December, 2008

1989 CBECS

Building Characteristics and

Consumption and Expenditures

for All Buildings

Public Use Files

This document contains all the file layouts and format codes for the 1989 Commercial Buildings Energy Consumption Survey (CBECS) building characteristics and consumption and expenditures public use files.

The files themselves can be downloaded in CSV (comma separated values) files from the CBECS web site: http://www.eia.doe.gov/emeu/cbecs. The files contain building-level records for 5,876 cases. The file layouts give, for each variable on a file: the variable name, a description,the position on the file and the corresponding format. To determine what each value of a variable means, find its corresponding format on the alphabetical list of the format codes found following the file layouts (ignoring the first words "VALUE" or "PICTURE" for each).

Layout for File 1: Summary File

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
	Metropolitan statistical area	MSA4	11- 11	$MSA.
	Climate zone	CLIMATE4	13- 13	$CLIMAT.
B1	Square footage	SQFT4	15- 22	MISS8CH.

B2	Square footage	SQFTC4	24- 25	$SQFTC.
	Principal building activity	PBA4	27- 28	$ACTIVTY.
C3A	Main energy used for heating	HT14	30- 30	$XXSUPL.
C3B	Secondary energy used for heating	HT24	32- 32	$XXSUPL.
C3C	Energy used for cooling	COOL4	34- 34	$XXSUPL.
C3D	Energy used for domestic hot water	WATR4	36- 36	$XXSUPL.
C3E	Energy used for commercial cooking	COOK4	38- 38	$XXSUPL.
C3F	Energy used for manufacturing	MANU4	40- 40	$XXSUPL.
C3G	Energy used to generate electricity	GENR4	42- 42	$XXSUPL.
D1	Percent heated in past 12 months	HEATP4	44- 46	HTCLP.
D6	Percent cooled in past 12 months	COOLP4	48- 50	HTCLP.
	Total weekly hours open	WKHRS4	52- 54	
E10	Total weekly hours open (categorized)	WKHRSC4	56- 56	$WKHRSC.
E11	Number of workers	NWKER4	58- 62	MISS5CH.
E12	Number of workers (categorized)	NWKERC4	64- 65	$NWKERC.
F1	Year construction was completed	YRCON4	67- 70	YRCON.
F3	Year construction was completed (catego.)	YRCONC4	72- 73	$YRCONC.
F4	Number of floors	NFLOOR4	75- 77	NFLOOR.
G1A	Percent lit during operating hours	LTOHRP4	79- 81	LTOHRP.
	Adjusted weight	ADJWT4	83- 90	
	Variance stratum	STRATUM4	92- 93	
	Pair indicator	PAIR4	95- 95	
	Electricity supplied	ELSUPL4	97- 97	$XXSUPL.
	Natural gas supplied	NGSUPL4	99- 99	$XXSUPL.
	Fuel oil supplied	FKSUPL4	101- 101	$XXSUPL.
	Steam supplied	STSUPL4	103- 103	$XXSUPL.
	Hot water supplied	HWSUPL4	105- 105	$XXSUPL.
	Annual electricity consumption (mBtu)	ELBTU4	107- 120	COMMA18.
	Annual natural gas consumption (mBtu)	NGBTU4	122- 135	COMMA18.
	Annual fuel oil deliveries (mBtu)	FKBTU4	137- 150	COMMA18.
	Annual steam consumption (mBtu)	STBTU4	152- 165	COMMA18.
	Annual hot water consumption (mBtu)	HWBTU4	167- 180	COMMA18.
	Annual major fuel consumption (mBtu)	MFBTU4	182- 195	COMMA18.

Layout for File 2: Building Activity

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
B6A	Percent vacant	VACP4	17- 19	MISS3CH.
B7A1	First previous/intended activity	VACBA14	21- 22	$ACTIVTY.
B7A2	Second previous/intended activity	VACBA24	24- 25	$ACTIVTY.

B6B	Percent office	OFCP4	27- 29	MISS3CH.
B6C	Percent retail/service	RETLP4	31- 33	MISS3CH.
B6D	Percent assembly	ASSMP4	35- 37	MISS3CH.
B6E	Percent food sales	FDSLSP4	39- 41	MISS3CH.
B6F	Percent public order and safety	PORDP4	43- 45	MISS3CH.
B6G	Percent out-patient health care	HCOUTP4	47- 49	MISS3CH.
B6H	Percent industrial	INDUSP4	51- 53	MISS3CH.
B6I	Percent agricultural	AGRICP4	55- 57	MISS3CH.
B6J	Percent laboratory	LABP4	59- 61	MISS3CH.
B6K	Percent refrigerated warehouse	WRHSRP4	63- 65	MISS3CH.
B6L	Percent nonrefrigerated warehouse	WRHSNP4	67- 69	MISS3CH.
B6M	Percent educational	EDUCP4	71- 73	MISS3CH.
B7M	Classroom seating capacity	EDSEAT4	75- 79	MISS5CH.
B6N	Percent food service	FDSVCP4	81- 83	MISS3CH.
B7N	Food service seating capacity	FDSEAT4	85- 89	MISS5CH.
B6O	Percent in-patient health care	HCINP4	91- 93	MISS3CH.
B7O	Licensed bed capacity (hospitals)	HCBED4	95- 99	MISS5CH.
B6P	Percent skilled residential care	NURSEP4	101- 103	MISS3CH.
B7P	Licensed bed capacity (skilled care)	NRSBED4	105- 109	MISS5CH.
B6Q	Percent lodging	LODGEP4	111- 113	MISS3CH.
B7Q	Number of guest rooms	LODGRM4	115- 119	MISS5CH.
B6R	Percent residential	RESP4	121- 123	MISS3CH.
B6S	Percent indoor parking garage	PARKP4	125- 127	MISS3CH.
B6T	Percent other activity	OTHERP4	129- 131	MISS3CH.
E1	Owned by a government agency	GOVOWN4	133- 133	$YESNO.
E2	Level of government ownership	GOVTYP4	135- 135	$GOVTYP.
E3	Occupant status	OCCTYP4	137- 137	$OCCTYP.
E5	No. of establishments (if more than 1)	NOCCAT4	139- 139	$NOCCAT.
F3	Year construction was completed (catego.)	YRCONC4	141- 142	$YRCONC.
	Adjusted weight	ADJWT4	144- 151	
	Variance stratum	STRATUM4	153- 154	
	Pair indicator	PAIR4	156- 156	
	Electricity supplied	ELSUPL4	158- 158	$XXSUPL.
	Natural gas supplied	NGSUPL4	160- 160	$XXSUPL.
	Fuel oil supplied	FKSUPL4	162- 162	$XXSUPL.
	Steam supplied	STSUPL4	164- 164	$XXSUPL.
	Hot water supplied	HWSUPL4	166- 166	$XXSUPL.

Layout for File 3: Operating Hours and Weather

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.

E9A	FROM Monday thru Friday opening hour	MFBGN4	17- 21	TIME5.
E9A	TO Monday thru Friday closing hour	MFEND4	23- 27	TIME5.
E9B	FROM Saturday opening hour	SATBGN4	29- 33	TIME5.
E9B	TO Saturday closing hour	SATEND4	35- 39	TIME5.
E9C	FROM Sunday opening hour	SUNBGN4	41- 45	TIME5.
E9C	TO Sunday closing hour	SUNEND4	47- 51	TIME5.
	Weekday hours open (Mon. thru Fri.)	MFHRS4	53- 57	
	Saturday hours open	SATHRS4	59- 63	
	Sunday hours open	SUNHRS4	65- 69	
	Total weekly hours open	WKHRS4	71- 73	
E10	Total weekly hours open	WKHRSC4	75- 75	$WKHRSC.
F3	Year construction was completed	YRCONC4	77- 78	$YRCONC.
	Adjusted weight	ADJWT4	80- 87	
	Variance stratum	STRATUM4	89- 90	
	Pair indicator	PAIR4	92- 92	
	Electricity supplied	ELSUPL4	94- 94	$XXSUPL.
	Natural gas supplied	NGSUPL4	96- 96	$XXSUPL.
	Fuel oil supplied	FKSUPL4	98- 98	$XXSUPL.
	Steam supplied	STSUPL4	100- 100	$XXSUPL.
	Hot water supplied	HWSUPL4	102- 102	$XXSUPL.
	Heating Degree-Days (Base 65 F)	HDD654	104- 108	COMMA6.
	Cooling Degree-Days (Base 65 F)	CDD654	110- 114	COMMA6.
	Average 1989 temperature (F)	TEMPAVG4	116- 120	
	Std. dev. of 1989 temperature (F)	TEMPSTD4	122- 126	

Layout for File 4: Building Shell, Equipment, and Multibuilding Facilities

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
D2	Tenants control amount of heat	HTCNTL4	17- 17	$YESNO.
D3	Heating controlled by thermostat	HTTHRM4	19- 19	$YESNO.
D4	Reduction in heat off-hours	RDHTNF4	21- 21	$RDHTCL.
D5A	Boilers used	BOILER4	23- 23	$YESNO.
D5B	Furnaces that heat air used	FURNAC4	25- 25	$YESNO.
D5C	Self-contained units used	SLFCON4	27- 27	$YESNO.
D5D	Packaged heating units used	PKGHT4	29- 29	$YESNO.
D5E	Heat pump used for heating	HTPMPH4	31- 31	$YESNO.
D5F	Air ducts used (heating)	DUCTHT4	33- 33	$YESNO.
D5G	Reheating coils in air ducts used	REHEAT4	35- 35	$YESNO.
D5H	Fan-coil units used (heating)	FNCLHT4	37- 37	$YESNO.
D5I	Steam/hot water baseboards used	BBDRAD4	39- 39	$YESNO.
D5J	Other heating equipment used	OTHTEQ4	41- 41	$YESNO.

