

## APPENDIX "G"

### NORTHWEST INDUSTRIAL AREA SUPPLEMENTAL SITE PLAN REQUIREMENTS

The Northwest Area of the City supports many significant natural features. The use of portions of the Northwest Area for industrial activities must include safeguards to protect these natural features. In order to ensure that these safeguards are implemented on an individual lot basis, the Northwest Industrial Area has been declared a Site Plan Control Area by Bylaw No. 44-2000.

This Appendix is structured as two separate sections. The first section is titled "Supplemental Site Plan Design Guidelines". In addition to the standard Design Guidelines of Section 7.0 of this Manual, these supplemental design guidelines will also be used in evaluating site plans submitted to the City for approval in the Northwest Industrial Subdivision.

In addition to the physical protections and safeguards for the environment that are provided by the design guidelines through Site Plan Approval, caution must also be exercised to prevent potential pollution and spills from occurring as a result of the industrial activities. The second section of this Appendix is titled "Operational Practices" that outlines good housekeeping, product-specific and spill response practices that the City encourages industries to follow to protect the natural features in this area. These "Operational Practices" will be attached to the approved site plans, with a requirement that they be distributed to the operators of the industrial uses to be located on the lands.

#### SECTION 1 - SUPPLEMENTAL SITE PLAN DESIGN GUIDELINES

In addition to the standard Design Guidelines outlined in Section 7.0 of this Manual, the following supplemental design guidelines shall also apply to the lands within the "Industrial" Zones located in the Northwest Industrial Area:

##### **G1 BUILDING SETBACK, MASSING AND FACADE (FIGURE G.1)**

##### **G1.1 ALL LOTS**

##### **a) Foundations**

In general, the undisturbed native soils at the site are considered suitable to support conventional spread foundations. Where the footing levels of the buildings will be above existing native mineral soil grade, structural fill will probably be used. Building footings constructed on undisturbed native soil or approved structural fill may be proportioned for preliminary design using a net allowable bearing pressure of 200kPa.

##### **b) Concrete Slabs-on-Concrete**

The floor slabs for the proposed industrial buildings may be constructed using conventional slab-on grade techniques, provided that the area beneath the buildings are prepared in

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accordance with the recommendations given in the report titled "Geotechnical Investigation Northwest Industrial Subdivision", dated September 1999, prepared by Naylor Engineering Associates Ltd. Special care should be taken to ensure that there are no variations of support in the floor areas. A modulus of subgrade reaction, k, of 50MPa/m may be used for design of the floor slabs.

#### **G1.2 LOTS WITHIN THE M2-10 AND M3 ZONES**

- a) For those sites located within the M2-10 and M3 Zones within the City of Brantford Comprehensive Zoning Bylaw, the buildings shall employ high quality material and shall be designed with particular emphasis on the facades facing the public streets.
- b) All mechanical and service equipment shall be located so that they are not visible or are screened from the public streets.
- c) Notwithstanding the minimum side yard and rear yard requirements, as indicated in the City of Brantford Comprehensive Zoning Bylaw, all the buildings within the M2-10 and M3 Zones with a frontage along Oak Park Road and Hardy Road shall be encouraged to be sited to create a strong and attractive street edge definition. This could be achieved by siting the building facades within a 15 - 20 metre setback from the streetline along Oak Park Road and Hardy Road.

#### **G1.3 LOTS WITHIN THE M3-2 ZONE**

- a) The overall building design shall proceed along a contemporary architectural theme with emphasis on the use of modern building materials such as tinted or reflective glazing materials, in combinations with architectural panels of either precast, metal or brick. The intention is to create a variety of attractive modern commercial facades within the M3-2 Zones.
- b) Building materials shall be uniform on all facades of the structure. Emphasis must be placed on design and details visible to the public or from adjacent properties. Specific building designs and finishing materials shall be approved on an individual basis.
- c) All mechanical and service equipment shall be designed as an integral part of the built form or screened from the streets.
- d) Particular attention shall be put onto the visual impact of the building facades visible from the access ramps of Highway 403.
- e) Notwithstanding the minimum side yard and rear yard requirements, as indicated in the City of Brantford Comprehensive Zoning Bylaw, in order to create a consistent and attractive street frontage along Oak Park Road, all the buildings within the M3-2 Zone shall be encouraged to be sited to have their building facades located within a 15 - 20

metre setback from the street line along Oak Park Road.

