ROAD DESIGN PARAMETERS	PRESENT CONDITIONS	DESIGN STANDARDS (DESIRABLE)	DESIGN STANDARDS (MINIMUM)	PROPOSED STANDARDS	SOURCE (e.g. TAC, MTO, YR)
DESIGN CLASSIFICATION	RLU70	UAU70	UAU60	UAU70	TAC-2017 Table 2.6.2
DESIGN SPEED	70 km/h	70 km/h	60 km/h	70 km/h	YR – RDGL Section 5
POSTED SPEED	60 km/h	60 km/h	60 km/h	60 km/h	YR
DESIGN VEHICLE	N/A	WB-20 Tractor Semi-Trailer (TAC)	WB-20 Tractor Semi-Trailer (TAC)	WB-20 Tractor Semi-Trailer (TAC)	YR – RDGL Section 5
MINIMUM STOPPING SIGHT DISTANCE	> 50 m	105 m	85 m	105 m	TAC-2017 Table 3.3.2
EQUIVALENT MINIMUM 'K' FACTOR	4.5 Crest 4.7 Sag	17 Crest 23 Sag 12 Sag (Comfort)	11 Crest 18 Sag 9s Sag (Comfort)	17 Crest 23 Sag 12 Sag (Comfort)	TAC-2017 Table 3.3.2 Table 3.3.4 Table 3.3.5
GRADES MAXIMUM	8.15 %	5.0 %	8.0 %	5.0 % (8.0% at Grade-Separations)	TAC-2017 Table 3.3.1
GRADES MINIMUM	0.5%	0.5%	0.5%	0.5%	YR RDGL Section 8.3
RADIUS MINIMUM	380 m	1680 m (NC) 200 m (Superelevated)	1290 m (NC) 130 m (Superelevated)	1680 m (NC) 200 m (Superelevated)	TAC-2017 Table 3.2.4
Maximum Rate of Super Elevation (4% Max)	N/A	4.0 %	4.0 %	4.0 %	YR RDGL Section 8.5
PAVEMENT WIDTH	2 Lanes @ 3.75m	2 Inside Lanes @ 3.30m 2 Outside Lanes @ 3.5 m	2 Inside Lanes @ 3.00m 2 Outside Lanes @ 3.5 m	2 Inside Lanes @ 3.30m 2 Outside Lanes @ 3.5 m	YR – RDGL Section 5
SHOULDER WIDTH (fully paved)	2.5 m	2.5 m	2.5 m	2.5 m	YR RDGL Section 8.5
SHOULDER ROUNDING	~0.50 m	0.5 m to 1.0 m	0.5 m to 1.0 m	0.5 m to 1.0 m	YR RDGL Section 8.5
MEDIAN WIDTH	N/A	4.0 m to 5.0 m	4.0 m to 5.0 m	4.0 m to 5.0 m	YR – RDGL Section 5
R.O.W. WIDTH	20 m to 72 m	OP Map 12 = 36.0 m	OP Map 12 = 36.0 m	OP Map 12 = 36.0 m	YR Official Plan Map 12
INTERSECTION CROSSFALL	Varies (Splined intersections)	1.0 %	1.0 %	1.0 %	YR RDGL Section 8.1

ROAD DESIGN PARAMETERS	PRESENT CONDITIONS	DESIGN STANDARDS (DESIRABLE)	DESIGN STANDARDS (MINIMUM)	PROPOSED STANDARDS	SOURCE (e.g. TAC, MTO, YR)
MININUM INTERSECTION RADIUS	12m	7.5m	7.5m	7.5m	YR RDGL Section 8.1
SIGNALS & ILLUMINATION	- Partial illumination at intersections - Traffic signals at: • Keele St. • Dufferin St.	- Full illumination - Traffic signals at: • Keele St. • Dufferin St.	- Full illumination - Traffic signals at: • Keele St. Dufferin St.	- Full illumination - Traffic signals at: • Keele St. • Dufferin St.	Existing Site Conditions
EROSION & SEDIMENT CONTROLS FOR DESIGN	Rip-rap ditch protection	• Silt fence for temporary construction impacts • Combination of Erosion Control Blankets with Seeding and Rip Rap for permanent ESC on slopes and exposed areas	• Silt fence for temporary construction impacts • Combination of Erosion Control Blankets with Seeding and Rip Rap for permanent ESC on slopes and exposed areas	• Silt fence for temporary construction impacts • Combination of Erosion Control Blankets with Seeding and Rip Rap for permanent ESC on slopes and exposed areas	As per the Greater Golden Horseshoe Area Conservation Authorities – ESC Guidelines – December 2006

