

CRITICAL MATERIAL LISTS
FOR
FPHA STANDARD BUILDING ELEMENTS

As Approved by WPB

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INDEX OF STANDARD PLAN TYPES & PRINCIPAL VARIATIONS

Revised March, 1943

Bldg. No.	Building Element	Persons	Type Heat	Construction
<u>SERIES WD-1. FRAME DORMITORIES</u>				
1	Wing 1S-SR	36	FWA	Frame
2	Wing 1S-DR	36	FWA	Frame
3	Wing 2S-SR	64	FWA	Frame
5	Wing 2S-DR	64	FWA	Frame
9	Service Unit 2S-NB-2W	128 Wom.	FWA	Frame
10	Service Unit 1S-NB-2W	72 Wom.	FWA	Frame
<u>SERIES TDU-1. TEMPORARY FAMILY DWELLING UNITS (1-STORY)</u>				
19	0-Bedroom Unit	1 Family	Ind.	Frame
20	1-Bedroom Unit	" "	"	"
21	2-Bedroom Unit	" "	"	"
22	3-Bedroom Unit	" "	"	"
<u>SERIES TDU-2. TEMPORARY FAMILY DWELLING UNITS (2-STORY)</u>				
33	0-Bedroom Unit	" "	"	"
34	1-Bedroom Unit	" "	"	"
35	2-Bedroom Unit	" "	"	"
36	3-Bedroom Unit	" "	"	"
37	105' Building	Varies	Group FWA	"
39	70' Building	"	" "	"
41	170' Building	"	" FHW	"
44	90' Building	"	" "	"
<u>SERIES TDU-3. TEMPORARY FAMILY DWELLING UNITS (1-STORY)</u>				
47	0-Bedroom Unit	1 Family	Ind.	Masonry
48	1-Bedroom Unit	" "	"	"
49	2-Bedroom Unit	" "	"	"
50	3-Bedroom Unit	" "	"	"
<u>SERIES WA-1. DORMITORY APARTMENTS</u>				
51	Wing - 16 Apartments	32	FWA	Std. Frame
52	" " "	"	FHW	" "
55	Service Unit - 32 Apartments (2-Wing)	64	FWA	" "
56	" " " " (2-Wing)	"	FHW	" "

INDEX OF VARIATION LETTERS
DORMITORIES, DORMITORY APARTMENTS AND FAMILY DWELLING UNITS

The variation letters employed throughout this Critical Material List indicate the following:

GROUP I:

- Variation X-1: Wood frame walls and wood frame floor construction
- Variation X-2: Wood frame walls and concrete floor slab on ground
- Variation X-3: Masonry exterior walls and wood frame floor construction
- Variation X-4: Masonry walls and partitions - concrete floor slab on ground

GROUP II: SPACE AND DOMESTIC WATER HEATING EQUIPMENT - GROUP OPERATED:

- Variation A: Coal Space Heating +15 degrees design temperature;
Coal Water Heating
- Variation C: Coal Space Heating 0 degrees design temperature;
Coal Water Heating
- Variation D: Coal Space Heating 20 degrees design temperature;
Coal Water Heating
- Variation E: Oil Space Heating +15 degrees design temperature;
Oil Water Heating
- Variation G: Oil Space Heating 0 degrees design temperature;
Oil Water Heating
- Variation H: Oil Space Heating -20 degrees design temperature;
Oil Water Heating
- Variation I: Gas Space Heating +15 degrees design temperature;
Gas Water Heating
- Variation L: Gas Space Heating 0 degrees design temperature;
Gas Water Heating
- Variation M: Gas Space Heating -20 degrees design temperature;
Gas Water Heating

GROUP IIa: COOKING EQUIPMENT - IN CONNECTION WITH GROUP OPERATED PLANTS:

- Variation R: Gas Range
- Variation T: Oil Range

GROUP III: SPACE & DOMESTIC WATER HEATING & COOKING EQUIPMENT, INDIVIDUAL:

- Variation N: Coal Range, Storage Tanks
- Variation O: Coal Range, Storage Tank, Chimney Heater
- Variation P: Coal Range, Storage Tank, Coal Space Heater
- Variation R: Gas Range, Gas Water Heater, Coal Space Heater
- Variation S: Gas Range, Gas Water Heater, Gas Space Heater
- Variation T: Oil Range, Oil Water Heater, Oil Space Heater

THE COMPLETE WORKING LIST FOR EACH PROJECT SHALL INCLUDE ALL OF THE UNMARKED ITEMS AND APPLICABLE VARIATION ITEMS AS SELECTED.

POSSIBLE COMBINATIONS OF VARIATIONS
FOR
HEATING AND COOKING

TYPE	SPACE HEATING		WATER HEATING		COOKING
	Group	Individual	Group	Individual	
Dormitories and Dormitory Apartments	A C D E G H I L M		A C D E G H I L M		
Family Dwelling Units, Group-operated heating	A C D E G H I L M		A C D E G H I L M		R R R T T T R R R
Family Dwelling Units, Individually-operated heating		* O P R S T		N O P R S T	N O P R S T
*Space heating is provided by cooking range.					

INDEX OF VARIATION LETTERS

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- Variation X-3: Masonry exterior walls and wood frame floor construction.
- Variation X-4: Masonry walls and partitions, concrete floor slab on ground.

GROUP II - SPACE AND DOMESTIC WATER HEATING EQUIPMENT, GROUP OPERATED:

- Variation A: Coal Space Heating +15 degree design temperature,
Coal Water Heating
- Variation C: Coal Space Heating 0 degree design temperature,
Coal Water Heating
- Variation D: Coal Space Heating -20 degree design temperature,
Coal Water Heating
- Variation E: Oil Space Heating +15 degree design temperature;
Oil Water Heating
- Variation G: Oil Space Heating 0 degree design temperature,
Oil Water Heating
- Variation H: Oil Space Heating -20 degree design temperature,
Oil Water Heating
- Variation I: Gas Space Heating +15 degree design temperature,
Gas Water Heating
- Variation L: Gas Space Heating 0 degree design temperature,
Gas Water Heating
- Variation M: Gas Space Heating -20 degree design temperature,
Gas Water Heating

COMPLETE WORKING LIST FOR EACH PROJECT SHALL INCLUDE ALL
OF THE UNMARKED ITEMS AND APPLICABLE VARIATION ITEMS AS
SELECTED.

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-1, Dormitories Building Element: 1S-SR (1 wing)
No. Persons Served: 36 No. Rooms: 36 Heating System: Forced warm air
Type Construction: 1 story frame - concrete floor on earth or wood frame floor

-WPB Approved List-

Crit.	Var.	Critical Material PER WING	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen	lf. 470	61	Steel 49, zinc 12
280		Glazing points		4	Zinc 4
290		Builders hardware			
		Fire door	no. 1		
		Doors - outside	no. 2		
		Doors - inside	no. 36		
		Windows in rooms	no. 72		
		Stop draft doors	no. 1		
		Door closers	no. 2		
		Fire exit bolts	no. 2		
		Total builders hardware		275	Steel 261, Brass 14
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		1062	Steel 1062
	X-1	Galv.		90	Steel 85, zinc 5
	X-2	Plain		900	Steel 900
	X-2	Galv.		75	Steel 71, zinc 4
300		ELECTRICAL - 1 phase, 3 wire			
		Fire Alarm System (wiring & equipment)		13	Steel 7, copper 6
320		Panelboards - No. circuits 6	no. 1	14	Steel 12, Cu 2
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	lf. 1760	22.6	Copper 22.6
340		Outlet boxes (nonmetallic)	no. 52		
350		Switches	no. 3	0.6	Steel 0.3, Cu 0.3
		Receptacles	no. 2	0.4	Steel 0.2, Cu 0.2
360		Straps Misc.		4.3	Steel 4.3
370		Solder		1.0	
380		Fixtures	no. 47	20.0	Steel 14.1, Cu 5.9
500		HEATING			
530		Ducts (nonmetallic)			
		Metal for connection, dampers, hangers, etc.		188	Steel 188
		Registers & grilles 8 x 4	no. 36	72	Steel 72



CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-1, Dormitories Building Element: 1S-DR (1 wing)
No. Persons Served: 36 No. Rooms: 18 Heating System: Forced warm air
Type Construction: 1 story frame, concrete floor on earth or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER WING	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen	sf. 347	45	Steel 41, zinc 4
280		Glazing points		3	Zinc 3
290		Builders hardware			
		Fire door	no. 1		
		Doors - outside	no. 2		
		Doors - inside	no. 18		
		Windows in rooms	no. 54		
		Stop draft doors	no. 1		
		Door closers	nc. 2		
		Fire exit bolts	no. 2		
		Total builders hardware		200	Steel 190, brass 10
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		970	Steel 970
	X-1	Galv.		85	Steel 81, zinc 4
	X-2	Plain		830	Steel 830
	X-2	Galv.		69	Steel 65, zinc 4
300		ELECTRICAL - 1 phase, 3 wire			
		Fire alarm system (wiring and equipment)		13	Steel 7, copper 6
320		Panelboards - No. circuits 6	no. 1	14	Steel 12, copper 2
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	lf 1640	20.1	Copper 20.1
3		Outlet boxes (nonmetallic)	no. 50		
350		Switches	no. 3	0.6	Steel 0.3, copper 0.3
		Receptacles	no. 3	0.6	Steel 0.3, copper 0.3
360		Straps, misc.		4.2	Steel 4.2
370		Solder		1.0	
380		Fixtures	no. 44	19	Steel 13, copper 6
500		HEATING			
530		Ducts (nonmetallic)			
		Metal allowed for conn., dampers, hangers, etc.		139	Steel 139
		Registers & grilles 10 x 4	no. 18	45	Steel 45

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-1, Dormitories Building Element: 2S-SR (1 wing)
No. Persons Served: 64 No. Rooms: 64 Heating System: Forced warm air
Type Construction: 2 story frame, concrete first floor on earth or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER WING	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen	sf. 685	89	Steel 81, zinc 8
280		Glazing points		8	Zinc 8
290		Builders hardware			
		Fire door	no. 2		
		Doors - outside	no. 4		
		Doors - inside	no. 64		
		Windows in rooms	no. 130		
		Stop draft doors	no. 2		
		Door closers	no. 4		
		Fire exit bolts	no. 4		
		Total builders hardware		510	Steel 483, brass 27
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		1580	Steel 1580
	X-1	Galv.		123	Steel 117, zinc 6
	X-2	Plain		1440	Steel 1440
	X-2	Galv.		100	Steel 95, zinc 5
300		ELECTRICAL - 1 phase, 3 wire			
		Fire alarm system (wiring and equipment)		13	Steel 7, copper 6
320		Panelboards - No. circuits 6	no. 2	27	Steel 24, copper 3
330		Nonmetallic cable (equiv. 1/2 single wire)			
		#14 wire	1/2 3490	45	Copper 45
		Outlet boxes (nonmetallic)	no. 102		
340		Switches	no. 8	1.6	Steel 0.8, copper 0.8
		Receptacles	no. 8	1.6	Steel 0.8, copper 0.8
360		Straps, misc.		8.5	Steel 8.5
370		Solder		2	
380		Fixtures	no. 86	37	Steel 26, copper 11
500		HEATING			
530		Ducts (nonmetallic)			
		Metal for connections, dampers; hangers, etc.		320	Steel 320
		Registers & grilles 8 x 4	no. 64	128	Steel 128

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-1, Dormitories Building Element: 2S-DR (1 wing)
No. Persons Served: 64 No. Rooms: 32 Heating System: Forced warm air
Type Construction: 2 story frame, concrete first floor on earth or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER WING	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen	sf. 525	68	Steel 62, zinc 6
280		Glazing points		6	Zinc 6
290		Builders hardware			
		Fire door	no. 2		
		Doors - outside	no. 4		
		Doors - inside	no. 32		
		Windows in rooms	no. 98		
		Stop draft doors	no. 2		
		Door closers	no. 4		
		Fire exit bolts	no. 4		
		Total builders hardware		382	Steel 363, brass 19
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		1380	Steel 1380
	X-1	Galv.		105	Steel 100, zinc 5
	X-2	Plain		1260	Steel 1260
	X-2	Galv.		80	Steel 76, zinc 4
300		ELECTRICAL - 1 phase, 3 wire			
		Fire alarm system (wiring and equipment)		13	Steel 7, copper 6
320		Panelboards - No. circuits 6	no. 2	27	Steel 24, copper 3
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	lf 3000	38.5	Copper 38.5
		Outlet boxes (nonmetallic)	no. 94		
350		Switches	no. 8	1.6	Steel 0.8, copper 0.8
		Receptacles	no. 6	1.2	Steel 0.6, copper 0.6
360		Straps, misc.		7.8	Steel 7.8
370		Solder		2	
380		Fixtures	no. 80	34	Steel 24, copper 10
500		HEATING			
530		Ducts (nonmetallic)			
		Metal for connections, dampers, hangers, etc.		246	Steel 246
		Registers & grilles 10 x 4	no. 32	80	Steel 80

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-1, Dormitories Building Element: Service Unit 1S-NB-3W
No. Persons Served: 108 No. Rooms: - Heating System: Forced Warm Air
Type Construction: 1 story masonry or frame walls, concrete floor on earth

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
		Outside fire alarm (split rim and hammer)		20	Steel 20
210		Reinforcing steel, tie wire and concrete accessories		100	Steel 100
240		Insect screen	sf. 438	57	Steel 51, zinc 6
260		Sheet metal flashings, chimney only		20	Steel 18, zinc 2
280		Glazing points		2	Zinc 2
290		Builders hardware			
		Doors - outside	no. 6		
		Doors - inside	no. 31		
		Windows - inc. corridor	no. 35		
		Coal doors	no. 1		
		Fire doors	no. 1		
		Door closers	no. 8		
		Fire exit bolts	no. 4		
		Misc. cab. & locker hardware	no. 30		
		Total builders hardware		330	Steel 315, brass 15
		Nails, screws etc.			
	X-2	Plain		1108	Steel 1108
	X-2	Galvanized		84	Steel 80, zinc 4
	X-4	Plain		677	Steel 677
	X-4	Galvanized		50	Steel 47, zinc 3
300		ELECTRICAL			
320		Entrance - 200A-3P-2B & SN	no. 1	31	Steel 24, copper 7
		Panelboards:			
		Cir. 12 - 2P - 30A	no. 1	60	Steel 53, copper 7
	EGH	Cir. 2 - 1P - 30A	no. 1	5	Steel 4.5, copper 0.5
330		Conductors (equiv. l.f. single wire)			
		#14 wire	lf. 2225	30	Copper 30
	EGH	#14 wire	lf. 60	1	Copper 1
		# 12 wire	lf. 110	2	Copper 2
		# 8 wire	lf. 600	30	Copper 30
		# 0 wire	lf. 100	32	Copper 32
340		Outlet boxes - nonmetallic	no. 77		
350		Switches	no. 16	3	Steel 1.5, copper 1.5
		Receptacles	no. 16	3	Steel 1.5, copper 1.5
360		Straps, misc.		6	Steel 6
370		Solder		2	Solder 2
380		Fixtures	no. 45	19	Steel 13.7, cu 5.3
400		PLUMBING			
420		Fixture trim		385	CI 281 stl 65 Br 24 Ru 5
430		CI pipe and fittings			
		Size 4"	lf. 65		
		Size 3"	lf. 215		
		Size 2"	lf. 180		
		Subtotal pipe & fittings	lf. 460	3693	CI 3693 (inc screw ftg)

Series WD-1, Dormitories
Service Unit 1S-NB-3W
Persons Served: 108

List No. 8
Sheet 2 of 3
March 15, 1943

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 Cont.		Galv. steel pipe Size 2" Size 1-1/2" Size 1-1/4" Subtotal steel pipe (If lead is used for roughing make-up of waste pipe, the subtotal of 567 pounds will change to)	lf. 40 lf. 133 lf. 7 lf. 180 . . .	567 613	Steel 538, zinc 29 CI 16, Steel 462 Zinc 25, Lead 110 Lead 7 1/4 CI 2 1/4, steel 90
440		Calking and flashing lead Misc. hangers, etc. Galv. water pipe & fittings Size 2" Size 1-1/2" Size 1-1/4" Size 1" Subtotal pipe & fittings Size 3/4" Size 1/2" Size 3/8" Subtotal pipe & fittings Misc. hangers, etc. Valves and cocks	 lf. 16 lf. 91 lf. 81 lf. 111 lf. 299 lf. 166 lf. 426 lf. 150 lf. 742 no. 16	 776 730 97 47	 Steel 641 Zinc 33 CI 102 Steel 613 Zn 30 CI 87 CI 29, steel 68 Brass 42, CI 5
450	ACD ILM EGH	Water Heaters 75 GPH/100° rise coal htr. 80 GPH/100° rise auto. gas htr. 100 GPH/100° rise auto. oil storage type with 100 gal. self contained tank	no. 1 no. 1 no. 1	405 393 950	CI 405 CI 30 Stl 350 Br 5 Zn 8 CI 300 Stl 628 Zn 14 Cu 8
460	ACD ILM ACD E-M	150 gallon storage tank Flue pipe, 24 gage Flue pipe, 24 gage Control Equipment Pressure relief valve Temperature relief valve Thermometer	no. 1 sf. 30 sf. 25 no. 1 no. 1 no. 1	300 30 25 1 1 2	Steel 300 Steel 30 Steel 25 Brass 1 Brass 1 Brass 1, CI 1
480	ACD ILM	Auto. damper regulator Black gas pipe & fittings Size 2" Size 1" Subtotal pipe & fittings	no. 1 lf. 25 lf. 15 lf. 40	11 150	CI 7 Steel 3 Brass 1 Steel 120, CI 30
	ILM ILM	Misc. hangers, etc. Valves and cocks	 no. 3	15 17	CI 5, steel 10 Brass 17
500 530		HEATING Heaters - Warm Air Furnaces			
	A	+15° coal Btu 765,000	no. 1	5900	CI 5340, Steel 560
	C	0° coal Btu 750,000	no. 1	5900	CI 5340, Steel 560
	D	-20° coal Btu 880,000	no. 1	7730	CI 7080, steel 650
	EI	+15° oil & gas Btu 700,000	no. 1	5625	CI 5065, steel 560
	GL	0° oil & gas Btu 750,000	no. 1	5625	CI 5065, steel 560
	HM	-20° oil & gas Btu 880,000	no. 1	7410	CI 6760, steel 650
		Blower 6200 CFM	no. 1	372	CI 30, steel 342
		Motor 2 HP and controls	no. 1	125	CI 47 Stl 47 Cu 25 Ru 6

