

**TOWN OF PEACE RIVER  
BYLAW NO 1918  
PEACE RIDGE AREA STRUCTURE PLAN**

**A BYLAW OF THE TOWN OF PEACE RIVER, IN THE PROVINCE OF ALBERTA,  
FOR THE PURPOSE OF ADOPTING THE PEACE RIDGE AREA STRUCTURE  
PLAN**

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**WHEREAS;** Pursuant to the Municipal Government Act, Revised Statutes of Alberta 2000, Chapter M-26, Council may adopt an Area Structure Plan; and;

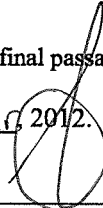
**WHEREAS;** Section 633 of the Municipal Government Act, Chapter M-26 empowers Council to adopt Area Structure Plans, which provide a framework for the subdivision and development of areas of land within the Town of Peace River; and

**NOW THEREFORE,** Pursuant to Sections 230, 606 and 692 of the Province of Alberta Municipal Government Act, the Town of Peace River Council, duly assembled, hereby enacts as follows:

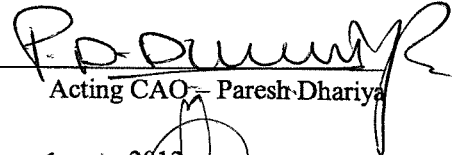
**That this bylaw shall be known as the Peace Ridge Area Structure Plan bylaw and that the attached Schedule "C" is adopted as the Peace Ridge Area Structure Plan.**

This bylaw shall take force and effect on the date of its final passage by Council.

First Reading given this 10 day of December 2012.



Mayor – Lorne Mann

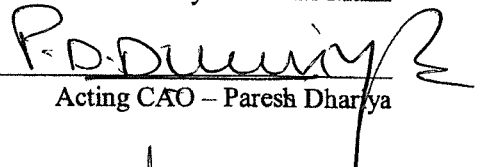


Acting CAO – Paresh Dhariya

Second Reading given this 28 day January 2013.



Mayor – Lorne Mann

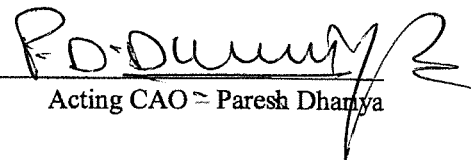


Acting CAO – Paresh Dhariya

Third Reading and Assent given this 28 day January 2013.



Mayor – Lorne Mann



Acting CAO – Paresh Dhariya

# PEACE RIDGE AREA STRUCTURE PLAN

Prepared by: **Ross W. Sharp & Associates Ltd.**

In partnership with:



## TABLE OF CONTENTS

1.1 PURPOSE .....	3
1.2 Policy Context of the ASP.....	4
FIGURE 1 – LAND USE BYLAW.....	17
1.3 Public Engagement Program.....	27
FIGURE 2 - LOCATION .....	28
2.0 SITE DESCRIPTION .....	29
FIGURE 3 & 3A LAND USE CONCEPT PLAN.....	31
3.0 LAND USE CONCEPT PLAN .....	33
3.1 Light Industrial .....	34
3.2 Residential - R-1A.....	37
3.3 Manufactured Home Subdivision .....	39
3.4 Semi-Detached Housing - Residential R2-A .....	42
3.5 Row Housing - Medium Density Residential.....	44
3.6 Apartment - Residential High Density .....	45
3.7 Municipal/ Environmental Reserve .....	47
3.8 Population Projections.....	50
FIGURE 4 - RESIDENTIAL WATER.....	51
FIGURE 5 - INDUSTRIAL WATER.....	52
4.0 SERVICING .....	53
4.1 Water .....	53
FIGURE 6 - SANITARY .....	55
FIGURE 7 - SANITARY .....	56
4.2 Sanitary .....	57
FIGURE 8 - STORM WATER MANAGEMENT .....	59
4.3 Storm Management System .....	60
FIGURE 9 - RESIDENTIAL ROADS .....	62
FIGURE 10 - INDUSTRIAL ROADS.....	63
4.4 Roads, Sidewalk and Trail Systems .....	64
4.5 Shallow Utilities .....	67

## 1.1 Purpose

The Peace Ridge Area Structure Plan (ASP) is intended to provide the Town of Peace River with a pragmatic and marketable long term development plan for approximately 100.83 ha (249.16 acres) of privately owned land in the north west corner of town.

The lands in question are legally described as the SW 1/4 sec. 25-83-22-W5M and part of the SW 1/4 sec 26-83-22-W5M.

The lands on the west side of the north/south undeveloped road allowance which will become 74<sup>th</sup> street are slated for light industrial development and a holding zone for R1-A residential development south of the east-west drainage course.

The lands on the east side of 74<sup>th</sup> street within the SW 1/4 are proposed for light industrial development, mixed residential development and a large single family residential holding zone south of the east/west drainage course.

The light industrial land use proposed for the SW 1/4 is essentially an expansion of the Weaver Welding Ltd. business located along 107<sup>th</sup> avenue. The intent is to expand the current yard site for heavy equipment storage and to generate at least one additional lot for a fabrication shop related to the same business.

The purpose of the concept plan on the west side of 80<sup>th</sup> street is to generate an exciting, innovative and high standard of mixed use residential development that will meet the future growth needs of Peace River.

The wide boulevard collector entrance off of the north/south road allowance - road plan 4036 or 80<sup>th</sup> street provides access to a 3.29 acre medium density and 2.95 acre high density residential sites, an expansive manufactured home subdivision and two smaller row housing sites that back onto the east/west drainage course.

