

TIMBERLANDS NORTH NEIGHBOURHOOD AREA STRUCTURE PLAN

CITY OF RED DEER | June 2013



Bylaw No.: 3217/B-2013 Approved by Council Resolution August 19, 2013



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1.0 INTRODUCTION

1.1 BACKGROUND

The Timberlands Town Centre Neighbourhood Area Structure Plan was originally approved by City Council in July of 2007. The original concept was for a mix of commercial and residential usage and encompassed the entire quarter section. Over the course of the last number of years, the southern residential (single-family and multi-family) areas have been developed, however the Town Centre and Main Street District in the northern portion remain undeveloped.

Since the NASP was originally adopted, the Town Centre concept has changed in part on account of the June, 2010 Commercial Market Opportunities Study. The proposed Land Use Plan for Timberlands North reflects a new vision and leadership role for the City. The plan is seen as one that challenges the local land development planning conventions and starts to implement some of the new ideas being developed as part of the City's design charter.

As the southern portion of the original Timberlands Town Centre Neighbourhood Area Structure Plan is currently mostly developed, the Timberlands North Neighbourhood Area Structure Plan is concerned with the undeveloped northern portion of the lands.

The Timberlands North Neighbourhood Area Structure Plan (NASP) has been prepared by IBI Group, on behalf of The City of Red Deer.

1.2 PURPOSE

The purpose of this Neighbourhood Area Structure Plan (NASP) is to describe the land use framework and development principles for approximately 36.78 hectares (90.89 acres) of land identified in Figure 1.3. This land was first contemplated in the East Hill Major Area Structure Plan (MASP) as one of a number of neighbourhood units accommodating future growth in east Red Deer.

The City's commitment within the Timberlands North NASP is to develop an area that reflects a unique image and character with walkable streets and solid integration of commercial, residential, and civic opportunities. In order to achieve this, the NASP contains a land use concept which will guide area development and set the expectations for future area development.

The Neighbourhood Area Structure Plan will establish a framework for the subdivision, servicing, and development of the Timberlands North area. The NASP identifies:

- the size and location of various land uses;
- the alignment of collector and local roadways and lanes;
- the neighbourhood open space system of parks, pathways and public utility lots;
- the location and range of commercial forms;
- the location and range of residential forms;
- the location of community facilities;
- servicing concepts for storm sewer, water and sanitary;
- the development staging sequence; and
- potential densities.

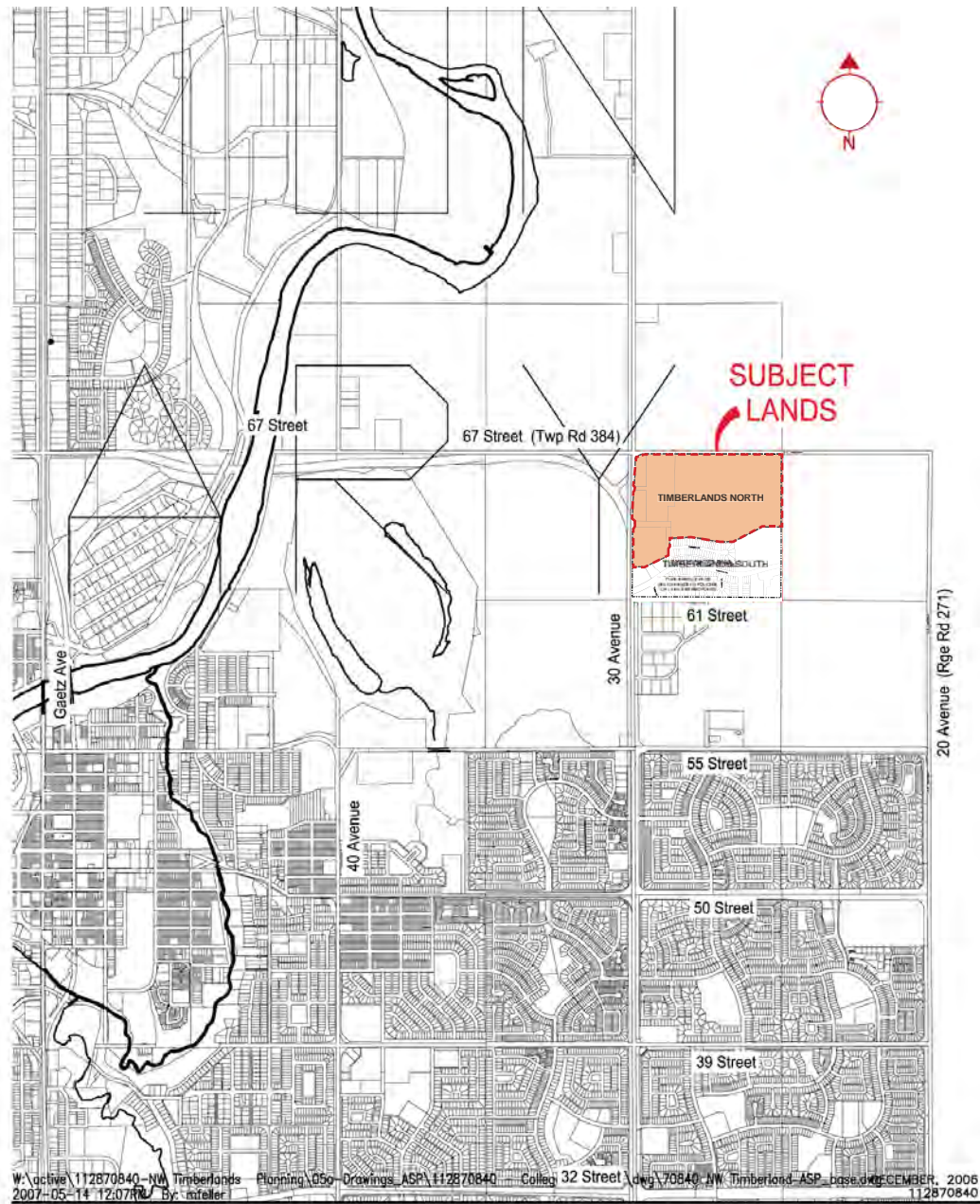
1.3 DEFINITION OF PLAN AREA

The Timberlands North Neighbourhood Area Structure Plan is comprised of the north portion of Northwest Quarter of Section 23, Township 38, Range 27 West of the Fourth Meridian and includes approximately 36.78 hectares (90.89 acres). As shown in Figure 1.1, Figure 1.2 and Figure 1.3, the NASP is defined by the following boundaries:

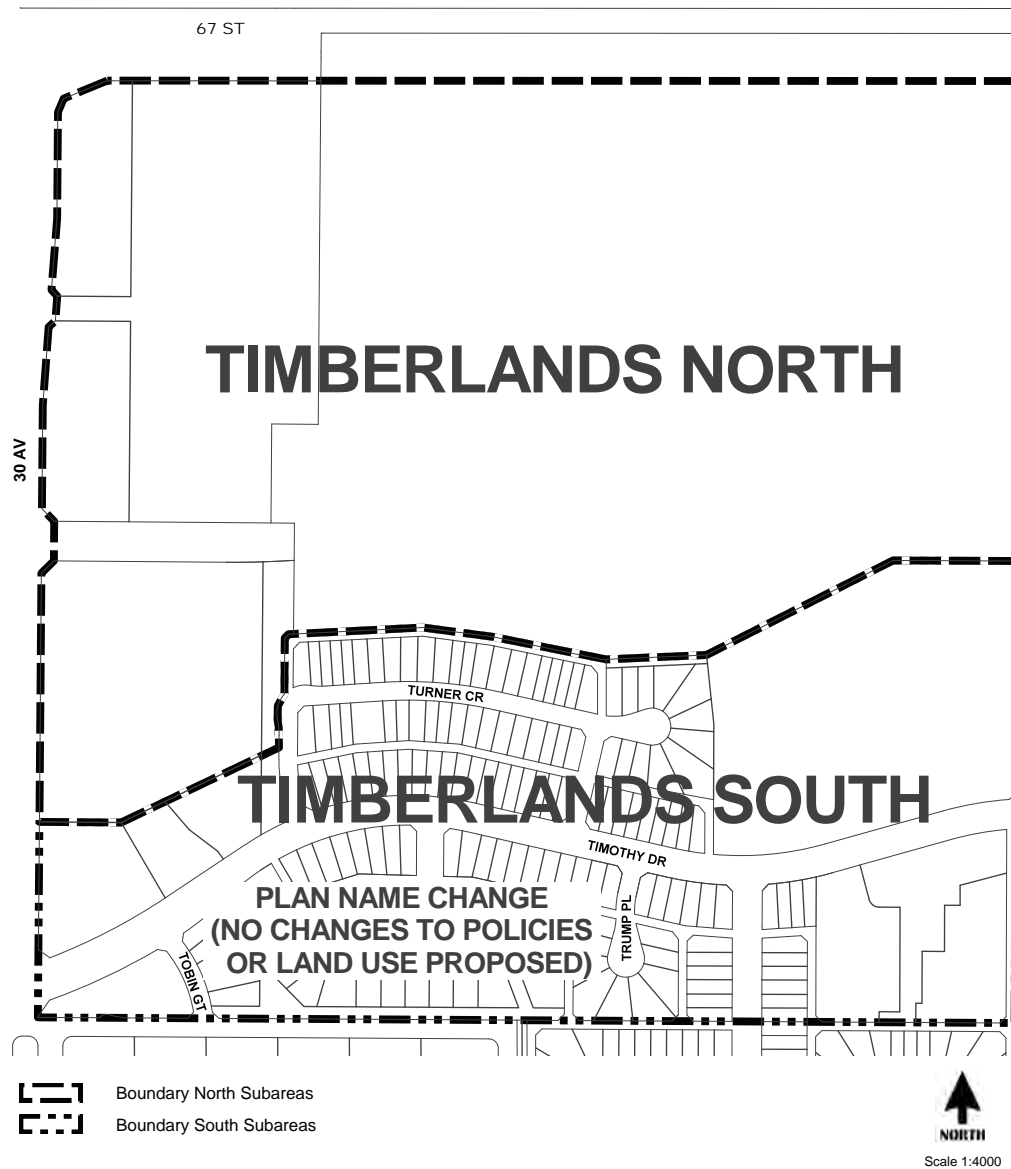
- 67 Street (Township Road 384) to the north;
- agricultural land to the east;
- existing residential development to the south; and
- 30 Avenue to the west.

As you can see in the aerial photo, Figure 1.2, there are no significant natural features in Timberlands North and there are no ecological connections to preserve.

The Timberlands North NASP constitutes a logical planning unit with respect to identifiable plan boundaries and servicing considerations and is consistent with the East Hills Major Area Structure Plan and the Municipal Development Plan.









2.0 PLAN VISION

2.1 STRATEGIC DIRECTION

The plan vision for Timberlands North is rooted in Red Deer City Council's Strategic Direction, 2012 – 2014. The purpose of the Strategic Direction is to guide Administration in creating organizational change, operational strategy and work plans to enable the community's vision to unfold. The Strategic Direction expresses Council's understanding of the community vision.

As it relates to community design, the Strategic Direction is to "design and plan our community to reflect our character and values. Specifically, our City's planning and urban design has resulted in a welcoming, more walkable and environmentally sustainable community which accurately reflects our character and values. It provides housing options, pedestrian routes, and allows for alternate forms of transportation and deliberate connections to our parks, trails and well-designed public spaces where people can meet and interact and feel a sense of belonging".

2.2 TIMBERLANDS NORTH COMMUNITY VISION

Timberlands North is a new pedestrian friendly neighbourhood in Red Deer. Timberlands North is well connected, visually appealing, environmentally sustainable and has a diversity of housing types and commercial opportunities. Timberlands North provides a mix of local amenities that can be accessed through a variety of alternative modes of transportation. Timberlands North will be the first community designed to respond to City Council's vision as set out in the Strategic Direction. Timberlands North is a City development which will set a high precedent for the development industry by designing a neighbourhood that embraces innovative design, has a variety of housing forms and targets a range of market segments. The intent of the Timberlands North vision is to outline a framework that will foster creativity and encourage innovation.



2.3 NEIGHBOURHOOD PLANNING PRINCIPLES

City of Red Deer Administration subsequently translated Council's Strategic Direction for Community Design into a set of Neighbourhood Planning Principles to help inform the land use concept plan and associated policies. The Neighbourhood Planning Principles are Natural Areas, Mixed Land Uses, Multi-Modal Choice, Compact Urban Form and Density, Integrated Parks and Community Spaces, Housing Opportunity and Choice, Resilient and Low Impact Neighbourhoods, Safe and Secure Neighbourhoods and Unique Neighbourhoods. The principles are more thoroughly described in the East Hill Major Area Structure Plan.



