

Task 1.2 Specification of Survey Compatibility (Auckland example)

Coding definitions which are common between the household, public transport and external cordon surveys are required.

Trip Time, Time Periods and Day

These are given in Table 1 with a new field, PERIOD.

Table 1 Time Periods

Period	Time	Codes for PERIOD
Weekday AM Peak	7.00-8.59am	1
Weekday Interpeak	9.00am-2.59pm	2
Weekday School PM Peak	3.00pm-3.59pm	3
Weekday PM Peak	4.00pm-5.59pm	4
Weekday Offpeak	6.00pm-6.59am	5
Saturday	All day	6

Trip Purpose

The expected modelled trip purposes are given in Table 2 along with the allocated codes for new field TRIPPURP.

The NHB purposes have been expanded into 2 coding categories:

- NHBBus in which both ends of the trips are for business purposes or the normal workplace
- NHBO covering all other NHB trips.

Table 2 Trip Purposes

Purposes	Abbreviation	Codes for TRIPPURP	
		Not ESCORT	ESCORT
HB (home-based) work: blue/white collar	HBW: B or W	1	11
HB education	HBE	2	12
HB shop	HBSH	3	13
HB social	HBSO	4	14
HB other	HBO	5	15
HB Business travel	HBBus	6	16
NHB Business travel	NHBBus	7	17
NHB (non-home-based) other	NHBO	8	18

The above trip purposes are defined in terms of productions-attractions (PA) from each of the survey trip end purposes, plus for the HTS the type of place at each trip end is considered where there is some ambiguity in the trip end purpose.

Following the PA purpose allocation, the trip direction is identified for HB trips using coding for a new field, PROD, in Table 3.

Table 3 Trip Direction

Direction	Codes for PROD
Productions	1
Attractions	2
NHB trips	3

Main and Secondary Modes

The transport modes for a trip are in Table 4 along with the database coding. This applies to the mode on each leg of a trip and also to the main mode which is subsequently determined.

The fields for each leg are labelled MODE1, MODE2, MODE3, etc and the main mode MMODE then is derived from these using the mode hierarchy (Table 5) and consideration of distance travelled by each mode.

Table 4: Mode of Transport

Composite Mode	Constituent Modes	Codes for MMODE, MODE1, MODE2, etc
Light vehicles	Car – driver	1
	Car - passenger	2
	LCV - driver	3
	LCV - passenger	4
	Motorcycle driver/ passenger	5
	Taxi passenger	6
Public transport	Public transport passenger:	
	- Bus	7
	- Train	8
	- Ferry	9
	School bus passenger	10
Active	Walk	11
	Cycle	12
Commercial Vehicles	Trucks (MCV and HCV)	13
NA		-1
Missing		-2
Exclusions	Truck passenger, Charter bus passenger, Other modes, etc	-3

Table 5 Mode Hierarchy

Rank	Modes
1	Train passenger
2	School bus passenger
3	Ferry passenger
4	Public bus passenger
5	Truck (MCV/HCV) driver
6	LCV driver
7	Taxi driver
8	Car driver
9	LCV passenger
10	Taxi passenger
11	Car passenger
12	Motorcycle driver/ passenger
13	Cycle
14	Walk
15	Other

Car Availability

Table 6 sets out the model definitions of car availability and the coding for the new field, CARAV. A combination of household and person information will be used to categorise trips into car availability categories.

Table 6: Car Availability

Level of car availability	Description	Codes for CARAV
Choice1 (1 car in household)	No. of cars in household \geq no. of adults/no. of licensed drivers	1
Choice2 (2 cars in household)		2
Choice3 (3+ cars in household)		3
Competition1 (1 car in household)	Residents of households where: no. of cars < no. of adults/no. of licensed drivers	4
Competition2 (2 cars in household)		5
Competition3 (3 cars in household)		6
Captive to public transport	Resident of non-car-owning household	7
Captive to car	Possessor of employer-assisted vehicle	8

Person Type

Table 7 sets out the ART3 person type definitions and codes (PERTYPE).

Table 7: Person Types

Person Types	Codes for PERTYPE
Infant, age<5	1
Child, age 5-10	2
dependent child, age 11-17	3
working adult child (full-time only) or adult, age<26	4
working adult child or adult, age 26+	5
Other adult child or adult, age <26	6
adult child or adult, not retired, not working age 26+	7
adult, retired	8
Other	-1

Household Types

Table 8 sets out the ART3 household type definitions and the coding applied to the Person database.

This is done for each household as identified in PERSONID and applied to a new field HHTYPE.

Table 8: Household Types

ART3, including retired	Codes for HHTYPE
1 adult, not working, not retired	1
1 adult, working	2
1 adult retired	3
2 adults, none working, 1 or more not retired	4
2 adults, 1 working	5
2 adults, both working	6
2 adults, both retired	7
3+ adults, none working	8
3+ adults, 1 working	9
3+ adults, 2 working	10
3+ adults, 3+ working	11

Type of Worker

Table 9 sets out the worker and employment related classifications and the coding and filed names of each.

Table 9: Types of Worker

Classification	Criteria using Survey Coding	Codes
Full/part time		WORKFP
Full time (>30hrs/week)	MAINACT = 1	1
Part time (all other)	MAINACT = 2, 3	2
Other	MAINACT not equal to 1, 2, 3	-1
Socio-economic group		WORKSE
White collar: NZSCO Major Groups 1-5	(ANZCSO1= 1 and ANZCSO2 = 1, 2, 4, 5) or (ANZCSO1= 2) or (ANZCSO1= 3 and ANZCSO2 = 14, 15) or (ANZCSO1= 4) or (ANZCSO1= 5) or (ANZCSO1= 6)	1
Blue collar: NZSCO Major Groups 6-10	ANZCSO1 not equal to -1 or -2 and not meeting the above criteria	2
Not known	ANZCSO1= -1	-1
Not working	ANZCSO1= -2	-2
Type of employment		EMPTYE
Paid employee	EMPTYE = 1	1
Self-employed	EMPTYE = 2	2
Employer of other persons	EMPTYE = 3	3
Family business	EMPTYE = 4	4
Volunteer	EMPTYE = 5	5
Not known	EMPTYE = -1	-1
Not working	EMPTYE = -2	-2
Work arrangement		WORKARR
Fixed hours	WORKTYPE = 1	1
Flexible hours	WORKTYPE = 2	2
Rostered shifts	WORKTYPE = 3	3
Work from home	WORKTYPE = 4	4
Not known	WORKTYPE = -1	-1
Not working	WORKTYPE = -2	-2

Zoning

Trip ends in the HTS were geo-coded to both x-y co-ordinates and 2006 meshblocks; the model zones have been allocated using a meshblocks to zone equivalence.

In the PTIS and ECS the geo-coding was to x-y co-ordinates from which zones were allocated via GIS shapefiles.

The filed names given to trip end zones are given in Table 10 and Table 11 gives the correspondence between external links that cross the regional boundaries and zone numbers allocated to them.

Table 10: Trip End Zone Codes

Trip End	Code
Origin zone	OZONE
Destination zone	DZONE

Table 11: External Links and Zone Numbers

External Links	Zone Numbers
SH1 North of Te Hana	513
SH2 East of SH1	514
SH1 South of Pokeno	515
Tuakau-Pukekawa Rd	516
Wily Road	517