While further details with respect to all of the proposed land uses will be provided later in the ASP, the intention is to develop a sustainable residential neighborhood that offers an affordable choice in housing while raising the bar as to park space, streetscape standards, pathways, storm management, water, sanitary and water servicing.

Each respective land use will have an overview as to how the proposed land use can be best facilitated.

## **1.2 Policy Context of the ASP**

The Peace Ridge ASP must comply with the Municipal Government Act (MGA) and the key policy documents that the Town of Peace River has in place including the Land Use Bylaw (LUB), the Inter Municipal Development Plan (IMDP) and the Municipal Development Plan (MDP). The ASP should also be compatible with existing adjacent area structure plans.

### **1.2.1 Municipal Government Act**

The Peace Ridge ASP will meet the requirements of the MGA (the Act). The Act enables the Town of Peace River to adopt an Area Structure Plan that provides a framework for the future development and subdivision of land within the two parcels of land as described.

Sections 633, 636, 638 and 692 of the MGA deal specifically with Area Structure Plans stating that these plans must describe:

1. The scope of development proposed for the area.
2. The land uses proposed for the area, either generally or with respect to specific parts of the area.
3. The density of the population proposed.
4. The general location of major transportation routes and public utilities.
5. Other matters the Town of Peace River Council considers necessary.

The Act provides, to the general public and organizations such as school boards, the opportunity to participate in the planning process by requiring an area structure plan to be adopted through a public hearing and bylaw process.

The MGA requires that the Area Structure Plan also must conform to the Town's Municipal Development Plan.

## 1.2.2 Municipal Development Plan (MDP)

The Town of Peace River Municipal Development Plan was adopted in July of 2010 as Bylaw 1874.

The MDP is the primary planning policy document for the Town of Peace River. It provides a framework for all development planning decisions and thus it is important that the Peace Ridge ASP conform to the principles and policies of the MDP. Policies and general content of the MDP which are applicable to the Peace Ridge ASP have been selected to be addressed in this document.

The MDP supports sustainable development practices which are achievable through the use of density, alternative means of transportation and incorporating natural features into the design of the neighborhood. The Peace Ridge ASP addresses the suitability practices through the use of mixed density, pathways and streetscape and the protection of environmentally sensitive areas.

Being 490 km NW of Edmonton and 195km NE of Grande Prairie, Peace River is the second largest urban center in northwest Alberta and will continue to provide a full range of services to the Peace Region.

The proposed mixed use residential density and an upscale manufactured home subdivision and extensive light industrial lands within the Peace Ridge ASP targets the future growth potential of the Town.

The ASP is keeping with the key principals of the MDP in that it seeks to maintain the natural areas of the plan area and attempts to minimize the impacts to the wildlife habitat.

### ***MDP - Sustainable Development***

Council's vision in its 2008 Strategic Plan pronounced the Town to be a "sustainable, caring and friendly community". A key strategic direction was to update the MDP to align it with the Strategic Plan and the Municipal Sustainability Plan:

The intent of this ASP is to provide for a sustainable community. Such communities are generally characterized by:

*higher density development so land and existing infrastructure is used efficiently and public transit can be supported*

The ASP introduces medium and high density sites and provides for a collector road system that could accommodate public transit.

*mixed land uses including residential, commercial industrial uses.*

The ASP provides for mixed use residential and light industrial uses. Neighborhood commercial uses can be accommodated in the ground floor of the proposed apartment building.

*Range of housing types to accommodate a mixed age and income groups.*

The large upscale manufactured home subdivision is targeted towards young families and retirees and the medium to high density caters to a similar mix of age groups.

*Encouraging alternative transportation modes: public transit, walking and cycling pathway/ trail system used by pedestrians or cyclists.*

The ASP includes a variety of trails both natural and paved that connect the green space elements within the neighborhood. The pathways will extend into the light industrial areas supporting the idea of either walking or cycling to work.

The ASP provides for 7.6 hectares of park space within the land use concept plan.

*Preservation and conservation of natural environmental resources.*

The Land Use Concept Plan seeks to preserve the natural drainage course, steeply sloped ravines, wetlands and sloughed areas while placing storm management lakes in the topographic lowest area of the site.

### ***MDP - 3.3. Future Growth and Development***

The MDP promotes the following guiding principles with respect to the future development decisions.

- *Ensure that a healthy, symbiotic balance is maintained between residential, commercial and industrial development.*
- *...land base is efficiently used... infrastructure networks are optimized*
- *Encourage development in areas that are contiguous with existing development*
- *Encourage the development of healthy, walkable and safe neighborhoods.*
- *Facilitate the development of diverse new neighborhoods that provide for a variety of housing choices, a mix of lot and unit sizes, encourage innovative subdivision and building designs and the compatibility of different land uses.*
- *...ensure that a diversity of housing is available*
- *promote the preservation and enhancement of natural areas.*
- *...ensure that new developments occur without compromising sensitive ecosystems.*
- *provide recreation opportunities and facilities through investment in parks and open spaces.*
- *Encourage sensitively design and pedestrian scaled mixed use development*
- *Provide pedestrian connectivity in between residential and commercial and industrial areas.*

The Land Use Concept Plan within the Peace Ridge ASP has followed the above guiding principles in an attempt to generate an economically sound and environmentally responsible future development.



## ***MDP - 5. Residential Development***

The residential development goals and objectives and policies within section 5 of the MDP are highly applicable to the mixed use residential areas of the Peace Ridge ASP determined by the Land Use Concept Plan.

### *Goals:*

- *To promote the development of efficient, sustainable residential development*
- *To facilitate the creation of neighborhoods that provides for a variety of lifestyles.*

The medium high density residential sites within the ASP will offer housing options for a wide range of homeowners from young adults to seniors. The well designed and upscale manufactured home subdivision will also offer an affordable choice of homes to young families and retirees.