**G2 LANDSCAPE DESIGN (FIGURES G.2 AND G.3)**

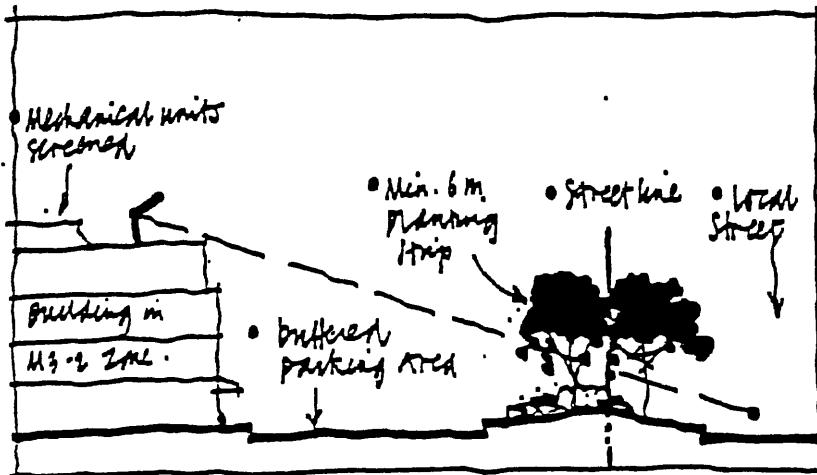
**G2.1 ALL LOTS**

- a) Notwithstanding the planting strip and landscape open space requirements indicated in the City of Brantford Comprehensive Zoning Bylaw, all the sites within the Northwest Industrial Area shall be encouraged to adopt the following minimum planting strip requirements for yards along public streets.

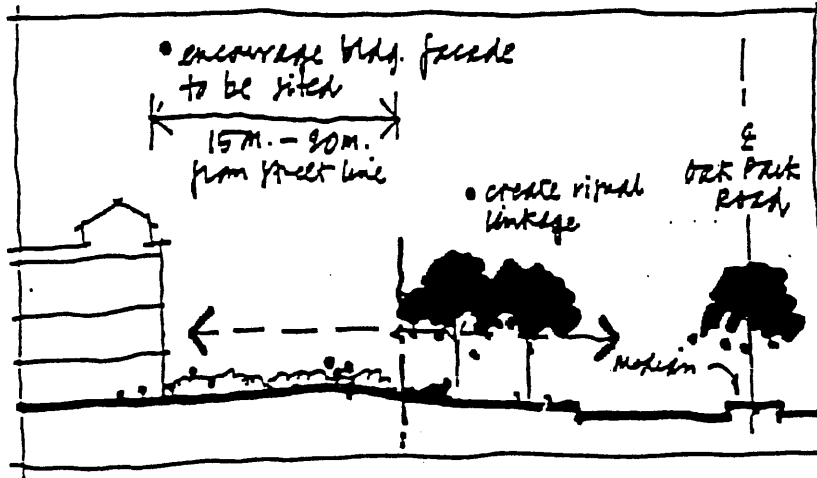
ZONES	YARDS ALONG MAJOR COLLECTOR ROADS AND HARDY ROAD	YARDS ALONG OAK PARK ROAD
M3	6m	6m
M2	3m	6m

- b) The landscape design shall provide a setting for each individual building and all landscape elements must help to integrate the building into the site.
- c) All lots are to be landscaped in a "savannah" theme through the use of certain plant species for landscaping purposes.
- d) In areas along Oak Park Road, Hardy Road, and major collector roads, a formal boulevard treatment with regularly spaced deciduous trees of limited species (see Table G.2) is encouraged. In other areas, a less formal and naturalized scheme should be considered. The actual design concept will be left to each individual landscape architect and shall be reviewed on an individual basis.
- e) Feature planting and focal landscape elements are to be provided at major entry points, intersections and site entrances using plant material from Tables G.2 and G.3.
- f) Low-scale foundation and accent planting is to be encouraged in front yard areas of individual sites to provide visual interest and allow for a degree of business identify within the overall site context.
- g) Parking areas are to be buffered from view along Oak Park Road and Hardy Road to the greatest extent possible. Coniferous materials from Table G.4, and low walls are to be considered to ensure year-round screening.
- h) A more informal landscape character is to be promoted in buffer/amenity areas between adjacent developments, and along the yards adjacent to areas in the "OS3" Zone of the Comprehensive Zoning Bylaw. Within these landscape areas, the planting of native

