

TOWN OF CALEDON					
VILLAGE OF ALTON, MAIN STREET NORTH, AND QUEEN STREET WEST CLASS EA					
DESIGN CRITERIA - 30% SUBMISSION					
Queen St W - Mississauga Rd to Osprey Mills Dr and James St to Main St					
ITEM	STANDARDS		EXISTING CONDITIONS	PROPOSED STANDARD	NOTES
	TAC	Town		DESIGN SPEED 50 (km/h)	
CLASSIFICATION					
ROAD CLASSIFICATIONS	UCU50	Residential / Neighbourhood Collector		UCU50	
DESIGN SPEED (km/h)	50			50	
POSTED SPEED (km/h)	40	60	50 (Mississauga Rd to west of John St) 40 (west of John St to Main St)	40	
NUMBER OF LANES	2	2	2	2	
TRAFFIC VOLUME AADT	<8000	1000 to 3000	TBD	TBD	to be confirmed by traffic study
TRUCK VOLUME (%)	N/A		TBD	TBD	to be confirmed by traffic study
HORIZONTAL ALIGNMENTS					
NC NORMAL CROWN (-0.02m/m) R _{min.} (m) , e =0.04	950		8000	1000	
CURVE RADIUS WITH SUPERELEV. RATE e=0.04 R _{min.} (m)	80	130	N/A	N/A	Reduced to 45 in urban curves
RC REVERSE CROWN (+0.02m/m) R _{min.} (m) , e=0.04	115		N/A	N/A	
TAPER RATIO RIGHT TURN	11:1-17:1		N/A	N/A	to be confirmed by traffic study
TAPER LENGTH RIGHT TURN (m)	38.5-59.5		N/A	N/A	to be confirmed by traffic study
PARALLEL LANE LENGTH FOR RIGHT TURN (m)	35-75		N/A	N/A	to be confirmed by traffic study
APPROACH TAPER RATIO LEFT TURN (m)	15:1-36:1		N/A	N/A	to be confirmed by traffic study
PARALLEL LANE FOR LT (m)	28.7		N/A	N/A	to be confirmed by traffic study
CROSS SECTIONS					
THROUGH LANE WIDTH (SHARED WITH BIKE) (m)	4.3-4.9 (side by side operation) 3.0-4.0 (single file operation)	4.45	3.3-3.9 (rural) 3.0-4.3 (urban)	4.9 (Mississauga Rd to Osprey Mills Dr) 3.5 (James St to Main St)	Side by side operation (Mississauga Rd to Osprey Mills Dr) Single file operation (James St to Main St) Cannot meet Town standard due to property constraints.
RIGHT TURN LANE WIDTH (m)	3.25-3.7	3.8	N/A	N/A	to be confirmed by traffic study
LEFT TURN LANE WIDTH (m)	3.25-3.7	3.25	N/A	N/A	to be confirmed by traffic study
TANGENT SECTION CROSS FALL, %	2%	3%	0.5-5	3%	
SPLASH PAD / KILLSTRIP (m)	N/A		0.8-1.2	0.75	
SIDEWALK WIDTH (m)	1.5-2.0	2.0	1.0-1.5	1.5	
RIGHT OF WAY					
CLEARZONE (m)	1.2 to 1.8	1.2±	0.7 min.	0.6	
STANDARD ROW WIDTH (m)	20-24	20	15-23	23 (Mississauga Rd to Osprey Mills Dr) 15-18 (James St to Main St)	Existing buildings prevent acquisition of wider ROW from James St to Main St.
VERTICAL ALIGNMENTS					
MINIMUM GRADE (%)	0.50%	0.75%	0.70%	0.75%	
MAXIMUM GRADE (%)	8.0%	6.0%	5.2	5.20%	
SAG VERTICAL CURVE K _{min.} - HEADLIGHT CONTROL	13	18	8.0	8.0	Streetlighting provided.
SAG VERTICAL CURVE K _{min.} - COMFORT CONTROL	5-6		8.0	8.0	
CREST VERTICAL CURVE K _{min.}	7	15	5.0	7.0	
DECISION SIGHT DISTANCE (m) Minimum / Desirable	140 / 200			70	Stopping sight distance, per TAC 2017 is min. 65m (table 2.5.2).