List No. 8
Sheet 2 of 3

Series WD-1, Dormitories
 Service Unit 1S-NB-3W
 Persons Served: 108

List No. 8
 Sheet 3 of 3
 March 15, 1943

Cr st . Li No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
530 Cont.		Propeller type exhaust fan, 10" size complete with auto. shutter	no. 3	66	CI 15, steel 48, cu 3
		Ducts, metal allowed for ftgs. fasteners, hangers, etc. and metal relief duct and 3 l.f. at furnace	lf. 200	560	Steel 560
550		Registers and grilles	no. 15	53	Steel 53
		Firing Equipment - Furnaces			
	E	+15° oil burner GPH 8	no. 1	250	CI 200, steel 38, cu 12
	G	0° oil burner GPH 8	no. 1	250	CI 200, steel 38, cu 12
	H	-20° oil burner GPH 9	no. 1	250	CI 200, steel 38, cu 12
	I	+15° gas burner Btu input 1,100,000	no. 1	451	CI 397, steel 45, cu 9
	L	0° gas burner Btu input 1,070,000	no. 1	451	CI 397, steel 45, cu 9
	M	-20° gas burner Btu input 1,260,000	no. 1	488	CI 429, steel 49, cu 10
	EGH	Oil pipe, fittings & valves, 2" and 3/4"	lf. 120	270	CI 43, steel 215, cu 12
	EGH	Reinforcing steel for oil tank		30	Steel 30
560		Control Equipment			
		Relay	no. 1	7	Steel 6, copper 1
	ACD	Damper regulators	no. 1	8	Steel 7, copper 1
		Thermostats	no. 4	12	Steel 11 copper 1
570		Breeching-flue conn. 15" dia.	lf. 15	150	Steel 150

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-1, Dormitories Building Element: Service:2S-NB-2W
No. Persons Served: 128 No. Rooms: - Heating System: Forced warm air
Type Construction: 2 story masonry and frame - concrete first floor on earth

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
		Outside fire alarm. (split rim and hammer)		20	Steel 20
240		Insect screen	sf. 350	46	Steel 42, zinc 4
280		Glazing points		4	Zinc 4
290		Builders hardware			
		Fire door	no. 1		
		Doors - outside	no. 6		
		Doors - inside	no. 42		
		Windows in rooms & corridors	no. 53		
		Door closers	no. 10		
		Fire exit bolts	no. 4		
		Total builders hardware		376	Steel 357, brass 19
		Rough hardware			
		Nails, screws, etc.			
		Plain		1170	Steel 1170
		Galvanized		100	Steel 95, zinc 5
260		Sheet metal flashings (chim. only)		20	Steel 18, zinc 2
300		ELECTRICAL - 1 phase, 3 wire			
320		Entrance 200A-3P-2B & SN	no. 1	31	Steel 24, copper 7
		Panelboards - No. circuits 14	no. 1	68	Steel 60, copper 8
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	lf. 2740	35.2	Copper 35.2
		#12 wire	lf. 110	1.5	Copper 1.5
		# 8 wire	lf. 780	39	Copper 39
		#00 wire	lf. 100	40.3	Copper 40.3
340		Outlet boxes (nonmetallic)	no. 93		
350		Switches	no. 20	4	Steel 2, copper 2
		Receptacles	no. 19	3.8	Steel 1.9, copper 1.9
360		Straps, misc.		8	Steel 8
370		Solder		2	
380		Fixtures	no. 54	23	Steel 16.2, copper 6.8
400		PLUMBING			
420		Fixtures, nonmetallic showers	no. 18	432	Steel 432
		Fixture trim	no. 49	517	CI 424 Stl 45 Br 34 Rub 14
430		CI pipe & fittings size 5"	lf. 5		
		size 4"	lf. 95		
		size 3"	lf. 135		
		size 2"	lf. 100		
		Subtotal CI pipe & fittings	lf. 335	3410	CI 3410 (inc. screw ftgs.)
		(If lead is used for roughing make-up of waste pipe, the subtotal of 3410 lbs. will change to)		3365	CI 3230, lead 135 (inc. screw ftgs.)

Crit. List No	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.)		Galv. steel pipe size 3"	lf. 20		
		size 2"	lf. 50		
		size 1-1/2"	lf. 133		
		size 1-1/4"	lf. 45		
		Subtotal steel pipe	lf. 270	1057	Steel 1012, zinc 45
		(If lead is used for roughing make-up of waste pipe, the subtotal of 1057 lbs. will change to)		1016	CI 11 Stl 898 Zn 39 Lead 168
		Calking and flashing lead		995	Lead 995
		Misc. hangers, etc.		76	CI 40, steel 36
440		Galv. water pipe & fittings			
		Pipe size 3/8"	lf. 155		
		Pipe size 1/2"	lf. 575		
		Pipe size 3/4"	lf. 80		
		Subtotal pipe & fittings	lf. 810	1008	Steel 972, zinc 36
		Pipe size 1"	lf. 95		
		Pipe size 1-1/4"	lf. 85		
		Pipe size 1-1/2"	lf. 85		
		Pipe size 2"	lf. 35		
		Pipe size 2-1/2"	lf. 20		
		Subtotal pipe & fittings	lf. 320	1142	Steel 1100, zinc 42
		Valves and cocks	no. 14	48	CI 11, brass 37
		Misc. hangers, etc.		105	CI 30, steel 75
450		Water Heaters			
	ACD	132 GPH/100° rise coal htr.	no. 1	650	CI 650
	IIM	80 GPH/100° rise auto. stg. type gas with 100 gallon self contained tank	no. 1	800	CI 50 Stl 736 Br 5 Zn 9
	EGH	190 GPH/100° rise auto. oil stg. type with 100 gallon self contained tank	no. 1	1240	CI 400 Stl 823 Cu 8 Zn 9
	ACD	250 gallon storage tank	no. 1	445	Steel 445
	IIM	150 gallon aux. stg. tank	no. 1	300	Steel 300
	ACD	Flue connections, 24 gage	sf. 75	75	Steel 75
	E-M	Flue connections, 24 gage	sf. 50	50	Steel 50
460		Control Equipment			
		Pressure relief valve	no. 1	1	Brass 1
		Temperature relief valve	no. 1	1	Brass 1
		Thermometer	no. 1	1.5	Brass 0.5, CI 1
	ACD	Auto. damper regulator	no. 1	11	CI 7, steel 3, brass 1
480		Black gas pipe & fittings			
		Pipe size 1-1/4"	lf. 15		
		Pipe size 1-1/2"	lf. 20		
		Pipe size 2"	lf. 25		
		Subtotal pipe & fittings	lf. 60	237	Steel 237
	IIM	Misc. hangers, etc.		12	CI 6, steel 6
	IIM	Valves and cocks	no. 4	24	Brass 24
500		HEATING			
530	A	+150 Coal Btu 867,000	no. 1	7730	CI 7080, steel 650
	C	00 Coal Btu 918,000	no. 1	9400	CI 8600, steel 800
	D	-200 Coal Btu 900,000	no. 1	9400	CI 8600, steel 800
	E	+150 Oil Btu 867,000	no. 1	7410	CI 6760, steel 650
	G	00 Oil Btu 918,000	no. 1	9020	CI 8220, steel 800
	H	-200 Oil Btu 900,000	no. 1	9020	CI 8220, steel 800

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
530 (Cont.)	I	+15° Gas Btu 867,000	no. 1	7410	CI 6760, steel 650
	L	0° Gas Btu 918,000	no. 1	9020	CI 8220, steel 800
	M	-20° Gas Btu 900,000	no. 1	9020	CI 8220, steel 800
		Blowers CFM 7800	no. 1	860	CI 40, steel 820
		Motors HP 2 & controls	no. 1	125	CI 47 Stl 47 Cu 25 Rub 6
		Exhaust fans-propeller type 10"	no. 4	88	CI 20. Stl 64, Cu 4
		Ducts (metal) 60 x 12	lf. 5		
		34 x 12	lf. 3		
		34 x 10	lf. 3	158	Steel 158
		Metal allowed for connections, dampers, etc of nonmetallic duct		386	Steel 386
		Registers & grilles 16 x 6	no. 2		
		6 x 4	no. 14	33	Steel 33
550		Firing Equipment - Furnaces			
	E	+15° Oil burner GPH 9	no. 1	250	CI 200, Stl 38, Cu 12
	G	0° Oil burner GPH 9	no. 1	250	CI 200, Stl 38, Cu 12
	H	-20° Oil burner GPH 9	no. 1	250	CI 200, Stl 38, Cu 12
	I	+15° Gas burner Btu input 1,240,000	no. 1	488	CI 429, Stl 49, Cu 10
	L	0° Gas burner Btu input 1,310,000	no. 1	488	CI 429, Stl 49, Cu 10
	M	-20° Gas burner Btu input 1,286,000	no. 1	488	CI 429, Stl 49, Cu 10
	EGH	Pipe and fitting Oil lines	lf. 100	240	CI 40, steel 200
	EGH	Reinforcing steel for oil tank		30	Steel 30
560		Control Equipment			
		Relays	no. 1	7	Steel 6, copper 1
		Damper regulators	no. 1	8	Steel 7, copper 1
		Thermostats	no. 4	12	Steel 11, copper 1
570		Breeching - flue connection 20" and 10" diameter		190	Steel 190

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-1, Dormitories Building Element: 1S-NB-2W (Service)
No. Persons Served: 72 No. Rooms: - Heating System: Forced warm air
Type Construction: 1 story - masonry and frame - concrete floor on earth

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
		Outside fire alarm (split rim and hammer)		20	Steel 20
240		Insect screen	sf. 298	39	Steel 35, zinc 4
260		Sheet metal, flashings, chimney only		20	Steel 18, zinc 2
280		Glazing points		2	Zinc 2
290		Builders hardware			
		Fire door	no. 1		
		Doors - outside	no. 6		
		Doors - inside	no. 26		
		Windows in rooms & corridors	no. 31		
		Door closers	no. 7		
		Fire exit bolts	no. 4		
		Total builders hardware		284	Steel 270, brass 14
		Rough hardware			
		Nails, screws, etc.			
		Plain		875	Steel 875
		Galvanized		68	Steel 65, zinc 3
300		ELECTRICAL - 1 phase, 3 wire			
320		Entrance 100A-3P-2B & SN	no. 1	22	Steel 18.7, copper 3.3
		Panelboards No. circuits 8	no. 1	40	Steel 35.5, copper 4.5
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	1f. 1710	23.3	Copper 23.3
		#12 wire	1f. 110	1.5	Copper 1.5
		# 8 wire	1f. 420	21	Copper 21
		# 1 wire	1f. 100	25.4	Copper 25.4
340		Outlet boxes (nonmetallic)	no. 61		
350		Switches	no. 12	2.4	Steel 1.2, copper 1.2
		Receptacles	no. 13	2.6	Steel 1.3, copper 1.3
360		Straps, misc.		5	Steel 5
370		Solder		1.2	
380		Fixtures	no. 36	15	Steel 11, copper 4
400		PLUMBING			
420		Fixtures (nonmetallic showers)	no. 9	216	Steel 216
		Fixtures, trimmings		288	CI 239, Stl 24, Br 18 Rub 7
430		CI pipe & fittings size 4"	1f. 20		
		size 3"	1f. 120		
		size 2"	1f. 65		
		* Subtotal CI pipe & fittings	1f. 205	1830	CI 1830 (inc. screw ftgs.)
		* For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.			

List No. 10
Sheet 1 of 3

Crit. List No	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.)		Galv. steel pipe size 3" size 2" size 1-1/2" size 1-1/4" Subtotal steel pipe (If lead is used for rough- ing make-up of waste pipe, the subtotal of 466 lb. will change to	lf. 10 lf. 30 lf. 95 lf. 5 lf. 140 lf. 140	466	Steel 443, zinc 23
		Calking and flashing lead Misc. hangers, etc.		540 25	CI 6 Stl 341 Zn 20 Lead 70 Lead 540 CI 10, steel 15
440		Galv. water pipe & fittings Pipe size 3/8" Pipe size 1/2" Pipe size 3/4" Subtotal galv. pipe & fittings Pipe size 1" Pipe size 1-1/4" Pipe size 1-1/2" Pipe size 2" Subtotal galv. pipe & fittings Misc. hangers, etc. Valves and cocks	lf. 100 lf. 420 lf. 60 lf. 580 lf. 70 lf. 80 lf. 100 lf. 20 lf. 270 no. 13	627 803 50 40.4	Steel 602, zinc 25 Steel 770, zinc 33 CI 20, steel 30 Brass 40.4
450	ACD	Water Heaters 50 GPH/100° rise coal htr.	no. 1	270	CI 270
	IIM	80 GPH/100° rise auto. gas stg. type with 100 gallon self contained tank	no. 1	800	CI 50 Stl 736 Br 5 Zn 9
	EGH	100 GPH/100° rise auto. oil stg. type with 35 gallon self contained tank	no. 1	800	CI 300 Stl 488 Cu 8 Zn 4
	ACD	150 gallon storage tank	no. 1	300	Steel 300
	EGH	66 gal. aux. storage tank	no. 1	140	Steel 133, zinc 7
	ACD	Flue connections, 24 gage	sf. 75	75	Steel 75
	E-M	Flue connections, 24 gage	sf. 50	50	Steel 50
		Control Equipment Pressure relief valve Temperature relief valve Thermometer	no. 1 no. 1 no. 1	1 1 1.5	Brass 1 Brass 1 CI 1, brass 0.5
	ACD	Auto. damper regulator	no. 1	11	CI 7, Steel 3, Brass 1
480	IIM	Black gas pipe & fittings Pipe size 1-1/4" Pipe size 1-1/2" Pipe size 2" Subtotal pipe & fittings Misc. hangers, etc. Valves and cocks	lf. 15 lf. 20 lf. 25 lf. 60 no. 4	237 12 23.9	Steel 237 CI 6, steel 6 Brass 23.9
500		HEATING			
530		Heaters - Warm air furnaces			
	A	+15° Coal Btu 503,000	no. 1	4225	CI 3825, steel 400
	C	0° Coal Btu 536,400	no. 1	4225	CI 3825, steel 400
	D	-20° Coal Btu 550,000	no. 1	4225	CI 3825, steel 400
	E	+15° Oil Btu 503,000	no. 1	4025	CI 3625, steel 400
	G	0° Oil Btu 536,400	no. 1	4025	CI 3625, steel 400
	H	-20° Oil Btu 550,000	no. 1	4025	CI 3625, steel 400

Crit. Id No	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
530 (Cont.)	I	+15° Gas Btu 503,000	no. 1	4025	CI 3625, steel 400
	L	0° Gas Btu 536,400	no. 1	4025	CI 3625, steel 400
	M	-20° Gas Btu 550,000	no. 1	4025	CI 3625, steel 400
		Blowers CFM 4300	no. 1	700	CI 30, steel 670
		Motors HP 1-1/2 & controls	no. 1	110	CI 41 Stl 41 Cu 22 Rub 6
		Exhaust fans-propeller type 10"	no. 2	44	CI 10, Stl 32, Cu 2
		Ducts (metal) 60 x 12	lf. 5	90	Steel 90
		Metal allowed for conn., dampers etc. of nonmetallic ducts		225	Steel 225
		Registers & grilles 16 x 6) 6 x 4)	no. 25	25	Steel 25
550		Firing Equipment - Furnaces			
	E	+15° Oil burner GPH 6	no. 1	250	CI 200, Stl 38, Cu 12
	G	0° Oil burner GPH 6	no. 1	250	CI 200, Stl 38, Cu 12
	H	-20° Oil burner GPH 6	no. 1	250	CI 200, Stl 38, Cu 12
	I	+15° Gas burner Btu input 720,000	no. 1	311	CI 274, Stl 31, Cu 6
	L	0° Gas burner Btu input 765,000	no. 1	311	CI 274, Stl 31, Cu 6
	M	-20° Gas burner Btu input 786,000	no. 1	311	CI 274, Stl 31, Cu 6
		Pipe and fitting			
	EGH	Oil lines	lf. 100	240	CI 40, steel 200
	EGH	Reinforcing steel for oil tank		15	Steel 15
560		Control Equipment			
		Relays	no. 1	7	Steel 6, copper 1
		Damper regulators	no. 1	8	Steel 7, copper 1
		Thermostats	no. 4	12	Steel 11, copper 1
570		Breeching-flue connections 16" dia		114	Steel 114

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-1 (Temporary Family Units) Building Element: 0 Bedroom Unit
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 1 story frame, concrete floor on earth or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 48	6	Steel 5, zinc 1
260		Sheet metal flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside & cabinet	no. 6		
		Windows in rooms (incl. shade brackets & catch)	no. 4		
		Transoms	no. 1		
		Total builders hardware		32	Steel 30, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		101	Steel 101
	X-1	Galv.		8	Steel 7.6, zinc 0.4
	X-2	Plain		85	Steel 85
	X-2	Galv.		7	Steel 6.6, zinc 0.4
300		ELECTRICAL - 1 phase, 2 wire			
320		Entrance (approx. share of bldg. switch, distr. panel and entr. wire)		6	Steel 5, copper 1
330		Nonmetallic cable (equiv. 1f. single wire)			
		#14 wire	1f. 210	2.7	Copper 2.7
340		Outlet boxes (nonmetallic)	no. 6		
350		Receptacles	no. 2	0.4	Steel 0.2, copper 0.2
360		Straps misc.		0.5	Steel 0.5
370		Solder		0.2	
380		Fixtures	no. 4	1.2	Steel 0.8, copper 0.4
400		PLUMBING			
420		Fixtures, showers, nonmetallic	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixtures, trimmings		35.9	CI 30, Steel 3, Brass 2.1, Rub. 0.8
430		CI pipe & fittings, size 3"	1f. 25		
		size 2"	1f. 5		
		* Subtotal pipe & fittings	1f. 30	261	CI 261 (includes 1-1/2" and 1-1/4" fittings)
		Steel pipe, size 1-1/2"	1f. 5		
		size 1-1/4"	1f. 5		
		Subtotal steel pipe	1f. 10	25	Steel 24, zinc 1
		(If lead is used for roughing make-up of waste pipe, the subtotal of 25 pounds will change to)		39	CI 2 Stl 11 Zn 1 Lead 25
		Calking and flashing lead		50	Lead 50
		Misc. hangers, etc.		12	CI 6, steel 6

*For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.

