

NATIONAL BUREAU OF STANDARDS REPORT

10 215

Cross Index:

OPERATION BREAKTHROUGH MATRIX CONSTRUCTION SPECIFICATIONS INSTITUTE UNIFORM SYSTEM

DEPARTMENT OF
HOUSING AND URBAN DEVELOPMENT

DEC 20 1970

U.S. DEPARTMENT OF
COMMERCE
WASHINGTON, D.C. 20540

to

Department of Housing and Urban Development



U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

NATIONAL BUREAU OF STANDARDS

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Office of Standard Reference Data—Clearinghouse for Federal Scientific and Technical Information¹—Office of Technical Information and Publications—Library—Office of Public Information—Office of International Relations.

¹ Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted, mailing address Washington, D.C. 20234.

² Located at Boulder, Colorado 80302

³ Located at 5285 Port Royal Road, Springfield, Virginia 22151.

NATIONAL BUREAU OF STANDARDS REPORT

NBS PROJECT

NBS REPORT

September 1, 1970

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Cross Index:

OPERATION BREAKTHROUGH MATRIX CONSTRUCTION SPECIFICATIONS INSTITUTE UNIFORM SYSTEM

by

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Building Research Division
Institute for Applied Technology

to

Department of Housing and Urban Development

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U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

Cross Index:

Operation Breakthrough Matrix,
Construction Specifications Institute Uniform System

Abstract

This report is a cross-index between the matrix intercepts from NBS 10 200, "Guide Criteria for the Design and Evaluation of OPERATION BREAKTHROUGH Housing Systems" and the broadscope and narrowscope titles of the widely used Construction Specifications Institute, "Uniform System." The cross-index is based on the original work of Everett G. Spurling, Jr., A.I.A., Consultant to the Building Research Division, National Bureau of Standards, and is intended to serve as a convenient reference to architects and other decision makers in the building construction process.

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The criteria in the four volumes of NBS 10 200 were organized according to matrix intercepts between 12 (A-L) *Built Elements* and 9 (1-9) *Attributes*. The matrix represents a departure from more conventional means of identification of building materials and construction processes. Durability of flooring, for example, would be found according to the matrix in Section D 8 (*Built Element* "D" is Floor-ceiling and *Attribute* "8" is Durability/Time Reliability) and lighting fixtures and fire safety would be found in Section K 4 (*Built Element* "K" is Lighting Elements and *Attribute* "4" is Fire Safety).

Figure 1 is the Guide Criteria Matrix. Not all intercepts are necessarily relevant. Figure 2 is a list of the broadscope and narrowscope titles of the divisions of the Uniform System. Division 1 of the Uniform System is not applicable on the matrix because general requirements lie outside the scope of the guide criteria.

<h1 style="text-align: center;">Guide Criteria Matrix</h1> <h2 style="text-align: center;">Built Elements</h2>			Attributes									
			Structural Serviceability	Structural Safety	Health and Safety	Fire Safety	Acoustic Environment	Illuminated Environment	Atmospheric Environment	Durability/Time Reliability (Function)	Spatial Characteristics and Arrangement	
			1	2	3	4	5	6	7	8	9	
Structure		A										
Interior Space Dividers	Walls and Doors, Inter-Dwelling	B										
	Walls and Doors, Intra-Dwelling	C										
	Floor-Ceiling	D										
Exterior Envelope	Walls, Doors and Windows	E										
	Roof-Ceiling, Ground Floor	F										
Fixtures and Hardware		G										
Plumbing		H										
Mechanical Equipment, Appliances		I										
Power, Electrical Distribution, Communications		J										
Lighting Elements		K										
Enclosed Spaces		L										

Fig. 1

Construction Specifications Institute, **Uniform System**

DIVISION 1 GENERAL REQUIREMENTS

0101 SUMMARY OF THE WORK
 0110 SCHEDULES & REPORTS
 0120 SAMPLES & SHOP DRAWINGS
 0130 TEMPORARY FACILITIES
 0140 CLEANING UP
 0150 PROJECT CLOSEOUT
 0160 ALLOWANCES
 0170 ALTERNATES

DIVISION 2 SITE WORK

0210 CLEARING OF SITE
 0220 EARTHWORK
 0230 PILING
 0235 CAISSONS
 0240 SHORING AND BRACING
 0250 SITE DRAINAGE
 0255 SITE UTILITIES
 0260 ROADS & WALKS
 0270 SITE IMPROVEMENTS
 0280 LAWNS & PLANTING
 0290 RAILROAD WORK
 0295 MARINE WORK

DIVISION 3 CONCRETE

0310 CONCRETE FORMWORK
 0320 CONCRETE REINFORCEMENT
 0330 CAST-IN-PLACE CONCRETE
 0340 PRECAST CONCRETE
 0350 CEMENTITIOUS DECKS

DIVISION 4 MASONRY

0410 MORTAR
 0420 UNIT MASONRY
 0440 STONE
 0450 MASONRY RESTORATION

DIVISION 5 METALS

0510 STRUCTURAL METAL
 0520 OPEN-WEB JOISTS
 0530 METAL DECKING
 0540 LIGHTGAGE FRAMING
 0550 MISCELLANEOUS METAL
 0570 ORNAMENTAL METAL
 0580 SPECIAL FORMED METAL

