

*TransLink Regional Travel Model (RTM3.2)*

# Quick Reference

Version 1.0

September 27, 2019

## Blending Factor<sup>1</sup>

Blending factors are used in skim blending. This is a process to create weighted average daily impedance from the model's peak hour assignment to be used in trip distribution and model choice. The factors account for the likelihood of the trip occurring in each peak hour. The sum of the factors should always equal to 1.

Trip Purpose	PA/AP	Time	Matrix	Factor
HB Work	P-A	AM	ms400	0.3918
		MD	ms401	0.1163
		PM	ms402	0.0264
	A-P	AM	ms403	0.0070
		MD	ms404	0.1398
		PM	ms405	0.3188
HB Work WCE	P-A	AM	ms406	0.5249
		PM	ms407	0.0023
	A-P	PM	ms408	0.4728
HB University	P-A	AM	ms410	0.3442
		MD	ms411	0.1565
		PM	ms412	0.0401
	A-P	AM	ms413	0.0388
		MD	ms414	0.1972
		PM	ms415	0.2233
HB School	P-A	AM	ms420	0.5422
		MD	ms421	0.0213
		PM	ms422	0.0086
	A-P	AM	ms423	0.0009
		MD	ms424	0.1210
		PM	ms425	0.3061
HB Shopping	P-A	AM	ms430	0.0497
		MD	ms431	0.2501
		PM	ms432	0.0994
	A-P	AM	ms433	0.0140
		MD	ms434	0.3304
		PM	ms435	0.2565
HB Personal Business	P-A	AM	ms440	0.1377
		MD	ms441	0.2593
		PM	ms442	0.1030
	A-P	AM	ms443	0.0283
		MD	ms444	0.2767
		PM	ms445	0.1951
HB Social	P-A	AM	ms450	0.0847
		MD	ms451	0.2008
		PM	ms452	0.1935
	A-P	AM	ms453	0.0175
		MD	ms454	0.3579
		PM	ms455	0.1457
HB Escorting	P-A	AM	ms460	0.2349
		MD	ms461	0.1695
		PM	ms462	0.1215
	A-P	AM	ms463	0.0915
		MD	ms464	0.1687
		PM	ms465	0.2139
NHB Work	P-A	AM	ms470	0.2036
		MD	ms471	0.4482
		PM	ms472	0.3482
NHB Other	P-A	AM	ms480	0.1202
		MD	ms481	0.5406
		PM	ms482	0.3392

<sup>1</sup> Greater Vancouver Regional Travel Model Development and Validation Report, July 2018, Page 99

## Time of Assginment<sup>2</sup>

Peak Period	Hour	Hours of the day represented
AM	07:30-08:30	06:00-10:00
MD	12:00-13:00	10:00-15:00, 18:00-06:00
PM	16:30-17:30	15:00-18:00

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<sup>2</sup> Greater Vancouver Regional Travel Model Development and Validation Report, July 2018, Page 98

## Expansion factors

### Daily Factor

#### Traffic Volume<sup>3</sup>

The traffic expansion factor is to convert the model assigned hourly traffic volume to daily volume. The factor set has a generic set and categorized set. Both sets can be used according to the study purpose. (The factor value keeps updating base on the latest screen-line data)

#### All Classes

AM	MD	PM
3.68	9.20	3.11

#### By category

Class	AM	MD	PM
SOV	3.44	8.41	3.95
HOV	1.51	8.58	5.32
SOV+HOV	3.22	8.63	4.05
Light Truck	3.59	5.63	6.17
Heavy Truck	4.88	5.43	6.36
All Truck	3.83	5.81	6.63

#### Transit ridership<sup>4</sup>

The transit expansion factor converts the hourly transit ridership to daily value. Like auto traffic, the factor set is classed by different types of service. The value shows below. (\*SeaBus has the same factor with Rail)

AM	MD	PM
Bus		
2.54	9.44	2.57
Rail		
2.53	9.54	2.92
WCE		
3.34		2.02

#### Annual Factor<sup>4</sup>

The annual expansion factor is to expend the daily volume on typical fall weekday to yearly volume. The generic expansion factor, including all vehicle classes, is 333. And the factors for each class are shown below:

Class	Factor
All Classes	333
Auto	335
Light Truck	313
Heavy Truck	276
Bus	299
Rail	331
WCE	224

<sup>3</sup> Technical Memo for TransLink Regional VKT Expansion Factors, by Delan, January 2014, Page 4-10

<sup>4</sup> TransLink Database: SAVONA.TL\_RESEARCH\_ANALYTICS\_DEV.counts.expansion\_factors

## Transit Vehicle Capacity and Cost

The table below gives a transit vehicle capacity and cost catalog. The value is used in the transit assignment process.

Transit Vehicle	Mode	Fleet Size	Capacity(S/T)	OC(\$/h)	OC(\$/km)	Auto. equ
1. Motor-Bus	b	747	35/50	65	0.55	2.5
2. Trolley	b	224	31/47	65	0.55	2.5
3. Blue-Bus	b	48	31/47	65	0.55	2.5
4. Sea-Bus	s	2	300/400	0	0	0
5. Sky-E	l	999	88/287	0	3	0
6. pcl-bus	b	20	50/50	30	0.55	2.5
7. Abbotsford	b	12	48/60	30	0.55	2.5
8. Comrail-5	r	5	1500/1650	0	0	0
9. Chilliwack	b	12	48/60	30	0.55	2.5
10. Mot-Artics	b	42	48/90	65	0.55	3.75
11. Tro-Artics	b	1	49/70	65	0.55	3.75
12. HwyCoach	b	66	49/49	65	0.55	2.5
13. MiniBus	b	40	20/24	65	0.55	2.5
14. Sky-M	l	999	140/300	0	0	0
15. Sky-Sh	l	999	150/350	0	0	0
16. BRT	g	42	60/105	0	0	3.75
17. LRT	f	1	160/300	0	3	0
18. Gondola	h	20	28/35	0	0	0
20. Sky-ML2	l	999	127/218	0	0	0
31. EL-2017	l	999	174/424	0	3	0
32. EL-2030	l	999	143/509	0	3	0
33. EL-2045	l	999	143/509	0	3	0
34. ML-2017	l	999	66/222	0	3	0
35. ML-2030	l	999	132/444	0	3	0
35. ML-2030	l	999	132/444	0	3	0
36. ML-2045	l	999	132/444	0	3	0
37. CL-2017	l	999	88/288	0	3	0
38. CL-2030	l	999	88/288	0	3	0
39. CL-2045	l	999	110/360	0	3	0

## Transit Modes

Mode	Description
<b>b</b>	Bus
<b>l</b>	SkyTrain
<b>r</b>	Rail (WCE)
<b>s</b>	SeaBus
<b>g</b>	BRT
<b>f</b>	LRT
<b>h</b>	Gondola

## Transit Perception Factor<sup>5</sup>

Transit perception is a factor that can reflect the user's feeling about taking transit in each stage. It is used in the mode choice model. The values are cited from the literature with some minor adjustment based on local knowledge.

Note that the boarding perception factor used for transfer boarding only. The model assumed there is no penalty for initial boarding. Current model only account perception impact for work purpose only.

Bus/Rail/WCE	Work	Time Component	Matrix	EMME Name	Value
<b>Bus</b>	Work	In-vehicle	ms300	busIVTprcpWk	1.25
		Wait	ms301	busWAITprcpWk	2.50
		Walk	ms302	busWALKprcpWk	2.00
		Boarding	ms303	busBOARDSprcpWk	10.00
<b>Rail</b>	Work	In-vehicle	ms310	railIVTprcpWk	1.00
		Wait	ms311	railWAITprcpWk	2.50
		Walk	ms312	railWALKprcpWk	2.00
		Boarding	ms313	railBOARDSprcpWk	10.00
<b>WCE</b>	Work	In-vehicle	ms320	wceIVTprcpWk	1.00
		Wait	ms321	wceWAITprcpWk	2.50
		Walk	ms322	wceWALKprcpWk	2.00
		Boarding	ms323	wceBOARDSprcpWk	10.00

## Truck Equivalent Factor<sup>5</sup>

Light Truck (ms130): 1.5

Heavy Truck (ms131): 2.5

## Vehicle Operating Cost<sup>6</sup>

Auto(ms100): 0.18 \$/km

Light Truck(ms101): 0.24 \$/km

Heavy Truck(ms102): 0.56 \$/km

## HOV Occupancy

Standard HOV Occupancy 2.25 (to calculate general number of people for HOV)

Trip Purpose	Matrix	Value	Occupancy Scale
<b>HB Work</b>	ms110	3.51	0.85
<b>HB University</b>	ms111	2.48	0.75
<b>HB Escorting</b>	ms112	2.60	0.70
<b>HB Pers Bus</b>	ms113	2.31	0.70
<b>HB School</b>	ms114	3.02	0.85
<b>HB Shop</b>	ms115	2.35	0.75
<b>HB Social</b>	ms116	2.61	0.70
<b>NHB Work</b>	ms117	2.31	0.85
<b>NHB Other</b>	ms118	2.58	0.70

\* This factor is to calculate the travel cost for each individual passenger in HOV.

\* The occupancy scale is to account for an increased willingness to pay for travel time savings when more people are in vehicle.

<sup>5</sup> Greater Vancouver Regional Travel Model Development and Validation Report, July 2018, Page 114

<sup>6</sup> Greater Vancouver Regional Travel Model Development and Validation Report, July 2018, Page 103

## Volume Delay Function<sup>7</sup>

Link	VDF	Expression
Centroid Connector	1	$fd01 = length * 60 / 40$
Bowen Island Service	2	$fd02 = 40 + ((volau + volad) - 100) * 60 / (volau + volad) * ((volau + volad) \geq 100)$
Merge Lane	3	$fd03 = length * 60 / el1 + 0.85 * ((volau + volad) / (600 * lanes))^5$
	4	$fd04 = length * 60 / el1 + 0.85 * ((volau + volad) / (800 * lanes))^5$
	5	$fd05 = length * 60 / el1 + 0.85 * ((volau + volad) / (1000 * lanes))^5$
	6	$fd06 = length * 60 / el1 + 0.85 * ((volau + volad) / (1200 * lanes))^5$
	7	$fd07 = length * 60 / el1 + 0.85 * ((volau + volad) / (1400 * lanes))^5$
Controlled Intersection	25	$fd25 = 0.25 + length * 60 / el1 + .85 * ((volau + volad) / (400 * lanes))^4$
	35	$fd35 = 0.25 + length * 60 / el1 + .85 * ((volau + volad) / (600 * lanes))^4$
	45	$fd45 = 0.25 + length * 60 / el1 + .85 * ((volau + volad) / (800 * lanes))^4$
	55	$fd55 = 0.25 + length * 60 / el1 + .85 * ((volau + volad) / (1000 * lanes))^4$
	65	$fd65 = 0.25 + length * 60 / el1 + .85 * ((volau + volad) / (1200 * lanes))^4$
Free Flow	75	$fd75 = 0.25 + length * 60 / el1 + .85 * ((volau + volad) / (1400 * lanes))^4$
	85	$fd85 = length * 60 / el1 * (1 + .6 * .85 * ((volau + volad) / (1600 * lanes^{1.05}))^5)$
	88	$fd88 = length * 60 / (el1 * 1.1) * (1 + .6 * .43 * ((volau + volad) / (1600 * lanes^{1.05}))^5)$

## Link Modes

Mode	Description
<b>v</b>	Vehicles (Primary Auto Mode)
<b>c</b>	High Occupancy Vehicles (HOV)
<b>d</b>	Single Occupancy Vehicles (SOV)
<b>x</b>	Light Trucks
<b>t</b>	Heavy Trucks
<b>n</b>	Discourage Heavy Vehicle Traffic
<b>b</b>	Bus
<b>p</b>	Pedestrian
<b>a</b>	Auxillary Transit Access
<b>l</b>	SkyTrain
<b>r</b>	Commuter Rail (West Coast Express)
<b>s</b>	SeaBus
<b>h</b>	Gondola

## Link Type

Description	Type	Mode Combination
Centroid Connector	1	vcdxta
Pedestrian	2	p
Bowen Island Ferry	3	vcdxtbp
SkyTrain	100	l
SeaBus	101	s
WCE	102	r
Gondola	103	h
Bus Only	200	vbp
HOV Lane	201	vcbp
CV Access Only	202	vxtbp
Freeway	300	vcdxtbp
Highway	301	vcdxtbp
Arterial	302	vcdxtbp
Collector	303	vcdxtnbp
Local	304	vcdxtnbp
Ramp	305	vcdxtbp
Hwy Directional Ramp	306	vcdxtbp
Hwy Loop Ramp	307	vcdxtbp
Other	310	vcdxtnbp

<sup>7</sup> TransLink Regional Transportation Model Phase 3 User guide, Page 25

*el1: Posted Speed*

*volau + volad: Traffic Volume*

## Bridge Crossing Penalties<sup>8</sup>

Ratio Peak:Mid-day Skim	Penalty (Additional distance in km)
<1.25 or if difference in time less than 5 minutes	0
1.25 - 1.5	1
1.5 - 2	2
>2	3

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<sup>8</sup> Greater Vancouver Regional Travel Model Development and Validation Report, July 2018, Page 62



## Matrix Catalog

Type	Matrix Type	Matrix Series	Description
ms	Scalar	1-99	Model Inputs
ms	Scalar	100-150	HOV Occupancy and Passenger Car Equivalents
ms	Scalar	160	Transit One Zone Fare
ms	Scalar	200-299	Values of Time
ms	Scalar	300-399	Transit Perception Factors
ms	Scalar	400-499	Blended Skims Factors
ms	Scalar	500-599	Transit Fare Blended Skims Factor
ms	Scalar	8000-8099	Truck Model Scalars
mo	Origin	1-99	Model Inputs
mo	Origin	100-199	Geographic and Ensemble Dummies
mo	Origin	200-299	Urban Form Variables such as densities and accessibilities
mo	Origin	2000-2099	Trip Productions
mo	Origin	8000-8099	Truck Model Productions
md	Destination	2000-2099	Trip Attractions
md	Destination	8000-8099	Truck Model Attractions
mf	Full	1-99	Model Inputs
mf	Full	200-299	Person - trips by time of day
mf	Full	300-399	Assigned trips by time of day (auto driver and transit)
mf	Full	3000-3999	Trip Distribution and Mode Choice Daily Trips by Trip Purpose
mf	Full	5000-5099	Auto Assignment Skims by time of day
mf	Full	5100-5299	Auto Assignment Blended Skims by Trip Purpose
mf	Full	5300-5399	Bus Assignment Skims by time of day
mf	Full	5400-5499	Bus Assignment Blended Skims by Trip Purpose
mf	Full	5500-5599	Rail Assignment Skims by time of day
mf	Full	5600-5699	Rail Assignment Blended Skims by Trip Purpose
mf	Full	5700-5799	WCE Assignment Skims by time of day
mf	Full	5800-5899	WCE Assignment Blended Skims by Trip Purpose
mf	Full	6000-6999	Park and Ride Model chosen lot and skims
mf	Full	8000-8099	Truck Model trips by market sector (daily and by time of day)
mf	Full	9000-9099	Mode Choice Logsums by trip purpose
mf	Full	9100-9199	Trip Distribution Friction Factors scratch matrices
mf	Full	9200-9299	Trip Distribution K-Factors
mf	Full	9900-9999	Temporary time of day skims storage