Unique Neighbourhoods



Integrated Parks and Community Spaces





Mixed Land Uses



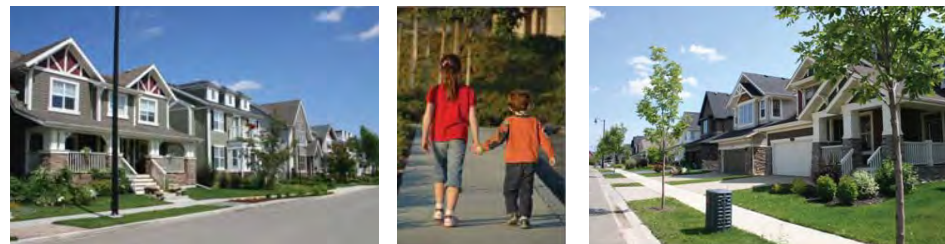
Compact Urban Form and Density



Multi-Modal Choice

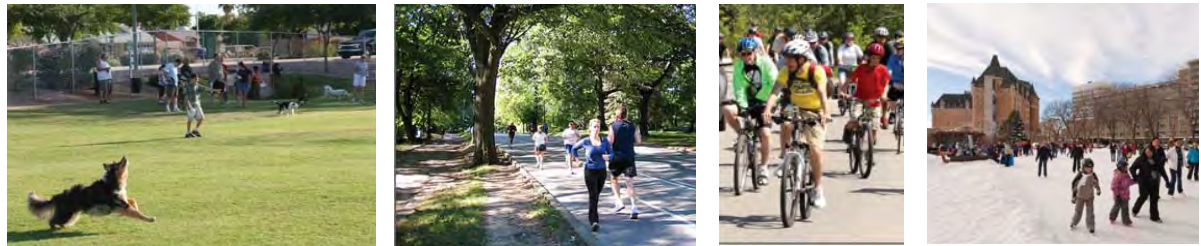


Resilient and Low Impact Neighbourhoods





Safe and Secure Neighbourhoods



Housing Opportunity and Choice



Natural Areas





3.0 LAND USE CONCEPT

3.1 INTRODUCTION

The following section is devoted to a description of the Land Use Concept Plan for the Timberlands North area and follows from the Vision, Strategic Direction and Neighbourhood Planning Principles articulated in Section 2. Development within the Timberlands North area will generally conform to the Land Use Concept illustrated in Figure 3.1.

3.2 PLAN OVERVIEW

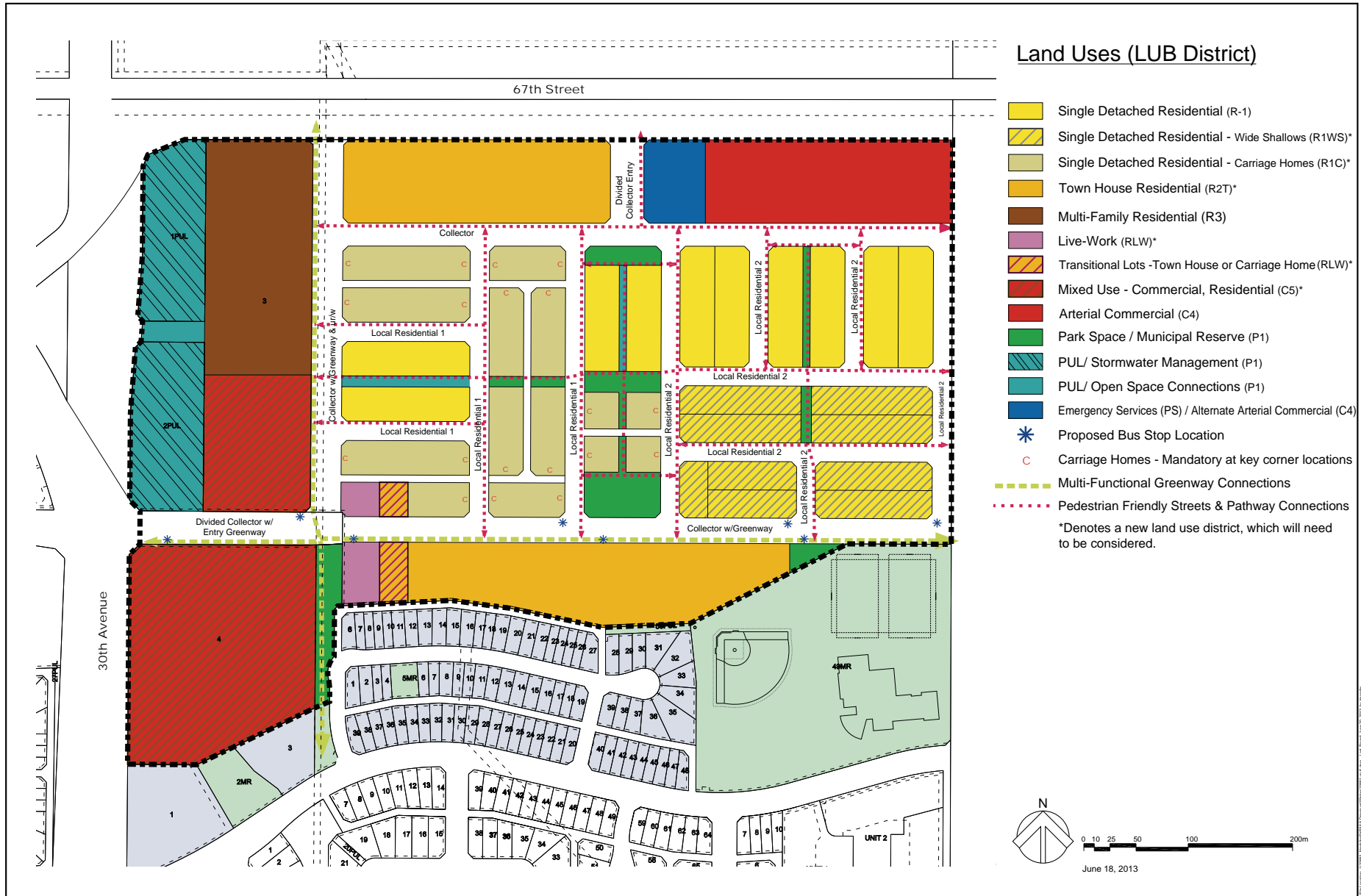
The plan is based on a modified grid street pattern allowing for enhanced connections and promoting walkability throughout the neighbourhood. Commercial and mixed use commercial, along with higher density residential are located on the periphery of the neighbourhood adjacent to 67th Street and 30th Avenue. The mixed use commercial along 30th Avenue constitutes an extension of the Clearview Market commercial activities located to the west.

Access to the neighbourhood is derived from two divided collectors off of 67th Street to the north and off of 30th Avenue to the west. Additional right-in/right-out connections may also be provided to the commercial and multi-family residential sites off of 30th Avenue and 67th Street. There is no direct vehicular access to the Timberlands South neighbourhood, however, there are multiple enhanced pedestrian connections. The plan allows for up to three new potential connections to future development to the east.

A diversity of housing forms have been organized into comprehensively planned neighbourhoods based on walkable blocks, containing both laned and laneless residential products. A central park feature provides the primary community amenity, gathering, and passive recreational space. In addition, pocket parks and green linkages provide neighbourhood focal points. Boulevarded and tree-lined streets with houses oriented close to the street create pedestrian-friendly, safe, connected neighbourhoods throughout. Potential land use statistics are described in Figure 3.2.

3.3 GENERAL POLICIES

1. Land use redesignations shall be consistent with the general land use classifications identified in Figure 3.1.
2. Auto oriented uses such as automobile service centres, drive-through businesses and service stations are preferred to be located within the arterial commercial district but may be located within the Mixed Use district if developed in conjunction with a grocery store.
3. All new development must abide by the built form and urban design requirements (also refer to current standards) of this plan to ensure a pedestrian-friendly street environment is created.
4. New development shall achieve a high standard of architectural design and detailing.
5. Universal accessibility for all is a fundamental element of this neighbourhood.





Land Use Allocation

Land Use Category/Component	Area (ha)	% of Net Developable Area	# of Dwelling Units
Gross Plan Area	36.78		
Developable Plan Area is made up as follows:			
Gross Plan Area minus			
Environmental Reserve	0		
Major Roads (arterials and expressways)	0		
Arterial Commercial	1.9		
District Commercial	4.8		100
Industrial Uses	0		
High Schools & Sportsfields additional to MR	0		
Special land use sites as determined by The City - EMS Site	0.47		
Constructed Wetlands	0		
Developable Plan Area	29.61	100%	
Total residential in the base scenario is made up as follows:			
Single Detached Residential (R1)	3.76	13%	90
Single Detached Wide Shallow Residential (R1WS)	2.47	8%	56
Single Detached Carriage Home Residential (R1C)	3.45	12%	106
Total Single Detached Residential	9.68	33%	252
Townhouse Residential	4.41	15%	123
Multi-Family Residential (R3)	2.31	8%	208
Live-Work (RLW)	0.34	1%	12
Transitional Lots- Townhouse or Carriage Home (RLW)	0.25	1%	8
Total Townhouse/Multifamily Residential	7.31	25%	351
Total Residential in Base Scenario	16.99	57%	603
Social Use			
Temporary Care/Day Care/Assisted Living Facility (TDA)	NA	NA	NA
Place of Worship Site	NA	NA	NA

Open Space			
Municipal Reserve (MR) (Note 6)	1.21	4.1%	
Public Utility Lot (PUL)	2.47	8.3%	
Total Open Space	3.68	12.4%	
Transportation			
Collector Roadways	4.79	16.2%	
Local Roadways	3.65	12.3%	
Lanes	0.46	1.6%	
Total Road Right-of-Ways	8.9	30.1%	
Road and PUL dedication as % of: (Gross Area - ER)	11.37	30.9%	
Other Uses			
Emergency Services Site (ES)	0.47		
Institutional Service Facility (PS)	NA		

Density

Table 2: Density and Housing Mix

Density	Dwelling Units (du)	Area (ha)	Density (du/ha)
Scenario 1 (Base Scenario)- Total residential excluding commercial mixed use	603	29.61	20.4
Scenario 2- Total residential including commercial mixed use.	703	34.41	20.4

Municipal Reserve

Table 3: Dedicated Park and Trails Space

Municipal Reserve Space	Timberlands North	Timberlands South	Timberlands Total
Municipal Reserve Area (Ha)	1.21	6.33	7.5
% of Developable Area	4.1%	23%	13.3%



4.0 COMMERCIAL

4.1 MIXED USE COMMERCIAL

The Timberlands North mixed use commercial, constituting some 4.81 hectares (11.88 acres), is located on the western portion of the site, bordering either side of the entry greenway from 30th Avenue. Portions of the mixed use commercial area face the community on the western-most interior collector greenway street. Mixed use commercial buildings combine living alternatives with commercial uses that serve the entire community. Essentially, this portion of the community will allow for the intensification of retail uses along the Gateway collector and the interior collector/greenway street adjacent to the town houses, live-work, single detached residential and carriage homes. These areas are suitable for

street-oriented retail incorporating residential uses above. If greater than two storeys, step-backs of upper floors will be required.

Mixed use buildings frame the major gateway (on the east-west collector) into Timberlands North and those buildings facing the collectors will be required to have active street faces built close to the property lines and allow room for restaurants and patios adjacent to public sidewalks. On site parking stalls will not be allowed in front of buildings facing the greenway collector or the interior (north-south) collector. Buildings facing 30th Avenue will be purely retail; housing units are not permitted above the retail facing 30th Avenue. These buildings, while not required to have more than a single occupied storey, shall read as two storey structures.

If an occupied second storey is proposed, potential second floor uses will include commercial service facilities or health and medical services.

Stand-alone retail/commercial developments are preferred on those parcels facing 30th Avenue. A mix of uses – preferably organized vertically – is encouraged. Pedestrian linkages to surrounding trails or greenway connections are to be integral to the development of these sites. Refer also to Section 5.7 Mixed Use Homes.



This is an example of a 1 storey commercial use building designed to look like a 2 storey building.



4.2 ARTERIAL COMMERCIAL

Arterial Commercial is located on the northern portion of the site on the south side of 67th Street, and on the east side of the main northern divided entry into the community. This portion of the community will allow for auto-related retail uses along 67th Street, easily accessible by the broader Red Deer Community. This area is suitable for auto-oriented retail, single storey strip or pad configurations. Buildings in this area will have their primary building face oriented to 67th Street and will have a moderate set back from the front property line. Landscaping shall occupy the set-back area between the building front and the property line. The setback area may contain low monument signs, access walks from the front sidewalk and drive lanes where drive-throughs are permitted.

When developing sites adjacent to residential uses the building should be located closer to the street so that the parking is less dominant and is allowed only behind the buildings. This parking shall be screened from the adjacent residential community by a low,



landscaped berm between the parking area and the collector street. Primary access to the Arterial Commercial will be from the east-west residential collector street.

Arterial Commercial buildings will be limited to a maximum of three storeys. Housing units are not allowed on upper floors of the Arterial Commercial buildings. A higher design standard for both the building architecture and the landscape architecture would be applied to these sites to create a 'prestige' arterial commercial area. Loading bays and service



areas would not be exposed to view from public streets and the rear portions of the Arterial Commercial area facing the community to the south should be designed with "four sided" architectural treatment effectively eliminating blank "rear" walls facing the residential community. Stand-alone retail/commercial developments are encouraged in this designation.



4.3 LIVE-WORK

Over the past decade, the concept for living and working at home has evolved into a particular building type which has been integrated into a variety of settings, both urban and suburban. Providing the opportunity for a housing unit to contain a separate, distinctive workspace, easily accessible from the dwelling, this live-work configuration presents a commercial street level use connected to the dwelling above. This configuration accommodates a number of uses including office, retail, and commercial services at the street level and is often located within or just on the edge of a purely residential area. Boutique or unique small scale community oriented uses are to be encouraged. The building design should emphasize the individuality of the units or unique nature of each storefront.

In the case of Timberlands North, the live-work units provide a transition from the mixed use commercial area to the residential area along the main east-west arterial at the main entrance to the community. A portion of the area designated on the plan for Town Homes or Carriage Homes will be considered an alternate zone (whichever is the adjacent use) allowing for additional live-work units subject to market demand.

In addition to street-oriented parking to serve the live-work units, a parking area is proposed to be located immediately to the rear of the south bank of live-work product. Refer also to Section 5.5 Live-Work Homes.



