

2010

Builder Practices Survey



February 2011

Dear Home Builder,

We need your input! For more than 20 years, the NAHB Research Center has relied upon your support for getting the information needed to improve America's housing industry. Past participation in our survey efforts has been vital to our continued progress. Please complete and return this questionnaire as soon as possible.

We understand there are many demands on your time and at first glance this questionnaire may appear long and complicated, but it uses checkmarks and percentages to make it easy to describe your typical construction practices – not an exact accounting of building materials.

Please be assured that all information about your firm will remain confidential. If you have any questions or would like an additional copy of this questionnaire for a fellow builder, please contact Joanne McAlpin at (800) 638-8556, ext. 6306, or send an e-mail to jmcaldpin@nahbrc.com.

Thank you in advance for your assistance.

Sincerely,

Michael Luzier
President
NAHB Research Center

Respondents who complete and return the survey will receive their choice of one of the following gifts.
(Please check ONE)

- Apparel Grab Bag (S)
- Apparel Grab Bag (M)
- Apparel Grab Bag (L)
- Apparel Grab Bag (XL)
- Apparel Grab Bag (XXL)
- Apparel Grab Bag (XXXL)
- 100' Measuring Tape
- 8GB USB Flash Drive
- Laser Level



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GARAGES AND CARPORTS

	SFD STARTER # HOUSES ↓	SFD MOVE-UP # HOUSES ↓	SFD LUXURY # HOUSES ↓	SFA TOWNHOUSE/DUPLEX # UNITS ↓	MF MULTIFAMILY # UNITS ↓
1 Car Garage	18	41	64	766	773
2 Car Garage	19	42	65	767	774
3 or more Car Garage	20	43	66	767a	774a
1 Car Carport	20a	43a	66a	768	775
2 or more Car Carport	20b	43b	66b	769	776
No Garage or Carport	21	44	67	769a	776a

NUMBER OF ROOMS

	SFD STARTER # ROOMS PER HOUSE ↓	SFD MOVE-UP # ROOMS PER HOUSE ↓	SFD LUXURY # ROOMS PER HOUSE ↓	SFA TOWNHOUSE/DUPLEX # ROOMS PER UNIT ↓	MF MULTIFAMILY # ROOMS PER UNIT ↓
Bedroom(s)	22	45	68	88	105
Half Bathroom(s)	23a	46a	69a	89a	106a
Full or ¾ Bathroom(s).....	23	46	69	89	106
Total Rooms (Exclude Bathrooms)	24	47	70	90	107
Closets (Include Coat / Linen / Pantry)	25	48	71	91	108

SUBSLAB PREPARATION

What did you place under your concrete slab floors for your living areas?

(✓ all you use)	SLAB- ON-GRADE	BASEMENT SLAB
4" or greater layer of stone or gravel	[] 121_1	[] 121_2
Less than 4" layer of stone or gravel	[] 122_1	[] 122_2
Sand	[] 122c_1	[] 122c_2
Strips or layers of geotextile drainage mat	[] 123_1	[] 123_2
Rigid foam insulation	[] 124_1	[] 124_2
Perforated plastic pipe	[] 125_1	[] 125_2
Plastic sheet (vapor barrier, 6 mil poly)	[] 125c_1	[] 125c_2
Other _____ (PLEASE SPECIFY)	[] 126_1	[] 126_2
Nothing under slab	[] 127_1	[] 127_2

BASEMENT / CRAWL SPACE WALL MATERIAL

What **percent** of your homes or multifamily **buildings** had basement or crawlspace walls made of the following materials?

Do not include brick veneer.

	SFD HOUSES	SFA UNITS	MF BUILDINGS
Poured concrete, reusable forms	109	109a	109b
Concrete block (CMU)	110	110a	110b
Precast concrete (e.g., Superior Walls®).....	111	111a	111b
Insulated Concrete Forms (ICFs)	112	112a	112b
Pressure treated wood	113	113a	113b
Other _____ (PLEASE SPECIFY)	114	114a	114b
	100%	100%	100%

ABOVE-GRADE STRUCTURAL WALLS

What **percent** of your homes' **above-grade** exterior walls had the following as a **primary** structural material?

Do not include foundation walls or brick veneer finish.

	FIRST STORY	UPPER STORIES
Concrete or masonry	128	131
Wood (all types)	129	132
Steel (all types)	130	133
	100%	100%

CONCRETE & MASONRY ABOVE-GRADE WALLS

If any of your homes had concrete or masonry **above-grade** walls, what **percent** were each of the following types?

Do not include basement walls or brick veneer finish.

Poured concrete, reusable/temporary forms	146
Concrete block (CMU)	147
Precast concrete (e.g., Superior Walls®)	148
Insulated Concrete Forms (ICFs)	149
Autoclaved aerated concrete (AAC)	150
Structural brick (brick wall supports roof).....	151
Other concrete or masonry _____ (PLEASE SPECIFY)	152
	100%

TYPES OF EXTERIOR WOOD & STEEL WALLS

What **percent** of your homes with wood and steel walls used the following types of construction?

Site-built light-frame (2x4s, 2x6s, etc.)	134
Panelized light-frame (factory-built wall panels)	135
Modular (factory-built structure)	136
Structural Insulated Panels (SIPs)	137
Post and beam or "timber frame"	138
Logs	139
	100%

TYPE OF WOOD WALL STUDS

What is the most common type or species of wood for your wall studs? (**✓ one**)

Timberstrand® or laminated strand lumber (LSL)	[] 1
Southern yellow pine (SYP)	[] 3
Douglas fir	[] 4
Hem-fir or other western woods	[] 5
Spruce / Pine / Fir (SPF) or eastern spruce	[] 6
LVL (laminated veneer lumber)	[] 7
Don't know	[] 9
Other _____ (PLEASE SPECIFY)	[] 10 145

What **percent** of your wood wall studs were?

Preservative treated	n145a
Finger jointed (any species)	n145b

WALL HEIGHT

What **percent** of your interior walls had the following heights? **Exclude** two-story foyers & great rooms from your estimates.

	FIRST STORY	UPPER STORIES
7' or less	501	508
7½'	502	509
8'	503	510
8½'	504	511
9'	505	512
10'	506	513
12' or more	507	514
	100%	100%

LIGHT-FRAME EXTERIOR WALL DEPTH & SPACING

What **percent** of all your exterior light-frame walls were:

	WOOD	STEEL
2x4s at 16" o.c.	140	140a
2x4s at 24" o.c.	141	141a
2x6s at 16" o.c.	142	142a
2x6s at 24" o.c.	143	143a
Other _____ (PLEASE SPECIFY)	144	144a
	100%	100%

INTERIOR WALLS

What **percent** of all your interior walls were:

Masonry or concrete	522
Steel (all spacing)	521a
Lumber: 2x3s at 16" o.c.	515
Lumber: 2x3s at 24" o.c.	516
Lumber: 2x4s at 16" o.c.	517
Lumber: 2x4s at 24" o.c.	518
Lumber: 2x6s at 16" o.c.	519
Lumber: 2x6s at 24" o.c.	520
Lumber: Other dimensions / spacing	520a
	100%

INTERIOR WALL & CEILING FINISH

What **percent** of your typical home's total wall and ceiling area had the following interior finishes?

	WALLS	CEILINGS
1/4" plywood paneling	523	532
1/4" hardboard paneling	524	533
3/8" gypsum drywall (all types)	525	534
1/2" gypsum drywall (all types)	526	535
Cement board (glass-reinforced)	527	536
Fiber cement (Hardibacker®, etc)	530a	539a
5/8" gypsum drywall (all types)	528	537
3/4" gypsum drywall (all types)	529	538
Lumber boards or shingles	530	539
Acoustical ceiling tiles		540
Other _____ (PLEASE SPECIFY)	531	541
	100%	100%

**WALL HEADERS:
WINDOWS, DOORS, AND FIREPLACES**

What **percent** of the (1) single window, door, and fireplace openings, (2) multiple window and door openings, and (3) garage door openings were spanned by headers of the following materials?

	SINGLE Window / Door / Fireplace Headers	MULTIPLE Window / Door Headers	Garage Door Headers
Built-up dimensional lumber	_____ 153	_____ 153a	_____ 167
Solid wood (4xs, etc.)	_____ 154	_____ 154a	_____ 168
Glulam	_____ 155	_____ 155a	_____ 169
Wooden I-joists used singly	_____ 156	_____ 156a	_____ 170
Wooden I-joists doubled	_____ 157	_____ 157a	_____ 171
LVL single	_____ 158	_____ 158a	_____ 172
LVL doubled	_____ 159	_____ 159a	_____ 173
Parallam®	_____ 160	_____ 160a	_____ 174
Concrete	_____ 161	_____ 161a	_____ 175
Steel (all types)	_____ 162	_____ 162a	_____ 176
Glued & nailed box headers	_____ 163	_____ 163a	_____ 177
Wood truss	_____ 164	_____ 164a	_____ 178
Timberstrand® (LSL)	_____ 165	_____ 165a	_____ 179
Fitch plate beams (lumber with steel plate, bolted)	_____ 166	_____ 166a	_____ 180
	100%	100%	100%

EXTERIOR WALL SHEATHING

Please consider "sheathing" to be the panel product that is fastened directly to wall studs. What **percent** of your total exterior wall area was sheathed with:

NONE (SIPs, masonry, log walls, etc.)	_____ 182
Plywood, 3/8"	_____ 183
Plywood, 1/2"	_____ 184
Plywood, 5/8"	_____ 185
Plywood, 3/4"	_____ 186
ZIP Wall System® (Huber)	_____ 186a
OSB, 3/8"	_____ 187
OSB, 7/16"	_____ 188
OSB, 1/2"	_____ 188a
OSB, 5/8"	_____ 189
OSB, 3/4"	_____ 190
Fiberboard (including Homosote & Built-Rite®)	_____ 191
Cement board (glass mesh reinforced, Durock®).	_____ 192
Fiber cement (Hardipanel®, etc.)	_____ 192a
Gypsumboard (including Dens-Glass®, FibeRock®)	_____ 193
1/8" foil-faced 3-ply kraft paper (Thermo-ply®).	_____ 194
Lumber board sheathing	_____ 195
Extruded polystyrene – XPS (blue Dow Styrofoam®, pink Owens Corning)	_____ 196
Expanded polystyrene – EPS, or "bead board"	_____ 197
Polyisocyanurate (Tuff-R®, Thermax®, R-Max®)	_____ 198
Other _____ (PLEASE SPECIFY)	_____ 199
	100%