### *Objectives:*

- *To encourage the development of “walkable” neighborhoods and communities*
- *To maintain the creation of affordable housing and housing for residents with special needs*

The streetscape proposed within the residential area of the ASP provides for separate sidewalks and grassed and paved boulevards on both sides of a local residential and collector streets make for an aesthetically pleasing and walkable community.

All parkway areas will also contain a linked network of natural and paved trails to further enhance the walk ability of the neighborhoods.

## ***MDP - Policies***

### ***MDP - 5.1. General***

*5.11 The town shall direct future residential development to the areas shown as residential and brown field development in the Future Land Use Concept Map.*

The purposed mixed/ residential development meets this policy for the SW 1/4 Sec. 25-83-22-W5M but the NE of the SE 1/4 Sec. 26-83-22-W5M is proposed as light industrial as opposed to residential within the future Land Use Concept Map.

*5.12 The Town shall direct new residential development to existing built-up areas... that are contiguous to developed areas to optimize existing servicing.*

The Peace Ridge ASP is contiguous with developed light industrial parcels to the north part of the site and residential development to the NE of the SW 1/3 Section.

#### ***MDP - 5.2 Housing Diversity***

*5.2.1 The town shall support the mix of housing types... and shall establish a minimum requirement for multi-unit development in new neighborhoods.*

*5.2.3. The Town recognizes a current need for manufactured homes and will work with interested developers to create new manufactured home community and/or subdivisions at appropriate locations throughout the ASP process.*

*5.2.4. The Town shall ensure that new manufactured home communities are attractively designed and developed within an equivalent level of servicing and open space as contained in neighborhood developments.*

The Peace Ridge ASP satisfies the noted policies by offering a variety of medium and high density forms of housing. The well designed upscale manufactured home subdivision is the dominant proposal within the residential portion of the ASP.

#### ***MDP - 5.3 Neighborhood Character and Design***

5.3.1 Through the preparation of ASP's the Town shall encourage the application of smart growth principles in the design of new residential neighborhoods. The design of residential neighborhoods shall be encouraged to:

- *include appropriate mix of housing choices...*
- *maintain stands of trees, watercourse and wetlands...*
- *provide a mixed use pedestrian orientated neighborhood*
- *create pedestrian street orientation and connectivity within the neighborhoods*
- *...base the street networks on a modified grid pattern.*
- *integrate and connect to the town trail system*
- *provide adequate parks to service the neighborhood and consolidate function and design of storm water management facilities as part of the open space system.*
- *Use collector roadways as future transit routes and design neighborhoods such that future transit services are provided within reasonable walking distance to most homes.*

The Peace Ridge ASP attempts to satisfy each and every neighborhood design principle noted above.

### ***MDP - 7.0 Industrial Development***

*"The ability to expand Peace River's industrial land inventory is key to the community long term economic success and sustainability."*

*Goal: To ensure that there is a sufficient sustainable industrial land supply available.*

*Objectives:*

- *to direct industrial developments to suitable location.*
- *to provide for a variety of industries.*

*Policies: General*

*7.1.1 ...direct future industrial developments to the areas identified as industrial within the Future Land Use Concept Map.*

*7.1.2 Industrial development shall occur in an orderly manner extending from existing development with existing servicing lands be developed prior to new unserviced ones.*

The Peace Ridge ASP provides for 15.75 Hectares (38.92 Acres) of light industrial land and for the extension of the Weaver Welding Ltd. yard site into two M-1 lots. The majority of the proposed light industrial land is located on the west side of 74th street and will tie into the light industrial lands within the Westview ASP located in the NE 1/4 of Sec. 26-83-22-W5M.

#### ***MDP - 7.2 Site Location and Planning***

*7.2.1. The Town shall require that area structure plans be prepared for the future industrial areas. Those plans should incorporate sustainable development strategies related to efficient servicing measures...*

*7.2.3. The LUB shall be reviewed to ensure it contains reasonable sustainable development standards for industrial sites.*

*7.2.4. ...Town shall ensure that appropriate separation distances and transition between industrial and non industrial use are maintained.*

*7.2.6. The appropriateness of an industrial use and its location will be evaluated with a full consideration of its environmental impact and compatibility with existing and future land uses in its proximity.*

*7.2.7. ...industries that store or manufacture dangerous goods shall only be located in an areas that are not in proximity to existing and future residential areas and river front locations.*

*7.2.8. discuss opportunity with CN Rail to facilitate the development of under-utilized land located adjacent to the rail line on the west hill.*

The light industrial component of the Peace Ridge ASP meets the Industrial Development Policies of the MDP.

The proposed industrial lots are contiguous within the existing light industrial uses along 107th Ave whereas the proposed 2.5 acre lots west of 74 street will be compatible with the lots proposed within the Westview ASP.

### ***MDP - 8.0 Transportation***

The transportation policies under section 8 of the MDP will be met by the road, sidewalk and trail elements within the Peace Ridge ASP.

### ***MDP - 9.0 Municipal Services and Utilities***

The Peace Ridge ASP servicing chapters are based on a review and understanding of the Town's Master Plans for water distribution, wastewater treatment and storm water management.

The ASP will outline the detailed phasing and staging of services in accordance with Policy 9.1.3. of the MDP.

The developer of these ASP lands will be responsible for the servicing of the site and the cost of expanding the necessary infrastructure through offsite levies and developer contributions which are negotiated at the Development Agreement Stage.

Easement and/or rights of way will be provided at the development stage to accommodate the required infrastructure. All utilities will be installed at the subdivision development stage in accordance with the Town Municipal Development Standards.