D5J1	Type of other heating equipment	OTHTQ14	43- 44 $OTHT.
D7	Tenants control amount of cooling	CLCNTL4	46- 46 $YESNO.
D8	Cooling controlled by thermostat	CLTHRM4	48- 48 $YESNO.
D9	Reduction in cooling off-hours	RDCLNF4	50- 50 $RDHTCL.
D10A	Central chillers used	CHILLR4	52- 52 $YESNO.
D10B	Air conditioners (walls/window) used	ACWNWL4	54- 54 $YESNO.
D10C	Packaged cooling units used	PKGCL4	56- 56 $YESNO.
D10D	Heat pump used for cooling	HTPMPC4	58- 58 $YESNO.
D10E	Air ducts used (cooling)	DUCTCL4	60- 60 $YESNO.
D10F	Fan-coil units (cooling)	FNCLCL4	62- 62 $YESNO.
D10G	Other cooling equipment used	OTCLEQ4	64- 64 $YESNO.
D10G1	Type of other cooling equipment	OTCLQ14	66- 67 $OTCL.
D11	Year main central chiller installed	CHLYRC4	69- 69 $YRC.
D12	Year main packaged A/C system installed	PKCYRC4	71- 71 $YRC.
D13A	Commercial refrigeration units	CFRIG4	73- 73 $YESNO.
D13B	Commercial freezers	CFRZR4	75- 75 $YESNO.
D13C	Residential-type refrigerators	RFRIG4	77- 77 $YESNO.
D13D	Residential-type freezers	RFRZR4	79- 79 $YESNO.
D13E	Ice-making machines	ICE4	81- 81 $YESNO.
D13F	Refrigerated vending machines	SODA4	83- 83 $YESNO.
D13G	Water coolers	WTRCL4	85- 85 $YESNO.
D13H	Other refrigeration equipment	OTREF4	87- 87 $YESNO.
D13H1	Type of other refrigeration equipment	OTREF14	89- 90 $OTREF.
E6	Space vacant for at least 3 months	PORVAC4	92- 92 $YESNO.
E7	Percent vacant for at least 3 months	VAC3MP4	94- 96 MISS3CH.
E8	Months in use out of past 12 months	MONUSE4	98- 99 MISS2CH.
F3	Year construction was completed	YRCONC4	101- 102 $YRCONC.
F5	Wall construction material	WLCNS4	104- 105 $WLCNS.
F6	Roof construction material	RFCNS4	107- 108 $RFCNS.
H5	Computer room with separate A/C	COMPRM4	110- 110 $YESNO.
I1	Non-emergency generating capability	GENER4	112- 112 $YESNO.
I2	Cogeneration system	COGEN4	114- 114 $YESNO.
I5	Cogeneration system connected to grid	GRID4	116- 116 $YESNO.
I6	Qualifying Facility under PURPA	PURPA4	118- 118 $YESNO.
J1	Multibuilding facility or complex	FACIL4	120- 120 $YESNO.
J3	Central physical plant on facility	PLANT4	122- 122 $YESNO.
J4	Central plant in this building	BLDPLT4	124- 124 $YESNO.
	Adjusted weight	ADJWT4	126- 133
	Variance stratum	STRATUM4	135- 136
	Pair indicator	PAIR4	138- 138
	Electricity supplied	ELSUPL4	140- 140 $XXSUPL.
	Natural gas supplied	NGSUPL4	142- 142 $XXSUPL.
	Fuel oil supplied	FKSUPL4	144- 144 $XXSUPL.
	Steam supplied	STSUPL4	146- 146 $XXSUPL.
	Hot water supplied	HWSUPL4	148- 148 $XXSUPL.
	Principal facility activity	FACACT4	150- 151 $FACACT.
	Source for facility activity	FACTSRC4	153- 153 $FACTSRC.

Layout for File 5: End Uses of Major Energy Sources

Question-naire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
C3AA	Electricity used for main heating	ELHT14	17- 17	$XXSUPL.
C3BA	Electricity used for secondary heating	ELHT24	19- 19	$XXSUPL.
C3CA	Electricity used for cooling	ELCOOL4	21- 21	$XXSUPL.
C3DA	Electricity used for water heating	ELWATR4	23- 23	$XXSUPL.
C3EA	Electricity used for commercial cooking	ELCOOK4	25- 25	$XXSUPL.
C3FA	Electricity used for manufacturing	ELMANU4	27- 27	$XXSUPL.
C3AB	Natural gas used for main heating	NGHT14	29- 29	$XXSUPL.
C3BB	Natural gas used for secondary heating	NGHT24	31- 31	$XXSUPL.
C3CB	Natural gas used for cooling	NGCOOL4	33- 33	$XXSUPL.
C3DB	Natural gas used for water heating	NGWATR4	35- 35	$XXSUPL.
C3EB	Natural gas used for commercial cooking	NGCOOK4	37- 37	$XXSUPL.
C3FB	Natural gas used for manufacturing	NGMANU4	39- 39	$XXSUPL.
C3GB	Natural gas used to generate electricity	NGGENR4	41- 41	$XXSUPL.
C3AC	Fuel oil used for main heating	FKHT14	43- 43	$XXSUPL.
C3BC	Fuel oil used for secondary heating	FKHT24	45- 45	$XXSUPL.
C3CC	Fuel oil used for cooling	FKCOOL4	47- 47	$XXSUPL.
C3DC	Fuel oil used for water heating	FKWATR4	49- 49	$XXSUPL.
C3EC	Fuel oil used for commercial cooking	FKCOOK4	51- 51	$XXSUPL.
C3FC	Fuel oil used for manufacturing	FKMANU4	53- 53	$XXSUPL.
C3GC	Fuel oil used to generate electricity	FKGENR4	55- 55	$XXSUPL.
C3AE	District steam used for main heating	STHT14	57- 57	$XXSUPL.
C3BE	District steam for secondary heating	STHT24	59- 59	$XXSUPL.
C3CE	District steam used for cooling	STCOOL4	61- 61	$XXSUPL.
C3DE	District steam used for water heating	STWATR4	63- 63	$XXSUPL.
C3EE	District steam for commercial cooking	STCOOK4	65- 65	$XXSUPL.
C3FE	District steam used for manufacturing	STMANU4	67- 67	$XXSUPL.
C3AF	District hot water for main heating	HWHT14	69- 69	$XXSUPL.
C3BF	District hot water for secondary heat	HWHT24	71- 71	$XXSUPL.
C3CF	District hot water used for cooling	HWCOOL4	73- 73	$XXSUPL.
C3DF	District hot water for water heating	HWWATR4	75- 75	$XXSUPL.
C3EF	District hot water commercial cooking	HWCOOK4	77- 77	$XXSUPL.
C3FF	District hot water for manufacturing	HWMANU4	79- 79	$XXSUPL.
C3CG	District chilled water used for cooling	CWCOOL4	81- 81	$XXSUPL.
F3	Year construction was completed	YRCONC4	83- 84	$YRCONC.
P4	Able to switch main heating fuel	SWITCH4	86- 86	$YESNO.
P5A	First alternate main heating fuel	SWTCH14	88- 89	$SWTCH.
P5B	Second alternate main heating fuel	SWTCH24	91- 92	$SWTCH.
	Adjusted weight	ADJWT4	94- 101	
	Variance stratum	STRATUM4	103- 104	
	Pair indicator	PAIR4	106- 106	
	Electricity supplied	ELSUPL4	108- 108	$XXSUPL.
	Natural gas supplied	NGSUPL4	110- 110	$XXSUPL.
	Fuel oil supplied	FKSUPL4	112- 112	$XXSUPL.

	Steam supplied	STSUPL4	114- 114	$XXSUPL.
	Hot water supplied	HWSUPL4	116- 116	$XXSUPL.

