

# Speed & Road Safety Review

## Oxford Road 24 and Oxford Road 59, Tavistock

**Presentation to East Zorra-Tavistock Council**

**June 2, 2021**

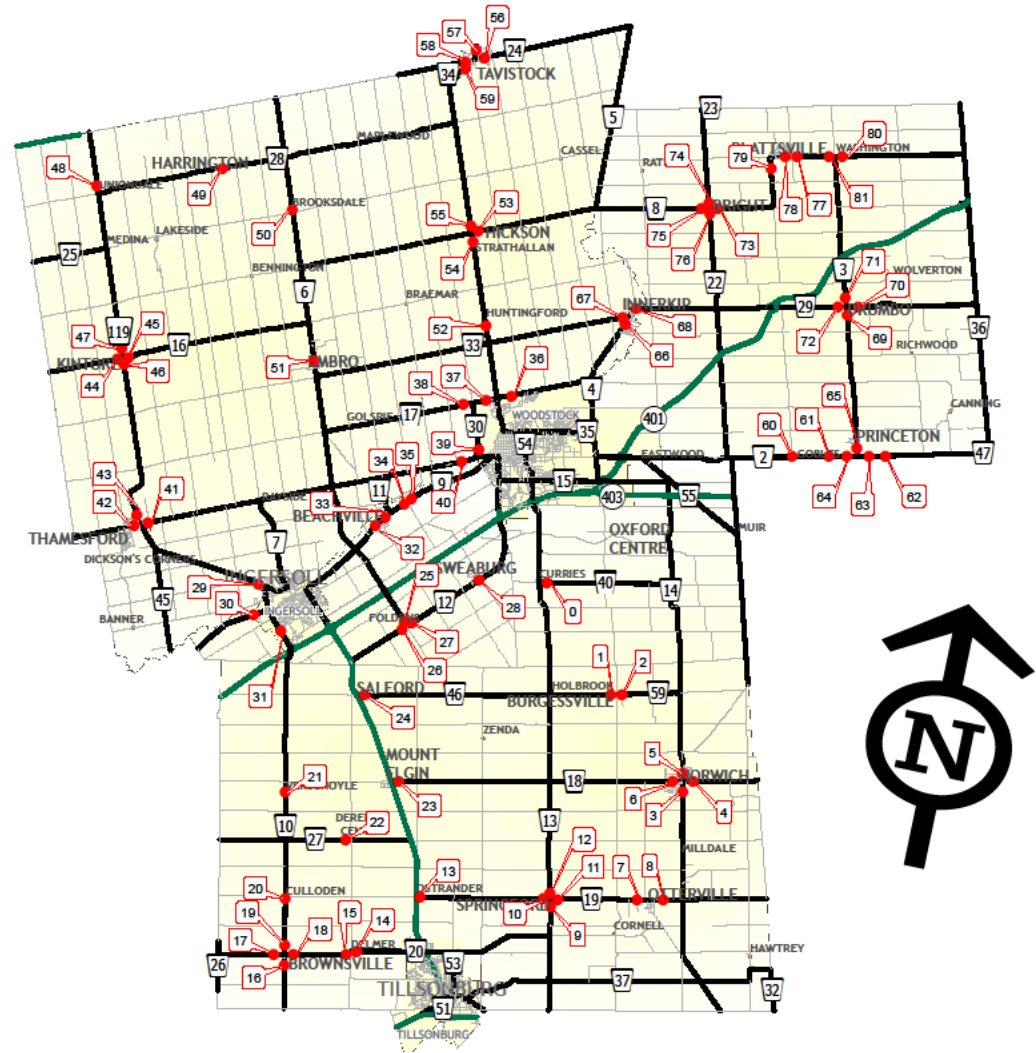
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Manager of Transportation & Waste Management Services

# County-wide Traffic Calming Approach

- **Regular/ongoing speed monitoring in communities and settlement areas**
- **Information sharing and collaboration with Police, municipal partners and community**
- **Adoption of posted speeds which are consistent with driving environment**
- **Need and prioritization of traffic calming measures**
- **Consideration of traffic calming measures as part of road design for planned road rehabilitation and land development**
- **Speed monitoring to evaluate effectiveness of traffic calming measures**