## Extra Attributes

Type	Name	Description
I node	@farezone	Fare Zones by Node/Stop
I node	@wcestopfare	WCE Boarding Fare by Stop (\$)
I node	@wcexferfare	Xfer WCE Boarding Fare by Stop(\$)
L link	@fareboundary	Fare Zone Boundary for Transit (0,1)
L link	@wcefareboundary	Fare Zone Boundaries for WCE (13,34,45)
L link	@lscid	Screenline Identifier
L link	@lscstn	Screenline Station Identifier
L link	@timeseg	Travel Time Segment Identifier
L link	@posted_speed	Posted Speed Limit
L link	@tolls	Link Toll Value (\$)
L link	@sov1	SOV Volume VOT1
L link	@sov2	SOV Volume VOT2
L link	@sov3	SOV Volume VOT3
L link	@sov4	SOV Volume VOT4
L link	@hov1	HOV Volume VOT1
L link	@hov2	HOV Volume VOT2
L link	@hov3	HOV Volume VOT3
L link	@hov4	HOV Volume VOT4
L link	@wsovl	SOV Link Volume
L link	@whovl	HOV Link Volume
L link	@lgvol	LGV Link Volume
L link	@hgvol	HGV Link Volume
L link	@sovoc	SOV Operating Cost (\$)
L link	@hovoc	HOV Operating Cost (\$)
L link	@lgvoc	LGV Operating Cost (\$)
L link	@hgvoc	HGV Operating Cost (\$)
L link	@tkpen	Truck Penalty
L link	@voltr	Total Transit Volume on Link
L link	@tran_cap	Transit Capacity
T line	@seatcapacity	Seated Line Capacity for time period
T line	@totcapacity	Total Line Capacity for time period
T line	@dwtboard	Dwell Time Boarding Factor
T line	@dwtalight	Dwell Time Alighting Factor
T line	@ridership	Average Line Boardings
T line	@ivtp	In vehicle travel time penalty
T line	@hfrac	Headway Fraction
T line	@linefare	Line Fare (zone1) for bus/skytrain (\$)
T line	@xferlinefare	Transfer Line Fare for bus/skytrain (\$)
S seg'	@hdwyfac	Effective Headway Multiplier
S seg'	@hdwyeff	Effective Headway

S seg'	@ivttfac	IVTT Perception Factor
S seg'	@pseat	Number of Seated Passengers
S seg'	@pstand	Number of Standing Passengers
S seg'	@boardavg	Average Boardings
S seg'	@voltravg	Average Transit Segment Volume
S seg'	@alightavg	Average Alightings
S seg'	@fareincrement	Increment Zone Fare (\$)
S seg'	@alight	alightings
P turn	@tsov1	SOV Turn Volume VOT1
P turn	@tsov2	SOV Turn Volume VOT2
P turn	@tsov3	SOV Turn Volume VOT3
P turn	@tsov4	SOV Turn Volume VOT4
P turn	@thov1	HOV Turn Volume VOT1
P turn	@thov2	HOV Turn Volume VOT2
P turn	@thov3	HOV Turn Volume VOT3
P turn	@thov4	HOV Turn Volume VOT4
P turn	@wsovt	SOV Turn Volume
P turn	@whovt	HOV Turn Volume
P turn	@lgvtn	LGV Turn Volume

Matrix	Name	Description	Value	Comments
ms01	CycleNum	Current Cycle Number	4.0000	
ms02	AmScen	AMScenario	21000.0000	
ms03	MdScen	MDSscenario	22000.0000	
ms04	PmScen	PMSscenario	23000.0000	
ms10	Year	Horizon Year of Run	2016.0000	
ms12	Processors	Number of Processors for Computer Running Model	8.0000	
ms20	parkingModel	Run Parking Model	1.0000	
ms21	tollSkim	Run Toll Skim	0.0000	
ms30	IterGlobal	Global Iterations	4.0000	
ms35	IterDist	DistributionIterations	20.0000	
ms36	RelErrDist	Distribution Relative Error	0.0100	
ms40	IterAss	Assignment Iterations	50.0000	
ms41	ConRelGap	ConvergenceRelativeGap	99u999992	
ms42	ConBestRel	ConvergenceBestRelative	0.0100	
ms43	ConNorm	ConvergenceNormalized	0.0050	
ms44	AutoOcc	Standard HOV Occupancy	2.2500	
ms45	tranCongest	Run Congested Transit Assignment	1.0000	
ms46	tranCapac	Run Capacitated Transit Assignment	1.0000	
ms100	autoOpCost	Auto Operating Cost	0.1800	
ms101	lgvOpCost	Light Truck Operating Cost	0.2400	
ms102	hgvOpCost	Heavy Truck Operating Cost	0.5600	
ms110	HOVOccHbw	HOV Occupancy HB Work	3.5100	
ms111	HOVOccHbu	HOV Occupancy HB University	2.4800	
ms112	HOVOccHbesc	HOV Occupancy HB Escorting	2.6000	
ms113	HOVOccHbpb	HOV Occupancy HB Pers Bus	2.3100	
ms114	HOVOccHbsch	HOV Occupancy HB School	3.0200	
ms115	HOVOccHBshop	HOV Occupancy HB Shop	2.3500	
ms116	HOVOccHBsoc	HOV Occupancy HB Social	2.6100	
ms117	HOVOccNHBw	HOV Occupancy NHB Work	2.3100	
ms118	HOVOccNHBo	HOV Occupancy NHB Other	2.5800	
ms122	AutoOccHbesc	Auto Occupancy HB Escorting	2.1400	
ms128	AutoOccNHBo	Auto Occupancy NHB Other	2.0000	
ms130	lgvPCE	Light Truck Passenger Car Equivalent	1.5000	
ms131	hgvPCE	Heavy Truck Passenger Car Equivalent	2.5000	
ms142	sov_pct_Hbesc	SOV proportion of Auto HB Escorting	0.2880	
ms148	sov_pct_NHBo	SOV proportion of Auto NHB Other	0.3650	
ms150	lgvTollFac	LGV toll factor	2.0000	
ms151	hgvTollFac	HGV toll factor	3.0000	
ms152	sovTollFac	SOV toll factor	1.0000	
ms153	hovTollFac	HOV toll factor	1.0000	
ms160	oneZoneFare	One Zone Fare - FS-SV	2.1000	
ms161	fareIncrement	Fare Increment	1.0500	
ms162	wce_bfare_zone1_1	wce_bfare_zone1_1	0.0000	
ms163	wce_bfare_zone1_2	wce_bfare_zone1_2	0.0000	
ms164	wce_bfare_zone1_3	wce_bfare_zone1_3	5.0300	
ms165	wce_bfare_zone3_1	wce_bfare_zone3_1	2.1200	
ms166	wce_bfare_zone3_2	wce_bfare_zone3_2	0.0000	
ms167	wce_bfare_zone3_3	wce_bfare_zone3_3	2.7200	
ms168	wce_bfare_zone4_1	wce_bfare_zone4_1	2.1000	
ms169	wce_bfare_zone4_2	wce_bfare_zone4_2	0.0000	
ms170	wce_bfare_zone4_3	wce_bfare_zone4_3	2.1000	
ms171	wce_bfare_zone5_1	wce_bfare_zone5_1	3.7900	
ms172	wce_bfare_zone5_2	wce_bfare_zone5_2	0.0000	
ms173	wce_bfare_zone5_3	wce_bfare_zone5_3	0.0000	
ms174	wce_bfare_zone13_1	wce_bfare_zone13_1	2.9100	
ms175	wce_bfare_zone13_2	wce_bfare_zone13_2	0.0000	
ms176	wce_bfare_zone13_3	wce_bfare_zone13_3	0.0000	
ms177	wce_bfare_zone34_1	wce_bfare_zone34_1	1.6900	
ms178	wce_bfare_zone34_2	wce_bfare_zone34_2	0.0000	
ms179	wce_bfare_zone34_3	wce_bfare_zone34_3	1.0800	
ms180	wce_bfare_zone45_1	wce_bfare_zone34_1	1.6900	
ms181	wce_bfare_zone45_2	wce_bfare_zone34_2	0.0000	
ms182	wce_bfare_zone45_3	wce_bfare_zone34_3	1.0800	
ms190	wce_fare_1z	wce_fare_1z	3.7900	
ms191	wce_fare_2z	wce_fare_2z	3.7900	
ms192	wce_fare_3z	wce_fare_3z	5.0300	
ms193	wce_fare_4z	wce_fare_4z	6.1000	
ms194	wce_fare_5z	wce_fare_5z	8.3900	
ms200	AutoVOT1	AutoVOT1 (min/dollar)	9.5000	
ms201	AutoVOT2	AutoVOT2 (min/dollar)	5.8000	

ms202	AutoVOT3	AutoVOT3 (min/dollar)	3.9000
ms203	AutoVOT4	AutoVOT4 (min/dollar)	3.3000
ms204	AutoVOT5	AutoVOT5 (min/dollar)	3.6000
ms212	VotBus	VOT Work (min/dollar)	4.9000
ms213	VotRail	VOT Work (min/dollar)	4.9000
ms214	VotWce	VOT Work (min/dollar)	4.9000
ms218	VotLgv	VOT lgv (min/dollar)	2.0300
ms219	VotHgv	VOT hgv (min/dollar)	1.4300
ms300	busIVTprcpWk	bus in-vehicle time perception work	1.2500
ms301	busWAITprcpWk	bus wait time perception work	2.5000
ms302	busWALKprcpWk	bus walk time perception work	2.0000
ms303	busBOARDSprcpWk	bus boarding perception work	10.0000
ms310	railIVTprcpWk	rail in-vehicle time perception work	1.0000
ms311	railWAITprcpWk	rail wait time perception work	2.5000
ms312	railWALKprcpWk	rail walk time perception work	2.0000
ms313	railBOARDSprcpWk	rail boarding perception work	10.0000
ms320	wceIVTprcpWk	wce in-vehicle time perception work	1.0000
ms321	wceWAITprcpWk	wce wait time perception work	2.5000
ms322	wceWALKprcpWk	wce walk time perception work	2.0000
ms323	wceBOARDSprcpWk	wce boarding perception work	10.0000
ms330	busIVTprcpNwk	bus in-vehicle time perception nonwork	0.0000 not in use
ms331	busWAITprcpNwk	bus wait time perception nonwork	0.0000 not in use
ms332	busWALKprcpNwk	bus walk time perception nonwork	0.0000 not in use
ms333	busTRANSprcpNwk	bus transfer perception nonwork	0.0000 not in use
ms334	busBOARDSprcpNwk	bus boarding perception nonwork	0.0000 not in use
ms340	railIVTprcpNwk	rail in-vehicle time perception nonwork	0.0000 not in use
ms341	railWAITprcpNwk	rail wait time perception nonwork	0.0000 not in use
ms342	railWALKprcpNwk	rail walk time perception nonwork	0.0000 not in use
ms343	railTRANSprcpNwk	rail transfer perception nonwork	0.0000 not in use
ms344	railBOARDSprcpNwk	rail boarding perception nonwork	0.0000 not in use
ms350	wceIVTprcpNwk	wce in-vehicle time perception nonwork	0.0000 not in use
ms351	wceWAITprcpNwk	wce wait time perception nonwork	0.0000 not in use
ms352	wceWALKprcpNwk	wce walk time perception nonwork	0.0000 not in use
ms353	wceTRANSprcpNwk	wce transfer perception nonwork	0.0000 not in use
ms354	wceBOARDSprcpNwk	wce boarding perception nonwork	0.0000 not in use
ms360	pr_auto_time_prcep	Park and Ride Drive time perception factor	1.2000
ms365	busIVTpr_cal_railGT	BusIVT percep RailGT Cal	1.0000
ms366	transfer_cal_railGT	transfer percep RailGT Cal	1.0000
ms400	HbWBI_AM_P-A	HbW Blend AM P-A Factor	0.3918
ms401	HbWBI_MD_P-A	HbW Blend MD P-A Factor	0.1163
ms402	HbWBI_PM_P-A	HbW Blend PM P-A Factor	0.0264
ms403	HbWBI_AM_A-P	HbW Blend AM A-P Factor	0.0070
ms404	HbWBI_MD_A-P	HbW Blend MD A-P Factor	0.1398
ms405	HbWBI_PM_A-P	HbW Blend PM A-P Factor	0.3188
ms406	HbWBI_AM_WCE_P-A	HbW Blend AM WCE P-A Factor	0.5249
ms407	HbWBI_PM_WCE_P-A	HbW Blend PM WCE P-A Factor	0.0023
ms408	HbWBI_PM_WCE_A-P	HbW Blend PM WCE A-P Factor	0.4728
ms410	HbUBI_AM_P-A	HbU Blend AM P-A Factor	0.3442
ms411	HbUBI_MD_P-A	HbU Blend MD P-A Factor	0.1565
ms412	HbUBI_PM_P-A	HbU Blend PM P-A Factor	0.0401
ms413	HbUBI_AM_A-P	HbU Blend AM A-P Factor	0.0388
ms414	HbUBI_MD_A-P	HbU Blend MD A-P Factor	0.1972
ms415	HbUBI_PM_A-P	HbU Blend PM A-P Factor	0.2233
ms420	HbScBI_AM_P-A	HbSc Blend AM P-A Factor	0.5422
ms421	HbScBI_MD_P-A	HbSc Blend MD P-A Factor	0.0213
ms422	HbScBI_PM_P-A	HbSc Blend PM P-A Factor	0.0086
ms423	HbScBI_AM_A-P	HbSc Blend AM A-P Factor	0.0009
ms424	HbScBI_MD_A-P	HbSc Blend MD A-P Factor	0.1210
ms425	HbScBI_PM_A-P	HbSc Blend PM A-P Factor	0.3061
ms430	HbShBI_AM_P-A	HbSh Blend AM P-A Factor	0.0497
ms431	HbShBI_MD_P-A	HbSh Blend MD P-A Factor	0.2501
ms432	HbShBI_PM_P-A	HbSh Blend PM P-A Factor	0.0994
ms433	HbShBI_AM_A-P	HbSh Blend AM A-P Factor	0.0140
ms434	HbShBI_MD_A-P	HbSh Blend MD A-P Factor	0.3304
ms435	HbShBI_PM_A-P	HbSh Blend PM A-P Factor	0.2565
ms440	HbPbBI_AM_P-A	HbPb Blend AM P-A Factor	0.1377
ms441	HbPbBI_MD_P-A	HbPb Blend MD P-A Factor	0.2593
ms442	HbPbBI_PM_P-A	HbPb Blend PM P-A Factor	0.1030
ms443	HbPbBI_AM_A-P	HbPb Blend AM A-P Factor	0.0283
ms444	HbPbBI_MD_A-P	HbPb Blend MD A-P Factor	0.2767
ms445	HbPbBI_PM_A-P	HbPb Blend PM A-P Factor	0.1951
ms450	HbSoBI_AM_P-A	HbSo Blend AM P-A Factor	0.0847
ms451	HbSoBI_MD_P-A	HbSo Blend MD P-A Factor	0.2008
ms452	HbSoBI_PM_P-A	HbSo Blend PM P-A Factor	0.1935