4.4 EMS BUILDING

An EMS (Emergency Services) Building site is proposed in the concept plan, dedicated to a community-level emergency service team and equipment. Owing to its location on the plan, at the north entry to the community, it is anticipated that the architecture of this facility will be distinctive and play a role in the overall identity of the community. Characteristic to buildings of this type might be a clock tower, or in the case of a fire station, a hose-drying tower that is designed as an identifiable feature of the building and thus, for the community.

The orientation of the building depends upon its function and the type of services provided. Any building should be situated on the site to provide optimal operation for the function, but should also relate to the contextual configuration of adjacent structures. Set-backs should conform to surrounding building set-backs, parking should be situated so as not to impact the adjacent residential areas, and site access should be such that the entry drive is not restricted and so that emergency vehicle traffic does not adversely impact the adjacent residences.



Mackenzie Towne Fire Station



5.0 RESIDENTIAL

Timberlands North has been designed as a mixed use, mixed residential community affording a variety of product choices to the Red Deer market. From the higher density multi-family units on the western edge of the community to the single-family detached neighbourhood on the eastern edge, the product mix of Timberlands North offers a wide choice in housing type, size and configuration. While this mix of unit types addresses different housing market segments, it also affects the overall character and design of the community. A well-planned development considers all the aspects of an inclusive community such as:

- a variety of housing;
- affordability;
- incorporating live/work/play;
- ensuring visual appeal; and
- improving connectivity, not only with commercial areas, but each individual neighbourhood.

Mixing housing types throughout the community avoids a certain monotony found in subdivisions and neighbourhoods where only one type of dwelling unit is built. In many cases, throughout Timberlands North, units served by a rear lane offer an enhanced pedestrian environment with a streetscape uninterrupted by driveways and curb-cuts. The range of unit types from attached town houses to detached single-family dwellings creates a varied landscape and street frontage changing from one portion of the community to the other. Sidewalks and pedestrian connections through larger blocks offer interesting pedestrian experiences in each neighbourhood of the community.

The following product types are mixed throughout the community offering each neighbourhood variety, interest, and streetscapes with an enhanced pedestrian experience:

- Single Detached Residential
- Town houses
- Wide-Shallow Homes
- Carriage Homes
- Live-Work Homes
- Multi-Family Residential
- Homes integrated with Commercial

Modifications to current land use districts and new land use districts have been created to accommodate products as described.

5.1 SINGLE DETACHED RESIDENTIAL DISTRICT

Located at the eastern portion of the community, south of the Arterial Commercial and north of the wide-shallow units, the single detached residential neighbourhood offers single-family units on economically sized lots on local residential streets. An additional block of this type of residential single detached product is also offered in the western portion of the plan area. These units are generally two storeys with a garage accessed from the street. The main portion of the house is set back a short distance from the front sidewalk (maximum 3 metres) and the garage is set back from the front plane of the main house by a minimum of 3 metres. The front driveway accommodates the depth of a single auto and is a minimum of 6 metres deep between the sidewalk and the garage door. Shared or paired driveways in laneless product are encouraged.

The orientation of these single detached units affords each with the ability to optimize solar water heating and the use of photovoltaics. The front face of the house faces the sidewalk and street offering an opportunity for an entry porch.

5.2 TOWN HOUSES

Town houses in Timberlands North are located in proximity to the commercial/mixed uses areas on the plan, affording easy access to commercial services and transit. Town houses usually consist of multiple floors and have their own ground floor access in an attached configuration providing an “urban” streetscape. The front door is sometimes elevated from the street and accessed by a “stoop” - a small staircase ending in a landing at the entrance of the unit. The units are built close to the sidewalk. Town houses can be a maximum of two and a half storeys and will often have a cohesive design across the units, or alternatively, provide for individual expression of each unit through the architectural detailing. Stacked town houses, where units are located horizontally one on top of the other, is also an option to be considered.

Each unit has a small rear yard between the main building and the detached garage. The garage is accessed from a rear lane or private driveway providing an uninterrupted streetscape at the front of the town houses. When facing an arterial street, noise attenuation mitigation measures will be required and, if possible, should be accommodated within the building.

In reference to the Town House site south of the central east / west collector the following will apply:

- 1) There will be no homes which front onto the existing rear lane or Municipal Reserve to the south of the site.
- 2) There will be no vehicle access to or from the existing rear lane or Municipal Reserve to the south of the site.
- 3) Along the south property line of the site, there will be enhanced landscaping including solid impermeable fencing.



- 4) Vehicular access to the site will be from the central east / west collector and access points will be limited in order to maintain streetscape continuity.
- 5) Windows and balconies shall respect privacy of neighbours by minimizing direct views into existing neighbouring windows and yards.
- 6) At the deepest portion of the site, along the south property line abutting the dwellings existing as of July 2013 on Turner Crescent cul de sac, there will be a minimum building setback of at least 12 metres. No structure, including accessory buildings, will be closer than 12 metres from the south property line.



5.3 WIDE-SHALLOW HOMES

The wide-shallow homes are a product that offers a shallower depth of lot than the single detached residential type and allows for more attractive design possibilities. Garages are integrated and set back from the front plane of the house, keeping the garage from being the focal point of the front facade of the house. Homes can incorporate large porches (at least 1.8m deep) and are built closer to the street affording “eyes on the street” and a greater sense of community security. The home owner also benefits from more usable backyard space providing a peaceful and private refuge. Inside the house, shorter hallways allow for less wasted interior space, larger living areas and bigger windows.

The wide-shallow home is two storeys across the



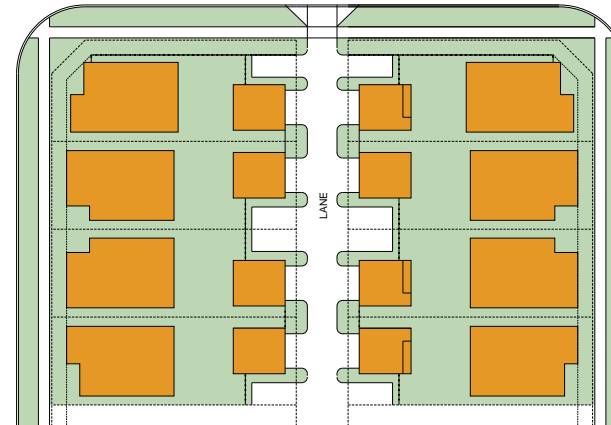
width of the house. With the use of dormers, bays and gable ends, the front elevation of the house will present a lively, articulated elevation to the street. Garage doors should make use of panels and windows so as not to present a flat, blank wall to the street front. Porches will be encouraged and designed using balusters, columns, handrails and other residential detailing on the primary side facing the street. Corner units should be designed so that architectural detailing serves all sides of the dwelling that face a public street.

5.4 CARRIAGE HOMES

The Timberlands North carriage home product is a unique approach to provide flexible living space for a single-family detached product. Carriage homes are located in the western portion of the community. They also front onto a pair of small parkettes in the Central portion of the community. Carriage homes have a detached garage served from the rear lane. The garage has an accessory dwelling unit situated on the second storey and accessed from the outside. The carriage homes are situated on economically-sized lots, which allow the main dwelling to be two and half storeys and the front face of the main house is set back a short distance from the front sidewalk. The primary dwelling of the carriage homes can accommodate a front porch and present a finely-detailed front elevation to the street. Each home will have a small private rear yard between the main house and the detached garage.

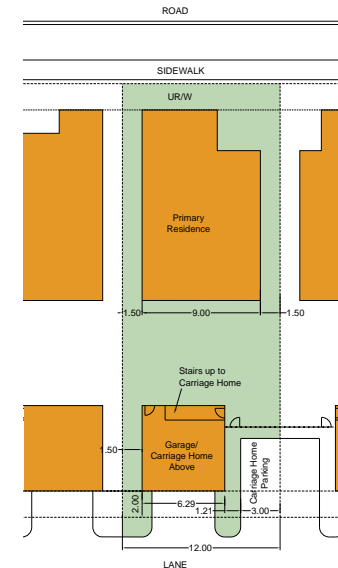


The rear detached garages of various sizes can provide space



Potential Block Layout- to accommodate additional parking for carriage homes off the lane
SCALE: m

Notes: images are examples only
ur/w = utility right of way





above to create a carriage house as a separate residential unit. The carriage homes will be required to provide an off-street parking space for the carriage house unit. Corner units should be designed so that architectural detailing wraps all sides of the dwelling that face a public street. Carriage homes will be required at all corner locations designated within the plan area. Some carriage homes will front onto park spaces. These park fronting homes will be accessed from a rear street built for vehicle traffic. Pedestrians will access these homes from the park at the front.

5.5 LIVE-WORK HOMES

Adjacent to the commercial and mixed use center, the live-work units provide a transition from the mixed use commercial area to the residential area along the main east-west arterial at the main entrance to the community. A portion of the area designated on the plan for town houses and carriage homes will be considered flexible zone areas allowing for live-work units if there is additional market for live-work product types.

Live-work units can be up to three storeys and provide for dwelling units above a street-level space that can be used for commercial purposes. The live-work unit has an interior stair that provides access to and from the dwelling, but the street level space is designed for commerce.

The configuration of the live-work product is that of a multi-family building or, preferably, a town house style building with individual entries to each



unit, either through or beside the commercial space or through a rear entry. The building can present a contiguous, multi-family design, or a town house style design where each unit is defined by particular design details. Each live-work unit may be condominiumized as a stand alone unit.

The building is built to the sidewalk and the streetscape is more commercial in nature. Building design should take advantage of corner locations. Refer also to Section 4.3 Live-work.

5.6 MULTI-FAMILY RESIDENTIAL

Located in the heart of the activity at Timberlands North, in the northwest corner of the site, are the higher density, multi-family buildings. Taking advantage of the location, this neighbourhood will be made up of multiple buildings, up to four storeys, with underground and some surface parking. The buildings will be multi-unit buildings accessed through central lobbies and interior corridors. Units will be in a mix of configurations with balconies or patios (at ground level), and preferably with full service amenities including fitness and recreation rooms. Outdoor amenity areas as well as the provision of both outdoor and interior bicycle parking/storage will be required for multi-family developments.

Multi-unit residential projects should incorporate play areas for children that have surveillance from ground oriented as well as upper story units. Integrate spaces that would allow for community gardens within parks adjacent to, or directly within multi-family developments.

Pedestrians will be accommodated with a clearly marked sidewalk and path system linking all parts of the complex, the interior community streets and the adjacent commercial areas. Vehicular access to the buildings will be at porte-cocheres (porch-like structures at an entrance through which a vehicle can pass in order for the occupants to alight under protective cover) on the surface, and clearly marked and unobtrusive garage entries on the flankages of the buildings.





The design of the multi-unit buildings will be in keeping with the residential character of the community and will have a scale and detail that will make this development a compatible neighbour to the smaller-scaled residences across the street. Building setbacks will vary depending upon the characteristics of the ground floor units. Where ground floor units have direct access, they will likely be located closer to the street. Where ground floor units have interior access and a patio, setbacks from the street will be greater.

5.7 MIXED USE HOMES

Mixed use homes are situated in the commercial heart and the activity center of the community. These mixed use homes are built on the upper storeys of the commercial and retail buildings that bracket the main west entry to the community. These housing units will be limited to those buildings facing the entry greenway and the north-south collector street and greenway.

As in the higher density multi-family configurations, the mixed use homes will be accessed through centralized lobbies and interior corridors. The elevator lobbies will also access the below grade parking. The units themselves will be in the one, two and three bedroom configuration and will have balconies overlooking the street or the plaza areas fronting the ground-level retail.

The mixed use commercial development will incorporate architectural design that enhances the area, is compatible with the over-all character of Timberlands North and connects itself visually and physically with the community.

Residential and commercial entrances should be differentiated architecturally in mixed-use buildings to avoid confusion. Commercial entries tend to be public, and residential entries tend to be private, and should therefore be designed accordingly.

Refer also to Section 4.1 Mixed-use Commercial.





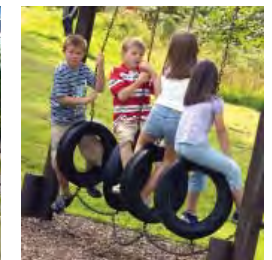
6.0 OPEN SPACE SYSTEM

Parks and open spaces are key public realm components, providing valuable spaces for outdoor activity and leisure as well as social interaction and community participation. The Timberlands North Area Structure Plan incorporates a variety of parks and open space features which will accommodate both active and passive pursuits of future residents. Connectivity is a key feature of the Timberlands North plan and pedestrian-enhanced sidewalks (tree-lined boulevards) provide multiple linkages to the various features, the adjacent school/library/park site and the larger regional network. Universal accessibility for all should guide the development of all open space facilities.



6.1 CENTRAL PARK

A central park system of provides a community amenity, gathering and recreational space focused on a program of passive/aesthetic pursuits including, but not limited to, education/interpretation, sculpture, public art, neighbourhood orchard and/or community gardens.



6.2 GREENWAY

A 3.0 metre (9.84 feet) wide multi-use trail/pathway is located along the south side of the east-west collector roadway in the extreme southern portion of the plan area. This shared pathway will accommodate pedestrians, cyclists and rollerbladers and connect to the larger regional system. The right-of-way will accommodate a double row of tree plantings to enhance the visual aesthetic and micro climatic attribute. A series of greenway linkages are also included at strategic locations throughout the community. Where these greenways intersect with a road there will be traffic calming measures implemented in order to improve pedestrian safety.





