

business future framework building envision environmental industrial

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## 1.0 INTRODUCTION / CONTEXT

The Highway 2A Corridor Design Guidelines apply to commercial and industrial development proposals on all lands in the Plan Area of the Highway 2A Industrial Area Structure Plan (H2AIASP) as shown on *Map 1 - Highway 2A Industrial ASP Policy Areas*. These guidelines will benefit developers by providing them with minimum requirements and a clear understanding of the expectations for development in the plan area. In addition, they will set up a system that can be used by the Municipality to evaluate potential projects. The guidelines will benefit business owners who choose to locate in the 2A corridor by creating a quality industrial park that will stand the test of time through the provision of a well-planned, maintained, and controlled environment in which to operate.

The guidelines are not meant to overburden developers or business owners with significant additional building and landscaping costs. The goal is to set out a consistent standard for high quality development in keeping with the level of investment in infrastructure that will be required to support the area as development proceeds.

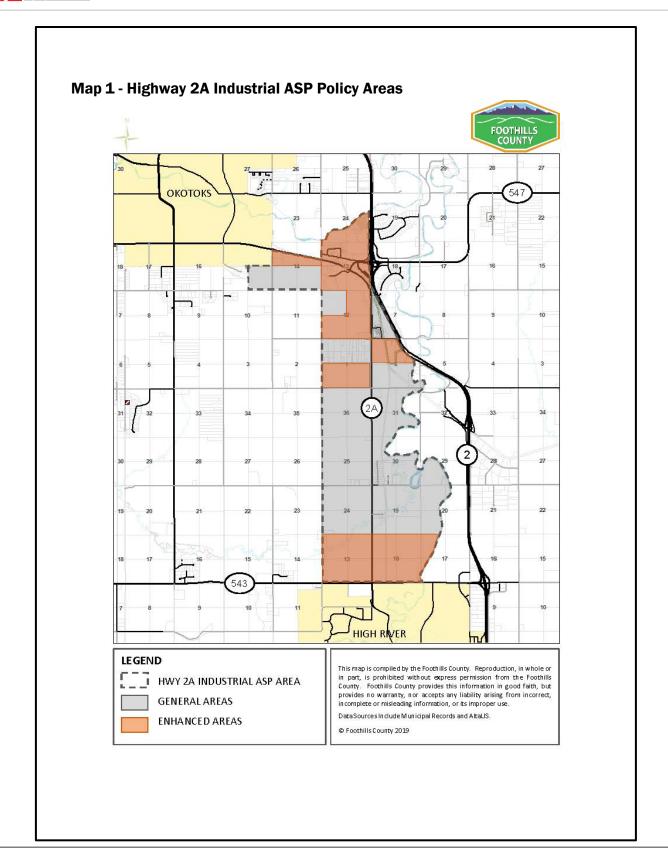
The Guidelines are general in nature and aim to encourage environmental compatibility, efficient and organized site layout and aesthetically pleasing, cost effective and environmentally sensitive building design and landscaping. They are not intended to require rigorous adherence to specific styles, building materials, or planting stock; and some flexibility will be employed in evaluating applications; general compliance with these guidelines may be considered sufficient at the discretion of the Approving Authority.

## 2.0 PURPOSE

The purpose of these guidelines is to:

- Establish a flexible design framework and minimum standards to guide development of the H2AIASP area;
- Lay out criteria for Municipal evaluation of development applications;
- Ensure that future commercial and industrial development will be in keeping with the vision for the area;
- Protect and promote the long-term economic vitality of the 2A corridor;
- Minimize impacts on existing residential development and the natural environment;
- Promote high quality development in keeping with the investment in existing and planned infrastructure for the area; and
- Facilitate an understanding of the Municipality's expectations and assist developers in compiling complete applications for timely approvals for development within the plan area.







## 3.0 USE OF THE GUIDELINES

## 3.1 ASSUMPTIONS AND LIMITATIONS

While compliance with the design guidelines is necessary for a successful development permit application, compliance with the guidelines will not guarantee approval of an application; there are additional requirements that must be met under the Land Use Bylaw.

Illustrations are provided to facilitate understanding of the concepts in the guidelines by providing one or more examples that would be appropriate or inappropriate in order to comply with the Highway 2A Corridor Design Guidelines. The illustrations are provided as examples only, there may be a number of possible design solutions that may be acceptable. In the event of conflict between an illustration and the text of this document, the text shall take precedence.

This document is provided as an appendix to the H2AIASP. Should there be any conflict between this document and the H2AIASP the ASP shall take precedence. This document is also referenced in Foothills County's Land Use Bylaw. Should there be disagreement between the Design Guidelines and the Land Use Bylaw the Land Use Bylaw shall take precedence.

### 3.2 USERS

Several different user groups have been identified for the Design Guidelines document:

- Property owners and their design consultants; to assist in the efficient preparation of development applications;
- Municipal Planning and Development Staff; for evaluation of development applications;
- The Municipal District's Council and Subdivision Approving Authority; to assist in the decision-making process.

## 3.3 GUIDELINE DOCUMENT ORGANIZATION

The Design Guidelines are divided into the following sections:

- Site Planning & Environment;
- · Parking Requirements;
- · Building Design;
- · Landscaping;
- Outbuildings, lighting, fencing and site furniture;
- · Signage;
- · Utilities, Mechanical and Telecommunications Equipment;
- Crime Prevention Through Environmental Design (CPTED).



Each section outlines the general requirements that are applicable to the entire corridor, followed by the additional requirements for those areas where the Enhanced Guidelines apply.

Sections 5 and 6 of the document outline the implementation process and how development applications are evaluated for compliance with the guidelines. The last section of the document contains the checklist used in the evaluation process.

## 4.0 DESIGN GUIDELINES

It is recognized that some industrial developments may have difficulty adapting their plans to adhere to specific design guidelines without compromising their processes or means of operating. Thus, the General Design Guidelines provided in this document are intended to be attainable, Enhanced Design Guidelines are provided for the more visible portions of the plan area and those areas adjacent to other forms of development. A certain level of flexibility may be granted at the discretion of the Approving Authority so applicants may satisfy the spirit and intent of the guidelines while minimizing impact on their business operations.

Applications for Commercial or Industrial uses within the General Area policy area on *Map 1 - Highway 2A Industrial ASP Policy Areas*, are subject to the General Guidelines. Applications within the Enhanced Areas (Those designated as Industrial Edge, Gateway Interface and Industrial / Commercial in the ASP) are subject to a higher standard. Applications for development permits in the Historic Country Residential and Agricultural Transition areas of the Corridor may be subject to either the general or enhanced guidelines at the discretion of the Approving Authority, Applications for homebased businesses will be subject to the Enhanced Guidelines as per Policy 3.5.1.5 of the ASP.

## 4.1 SITE PLANNING & ENVIRONMENT

The site planning requirements address the following: how buildings are located and oriented on a parcel, where screening is required to reduce impacts, methods for reducing impacts on the site itself and site access and circulation. In the enhanced guidelines there is greater emphasis on the aesthetic aspects of site design including requirements for screening.

## 4.1.1 SITE PLANNING & ENVIRONMENT THROUGHOUT THE CORRIDOR

## **Building Location and Orientation**

All buildings and other structures should be placed on the site with due consideration to existing development, the location of adjoining uses, and the location of major roads. The principal building should be located with the public entrance facing the main site entrance, should be easily identified (Fig. 1) and be



connected by a surfaced pedestrian pathway to the street or the main parking area.

The Maximum site coverage, including all buildings and impermeable surfaces, is 60% of the total lot area or as supported by a stormwater management plan prepared by an accredited professional. Parking areas and internal roadways are included in the site coverage if impervious materials are used but may be exempt from this calculation if constructed of pervious materials<sup>1</sup>. A thick (>200mm) layer of non-compacted spread gravel may be considered as partially pervious depending on the aggregate size.

Building setbacks as outlined in the Land-Use by-law and development set-backs as specified by Alberta Transportation for development adjacent to provincial roadways must be adhered to for all structures.



Fig. 1 Delineation of entry using unique or special form.