# Traffic Data Benchmarking

- 24 hr speed counts at over 80 locations in 2019
- reduced speed zones through rural communities, hamlets and built up areas



# OR 24 & OR 59 Speed and Road Safety Review Work Plan

- Review speed data on OR 24 (Hope St) and OR 59 (Woodstock St), Tavistock
- Pedestrian study at Woodstock St N
- Review existing driving environment
- Review historical collision records
- Determine appropriate posted speed limit
- Data evaluation and recommendations
- Share results and proposed recommendations with Municipal Representatives and Police

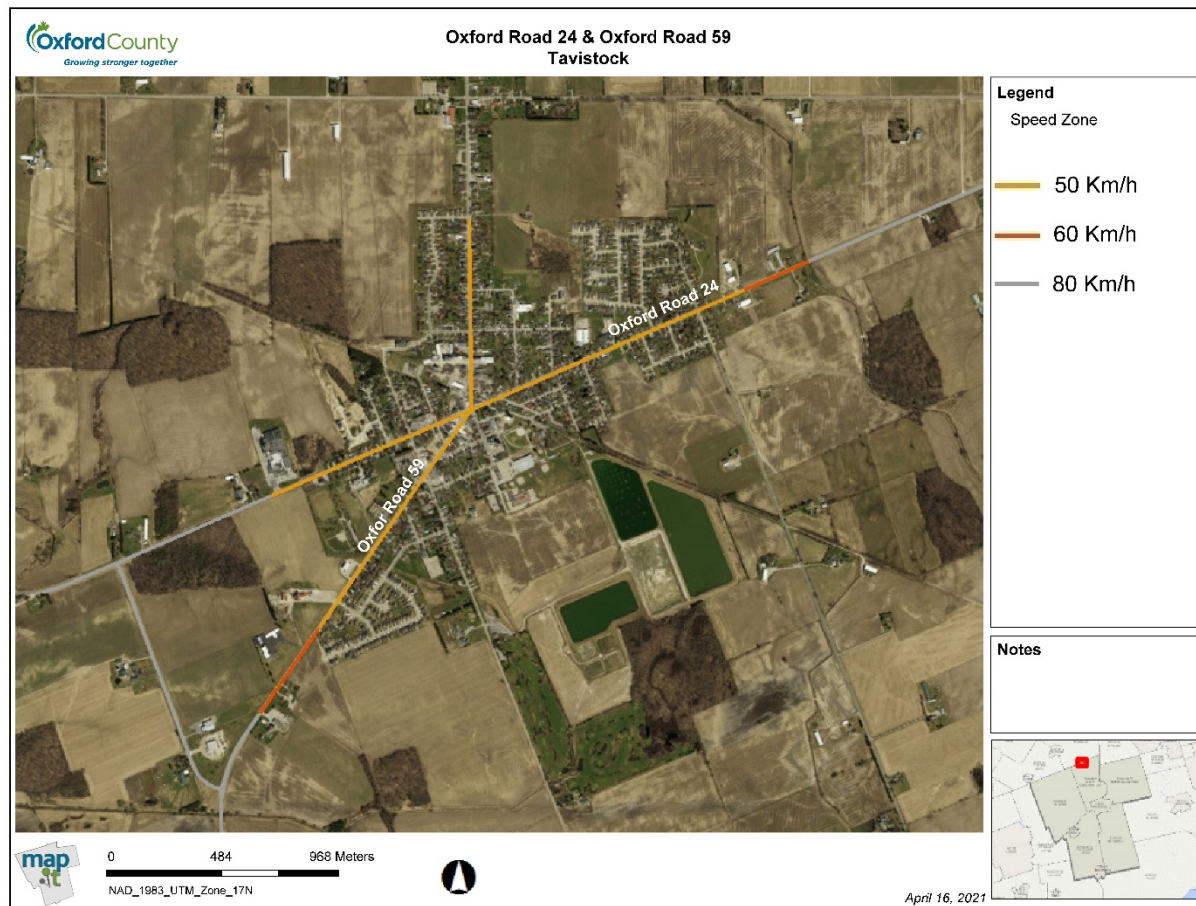
