690.091.87
W17d
c.2

U.S. War Production Board

Defense housing critical list.
Effective Feb. 24, 1942

Federal Housing Administration
Library

D
.A3
1942

cat

DEFENSE HOUSING CRITICAL LIST

Effective February 24, 1942

U. S. WAR PRODUCTION BOARD
DIVISION INDUSTRY OPERATIONS
HOUSING PRIORITIES BRANCH

Federal Housing Administration
Library

VF
690.091.87
W17d
c.2

HD
7293
.A3
4658

DEFENSE HOUSING CRITICAL LIST

EFFECTIVE FEBRUARY 24, 1942

100 GENERAL PROVISIONS

110 Scope:

111 This list supersedes and nullifies the Defense Housing Critical List, PM–1192, dated September 19, 1941.

112 This list is based upon the critical positions, at the time of issuance, of materials essential to the construction, allocation and equipment of housing, and is subject to revision by the Director of Industry Operations whenever warranted by a change in the critical position of the materials included.

113 Only the materials and products included in this list, and only in such limited quantities and for such limited uses as are herein specified or imposed by an applicable Preference Rating Order, are eligible for procurement by the extension of a Preference Rating Order granted for a housing project.

114 Materials not included in this list and not subject to allocation or priority control may be used without restriction or limitation, provided, however, that nothing herein is intended to limit the application of the provisions of Priorities Regulation No. 1.

120 Substitutes:

121 Materials or products of the sizes, weights or composition specified in the list may not be immediately procurable due to necessary changes in manufacturing processes or procedure. In such cases, the Preference Rating Order may be extended to secure delivery of similar products or materials previously produced for the same use, provided such delivery is made from the supplier's existing stocks or inventory.

130 Definitions:

131 "Applicable code or regulation" means a code or regulation of a public body having jurisdiction, or a regulation or standard of a housing agency of the Federal Government constructing or aiding the financing of the project.

132 "Multi-family dwelling" means a dwelling containing separate living units for three or more families with joint facilities or services or both. For the purpose of the Defense Housing Critical List, the term "joint

facilities" means any one or more of the following which serve three or more families: Entrance hall, stairway, storage or laundry facilities, bathroom or toilet, attic, heating plant, hot water generator, and electrical service equipment; the term "joint services" means janitorial and maintenance services.

200 STRUCTURE

210 Reinforcing steel bars, mesh or fabric, tie wire, and accessories—only for reinforced concrete or reinforced masonry:

211 Foundation walls, footings, piers and grade beams where reinforcing is required by applicable code or regulation due to varying soil bearing or for earthquake resistance.

212 Columns, piers and load bearing walls where required by applicable code or regulation for earthquake resistance or for multi-family structures over two stories high.

213 Beams and self-supporting slabs for multi-family dwellings where required for fire or earthquake resistance by applicable code or regulation unless wood construction is permitted.

214 Interior stairs for multi-family dwellings over two stories high where required by applicable code or regulation for fire hazard protection or for earthquake resistance.

215 Lintels.

216 Retaining walls where earthquake resistance is required by applicable code or regulation.

217 Bond, tie or perimeter beams where required by applicable code or regulation for earthquake or hurricane resistance.

218 Chimneys for large central heating plants or where earthquake resistance is required by applicable code or regulation.

219 Structures in Puerto Rico and Virgin Islands.

220 Miscellaneous steel and iron:

221 Anchors, dowels, cleats, timber connectors, bolts and tie rods with nuts and washers.

222 Plates for framing wood trusses.

223 Joist hangers for multi-family dwellings.

224 Angle lintels for exterior walls constructed of masonry veneer over wood framing.

225 Fireplace dampers—ferrous metal uncoated without metallic throats.

230 Steel stairs, rails, railings and incidental fittings and fastenings—uncoated or non-metallic coated ferrous metal—for multi-family dwellings over 2 stories high where required by applicable code or regulation for fire hazard protection and in such cases only where reinforced concrete is not permitted.

240 Insect screen mesh:

241 Painted steel.

242 Thin coat galvanized steel.

250 Fire doors including frames for multi-family dwellings where required by applicable code or regulation—wood cored with non-metallic coated 30 gauge ferrous sheet metal covers.

260 Roofing and sheet metal:

261 Fittings, fastenings, hangars, and cleats—zinc coated ferrous metal where exposed to weather, otherwise no metallic coating.

262 Solder.

263 Flashings—ferrous sheet metal not heavier than 26 gauge, no metallic coating, phosphate treated, or zinc coated not to exceed 1¼ ounces per square foot, total coating both sides—2½ pound hard lead, or 4 pound soft lead.

264 Gutters (half round) and downspouts—ferrous sheet metal as for 263.

265 Wire basket strainers for downspouts connected to sewer lines—ferrous metal zinc coated.

266 Scuppers and downspout connections for flat roofs—ferrous metal as for 263.

267 Gravel stops for flat roofs—ferrous metal as for 263.

268 Roof ventilators of aspirator type—ferrous metal as for 263.

269 Termite shields—ferrous metal as for 263.

2691 Shields for continuous foundations and for piers and pipes in Florida, Alabama, Mississippi, Louisiana, Texas, and Hawaii.

2692 Extension of flashing to provide a termite shield where masonry terrace, platform or porch slab and steps abut wood construction at exterior walls.

270 Lath and lathing devices:

271 Lath-ferrous metal, no metallic coating—for tile bedbase and cement plaster walls in bathrooms; for partitions, ceilings and soffits required to be fire-resistant by applicable code or regulation in multi-family dwellings over 2 stories high and over and in heater rooms for any multi-family dwelling and only in such cases where non-metallic materials such as gypsum lath and gypsum plaster will not meet the applicable requirements.