## Screening

Outdoor storage should be located at the side of or behind the main building on a site and adequately removed from pedestrian pathways or outdoor spaces. These areas may also require screening<sup>2</sup> with landscaping, berming, walls and/or fencing at the discretion of the Approving Authority.

## **Environment**

The design, construction, and operation of commercial and industrial developments in the Highway 2A corridor shall implement techniques to reduce the consumption of water, energy, and materials consistent with best practices in sustainable design.

Development shall consider the natural features of the site when determining locations for buildings and other improvements in order to minimize the impact on the natural setting as well as to reduce the amount of clearing and grading required. Natural features may include mature trees, rolling terrain, rivers, streams, drainage courses, wetland areas and viewpoints, or any other features that contribute to the distinct natural character of Foothills County as determined by the Municipality.

<sup>1</sup> Pervious Material: A material or surface which allows the penetration of water into the ground.

<sup>2</sup> Screening: A fence, berm or hedge used to obstruct views.







Fig. 2 Using existing slope in site design.

Fig. 3 Using natural drainage in site design.

The use of impermeable pavement should be reduced where possible; utilizing porous surfacing materials that allow stormwater to re-infiltrate the ground will be encouraged for parking areas, roadways, plazas or other hard surfaced areas. Alternatively, directing stormwater into conveyance, retention, and recharge areas<sup>3</sup> such as, natural drainage systems i.e. rain gardens, bio-swales, and naturalized storm ponds will be encouraged.

The construction of energy efficient buildings that incorporate passive<sup>4</sup> or active<sup>5</sup> solar heating as well as the use of day-lighting<sup>6</sup> and natural ventilation<sup>7</sup> is supported. The use of day-lighting should be balanced with the impacts it may have on solar heat gain in the building.

Water conservation measures will be encouraged, including roof top catchment for irrigation or as a supplemental firefighting source. Low-flow toilets and other water efficient fixtures and water efficient appliances are required for all new development and renovations to existing development throughout the H2A Corridor. Exploring opportunities to employ small system reclaimed water<sup>8</sup> for irrigation is encouraged where possible. The use of recycled materials in construction will be encouraged. Construction management plans that include a recycling strategy to minimize the amount of construction waste sent to landfills should be utilized in all new development and renovations to existing development throughout the corridor.

<sup>3</sup> Retention areas: Depressed areas where water is stored until it seeps into the ground, evaporates or is utilized by vegetation

<sup>4</sup> Passive solar heating: A means of using sunlight for useful energy without use of active mechanical systems. Generally, sunlight is used to heat air, water or thermal mass.

<sup>5</sup> Active solar heating: A solar energy collector is used to heat either liquid or air, this energy can either be used to heat an interior space or it can be transferred to a storage system and distributed from there.

<sup>6</sup> Day-lighting: Illumination of indoor spaces by natural light through the use of skylights, windows, and reflected light. Day-lighting may also employ light sensors, and louvers or shading devices to regulate light or control glare.

<sup>7</sup> Natural ventilation: The use of openings in a building and the naturally occurring phenomena of wind and the stack effect (the movement of air driven by buoyancy) to supply fresh air.

<sup>8</sup> Small System Reclaimed water: Stormwater or wastewater, which has been treated by a system serving a single property for uses other than toilet or urinal flushing or sub-surface irrigation.



The development of a Construction Waste Reduction Plan for each development is recommended. All products, materials and systems used for construction should be evaluated for their ability to be recycled when they reach the end of their useful lifecycle. Preference should be given to products and systems that facilitate easy, non-energy intensive separation and recycling with minimal contamination by foreign debris.

Post-construction, recycling of solid waste including used oil or byproducts of manufacturing processes is also encouraged and should be accommodated in site layout and design.

## **Access and Circulation**

Site access and internal roadways must meet Foothills County standards and fire / emergency access standards. The access, circulation and parking system should provide for the safe, efficient, and functional movement of multiple modes of transportation. Clear access and orientation shall be provided for vehicles and pedestrians. Loading bays or drive-through lanes shall be located to minimize pedestrian/bicycle/vehicle conflicts and so they do not impede the efficient flow of traffic or pedestrian movements.

When creating site plans, consideration should be given to providing for alternate modes of transportation, including public transit (space allocated for shuttle or bus stops), bicycles (safe routes and storage) and pedestrians (safe and comfortable routes removed from vehicular traffic). The use of bumpers or curbs to facilitate safe pedestrian access to buildings, and protect vulnerable areas of the buildings themselves (e.g. gas meters, fire connections and mechanical equipment) is encouraged.

Snow removal and storage requirements (including accommodating run-off from snow melt) as well as potential drifting should be considered in the design of site access, circulation, and parking.

## 4.1.2 SITE PLANNING AND ENVIRONMENTAL IN ENHANCED AREAS

## **Aesthetic Standards**

With respect to Corner lots and End View lots, in the Enhanced Areas, consideration should be given to sightlines. Having an attractive view from both directions on a corner and at the end of a street, will be encouraged. Special attention should be given to creating pedestrian scale and inviting places for visitors and employees. Service delivery areas, storage areas and loading docks shall be located less visible portions of the site such as at the side or rear of the principal building. They should not be visually obtrusive and must be at least partially screened so they are only minimally visible from the street or any adjacent residential areas (Fig. 4, 5).





Fig. 4 Loading area located to the side and partially screened

Fig. 5 Screening for service area

In the Enhanced Areas, outside storage including that for product or raw materials, and trash and recycling areas may be allowed at the discretion of the Approving Authority based on the location, and the proposed aesthetic treatment of the screening that will be provided. Garbage or recycling containers shall be hidden from public view either by a freestanding enclosure or within a building (Fig. 6). All ancillary enclosures and out-buildings shall be constructed of materials similar in texture, colour and character to the principle building.



Fig. 6 Garbage containers screened with enclosure

Where fencing of a property is required along a front property line or a street facing side yard property line of a corner lot, it should incorporate clusters of landscaping or decorative elements for visual interest.

## **Buffers**

Commercial lands within the H2AIASP area that are adjacent to residential development shall have a landscaped buffer $^{\circ}$  of a minimum of 6.0 m (19.7 ft) wide along the property line abutting the residential lands. This landscaped area may be within a required yard setback. $^{10}$ 

<sup>9</sup> Buffer: an area that serves the purpose of keeping two or more areas distant from one another.

<sup>10</sup> Set back: the distance which a building or other structure is to be removed from a street or road, a river or stream, a shore or flood plain, or any a place which needs protection.



Industrial parcels that are adjacent to residential development shall have a landscaped buffer of a minimum of 10.0 m (32.8 ft) wide along the property line abutting the residential lands. This landscaped area may be within a required yard setback and is encouraged to be designed to emulate natural form.

## **Pedestrian Accessibility**

In the Enhanced Areas of the ASP area, pedestrian spaces and routes should be designed to invite walking throughout and around each development. They should provide convenient, safe and visually attractive pedestrian access to all destinations on the site. Where possible, pathway systems should provide connectivity between sites to form a comprehensive pedestrian circulation system.

Provision of landscaped outdoor spaces which can serve as plazas, patios or pedestrian gathering places with appropriate site furniture and lighting are highly desirable. (Fig. 7, 8) These areas should be shaded and include amenities such as street furniture, drinking fountains, trash/recycling receptacles and adequate lighting for visibility and safety.



Fig. 7 Outdoor pedestrian space



Fig. 8 Outdoor pedestrian space

## 4.2 PARKING REQUIREMENTS

Parking requirements address the amount, location and layout of both parking and loading spaces.

## 4.2.1 PARKING REQUIREMENTS THROUGHOUT THE CORRIDOR

Parking and loading spaces for sites throughout the H2AIASP area will be provided as outlined in Foothills County's Land Use Bylaw. To avoid large expanses of parking adjacent to roadways it is recommended that there be minimal parking in front of the building. The majority of the required parking should be located at the side or the rear of the principal building and where possible parking spaces should be provided in smaller groups dispersed throughout the site (Fig. 9) or broken up with landscaping.

Breaking up large parking areas with landscaped islands will be highly encouraged, especially if the islands are designed to collect and hold stormwater and allow it to soak into the ground.