Layout for File 6: End Uses of Minor Energy Sources

Question-naire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
C1D	Propane used in past 12 months	PRUSED4	17- 17	$YESNO.
C3AD	Propane used for main heating	PRHT14	19- 19	$YESNO.
C3BD	Propane used for secondary heating	PRHT24	21- 21	$YESNO.
C3CD	Propane used for cooling	PRCOOL4	23- 23	$YESNO.
C3DD	Propane used for water heating	PRWATR4	25- 25	$YESNO.
C3ED	Propane used for commercial cooking	PRCOOK4	27- 27	$YESNO.
C3FD	Propane used for manufacturing	PRMANU4	29- 29	$YESNO.
C3GD	Propane used to generate electricity	PRGENR4	31- 31	$YESNO.
C1H	Wood used in past 12 months	WOUSED4	33- 33	$YESNO.
C3AH	Wood used for main heating	WOHT14	35- 35	$YESNO.
C3BH	Wood used for secondary heating	WOHT24	37- 37	$YESNO.
C3DH	Wood used for water heating	WOWATR4	39- 39	$YESNO.
C3EH	Wood used for commercial cooking	WOCOOK4	41- 41	$YESNO.
C3FH	Wood used for manufacturing	WOMANU4	43- 43	$YESNO.
C3GH	Wood used to generate electricity	WOGENR4	45- 45	$YESNO.
C1I	Coal used in past 12 months	COUSED4	47- 47	$YESNO.
C3AI	Coal used for main heating	COHT14	49- 49	$YESNO.
C3BI	Coal used for secondary heating	COHT24	51- 51	$YESNO.
C3DI	Coal used for water heating	COWATR4	53- 53	$YESNO.
C3EI	Coal used for commercial cooking	COCOOK4	55- 55	$YESNO.
C3FI	Coal used for manufacturing	COMANU4	57- 57	$YESNO.
C3GI	Coal used to generate electricity	COGENR4	59- 59	$YESNO.
C1J	Active solar used in past 12 months	SOUSED4	61- 61	$YESNO.
C3AJ	Active solar used for main heating	SOHT14	63- 63	$YESNO.
C3BJ	Active solar used for secondary heating	SOHT24	65- 65	$YESNO.
C3DJ	Active solar used for water heating	SOWATR4	67- 67	$YESNO.
C3EJ	Active solar for commercial cooking	SOCOOK4	69- 69	$YESNO.
C3FJ	Active solar used for manufacturing	SOMANU4	71- 71	$YESNO.
C3GJ	Active solar to generate electricity	SOGENR4	73- 73	$YESNO.
C1K	Other energy source in past 12 months	OTUSED4	75- 75	$YESNO.
C3AK	Other energy used for main heating	OTHT14	77- 77	$YESNO.
C3BK	Other energy used for secondary heating	OTHT24	79- 79	$YESNO.
C3CK	Other energy used for cooling	OTCOOL4	81- 81	$YESNO.
C3DK	Other energy used for water heating	OTWATR4	83- 83	$YESNO.
C3EK	Other energy used for commercial cooking	OTCOOK4	85- 85	$YESNO.

C3FK	Other energy used for manufacturing	OTMANU4	87- 87	$YESNO.
C3GK	Other energy to generate electricity	OTGENR4	89- 89	$YESNO.
F3	Year construction was completed	YRCONC4	91- 92	$YRCONC.
	Adjusted weight	ADJWT4	94- 101	
	Variance stratum	STRATUM4	103- 104	
	Pair indicator	PAIR4	106- 106	
	Electricity supplied	ELSUPL4	108- 108	$XXSUPL.
	Natural gas supplied	NGSUPL4	110- 110	$XXSUPL.
	Fuel oil supplied	FKSUPL4	112- 112	$XXSUPL.
	Steam supplied	STSUPL4	114- 114	$XXSUPL.
	Hot water supplied	HWSUPL4	116- 116	$XXSUPL.

Layout for File 7: Lighting and Conservation Features

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
G1A	Percent lit during operating hours	LTOHRP4	20- 22	LTOHRP.
G1B	Percent lit during off-hours	LTNHRP4	24- 26	LTNHRP.
G2AA	Incandescent bulbs used	BULB4	28- 28	$YESNO.
G2BA	Percent lit by incandescent bulbs	BULBP4	30- 32	LTOHRP.
G2AB	Fluorescent lights used	FLUOR4	34- 34	$YESNO.
G2BB	Percent lit by fluorescent lights	FLUORP4	36- 38	LTOHRP.
G2AC	High-intensity discharge lights used	HID4	40- 40	$YESNO.
G2BC	Percent lit by HID lights	HIDP4	42- 44	LTOHRP.
G2AD	Any other lighting equipment used	OTLT4	46- 46	$YESNO.
G2BD	Percent lit by other lighting equipment	OTLTP4	48- 50	LTOHRP.
H1AA	Roof or ceiling insulation	RIN4	52- 52	$YESNO.
H1BA	Roof/ceiling insulation installed/added	RININS4	54- 54	$INSADD.
H1CA	When roof or ceiling insulation added	RINDT4	56- 56	$YRADD.
H1AB	Exterior wall insulation	WIN4	58- 58	$YESNO.
H1BB	Wall insulation installed or added	WININS4	60- 60	$INSADD.
H1CB	When wall insulation added	WINDT4	62- 62	$YRADD.
H1AC	Storm windows or doors	STW4	64- 64	$YESNO.
H1BC	Storm windows/doors installed or added	STWINS4	66- 66	$INSADD.
H1CC	When storm windows or doors added	STWDT4	68- 68	$YRADD.
H1AD	Tinted or reflective glass	TRG4	70- 70	$YESNO.
H1BD	Tinted/reflective glass installed/added	TRGINS4	72- 72	$INSADD.
H1CD	When tinted or reflective glass added	TRGDT4	74- 74	$YRADD.
H1AE	Shadings or awnings	AWN4	76- 76	$YESNO.
H1BE	Shadings or awnings installed or added	AWNINS4	78- 78	$INSADD.
H1CE	When shadings or awnings added	AWNDT4	80- 80	$YRADD.

H1AF	Weather stripping or caulking	STR4	82- 82	$YESNO.
H1BF	Weatherstrip/caulk installed or added	STRINS4	84- 84	$INSADD.
H1CF	When weatherstripping or caulking added	STRDT4	86- 86	$YRADD.
H1AG	High-efficiency ballasts	HEB4	88- 88	$YESNO.
H1BG	High-efficiency ballasts installed/added	HEBINS4	90- 90	$INSADD.
H1CG	When high-efficiency ballasts added	HEBDT4	92- 92	$YRADD.
H2	Energy management and control system	EMCS4	94- 94	$YESNO.
H3A	EMCS controls lighting	EMCSLT4	96- 96	$YESNO.
H3B	EMCS controls heating and cooling	EMCSHC4	98- 98	$YESNO.
H3C	EMCS controls anything else	EMCSOT4	100- 100	$YESNO.
H4	Regular preventive maintenance program	MAINT4	102- 102	$YESNO.
H6	Participated in utility conservation pgm	UTCNS4	104- 104	$YESNO.
	Adjusted weight	ADJWT4	106- 113	
	Variance stratum	STRATUM4	115- 116	
	Pair indicator	PAIR4	118- 118	
	Electricity supplied	ELSUPL4	120- 120	$XXSUPL.
	Natural gas supplied	NGSUPL4	122- 122	$XXSUPL.
	Fuel oil supplied	FKSUPL4	124- 124	$XXSUPL.
	Steam supplied	STSUPL4	126- 126	$XXSUPL.
	Hot water supplied	HWSUPL4	128- 128	$XXSUPL.

Layout for File 8: Electricity

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
P1A	Seasonal pricing for electricity	ELSEAS4	20- 20	$YESNO.
P1B	Time-of-day pricing for electricity	ELTODP4	22- 22	$YESNO.
P1C	Time-of-day lock-out/limit for electric	ELTODL4	24- 24	$YESNO.
P1D	Interruptible/curtailable electricity	ELINTR4	26- 26	$YESNO.
P1E	Metered peak demand for electricity	ELDEM4	28- 28	$YESNO.
	Adjusted weight	ADJWT4	30- 37	
	Variance stratum	STRATUM4	39- 40	
	Pair indicator	PAIR4	42- 42	
	Electricity supplied	ELSUPL4	44- 44	$XXSUPL.
	Natural gas supplied	NGSUPL4	46- 46	$XXSUPL.
	Fuel oil supplied	FKSUPL4	48- 48	$XXSUPL.
	Steam supplied	STSUPL4	50- 50	$XXSUPL.
	Hot water supplied	HWSUPL4	52- 52	$XXSUPL.
	Annual electricity consumption (kWh)	ELCNS4	54- 65	COMMA15.
	Annual electricity consumption (mBtu)	ELBTU4	67- 80	COMMA18.
	Annual electricity expenditures	ELEXP4	82- 90	COMMA11.