DIVISION 6 CARPENTRY

0610 ROUGH CARPENTRY
 0620 FINISH CARPENTRY
 0630 GLUE-LAMINATED WOOD
 0640 CUSTOM WOODWORK

DIVISION 7 MOISTURE PROTECTION

0710 WATERPROOFING
 0715 DAMPPROOFING
 0720 BUILDING INSULATION
 0730 SHINGLES & ROOFING TILES
 0740 PREFORMED ROOFING & SIDING
 0750 MEMBRANE ROOFING
 0760 SHEET METAL WORK
 0770 WALL FLASHING
 0780 ROOF ACCESSORIES
 0790 CALKING & SEALANTS

DIVISION 8 DOORS, WINDOWS, GLASS

0810 METAL DOORS & FRAMES
 0820 WOOD DOORS
 0830 SPECIAL DOORS
 0850 METAL WINDOWS

0860 WOOD WINDOWS
 0870 FINISH HARDWARE
 0875 OPERATORS
 0880 WEATHERSTRIPPING
 0885 GLASS & GLAZING
 0890 CURTAINWALL SYSTEM
 0895 STOREFRONT SYSTEM

DIVISION 9 FINISHES

0910 LATH & PLASTER
 0925 GYPSUM DRY WALL
 0930 TILE WORK
 0940 TERRAZZO
 0945 VENEER STONE
 0950 ACOUSTICAL TREATMENT
 0955 WOOD FLOORING
 0965 RESILIENT FLOORING
 0970 SPECIAL FLOORING
 0980 SPECIAL COATINGS
 0990 PAINTING
 0995 WALL COVERING

DIVISION 10 SPECIALTIES

1010 CHALKBOARD & TACKBOARD
 1013 CHUTES
 1015 COMPARTMENTS & CUBICLES
 1020 DEMOUNTABLE PARTITIONS
 1023 DISAPPEARING STAIRS
 1025 FIREFIGHTING DEVICES
 1030 FIREPLACE EQUIPMENT
 1035 FLAGPOLES
 1037 FOLDING GATES
 1040 IDENTIFYING DEVICES
 1050 LOCKERS
 1053 MESH PARTITIONS
 1055 POSTAL SPECIALTIES
 1060 RETRACTABLE PARTITIONS
 1065 SCALES
 1067 STORAGE SHELVING
 1070 SUN CONTROL DEVICES
 1075 TELEPHONE BOOTHS
 1080 TOILET & BATH ACCESSORIES
 1085 VENDING MACHINES
 1090 WARDROBE SPECIALTIES
 1095 WASTE DISPOSAL UNITS

DIVISION 11 EQUIPMENT

1110 BANK EQUIPMENT
 1115 COMMERCIAL EQUIPMENT
 1118 DARKROOM EQUIPMENT
 1120 ECCLESIASTICAL EQUIPMENT
 1130 EDUCATIONAL EQUIPMENT
 1140 FOOD SERVICE EQUIPMENT
 1150 GYMNASIUM EQUIPMENT
 1155 INDUSTRIAL EQUIPMENT
 1160 LABORATORY EQUIPMENT
 1163 LAUNDRY EQUIPMENT
 1165 LIBRARY EQUIPMENT
 1170 MEDICAL EQUIPMENT
 1180 MORTUARY EQUIPMENT
 1185 PARKING EQUIPMENT
 1188 PRISON EQUIPMENT
 1190 RESIDENTIAL EQUIPMENT
 1197 STAGE EQUIPMENT

DIVISION 12 FURNISHING

1210 ARTWORK
 1220 BLINDS & SHADES
 1230 CABINETS & FIXTURES

1240 CARPETS & MATS
 1250 DRAPERY & CURTAINS
 1260 FURNITURE
 1270 SEATING

DIVISION 13 SPECIAL CONSTRUCTION

1310 AUDIOMETRIC ROOMS
 1315 BOWLING ALLEYS
 1320 BROADCASTING STUDIOS
 1325 CLEAN ROOMS
 1330 CONSERVATORIES
 1335 HYPERBARIC ROOMS
 1340 INCINERATORS
 1345 INSULATED ROOMS
 1350 INTEGRATED CEILING
 1355 OBSERVATORIES
 1360 PEDESTAL FLOORS
 1365 PREFABRICATED STRUCTURES
 1370 RADIATION PROTECTION
 1375 SPECIAL CHIMNEY CONSTRUCTION
 1380 STORAGE VAULT
 1385 SWIMMING POOL
 1390 ZOO STRUCTURES

DIVISION 14 CONVEYING SYSTEMS

1410 DUMBWAITERS
 1420 ELEVATORS
 1430 HOISTS & CRANES
 1440 LIFTS
 1450 MATERIALS HANDLING SYSTEMS
 1460 MOVING STAIRS & WALKS
 1470 PNEUMATIC TUBE SYSTEMS