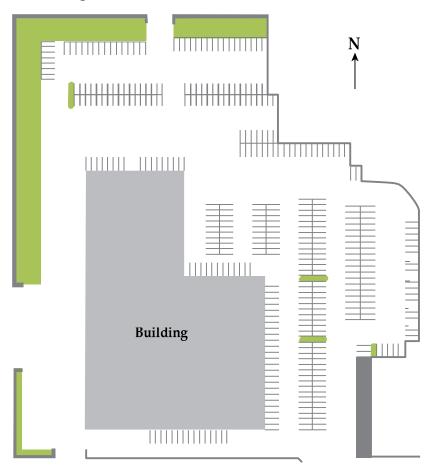


Fig. 9 Example of parking dispersed throughout the site.

While parking and loading for the 2A corridor will generally be required to be provided as outlined in the Land Use Bylaw, shared parking and loading sites will be considered where appropriate, and consideration for reduced parking will be given based on site-specific uses.

Provision of Parking for physically disabled persons as per the Land Use Bylaw shall be provided in accordance with Provincial regulations. In addition, parking for physically disabled persons shall be located as close as possible to ramps, walkways, and building entrances and shall be arranged in such a way that users of wheelchairs are not required to pass behind parked vehicles to access a sidewalk or walkway.

The required number and design of parking spaces and loading zones for vehicles used by physically disabled persons for any use shall be included as part of and not in addition to the applicable minimum parking requirement.



## 4.2.2 PARKINGREQUIREMENTS IN ENHANCED AREAS

In the Enhanced Areas of the Highway 2A Corridor, as in all areas of the corridor, parking at the front of the site (between the building and the street) should be minimized, with the majority of parking located at the side or the rear of the building. In addition, in Enhanced Areas, if large parking areas are located adjacent to roadways, they must be visually screened or constructed so they are lower than the adjacent street. (Fig. 10, 11)

Parking lots containing more than 50 spaces in the Enhanced Areas must be broken up into smaller units with landscaped islands (Fig. 12).



Fig. 10 Parking area lower than road to provide screening



Fig. 11 Screening parking with landscaping



Fig. 12 Dividing up large parking areas and using landscaped islands

The landscaped islands may be constructed using hard<sup>11</sup> and soft<sup>12</sup> landscaping materials. Curb cuts which enable the islands to function as retention areas for stormwater runoff from the parking areas may also be included.

<sup>11</sup> Hard landscaping: construction and surfacing materials used in site landscaping i.e. brick, stone, concrete, aggregate, glass, metals, woods, and so on.

<sup>12</sup> Soft landscaping: vegetative materials used in landscape design, including aquatic and semiaquatic plants, field-layer plants, shrubs, and trees.



When choosing parking lot trees, consideration should be given to providing ample shade for parked cars as well as creating a more attractive environment.

## 4.3 BUILDING DESIGN

Building Design requirements address creating visual interest, considering the view from the road, identifying the building entry, use of quality materials, considering solar orientation, use of daylight to reduce energy consumption and the use of architectural elements or landscaping to control solar heat gain.

## 4.3.1 BUILDING DESIGN THROUGHOUT THE CORRIDOR

All buildings proposed for the H2AC must provide a safe and comfortable environment for employees and visitors. Indoor spaces should provide adequate heat, light and healthy air quality as per Provincial Occupational Health and Safety and Alberta Safety Codes standards. All buildings shall comply with the Safety Codes particularly with respect to occupancy, safety and building standards.

It is recognized that many industrial uses will require buildings with a large footprint. However, in order to create a more pedestrian friendly environment, consideration should be given to breaking up large masses into individual forms. This is preferred to having buildings with a monolithic appearance (fig. 13, 14).



Fig.13 Monolithic building



Fig.14 Articulated building with multiple masses



Fig. 15 Articulation using recessing and colour



Fig. 16 Articulation using roofline, colour and materials

<sup>13</sup> Monolithic: Consisting of one piece, solid or unbroken, with no differentiation of parts.



Articulation<sup>14</sup> of the façades, and roof line and the incorporation of details which create interest, such as changes in material or colour is encouraged (Fig. 14, 15, 16). As a minimum requirement, the front elevation should be visually interesting and of a scale that is comfortable for pedestrians. Where buildings are located on corner lots, consideration should be given to the exterior walls on both streets.

The main or public entrance to the principal building should be clearly identifiable as the primary point of arrival. This can be achieved through the use of large architectural elements (particularly strong vertical forms such as towers) or a change in the roof line, the use of an overhang, landscaping or incorporating special materials such as stone or brick (Fig 14, 16).

In buildings with an office component and a processing/manufacturing component, it is desirable that both portions of the building be unified in architectural style and treatment. Where this is not possible, the office portion should be designed as an architectural focal point with the plant component forming a neutral background (Fig. 17).

For both industrial and commercial uses, all buildings shall be constructed and finished with durable materials designed to maintain their initial appearance throughout the life of the project.



Fig.17 Office frontage with factory as backdrop.

Buildings should be designed with solar orientation in mind with each elevation responding appropriately to its orientation but also respecting, solar access for adjacent buildings (existing and proposed). The use of day light to illuminate interior spaces will be encouraged.

Use of architectural elements such as building overhangs, fins, louvers, or landscape elements such as deciduous trees to reduce solar heat gain and glare from windows especially on the south and east sides of buildings will be encouraged. Minimizing paved areas adjacent to a building may also reduce heat gain. (Fig. 18)

<sup>14</sup> Articulation: The articulation of a building emphasizes each part individually revealing the distinct areas or functions of the building and how the parts fit into the whole.





Fig.18 An example of an exterior design that reduces solar heat gain.

## 4.3.2 BUILDING DESIGN IN ENHANCED AREAS

In the enhanced areas of the 2A Corridor, buildings with a distinct corporate identity and quality architectural appearance are preferred. A pedestrian oriented environment is encouraged where appropriate, for example in areas where there are several commercial uses in close proximity.

A more comfortable pedestrian environment can be achieved through a number of means such as the breaking-up of large masses into smaller ones, articulating surfaces to produce shade and shadow, the incorporation of windows on building elevations or the expression of the structure of a building (e.g. a change in material or colour from one storey to the next).

Each building should have a pedestrian scale base<sup>15</sup> that clearly delineates its entrance or entrances. Buildings should feature patterns and details which provide visual interest at the scale of the pedestrian. Building façades will avoid large stretches of blank uninterrupted walls where visible from the street. Visual interest shall be added to façades using the variation of roof line or wall plane articulation, or by incorporating building elements such as window groupings, porches, dormers, turrets or towers.

<sup>15</sup> Pedestrian scale base: When the first floor of a multi-floor building incorporates elements that are of a comfortable scale relative to a person.



Roof mounted service equipment in the Enhanced Areas will be located away from roof edges and screened from view. (Fig. 19, 20) Screening should be an integral part of the roofscape and be in keeping with the overall design strategy with respect to form, materials and colour. Special attention should be given to those areas where the roofscape can be seen from the street or adjacent buildings.

Architectural metal, glass and steel, manufactured or natural stone, brick masonry products, and precast concrete are the preferred materials used on buildings in the Enhanced Areas. Alternate materials will be reviewed and evaluated by the Approving Authority considering the quality of the building design.

Exterior materials and colors should be aesthetically pleasing and of a high quality and compatible with materials and colors of nearby structures.



Fig. 19 Screening rooftop equipment directly



Fig. 20 Example of parapet wall

## 4.4 LANDSCAPING

## **Purpose of Landscaping**

The quality of landscaping is a major factor in the development of a highly functional and aesthetically inviting industrial area. Site landscape plans should consider those proposed on adjacent properties or may be undertaken as part of an overall landscaping scheme for a larger area.

In addition to making the area more attractive, landscaping can serve a variety of functions in an Industrial site. Thoughtfully designed landscaping can:

- · Create more pedestrian friendly environments by providing shade and shelter;
- · Break up the mass of industrial buildings or expanse of parking areas;
- · Soften architectural materials:
- Provide screening of service structures and loading areas;
- Differentiate between areas which serve different purposes ex. An entry plaza could be separated from a parking area or outdoor seating area by landscaping elements;
- · Provide shade and climate control for outdoor and indoor spaces;



- Control the movement of airborne particulates;
- Provide buffers between different land-uses;
- Filter drainage and stormwater runoff from parking areas and streets;
- Allow the re-infiltration of stormwater into the ground.