	Electricity demand-metering	DEMMTR4	92- 92	$YESNO.
	Season of peak electric load	SEASON4	94- 94	$SEASON.
	Peak annual electric load	PEAK4	96- 101	
	Annual electric load factor	LOADFAC4	103- 107	
	Peak summer electric load	PEAKS4	109- 114	
	Average summer peak electric load	AVGPKS4	116- 121	
	Average summer electric load factor	AVGLFS4	123- 127	
	Peak winter electric load	PEAKW4	129- 134	
	Average winter peak electric load	AVGPKW4	136- 141	
	Average winter electric load factor	AVGLFW4	143- 147	
K-2	How electricity is billed	ELBLTYP4	149- 149	$BILTYP.
K-5	Electricty bill coverage	ELCOVER4	151- 151	$COVER.
	Electricity account classification	ELACCL4	153- 154	$BLDGCL.
	Electricity aggregated/disaggregated	ELDSAG4	156- 156	$DISAGG.
	Electricity supplier form	ELFORM4	158- 159	$FORM.
	Days of electricity shifted from CY89	ELSHFT4	161- 164	
	Electricity consumption imputation	ZELCNS4	166- 166	$ZCNSEXP.
	Electricity expenditures imputation	ZELEXP4	168- 168	$ZCNSEXP.
	Imputed demand-metering	ZDEMMTR4	170- 170	$ZVAR.
	Imputed season of peak load	ZSEASON4	172- 172	$ZVAR.
	Imputed peak load (and load factor)	ZPEAK4	174- 174	$ZVAR.
	Imputed electricity acct. classification	ZELACCL4	176- 176	$ZVAR.

Layout for File 9: Natural Gas

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
P2	Interruptible natural gas service	NGINTR4	20- 20	$YESNO.
	Adjusted weight	ADJWT4	22- 29	
	Variance stratum	STRATUM4	31- 32	
	Pair indicator	PAIR4	34- 34	
	Electricity supplied	ELSUPL4	36- 36	$XXSUPL.
	Natural gas supplied	NGSUPL4	38- 38	$XXSUPL.
	Fuel oil supplied	FKSUPL4	40- 40	$XXSUPL.
	Steam supplied	STSUPL4	42- 42	$XXSUPL.
	Hot water supplied	HWSUPL4	44- 44	$XXSUPL.
	Annual natural gas consumption (ccf)	NGCNS4	46- 57	COMMA15.
	Annual natural gas consumption (mBtu)	NGBTU4	59- 72	COMMA18.
	Transportation gas customer	TGCUST4	74- 74	$YESNO.
	Annual transportation gas consmp. (ccf)	TGCNS4	76- 87	COMMA15.
	Annual transportation gas consmp. (mBtu)	TGBTU4	89- 102	COMMA18.

	Annual natural gas expenditures	NGEXP4	104- 112	COMMA11.
L-2	How natural gas is billed	NGBLTYP4	114- 114	$BILTYP.
L-5	Natural gas bill coverage	NGCOVER4	116- 116	$COVER.
	Natural gas account classification	NGACCL4	118- 119	$BLDGCL.
	Natural gas aggregated/disaggregated	NGDSAG4	121- 121	$DISAGG.
	Natural gas supplier form	NGFORM4	123- 124	$FORM.
	Days of natural gas shifted from CY89	NGSHFT4	126- 129	
	Natural gas consumption imputation	ZNGCNS4	131- 131	$ZCNSEXP.
	Imputed transportation gas customer	ZTGCUST4	133- 133	$ZVAR.
	Transportation gas consmp. imputation	ZTGCNS4	135- 135	$ZCNSEXP.
	Natural gas expenditures imputation	ZNGEXP4	137- 137	$ZCNSEXP.
	Imputed natural gas acct. classification	ZNGACCL4	139- 139	$ZVAR.

Layout for File 10: Fuel Oil

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
FILE10				
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
P3	Total fuel oil tank capacity (gallons)	TOTCAP4	20- 25	MISS6CH.
	Imputed total tank capacity (gallons)	ZTOTCAP4	27- 27	$ZVAR.
	Adjusted weight	ADJWT4	29- 36	
	Variance stratum	STRATUM4	38- 39	
	Pair indicator	PAIR4	41- 41	
	Electricity supplied	ELSUPL4	43- 43	$XXSUPL.
	Natural gas supplied	NGSUPL4	45- 45	$XXSUPL.
	Fuel oil supplied	FKSUPL4	47- 47	$XXSUPL.
	Steam supplied	STSUPL4	49- 49	$XXSUPL.
	Hot water supplied	HWSUPL4	51- 51	$XXSUPL.
	Annual fuel oil deliveries (gals.)	FKCNS4	53- 64	COMMA15.
	Annual fuel oil deliveries (mBtu)	FKBTU4	66- 79	COMMA18.
	Annual fuel oil expenditures	FKEXP4	81- 89	COMMA11.
M-2	How fuel oil is billed	FKBLTYP4	91- 91	$BILTYP.
M-5	Fuel oil bill coverage	FKCOVER4	93- 93	$COVER.
	Fuel oil aggregated/disaggregated	FKDSAG4	95- 95	$DISAGG.
	Distillate fuel oil supplied	DISTIL4	97- 97	$YESNO.
	Residual fuel oil supplied	RESID4	99- 99	$YESNO.
	Kerosene supplied	KERO4	101- 101	$YESNO.
	Other fuel oil supplied	OTFK4	103- 103	$YESNO.
	Includes some fuel oil data from 1990	FKTRNS4	105- 105	$YESNO.
	Fuel oil deliveries imputation	ZFKCNS4	107- 107	$ZCNSEXP.

	Imputed distillate fuel oil supplied	ZDISTIL4	109- 109	$ZVAR.
	Imputed residual fuel oil supplied	ZRESID4	111- 111	$ZVAR.
	Imputed kerosene supplied	ZKERO4	113- 113	$ZVAR.
	Imputed other fuel oil supplied	ZOTFK4	115- 115	$ZVAR.
	Fuel oil expenditures imputation	ZFKEXP4	117- 117	$ZCNSEXP.
	Imputed fuel oil account classification	ZFKACCL4	119- 119	$ZVAR.

Layout for File 11: District Steam and Hot Water

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
	Adjusted weight	ADJWT4	20- 27	
	Variance stratum	STRATUM4	29- 30	
	Pair indicator	PAIR4	32- 32	
	Electricity supplied	ELSUPL4	34- 34	$XXSUPL.
	Natural gas supplied	NGSUPL4	36- 36	$XXSUPL.
	Fuel oil supplied	FKSUPL4	38- 38	$XXSUPL.
	Steam supplied	STSUPL4	40- 40	$XXSUPL.
	Hot water supplied	HWSUPL4	42- 42	$XXSUPL.
	Chilled water supplied	CWSUPL4	44- 44	$XXSUPL.
	Annual steam consumption (mlbs.)	STCNS4	46- 57	COMMA15.
	Annual steam consumption (mBtu)	STBTU4	59- 72	COMMA18.
	Annual steam expenditures	STEXP4	74- 82	COMMA11.
N-2	How district steam is billed	STBLTYP4	84- 84	$BILTYP.
N-5	District steam bill coverage	STCOVER4	86- 86	$COVER.
	Steam aggregated/disaggregated	STDSAG4	88- 88	$DISAGG.
	Billed for district steam	STBILD4	90- 90	$YESNO.
	Heat/cool plant in bldg. using steam	STPLNT4	92- 92	$YESNO.
	Days of steam shifted from CY89	STSHFT4	94- 97	
	Annual hot water consumption (mlbs.)	HWCNS4	99- 110	COMMA15.
	Annual hot water consumption (mBtu)	HWBTU4	112- 125	COMMA18.
	Annual hot water expenditures	HWEXP4	127- 135	COMMA11.
N-2	How district hot water is billed	HWBLTYP4	137- 137	$BILTYP.
N-5	District hot water bill coverage	HWCOVER4	139- 139	$COVER.
	Hot water aggregated/disaggregated	HWDSAG4	141- 141	$DISAGG.
	Billed for district hot water	HWBILD4	143- 143	$YESNO.
	Heat/cool plant in bldg. using hot water	HWPLNT4	145- 145	$YESNO.
	Days of hot water shifted from CY89	HWSHFT4	147- 150	
	Steam consumption imputation	ZSTCNS4	152- 152	$ZCNSEXP.
	Steam expenditures imputation	ZSTEXP4	154- 154	$ZCNSEXP.
	Hot water consumption imputation	ZHWCNS4	156- 156	$ZCNSEXP.

	Hot water expenditures imputation	ZHWEXP4	158- 158	$ZCNSEXP.