DIVISION 15 MECHANICAL

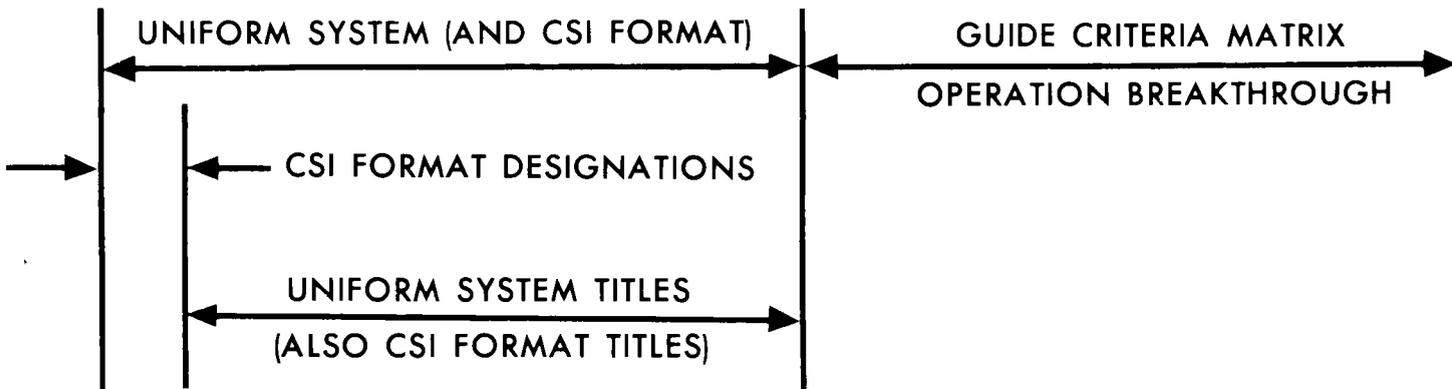
1501 GENERAL PROVISIONS
 1510 BASIC MATERIALS & METHODS
 1520 WATER SUPPLY SYSTEM
 1525 SOIL & WASTE SYSTEM
 1529 ROOF DRAINAGE SYSTEM
 1530 PLUMBING FIXTURES & TRIM
 1535 GAS PIPING SYSTEM
 1540 SPECIAL PIPING SYSTEMS
 1550 FIRE EXTINGUISHING SYSTEM
 1557 FUEL HANDLING SYSTEMS
 1560 STEAM HEATING SYSTEMS
 1565 HOT WATER HEATING SYSTEM
 1575 CHILLED WATER CIRCULATING SYSTEM
 1577 DUAL-TEMPERATURE SYSTEM
 1578 HEAT PUMP
 1580 AIR-TEMPERING SYSTEM
 1590 REFRIGERATION
 1595 HVC CONTROLS & INSTRUMENTS

DIVISION 16 ELECTRICAL

1601 GENERAL PROVISIONS
 1610 BASIC MATERIALS & METHODS
 1620 ELECTRICAL SERVICE SYSTEM
 1630 ELECTRICAL DISTRIBUTION SYSTEM
 1640 LIGHTING FIXTURES
 1650 COMMUNICATION SYSTEMS
 1659 CLOSED-CIRCUIT TELEVISION
 1670 ELECTRICAL POWER EQUIPMENT
 1680 ELECTRICAL COMFORT SYSTEM
 1690 ELECTRICAL SYSTEM CONTROLS & INSTRUMENTS
 1695 LIGHTNING PROTECTION SYSTEM

Fig. 2

CROSS-INDEX



DIVISION 1 - GENERAL REQUIREMENTS

Reference
Numbers*

0101	Summary of the Work _____	N/A
0110	Schedules and Reports _____	N/A
0120	Samples and Shop Drawings _____	N/A
0130	Temporary Facilities _____	N/A
0140	Cleaning up _____	N/A
0150	Project Closeout _____	N/A
0160	Allowances _____	N/A
0170	Alter ates _____	N/A

DIVISION 2 - SITE WORK

0210	Clearing of Site _____	N/A
0211	Demolition	
0212	Structures Moving	
0213	Clearing and Grubbing	
0220	Earthwork _____	A1, A2, A8
0221	Grading	
0222	Excavating and Backfilling	
0223	Dewatering	
0224	Subdrainage	
0225	Soil Poisoning	
0226	Soil Compaction Control	
0227	Soil Stabilization	
0230	Piling _____	A1, A2, A4, A7, A8

* Note Italicized numbers have been arbitrarily assigned by CSI where vacancies occur in the Uniform System.