# OR 24 Existing Conditions

- **Signalized intersection at OR 59**
- **Urban x-sec with curb, paved shoulders, sidewalk in built-up limits**
- **Rural x-sec with gravel shoulders beyond built-up limits**
- **Limits of urban x-sec generally aligns with built-up area**

# OR 59 Existing Conditions

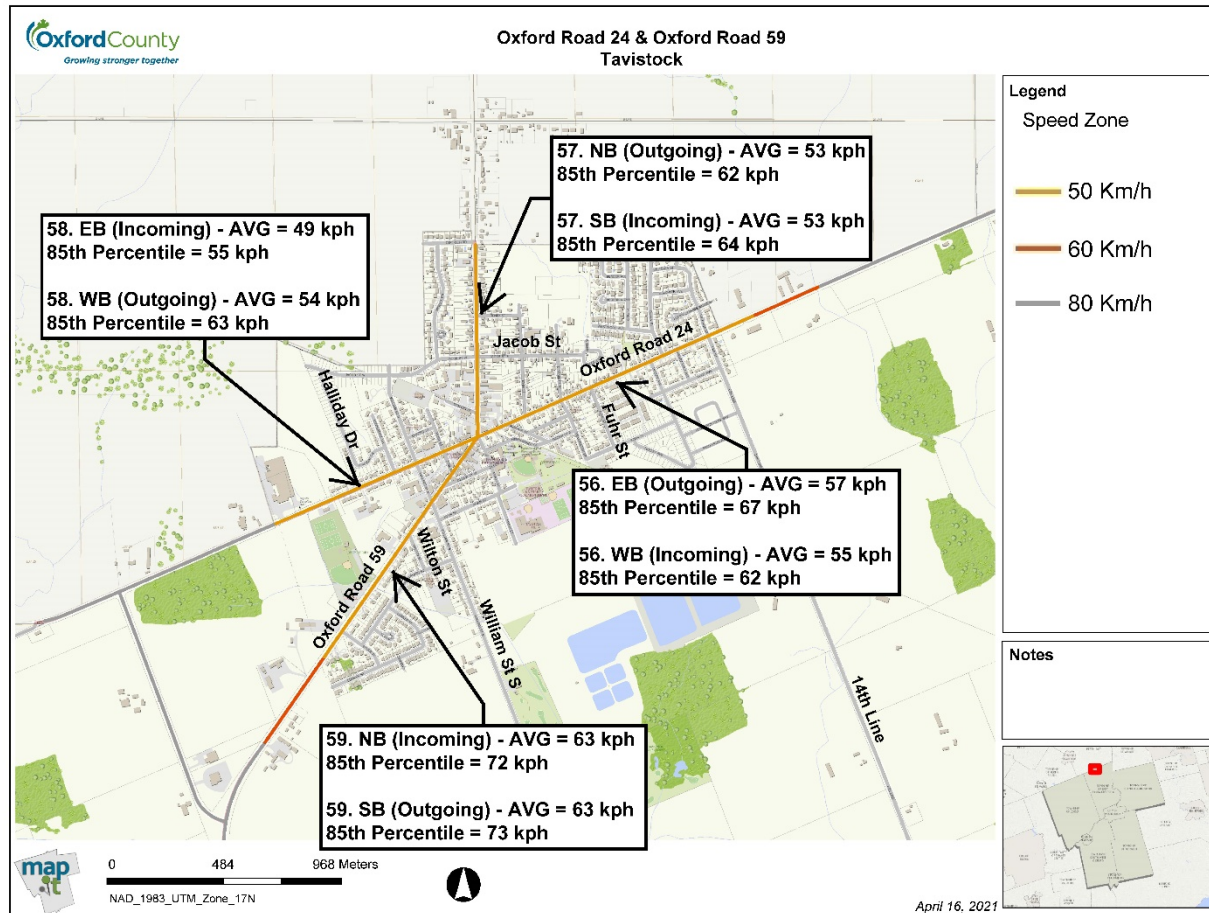
- **Signalized intersection at OR 24**
- **Urban x-sec with curb, paved shoulders, sidewalk (Dietrich Rd to Wilton St)**
- **Partially rural x-sec with gravel shoulder on west side and paved shoulders, curb on east side (Wilton St to Bauer St)**
- **Rural x-sec with gravel shoulders south of Bauer St**