TWO LAYERS OF EXTERIOR WALL SHEATHING

What **percent** of your homes had a layer of foam sheathing placed over a layer of structural sheathing material? **Do not include** layer of foam for EIFS finish. _____%
181

Check the most common material for second layer of foam:

1 [] XPS	2 [] EPS	3 [] Polyisocyanurate
		181a

THICKNESS OF FOAM

What was the **typical thickness** of the foam you used? (✓ one)

1 [] 1/2"	4 [] 1-1/2"
2 [] 5/8 or 3/4"	5 [] 2" or greater
3 [] 1"	200

What percentage of your homes are fully sheathed with either plywood or OSB? _____ 205

MATERIAL OF STRUCTURAL FLOOR SYSTEM

What **percent** of your structural floors in finished areas of your homes (exclude basement and garage floors) were:

	GROUND FLOOR	UPPER FLOORS
Cast-in-place concrete	_____ 212	_____ 216
Precast concrete	_____ 213	_____ 217
Wood or lumber	_____ 214	_____ 218
Steel (all types)	_____ 215	_____ 219
	100%	100%

DEPTH OF STRUCTURAL FLOOR

For each material you used, ✓ the **most common depth** of your floor framing:

	LUMBER JOISTS	WOODEN I-JOISTS	OPEN-WEB JOISTS	STEEL JOISTS
8"	[]	[]	[]	[] ₁
10" (or 9-7/8")	[]	[]	[]	[] ₂
12" (or 11-7/8")	[]	[]	[]	[] ₃
14" or greater	[] 1033	[] 1034	[] 1035	[] 1035a

TYPES OF WOOD FLOOR FRAMING

What **percent** of your structural wood floors on ground and upper floors were:

	GROUND FLOOR	UPPER FLOORS
Do not include support beam, slabs, or concrete.		
Lumber joists, solid wood	_____ 220	_____ 225
Wooden I-joists	_____ 221	_____ 226
Open-web joists (wood floor truss)	_____ 222	_____ 227
Structural Insulated Panels (SIPs)	_____ 223	_____ 228
Other wood _____ (PLEASE SPECIFY)	_____ 224	_____ 229
	100%	100%

SPACING OF FLOOR FRAMING

What **percent** of your framed floor area had joists spaced at:

	LUMBER JOISTS	WOODEN I-JOISTS	OPEN-WEB JOISTS	STEEL JOISTS
12" o.c.	1036	1042	1048	1048a
16" o.c.	1037	1043	1049	1049a
19.2" o.c.	1038	1044	1050	1050a
24" o.c.	1039	1045	1051	1051a
32" o.c.	1040	1046	1052	1052a
Other spacing	1041	1047	1053	1053a
	100%	100%	100%	100%

SPECIES OF WOOD FLOOR FRAMING

What species of dimensional lumber joist (**not** I-joists) did you **most commonly** use for your floor framing?

(✓ one)

Southern yellow pine (SYP)	[] 1
Douglas fir or hem-fir	[] 2
Spruce / Pine / Fir (SPF), or eastern spruce	[] 3
Treated lumber	[] 4
Don't know	[] 5
Other _____	[] 6
(PLEASE SPECIFY)	230

FLOOR SHEATHING (SUBFLOORING)

What **percent** of your total floor area used each of the following sheathing (sub-flooring) materials?

	GROUND FLOOR	UPPER FLOORS
Concrete or SIPs	231	246
1/2" plywood	232	247
5/8" plywood	233	248
3/4" plywood	234	249
1-1/8" plywood	235	250
7/16" or 1/2" OSB	236	251
5/8" OSB	237	252
3/4" OSB	238	253
7/8" OSB	239	254
1" OSB	240	255
1-1/8" or thicker OSB	241	256
1x boards (3/4" actual, including T&G)	243	258
2x boards (1-1/2" actual, including T&G)	244	259
Other _____	245	260
(PLEASE SPECIFY)	100%	100%

If you used OSB floor sheathing, what was the typical brand or type?

(✓ one)

Generic or commodity	[] 1
Advantech (Huber)	[] 2
EdgeGold (Weyerhaeuser)	[] 3
Pinnacle (Norboard)	[] 4
Point Six (Durastrand)	[] 5
TopNotch (LP)	[] 6
Other _____	[] 7
(PLEASE SPECIFY)	n230

RIMBOARD FOR WOOD I-JOISTS

What percent of your **I-joist floor systems** used each of the following **rimboard** materials?

NO rimboard used (sheathing only)	1117h
TimberStrand®	1117a
OSB (G-P Fiberstrong®, L-P Solid Start®, etc.)	1117b
Wooden I-joists with blocking	1117c
Plywood	1117d
Dimensional lumber (2x10's, etc.)	1117e
LVL (laminated veneer lumber)	1117f
Re-sawn glulam	1117g
	100%

FLOOR BEAMS: SUPPORT, FLUSH, AND EDGE BEAMS

Floor beams may include 1) **support beams**, which provide a bearing point for floor joists, 2) **flush beams**, which provide support and are recessed into the floor, and 3) **edge beams** that typically support the edge of a loft or stairway (exclude rimboard).

About how many linear feet (LF) of floor beams did you use in a **typical** house or multifamily living unit?

	GROUND FLOOR	UPPER FLOORS
Single-family detached (SFD) floor beams: LF per HOUSE ..	LF ₁₀₆₁	LF ₁₀₆₄
Single-family attached (SFA) floor beams: LF per UNIT	LF _{1061a}	LF _{1064a}
Multifamily floor beams: LF per UNIT	LF ₁₀₆₂	LF ₁₀₆₅

FLOOR BEAM MATERIAL

What **percent** of your floor beams were:

	GROUND FLOOR	UPPER FLOORS
Built-up dimension lumber	1099	1108
Solid lumber (4x6 or greater) ..	1100	1109
Glulam	1101	1110
LVL	1102	1111
Parallam®	1103	1112
TimberStrand®	1103a	1112a
Open-web Joist	1104	1113
Steel (all types)	1105	1114
I-Joist (multiple)	1106	1115
Other _____	1107	1116
(PLEASE SPECIFY)	100%	100%

ROOF BEAMS AND CEILING SUPPORT BEAMS

For a **typical** house or multifamily **building**, how many **linear feet (LF)** of roof beams (ridge, hip, and valley) and beams located on the ceiling assembly did you use?

Do not include wall headers that support roofs.

Single-family detached (SFD) roof beams.....	_____ LF	1080
Single-family attached (SFA) roof beams	_____ LF	1080a
Multifamily building roof beams	_____ LF	1080b

What **percent** of your roof and ceiling assembly beams were:

Built-up dimensional lumber	_____	1081
Solid lumber (4x6 or greater)	_____	1082
Glulam	_____	1083
LVL	_____	1084
Parallam®	_____	1085
TimberStrand®	_____	1085a
Girder truss	_____	1086
Steel (all types)	_____	1087
I-Joist (multiple)	_____	1088
Other _____	(PLEASE SPECIFY)	1089
		100%

ROOF FRAMING

What **percent** of the total roof area on your homes were the following shapes?

Gable	_____	261
Hip	_____	262
Gambrel	_____	263
Flat	_____	264a
Other _____	(PLEASE SPECIFY)	264
		100%

TURNED GABLES AND DORMERS

How many turned gables (gables perpendicular to the main ridge of the roof) and dormers did your **typical** house or multifamily building have?

	SFD	SFA	MF BUILDINGS
Turned gables..	_____ 265	_____ 265a	_____ 265b
Dormers	_____ 266	_____ 266a	_____ 266b

TYPE OF ROOF FRAMING

What **percent** of your houses had roofs framed with:

Combination of trusses and rafters	_____	270
Rafters only	_____	268
Trusses only	_____	269
Structural Insulated Panels (SIPs)	_____	271
Beams and purlins	_____	272
Other _____	(PLEASE SPECIFY)	273
		100%

SPECIES OF ROOF FRAMING LUMBER

What percent of your dimensional lumber trusses or rafters / ceiling joists (**not** I-joists) were:

	TRUSSES	RAFTERS
Southern yellow pine (SYP)	_____ 280	_____ 285
Douglas fir or hem-fir	_____ 281	_____ 286
Spruce / Pine / Fir (SPF)	_____ 282	_____ 287
Treated lumber	_____ 282a	_____ 287a
Don't know	_____ 283	_____ 288
Other _____	(PLEASE SPECIFY) 284	_____ 289
		100%

COMBINATION TRUSS & RAFTER ROOFS

For roofs framed with both trusses and rafters, what **percent** of the roof was typically framed with each?

Trusses	_____	274
Rafters	_____	275
		100%

RAFTER ROOFS

If you built with rafters, what **percent** of your rafters were:

Lumber	_____	276
I-joists	_____	277
Steel	_____	278
		100%

TRUSS ROOFS

If you built with roof trusses, what **percent** of your trusses were:

Lumber	_____	276a
I-joists	_____	277a
Steel	_____	278a
		100%

CEILING TYPE

What **percent** of the ceiling area **directly under the roof** was:

Sloped (i.e., cathedral or vaulted)	_____	296
Flat	_____	297
		100%

OVERHANG / EAVES

How deep was the eave or overhang of your typical house?