Reference
Numbers

0235	Caissons _____	A1, A2, A4, A8
0240	Shoring and Bracing _____	A1, A2, A3, A4, A8
0241	Sheeting	
0242	Underpinning	
0250	Site Drainage _____	N/A
0255	Site Utilities _____	N/A
0260	Roads and Walks _____	N/A
0261	Paving	
0262	Curbs and Gutters	
0263	Walks	
0264	Road and Parking Appurtenances	
0270	Site Improvements _____	N/A
0271	Fences	
0272	Playing Fields	
0273	Fountains	
0274	Irrigation System	
0275	Yard Improvements	
0280	Lawns and Planting _____	N/A
0281	Soil Preparation	
0282	Lawns	
0283	Ground Cover and Other Plants	
0284	Trees and Shrubs	
0290	Railroad Work _____	N/A
0295	Marine Work _____	N/A
0296	Boat Facilities	
0297	Protective Marine Structures	
0298	Dredging	

DIVISION 3 - CONCRETE

0310	Concrete Formwork _____	A1, A2, A4, A8 C1, C2, C4, C8 D1, D2, D4, D8 E1, E2, E4, E8 F1, F2, F4, F8
0320	Concrete Reinforcement _____	A1, A2, A4, A7, A8 C1, C2, C4, C8 D1, D2, D4, D8 E1, E2, E4, E7, E8 F1, F2, F4, F8
0330	Cast-In-Place Concrete _____	A1, A2, A4, A5, A7, A8 C1, C2, C4, C5, C8, C9 D1, D2, D4, D5, D8 E1, E2, E4, E5, E7, E8
0331	Heavyweight Aggregate Concrete	
0332	Lightweight Aggregate Concrete	F1, F2, F4, F5, F7, F8
0333	Post-Tensioned Concrete	
0334	Nonloadable Concrete	

Reference
Numbers

0335	Specially Finished Concrete	
0336	Specially Placed Concrete	
0340	Precast Concrete	A1, A2, A4, A5, A7, A8 C1, C2, C4, C5, C8, C9
0341	Precast Concrete Panels	D1, D2, D4, D5, D8 E1, E2, E4, E5, E7, E8
0342	Precast Structural Concrete	F1, F2, F4, F5, F7, F8
0343	Precast Prestressed Concrete	
0350	Cementitious Decks	F1, F2, F4, F5, F7, F8
0351	Poured Gypsum Deck	
0352	Insulating Concrete Roof Decks	
0353	Cementitious Unit Decking	

DIVISION 4 - MASONRY

0410	Mortar	A1, A2, A4, A7, A8 B1, B2, B4, B5, B8 C1, C2, C4, C5, C8, C9 E1, E2, E4, E5, E7, E8
0420	Unit Masonry	A1, A2, A4, A7, A8 B1, B2, B4, B5, B8
0421	Brick Masonry	C1, C2, C4, C5, C8, C9 E1, E2, E4, E5, E7, E8
0422	Concrete Unit Masonry	
0423	Clay Backing Tile	
0424	Clay Facing Tile	
0425	Ceramic Veneer	
0426	Pavers	
0427	Glass Unit Masonry	
0428	Gypsum Unit Masonry	
0429	Reinforced Masonry	
0440	Stone	D1, D3, D4, D5, D7, D8, D9
0441	Rough Stone	E1, E2, E4, E5, E7, E8
0442	Cut Stone	
0443	Simulated Stone	
0444	Flagstone	
0450	Masonry Restoration	N/A

DIVISION 5 - METALS

0510	Structural Metal	A1, A2, A4, A5, A7, A8 C1, C2, C4, C5, C7, C8 D1, D2, D4, D5, D7, D8 E1, E2, E4, E5, E7, E8 F1, F2, F4, F5, F7, F8
0520	Open-Web Joists	A1, A2, A4, A5, A7, A8 D1, D2, D4, D5, D7, D8 F1, F2, F4, F5, F7, F8
0530	Metal Decking	D1, D2, D4, D5, D7, D8 F1, F2, F4, F5, F7, F8
0540	Lightgage Framing	A1, A2, A4, A5, A7, A8 C1, C2, C4, C5, C7, C8 D1, D2, D4, D5, D7, D8 E1, E2, E4, E5, E7, E8 F1, F2, F4, F5, F7, F8

Reference
Numbers

0550	Miscellaneous Metal	A1, A2, A4, A5, A7, A8	D1, D2, D3, D4, D5, D7, D8
0551	Metal Stairs	E1, E2, E3, E4, E5, E7, E8	J1, J2, J3, J4, J5, J7, J8
0552	Floor Gratings	L1, L2, L3, L4, L5, L7, L8	
0553	Construction Castings		
0570	Ornamental Metal	E1, E2, E3, E4, E7, E8	J1, J2, J3, J4, J7, J8
		L1, L2, L3, L4, L7, L8	
0580	Special Formed Metal	N/A	

DIVISION 6 - CARPENTRY

0610	Rough Carpentry	A1, A2, A4, A5, A7, A8	B1, B2, B4, B5, B8	C1, C2, C4
0611	Framing and Sheathing	C5, C7, C8, C9	D1, D2, D4, D5, D7, D8	E1, E2, E4,
0612	Heavy Timber Work	E5, E7, E8 F1, F2, F4, F5, F7, F8		
0620	Finish Carpentry	B1, B3, B4, B7, B8	C1, C4, C7, C8	D1, D4, D7, D8
0621	Wood Trim	E1, E2, E3, E4, E5, E7, E8 F1, F2, F4, F7, F8		
0622	Millwork	J1, J4, J7, J8		
0623	Wood Siding			
0630	Glue-Laminated Wood	A1, A2, A4, A5, A7, A8	D1, D2, D4, D5, D8	
		F1, F2, F4, F5, F7, F8		
0640	Custom Woodwork	B1, B4, B5, B6, B7, B8, B9	C1, C4, C5, C6, C7, C8, C9	
0641	Custom Cabinetwork	G1, G4, G5, G6, G7, G8, G9		
0642	Custom Panelwork			