Crit. L No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
440		Galv. water pipe & fittings Pipe size 3/8" Pipe size 1/2" Pipe size 3/4" Subtotal pipe & fittings Valves and cocks	lf. 15 lf. 30 lf. 45 lf. 90 no. 3	109 3.8	Steel 103, zinc 6 CI 1, brass 2.8
450	N	Water Heaters 30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas heater	no. 1	145	CI 7, Stl 132, Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil heater	no. 1	225	CI 12, Stl 206, Br 3, Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs. 8 sf 24 gage 1/2" pressure relief valve	no. 1 no. 1	8 1	Steel 8 Brass 1
460	RS	Black gas pipe and fittings Pipe size 3/4" Pipe size 1/2" Subtotal gas pipe and fittings	lf. 20 lf. 10 lf. 30	41	Steel 41
480	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500		HEATING			
520	S	Space Heaters +15°, 0° & -20° Gas Btu input 30,000	no. 1	102	CI 35, Steel 65, Cu 2
	R	+15°, 0° & -20° Coal Btu output 35,000	no. 1	150	CI 75, Steel 75
	T	+15°, 0° & -20° Oil Btu output 18,000	no. 1	123	Steel 121, Cu 2
	T	Firing equipment Oil storage tank - 55 gal.	no. 1	57	Steel 55, CI 2
570	S	Breeching - flue connections For gas space htr. 6" dia.	lf. 5	12	Steel 12
	R	For coal space htr. 7" dia.	lf. 5	15	Steel 15
	T	For oil space htr. 6" dia.	lf. 5	12	Steel 12
600		HOUSEHOLD EQUIPMENT			
610	N	Cooking Equipment Coal range	no. 1	350	CI 300, Steel 50
	RS	Gas range	no. 1	91	CI 25, Steel 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Steel 105, Cu 2
	N	Flue connections For coal range 7" dia.	lf. 5	15	Steel 15
		Refrigeration (1) Ice - 3/2 cu. ft. (2) Electric - 6 cu. ft. (3) Gas - 5 cu. ft.		6.5	Steel 6, zinc 0.5 Frozen inventory Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-1 (Temporary Family Units) Building Element: 1 Bedroom Unit
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 1-story frame concrete floor on earth or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 54	8	Steel 7, zinc 1
260		Sheet metal, flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside & cabinet	no. 4		
		Windows in rooms (inc. shade bracket, spring & catch)	no. 5		
		Transoms	no. 2		
		Total builders hardware		27	Steel 25, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		142	Steel 142
	X-1	Galvanized		11	Steel 10.4, zinc 0.6
	X-2	Plain		122	Steel 122
	X-2	Galvanized		9	Steel 8.5, zinc 0.5
300		ELECTRICAL - 1 phase, 2 wire			
320		Entrance (approx. share of bldg. switch, distr. panel and entrance wire)		6	Steel 5, copper 1
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	1f. 292	3.7	Copper 3.7
		Outlet boxes (nonmetallic)	no. 10		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 3	0.6	Steel 0.3, copper 0.3
360		Straps, misc.		0.8	Steel 0.8
370		Solder		0.3	
380		Fixtures	no. 5	1.5	Steel 1, copper 0.5
400		PLUMBING			
420		Fixtures, showers, nonmetallic	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixtures, trimmings		35.9	CI 30 Stl 3 Br 2.1 Rub 0.8
430		CI pipe & fittings size 3"	1f. 25		
		size 2"	1f. 5		
		* Subtotal pipe & fittings	1f. 30	261	CI 261 (includes 1-1/2" and 1-1/4" fittings)
		Steel pipe size 1-1/2"	1f. 5		
		size 1-1/4"	1f. 5		
		Subtotal steel pipe	1f. 10	25	Steel 24, zinc 1
		(If lead is used for roughing make-up of waste pipe, the subtotal of 25 pounds will change to)		39	CI 3 Stl 11 Zn 1 Lead 25
		Calking and flashing lead		50	Lead 50
		Misc. hangers, etc.		12	CI 6, steel 6

*For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.

Crit. List N	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
440		Galv. water pipe & fittings Pipe size 3/8" Pipe size 1/2" Pipe size 3/4" Subtotal pipe & fittings Valves and cocks	lf. 15 lf. 30 lf. 45 lf. 90 no. 3	109 3.8	Steel 103, zinc 6 CI 1, brass 2.8
450	OP	Water Heaters 30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas heater	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil heater	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs 8 sf 24 gage 1/2" pressure relief valve	no. 1 no. 1	8 1	Steel 8 Brass 1
460 480	RS	Black gas pipe and fittings Pipe size 3/4" Pipe size 1/2" Subtotal gas pipe & fittings	lf. 20 lf. 10 lf. 30	41	Steel 41
	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500 520		HEATING Space heaters			
	O	+15°, 0°, -20° chimney heater including blower 300 CFM, flue, motor and control	no. 1	135	CI 105, Stl 26, Cu 4
	PR	+15°, 0°, -20° coal space htr. Btu output 35,000	no. 1	150	CI 75, steel 75
	S	+15°, 0°, -20° gas space htr. Btu input 30,000	no. 1	102	CI 35, Stl 65, Cu 2
	T	+15°, 0°, -20° oil space htr. Btu output 30,000	no. 1	123	Steel 121, copper 2
550		Firing Equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	CI 2, steel 55
		Breeching - flue connections			
	PR	For coal space heater 7" dia.	lf. 5	15	Steel 15
	S	For gas space heater 6" dia.	lf. 5	12	Steel 12
	T	For oil space heater 6" dia.	lf. 5	12	Steel 12
600 610		HOUSEHOLD EQUIPMENT Cooking Equipment			
	OP	Coal range	no. 1	350	CI 300, steel 50
	RS	Gas range	no. 1	91	CI 25, Stl 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Stl 105, Cu 2
		Flue connections			
	OP	For coal range 7" dia.	lf. 5	15	Steel 15
620		Refrigeration			
		(1) Ice - 5 cu. ft.		6.5	Steel 6, zinc 0.5
		(2) Elec. - 6 cu. ft.			Frozen inventory
		(3) Gas - 5 cu. ft.			Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-1 (Temporary Family Units) Building Element: 2 Bedroom Unit
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 1 story frame - concrete floor on earth or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 60	8	Steel 7, zinc 1
260		Sheet metal flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside & cabinet	no. 5		
		Windows in rooms (including shade brackets, spring and catch)	no. 6		
		Transoms	no. 3		
		Total builders hardware		32	Steel 30, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		165	Steel 165
	X-1	Galvanized		13	Steel 12.3, zinc 0.7
	X-2	Plain		140	Steel 140
	X-2	Galvanized		11	Steel 10.4, zinc 0.6
300		ELECTRICAL - 1 phase, 2 wire			
320		Entrance (approx. share of bldg. switch, distr. panel and entrance wire)		6	Steel 5, copper 1
330		Nonmetallic cable (equiv. l.f. single wire)			
		#14 wire	lf. 328	4.2	Copper 4.2
340		Outlet boxes (nonmetallic)	no. 12		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 4	0.8	Steel 0.4, copper 0.4
360		Straps, misc.		1	Steel 1
370		Solder		0.3	
380		Fixtures	no. 6	1.8	Steel 1.2, copper 0.6
400		PLUMBING			
420		Fixtures, showers (nonmetallic)	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixtures, trimmings		35.9	CI 30, Stl 3, Br 2.1, Ru 0.8
430		CI pipe & fittings, size 3"	lf. 25		
		size 2"	lf. 5		
		* Subtotal pipe and fittings	lf. 30	261	CI 261 (includes 1-1/2" and 1-1/4" fittings)
		Steel pipe, size 1-1/2"	lf. 5		
		size 1-1/4"	lf. 5		
		Subtotal steel pipe	lf. 10	25	Steel 24, zinc 1
		(If lead is used for roughing make-up of waste pipe, the subtotal of 25 pounds will change to)		39	CI 2 Stl 11 Zn 1 Lead 25
		Calking and flashing lead		50	Lead 50
		Misc. hangers, etc.		12	CI 6, steel 6

*For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
440		Galv. water pipe & fittings Pipe size 3/8"	lf. 15		
		Pipe size 1/2"	lf. 30		
		Pipe size 3/4"	lf. 45		
		Subtotal pipe & fittings	lf. 90	109	Steel 103, zinc 6
		Valves and cocks	no. 3	3.8	CI 1, brass 2.8
450		Water Heaters			
	OP	30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas htr.	no. 1	145	CI 7, Stl 132, Br 3, Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil htr.	no. 1	225	CI 12, Stl 206, Br 3, Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe and fittings, 8 sf., 24 gage	no. 1	8	Steel 8
460		1/2" pressure relief valve	no. 1	1	Brass 1
480	RS	Black gas pipe and fittings Pipe Size 3/4"	lf. 20		
		Pipe Size 1/2"	lf. 10		
		Subtotal pipe & fittings	lf. 30	41	Steel 41
	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500		HEATING			
520		Space Heaters			
	O	+15°, 0°, -20° coal chimney heater including blower 300 CFM flue, motor and control	no. 1	135	CI 105, steel 26, cu 4
	PR	+15°, 0°, -20° coal space heater Btu output 35,000	no. 1	150	CI 75, steel 75
	S	+15°, 0°, -20° gas space heater Btu input 40,000	no. 1	142	CI 50, steel 89, cu 3
	T	+15°, 0°, -20° oil space heater Btu output 30,000	no. 1	123	Steel 121, copper 2
5		Firing Equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	CI 2, steel 55
570		Breeching - flue connections			
	PR	For coal space htr. 7" dia.	lf. 5	15	Steel 15
	S	For gas space htr. 6" dia.	lf. 5	12	Steel 12
	T	For oil space htr. 7" dia.	lf. 5	15	Steel 15
600		HOUSEHOLD EQUIPMENT			
610		Cooking Equipment			
	CP	Coal range	no. 1	350	CI 300, steel 50
	RS	Gas range	no. 1	91	CI 25, steel 65 cu 1
	T	Oil range	no. 1	137	CI 30, steel 105, cu 2
		Flue connection			
	OP	For coal range 7" dia.	lf. 5	15	Steel 15
620		Refrigeration			
		(1) Ice - 5 cu. ft.		6.5	Steel 6, zinc 0.5
		(2) Electric - 6 cu. ft.			Frozen inventory
		(3) Gas - 5 cu. ft.			Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-1 (Temporary Family Units) Building Element: 3 Bedroom Unit
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 1 story frame - concrete floor on earth or wood frame floor

- WPB Approved List -

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 66	9	Steel 8, zinc 1
260		Sheet metal flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside & cabinet	no. 6		
		Windows in rooms (incl. shade, brackets, spring & catch	no. 7		
		Transoms	no. 4		
		Total builders hardware		37	Steel 34, Brass 3
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		197	Steel 197
	X-1	Galv.		15	Steel 14.2, Zinc 0.8
	X-2	Plain		167	Steel 167
	X-2	Galv.		13	Steel 12.3, Zinc 0.7
300		ELECTRICAL - 1 phase, 2 wire			
320		Entrance (approx. share of bldg. switch, distr. panel and entrance wire)		6	Steel 5, copper 1
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	1f. 392	4.8	Copper 4.8
40		Outlet boxes (nonmetallic)	no. 14		
50	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 5	1	Steel 0.5, copper 0.5
360		Straps, Misc.		1.2	Steel 1.2
370		Solder		0.4	
380		Fixtures	no. 7	2.1	Steel 1.4, copper 0.7
400		PLUMBING			
420		Fixtures, showers, nonmetallic	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixtures, trimming		35.9	CI 30, Steel 3, Brass 2.11, Rubber 0.75
430		CI pipe & fittings, size 3"	1f. 25		
		size 2"	1f. 5		
		* Subtotal CI pipe & fittings	1f. 30	261	CI 261 (includes 1-1/2" and 1-1/4" fittings)
		Steel pipe, size 1-1/2"	1f. 5		
		size 1-1/4"	1f. 5		
		Subtotal steel pipe	1f. 10	25	Steel 24, zinc 1
		(If lead is used for rough- ing make-up of waste pipe, the subtotal of 25 pounds will change to		39	CI 2 Stl 11 Zn 1 Lead 25
		Calking and flashing lead		50	Lead 50

*For wood frame floor con-
struction, the weight given in
cast iron may be made up of
cast iron and lead.

Crit. No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.) 440		Misc. hangers, etc.		12	CI 6, steel 6
		Galv. water pipe & fittings			
		Pipe size 3/8"	lf. 15		
		Pipe size 1/2"	lf. 30		
		Pipe size 3/4"	lf. 45		
		Subtotal pipe & fittings	lf. 90	109	Steel 103, zinc 6
		Valves and cocks	no. 3	3.8	CI 1, brass 2.8
450		Water Heaters			
	OP	30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas heater	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil heater	no. 1	225	CI 12, Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs. 8 sf 24 gage	no. 1	8	Steel 8
460		1/2" pressure relief valve	no. 1	1	Brass 1
480	RS	Black gas pipe and fittings			
		Pipe size 3/4"	lf. 20		
		Pipe size 1/2"	lf. 10		
		Subtotal gas pipe & fittings	lf. 30	41	Steel 41
	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500		HEATING			
520		Heaters			
	O	±15°, 0°, -20° Coal Chimney heater including blower 300 CFM flue, motor and control	no. 1	135	CI 105, Stl 26, Cu 4
	PR	±15°, 0°, -20° Coal space heater Btu output 35,000	no. 1	150	CI 75, Steel 75
	S	±15°, 0°, -20° Gas space heater Btu input 40,000	no. 1	142	CI 50, Steel 89, Cu 3
	T	±15°, 0°, -20° Oil space heater Btu output 30,000	no. 1	123	Steel 121, copper 2
530		Firing equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	CI 2, Steel 55
570		Breeching			
	PR	For coal space heater 7" dia.	lf. 5	15	Steel 15
	S	For gas space heater 6" dia.	lf. 5	12	Steel 12
	T	For oil space heater 7" dia.	lf. 5	15	Steel 15
600		HOUSEHOLD EQUIPMENT			
610		Cooking equipment			
	OF	Coal range	no. 1	350	CI 300, Steel 50
	RS	Gas range	no. 1	91	CI 25, Steel 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Steel 105, Cu 2
		Flue connections			
	OP	For coal range 7" dia.	lf. 5	15	Steel 15
620		Refrigeration			
		(1) Ice - 5 cu. ft.		6.5	Steel 6, zinc 0.5
		(2) Electric - 6 cu. ft.			Frozen inventory
		(3) Gas - 5 cu. ft.			Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-2, (Temporary Family Units) Building Element: 0 Bedroom Unit
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 2 story frame, concrete floor on ground on wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 35	5	Steel 4, zinc 1
260		Sheet metal flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 1		
		Doors - inside & cabinet	no. 6 1/2		
		Windows in rooms (including shade brackets, spring and catch)	no. 5 1/4		
		Transoms	no. 1		
		Total builders hardware		28	Steel 26, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		102	Steel 102
	X-1	Galvanized		11	Steel 10.4, zinc 0.6
	X-2	Plain		89	Steel 89
	X-2	Galvanized		9	Steel 8.5, zinc 0.5
300		ELECTRICAL			
320		Entrance (see Dwg. M-405)		2.6	Steel 2, copper 0.6
		Panelboards	no. 1/4	3.4	Steel 3, copper 0.4
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	1f. 170	2.2	Copper 2.2
		# 8 wire	1f. 35	1.8	Copper 1.8
340		Outlet boxes (nonmetallic)	no. 7		
350		Receptacles	no. 2	0.4	Steel 0.2, copper 0.2
360		Straps, misc.		0.5	Steel 0.5
370		Solder		0.2	
380		Fixtures	no. 5	1.5	Steel 1, copper 0.5
400		PLUMBING - 1/2 Stack/DU			
420		Fixtures, nonmetallic shower	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixture trimmings		36	CI 30, Stl 3, Br 2.2, Ru 0.8
430		CI pipe & fittings, size 3" size 2"	1f 17.5 1f. 2.5		
		Subtotal pipe & fittings	1f. 20	203	CI 203 (includes 1-1/2" and 1-1/4" fittings)
		(If lead is used for roughing make-up of waste pipe, the subtotal of 203 pounds will change to)		199	CI 186, lead 13 (includes screw fittings)
		Steel pipe, size 1-1/2" size 1-1/4"	1f. 7 1f. 5		
		Subtotal steel pipe	1f. 12	29	Steel 27, zinc 2
		(If lead is used for roughing make-up of waste pipe, the subtotal of 29 pounds will change to)		42	CI 2 Stl 14 Zn 1 Lead 25