# Building Setback / Massing / Facade

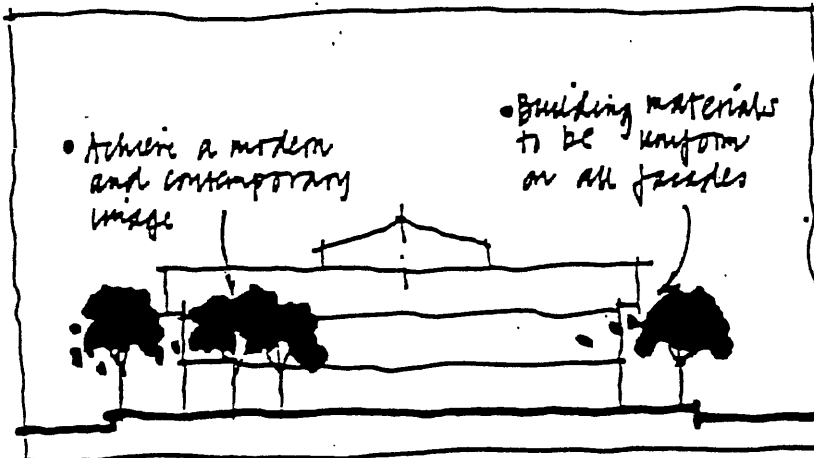


- screen mechanical units from views



- site building facades within 15 - 20m of Oak Park Road to create a consistent and strong street definition

- create interesting visual experience along Oak Park Street



- use contemporary materials and uniform treatment on all facades

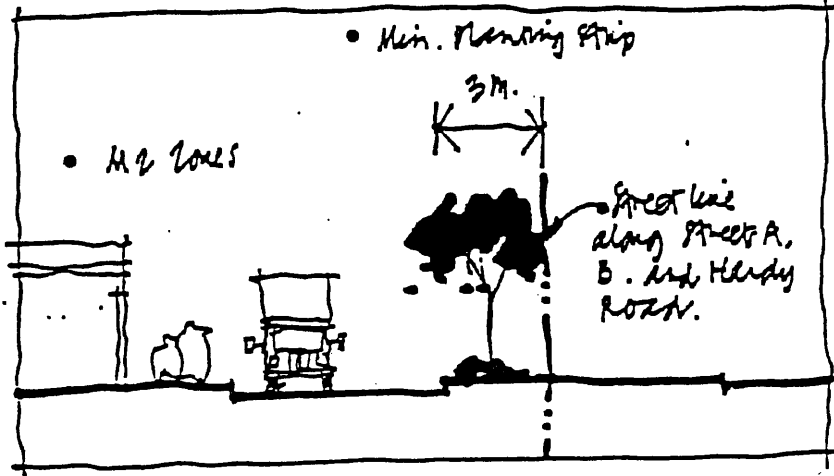
NORTHWEST INDUSTRIAL AREA  
CITY OF BRANTFORD

BUILDING SETBACK, MASSING & FACADE

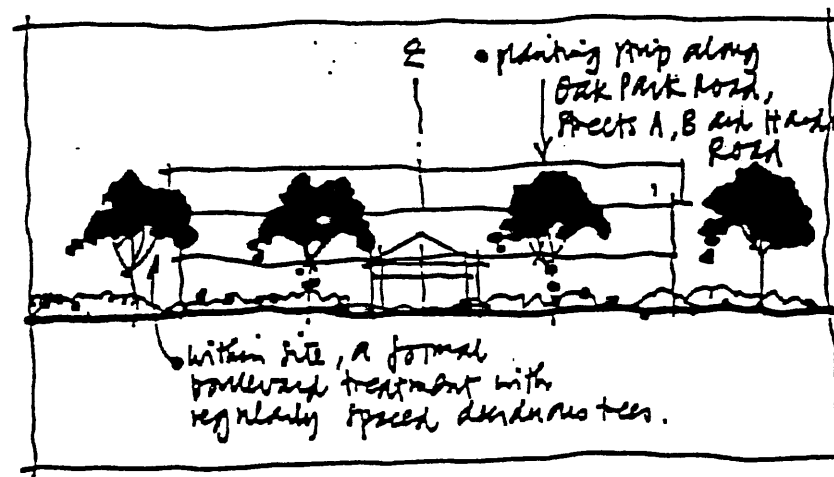
# Landscape Design



- adopt minimum planting strip standards along the streets:  
M3 area - 6m



- minimum planting strip standards:  
M2 area - 3m and 6m

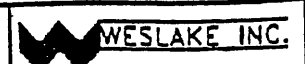


- create a formal boulevard landscape character within the front yards along Oak Park Road, Streets A and B, Hardy Road