272 Corner and joint reinforcing—not more than 2½" lap on each surface of internal angles and on each surface where different kinds of plaster base abut each other—ferrous metal, no metallic coating.

273 Corner beads for vertical corners only (maximum permissible length 6' each)—ferrous metal, no metallic

coating, zinc coated optional in kitchens and bathrooms.

274 Sound insulation lathing devices where sound insulation is required by applicable code or regulation—ferrous metal, no metallic coating.

275 Exterior stucco fabric or mesh—ferrous metal, no metallic coating; zinc coated before fabrication optional in the State of California except that part of the State north of the San Francisco Bay localities.

280 Glazing points—zinc.

290 Builders and cabinet hardware.—In accordance with the following specifications:

NOTE: For description of finishes and types refered to by number, see the Federal Specifications for Builders' Hardware.

291 *Finish.*—Door and window trim, except as noted:

2911 Bright or dull Brass, U. S. 3 or U. S. 4, with coating of clear lacquer on cylinder only.

2912 Black lacquer or Japan, U. S. 18A, U. S. 1 D on iron or steel.

2913 Black lacquer over phosphate treatment, U. S. 18A on iron or steel.

2914 Baked enamel colored, for iron or steel.

2915 Exterior hardware and exterior hardware fastenings for windows and doors may be zinc coated where used under extreme exposure conditions as interpreted by the field offices processing applications provided that extreme exposure conditions shall not be deemed to exist in areas more than 50 miles distant from the Great Salt Lake or from bodies of salt water on the Eastern and Western seaboard and in island territories or possessions and not more than 100 miles inland from the Gulf of Mexico nor more than 30 miles inland from any of the Great Lakes.

Applications:

2911 and 2912 optional with manufacturer for interiors.

2911 only on brass for exteriors.

2913 only for iron or steel on exteriors.

2914 only for interior use.

Die castings shall meet all requirements on die castings in the effective issue of emergency alternate Fed. Spec. EFFG 106.

292 *Doors:*

2921 *Entrance doors.—(a) Common entrance to multi-family dwellings:*

Pair butts type 2014½ P primed: Size 3½″ x 3½″ for 1⅜″ door; size 4″ for 1¾″ door.

Mortise-lock set type 88: Type 88, 5 to 6″ x 3¾″ x ¾″ japanned iron case. Backset 2¾″. Solid front 8 x 1¼″. Latch bolt, minimum 1 x ⅝″; minimum throw ½″. Dead bolt, minimum

1⅛ x ½″, minimum throw ½″. Lock shall have 1 bronze cylinder, with or without removable and interchangeable core feature, with five or more pin tumblers giving practically unlimited changes. Ferrous front and bolts and wrought steel strike. Two brass keys.

Knobs: Type 210–B, except steel on exterior; glass, porcelain, plastic or steel on interior; minimum diameter 1⅛″. Wrought steel shank on glass knobs.

Escutcheons: Type 300 outside x 302 inside; wrought steel or cast iron.

Option: Type 150, tubular or type 161, cylindrical, except steel, cast iron or die cast. Solid or two-piece front, ferrous metal for bolt, steel front and strike. Type 154, tubular except steel, cast iron or die cast. Solid or two-piece front, brass 5 pin tumbler cylinder, 2 brass cylinder keys.

Knobs: 210–B except steel on exterior; glass, porcelain, plastic, or steel on interior; minimum diameter 1⅞″ wrought steel shank on glass knobs.

Escutcheons: Rose 1¾″ x 2 or 2 diameter steel or cast iron on exterior; steel, cast iron or plastic on interior.

2922 *Interior entrance doors public hall to units in multi-family dwellings:*

Pair butts type 2014½ P. Primed: size 3½″ x 3½″ for 1⅜″ door; size 4″ for 1¾″ door.

Mortise latch set type 28, except japanned iron case 1⅝″ x 3⅛″ x 9/16″; front wrought steel 3½″ x 1″ compression spring, iron hub, ferrous bolt, steel strike. Latch bolt not less than ⅝″ x 7/16″ x ⅜″ minimum throw.

Knobs: Type 210–B, glass, porcelain, plastic or steel; minimum diameter 1⅞″. Wrought shank on glass knobs.

Escutcheons: Pendant type, wrought steel—cast iron or plastic approximately 7″ x 1¾″.

Option: Type 150, tubular or type 161, cylindrical, except steel, cast iron or die cast. Solid or two-piece front, ferrous metal for bolt, steel front and strike.

Knobs: Type 210–B, except steel on exterior; glass, porcelain, plastic or steel on interior; minimum diameter 1⅞″. Wrought steel shank on glass knobs.

Escutcheons: Rose 1¾″ x 2″, or 2″ diameter steel or cast iron on exterior; steel, cast iron or plastic on interior.

Rim night latch: 2⅜″ x 3⅝″ cast iron case, ferrous

bolt, brass 5-pin tumbler cylinder, 2 brass cylinder keys.

Option: Type 154 tubular, except steel, cast iron or die cast. Solid or two-piece front; brass 5-pin tumbler cylinder 2 brass cylinder keys.

Wood door stop: 2½″ projection, rubber tip, unfinished.

Letter box (only for multi-family dwellings): Group letter boxes in accordance with U. S. Postal Regulations, ferrous metal only.

2923 *Entrance door to single units:*

Pair butts type 2014 ½ P. Primed: Size 3½ x 3½ for 1⅜″ door; size 4″ for 1¾″ door.

Mortise latch set type 28, except japanned iron case 1⅝ x 3⅛ x 9/16″ frontwrought steel 3½″ x 1″, compression spring, iron hub, iron bolt, steel front and strike. Latch bolt not less than ⅝ x 7/16 x ⅜″ minimum throw.