Layout for File 12: District Chilled Water

Question-naire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
	Adjusted weight	ADJWT4	20- 27	
	Variance stratum	STRATUM4	29- 30	
	Pair indicator	PAIR4	32- 32	
	Electricity supplied	ELSUPL4	34- 34	$XXSUPL.
	Natural gas supplied	NGSUPL4	36- 36	$XXSUPL.
	Fuel oil supplied	FKSUPL4	38- 38	$XXSUPL.
	Steam supplied	STSUPL4	40- 40	$XXSUPL.
	Hot water supplied	HWSUPL4	42- 42	$XXSUPL.
	Annual chilled water consmp. (ton-hours)	CWCNS4	44- 55	COMMA15.
	Annual chilled water expenditures	CWEXP4	57- 65	COMMA11.
N-2	How district chilled water is billed	CWBLTYP4	67- 67	$BILTYP.
N-5	District chilled water bill coverage	CWCOVER4	69- 69	$COVER.
	Chilled water aggregated/disaggregated	CWDSAG4	71- 71	$DISAGG.
	Billed for district chilled water	CWBILD4	73- 73	$YESNO.
	Heat/cool plant, chilled water bldg.	CWPLNT4	75- 75	$YESNO.
	Days of chilled water shifted from CY89	CWSHFT4	77- 80	
	Annual major fuel consumption (mBtu)	MFBTU4	82- 95	COMMA18.
	Annual major fuel expenditures	MFEXP4	97- 105	COMMA11.
	Chilled water consumption imputation	ZCWCNS4	107- 107	$ZCNSEXP.
	Chilled water expenditures imputation	ZCWEXP4	109- 109	$ZCNSEXP.
	<50% major fuel consumption imputed	ZMFBTU4	111- 111	$YESNO.
	<50% major fuel expenditures imputed	ZMFEXP4	113- 113	$YESNO.

Layout for File 13: Imputation Flags for Summary Data, Building Activity, Operating Hours, Shell, and Equipment

Question-naire item	Variable Description	Variable Name	Variable Position	Variable Format

CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
	Imputed square footage	ZSQFT4	20- 20	$ZVAR.
	Imputed square footage category	ZSQFTC4	22- 22	$ZVAR.
	Imputed 1st previous/intended use	ZVACBA14	24- 24	$ZVAR.
	Imputed 2nd previous/intended use	ZVACBA24	26- 26	$ZVAR.
	Imputed classroom seating	ZEDSEAT4	28- 28	$ZVAR.
	Imputed food service seating	ZFDSEAT4	30- 30	$ZVAR.
	Imputed licensed beds (hospitals)	ZHCBED4	32- 32	$ZVAR.
	Imputed licensed beds (nursing)	ZNRSBED4	34- 34	$ZVAR.
	Imputed number of guest rooms	ZLODGRM4	36- 36	$ZVAR.
	Imputed percent heated	ZHEATP4	38- 38	$ZVAR.
	Imputed tenants control heating	ZHTCNTL4	40- 40	$ZVAR.
	Imputed thermostat control of heating	ZHTTHRM4	42- 42	$ZVAR.
	Imputed reduced heating off-hours	ZRDHTNF4	44- 44	$ZVAR.
	Imputed boiler	ZBOILER4	46- 46	$ZVAR.
	Imputed furnace	ZFURNAC4	48- 48	$ZVAR.
	Imputed self-contained heating units	ZSLFCON4	50- 50	$ZVAR.
	Imputed packaged heating units	ZPKGHT4	52- 52	$ZVAR.
	Imputed heat pump for heating	ZHTPMPH4	54- 54	$ZVAR.
	Imputed air ducts (heating)	ZDUCTHT4	56- 56	$ZVAR.
	Imputed reheating coils	ZREHEAT4	58- 58	$ZVAR.
	Imputed fan-coil units (heating)	ZFNCLHT4	60- 60	$ZVAR.
	Imputed steam/hot water bboards/rads	ZBBDRAD4	62- 62	$ZVAR.
	Imputed other heating equipment	ZOTHTEQ4	64- 64	$ZVAR.
	Imputed first other heating equipment	ZOTHTQ14	66- 66	$ZVAR.
	Imputed percent cooled	ZCOOLP4	68- 68	$ZVAR.
	Imputed tenants control cooling	ZCLCNTL4	70- 70	$ZVAR.
	Imputed thermostat control of cooling	ZCLTHRM4	72- 72	$ZVAR.
	Imputed reduced cooling off-hours	ZRDCLNF4	74- 74	$ZVAR.
	Imputed central chiller	ZCHILLR4	76- 76	$ZVAR.
	Imputed individual air conditioners	ZACWNWL4	78- 78	$ZVAR.
	Imputed packaged cooling units	ZPKGCL4	80- 80	$ZVAR.
	Imputed heat pump for cooling	ZHTPMPC4	82- 82	$ZVAR.
	Imputed air ducts (cooling)	ZDUCTCL4	84- 84	$ZVAR.
	Imputed fan-coil units (cooling)	ZFNCLCL4	86- 86	$ZVAR.
	Imputed other cooling equipment	ZOTCLEQ4	88- 88	$ZVAR.
	Imputed first other cooling equipment	ZOTCLQ14	90- 90	$ZVAR.
	Imputed year main chiller installed	ZCHLYRC4	92- 92	$ZVAR.
	Imputed year main packaged A/C installed	ZPKCYRC4	94- 94	$ZVAR.
	Imputed commercial refrigeration unit	ZCFRIG4	96- 96	$ZVAR.
	Imputed commercial freezer	ZCFRZR4	98- 98	$ZVAR.
	Imputed residential-type refrigerator	ZRFRIG4	100- 100	$ZVAR.
	Imputed residential-type freezer	ZRFRZR4	102- 102	$ZVAR.
	Imputed ice-making machine	ZICE4	104- 104	$ZVAR.
	Imputed refrigerated vending machine	ZSODA4	106- 106	$ZVAR.
	Imputed water cooler	ZWTRCL4	108- 108	$ZVAR.
	Imputed other refrigeration equipment	ZOTREF4	110- 110	$ZVAR.
	Imputed first other refrig. equipment	ZOTREF14	112- 112	$ZVAR.

	Imputed government ownership	ZGOVOWN4	114- 114	$ZVAR.
	Imputed type of government ownership	ZGOVTYP4	116- 116	$ZVAR.
	Imputed occupancy status	ZOCCTYP4	118- 118	$ZVAR.
	Imputed number of occupants	ZNOCC4	120- 120	$ZVAR.
	Imputed number of occupants category	ZNOCCAT4	122- 122	$ZVAR.
	Imputed space vacant 3 or more months	ZPORVAC4	124- 124	$ZVAR.
	Imputed percent vacant 3 or more months	ZVAC3MP4	126- 126	$ZVAR.
	Imputed months in use out of past 12	ZMONUSE4	128- 128	$ZVAR.
	Imputed Monday-Friday opening hour	ZMFBGN4	130- 130	$ZVAR.
	Imputed Monday-Friday closing hour	ZMFEND4	132- 132	$ZVAR.
	Imputed Saturday opening hour	ZSATBGN4	134- 134	$ZVAR.
	Imputed Saturday closing hour	ZSATEND4	136- 136	$ZVAR.
	Imputed Sunday opening hour	ZSUNBGN4	138- 138	$ZVAR.
	Imputed Sunday closing hour	ZSUNEND4	140- 140	$ZVAR.
	Imputed Monday-Friday operating hours	ZMFHRS4	142- 142	$ZVAR.
	Imputed Saturday operating hours	ZSATHRS4	144- 144	$ZVAR.
	Imputed Sunday operating hours	ZSUNHRS4	146- 146	$ZVAR.
	Imputed weekly operating hours	ZWKHRS4	148- 148	$ZVAR.
	Imputed weekly operating hours category	ZWKHRSC4	150- 150	$ZVAR.
	Imputed number of workers category	ZNWKERC4	152- 152	$ZVAR.
	Imputed year constructed	ZYRCON4	154- 154	$ZVAR.
	Imputed year constructed category	ZYRCONC4	156- 156	$ZVAR.
	Imputed number of floors	ZNFLOOR4	158- 158	$ZVAR.
	Imputed wall construction material	ZWLCNS4	160- 160	$ZVAR.
	Imputed roof construction material	ZRFCNS4	162- 162	$ZVAR.
	Imputed computer room	ZCOMPRM4	164- 164	$ZVAR.
	Adjusted weight	ADJWT4	166- 173	
	Variance stratum	STRATUM4	175- 176	
	Pair indicator	PAIR4	178- 178	
	Electricity supplied	ELSUPL4	180- 180	$XXSUPL.
	Natural gas supplied	NGSUPL4	182- 182	$XXSUPL.
	Fuel oil supplied	FKSUPL4	184- 184	$XXSUPL.
	Steam supplied	STSUPL4	186- 186	$XXSUPL.
	Hot water supplied	HWSUPL4	188- 188	$XXSUPL.