DIVISION 7 - MOISTURE CONTROL

0710	Waterproofing	D7, D8	E7, E8
0711	Membrane Waterproofing		
0712	Hydrolytic Waterproofing		
0713	Liquid Waterproofing		
0714	Metallic Oxide Waterproofing		
0715	Dampproofing	D7, D8	E7, E8 L7
0716	Bituminous Dampproofing		
0717	Silicone Dampproofing		
0718	Cementitious Dampproofing		
0719	Preformed Vapor Barrier		
0720	Building Insulation	C4, C5, C7, C8	D4, D5, D7, D8
		E4, E5, E7, E8 F4, F5, F7, F8	
0730	Shingles and Roofing Tiles	E4, E5, E7, E8	F4, F5, F7, F8
0731	Asphalt Shingles		
0732	Asbestos-Cement Shingles		
0733	Wood Shingles		
0734	Slate Shingles		
0735	Clay Roofing Tiles		
0736	Concrete Roofing Tiles		

Reference
Numbers

0737	Porcelain Enamel Shingles	
0738	Metal Shingles	
0740	Prefomed Roofing and Siding	E 1, E 4, E 5, E 7, E 8 F 1, F 4, F 5, F 7, F 8
0741	Prefomed Metal Roofing	
0742	Prefomed Metal Siding	
0743	Asbestos - Cement Panels	
0744	Prefomed Plastic Panels	
0745	Custom Panel Roofing	
0750	Membrane Roofing	F 4, F 5, F 7, F 8
0751	Built-up Bituminous Roofing	
0752	Prepared Roll Roofing	
0753	Elastic Sheet Roofing	
0754	Elastic Liquid Roofing	
0760	Sheet Metal Work	E 1, E 3, E 4, E 5, E 7, E 8 F 1, F 4, F 5, F 7, F 8
0761	Sheet Metal Roofing	17, 18 L 7
0762	Metal Roof Flashing and Trim	
0763	Gutters and Downspouts	
0764	Grilles and Louvers	
0765	Decorative Sheet Metal Work	
0770	Wall Flashing	E 1, E 4, E 7, E 8
0780	Roof Accessories	F 1, F 3, F 4, F 5, F 7, F 8 14, 17, 18
0781	Plastic Skylights	J 4, J 7, J 8
0782	Metal - Framed Skylights	
0783	Roof Hatches	
0784	Gravity Ventilators	
0790	Calking and Sealants	E 5, E 7, E 8 F 7, F 8

DIVISION 8 - DOORS, WINDOWS, AND GLASS

0810	Metal Doors and Frames	B3, B4, B5, B6, B7, B8, B9 C3, C4, C5, C7, C8, C9
0811	Hollow Metal Doors and Frames	E3, E4, E5, E6, E7, E8, E9 J3, J4, J5, J6, J7, J8, J9
0812	Aluminum Doors and Frames	L4, L9
0813	Stainless Steel Doors & Frames	
0814	Bronze Doors and Frames	
0815	Metal Storm and Screen Doors	
0820	Wood Doors	B3, B4, B5, B6, B7, B8, B9 C3, C4, C5, C7, C8, C9 E3, E4, E5, E6, E7, E8 J3, J4, J5, J7, J8, J9 L4, L9
0830	Special Doors	B3, B4, B5, B6, B7, B8, B9 C3, C4, C5, C6, C7, C8
0831	Sliding Metal Firedoors	C9 E3, E4, E5, E6, E7, E8, E9 J3, J4, J5, J7, J8
0832	Metal - Covered Doors	J9 L4, L9
0833	Coiling Doors and Grilles	
0834	Plastic - Faced Doors	
0835	Folding Doors	

Reference
Numbers

0836	Overhead Doors	
0837	Sliding Glass Doors	
0838	Tempered Glass Doors	
0839	Revolving Doors	
0840	Flexible Doors	
0841	Hangar Doors	
0850	Metal Windows	E1, E2, E3, E4, E5, E6, E7, E8, E9 L7, L9
0851	Steel Windows	
0852	Aluminum Windows	
0853	Stainless Steel Windows	
0854	Bronze Windows	
0860	Wood Windows	E1, E2, E3, E4, E5, E6, E7, E8, E9 L7, L9
0870	Finish Hardware	B3, B4, B5, B7, B8 C3, C4, C5, C7, C8 E3, E4, E5, E7, E8 J3, J4, J5, J7, J8, J9 L4, L9
0875	Operators	C3, C4, C5, C7, C8 E3, E4, E5, E7, E8 J3, J4, J5, J7, J8, J9
0880	Weatherstripping	C3, C5, C7, C8 E3, E5, E7, E8 J3, J5, J7, J8
0885	Glass and Glazing	E1, E2, E3, E4, E5, E6, E7, E8, E9 L7, L9
0890	Curtainwall System	E1, E2, E3, E4, E5, E6, E7, E8, E9 L7, L9
0895	Storefront System	E1, E2, E3, E4, E5, E6, E7, E8