6.3 PUBLIC UTILITY LOT – STORM PONDS

Two stormwater management facilities have been constructed along the western boundary of the property adjacent to 30th Avenue. There is an opportunity to creatively integrate these facilities into the residential and mixed use areas immediately to the east, thus creating interesting gathering places within the plan and creating opportunities for social interaction. The facilities could be enhanced with permanent water features to help mask the road noise and provide for a much more dynamic attribute and community amenity. The edges of the storm ponds should be partially naturalized to improve the the amenity and ecological function of the ponds.

If The City redesigns the ponds, the following should be considered to creatively integrate with the adjacent mixed use and residential developments:

- Parks and open space for year-round use;
- Publicly-owned parks should be designed to standards maintainable within the City’s budget;
- Unique design elements such as water features (e.g., fountains) or structures (e.g., gazebos and artwork) are encouraged. Urban agriculture and educational opportunities should also be considered;
- Modifications to the storm pond design to enhance water treatment and create a higher quality amenity space for the neighbourhood will be at the Developer’s cost; and
- If the pond configuration (slope) is changed, an update to the storm model/pond design will be required along with a new submission to Alberta Environment.





Signature buildings at key entry points to community.

7.0 URBAN DESIGN

7.1 SITE DESIGN

All buildings in the Timberlands North community should foster a vital and active pedestrian-oriented street life. They should relate well to the street and to each other, provide opportunities to maintain views and sunlight penetration to streets and open spaces, create attractive rooflines, and minimize shadowing. Residential and commercial buildings should front onto streets and/or public spaces and are strongly encouraged to be located adjacent to the sidewalk to create a uniform “streetwall”.

Buildings should frame streets and spaces through height and massing, forming inviting “urban rooms” where the public life of the neighbourhood thrives. While architectural variety is encouraged, the overall effect of individual buildings should be diverse yet harmonious, resulting in an inviting urban environment.

7.2 BUILT FORM

Timberlands North will accommodate a variety of building typologies including various forms of mixed used mid-rise, low-rise residential and low-rise accessory suites.

Signature buildings are encouraged at the key entry points to the community and are expected to feature design excellence reinforcing the entry experience as well as adding to the superior architectural qualities of Timberlands North. Architectural Controls, established by the Developer will be used to achieve the following standards.

7.2.1 Commercial

1. New development will contribute to the creation of pedestrian-oriented streetfronts through the following:
 - within the commercial mixed use district, locating active uses at-grade along all major pedestrian frontages;
 - aligning buildings to relate directly to the primary pedestrian frontage with lobbies and building entries oriented toward the sidewalks;
 - modulating building faces in width, height, and finishing materials to visually break up large building walls. The inclusion of smaller commercial retail units (CRUs) into the building façades of large retail tenants is encouraged;
 - building façades at-grade should have transparent glazing (doors and windows); and
 - providing canopies or other forms of shelter for pedestrians and bicycle parking.
2. Buildings situated in landmark locations should feature exceptional signature architectural design and be oriented in a manner that emphasizes their landmark character and enhances the entry points to the community.
3. The area between the maximum building setback and the property line should be occupied by building entryways, outdoor seating areas for restaurants, seasonal display, bicycle parking and/or street furniture.
4. Individual storefronts that are greater than 30 metres in width should provide multiple entrances at the street level, which may include incorporating separate individual retail units that have entrances oriented to the street.
5. The primary entrance of a building should be located along the pedestrian street and not an internal parking lot. Where entry from



- a parking lot is required, that entry should be designed similar to the main entry on the pedestrian street.
6. Landscaping, with a focus on nature landscaping, should be incorporated into new developments to ensure proper integration, protection from the elements and comfortable pedestrian routes.
 7. All parking should be restricted to on-street, at the rear of the building or below grade. Parking may be permitted in front of buildings facing 30th avenue only on the mixed use site at the southwest corner of the plan area. Large surface parking areas should be avoided and should be broken into smaller ones.
 8. Lighting plans should be required at the development permit stage to ensure minimal infringement on abutting residential/commercial properties or dark sky principles.
 9. In general, CPTED principles should be applied to all site designs.
 10. Entry-ways to buildings should relate to the sidewalk or property line to emphasize the building entrance and provide “punctuation” in the overall street-scape treatment and architectural concept for the building.
 11. In larger projects, preferred parking should be provided for very small vehicles (smart cars), and alternative fuelled vehicles (hybrids, electric vehicles, biodiesel etc.).
 12. Use of building materials with recycled content is encouraged.
 13. Use local and regional building materials where these are available.
 14. Provide recycling facilities within the unit and/or building. Provide composting facilities on site where practical.
 15. The use of potable water for outdoor use should

- be minimized through the following measures:
- Highly efficient irrigation systems including drip irrigation and soil moisture sensors;
 - The capture and use of rainwater using rain barrels, cisterns and ponds;
 - The use of drought tolerant landscaping.

7.3 COMMERCIAL-RESIDENTIAL INTERFACE

The interface between the residential neighbourhoods and the commercial areas in Timberlands North must be designed in such a way that visual and functional conflicts are eliminated or minimized. Building façades that interface with the smaller-scaled residential buildings shall incorporate design elements that reduce the impacts of large buildings masses. The following design elements should be included:

- architectural detailing that establishes a vertical rhythm;
- landscape elements that soften the appearance of the façade and reinforce a vertical rhythm;
- use of transparent glazing at the ground level storey; and
- pedestrian-scale lighting.

7.3.1 Residential

The interface of all types of residential to the public street is important. The following should be considered when designing:

1. All at-grade residential units that front a public sidewalk or a publicly accessible private sidewalk require individual, primary entrances (e.g., front doors) providing direct access to and

from a public sidewalk.

2. All at-grade residential units should be designed to provide visual privacy from any public or internal sidewalk without the need for high or non-transparent privacy fences or walls that detract from the active street edge.
3. All new residential units should be provided with private outdoor amenity space, either exclusive to an individual unit or as a common amenity available to all units.
4. Sound attenuation studies may be required at the development permit stage to determine mitigation methods when developments are abutting arterial streets.

7.3.2 Large Residential or Commercial Buildings

1. Upper storey building elements including penthouse floors and mechanical rooms, should be treated with expressive architectural forms to contribute to a distinctive skyline.
2. Tall building elements and massing should be organized in a way that maintains sunlight access, indirect daytime lighting and sky exposure through the majority of the day.
3. Shadow studies may be required at the development permit stage to determine shadow impacts on surrounding residential neighbourhoods.
4. Building step backs, articulation, creative use of colours, materials and textures are encouraged.
5. Incorporation of green roofs and other green building technologies are encouraged. Buildings that can meet Built Green standards or



LEED™ certification requirements (or equivalent) is highly desirable.

7.4 PUBLIC REALM

The urban design and public realm policy for Timberlands North is focused on place-making and pedestrianization, but also on the need to create safe and secure neighbourhoods and environments that respond to climatic factors to optimize comfort. The intent is to create the type of public realm that encourages walking and attracts visitors to the area by virtue of creating people-friendly streets and sidewalks, urban parks and lively public spaces. Urban design and public realm policies are intended to both complete and complement those initiatives.

7.4.1 Streetscape Design

Streets are an essential part of the public realm within the Timberlands North neighbourhoods. Lively streetscapes comprised of a variety of design elements are key to a pleasurable pedestrian experience. Streetscapes are the total result of many smaller components – streets, sidewalks, building frontages and other elements. Collectively, these design elements are the physical infrastructure of place-making through the pedestrian realm. In addition, one of the most important elements of creating attractive streetscapes is the presence of street trees and therefore it is essential that tree planting be conducted properly, paying attention to soil and moisture volume for root system, so that they can thrive over many years. The following should be considered in the design of the public realm:

1. Universal accessibility for all is a fundamental element of this neighbourhood.
2. Street furniture, lighting, signage, and landscaping

should be oriented towards the pedestrian.

3. Employ canopies, awnings, and similar pedestrian sheltering treatments along retail street fronts.
4. Minimize disruptions to the pedestrian network from curb cuts, parking access, or above-ground utilities.
5. The planting of deciduous street trees is encouraged wherever possible, closely planted between pedestrians and vehicles.
6. Naturalization of boulevards is encouraged.
7. Driveway crossings are to be paired or shared and aligned to allow space for tree planting.
8. Facilities for street trees are to be sustainable and allow trees to achieve a 25 year lifespan in sidewalk plantings and 50 years in tree lawns. Designs must include sufficient root and branching space and should include a means of supplying supplementary water, fertilizer, and air as well as protection against snow clearing and de-icing activities. Design should also accommodate removal of stumps and planting of replacement trees. Facilities should function 12 months of the year, 24 hours a day.

7.4.2 Signage

1. The size of signage should be scaled and oriented to the pedestrian. Signs that are scaled to the automobile should be restricted to 30th Avenue and 67th Street frontages.
2. Fascia signs may be permitted on building façades that interface with 30th Avenue and 67th Street and may be scaled for automobile traffic. Free-standing signs relating to the auto-oriented uses in the Arterial Commercial zone may be permitted to locate along 67th Street corridor provided they are limited in number



and designed comprehensively with the adjacent development.

3. Retail frontages are encouraged to employ blade signage oriented towards pedestrians.
4. Signs should be architecturally compatible with the building they are attached to through materials, colour, scale, and character and conform to the following design principles:
 - signs should not obscure architectural features;
 - sign design should be integrated with the design of the building; and
 - use illumination only when necessary and minimize overspill lighting that affects neighbouring residential developments.



Street furniture or park furniture could be the same, or similar quality, to that used in downtown Red Deer.



Attractive pedestrian scale light fixtures, with LED lamps, should be used in streets and parks.



5. The placement of Idle Free Zone signage is encouraged.
6. All signs must comply with the current City of Red Deer Land Use Bylaw.

7.4.3 Street Furniture

Street furniture or park furniture for Timberlands North could be the same, or similar quality to that used in downtown Red Deer.

1. This furniture should be selected on the basis of durability and design compatibility with the architecture of the community.
2. All street furniture should be consistently used throughout the community including the mixed use commercial area, parks, pocket parks and on the 30th Avenue and 67th Street interfaces.
3. Attractive, pedestrian scaled light fixtures (utilizing LED lamp) should be used in local residential streets and parks.
4. Larger scaled lighting fixtures found in parking lots and along collector roads, should be the same design motif as pedestrian scaled lighting.
5. All lighting should be designed so that light pollution is minimized in the residential neighbourhoods including the mixed use residential area.
6. Iconic banners at entry areas and central park feature should be consistent with urban design elements/street furniture throughout community.
7. Lighting plans are recommended at the Development Permit stage in relation to commercial, mixed use and multi-family uses to ensure the goals of dark skies/reducing night

pollution are considered.

8. In the selection of street furniture, green (environmental) standards should be explored, along with considerations for long-term maintenance and replacement protocols.

7.4.4 Community Entries

Community entry signage should be located at the two primary entry points to the community from 30th Avenue and 67 Street.

The two proposed entry features should be coordinated in their design. The entry sign at 67 Street could take the form of a wall, incorporate public art and be located at the terminus of the entry road in the small park area. The entry signage feature at 30 Avenue should be located near the intersection on the lands used for storm water management.



8.0 TRANSPORTATION AND UTILITY SYSTEMS

The vision of Timberlands North NASP is based on an interpretation of City Council's Strategic Vision and Design Charter. Neighbourhood Planning and Design Standards and Engineering Design Guidelines are yet to be revised to reflect the new Strategic Vision. Timberlands North will be used to test different servicing concepts and inform revisions to existing Standards and Guidelines. Therefore, unique to the Timberlands North NASP, the Transportation and Utility Systems are displayed as concept only and will be subject to change during the course of Timberlands North detailed design development. This will require further consultation with impacted City departments and updating of City Standards and Guidelines. It is expected that there will be resultant modifications to the right of ways, easements, alignments and apertures but the overall vision of the neighbourhood will be maintained.

8.1 OVERVIEW

The Timberlands North neighbourhood strives for a balance between vehicular and non-vehicular mobility choices while placing greater emphasis on human scale, pedestrian mobility, and safety; all to foster a healthier, more complete and sustainable neighbourhood. The circulation network will cater to a more compact urban form and more innovative and diverse housing choices.

This is to be achieved through:

- Greater connectivity and network options;
- Strategic traffic calming;
- Reduced carriageways;

- Reduced road right of ways;
- Enhanced boulevards for vegetation, bio-swales, and trees;
- More generous sidewalks separated from the carriageway by the boulevard;
- Minimizing building setbacks to frame the street edge; and
- Greater attention to the function, form, and the interface with uses adjacent the roadway to create a safe, stimulating, and enjoyable walking experience.

8.2 STREET TYPOLOGY

The Timberlands North NASP introduces a series of interconnected street typologies to create a memorable and enjoyable pedestrian realm without compromising the functional aspects of vehicular mobility, emergency access, or site servicing. Movement patterns such as travelling in and out, through, and within the neighbourhood via transit, private vehicle, bicycle, or walking are all important options that were considered.

In addition, key infrastructure components compete for space within the public road right of ways and these elements have been properly considered to ensure they can be accommodated along with the contextual issues that will allow for creative adaptation. For example, in certain street typologies, the integration of innovative storm water management techniques such as bio-swales or absorbent landscapes (Low Impact Development (LID)) in the boulevards are introduced as an option where practical and economically sensible.

A select set of street profiles have been proposed specific to the Timberlands North Concept Plan. These street typologies not only account for the

intended capacity of the roadways, but also the types of uses that may front onto them. These street profiles offer an innovative and context - sensitive approach to complete streets design.

