heat and Power Generation
48 31 16 Biomass-Fueled Combined Heat and Power Generation

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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>48 71 19</td>
<td>Electrical Power Generation Power Test Equipment</td>
</tr>
<tr>
<td>48 71 23</td>
<td>Electrical Power Generation Resistance Test Equipment</td>
</tr>
<tr>
<td>48 71 26</td>
<td>Electrical Power Generation Voltage Test Equipment</td>
</tr>
</tbody>
</table>