DIVISION 9 - FINISHES

0910	Lath and Plaster	B1, B2, B3, B4, B5, B6, B7, B8
0911	Metal Furring	C1, C2, C3, C4, C5, C6, C7, C8
0912	Metal Lath	D1, D2, D3, D4, D5, D6, D7, D8
0913	Gypsum Lath	E1, E2, E3, E4, E5, E6, E7, E8
0914	Plaster Partition Systems	F1, F2, F3, F4, F5, F6, F7, F8
0915	Plastering Accessories	
0916	Plaster	
0917	Stucco	
0918	Acoustical Plaster	
0919	Plaster Moldings & Ornaments	
0925	Gypsum Drywall	B1, B2, B3, B4, B5, B6, B7, B8 C1, C2, C3, C4, C5, C6, C7, C8 D1, D2, D3, D4, D5, D6, D7, D8, E1, E2, E3, E4, E5, E6, E7, E8, F1, F2, F3, F4, F5, F6, F7, F8
0926	Gypsum Drywall System	
0927	Gypsum Drywall Finishing	
0930	Tile Work	B1, B2, B3, B4, B5, B6, B7, B8 D1, D2, D3, D4, D5, D6, D7, D8
0931	Ceramic Tile	
0932	Ceramic Mosaic	
0933	Quarry Tile	

Reference
Numbers

0934	Glass Mosaics	
0935	Conductive Ceramic Tile	
0940	Terrazzo _____	D1, D2, D3, D4, D5, D6, D7, D8
0941	Cast-In-Place Terrazzo	
0942	Precast Terrazzo	
0943	Conductive Terrazzo	
0945	Veneer Stone _____	D1, D2, D3, D4, D5, D6, D7, D8 E1, E2, E3, E4, E5, E7, E8
0950	Acoustical Treatment _____	D1, D2, D3, D4, D5, D6, D7, D8 F1, F2, F3, F4, F5, F6, F7, F8 L5, I5
0955	Wood Flooring _____	D1, D2, D3, D4, D5, D6, D7, D8
0956	Wood Strip Flooring	
0957	Wood Parquet Flooring	
0958	Plywood Block Flooring	
0959	Resilient Wood Floor System	
0960	Wood Block Industrial Floor	
0965	Resilient Flooring _____	D3, D4, D5, D6, D7, D8
0966	Resilient Tile Flooring	
0967	Resilient Sheet Flooring	
0968	Conductive Resilient Floors	
0970	Special Flooring _____	D3, D4, D5, D6, D7, D8
0971	Magnesium Oxychloride Floors	
0972	Epoxy-Marble-Chip Flooring	
0973	Elastomeric Liquid Flooring	
0974	Heavy-Duty Concrete Toppings	
0980	Special Coatings _____	B3, B4, B6, B7, B8 C3, C4, C6, C7, C8
0981	Cementitious Coatings	D3, D4, D6, D7, D8 E3, E4, E6, E7, E8
0982	Elastomeric Coatings	F3, F4, F6, F7, F8
0983	Fire-Resistant Coatings	
0990	Painting _____	B3, B4, B6, B7, B8 C3, C4, C6, C7, C8 D3, D4, D6, D7, D8 E3, E4, E6, E7, E8 F3, F4, F6, F7, F8
0995	Wall Covering _____	B3, B4, B6, B7, B8 C3, C4, C6, C7, C8 D3, D4, D6, D7, D8 E3, E4, E6, E7, E8 F3, F4, F6, F7, F8

DIVISION 10 - SPECIALTIES

1010	Chalkboard and Tackboard _____	N/A
1013	Chutes _____	G1, G4, G5, G7, G8, G9
1015	Compartments and Cubicles _____	G1, G2, G3, G4, G7, G8, G9
1016	Hospital Cubicles	
1017	Office Cubicles	

Reference
Numbers

1018	Toilet & Shower Compartments	
1020	Demountable Partitions _____	B1, B4, B5, B6, B7, B8, B9 C1, C4, C5, C6, C7, C8, C9
1023	Disappearing Stairs _____	F1, F2, F3, F4, F5, F8, F9
1025	Firefighting Devices _____	G3, G4, G7, G8 L4
1030	Fireplace Equipment _____	B3, B4, B7, B8, B9
1031	Fireplace Accessories	
1032	Fireplace Dampers	
1033	Prefabricated Fireplace	
1035	Flagpoles _____	N/A
1037	Folding Gates _____	N/A
1040	Identifying Devices _____	G3, G4, G8 L3, L4
1041	Directory & Bulletin Boards	
1042	Painted Signs	
1043	Plaques	
1044	Three-Dimensional Signs	
1050	Lockers _____	G3, G4, G5, G7, G8, G9
1053	Mesh Partitions _____	C1, C4, C7, C8, C9
1055	Postal Specialties _____	G4, G5, G7, G8, G9
1060	Retractable Partitions _____	B1, B4, B5, B6, B7, B8, B9
1061	Coiling Partitions	
1062	Folding Partitions	
1065	Scales _____	N/A
1067	Storage Shelving _____	G1, G4, G8
1070	Sun Control Devices _____	E1, E2, E4, E6, E7, E8
1075	Telephone Booths _____	J4, J5, J8, J9
1080	Toilet & Bath Accessories _____	H3, H7, H8
1085	Vending Machines _____	N/A or G3, G4, G5, G7, G8, G9
1090	Wardrobe Specialties _____	N/A
1095	Waste Disposal Units _____	G3, G4, G5, G7, G8, G9 L4
1096	Packaged Incinerators	
1097	Waste Compactors	