ms453	HbSoBl_AM_A-P	HbSo Blend AM A-P Factor	0.0175
ms454	HbSoBl_MD_A-P	HbSo Blend MD A-P Factor	0.3579
ms455	HbSoBl_PM_A-P	HbSo Blend PM A-P Factor	0.1457
ms460	HbEsBl_AM_P-A	HbEs Blend AM P-A Factor	0.2349
ms461	HbEsBl_MD_P-A	HbEs Blend MD P-A Factor	0.1695
ms462	HbEsBl_PM_P-A	HbEs Blend PM P-A Factor	0.1215
ms463	HbEsBl_AM_A-P	HbEs Blend AM A-P Factor	0.0915
ms464	HbEsBl_MD_A-P	HbEs Blend MD A-P Factor	0.1687
ms465	HbEsBl_PM_A-P	HbEs Blend PM A-P Factor	0.2139
ms470	NHbWBl_AM_P-A	NHbW Blend AM P-A Factor	0.2036
ms471	NHbWBl_MD_P-A	NHbW Blend MD P-A Factor	0.4482
ms472	NHbWBl_PM_P-A	NHbW Blend PM P-A Factor	0.3482
ms480	NHbOBl_AM_P-A	NHbO Blend AM P-A Factor	0.1202
ms481	NHbOBl_MD_P-A	NHbO Blend MD P-A Factor	0.5406
ms482	NHbOBl_PM_P-A	NHbO Blend PM P-A Factor	0.3392
ms490	Zero	Zero	0.0000
ms500	TrFr_HbWBl_AM_P-A	TrFr HbW Blend AM P-A Factor	0.4195
ms501	TrFr_HbWBl_MD_P-A	TrFr HbW Blend MD P-A Factor	0.0798
ms502	TrFr_HbWBl_PM_P-A	TrFr HbW Blend PM P-A Factor	0.0215
ms503	TrFr_HbWBl_OP_P-A	TrFr HbW Blend OP P-A Factor	0.0145
ms504	TrFr_HbWBl_AM_A-P	TrFr HbW Blend AM A-P Factor	0.0056
ms505	TrFr_HbWBl_MD_A-P	TrFr HbW Blend MD A-P Factor	0.0309
ms506	TrFr_HbWBl_PM_A-P	TrFr HbW Blend PM A-P Factor	0.3106
ms507	TrFr_HbWBl_OP_A-P	TrFr HbW Blend OP A-P Factor	0.1176
ms510	TrFr_HbUbl_AM_P-A	TrFr HbU Blend AM P-A Factor	0.3247
ms511	TrFr_HbUbl_MD_P-A	TrFr HbU Blend MD P-A Factor	0.1513
ms512	TrFr_HbUbl_PM_P-A	TrFr HbU Blend PM P-A Factor	0.0281
ms513	TrFr_HbUbl_OP_P-A	TrFr HbU Blend OP P-A Factor	0.0124
ms514	TrFr_HbUbl_AM_A-P	TrFr HbU Blend AM A-P Factor	0.0042
ms515	TrFr_HbUbl_MD_A-P	TrFr HbU Blend MD A-P Factor	0.0999
ms516	TrFr_HbUbl_PM_A-P	TrFr HbU Blend PM A-P Factor	0.2636
ms517	TrFr_HbUbl_OP_A-P	TrFr HbU Blend OP A-P Factor	0.1158
ms520	TrFr_HbScBl_AM_P-A	TrFr HbSc Blend AM P-A Factor	0.4247
ms521	TrFr_HbScBl_MD_P-A	TrFr HbSc Blend MD P-A Factor	0.0187
ms522	TrFr_HbScBl_PM_P-A	TrFr HbSc Blend PM P-A Factor	0.0030
ms523	TrFr_HbScBl_OP_P-A	TrFr HbSc Blend OP P-A Factor	0.0242
ms524	TrFr_HbScBl_AM_A-P	TrFr HbSc Blend AM A-P Factor	0.0005
ms525	TrFr_HbScBl_MD_A-P	TrFr HbSc Blend MD A-P Factor	0.0402
ms526	TrFr_HbScBl_PM_A-P	TrFr HbSc Blend PM A-P Factor	0.4739
ms527	TrFr_HbScBl_OP_A-P	TrFr HbSc Blend OP A-P Factor	0.0147
ms530	TrFr_HbShBl_AM_P-A	TrFr HbSh Blend AM P-A Factor	0.0688
ms531	TrFr_HbShBl_MD_P-A	TrFr HbSh Blend MD P-A Factor	0.2806
ms532	TrFr_HbShBl_PM_P-A	TrFr HbSh Blend PM P-A Factor	0.0671
ms533	TrFr_HbShBl_OP_P-A	TrFr HbSh Blend OP P-A Factor	0.0239
ms534	TrFr_HbShBl_AM_A-P	TrFr HbSh Blend AM A-P Factor	0.0104
ms535	TrFr_HbShBl_MD_A-P	TrFr HbSh Blend MD A-P Factor	0.1999
ms536	TrFr_HbShBl_PM_A-P	TrFr HbSh Blend PM A-P Factor	0.2343
ms537	TrFr_HbShBl_OP_A-P	TrFr HbSh Blend OP A-P Factor	0.1150
ms540	TrFr_HbPbBl_AM_P-A	TrFr HbPb Blend AM P-A Factor	0.1510
ms541	TrFr_HbPbBl_MD_P-A	TrFr HbPb Blend MD P-A Factor	0.2854
ms542	TrFr_HbPbBl_PM_P-A	TrFr HbPb Blend PM P-A Factor	0.0505
ms543	TrFr_HbPbBl_OP_P-A	TrFr HbPb Blend OP P-A Factor	0.0320
ms544	TrFr_HbPbBl_AM_A-P	TrFr HbPb Blend AM A-P Factor	0.0165
ms545	TrFr_HbPbBl_MD_A-P	TrFr HbPb Blend MD A-P Factor	0.2016
ms546	TrFr_HbPbBl_PM_A-P	TrFr HbPb Blend PM A-P Factor	0.1817
ms547	TrFr_HbPbBl_OP_A-P	TrFr HbPb Blend OP A-P Factor	0.0812
ms550	TrFr_HbSoBl_AM_P-A	TrFr HbSo Blend AM P-A Factor	0.1111
ms551	TrFr_HbSoBl_MD_P-A	TrFr HbSo Blend MD P-A Factor	0.1688
ms552	TrFr_HbSoBl_PM_P-A	TrFr HbSo Blend PM P-A Factor	0.1339
ms553	TrFr_HbSoBl_OP_P-A	TrFr HbSo Blend OP P-A Factor	0.0784
ms554	TrFr_HbSoBl_AM_A-P	TrFr HbSo Blend AM A-P Factor	0.0092
ms555	TrFr_HbSoBl_MD_A-P	TrFr HbSo Blend MD A-P Factor	0.0957
ms556	TrFr_HbSoBl_PM_A-P	TrFr HbSo Blend PM A-P Factor	0.1407
ms557	TrFr_HbSoBl_OP_A-P	TrFr HbSo Blend OP A-P Factor	0.2622
ms560	TrFr_HbEsBl_AM_P-A	TrFr HbEs Blend AM P-A Factor	0.2394
ms561	TrFr_HbEsBl_MD_P-A	TrFr HbEs Blend MD P-A Factor	0.1639
ms562	TrFr_HbEsBl_PM_P-A	TrFr HbEs Blend PM P-A Factor	0.0448
ms563	TrFr_HbEsBl_OP_P-A	TrFr HbEs Blend OP P-A Factor	0.0500
ms564	TrFr_HbEsBl_AM_A-P	TrFr HbEs Blend AM A-P Factor	0.0250
ms565	TrFr_HbEsBl_MD_A-P	TrFr HbEs Blend MD A-P Factor	0.1170
ms566	TrFr_HbEsBl_PM_A-P	TrFr HbEs Blend PM A-P Factor	0.2282
ms567	TrFr_HbEsBl_OP_A-P	TrFr HbEs Blend OP A-P Factor	0.1317
ms570	TrFr_NHbWBl_AM_P-A	TrFr NHbW Blend AM P-A Factor	0.1436
ms571	TrFr_NHbWBl_MD_P-A	TrFr NHbW Blend MD P-A Factor	0.2934

ms572	TrFr_NHbWBl_PM_P-A	TrFr NHbW Blend PM P-A Factor	0.4743
ms573	TrFr_NHbWBl_OP_P-A	TrFr NHbW Blend OP P-A Factor	0.0887
ms580	TrFr_NHbOBl_AM_P-A	TrFr NHbO Blend AM P-A Factor	0.0735
ms581	TrFr_NHbOBl_MD_P-A	TrFr NHbO Blend MD P-A Factor	0.4560
ms582	TrFr_NHbOBl_PM_P-A	TrFr NHbO Blend PM P-A Factor	0.3639
ms583	TrFr_NHbOBl_OP_P-A	TrFr NHbO Blend OP P-A Factor	0.1066
ms8030	gg27nonret	non-retail employment in gg27	1005147.7500
ms8050	RGphAM	Rg Truck Peak Hour Factor AM	0.2600
ms8051	RGphMD	Rg Truck Peak Hour Factor MD	0.2410
ms8052	RGphPM	Rg Truck Peak Hour Factor PM	0.2410

Matrix	Name	Description
mo10	TotPop	POP_Total
mo11	Pop0t4	POP_0to4
mo12	Pop5t12	POP_5to12
mo13	Pop13t17	POP_13to17
mo14	Pop18t24	POP_18to24
mo15	Pop25t34	POP_25to34
mo16	Pop35t54	POP_35to54
mo17	Pop55t64	POP_55to64
mo18	Pop65Up	POP_65plus
mo20	TotEmp	EMP_Total
mo21	EmpConMfg	Construct_Mfg
mo22	EmpFire	FIRE
mo23	EmpTcuWh	TCU_Wholesale
mo24	EmpRet	Retail
mo25	EmpBoS	Business_OtherServices
mo26	EmpAcFoInCu	AccomFood_InfoCult
mo27	EmpHeEdPuAd	Health_Educat_PubAdmin
mo30	EnrolElem	Elementary_Enrolment
mo31	EnrolSec	Secondary_Enrolment
mo32	EnrolPsFte	PostSecFTE
mo40	TotHh	HHOLDS_Total
mo41	Hh1p	HHOLDS_1Person
mo42	Hh2p	HHOLDS_2Person
mo43	Hh3p	HHOLDS_3Person
mo44	Hh4pUp	HHOLDS_4plusPerson
mo50	areahc	taz_a_area_hec
mo51	zoneindex	Zone numbers
mo60	prk2hr	parkingcost2hr
mo61	prk8hr	parkingcost8hr
mo69	railStn	railstationinzone
mo70	cs250	car_share_250m
mo71	cs500	car_share_500m
mo80	bikesc	bikescore
mo90	prcost	pnr_lot_cost
mo91	prcap	pnr_lot_capacity
mo92	prtrmt	pnr_terminal_time
mo100	d_cbd	cbd dummy
mo101	d_tc	towncentre dummy
mo102	d_uni	university dummy
mo103	d_ubc	ubc dummy
mo104	d_sfu	sfu dummy
mo105	d_air	airport dummy
mo106	d_yvr	yvr dummy



mo107	d_ns	northshore dummy
mo108	d_dtes	downtowneastidedummy
mo109	d_fry	ferrydummy
mo110	d_hosp	hospitaldummy
mo120	ga_ensem	ga Ensemble Groups
mo121	gb_ensem	gb Ensemble Groups
mo122	gc_ensem	gc Ensemble Groups
mo123	gd_ensem	gd Ensemble Groups
mo124	ge_ensem	ge Ensemble Groups
mo125	gf_ensem	gf Ensemble Groups
mo126	gg_ensem	gg Ensemble Groups
mo127	gh_ensem	gh Ensemble Groups
mo128	gi_ensem	gi Ensemble Groups
mo129	gj_ensem	gj Ensemble Groups
mo130	gk_ensem	gk Ensemble Groups
mo131	gl_ensem	gl Ensemble Groups
mo132	gm_ensem	gm Ensemble Groups
mo133	gn_ensem	gn Ensemble Groups
mo134	go_ensem	go Ensemble Groups
mo135	gp_ensem	gp Ensemble Groups
mo136	gq_ensem	gq Ensemble Groups
mo137	gr_ensem	gr Ensemble Groups
mo138	gs_ensem	gs Ensemble Groups
mo139	gt_ensem	gt Ensemble Groups
mo140	gu_ensem	gu Ensemble Groups
mo141	gv_ensem	gv Ensemble Groups
mo142	gw_ensem	gw Ensemble Groups
mo143	gx_ensem	gx Ensemble Groups
mo144	gy_ensem	gy Ensemble Groups
mo145	gz_ensem	gz Ensemble Groups
mo200	popdens	Population density (per/hect)
mo201	empdens	Employment density (job/hect)
mo202	combinedens	Pop + Emp density (per hect)
mo205	popdensln	Log Population density (per/hect)
mo206	empdensln	Log Employment density (job/hect)
mo207	combinedensln	Log Pop + Emp density (per hect)
mo210	autoAcc	Auto Accessibility
mo211	transitAcc	Transit Accessibility
mo212	distCbd	Distance to CBD
mo213	distTc	Distance to Town Centre
mo214	uniAcc	University Accessibility
mo215	socAcc	Social Recreational Accessibility
mo220	autoAccLn	Log Auto Accessibility
mo221	transitAccLn	Log Transit Accessibility
mo222	distCbdLn	Log Distance to CBD
mo223	distTcLn	Log Distance to Town Centre
mo224	uniAccLn	Log University Accessibility

mo225	socAccLn	Log Social Recreational Accessibility
mo2000	hbwInc1Au0prd	hbwInc1Au0 Productions
mo2001	hbwInc2Au0prd	hbwInc2Au0 Productions
mo2002	hbwInc3Au0prd	hbwInc3Au0 Productions
mo2003	hbwInc1Au1prd	hbwInc1Au1 Productions
mo2004	hbwInc2Au1prd	hbwInc2Au1 Productions
mo2005	hbwInc3Au1prd	hbwInc3Au1 Productions
mo2006	hbwInc1Au2prd	hbwInc1Au2 Productions
mo2007	hbwInc2Au2prd	hbwInc2Au2 Productions
mo2008	hbwInc3Au2prd	hbwInc3Au2 Productions
mo2010	hbescInc1Au0prd	hbescInc1Au0 Productions
mo2011	hbescInc2Au0prd	hbescInc2Au0 Productions
mo2012	hbescInc3Au0prd	hbescInc3Au0 Productions
mo2013	hbescInc1Au1prd	hbescInc1Au1 Productions
mo2014	hbescInc2Au1prd	hbescInc2Au1 Productions
mo2015	hbescInc3Au1prd	hbescInc3Au1 Productions
mo2016	hbescInc1Au2prd	hbescInc1Au2 Productions
mo2017	hbescInc2Au2prd	hbescInc2Au2 Productions
mo2018	hbescInc3Au2prd	hbescInc3Au2 Productions
mo2020	hbpbInc1Au0prd	hbpbInc1Au0 Productions
mo2021	hbpbInc2Au0prd	hbpbInc2Au0 Productions
mo2022	hbpbInc3Au0prd	hbpbInc3Au0 Productions
mo2023	hbpbInc1Au1prd	hbpbInc1Au1 Productions
mo2024	hbpbInc2Au1prd	hbpbInc2Au1 Productions
mo2025	hbpbInc3Au1prd	hbpbInc3Au1 Productions
mo2026	hbpbInc1Au2prd	hbpbInc1Au2 Productions
mo2027	hbpbInc2Au2prd	hbpbInc2Au2 Productions
mo2028	hbpbInc3Au2prd	hbpbInc3Au2 Productions
mo2030	hbschInc1Au0prd	hbschInc1Au0 Productions
mo2031	hbschInc2Au0prd	hbschInc2Au0 Productions
mo2032	hbschInc3Au0prd	hbschInc3Au0 Productions
mo2033	hbschInc1Au1prd	hbschInc1Au1 Productions
mo2034	hbschInc2Au1prd	hbschInc2Au1 Productions
mo2035	hbschInc3Au1prd	hbschInc3Au1 Productions
mo2036	hbschInc1Au2prd	hbschInc1Au2 Productions
mo2037	hbschInc2Au2prd	hbschInc2Au2 Productions
mo2038	hbschInc3Au2prd	hbschInc3Au2 Productions
mo2040	hbshopInc1Au0prd	hbshopInc1Au0 Productions
mo2041	hbshopInc2Au0prd	hbshopInc2Au0 Productions
mo2042	hbshopInc3Au0prd	hbshopInc3Au0 Productions
mo2043	hbshopInc1Au1prd	hbshopInc1Au1 Productions
mo2044	hbshopInc2Au1prd	hbshopInc2Au1 Productions
mo2045	hbshopInc3Au1prd	hbshopInc3Au1 Productions
mo2046	hbshopInc1Au2prd	hbshopInc1Au2 Productions
mo2047	hbshopInc2Au2prd	hbshopInc2Au2 Productions
mo2048	hbshopInc3Au2prd	hbshopInc3Au2 Productions
mo2050	hbsocInc1Au0prd	hbsocInc1Au0 Productions

mo2051	hbsocInc2Au0prd	hbsocInc2Au0 Productions
mo2052	hbsocInc3Au0prd	hbsocInc3Au0 Productions
mo2053	hbsocInc1Au1prd	hbsocInc1Au1 Productions
mo2054	hbsocInc2Au1prd	hbsocInc2Au1 Productions
mo2055	hbsocInc3Au1prd	hbsocInc3Au1 Productions
mo2056	hbsocInc1Au2prd	hbsocInc1Au2 Productions
mo2057	hbsocInc2Au2prd	hbsocInc2Au2 Productions
mo2058	hbsocInc3Au2prd	hbsocInc3Au2 Productions
mo2060	hbuprd	hbu productions
mo2070	nhbwprd	nhbw productions
mo2080	nhboprd	nhbo productions
mo8020	IRLgPr	IR LgTruck Productions
mo8021	IRHvPr	IR HvTruck Productions
mo8022	IRLgAdj	IR Lg Adjustment Calc
mo8023	IRHvAdj	IR Hv Adjustment Calc
mo8030	PMVrat	PMV activity ratio
mo8050	RGLgPr	Rg Daily LgTruck Trip Prod
mo8051	RGHvPr	Rg Daily HvTruck Trip Prod