Knobs: Type 210–B except steel on exterior, glass, porcelain, plastic or steel on interior; glass knob with wrought steel shank, minimum diameter 1⅞″.

Escutcheon: Pendant type approximately 7″ x 1¾″, wrought steel cast iron or plastic.

Option: Type 150, tubular or type 161, cylindrical except steel, cast iron or die cast. Solid or two-piece front, ferrous metal for bolt, steel front and strike.

Knobs: 210–B glass, porcelain, plastic or steel; glass knob with wrought steel shank, minimum diameter 1⅞″.

Escutcheon: Rose 1¾″ x 2″ or 2″ diameter, steel, cast iron or plastic.

Rim night latch: 2⅜″ x 3⅝″ cast iron case, ferrous bolt, brass 5 pin tumbler cylinder, 2 brass cylinder keys.

Option: Type 154 tubular, except steel, cast iron or die cast. Solid or two-piece front; brass 5-pin tumbler cylinder, 2 brass cylinder keys.

Wood door stop: 2½″ projector, rubber tip, unfinished.

Letter box: Steel or cast iron, with attachment for holding papers, size approximately 10½″ x 5½″ x 2¾″.

Option: Letter slot, steel or cast iron; spring-or-gravity closing flap. Size approximately 3″ x 10″ with 1½″ x 7″ opening. For single units only.

2924 *Rear door:*

Pair butts type 2014½ P. Primed: Size 3½″ for 1⅜″ door; 4″ for 1¾″ door.

Mortise latch set type 28, except japanned iron case 1⅝″ x 3⅛″ x 9/16″; front wrought steel 3½″ x 1″ compression spring; iron hub, ferrous bolt, steel strike. Latch bolt not less than ⅝″ x 7/16″ x ⅜″ minimum throw.

Knobs: Type 210–B, except steel on exterior; glass, porcelain, plastic or steel on interior; minimum diameter 1⅞″. Wrought steel shank on glass knobs.

Escutcheon: Pendant type, wrought steel or cast iron, approximately 7″ x 1¾″.

Option: Type 150, tubular or type 161, cylindrical, except steel, cast iron or die cast. Solid or two-piece front, ferrous metal for bolt, steel front and strike.

Knobs: Type 210–B, except steel on exterior; glass, porcelain, plastic or steel on interior; minimum diameter 1⅞″. Wrought steel shank on glass knobs.

Escutcheon: Rose 1¾″ x 2″, or 2″ diameter steel or cast iron on exterior; steel, cast iron or plastic on interior.

Mortise bolt type 1053A steel or cast iron bolt and strike; wrought steel or cast iron turnpiece and plate.

Rim night latch: 2⅜″ x 3⅝″ cast iron case, ferrous bolt, brass 5-pin tumbler, cylinder, 2 brass cylinder keys.

Option: Type 154 tubular, except steel, cast iron or die cast. Solid or two-piece front; brass 5-pin tumbler cylinder, 2 brass cylinder keys.

Wood door stop: 2½″ projector, rubber tip, unfinished.

2925 Bathroom door:

Pair butts type 2014½ P. Primed: Size 3½″ for 1⅜″ door; size 4″ for 1¾″ door.

Mortise latch set type 28, except japanned iron case 1⅝ x 3⅛ x 9/16″, front wrought steel 3½″ x 1″, compression spring, iron hub, iron bolt, steel front and strike. Latch bolt not less than ⅝ x 7/16 x ⅜″ minimum throw.

Knobs: Type 210–B glass, porcelain, plastic or steel; glass knob with wrought steel shank, minimum diameter 1⅞″.

Escutcheon: Pendant type approximately 7″ x 1¾″ wrought steel, cast iron or plastic; stop on inside to lock against outside; emergency entrance from outside.

Option: Type 150, tubular or type 161, cylindrical, except steel, cast iron or die cast. Solid or two-piece front, steel bolt, front and strike.

445067°—42——2

Knobs: Type 210–B glass with wrought steel shank, porcelain, plastic or steel; minimum diameter 1⅞″.

Escutcheon: Rose 1¾″ x 2″, or 2″ diameter, steel cast iron or plastic; stop on inside to lock against outside; emergency entrance from outside. Stops may be in knob or tubular types.

2926 *Interior doors, closet doors:*

Primed butts type 2014½ P. Primed: Size 3½″ for 1⅜″ door; size 4″ for 1¾″ door.

Mortise latch set type 28, except japanned iron cast 1⅝″ x 3⅛″ x 9/16″; front wrought steel 3½″ x 1″ compression spring iron hub, iron bolt, steel strike.

Knobs: Type 210–B glass with wrought steel shank, porcelain, plastic or steel; minimum diameter 1⅞″. Standard closet spindle.

Escutcheons: Pendant type, wrought steel, cast iron or plastic; approximately 7″ x 1¾″.

Option: Type 150, tubular or type 161, cylindrical, except steel, cast iron or die cast. Solid or two-piece front, iron, steel, or die cast bolt, steel front and strike.

Knobs: Type 210–B glass, with wrought steel shank, porcelain, plastic or steel; minimum diameter 1⅞″; turn knob head on spindle for closet interiors.

Escutcheon: Rose 1¾″ x 2″ or 2″ diameter, steel, cast iron or plastic.

2927 *Clothes closets:* 8 coat and hat hooks steel wire or cast iron.

2928 *Double acting doors:*

Set of steel floor hinges, double acting commercial spring type with wrought steel side plates having prime coat.

Push plates—beveled glass or plastic, size approximately 3″ x 12″.

2929 *Screen doors:*

Spring hinges, shall be cast iron or wrought steel japanned, surface type, size 3″ fixed tension coiled spring.