Respecting storm water management, the ASP provides for a storm water management lake on the SE corner of the site which takes advantage of the natural topography of the lands. This facility will be designed to meet the provincial standards of Alberta Environment and the Town of Peace River's Engineering Standards.

Solid waste is managed by the East Peace Region Waste Management Authority which operates a number of waste transfer stations in the region and regional landfill 17km east of Peace River on Highway 686.

Once developed this new area will receive solid waste management services similar to other new and existing developments within the Town of Peace River.

### ***MDP - 10.0 Environment***

The goals of the MDP with respect to the environment are:

*To identify and protect natural areas, wildlife corridors and areas susceptible to flooding and other significant environmental protection areas.*

*To promote environmentally responsible development.*

*Objectives include the following:*

- *to protect and enhance significant natural areas*
- *... conserve environmentally sensitive areas*
- *... reduce the impact of development in the natural environment.*
- *... apply ER to protect environmentally significant naturalization.*

The applicable general environment policies that relate to this ASP include:

*10.1.1. ...Town... shall promote development policies that minimize the ecological footprint of growth and development.*

*10.1.3. ...development may be approved within environmentally sensitive areas if:*

*site specific geotechnical testing and environmental impact assessments.*

*10.2.1 ...the Town shall require lands deemed to be unsuitable for development to be dedicated as ER.*

*10.2.5. as part of the ASP process natural areas shall be integrated into the design of new neighborhoods to form part of the broader open space network system.*

*10.3.1. Prior to development proceeding the town shall ensure that all required geotechnical studies are undertaken.*

The ASP puts forward a design that allows for a 12 meter wide buffer between the top of the bank and the rear property lines of the proposed light industrial and manufactured home lots. The integrity of the natural drainage courses can thus be protected from slope erosion while allowing for a pathway system to be developed along this buffer zone.

The plan seeks to protect the west to east unnamed drainage course and its treed embankment as an important natural feature and it will be classified as Environmental Reserve (ER) when subdivided. The plan proposes a parkway corridor (MR) with natural trails adjacent to the area defined as ER.

Geotechnical studies would need to be completed during the phased development of all residential sites to ensure that the natural environmental integrity of the area is maintained and/or enhanced.

Section 13.4 of the Municipal Development Plan deals specifically with the preparation of area structure plans.

The key polices are as follows:

- *asp's are to be prepared by the developer in advance of the subdivision and development of new neighborhoods.*
- *minimum area of coverage is a quarter section.*
- *preparation of an ASP may be supported by Council if the area that is subject of the plan is located within an area that as generally contiguous with existing development.*

*ASP's shall include the following information:*

- *an examination of existing land uses and physical features*
- *measure for protection of natural features*
- *summary of land use areas and population and school generation*

- *surface drainage patterns*
- *road alignments*
- *location of sanitary, storm and water systems*
- *area and location of school sites and recreation facilities*
- *location of parks and trails*
- *proposed transit routes*
- *proposed land use districts*
- *subdivision phasing plan*
- *energy and water conservation measures*
- *all supplied documentation required by the town*

The Peace Ridge ASP fully meets all of the policy requirements of section 13.4 of the MDP.



### **1.2.3 Inter-Municipal Development Plan**

The Town of Peace River adopted the Inter-Municipal Development Plan along with its municipal neighbors the MD of Northern Lights, MD of East Peace and the MD of Peace in July of 1999.

While the area defined by the Peace Ridge ASP is in the Town of Peace River and not within the urban expansion area of the IDP, the recommendations within the ASP will meet or exceed the key polices of the IDP.

We assume that the Peace Ridge ASP will be referred to the neighboring Municipal District's Administration for comment.



<b>SPC ENGINEERING</b> <small>Professional Engineers and Architects</small> 301 - 10128-130 AVE. GRANDE PRAIRIE, AB T5V 2H9 P. 780.852.4035 F. 780.852.1880 WWW.SPENRBI.CA	CLIENT WEAVER WELDING	PROJECT AREA STRUCTURE PLAN SW 25-83-22-W5 AND SE 26-83-22-W5	DRAWING LAND USE DISTRICT PLAN SCALE 1:2500	PROJECT NO.: --- DRAWN BY: --- DATE: ---	DRAWING NUMBER <b>FIG01</b>
	GOVERNMENT ROAD ALLOWANCE				

## 1.2.4 Land Use Bylaw

While the Town's Municipal Development Plan and the Peace Ridge ASP provide planning goals, objectives and polices for the land base defined by the ASP, the Town's Land Use Bylaw regulates and controls the use and development of land and building in the municipality.

The new Land Use Bylaw has yet to be adopted by Council, thus Land Use Bylaw No. 1731, adopted in June of 2003 and amended in April of 2008, has been adopted for reference in this ASP as our reference document.

The following provides a brief summary of those sections of the Land use Bylaw that are applicable to the Peace Ridge ASP.

### ***LUB - Section 11(1) - General Land Use Provisions***

#### *Accessory Buildings:*

- d. ...total combined area of all accessory buildings shall not exceed 26% of the site area*
- e. ...shall not exceed 1 story or 4.57 meters in height*
- f. ...shall be set back .31 meters (1 ft) from all lot lines.*
  - i. in case of a separate detached garage minimum setback of 6.1 meters (20 ft) from the rear of side lot lines to the entrance of the garage.*

The manufactured home subdivision is proposing to have separate garages and thus the above regulations would apply.