Matrix	Name	Description
md2000	hbwatr	hbw Attractions
md2010	hbescatr	hbesc Attractions
md2020	hbpbatr	hbpb Attractions
md2030	hbschatr	hbsch Attractions
md2031	hbschprgx	hbsch Production Sum by GX
md2032	hbschsc	hbsch Attraction by GX
md2040	hbshopatr	hbshop Attractions
md2050	hbsocatr	hbsoc Attractions
md2060	hbuatr	hbu Attractions
md2070	nhbwatr	nhbw Attractions
md2080	nhboatr	nhbo Attractions
md8020	IRLgAt	IR LgTruck Attractions
md8021	IRHvAt	IR HvTruck Attractions
md8022	IRLgAdj	IR Lg Adjustment Calc
md8023	IRHvAdj	IR Hv Adjustment Calc
md8050	RGLgAt	Rg Daily LgTruck Trip Att
md8051	RGHvAt	Rg Daily HvTruck Trip Att

Matrix	Name	Description
mf70	extSovAm	External Demand SOV AM
mf71	extHovAm	External Demand HOV AM
mf75	extSovMd	External Demand SOV MD
mf76	extHovMd	External Demand HOV MD
mf80	extSovPm	External Demand SOV PM
mf81	extHovPm	External Demand HOV PM
mf85	MD_Demadj	MD Incr Calibration Matrix
mf90	bikeskim	Weighted Average IJ bike score
mf91	distAON	All or nothing initial distance skim
mf92	Bridge_pen_AM	Bridge_pen_AM
mf93	Bridge_pen_PM	Bridge_pen_PM
mf95	fare_zones	Fare Zones Travelled
mf200	SOV_pertrp_VOT_1_Am	SOV per-trips VOT 1 AM
mf201	SOV_pertrp_VOT_2_Am	SOV per-trips VOT 2 AM
mf202	SOV_pertrp_VOT_3_Am	SOV per-trips VOT 3 AM
mf203	SOV_pertrp_VOT_4_Am	SOV per-trips VOT 4 AM
mf206	HOV_pertrp_VOT_1_Am	HOV per-trips VOT 1 AM
mf207	HOV_pertrp_VOT_2_Am	HOV per-trips VOT 2 AM
mf208	HOV_pertrp_VOT_3_Am	HOV per-trips VOT 3 AM
mf209	HOV_pertrp_VOT_4_Am	HOV per-trips VOT 4 AM
mf215	Wk_pertrp_Am	Walk per-trips AM
mf216	Bk_pertrp_Am	Bike per-trips AM
mf230	SOV_pertrp_VOT_1_Md	SOV per-trips VOT 1 MD
mf231	SOV_pertrp_VOT_2_Md	SOV per-trips VOT 2 MD
mf232	SOV_pertrp_VOT_3_Md	SOV per-trips VOT 3 MD
mf233	SOV_pertrp_VOT_4_Md	SOV per-trips VOT 4 MD
mf236	HOV_pertrp_VOT_1_Md	HOV per-trips VOT 1 MD
mf237	HOV_pertrp_VOT_2_Md	HOV per-trips VOT 2 MD
mf238	HOV_pertrp_VOT_3_Md	HOV per-trips VOT 3 MD
mf239	HOV_pertrp_VOT_4_Md	HOV per-trips VOT 4 MD
mf245	Wk_pertrp_Md	Walk per-trips MD
mf246	Bk_pertrp_Md	Bike per-trips MD
mf260	SOV_pertrp_VOT_1_Pm	SOV per-trips VOT 1 PM
mf261	SOV_pertrp_VOT_2_Pm	SOV per-trips VOT 2 PM
mf262	SOV_pertrp_VOT_3_Pm	SOV per-trips VOT 3 PM
mf263	SOV_pertrp_VOT_4_Pm	SOV per-trips VOT 4 PM
mf266	HOV_pertrp_VOT_1_Pm	HOV per-trips VOT 1 PM
mf267	HOV_pertrp_VOT_2_Pm	HOV per-trips VOT 2 PM
mf268	HOV_pertrp_VOT_3_Pm	HOV per-trips VOT 3 PM
mf269	HOV_pertrp_VOT_4_Pm	HOV per-trips VOT 4 PM
mf275	Wk_pertrp_Pm	Walk per-trips PM
mf276	Bk_pertrp_Pm	Bike per-trips PM
mf300	SOV_drvtrp_VOT_1_Am	SOV drv-trips VOT 1 AM
mf301	SOV_drvtrp_VOT_2_Am	SOV drv-trips VOT 2 AM
mf302	SOV_drvtrp_VOT_3_Am	SOV drv-trips VOT 3 AM
mf303	SOV_drvtrp_VOT_4_Am	SOV drv-trips VOT 4 AM
mf306	HOV_drvtrp_VOT_1_Am	HOV drv-trips VOT 1 AM
mf307	HOV_drvtrp_VOT_2_Am	HOV drv-trips VOT 2 AM
mf308	HOV_drvtrp_VOT_3_Am	HOV drv-trips VOT 3 AM
mf309	HOV_drvtrp_VOT_4_Am	HOV drv-trips VOT 4 AM
mf312	lgvPceAm	light trucks PCE AM
mf313	hgvPceAm	heavy trucks PCE AM
mf314	busAm	Bus Person Trips AM
mf315	railAm	Rail Person Trips AM
mf316	WCEAm	WCE Person Trips AM
mf320	SOV_drvtrp_VOT_1_Md	SOV drv-trips VOT 1 MD
mf321	SOV_drvtrp_VOT_2_Md	SOV drv-trips VOT 2 MD
mf322	SOV_drvtrp_VOT_3_Md	SOV drv-trips VOT 3 MD
mf323	SOV_drvtrp_VOT_4_Md	SOV drv-trips VOT 4 MD
mf326	HOV_drvtrp_VOT_1_Md	HOV drv-trips VOT 1 MD
mf327	HOV_drvtrp_VOT_2_Md	HOV drv-trips VOT 2 MD
mf328	HOV_drvtrp_VOT_3_Md	HOV drv-trips VOT 3 MD
mf329	HOV_drvtrp_VOT_4_Md	HOV drv-trips VOT 4 MD
mf332	lgvPceMd	light trucks PCE MD
mf333	hgvPceMd	heavy trucks PCE MD
mf334	busMd	Bus Person Trips MD
mf335	railMd	Rail Person Trips MD
mf336	WCEMd	WCE Person Trips MD
mf340	SOV_drvtrp_VOT_1_Pm	SOV drv-trips VOT 1 PM
mf341	SOV_drvtrp_VOT_2_Pm	SOV drv-trips VOT 2 PM

mf342	SOV_drvtrp_VOT_3_Pm	SOV drv-trips VOT 3 PM
mf343	SOV_drvtrp_VOT_4_Pm	SOV drv-trips VOT 4 PM
mf346	HOV_drvtrp_VOT_1_Pm	HOV drv-trips VOT 1 PM
mf347	HOV_drvtrp_VOT_2_Pm	HOV drv-trips VOT 2 PM
mf348	HOV_drvtrp_VOT_3_Pm	HOV drv-trips VOT 3 PM
mf349	HOV_drvtrp_VOT_4_Pm	HOV drv-trips VOT 4 PM
mf352	lgvPcePm	light trucks PCE PM
mf353	hgvPcePm	heavy trucks PCE PM
mf354	busPm	Bus Person Trips PM
mf355	railPm	Rail Person Trips PM
mf356	WCEPm	WCE Person Trips PM
mf3000	HbWSOV11PerTrips	HbW SOV Low Income Per-Trips
mf3001	HbWSOV12PerTrips	HbW SOV Med Income Per-Trips
mf3002	HbWSOV13PerTrips	HbW SOV High Income Per-Trips
mf3005	HbWHV211PerTrips	HbW HV2 Low Income Per-Trips
mf3006	HbWHV212PerTrips	HbW HV2 Med Income Per-Trips
mf3007	HbWHV213PerTrips	HbW HV2 High Income Per-Trips
mf3010	HbWHV3+11PerTrips	HbW HV3+ Low Income Per-Trips
mf3011	HbWHV3+12PerTrips	HbW HV3+ Med Income Per-Trips
mf3012	HbWHV3+13PerTrips	HbW HV3+ High Income Per-Trips
mf3015	HbWBusPerTrips	HbW Bus Per-Trips
mf3020	HbWRailPerTrips	HbW Rail Per-Trips
mf3025	HbWWCEPerTrips	HbW WCE Per-Trips
mf3030	HbWWalkPerTrips	HbW Walk Per-Trips
mf3035	HbWBikePerTrips	HbW Bike Per-Trips
mf3050	HbWP-A11A0	HbW P-A Trips I1 A0
mf3051	HbWP-A11A1	HbW P-A Trips I1 A1
mf3052	HbWP-A11A2	HbW P-A Trips I1 A2
mf3053	HbWP-A12A0	HbW P-A Trips I1 A0
mf3054	HbWP-A12A1	HbW P-A Trips I1 A1
mf3055	HbWP-A12A2	HbW P-A Trips I1 A2
mf3056	HbWP-A13A0	HbW P-A Trips I1 A0
mf3057	HbWP-A13A1	HbW P-A Trips I1 A1
mf3058	HbWP-A13A2	HbW P-A Trips I1 A2
mf3100	HbUSOVPerTrips	HbU SOV Per-Trips
mf3105	HbUHOVPerTrips	HbU HOV Per-Trips
mf3115	HbUBusPerTrips	HbU Bus Per-Trips
mf3120	HbURailPerTrips	HbU Rail Per-Trips
mf3130	HbUWalkPerTrips	HbU Walk Per-Trips
mf3135	HbUBikePerTrips	HbU Bike Per-Trips
mf3150	HbUP-A	HbU P-A Trips
mf3205	HbScHOV11PerTrips	HbSc HV2+ Low Income Per-Trips
mf3206	HbScHOV12PerTrips	HbSc HV2+ Med Income Per-Trips
mf3207	HbScHOV13PerTrips	HbSc HV2+ High Income Per-Trips
mf3215	HbScBusPerTrips	HbSc Bus Per-Trips
mf3220	HbScRailPerTrips	HbSc Rail Per-Trips
mf3230	HbScWalkPerTrips	HbSc Walk Per-Trips
mf3235	HbScBikePerTrips	HbSc Bike Per-Trips
mf3250	HbScP-A11A0	HbSc P-A Trips I1 A0
mf3251	HbScP-A11A1	HbSc P-A Trips I1 A1
mf3252	HbScP-A11A2	HbSc P-A Trips I1 A2
mf3253	HbScP-A12A0	HbSc P-A Trips I1 A0
mf3254	HbScP-A12A1	HbSc P-A Trips I1 A1
mf3255	HbScP-A12A2	HbSc P-A Trips I1 A2
mf3256	HbScP-A13A0	HbSc P-A Trips I1 A0
mf3257	HbScP-A13A1	HbSc P-A Trips I1 A1
mf3258	HbScP-A13A2	HbSc P-A Trips I1 A2
mf3300	HbShSOV11PerTrips	HbSh SOV Low Income Per-Trips
mf3301	HbShSOV12PerTrips	HbSh SOV Med Income Per-Trips
mf3302	HbShSOV13PerTrips	HbSh SOV High Income Per-Trips
mf3305	HbShHOV11PerTrips	HbSh HOV Low Income Per-Trips
mf3306	HbShHOV12PerTrips	HbSh HOV Med Income Per-Trips
mf3307	HbShHOV13PerTrips	HbSh HOV High Income Per-Trips
mf3315	HbShBusPerTrips	HbSh Bus Per-Trips
mf3320	HbShRailPerTrips	HbSh Rail Per-Trips
mf3330	HbShWalkPerTrips	HbSh Walk Per-Trips
mf3335	HbShBikePerTrips	HbSh Bike Per-Trips
mf3350	HbShP-A11A0	HbSh P-A Trips I1 A0
mf3351	HbShP-A11A1	HbSh P-A Trips I1 A1
mf3352	HbShP-A11A2	HbSh P-A Trips I1 A2
mf3353	HbShP-A12A0	HbSh P-A Trips I1 A0
mf3354	HbShP-A12A1	HbSh P-A Trips I1 A1
mf3355	HbShP-A12A2	HbSh P-A Trips I1 A2
mf3356	HbShP-A13A0	HbSh P-A Trips I1 A0