CYCLING AND PEDESTRIAN DESIGN PARAMETERS	PRESENT CONDITIONS	DESIGN STANDARDS (DESIRABLE)	DESIGN STANDARDS (MINIMUM)	PROPOSED STANDARDS	SOURCE (e.g. TAC, MTO, YR)
Cycling Facility Type (e.g. on- street, off-street, MUP)	N/A	Cycle Track 2.35m including buffer	Cycle Track 1.75m including buffer	Cycle Track 2.35m including buffer	YR RDGL Section 8.5
Minimum Boulevard Width	N/A	3.5 m from edge of pavement	1.3 m from edge of pavement	0 – 4.5 m	YR RDGL Section 8.5
Proposed Sidewalk Width	N/A	2.1– 3.4 m	2.1 m	2.1 m	YR RDGL Section 8.7

ENTRANCE DESIGN PARAMETERS	PRESENT CONDITIONS	DESIGN STANDARDS (DESIRABLE)	DESIGN STANDARDS (MINIMUM)	PROPOSED STANDARDS	SOURCE (e.g. TAC, MTO, YR)
MINIMUM WIDTH	3.5 m Res 3.5 m Com.	5.0 m Res. 9.0 m Com.	3.0 m Res. 5.0 m Com.	5.0 m Res. 9.0 m Com.	YR RDGL Section 8.8 DS-203 DS-215
MINIMUM LENGTH (ROW to building)	14.5 m Res. 16.0 m Com.	4.5 m Res. 9.0 m Com.	4.5 m Res. 9.0 m Com.	4.5 m Res. 9.0 m Com.	As per local municipality standard (Vaughan By-Law 1-88)
MINIMUM RADIUS	5.0 m Res. 7.0 m Com.	5.0 m Res. 9.0 m Com.	3.0 m Res. 5.0 m Com.	5.0 m Res. 9.0 m Com.	YR RDGL Section 8.8 DS-203 DS-215
MAXIMUM GRADE	12 %	10 %	10 %	10 %	YR RDGL Section 8.8
MAX. ALGEBRAIC GRADE CHANGE (4% Max)	4 %	4%	4%	4%	YR RDGL Section 8.8

ADDITIONAL DESIGN AND SCOPE REQUIREMENTS:

- Traffic Safety:
    - A 8.5m desirable clear zone (Roadside Design Manual, Table 2-2) will be provided from the edge of the travel lane. Hydro poles and other hazards will be relocated outside of the clear zone.

- Operational and Maintenance:
    - A minimum 2m distance will be implemented, where feasible, between the back of curb and the sidewalk to provide sufficient room for snow clearing.

- Road Closures / Staging:
    - Road closures and construction staging will be investigated during the preliminary

design stage of the project. It is anticipated that at least one lane of traffic will be maintained between Keele Street and Rodinea Road.

- York Region Transit:
  - There are currently no existing YRT routes on this section of Teston Road.

- Traffic and Pedestrian Management During Construction:
  - Traffic and Pedestrian management during construction will be investigated during the preliminary design stage of the project. It is anticipated that at least one lane of traffic will be maintained between Keele Street and Rodinea Road.

- Streetscaping:
  - Proposed boulevards provide opportunities for new street trees and other streetscaping features.