Crit. Lis No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430		Calking and flashing lead		49	Lead 49
Cont.		Misc. hangers, etc.		12	CI 6, steel 6
440		Galv. water pipe & fittings			
		Steel pipe size 3/8"	lf. 20		
		Steel pipe size 1/2"	lf 22.5		
		Steel pipe size 3/4"	lf 37.5		
		Subtotal pipe & fittings	lf. 80	95	Steel 91, zinc 4
		Valves and cocks	no. 2	2.65	CI 0.5, brass 2.15
450		Water Heaters			
	N	30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas htr.	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil htr.	no. 1	225	CI 12, Stl 206, Br 3, Zn 1 (85 lbs. W.W.P.)
	RST	Flue pipe and fittings, 8 s.f. 2 1/4 gage	no. 1	8	Steel 8
460		1/2" pressure relief valve	no. 1	1	Brass 1
48	R	Black gas pipe and fittings			
		Pipe size 3/4"	lf. 18		
		Pipe size 1/2"	lf. 5		
		Subtotal pipe and fittings	lf. 23	36	Steel 36
	R	Valves and cocks	no. 2	3	Brass 3
	S	Black gas pipe and fittings			
		Pipe size 1"	lf. 8		
		Pipe size 3/4"	lf. 13		
		Pipe size 1/2"	lf. 5		
		Subtotal pipe and fittings	lf. 26	42	Steel 42
	S	Valves and cocks	no. 3	4	Brass 4
500		HEATING			
		Space Heaters			
	S	+15°, 0° & -20° gas Btu input 30,000	no. 1	102	CI 35, Steel 65, Cu 2
	R	+15°, 0° & -20° coal Btu output 35,000	no. 1	150	CI 75, steel 75
	T	+15°, 0° & -20° oil Btu output 18,000	no. 1	123	Steel 121, copper 2
550		Firing equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	Steel 55, CI 2
570		Breeching			
	S	For gas space htr. 6" dia.	lf. 5	12	Steel 12
	R	For coal space htr 7" dia.	lf. 5	15	Steel 15
	T	For oil space htr. 6" dia.	lf. 5	12	Steel 12
600		HOUSEHOLD EQUIPMENT			
	N	Coal range	no. 1	350	CI 300, steel 50
	RS	Gas range	no. 1	91	CI 25, steel 65, cu 1
	T	Oil range	no. 1	137	CI 30, steel 105, cu 2
		Flue connections			
	N	For coal range 7" dia.	lf. 5	15	Steel 15
620		Refrigeration			
		(1) Ice - 3-1/2 cu. ft.		6.5	Steel 6, zinc 0.5
		(2) Electric - 6 cu. ft.			Frozen inventory
		(3) Gas - 5 cu. ft.			Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-2 (Temporary Family Units) Building Element: 1 Bedroom Unit
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 2-story frame - concrete floor on ground or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 41	5	Steel 4, zinc 1
260		Sheet metal, flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.15	Zinc 0.15
290		Builders hardware			
		Doors - outside & screen	no. 1		
		Doors - inside & cabinet	no. 4½		
		Windows in rooms (inc. shade brackets, spring & catch	no. 6¼		
		Transoms	no. 2		
		Total builders hardware		23	Steel 21, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		129	Steel 129
	X-1	Galvanized		14	Steel 13.3, zinc 0.7
	X-2	Plain		113	Steel 113
	X-2	Galvanized		11	Steel 10.4, zinc 0.6
300		ELECTRICAL			
320		Entrance (see Dwg. M-405)		2.6	Steel 2, copper 0.6
		Panelboards	no. ¼	3.4	Steel 3, copper 0.4
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	1f. 220	2.9	Copper 2.9
		# 8 wire	1f. 45	2.3	Copper 2.3
3		Outlet boxes (nonmetallic)	no. 11½		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 3	0.6	Steel 0.3, copper 0.3
360		Straps, misc.		1	Steel 1
370		Solder		0.3	
380		Fixtures	no. 6½	2	Steel 1.3, copper 0.7
400		PLUMBING (1/2 Stack/DU)			
420		Fixtures, nonmetallic shower	no. 1	24	Stl 18 CI 6 (Max. L-42)
		Fixture, trimmings		36	CI 30 Stl 3 Br 2.2 Rub 0.8
430		CI pipe & fittings size 3"	1f. 17.5		
		size 2"	1f. 2.5		
		Subtotal CI pipe & fittings	1f. 20	203	CI 203 (includes 1-1/2" and 1-1/4" fittings)
		(If lead is used for roughing make-up of waste pipe, the subtotal of 203 pounds will change to)		199	CI 186, lead 13 (includes screw fittings)

Crit. List No	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.)		Steel pipe size 1-1/2"	lf. 7		
		size 1-1/4"	lf. 5		
		Subtotal steel pipe	lf. 12	29	Steel 27, zinc 2
		(If lead is used for roughing make-up of waste pipe, the subtotal of 29 pounds will change to)		42	CI 2 Stl 14 Zn 1 Lead 25
		Calking and flashing lead		49	Lead 49
		Misc. hangers, etc.		12	CI 6, steel 6
440		Galv. water pipe & fittings			
		Steel pipe size 3/8"	lf. 20		
		size 1/2"	lf. 22.5		
		size 3/4"	lf. 37.5		
		Subtotal pipe & fittings	lf. 80	95	Steel 91, zinc 4
		Valves and cocks	no. 2	2.65	CI 0.5, brass 2.15
450	OP	Water Heaters			
		30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas heater	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil heater	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs. 8 sf 24 gage	no. 1	8	Steel 8
460		1/2" pressure relief valve	no. 1	1	Brass 1
480	R	Black gas pipe and fittings			
		Pipe size 3/4"	lf. 18		
		Pipe size 1/2"	lf. 5		
		Subtotal gas pipe & fittings	lf. 23	36	Steel 36
	R	Valves and cocks	no. 2	3	Brass 3
	S	Black gas pipe and fittings			
		Pipe size 1"	lf. 8		
		Pipe size 3/4"	lf. 13		
		Pipe size 1/2"	lf. 5		
		Subtotal gas pipe & fittings	lf. 26	42	Steel 42
	S	Valves and cocks	no. 3	4	Brass 4
500		HEATING			
520		Heaters			
	O	+150, 00, -200 chimney heater including blower 300 CFM, flue, motor and control	no. 1	135	CI 105, Stl 26, Cu 4
	PR	+150, 00, -200 coal space htr. Btu output 35,000	no. 1	150	CI 75, steel 75
	S	+150, 00, -200 gas space htr. Btu input 30,000	no. 1	102	CI 35, Stl 65, Cu 2
	T	+150, 00, -200 oil space htr. Btu output 18,000	no. 1	123	Steel 121, copper 2
550		Firing Equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	CI 2, steel 55
570		Breeching - flue connections			
	PR	For coal space heater 7" dia.	lf. 5	15	Steel 15
	S	For gas space heater 6" dia.	lf. 5	12	Steel 12
	T	For oil space heater 6" dia.	lf. 5	12	Steel 12
600		HOUSEHOLD EQUIPMENT			
610		Cooking Equipment			
	OP	Coal range	no. 1	350	CI 300, steel 50
	RS	Gas range	no. 1	91	CI 25, Stl 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Stl 105, Cu 2

Crit. List No	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
610 (Cont.)	OP	Flue connections	lf. 5	15	Steel 15
		For coal range 7" dia.			
620		Refrigeration			
		(1) Ice - 5 cu. ft.			
		(2) Elec. - 6 cu. ft.		6.5	Steel 6, zinc 0.5
		(3) Gas - 5 cu. ft.			Frozen inventory
					Frozen inventory

**CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS**

Se s: TDU-2 (Temporary Family Units) Building Element: 2 Bedroom
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 2-story frame - concrete floor on ground or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 47	6	Steel 5, zinc 1
260		Sheet metal, flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.15	Zinc 0.15
290		Builders hardware			
		Doors - outside & screen	no. 1		
		Doors - inside & cabinet	no. 5½		
		Windows in rooms (inc. shade brackets, spring, etc.	no. 7¼		
		Transoms	no. 3		
		Total builders hardware		29	Steel 27, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		157	Steel 157
	X-1	Galvanized		18	Steel 17.1, zinc 0.9
	X-2	Plain		137	Steel 137
	X-2	Galvanized		14	Steel 13.3, zinc 0.7
300		ELECTRICAL			
320		Entrance (see dwg. M-405)		2.6	Steel 2, copper 0.6
		Panelboards		3.4	Steel 3, copper 0.4
330		Nonmetallic cable (equiv. l.f. single wire)			
		#14 wire	lf. 270	3.5	Copper 3.5
		# 8 wire	lf. 50	2.5	Copper 2.5
340		Outlet boxes (nonmetallic)	no. 13½		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 4	0.8	Steel 0.4, copper 0.4
360		Straps, misc.		1.1	Steel 1.1
370		Solder		0.3	
380		Fixtures	no. 7½	2.3	Steel 1.5, copper 0.8
400		PLUMBING (1/2 Stack/DU)			
420		Fixtures, nonmetallic shower	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixture trimmings		36	CI 30, Stl 3, Br 2.2
					Rub 0.8
430		CI pipe & fittings size 3"	lf. 17.5		
		size 2"	lf. 2.5		
		Subtotal CI pipe & fittings	lf. 20	203	CI 203 (includes 1-1/2" and 1-1/4" fittings)
		(If lead is used for roughing make-up of waste pipe, the subtotal of 203 pounds will change to)		199	CI 186, lead 13 (includes screw fittings)

Crit. List	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.)		Steel pipe size 1-1/2" size 1-1/4" Subtotal steel pipe (If lead is used for rough- ing make-up of waste pipe, the subtotal of 29 pounds will change to	lf. 7 lf. 5 lf. 12	29	Steel 27, zinc 2
		Calking & flashing lead Misc. hangers, etc.		42 49 12	CI 2 Stl 14 Zn 1 Lead 25 Lead 49 CI 6, steel 6
440		Galv. water pipe & fittings Steel pipe size 3/8" size 1/2" size 3/4" Subtotal pipe & fittings Valves and cocks	lf. 20 lf. 22.5 lf. 37.5 lf. 80 no. 2	95 2.65	Steel 91, zinc 4 CI 5, brass 2.15
450	OP	Water Heaters 30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas heater	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil heater	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
460	RST	Flue pipe & ftgs. 8 sf 24 gage 1/2" pressure relief valve	no. 1 no. 1	8 1	Steel 8 Brass 1
480	R	Black gas pipe and fittings Pipe size 3/4" Pipe size 1/2" Subtotal gas pipe & fittings Valves and cocks	lf. 18 lf. 5 lf. 23 no. 2	36 3	Steel 36 Brass 3
	R	Black gas pipe and fittings Pipe size 1" Pipe size 3/4" Pipe size 1/2" Subtotal gas pipe & fittings Valves and cocks	lf. 8 lf. 13 lf. 5 lf. 26 no. 3	42 4	Steel 42 Brass 4
	S				
500		HEATING			
520	O	Space Heaters +15°, 0°, -20° chimney heater including blower 300 CFM, flue, motor and control	no. 1	135	CI 105, Stl 26, Cu 4
	PR	+15°, 0°, -20° coal space htr. Btu output 35,000	no. 1	150	CI 75, steel 75
	S	+15°, 0°, -20° gas space htr. Btu input 40,000	no. 1	142	CI 50, Stl 89, Cu 3
	T	+15°, 0°, -20° oil space htr. Btu output 30,000	no. 1	123	Steel 121, copper 2
550		Firing Equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	CI 2, steel 55
570		Breeching - flue connections			
	PR	For coal space heater 7" dia.	lf. 5	15	Steel 15
	S	For gas space heater 6" dia.	lf. 5	12	Steel 12
	T	For oil space heater 7" dia.	lf. 5	15	Steel 15
600		HOUSEHOLD EQUIPMENT			
610		Cooking Equipment			
	OP	Coal range	no. 1	350	CI 300, steel 50
	RS	Gas range	no. 1	91	CI 25, Stl 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Stl 105, Cu 2

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
610 (Cont.)	OP	Flue connections	lf. 5	15	Steel 15
		For coal range 7" dia.			
620		Refrigeration		6.5	Steel 6, zinc 0.5
		(1) Ice - 5 cu. ft.			Frozen inventory
		(2) Elec. - 6 cu. ft.			Frozen inventory
		(3) Gas - 5 cu. ft.			

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-2 (Temporary Family Units) Building Element: 3 Bedroom
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: 2-story frame - concrete floor on ground or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 53	7	Steel 6, zinc 1
260		Sheet metal, flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.15	Zinc 0.15
290		Builders hardware			
		Doors - outside & screen	no. 1		
		Doors - inside & cabinet	no. 6½		
		Windows in rooms (inc. shade brackets, spring & catch)	no. 8½		
		Transoms	no. 4		
		Total builders hardware		34	Steel 32, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-1	Plain		185	Steel 185
	X-1	Galvanized		21	Steel 20, zinc 1
	X-2	Plain		161	Steel 161
	X-2	Galvanized		16	Steel 15.2, zinc 0.8
300		ELECTRICAL			
320		Entrance (see dwg. M-405)		2.6	Steel 2, copper 0.6
		Panelboards		3.4	Steel 3, copper 0.4
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	lf. 320	4.1	Copper 4.1
		# 8 wire	lf. 60	3	Copper 3
3		Outlet boxes (nonmetallic)	no. 15½		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 5	1	Steel 0.5, copper 0.5
360		Straps, misc.		1.3	Steel 1.3
370		Solder		0.4	
380		Fixtures	no. 8½	2.6	Steel 1.7, copper 0.9
400		PLUMBING - 1/2 Stack/D.U.			
420		Fixtures, nonmetallic shower	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixture, trimmings		36	CI 30 Stl 3 Br 2.2 Rub 0.8
430		CI pipe & fittings size 3"	lf. 17.5		
		size 2"	lf. 2.5		
		Subtotal CI pipe & fittings	lf. 20	203	CI 203 (includes 1-1/2" and 1-1/4" fittings)
		(If lead is used for roughing make-up of waste pipe, the subtotal of 203 pounds will change to)		199	CI 186, lead 13 (includes screw fittings)

Crit. List	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.)		Steel pipe size 1-1/2"	lf. 7		
		size 1-1/4"	lf. 5		
		Subtotal steel pipe	lf. 12	29	Steel 27, zinc 2
		(If lead is used for rough- ing make-up of waste pipe, the subtotal of 29 pounds will change to		42	CI 2 Stl 14 Zn 1 Lead 25
		Calking and flashing lead		49	Lead 49
		Misc. hangers, etc.		12	CI 6, steel 6
440		Galv. water pipe & fittings			
		Steel pipe size 3/8"	lf. 20		
		size 1/2"	lf. 22.5		
		size 3/4"	lf. 37.5		
		Subtotal pipe & fittings	lf. 80	95	Steel 91, zinc 4
		Valves and cocks	no. 2	2.65	CI 0.5, brass 2.15
450		Water Heaters			
	OP	30 gal. range boilers	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas htr.	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil htr.	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs. 8 sf 24 gage	no. 1	8	Steel 8
460		1/2" pressure relief valve	no. 1	1	Brass 1
480	R	Black gas pipe and fittings			
		Pipe size 3/4"	lf. 18		
		Pipe size 1/2"	lf. 5		
		Subtotal gas pipe & fittings	lf. 23	36	Steel 36
	R	Valves and cocks	no. 2	3	Brass 3
	S	Black gas pipe and fittings			
		Pipe size 1"	lf. 8		
		Pipe size 3/4"	lf. 13		
		Pipe size 1/2"	lf. 5		
		Subtotal gas pipe & fittings	lf. 26	42	Steel 42
	S	Valves and cocks	no. 3	4	Brass 4
500		HEATING			
520		Space Heaters			
	O	+15°, 0° & -20° chimney htr. inc. blower 300 CFM, flue, motor & control	no. 1	135	CI 105, Stl 26, Cu 4
	PR	+15°, 0° & -20° coal space htr. Btu output 35,000	no. 1	150	CI 75, steel 75
	S	+15°, 0° & -20° gas space htr. Btu input 40,000	no. 1	142	CI 50, Stl 89, Cu 3
	T	+15°, 0° & -20° oil space htr. Btu output 30,000	no. 1	123	Steel 121, copper 2
550		Firing Equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	CI 2, steel 55
570		Breeching - flue connections			
	PR	For coal space heaters 7" dia.	lf. 5	15	Steel 15
	S	For gas space heaters 6" dia.	lf. 5	12	Steel 12
	T	For oil space heaters 7" dia.	lf. 5	15	Steel 15
600		HOUSEHOLD EQUIPMENT			
600		Cooking equipment			
	OP	Coal range	no. 1	350	CI 300, steel 50
	RS	Gas range	no. 1	91	CI 25, Stl 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Stl 105, Cu 2
		Flue connections			
	OP	For coal range 7" dia.	lf. 5	15	Steel 15

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
620		Refrigeration (1) Ice - 5 cu. ft. (2) Elec. - 6 cu. ft. (3) Gas - 5 cu. ft.		6.5	Steel 6, zinc 0.5 Frozen inventory Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-2 (Temporary Family Units) Building Element: 105' Building
No. Persons Served: - No. Rooms: - Heating System: Group forced warm air
Type Construction: 2-story frame - concrete floor on ground or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE	(For these classes, use per dwelling unit requirements of List Nos. 33, 34, 35 and 36 as a base.		
300		ELECTRICAL			
600		HOUSEHOLD EQUIPMENT			
400		PLUMBING			
			(For this class, use per dwelling unit requirements of List Nos. 33, 34, 35 and 36 as a base, omitting items 440, 450, 460 and 480 shown therein, and add items shown here.		