Catches shall be either rim type or tubular mortise type wrought steel or cast iron.

293 *Cabinets:*

Hinges for lipped doors—steel, prime coat, surface type exposed or semi-concealed; for flush doors, concealed pivots may be used. Knobs or pulls shall be glass, plastic, steel with zinc plating or enamel coating of similar color; or hardwood, unfinished.

Catch—friction catch.

NOTE.—Flush doors requiring no pulls or knobs preferred.

294 *Windows:*

2941 *Double hung sash:*

Sash weights and pulleys—ferrous metal.

Spiral and spring balances—ferrous metal.

Sash lock, cast iron, or wrought steel, approximate size 2½″ x ⅞″.

Hook lift, wrought steel, approximate size 1″ x 1⅝″.

2942 *Casements:*

Butts 3 x 3 type 2014½-P, for casements.

Surface bolts type 1060–A, size 6″ (for pairs of casements only).

1 only casement fastener, tee formed lever handle projecting 1½″, with wrought or cast base, approximately 1⅜ x 1 7/16″.

1 only casement adjuster, type 1000, except steel (1 to each sash).

2943 *Single casements opening out:*

Pr.— half surface steel extension hinges prime coat—to permit cleaning.

Option: Worm and gear type operator—all parts shall be steel except die cast or cast iron housing may be used.

Automatic top closer, wrought steel.

2944 Cellar windows.—Shall have complete set, wrought steel, japanned, including 1 pair hinges, 1¾ x 2¼ japanned steel, fast pin 0.06″ thick catch B 1137A hook and eye 1601C except japanned and eye for holding open.

2945 *Window screens:*

Full length, hangers, type 1825 to No. 1825–B, to suit detail; hook and eye type 1601–C, size 1½″ (unfinished).

Sliding screens—2 steel springs, japanned, 1223A.

295 *Garage hardware:*

Hinge type, type No. 2209, 12″ with steel pin, three to the door.

Thumb latch type 1189A.

Bolt type 1022B 6″.

Cane—12″ wrought steel.

Padlock eyes—No. 1540.

296 *Maintenance and management building:*

2961 *Exterior entrance doors to public space:*

To have hardware as specified for entrance doors to single units.

Stationary leaf of double doors to have chain bolt type 1025A 6″ at top and foot bolt type 1047A 6″ at bottom.

Other exterior door to have hardware as specified for entrance doors, to single units (omit letter box).

Standing half of double doors to have chain bolt type 1025A 6″ at top, foot-bolt type 1047A 6″ at bottom.

2962 *Doors to manager's office.*
Doors to superintendent's office.
Doors to other rooms indicated as requiring locks with keys, such as store rooms, shops, etc.
To have hardware as specified for interior entrance doors to units in multi-family dwellings.

2963 *Doors to private toilets.*—To have hardware as specified for bathroom doors in dwelling units substituting lock type 17 A EK with wrought steel front and strike.

2964 *Doors to public toilets other interior doors.*—To have hardware as specified for interior doors in dwelling units.

2965 *Cabinets under counter in public space.*—To have hardware as specified for cabinets.

2966 *Windows.*—To have hardware as specified under windows and casements in dwelling units.

297 *Miscellaneous:*

2971 *Padlocks.*—Padlocks for bulkheads, garages and doors to cellar spaces shall be 1½″ in size, disc tumbler, or pin tumbler construction with ferrous or die cast case.

2972 *Self-releasing fire exit devices* where required by applicable code or regulation, ferrous metal, no metallic coating.

2973 *Automatic fire door fixtures* where required by applicable code or regulation, ferrous metal, no metallic coating.

2974 *Door closing devices* for multi-family dwellings where required by applicable code or regulation, ferrous metal, no metallic coating.

2975 *Wood-venetian blind hardware*—ferrous metal, no metallic coating.

2976 *Shade fixtures*—ferrous metal, no metallic coating.

2977 *Brackets for wood hand rails*—ferrous metal, no metallic coating.

298 *Rough hardware:*

2981 *Nails and screws*, for rough and finished carpentry—ferrous metal, uncoated or non-metallic coated.

2982 *Zinc coated nails*, optional for all purposes in Hawaii and optional elsewhere for roof covering, exterior sheet metal work and wall ties; electrolytic zinc coated nails optional for exterior side wall finishes.

2983 *Wall ties*—ferrous metal non-metallic coated; zinc coated sheet metal optional for masonry veneer over frame construction.

300 ELECTRICAL

310 General:

311 *Outlets.*—The number of outlets allowed for fixtures, snap switches, convenience and special purpose receptacles for each dwelling unit shall not exceed the sum total calculated as follows:

a. Bathroom—two outlets.
b. Kitchen—four outlets.
c. Dining room or dining space—three outlets.
d. Living room—four outlets.
e. Each other habitable room—four outlets.
f. Each private hall—two outlets.
g. Each private foyer—two outlets.
h. Each exterior entrance—one outlet.
i. Utility room—three outlets.
j. Basement (1) in dwellings which do not contain a utility room—five outlets; (2) in dwellings which contain a utility room in addition to a basement—three outlets.
k. Garage—one car, two outlets; two car, three outlets. Multi-family—two outlets for each enclosed car stall.
l. Other areas, including public stairhalls, service spaces, etc.; number as determined for the individual case by the office processing the application.
m. Special purpose outlets for ranges, refrigerators and for heating, ventilating, and plumbing appliances and equipment; number as determined for the individual case by the office processing the application. (Where house is piped for gas range outlet is not eligible.)

The following items each count as one outlet provided the wiring device (or devices) is installed in one outlet box: Single snap switch—combination snap switch and convenience outlet—duplex convenience outlet—fixture outlet—combination fixture and convenience outlet—special purpose outlet.