Inches	_____	267
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ROOF PITCH

What **percent** of your roofs had pitches of:

Flat to 1/2 / 12"	_____	290
1/2 / 12" to 4/12"	_____	291
5/12" or 6/12"	_____	292
7/12" or 8/12"	_____	293
9/12" or 10/12"	_____	294
11/12" or greater	_____	295
		100%

ROOFING MATERIAL

What **percent** of your total roof area was finished with:

Asphalt shingle, three tab, standard weight	_____	310
Asphalt shingle, “Architectural” or laminated	_____	311
Cedar shingles (sawn)	_____	312
Cedar shakes (split)	_____	313
Clay or ceramic roof tiles	_____	315
Concrete roof tiles	_____	316
Fiber cement shingles	_____	317
Slate (natural)	_____	318
Steel	_____	319
Aluminum	_____	320
Copper	_____	314
Built-up roof (e.g., hot-mopped asphalt).....	_____	321
Single ply (EPDM, vinyl, modified bitumen)	_____	322
Composite shingles (plastic or recycled rubber) ...	_____	322b
Other _____	_____	322a
(PLEASE SPECIFY)		100%

METAL ROOFING STYLE

If you used metal roofing, what **percent** of your metal roofing (exclude copper) was:

Metal shakes/shingles/tiles	_____	310v
Standing seam/Vertical ribbed	_____	311v
Corrugated	_____	312v
Flat panel	_____	313v
Granulated.....	_____	322cv
Don’t know	_____	322bv
Other _____	_____	322av
(PLEASE SPECIFY)		100%

ROOF VENTILATION

What **percent** of your homes and multifamily buildings had:

	SFD	SFA	MF BUILDINGS
Ridge vents	_____ 329	_____ 329a	_____ 329b
Roof vents – not powered	_____ 330	_____ 330a	_____ 330b
Wind turbine roof vents	_____ 331	_____ 331a	_____ 331b
Roof mounted attic fans	_____ 332	_____ 332a	_____ 332b
Gable wall louvers	_____ 333	_____ 333a	_____ 333b
Gable mounted attic fans	_____ 334	_____ 334a	_____ 334b
Whole house fans	_____ 335	_____ 335a	_____ 335b
Soffit vents	_____ 336	_____ 336a	_____ 336b
Totals need not add to 100%			

ROOF SHEATHING

What **percent** of your total roof area was sheathed with:

NONE (roofing attached directly to framing, or SIPs) ..	_____	298
3/8” plywood	_____	299
1/2” plywood	_____	300
5/8” plywood	_____	301
3/4” plywood	_____	302
ZIP Roof System® (Huber)	_____	302a
7/16” OSB (including TechShield®)	_____	303
1/2” OSB (including TechShield®)	_____	303a
5/8” OSB (including TechShield®)	_____	304
3/4” OSB (including TechShield®)	_____	305
1”x boards (3/4” actual) – no spacing	_____	306
1”x boards (3/4” actual) – spaced	_____	307
2”x lumber (1-1/2” actual – including T&G)	_____	308
Other _____	_____	309
(PLEASE SPECIFY)		100%

SOFFIT & FASCIA MATERIAL – EAVES & RAKES

What **percent** of your soffit and fascia material was made of:

	SOFFIT	FASCIA
NO soffit or fascia installed	_____ 358	_____ 366
Cedar boards	_____ 359a	_____ 367a
Redwood boards	_____ 359b	_____ 367b
Other wood boards	_____ 359c	_____ 367c
Plywood / LVL	_____ 360a	_____ 368a
Hardboard or MDF (e.g., MiraTEC®, PrimeTrim®, engineered wood trim)	_____ 361	_____ 369
OSB (LP SmartSide®)	_____ 362	_____ 370
Stucco	_____ 363	_____ 371
Cellular PVC (Azek® or Koma®).....	_____ 365e	_____ 373e
Vinyl (wrap for fascia)	_____ 364	_____ 372
Aluminum (wrap for fascia)	_____ 365	_____ 373
Steel	_____ 365b	_____ 373b
Fiber cement	_____ 365c	_____ 373c
Urethane / Polyurethane plastic	_____ 365d	_____ 373d
Plastic & wood fiber composite	_____ 365f	_____ 373f
Other _____	_____ 365a	_____ 373a
(PLEASE SPECIFY)		100%

SIDING / EXTERIOR FINISH MATERIAL

What **percent** of the total exterior wall area for all the homes you built, including garages and dormers, was finished (sided) with the following materials?

Wood-based Siding

Plywood panels (e.g., T-111)	_____	341
OSB (e.g., LP SmartSide®)	_____	345
Hardboard	_____	342
Cedar shingles (sawn) or shakes (split)	_____	344
Cedar boards	_____	343a
Redwood boards	_____	343b
Other wood boards	_____	343c
Other wood-based siding _____ (PLEASE SPECIFY)	_____	346

Masonry and Cement Materials

Brick	_____	347
Natural stone	_____	348
Manufactured stone (“synthetic stone”)	_____	349
Cement stucco	_____	350
Synthetic stucco or EIFS (e.g., Dryvit®, STO®)	_____	351
Architectural concrete block (split-face, etc.) ...	_____	352
Fiber cement siding (e.g., Hardiplank®, CertainTeed)	_____	353

Plastic & Metal Siding

Vinyl	_____	354
Aluminum	_____	355
Steel	_____	356

Other

_____ (PLEASE SPECIFY) **100%**

EXTERIOR TRIM MATERIAL

What **percent** of the total exterior ornamental trim you installed was made of (exclude soffit & fascia):

NO exterior ornamental trim installed	_____	719
Cedar boards	_____	720a
Redwood boards	_____	720b
Other wood boards	_____	720c
Plywood / LVL	_____	721
Hardboard or MDF (e.g., MiraTEC®, PrimeTrim® engineered wood trim)	_____	722
OSB (LP SmartSide®)	_____	723
Stucco	_____	723a
Vinyl (wrap)	_____	723b
Aluminum (wrap)	_____	723c
Steel	_____	725
Fiber cement	_____	725a
Urethane / Polyurethane plastic	_____	725b
Cellular PVC (Azek® or Koma®)	_____	725c
Plastic & wood fiber composite	_____	725d
Other _____ (PLEASE SPECIFY)	_____	724

100%

EXTERIOR TRIM TYPE

Considering your typical house, what style of exterior trim / molding do you **most commonly** apply?

	EAVES	FRONT DOOR	FRONT WINDOWS	OTHER DOORS OR WINDOWS
Board only, no crown []	[]	[]	[]	[] 1
Board and crown []	[]	[]	[]	[] 2
Crown only []	[]	[]	[]	[] 3
Dentil molding []	[]	[]	[]	[] 4
Pediments []	[]	[]	[]	[] 5
Pilasters []	[]	[]	[]	[] 6
Arches []	[]	[]	[]	[] 7
Other special moldings .. []	[]	[]	[]	[] 8
None (part of door / window) . []	[]	[]	[]	[] 9
	N76	N77	N78	N79

WINDOWS

AVERAGE WINDOW OPENINGS PER HOUSE

What was the **average number** of window **openings** (in the wall framing) in your typical house?

Exclude openings for doors and non-prime windows.

SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
_____ 374a	_____ 374b	_____ 374c	_____ 375	_____ 376

AVERAGE WINDOW UNITS PER HOUSE

Considering that some window **openings** have more than one window **unit** per opening: how many window **units** were in your **typical** home?

Include both operable (venting) and fixed units.

Average number of window **units** per new home:

SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
_____ 377a	_____ 377b	_____ 377c	_____ 378	_____ 379

GLAZING

What **percent** of your windows were:

Single glazed	_____	422
Double glazed	_____	423
Triple glazed	_____	424
Heat-Mirror®	_____	425
		100%

GLASS TYPE

What type of glass did your windows **most commonly** have?

Clear	_____	426
Low-E	_____	427
Argon filled	_____	427a
Tinted	_____	428
Impact resistant	_____	428a

Totals need not add to 100%

MATERIAL OF WINDOW FRAMES

What **percent** of all the window **units** you installed had the following frame material?

	SFD	SFA	MF UNITS
Wood (no cladding)	380	387	394
Wood, aluminum clad	381	388	395
Wood, vinyl clad	382	389	396
Aluminum	383	390	397
Vinyl	384	391	398
Composite	385	392	399
Other _____ (PLEASE SPECIFY)	386	393	400
	100%	100%	100%

WINDOW TYPE

What **percent** of all the window **units** you installed were:

	SFD	SFA	MF UNITS
Casement	401	408	415
Awning	402	409	416
Double hung	403	410	417
Single hung	404	411	418
Sliding (side-by-side)	405	412	419
Fixed, rectangular	406	413	420
Fixed, non-rectangular	407	414	421
Other _____ (PLEASE SPECIFY)	407a	414a	421a
	100%	100%	100%

SKYLIGHTS AND ROOF WINDOWS

How **many** skylights/roof windows did your **typical** house have?

	SFD	SFA	MF Per BUILDING
Skylights	323	325	327
Tubular Skylights	323a	325a	327a
Roof windows	324	326	328

EXTERIOR SHUTTERS

How **many PAIRS** of exterior shutters did your **typical house** have?

	SFD	SFA	MF Per UNIT
	731	731a	731b

What **percent** of the shutters were made of:

	SFD	SFA	MF Per UNIT
Wood (any type)	732	732a	732b
Plastic (including polyurethane and PVC)	733	733a	733b
Other	734	734a	734b
	100%	100%	100%

What **percent** of the shutters were of the following styles?

	SFD	SFA	MF Per UNIT
Raised panel	735	735a	735b
Louvered	736	736a	736b
Board and Batten	737	737a	737b
Other	738	738a	738b
	100%	100%	100%

PATIO DOORS

How **many** patio door **openings** did your typical house have?
Please include both sliding and hinged patio doors.

	SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
	429a	429b	429c	430	431

PATIO DOOR TYPE

What **percent** of all your patio doors were:

	SFD	SFA	MF
Hinged/Swinging	432	434	436
Sliding	433	435	437
	100%	100%	100%

PATIO DOOR MATERIAL

What **percent** of all your patio doors were:

	HINGED	SLIDING
Wood (no cladding)	438	446
Wood, aluminum clad	439	447
Wood, vinyl clad	440	448
Steel	441	449
Aluminum	442	450
Vinyl	443	451
Composite (fiberglass, etc.)	444	452
Other _____ (PLEASE SPECIFY)	445	453
	100%	100%

EXTERIOR DOORS

How **many** exterior entry door **OPENINGS** were in your typical house?

Exclude patio doors.

	SFD Starter	SFD Move-up	SFD Luxury	SFA Per UNIT	MF Per UNIT
	454a	454b	454c	455	456

EXTERIOR DOOR MATERIAL

What **percent** of all your exterior doors were: (If glass, answer for frame material)

Exclude patio doors.