### ***LUB - Section 11 (9) - Parking and Loading Facilities***

#### *a. Offsite Parking*

##### *Residential - Minimum Parking Requirements*

- Apartments, housing ... 1.5 spaces per dwelling*
- manufactured home ... 2 spaces per lot*
- other residential uses ... 2 spaces per unit*

- *Industrial/ manufacturing/ warehousing ... 1 space/ 3 employees*
- *wholesale and storage buildings, yards... 1 space/ 139.35 square ft*
- *servicing and repair facilities ...parking spaces shall not be less than 16.72 square meters (180 square feet) in area.*

### *3. Manufactured Homes*

*a....shall be of sound construction and appearance to the satisfaction of the development office of the MPC.*

*b. ...undercarriage of a manufactured home shall be completely screened from view by fireproof skirting*

*c. axles, wheels and towing tongue shall be removed prior to installation.*

*d. all access, structures, additions, porches etc.. shall be of quality design and appearance.*

The above general regulations are important to this area structure plan given the significance of the manufactured home subdivision within the concept plan.

Section B of the Land Use Bylaw provides regulations pertaining to the land use districts within the town. The land use districts that are applicable to the Peace Ridge ASP include: Residential 1-A (R1 A), Residential - Two Family R-2, Residential - Medium Density - R-3, Residential High Density R-4, Residential Manufactured Home Subdivision R-MHS, and Light Industrial M-1.

We have summarized the more significant regulations within each of the above districts that are found within Figure 1 of the Peace Ridge ASP.

Although the reader should refer directly to the LU Bylaw for detailed information, the following summary is intended to provide a useful review of the regulations that pertain to the ASP.

### ***LUB - Section 14 - Residential District (R1-A)***

The area south of the west to east drainage course for both the SE 1/4 Sec. 26-83-22-W5M and SW 1/4 Sec. 25-83-22-W5M is currently zoned as R1-A. The Peace Ridge ASP has retained this low density single family residential district as a holding zone with further detailed subdivision design being undertaken at a later stage or under a separate ASP following development of the lands north of this drainage course.

1. *Purpose: ...development of low density single detached resident dwellings.*

2. *Permitted Uses:*

- *accessory buildings*
- *park or playground*
- *single detached dwelling*

3. *Site Provisions:*

- a. *area of site – SDD (single detached dwelling), area 510.95 m<sup>2</sup> (5500 sq ft)*
- b. *minimum lot width for corner lot - 16.76 meters (55 ft)*
- c. *front yard depth - 7.6 meters (25 ft)*
- d. *rear yard depth - 7.6 meters (25 ft)*
- e. *side yard width - 1.22 meters/ exterior side yard 3.66m*
- f. *in a lane less subdivision at least 1 side yard shall be a minimum of 3.05 m unless*
  - i. *attached garage is included*
  - ii. *servicing is from the front in which case the minimum side yard shall be 1.22 meters on both sides.*
- h. *building height - two stories or 10.67m (35 ft)*
- i. *site coverage - 35%*
- j. *density (max) - 6 dwelling units per net .404 ha (1 Acre)*

### ***LUB - Section 21 - Residential Two Family District (R-2)***

The first medium density site proposed on the north side of the entrance is designed to accommodate semi-detached bungalow style adult living condominium project. The most appropriate zoning for the site appears to be R-2 under the land use bylaw.

1. Purpose: ...development of single and double and creation of multiunit resident dwellings.

2. Permitted Uses:

- accessory buildings
- duplex
- park or playground
- semi-detached dwellings
- single detached dwellings

3. Site Provisions:

a. Area of site

...semi-detached dwelling unit - 3500 sq. ft....

b. width

...semi-detached dwelling unit - 10.06 meters

d. front yard depth (min) - 7.62 meters(25 ft)

e. rear yard depth (min) - 7.62 meters

f. side yard width (min)

i. exterior 3.66 meters

ii. interior 1.22 meters

g. notwithstanding subsection 3(e) in a lane less subdivision one side yard shall be a minimum of 3.05 meters in width.

i. The design of the principal residence includes an attached garage, in which case the min. side yard shall be 1.22 meters on both sides.

h. Building height(max)

i.. ...semi-detached dwelling: 2 stories or 10.67 meters, whichever is greater.

i. site coverage - 35%

j. density (max) - 12 dwelling units per acre

4. Additional Requirements:

e. in the case of a ...dwelling group development a minimum of 10% of the lot shall be devoted to landscaping open space and a minimum of 50% of this landscape open space shall contain recreation and playground equipment.

### ***LUB - Section 23 - Residential Medium Density District (R-3)***

The ASP is proposing two medium density row housing sites the first being 1.38 acres in size and the second being 0.94 of an acre. The land use district most applicable to these row housing sites is R-3.

1. *Purpose: ...the development of medium density residential dwellings*

2. *Permitted uses: a. row dwelling*

3. *Site Provisions:*

*a. lot area (min): row dwelling interior - 2000 sq ft, row dwelling exterior - 2400 sq ft*

*b. front yard depth (min) - 7.62 m*

*c. rear yard depth (min) - 13.72 m*

*d. exterior side yard width - 4.57 m*

*e. interior side yard width - 4.57m*

*f. coverage of site (max) - 35%*

*g. building height (max) - 3.5 stories*

*h. density (max) - 24 dwelling units per acre*

*i. lot width (min)*

*i. row dwelling 6.1 m*

4. *Additional Requirements:*

*c. minimum 10% devoted to landscaped open space. Minimum 50% of space to contain recreation and playground equipment.*

### ***LUB - Section 24 - Residential High Density District (R-4)***

The ASP proposes a 2.95 acre apartment site on the south side of the entrance road leading into the development. The most appropriate land use district within the land use bylaw would be R-4.