Fig. 21 Site entrance



Fig. 22 Along building faces



Fig. 23 Street interface areas



Fig. 24 Adjacent to pedestrian spaces



Fig. 25 Screening of parking areas



Fig. 26 Screening utility boxes



Fig. 27 Building entrance



Fig. 28 Enhancing green spaces

## **Locations for Landscaping**

The Design Guidelines are not intended to significantly increase development costs by mandating extensive landscaping requirements. Instead, landscaping should be focused in areas where it will have the most impact such as (Fig. 21 - 28):

- · Entrances to the site;
- Focal points or highly visible areas of the site, such as building entrances;
- Buffers between sites;
- · Along building faces visible from the road;
- Where it provides screening of parking, loading or storage areas;
- Where it provides screening for utility boxes or mechanical equipment.



## 4.4.1 LANDSCAPING REQUIREMENTS THROUGHOUT THE CORRIDOR

Developers throughout the Corridor must submit a landscaping plan and landscape maintenance plan with their development permit application demonstrating compliance with the H2A Corridor Design Guidelines. Compliance will be evaluated using the checklist provided in Section 6. Additional landscaping may be required, if in the opinion of the Approving Authority, there is likelihood that the proposed development will generate undesirable impacts on surrounding sites, such as but not limited to poor appearance, excessive noise, light, traffic, litter, or dust.





Fig. 29 Vegetated drainage swale

Fig. 30 Roadside ditching for stormwater conveyance

Landscaped areas should incorporate both evergreen and deciduous trees to provide foliage year-round. In addition, provision of fall and winter colour through foliage or bark colour could be considered. Planting along roadways should allow for sight lines to view the main building. Foundation planting which complements and focuses attention on the office portion or the main entry of the building is encouraged.

Planting beds in landscaped areas will include ground cover such as mulch or stone to reduce weed growth. Berms and all other areas that are not for buildings, parking, landscaping, storage or circulation should be seeded with an approved seed mix.

Vehicle parking, outdoor storage, snow storage, outdoor displays or goods for sale may be allowed on a portion of a site that has been designated for landscaping at the discretion of the Development Authority, but must be addressed in the landscaping plan that is submitted as part of the overall development permit application. This should include proposed mitigation measures to avoid killing vegetation or otherwise damaging landscaping.

## "Greening" Landscaping

Water, especially treated water, is a precious resource and as such must be conserved or re-used wherever possible. For all development located in the H2A Potable water shall not be used for irrigation. Where irrigation is required, it must employ stormwater run-off, snow melt or reclaimed water. The implementation of strategies to reduce or eliminate irrigation requirements for landscaping will be strongly encouraged. Such measures include (Fig. 29-33):



- Use of drought resistant native plant species with a low water requirement;
- Locating plant material in drainage swales or stormwater retention areas;
- Draining parking areas into landscaped retention areas through curb-cuts (Fig. 33):
- Directing downspouts into infiltration planter boxes<sup>16</sup> adjacent to buildings;
- Use of tree box filters<sup>17</sup> for filtering run-off from roads;
- Limiting vegetation on tops of berms or other locations where water retention is difficult;
- Limiting sod to areas where it serves a functional purpose;
- Using sculpture and architectural elements and hard landscaping to augment soft landscaped areas without augmenting water requirements.

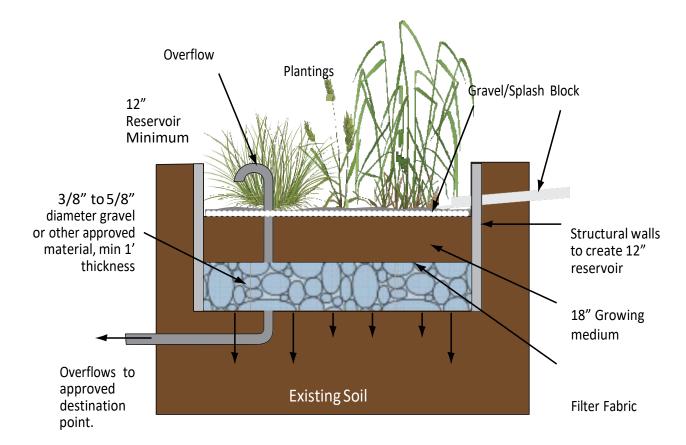


Fig. 31 An example of a planter box.

<sup>16</sup> Planter boxes: Raised planting beds that intercept, store and filter stormwater runoff from downspouts. They allow the infiltration of storm water into the ground while at the same time irrigating vegetation planted inside of them. Pollution reduction is achieved as the stormwater filters through the soil and plant root systems. (see Fig. 31)

<sup>17</sup> Tree Box Filters: Similar to a Planter Box. Provides for the infiltration of stormwater through soil and tree root systems (see Fig. 32).



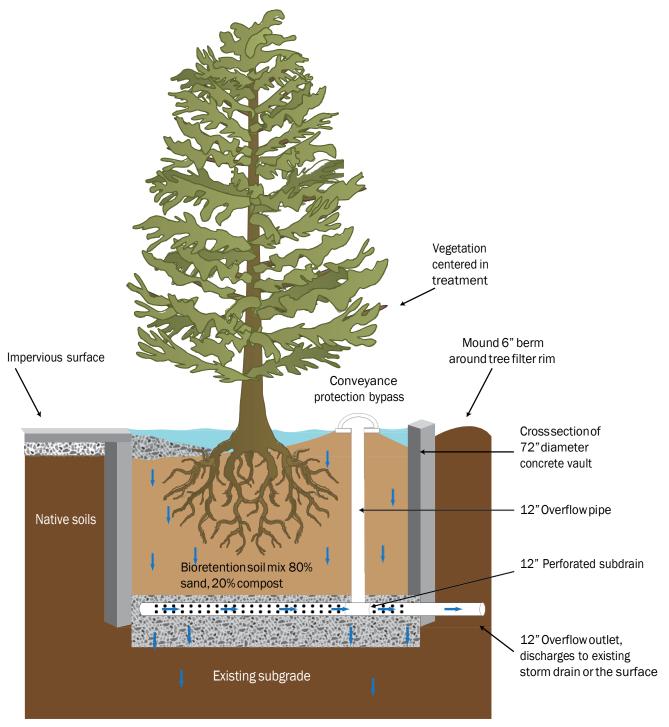


Fig. 32 An example of a tree box filter



## 4.4.2 LANDSCAPING REQUIREMENTS IN ENHANCED AREAS

The preferred approach to landscaping in the Enhanced Areas, similar to other areas of the H2A Corridor, is to use landscaping strategically to provide for specific functions. In enhanced areas landscaping should be used to:

- · Complement the roadway landscapes;
- · Reinforce the site entry sequence;
- Create distinctive settings for buildings by framing their front elevations;
- Screen aesthetically undesirable site functions such as parking, loading or storage areas and mechanical or telecommunications equipment;
- Reinforce the design of the open space systems;
- Provide shade for parking areas and;
- · Provide amenities for pedestrians.

Shade and shelter from winds should be considered in all landscape design, especially along pedestrian routes or adjacent to parking areas. Plant materials should be drought resistant native species.



Fig. 33 Example of a curb cut for runoff collection

## 4.5 OUTBUILDINGS, LIGHTING, FENCING, AND SITE FURNITURE

This section of the guidelines speaks to accessory components of the site, describing requirements for the design and location of outbuildings, lighting, fencing and site furniture.



## 4.5.1 OUTBUILDINGS, LIGHTING, FENCING, AND SITE FURNITURE THROUGHOUT THE CORRIDOR

It is desirable that outbuildings on industrial sites in the 2A Corridor be of similar materials and character as the principal building on the site. They must be located so as not to hamper pedestrian or vehicular circulation, emergency access or staging for fire-fighting for the site and must comply with all Municipal setbacks. Sea-cans or shipping containers are considered as outbuildings and must meet the same requirements.