# OR 24 & OR 59 Speed Zones





# Speed Data – OR 24 & OR 59





# OR 24 & OR 59 Traffic Data

Location	AADT <sup>1</sup>	24 Hr Traffic Volume	Truck Volume <sup>2</sup>	% Trucks
Hope St W	4026	4005	623	16
Hope St E	6772	6740	745	11
Woodstock St N	4737	4695	546	12
Woodstock St S	3724	3707	462	13
<div><div>1. Average Annual Daily Traffic</div><div>2. Truck volume includes all vehicles greater than 8m in length</div></div>				

# Collision History OR 24 Study Limits

Year	2013	2014	2015	2016	2017	2018	2019	2020
Property Damage Only	0	3	6	3	0	3	4	2
Non-Fatal Injury	0	0	1	0	0	0	2	0
Fatal Injury	0	0	0	0	0	0	0	0
Total	0	3	7	3	0	3	6	2
Total Collisions 2013 – 2020: 24								

- Historical collision data from 2013 to 2020:
  - ▶ 24 total collisions
  - ▶ 3 collisions resulted in non-fatal injuries
  - ▶ 21 collisions resulted in property damage
  - ▶ Avg 3.0 collisions/year
  - ▶ Collision rate = 0.35 collisions/1mil vehicle kms
    - MTO 2010 Avg = 1.7 collisions/1mil vehicle kms
    - Annual collisions (right angle impacts, turning movements) are below Ontario Traffic Manual warrant for an All Way Stop (Avg. 4 collisions/year over 3 years) at any road intersecting OR 24

# Collision History OR 59 Study Limits

Year	2013	2014	2015	2016	2017	2018	2019	2020
Property Damage Only	0	1	5	4	7	2	8	0
Non-Fatal Injury	0	0	3	1	1	0	0	0
Fatal Injury	0	0	0	0	0	0	0	0
Total	0	1	8	5	8	2	8	0
<b>Total Collisions 2013 - 2020: 32</b> <b>*Includes OR 24 intersection collisions</b>								

- **Historical collision data from 2013 to 2020:**
  - ▶ 32 total collisions
  - ▶ 5 collision resulted in non-fatal injury
  - ▶ 27 collisions resulted in property damage
  - ▶ 9 collisions at signalized intersection
  - ▶ Avg 4.0 collisions/year through study area
  - ▶ Collision rate = 0.86 collisions/1mil vehicle kms
  - MTO 2010 Avg = 1.7 collisions/1mil vehicle kms
  - Annual collisions (right angle impacts, turning movements) are below Ontario Traffic Manual warrant for an All Way Stop (Avg. 4 collisions/year over 3 years) at any road intersecting OR 59

# Posted Speed Limits – OR 24

SEGMENT (east to west)	POSTED SPEED (KM/HR)	TAC RECOMMENDED POSTED SPEED* (KM/HR)	DIFFERENCE (KM/HR)	OXFORD COUNTY RECOMMENDED POSTED SPEED (KM/HR)
OR 34 to 750m west of OR 59 – Rural	80	80	0	80
750m west of OR 59 to 1.1km east of OR 59 – Urban	50	60	+10	50
1.1km east of OR 59 to 15 <sup>th</sup> Line – Rural	50/60/80	80	+30/+20/0	50/80

\* TAC Canadian Guideline for Establishing Posted Speed Limits (2009)