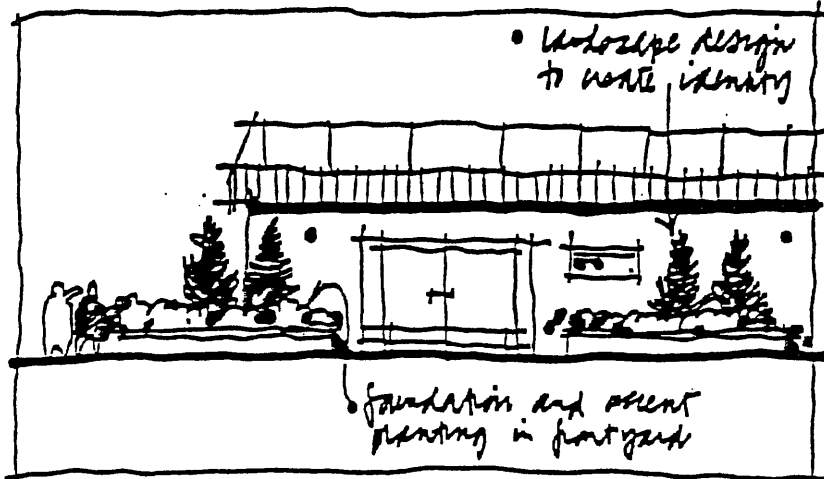
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LANDSCAPE DESIGN

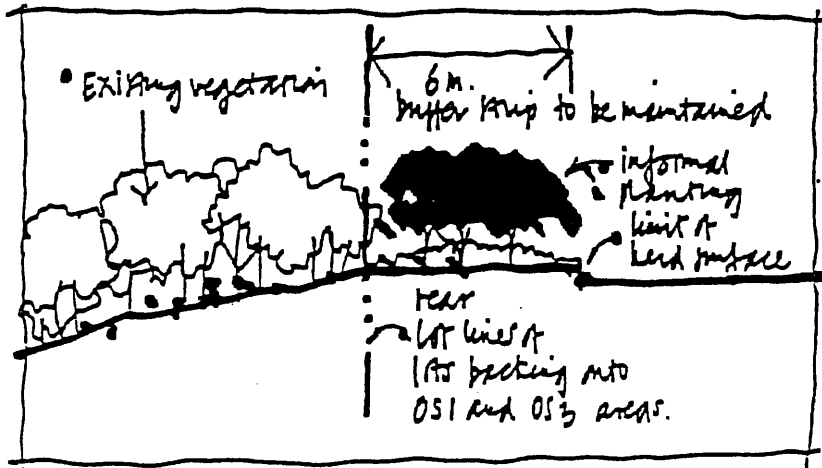
FIGURE No. G.2



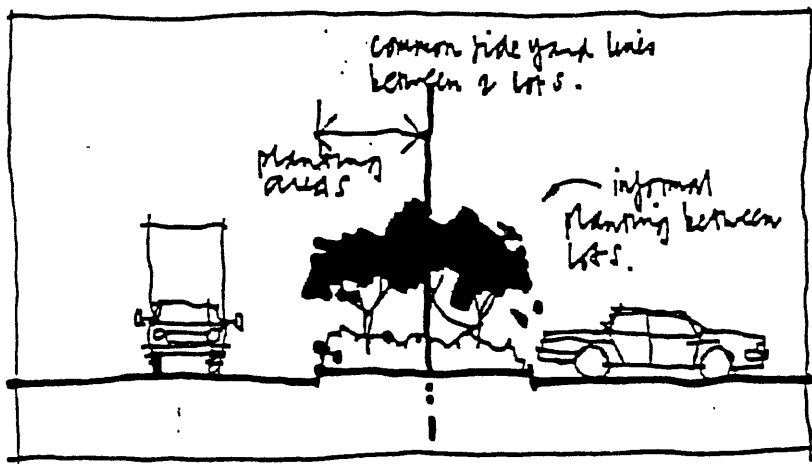
# Landscape Design



- use accent and feature planting in front of individual building entrances



- promote informal landscape character in buffer area between lots and Open Space



- promote informal planting between lots

NORTHWEST INDUSTRIAL AREA  
CITY OF BRANTFORD

VEHICULAR CIRCULATION, PARKING  
AND LOADING AREAS

species compatible with the local plant communities are encouraged. Tables G.1 to G.4 provide recommended species and Table 10.5 lists species to be excluded.