8.3 UTILITIES

Unique to the Timberlands North NASP, front street servicing of lots with deep municipal services is being utilized in some areas that would not normally be supported by the City. Rear lane servicing with deep municipal services is the preferred method due to settlement and management of ongoing maintenance issues. However, in order to facilitate better neighborhoods, including different housing types, improved pedestrian realms, low impact developments, etc., front street servicing will be permitted in a limited number of additional areas. This may result in additional maintenance costs to the City. Deep and shallow utilities will generally continue to be located in rear lanes, consistent with general practice. However, the street profiles for Timberlands North also facilitate placement of deep and shallow utilities within the frontage road, where no lanes are provided. A detailed Servicing Study will determine the precise location of utilities.

8.4 LOW IMPACT DEVELOPMENT (LID)

LID employs a variety of practical techniques to manage stormwater runoff close to its source, where rain falls (ie. Source Control Practices –SCP). LID designs focus on implementing better site design practices and site-specific stormwater control options such as green roofs, bio-swales, stormwater capture and re-use, pervious materials, and landscape designs that increase the absorption and filtering of rainwater.



LID is not a land-use control strategy. It is an ecosystem-based approach in which water is the central focus for the design and construction of the built environment so that it can function sustainably as part of the ecosystem.

Implementing LID techniques can promote the recharging of aquifers, the protection of riparian areas and wetlands, and the maintenance or improvement of the aquatic health of our water bodies. Aesthetics of the built environment can be improved, enhancing the overall quality of life we all seek in our communities.

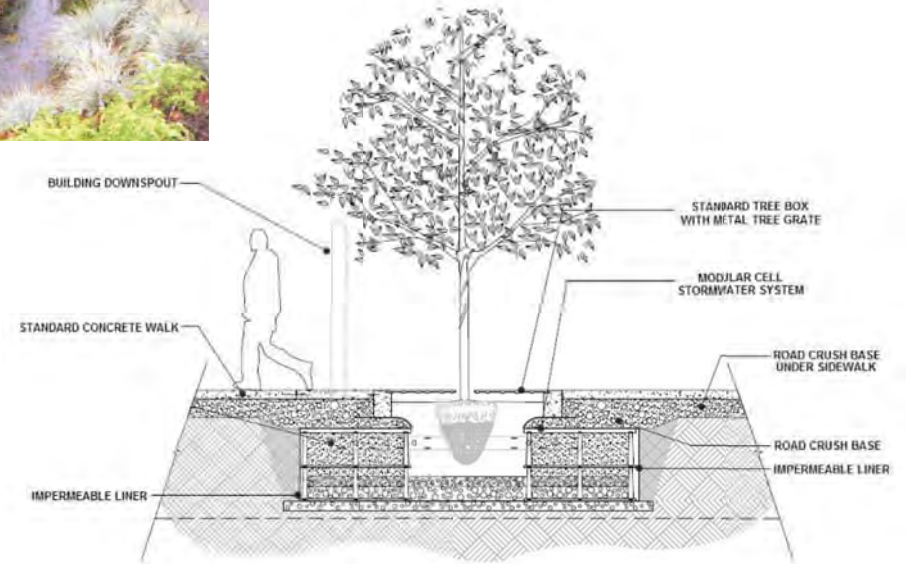
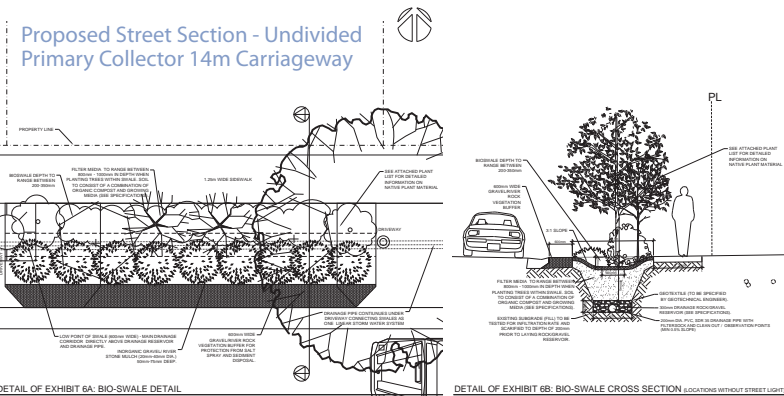
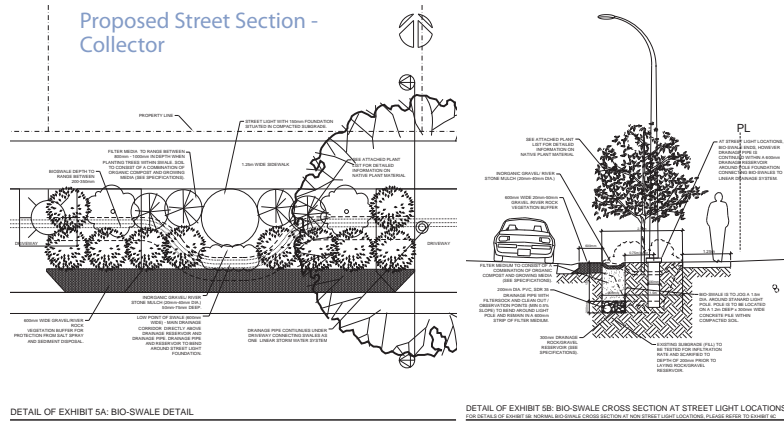
For Timberlands North, all forms of LID techniques are encouraged on individual sites. Furthermore, as part of the leadership vision the City of Red Deer has for Timberlands North, LID techniques in the form of bio-swales/absorbent landscapes are being considered for integration within the proposed street designs and public right of way. A number of street typologies have been proposed to accommodate bio-swales. In addition to enhanced aesthetic value, volume and water quality benefits, the bio-swales may also offer reductions in the size and amount of storm piping and down-stream storage

infrastructure.

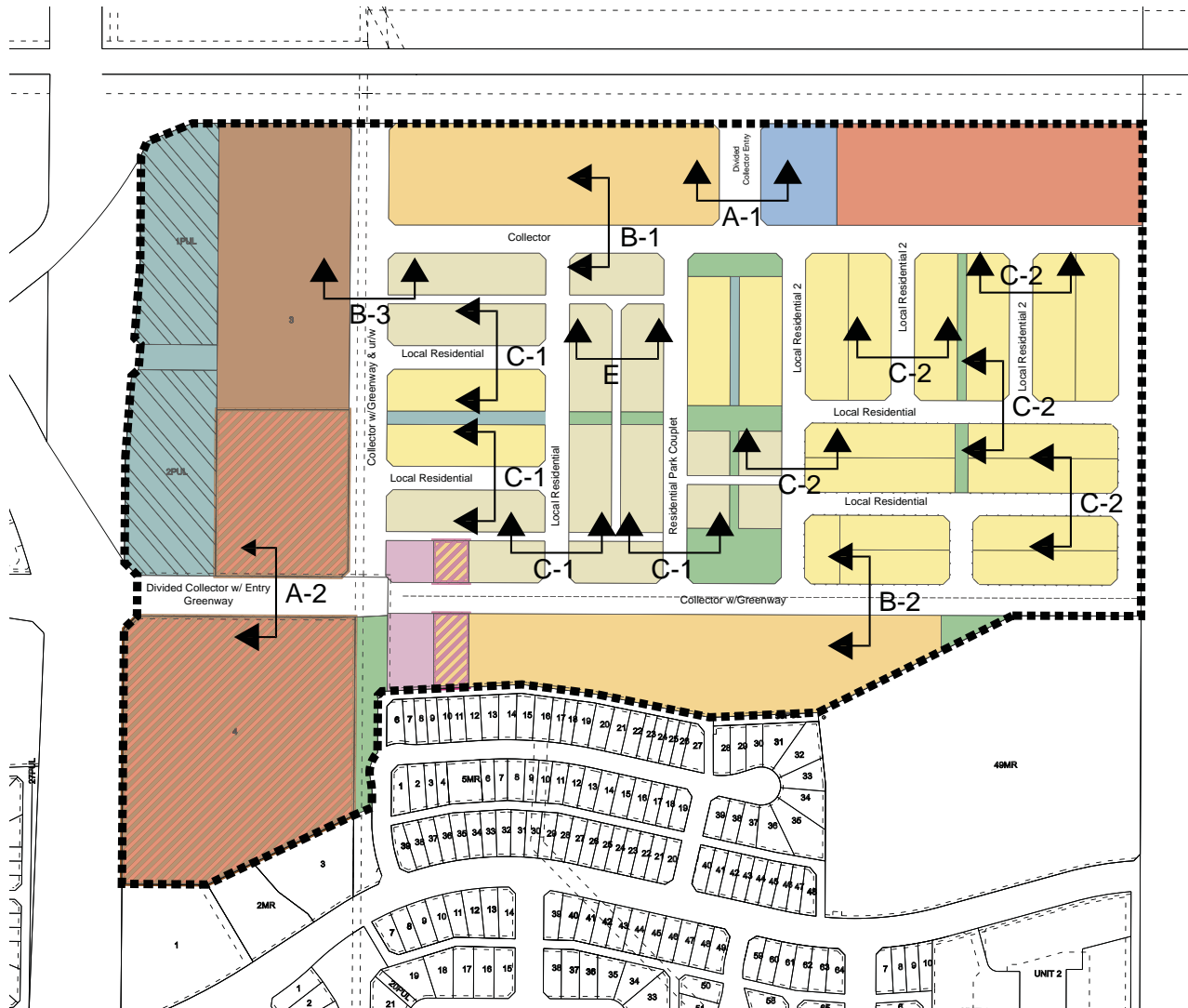
The detailed Servicing Study will determine where and how LID techniques are implemented. The details provided below are for illustration purposes only and final details are to be developed during the course of more detailed design.

Bio-swales are recommended where they can be applied and function effectively, such as along longer street runs and where the boulevards are wider and require minimal driveway interruptions. Flankage locations are also appropriate for bio-swales.

LID or bio-swale options are not limited to existing design solutions or the concepts provided in this document for illustration purposes. Further innovation and creative use of materials, techniques, and products are encouraged to facilitate the integration of LID techniques and/or bio-swales with in the road profiles in Timberlands North.

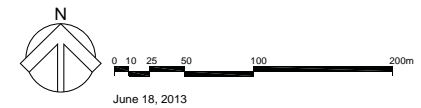


Note: In streets where bio-swales are not feasible, traditional storm piping will be required.

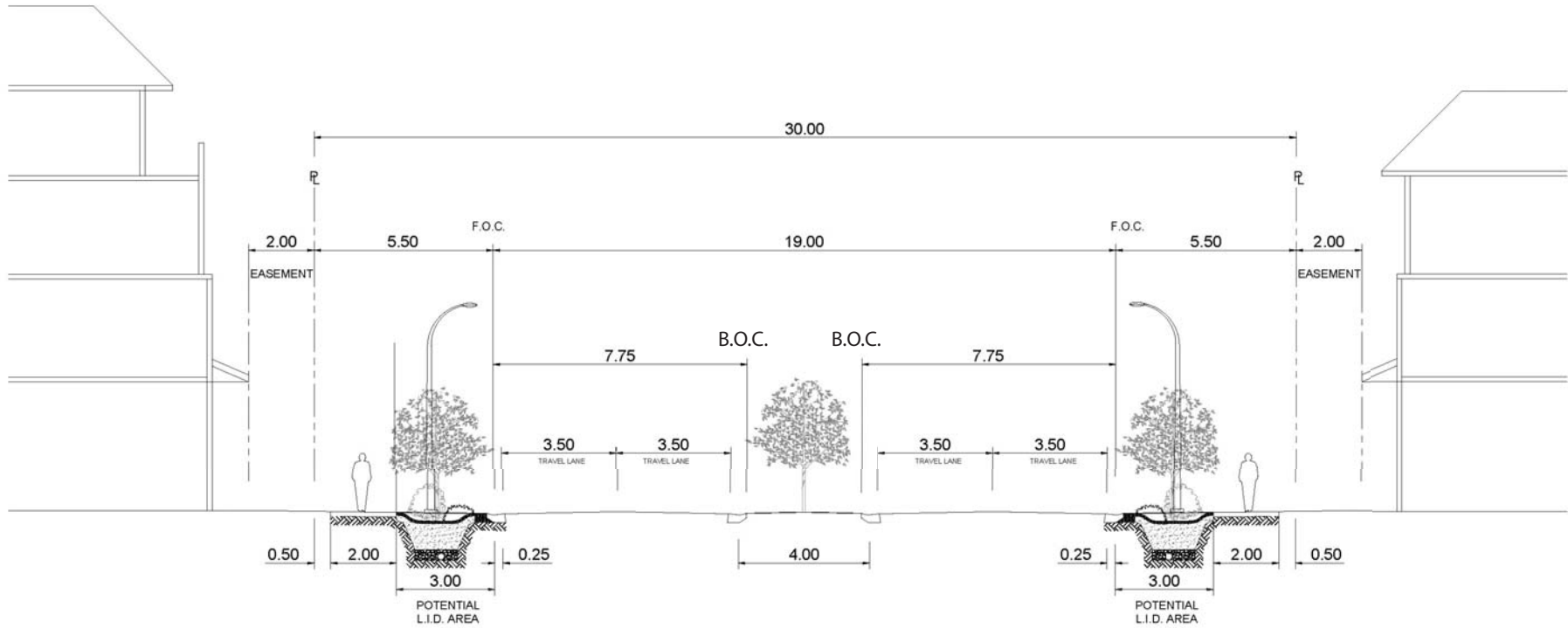


8.5 STREET CROSS SECTIONS

A series of cross sections have been provided to illustrate, in practical terms, the intent and land use considerations relevant to the street designs. Exact servicing design is still required at the detail design stage and may require minor modifications to these cross sections.