# Posted Speed Limits – OR 59

SEGMENT (north to south)	POSTED SPEED (KM/HR)	TAC RECOMMENDED POSTED SPEED* (KM/HR)	DIFFERENCE (KM/HR)	OXFORD COUNTY RECOMMENDED POSTED SPEED (KM/HR)
Dietrich Rd to 50m south of Wilton St - Urban	50	60	+10	50
50m south of Wilton St to 150m south of Bauer St – Urban	50	70	+20	50
150m south of Bauer St to OR 34 – Rural	60/80	80	+20/0	80

\* TAC Canadian Guideline for Establishing Posted Speed Limits (2009)

# Appropriate Posted Speeds

- **Reduces speed variation/differential**
- **Promotes uniform traffic flow**
- **Reduces risk of collisions**
- **Improves enforcement effectiveness**
- **Enhances road safety**

# Speed Variation/Differential

- **Collision rate is more directly affected by speed variation then absolute speed**
- **Risk of collision is lower with uniform traffic flow**
- **Posted speeds lower then design/operating speeds result in:**
  - ▶ Tailgating
  - ▶ Impatient Drivers
  - ▶ Passing
  - ▶ Greater collision risk



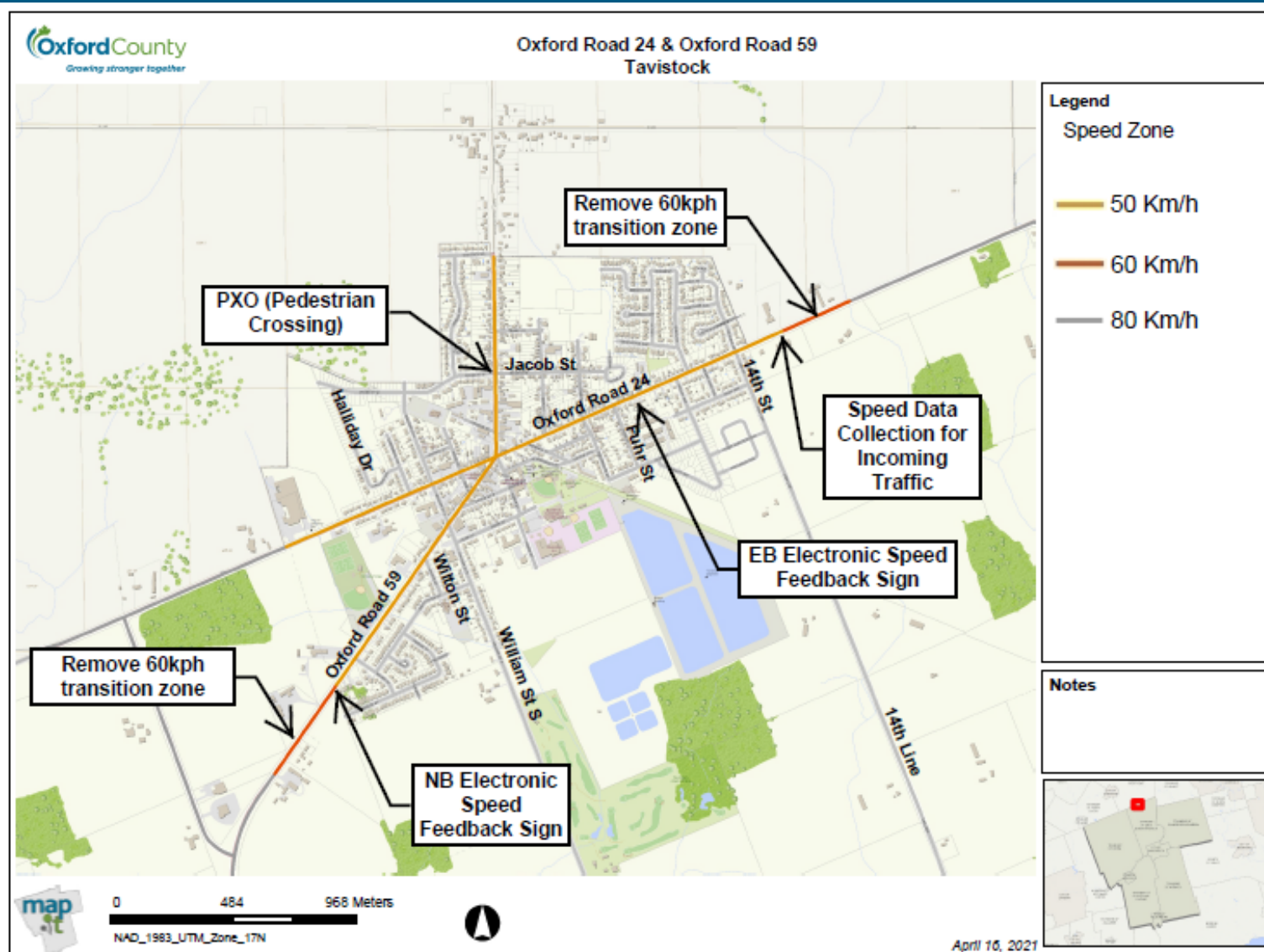
# Establishing Posted Speeds (TAC)