	FRONT	OTHER
Solid wood – raised panel	457	462
Wood – flush	458	463
Steel – raised panel	459	464
Steel – flush	460	465
Fiberglass	461	466
Other _____ (PLEASE SPECIFY)	461a	466a
	100%	100%

DOUBLE FRONT DOORS

What **percent** of your front doors were double doors? _____ 467

SIDELITES

What **percent** of your front doors had sidelites?

Sidelites on one side	_____	468
Sidelites on both sides	_____	469
NO sidelites	_____	470
		100%

MULTIFAMILY COMMON ENTRY DOORS

In some multifamily buildings, the individual living units have entry doors opening directly to the outside. Other buildings have common entry doors opening to hallways leading to entry doors for the individual living units.

What **percent** of your multifamily buildings used common entry doors? 471a

Of the new multifamily buildings with common entry doors, **how many** common entry doors, including double doors, did a **typical** building have? 471b

INTERIOR DOORS

Interior doors include bedroom, bathroom, closet, and all other interior doors. What **percent** of your interior doors were:

Single interior hinged door(s)	_____	477a
Double interior hinged door(s)	_____	477b
Single bi-fold door(s)	_____	477c
Double bi-fold door(s)	_____	477d
Sliding / Pocket / Bypass door(s)	_____	477e
Other door(s) _____	_____	477f
	(PLEASE SPECIFY)	100%

INTERIOR DOOR MATERIAL

What **percent** of all your interior doors were:

	PASSAGE	CLOSET
SOLID WOOD DOORS		
Panel door	_____ 478	_____ 487
Flush door	_____ 479	_____ 488
Louvered door	_____ 479a	_____ 488a
Door with glass units	_____ 480	_____ 489
ENGINEERED WOOD DOORS		
Hollow core panel door	_____ 480a	_____ 489a
Hollow core flush door	_____ 481	_____ 490
Solid core panel door	_____ 482	_____ 491
Solid core flush door	_____ 482a	_____ 491a
OTHER TYPES OF DOORS		
Mirror on steel frame	_____ 483	_____ 492
Steel (no mirror)	_____ 484	_____ 493
Other _____	_____ 486	_____ 495
	(PLEASE SPECIFY)	100%

CABINETS & COUNTERTOPS

Indicate the **number** of cabinets and the **linear feet** of kitchen countertop you installed in a typical home.

	SFD & SFA	MF
Number of Kitchen cabinets	_____ 542	_____ 558
Number of Vanity cabinets	_____ 543	_____ 559
Number of Medicine cabinets	_____ 543a	_____ 559a
Number of Other cabinets	_____ 544	_____ 560
Linear feet of Kitchen countertops ..	_____ 545	_____ 561

KITCHEN AND VANITY COUNTERTOP MATERIAL

What **percent** of your kitchen and bathroom vanity countertops were made of:

	KITCHEN	VANITY
Solid Surface (e.g., Corian [®] , Surell [®] , Swanstone [®])	_____ 584	_____ 590
Laminate (e.g., Formica [®] , WilsonArt [®])	_____ 585	_____ 591
Ceramic tile	_____ 586	_____ 592
Cultured marble	_____ 587	_____ 593
Engineered stone or quartz surfacing (Zodiaq [®] , Silestone [®])	_____ 587a	_____ 593a
Solid wood (butcher block)	_____ 588	_____ 594
Granite	_____ 589	_____ 594a
Marble, slate, or other natural stone	_____ 589a	_____ 595a
Other _____	_____ 589b	_____ 595b
	(PLEASE SPECIFY)	100%

MATERIAL OF CABINET BOX

What **percent** of the cabinets you installed had sides and shelves made of:

	SFD & SFA	MF
Wood veneer on particleboard or MDF ..	_____ 576	_____ 580
Solid Wood	_____ 576a	_____ 580a
Plastic or paper overlay, or laminate on particleboard or MDF	_____ 577	_____ 581
Plywood (all types)	_____ 578	_____ 582
Other _____	_____ 579	_____ 583
	(PLEASE SPECIFY)	100%

CABINET DOOR TYPE

What **percent** of the cabinets you installed had the following types of doors?

	SFD & SFA	MF
Wood finish, raised panel in frame ..	_____ 563	_____ 572
Wood finish, flat panel in frame	_____ 564	_____ 571
Glass panel in wood frame	_____ 564a	_____ 571a
Laminate with raised panel look	_____ 567	_____ 574
Wood finish, flat panel, no frame ..	_____ 565	_____ 570
Laminate finish, flat panel, no frame ..	_____ 566	_____ 573
Other _____	_____ 568	_____ 575
	(PLEASE SPECIFY)	100%

CABINET FRAME TYPE

What **percent** of the cabinets you installed had the following types of face frames?

	SFD & SFA	MF
Frameless (European style)	_____ 562a	_____ 569a
Face-framed (Traditional)	_____ 562b	_____ 569b
Other: _____	_____ 562c	_____ 569c
	(PLEASE SPECIFY)	100%

DRIVEWAYS

The following questions deal **only** with **single-family** homes.

- Percent of single-family homes with driveways* ... _____ 777
- Length (in feet) of typical driveway*..... _____ 777_L
- Width (in feet) of typical driveway* _____ 777_W

What **percent** of your driveways were made of:

- Asphalt _____ 778
- Poured concrete (including stamped/stenciled) ... _____ 779
- Brick _____ 780
- Concrete paver _____ 781
- Gravel or crushed stone w/ parking pad _____ 782
- Gravel or crushed stone w/ **no** parking pad _____ 783
- Other _____ (PLEASE SPECIFY) _____ 784
100%

GARAGE DOOR CONFIGURATIONS

What **percent** of your garages had the following types of doors?

- One single door _____ 750a
- One double door _____ 750
- Two single doors _____ 751
- One double door, one single door _____ 752
- Three single doors _____ 753
- Other configuration _____ (PLEASE SPECIFY) _____ 753a
100%

GARAGE DOOR OPTIONS

What **percent** of your garage doors were the following types?

- Sectional _____ 739
- One-piece (canopy or retractable)..... _____ 740
- Side-hinged _____ 741
- Other _____ 742
100%

What **percent** of your garage doors were the following materials?

- Steel _____ 754
- Wood _____ 755
- Fiberglass or Plastic _____ 756
- Other _____ 757
100%

What **percent** of your garage doors were the following styles?

- Raised panel _____ 759
- Flat panel _____ 760
- Other _____ 761
100%

What **percent** of your garage doors were the following heights?

- 7 foot _____ 759a
- 8 foot _____ 760a
- Other _____ 761a
100%

What **percent** of your garage doors were insulated? _____ 821a

What **percent** of your garage doors had windows? .. _____ 824a

What **percent** of your garage doors had openers? .. _____ 745

FINISHED FLOORING TYPE

What type of flooring do you **most commonly** install in the following rooms?

<i>(✓ only one box per row)</i>	Wall-	Hardwood	Hardwood	Vinyl	Vinyl	Ceramic		Slate	Marble	Other	
	to-Wall Carpet	(solid)	(engineered)	Sheet	Tile	Laminate	Tile				
	1	2	3	4	5	6	7	8	9	10	
Entry foyer (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	642
Living room (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	643
Dining room (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	644
Family room, den, rec room (✓one) ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	645
Kitchen (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	646
Bedrooms (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	647
Half bathrooms (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	648
Full bathrooms (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	649
Hallway (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	651
Finished basement (✓one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	651a

ROOMS WITH FLOORING UNDERLAYMENT

In which rooms did you **typically** use underlayment?
(✓all that apply)

None	[]	661a
All Rooms	[]	661b
Entry foyer	[]	652
Living room	[]	653
Dining room	[]	655
Family room, den, rec room	[]	656
Kitchen	[]	657
Bedrooms	[]	658
Half bathrooms	[]	659
Full bathrooms	[]	661
Hallway	[]	661c
Other rooms _____ (PLEASE SPECIFY)	[]	662

FLOORING UNDERLAYMENT MATERIAL

Underlayment is a second layer of sheet goods over the structural floor sheathing or concrete slab.

What **percent** of all the flooring underlayment you used was:

Lauan plywood	_____	668
1/4" OSB	_____	669
3/8" OSB	_____	670
7/16" or 1/2" OSB	_____	671
5/8" OSB	_____	672
3/4" OSB	_____	673
1/4" plywood (other than lauan)	_____	674
3/8" plywood	_____	675
1/2" plywood	_____	676
5/8" plywood	_____	677
3/4" plywood	_____	678
1/4" particleboard	_____	679
3/8" particleboard	_____	680
1/2" particleboard	_____	681
5/8" particleboard	_____	682
3/4" particleboard	_____	683
1/4" hardboard	_____	684
Fiber cement (e.g., Hardibacker®, etc)	_____	685a
Cement board (Durock®, Wonderboard®, etc) ..	_____	685
Gypsum panel (FibeRock® or Dens-Shield®) ..	_____	686
Poured lightweight concrete (Gypcrete®, etc.) ..	_____	686a
Other _____ (PLEASE SPECIFY)	_____	687
		100%

INSULATION

FLAT CEILINGS / ATTIC INSULATION MATERIAL

What **percent** of your total **flat** ceiling areas (e.g., attics) were insulated with the following materials, and what was the typical R-value?

	% FLAT CEILINGS	
	INSULATED	R-VALUE
NOT insulated	_____	820
Fiberglass batt and blown	_____	812 _____ 812r
Fiberglass batt	_____	813 _____ 813r
Fiberglass blown	_____	814 _____ 814r
Rockwool batt	_____	815 _____ 815r
Rockwool blown	_____	816 _____ 816r
Cellulose blown	_____	817 _____ 817r
Spray foam	_____	818 _____ 818r
Foam board	_____	822 _____ 822r
Other _____ (PLEASE SPECIFY)	_____	819 _____ 819r
	100%	

SLAB-ON-GRADE FOUNDATION INSULATION

What type of insulation did you **typically** use with slab-on-grade foundations, beneath the slab and / or around the perimeter?