1. *Purpose: provide for a variety of high density multiple family housing units.*

2. Uses: Permitted uses – apartment

3. Site Provisions:

- a. Lot Area apartment - 1011.68 m<sup>2</sup> (10,890 ft<sup>2</sup>)
- b. Lot width (min) - apartment 30.18 m (99 ft)
- c. Lot depth (min) - 33.53 m (110 ft)
- d. Front yard depth (min) - 7.62 m (25 ft)
- e. side yard (min) - 40% of building height
- f. Rear yard depth (min) - 10.67 m (35 ft)
- g. Building Height (min) - discretion of MPC
- h. Density:
  - max: 36 units per acre
  - min: 24 units per acre
- i. Dwelling units per Apartment (min) - 8 units per apartment
- j. Coverage of site (max) - 50%

4. Additional Requirements:

- a. using 10% devoted to landscaped open space. Minimum of 50% of this space shall contain recreation and playground equipment.
- b. any apartment project shall satisfy the development offerings as to:
  - i. provision for access to garbage storage
  - ii. access for firefighting purposes;
  - iii. light between buildings;
  - iv. privacy for dwelling units and adjacent to the development;
  - v. orientation of buildings and general appearance of project
  - vi. safe pedestrian access to and from the public sidewalks fronting the building
- e. On at least two sides of any building used as an apartment there shall be firm level areas accessible from the road for firefighting equipment.
- f. all off street parking should be surrounded by a landscaped area of not less than .91 m in width and a wall of hedge of not less than 1.52 m (5 ft) in height...



***LUB - Section 26 - Residential Manufactured Home Subdivision District (R-MHS)***

The ASP is proposing an upscale manufactured home subdivision that occupies an area of 7.06 ha (17.44 acres) which equals 7% of the gross area that the ASP covers.

The R-MHS District under the Land Use Bylaw is a key district for the ASP.

*1. Purpose: To provide for the development of manufactured home subdivisions.*

*2. Uses: a. Permitted - manufactured home*

*3. Site Provisions:*

*a. Lot Area (minimum)*

*use - width - length - area*

*manufactured home - 15.24 m - 30.48 m - 46.45 m<sup>2</sup>*

*b. front yard depth (min) - 7.62 m*

*c. notwithstanding 3a*

*i. min lot width for a corner site shall be 16.76 m*

*ii. min lot width in a lane less subdivision shall be 16.76 m meters or 18.29 m for a corner side and the minimum depth 33.53 m*

*iii. except for a corner site, the minimum lot width for a lane less subdivision may be reduced by MPC but shall not be less than 24 m.*

*d. rear yard depth (min) - 7.62 m*

*e. side yard width (min)*

*i. interior 1.32 m*

*ii. exterior 3.66 m*

*f. notwithstanding section 3(e)*

*i. ...where a lane forms the side of the site the min side yard shall be 10% of the width of the site, however shall not exceed 3.05 m*

*ii. in a lane less subdivision at least 1 side yard shall be a minimum of 3.05 m*

- g. site coverage - 35%*
- h. density (max) - 8 dwelling units per acre*
- i. minimum size of manufactured home - 74.32m<sup>2</sup>*

### ***LUB- Section 35 - Light Industrial District (M1)***

Light industrial is the most dominant land use other than the current residential holding zone of R1-A. This district occupies 15.75 ha (38.92 acres) or 15.63% of the gross ASP area.

In keeping with the adjacent land uses the Light Industrial (M-1) District regulations are applicable to the Peace Ridge ASP.

*1. Purpose: ...to provide for industrial development.*

*2. Uses:*

*a. Permitted Uses:*

*Accessory building, auction facility, auto, farm equipment and recreation equipment sales and service, building material and supply outlet, business support service, carwash, drive through vehicle service, equipment repair and storage, food catering, gas bar, lumber yard, office complex, offices, park, service station, storage facility, warehouse and distribution sales, workshop (used by trades)*

*b. Discretionary Uses:*

*Auto body and repair, auto wrecker, bulk fuel sales, caretaker office, general industrial, manufacturing plant, manufactured home dealership, moved in building, offices, outdoor storage, parking facility, professional services, public use, recycling depot, repair shop, sign, storage shed, trucking or cartage firm, waste management.*

*3. Site Provisions:*

*a. area (min) - 464.5 m*

*b. front yard depth (min) - 6.1 m*

- c. rear yards depth (min) - 6.1 m except
  - i. rear yard abuts a residential district the rear yard shall not be less than 7.62 m*
  - ii. rear building of site abuts a railway right of way no rear yard is required.**
- d. side yard width (min) - if a side yard is provided it shall be a minimum of 4.57 m excepting that zero lot line development may be permitted on one side of the property line if a firewall is provided.*
- e. DO or MPC may reduce the side yard requirements whenever there is an abutting rail line, lane or utility lot provided fire regulations are not violated.*
- f. area for parking, loading or storage shall be located on a site at the discretion of the DO or MPC.*
- g. Site coverage (max) 60%*

#### *4. Additional Requirements:*

- a. Screening and Fencing
  - i. all sites abutting a residential district shall be screened from the view of the residential district.*
  - ii. all apparatus on the roof top of a building shall be screened.*
  - iii. outside storage areas shall be screened from adjacent sites.**
- b. no use shall be established that is or will become obnoxious by way of noise, odor, vibration, smoke, heat or any other nuisance factors.*
- c. Storage areas
  - i. storage should be placed at the rear building*
  - ii. outside display and storage areas should be kept in a clean and tidy appearance*
  - iii. all outside storage shall be screened...**