Exterior lighting should be incorporated to provide security and safety of on-site areas such as parking, loading, shipping, receiving, pathway, and working areas. It is particularly important that building entrances be well lit. Any exterior lighting of the site or building must be compliant with the Municipality's *Dark Sky Bylaw*. The use of energy efficient or solar powered fixtures and those equipped with timers, motion sensors or light sensors will be encouraged.

Fencing or screening walls can be an important component of site security, and can reduce a property's susceptibility to crime, however it is desirable that fencing – at least on the front or street-side of the principal building, be attractive and incorporate pillars or articulation for visual interest (Fig. 34, 35, 38, 39). Care should be exercised in determining what type of fencing or screening is best suited to each application on the site. Chain-link fencing with vinyl slats will generally not be considered acceptable in the Highway 2A corridor. The maximum height for fences or walls is 3.05m (10 feet) tall unless otherwise accepted by the Approving Authority.



Fig. 34 Iron security fence



Fig. 35 Ribbed metal solid fence



Fig. 36 Solid metal fence with landscaping



Fig. 37 Landscaping pockets along fence



Fig. 38 Perforated metal panel fence



Fig. 39 Precast concrete fence



## 4.5.2 OUTBUILDINGS, LIGHTING, FENCING, AND SITE FURNITURE IN ENHANCED AREAS

As in the rest of the Corridor, outbuildings in Enhanced Areas of the Corridor should be designed and located to complement the overall site design and should be of similar materials and character as the principal building on the site. Sea-cans shall not be located in the front yard of a site in the Enhanced Areas.

Fences or walls in Enhanced Areas shall be designed as an integral element of the site plan and should be of appropriate material and scale to complement the architecture on the site. Long expanses of blank fence or wall without articulation should be avoided. Where significant lengths of walls or fences are required, articulation and/or ornamentation shall be required. Landscaping along a fence line is also an appropriate means of providing visual interest (Fig. 36, 37). Chainlink fencing in enhanced areas should be black. Chain-link fencing with vinyl slats will not be considered acceptable for fencing or screening in the Enhanced Areas. No fence shall obscure the front of the face of the building in the Enhanced Areas.

## 4.6 SIGNAGE

This section of the guidelines speaks to requirements for and restrictions on signage in the Highway 2A Corridor.

## 4.6.1 SIGNAGE THROUGHOUT THE CORRIDOR

## **General Signage Requirements**

Signage in the 2A corridor may require a development permit as outlined in Foothills County's Land Use Bylaw. Whether requiring a development permit or not, all signage must comply with the Land Use Bylaw, the Dark Sky Bylaw and the Community Standards bylaw as well as with these design guidelines. Signage must relate to the business or activity on the site on which it is located. For signs that are part of an overall development permit application, the applicant must submit sufficient information to the Approving Authority so that the sign can be approved prior to installation occurring.

Signage in the 2A Corridor may require a Roadside Development Permit from the Minister of Transportation pursuant to the Highways Development and Protection Regulation, Alberta Regulation 326/2009.

Signage, including corporate, tenant and traffic signage, should be coordinated on each property. No sign shall be located where it will interfere with pedestrian or traffic safety. Any form of signage not explicitly listed below shall be prohibited, unless deemed appropriate by the Approving Authority and approved through the development permit process.



## **Address Signs**

The 9-1-1 address shall be installed on every developed lot as close to the approach and the property line as is practical in order to allow protective services to identify properties in a timely fashion. Address signs should follow the County's recommendations in terms of sign location, size, and color. Address signs shall be facing the road, clearly visible and not create an obstruction for road grading, snow plowing, or mowing. Individual bays or units in multi-unit complexes must be appropriately addressed.

## **Free-Standing Signs**

A Free-Standing Sign is defined in the Land Use Bylaw as:

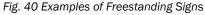
A sign on a standard base or column permanently fixed to the ground and not attached to any building or other structure. The sign advertises goods and services which are at the location on which the sign is located (See Fig. 40).

No more than one (1) free-standing sign shall be allowed per parcel frontage for the purpose of identifying the use or building on that parcel.

## A Free-Standing Sign:

- Shall not exceed 4.5 square metres in area or 2 metres in height (sign portion);
- · When mounted shall not exceed 8 metres in height;
- Shall be permanently attached to the ground with structural support design approved by an engineer;
- Shall meet development setbacks for the appropriate land use district unless otherwise permitted by the Approving Authority;
- Should be designed in a manner which is architecturally compatible with the general character of the building(s) on-site;
- May require landscaping at the base at the discretion of the Approving Authority.









## Fascia Signs

A Fascia Sign is defined in the Land Use Bylaw as:

A sign placed flat and parallel to the face of a building so that no part projects more than 0.3m (1 ft.) from the building (See Fig. 41).

## A Fascia Sign:

- May be erected for corporate identification purposes;
- Shall not exceed 20% of the building face or bay to which the sign is attached;
- Should be designed in a manner that is architecturally compatible with the general character of the building to which it is affixed.





Fig. 41 Examples of Fascia Signs

## **Roof Signs**

A Roof Sign is defined in the Land Use Bylaw as:

Any sign erected upon, against, or directly above a roof or on top of or above the parapet wall of a building (See Fig. 42 & Fig. 43).







Fig 43 Roof Mounted Roof Sign

## Roof signs:

- May be permitted in the Highway 2A Corridor at the discretion of the Approving Authority;
- Shall not project beyond any building face;



- Shall not be illuminated:
- When roof mounted, shall be permanently affixed to the building with structural supports adequate to support the proposed sign;
- When installed, shall be included in the total building height when determining if the building complies with the maximum height in the LUB;
- Painted / printed on roof signs shall be painted or printed directly onto the roof surface using material that will withstand wind and weather and maintain an acceptable appearance for as long as they are there;
- Should have a message that is legible and recognizable;
- Should be designed in a manner which is compatible in character and design with the building to which they are affixed.









Fig. 44 Examples of Projecting Signs

## **Projecting Signs**

A Projecting Sign is defined as:

A sign other than a canopy or awning sign which projects from a structure or a building face or wall (See Fig. 44).

## Projecting Signs:

- Shall have a maximum area of 3 square metres, or as otherwise accepted by the Approving Authority;
- Shall not rise above a parapet;
- Shall provide a minimum of 2.5 metres of clearance from the bottom of the sign to the surface below it;
- · Structural supports shall be adequate to support the proposed sign;
- Shall not encroach within 0.6 metres of the property line.

## Canopy/Awning Signs

A Canopy Sign is defined as:

A sign that is attached to or constructed in or on a canopy, including computerized signage (See Fig. 45).



An Awning Sign is defined as:

A sign that is painted on or anchored flat to the surface of an awning (See Fig. 46).





Fig. 45 Example of Canopy Sign

Fig. 46 Example of Awning Sign

## Canopy and Awning signs:

- · Shall be affixed or forming part of the principle building;
- Shall provide a minimum separation of 2.5 metres from the bottom of the sign to the surface below;
- Awning signage shall project no further than 1.83 metres out from the face of the building, unless otherwise accepted by the Approving Authority;
- Shall not overhang any abutting property.

## 4.6.2 SIGNAGE IN ENHANCED AREAS

Signs in Enhanced Areas should reflect the character of the principal building and its intended use. They should enhance the style or unique architectural features of buildings and should be designed to enhance both the pedestrian and driving experience.

Signs in Enhanced Areas are not permitted to cover or obscure architectural features of buildings. The location and shape of the architectural features of the building should be considered when determining the size and location of a sign. Design elements such as window patterns will help determine the sign shape and size that will suit the building.

Projecting signs are encouraged for commercial development in the enhanced areas of the plan, as with other types of signs, they should be designed to reflect the character of the building and the business and should fit with adjacent signage.

The design and alignment of signs on multi-use buildings, or buildings occupied by multiple businesses should complement each other such that a unified appearance is achieved.



## 4.7 UTILITIES, MECHANICAL AND TELECOMMUNICATIONS EQUIPMENT

This section of the guidelines speaks to requirements regarding utility services, and mechanical and telecommunications equipment on sites in the Highway 2A Corridor.