One ✓per column:
BENEATH SLAB PERIMETER

Extruded polystyrene (e.g., Dow-Styrofoam®, etc.)	[]	[]	1
Expanded polystyrene (bead board)	[]	[]	2
Polyisocyanurate (e.g., Thermax®)	[]	[]	3
Fiberglass	[]	[]	4
No insulation used for slab	[] 843	[] 844	5

THICKNESS OF SLAB INSULATION MATERIAL

What was the **typical thickness** of the insulation you used with slab-on-grade foundations, beneath the slab and / or around the perimeter?

One ✓per column:
BENEATH SLAB PERIMETER

3/4"	[]	[]	1
1"	[]	[]	2
1-1/2"	[]	[]	3
2" or more	[] 845	[] 846	4

BASEMENT AND CRAWL SPACE INSULATION

What method did you **typically** use to insulate the foundations of homes with basements or crawl spaces? (**One ✓per column**)

BASE- CRAWL
MENTS SPACES

Between floor joists of the ground floor	[]	[]	1
Entire interior and exterior surfaces of the foundation wall	[]	[]	2
Entire interior surface of foundation wall	[]	[]	3
Only above-grade interior	[]	[]	4
Entire exterior surface of foundation wall	[]	[]	5
Only below-grade portion of foundation wall exterior	[]	[]	6
Only above-grade portion of foundation wall exterior	[]	[]	7
Foundation wall cavity	[]	[]	8
NO foundation insulation used	[] 847	[] 848	9

FOUNDATION WALL INSULATION TYPE

What material did you typically use to insulate your basement or crawl space walls, and what was the R-value?

If you insulated both the interior and exterior surfaces, you may check two materials; otherwise check only one.

	MATERIAL	R-VALUE
Fiberglass batt or blanket	[] 851_1	_____ 851_1r
Rockwool batt	[] 851_2	_____ 851_2r
Fiberglass / rockwool board	[] 851_3	_____ 851_3r
Extruded polystyrene (XPS)	[] 851_4	_____ 851_4r
Expanded polystyrene (EPS)	[] 851_5	_____ 851_5r
Polyisocyanurate	[] 851_6	_____ 851_6r
Spray foam	[] 851_8	_____ 851_8r
Other _____	[] 851_7	_____ 851_7r
	(PLEASE SPECIFY)	

HOUSES INSULATED BETWEEN FLOOR JOISTS

What material did you typically use to insulate between ground floor joists and what was the typical R-value?

	MATERIAL	R-VALUE
Fiberglass batt or blanket	[] 1	_____
Rockwool batt	[] 2	_____
Fiberglass blown	[] 3	_____
Cellulose blown	[] 4	_____
Spray foam	[] 5	_____
Foam board or SIPs	[] 6	_____
	849	850

GARAGE INSULATION

What percent of your garages had insulation installed in the:

Ceilings	_____	853
All walls	_____	854
Only walls shared with living space	_____	855

Total need not add to 100%

WALL CAVITY INSULATION MATERIAL

What percent of your homes had the following wall cavity insulation materials, and what were their R-values?

Do not include foam exterior wall sheathing.

	% HOMES	R-VALUE
NO wall cavity insulation	_____ 840	
Fiberglass batt	_____ 832	_____ 832r
Rockwool batt	_____ 833	_____ 833r
Fiberglass blown behind mesh	_____ 834	_____ 834r
Fiberglass blown-in, no mesh	_____ 835	_____ 835r
Cellulose blown behind mesh	_____ 836	_____ 836r
Cellulose blown-in, no mesh	_____ 837	_____ 837r
Spray foam	_____ 868	_____ 868r
Foam board, SIP, or ICF	_____ 838	_____ 838r
Other _____	_____ 839	_____ 839r
	(PLEASE SPECIFY)	
	100%	

If you used spray foam insulation anywhere in your homes, was it typically Polyurethane?

Yes	_____ [] 1
No	_____ [] 2
Don't know	_____ [] 3
	945

CATHEDRAL CEILING INSULATION MATERIAL

What percent of your cathedral / sloped ceilings were insulated with the following materials, and what was the typical R-value?

	% CATHEDRAL CEILING INSULATED	R-VALUE
NOT insulated	_____ 831	
Fiberglass batt or blanket	_____ 827	_____ 827r
Rockwool batt or blanket	_____ 828	_____ 828r
Spray foam	_____ 842	_____ 842r
Foam board or SIPs	_____ 829	_____ 829r
Other _____	_____ 830	_____ 830r
	(PLEASE SPECIFY)	
	100%	

SOUND INSULATION

What percent of your homes had some insulation in their interior partition walls and / or floors-between-stories to dampen sound?

	SFD	SFA	MF BUILDINGS
Homes with wall sound insulation	_____ 806	_____ 807	_____ 808
Homes with floor sound insulation	_____ 806a	_____ 807a	_____ 808a

Of your homes with wall sound insulation, how many linear feet (LF) of interior partition wall did you insulate in your typical house or unit?

LF of wall with sound insulation	_____ 809	_____ 810	_____ 811
----------------------------------	-----------	-----------	-----------

Of your homes with floor sound insulation, how many square feet (SF) of floor area did you insulate in your typical house or unit?

Sq.Ft. of floor with sound insulation	_____ 809a	_____ 810a	_____ 811a
---------------------------------------	------------	------------	------------

AIR INFILTRATION BARRIERS / HOUSE WRAP

What percent of your homes and multifamily buildings were wrapped with air infiltration barrier material?

Exclude roofing felt.

	SFD	SFA	MF BUILDINGS
Percent wrapped:	_____ 856	_____ 856a	_____ 856b

RADIANT BARRIERS

What percent of your houses had radiant barriers in the wall, roof, or ceiling assembly?

Radiant barrier roof sheathing	_____ 857
Other roof/ceiling/attic radiant barrier	_____ 857a
Radiant barrier in wall	_____ 858
	Totals need not add to 100%

AIR (HVAC) DUCTS

What **percent** of your houses with ducted HVAC systems had the main duct and run-outs located in the:

Basement, crawl space or in framed floors only	_____	1008
Attic only	_____	1009
Both attic and basement or crawlspace	_____	1010
In or under concrete floor slab	_____	1011
Both in attic and concrete floor slab	_____	1011a
	100%	

AIR DUCT MATERIAL

What **percent** of your houses with ducted HVAC systems had the following types of duct material?

MAIN DUCTS

Metal	_____	912
Flexible	_____	913
Fiberglass, rigid (foil-faced fiberglass board)	_____	914
Other _____	_____	914a
	(PLEASE SPECIFY)	100%

RUN-OUT DUCTS

Metal	_____	915
Flexible	_____	916
Fiberglass, rigid (foil-faced fiberglass board)	_____	917
Other _____	_____	917a
	(PLEASE SPECIFY)	100%

WALL STACKS

Metal	_____	918
Fiberglass, rigid (foil-faced fiberglass board)	_____	919
NONE (wall cavity)	_____	920
Other _____	_____	920a
	(PLEASE SPECIFY)	100%

RIGID FIBERGLASS DUCTS

If you used any rigid fiberglass ducts, what was the typical thickness of the fiberglass board used. (**✓one**)

1 inch	[]	1
2 inch	[]	2
Other _____	[]	3
	(PLEASE SPECIFY)	926

METAL DUCT INSULATION

If you used any metal duct, what **percent** of all the metal ducting was insulated by the following methods, if any?

Lined with insulation (insulation inside the duct)	_____	921
Wrapped with insulation	_____	922
NOT insulated	_____	924
Other _____	_____	923
	(PLEASE SPECIFY)	100%

METAL DUCT WRAP THICKNESS

If you used any duct insulation wrap, what was the typical thickness? (**✓one**)

1-1/2 inches or less	[]	1
2 inches	[]	2
More than 2 inches	[]	3
		925

DECKS, PATIOS, PORCHES, & FLATWORK

What **percent** of your homes had the following structures, and what was their typical **size** in square feet?

	PERCENT	SQ. FT.
Deck (outside)	_____ 927	_____ 928
Patio / Pool deck	_____ 929	_____ 930
Breezeway	_____ 931	_____ 932
Front porch	_____ 933	_____ 934
Front stoop	_____ 935	_____ 936
Side porch	_____ 937	_____ 938
Screened-in porch	_____ 939	_____ 940

Totals need not add to 100%

PATIO / POOL DECK MATERIAL

What **percent** of your patios had surfacing material made of:

Poured concrete (include stamped or stenciled) ..	_____	955
Concrete pavers	_____	956
Brick	_____	957
Tiles	_____	957a
Natural stone	_____	958
Treated wood block	_____	959
Treated lumber	_____	959a
Other _____	_____	960
	(PLEASE SPECIFY)	100%

DECK AND PORCH MATERIAL

What **percent** of the decks and porches you built had decking or surface material made of:

	DECKS	PORCHES
Treated wood	_____ 961	_____ 968
Cedar	_____ 964	_____ 971
Redwood	_____ 965	_____ 972
Other untreated wood	_____ 966	_____ 973
Composite (Trex®, ChoiceDek®, etc) ...	_____ 966a	_____ 973a
PVC & other plastic (Azek®, etc) ...	_____ 967	_____ 974
Brick	_____	_____ 975a
Tiles	_____	_____ 975b
Concrete (include stamped and stenciled)	_____	_____ 975
Natural stone	_____	_____ 975c
	100%	100%

DECK AND PORCH RAILINGS

What **percent** of your decks and porches had railings?

Decks _____ % 1121 Porches _____ % 1122a

What **percent** of your deck and porch railings consisted primarily of the following materials?

	DECKS	PORCHES
Treated wood	_____ 1123	_____ 1122b
Cedar	_____ 1125	_____ 1124
Redwood	_____ 1127	_____ 1126
Other untreated wood	_____ 1129	_____ 1128
Composite (Trex®, ChoiceDek®, etc) ...	_____ 1131	_____ 1130
PVC & other plastic (Azek®, etc) ...	_____ 1133	_____ 1132
Aluminum	_____ 1135	_____ 1134
Wrought iron or steel	_____ 1137	_____ 1136
Masonry or concrete (all types) .	_____ 1139	_____ 1138
Other _____ (PLEASE SPECIFY)	_____ 1141	_____ 1140
	100%	100%

WALKWAYS & SIDEWALKS

How many **linear feet** of walkways and sidewalk did your typical home have?