- Forestry and Tree Planting:
  - A tree inventory will be carried out in the study area including within the Oak Ridges Moraine valley. Tree removals will be determined during the preliminary design phase with compensation planting according to Region and TRCA requirements.
  - Remaining trees will be protected during construction through the erection of fencing at the perimeter of the tree protection zone.
  - New street trees will be planted in the vegetated boulevards, where feasible, to compensate for the tree removals.

- AODA Compliance:
  - All sidewalks, sidewalk ramps, intersection cross-walks and pedestrian signals will be designed for York Region AODA standards.

- Transit Management Systems:
  - Transit Management Systems will be determined during the transportation planning component of this EA study.

- Intelligent Traffic Systems:
  - Intelligent Traffic Systems requirements will be determined during the transportation planning component of this EA study.

- ESC and SWM:
  - Existing drainage patterns are anticipated to be maintained.
  - The urbanization of the corridor will require the implementation of storm sewer systems to suit the post-construction run-off conditions.
  - All watercourses including the Don River East Branch Tributary will be maintained with crossing structures based on current TRCA requirements.

- Special Entrance Treatments:
  - Driveways will be reconstructed to match the existing surface treatment.

- Rail Crossing:
    - Barrie GO Line - Metrolinx has identified the existing dual-track at-grade crossing east of the Keele Street intersection (Mile 19.40, Newmarket Subdivision) be grade separated should Teston Road be extended. Crossing designs will be reviewed during this study.

- Pavement Structure:
    - The proposed pavement structure will meet the Region's Minimum Granular Bearing Equivalency (GBE) Ratio of 800. A full depth pavement structure is anticipated based on the Region standard pavement structure:
        - 50mm SP12.0
        - 100mm SP19.0
        - 150mm Granular 'A'
        - 450mm – 525mm Granular 'B', Type 1
    - The proposed pavement structure will be confirmed through the completion of a Pavement Design Report later in the EA study.