Layout for File 14: Imputation Flags for End Uses

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
	Imputed main heating	ZHT14	20- 20	$ZVAR.
	Imputed secondary heating	ZHT24	22- 22	$ZVAR.

Imputed cooling ZCOOL4 24- 24 $ZVAR.
Imputed water heating ZWATR4 26- 26 $ZVAR.
Imputed commercial cooking ZCOOK4 28- 28 $ZVAR.
Imputed manufacturing ZMANU4 30- 30 $ZVAR.
Imputed electricity generation ZGENR4 32- 32 $ZVAR.
Imputed electricity for main heating ZELHT14 34- 34 $ZVAR.
Imputed electricity for 2ndary heating ZELHT24 36- 36 $ZVAR.
Imputed electricity for cooling ZELCOOL4 38- 38 $ZVAR.
Imputed electricity for water heating ZELWATR4 40- 40 $ZVAR.
Imputed electricity for cooking ZELCOOK4 42- 42 $ZVAR.
Imputed electricity for manufacturing ZELMANU4 44- 44 $ZVAR.
Imputed natural gas for main heating ZNGHT14 46- 46 $ZVAR.
Imputed natural gas for 2ndary heating ZNGHT24 48- 48 $ZVAR.
Imputed natural gas for cooling ZNGCOOL4 50- 50 $ZVAR.
Imputed natural gas for water heating ZNGWATR4 52- 52 $ZVAR.
Imputed natural gas for cooking ZNGCOOK4 54- 54 $ZVAR.
Imputed natural gas for manufacturing ZNGMANU4 56- 56 $ZVAR.
Imputed natural gas to generate electric ZNGGENR4 58- 58 $ZVAR.
Imputed fuel oil for main heating ZFKHT14 60- 60 $ZVAR.
Imputed fuel oil for 2ndary heating ZFKHT24 62- 62 $ZVAR.
Imputed fuel oil for cooling ZFKCOOL4 64- 64 $ZVAR.
Imputed fuel oil for water heating ZFKWATR4 66- 66 $ZVAR.
Imputed fuel oil for cooking ZFKCOOK4 68- 68 $ZVAR.
Imputed fuel oil for manufacturing ZFKMANU4 70- 70 $ZVAR.
Imputed fuel oil to generate electricity ZFKGENR4 72- 72 $ZVAR.
Imputed propane for main heating ZPRHT14 74- 74 $ZVAR.
Imputed propane for 2ndary heating ZPRHT24 76- 76 $ZVAR.
Imputed propane for cooling ZPRCOOL4 78- 78 $ZVAR.
Imputed propane for water heating ZPRWATR4 80- 80 $ZVAR.
Imputed propane for cooking ZPRCOOK4 82- 82 $ZVAR.
Imputed propane for manufacturing ZPRMANU4 84- 84 $ZVAR.
Imputed propane to generate electricity ZPRGENR4 86- 86 $ZVAR.
Imputed steam for main heating ZSTHT14 88- 88 $ZVAR.
Imputed steam for 2ndary heating ZSTHT24 90- 90 $ZVAR.
Imputed steam for cooling ZSTCOOL4 92- 92 $ZVAR.
Imputed steam for water heating ZSTWATR4 94- 94 $ZVAR.
Imputed steam for cooking ZSTCOOK4 96- 96 $ZVAR.
Imputed steam for manufacturing ZSTMANU4 98- 98 $ZVAR.
Imputed hot water for main heating ZHWHT14 100- 100 $ZVAR.
Imputed hot water 2ndary heating ZHWHT24 102- 102 $ZVAR.
Imputed hot water for cooling ZHWCOOL4 104- 104 $ZVAR.
Imputed hot water for heating water ZHWWATR4 106- 106 $ZVAR.
Imputed hot water for cooking ZHWCOOK4 108- 108 $ZVAR.
Imputed hot water for manufacturing ZHWMANU4 110- 110 $ZVAR.
Imputed chilled water for cooling ZCWCOOL4 112- 112 $ZVAR.
Imputed wood for main heating ZWOHT14 114- 114 $ZVAR.
Imputed wood for 2ndary heating ZWOHT24 116- 116 $ZVAR.
Imputed wood for water heating ZWOWATR4 118- 118 $ZVAR.
Imputed wood for cooking ZWOCOOK4 120- 120 $ZVAR.
Imputed wood for manufacturing ZWOMANU4 122- 122 $ZVAR.
Imputed wood to generate electricity ZWOGENR4 124- 124 $ZVAR.
Imputed coal for main heating ZCOHT14 126- 126 $ZVAR.
Imputed coal for 2ndary heating ZCOHT24 128- 128 $ZVAR.
Imputed coal for water heating ZCOWATR4 130- 130 $ZVAR.

	Imputed coal for cooking	ZCOCOOK4	132- 132	$ZVAR.
	Imputed coal for manufacturing	ZCOMANU4	134- 134	$ZVAR.
	Imputed coal to generate electricity	ZCOGENR4	136- 136	$ZVAR.
	Imputed solar for main heating	ZSOHT14	138- 138	$ZVAR.
	Imputed solar for 2ndary heating	ZSOHT24	140- 140	$ZVAR.
	Imputed solar for water heating	ZSOWATR4	142- 142	$ZVAR.
	Imputed solar for cooking	ZSOCOOK4	144- 144	$ZVAR.
	Imputed solar for manufacturing	ZSOMANU4	146- 146	$ZVAR.
	Imputed solar to generate electric	ZSOGENR4	148- 148	$ZVAR.
	Imputed other energy for main heating	ZOTHT14	150- 150	$ZVAR.
	Imputed other energy for 2ndary heating	ZOTHT24	152- 152	$ZVAR.
	Imputed other energy for cooling	ZOTCOOL4	154- 154	$ZVAR.
	Imputed other energy for water heating	ZOTWATR4	156- 156	$ZVAR.
	Imputed other energy for cooking	ZOTCOOK4	158- 158	$ZVAR.
	Imputed other energy for manufacturing	ZOTMANU4	160- 160	$ZVAR.
	Imputed other energy to generate elec	ZOTGENR4	162- 162	$ZVAR.
	Imputed ability to switch main heating	ZSWITCH4	164- 164	$ZVAR.
	Imputed first alternate main heating	ZSWTCH14	166- 166	$ZVAR.
	Imputed second alternate main heating	ZSWTCH24	168- 168	$ZVAR.
	Adjusted weight	ADJWT4	170- 177	
	Variance stratum	STRATUM4	179- 180	
	Pair indicator	PAIR4	182- 182	
	Electricity supplied	ELSUPL4	184- 184	$XXSUPL.
	Natural gas supplied	NGSUPL4	186- 186	$XXSUPL.
	Fuel oil supplied	FKSUPL4	188- 188	$XXSUPL.
	Steam supplied	STSUPL4	190- 190	$XXSUPL.
	Hot water supplied	HWSUPL4	192- 192	$XXSUPL.

Layout for File 15: Imputation Flags for Lighting and Conservation Features

Questionnaire item	Variable Description	Variable Name	Variable Position	Variable Format
CASEID	Building identifier	BLDGID4	1- 5	
	Census region	REGION4	7- 7	$REGION.
	Census division	CENDIV4	9- 9	$CENDIV.
B2	Square footage	SQFTC4	11- 12	$SQFTC.
	Principal building activity	PBA4	14- 15	$ACTIVTY.
F3	Year construction was completed	YRCONC4	17- 18	$YRCONC.
	Imputed percent lit	ZLTOHRP4	20- 20	$ZVAR.
	Imputed percent lit off-hours	ZLTNHRP4	22- 22	$ZVAR.
	Imputed incandescent bulbs	ZBULB4	24- 24	$ZVAR.
	Imputed percent lit by incand. bulbs	ZBULBP4	26- 26	$ZVAR.
	Imputed fluorescent lights	ZFLUOR4	28- 28	$ZVAR.
	Imputed percent lit by fluorescent lites	ZFLUORP4	30- 30	$ZVAR.
	Imputed high-intensity discharge lights	ZHID4	32- 32	$ZVAR.
	Imputed percent lit by HID lights	ZHIDP4	34- 34	$ZVAR.
	Imputed any other lighting equipment	ZOTLT4	36- 36	$ZVAR.