# 4.7.1 UTILITIES, MECANICAL AND TELECOMMUNICATIONS EQUIPMENT REQUREMENTS THROUGHOUT THE CORRIDOR

Utility service lines, transformers mechanical and telecommunications equipment throughout the corridor should be located so they are removed from main pedestrian pathways and away from main vehicular carriage ways, unless they are buried and included within an approved integrated utility corridor. Burying power service lines is encouraged where practical.

# 4.7.2 UTILITIES, MECANICAL AND TELECOMMUNICATIONS EQUIPMENT REQUREMENTS IN ENHANCED AREAS

All permanent utility service lines in Enhanced Areas should be installed underground. Transformers, mechanical equipment, telecommunications devices, and utility cabinets should be located away from streets, pedestrian areas and outdoor seating areas. They should also be located so they are not visible from the street, or screening should be provided in the form of fencing or landscaping. Alternatively wrapping may be considered where appropriate (Fig. 47, 48, 49).



Fig. 47 Buried Utility Box



Fig. 48 Landscaping Around Utility Boxes



Fig. 49 Wrapped Utility Box

## 4.8 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Crimes such as theft, assault and vandalism can become a major expense to businesses and create fear and discomfort for their employees. It is therefore desirable to limit opportunities for crime to take place whenever possible.



According to a Home Office Police Research Group Briefing Note produced by the Home Office Department of the British Government:

"The level of crime on an (industrial) estate is greatly influenced by its design, layout and location. Careful attention to these aspects in the future could reduce the crime risk."

Crime Prevention Through Environmental Design (CPTED) is an approach to planning that attempts to address crime prevention through careful and deliberate design of the environments where people live work and play. According to the International CPTED Association (ICA), CPTED is defined as:

"A multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts by affecting the built, social and administrative environment."

The use of CPTED principles may improve a community's perception of safety and has been proven effective in reducing crime in communities worldwide.

There are several key strategies that have been defined to assist in implementing CPTED, they are: Natural Surveillance, Natural Access Control, Territorial Reinforcement and Maintenance and Activity support.

**Natural Surveillance:** The placement of physical features, and places for activity in such a way as to maximize visibility and foster positive social interaction among legitimate users of private and public space. Potential offenders feel increased scrutiny and limitations on their escape routes.

**Natural Access Control:** Limits the opportunity for crime by taking steps to clearly differentiate between public space and private space. It is accomplished by designing and constructing entrances and exits, fencing, lighting and landscape to limit access or control flow through a site or area.

**Territorial Reinforcement:** Promotes social control through increased definition of space and improved proprietary concern. It is accomplished by using buildings, fences, pavement, signs, lighting and landscape to express ownership and define public, semi-public and private space.

**Maintenance:** Can be viewed as an expression of ownership of property. Deterioration indicates less control by the intended users of a site and a greater tolerance of disorder. Ensuring properties are well maintained may reduce the occurrence of vandalism.

**Activity Support:** Increases the use of a built environment for safe activities with the intent of increasing the risk of detection of criminal and undesirable activities. Natural surveillance by the intended users is casual and there is no specific plan for people to watch out for criminal activity.



These strategies have been used most effectively in residential or mixed-use areas where activity occurs throughout the day and night. However, some of the principles can be readily applied to industrial or commercial development. For instance, the provision of significant areas of transparency around entryways and stairways will enhance natural surveillance and increase security.

Developers in the H2AIASP area are encouraged to implement CPTED strategies on their sites where it does not compromise their business operations or conflict with other Municipal policies or bylaws. Special care will be required to balance the need for lighting to provide security with adherence to the Municipality's Dark Sky Bylaw. Likewise, to balance the need to provide sightlines for surveillance with adherence to the Municipality's Screening Standards.

## 5.0 IMPLEMENTATION

A design review will be carried out as part of the development permit process for the following commercial and/or industrial developments or improvements proposed for lands within the H2AIASP:

- a) All new construction and site development;
- b) Additions to buildings that add more than 10% to the existing building's footprint or any side elevation;
- c) All exterior alterations to the exterior of existing facilities; and
- d) Any alterations or additions to site improvements (excluding buildings).

The design review will evaluate proposed projects for their compliance with the Highway 2A Corridor Design Guidelines. To facilitate this process the developer will submit a detailed site plan and a landscaping plan that includes a landscape maintenance plan with the application for a development permit.

A design review may be waived by the Approving Authority where the existing site development has been done in compliance with a development permit for which all conditions of approval have been met and where the proposed site development will not cause the property to fail to meet the spirit and intent of these design guidelines.

## **Site Plan Requirements**

Site plan drawings shall be approximately to scale and include the following:

- · Arrow indicating north,
- · Boundaries of the property,
- · Any easements or rights of way existing on the parcel,
- Building locations on the parcel (including future expansion areas if applicable),
- Driveways, parking areas and loading areas including curb details and surface materials and provisions for snow storage,



- · Sidewalks and any other paved areas,
- · Lot grading and drainage showing approved grades on the site,
- The location and size of any stormwater management facilities,
- Service lead-ins (storm, sanitary, water, hydro, gas and telephone).
- Hydro poles, transformers, meters, fire hydrants, Siamese connections.
- Fence and wall locations, design, height, materials and colours.
- Exterior lighting location, design, colour and throw.
- · Exterior storage areas and their screening (including garbage and recycling).
- Locations of any proposed signage, and details to sufficiently describe the design and the specifics of installation.

## **Landscape Plan Requirements**

Landscape plan drawings and supporting documentation shall conform to the site plan, be approximately to scale and should include:

- Existing trees and natural features, including those designated for preservation and measures proposed to preserve them.
- Existing and proposed site contours.
- All proposed planting, including location, type, species and size (in caliper, height and spread).
- · Specifications for materials used for hard surfacing.
- Specifications for materials used for groundcover in planting areas.
- Locations of and specifications for any landscape furniture (benches, picnic tables, play structures etc.)
- All screening, including specifications for materials, details and elevations.
- Any contemplated phasing of the installation of the landscaping.
- Any Low Impact Development practices or construction methods that will be incorporated into the development.
- Location of above and below ground utility services.
- A schedule, which details a comprehensive landscape maintenance plan including how and if landscaping will be irrigated.

Upon receiving a complete development permit application package a design review will be carried out by Municipal staff. In some cases, external agencies (such as the Alberta Transportation) may be asked to review applications. Additionally, larger scale developments may warrant a design review panel or professional advice to ensure a comprehensive evaluation is performed. If professional advice is required it shall be at the cost of the applicant.



## **Evaluating Applications**

Applications in the H2A Corridor will be evaluated by the Approving Authority for compliance with the design guidelines using the Project Evaluation Check-list. Definitions pertaining to the Check-lists can be found in Section 7.0 Definitions

## 6.0 PROJECT EVALUATION CHECKLIST

The Checklist is divided into the following sections that match the sections of the guidelines:

- Site Planning & Environment
- · Parking Requirements
- · Building Design
- Landscaping
- · Outbuildings, lighting, fencing and site furniture
- Signage
- Utilities, Mechanical and Telecommunications Equipment
- Crime Prevention Through Environmental Design (CPTED)

Each Section is divided into: Guidelines that are to be applied throughout the Corridor, Guidelines that apply to the Enhanced Areas and Additional Items for Consideration that may be considered optional.

