RSPM Research #788	RSPM VMT - Trip Frequency - Trip Length Models														Notes/Possible Modifications
TFL ESTIMATED MODELS	AADVMT		Transit Freq		Transit length		Bike Freq		Bike length		Walk Freq		Walk-Length		
May 2017	Metro	NonMetro	Metro	NonMetro	Metro	NonMetro	Metro	NonMetro	Metro	NonMetro	Metro	NonMetro	Metro	NonMetro	1
intercept	х	x	х	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	
Other Modules															
Average Annual Daily VMT			х	х	х	х	х	х	х	х	х	х	х	х	
Regionwide variables															
US Census Region (CENSUS_R: 01="NE", "02"="MW", "03"="S", "04"="W")		х													An alternative is census district*
Transit miles per cap	х		х		х		х		х		х		х		Use bus-equivalent miles per capita
Fwy lane miles per cap	х		х		х		х		х		х		Х		1
Arterial lane miles per cap															-
Syntheic HH variables															1
HH Size	х	x	х	х	х	х	х	х	х	х	х	х	х	х	1
Worker Count	x	х	х	х	х	Х	х	х	х	х	х	х	х	х	1
Income	х	х		х	х	х	х	х	х	х	х	х	х	х	1
Driving Age Pop		х													Will test using licensed drivers instead
Vehicles Per Driver	х	х	х	х	х	х		Х			х	х	х	х	1
AgeOto14			х	х		х	х	х	х	х	х	х	х	х	1
Age65Plus	х	х			х		Х	Х							1
Life Cycle															
(Single, Young Couple, Couple with			.,					×		x	×		v		
children, Empty Nester) Dwelling Unit Type (SFD, Dplx, Apt2-4			Х	Х		Х	Х	X	Х	X	X	Х	Х	Х	1
units, Apt5+ units)															
,,															1
HOME BUILT ENVIRONMENT/5Ds															1
5Ds: DENSITY															1
DUs/unprotected acre (SLD: D1A)								Х							1
Pop/unprotected acre (SLD: D1B)	х	х		Х	Х	Х		Х							
Emp/unprotected acre (SLD: D1C)							х								
Emp + DUs/unprotected acre (SLD: D1D)			х	Х		Х		Х		Х	х	Х	х	Х	
Census tract pop density (TRPOPDEN)	х	x			х										_
Urbanized Area Emp density(UZAEMPDEN)						Х			х						Will use blockgroup density wherever possible
5Ds: DIVERSITY/ENTROPY							х	Х			х	х			1
Emp & HH entropy (SLD: D2A_EPHHM)		х						Х	х				Х	Х	Will use entropy derived from HH & EMP (total
D1B * D2A_EPHHM		х													and Ret/Svc)
5Ds: DESIGN						1									1
Lane mile ped-oriented density/sqmi (SLD:															
D3apo)															
						Х		Х		Х	х	Х		Х	Will investigate possible composite measure of
Intersection density-4+ leg multi- modal/sqmi (SLD: D3bmm4)							x				x		x		these three Design measures
Intersection density-4+ leg ped-						1									1
oriented/sqmi (SLD: D3bpo4)	x				х				х		х	х	х		
5Ds: TRANSIT															
%CBG employment within ½ mile of fixed-															Can drop without significant effects on
guideway transit stop (SLD: D4b050)	x				x										goodness-of-fit or accuracy in validation
					^		1								goodness of the or decarder, in randation
D4c (PM Peak transit svc hrly freq within															
1/4 mile of block group boundary)	х		х								х		Х		Measure used in block group Place Types,
Regionwide Transit miles per cap*D4c	х		х			1									1
5Ds: ACCESSIBILITY						1									1
Emp within 45 minutes auto (SLD: D5ar)															Will use ACCESS (as defined in black arrays
		х	!	1	ļ	1		х		ļ	х	Х		1	Will use ACCESS (as defined in block group
Ratio Emp Auto Accessibility vs Total MSA (SLD: D5cr)	v				x										Place Types, below) wherever possible
(SLD: DScr) Harmonic mean of Emp within 2 miles and	Х	+	1		_ ^	+	 			1	1			+	1
Pop within 5 miles (ACCESS)			L		<u> </u>	<u> </u>			<u> </u>	<u> </u>	L			<u> </u>	Measure used in block group Place Types,
Emp within 5 mile of blockgroup centroid															1
(EMPTOT_5)	Х	х			Х	1				<u> </u>				1	J

^{*}Alternative to Census_R, Census_D: '01'='New England', '02'='Middle Atlantic', '03'='East North Central', '04'='West North Central', '05'='South Atlantic', '06'='East South Central', '07'='West South Central', '08'='Mountain', '09'='Pacific'

SLD: https://www.epa.gov/sites/production/files/2014-03/documents/sld_userguide.pdf