### **G3 VEHICULAR CIRCULATION, PARKING AND LOADING AREAS (FIGURE G.4)**

#### **G3.1 ALL LOTS**

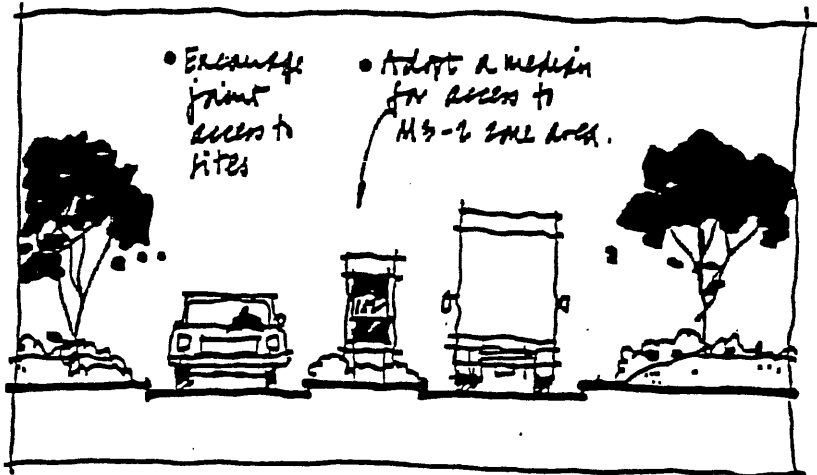
- a) Access drives from streets shall be easily visible and will be denoted with a street number sign.
- b) Joint access shall be encouraged so as to reduce the number of access points onto the roadway system. If joint drives are compatible with neighbouring developments, the approved agreement or rights-of-way are to be registered on title.
- c) Within the areas zoned M3-2, any two-way access points shall feature a median strip.
- d) In large parking lots, the expanse of paving shall be encouraged to be broken down into smaller sections through the use of islands and medians. If feasible, the space shall be large enough to accommodate planting. The plant material specified for the islands shall be both shrubs and trees taken from Tables G.1 to G.4. If the island or median is also a main pedestrian link between the parking lot and the buildings, special attention must be made to accommodate both plantings and a walkway.
- e) Parking shall be arranged so that pedestrian access from the parking area to the building will be practical and safe. This can be done through the use of walkways or by the alignment of the parking bays.
- f) Loading and service facilities shall be screened from the streets. Any screen walls required to reduce the visual impact of these areas shall be constructed of material compatible with the building structure.
- g) From the sites immediately adjacent to the access ramps from and to Highway 403 within the M3-2 Zone areas, all the loading areas and parking areas shall be screened by the use of generous planting strips, berming and/or screening fences (see also Figure G.4).

### **G4 SIGNAGE AND SITE IDENTIFICATION (FIGURE G.5)**

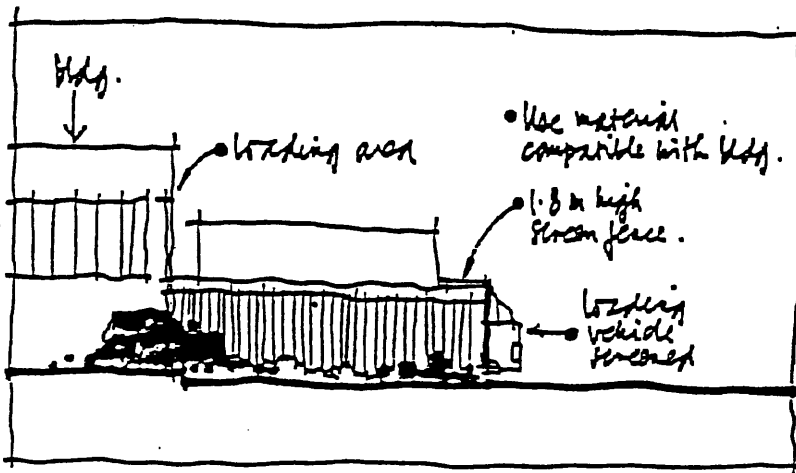
#### **G4.1 ALL LOTS**

- a) A major sign shall be located on each property at the main vehicular entrance to the site. This sign shall note the name of the building, street number and provide any directions if necessary.

