Urban Design and Infrastructure
An Overview

Alex Taranu, FCIP, RPP, OAA
Urban Design and Infrastructure - Overview

1. Introduction – Urban Design and Public/Civic Infrastructure
2. Urban Design and Major Public Infrastructure
3. Urban Design and Community Education Infrastructure
4. Urban Design and Open Space, Culture and Recreation Infrastructure
5. Urban Design and Transportation Infrastructure
6. Urban Design and Utilities
7. Urban Design and Engineering Infrastructure
8. Urban Design and Sustainable/Green Community Infrastructure
9. Case Study: Mount Pleasant Village
10. Conclusions
2. Urban Design and Major Public Infrastructure

- Universities, Colleges, Hospitals, Justice/Courthouses, Government offices
3. Urban Design and Community Education Infrastructure

- Schools, libraries: The challenge of prototypes and programming, retrofit of existing schools
4. Urban Design and Open Space, Culture and Recreation Infrastructure

- Open space/Parks systems
- Recreation amenities
- Cultural amenities – performing arts, museums
5. Urban Design and Transportation Infrastructure

- Transit, active transportation: mobility hubs, transit system and structures
- Roads and streets
6. Urban Design and Utilities

- Energy, hydro, gas
- Communication infrastructure
7. Urban Design and Engineering Infrastructure

- Stormwater management: stormwater ponds, ditches
- Bridges, flood protection, water/riverfronts
Integrative Design: Complete Streets for Public Health and Sustainability
8. Urban Design and Sustainable/green Community Infrastructure

- Sustainability and public health issues, "green" infrastructure
8. Urban Design and Sustainable Community Infrastructure

Eco-Districts concept (from ULI)

- Energy – solar, geothermal, thermal
- Transportation

- Storm, sewer, water
- Amenities, social sustainability

Urban Land Institute
**Sustainable/Green Infrastructure: Case Study**

**Sustainable Infrastructure**
- Energy
- Storm Water
- Utilities
- Waste

**Green Development**
- Green buildings, green roofs

**Development for Public Health**
- Active living, walkability, active transportation/ reduced car usage
- Clean air and water, noise reduction, safety
- Access to amenities
- Public realm for social and mental health

---

**Queen Street East - Proposed Urban Design Concept Plan**

- Integrated natural environmental elements
- Sustainable transportation infrastructure
- Complete Streets
- Green, pedestrian environment, open space system
- Access to fresh food, market

- Integrated urban health care facilities
- PV/solar energy and green buildings
- Urban agriculture
- Sustainable storm water management
- Transit oriented development

---

Urban Design and Public Infrastructure
9. Case Study: Mount Pleasant Village Urban Transit Village, Brampton

1. City and Area Context
   - Role and place of MPV in the city’s structure
   - MPV and the Mount Pleasant Secondary Plan

2. Neighbourhood Plan and Concept
   - General layout and functional areas
   - Central square, parkettes, streets

3. Built Form, Character and Identity
   - Mixed use and residential
   - Cultural amenities

4. Urban Design and Civic Infrastructure
   - Community Centre/Library/School
   - Transit infrastructure, streetscape

5. Innovation: Sustainability, Liveability and Public Health
   - TOD, walkability, ADS

6. Innovation: Delivery Process
   - P3 delivery, funding, planning and development process
Mount Pleasant Community, Mount Pleasant Village

1. City and Area Context
Role and place in the city’s structure; MPV and the Mount Pleasant Secondary Plan
Mount Pleasant Village

2. Neighbourhood Plan and Concept
General layout and functional areas

Aerial views – courtesy Mattamy Homes

Transit spine
Green spine
Cultural amenity
Live-Work units
Transit structures
GO Station
Central Square
Transit spine
Open space system
Mount Pleasant Village

3. Built Form, Character and Identity
- Mixed use and residential
- Cultural amenity space
Mount Pleasant Village

4. Urban Design and Public Infrastructure:
- Cultural amenity space: library, community centre (former CPR train station), public school
Mount Pleasant Village

5. Urban Design and Public Infrastructure:
Transit infrastructure, streetscape, public art
Mount Pleasant Village

6. Innovation: Sustainability, Liveability and Public Health
- TSD/TOD/active transportation, walkability, public realm, ADS

Green spine active transportation
Pocket parkettes
Mix of urban forms and residential types
Lay-by lanes
Transit spine
Public realm: Central Square
Future higher/medium density
Future mixed use
GO Station: regional transit, high order local transit

Environmental restoration enhancement and integration
Cultural amenity: library, community centre and urban school within walking distance
Public realm for social health
Complete streets for transit and active transportation

Alternative Development Standards
6. Innovation – Delivery Process

- Innovative partnership between the City of Brampton, the developer (Mattamy Homes), Peel District School Board, Library Board
- Funding coming from the Federal Action Plan and provincial government (transit, cultural amenity, square), City (cultural amenity/library) and School Board
- Fast tracking delivery with very limited timelines and strong organization, dedicated resources, frequent team meetings and tight coordination
- Innovative planning and approval process with Block Plan, detailed guidelines, design review, alternative development standards (ADS)