312 *Zinc coating.*—Where zinc coated material is permitted; the coating shall not exceed 0.00065 of an inch in thickness.

320 Service entrance:

321 Nonmetallic service cables.

322 Moisture resistant cables only for underground installation in nonmetallic service raceways.

323 Service cable head.

324 Service equipment, panel boards and enclosures—nonmetallic or ferrous sheet metal enclosures: Nonmetallic coated sheet metal; zinc coated sheet metal for exterior use or where imbedded in exterior concrete or masonry. Copper or copper alloy for current

carrying parts only. Over-current devices may be fuse or automatic type, thermal or magnetic.

330 Interior wiring:

331 Covered neutral cable.

332 Insulated single conductors.

333 Nonmetallic sheathed cable.

334 Nonmetallic service cable—for range and domestic water heater circuits and for feeders from a master-service cabinet to supply other structures.

335 Armored cable—Federal Specification E–J–C–71 type—only for:

3351 Embedding in plaster.

3352 Chases or hollow spaces in masonry or concrete.

3353 Motor connections from motor outlet to motor terminal.

3354 Fishing in existing concealed spaces.

336 Flexible metal conduit—zinc coated ferrous metal—only for flexible connections to motor terminals as an extension of 337 or 338 following.

337 Electrical metallic tubing—ferrous metal.

3371 Enamelled—only for (*a*) Embedding in masonry or concrete; (*b*) housing No. 4 conductors or larger, where exposed.

3372 Zinc coated optional only for (*a*) embedding in exterior masonry or concrete; (*b*) housing No. 4 conductors or larger, where exposed on exterior of structure.

338 Rigid conduit—ferrous metal.

3381 Enamelled—optional for uses specified in 3371 above where during installation or afterwards it will be subject to severe mechanical injury.

3382 Zinc coated—optional for uses specified in 3372 above where during installation or afterwards it will be subject to severe mechanical injury.

340 Outlet boxes:

341 Nonmetallic type.

342 Ferrous type, where connected to eligible metallic raceways or armored cable, enamelled; zinc coated optional only for use specified in 3372 and 3382 above.

350 Plates and wiring devices, such as convenience and special purpose recepticles, switches and lampholders; nonmetallic plates, nonmetallic outer shells and covers for lampholders.

360 Fittings:

361 Clamps, lock-nuts, connectors, bushings and nipples—zinc or cadmium coated.

362 Hangers, straps, supports, sleeves and fastenings—ferrous metal—no metallic coating.

363 Cable connectors—Copper and copper alloy for current carrying parts only.

370 Solder.

380 Lighting fixtures.—Copper or copper alloy for current-carrying parts only; nonmetallic shells and covers for sockets.

381 Interior—nonmetallic type or light gauge ferrous sheets, spun, stamped or drawn with nonmetallic protective coating and nonmetallic shades and reflectors.

382 Exterior—nonmetallic or ferrous fixtures with nonmetallic coating. (Metal posts for supporting fixtures are not allowed.)

390 Low tension communication assemblies.—such as bells and door lock releases—only for multi-family dwelling structures. Private telephones not allowed.

400 PLUMBING AND GAS DISTRIBUTION

410 General:

411 Eligible materials and quantities are limited to those necessary to meet minimum requirements of the Emergency Plumbing Standards for Defense Housing issued by the Defense Housing Coordinator with an allowance of not to exceed 10 percent where required for variation in layout.

412 Each dwelling unit is eligible for the installation of not to exceed the following fixtures: 1 single or double laundry tray; 1 single compartment kitchen sink or 1 combination sink and laundry tray. Ferrous metal allowed for under sink cabinet only where it is required to support sink—nonmetallic cabinet and drain board preferred; choice of a tub or shower stall; 2 water closets; and 1 lavatory.

420 Fixtures, fixture fittings and trimmings:

421 *Fixtures:*

Vitreous, cast, or stamped ferrous metal, no metallic coating; bonderized, galvanized finish allowed for shower compartments only. No shower stall doors allowed. Ferrous metal single or double laundry trays not allowed.

Nonmetallic fixtures should be used where practicable.

422 *Fixture fittings and trimmings:*

Ferrous or die cast zinc; brass base metal allowed only where former not available.

Exposed metal, where other than rough surface is desired, to be finished by nonmetallic coating. Either gun metal or emery finish for painting or lacquering is suggested.

Escutcheons, closet tank balls and floats to be nonmetallic except for spuds.

No brass or copper is to be used in handles.

All drawn tubing and fittings to be no heavier than 20 gauge.

The use of brass for fixture fittings and trimmings is permissible in the fittings described in 4221 through 4226, inclusive, except where materials are specifically designated.

4221 *Bathtub fittings:*
Over rim tub supply fitting with ½" valves, with or without transfer valve for shower. Copper or brass not allowed for connecting pipes, shower arm, escutcheon or head. Valve inlets to be tapped ½" I. P. S., no brass or copper, except for sweated adapter, to be used in unions.
Double bath faucet—½" valves.
Outlet plug and strainer for waste and overflow.
Trap—ferrous or lead.

4222 *Shower stall fitting:*
Hot and cold shower valve assembly with ½" valves. Copper or brass not allowed for connecting pipes, shower arm, escutcheon or head. Valve inlets to be tapped ½" I. P. S., no brass or copper, except for sweated adapter, to be used in unions.
Receptor shower grid.
Trap—ferrous or lead.

4223 *Lavatory fittings:*
½" compression faucets.
Combination lavatory fitting to include also through the back fitting. No pop-up waste assembly.
Wrought outlet plug with 1¼" tailpiece not over 4" long.
Trap—ferrous or lead.