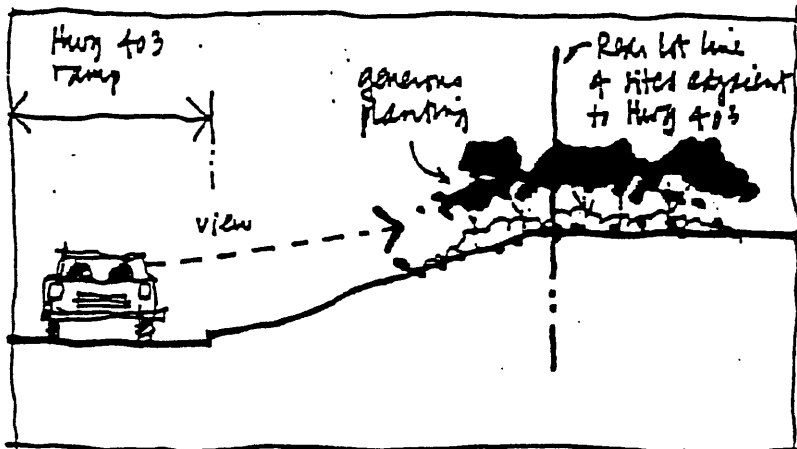
# Vehicular Circulation / Parking / Loading



- two-way access to site should feature a median strip



- screen loading areas and parking areas from public views
- screen fence to be compatible with building design



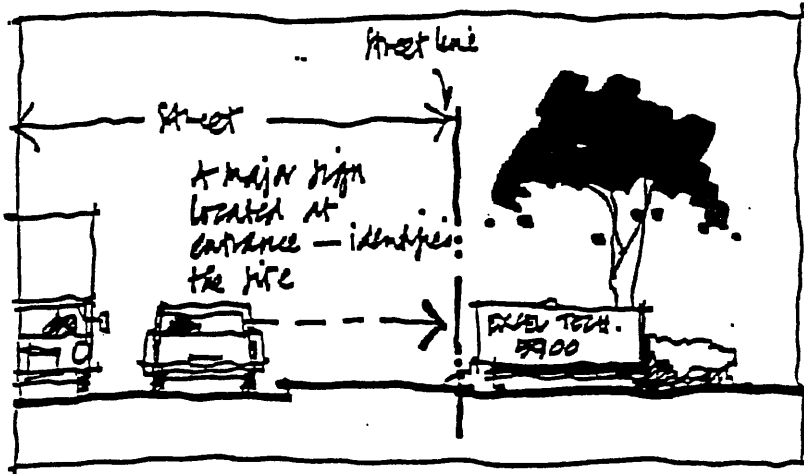
- maintain attractive views to site from Highway 403 ramps
- generous planting along rear yards

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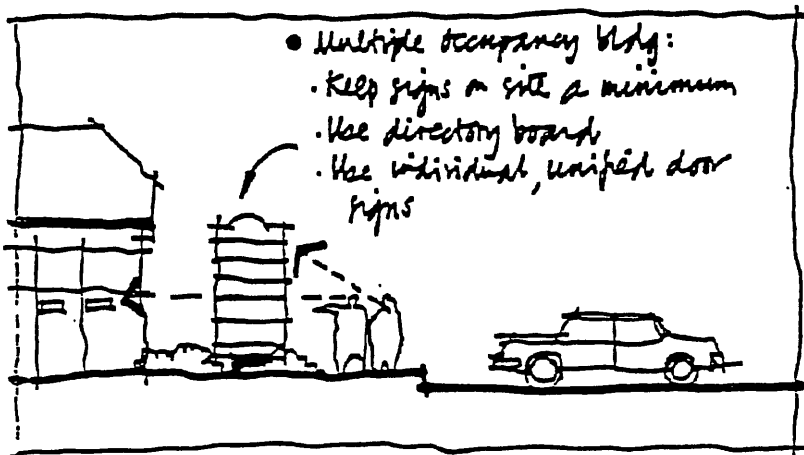
VEHICULAR CIRCULATION/PARKING/LOADING AREA



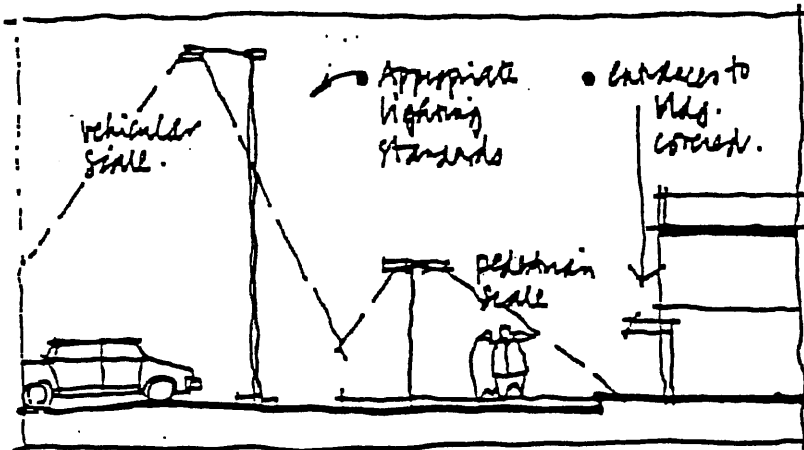
# Signage / Pedestrian Circulation / Lighting