Key map for street profiles



*Curbs can be rolled or standard curbs with cuts into where LID's / Bio-swales are integrated.

8.5.1 Divided Entry Collector with Separate Sidewalk (A-1)

Features: R/W 30m

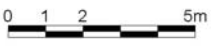
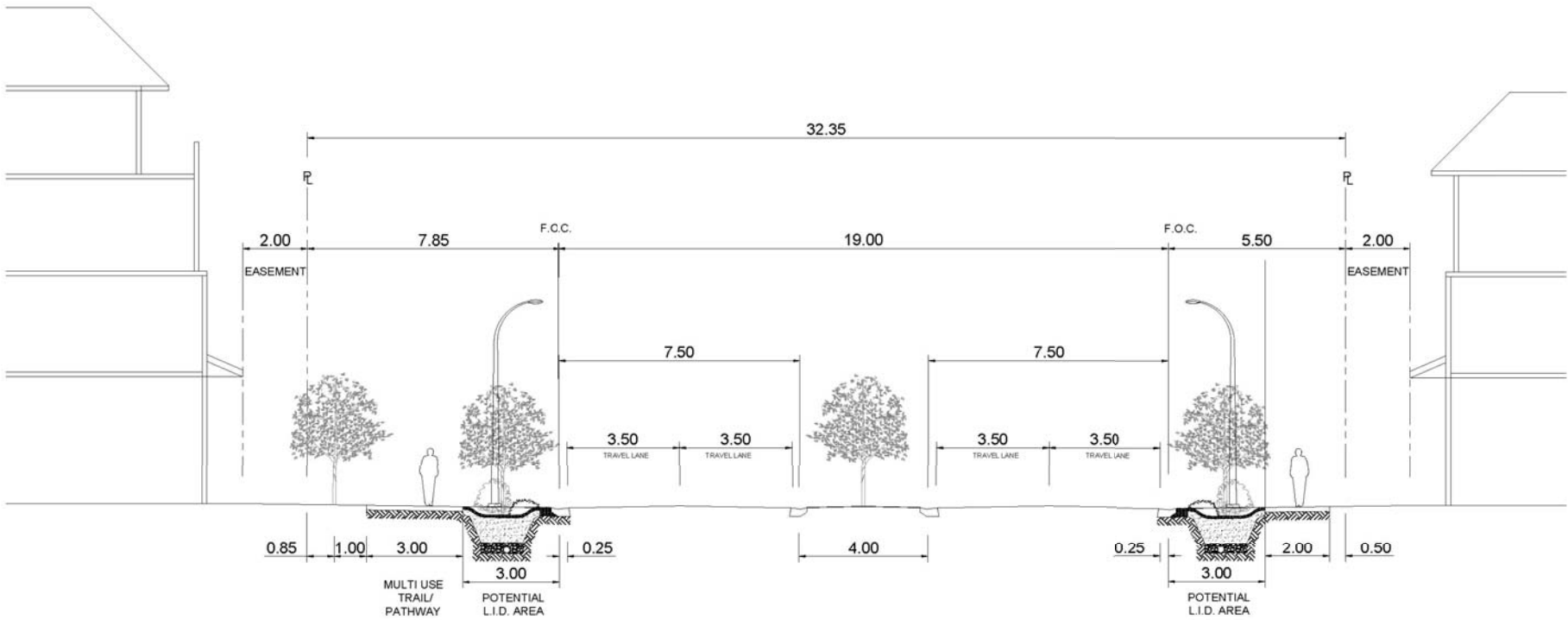
Carriageway remains unchanged;

2.0m wide separate sidewalks on both sides;

Street trees within both boulevards and median;

Offers opportunity to integrate LID within the boulevard, where adjacent land use context is appropriate.

Intent: To provide major vehicular and pedestrian gateway into the community with commercial and mixed use frontage close to the street.

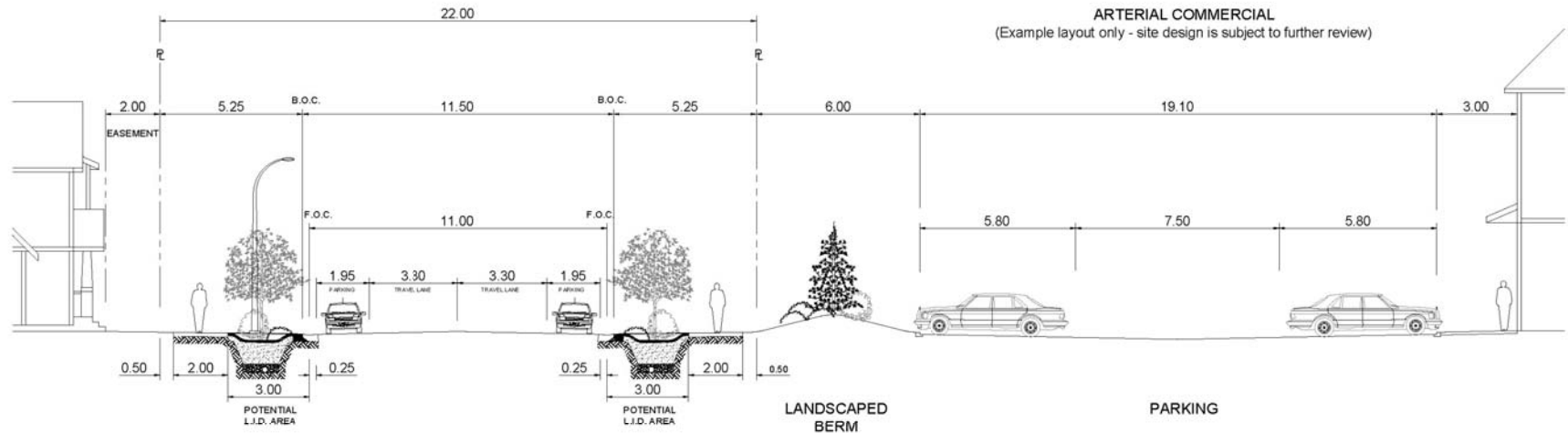


8.5.2 Divided Entry Collector with Separate Sidewalk and Greenway (A-2)

Features: R/W 32.35m

- Carriageway remains unchanged;
- 3.0m wide multi-use pathway on one side and 2.0m wide separate sidewalks on the other side;
- Street trees within both boulevards and median;
- Greenway framed by trees on both sides of 3.0m pathway;
- Offers opportunity to integrate LID within the boulevard, where adjacent land use context is appropriate. Existing sanitary located in the middle of the ROW may influence the ability to plant trees resulting in a change to the type of planting within the median.

Intent: To provide major vehicular and pedestrian gateway into the community with commercial and mixed use frontage close to the street and to accommodate an enhanced multi-use pathway (with cycling route) connection on one side of the street.

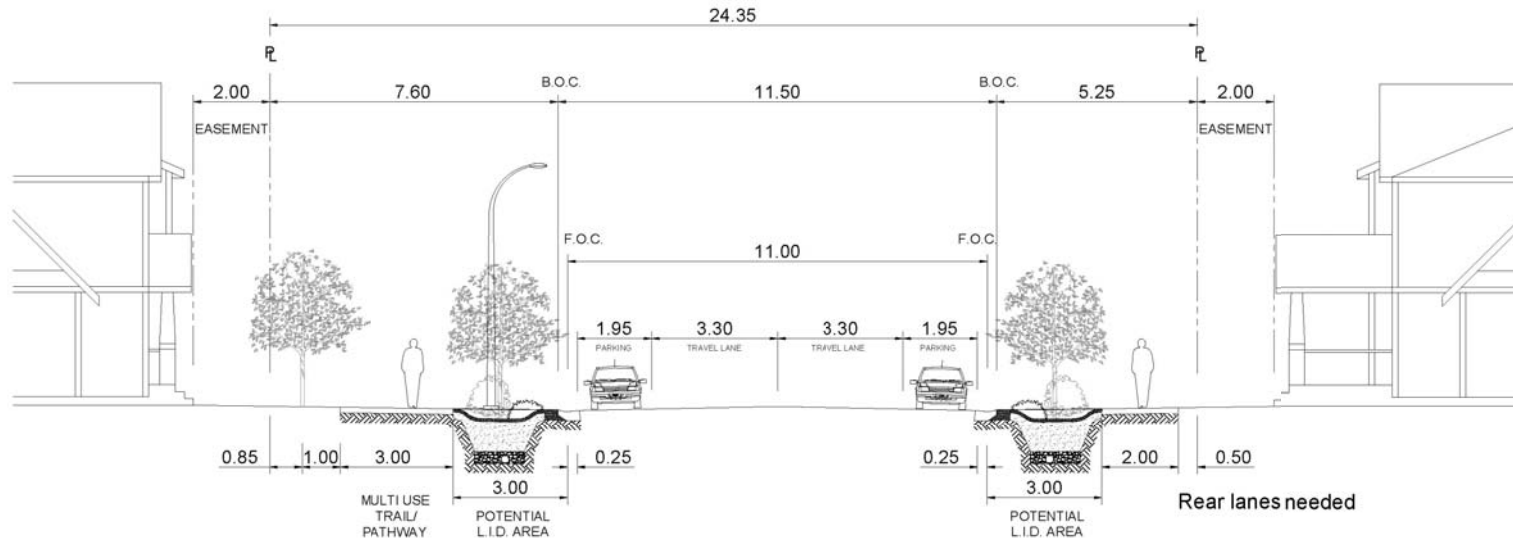


*Curbs can be rolled or standard curbs with cuts into where LID's / Bio-swales are integrated.

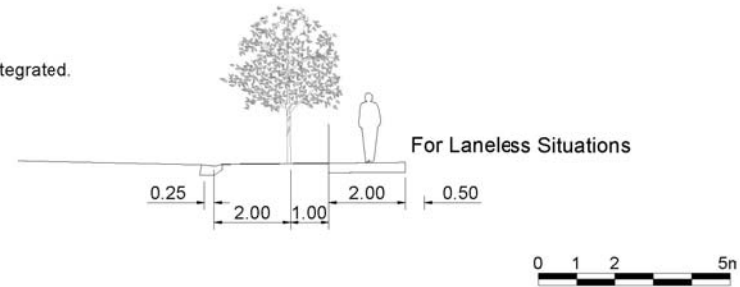
8.5.3 Collector with Separate Sidewalk (B-1)

- Features: R/W 22.0m
 Carriageway 11.5m back of curb (B.O.C.) to B.O.C.;
 2.0m wide separate sidewalks on the both sides;
 Street trees within both boulevards;
 Offers opportunity to integrate LID within the boulevard, where adjacent land use context is appropriate.
- Intent: To provide vehicular and pedestrian movement through and within the community with commercial and residential frontages close to the street.





*Curbs can be rolled or standard curbs with cuts into where LID's / Bio-swales are integrated.

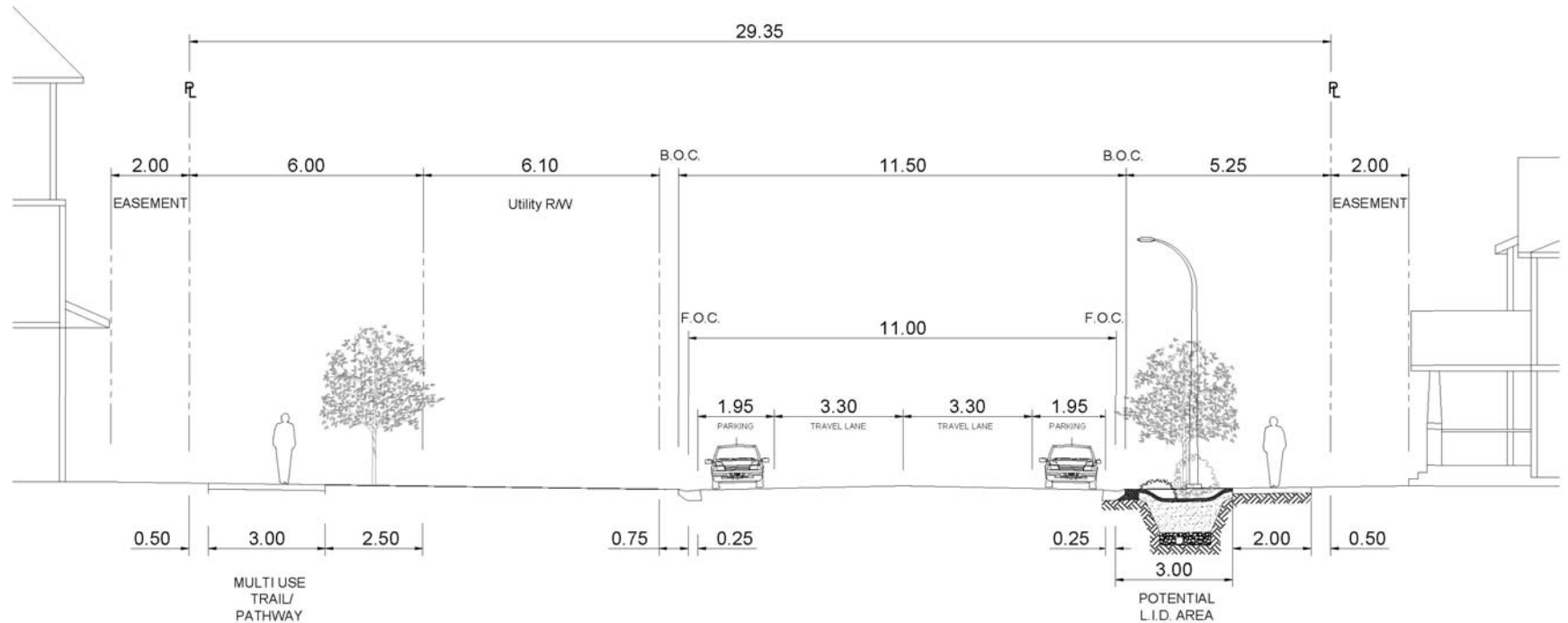


8.5.4 Collector with Separate Sidewalk and Greenway (B-2)

- Features: R/W 24.35m;
- Carriageway 11.5 B.O.C. to B.O.C.;
- 3.0m wide multi-use pathway on one side and 2.0m wide separate sidewalks on the other side;
- Street trees within both boulevards;
- Greenway framed by trees on both sides of 3.0m pathway;
- Offers opportunity to integrate LID within the boulevard, where adjacent land use context is appropriate (i.e., not appropriate for front drive residential areas).