mf3357	HbShP-AI3A1	HbSh P-A Trips I1 A1
mf3358	HbShP-AI3A2	HbSh P-A Trips I1 A2
mf3400	HbPbSOV11PerTrips	HbPb SOV Low Income Per-Trips
mf3401	HbPbSOV12PerTrips	HbPb SOV Med Income Per-Trips
mf3402	HbPbSOV13PerTrips	HbPb SOV High Income Per-Trips
mf3405	HbPbHOV11PerTrips	HbPb HOV Low Income Per-Trips
mf3406	HbPbHOV12PerTrips	HbPb HOV Med Income Per-Trips
mf3407	HbPbHOV13PerTrips	HbPb HOV High Income Per-Trips
mf3415	HbPbBusPerTrips	HbPb Bus Per-Trips
mf3420	HbPbRailPerTrips	HbPb Rail Per-Trips
mf3430	HbPbWalkPerTrips	HbPb Walk Per-Trips
mf3435	HbPbBikePerTrips	HbPb Bike Per-Trips
mf3450	HbPbP-AI1A0	HbPb P-A Trips I1 A0
mf3451	HbPbP-AI1A1	HbPb P-A Trips I1 A1
mf3452	HbPbP-AI1A2	HbPb P-A Trips I1 A2
mf3453	HbPbP-AI2A0	HbPb P-A Trips I1 A0
mf3454	HbPbP-AI2A1	HbPb P-A Trips I1 A1
mf3455	HbPbP-AI2A2	HbPb P-A Trips I1 A2
mf3456	HbPbP-AI3A0	HbPb P-A Trips I1 A0
mf3457	HbPbP-AI3A1	HbPb P-A Trips I1 A1
mf3458	HbPbP-AI3A2	HbPb P-A Trips I1 A2
mf3500	HbSoSOV11PerTrips	HbSo SOV Low Income Per-Trips
mf3501	HbSoSOV12PerTrips	HbSo SOV Med Income Per-Trips
mf3502	HbSoSOV13PerTrips	HbSo SOV High Income Per-Trips
mf3505	HbSoHOV11PerTrips	HbSo HOV Low Income Per-Trips
mf3506	HbSoHOV12PerTrips	HbSo HOV Med Income Per-Trips
mf3507	HbSoHOV13PerTrips	HbSo HOV High Income Per-Trips
mf3515	HbSoBusPerTrips	HbSo Bus Per-Trips
mf3520	HbSoRailPerTrips	HbSo Rail Per-Trips
mf3530	HbSoWalkPerTrips	HbSo Walk Per-Trips
mf3535	HbSoBikePerTrips	HbSo Bike Per-Trips
mf3550	HbSoP-AI1A0	HbSo P-A Trips I1 A0
mf3551	HbSoP-AI1A1	HbSo P-A Trips I1 A1
mf3552	HbSoP-AI1A2	HbSo P-A Trips I1 A2
mf3553	HbSoP-AI2A0	HbSo P-A Trips I1 A0
mf3554	HbSoP-AI2A1	HbSo P-A Trips I1 A1
mf3555	HbSoP-AI2A2	HbSo P-A Trips I1 A2
mf3556	HbSoP-AI3A0	HbSo P-A Trips I1 A0
mf3557	HbSoP-AI3A1	HbSo P-A Trips I1 A1
mf3558	HbSoP-AI3A2	HbSo P-A Trips I1 A2
mf3600	HbEsSOV11PerTrips	HbEs SOV Low Income Per-Trips
mf3601	HbEsSOV12PerTrips	HbEs SOV Med Income Per-Trips
mf3602	HbEsSOV13PerTrips	HbEs SOV High Income Per-Trips
mf3605	HbEsHOV11PerTrips	HbEs HOV Low Income Per-Trips
mf3606	HbEsHOV12PerTrips	HbEs HOV Med Income Per-Trips
mf3607	HbEsHOV13PerTrips	HbEs HOV High Income Per-Trips
mf3615	HbEsBusPerTrips	HbEs Bus Per-Trips
mf3620	HbEsRailPerTrips	HbEs Rail Per-Trips
mf3630	HbEsWalkPerTrips	HbEs Walk Per-Trips
mf3635	HbEsBikePerTrips	HbEs Bike Per-Trips
mf3650	HbEsP-AI1A0	HbEs P-A Trips I1 A0
mf3651	HbEsP-AI1A1	HbEs P-A Trips I1 A1
mf3652	HbEsP-AI1A2	HbEs P-A Trips I1 A2
mf3653	HbEsP-AI2A0	HbEs P-A Trips I1 A0
mf3654	HbEsP-AI2A1	HbEs P-A Trips I1 A1
mf3655	HbEsP-AI2A2	HbEs P-A Trips I1 A2
mf3656	HbEsP-AI3A0	HbEs P-A Trips I1 A0
mf3657	HbEsP-AI3A1	HbEs P-A Trips I1 A1
mf3658	HbEsP-AI3A2	HbEs P-A Trips I1 A2
mf3700	NHbWSOVPerTrips	NHbW SOV Per-Trips
mf3705	NHbWHOVPPerTrips	NHbW HOV Per-Trips
mf3715	NHbWBusPerTrips	NHbW Bus Per-Trips
mf3720	NHbWRailPerTrips	NHbW Rail Per-Trips
mf3730	NHbWWalkPerTrips	NHbW Walk Per-Trips
mf3735	NHbWBikePerTrips	NHbW Bike Per-Trips
mf3750	NHbWP-A	NHbW P-A Trips
mf3800	NHbOSOVPerTrips	NHbO SOV Per-Trips
mf3805	NHbOHOVPerTrips	NHbO HOV Per-Trips
mf3815	NHbOBusPerTrips	NHbO Bus Per-Trips
mf3820	NHbORailPerTrips	NHbO Rail Per-Trips
mf3830	NHbOWalkPerTrips	NHbO Walk Per-Trips
mf3835	NHbOBikePerTrips	NHbO Bike Per-Trips
mf3850	NHbOP-A	NHbO P-A Trips
mf5000	AmSovOpCstVOT1	Am Sov VOT1 Op Cost

mf5001	AmSovTimeVOT1	Am Sov VOT1 Time
mf5003	AmSovOpCstVOT2	Am Sov VOT2 Op Cost
mf5004	AmSovTimeVOT2	Am Sov VOT2 Time
mf5006	AmSovOpCstVOT3	Am Sov VOT3 Op Cost
mf5007	AmSovTimeVOT3	Am Sov VOT3 Time
mf5009	AmSovOpCstVOT4	Am Sov VOT4 Op Cost
mf5010	AmSovTimeVOT4	Am Sov VOT4 Time
mf5012	AmHovOpCstVOT1	Am Hov VOT1 Op Cost
mf5013	AmHovTimeVOT1	Am Hov VOT1 Time
mf5015	AmHovOpCstVOT2	Am Hov VOT2 Op Cost
mf5016	AmHovTimeVOT2	Am Hov VOT2 Time
mf5018	AmHovOpCstVOT3	Am Hov VOT3 Op Cost
mf5019	AmHovTimeVOT3	Am Hov VOT3 Time
mf5021	AmHovOpCstVOT4	Am Hov VOT4 Op Cost
mf5022	AmHovTimeVOT4	Am Hov VOT4 Time
mf5024	AmLgvOpCst	Am LGV Op Cost
mf5025	AmLgvTime	Am LGV Time
mf5027	AmHgvOpCst	Am HGV Op Cost
mf5028	AmHgvTime	Am HGV Time
mf5030	MdSovOpCstVOT1	Md Sov VOT1 Op Cost
mf5031	MdSovTimeVOT1	Md Sov VOT1 Time
mf5033	MdSovOpCstVOT2	Md Sov VOT2 Op Cost
mf5034	MdSovTimeVOT2	Md Sov VOT2 Time
mf5036	MdSovOpCstVOT3	Md Sov VOT3 Op Cost
mf5037	MdSovTimeVOT3	Md Sov VOT3 Time
mf5039	MdSovOpCstVOT4	Md Sov VOT4 Op Cost
mf5040	MdSovTimeVOT4	Md Sov VOT4 Time
mf5042	MdHovOpCstVOT1	Md Hov VOT1 Op Cost
mf5043	MdHovTimeVOT1	Md Hov VOT1 Time
mf5045	MdHovOpCstVOT2	Md Hov VOT2 Op Cost
mf5046	MdHovTimeVOT2	Md Hov VOT2 Time
mf5048	MdHovOpCstVOT3	Md Hov VOT3 Op Cost
mf5049	MdHovTimeVOT3	Md Hov VOT3 Time
mf5051	MdHovOpCstVOT4	Md Hov VOT4 Op Cost
mf5052	MdHovTimeVOT4	Md Hov VOT4 Time
mf5054	MdLgvOpCst	Md LGV Op Cost
mf5055	MdLgvTime	Md LGV Time
mf5057	MdHgvOpCst	Md HGV Op Cost
mf5058	MdHgvTime	Md HGV Time
mf5060	PmSovOpCstVOT1	Pm Sov VOT1 Op Cost
mf5061	PmSovTimeVOT1	Pm Sov VOT1 Time
mf5063	PmSovOpCstVOT2	Pm Sov VOT2 Op Cost
mf5064	PmSovTimeVOT2	Pm Sov VOT2 Time
mf5066	PmSovOpCstVOT3	Pm Sov VOT3 Op Cost
mf5067	PmSovTimeVOT3	Pm Sov VOT3 Time
mf5069	PmSovOpCstVOT4	Pm Sov VOT4 Op Cost
mf5070	PmSovTimeVOT4	Pm Sov VOT4 Time
mf5072	PmHovOpCstVOT1	Pm Hov VOT1 Op Cost
mf5073	PmHovTimeVOT1	Pm Hov VOT1 Time
mf5075	PmHovOpCstVOT2	Pm Hov VOT2 Op Cost
mf5076	PmHovTimeVOT2	Pm Hov VOT2 Time
mf5078	PmHovOpCstVOT3	Pm Hov VOT3 Op Cost
mf5079	PmHovTimeVOT3	Pm Hov VOT3 Time
mf5081	PmHovOpCstVOT4	Pm Hov VOT4 Op Cost
mf5082	PmHovTimeVOT4	Pm Hov VOT4 Time
mf5084	PmLgvOpCst	Pm LGV Op Cost
mf5085	PmLgvTime	Pm LGV Time
mf5087	PmHgvOpCst	Pm HGV Op Cost
mf5088	PmHgvTime	Pm HGV Time
mf5100	HbWBI SovCost_I1	HbW BI Sov Cost_Low_Income
mf5101	HbWBI SovTime_I1	HbW BI Sov Time_Low_Income
mf5102	HbWBI SovToll_I1	HbW BI Sov Toll_Low_Income
mf5103	HbWBI SovCost_I2	HbW BI Sov Cost_Med_Income
mf5104	HbWBI SovTime_I2	HbW BI Sov Time_Med_Income
mf5105	HbWBI SovToll_I2	HbW BI Sov Toll_Med_Income
mf5106	HbWBI SovCost_I3	HbW BI Sov Cost_High_Income
mf5107	HbWBI SovTime_I3	HbW BI Sov Time_High_Income
mf5108	HbWBI SovToll_I3	HbW BI Sov Toll_High_Income
mf5110	HbWBI HovCost_I1	HbW BI Hov Cost_Low_Income
mf5111	HbWBI HovTime_I1	HbW BI Hov Time_Low_Income
mf5112	HbWBI HovToll_I1	HbW BI Hov Toll_Low_Income
mf5113	HbWBI HovCost_I2	HbW BI Hov Cost_Med_Income
mf5114	HbWBI HovTime_I2	HbW BI Hov Time_Med_Income
mf5115	HbWBI HovToll_I2	HbW BI Hov Toll_Med_Income



mf5116	HbWBIHovCost_I3	HbW BI Hov Cost_High_Income
mf5117	HbWBIHovTime_I3	HbW BI Hov Time_High_Income
mf5118	HbWBIHovToll_I3	HbW BI Hov Toll_High_Income
mf5120	HbShBIHovCost_I1	HbSh BI Sov Cost_Low_Income
mf5121	HbShBIHovTime_I1	HbSh BI Sov Time_Low_Income
mf5122	HbShBIHovToll_I1	HbSh BI Sov Toll_Low_Income
mf5123	HbShBIHovCost_I2	HbSh BI Sov Cost_Med_Income
mf5124	HbShBIHovTime_I2	HbSh BI Sov Time_Med_Income
mf5125	HbShBIHovToll_I2	HbSh BI Sov Toll_Med_Income
mf5126	HbShBIHovCost_I3	HbSh BI Sov Cost_High_Income
mf5127	HbShBIHovTime_I3	HbSh BI Sov Time_High_Income
mf5128	HbShBIHovToll_I3	HbSh BI Sov Toll_High_Income
mf5130	HbShBIHovCost_I1	HbSh BI Hov Cost_Low_Income
mf5131	HbShBIHovTime_I1	HbSh BI Hov Time_Low_Income
mf5132	HbShBIHovToll_I1	HbSh BI Hov Toll_Low_Income
mf5133	HbShBIHovCost_I2	HbSh BI Hov Cost_Med_Income
mf5134	HbShBIHovTime_I2	HbSh BI Hov Time_Med_Income
mf5135	HbShBIHovToll_I2	HbSh BI Hov Toll_Med_Income
mf5136	HbShBIHovCost_I3	HbSh BI Hov Cost_High_Income
mf5137	HbShBIHovTime_I3	HbSh BI Hov Time_High_Income
mf5138	HbShBIHovToll_I3	HbSh BI Hov Toll_High_Income
mf5139	HbShBI_BPEN	HbShopping Bridge Penalty
mf5140	HbPbBIHovCost_I1	HbPb BI Sov Cost_Low_Income
mf5141	HbPbBIHovTime_I1	HbPb BI Sov Time_Low_Income
mf5142	HbPbBIHovToll_I1	HbPb BI Sov Toll_Low_Income
mf5143	HbPbBIHovCost_I2	HbPb BI Sov Cost_Med_Income
mf5144	HbPbBIHovTime_I2	HbPb BI Sov Time_Med_Income
mf5145	HbPbBIHovToll_I2	HbPb BI Sov Toll_Med_Income
mf5146	HbPbBIHovCost_I3	HbPb BI Sov Cost_High_Income
mf5147	HbPbBIHovTime_I3	HbPb BI Sov Time_High_Income
mf5148	HbPbBIHovToll_I3	HbPb BI Sov Toll_High_Income
mf5150	HbPbBIHovCost_I1	HbPb BI Hov Cost_Low_Income
mf5151	HbPbBIHovTime_I1	HbPb BI Hov Time_Low_Income
mf5152	HbPbBIHovToll_I1	HbPb BI Hov Toll_Low_Income
mf5153	HbPbBIHovCost_I2	HbPb BI Hov Cost_Med_Income
mf5154	HbPbBIHovTime_I2	HbPb BI Hov Time_Med_Income
mf5155	HbPbBIHovToll_I2	HbPb BI Hov Toll_Med_Income
mf5156	HbPbBIHovCost_I3	HbPb BI Hov Cost_High_Income
mf5157	HbPbBIHovTime_I3	HbPb BI Hov Time_High_Income
mf5158	HbPbBIHovToll_I3	HbPb BI Hov Toll_High_Income
mf5159	HbPbBI_BPEN	HbPerBus Bridge Penalty
mf5160	HbSoBIHovCost_I1	HbSo BI Sov Cost_Low_Income
mf5161	HbSoBIHovTime_I1	HbSo BI Sov Time_Low_Income
mf5162	HbSoBIHovToll_I1	HbSo BI Sov Toll_Low_Income
mf5163	HbSoBIHovCost_I2	HbSo BI Sov Cost_Med_Income
mf5164	HbSoBIHovTime_I2	HbSo BI Sov Time_Med_Income
mf5165	HbSoBIHovToll_I2	HbSo BI Sov Toll_Med_Income
mf5166	HbSoBIHovCost_I3	HbSo BI Sov Cost_High_Income
mf5167	HbSoBIHovTime_I3	HbSo BI Sov Time_High_Income
mf5168	HbSoBIHovToll_I3	HbSo BI Sov Toll_High_Income
mf5170	HbSoBIHovCost_I1	HbSo BI Hov Cost_Low_Income
mf5171	HbSoBIHovTime_I1	HbSo BI Hov Time_Low_Income
mf5172	HbSoBIHovToll_I1	HbSo BI Hov Toll_Low_Income
mf5173	HbSoBIHovCost_I2	HbSo BI Hov Cost_Med_Income
mf5174	HbSoBIHovTime_I2	HbSo BI Hov Time_Med_Income
mf5175	HbSoBIHovToll_I2	HbSo BI Hov Toll_Med_Income
mf5176	HbSoBIHovCost_I3	HbSo BI Hov Cost_High_Income
mf5177	HbSoBIHovTime_I3	HbSo BI Hov Time_High_Income
mf5178	HbSoBIHovToll_I3	HbSo BI Hov Toll_High_Income
mf5179	HbSoBI_BPEN	HbSocial Bridge Penalty
mf5200	HbUBIhovCost	HbU BI Sov Cost
mf5201	HbUBIhovTime	HbU BI Sov Time
mf5202	HbUBIhovToll	HbU BI Sov Toll
mf5205	HbUBIhovCost	HbU BI Hov Cost
mf5206	HbUBIhovTime	HbU BI Hov Time
mf5207	HbUBIhovToll	HbU BI Hov Toll
mf5210	HbScBIhovCost	HbSc BI Sov Cost
mf5211	HbScBIhovTime	HbSc BI Sov Time
mf5212	HbScBIhovToll	HbSc BI Sov Toll
mf5215	HbScBIhovCost	HbSc BI Hov Cost
mf5216	HbScBIhovTime	HbSc BI Hov Time
mf5217	HbScBIhovToll	HbSc BI Hov Toll
mf5219	HbScBI_BPEN	HbSchool Bridge Penalty
mf5220	HbEsBIhovCost	HbEs BI Sov Cost