4224 *Water closet fittings:*
Flush valve, not to include overflow pipe. Ball Cock, not to include float or hush tube.
Tubing flush Ell, 2" x 4" x 6".
Seat hinges with either (*a*) brass bearing surfaces only, or (*b*) not more than one pair of brass bolts or studs and nuts and one pair of hinges per unit. No crossbars or hinges for cover.

Note.–Rubber Seats Not Allowed.

4225 *Kitchen sink fittings:*
Combination swing spout faucet, either exposed, or concealed for deck installation, no metallic soapdish, no transfer valve, spout to be not over 6" long.
Separate ½" compression faucets, solid flange, tapped female.
Strainer with metal grid and tailpiece. Where combination sink and tray is used, tailpiece of tray plug to be not more than 4" long.
Trap—ferrous or lead.

4226 *Laundry tray fittings:*
Combination rough brass swing spout tray faucet, brass limited to valve body assembly and spout.
Separate ½" faucets.
Wrought outlet plug with tailpiece not over 4" long.
Trap—ferrous or lead.

430 Sanitary drainage system:
431 Soil pipe, fittings, cleanouts, plugs, floor drains and ferrules—cast iron.
432 Screw pipe and fittings.
4321 Screw pipe—galvanized steel or galvanized wrought iron.
4322 Screw pipe fittings—galvanized malleable iron, or cast iron, no metallic coating.
433 Lead pipe, fittings and solder.
4331 Lead pipe.
4332 Solder nipples and ferrules—brass.
4333 Solder.
434 Caulking lead.
435 Flashing—ferrous sheet metal not heavier than 26 gauge; no metallic coating, phosphate treated, or zinc coated not to exceed 1¼ ounces per square foot total coating both sides, or 2½ pound hard lead or 4 pound soft lead.
436 Hangers, supports and miscellaneous iron—ferrous metal no metallic coating.
437 Sump pump or ejector assembly.

440 Water supply:
441 Water supply pipe—ferrous metal zinc coated or cement lined, or lead.
442 Water supply pipe fittings—as for 441.
443 Valves—brass for 1½" size or smaller, ferrous metal with brass stem, seats, and discs for larger sizes.
4431 Shut-off valves.
4432 Relief valves.
4433 Sill cocks—not more than two per dwelling unit for one family, two family and row house structures, and not more than eight per gross acre for multi-family dwellings.
4434 Pressure reducing valves
444 Hangers and supports and miscellaneous iron—ferrous metal, no metallic coating.

450 Domestic hot water heaters and storage tanks.—Ferrous metal uncoated or nonmetallic coated or zinc coated where water conditions require it. Copper allowed only for current carrying parts of electric type. Boiler stands, ferrous metal, no metallic coating.
No metal jackets for tank insulation.
Maximum tank capacity limited to 20 gallons per dwelling unit, except a maximum tank capacity of 30 gallons is

permissible for electric type and where tank is used with coal burning equipment without controls.

Where the water pressure is under 75 pounds, the tank test not to exceed 250 pounds and the working pressure not to exceed 106½ pounds; where the water pressure is in excess of 75 pounds, the tank test pressure not to exceed 300 pounds and the working pressure not to exceed 127½ pounds.

451 Direct fired coils for boilers or furnaces, with storage tank.

452 Direct fired coil, fin or tube heaters with storage tank.

453 Tank type—direct fired gas, oil or coal; or electric.

454 Direct fired water jacket type with storage tank.

455 Indirect coil type with storage tank or instantaneous.

460 Control equipment for domestic hot water heating.—Ferrous metal with brass held to minimum necessary.

4621 Safety valves—pressure relief, temperature relief or combination pressure and temperature relief.

4622 Operating and safety controls.

4623 Gas shutoff valves.

470 Water softeners:

471 Tanks—ferrous metal, no metallic coating.

472 Valves—brass for 1½″ size or smaller, ferrous metal with brass stem, seats, and discs for larger sizes.

480 Gas distribution:

481 Pipe, fittings, hangers, supports and fastenings—ferrous metal, no metallic coating.

482 Regulators—ferrous metal with brass held to minimum necessary.

483 Valves and cocks—brass for 1½″ size or smaller, ferrous metal with brass stem, seats, and discs for larger sizes.

500 HEATING

510 General:

511 The maximum net hourly output capacity of the heating unit or system as determined in 514 or 515 hereof is the capacity—after deductions have been made for piping and pickup, attached domestic water heaters, and non-dwelling heating loads—available to provide for the total hourly heat loss of the dwelling it heats. Such maximum net hourly output capacity in B. t. u. shall not exceed 66 times the dwelling area in square feet or 80,000 B. t. u. per dwelling unit, whichever is the smaller.

512 The total hourly heat loss of a dwelling shall not exceed such maximum net output capacity and shall be determined in accordance with the data and methods described in the current edition of the "Guide" of the American Society of Heating and Ventilating Engineers or by an alternate method which results in not less than the amount determined by the "Guide" method. Such total hourly heat loss shall be based on maintaining 70° F. inside the dwelling when the outside temperature is at the design temperature for the locality. (Spaces such as unheated garages, attics and basementless spaces shall be calculated at outside design temperature.) Storm windows and doors furnished shall be credited with the heat loss reduction they effect.

513 Dwelling area is the total area used for dwelling purposes contained within the exterior walls at each principal floor level excluding garage and unfinished storage space but including only the finished area of any living, sleeping, dining or kitchen space located in the basement or attic.

514 Prior to sixty days after the effective date of this Defense Housing Critical List, the maximum net hourly output capacity shall be determined from catalog ratings in effect on said effective date. On or after sixty days after the effective date of this Defense Housing Critical List only equipment rated in accordance with 515 hereof shall be eligible. Equipment may be rated within a range of specified firing rates selected by the manufacturer if at any firing rate within that range its performance certified by the manufacturer to have been determined by test is within the limitation of the applicable code or standard specified in 515.