Imputed percent other lighting equipment ZOTLTP4 38- 38 $ZVAR.
Imputed roof or ceiling insulation ZRIN4 40- 40 $ZVAR.
Imputed roof/ceil insulation inst/add ZRININS4 42- 42 $ZVAR.
Imputed when roof/ceil insulation added ZRINDT4 44- 44 $ZVAR.
Imputed exterior wall insulation ZWIN4 46- 46 $ZVAR.
Imputed wall insulation installed/added ZWININS4 48- 48 $ZVAR.
Imputed when wall insulation added ZWINDT4 50- 50 $ZVAR.
Imputed storm windows/doors ZSTW4 52- 52 $ZVAR.
Imputed storm windows installed/added ZSTWINS4 54- 54 $ZVAR.
Imputed when storm windows added ZSTWDT4 56- 56 $ZVAR.
Imputed tinted/reflective glass ZTRG4 58- 58 $ZVAR.
Imputed tinted/reflec installed/added ZTRGINS4 60- 60 $ZVAR.
Imputed when tint/reflec glass added ZTRGDT4 62- 62 $ZVAR.
Imputed shadings or awnings ZAWN4 64- 64 $ZVAR.
Imputed shadings/awnings install/add ZAWNINS4 66- 66 $ZVAR.
Imputed when shadings/awnings added ZAWNDT4 68- 68 $ZVAR.
Imputed weather stripping/caulking ZSTR4 70- 70 $ZVAR.
Imputed stripping/caulk install/add ZSTRINS4 72- 72 $ZVAR.
Imputed when stripping/caulking added ZSTRDT4 74- 74 $ZVAR.
Imputed high-efficiency ballasts ZHEB4 76- 76 $ZVAR.
Imputed high-effic ballasts inst/add ZHEBINS4 78- 78 $ZVAR.
Imputed when high-effic ballasts added ZHEBDT4 80- 80 $ZVAR.
Imputed EMCS ZEMCS4 82- 82 $ZVAR.
Imputed EMCS controls lighting ZEMCSLT4 84- 84 $ZVAR.
Imputed EMCS controls HVAC ZEMCSHC4 86- 86 $ZVAR.
Imputed EMCS controls anything else ZEMCSOT4 88- 88 $ZVAR.
Imputed regular maintenance program ZMAINT4 90- 90 $ZVAR.
Imputed utility conservation program ZUTCNS4 92- 92 $ZVAR.
Imputed electric generating capability ZGENER4 94- 94 $ZVAR.
Imputed cogeneration system ZCOGEN4 96- 96 $ZVAR.
Imputed connected to grid ZGRID4 98- 98 $ZVAR.
Imputed Qualifying Facility (PURPA) ZPURPA4 100- 100 $ZVAR.
Imputed facility ZFACIL4 102- 102 $ZVAR.
Imputed facility with central plant ZPLANT4 104- 104 $ZVAR.
Imputed central plant in building ZBLDPLT4 106- 106 $ZVAR.
Adjusted weight ADJWT4 108- 115
Variance stratum STRATUM4 117- 118
Pair indicator PAIR4 120- 120
Electricity supplied ELSUPL4 122- 122 $XXSUPL.
Natural gas supplied NGSUPL4 124- 124 $XXSUPL.
Fuel oil supplied FKSUPL4 126- 126 $XXSUPL.
Steam supplied STSUPL4 128- 128 $XXSUPL.
Hot water supplied HWSUPL4 130- 130 $XXSUPL.

PROGRAM TO CREATE FORMAT LIBRARY FOR THE 1989 CBECS DATA

PROC FORMAT LIBRARY=SASLIB;

```
VALUE $ACTIVTY
  '  ' = 'Inapplicable'
  '01' = 'Vacant'
  '02' = 'Office'
  '03' = 'Mercantile/services'
  '04' = 'Assembly'
  '05' = 'Food sales'
  '06' = 'Public order/safety'
  '07' = 'Health care (outpatient)'
  '08' = 'Industrial'
  '09' = 'Agricultural'
  '10' = 'Laboratory'
  '11' = 'Warehouse (refrig.)'
  '12' = 'Warehouse (nonrefrig.)'
  '13' = 'Education'
  '14' = 'Food service'
  '15' = 'Health care (inpatient)'
  '16' = 'Skilled nursing'
  '17' = 'Lodging'
  '18' = 'Residential'
  '19' = 'Parking garage'
  '20' = 'Other'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $BILTYP
  ' ' = 'Inapplicable'
  '1' = 'One bill'
  '2' = 'More than one bill'
  '7' = 'Not billed'
  '8' = 'Don"t know'
  '9' = 'Missing';

VALUE $BLDGCL
  '  ' = 'Inapplicable'
  '01' = 'Residential'
  '02' = 'Commercial'
  '03' = 'Industrial'
  '04' = 'Commercial/Industrial'
  '05' = 'Commercial/Residential'
  '06' = 'School'
  '07' = 'Government (school)'
  '08' = 'Government (other)'
  '09' = 'Agriculture'
  '10' = 'Institutional, non-profit (non-gov.)'
  '11' = 'Industrial/Residential'
  '55' = 'Combination of types (aggregation)'
  '95' = 'Other'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $CENDIV
  '1' = 'New England'
  '2' = 'Middle Atlantic'
```

```
  '3' = 'East North Central'
  '4' = 'West North Central'
  '5' = 'South Atlantic'
  '6' = 'East South Central'
  '7' = 'West South Central'
  '8' = 'Mountain'
  '9' = 'Pacific';

VALUE $CLIMAT
  '1' = '<2000 CDD,>7000 HDD'
  '2' = '<2000 CDD,5500-7000 HDD'
  '3' = '<2000 CDD,4000-5499 HDD'
  '4' = '<2000 CDD,<4000 HDD'
  '5' = '>=2000 CDD,<4000 HDD';

VALUE $COVER
  ' '  = 'Inapplicable'
  '1'  = 'Just sampled building'
  '2'  = 'Covers other building(s)'
  '7'  = 'No bill'
  '8'  = 'Don"t know'
  '9'  = 'Missing';

VALUE $DISAGG
  ' ' = 'Inapplicable'
  '1' = 'No aggreg./disagg. required'
  '2' = 'Aggregation performed'
  '3' = 'Disaggregation performed'
  '4' = 'Ratio < .1'
  '5' = 'Unable to calculate'
  '9' = 'Not ascertained';

VALUE $FACACT
  '  ' = 'Inapplicable'
  '01' = 'College or university'
  '02' = 'Secondary school'
  '03' = 'Elementary school'
  '04' = 'Office'
  '05' = 'Shopping center/mall'
  '06' = 'Hospital/other inpatient health center'
  '07' = 'Industrial/Manufacturing'
  '08' = 'Agricultural'
  '09' = 'Hotel/motel'
  '10' = 'Prison/jail/reformatory'
  '11' = 'Entertainment/sports complex'
  '12' = 'Warehouse'
  '13' = 'Religious assembly'
  '14' = 'Auto service/sales'
  '15' = 'School (unspecified)'
  '16' = 'Residential'
  '17' = 'Airport'
  '18','95' = 'Other';

VALUE $FACTSRC
```

```
  '1' = 'Facility Form'
  '2' = 'Coded by EIA staff'
  '3' = 'Coded by contractor staff';

VALUE $FORM
  '  ' = 'Inapplicable'
  'NG' = 'Natural Gas'
  'DH' = 'District Heating and Cooling'
  'EL' = 'Electricity'
  'FO' = 'Fuel Oil'
  'WN' = 'Natural Gas (worksheet)'
  'WE' = 'Electricity (worksheet)';

VALUE $GOVTYP
  ' ' = 'Inapplicable'
  '1' = 'Federal agency'
  '2' = 'State agency'
  '3' = 'Local agency'
  '8' = 'Don"t know'
  '9' = 'Not ascertained';

VALUE $INSADD
  ' ' = 'Inapplicable'
  '1' = 'Installed'
  '2' = 'Added'
  '8' = 'Don"t know'
  '9' = 'Not ascertained';

VALUE $INTYPE
  '  ' = 'Inapplicable'
  '01' = 'Distillate '
  '02' = 'Residual'
  '03' = 'Anthracite'
  '04' = 'Bituminous'
  '05' = 'Subbituminous'
  '06' = 'Distillate/residual'
  '11' = 'Propane'
  '12' = 'Wood'
  '13' = 'Solar'
  '14' = 'Steam (input)'
  '15' = 'Black liquor'
  '95' = 'Other'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $LISTCK
  ' ' = 'Inapplicable'
  '1' = 'Correct (one bldg.)'
  '2' = 'Incorrect (2+ bldgs.)'
  '3' = 'Incorrect (part bldg.)'
  '9' = 'Not ascertained';

VALUE $MALL
  ' ' = 'Inapplicable'
```

```
  '1' = 'Strip shopping center'
  '2' = 'Enclosed mall'
  '3' = 'Not strip center/mall'
  '9' = 'Don"t know';

VALUE $MEASURE
  ' '     = 'Inapplicable'
  '01'    = 'Kilowatt hours'
  '02'    = 'Therms'
  '03'    = 'Decitherms'
  '04'    = 'Decatherms'
  '05'    = 'Cubic feet'
  '06'    = '100 cubic feet'
  '07'    = '1,000 cubic feet'
  '08'    = 'Gallons'
  '09'    = 'Btu"s'
  '10'    = 'Million Btu"s'
  '11'    = 'Ton hours'
  '12'    = 'Pounds'
  '13'    = 'Thousand pounds'
  '14'    = 'Barrels'
  '15'    = 'Day tons'
  '16'    = 'Thousand BTU"s'
  '95'    = 'Code pending'
  '98'    = 'Don"t know'
  '99'    = 'Not ascertained';

VALUE $MSA
  '1' = 'Non-Metropolitan'
  '2' = 'Metropolitan';

VALUE $NOCCAT
  ' ' = 'Inapplicable'
  '1' = '2 to 5'
  '2' = '6 to 10'
  '3' = '11 to 20'
  '4' = '21 to 49'
  '5' = '50 to 99'
  '6' = '100 or more'
  '8' = 'Don"t know'
  '9' = 'Not ascertained';

VALUE $NWKERC
  '  ' = 'Building not in use'
  '00' = 'None'
  '01' = '1 to 4'
  '02' = '5 to 9'
  '03' = '10 to 19'
  '04' = '20 to 49'
  '05' = '50 to 99'
  '06' = '100 to 249'
  '07' = '250 to 499'
  '08' = '500 to 999'
  '09' = '1,000 to 2,499'
```

```
  '10' = '2,500 to 4,999'
  '11' = '5,000 or more'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $OCCTYP
  '1' = 'One, the owner'
  '2' = 'One, not owner'
  '3' = 'More than 1, incl owner'
  '4' = 'More than 1, excl owner'
  '5' = 'Currently unoccupied'
  '8' = 'Don"t know'
  '9' = 'Not ascertained';

VALUE $OTCL
  '  ' = 'Inapplicable'
  '01' = 'Evaporative coolers'
  '95' = 'Other'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $OTHT
  '  ' = 'Inapplicable'
  '01' = 'Heating panels'
  '02' = 'Dist"n for boilers'
  '03' = 'Induction units'
  '95' = 'Other'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $OTREF
  '  ' = 'Inapplicable'
  '01' = 'Frozen drink/food maker'
  '02' = 'Dehumidifier'
  '03' = 'Lab refrigeration'
  '04' = 'Compressors for refrig.'
  '95' = 'Other'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $RDHTCL
  ' ' = 'Inapplicable'
  '1' = 'Yes'
  '2' = 'No'
  '7' = 'Always in full use'
  '8' = 'Don"t know'
  '9' = 'Not ascertained';

VALUE $REGION
  '1' = 'Northeast'
  '2' = 'Midwest'
  '3' = 'South'
  '4' = 'West';
```

```
VALUE $RFCNS
  '01' = 'Wooden materials'
  '02' = 'Slate or tile'
  '03' = 'Shingles (not wood)'
  '04' = 'Built-up'
  '05' = 'Metal surfacing'
  '06' = 'Single/multiple ply'
  '07' = 'Concrete roof'
  '08' = 'Other (specify)'
  '09' = 'Metal & rubber'
  '10' = 'Cement & asphalt'
  '11' = 'Composite'
  '12' = 'Glass'
  '13' = 'Shingles & metal'
  '14' = 'Slate & built-up'
  '15' = 'Built-up & metal'
  '16' = 'Built-up & s/m ply'
  '95' = 'Other'
  '97' = 'Refused'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $SEASON
 ' '= 'Inapplicable'
 '1'= 'Summer'
 '2'= 'Winter'
 '3'= 'Summer & winter'
 '8'= 'Unknown'
 '9'= 'Missing';

VALUE $SQFTC
  '01' = '1,000 or less'
  '02' = '1,001 to 5,000'
  '03' = '5,001 to 10,000'
  '04' = '10,001 to 25,000'
  '05' = '25,001 to 50,000'
  '06' = '50,001 to 100,000'
  '07' = '100,001 to 200,000'
  '08' = '200,001 to 500,000'
  '09' = '500,001 to 1 million'
  '10' = 'Over 1 million'
  '97' = 'Refused'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $SWTCH
  '  ' = 'Inapplicable'
  '01' = 'Electricity'
  '02' = 'Natural gas'
  '03' = 'Fuel oil/kerosene'
  '04' = 'District steam'
  '05' = 'District hot water'
  '06' = 'Other'
  '07' = 'Propane'
```

```
  '08' = 'Wood'
  '09' = 'Coal'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $WKHRSC
  ' ' = 'Inapplicable'
  '0' = 'Never open'
  '1' = '1 to 39'
  '2' = '40 to 48'
  '3' = '49 to 60'
  '4' = '61 to 84'
  '5' = '85 to 167'
  '7' = 'Always open'
  '8' = 'Don"t know'
  '9' = 'Not ascertained';

VALUE $WLCNS
  '01' = 'Window/vision glass'
  '02' = 'Decor./construction glass'
  '03' = 'Concrete panels'
  '04' = 'Masonry'
  '05' = 'Siding/shingles/shakes'
  '06' = 'Metal panels'
  '07' = 'Other'
  '08' = 'Masonry & metal'
  '09' = 'Masonry & siding'
  '10' = 'Window glass & masonry'
  '11' = 'Window glass & concrete'
  '12' = 'Window & construction glass'
  '13' = 'Steel frame & masonry'
  '14' = 'Window glass & metal'
  '15' = 'Window,constr.glass & concrete'
  '16' = 'Concrete & siding'
  '95' = 'Other'
  '98' = 'Don"t know'
  '99' = 'Not ascertained';

VALUE $XXSUPL
  ' ' = 'Inapplicable'
  '1' = 'Yes'
  '2' = 'No'
  '3' = 'No (revised)'
  '4' = 'Not 1989'
  '5' = 'Yes (revised)'
  '8' = 'Don"t know'
  '9' = 'Not ascertained';

VALUE $YESNO
  ' ' = 'Inapplicable'
  '1' = 'Yes'
  '2' = 'No'
  '7' = 'Refused'
  '8' = 'Don"t know'
```

