

Changes in the Design and Review Process for Development Approvals in BC

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Overview

- **Policy and process**
 - Who does what?
 - Terms of reference
 - Professional responsibility
 - Design domain
- **Technical issues**
 - Intersection functional area
 - Sensitivity analysis
 - Onsite access and manoeuvrability
 - Operational analysis



Policy and Process

Who Does What?

- Developer
- Architect
- Transportation Engineer
- Civil Design Engineer
- MoT Development Approvals staff
- Municipal staff

Policy and Process

Terms of Reference

- Required for all detailed designs and simple designs with unique factors
- Lays out key study requirements
- Warns of problems known by MoT and municipality
- See MoT DA staff early to get ToR
- Forms and check list provided

Policy and Process

Professional Responsibility

- Professional “team members” cooperate and work within their knowledge and training
- Earlier decisions affect later ones
- May need more than 1 iteration
- Letters of Assurance
- Quality management

Policy and Process

Design Domain

- TAC Design Guidelines and B.C. Supplement
- Interaction between design elements
- E.g. turning radius vs. lane width
- Don't use a cookbook approach and don't use “multiple minimums”

2007 Site Impact Analysis Requirements Manual

1. Introduction
 2. Things You Must Do
 3. Parking and Trip Generation Rates
 4. Traffic Analysis
 5. Important Design Issues - Off-Site
 6. Important Design Issues - On-Site
- Appendices



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7



Things You Must Do

- Qualified Persons
- Determine Jurisdiction
- Determine Process (Simplified or Detailed)
- Define Terms of Reference
- Comply with “Good Practice” and Standards
- Comprehensive Reporting of Assumptions, Process, Options and Recommendations



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8



What's Reviewed

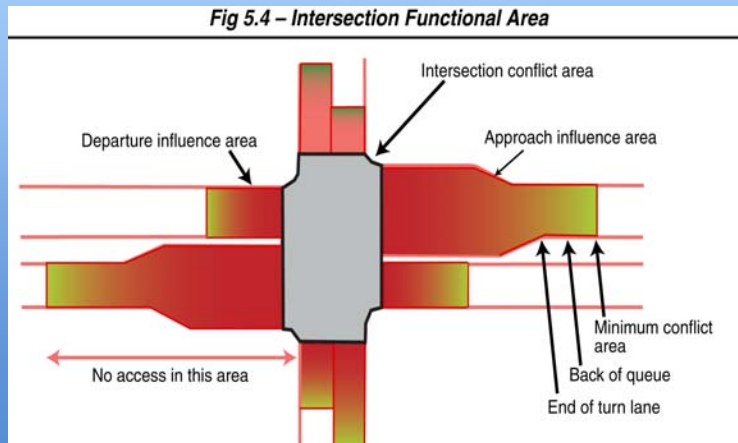
- Traffic Impact
- Road Design
- Access
- On-Site Design
- Other issues

Technical Issues

- Intersection functional area
- Sensitivity analysis
- On-site access and manoeuvrability
- Operational analysis

Technical Issues

Intersection functional area



Technical Issues

Intersection functional area

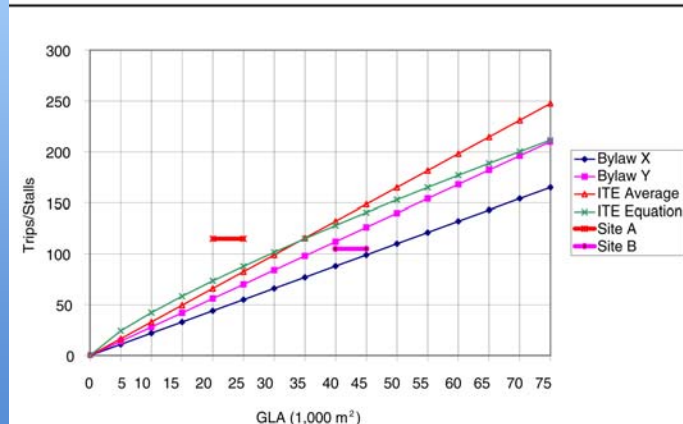
- Safety issues
- Capacity
- Ease of access to development compromised

- Eliminate or restrict access in this area
- Length of area is dependent on traffic volumes and queues

Technical Issues

Sensitivity analysis

Fig 3.1 – Trip/Parking Rate Comparison



Technical Issues

Sensitivity analysis

- No site has the “average” trip generation or parking rate
- Traffic volumes from another day will be different
- Average vs. 85th percentile
- Analyse a range of rates/volumes & combinations
- Develop a robust design to accommodate expected variation

Technical Issues

On-site access and manoeuvrability



Technical Issues

On-site access and manoeuvrability

- Safe access for all modes
- Adequate capacity
- Access point = an intersection
- Separate vehicles and pedestrians
- Minimise conflicts with pedestrians and vehicles
- Recognise vehicle turning capability

Technical Issues

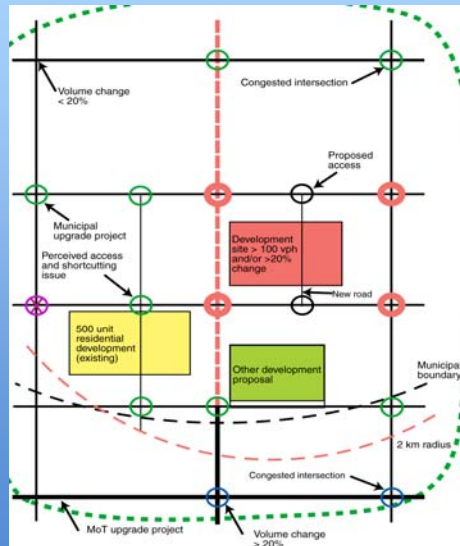


Technical Issues

On-site access and manoeuvrability

- Locate access points for optimum access
- Provide adequate queue storage
- Design circulation for pedestrian safety
- Provide adequate pedestrian, bicycle and transit facilities
- Provide adequate turning radius
- Provide adequate parking consistent with TDM initiatives (stall size and amount)
- **Critical issue – impact of on-site operation on the access points**

Technical Issues



Operational analysis

- Study area = area of impact
- Design hour volumes – sensitivity
- Approved software
- Progression analysis required
- Operational criteria – LoS, delay, progression etc.
- Safety considerations – forgiving design
- Signability
- Reporting format

Summary

- Defined process
 - Do it early – and get it right, first time
- Identify key issues
 - “Does it impact highway operations”
- Thorough and consistent analysis
 - Compatible with municipal processes
- Develop acceptable mitigation
- Approve safe access with minimum traffic impact