### **1.3 Public Engagement Program**

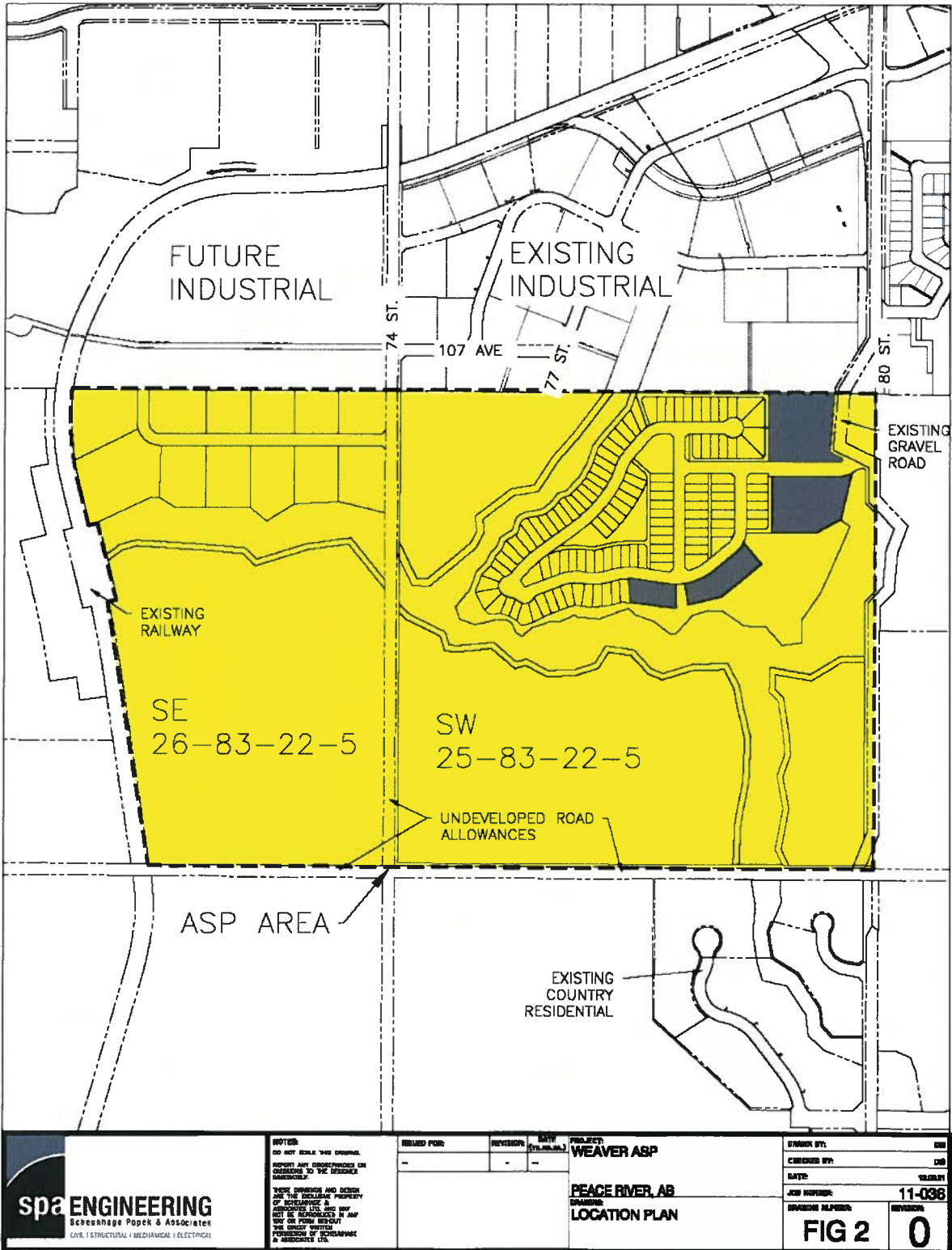
Utilizing a mailing list generated by the Mackenzie Municipal Services Agency and/or the Town of Peace River it is our intent to send direct invitations to residents and businesses within close proximity to the ASP site to attend a drop in style open house at least three weeks prior to the first reading of the ASP.

The 2 to 3 hour open house would be presented in a convenient location on a Thursday late afternoon or Saturday morning. General promotion of the open house would be via advertisements in the local paper and postings on the Town's website.

Questionnaires soliciting comments on the draft asp would be circulated at the open house and posted on the Town's website.

The objective is to receive as many constructive comments, ideas and suggestions for change as possible and to mold the best of these into an amended plan.

FIGURE 2 - LOCATION



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DESIGNED FOR:	REVISIONS:	DATE (YEAR/MONTH):	PROJECT:
			<b>WEAVER ASP</b>
			<b>PEACE RIVER, AB</b>
			<b>LOCATION PLAN</b>

DRAWN BY:	CM
CHECKED BY:	CM
DATE:	12/04/21
JOB NUMBER:	11-036
DRAWING NUMBER:	<b>FIG 2</b>
REVISION:	<b>0</b>

301 - 101 20-150 Ave, Grande Prairie, AB T8V 8Y9  
 P. 780.634.6234 F. 780.634.1880 www.spa-engineering.ca

## 2.0 Site Description



The Peace Ridge ASP is legally described as the SE 1/4 Sec. 26-83-22-W5M and SW 1/4 Sec. 25-83-22-W5M reflecting a gross area of 100.83 ha (249.16 acres).

The CNR Railway defines the western edge of the site area and the Westview Area Structure Plan on the NE 1/4 Sec. 26-83-22-W5M is immediately north of the SE 1/4.

The Peace River Business Park lies immediately north of the SW 1/4 with its established businesses located along 104<sup>th</sup> avenue and 107<sup>th</sup> avenue which back onto the Peace Ridge ASP lands.

Defined as the undeveloped road allowance, 74<sup>th</sup> street, running north/south, divides the SE 1/4 and the SW 1/4 while the existing graveled road defines the eastern edge of the ASP lands (80<sup>th</sup> street).