Intent: To provide vehicular and pedestrian movement

through and within the community with commercial/mixed use and residential frontage close to the street, while also accommodating an enhanced multi-use pathway (with cycling route) connection on one side of the street.

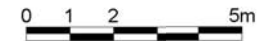


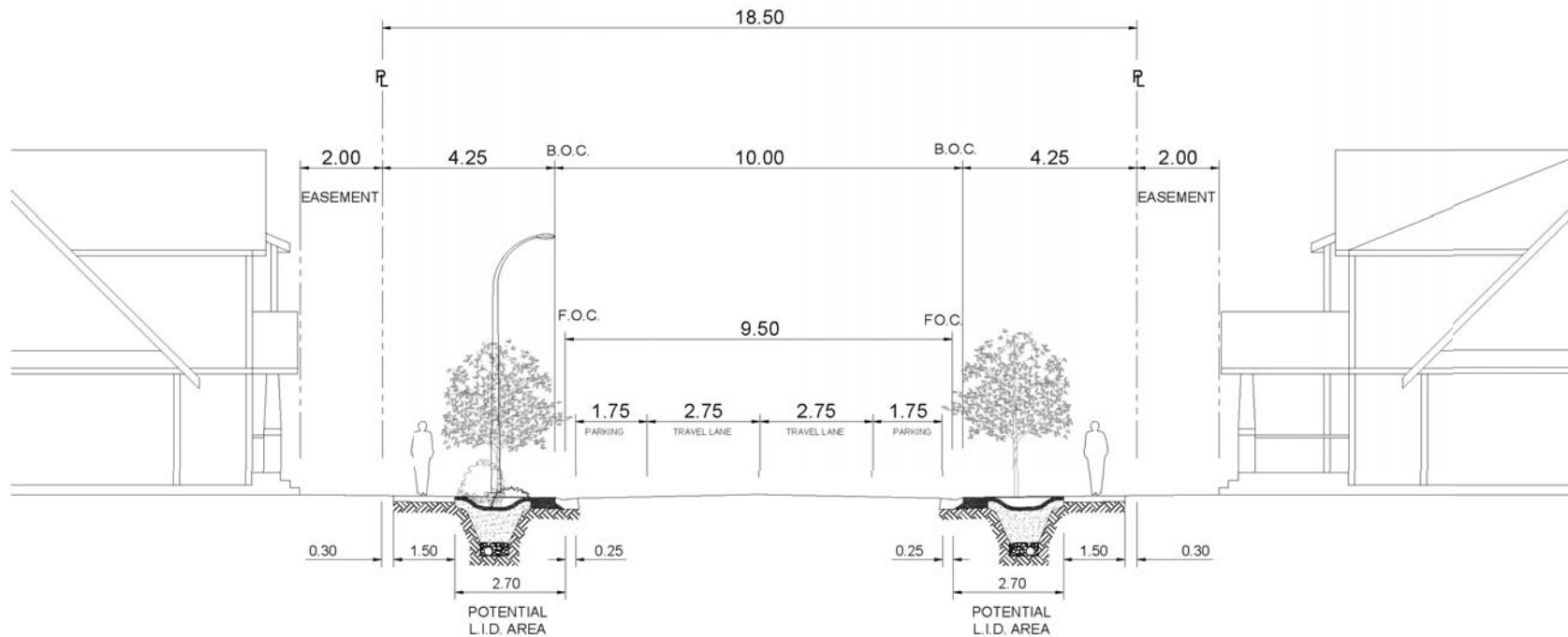
*Curbs can be rolled or standard curbs with cuts into where LID's / Bio-swales are integrated

8.5.5 Collector with Separate Sidewalk and Utility Corridor Greenway (B-3)

Features: Carriageway integrates gas line R/W;
 Carriageway 11.5m B.O.C. to B.O.C.;
 3.0m wide multi-use pathway on one side integrated with utility R/W and 2.0m wide separate sidewalks on the other side;
 Street trees within both boulevards;
 Offers opportunity to integrate LID within the boulevard, where adjacent land use context is appropriate.

Intent: To provide vehicular and pedestrian movement through and within the community with commercial/mixed use and residential frontage close to the street, while also accommodating an enhanced multi-use pathway (with cycling route) connection on one side of the street. Minor adjustments to this cross section may be required when the detailed servicing study is completed.



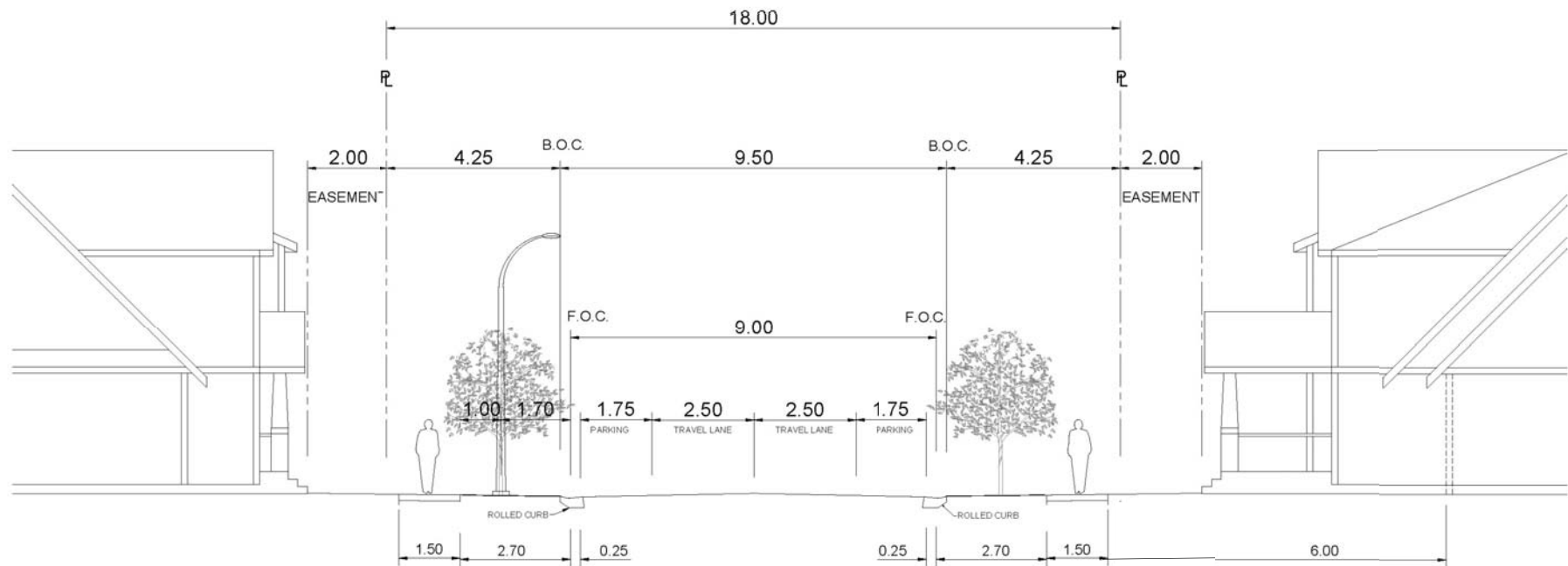


*Curbs can be rolled or standard curbs with cuts into where LID's / Bio-swales are integrated.

8.5.6 Local Residential Street - Separate Sidewalk – Laned Residential (C-1)

- Features:
- R/W 18.5m;
 - Carriageway 10.0m B.O.C. to B.O.C.;
 - 1.5m wide separate sidewalks on the both sides;
 - Street trees within both boulevards;
 - Offers opportunity to integrate LID within the boulevard, where adjacent land use context is appropriate. Some locations may require a cross section that is a combination of C-1 and C-2 where one side of the street has lanes and the other side has no lanes.

Intent: To provide local residential vehicular and pedestrian movement within the community with residential frontage close to the street and rear lanes.



Potential Alternative for front drive product on wide shallow and laneless lots

Garage is setback from property line. Rest of home to be located close to property line



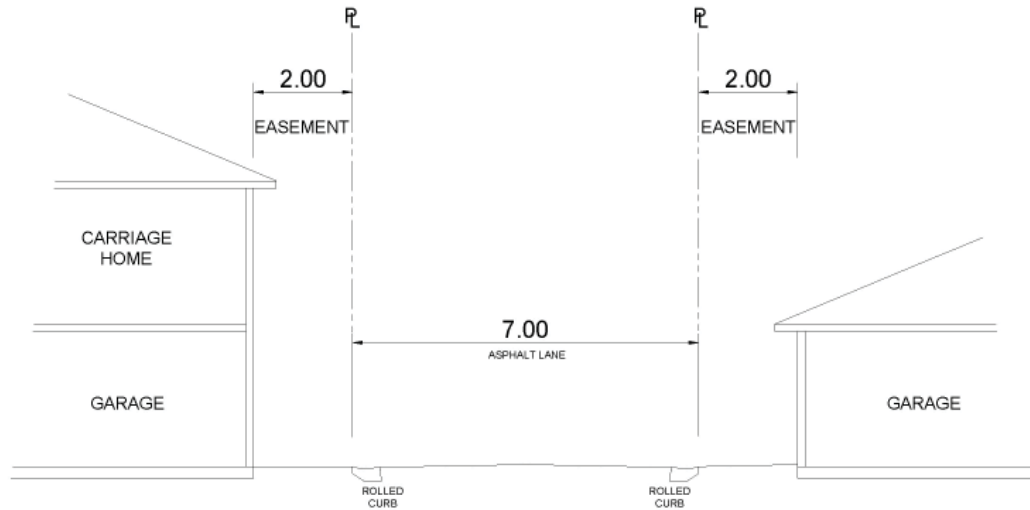
8.5.7 Local Residential Street - Separate Sidewalk – Front Drive Residential (C-2)

- Features:
- R/W 18.0m;
 - Carriageway 9.5m B.O.C. to B.O.C.;
 - 1.5m wide separate sidewalks on the both sides;
 - Street trees within both boulevards;
 - Does not offer the opportunity to integrate LID

Intent: To provide local residential vehicular and pedestrian movement within the community with residential frontage close to the street with front garages/driveways and no rear lanes. Special garage and frontage setbacks apply. If required, at detailed design stage, parking may be eliminated to accommodate emergency access.



Lane Treatment - Design Elements: Garbage collection route with narrow pavement width, Asphalt paving.



Lane Treatment - Design Elements: Garage with "Carriage Homes", Asphalt paving.



Lane Treatment - Design Elements: Asphalt paving.

8.5.8 Lanes

Features: Rolled curbed to define asphalt lane;
Explore opportunities to house shallow utilities in lane R/W if deep services are in frontage road.

Intent: Clean, well defined rear lanes to create a more visually appealing lane environment more conducive to walking and access to carriage homes/garage suites.



8.6 PEDESTRIAN AND BICYCLE NETWORK

Timberlands North is designed on a grid network and affords the greatest number of linkage options for both vehicles and pedestrians. All streets are designed to accommodate separate sidewalks on both sides and will therefore optimize the pedestrian network options across the entire plan area. This will provide connections to park spaces within the plan area as well as link to pathway systems adjacent to the community and become an extension of the City's greater regional pathway system.

Bicycle routes have been earmarked on two main corridors, one north-south and the other east-west. The bicycle routes are integrated into the multi-use pathway or greenway on the collector roads and will provide safe and efficient cycling connections across and beyond the plan area.

8.7 PARKING, LOADING AND TRAFFIC CALMING

On-street parking and loading areas are accommodated on most street types except the divided collector roads as they serve as primary entry links to move residents and visitors in and out of the community efficiently. However, once within the community, traffic will be dispersed through the grid system and speed is to be mitigated to safer levels and on-street parking serves as a form of traffic calming by pinching the free flow thoroughfare.

Cars parked on the street also act as a buffer between moving traffic and pedestrians on the sidewalk. Therefore, on street parking and loading areas are to be a standard element on all streets, aside from the divided entry streets.

Furthermore, the street design accommodates the unobstructed ability of emergency apparatus to turn into, move down and set up in a street with parked cars. Parking within 7.5m of intersections will be restricted. The use of bump outs at intersection locations is one tool to restrict parking near intersections and protect vehicle accessibility into a street. This option will also reduce the crossing distance for pedestrians at intersections or at mid-block locations.

8.8 PUBLIC TRANSIT

Integrated within the east-west collector along the southern portion that runs through the plan area, a public transit route and associated bus stops have been proposed and will effectively place every site within the plan area within 500m (5 to 7 minute) walking distance to a transit stop.