_____ LF
976

What **percent** of all your sidewalks and walkways were:

Poured concrete	_____ 977
Concrete paver	_____ 978
Asphalt	_____ 978a
Brick paver	_____ 979
Brick or clay tiles	_____ 979a
Natural stone	_____ 980
Crushed stone or gravel	_____ 981
Other _____ (PLEASE SPECIFY)	_____ 982
	100%

SWIMMING POOLS

What **percent** of your homes included their own swimming pool as part of the sales contract?

SFD	SFA	MF BUILDINGS
_____ % 983	_____ % 983a	_____ % 983b

What was the typical size of the swimming pool?

Average size of SF Detached pool: _____ FT. X _____ FT.	
_____ 984	_____ 985
Average size of SF Attached pool: _____ FT. X _____ FT.	
_____ 984a	_____ 985a
Average size of Multifamily pool: _____ FT. X _____ FT.	
_____ 984b	_____ 985b

SWIMMING POOL MATERIAL

What was the **primary method** used for constructing swimming pools?

(✓ one)

Cast-in-place concrete	[] 1
Shotcrete (gunnite)	[] 2
Other _____ (PLEASE SPECIFY)	[] 3 986

FENCING AND LANDSCAPE WALLS

What **percent** of your homes or living units had fencing / privacy walls or landscape / retaining walls installed on the lot as part of their sales contract?

	Fence / Privacy Wall	Landscape / Retaining Wall
SF Detached Houses	_____ % 987	_____ % 998
SF Attached Houses	_____ % 987a	_____ % 998a
Multifamily Buildings	_____ % 987b	_____ % 998b
	Totals need not add to 100%	

For houses with fencing or walls, what was the typical length of fence or wall? (per building if multifamily)

	Fence / Privacy Wall	Landscape / Retaining Wall
SF Detached Houses	_____ LF 988	_____ LF 999
SF Attached Houses	_____ LF 988a	_____ LF 999a
Multifamily Buildings	_____ LF 988b	_____ LF 999b
	Totals need not add to 100%	

What was the typical fence / wall height?

	Fence / Privacy Wall	Landscape / Retaining Wall
SF Detached Houses	_____ FT 989	_____ FT 1000
SF Attached Houses	_____ FT 989a	_____ FT 1000a
Multifamily Buildings	_____ FT 989b	_____ FT 1000b
	Totals need not add to 100%	

FENCING AND LANDSCAPE WALL MATERIAL

What **percent** of the fences or walls were:

	Fence / Privacy Wall	Landscape / Retaining Wall
Wood – vertical boards on alternating sides	_____ 990	
Wood – vertical boards on one side ..	_____ 991	
Wood with horizontal rails / boards ..	_____ 992	
Chain link or wire w/ steel posts	_____ 993	
Wire w/ wood posts	_____ 993E	
Wrought iron	_____ 993b	
Ornamental steel	_____ 997d	
Aluminum	_____ 993c	
Plastic & wood fiber composite (Trex, etc.) ..	_____ 993a	
Vinyl, PVC, or other plastic	_____ 994	
Pre-cast concrete	_____ 997	
Poured concrete	_____ 997a	_____ 1004
Concrete retaining wall		
blocks (dry stacked)	_____ 997c	_____ 1003a
Mortared concrete block	_____ 997b	_____ 1003
Stone	_____ 995	_____ 1001
Brick	_____ 996	_____ 1002
Treated landscape timbers	_____ 100%	_____ 1006
	100%	100%

If you built **wood fence/privacy walls**, what **percent** were:

Treated wood	_____ 977
Cedar	_____ 978
Redwood	_____ 978a
Other untreated wood	_____ 979
	100%

HOMES FOR OLDER BUYERS

What **percent** of your homes were:

Constructed in "active adult" or age-restricted communities 746
 Sold to occupants over the age of 55 747

PRACTICES REGARDING RADON GAS

Please answer these questions even if you used **NO** radon-reducing practices.

SUB-SLAB OR SUB-MEMBRANE VENTILATION

What **percent** of the houses you built had the following types of ventilation systems to reduce radon:

	BASEMENTS OR SLABS	CRAWL SPACES
NO venting installed to reduce radon	791	795
A rough-in for ventilation (not a complete system, e.g., capped pipe riser in basement)	788	
Passive stack ventilation	789	792
Fan-driven (active) depressurization	790	793
Foundation wall vents	794	
	100%	100%

SEALING METHODS OF HOUSES

WITH SLAB OR BASEMENT FOUNDATIONS

How do you seal your slabs? If you **don't** seal, ✓ "NO slab sealing method used."
 (✓ all that apply)

NO slab sealing method used [] 803
 Polyethylene or other membrane under slab [] 796
 Membrane on foundation walls below grade [] 797
 Caulk around slab, wall openings and slab joints [] 798
 Seal interior of foundation walls [] 799
 Locate sump access outside of basement [] 800
 Install air tight sump pit covers [] 801
 Other [] 802
 (PLEASE SPECIFY)

RADON TESTING

What **percent** of your homes were tested for radon? %
 804

Of the houses tested for radon, what **percent** needed further work to reduce radon to less than 4 pCi/L? %
 805

PASSIVE vs. ACTIVE SUBSLAB VENTILATION

If you installed **PASSIVE** sub-slab or sub-membrane ventilation (without a fan), what was the typical cost for you to include these features per home? (✓ one)

Less than \$200 [] 1
 \$200 to \$299 [] 2
 \$300 to \$399 [] 3
 \$400 to \$499 [] 4
 \$500 to \$599 [] 5
 \$600 to \$799 [] 6
 \$800 or more [] 7
 v114

If you installed **ACTIVE** sub-slab or sub-membrane ventilation (with a fan), what was the typical cost for you to include these features per home? (✓ one)

Less than \$450 [] 1
 \$450 to \$549 [] 2
 \$550 to \$649 [] 3
 \$650 to \$749 [] 4
 \$750 to \$849 [] 5
 \$850 to \$1049 [] 6
 \$1050 or more [] 7
 v120

PLUMBING FIXTURES

What was the typical **number** of plumbing fixtures installed in each of your homes?

	SFD Starter ↓	SFD Move-up ↓	SFD Luxury ↓	SFA Per UNIT ↓	MF Per UNIT ↓
Lavatory sinks	v1	v10	v19	v28	v37
Bathtubs (both standard and whirlpool)	v2	v11	v20	v29	v38
Separate shower Stalls	v3	v12	v21	v30	v39
Toilets	v4	v13	v22	v31	v40
Bidets	v5	v14	v23	v32	v41
Kitchen sinks	v6	v15	v24	v33	v42
Bar sinks	v7	v16	v25	v34	v43
Laundry tubs / sinks	v8	v17	v26	v35	v44
Other (PLEASE SPECIFY)	v9	v18	v27	v36	v45

KITCHEN SINK TYPE

What **percent** of your kitchen sinks were:

Drop-in (self-rimming, overmount) v95
 Undermount (sub-mount or under-counter) v96
 Other v97
 (PLEASE SPECIFY) **100%**

KITCHEN SINK MATERIAL

What **percent** of your kitchen sinks installed were:

Stainless steel v58
 Enameled cast iron v59
 Enameled steel (include Americast®) v60
 Cultured marble v61
 Solid-surface (Corian®, Swanstone®, etc.) v62
 Granite / Stone (Moenstone®, Silgranit®, Kindred Granite®, etc.) v62c
 Acrylic v62a
 Other v62b
 (PLEASE SPECIFY) **100%**

KITCHEN SINK BASINS

What **percent** of your kitchen sinks had the following number of basins?

Single basin v90
Double basin v91
Triple basin v92
Other (PLEASE SPECIFY) v93
100%

KITCHEN SINK FAUCETS

What **percent** of your kitchen sink faucets had the following control types:

Single control (handle or lever) v201
Two controls (one for hot and one for cold) v202
100%

What **percent** of your kitchen sink faucets had the following finishes:

Chrome v203
Brass / Gold v204
Bronze (oil rubbed, polished, brushed, etc.) v205
Solid color (almond, white, black, biscuit, etc.) v206
Nickel / Pewter v207
Stainless steel v208
Other (PLEASE SPECIFY) v209
100%

LAVATORY SINK TYPE

What **percent** of the lavatory sinks you installed were:

One-piece sink and countertop v46
Drop-in (self-rimming, overmount) v47
Wall-hung v48
Pedestal v50
Undermount (sub-mount or under-counter) v49
Vessel v49a
100%

LAVATORY SINK MATERIAL

What **percent** of all the lavatory sinks you installed were:

Vitreous china (ceramic) v51
Enameled cast iron v52
Enameled steel (include Americast®) v53
Cultured marble v54
Coated fiberglass v55
Acrylic v56
Solid-surface (Corian®, Swanstone®, etc.) v57
Other (PLEASE SPECIFY) v57a
100%

LAVATORY SINK FAUCETS

What **percent** of your lavatory sink faucets had the following control types:

Single control (handle or lever) v211
Two controls (one for hot and one for cold) v212
100%

What **percent** of your lavatory sink faucets had the following finishes:

Chrome v213
Brass / Gold v214
Bronze (oil rubbed, polished, brushed, etc.) v215
Solid color (almond, white, black, biscuit, etc.) v216
Nickel / Pewter v217
Stainless steel v218
Other (PLEASE SPECIFY) v219
100%

BATHTUB AND WHIRLPOOL SURROUNDS

What **percent** of the separate bathtubs and whirlpool baths you installed had **site-constructed** surrounds of the following materials?

NO separate bathtub surrounds were constructed % v76
Ceramic tile % v71
Marble, slate, or other natural stone % v71a
Solid surface (e.g., Corian®, Avonite®, etc.) % v72
High-pressure laminate (e.g., Formica, Wilsonart) % v73
Fiberglass / Plastic % v73a
Cultured marble % v74
Other (PLEASE SPECIFY) % v75
100%

BATHTUBS (NON-WHIRLPOOL)

What **percent** of all the non-whirlpool bathtubs you installed were:

Tub / Shower Combination

Coated fiberglass, one-piece v63
Coated fiberglass, multi-piece v63m
Acrylic, one-piece v64
Acrylic, multi-piece v64m
Other (PLEASE SPECIFY) v64a

Tub only

Enameled cast iron v65
Enameled steel v66
Cultured marble v67
Coated fiberglass v68
Acrylic v69
Solid-surface (e.g., Swanstone®, Avonite®, etc.) v70
Other (PLEASE SPECIFY) v70a
100%

WHIRLPOOL BATHTUBS

What **percent** of your homes had whirlpool baths?