mf5221	HbEsBI_SovTime	HbEs BI Sov Time
mf5222	HbEsBI_SovToll	HbEs BI Sov Toll
mf5225	HbEsBI_HovCost	HbEs BI Hov Cost
mf5226	HbEsBI_HovTime	HbEs BI Hov Time
mf5227	HbEsBI_HovToll	HbEs BI Hov Toll
mf5229	HbEsBI_BPEN	HbEscort Bridge Penalty
mf5230	NHbWBI_SovCost	NHbW BI Sov Cost
mf5231	NHbWBI_SovTime	NHbW BI Sov Time
mf5232	NHbWBI_SovToll	NHbW BI Sov Toll
mf5235	NHbWBI_HovCost	NHbW BI Hov Cost
mf5236	NHbWBI_HovTime	NHbW BI Hov Time
mf5237	NHbWBI_HovToll	NHbW BI Hov Toll
mf5240	NHbOBI_SovCost	NHbO BI Sov Cost
mf5241	NHbOBI_SovTime	NHbO BI Sov Time
mf5242	NHbOBI_SovToll	NHbO BI Sov Toll
mf5245	NHbOBI_HovCost	NHbO BI Hov Cost
mf5246	NHbOBI_HovTime	NHbO BI Hov Time
mf5247	NHbOBI_HovToll	NHbO BI Hov Toll
mf5249	NHbOBI_BPEN	NHbO Bridge Penalty
mf5300	AmBusIvtt	Am Bus InVehicle Time
mf5301	AmBusWait	Am Bus Waiting Time
mf5302	AmBusAux	Am Bus Auxillary Time
mf5303	AmBusBoard	Am Bus Boardings
mf5304	AmBusFare	Am Bus Fare
mf5310	MdBusIvtt	Md Bus InVehicle Time
mf5311	MdBusWait	Md Bus Waiting Time
mf5312	MdBusAux	Md Bus Auxillary Time
mf5313	MdBusBoard	Md Bus Boardings
mf5314	MdBusFare	Md Bus Fare
mf5320	PmBusIvtt	Pm Bus InVehicle Time
mf5321	PmBusWait	Pm Bus Waiting Time
mf5322	PmBusAux	Pm Bus Auxillary Time
mf5323	PmBusBoard	Pm Bus Boardings
mf5324	PmBusFare	Pm Bus Fare
mf5400	HbWBIBusIvtt	HbW BI Bus InVehicle Time
mf5401	HbWBIBusWait	HbW BI Bus Waiting Time
mf5402	HbWBIBusAux	HbW BI Bus Auxillary Time
mf5403	HbWBIBusBoard	HbW BI Bus Boardings
mf5404	HbWBIBusFare	HbW BI Bus Fare
mf5410	HbUBIBusIvtt	HbU BI Bus InVehicle Time
mf5411	HbUBIBusWait	HbU BI Bus Waiting Time
mf5412	HbUBIBusAux	HbU BI Bus Auxillary Time
mf5413	HbUBIBusBoard	HbU BI Bus Boardings
mf5414	HbUBIBusFare	HbU BI Bus Fare
mf5420	HbScBIBusIvtt	HbSc BI Bus InVehicle Time
mf5421	HbScBIBusWait	HbSc BI Bus Waiting Time
mf5422	HbScBIBusAux	HbSc BI Bus Auxillary Time
mf5423	HbScBIBusBoard	HbSc BI Bus Boardings
mf5424	HbScBIBusFare	HbSc BI Bus Fare
mf5430	HbShBIBusIvtt	HbSh BI Bus InVehicle Time
mf5431	HbShBIBusWait	HbSh BI Bus Waiting Time
mf5432	HbShBIBusAux	HbSh BI Bus Auxillary Time
mf5433	HbShBIBusBoard	HbSh BI Bus Boardings
mf5434	HbShBIBusFare	HbSh BI Bus Fare
mf5440	HbPbBIBusIvtt	HbPb BI Bus InVehicle Time
mf5441	HbPbBIBusWait	HbPb BI Bus Waiting Time
mf5442	HbPbBIBusAux	HbPb BI Bus Auxillary Time
mf5443	HbPbBIBusBoard	HbPb BI Bus Boardings
mf5444	HbPbBIBusFare	HbPb BI Bus Fare
mf5450	HbSoBIBusIvtt	HbSo BI Bus InVehicle Time
mf5451	HbSoBIBusWait	HbSo BI Bus Waiting Time
mf5452	HbSoBIBusAux	HbSo BI Bus Auxillary Time
mf5453	HbSoBIBusBoard	HbSo BI Bus Boardings
mf5454	HbSoBIBusFare	HbSo BI Bus Fare
mf5460	HbEsBIBusIvtt	HbEs BI Bus InVehicle Time
mf5461	HbEsBIBusWait	HbEs BI Bus Waiting Time
mf5462	HbEsBIBusAux	HbEs BI Bus Auxillary Time
mf5463	HbEsBIBusBoard	HbEs BI Bus Boardings
mf5464	HbEsBIBusFare	HbEs BI Bus Fare
mf5470	NHbWBIBusIvtt	NHbW BI Bus InVehicle Time
mf5471	NHbWBIBusWait	NHbW BI Bus Waiting Time
mf5472	NHbWBIBusAux	NHbW BI Bus Auxillary Time
mf5473	NHbWBIBusBoard	NHbW BI Bus Boardings
mf5474	NHbWBIBusFare	NHbW BI Bus Fare

mf5480	NHbOBIBusIvtt	NHbO BI Bus InVehicle Time
mf5481	NHbOBIBusWait	NHbO BI Bus Waiting Time
mf5482	NHbOBIBusAux	NHbO BI Bus Auxillary Time
mf5483	NHbOBIBusBoard	NHbO BI Bus Boardings
mf5484	NHbOBIBusFare	NHbO BI Bus Fare
mf5500	AmRailIvtt	Am Rail Invehicle Time
mf5501	AmRailIvttBus	Am Rail Invehicle Time on Bus
mf5502	AmRailWait	Am Rail Waiting Time
mf5503	AmRailAux	Am Rail Auxilliary Time
mf5504	AmRailBoard	Am Rail Boardings
mf5505	AmRailFare	Am Rail Fare
mf5510	MdRailIvtt	Md Rail Invehicle Time
mf5511	MdRailIvttBus	Md Rail Invehicle Time on Bus
mf5512	MdRailWait	Md Rail Waiting Time
mf5513	MdRailAux	Md Rail Auxilliary Time
mf5514	MdRailBoard	Md Rail Boardings
mf5515	MdRailFare	Md Rail Fare
mf5520	PmRailIvtt	Pm Rail Invehicle Time
mf5521	PmRailIvttBus	Pm Rail Invehicle Time on Bus
mf5522	PmRailWait	Pm Rail Waiting Time
mf5523	PmRailAux	Pm Rail Auxilliary Time
mf5524	PmRailBoard	Pm Rail Boardings
mf5525	PmRailFare	Pm Rail Fare
mf5600	HbWBIRailIvtt	HbW BI Rail Invehicle Time
mf5601	HbWBIRailIvttBus	HbW BI Rail Invehicle Time on Bus
mf5602	HbWBIRailWait	HbW BI Rail Waiting Time
mf5603	HbWBIRailAux	HbW BI Rail Auxilliary Time
mf5604	HbWBIRailBoard	HbW BI Rail Boardings
mf5605	HbWBIRailFare	HbW BI Rail Fare
mf5610	HbUBIRailIvtt	HbU BI Rail Invehicle Time
mf5611	HbUBIRailIvttBus	HbU BI Rail Invehicle Time on Bus
mf5612	HbUBIRailWait	HbU BI Rail Waiting Time
mf5613	HbUBIRailAux	HbU BI Rail Auxilliary Time
mf5614	HbUBIRailBoard	HbU BI Rail Boardings
mf5615	HbUBIRailFare	HbU BI Rail Fare
mf5620	HbScBIRailIvtt	HbSc BI Rail Invehicle Time
mf5621	HbScBIRailIvttBus	HbSc BI Rail Invehicle Time on Bus
mf5622	HbScBIRailWait	HbSc BI Rail Waiting Time
mf5623	HbScBIRailAux	HbSc BI Rail Auxilliary Time
mf5624	HbScBIRailBoard	HbSc BI Rail Boardings
mf5625	HbScBIRailFare	HbSc BI Rail Fare
mf5630	HbShBIRailIvtt	HbSh BI Rail Invehicle Time
mf5631	HbShBIRailIvttBus	HbSh BI Rail Invehicle Time on Bus
mf5632	HbShBIRailWait	HbSh BI Rail Waiting Time
mf5633	HbShBIRailAux	HbSh BI Rail Auxilliary Time
mf5634	HbShBIRailBoard	HbSh BI Rail Boardings
mf5635	HbShBIRailFare	HbSh BI Rail Fare
mf5640	HbPbBIRailIvtt	HbPb BI Rail Invehicle Time
mf5641	HbPbBIRailIvttBus	HbPb BI Rail Invehicle Time on Bus
mf5642	HbPbBIRailWait	HbPb BI Rail Waiting Time
mf5643	HbPbBIRailAux	HbPb BI Rail Auxilliary Time
mf5644	HbPbBIRailBoard	HbPb BI Rail Boardings
mf5645	HbPbBIRailFare	HbPb BI Rail Fare
mf5650	HbSoBIRailIvtt	HbSo BI Rail Invehicle Time
mf5651	HbSoBIRailIvttBus	HbSo BI Rail Invehicle Time on Bus
mf5652	HbSoBIRailWait	HbSo BI Rail Waiting Time
mf5653	HbSoBIRailAux	HbSo BI Rail Auxilliary Time
mf5654	HbSoBIRailBoard	HbSo BI Rail Boardings
mf5655	HbSoBIRailFare	HbSo BI Rail Fare
mf5660	HbEsBIRailIvtt	HbEs BI Rail Invehicle Time
mf5661	HbEsBIRailIvttBus	HbEs BI Rail Invehicle Time on Bus
mf5662	HbEsBIRailWait	HbEs BI Rail Waiting Time
mf5663	HbEsBIRailAux	HbEs BI Rail Auxilliary Time
mf5664	HbEsBIRailBoard	HbEs BI Rail Boardings
mf5665	HbEsBIRailFare	HbEs BI Rail Fare
mf5670	NHbWBIRailIvtt	NHbW BI Rail Invehicle Time
mf5671	NHbWBIRailIvttBus	NHbW BI Rail Invehicle Time on Bus
mf5672	NHbWBIRailWait	NHbW BI Rail Waiting Time
mf5673	NHbWBIRailAux	NHbW BI Rail Auxilliary Time
mf5674	NHbWBIRailBoard	NHbW BI Rail Boardings
mf5675	NHbWBIRailFare	NHbW BI Rail Fare
mf5680	NHbOBIRailIvtt	NHbO BI Rail Invehicle Time
mf5681	NHbOBIRailIvttBus	NHbO BI Rail Invehicle Time on Bus
mf5682	NHbOBIRailWait	NHbO BI Rail Waiting Time

mf5683	NHbOBIRailAux	NHbO BI Rail Auxilliary Time
mf5684	NHbOBIRailBoard	NHbO BI Rail Boardings
mf5685	NHbOBIRailFare	NHbO BI Rail Fare
mf5700	AmWceIvtt	Am Rail Invehicle Time
mf5701	AmWceIvttRail	Am Rail Invehicle Time on Rail
mf5702	AmWceIvttBus	Am Rail Invehicle Time on Bus
mf5703	AmWceWait	Am Rail Waiting Time
mf5704	AmWceAux	Am Rail Auxilliary Time
mf5705	AmWceBoard	Am Rail Boardings
mf5706	AmWceFare	Am Rail Fare
mf5710	MdWceIvtt	Md Rail Invehicle Time
mf5711	MdWceIvttRail	Md Rail Invehicle Time on Rail
mf5712	MdWceIvttBus	Md Rail Invehicle Time on Bus
mf5713	MdWceWait	Md Rail Waiting Time
mf5714	MdWceAux	Md Rail Auxilliary Time
mf5715	MdWceBoard	Md Rail Boardings
mf5716	MdWceFare	Md Rail Fare
mf5720	PmWceIvtt	Pm Rail Invehicle Time
mf5721	PmWceIvttRail	Pm Rail Invehicle Time on Rail
mf5722	PmWceIvttBus	Pm Rail Invehicle Time on Bus
mf5723	PmWceWait	Pm Rail Waiting Time
mf5724	PmWceAux	Pm Rail Auxilliary Time
mf5725	PmWceBoard	Pm Rail Boardings
mf5726	PmWceFare	Pm Rail Fare
mf5800	HbWBIWceIvtt	HbW BI WCE Invehicle Time
mf5801	HbWBIWceIvttRail	HbW BI WCE Invehicle Time on WCE
mf5802	HbWBIWceIvttBus	HbW BI WCE Invehicle Time on Bus
mf5803	HbWBIWceWait	HbW BI WCE Waiting Time
mf5804	HbWBIWceAux	HbW BI WCE Auxilliary Time
mf5805	HbWBIWceBoard	HbW BI WCE Boardings
mf5806	HbWBIWceFare	HbW BI WCE Fare
mf6000	buspr-lotChceWkAMPA	Bus Best PnR Lot - Bus
mf6001	railpr-lotChceWkAMPA	Rail Best PnR Lot - Rail
mf6002	wcepr-lotChceWkAMPA	Rail Best PnR Lot -WCE
mf6003	pr-gtAutoWkAMPA	PnR Generalized Cost Auto Leg
mf6005	buspr-GetranWkAMPA	PnR Generalized Cost Transit Leg - Bus
mf6006	buspr-minGCWkAMPA	PnR Combined Skim Result - Bus
mf6015	railpr-GetranWkAMPA	Rail PnR Generalized Cost Transit Leg - Rail
mf6016	railpr-minGCWkAMPA	Rail PnR Combined Skim Result - Rail
mf6030	wcepr-GetranWkAMPA	WCE PnR Generalized Cost Transit Leg
mf6031	wcepr-minGCWkAMPA	WCE PnR Combined Skim Result
mf6048	pr-gtAutoWkMDPA	PnR Generalized Cost Auto Leg
mf6050	buspr-GetranWkMDPA	PnR Generalized Cost Transit Leg - Bus
mf6051	buspr-minGCWkMDPA	PnR Combined Skim Result - Bus
mf6060	railpr-GetranWkMDPA	Rail PnR Generalized Cost Transit Leg - Rail
mf6061	railpr-minGCWkMDPA	Rail PnR Combined Skim Result - Rail
mf6075	wcepr-GetranWkMDPA	WCE PnR Generalized Cost Transit Leg
mf6076	wcepr-minGCWkMDPA	WCE PnR Combined Skim Result
mf6088	pr-gtAutoWkPMPA	PnR Generalized Cost Auto Leg
mf6090	buspr-GetranWkPMPA	PnR Generalized Cost Transit Leg - Bus
mf6091	buspr-minGCWkPMPA	PnR Combined Skim Result - Bus
mf6100	railpr-GetranWkPMPA	Rail PnR Generalized Cost Transit Leg - Rail
mf6101	railpr-minGCWkPMPA	Rail PnR Combined Skim Result - Rail
mf6115	wcepr-GetranWkPMPA	WCE PnR Generalized Cost Transit Leg
mf6116	wcepr-minGCWkPMPA	WCE PnR Combined Skim Result
mf6130	buspr-lotChceNWkAMPA	Bus Best PnR Lot - Bus
mf6131	railpr-lotChceNWkAMPA	Rail Best PnR Lot - Rail
mf6132	wcepr-lotChceNWkAMPA	Rail Best PnR Lot -WCE
mf6133	pr-gtAutoNWkAMPA	PnR Generalized Cost Auto Leg
mf6135	buspr-GetranNWkAMPA	PnR Generalized Cost Transit Leg - Bus
mf6136	buspr-minGCNWkAMPA	PnR Combined Skim Result - Bus
mf6145	railpr-GetranNWkAMPA	Rail PnR Generalized Cost Transit Leg - Rail
mf6146	railpr-minGCNWkAMPA	Rail PnR Combined Skim Result - Rail
mf6160	wcepr-GetranNWkAMPA	WCE PnR Generalized Cost Transit Leg
mf6161	wcepr-minGCNWkAMPA	WCE PnR Combined Skim Result
mf6173	pr-gtAutoNWkMDPA	PnR Generalized Cost Auto Leg
mf6175	buspr-GetranNWkMDPA	PnR Generalized Cost Transit Leg - Bus
mf6176	buspr-minGCNWkMDPA	PnR Combined Skim Result - Bus
mf6185	railpr-GetranNWkMDPA	Rail PnR Generalized Cost Transit Leg - Rail
mf6186	railpr-minGCNWkMDPA	Rail PnR Combined Skim Result - Rail
mf6200	wcepr-GetranNWkMDPA	WCE PnR Generalized Cost Transit Leg
mf6201	wcepr-minGCNWkMDPA	WCE PnR Combined Skim Result
mf6213	pr-gtAutoNWkPMPA	PnR Generalized Cost Auto Leg
mf6215	buspr-GetranNWkPMPA	PnR Generalized Cost Transit Leg - Bus