THE FOLLOWING QUANTITIES BASED ON ONE DWELLING UNIT

440		Galv. water pipe & fittings			
		Pipe size 3/8"	lf.	13	
		Pipe size 1/2"	lf.	30	
		Pipe size 3/4"	lf.	25	
		Subtotal galv. pipe & fittings	lf.	68	76
		Misc. hangers, etc.			3
		Valves and cocks	no.	3	4
480	R	Black gas pipe & fittings 3/4" (for cooking only)	lf.	15	21
	R	Valves and cocks	no.	1	1.5
					Steel 72.5, zinc 3.5
					Steel 3
					CI 0.5, brass 3.5

THE FOLLOWING QUANTITIES BASED ON MAX. OF 12 DU

440		Galv. water pipe & fittings			
		Pipe size 1/2"	lf.	15	
		Pipe size 3/4"	lf.	25	
		Pipe size 1"	lf.	45	
		Pipe size 1-1/4"	lf.	105	
		Subtotal galv. pipe & fittings	lf.	190	522
		Misc. hangers, etc.			12
		Valves and cocks	no.	2	7
450		Water Heaters			
	ACD	76 GPH/100 deg. rise coal htr.	no.	1	388
	IIM	80 GPH/100 deg. rise auto. gas stg. type with 100 gal. self contained storage tank	no.	1	800
	EGH	190 GPH/100 deg. rise auto. oil stg. type with 100 gal. self contained tank	no.	1	1240
	ACD	150 gal. storage tank	no.	1	300
	IIM	66 gal. aux. stg. tank	no.	1	140
	ACD	Flue connections	sf.	16	17
	E-M	Flue connections	sf.	10	10
460		Control Equipment			
		Pressure relief valve	no.	1	1
		Temperature relief valve	no.	1	1
					Steel 496, zinc 26
					Steel 12
					Brass 7
					CI 388
					CI 50 Stl 736 Br 5 Zn 9
					CI 400 Stl 823 Cu 8 Zn 9
					Steel 133, zinc 7
					Steel 17
					Steel 10
					Brass 1
					Brass 1

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
460 (Cont.)		Thermometer	no. 1	1.5	CI 1, brass 0.5
	ACD	Auto. damper regulator	no. 1	11	CI 7, Stl 3, Br 1
480	ILM	Black gas pipe & fittings			
		Pipe size 1"	lf. 20		
		Pipe size 1-1/4"	lf. 40		
		Pipe size 1-1/2"	lf. 85		
		Pipe size 2-1/2"	lf. 15		
		Subtotal gas pipe & fittings	lf. 160	486	Steel 486
	IIM	Misc. hangers, etc.		12	Steel 12
	IIM	Valves and cocks	no. 3	24	CI 12, brass 12
500		HEATING			
530		Heaters - warm air furnaces			
	A	+15° Coal Btu 385,000	no. 1	2443	CI 2300, steel 143
	C	0° Coal Btu 400,000	no. 1	2443	CI 2300, steel 143
	D	-20° Coal Btu 500,000	no. 1	2957	CI 2800, steel 157
	E	+15° Oil Btu 385,000	no. 1	2313	CI 2170, steel 143
	G	0° Oil Btu 400,000	no. 1	2313	CI 2170, steel 143
	H	-20° Oil Btu 500,000	no. 1	2807	CI 2650, steel 157
	I	+15° Gas Btu 385,000	no. 1	2313	CI 2170, steel 143
	L	0° Gas Btu 400,000	no. 1	2313	CI 2170, steel 143
	M	-20° Gas Btu 500,000	no. 1	2807	CI 2650, steel 157
		Blowers CFM 2000	no. 1	320	CI 20, steel 300
		Motor HP 3/4 & controls	no. 1	62	CI 23, steel 23, copper 12.4, rubber 3.6
		Duct - metal 20-1/2 x 8-1/2	lf. 8		
		18 x 18	lf. 2	76	Steel 76
		Metal allowed for dampers, connections, etc. of non-metallic ducts		214	Steel 214
		Registers and grilles	no. 36	63	Steel 63
550		Firing Equipment			
	E	+15° Oil burner GPH 5	no. 1	250	CI 200, Stl 38, Cu 12
	G	0° Oil burner GPH 5	no. 1	250	CI 200, Stl 38, Cu 12
	H	-20° Oil burner GPH 5	no. 1	250	CI 200, Stl 38, Cu 12
	I	+15° Gas burner Btu input 575,000	no. 1	292	CI 257, Stl 29, Cu 6
	L	0° Gas burner Btu input 585,000	no. 1	292	CI 257, Stl 29, Cu 6
	M	-20° Gas burner Btu input 720,000	no. 1	311	CI 274, Stl 31, Cu 6
		Pipe and fittings			
	EGH	Oil lines 1" dia.	lf. 100	210	CI 40, Steel 170
	EGH	Reinforcing steel for oil tank		15	Steel 15
560		Control Equipment			
		Relay	no. 1	7	Steel 6, copper 1
		Damper regulator	no. 1	8	Steel 7, copper 1
		Thermostats	no. 3	9	Steel 8, copper 1
570		Breeching			
		Flue connections 12" dia.	lf. 6	40	Steel 40

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-2 (Temporary Family Units) Building Element: 70' Building
No. Persons Served: - No. Rooms: - Heating System: Group forced warm air
Type Construction: 2-story frame - concrete floor on ground or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE	(For these classes, use per dwelling unit requirements of List Nos. 33, 34, 35 and 36 as a base.		
300		ELECTRICAL			
600		HOUSEHOLD EQUIPMENT			
400		PLUMBING	(For this class, use per dwelling unit requirements of List Nos. 33, 34, 35 (and 36 as a base, omitting items 440, 450, 460 and 480 shown therein, and add items shown here.		

THE FOLLOWING QUANTITIES ARE BASED ON ONE DWELLING UNIT

440		Galv. water pipe & fittings			
		Pipe size 3/8"	lf.	13	
		Pipe size 1/2"	lf.	30	
		Pipe size 3/4"	lf.	25	
		Subtotal galv. pipe & fittings	lf.	68	76 Steel 72.5, zinc 3.5
		Misc. hangers, etc.		3	Steel 3
		Valves and cocks	no.	3	4 CI 0.5, brass 3.5
480	R	Black gas pipe & fittings 3/4" (for cooking only)	lf.	15	21 Steel 21
	R	Valves and cocks	no.	1	1.5 Brass 1.5

THE FOLLOWING QUANTITIES BASED ON MAS OF 8 DU

440		Galv. water pipe & fittings			
		Pipe size 1/2"	lf.	15	
		Pipe size 3/4"	lf.	20	
		Pipe size 1"	lf.	40	
		Pipe size 1-1/4"	lf.	75	
		Subtotal Galv. pipe & fittings	lf.	150	327 Steel 312, zinc 15
		Misc. hangers, etc.		10	Steel 10
		Valves and cocks	no.	2	7 Brass 7
450		Water Heaters			
	ACD	50 GPH/100 deg. rise coal htr.	no.	1	270 CI 270
	IIM	70 GPH/100 deg. rise auto. gas stg. type with 100 gal. self-contained tank	no.	1	800 CI 50 Stl 736 Br 5 Zn 9
	EGH	100 GPH/100 deg. rise auto. oil stg. type with 35 gal. self-contained tank	no.	1	800 CI 300 Stl 488 Cu 8 Zn 4
	ACD	100 gal. storage tank	no.	1	183 Steel 174, zinc 9
	EGH	66 gal. auxiliary stg. tank	no.	1	140 Steel 133, zinc 7
	ACD	Flue connections	sf.	16	17 Steel 17
	E-M	Flue connections	sf.	10	10 Steel 10
460		Control Equipment			
		Pressure relief valve	no.	1	1 Brass 1
		Temperature relief valve	no.	1	1 Brass 1

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
460 (Cont.)		Thermometer	no. 1	1.5	CI 1, brass 0.5
	ACD	Auto damper regulator	no. 1	11	CI 7, Stl 3, Br 1
480	ILM	Black gas pipe & fittings			
		Pipe size 1"	lf. 20		
		Pipe size 1-1/4"	lf. 40		
		Pipe size 1-1/2"	lf. 40		
		Pipe size 2"	lf. 15		
		Subtotal gas pipe & fittings	lf. 115	340	Steel 340
	ILM	Misc. hangers, etc.		10	Steel 10
	ILM	Valves and cocks	no. 3	18	Brass 18
500		HEATING			
530		Heaters - warm air furnaces			
	A	+15° Coal Btu 270,000	no. 1	1852	CI 1750, steel 102
	C	0° Coal Btu 280,000	no. 1	1852	CI 1750, steel 102
	D	-20° Coal Btu 350,000	no. 1	1852	CI 1750, steel 102
	E	+15° Oil Btu 270,000	no. 1	1752	CI 1650, steel 102
	G	0° Oil Btu 280,000	no. 1	1752	CI 1650, steel 102
	H	-20° Oil Btu 350,000	no. 1	1752	CI 1650, steel 102
	I	+15° Gas Btu 270,000	no. 1	1752	CI 1650, steel 102
	L	0° Gas Btu 280,000	no. 1	1752	CI 1650, steel 102
	M	-20° Gas Btu 350,000	no. 1	1752	CI 1650, steel 102
		Blowers CFM 1400	no. 1	190	CI 15, steel 175
		Motor HP 1/3 & controls	no. 1	30	CI 11, Stl 11 Cu 6 Rub 2
		Ducts - metal 14-1/2 x 8-1/2 18 x 18	lf. 8 lf. 2	64	Steel 64
		Metal allowed for dampers, connections, etc. of non- metallic ducts		127	Steel 127
		Registers and grilles	no. 24	50	Steel 50
550		Firing Equipment			
	E	+15° Oil burner GPH 3	no. 1	155	CI 124 Stl 23 Cu 8
	G	0° Oil burner GPH 3	no. 1	155	CI 124 Stl 23 Cu 8
	H	-20° Oil burner GPH 4	no. 1	155	CI 124 Stl 23 Cu 8
	I	+15° Gas burner Btu input 386,000	no. 1	270	CI 237 Stl 27 Cu 6
	L	0° Gas burner Btu input 400,000	no. 1	279	CI 245 Stl 28 Cu 6
	M	-20° Gas burner Btu input 500,000	no. 1	279	CI 245 Stl 28 Cu 6
		Pipe and fittings			
	EGH	Oil lines 1" dia.	lf. 100	210	CI 40, Steel 170
	EGH	Reinforcing steel for oil tank		15	Steel 15
560		Control Equipment			
		Relay	no. 1	7	Steel 6, copper 1
		Damper regulator	no. 1	8	Steel 7, copper 1
		Thermostats	no. 3	9	Steel 8, copper 1
570		Breeching			
		Flue connection - 12" dia.	lf. 6	40	Steel 40

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-2 (Temporary Family Units) Building Element: 170' Building
No. Persons Served: - No. Rooms: - Heating System: Group forced hot water
Type Construction: 2-story frame - concrete floor on ground or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE	(For these classes, use per dwelling		
300		ELECTRICAL	(unit requirements of List Nos. 33,		
600		HOUSEHOLD EQUIPMENT	(34, 35 and 36 as a base.		
400		PLUMBING	(For this class, use per dwelling unit		
			(requirements of List Nos. 33, 34, 35		
			(and 36 as a base, omitting items 440,		
			(450, 460 and 480 shown therein, and		
			(add items shown here.		

THE FOLLOWING QUANTITIES BASED ON ONE DWELLING UNIT

440		Galv. water pipe & fittings	lf.	13		
		Pipe size 3/8"	lf.	30		
		Pipe size 1/2"	lf.	25		
		Pipe size 3/4"	lf.	68	76	Steel 72.5, zinc 3.5
		Subtotal galv. pipe & fittings			3	Steel 3
		Misc. hangers, etc.			4	CI 0.5, brass 3.5
480	R	Valves and cocks	no.	3		
		Black gas pipe & fittings 3/4"	lf.	15	21	Steel 21
		(for cooking only)				
	R	Valves and cocks	no.	1	1.5	Brass 1.5

THE FOLLOWING QUANTITIES BASED ON MAX. OF 18 DU

440		Galv. water pipe & fittings	lf.	15		
		Pipe size 1/2"	lf.	20		
		Pipe size 3/4"	lf.	40		
		Pipe size 1"	lf.	80		
		Pipe size 1-1/4"	lf.	95		
		Pipe size 1-1/2"	lf.	250	620	Steel 592, zinc 28
		Subtotal galv. pipe & fittings			15	Steel 15
		Misc. hangers, etc.			9.2	Brass 9.2
450		Valves and cocks	no.	2		
		Water Heaters				
	CD	132 GPH/100 deg. rise coal htr.	no.	1	650	CI 650
	LM	80 GPH/100 deg. rise auto. gas stg. type with 100 gal. self-contained tank	no.	1	800	CI 50 Stl 736 Br 5 Zn 9
	GH	190 GPH/100 deg. rise auto. oil stg. type with 100 gal. self-contained tank	no.	1	1240	CI 400 Stl 823 Cu 8 Zn 9
	CD	250 gal. storage tank	no.	1	445	Steel 445
	LM	150 gal. auxiliary stg. tank	no.	1	300	Steel 300
	CD	Flue connections	sf.	16	17	Steel 17
	G-M	Flue connections	sf.	10	10	Steel 10

Grit. List N	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
460		Control Equipment			
		Pressure relief valve	no. 1	1	Brass 1
		Temperature relief valve	no. 1	1	Brass 1
		Thermometer	no. 1	1.5	CI 1, brass 0.5
	CD	Auto. damper regulator	no. 1	11	CI 7, steel 3, brass 1
480	IM	Black gas pipe & fittings			
		Pipe size 1"	lf. 20		
		Pipe size 1-1/4"	lf. 40		
		Pipe size 1-1/2"	lf. 120		
		Pipe size 2"	lf. 20		
		Pipe size 2-1/2"	lf. 15		
		Subtotal gas pipe & fittings	lf. 215	690	Steel 690,
	IM	Misc. hangers, etc.		15	Steel 15
	IM	Valves and cocks	no. 3	27.5	CI 12, brass 15.5
500		HEATING			
540		Boilers - hot water heating			
	C	0° Coal 1600 sf net IBR	no. 1	2263	CI 2263
	D	-20° Coal 1800 sf net IBR	no. 1	2531	CI 2531
	G	0° Oil 1600 sf net IBR	no. 1	2412	CI 2412
	H	-20° Oil 1800 sf net IBR	no. 1	2649	CI 2649
	L	0° Gas 1600 sf net IBR	no. 1	1978	CI 1978 (burner incl.)
	M	-20° Gas 1800 sf net IBR	no. 1	2165	CI 2165 (burner incl.)
		Pipe 2" dia.	lf. 410	1500	Steel 1500
		Pipe 3/4" dia.	lf. 230	260	Steel 260
		Pipe 1/2" dia.	lf. 370	315	Steel 315
		Fittings		700	CI 700
		Valves 2" size	no. 2	50	CI 48, brass 2
		Valves 3/4" size	no. 2	3	Brass 3
		Valves 1/2" size	no. 1	1	Brass 1
		Flow control valve 2" size	no. 1	22	CI 20, brass 2
		Radiator valves 1/2" size	no. 12	12	Brass 12
		Air valves 1/8" size	no. 18	2	Brass 2
		Air valves 3/4" size	no. 1	1	Brass 1
	CGL	0° radiators	sf. 1181	5315	CI 5315
	DHM	-20° radiators	sf. 1325	5963	CI 5963
		Hangers		45	CI 30, steel 15
	CGL	0° circ. pump size 2" & controls	no. 1	62	CI 42, Stl 13, Cu 7
	DHM	-20° circ. pump size 2-1/2" and controls	no. 1	85	CI 63, Stl 14, Cu 8
		Expansion tank gal. 30	no. 1	72	Steel 72
550		Firing Equipment			
	GH	0° & -20° Oil burner GPH 4	no. 1	155	CI 124, Stl 23, Cu 8
		Pipe and fittings			
	GH	Oil lines 1" dia.	lf. 100	210	CI 40, steel 170
	GH	Reinforcing steel for oil tank		15	Steel 15
560		Control Equipment			
		Relay	no. 1	7	Steel 6, copper 1
		Damper regulator	no. 1	8	Steel 7, copper 1
		Thermostats	no. 3	9	Steel 8, copper 1
		Pressure reducing valve size 1/2"	no. 1	3	Brass 3
		Pressure relief valve size 1/2"	no. 1	3	Brass 3
570		Breeching			
		Flue connections - 12" dia.	lf. 6	40	Steel 40

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-2 (Temporary Family Units) Building Element: 90' Building
No. Persons Served: - No. Rooms: - Heating System: Group forced Hot Water
Type Construction: 2-story frame - concrete floor on ground or wood frame floor

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE	(For these classes, use per dwelling		
300		ELECTRICAL	{ unit requirements of List Nos. 33,		
600		HOUSEHOLD EQUIPMENT	{ 34, 35 and 36 as a base.		
400		PLUMBING	(For this class use per dwelling unit		
			(requirements of List Nos. 33, 34, 35		
			(and 36 as a base, omitting items 440,		
			(450, 460 and 480 shown therein, and		
			(add items shown here.		

THE FOLLOWING QUANTITIES BASED ON ONE DWELLING UNIT

440		Galv. water pipe and fittings			
		Pipe size 3/8"	lf.	13	
		Pipe size 1/2"	lf.	30	
		Pipe size 3/4"	lf.	25	
		Subtotal galv. pipe & fittings	lf.	68	76 Steel 72.5, zinc 3.5
		Misc. hangers, etc.		3	Steel 3
		Valves and cocks	no.	3	4 CI 0.5, brass 3.5
480	R	Black gas pipe & fittings 3/4"			
		(for cooking only)	lf.	15	21 Steel 21
	R	Valves and cocks	no.	1	1.5 Brass 1.5

THE FOLLOWING QUANTITIES BASED ON MAX. OF 10 DU

440		Galv. water pipe & fittings			
		Pipe size 1/2"	lf.	15	
		Pipe size 3/4"	lf.	25	
		Pipe size 1"	lf.	45	
		Pipe size 1-1/4"	lf.	90	
		Subtotal galv. pipe & fittings	lf.	175	485 Steel 462, zinc 23
		Misc. hangers, etc.		10	Steel 10
		Valves and cocks	no.	2	7 Brass 7
450		Water Heaters			
	CD	50 GPH/100 deg. rise coal htr.	no.	1	270 CI 270
	LM	80 GPH/100 deg. rise auto. gas			
		stg. type with 100 gal. self-			
		contained tank	no.	1	800 CI 50 Stl 736 Br 5 Zn 9
	GH	100 GPH/100 deg. rise auto. oil			
		stg. type with 35 gal. self-			
		contained tank	no.	1	800 CI 300 Stl 488 Cu 8 Zn 4
	CD	100 gal. storage tank	no.	1	183 Steel 174, zinc 9
	GH	66 gal. auxiliary stg. tank	no.	1	140 Steel 133, zinc 7
	CD	Flue connections, 24 gage	sf.	16	17 Steel 17
	G-M	Flue connections, 24 gage	sf.	10	10 Steel 10
460		Control Equipment			
		Pressure relief valve	no.	1	1 Brass 1
		Temperature relief valve	no.	1	1 Brass 1

Crit. List No	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
460 (Cont.)	CD	Auto. damper regulator	no. 1	11	CI 7, steel 3, brass 1
		Thermometer	no. 1	1.5	CI 1, brass 0.5
480	LM	Black gas pipe & fittings			
		Pipe size 1"	lf. 20		
		Pipe size 1-1/4"	lf. 35		
		Pipe size 1-1/2"	lf. 75		
		Pipe size 2-1/2"	lf. 15		
		Subtotal gas pipe & fittings	lf. 145	456	Steel 456
	LM	Misc. hangers, etc.		10	Steel 10
	LM	Valves and cocks	no. 3	24	CI 12, brass 12
500		HEATING			
540		Boilers - hot water heating			
	C	0° Coal 1000 sf net IER	no. 1	1800	CI 1800
	D	-20° Coal 1100 sf net IER	no. 1	1800	CI 1800
	G	0° Oil 1000 sf net IER	no. 1	1900	CI 1900
	H	-20° Oil 1100 sf net IER	no. 1	1900	CI 1900
	L	0° Gas 1000 sf net IER	no. 1	1400	CI 1400 (Burner incl.)
	M	-20° Gas 1100 sf net IER	no. 1	1400	CI 1400
		Pipe 1-1/2" dia.	lf. 250	700	Steel 700
		Pipe 3/4" dia.	lf. 115	130	Steel 130
		Pipe 1/2" dia.	lf. 240	204	Steel 204
		Fittings		350	CI 350
		Valves 1-1/2" size	no. 2	10	Brass 10
		Valves 3/4" size	no. 2	3	Brass 3
		Valves 1/2" size	no. 1	1	Brass 1
		Flow control valve 1-1/2" size	no. 1	18	CI 16, brass 2
		Radiator valves 1/2" size	no. 12	12	Brass 12
		Air valves 1/8" size	no. 9	1	Brass 1
		Air valves 3/4" size	no. 1	1	Brass 1
	CGL	0° radiators	sf. 724	3258	CI 3258
	DHM	-20° radiators	sf. 820	3690	CI 3690
		Hangers		30	CI 20, steel 10
		Circ. pump size 2" & controls	no. 1	62	CI 42, Stl 13, Cu 7
		Expansion tank - gal 30	no. 1	72	Steel 72
550		Firing Equipment			
	GH	0° & -20° Oil burner GPH 3	no. 1	155	CI 124, Stl 23, Cu 8
		Pipe and fittings			
	GH	Oil lines 1" dia.	lf. 100	210	CI 40, steel 170
560	GH	Reinforcing steel for oil tank		15	Steel 15
		Control Equipment			
		Relay	no. 1	7	Steel 6, copper 1
		Damper regulator	no. 1	8	Steel 7, copper 1
		Thermostats	no. 3	9	Steel 8, copper 1
		Press. reducing valve 1/2" size	no. 1	3	Brass 3
		Press. relief valve 1/2" size	no. 1	3	Brass 3
570		Breeching			
		Flue connection - 12" dia.	lf. 6	40	Steel 40