	SFD Starter ↓	SFD Move-up ↓	SFD Luxury ↓	SFA Units ↓	MF Units ↓
Whirlpool bathtubs _____	v2w	v11w	v20w	v29w	v38w

What **percent** of all the whirlpool baths you installed were:

Tub / Shower Combination

Coated fiberglass, one-piece	_____	v63w
Coated fiberglass, multi-piece	_____	v63wm
Acrylic, one-piece	_____	v64w
Acrylic, multi-piece	_____	v64wm
Other _____	_____	v64aw
	(PLEASE SPECIFY)	

Tub only

Enameled cast iron	_____	v65w
Enameled steel	_____	v66w
Cultured marble	_____	v67w
Coated fiberglass	_____	v68w
Acrylic	_____	v69w
Solid-surface (e.g., Swanstone [®] , Avonite [®] , etc.) _____	_____	v70w
Other _____	_____	v70aw
	(PLEASE SPECIFY)	

100%

TUB / SHOWER DOORS

What **percent** of the tubs, showers, and whirlpool baths you installed had shower doors?

Bathtubs (non-whirlpool)	_____	v231
Showers	_____	v232
Whirlpool baths	_____	v233

Totals need not add to 100%

SEPARATE SHOWER STALLS

What **percent** of all the shower stalls you installed were:

Fabricated on-site from:

Ceramic tile	_____	v77
Marble, slate, or other natural stone	_____	v77a
Solid surface (e.g., Corian [®] , Avonite [®] , etc.)	_____	v78
High pressure laminate (e.g., Formica [®] , Wilsonart [®])	_____	v79
Cultured marble	_____	v80
Other _____	_____	v81
	(PLEASE SPECIFY)	

Manufactured units of:

Coated fiberglass, one-piece	_____	v82
Coated fiberglass, multi-piece	_____	v82m
Acrylic, one-piece	_____	v83
Acrylic, multi-piece	_____	v83m
Other _____	_____	v84
	(PLEASE SPECIFY)	

100%

SHOWER BASES

What **percent** of the fabricated on-site showers you installed had manufactured bases or pans?

_____ v256

BATHTUB / SHOWER FAUCETS

What **percent** of your bathtub / shower faucets used the following control types:

Single control, pulled or lifted to turn on water	_____	v221
Single control, twisted to turn on water	_____	v222
Two controls (one for hot and one for cold)	_____	v223

100%

What **percent** of your bathtub / shower faucets had the following finishes:

Chrome	_____	v224
Brass / Gold	_____	v225
Bronze (oil rubbed, polished, brushed, etc.)	_____	v226
Solid color (almond, white, black, biscuit, etc.)	_____	v227
Nickel / Pewter	_____	v228
Stainless steel	_____	v229
Other _____	_____	v230
	(PLEASE SPECIFY)	

100%

STEAM GENERATORS

What **percent** of all the tubs, showers, and whirlpool baths you installed had Steam Generators?

Bathtubs	_____	v234
Showers	_____	v235
Whirlpools	_____	v236

SHOWERHEADS

What **percent** of the bathtubs and showers you installed had showerheads of the following types:

Standard / Fixed showerhead	_____	v249
Hand-held showerhead	_____	v250
Massaging showerhead	_____	v251
Thermostatic valves	_____	v252
Body sprays	_____	v253
Steam head	_____	v254
Other _____	_____	v255
	(PLEASE SPECIFY)	

What **percent** of the bathtubs and showers you installed had the following:

More than 1 Standard showerhead	_____	v257
More than 1 Hand-held showerhead	_____	v258

Totals need not add to 100%

TOILETS

What **percent** of the toilets installed in your new homes were:

One piece (bowl and tank one casting)	_____	v85_1
Two piece	_____	v85_2

100%

What **percent** of the toilets had the following bowl styles?

Elongated	_____	v85_3
Standard	_____	v85_4

100%

What **percent** of your toilets were dual flush?

Percent of toilets with Dual Flush	_____	v85_5
--	-------	-------

TOILET BRANDS

Of all the toilets you installed last year, what **percent** were the following brands?

	Percent
American Standard	_____ v85
Briggs	_____ v85a
Crane	_____ v85b
Eljer	_____ v85c
Gerber	_____ v86
Kohler	_____ v86a
Mansfield	_____ v86b
Sterling	_____ v86c
Toto	_____ v87
Universal-Rundle	_____ v87a
St. Thomas Creations	_____ v87b
Other _____ (PLEASE SPECIFY)	_____ v87c
	100%

MOUNTED BATH ACCESSORIES

How many of the following are installed in your typical bathroom?

Towel bar	_____ v241
Towel ring	_____ v242
Robe hook	_____ v243
Toilet paper holder	_____ v244
Toothbrush and/or Tumbler holder	_____ v245
Shelf	_____ v246
Soapdish	_____ v247
Grab bars	_____ v248

APPLIANCES

RANGES, COOKTOPS & OVENS

What **percent** of your homes were equipped with ranges or cooktops and ovens that were:

	SFD	SFA	MF UNITS
Freestanding	_____ a1	_____ a6	_____ a11
Slide-in	_____ a2	_____ a7	_____ a12
Drop-in	_____ a3	_____ a8	_____ a13
Cooktop & wall oven(s) ..	_____ a4	_____ a9	_____ a14
NO range / cooktop / oven	_____ a5	_____ a10	_____ a15
	100%	100%	100%

WALL OVEN CONFIGURATION

What **percent** of your new homes with built-in wall ovens had:

A single wall oven	_____ a34
Two separate wall ovens	_____ a35
Stacked double ovens in a single unit	_____ a36
	100%

BURNER TYPE

What **percent** of the cooking appliances you installed had the following types of burners?

	RANGES	COOKTOPS
Electric		
Halogen burner / smoothtop	_____ a22	_____ a28
Smoothtop, not halogen	_____ a23	_____ a29
Conventional heat coils	_____ a24	_____ a30
Modular units for grill	_____ a25	_____ a31
Gas		
Sealed gas burners	_____ a26	_____ a32
Conventional gas	_____ a27	_____ a33
	100%	100%

FUEL TYPE

What **percent** of the equipment you installed used the following fuel types?

	RANGES	COOKTOPS	WALL OVENS	WATER HEATERS
Gas	_____ a16	_____ a18	_____ a18a	_____ a20
Electric	_____ a17	_____ a19	_____ a19a	_____ a21
Oil				_____ a21a
	100%	100%	100%	100%

MICROWAVE OVENS

What **percent** of your homes were equipped with microwave ovens that were:

	SFD	SFA	MF UNITS
Built-in with range	_____ a58	_____ a62	_____ a66
Built into cabinet	_____ a58a	_____ a62a	_____ a66a
Over-the-range	_____ a59	_____ a63	_____ a67
Countertop or hung under cabinets	_____ a60	_____ a64	_____ a68
Top unit of double wall oven	_____ a60a	_____ a64a	_____ a68a
NO microwave oven ...	_____ a61	_____ a65	_____ a69
	100%	100%	100%

REFRIGERATORS/FREEZERS

What **percent** of your homes were equipped with refrigerators that were:

	SFD	SFA	MF UNITS
Freezer on top, refrigerator below	_____ a70	_____ a74	_____ a78
Refrigerator on top, freezer below	_____ a71	_____ a75	_____ a79
Side-by-side refrigerator / freezer ...	_____ a72	_____ a76	_____ a80
Refrigerator with no freezer	_____ a72a	_____ a76a	_____ a80a
NO refrigerator	_____ a73	_____ a77	_____ a81
	100%	100%	100%

DISHWASHERS

What **percent** of your homes were equipped with:

	SFD	SFA	MF UNITS
Dishwashers with timing cycles	_____ a82	_____ a85	_____ a88
Dishwashers with cleaning sensors	_____ a83	_____ a86	_____ a89
NO dishwasher	_____ a84	_____ a87	_____ a90
	100%	100%	100%

CLOTHES WASHERS

What **percent** of your homes were equipped with clothes washers that were:

	SFD	SFA	MF UNITS
Top loading washing machine	_____ a91	_____ a94	_____ a97
Front loading washing machine	_____ a92	_____ a95	_____ a98
NO washing machine ...	_____ a93	_____ a96	_____ a99
	100%	100%	100%

CLOTHES DRYERS

What **percent** of your homes were equipped with clothes dryers that were:

	SFD	SFA	MF UNITS
Electric dryer	_____ a100	_____ a103	_____ a106
Gas powered dryer	_____ a101	_____ a104	_____ a107
NO clothes dryer	_____ a102	_____ a105	_____ a108
	100%	100%	100%

OTHER APPLIANCES & HOME FEATURES

What **percent** of your homes were equipped with the following appliances?