mf6216	buspr-minGCNWkPMPA	PnR Combined Skim Result - Bus
mf6225	railpr-GctranNWkPMPA	Rail PnR Generalized Cost Transit Leg - Rail
mf6226	railpr-minGCNWkPMPA	Rail PnR Combined Skim Result - Rail
mf6240	wcepr-GctranNWkPMPA	WCE PnR Generalized Cost Transit Leg
mf6241	wcepr-minGCNWkPMPA	WCE PnR Combined Skim Result
mf6303	pr-gtAutoWkAMAP	PnR Generalized Cost Auto Leg
mf6305	buspr-GctranWkAMAP	PnR Generalized Cost Transit Leg - Bus
mf6306	buspr-minGCWkAMAP	PnR Combined Skim Result - Bus
mf6315	railpr-GctranWkAMAP	Rail PnR Generalized Cost Transit Leg - Rail
mf6316	railpr-minGCWkAMAP	Rail PnR Combined Skim Result - Rail
mf6330	wcepr-GctranWkAMAP	WCE PnR Generalized Cost Transit Leg
mf6331	wcepr-minGCWkAMAP	WCE PnR Combined Skim Result
mf6348	pr-gtAutoWkMDAP	PnR Generalized Cost Auto Leg
mf6350	buspr-GctranWkMDAP	PnR Generalized Cost Transit Leg - Bus
mf6351	buspr-minGCWkMDAP	PnR Combined Skim Result - Bus
mf6360	railpr-GctranWkMDAP	Rail PnR Generalized Cost Transit Leg - Rail
mf6361	railpr-minGCWkMDAP	Rail PnR Combined Skim Result - Rail
mf6375	wcepr-GctranWkMDAP	WCE PnR Generalized Cost Transit Leg
mf6376	wcepr-minGCWkMDAP	WCE PnR Combined Skim Result
mf6388	pr-gtAutoWkPMAP	PnR Generalized Cost Auto Leg
mf6390	buspr-GctranWkPMAP	PnR Generalized Cost Transit Leg - Bus
mf6391	buspr-minGCWkPMAP	PnR Combined Skim Result - Bus
mf6400	railpr-GctranWkPMAP	Rail PnR Generalized Cost Transit Leg - Rail
mf6401	railpr-minGCWkPMAP	Rail PnR Combined Skim Result - Rail
mf6415	wcepr-GctranWkPMAP	WCE PnR Generalized Cost Transit Leg
mf6416	wcepr-minGCWkPMAP	WCE PnR Combined Skim Result
mf6433	pr-gtAutoNWkAMAP	PnR Generalized Cost Auto Leg
mf6435	buspr-GctranNWkAMAP	PnR Generalized Cost Transit Leg - Bus
mf6436	buspr-minGCNWkAMAP	PnR Combined Skim Result - Bus
mf6445	railpr-GctranNWkAMAP	Rail PnR Generalized Cost Transit Leg - Rail
mf6446	railpr-minGCNWkAMAP	Rail PnR Combined Skim Result - Rail
mf6460	wcepr-GctranNWkAMAP	WCE PnR Generalized Cost Transit Leg
mf6461	wcepr-minGCNWkAMAP	WCE PnR Combined Skim Result
mf6473	pr-gtAutoNWkMDAP	PnR Generalized Cost Auto Leg
mf6475	buspr-GctranNWkMDAP	PnR Generalized Cost Transit Leg - Bus
mf6476	buspr-minGCNWkMDAP	PnR Combined Skim Result - Bus
mf6485	railpr-GctranNWkMDAP	Rail PnR Generalized Cost Transit Leg - Rail
mf6486	railpr-minGCNWkMDAP	Rail PnR Combined Skim Result - Rail
mf6500	wcepr-GctranNWkMDAP	WCE PnR Generalized Cost Transit Leg
mf6501	wcepr-minGCNWkMDAP	WCE PnR Combined Skim Result
mf6513	pr-gtAutoNWkPMAP	PnR Generalized Cost Auto Leg
mf6515	buspr-GctranNWkPMAP	PnR Generalized Cost Transit Leg - Bus
mf6516	buspr-minGCNWkPMAP	PnR Combined Skim Result - Bus
mf6525	railpr-GctranNWkPMAP	Rail PnR Generalized Cost Transit Leg - Rail
mf6526	railpr-minGCNWkPMAP	Rail PnR Combined Skim Result - Rail
mf6540	wcepr-GctranNWkPMAP	WCE PnR Generalized Cost Transit Leg
mf6541	wcepr-minGCNWkPMAP	WCE PnR Combined Skim Result
mf6800	HbWBIBAuPRCost	HbW BI Bus-Auto PR Cost
mf6801	HbWBIBAuPRTTime	HbW BI Bus-Auto PR Time
mf6802	HbWBIBAuPRToll	HbW BI Bus-Auto PR Toll
mf6803	HbWBAuPrkCst	HbW Bus-Auto PR Parking Cost
mf6804	HbWBAuTrmTim	HbW Bus-Auto PR Terminal Time
mf6810	HbWBIRAuPRCost	HbW BI Rail-Auto PR Cost
mf6811	HbWBIRAuPRTTime	HbW BI Rail-Auto PR Time
mf6812	HbWBIRAuPRToll	HbW BI Rail-Auto PR Toll
mf6813	HbWRAuPrkCst	HbW Rail-Auto PR Parking Cost
mf6814	HbWRAuTrmTim	HbW Rail-Auto PR Terminal Time
mf6820	HbWBIWAuPRCost	HbW BI WCE-Auto PR Cost
mf6821	HbWBIWAuPRTTime	HbW BI WCE-Auto PR Time
mf6822	HbWBIWAuPRToll	HbW BI WCE-Auto PR Toll
mf6823	HbWWAuPrkCst	HbW WCE-Auto PR Parking Cost
mf6824	HbWWAuTrmTim	HbW WCE-Auto PR Terminal Time
mf6900	HbWBIBAuBusIvtt	HbW BI Bus-Auto PR InVehicle Time
mf6901	HbWBIBAuBusWait	HbW BI Bus-Auto PR Bus Waiting Time
mf6902	HbWBIBAuBusAux	HbW BI Bus-Auto PR Bus Auxillary Time
mf6903	HbWBIBAuBusBoard	HbW BI Bus-Auto PR Bus Boardings
mf6904	HbWBIBAuBusFare	HbW BI Bus-Auto PR Bus Fare
mf6910	HbWBIRAuRailIvtt	HbW BI Rail-Auto Rail Invehicle Time
mf6911	HbWBIRAuRailIvttBus	HbW BI Rail Invehicle Time on Bus
mf6912	HbWBIRAuRailWait	HbW BI Rail-Auto Rail Waiting Time
mf6913	HbWBIRAuRailAux	HbW BI Rail-Auto Rail Auxilliary Time
mf6914	HbWBIRAuRailBoard	HbW BI Rail-Auto Rail Boardings
mf6915	HbWBIRAuRailFare	HbW BI Rail-Auto Rail Fare
mf6920	HbWBIWAuWceIvtt	HbW BI WCE-Auto WCE Invehicle Time

mf6921	HbWBIWAuWceIvtRail	HbW BI WCE-Auto WCE Invehicle Time on Rail
mf6922	HbWBIWAuWceIvtBus	HbW BI WCE-Auto WCE Invehicle Time on Bus
mf6923	HbWBIWAuWceWait	HbW BI WCE-Auto WCE Waiting Time
mf6924	HbWBIWAuWceAux	HbW BI WCE-Auto WCE Auxilliary Time
mf6925	HbWBIWAuWceBoards	HbW BI WCE-Auto WCE Boardings
mf6926	HbWBIWAuWceFare	HbW BI WCE-Auto WCE Fare
mf8000	24CBLg	Cross Border Light Trucks 24 Hrs
mf8001	AMCBLg	Cross Border Light Trucks AM
mf8002	MDCBLg	Cross Border Light Trucks MD
mf8003	PMCBLg	Cross Border Light Trucks PM
mf8010	24CBHv	Cross Border Heavy Trucks 24 Hrs
mf8011	AMCBHv	Cross Border Heavy Trucks AM
mf8012	MDCBHv	Cross Border Heavy Trucks MD
mf8013	PMCBHv	Cross Border Heavy Trucks PM
mf8020	IRLg99	IR Light Truck 1999 Survey Rat
mf8021	IRHv99	IR Heavy Truck 1999 Survey Rat
mf8022	IRLg24	IR LgTruck Daily Trips
mf8023	IRHv24	IR HvTruck Daily Trips
mf8024	IRLgAM	IR LgTruck AM Trips
mf8025	IRHvAM	IR HvTruck AM Trips
mf8026	IRLgMD	IR LgTruck MD Trips
mf8027	IRHvMD	IR HvTruck MD Trips
mf8028	IRLgPM	IR LgTruck PM Trips
mf8029	IRHvPM	IR HvTruck PM Trips
mf8030	PMV24	PMV24Hrs
mf8031	PMVAM	PMVAM
mf8032	PMVMD	PMVMD
mf8033	PMVPM	PMVPM
mf8040	APHv24	AP HvTrucks Daily Trips
mf8041	APHvAM	AP HvTrucks AM Trips
mf8042	APHvMD	AP HvTrucks MD Trips
mf8043	APHvPM	AP HvTrucks PM Trips
mf8050	RGLgAp	Rg LgTruck Peak Period AM
mf8051	RGHvAp	Rg HvTruck Peak Period AM
mf8052	RGLgMp	Rg LgTruck Peak Period MD
mf8053	RGHvMp	Rg HvTruck Peak Period MD
mf8054	RGLgPp	Rg LgTruck Peak Period PM
mf8055	RGHvPp	Rg HvTruck Peak Period PM
mf8060	RGLgFc	Rg Lg Truck Impedance
mf8061	RGHvFc	Rg Hv Truck Impedance
mf8062	RGLg24	Rg LgTruck Daily Trips
mf8063	RGHv24	Rg HvTruck Daily Trips
mf8064	RGLgAM	Rg LgTruck AM Trips
mf8065	RGLgMD	Rg LgTruck MD Trips
mf8066	RGLgPM	Rg LgTruck PM Trips
mf8067	RGHvAM	Rg HvTruck AM Trips
mf8068	RGHvMD	Rg HvTruck MD Trips
mf8069	RGHvPM	Rg HvTruck PM Trips
mf8080	LGVAM	LGV Truck Demand AM
mf8081	HGVAM	HGV Truck Demand AM
mf8082	LGVMd	LGV Truck Demand MD
mf8083	HGVMD	HGV Truck Demand MD
mf8084	LGVPM	LGV Truck Demand PM
mf8085	HGVPM	HGV Truck Demand PM
mf8100	SkimAmSovTimeVOT1	Skim AM SOV VOT1 Time
mf8101	SkimAmSovTimeVOT2	Skim AM SOV VOT2 Time
mf8102	SkimAmSovTimeVOT3	Skim AM SOV VOT3 Time
mf8103	SkimAmSovTimeVOT4	Skim AM SOV VOT4 Time
mf8104	SkimAmHovTimeVOT1	Skim AM HOV VOT1 Time
mf8105	SkimAmHovTimeVOT2	Skim AM HOV VOT2 Time
mf8106	SkimAmHovTimeVOT3	Skim AM HOV VOT3 Time
mf8107	SkimAmHovTimeVOT4	Skim AM HOV VOT4 Time
mf8108	SkimAmLgvTime	Skim AM LGV Time
mf8109	SkimAmHgvTime	Skim AM HGV Time
mf8110	SkimAmSovDistVOT1	Skim AM SOV VOT1 Dist
mf8111	SkimAmSovDistVOT2	Skim AM SOV VOT2 Dist
mf8112	SkimAmSovDistVOT3	Skim AM SOV VOT3 Dist
mf8113	SkimAmSovDistVOT4	Skim AM SOV VOT4 Dist
mf8114	SkimAmHovDistVOT1	Skim AM HOV VOT1 Dist
mf8115	SkimAmHovDistVOT2	Skim AM HOV VOT2 Dist
mf8116	SkimAmHovDistVOT3	Skim AM HOV VOT3 Dist
mf8117	SkimAmHovDistVOT4	Skim AM HOV VOT4 Dist
mf8118	SkimAmLgvDist	Skim AM LGV Dist
mf8119	SkimAmHgvDist	Skim AM HGV Dist