9.0 ENGINEERING SERVICES

9.1 STORMWATER MANAGEMENT

Two combined stormwater management facilities (SWMF) have been completed for Timberlands North and are located near the northwest corner of the development. They will control stormwater from both the major and minor storm system for the entire development as well as major/minor stormwater from ±10 ha of NE ¼ Sec. 23 and a small part (±1 ha) of the Laebon Lands in the northwest corner of SW ¼ Sec. 23. The SWMFs are constructed wetland facilities that are sized to accommodate stormwater detention for a 1:100 year storm event. The location of these facilities is identified in Figure 9.1, and may be integrated with the adjacent Commercial and Residential area.

All storm sewers within the development will be sized to accommodate a 1 in 5 year stormwater event with stormwater being conveyed on the streets or within bioswales within the boulevards to the stormwater management facilities during large stormwater events.

All stormwater in the development area will discharge into an existing trunk main located at the intersection of 30 Avenue and the proposed commercial collector located 400 m south of 67 Street.

All stormwater facilities and storm sewers will be designed in accordance with The City of Red Deer Engineering Design Guidelines and will become the responsibility of The City of Red Deer to maintain after the applicable maintenance period.

The major drainage and overall storm system with

Timberlands North are shown on Figure 9.1.

9.2 SANITARY SEWER SERVICING

The proposed development will be serviced from the existing Waskasoo Regional Sanitary Sewer Main, located within the 30 Avenue and 67 Street rights-of-way. The section of main from 58 Street to the connection to the City trunk sanitary main in 40 Avenue north of the Red Deer River was oversized to accommodate flows from the adjacent lands.

The sanitary trunk mains for Section 23 will connect to this main at the intersection of 30 Avenue and 67 Street. Provisions will be made to allow a portion of the flow to be diverted north into the new Northland Drive sanitary trunk main when the east half of Section 23 develops. The overall conceptual sanitary sewer system for Timberlands North is shown on Figure 9.2.

The majority of the sanitary pipes will be 200mm in diameter, except for the sanitary mains, which will be between 250 to 300 mm in diameter. In most instances the sanitary lines will be located in the lanes except in cases where there is no lane to service from.

All sanitary sewer facilities will be designed in accordance with The City of Red Deer Engineering Design Guidelines and will become the responsibility of the City to maintain after the applicable maintenance period.

9.3 WATER DISTRIBUTION

The overall water distribution system needed to service Timberlands North is shown on Figure 9.3. The water trunk is to be located along the south collector road to the west collector road, then north to 67th street where it will tie into a future water trunk along 67th street to a new reservoir east of

20th avenue.

Water mains will be sized at the detailed design and servicing study stage.

All water main facilities will be designed in accordance with The City of Red Deer Engineering Design Guidelines and will become the responsibility of The City of Red Deer to maintain after the applicable maintenance period.

* Servicing Studies to be updated as determined by the City of Red Deer.

9.4 POWER DISTRIBUTION

The City of Red Deer EL&P Department has advised that they will service this development from their existing overhead power line located parallel to the west boundary of 30th avenue and from a future overhead power line to be located within the new south boulevard of the proposed 67th street right of way.

Currently, the Fortis lines on 55 Street and 30 Avenue service many Fortis customers outside of The City of Red Deer. Fortis has expressed interest in keeping these lines until all of the land occupied by Fortis customers has been annexed by The City of Red Deer.

9.5 SHALLOW UTILITIES

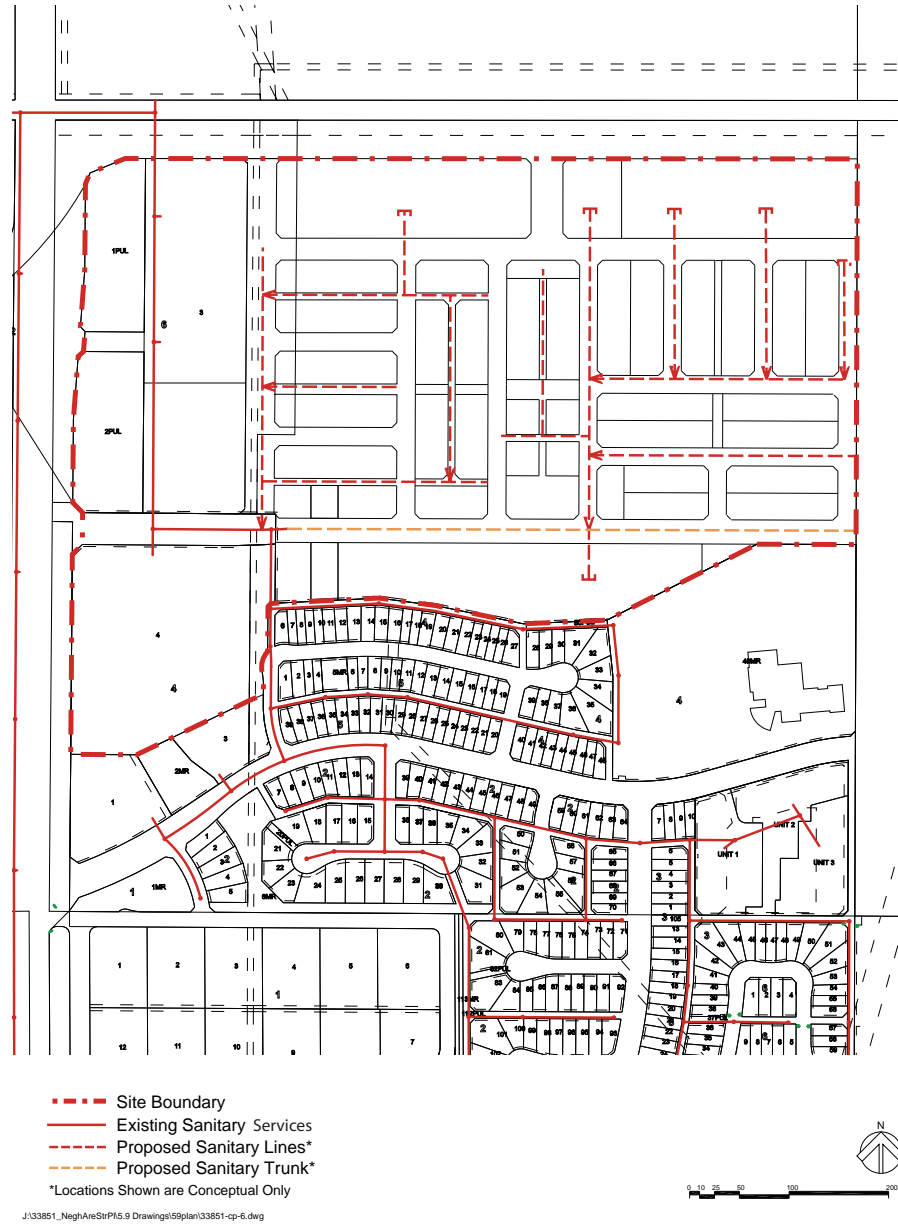
Gas, telephone and cable television services will be provided by the following companies:

- ATCO Gas (Natural Gas)
- Telus Communications (Telephone)
- Shaw Cable (Cable Television)

ATCO Gas will service this development by constructing a large diameter medium pressure gas main along the existing high-pressure gas main right-of-way from Rollis Street to 55 Street. A new alignment will be required to extend this main north to service the Timberlands North development area.

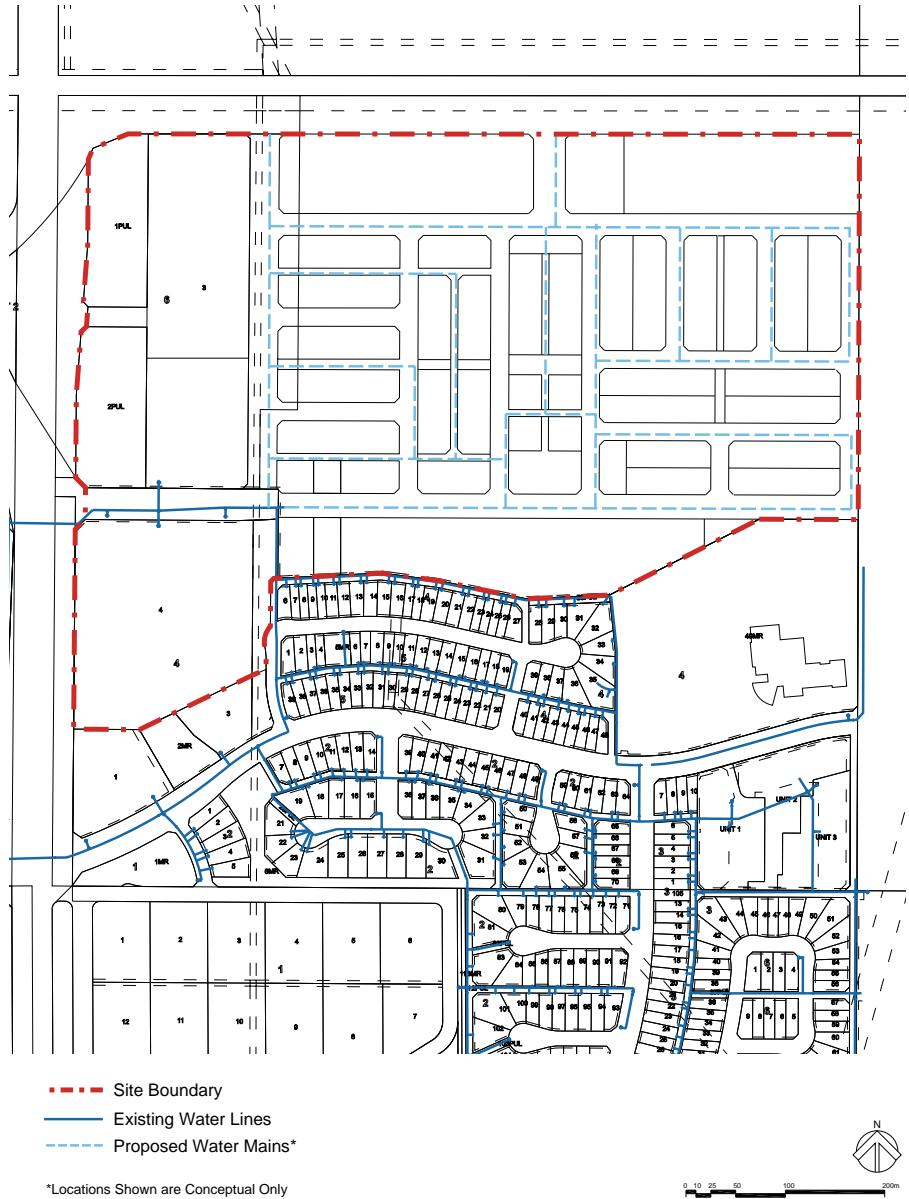


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Figure 9.2 - OVERALL CONCEPTUAL
SANITARY SEWER SYSTEM



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Shaw Cable does not have any facilities in the immediate vicinity to service the Timberlands North development area. A fibre optics cable will need to be constructed east along 67 Street from the Gaetz Avenue/67 Street intersection or north along 30 Avenue from the Ross Street/30 Avenue intersection. The shallow utility alignments will be established during preparation of the detailed servicing study for the Timberlands North lands.

In addition to the Telus and Shaw communications networks, The City of Red Deer has partnered with the Alberta Government (Bell West) to provide Supernet fibre optics service to all schools and City owned facilities within the City. Provisions should also be made for the extension of the “Supernet/City of Red Deer Rednet” fibre optics network.

9.6 ATCO PIPELINES HIGH PRESSURE GAS LINE (ROW 2271KS)

An existing high pressure gas line extends north / south through the proposed development. In the southern portion of the Plan it has been located within an existing linear park. In the northern portion of the plan, this gas line will be integrated within the road right of way, along the west side (commercial and multi-family residential frontage) and form part of the north-south green way connection.



10.0 IMPLEMENTATION

10.1 DEVELOPMENT STAGING

Infrastructure servicing will be extended into these lands from the west. Currently, The City of Red Deer is anticipating construction for the entire Timberlands North area in a single construction season. Thereafter, it is anticipated that development will proceed in a general easterly direction along the major arterial/collector and then northwards towards 67th Street. There should be a conscious attempt to minimize the gap-toothed appearance associated with non-contiguous development, notwithstanding market demand for specific product types.

10.2 RE-DISTRICTING AND SUBDIVISION

Re-districting and subdivision applications, to conform to the land use designations described in the NASP, will be undertaken as necessary. Guided by The City of Red Deer MDP, the East Hill MASP, and the Timberlands North NASP, re-districting and subdivisions will be required to adhere to The City of Red Deer Land Use Bylaw and informational requirements necessary for each application.

10.3 PLAN AMENDMENTS

An amendment to the adopted NASP is required for any significant changes to the plan, such as:

- Major shift in the location of community facilities;
- Major shift between general land use categories (e.g., residential to industrial);
- Major shift in infrastructure design or layout, excepting the addition or deletion of lanes (e.g., roads, sanitary services);

- Change in other documents affecting planning and land use in the area (such as a major amendment to the MASP) will require an amendment to the NASP;
- The access points of the collector roadways onto adjacent arterial roadways as proposed are fixed and cannot be changed without a plan amendment, because this may affect landowners in existing subdivisions.

10.3.1 Exceptions

- Provided the intent of the Timberlands North NASP is maintained, a minor adjustment to proposed land use boundaries or roadway alignments, including the addition or deletion of lanes which have been reviewed and accepted as appropriate by The City, or Public Utility Lots, may be made where necessary without an amendment.
- No amendments to the servicing concepts are required to reflect changes determined as a result of more detailed work.
- No amendments to the overall development sequence are required as long as the overall intent is being maintained.
- Minor adjustments to the road cross sections will not require an amendment.

10.4 SITE DESIGN REVIEW

The site design for all parcels within this NASP area shall be reviewed and compliance demonstrated with the policies of this plan.