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-3 (1-story Temporary Family Unit) Building Element: O-Bedroom Unit ('A' Type)
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: Concrete floor slab or wood frame floor const.-masonry walls & partitions

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen) inc. allowance for end windows	sf. 40	5	Steel 4, zinc 1
260		Sheet metal, flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside	no. 2		
		Windows in rooms (inc. shade brackets, spring & catch) inc. allowance for end windows	no. 3.3		
		Transoms	no. 2		
		Total builders hardware		20	Steel 19, brass 1
		Rough hardware			
		Nails, screws, etc.			
	X-3	Plain		69	Steel 69
	X-3	Galvanized		7	Steel 6.6, zinc 0.4
	X-4	Plain		40	Steel 40
	X-4	Galvanized		5	Steel 4.7, zinc 0.3
300		ELECTRICAL			
320		Entrance (approx. share of bldg. switch, dist. panel & entr. wire)		6	Steel 5, copper 1
330		Nonmetallic cable (equiv. 1.f. single wire) #14 wire	lf. 170	2.2	Copper 2.2
340		Outlet boxes (nonmetallic	no. 5		
350		Receptacles	no. 2	0.4	Steel 0.2, copper 0.2
360		Straps, misc.		0.5	Steel 0.5
370		Solder		0.2	
380		Fixtures	no. 3	0.9	Steel 0.6, copper 0.3
400		PLUMBING (1/2 Stack Per DU)			
420		Fixtures, showers, nonmetallic	no. 1	24	Steel 18, CI 6 (Max. L-42)
		Fixtures, trimmings		30.15	CI 25 Stl 3 Br 1.55 Rub 0.6
430		CI pipe & fittings size 3"	lf. 10		
		size 2"	lf. 7.5		
		*Subtotal pipe & fittings	lf. 17.5	153	CI 153 (inc. 1-1/2" ftgs.)
		Steel pipe size 1-1/2"	lf. 17.5	49	Steel 46.5, zinc 2.5
		(If lead is used for rough- ing make-up of waste pipe, the total of 49 pounds will change to)		54	CI 1 Stl 41 Zn 1 Lead 11
		Calking and flashing lead		44	Lead 44
		Misc. hangers, etc.		12	CI 6, steel 6
		*For wood frame floor construc- tion, the weight given in cast iron may be made up of cast iron and lead.			

Crit. List N	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
440		Galv. water pipe & fittings Pipe size 3/8" Pipe size 1/2" Pipe size 3/4" Subtotal pipe & fittings Valves and cocks	lf. 12.5 lf. 65 lf. 15 lf. 92.5 no. 3	109 1.9	Steel 103, zinc 6 CI 0.5, brass 1.4
450	N	Water Heaters 30 gal. range boiler	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas htr.	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil htr.	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs. 8 sf 24 gage 1/2" pressure relief valve	no. 1 no. 1	8 1	Steel 8 Brass 1
460	RS	Black gas pipe and fittings Pipe size 3/4" Pipe size 1/2" Subtotal gas pipe & fittings	lf. 20 lf. 10 lf. 30	41	Steel 41
480	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500		HEATING			
520		Space Heaters			
	S	+150, 00 & -200 gas Btu input 30,000	no. 1	102	CI 35, Stl 65, Cu 2
	R	+150, 00 & -200 coal Btu output 35,000	no. 1	150	CI 75, steel 75
	T	+150, 00 & -200 oil Btu output 18,000	no. 1	123	Steel 121, copper 2
550		Firing Equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	Steel 55, CI 2
570		Breeching - flue connections			
	S	For gas space htr. 6" dia.	lf. 5	12	Steel 12
	R	For coal space htr. 7" dia.	lf. 5	15	Steel 15
	T	For oil space htr. 6" dia.	lf. 5	12	Steel 12
600		HOUSEHOLD EQUIPMENT			
610		Cooking Equipment			
	N	Coal range	no. 1	350	CI 300, steel 50
	N	Flue connection 7" dia.	lf. 5	15	Steel 15
	RS	Gas range	no. 1	91	CI 25, Stl 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Stl 105, Cu 2
620		Refrigeration			
		(1) Ice - 3-1/2 cu. ft.		6.5	Steel 6, zinc 0.5
		(2) Elec. - 6 cu. ft.			Frozen inventory
		(3) Gas - 5 cu. ft.			Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-3 (1-story Temporary Family Units) Building Element: 1 BR Unit ('B' & 'C' Types)
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: Concrete floor slab or wood frame floor - masonry walls & partitions

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 46	6	Steel 5, zinc 1
260		Sheet metal, flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside	no. 3		
		Windows in rooms (inc. shade brackets, spring & catch)	no. 4.3		
		Transoms	no. 3		
		Total builders hardware		27	Steel 26, brass 1
		Rough hardware			
		Nails, screws, etc.			
	X-3	Plain		103	Steel 103
	X-3	Galvanized		11	Steel 10.4, zinc 0.6
	X-4	Plain		50	Steel 50
	X-4	Galvanized		6	Steel 5.7, zinc 0.3
300		ELECTRICAL			
320		Entrance (approx. share of bldg. switch, dist. panel & entr. wire)		6	Steel 5, copper 1
330		Nonmetallic cable (equiv. l.f. single wire) #14 wire	lf. 270	3.3	Copper 3.3
340		Outlet boxes (nonmetallic)	no. 10		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 3	0.6	Steel 0.3, copper 0.3
360		Straps, misc.		0.9	Steel 0.9
370		Solder		0.2	
380		Fixtures	no. 5	1.5	Steel 1, copper 0.5
400		PLUMBING (1/2 Stack/DU)			
420		Fixtures, showers nonmetallic	no. 1	24	Stl 18 CI 6 (Max. L-42)
		Fixtures, trimmings		36	CI 30 Stl 3 Br 2.2 Rub 0.8
430		CI pipe & fittings size 3"	lf. 10		
		size 2"	lf. 10		
		* Subtotal pipe & fittings	lf. 20	198	CI 198 (includes 1-1/2" and 1-1/4" fittings)
		Steel pipe size 1-1/2"	lf. 20		
		size 1-1/4"	lf. 2		
		Subtotal steel pipe	lf. 22	61.5	Steel 58, zinc 3.5
		(If lead is used for roughing make up of waste pipe, subtotal of 61.5 will be changed to)		74	CI 2 Stl 45 Zn 2 Lead 25
		Calking and flashing lead		59	Lead 59
		Misc. hangers, etc.		12	CI 6, steel 6
		*For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.			

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
440		Galv. water pipe & fittings Pipe size 3/8" Pipe size 1/2" Pipe size 3/4" Subtotal pipe & fittings Valves and cocks Misc. hangers, etc.	lf. 25 lf. 57.5 lf. 12.5 lf. 95 no. 1.5	123 1.9 4	Steel 118, zinc 5 CI 0.5, brass 1.4 Steel 4
450	OP	Water Heaters 30 gal. range boiler	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas htr.	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil htr.	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs. 8 sf 24 gage 1/2" pressure relief valve	no. 1 no. 1	8 1	Steel 8 Brass 1
460	RS	Black gas pipe and fittings Pipe size 3/4" Pipe size 1/2" Subtotal gas pipe & fittings	lf. 20 lf. 10 lf. 30	41	Steel 41
480	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500		HEATING			
520	O	Chimney heater, inc. blower 300 CFM, flue, motor & control Space Heaters	no. 1	135	CI 105, Stl 26, Cu 4
	PR	+150, 00, -200 coal space htr. Btu output 35,000	no. 1	150	Steel 75, CI 75
	S	+150, 00, -200 gas space htr. Btu input 30,000	no. 1	102	CI 35, Stl 65, Cu 2
	T	+150, 00, -200 oil space htr. Btu output 30,000	no. 1	123	Steel 121, copper 2
550		Firing Equipment			
	T	Oil storage tank - 55 gal. Breeching - flue connections	no. 1	57	CI 2, steel 55
	PR	For coal space htr. 7" dia.	lf. 5	15	Steel 15
	S	For gas space htr. 6" dia.	lf. 5	12	Steel 12
	T	For oil space htr. 6" dia.	lf. 5	12	Steel 12
600		HOUSEHOLD EQUIPMENT			
610		Cooking Equipment			
	OP	Coal range	no. 1	350	CI 300, steel 50
	OP	Flue connections 7" dia.	lf. 5	15	Steel 15
	RS	Gas range	no. 1	91	CI 25, Stl 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Stl 105, Cu 2
620		Refrigeration (1) Ice - 5 cu. ft. (2) Elec. - 6 cu. ft. (3) Gas - 5 cu. ft.		6.5	Steel 6, zinc 0.5 Frozen inventory Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-3 (1-story Temporary Family Unit) Building Element: 2 BR Unit ('B' & 'C' Types)
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: Concrete floor slab or wood frame floor - masonry walls & partitions

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen)	sf. 52	7	Steel 6, zinc 1
260		Sheet metal, flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside	no. 4		
		Windows in rooms (inc. shade brackets, spring & catch)	no. 5.3		
		Transoms	no. 4		
		Total builders hardware		32	Steel 30, brass 2
		Rough hardware			
		Nails, screws, etc.			
	X-3	Plain		139	Steel 139
	X-3	Galvanized		15	Steel 14.2, zinc 0.8
	X-4	Plain		60	Steel 60
	X-4	Galvanized		8	Steel 7.6, zinc 0.4
300		ELECTRICAL			
320		Entrance (approx. share of bldg. switch, dist. panel & entr. wire)		6	Steel 5, copper 1
330		Nonmetallic cable (equiv. l.f. single wire)			
		#14 wire	lf. 320	4	Copper 4
		Outlet boxes (nonmetallic)	no. 11		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 4	0.8	Steel 0.4, copper 0.4
360		Straps, misc.		0.9	Steel 0.9
370		Solder		0.2	
380		Fixtures	no. 5	1.5	Steel 1, copper 0.5
400		PLUMBING (1/2 Stack Per DU)			
420		Fixtures, showers, nonmetallic	no. 1	24	Stl 18 CI 6 (Max. 1-42)
		Fixtures, trimmings		36	CI 30 Stl 3 Br 2.2 Rub 0.8
430		CI pipe & fittings size 3"	lf. 10		
		size 2"	lf. 10		
		* Subtotal pipe & fittings	lf. 20	198	CI 198 (includes 1-1/2" and 1-1/4" fittings)
		Steel pipe size 1-1/2"	lf. 20		
		size 1-1/4"	lf. 2		
		Subtotal steel pipe	lf. 22	61.5	Steel 58, zinc 3.5
		(If lead is used for roughing make-up of waste pipe, the subtotal of 61.5 pounds will change to)		74	CI 2 Stl 45 Zn 2 Lead 25
		Calking and flashing lead		59	Lead 59
		Misc. hangers, etc.		12	CI 6, steel 6

*For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.

Crit. List N	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
440		Galv. water pipe & fittings Pipe size 3/8" Pipe size 1/2" Pipe size 3/4" Subtotal pipe & fittings Valves and cocks Misc. hangers, etc. Water Heaters	lf. 25 lf. 57.5 lf. 12.5 lf. 95 no. 1.5	123 1.9 4	Steel 118, zinc 5 Brass 1.4, CI 0.5 Steel 4
450	OP	30 gal. range boiler	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas htr.	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil htr.	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & ftgs. 8 sf 24 gage 1/2" pressure relief valve	no. 1 no. 1	8 1	Steel 8 Brass 1
460	RS	Black gas pipe and fittings Pipe size 3/4" Pipe size 1/2" Subtotal gas pipe & fittings	lf. 20 lf. 10 lf. 30	41	Steel 41
	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500		HEATING			
520	O	Chimney heater, inc. blower 300 CFM, flue, motor & Control Space Heaters	no. 1	135	CI 105, Stl 26, Cu 4
	PR	+15°, 0° & -20° coal space htr. Btu output 35,000	no. 1	150	CI 75, steel 75
	S	+15°, 0° & -20° gas Btu input 40,000	no. 1	142	CI 50, Stl 89, Cu 3
	T	+15°, 0° & -20° oil Btu output 30,000	no. 1	123	Steel 121, copper 2
550	T	Firing Equipment Oil storage tank - 55 gal. Breeching - flue connections	no. 1	57	CI 2, steel 55
	PR	For coal space heater 7" dia.	lf. 5	15	Steel 15
	S	For gas space heater 6" dia.	lf. 5	12	Steel 12
	T	For oil space heater 7" dia.	lf. 5	15	Steel 12
600		HOUSEHOLD EQUIPMENT			
610		Cooking Equipment			
	OP	Coal range	no. 1	350	CI 300, steel 50
	OP	Flue connection 7" dia.	lf. 5	15	Steel 15
	RS	Gas range	no. 1	91	CI 25, Stl 65, Cu 1
	T	Oil range	no. 1	137	CI 30, Stl 105, Cu 2
620		Refrigeration (1) Ice - 5 cu. ft. (2) Elec. - 6 cu. ft. (3) Gas - 5 cu. ft.		6.5	Steel 6, zinc 0.5 Frozen inventory Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: TDU-3 (1 story Temporary Family Unit) Bldg. Element: 3 BR Unit (B & C Types)
No. Persons Served: - No. Rooms: - Heating System: Individual
Type Construction: Concrete floor slab or wood frame floor, masonry walls & partitions

-WFB Approved List-

Crit. List No.	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen (1/2 screen) including allowance for end windows	sf. 58	8	Steel 7, zinc 1
260		Sheet metal flashings, chimney only		8	Steel 7, zinc 1
280		Glazing points		0.3	Zinc 0.3
290		Builders hardware			
		Doors - outside & screen	no. 4		
		Doors - inside	no. 5		
		Windows in rooms (including shade brackets, spring and catch) and including allowance for end windows	no. 6.3		
		Transoms	no. 5		
		Total builders hardware		37	Steel 35, brass 2
		Rough hardware			
	X-3	Plain		159	Steel 159
	X-3	Galvanized		18	Steel 17.1, zinc 0.9
	X-4	Plain		70	Steel 70
	X-4	Galvanized		9	Steel 8.5, zinc 0.5
300		ELECTRICAL			
320		Entrance (approx. share of building switch, distribution panel and entrance wire)		6	Steel 5, copper 1
3		Nonmetallic cable (equiv. l.f. single wire)			
		#14 wire	lf. 370	4.7	Copper 4.7
340		Outlet boxes (nonmetallic)	no. 14		
350	0	Switches	no. 2	0.4	Steel 0.2, copper 0.2
		Receptacles	no. 5	1.0	Steel 0.5, copper 0.5
360		Straps, misc.		1.2	Steel 1.2
370		Solder		0.4	
380		Fixtures	no. 7	2.1	Steel 1.4, copper 0.7
400		PLUMBING (1/2 Stack Per DU)			
420		Fixtures, showers nonmetallic	no. 1	24	Steel 18 CI 6 (Max. L-42)
		Fixture trimmings		36	CI 30 Stl 3 Br 2.2 Rub 0.8
430		CI pipe & fittings, size 3"	lf. 10		
		size 2"	lf. 10		
		* Subtotal pipe & fittings	lf. 20	198	CI 198 (includes 1-1/2" and 1-1/4" fittings)
		Steel pipe, size 1-1/2"	lf. 20		
		size 1-1/4"	lf. 2		
		Subtotal steel pipe	lf. 22	61.5	Steel 58, zinc 3.5
		(If lead is used for roughing make-up of waste pipe, the subtotal of 61.5 lbs. will change to)		74	CI 2 Stl 45 Zn 2 Lead 25

*For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.