SIGHT DISTANCE FOR TURN MOVEMENT (m)	105			TBD	

REGIONAL MUNICIPALITY OF PEEL					
VILLAGE OF ALTON, MAIN STREET NORTH, AND QUEEN STREET WEST CLASS EA					
DESIGN CRITERIA - 30% SUBMISSION					
Main St - Sta. 8+260 to 8+440 and Sta. 9+630 to Queen St					
ITEM	STANDARDS		EXISTING CONDITIONS	PROPOSED STANDARD	NOTES
	TAC	Town		DESIGN SPEED 50 (km/h)	
CLASSIFICATION					
ROAD CLASSIFICATIONS	UCU50	Residential / Neighbourhood Collector		UCU50	
DESIGN SPEED (km/h)	50			50	
POSTED SPEED (km/h)	40	60	40	40	
NUMBER OF LANES	2	2	2	2	
TRAFFIC VOLUME AADT	<8000	1000 to 3000	TBD	TBD	to be confirmed by traffic study
TRUCK VOLUME (%)	N/A		TBD	TBD	to be confirmed by traffic study
HORIZONTAL ALIGNMENTS					
NC NORMAL CROWN (-0.02m/m) Rmin. (m) , e =0.04	950		N/A	N/A	
CURVE RADIUS WITH SUPERELEV. RATE e=0.04 Rmin (m)	80	130	N/A	50	
RC REMOVE CROWN (+0.02m/m) Rmin (m) , e=0.04	115		N/A	N/A	
TAPER RATIO RIGHT TURN	11:1-17:1		N/A	N/A	to be confirmed by traffic study
TAPER LENGTH RIGHT TURN (m)	38.5-59.5		N/A	N/A	to be confirmed by traffic study
PARALLEL LANE LENGTH FOR RIGHT TURN (m)	35-75		N/A	N/A	to be confirmed by traffic study
APPROACH TAPER RATIO LEFT TURN (m)	15:1-36:1		N/A	N/A	to be confirmed by traffic study
PARALLEL LANE FOR LT (m)	28.7		N/A	N/A	to be confirmed by traffic study
CROSS SECTIONS					
THROUGH LANE WIDTH (SHARED WITH BIKE) (m)	4.3-4.9 (side by side operation) 3.0-4.0 (single file operation)	4.45	3.25	3.5	Single file operation
RIGHT TURN LANE WIDTH (m)	3.25-3.7	3.8	N/A	N/A	to be confirmed by traffic study
LEFT TURN LANE WIDTH (m)	3.25-3.7	3.25	N/A	N/A	to be confirmed by traffic study
TANGENT SECTION CROSS FALL, %	2%	3%	0.1-7.0	3%	
SPLASH PAD / KILLSTRIP (m)	N/A		N/A	0.75	
SIDEWALK WIDTH (m)	1.5-2.0	2.00	1.00	1.50	
RIGHT OF WAY					
CLEARZONE (m)	1.2-1.8	1.2±	0.7 min.	1.95	Measured to face of curb
STANDARD ROW WIDTH (m)	20-24	20	20	20-26	
VERTICAL ALIGNMENTS					
MINIMUM GRADE (%)	0.50%	0.75%	1.20%	1.20%	
MAXIMUM GRADE (%)	8.0% - 10.0%	6.0%	11.30%	10.00%	
SAG VERTICAL CURVE Kmin. - HEADLIGHT CONTROL	13	18	6	10.5	Matching existing. Recommend streetlighting in order to mitigate the K value requirement.
SAG VERTICAL CURVE Kmin. - COMFORT CONTROL	5-6		6	6.0	
CREST VERTICAL CURVE Kmin.	7	15	4	5.0	
DECISION SIGHT DISTANCE (m) Minimum / Desirable	140 / 200			27	Reduced sight distance at vertical crest.