- locate major sign and site identification at main entrance
- provide street number and corporation logo



- use multiple identification directory in multi-tenant building
- minimize number of on-site signs



- provide covers for pedestrian entrances
- use appropriate pedestrian scale lighting for pedestrian areas

NORTHWEST INDUSTRIAL AREA  
CITY OF BRANTFORD

SIGNAGE, PEDESTRIAN AND LIGHTING

- b) Signs on the site shall be kept to a minimum. When direction signs are needed to facilitate movement, it is preferable to have more than one direction per sign.
- c) In multiple occupancy developments, a directory board shall be required. This board shall be wall or ground mounted and it shall list the individual businesses located within. Wherever possible, the street number and company name should also be located on the individual door of each unit. This treatment shall be uniform throughout and all numbers and names shall be placed in identical locations.
- d) No temporary advertising and business signs shall be mounted within the front yards or the public rights-of-way along Oak Park Road and Hardy Road.

## **G5 PEDESTRIAN CIRCULATION, ENTRANCE AREAS AND LIGHTING (FIGURE G.5)**

### **G5.1 ALL LOTS**

- a) All entrances into the buildings must be clearly defined and protected by an overhead cover. The entrance cover shall project past the building line and will thus help to protect the walks approaching the actual building entrance.
- b) The use of interlocking paving in all pedestrian areas will be encouraged. The type and colour of the stone will be determined on an individual basis.
- c) Consistent with the proposed architectural theme within the M3-2 Zone areas, lighting shall also be contemporary. The light standards within the front yards and pedestrian areas shall be low in height to create a comfortable street scale. They shall also highlight landscape features or architectural details within the site.

## **G6 INTERFACE WITH THE NATURAL SLOPE AND OPEN SPACE AREAS**

### **G6.1 LOTS ADJACENT TO LANDS IN THE "OS3" ZONE**

- a) All site grading work shall be undertaken to avoid any disturbance to the existing slope and vegetation within the OS3 areas.
- b) A buffer strip of a minimum 15.0m shall be provided along the grading limits abutting lands in the OS3 Zone.
- c) This buffer strip shall be planted with native species (see Tables G.1 to G.4) compatible with the local plant communities.
- d) A fence shall be provided along any mutual lot line with lands in the "OS3" Zone.

**G7 STORMWATER MANAGEMENT AND GRADING**

**G7.1 ALL LOTS**

- a) Stormwater infiltration practices are to be implemented in the overall stormwater management plan to maintain the existing groundwater regime, and to protect groundwater dependent natural features adjacent to the Northwest Industrial Area.
- b) Stormwater management measures (parking lot and rooftop storage) must effectively reduce the magnitude of peakflows by 50%. This applies to 2-year to 100-year precipitation events (based on City of Brantford rainfall records).
- c) Oil/grit separators, or equivalent devices, should be incorporated into the site drainage system. All resultant stormwater runoff from the site must be routed through these device(s) prior to leaving the site. Level 1 protection (as per the Ministry of Environment's Stormwater Management Practices and Planning Manual, June 1994) is to be used in sizing the devices(s).
- d) An erosion and sediment control plan must be included in the Stormwater Management Plan which illustrates the following:
  - all environmentally significant features to be protected prior to, during and after construction activities;
  - methods of keeping soil on site (a priority during all phases of site development);
  - trapping of sediments by various means such as cut-off swale, sediment traps, rock check dams, silt fence, etc;
  - maintenance aspects to ensure that all erosion and sediment control devices function as intended.
  - the erosion and sediment control plan should also include appropriate notes, information, etc., as required by the Grand River Conservation Authority.