DIVISION 11 - EQUIPMENT

1110	Bank Equipment _____	N/A
1111	Depository Units	
1112	Outdoor Tellers' Windows	

Reference
Numbers

1113	Safes
1114	Tellers' Counters
1115	Commercial Equipment _____ N/A
1118	Darkroom Equipment _____ N/A
1120	Ecclesiastical Equipment _____ N/A
1121	Baptismal Tanks
1122	Bells
1123	Carillons
1124	Chancel Fittings
1125	Organs
1126	Pews
1130	Educational Equipment _____ N/A
1131	Art & Craft Equipment
1132	Audio-Visual Aids
1133	Language Laboratories
1134	Prefabricated Astro- Observatories
1135	Vocational Shop Equipment
1140	Food Service Equipment _____ N/A
1141	Bar Units
1142	Cooking Equipment
1143	Dishwashing Equipment
1144	Food Preparation Machines
1145	Food Preparation Tables
1146	Food Serving Units
1147	Refrigerated Cases
1148	Sinks & Drainboards
1149	Soda Fountains
1150	Gymnasium Equipment _____ N/A
1155	Industrial Equipment _____ N/A
1160	Laboratory Equipment _____ N/A
1163	Laundry Equipment _____ N/A
1165	Library Equipment _____ N/A
1166	Bookshelving
1167	Bookstacks
1168	Charging Counters
1170	Medical Equipment _____ N/A
1171	Dental Equipment
1172	Examination Room Equipment
1173	Hospital Casework
1174	Incubators
1175	Patient Care Equipment

Reference
Numbers

1176	Radiology Equipment	
1177	Sterilizers	
1178	Surgery Equipment	
1179	Therapy Equipment	
1180	Mortuary Equipment _____	N/A
1185	Parking Equipment _____	N/A
1188	Prison Equipment _____	N/A
1190	Residential Equipment _____	G1, G2, G3, G4, G5, G7, G8, G9
1191	Central Vacuum Cleaner	L4, L5, L7, L8, L9
1192	Kitchen & Lavatory Cabinets	
1193	Residential Kitchen Equipment	
1194	Residential Laundry Equipment	
1195	Unit Kitchens	
1197	Stage Equipment _____	N/A

DIVISION 12 - FURNISHINGS

1210	Artwork _____	N/A
1220	Blinds and Shades _____	E3, E4, E5, E6, E7, E8, E9
1230	Cabinets and Fixtures _____	N/A
1231	Classroom Cabinets	
1232	Dormitory Units	
1240	Carpets and Mats _____	D3, D4, D5, D6, D7, D8, D9
1250	Draperies and Curtains _____	E3, E4, E5, E6, E7, E8, E9
1251	Draperies Tracks	
1252	Fabrics	
1260	Furniture _____	N/A or L8, L9
1270	Seating _____	N/A
1271	Auditorium Seating	
1272	Classroom Seating	
1273	Stadium Seating	

DIVISION 13 - SPECIAL CONSTRUCTION

1310	Audiometric Room _____	N/A
1315	Bowling Alleys _____	N/A
1320	Broadcasting Studios _____	N/A
1325	Clean Room _____	N/A
1330	Conservatory _____	N/A
1335	Hyperbaric Rooms _____	N/A

Reference
Numbers

1340	Incinerator _____	G1, G2, G3, G4, G7, G8, G9	L4, L7, L8, L9
1345	Insulated Room _____	N/A	
1350	Integrated Ceiling _____	D3, D4, D5, D6, D7, D8	F3, F4, F5, F6, F7, F8 I3, I4, I5, I7, I8, I9
1355	Observatory _____	N/A	
1360	Pedestal Floor _____	N/A or D1, D2, D3, D4, D5, D7, D8, D9	
1365	Prefabricated Structures _____	N/A	
1370	Radiation Protection _____	N/A	
1375	Special Chimney Construction _____	I1, I2, I3, I4, I7, I8	
1380	Storage Vault _____	N/A	
1385	Swimming Pool _____	N/A	
1390	Zoo Structures _____	N/A	

DIVISION 14 - CONVEYING SYSTEMS

1410	Dumbwaiters _____	N/A	
1420	Elevators _____	J1, J2, J3, J4, J5, J7, J8, J9	
1430	Hoists and Cranes _____	N/A	
1440	Lifts _____	N/A	
1450	Materials Handling System _____	N/A	
1460	Moving Stairs and Walks _____	N/A	
1470	Pneumatic Tube System _____	N/A	