Crit. List	Var.	Critical Material PER DWELLING UNIT	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.)		Calking and flashing lead		59	Lead 59
		Misc. hangers, etc.		12	Steel 6, CI 6
440		Galv. water pipe & fittings			
		Pipe size 3/8"	lf. 25		
		Pipe size 1/2"	lf 57.5		
		Pipe size 3/4"	lf 12.5		
		Subtotal pipe & fittings	lf. 95	123	Steel 118, zinc 5
		Valves and cocks	no. 1.5	1.9	Brass 1.4, CI 0.5
		Misc. hangers, etc..		4	Steel 4
450		Water Heaters			
	OP	30 gal. range boiler	no. 1	70	Steel 67, zinc 3 (85 lbs. W.W.P.)
	RS	20 gal. auto. stg. gas htr.	no. 1	145	CI 7 Stl 132 Br 3 Zn 3 (85 lbs. W.W.P.)
	T	30 gal. auto. stg. oil htr.	no. 1	225	CI 12 Stl 206 Br 3 Zn 4 (85 lbs. W.W.P.)
	RST	Flue pipe & fittings, 8 sf			
		24 gage	no. 1	8	Steel 8
		1/2" pressure relief valve	no. 1	1	Brass 1
460	RS	Black gas pipe and fittings			
		Pipe size 3/4"	lf. 20		
		Pipe size 1/2"	lf. 10		
		Subtotal gas pipe & fitting	lf. 30	41	Steel 41
	R	Valves and cocks	no. 2	3	Brass 3
	S	Valves and cocks	no. 3	5	Brass 5
500		HEATING			
520	O	Chimney heater, including blower 300 CPM, flue, motor and control	no. 1	135	CI 105, steel 26, cu 4
	PR	+15°, 0° & -20° coal space heater, Btu output 35,000	no. 1	150	CI 75, steel 75
	S	+15°, 0° & -20° gas space heater, Btu input 40,000	no. 1	142	CI 50, steel 89, cu 3
	T	+15°, 0° & -20° oil space heater, Btu output 30,000	no. 1	123	Steel 121, copper 2
550		Firing Equipment			
	T	Oil storage tank - 55 gal.	no. 1	57	CI 2, steel 55
570		Breeching			
	PR	For coal space htr. 7" dia.	lf. 5	15	Steel 15
	S	For gas space htr. 6" dia.	lf. 5	12	Steel 12
	T	For oil space htr. 7" dia.	lf. 5	15	Steel 15
600		HOUSEHOLD EQUIPMENT			
610		Cooking Equipment			
	OP	Coal Range	no. 1	350	CI 300, steel 50
	OP	Flue connection 7" dia.	lf. 5	15	Steel 15
	RS	Gas Range	no. 1	91	CI 25, steel 65, cu 1
	T	Oil Range	no. 1	137	CI 30, steel 105, cu 2
620		Refrigeration			
		(1) Ice - 5 cu. ft.		6.5	Steel 6, zinc 0.5
		(2) Electric - 6 cu. ft.			Frozen inventory
		(3) Gas - 5 cu. ft.			Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WA-1 (Dormitory Apartments) Building Element: 16 apartment wing
No. Persons: 32 No. Rooms: 16 Heating System: Forced warm air
Type Construction: Frame superstructure - concrete slab on ground

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER WING	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
240		Insect screen	sf. 450	59	Steel 53, zinc 6
280		Glazing points		5	Zinc 5
290		Builders hardware			
		Doors - outside & screens	no. 32		
		Doors - inside	no. 16		
		Windows in rooms including shade brackets, spring and catch	no. 16		
		Total builders hardware		132	Steel 125, brass 7
		Rough hardware			
		Nails, screws, plain		1300	Steel 1300
		Nails, screws, galv.		90	Steel 85.5, zinc 4.5
300		ELECTRICAL - 1 phase, 3 wire			
320		Panelboards No. circuits 22	no. 1	54	Steel 48, copper 6
330		Nonmetallic cable (equiv. 1.f. single wire)			
		#14 wire	1f 1080	13.9	Copper 13.9
		#12 wire	1f 1410	28	Copper 28
340		Outlet boxes (nonmetallic)	no. 64		
350		Receptacles	no. 16	3.2	Steel 1.6, copper 1.6
360		Straps, misc.		5.5	Steel 5.5
370		Solder		1.4	
380		Fixtures	no. 48	21	Steel 15, copper 6
		PLUMBING			
420		Fixtures, nonmetallic showers	no. 16	404	Steel 404
		Fixture trim		460	CI 425 Stl 16 Br 14 Rub 5
430		CI pipe & fittings, size 4"	1f. 85		
		size 3"	1f. 55		
		size 2"	1f. 80		
		*Subtotal pipe and fittings	1f. 220	2300	CI 2300 (inc screw ftgs)
		Steel pipe, size 2"	1f. 45		
		size 1-1/2"	1f. 135		
		Subtotal steel pipe	1f. 180	940	Steel 900, zinc 40
		(If lead is used for roughing make-up of waste pipe, the subtotal of 940 pounds will change to)		971	CI 16 Stl 851 Zn 40 Lead 64
		Calking and flashing lead		500	Lead 500
		Misc. hangers, etc.		52	CI 32, steel 20
440		Galv. Water Pipe & Fittings			
		Pipe size 3/8"	1f. 45		
		Pipe size 1/2"	1f. 300		
		Pipe size 3/4"	1f. 200		
		Subtotal pipe and fittings	1f. 545	615	Steel 585, zinc 30
		Pipe size 1"	1f. 30		
		Pipe size 1-1/4"	1f. 100		
		Pipe size 1-1/2"	1f. 30		
		Subtotal pipe and fittings	1f. 160	500	Steel 475, zinc 25

*For wood frame floor construction, the weight given in cast iron may be made up of cast iron and lead.

Crit. Li. No	Var.	Critical Material PER WING	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
440 (Cont.)		Misc. hangers, etc.		50	Steel 50
500 530		HEATING Ducts (Metal allowed for damper, connections, etc. of nonmetallic ducts) Registers & grilles 12 x 4 10 x 4	no. 4 no. 12	220 42	Steel 220 Steel 42
600 610 620		HOUSEHOLD EQUIPMENT Cooking equipment Electric hot plate Refrigerators (1) Ice (2) Mechanical	no. 1	22 6.5	Steel 20, copper 2 Steel 6, zinc 0.5 Frozen inventory

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WA-1 (Dormitory Apartments) Building Element: 16 apartment wing
No. Persons Served: 32 No. Rooms: 16 Heating System: Forced hot water
Type Construction: Frame superstructure - concrete slab on ground

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER WING	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE)			
300		ELECTRICAL)			
400		PLUMBING)	For these items, refer to List No. 51		
600		HOUSEHOLD EQUIPMENT)			
500		HEATING			
5'-		Pipe, 2" diameter	lf. 300	1104	Steel 1104
		Pipe, 3/4" diameter	lf. 230	260	Steel 260
		Fittings	no. 100	200	CI 200
		Drain valves, 1/2" size	no. 16	16	Brass 16
		Rad. valves, 3/4" size	no. 16	24	Brass 24
	AEI	+15° radiators	sf. 474	2133	CI 2133
	CDG)	0° & -20° radiators	sf. 592	2664	CI 2664
	HLM)	Hangers		40	CI 30, steel 10

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WA-1 (Dormitory Apartments) Building Element: Service unit - 32 ants.
No. Persons Served: 64 No. Rooms: - Heating System: Forced warm air
Type Construction: Frame superstructure - concrete slab on ground

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER SERVICE UNIT (2 WINGS)	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
		Outside fire alarm (split rim & hammer)		20	Steel 20
240		Insect screen	sf. 200	26	Steel 23, zinc 3
260		Sheet metal, flashings, chimney only		20	Steel 18, zinc 2
280		Glazing points		2	Zinc 2
290		Builders hardware			
		Doors - outside & screen	no. 14		
		Doors - inside	no. 16		
		Windows in rooms	no. 16		
		Total builders hardware		95	Steel 90, brass 5
		Rough hardware			
		Nails, screws, etc.			
		Plain		700	Steel 700
		Galvanized		57	Steel 54, zinc 3
300		ELECTRICAL - 1 phase, 3 wire			
320		Entrance 200A-3P-2B & SN	no. 1	30	Steel 23, copper 7
		Panelboards No. circuits 6	no. 1	64	Steel 55, copper 9
330		Nonmetallic cable (equiv. l.f. single wire)			
		# 14 wire	lf. 1340	17.2	Copper 17.2
		# 10 wire	lf. 80	2.6	Copper 2.6
		# 4 wire	lf. 420	53	Copper 53
		#000 wire	lf. 100	50	Copper 50
		Outlet boxes (nonmetallic	no. 46		
350		Switches	no. 15	3	Steel 1.5, copper 1.5
		Receptacles	no. 9	1.8	Steel 0.9, copper 0.9
360		Straps, misc.		3.6	Steel 3.6
370		Solder		1	
380		Fixtures	no. 22	14	Steel 10, copper 4
400		PLUMBING			
420		Fixture trim		45	CI 40 Stl 1 Br 3 Rub 1
430		CI pipe & fittings size 6"	lf. 30		
		size 4"	lf. 105		
		size 3"	lf. 25		
		* Subtotal pipe & fittings	lf. 160	1620	CI 1620 (inc. screw ftgs.)
		Galv. steel pipe size 1-1/2"	lf. 10	28	Steel 26, zinc 2
		(If lead is used for rough- ing make-up of waste pipe, the total of 28 pounds will change to		42	CI 2 Stl 14 Zn 1 Lead 25
		*For wood frame floor construc- tion, the weight given in cast iron may be made up of cast iron and lead.			

Crit. List N	Var.	Critical Material PER SERVICE UNIT (2 WINGS)	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
430 (Cont.)		Calking & flashing lead		350	Lead 350
		Misc. hangers, etc.		17	CI 2, steel 15
440		Galv. water pipe & fittings			
		Pipe size 3/8"	lf. 30		
		Pipe size 1/2"	lf. 35		
		Pipe size 3/4"	lf. 50		
		Subtotal pipe & fittings	lf. 115	145	Steel 130, zinc 15
		Pipe size 1"	lf. 50		
		Pipe size 1-1/4"	lf. 75		
		Pipe size 1-1/2"	lf. 75		
		Pipe size 2"	lf. 36		
		Pipe size 2-1/2"	lf. 42		
		Pipe size 3"	lf. 20		
		Subtotal pipe & fittings	lf. 298	1230	Steel 1190, zinc 40
		Misc. hangers, etc.		50	Steel 50
		Valves and cocks	no. 11	87	CI 15, brass 72
450		Water Heaters			
	ACD	132 GPH/100 deg. rise coal htr.	no. 1	648	CI 648
	ILM	80 GPH/100 deg. rise auto. gas stg. type with 100 gal. self contained tank	no. 1	800	CI 50 Stl 736 Br 5 Zn 9
	EGH	190 GPH/100 deg. rise auto. oil stg. type with 100 gal. self contained tank	no. 1	1240	CI 400 Stl 823 Cu 8 Zn 9
	ACD	250 gallon storage tank	no. 1	435	Steel 435
	ILM	150 gal. aux. stg. tank	no. 1	300	Steel 300
	ACD	Flue connections, 24 gage	sf. 30	30	Steel 30
	E-M	Flue connections, 24 gage	sf. 20	20	Steel 20
460		Control Equipment			
		Pressure relief valve	no. 1	1	Brass 1
		Temperature relief valve	no. 1	1	Brass 1
		Thermometer	no. 1	1.5	Brass 0.5, CI 1
	ACD	Auto. damper regulator	no. 1	11	CI 7, Stl 3, Br 1
480		Black gas pipe & fittings			
		Pipe size 1-1/2"	lf. 50		
		Pipe size 2"	lf. 20		
		Pipe size 2-1/2"	lf. 40		
		Subtotal pipe & fittings	lf. 110	501	Steel 501
	ILM	Misc. hangers, etc.		15	Steel 15
	ILM	Valves and cocks	no. 5	24	CI 12, brass 12
500		HEATING			
530		Heaters - warm air furnaces			
	A	+15° Coal Btu 300,000 each	no. 2	3704	CI 3500, steel 204
	C	0° Coal Btu 350,000 each	no. 2	4466	CI 4200, steel 266
	D	-20° Coal Btu 400,000 each	no. 2	4886	CI 4600, steel 286
	E	+15° Oil Btu 300,000 each	no. 2	3504	CI 3300, steel 204
	G	0° Oil Btu 350,000 each	no. 2	4266	CI 4000, steel 266
	H	-20° Oil Btu 400,000 each	no. 2	4626	CI 4340, steel 286
	I	+15° Gas Btu 300,000 each	no. 2	3504	CI 3300, steel 204
	L	0° Gas Btu 350,000 each	no. 2	4266	CI 4000, steel 266
	M	-20° Gas Btu 400,000 each	no. 2	4626	CI 4340, steel 286
		Blowers CFM 2400 each	no. 2	640	CI 40, steel 600
		Motors HP 3/4 & controls	no. 2	124	CI 46 Stl 46 Cu 25 Rub 7
		Ducts (metal) 17-1/2 x 11-1/2	lf. 20		
		23-1/2 x 5-1/2	lf. 10		
		18 x 18	lf. 4	133	Steel 133
		Metal allowed for dampers, connections etc of nonmetallic ducts, hangers, etc.		143	Steel 143

Crit. Lis+ No	Var.	Critical Material PER SERVICE UNIT (2 WINGS)	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
530 (Cont.)		Registers and grilles 10 x 4 6 x 4	nc. 2 no. 8	17	Steel 17
550		Firing Equipment			
	E	+15° Oil burner GPH 4	no. 2	310	CI 248, Stl 46 Cu 16
	G	0° Oil burner GPH 4	no. 2	310	CI 248, Stl 46, Cu 16
	H	-20° Oil burner GPH 4	no. 2	310	CI 248, Stl 46, Cu 16
	I	+15° Gas burner Btu input 430,000	no. 2	558	CI 490, Stl 56, Cu 12
	L	0° Gas burner Btu input 500,000	no. 2	558	CI 490, Stl 56, Cu 12
	M	-20° Gas burner Btu input 572,000	no. 2	584	CI 514, Stl 58, Cu 12
		Pipe and fittings			
	EGH	Oil lines 1-1/4" dia.	lf. 100	290	CI 60, steel 230
	EGH	Reinforcing steel for oil tank		30	Steel 30
560		Control Equipment			
		Relays	no. 2	14	Steel 12, copper 2
		Damper regulators	no. 2	16	Steel 14, copper 2
		Thermostats	no. 4	12	Steel 11, copper 1
570		Breeching-flue connection 16" dia.	lf. 35	399	Steel 399

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WA-1 (Dormitory Apartments) Building Element: Service Unit - 32 Apts.
No. Persons Served: 64 No. Rooms: - Heating System: Forced Hot Water
Type Construction: Frame superstructure - concrete slab on ground

-WPB Approved List-

Crit. List No.	Var.	Critical Material PER SERVICE UNIT (Two Wings)	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE)			
300		ELECTRICAL)			
400		PLUMBING)			
500		HEATING			
530		Boilers - hot water heating			
	A	+15° coal 1800 sf net IBR	no. 1	3484	CI 3484
	CD	0° & -20° coal 2100 sf net IBR	no. 1	3878	CI 3878
	E	+15° oil 1800 sf net IBR	no. 1	3264	CI 3264
	GH	0° & -20° oil 2100 sf net IBR	no. 1	3623	CI 3623
	I	+15° gas 1800 sf net IBR	no. 1	3264	CI 3264
	LM	0° & -20° gas 2100 sf net IBR	no. 1	3623	CI 3623
		Pipe - 3" diameter	lf. 10	76	Steel 76
		Pipe - 2" diameter	lf. 95	350	Steel 350
		Pipe - 1" diameter	lf. 110	185	Steel 185
		Pipe - 3/4" diameter	lf. 95	108	Steel 108
		Fittings		200	CI 200
		Valves 2" size	no. 4	100	CI 96, brass 4
		Valves 1" size	no. 2	5	Brass 5
		Valves 3/4" size	no. 5	8	Brass 8
		Flow control valves 2" size	no. 2	44	CI 40, brass 4
		Radiator valves 3/4" size	no. 6	9	Brass 9
	AEI	+15° radiators	sf. 100	450	CI 450
	CDG)	0° and -20° radiators	sf. 120	540	CI 540
	HLM)				
		Hangers		30	CI 22, steel 8
		Circulators 2" and controls	no. 2	124	CI 84, steel 26, cu 14
		Expansion tank 40 gallon	no. 1	92	Steel 92
550		Firing equipment			
	E	+15° oil burner GPH 4	no. 1	155	CI 124, steel 23, cu 8
	GH	0° & -20° oil burner GPH 4	no. 1	155	CI 124, steel 23, cu 8
	I	+15° gas burner Btu input 500,000	no. 1	272	CI 239, steel 27, cu 6
	LM	0° & -20° gas burner Btu input 550,000	no. 1	272	CI 239, steel 27, cu 6
		Pipe and fittings			
	EGH	Oil lines 1-1/4" dia.	lf. 100	290	CI 60, steel 230
560	EGH	Reinf. steel for oil tank		15	Steel 15
		Control Equipment			
		Relays	no. 2	14	Steel 12, copper 2
		Damper regulator	no. 1	8	Steel 7, copper 1
		Thermostats	no. 3	9	Steel 8, copper 1
		Pressure reducing valve 3/4"	no. 1	3	Brass 3
		Pressure relief valve 3/4"	no. 1	3	Brass 3
570		Breeching			
		Flue connections - 16" dia.	lf. 4	46	Steel 46

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-3, Dwellings Building Element: 1S-WB-1W with Service Unit
No. Persons Served: No Maximum Heating System: Forced Warm Air
Type Construction: Walls: Frame or Masonry - 1 Story
Floors: Concrete slab on ground or Wood frame

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		SMOOTH Outside fire alarm (split rim and number)		20	Steel 20
210		Reinforcing steel, tie wire, and accessories for concrete		100	Steel 100
240		Insert screen	sf. 630	82	Steel 74, zinc 8
260		Sheet metal flashings, galvanized		20	Steel 18, zinc 2
280		Glazing points		3	Zinc 3
90		Builders hardware			
		Door - outside	no. 5		
		Door - inside	no. 53		
		Fire alarm	no. 2		
		Stop draft doors	no. 1		
		Windows	no. 78		
		Door closers	no. 8		
		Fire exit bolts	no. 6		
		Misc. lockers, cabinets, etc.	no. 30		
		Total builders hardware		500	Steel 475, brass 25
		Nails, screws, etc.			
	X-1	Plain		2300	Steel 2300
	X-1	Galvanized		175	Steel 166, zinc 9
	X-2	Plain		2060	Steel 2060
	X-2	Galvanized		155	Steel 147, zinc 8
	X-3	Plain		1575	Steel 1575
	X-3	Galvanized		120	Steel 114, zinc 6
	X-4	Plain		1260	Steel 1260
	X-4	Galvanized		95	Steel 90, zinc 5
300		WIRING Fire alarm system (wiring and equipment)		15	Steel 7, copper 8
320		Entrance 60A-3P-2B & SN Panelboards	no. 4	39	Steel 35, copper 4
		Cir. 8 - 30A - 1P	no. 2	36	Steel 32, copper 4
	EGH	Cir. 2 - 30A - 1P	no. 1	5	Steel 4.5, copper 0.5
330		Conductors (equiv. 1.f. single wire)			
		#14 wire	lf. 5400	70	Copper 70
	EGH	#14 wire	lf. 60	1	Copper 1
		#12 wire	lf. 160	3	Copper 3
		#10 wire	lf. 220	18	Copper 18
		#1 wire	lf. 100	26	Copper 26
340		Outlet boxes - nonmetallic	no. 121		
350		Switches	no. 12	5	Steel 2.5, copper 2.5
		Receptacles	no. 14	6	Steel 3, copper 3
0		Straps, misc.		9	Steel 9
370		Solder		3	Solder 3
380		Fish tape	no. 95	42	Steel 30, copper 12