	SFD	SFA	MF UNITS
Garbage disposal	_____ a113	_____ a117	_____ a121
Trash compactor	_____ a114	_____ a118	_____ a122
Hot water dispenser	_____ a115	_____ a119	_____ a123
Central vacuum – full system	_____ a116	_____ a120	_____ a124
Central vacuum – pre-pipe only	_____ a141	_____ a142	_____ a143
Elevator	_____ a144	_____ a145	_____ a146
Standby generator	_____ a147	_____ a148	_____ a149
Water softener	_____ a147a	_____ a148a	_____ a149a
Hot water recirculation piping	_____ a147b	_____ a148b	_____ a149b
Code required fire sprinkler system	_____ a147d	_____ a148d	_____ a149d
Non-code required fire sprinkler system	_____ a147c	_____ a148c	_____ a149c
	Totals need not add to 100%		

FIRE SPRINKLER SYSTEMS (Skip if none installed)

What **percent** of your fire sprinkler piping was:

	SFD & SFA	MF
CPVC	_____ s101	_____ s106
PEX	_____ s102	_____ s107
Steel/Iron	_____ s103	_____ s108
Copper	_____ s104	_____ s109
Other _____ (PLEASE SPECIFY)	_____ s105	_____ s110
	100%	100%

What **percent** of your fire sprinkler systems were:

	SFD & SFA	MF
Stand-alone fire sprinkler systems	_____ s111	_____ s113
Combined plumbing and fire sprinkler systems	_____ s112	_____ s114
	100%	100%

WATER PIPES

What percent of your homes' **water service** (from the street to the house); **distribution** (hot/cold water plumbing within the house); **waste & vent** (DWV piping that drains water from the sinks, toilets, etc) pipe was the following types:

	WATER SERVICE	DISTRIBUTION	WASTE & VENT
Copper	_____ v210s	_____ v210d	_____ v210w
PVC or CPVC	_____ v211s	_____ v211d	_____ v211w
Polyethylene (PE) ...	_____ v212s		
PEX or PEX-AL-PEX	_____ v213s	_____ v213d	
Steel / Cast iron	_____ v215s		_____ v215w
ABS			_____ v216w
	100%	100%	100%

If you used PEX **plumbing** systems, what percent of the piping, fittings, and manifolds were the following brands:

	PIPING	FITTINGS	MANIFOLDS
Bow	_____ v217p	_____ v217f	_____ v217m
IPEX	_____ v218p	_____ v218f	_____ v218m
JM Eagle	_____ v219p	_____ v219f	_____ v219m
NIBCO	_____ v220p	_____ v220f	_____ v220m
Rehau	_____ v221p	_____ v221f	_____ v221m
Sioux Chief		_____ v222f	_____ v222m
Uponor (formerly Wisbo)	_____ v223p	_____ v223f	_____ v223m
Viega (formerly Vanguard)	_____ v224p	_____ v224f	_____ v224m
Watts	_____ v225p	_____ v225f	_____ v225m
Zurn	_____ v226p	_____ v226f	_____ v226m
Don't know	_____ v227p	_____ v227f	_____ v227m
Other	_____ v228p	_____ v228f	_____ v228m
	100%	100%	100%

What percent of the PEX **plumbing** systems you installed were:

	SFD Starter	SFD Move-up	SFD Luxury	SFA Units	MF Units
Trunk & Branch	_____	_____	_____	_____	_____
Home Run	_____	_____	_____	_____	_____
Zone (remote manifold)	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____
Don't know	_____	_____	_____	_____	_____
	100% v229s	100% v229m	100% v229l	100% v229t	100% v229a

What percent of the **fittings** for your PEX **plumbing** systems were:

	SFD Starter	SFD Move-up	SFD Luxury	SFA Units	MF Units
Engineered plastic	_____	_____	_____	_____	_____
Copper/Brass ...	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____
Don't know	_____	_____	_____	_____	_____
	100% v230s	100% v230m	100% v230l	100% v230t	100% v230a

HYDRONIC RADIANT HEAT

What percent of your homes had **hydronic radiant heat** installed in:

	SFD Starter ↓	SFD Move-up ↓	SFD Luxury ↓	SFA Units ↓	MF Units ↓
None	_____	_____	_____	_____	_____
Less than 25% of square footage .	_____	_____	_____	_____	_____
25 – 50 % of square footage .	_____	_____	_____	_____	_____
50% or more square footage .	_____	_____	_____	_____	_____
	100% v231s	100% v231m	100% v231l	100% v231t	100% v231a

If you used **PEX radiant** systems, what percent of the piping, manifolds, and controls were the following brands:

	PIPING	MANIFOLDS	CONTROLS
Bow	_____ v232p	_____ v232m	_____ v232c
Caleffi	_____	_____ v233m	_____
Heat Link	_____ v234p	_____ v234m	_____ v234c
Heat-Timer	_____	_____	_____ v235c
Honeywell	_____	_____ v236m	_____ v236c
IPEX	_____ v237p	_____ v237m	_____ v237c
JM Eagle	_____ v238p	_____ v238m	_____ v238c
Rehau	_____ v239p	_____ v239m	_____ v239c
Roth	_____ v240p	_____ v240m	_____ v240c
Tekmar	_____	_____	_____ v241c
Uponor (formerly Wisco)	_____ v242p	_____ v242m	_____ v242c
Viega (formerly Vanguard)	_____ v243p	_____ v243m	_____ v243c
Watts	_____ v244p	_____ v244m	_____ v244c
Zurn	_____ v245p	_____ v245m	_____ v245c
Don't know	_____ v246p	_____ v246m	_____ v246c
Other	_____ v247p	_____ v247m	_____ v247c
	100%	100%	100%

CONFIGURATION OF HVAC SYSTEMS

What percent of your homes (or multifamily units) had the following **primary heating systems**:

Standard heat pump w/ electric backup heat	_____ h101
Standard heat pump w/ gas or propane backup	_____ h102
Geothermal heat pump	_____ h103
Gas or propane furnace or boiler	_____ h104
Oil furnace or boiler	_____ h105
Electric furnace, baseboard, or radiant	_____ h106
No primary heating system	_____ h107
	100%

HEATING DISTRIBUTION SYSTEMS

What percent of your homes with primary heating systems had the following **heating distribution systems**:

Ductless Heat Pump	_____ h111
Forced Air—one zone only	_____ h112
Forced Air—two or more zones	_____ h113
Hydronic—radiant floor	_____ h114
Hydronic—baseboard or radiators	_____ h115
Another type of distribution system	_____ h116
	100%

AIR CONDITIONING SYSTEMS

What percent of your homes had the following types of air conditioning systems:

No air conditioning system installed	_____ h121
Evaporative cooler	_____ h122
Single AC unit	_____ h123
Two or more AC units	_____ h124
Ductless heat pump or AC	_____ h125
	100%

HVAC SYSTEM FEATURES

What percent of your homes had the following as part of their **HVAC systems**:

High performance air cleaner (HEPA, electronic)	_____ h131
Humidifier	_____ h132
Heat Recovery Ventilators (HRV, ERV)	_____ h133
Non-energy-recovery fresh air exchangers	_____ h134
	Total need not add to 100%

EFFICIENCY RATINGS OF WARM AIR FURNACES

Of all the furnaces installed in the homes your firm built, what percent had efficiency ratings of:

Less than 78%	_____ h141
78% to 79.9%	_____ h142
80% to 89.9%	_____ h143
90% to 95%	_____ h144
95.1% or greater	_____ h145
Don't know	_____ h146
	100%

AIR CONDITIONER EFFICIENCY

What percent of air conditioning systems and heat pumps installed in your home had **SEER ratings** of:

Less than 13	_____ h151
13.0 to 14.9	_____ h152
15.0 to 16.9	_____ h153
17.0 to 18.9	_____ h154
19.0 to 20.9	_____ h155
21 or higher	_____ h156
Don't know	_____ h157
	100%

INFRASTRUCTURE

What **percent** of your single family detached dwellings were located:

	SFD	
In residential developments	_____	h201
Not in residential developments	_____	h202
	100%	

What **percent** of your homes & multifamily buildings located in residential developments had frontage on the following:

	SFD		SFA & MF	
Concrete streets	_____	h203	_____	h206
Asphalt streets	_____	h204	_____	h207
Other: _____ (PLEASE SPECIFY)	_____	h205	_____	h208
	100%		100%	

What **percent** of your homes and multifamily buildings located in residential developments were on streets with the following:

	SFD		SFA & MF	
Sidewalks	_____	h209	_____	h214
Curbs and gutters	_____	h210	_____	h215
Curbs only, no gutters	_____	h211	_____	h216
Gutters only, no curbs	_____	h212	_____	h217
No curbs or gutters	_____	h213	_____	h218
	Total need not add to 100%			

STANDBY GENERATORS

What **percent** of your standby generators were:

Natural gas	_____	g106
Propane/LP gas	_____	g107
Gasoline	_____	g108
Diesel	_____	g109
Other	_____	g110
	100%	

What **percent** of your standby generators were:

Not permanently installed (portable)	_____	g114
Permanently installed 7kW to 20kW	_____	g115
Permanently installed over 20kW	_____	g116
	100%	

What **percent** of your standby generator installations included:

Manual transfer switch	_____	g114
Automatic transfer switch	_____	g115
	100%	

UPDATES

Would you like to receive periodic communications on NAHB Research Center testing results and programs via e-mail?

No 1 Yes 2 a160

(PLEASE SPECIFY E-MAIL ADDRESS)

PLEASE SELECT ONE OF THE FOLLOWING GIFTS:

- | | | |
|---|--|---|
| <input type="checkbox"/> Apparel Grab Bag (S) | <input type="checkbox"/> Apparel Grab Bag (XL) | <input type="checkbox"/> 100' Contractor Measuring Tape |
| <input type="checkbox"/> Apparel Grab Bag (M) | <input type="checkbox"/> Apparel Grab Bag (XXL) | <input type="checkbox"/> 8GB USB Flash Drive |
| <input type="checkbox"/> Apparel Grab Bag (L) | <input type="checkbox"/> Apparel Grab Bag (XXXL) | <input type="checkbox"/> Laser Level |

Thank You for Your Time and Cooperation!

Comments or questions? Contact Joanne McAlpin at jmcAlpin@nahbrc.com or 1-800-638-8556 ext. 6306.

Returning the Questionnaire

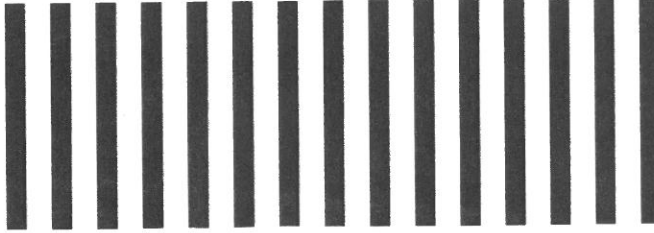
1. If your name or address differs from the address label, please make appropriate corrections (this will be used to send your gift)
2. If you'd like to participate in online surveys and earn more free gifts, please include your email address above
3. Place your completed survey in the postage-paid return envelope (see center of survey) and drop it in the mail

Please print and mail your survey to us, postage paid, by affixing the Business Reply Mail page (next page) to the outside of your envelope.

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