515 Except as provided in 514 hereof, the maximum net hourly output capacity is determined as follows:

5151 *Floor furnace:*

Gas-fired—90 percent of published, listed, or labeled output rating determined in accordance with the current "Commercial Standard" or "Recommended Commercial Standard for Gas Floor Furnace—Gravity Circulating Type," or 90 percent of the A. G. A. output rating.

Oil-fired—90 percent of the manufacturer's certified output rating at 70 percent or higher efficiency.

5152 *Space heater:*

Hand-fired or coal or wood—90 percent of manufacturer's certified output rating at 60 percent or higher efficiency.

Gas-fired—90 percent of A. G. A. output rating.

Oil-fired—100 percent of the published, listed, or labeled rating determined in accordance with the current "Commercial Standard" or "Proposed Commercial Standard for Flue Connected Oil Burning Space Heater Equipped with Vaporizing Pot Type Burners."

5153 *Pipeless gravity furnace:*

Hand-fired coal—90 percent of the manufacturer's certified register output at 55 percent or higher efficiency.

Oil-fired—90 percent of the manufacturer's certified register output at 70 percent or higher efficiency.

5154 *Gravity furnace:*
Hand-fired coal—110 percent of the manufacturer's certified "Standard Gravity Code" rating in square inches leader area times 136 B. t. u.
Mechanically fired (conversion installations) same as for hand-fired.
Gas-fired (furnace-burner unit) 75 percent of A. G. A. bonnet output rating.
Oil-fired (furnace-burner unit) 75 percent of the manufacturer's certified bonnet output at 70 percent or higher efficiency.

5155 *Forced warm air furnace:*
Hand or mechanically fired coal (gravity rated furnace with fan conversion) 100 percent of the manufacturer's certified "Standard Gravity Code" leader pipe area in square inches times 180 B. t. u.
Gas-fired (fan-burner-furnace unit) 85 percent of A. G. A. output rating.
Oil-fired (fan-burner-furnace unit) 85 percent of the output rating as determined by the "Recommended Code of the N. W. A. H. & A. C. A. for Testing and Rating Oil-Fired, Fan-Furnace Combinations."
Stoker-fired (fan-burner-furnace unit) 85 percent of manufacturer's certified output rating at 70 percent or greater bonnet efficiency.

5156 Boiler (only for heating systems serving two or dwelling units or for extensions of existing more plants to service additional living accommodations).
Gas-fired—65 percent of A. G. A. output rating.
Hand-fired or mechanically fired (all fuels) 100 percent of current I. B. R. net rating for cast iron boilers, or 100 percent of net rating certified by the manufacturer to have been obtained by test procedure in accordance with the I. B. R. Testing and Rating Code less (in each case) 12,000 net B. t. u. per dwelling unit for domestic hot water heated indirectly by the heating boiler.

516 Limitation on gas-fired equipment: The use of gas-fired equipment for heating space is subject to the availability of natural or mixed natural and manufactured gas from the utility company servicing the project. In addition, in areas where prohibitions or restrictions on deliveries of such gas for gas-fired equipment for heating space are imposed by the War Production Board, proof must be submitted establishing exemption from such prohibitions or restrictions.

PERMISSIBLE INSTALLATIONS

520 Overflow heaters:
521 Floor furnaces and pipeless gravity furnaces—ferrous metal—no metallic coating.
5211 Registers—stamped, fabricated or cast ferrous metal—no metallic coating.
522 Space heaters, stoves and other similar heating devices—ferrous metal—no metallic coating.

530 Warm air distribution systems:
531 Furnaces—ferrous metal—no metallic coating.
5311 Fans, blowers and motors—for forced warm air systems.
5312 Filters—for forced warm air systems—nonmetallic containers and filter material with ferrous metal grid.
5313 Humidifiers—including parts and piping nonmetallic or ferrous metal—nonmetallic coated except for optional zinc coated piping.
532 *Distribution materials:*
5321 Ducts, connections, fittings, hangers, and fastenings—(*a*) ferrous sheet metal, untreated or phosphate treated; (*b*) zinc coated ferrous sheet metal fittings for concealed composition duct work.
5322 Limitations—eligible materials and quantities limited to those necessary to meet the minimum sheet metal requirements of the current standards of the National Board of Fire Underwriters, Pamphlet No. 90. The following are not eligible: Sheet metal double ducts, sheet metal return ducts beyond 6 feet from the heater, sheet metal heavier than 26 U. S. gauge.
5323 Registers and grilles—(*a*) stamped, fabricated or cast ferrous metal—no metallic coating.

540 Steam or hot water systems (only for heating systems serving two or more families or for extensions of existing plants to service additional living accommodations).
541 Boilers—ferrous metal with brass safety devices and cocks limited to minimum practicable and with pressure gauges for steam boilers and combination temperature and altitude gauges for hot water boilers. Metal jackets not allowed.
542 *Distribution materials:*
5421 Piping—ferrous metal—no metallic coating.
5422 Fittings—cast ferrous metal—no metallic coating.
5423 Valves—no metallic coating—brass for 1½" size and less; ferrous metal elsewhere except seats, discs and stems; (*a*) flow control valve for forced circulation hot water systems; (*b*) check, blow-off, gate, glove, cock, radiator; (*c*) air valves.

5424 Traps, for multi-family steam systems; (*a*) radiator —brass, no metallic coating; (*b*) boiler return, blast, bucket, float and thermostatic.
5425 Radiators and convectors—ferrous metal, no metallic coating and no metal enclosure.
5426 Hangers, brackets and fastenings—ferrous metal, no metallic coating.