Crit. st No.	Var.	Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
400		PLUMBING			
420		Fittings, etc.		191	CI 154 Stl 20 Br 13 Ru 4
430		CS pipe and fittings			
		Size 1/2"	lf. 20		
		Size 3/4"	lf. 45		
		Size 1"	lf. 95		
		Subtotal pipe & fittings	lf. 160	1450	CI 1450 (inc. screw ftg)
		Galv. steel pipe			
		Size 1/2"	lf. 20		
		Size 3/4"	lf. 95		
		Size 1"	lf. 35		
		Subtotal steel pipe	lf. 150	443	Steel 421, zinc 22
		(If used as used for rough- ing out of waste pipe, the subtotal of 443 pounds will change to		462	CI 9 Stl 396 Zn 21 Lead 36
		Culinary oil flashing lead		350	Lead 350
		Misc. fittings, etc.		75	CI 10, steel 65
0		Galv. steel pipe & fittings			
		Size 1/2"	lf. 20		
		Size 3/4"	lf. 100		
		Size 1"	lf. 25		
		Subtotal pipe & fittings	lf. 145	430	Stl 359 Zn 21 CI 50
		Size 1/2"	lf. 100		
		Size 3/4"	lf. 150		
		Size 1"	lf. 70		
		Subtotal pipe & fittings	lf. 370	270	Stl 228 Zn 12 CI 30
		Misc. fittings, etc.		45	CI 10, steel 35
		Valves and cocks	no. 4	22	Brass 22
450		Water heaters			
	ACD	Water heater, 100 gal. hor.	no. 1	405	CI 405
	ILM	Water heater, 100 gal. auto. gas			
		Storage type, 100 gallon			
		oil & gas tank	no. 1	783	CI 30 Stl 729 Br 6 Zn 18
	EGH	Water heater, 100 gal. auto. oil			
		Storage type, 100 gal.			
		oil & gas tank	no. 1	950	CI 300 Stl 628 Zn 14 Cu 8
	ACD	Water heater, 100 gal. storage tank	no. 1	300	Steel 300
	ACD	Water heater, 10 gal. gas	sf. 30	30	Steel 30
	E-M	Water heater, 10 gal. gas	sf. 25	25	Steel 25
460		Control Equipment			
		Pressure control valve	no. 1	1	Brass 1
		Temperature relief valve	no. 1	1	Brass 1
		Thermometer	no. 1	2	CI 1, brass 1
	ACD	Water heater regulator	no. 1	11	CI 7, stl 3, br 1
480		Black gas pipe & fittings			
		Size 1/2"	lf. 25		
		Size 3/4"	lf. 15		
		Subtotal pipe & fittings	lf. 40	150	Steel 120, CI 30
	ILM	Misc. fittings, etc.		15	CI 5, steel 10
	ILM	Valves and cocks	no. 3	17	Brass 17
500		HEATING			
530		Heaters-Water Air Furnaces			
	A	+150 each for 430,000	no. 1	2957	CI 2800, steel 157
	C	00 each for 430,000	no. 1	2957	CI 2800, steel 157
	D	-300 each for 500,000	no. 1	2957	CI 2800, steel 157
	EI	+300 each for 430,000	no. 1	2807	CI 2650, steel 157

Crit. I t N	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
530	GL	0° oil & gas Btu 430,000	no. 1	2807	CI 2650, steel 157
Cont.	HM	-20° oil & gas Btu 500,000	no. 1	2807	CI 2650, Steel 157
		Blower 3200 CFM	no. 1	264	CI 25, steel 239
		Motor 1 HP and controls	no. 1	80	CI 30 Stl 30 Cu 16 Ru 4
		Propeller type exhaust fans, 10" size complete with auto. shutter	no. 2	44	CI 10, steel 32, cu 2
		Ducts, metal allowed for ftgs. fastenings, hangers, etc. & relief duct & 3 lf at furnace	lf. 300	560	Steel 560
550		Registers and grilles	no. 44	110	Steel 110
		Firing equipment-furnaces			
	E	+15° oil burner GPH 5	no. 1	250	CI 200, steel 38, cu 12
	G	0° oil burner GPH 5	no. 1	250	CI 200, steel 38, cu 12
	H	-20° oil burner GPH 5	no. 1	250	CI 200, steel 38, cu 12
	I	+15° gas burner 620,000 Btu input	no. 1	292	CI 257, steel 29, cu 6
	L	0° gas burner 620,000 Btu input	no. 1	292	CI 257, steel 29, cu 6
	M	-20° gas burner 720,000 Btu input	no. 1	311	CI 274, steel 31, cu 6
	EGH	Oil pipe, fittings and valves 2" and 3/4"	lf. 90	223	CI 38, steel 175, cu 10
560	EGH	Reinforcing steel for oil tank Control Equipment		15	Steel 15
		Relay	no. 1	7	Steel 6, copper 1
	ACD	Damper regulator	no. 1	8	Steel 7, copper 1
		Thermostats	no. 4	12	Steel 11 copper 1
570		Breeching-flue conn. 12" dia.	lf. 10	90	Steel 90
600		HOUSEHOLD EQUIPMENT			
620		Refrigerator (Select type to be used)			
		Ice	no. 1	30	Steel 27, zinc 3
		Mechanical	no. 1		Frozen inventory
		Electric hot plate	no. 1	20	Steel 18, copper 2

* * * *

DEDUCT the following material from the Basic List for the omission
 of one single room bay - two single rooms:

200	STRUCTURE				
240	Insect screens	sf. 17	2.2	Steel 2, zinc 0.2	
280	Glazing points		0.1	Zinc 0.1	
290	Builders Hardware				
	Doors - inside	no. 2			
	Windows	no. 2			
	Total builders hardware		8	Steel 8	
	Nails, screws, etc.				
X-1	Plain		76	Steel 76	
X-1	Galvanized		6	Steel 5.7, zinc 0.3	
X-2	Plain		68	Steel 68	
X-2	Galvanized		5	Steel 4.8, zinc 0.2	
X-3	Plain		52	Steel 52	
X-3	Galvanized		4	Steel 3.8, zinc 0.2	
X-4	Plain		42	Steel 42	
X-4	Galvanized		3	Steel 2.8, zinc 0.2	

Series WD-3, Dormitories
 1S-NB-1W with Service Unit
 Persons: 50 Maximum

List No. 61
 Sheet 4 of 4
 March 15, 1943

Crit. st	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
300 330		ELECTRICAL Conductors (equiv. 1.f. single wire) #14 wire	lf. 40	0.5	Steel 0.5
340 380		Outlet boxes - nonmetallic Fixtures	no. 2 no. 2	0.9	Steel 0.63, cu 0.27
500 530		HEATING Ducts, metal allowed for ftgs. fastenings, hangers, etc. Registers and grilles	lf. 8 no. 2	4 4	Steel 4 Steel 4

DEDUCT the following material from the Basic List for the omission
 of one double room bay - two double rooms:

200 240 280)		STRUCTURE Insect screens Glazing points Builders hardware Doors - inside Windows Total builders hardware Nails, screws, etc.	sf. 32 no. 2 no. 4	4.2 0.1 9	Steel 3.8, zinc 0.4 Zinc 0.1 Steel 9
X-1 X-1 X-2 X-2 X-3 X-3 X-4 X-4		Plain Galvanized Plain Galvanized Plain Galvanized Plain Galvanized	 	111 9 102 8 78 6 62 5	Steel 111 Steel 8.5, zinc 0.5 Steel 102 Steel 7.6, zinc 0.4 Steel 78 Steel 5.7, zinc 0.3 Steel 62 Steel 4.7, zinc 0.3
300 330		ELECTRICAL Conductors (equiv. 1.f. single wire) #14 wire	lf. 80	1	Copper 1
340 380		Outlet boxes - nonmetallic Fixtures	no. 4 no. 4	1.8	Steel 1.25, cu 0.55
500 530		HEATING Ducts, metal allowed for ftgs. fastenings, hangers, etc. Registers and grilles	lf. 12 no. 2	6 5	Steel 6 Steel 5

NOTE: MAXIMUM DEDUCTIONS FROM THIS LIST (NO. 61) SHALL BE ONE
 DOUBLE ROOM BAY AND TWO SINGLE ROOM BAYS.

FOR DEDUCTIONS GREATER THAN ABOVE, USE LIST NO. 62

List No. 61
 Sheet 4 of 4

CRITICAL MATERIAL LIST
FOR
FPHA STANDARD BUILDING ELEMENTS

Series: WD-3, Dormitories Building Element: 13-MB-1W with Service Unit
No. Persons Served: 36 Maximum Heating System: Forced Warm Air
Type Construction: Walls: Frame or masonry - 1 story
Floors: Concrete slab on ground or wood frame

-WPB Approved List-

Crit. List No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
200		STRUCTURE			
		Outside fire alarm (split rim and hammer)		20	Steel 20
210		Reinforcing steel, tie wire and accessories for concrete		100	Steel 100
240		Insect screen	sf. 532	70	Steel 63, zinc 7
260		Sheet metal flashings, chimney only		20	Steel 18, zinc 2
280		Glazing points		3	Zinc 3
90		Builders hardware			
		Doors - outside	no. 5		
		Doors - inside	no. 45		
		Fire doors	no. 2		
		Stop draft doors	no. 1		
		Windows	no. 66		
		Door closers	no. 8		
		Fire exit bolts	no. 6		
		Misc. lockers, cabinets, etc.	no. 30		
		Total builders hardware		466	Steel 441, brass 25
		Nails, screws, etc.			
	X-1	Plain		1866	Steel 1866
	X-1	Galvanized		141	Steel 134, zinc 7
	X-2	Plain		1667	Steel 1667
	X-2	Galvanized		125	Steel 118.4, zinc 6.6
	X-3	Plain		1274	Steel 1274
	X-3	Galvanized		97	Steel 92, zinc 5
	X-4	Plain		1020	Steel 1020
	X-4	Galvanized		76	Steel 72, zinc 4
300		ELECTRICAL			
320		Entrance 60A-3P-2B & SN	no. 4	39	Steel 35, copper 4
		Panelboards:			
		Cir. 8 - 30A - 1P	no. 1	18	Steel 16, copper 2
		Cir. 6 - 30A - 1P	no. 1	14	Steel 12, copper 2
	EGH	Cir. 2 - 30A - 1P	no. 1	5	Steel 4.5, copper 0.5
330		Conductors (equiv. 1.f. single wire)			
		#14 wire	1f. 3600	45	Copper 45
	EGH	#14 wire	1f. 60	1	Copper 1
		#12 wire	1f. 160	3	Copper 3
		# 6 wire	1f. 270	22	Copper 22
		# 1 wire	1f. 100	26	Copper 26
340		Outlet boxes - nonmetallic	no. 105		
350		Switches	no. 12	5	Steel 2.5, copper 2.5
		Receptacles	no. 12	6	Steel 3, copper 3
360		Straps, misc.		8	Steel 8
70		Solder		2	Solder 2
380		Fixtures	no. 81	35	Steel 25, copper 10
		Fire alarm system (wiring and equipment)		14	Steel 7, copper 7

Crit. t No.	Var.	Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
400		PLUMBING			
420		Fixture work		175	GI 145 Stl 15 Br 12 Cu 3
430		GI pipe and fittings			
		Size 1/2"	12. 25		
		Size 3/4"	12. 10		
		Size 1"	12. 80		
		Subtotal pipe & fittings	12. 115	1260	GI 1260 (inc screw ftg)
		Galv. steel pipe			
		Size 1/2"	12. 25		
		Size 3/4"	12. 10		
		Size 1"	12. 80		
		Subtotal steel pipe	12. 115	1260	Lead 30, zinc 20
		GI pipe and fittings for rough-			
		ing work of 4000 pipe,			
		the weight of 400 pounds			
		will change to		401	GI 8 Stl 372 Zn 19 Lead 32
		Callings and flashing lead		320	Lead 320
		Misc. piping work		55	GI 10, steel 45
		Galv. steel pipe & fittings			
		Size 1/2"	12. 25		
		Size 3/4"	12. 10		
		Size 1"	12. 80		
		Subtotal pipe & fittings	12. 115	1260	GI 1260 Stl 15 Br 12 Cu 3
		Size 3/4"	12. 90		
		Size 1/2"	12. 145		
		Size 1/4"	12. 60		
		Subtotal pipe & fittings	12. 295	250	GI 25 Stl 215 Zn 10
		Misc. piping work		10	GI 10, steel 30
		Valves and pipe		10	GI 10, steel 30
450		Water tank			
	ACD	100 gal. water tank, steel		100	GI 100
	ILM	GI pipe and fittings, gas			
		storage, 100 gallon			
		self contained tank		780	GI 80 Stl 729 Br 6 Zn 18
	EGH	100 gal. water tank, oil			
		storage, 100 gal.			
		self contained tank		780	GI 80 Stl 729 Br 6 Zn 18
	ACD	82 gal. water tank, steel		281	Steel 105, zinc 15
	ACD	Flue pipe, 1/2"	12. 30	30	Steel 30
	E-M	Flue pipe, 1/2"	12. 25	25	Steel 25
460		Control box, brass			
		Pressure, 1/2"	12. 1	1	Brass 1
		Temperature, 1/2"	12. 1	1	Brass 1
		Thermometer	12. 2	2	Brass 2, GI 1
	ACD	Auto. gas pressure regulator	12. 3	31	GI 7 Stl 3 Brass 1
480	ILM	Black gas pipe & fittings			
		Size 1/2"	12. 1		
		Size 3/4"	12. 2		
		Subtotal pipe & fittings	12. 3	150	GI 30, steel 120
	ILM	Misc. piping work		10	GI 10, steel 10
	ILM	Valves and pipe		10	Brass 10
500		HEATING			
530		Heaters - Warm Air Furnaces			
	A	+150 coal, 1/2" 350,000	no. 1	2413	GI 2300, steel 113
	C	00 coal, 1/2" 350,000	no. 2	2413	GI 2300, steel 113
	D	-200 coal, 1/2" 150,000	no. 3	2413	GI 2300, steel 113
	EI	+150 oil & gas, 1/2" 350,000	no. 4	2313	GI 2270, steel 113
	GL	00 oil & gas, 1/2" 350,000	no. 5	2313	GI 2270, steel 113
	HM	-200 oil & gas, 1/2" 150,000	no. 6	2313	GI 2270, steel 113

Crit. st No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
530 Cont.		Blower 2600 CFM	no. 1	264	CI 25, steel 239
		Motor 1 HP and controls	no. 1	80	CI 30 Stl 30 Cu 16 Ru 4
		Propeller type exhaust fans, 10" size, complete with auto. shutter	no. 2	44	CI 10 Stl 32 copper 2
		Ducts, metal allowed for ftgs. fastenings, hangers, etc. & relief duct & 3 lf at furnace	lf. 240	500	Steel 500
		Registers and grilles	no. 36	90	Steel 90
550	EGH	Firing Equipment - Furnaces +15°, 0° & -20° oil burners GPH 4	no. 1	155	CI 124 Stl 23 Copper
	IL	+15° & 0° gas burners 500,000 Btu input	no. 1	279	CI 245 Stl 28 Copper 6
	M	-20° gas burners 575,000 Btu input	no. 1	292	CI 257 Stl 29 Copper 6
	EGH	Oil pipe, fittings & valves 2" and 3/4"	lf. 90	223	CI 38 Stl 175 Copper 10
	EGH	Reinforcing steel for oil tank		15	Steel 15
		Control Equipment			
		Relay	no. 1	7	Steel 6, copper 1
	ACD	Damper regulator	no. 1	8	Steel 7, copper 1
		Thermostats	no. 4	12	Steel 11, copper 1
570		Breeching-flue conn. 12" dia.	lf. 10	90	Steel 90
600		HOUSEHOLD EQUIPMENT			
620		Refrigerators (Select type to be used)			
		Ice	no. 1	30	Steel 27, zinc 3
		Mechanical	no. 1		Frozen inventory
650		Electric hot plate	no. 1	20	Steel 18, copper 2

DEDUCT the following material from the Basic List for the omission
 of one single room bay - two single rooms:

200		STRUCTURE			
240		Insect screens	sf. 17	2.2	Steel 2, zinc 0.2
280		Glazing points		0.1	Zinc 0.1
290		Builders hardware			
		Doors - inside	no. 2		
		Windows	no. 2		
		Total builders hardware		8	Steel 8
		Nails, screws, etc.			
	X-1	Plain		76	Steel 76
	X-1	Galvanized		6	Steel 5.7, zinc 0.3
	X-2	Plain		68	Steel 68
	X-2	Galvanized		5	Steel 4.8, zinc 0.2
	X-3	Plain		52	Steel 52
	X-3	Galvanized		4	Steel 3.8, zinc 0.2
	X-4	Plain		42	Steel 42
	X-4	Galvanized		3	Steel 2.8, zinc 0.2
300		ELECTRICAL			
320		Conductors (equiv. 1.f. single wire)			
		#14 wire	lf. 40	0.5	Steel 0.5
340		Outlet boxes - nonmetallic	no. 2		
380		Fixtures	no. 2	0.9	Steel 0.63, cu 0.27

Series WD-3, Dormitories
 1S-NB-1W with Service Unit
 Persons: 38 Maximum

List No. 62
 Sheet 4 of 4
 March 15, 1943

Crit. Li. No.	Var.	Critical Material	Dim. or No.	Total Wts. Lbs.	Composition of Weights Lbs.
500 530		HEATING Ducts, metal allowed for ftgs. fastenings, hangers, etc. Registers and grilles	lf. 8 no. 2	4 4	Steel 4 Steel 4
DEDUCT the following material from the <u>Basic List</u> for the omission of one double room bay - two double rooms:					
200 240 280 290		STRUCTURE Insect screens Glazing points Builders hardware Doors - inside Windows Total builders hardware Nails, screws, etc.	sf. 32 no. 2 no. 4	4.2 0.1 9	Steel 3.8, zinc 0.4 Zinc 0.1 Steel 9
	X-1	Plain		111	Steel 111
	X-1	Galvanized		9	Steel 8.5, zinc 0.5
	X-2	Plain		102	Steel 102
	X-2	Galvanized		8	Steel 7.6, zinc 0.4
	X-3	Plain		78	Steel 78
	X-3	Galvanized		6	Steel 5.7, zinc 0.3
	X-4	Plain		62	Steel 62
	X-4	Galvanized		5	Steel 4.7, zinc 0.3
300 330		ELECTRICAL Conductors (equiv. 1.f. single wire) #14 wire	lf. 80	1	Copper 1
340 380		Outlet boxes - nonmetallic Fixtures	no. 4 no. 4	1.8	Steel 1.25, cu 0.55
500 530		HEATING Ducts, metal allowed for ftgs. fastenings, hangers, etc. Registers and grilles	lf. 12 no. 2	6 5	Steel 6 Steel 5

List No. 62
 Sheet 4 of 4