DIVISION 15 - MECHANICAL

1501	General Provisions _____	H3, H4, H5, H7, H8	I3, I4, I5, I7, I8
1502	Codes and Standards		
1503	Mechanical Systems Schedule		
1504	Mechanical Reference Symbols		
1510	Basic Materials and Methods _____	H1, H2, H3, H4, H5, H7, H8	
1511	Pipe and Pipefittings	I1, I2, I3, I4, I5, I7, I8, I9	
1512	Valves		
1513	Piping Specialties		
1514	Mechanical Supporting Devices		
1515	Vibration Isolation		
1516	Mechanical Systems Insulation		
1520	Water Supply System _____	H3, H4, H5, H7, H8, H9	
1521	Water Supply Piping System		
1522	Domestic Hot Water System		

Reference
Numbers

1523	Domestic Iced Water System	
1524	Water Well and Wellpump	
1525	Soil and Waste System	H3, H5, H7, H8, H9
1526	Soil and Waste Piping	
1527	Waste Treatment Equipment	
1528	Sanitary Sewers	
1529	Roof Drainage System	F 1, F2, F3, F5, F7, F8 H3, H5, H7, H8
1530	Plumbing Fixtures and Trim	H3, H5, H7, H8, H9 L9
1535	Gas Piping System	H3, H4, H7, H8
1540	Special Piping Systems	N/A
1541	Compressed Air System	
1542	Vacuum Piping System	
1543	Oxygen Piping System	
1544	Nitrous Oxide Piping System	
1545	Process Piping System	
1550	Fire Extinguishing System	H3, H4, H5, H7, H8, L4
1551	Automatic Sprinkler System	
1552	Carbon Dioxide System	
1553	Elevated Water Reservoir	
1554	Standpipe and Firehose Stations	
1555	Underground Fire Lines	
1557	Fuel Handling System	13, 14, 15, 17, 18
1560	Steam Heating System	13, 14, 15, 17, 18
1561	Steam Boiler & Equipment	
1562	Steam Circulating System	
1563	Steam Terminal Units	
1565	Hot Water Heating System	13, 14, 15, 17, 18
1566	Hot Water Boiler & Equipment	
1567	Hot Water Circulating System	
1568	Hot Water Terminal Units	
1569	Hot Water Snow-Melting System	
1575	Chilled Water Circulating System	13, 14, 15, 17, 18
1577	Dual-Temperature System	13, 14, 15, 17, 18
1580	Air-Tempering System	13, 14, 15, 17, 18, 19 L7 H5
1581	Warm Air Furnaces	
1582	Air-Handling Equipment	
1583	Air Filtration Equipment	
1584	Humidity Control Equipment	
1585	Packaged Air-Tempering Units	
1586	Air Distribution Duct System	

Reference
Numbers

1587	Tempered Air Terminal Units	
1588	Air Curtain	
1590	Refrigeration	13, 14, 15, 17, 18
1591	Water Chillers	
1592	Commercial Refrigeration Units	
1593	Cooling Towers	
1595	HVC Controls and Instruments	13, 14, 15, 17, 18, 19

DIVISION 16 - ELECTRICAL

<i>1601</i>	General Provisions	J3, J4, J6, J7, J8 K3, K4, K6, K7, K8
<i>1602</i>	Codes and Standards	
<i>1603</i>	Electrical Systems Schedule	
<i>1604</i>	Electrical Reference Symbols	
1610	Basic Materials and Methods	J1, J2, J3, J4, J6, J7, J8
1611	Raceways and Fittings	
1612	Busways	
1613	Conductors	
1614	Electrical Supporting Devices	
1620	Electrical Service System	J3, J4, J5, J6, J7, J8
1621	Overhead Electrical Service	
1622	Underground Electrical Service	
1623	Electrical Substations	
1624	Electrical Entrance Equipment	
1625	Grounding System	
1626	Standby Electrical System	
1630	Electrical Distribution System	J3, J4, J5, J6, J7, J8 H5
1631	Feeder Circuits	
1632	Branch Circuits	
1633	Panelboards	
1634	Wiring Devices	
1635	Underfloor Electrical System	
1640	Lighting Fixtures	K3, K4, K5, K6, K7, K8, K9 H5
1641	Indoor Lighting Fixtures	
1642	Outdoor Lighting Fixtures	
1650	Communication System	J3, J4, J5, J7, J8, J9 L4 H5
1651	Telephone Equipment	
1652	Intercommunication System	
1653	Public Address System	
1654	Paging System	
1655	Nurses' Call System	
1656	Alarm and Detection Systems	
1657	Clock and Program System	
1658	Audio-Video Reproducers	

Reference
Numbers

1659	Closed-Circuit Television _____	N/A
1660	Radiotelephone System	
1661	Commercial Projection System	
1670	Electrical Power Equipment _____	J3, J4, J5, J7, J8
1671	Motors and Motor Controls	
1672	Special Transformers	
1673	Frequency Converters	
1674	Rectifiers	
1680	Electrical Comfort System _____	J3, J4, J5, J7, J8, J9
1681	Electrical Heating System	
1682	Packaged Air-Tempering Units	
1683	Electrical Snow-Melting System	
1684	Heat Pumps	
1690	Electrical System Controls _____	J3, J4, J5, J6, J7, J8, J9 and Instruments
1695	Lightning Protection System _____	F3, F4, F7, F8