543 *Accessories:*
5431 Pump assemblies—water circulators, condensation and return line vacuum.
5432 Expansion tanks for hot water systems—ferrous metal, no metallic coating.

550 Firing equipment:
551 Oil and gas burners.
552 Coal stokers, hopper type—for multi-family systems only. No metallic coating.
553 Oil storage tanks—ferrous metal, no metallic coating, size not to exceed 275 gallons capacity for tanks serving three units or less and to not more than 100 gallons per dwelling unit for tanks serving four dwelling units or more.
554 Oil line pumps.
555 Vent, fill and oil line piping and fittings—ferrous metal. no metallic coating.

560 Control equipment:
561 Electric material as allowed under 330, 340, 350, 360, and 370 of Electrical Section.
562 Relays and solenoids.
563 Damper regulators.
564 Thermostats (room, aquastats, air stats, combination fan and limit controls, combustion safety controls.)
565 Pressure controls.
5651 Pressure reducing valves.
5652 Pressure stats.
5653 Pressure relief valves.
566 Shut off cocks for gas heaters, furnaces and boilers.

570 Breechings and smokepipe.—Ferrous metal, no metallic coating. Breechings for multi-family heating systems may include necessary clean-out doors.

580 Vents and flues.—For heating equipment in demountable houses—ferrous metal, no metallic coating. Vents may include necessary casings, supports and connections. "Demountable houses" may include all prefabricated structural enclosures for dwelling purposes.

600 HOUSEHOLD EQUIPMENT

610 Ranges of the type available in the industry.

620 Refrigerators of the type available in the industry.

630 Incinerator equipment for multi-family dwellings only. Incinerator proper and flue of nonmetallic material.

631 Fire and ash doors, gratings, lintels, frames, and anchors —ferrous metal, no metallic coating.
632 Chimney screen mesh—ferrous metal zinc coated.
633 Hopper doors and hardware—ferrous metal, no metallic coating.
634 Firing equipment and connections as allowed in 330, 340, 350, 360, 370 of Electrical Section; 481, 483 of Gas Distribution Section; and 551, 553, 555 of Heating Section.

700 LAND DEVELOPMENT AND UTILITY SERVICE

710 General.—Land development and utility service items purchased or installed by a public utility are not eligible under Housing Preference Rating Orders. The following items are eligible only when they are an integral part of the housing project and are included in the contract for contracting the project.

720 Water supply and distribution:
721 *Wells:*
7211 Reinforcing steel for dug well slabs. Casings—ferrous metal, no metallic coating or
7212 Zinc coated optional.
722 *Pumps and pumping equipment:*
7221 Shallow and deep well pumps and pumping equipment, including motors and incidental electric wiring and control equipment.
7222 Pressure tank—ferrous metal, nonmetallic or zinc coated optional. Capacity not to exceed 42 gallons per dwelling unit except where wells yield less than 3 gallons per minute.
723 Pipe and fittings—concrete preferred; asbestos cement, ferrous metal, nonmetallic coated; zinc coated optional for 2 inch and smaller sizes, or lead.
724 Caulking lead and solder.
725 Valves and cocks—ferrous metal with brass stems, seats and discs; brass for 1½" and smaller sizes.
726 Valve and meter boxes and covers—ferrous metal no metallic coating for boxes 6" in diameter and smaller and for covers and frames for all boxes.
727 Fire hydrants—ferrous metal with brass for working parts only.
728 Storage reservoirs, tanks and supports.
7281 Reinforcing steel.
7282. Supports for elevated tanks—ferrous metal, no metallic coating—nonmetallic tanks only.
729 Meters—master only.

730 Gas distribution:
731 Pipe and fittings—ferrous metal, no metallic coating.
732 Valves and cocks—ferrous metal with brass stems, seats and discs; brass for 1½ inch and smaller sizes.
733 Containers for liquified petroleum products—ferrous metal, no metallic coating.

734 Meters—master and individual.
735 Pressure regulators.
736 Valve and meter boxes and covers—ferrous metal, no metallic coating for boxes 6″ in diameter and smaller and for covers and frames of all boxes.

740 Electric distribution:
741 Pole hardware and guys—ferrous metal, no metallic coating.
742 Conductors, connectors and fittings—copper or copper alloy for current carrying parts only; otherwise ferrous metal, no metallic coating.
743 Raceways and fittings—nonmetallic underground; zinc coated ferrous metal optional where installed in fill under roads and where exposed.
744 Transformer and protective equipment—ferrous metal, no metallic coating; copper or copper alloy for current carrying parts.
745 Manhole and vault equipment—ferrous metal, no metallic coating.
746 Auxiliary equipment—ferrous metal, corrosion resisting finish; copper or copper alloy for current carrying parts.
747 Meters—master and individual.

750 Drainage:
751 Reinforcing steel for drainage culverts and inlets.
752 Angles, frames and gratings for drainage inlets—ferrous metal, no metallic coating.

760 Sewerage treatment and pumping plants (metal septic tanks not allowed.
761 Reinforcing steel for structural elements.
762 Pipe and fittings—ferrous metal, no metallic coating.
763 Caulking lead.
764 Valves—ferrous metal with brass stems, seats and discs; brass for 1½″ and smaller sizes.
765 Pumps and pumping equipment, including motors and incidental electric wiring and control equipment.

770 Utility service manholes, vaults, and pits.
771 Reinforcing steel for self-supporting slab covers.
772 Manhole covers and frames—ferrous metal, no metallic coating.
773 Step bars—ferrous metal, no metallic coating.

780 Anchors, dowels, tie rods and bolts with nuts and washers.

U. S. GOVERNMENT PRINTING OFFICE: 1942