'9' = 'Not ascertained';

VALUE $YRADD
' ' = 'Inapplicable'
'1' = '1989'
'2' = '1984 to 1988'
'3' = 'Before 1984'
'8' = 'Don"t know'
'9' = 'Not ascertained';

VALUE $YRC
' ' = 'Inapplicable'
'1' = '1959 or before'
'2' = '1960 to 1969'
'3' = '1970 to 1979'
'4' = '1980 to 1986'
'5' = '1987 to 1989'
'8' = 'Don"t know'
'9' = 'Not ascertained';

VALUE $YRCONC
'01' = '1899 or before'
'02' = '1900 to 1919'
'03' = '1920 to 1945'
'04' = '1946 to 1959'
'05' = '1960 to 1969'
'06' = '1970 to 1979'
'07' = '1980 to 1983'
'08' = '1984 to 1986'
'09' = '1987 to 1989'
'97' = 'Refused'
'98' = 'Don"t know'
'99' = 'Not ascertained';

VALUE $ZCNSEXP
' ' = 'Not supplied'
'0' = 'Reported'
'1' = 'Prorated from adjacent periods'
'2' = 'Hot-decked'
'3' = 'Regression estimate'
'8' = 'Worksheet procedure'
'9' = 'Missing';

VALUE $ZVAR
' ' = 'Inapplicable'
'1' = 'Imputed'
'2' = 'Reported'
'9' = 'Missing';

PICTURE HTCLP
0-100 = '009'
995 = '32 < heated < 50' (NOEDIT)
996 = 'Less than one half'
998 = 'Don"t know'

```
    999  = 'Not ascertained';

  PICTURE LTNHRP
    0-100= '009'
     995 = 'Less than one half'
     997 = 'No off-hours'
     998 = 'Don"t know'
     999 = 'Not ascertained';

  PICTURE LTOHRP
    0-100= '009'
     995 = 'Less than one half'
     997 = 'Not in use'
     998 = 'Don"t know'
     999 = 'Not ascertained';

  PICTURE MISS2CH
    0-97 = '09'
     98  = 'Don"t know'
     99  = 'Not ascertained';

  PICTURE MISS3CH
    0-997 = '009'
     998  = 'Don"t know'
     999  = 'Not ascertained';

  PICTURE MISS5CH
    0-99997 = '00,009'
     99998  = 'Don"t know'
     99999  = 'Not ascertained';

  PICTURE MISS6CH
    0-999997   = '000,009'
     999998    = 'Don"t know'
     999999    = 'Not ascertained';

  PICTURE MISS8CH
    0-99999996 = '00,000,009'
     99999997  = 'Refused'
     99999998  = 'Don"t know'
     99999999  = 'Not ascertained';

  PICTURE NFLOOR
    0-14 = '009'
     994 = '15 to 25' (NOEDIT)
     995 = 'Over 25' (NOEDIT)
     998 = 'Don"t know'
     999 = 'Not ascertained';

  PICTURE YRCON
     1492-1989    = '9999'
  0-1491,1990-9996 = '*9999*'
       9997       = 'Refused'
       9998       = 'Don"t know'
```

9999 = 'Not ascertained';