SIGHT DISTANCE FOR TURN MOVEMENT (m)	105				

REGIONAL MUNICIPALITY OF PEEL					
VILLAGE OF ALTON, MAIN STREET NORTH, AND QUEEN STREET WEST CLASS EA					RVA 184339
DESIGN CRITERIA - 30% SUBMISSION					
Main St - Highpoint Side Road to Sta. 8+260 and Sta. 8+440 to Sta. 9+630					
ITEM	STANDARDS		EXISTING CONDITIONS	PROPOSED STANDARD	NOTES
	TAC	Town		DESIGN SPEED 50 (km/h)	
CLASSIFICATION					
ROAD CLASSIFICATIONS	RCU50	Residential Collector		RCU50	
DESIGN SPEED (km/h)	50			50	
POSTED SPEED (km/h)	40	60	40 (600m south of Mary St to 200m south of Highpoint Side Road) 60 (200m south of Highpoint Side Road to Highpoint Side Road)	40	Posted speed reduced to 30km/hr through S-curve
NUMBER OF LANES	2	2		2	
TRAFFIC VOLUME AADT	<5000	1000 to 3000	TBD	TBD	to be confirmed by traffic study
TRUCK VOLUME (%)	≤30		TBD	TBD	to be confirmed by traffic study
HORIZONTAL ALIGNMENTS					
NC NORMAL CROWN (-0.02m/m) R _{min.} (m) e=0.06	900		3663	3663	
CURVE RADIUS WITH SUPERELEV. RATE e=0.06 R _{min.} (m)	60	130	40	60	Reduced to 55 on sharp curve in S-curve
RC REVERSE CROWN (+0.02m/m) R _{min.} (m) , e=0.06	800		N/A	N/A	
NC NORMAL CROWN (-0.02m/m) R _{min.} (m) , e=0.04	800		N/A	N/A	
CURVE RADIUS WITH SUPERELEV. RATE e=0.04 R _{min.} (m)	100		N/A	N/A	
RC REVERSE CROWN (+0.02m/m) R _{min.} (m) , e=0.04	400		N/A	N/A	
TAPER RATIO RIGHT TURN	11:1-17:1		N/A	N/A	to be confirmed by traffic study
TAPER LENGTH RIGHT TURN (m)	38.5-59.5		N/A	N/A	to be confirmed by traffic study
PARALLEL LANE LENGTH FOR RIGHT TURN (m)	35-75		N/A	N/A	to be confirmed by traffic study
APPROACH TAPER RATIO LEFT TURN (m)	8:1-30:1		N/A	N/A	to be confirmed by traffic study
PARALLEL LANE FOR LT (m)	28.7		N/A	N/A	to be confirmed by traffic study
CROSS SECTIONS					
THROUGH LANE WIDTH (m)	3.0-3.7 (DHDV<450) 3.5-3.7 (DHDV>450)	3.8	3.25-4.6	3.3	Meets TAC 2017, Table 4.2.1 & 4.2.2
RIGHT TURN LANE WIDTH (m)	3.25-3.7 (DHDV<450) 3.5-3.7 (DHDV>450)	3.8	N/A	N/A	to be confirmed by traffic study
LEFT TURN LANE WIDTH (m)	3.25-3.7 (DHDV<450) 3.5-3.7 (DHDV>450)	3.25	N/A	N/A	to be confirmed by traffic study
TANGENT SECTION CROSS FALL, %	2%		0.1-9.0	3%	
SIDEWALK WIDTH (m)	1.8-2.0		N/A	N/A	
PAVED SHOULDER (m)	1.5 (DHDV<250) 2.0 (250<-DHDV<450) 2.5 (DHDV>450) 1.5-3.0 (Bicycle Accessible)		0.0-0.8	1.5	Assuming DHDV <250 (to be confirmed by traffic study) Bicycle Accessible Shoulder
RIGHT OF WAY					
CLEARZONE (m)	4.5-5.0		0.7 min.	5.0	Assuming ADT 1500-6000, 4:1 fill slope
STANDARD ROW WIDTH (m)			20-30	20-27	plus 1.5-2.0m drainage easement
VERTICAL ALIGNMENTS					
MINIMUM GRADE (%)	N/A	0.75%	1.45%	1.45%	
MAXIMUM GRADE (%)	7.0 - 10.0%	6.0%	14.35%	12.25%	
SAG VERTICAL CURVE K _{min.} - HEADLIGHT CONTROL	13	18	6	9	Will look into increasing K value to meet standard. Alternative would be to recommend providing streetlighting.
SAG VERTICAL CURVE K _{min.} - COMFORT CONTROL	5-6		6	9	
CREST VERTICAL CURVE K _{min.}	7	15	3	4	
DECISION SIGHT DISTANCE (m) Minimum / Desirable	140 / 200			20	Stopping sight distance, per TAC 2017 is min. 65m (table 2.5.2).
SIGHT DISTANCE FOR TURN MOVEMENT (m)	105			TBD	