TABLE G.1 - POSSIBLE PLANT SPECIES FOR USE IN BRANTFORD NORTHWEST

SPECIFIC NAME	COMMON NAME	FORB	GRASS-LIKE
<i>Andropogon gerardii</i>	Big Bluestem		X
<i>Anemone cylindrica</i>	Long-fruited Anemone	X	
<i>Asclepias tuberosa</i>	Butterfly-weed	X	
<i>Aster ericoides</i>	Heath Aster	X	
<i>Aster laevis</i>	Smooth Aster	X	
<i>Aster oolentangiensis</i>	Azure Aster	X	
<i>Aster urophyllus</i>	Arrow-leaved Aster	X	
<i>Carex pennsylvanica</i>	Pennsylvania Sedge		X
<i>Desmodium canadense</i>	Showy Tick-trefoil	X	
<i>Elymus canadensis</i>	Canada Wild-rye		X
<i>Hellanthus divaricatus</i>	Woodland Sunflower	X	
<i>Lespedeza capitata</i>	Round-headed Bush-clover	X	
<i>Monarda fistulosa</i>	Wild Bergamot	X	
<i>Schizachyrium scoparium</i>	Little Bluestem		X
<i>Solidago juncea</i>	Early Goldenrod	X	
<i>Solidago nemoralis nemoralis</i>	Grey Goldenrod	X	
<i>Solidago rigida</i>	Rigid Goldenrod	X	
<i>Sorghastrum nutans</i>	Indian Grass		X
<i>Sporobolus cryptandrus fuscicollis</i>	Sand Dropseed		X
<i>Taenidia integemma</i>	Yellow Pimpernel	X	
<i>Verben stricta</i>	Hoary Vervain	X	

Table G.2 - Recommended Dominant Landscape Tree Species

SCIENTIFIC NAME	COMMON NAME
<i>Quercus macrocarpa</i>	Bur Oak
<i>Quercus Alba</i>	White Oak
<i>Quercus Velutina</i>	Black Oak

Table G.3 - Other Possible Locally Native Tree Species

SCIENTIFIC NAME	COMMON NAME
<i>Platanus occidentalis</i>	Sycamore
<i>Sassafras albidum</i>	Sassafras
<i>Celtis occidentalis</i>	Hackberry
<i>Quercus rubra</i>	Red Oak

Depending on availability

Table G.4 - Recommended Conifers for Screening Plantings

SCIENTIFIC NAME	COMMON NAME
<i>Thuja occidentalis</i>	White Cedar
<i>Pinus strobus</i>	White Pine
<i>Picea gaucha</i>	White Spruce

Salt sensitive

Table G.5 - Non-Native and Invasive Species

SCIENTIFIC NAME	COMMON NAME
<i>Rhamnus spp.</i>	Common Buckthorn
<i>Lonicera tatarica</i>	Tatarian Honeysuckle
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Hesperis matronalis</i>	Dame's Rocket
<i>Ligustrum spp.</i>	Privets
<i>Syringa spp.</i>	Lilac spp.
<i>Acer platanoides</i>	Norway Maple
<i>Forestiera spp.</i>	Autumn and Russian Olives
<i>Lythium salicaria</i>	Purple Loosestrife

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## SECTION 2 - OPERATIONAL PRACTICES

### 1) GOOD HOUSEKEEPING PRACTICES

**Post and Report:** For any individual site, the telephone numbers for the City of Brantford and the Ministry of Environment & Energy Spill Centre must be clearly posted so that spills can be reported promptly.

**Minimize Materials:** An effort will be made to store only enough material required to do the job.

**Storage:** All materials stored on site will be stored in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not possible, the materials will be covered with polyethylene or polypropylene sheeting to protect them from the elements.

**Labeling:** Products will be kept in their original containers with the original manufacturer's label affixed to each container.

**Mixing:** Substances will not be mixed with one another unless this is recommended by the manufacturer.

**Disposal:** Whenever possible, all of a product will be used prior to disposal of the container. Manufacturers' recommendations for proper use and disposal will be followed.

**Inspections:** City staff will inspect the site occasionally to ensure proper use and disposal of materials on site.

**Spoil Materials:** Any excavated earth that will not be used for fill material and all demolished pavement will be hauled off site immediately and will be disposed of properly.

### 2) PRODUCT-SPECIFIC PRACTICES:

**Petroleum Products:** All on-site vehicles will be monitored for leaks and will receive regular preventative maintenance to reduce the chance of leakage. If petroleum products will be present at the site, they will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite will be applied according to the manufacturers' recommendations.

**Cleaning Fluids:** All cleaning or degreasing fluids must be stored in suitable sealed containers both before and after use. Used cleaning fluids must also be stored and identified in appropriate sealed containers and disposed of according to manufacturers' instructions. Records will be kept and made available to City staff showing inventory, delivery and disposal.

**Concrete Trucks:** Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water at the site.

**Paints:** All containers will be tightly sealed and stored when not required for use. Excess paint will not be poured into the storm sewer system, but will be properly disposed of according to manufacturers' instructions or provincial and local regulations.

**Fertilizers:** Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to stormwater. The fertilizer will be stored in a covered area and any partially used bags will be transferred to a sealable plastic bin to avoid spills.

3) **SPILL RESPONSE PRACTICES**

The owner shall be provided with and acknowledge receipt of the City's Spill Response Procedure.