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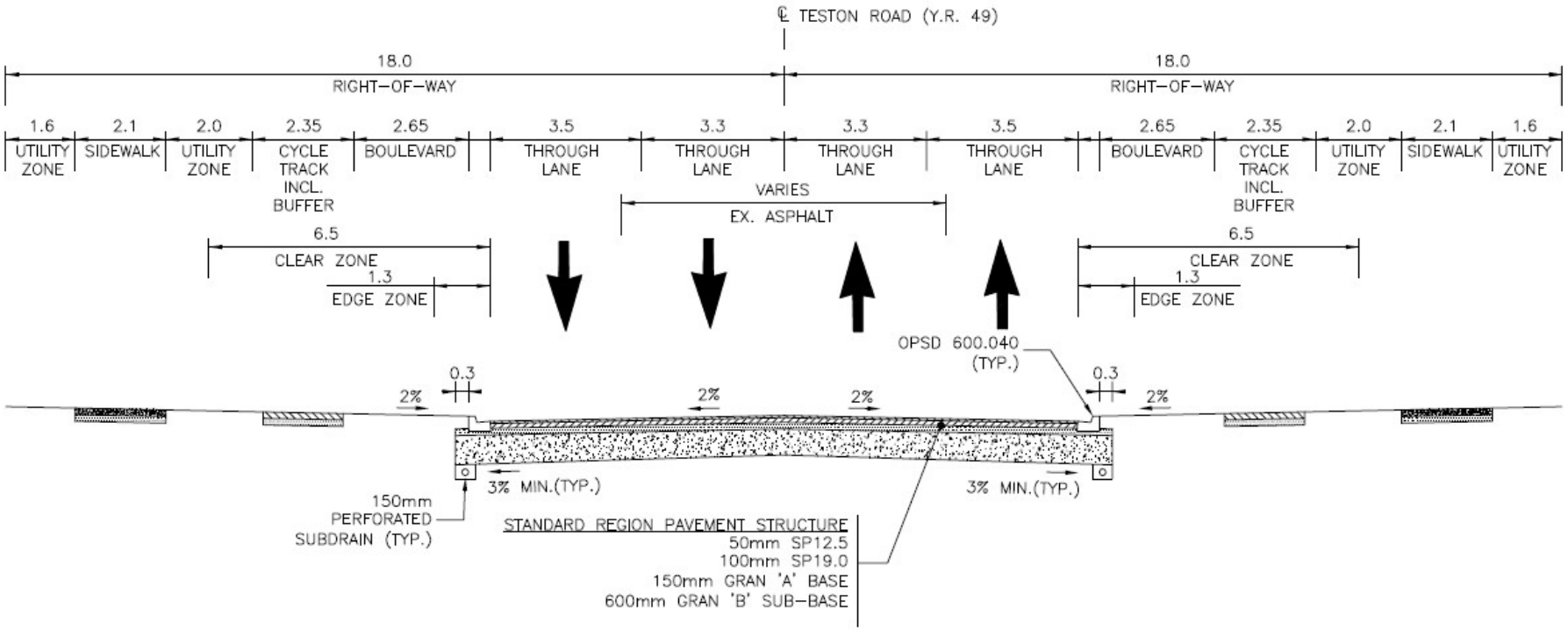
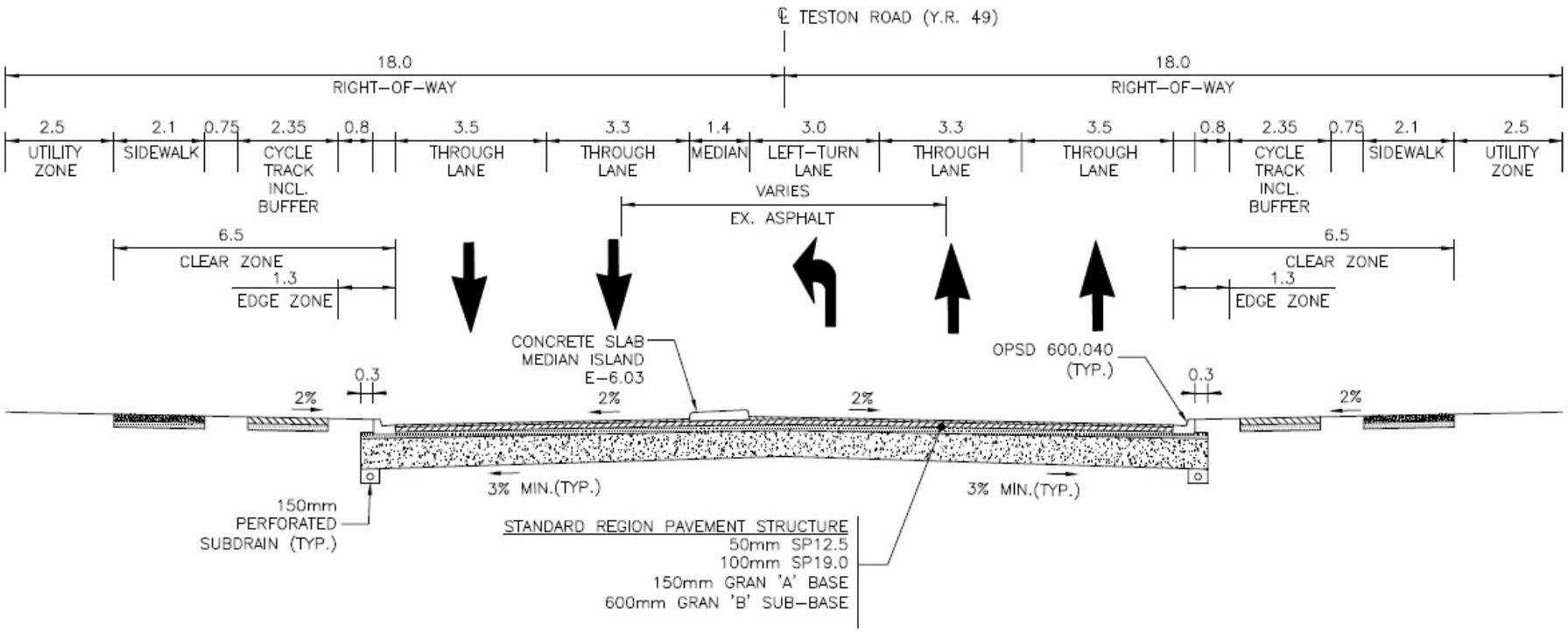
PROPOSED TYPICAL CROSS-SECTION(S):