- **TAC Canadian Guideline – 2007**
- **Risk based analysis**
- **Physical and Road-User characteristics**
- **Systematic, consistent approach**
- **Site specific characteristics, engineering judgement**
- **Excludes school zones/playground areas**
- **Local, Provincial policies**

# Speed and Road Safety Review Findings

- Operating speeds on OR 24 eastbound (@ Fuhr St) marginally excessive
- Operating speeds on OR 59 south of Wilton St marginally excessive
- 60km/hr transition zones on OR 24 east and OR 59 south do not align with built driving environment
- 50km/hr zone on OR 59, south of Wilton, does not align with built driving environment
- Historical collision data did not show apparent speed related trends
- %truck volume is typical of most County roads

# Recommendations – Immediate OR 24 and OR 59



# Future Considerations OR 24 & OR 59

- **Extend urban x-sec on OR 24, west & east to align with limits of existing 50km/hr speed zone (2-5yrs)**
- **Ongoing Police enforcement and speed data sharing**
- **Automated speed enforcement/CSZ designation**
- **Road urbanization (OR 24 West/East & OR 59 South)**
- **Curb extensions (bump outs), separated bike lanes**
- **Community Watch Program (Township)**
- **Physical features at village limits**
  - community sign, landscaping, trees, shrubbery
- **Upload of Maplewood SR to County**
  - alternative route for through traffic

# Community Safety Zone Designation

- **Highway Traffic Act (HTA)**
  - ▶ permits CSZ designation on part of highway where public safety is of 'special concern'
  - ▶ speed fines can be doubled in CSZs
- **Ontario Traffic Manual (OTM)**
  - ▶ evidence that public safety is of special concern
  - ▶ CSZs not intended for entire length of roadway
  - ▶ number/location of CSZs are critical for successful enforcement

# Proposed County-wide CSZ Designation Criteria

- **Areas of special safety concern**
  - Schools, community centres, recreational areas, hospitals, senior centers/residences, high pedestrian volumes
- **Safety risk analysis for areas of special concern**
  - Collision ratio, traffic volumes, pedestrian volumes, operating speeds, % sidewalks, # of entrances/km
- **CSZ designation would support potential implementation of Automated Speed Enforcement (ASE)**
- **County Council approval of proposed CSZ criteria (June 23, 2021)**
- **Segments in Tavistock would meet area of special concern**

# Next Steps

- **Review of incoming speed data at Hope St E**
  - Determine if data warrants speed feedback sign
- **Report to County Council – July 14, 2021**
  - Speed By-law amendments
- **Implementation of immediate measures**
  - Speed zone adjustments
  - Installation of speed feedback signs
  - Pedestrian crossing (PXO) at Jacob Street (2022)
- **Post Monitoring**



# Speed & Road Safety Concerns

**THANK YOU**