## **SITE PLANNING & ENVIRONMENT**

## **Site Planning & Environment Throughout the Corridor**

	Site coverage does not exceed 60% or is supported by stormwater
	management plan prepared by a qualified professional
	Siting considers the preservation/enhancement of natural features
	All setbacks comply with land-use by-law
	Site access and internal roadways meet Foothills County standards and Fire $\!\!/$ Emergency access requirements
	Clear access and orientation provided for vehicles and pedestrians
	Principal Building entrance oriented towards main entry to site
	Loading bays or drive-through lanes do not impede the efficient flow of vehicular or pedestrian movements
	Outdoor storage located at side or behind main building or adequately screened
	Pedestrian/bicycle/vehicle conflicts are minimized
	Snow removal and storage considered in design of parking and circulation
$\Box$	Water conservation is considered



	Construction Waste Reduction Plan provided
	Accommodation of recycling in site design
Site	Planning & Environment in Enhanced Areas
	Service, delivery and storage areas and loading docks located in areas of low visibility and screened if deemed necessary by the Approving Authority.
	$\label{lem:Garbage} Garbage \ / \ was te \ management \ containers \ hidden \ from \ public \ view \ either \ by \ a \ freestanding \ enclosure \ or \ within \ the \ principle \ building$
	Fencing along street facing property lines incorporates clusters of landscaping or other means create visual interest
	Commercial lands within the 2A corridor that are adjacent to residential development have a landscaped buffer of a minimum of 6.0 m (19.7 ft) wide along the property line abutting the residential lands
	Industrial parcels that are adjacent to residential development have a minimum of 10.0m (32.8ft) landscaped buffer along the property line
Site	Planning & Environment Additional Considerations
	tional)
	Provision for alternate modes of transportation Use of permeable pavement and other low impact stormwater management practices
	Convenient, safe and visually attractive pedestrian access is provided to all destinations on the site
	Provision of landscaped outdoor spaces which can serve as plazas, patios or pedestrian gathering places with appropriate site furniture and lighting Outdoor gathering spaces are shaded and include amenities such as street furniture, and adequate lighting for visibility and safety
PAF	RKING REQUIREMENTS
Par	king Throughout the Corridor
	Adequate parking is provided as per land-use by-law
	If more than 50 parking stalls, at least 60% located at the side and/or the rear of the building, unless otherwise accepted by the Approving Authority
Par	king in Enhanced Areas
	Parking lots containing more than 50 spaces are broken up into smaller units with landscaped islands or are dispersed around the site
	Where parking lots with more than 35 spaces are located adjacent to roadways, they are visually buffered with screening between the road and the parking area.



Pa	rking Additional Considerations (optional)
	Parking areas surfaced with permeable materials
	Stormwater runoff from parking areas drains into landscaped areas
	Landscape islands in parking areas contain shade trees to reduce "heat island effect"
BUI	LDING DESIGN
Bui	Iding Design Throughout the Corridor
	Buildings comply with Alberta Safety Codes <sup>18</sup> , particularly with respect to occupancy, safety, fire codes and building standards
	Buildings constructed and finished with durable materials designed to maintain their initial appearance throughout the life of the project
	Principal building entrance is easily identifiable
	Principal building entrance is safely accessible from main parking area
	Front elevation of principal building is visually interesting
	All appliances and fixtures are energy smart and water smart
	All plumbing fixtures are low-flow or no-flow
	Use of daylight to reduce lighting requirements but also considering heat gain
	Water conservation measures are implemented
	Provided construction waste reduction plan
Bui	lding Design in Enhanced Areas
	Exterior materials and colours are aesthetically pleasing, of high quality, and compatible with materials and colors of nearby structures
	Design of buildings incorporates the breaking-up of large masses into smaller ones
	Design of building façades avoids large stretches of blank uninterrupted walls
	Each building has a pedestrian scale base that clearly delineates its entrance or entrances
	Roof mounted service equipment located away from roof edges and screened

☐ Screening is an integral part of the design and follows the overall design

strategy with respect to form, materials and colour

from view

<sup>18</sup> Alberta Safety Codes includes: building codes and standards, fire codes and standards, private sewage codes and standards, plumbing codes, electrical codes and standards, gas codes and standards, boiler and pressure vessels codes and elevator codes and standards.



Bui	lding Design Additional Considerations (Optional)
	Energy efficient buildings incorporating green energy for heat and /or light
	Use of recycled materials
	Building incorporates measures to reduce solar gain
	Buildings feature patterns and detail which provide visual interest at the scale of the pedestrian
LAN	IDSCAPING
Lan	dscaping Throughout the Corridor
	Landscaping and Landscape Maintenance Plans submitted and accepted by the Approving Authority
	Landscaping is provided at site entrance and focal points of the site
	Landscaped buffers are provided if site is adjacent to residential properties
	Landscape Maintenance Plan does not utilize potable water for irrigation
	Landscaping vegetation is drought resistant and makes use of native species
	Landscaping is predominantly located in areas that provide for water retention (rather than on the top of a berm)
	Provision for year-round colour and interest in landscaping
	Non-native grasses limited to areas where they serve a functional purpose
Lan	dscaping in Enhanced Areas
	Visually unattractive site functions such as parking, loading and storage areas are screened with landscaping or a combination of landscaping and screening
	Landscaping is used to enhance the appearance of the site from nearby roads and to provide on-site amenities
Lan	dscaping Additional Considerations (Optional)
	Foundation planting used to create interest along building faces
	Pedestrian friendly environments created by providing shade and shelter
	Use of sculpture, architectural elements or hard-scaping to augment landscaping
	Landscaping is used to re-enforce the site entry sequence
	Landscaping is used to enhance front elevations of buildings
	Landscaping is used to provide climate moderation for pedestrian spaces
	Use of landscaping to filter stormwater run-off
	Locating landscaping in vegetated drainage swales or bio-retention areas
	Incorporates landscape design features that reduce irrigation requirements



## **OUTBUILDINGS, LIGHTING, FENCING AND SITE FURNITURE**

## Outbuildings, Lighting, Fencing and Site Furniture Throughout the Corridor

	Outbuildings comply with Municipal setbacks
	Outbuildings do not hamper site access or circulation
	Outbuildings do not hamper emergency access or staging for fire-fighting
	Outbuildings are of similar material and character to the principal building on the site
	Exterior lighting provides security and safety of on-site areas
	Lighting complies with Municipal Dark Sky Bylaw
	Fencing/screening, if required, incorporates pillars or articulation for visual interest
	The height of any fences or freestanding walls does not exceed 3.05 m
	Security toppers are angled wire or as accepted by the Approving Authority
)ut	buildings, Lighting, Fencing and Site Furniture in Enhanced
۱re	
	Ancillary enclosures and out-buildings constructed of materials similar to the principle building and are incorporated into the overall plan in an appropriate manner
	Light standards and exterior light fixtures are in a style that suits the architectural theme of the site
	Fences or walls are designed as an integral element of the site plan and are of appropriate material and scale to complement the architecture on the site
	Where significant lengths of walls or fences are required, articulation is provided
	Landscaping pockets are used to provide visual interest along uninterrupted fence lines
	No fence extends past or is in front of the front face of the principal building
	buildings, Lighting, Fencing and Site Furniture Additional siderations (Optional)
	Use of energy efficient or solar powered light fixtures
	Use of lighting equipped with timers, motion sensors or light sensors



## SIGNAGE

## Signage Throughout the Corridor

	Signage complies with the Land Use Bylaw, the Dark Sky Bylaw and the Community Standards bylaw
	Building or site address is clearly identified as per municipal standards
	Signage is located where it will not interfere with pedestrian or traffic safety
	All signage is designed to be similar in material and style to buildings and other site features
	Free standing signage is permanently attached to the ground, meets required setbacks, does not incorporate any blinking, flashing, strobe lights or running lights
	Free-standing signage does not exceed 4.5 square metres or 2 metres in height (sign portion)
	Freestanding signage when mounted does not exceed 8 metres in height
	Facia Signs do not exceed 20% of the building face or bay
	Roof Signs are permanently affixed to the building with structural support approved by an engineer
	Roof signs do not project beyond any building face
	Roof signs are not illuminated
	Projecting signage does not exceed <b>3</b> square metres and provides at least 2.5 metres of clearance from the bottom of the sign to the ground, unless otherwise accepted by the Approving Authority
	Canopy signage provides a minimum 2.5 metres of clearance from the bottom of the sign to the ground
	Awning signage projects no further than 1.83 metres from the face of the building and provides a minimum 2.5 metres of clearance from the bottom of the sign to the ground, unless otherwise accepted by the Approving Authority
Sig	nage in Enhanced Areas
	Signage, including corporate, tenant and traffic signage, is coordinated in material and style
Sig	nage Additional Considerations (Optional)
	None.