TESTON ROAD – MID–BLOCK TYPICAL SECTION
LOOKING EAST
N.T.S.

DRAFT



TESTON ROAD – INTERSECTION TYPICAL SECTION
LOOKING EAST
N.T.S.

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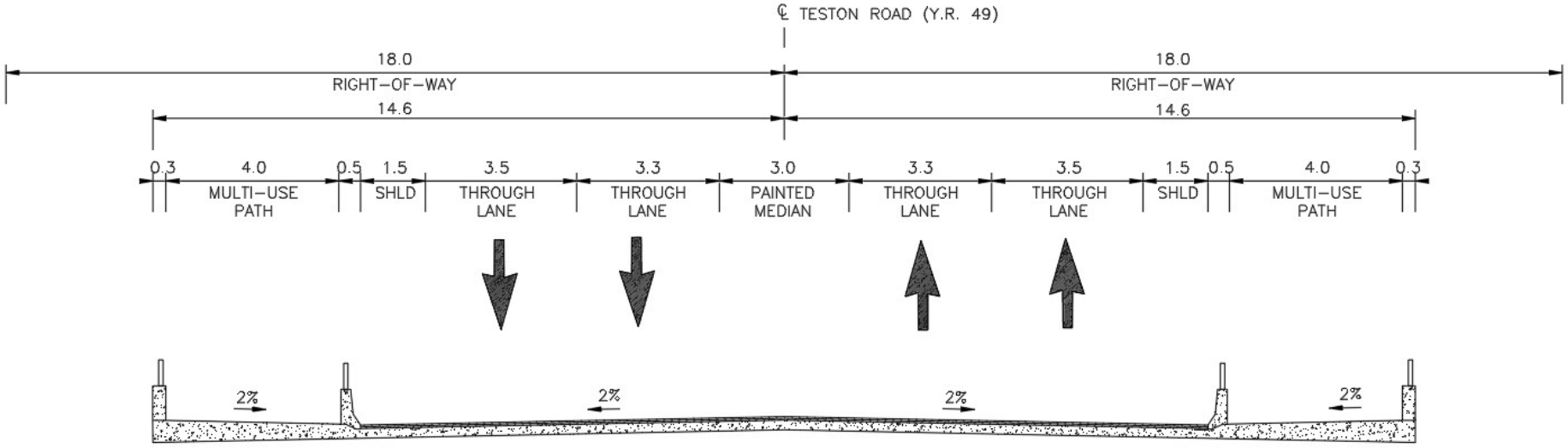

TESTON ROAD – DON RIVER TRIBUTARY CROSSING STRUCTURE TYPICAL SECTION

LOOKING EAST

N.T.S.

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LOCATION MAP:

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DESIGN CRITERIA SIGN-OFF:

Recommended by: Consultant Project Manager	Name: Signature:	Date:
Comments:		
Reviewed by: CPD, Project Manager	Name: Signature:	Date:
Comments:		
Reviewed by: CPD, Engineering Manager	Name: Signature:	Date:
Comments:		
Reviewed by: CPD, Electrical & Traffic Design Project Manger	Name: Signature:	Date:
Comments:		
Reviewed by: RTO, Roads Operation Manager	Name: Signature:	Date:
Comments:		
Approved by: CPD, Director	Name: Signature:	Date:
Comments:		
Approved by: RTO, Director	Name: Signature:	Date:
Comments:		