mf8120	SkimAmSovTollVOT1	Skim AM SOV VOT1 Toll
mf8121	SkimAmSovTollVOT2	Skim AM SOV VOT2 Toll
mf8122	SkimAmSovTollVOT3	Skim AM SOV VOT3 Toll
mf8123	SkimAmSovTollVOT4	Skim AM SOV VOT4 Toll
mf8124	SkimAmHovTollVOT1	Skim AM HOV VOT1 Toll
mf8125	SkimAmHovTollVOT2	Skim AM HOV VOT2 Toll
mf8126	SkimAmHovTollVOT3	Skim AM HOV VOT3 Toll
mf8127	SkimAmHovTollVOT4	Skim AM HOV VOT4 Toll
mf8128	SkimAmLgvToll	Skim AM LGV Toll
mf8129	SkimAmHgvToll	Skim AM HGV Toll
mf8130	SkimMdSovTimeVOT1	Skim MD SOV VOT1 Time
mf8131	SkimMdSovTimeVOT2	Skim MD SOV VOT2 Time
mf8132	SkimMdSovTimeVOT3	Skim MD SOV VOT3 Time
mf8133	SkimMdSovTimeVOT4	Skim MD SOV VOT4 Time
mf8134	SkimMdHovTimeVOT1	Skim MD HOV VOT1 Time
mf8135	SkimMdHovTimeVOT2	Skim MD HOV VOT2 Time
mf8136	SkimMdHovTimeVOT3	Skim MD HOV VOT3 Time
mf8137	SkimMdHovTimeVOT4	Skim MD HOV VOT4 Time
mf8138	SkimMdLgvTime	Skim MD LGV Time
mf8139	SkimMdHgvTime	Skim MD HGV Time
mf8140	SkimMdSovDistVOT1	Skim MD SOV VOT1 Dist
mf8141	SkimMdSovDistVOT2	Skim MD SOV VOT2 Dist
mf8142	SkimMdSovDistVOT3	Skim MD SOV VOT3 Dist
mf8143	SkimMdSovDistVOT4	Skim MD SOV VOT4 Dist
mf8144	SkimMdHovDistVOT1	Skim MD HOV VOT1 Dist
mf8145	SkimMdHovDistVOT2	Skim MD HOV VOT2 Dist
mf8146	SkimMdHovDistVOT3	Skim MD HOV VOT3 Dist
mf8147	SkimMdHovDistVOT4	Skim MD HOV VOT4 Dist
mf8148	SkimMdLgvDist	Skim MD LGV Dist
mf8149	SkimMdHgvDist	Skim MD HGV Dist
mf8150	SkimMdSovTollVOT1	Skim MD SOV VOT1 Toll
mf8151	SkimMdSovTollVOT2	Skim MD SOV VOT2 Toll
mf8152	SkimMdSovTollVOT3	Skim MD SOV VOT3 Toll
mf8153	SkimMdSovTollVOT4	Skim MD SOV VOT4 Toll
mf8154	SkimMdHovTollVOT1	Skim MD HOV VOT1 Toll
mf8155	SkimMdHovTollVOT2	Skim MD HOV VOT2 Toll
mf8156	SkimMdHovTollVOT3	Skim MD HOV VOT3 Toll
mf8157	SkimMdHovTollVOT4	Skim MD HOV VOT4 Toll
mf8158	SkimMdLgvToll	Skim MD LGV Toll
mf8159	SkimMdHgvToll	Skim MD HGV Toll
mf8160	SkimPmSovTimeVOT1	Skim PM SOV VOT1 Time
mf8161	SkimPmSovTimeVOT2	Skim PM SOV VOT2 Time
mf8162	SkimPmSovTimeVOT3	Skim PM SOV VOT3 Time
mf8163	SkimPmSovTimeVOT4	Skim PM SOV VOT4 Time
mf8164	SkimPmHovTimeVOT1	Skim PM HOV VOT1 Time
mf8165	SkimPmHovTimeVOT2	Skim PM HOV VOT2 Time
mf8166	SkimPmHovTimeVOT3	Skim PM HOV VOT3 Time
mf8167	SkimPmHovTimeVOT4	Skim PM HOV VOT4 Time
mf8168	SkimPmLgvTime	Skim PM LGV Time
mf8169	SkimPmHgvTime	Skim PM HGV Time
mf8170	SkimPmSovDistVOT1	Skim PM SOV VOT1 Dist
mf8171	SkimPmSovDistVOT2	Skim PM SOV VOT2 Dist
mf8172	SkimPmSovDistVOT3	Skim PM SOV VOT3 Dist
mf8173	SkimPmSovDistVOT4	Skim PM SOV VOT4 Dist
mf8174	SkimPmHovDistVOT1	Skim PM HOV VOT1 Dist
mf8175	SkimPmHovDistVOT2	Skim PM HOV VOT2 Dist
mf8176	SkimPmHovDistVOT3	Skim PM HOV VOT3 Dist
mf8177	SkimPmHovDistVOT4	Skim PM HOV VOT4 Dist
mf8178	SkimPmLgvDist	Skim PM LGV Dist
mf8179	SkimPmHgvDist	Skim PM HGV Dist
mf8180	SkimPmSovTollVOT1	Skim PM SOV VOT1 Toll
mf8181	SkimPmSovTollVOT2	Skim PM SOV VOT2 Toll
mf8182	SkimPmSovTollVOT3	Skim PM SOV VOT3 Toll
mf8183	SkimPmSovTollVOT4	Skim PM SOV VOT4 Toll
mf8184	SkimPmHovTollVOT1	Skim PM HOV VOT1 Toll
mf8185	SkimPmHovTollVOT2	Skim PM HOV VOT2 Toll
mf8186	SkimPmHovTollVOT3	Skim PM HOV VOT3 Toll
mf8187	SkimPmHovTollVOT4	Skim PM HOV VOT4 Toll
mf8188	SkimPmLgvToll	Skim PM LGV Toll
mf8189	SkimPmHgvToll	Skim PM HGV Toll
mf9000	HbWLSI1A0	HbW LogSum I1 A0
mf9001	HbWLSI1A1	HbW LogSum I1 A1
mf9002	HbWLSI1A2	HbW LogSum I1 A2
mf9003	HbWLSI2A0	HbW LogSum I1 A0

mf9004	HbWLSI2A1	HbW LogSum I1 A1
mf9005	HbWLSI2A2	HbW LogSum I1 A2
mf9006	HbWLSI3A0	HbW LogSum I1 A0
mf9007	HbWLSI3A1	HbW LogSum I1 A1
mf9008	HbWLSI3A2	HbW LogSum I1 A2
mf9010	HbULS	HbU LogSum
mf9020	HbScLSA0	HbSc LogSum A0
mf9021	HbScLSA1	HbSc LogSum A1
mf9022	HbScLSA2	HbSc LogSum A2
mf9030	HbShLSI1A0	LogSum HbSh I1 A0
mf9031	HbShLSI1A1	LogSum HbSh I1 A1
mf9032	HbShLSI1A2	LogSum HbSh I1 A2
mf9033	HbShLSI2A0	LogSum HbSh I2 A0
mf9034	HbShLSI2A1	LogSum HbSh I2 A1
mf9035	HbShLSI2A2	LogSum HbSh I2 A2
mf9036	HbShLSI3A0	LogSum HbSh I3 A0
mf9037	HbShLSI3A1	LogSum HbSh I3 A1
mf9038	HbShLSI3A2	LogSum HbSh I3 A2
mf9040	HbPbLSI1A0	HbPb LogSum I1 A0
mf9041	HbPbLSI1A1	HbPb LogSum I1 A1
mf9042	HbPbLSI1A2	HbPb LogSum I1 A2
mf9043	HbPbLSI2A0	HbPb LogSum I1 A0
mf9044	HbPbLSI2A1	HbPb LogSum I1 A1
mf9045	HbPbLSI2A2	HbPb LogSum I1 A2
mf9046	HbPbLSI3A0	HbPb LogSum I1 A0
mf9047	HbPbLSI3A1	HbPb LogSum I1 A1
mf9048	HbPbLSI3A2	HbPb LogSum I1 A2
mf9050	HbSoLSI1A0	LogSum HbSo I1 A0
mf9051	HbSoLSI1A1	LogSum HbSo I1 A1
mf9052	HbSoLSI1A2	LogSum HbSo I1 A2
mf9053	HbSoLSI2A0	LogSum HbSo I2 A0
mf9054	HbSoLSI2A1	LogSum HbSo I2 A1
mf9055	HbSoLSI2A2	LogSum HbSo I2 A2
mf9056	HbSoLSI3A0	LogSum HbSo I3 A0
mf9057	HbSoLSI3A1	LogSum HbSo I3 A1
mf9058	HbSoLSI3A2	LogSum HbSo I3 A2
mf9060	HbEsLSA0	HbEs LogSum A0
mf9061	HbEsLSA1	HbEs LogSum A1
mf9062	HbEsLSA2	HbEs LogSum A2
mf9070	NHbWLS	NHbW LogSum
mf9080	NHbOLS	NHbO LogSum
mf9100	P-AFrictionFact1	Trip Distribution Friction Factor 1
mf9101	P-AFrictionFact2	Trip Distribution Friction Factor 2
mf9102	P-AFrictionFact3	Trip Distribution Friction Factor 3
mf9103	P-AFrictionFact4	Trip Distribution Friction Factor 4
mf9104	P-AFrictionFact5	Trip Distribution Friction Factor 5
mf9105	P-AFrictionFact6	Trip Distribution Friction Factor 6
mf9106	P-AFrictionFact7	Trip Distribution Friction Factor 7
mf9107	P-AFrictionFact8	Trip Distribution Friction Factor 8
mf9108	P-AFrictionFact9	Trip Distribution Friction Factor 9
mf9200	Kij_hbw	Kij_hbw
mf9201	Kij_hbu	Kij_hbu
mf9202	Kij_hbsch	Kij_hbsch
mf9203	Kij_hbshop	Kij_hbshop
mf9204	Kij_hbpb	Kij_hbpb
mf9205	Kij_hbsoc	Kij_hbsoc
mf9206	Kij_hbesc	Kij_hbesc
mf9207	Kij_nhbw	Kij_nhbw
mf9208	Kij_nhbo	Kij_nhbo



Ensemble				
Matrix	Ensemble	Name	Description	Comments
mo120	ga_ensem	Not in use	1:North Shore 2:Burrard Peninsula 3:Richmond and YVR 4:South of Fraser 5:North of Fraser, East of Pitt River	I don't think this was ever really used, should have been quite similar, or the same as gb
mo121	gb_ensem	Production geography and Time Slicing Zone	15: Metro Vancouver 16: Fraser Valley 1: West Vancouver, Bowen Island 2: North Vancouver(City and District) 3: Downtown Vancouver 4: rest of Vancouver 5: Burnaby, New Westminster 6: Coquitlam, Port Moody, Port Coquitlam 7: Richmond, YVR 8: South Delta, Ecological Area 9: North Surrey, North Delta 10: South Surrey, White Rock 11: Pitt Meadows, Maple Ridge 12: Langley(City and Township) 23: Mission, North of Fraser 24: Dewdney, Lake Errock, North of Fraser 25: Agassiz, Harrison, North of Fraser 26: Provincial Park, South of Fraser 27: Chilliwack 28: East/South Abbotsford 29: West/North Abbotsford	This was the gb historically as it was 'land masses separated by regional _bridges_
mo123	gd_ensem	Not in use		Don't think this was ever used, maybe a leftover of some previous analysis
mo124	ge_ensem	Metro Vancouver/Fraser Valley		Census boundaries for the major CMAs, I think the numbering comes from the prefix on the CT level data
mo125	gf_ensem	Sub Regional Group Zones(Similar with GY, except Fraser valley area)  This was used in the pre-2.2 days to model transit fare zones and add fares based on different OD pairs		This was used in the pre-2.2 days to model transit fare zones and add fares based on different OD pairs
mo126	gg_ensem	Major industrial activity areas		Used in the truck model to identify major industrial activity areas
mo127	gh_ensem	trip diary sampling zone groupings		This was recently updated with the trip diary 2017 50+ areas
mo128	gi_ensem	Park & Ride Facilities	1: Regular Zones 2: Park & Ride/ Exchange Station 100: Bowen Island 101: Lions Bay 102: West Vancouver 103: District of North Vancouver 104: City of North Vancouver 105: Mountain Area 106: University Endowment Lands 107: Downtown Vancouver 108: Vancouver 109: Burnaby 110: New Westminster 111: Anmore 112: Belcarra 113: Port Moody 114: Coquitlam 115: Port Coquitlam 116: Pitt Meadows 117: Maple Ridge 118: YVR 119: Richmond 120: Delta 121: Surrey 122: White Rock 123: City of Langley 124: Township of Langley  1: exist in 2011, 2016, 2035, and 2050 2: exist in only 2011 3: exist in 2016, 2035, and 2050 4: exist in 2035 and 2050	200: Mission 201: Abbotsford 202: Chilliwack 203: North of Fraser 204: South of Fraser
mo132	gm_ensem	Municipal Grouped Zones		Municipal Boundaries - Vancouver/VanCBD had historically be separate, YVR was pulled out of richmond this time around
mo133	gn_ensem	Park & Ride and exist year		
mo135	gp_ensem	Park & Ride Group Origin (Not in use)		We switched to accessibility measures in the pnr model, we used to explicitly control O-D per lot to avoid illogical trips, now unused)

mo137	gr_ensem	Park & Ride Group Destination (Not in use)		We switched to accessibility measures in the pnr model, we used to explicitly control O-D per lot to avoid illogical trips, now unused)
mo138	gs_ensem	Not in use		Long time ago, used to be the town centres (regional town centers, was never updated when the regional village centre designation was added)
mo139	gt_ensem	Not in use		Used to be the old truck model ensemble for control totals, unused
mo140	gu_ensem	Not in use	<div>1: West Vancouver, Bowen Island 2: North Vancouver(City and District) 5: Burnaby, New Westminster 6: Coquitlam, Port Moody, Port Coquitlam 7: Richmond, YVR 8: South Delta, Ecological Area 9: North Surrey, North Delta 10: South Surrey, White Rock 11: Pitt Meadows, Maple Ridge 12: Langley(City and Township) 13: Mission, North of Fraser 14: Abbotsford, Chilliwack and Provincial Parks 15: Park &amp; Ride Zone 16: New Westminster 21: Downtown Vancouver 22: Downtown Eastside 23: W 4th Avenue Corridor 24: West Vancouver 25: East Vancouver</div>	This a Phase 2 model development left over. It is basically gy with some additional Vancouver splitting. Should be eliminated
mo141	gv_ensem	Not in use (Similar with GY, except P&R Zone and University Land)	<div>1: West Vancouver, Bowen Island 2: North Vancouver(City and District) 3: Vancouver 4: Burnaby 5: New Westminster 6: Coquitlam, Port Moody, Port Coquitlam 7: Richmond, YVR 8: Delta 9: Surrey, White Rock 10: Pitt Meadows, Maple Ridge 11: Langley(City and Township) 12: Mission 13: North of Fraser 14: Abbotsford 15: Chilliwack and Provincial Parks</div> <div>1: West Vancouver, Bowen Island 2: North Vancouver(City and District) 3: Downtown Vancouver 4: rest of Vancouver 5: Burnaby, New Westminster 6: Coquitlam, Port Moody, Port Coquitlam 7: Richmond, YVR 8: South Delta, Ecological Area 9: North Surrey, North Delta 10: South Surrey, White Rock 11: Pitt Meadows, Maple Ridge 12: Langley(City and Township) 13: Mission, North of Fraser 14: Abbotsford, Chilliwack and Provincial Parks</div>	Similar to gu
mo143	gx_ensem	School District		
mo144	gy_ensem	Sub Regional Group Zones		Correct, this was a pretty common level to summarize regional O-D info going far back histoically
mo145	gz_ensem	Not in use(Map to the old 641 zone system)		A mapping back to the (ancient) 641 zone numberin sustem the currnet zones were split from, the 1741 wasn't a pure subset of the 641 in all places, so this isn't an exact lookup (also re