## UTILITIES, MECHANICAL AND TELECOMMUNICATIONS EQUIPMENT

	ities, Mechanical and Telecommunications Equipment oughout the Corridor
	Power lines, transformers mechanical and telecommunications equipment are located away from main pedestrian pathways unless included within an approved integrated utility greenway
	Power lines, transformers mechanical and telecommunications equipment are located away from main vehicular carriage ways
Util	ities, Mechanical and Telecommunications Equipment in
Enh	anced Areas
	All permanent utility lines are installed underground
	ities, Mechanical and Telecommunications Equipment litional Considerations (Optional)
	Transformers, mechanical equipment, telecommunications devices, equipment switching boxes and other utility cabinets are located away from streets, pedestrian areas and outdoor seating areas, unless incorporated into an approved integrated utility greenway

## CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

☐ Transformers, mechanical equipment, telecommunications devices,

equipment switching boxes and other utility cabinets are located such that they are not visible from the street, or screening is provided in the form of

## **Crime Prevention Through Environmental Design for Consideration (Optional)**

fencing or landscaping.

Includes design elements that support strategies for Crime Prevention
Through Environmental Design.

## 7.0 DEFINITIONS:

### Articulation of buildings:

The articulation of a building emphasizes each part individually revealing the distinct areas or functions of the building and how the parts fit into the whole.

### Articulation of surfaces:

The breaking up of long continuous surfaces by displacing portions of them either horizontally or vertically.

### Berming:

Creating a level space, shelf or raised barrier of earth to separate two areas.

## Bio-retention area (see also Rain garden):

A shallow depression which has been planted with vegetation, designed to retain or detain stormwater before it is infiltrated into the ground or evaporated. This term may sometimes be used interchangeably with "rain garden", typically a rain garden is of smaller scale and would accommodate the run-off from one residential property, where as a bio-retention area would describe a larger project encompassing several residential properties or one or more non-residential properties.

#### Bio-swales:

Gently sloped ditches vegetated with native plants that reduce runoff volumes through infiltration and evapo-

#### **Buffer:**

An area that serves the purpose of keeping two or more areas distant from one another.

#### **Built context:**

The pattern of land use, building type size, style and site design in an area.

#### Climate moderation:

Can generally be described as efforts through landscaping design to maintain a comfortable outdoor environment for pedestrians.

## Comprehensive pedestrian circulation system:

Can generally be described as a network of sidewalks, pathways, trails, and other pedestrian conveyance systems that effectively links one area to another.

### Day-lighting (structures):

The illumination of indoor spaces by natural light through the use of skylights, windows, and reflected light. Day- lighting may also employ light sensors, and louvers or shading devices to regulate light or control glare.

### Delineate:

To visually indicate, describe or render something.

## Drought resistant (tolerant):

Can generally be described as flora that is resistant to and tolerant of drought i.e. the phenomenon that exists when precipitation is significantly below normal recorded levels, causing serious hydrological imbalances that often adversely affect land resources and production systems (Government of Canada 2010).

#### Durable:

In the context of the 2A corridor, can generally be described as a material able to withstand normal outdoor conditions without the appearance or physical integrity of the material being reduced over the same period of time in which a less robust material would exhibit signs of deterioration.



### Energy efficiency:

Can generally be described as a measure of how effectively energy is being used for a given purpose. For example, providing a similar or better level of service with less energy consumption on a per unit basis is considered an improvement in energy efficiency (Government of Canada 2010).

### **Energy smart:**

Can generally be described as appliances and fixtures that have met the requirements set forth by the Energy star designation recognized by Natural Resources Canada.

#### Fence:

A vertical physical barrier constructed to prevent visual intrusions, unauthorized access, or to provide sound abatement and/or the confinement of live animals. (from Foothills County's Land Use Bylaw).

### Green energy:

Can generally be described as electricity generation which uses renewable resources and has minimal impact on the environment.

### Landscaping:

Means the modification and enhancement of a property through the use of any or all of the following elements:

- · soft landscaping consisting of vegetation such as trees, shrubs, hedges, grass and ground cover; and
- hard landscaping consisting of non-vegetative materials such as brick, stone, concrete, tile, and wood, but including
  monolithic concrete and asphalt in the form of patios, walkways, paths but excluding parking lots (from Foothills
  County's Land Use Bylaw).

## Lot grading:

Means any work, operation or activity that results in a disturbance of the earth including the removal of top soil or borrow, borrow pits, berming, excavating, trenching, backfilling, filling, land leveling re-contouring and, grading other than for building purposes but does not include aggregate extraction, commercial logging, tree clearing, dugouts/private dams, ornamental ponds, storm water ponds, lagoon for the purpose of processing wastewater or landscaping (from Foothills County's Land Use Bylaw).

## Low Impact Development (LID):

Can generally be described as a form of site design and development that minimizes impacts on air, land and water. Specifically, site design and development forms will work to preserve pre-development site drainage conditions and on-site hydrological functions.

#### Monolithic:

Consisting of one piece; solid or unbroken, with no differentiation of parts.

## Natural features:

Can generally be described as those landscape features of a site or area created by geologic processes.

## Natural ventilation:

The use of openings in a building and naturally occurring phenomena (wind and the stack effect) to supply fresh air.

## Non-native grasses:

Can generally be described as grass species not native to the flora of the Province of Alberta and on a more general scale Canada.

### Passive solar heating

A means of using sunlight for useful energy without use of active mechanical systems. Generally, sunlight is used to heat air, water or thermal mass.

#### Pedestrian scale/human scale:

The relationship between the dimensions of a building, street, outdoor space, or streetscape element and the average dimensions of the human body, may also refer to space and the built environment as perceived by the senses of a human being.

### Pedestrian scale base:

When the first floor of a multi-floor building incorporates elements that are of a comfortable scale relative to a person.

#### Permeable paving materials:

Can generally be described as materials used in hard surfacing which allow rainfall to percolate to subsurface catchment areas, which then allow infiltration into underlying soils or the removal of the water by subsurface drainage.

### Pervious material:

A material or surface which allows the penetration of water into the ground.

#### Planter-box:

Planter boxes are raised planting beds that intercept, store and filter stormwater runoff from downspouts. They allow the infiltration of storm water into the ground while at the same time irrigating vegetation planted inside of them.

#### Rain garden:

A type of Bio-retention area usually a small bowl-shaped garden filled with native plants. Runoff from a disconnected roof downspout or other source may be collected in the bowl and infiltrate into the soil with the help of long-rooted native plants.

## Recycled materials:

Can generally be described as materials that can be treated or processed in order that they may be suitable for re-use.

## Retention areas / Bio-retention areas:

Depressed areas where water is stored until it seeps into the ground, evaporates or is utilized by vegetation.

## Running lights:

Also referred to as chasing LED lights. A series of small lights that illuminate in a progression one after the other such that it appears that a light is "running" along the path.

## Screening:

Means a fence, earth berm, hedge or trees used to visually and/or physically separate areas or functions (from Foothills County's Land Use Bylaw).

## Set back (differs from definition in Foothills County Land Use Bylaw - different context):

The distance which a building or other structure is to be removed from a property line, a street or road, a river or stream, a shore or flood plain, or any a place which needs protection.

## Solar gain:

Can generally be described as an increase in interior temperature as a result of solar radiation. Solar gain may be maximized in the winter months to reduce heating costs and minimized in the summer months to reduce cooling costs.

### Solar heating:

An active solar energy collector is used to heat either liquid or air, this energy can either be used to heat an interior space or it can be transferred to a storage system and distributed from there.



## Tree Box filters:

Similar to a Planter Box. Provides for the infiltration of stormwater through soil and tree root systems (*Fig. 32*). The system consists of a container filled with a soil mixture, a mulch layer, under-drain system and a shrub or tree. Stormwater drains directly from impervious surfaces through a filter media. Treated water flows out of the system through an under drain connected to a storm drainpipe / inlet or into the surrounding soil. Stormwater is filtered and the tree is watered.

## Useful life:

Can generally be described as the time span that a product or material has been designed and manufactured to last for.

### Vegetated drainage swales:

A type of bio-infiltration where vegetation is planted in a swale that is used for the detention or conveyance of stormwater run-off.

#### Water conservation:

In accordance with the Province of Alberta's Water for Life Strategy, can generally be described as any beneficial reduction in water use, loss or waste and water management practices that improve the use of water resources to benefit people or the environment.

#### Water smart:

Can generally be described as those plumbing fixtures that meet and are recognized by the nationally recognized Environmental Choice Program's Certification Criteria.