The Canada Land Inventory mapping for this area is covered under the Peace River index map. The area is part of the Interior Plains Physiographical Region. It has parkland vegetation in the south and vegetation of the boreal forest in the northwest.

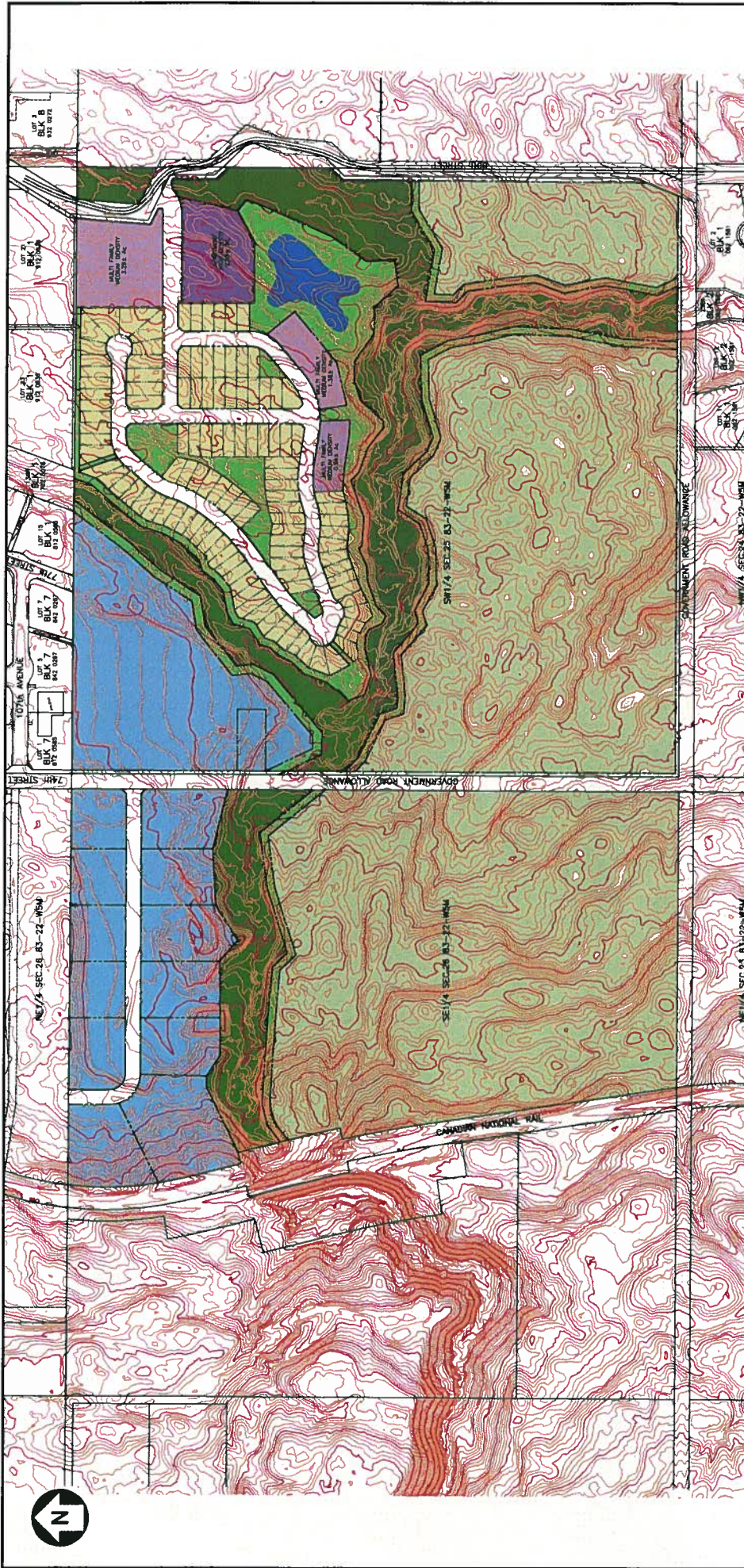
The deeply incised Peace River valley is the obvious dominant feature of this area topographically, with the mighty Peace River flowing northwest through the centre of the town.



The area is underlain by upper and lower crustaceous sedimentary rocks mainly shales of the Shaftesbury Formation and sandstones of the Dunvegan and Peace River Formations. Present surficial deposits originated from the materials transported by glaciers or deposited in former glacier lakes.

The site area that we are working with is part of the Peace River drainage system. The SW 1/4 Sec. 25 83-22-W4 slopes from the northwest to the southeast with contour elevations ranging from 425 m in the northwest to the low point of 385 m in the extreme southeast. This represents a 40 m difference in elevation over a 1/2 mile.

Contour intervals for the SE 1/4 Sec. 26-83-22-W5M are less dramatic ranging from 425 m to the north to 415 m in the south.



**LEGEND**

- ENVIRONMENTAL RESERVE
- MUNICIPAL RESERVE
- RESIDENTIAL MEDIUM DENSITY
- RESIDENTIAL HIGH DENSITY
- LIGHT INDUSTRIAL
- RESIDENTIAL
- PUBLIC UTILITY LOT
- SOLID BOARD WOOD FENCE
- ENVIRONMENTAL RESERVE
- MUNICIPAL RESERVE
- LIGHT INDUSTRIAL
- RESIDENTIAL
- PUBLIC UTILITY LOT
- SOLID BOARD WOOD FENCE

**AREA TABLE**

Category	Area (Ac)	Percentage
ER	13.99±	13.87%
MR	7.90±	7.83%
LIGHT INDUSTRIAL	15.75±	15.62%
RESIDENTIAL	46.86±	46.47%
RESIDENTIAL MEDIUM	2.27±	2.25%
RESIDENTIAL HIGH	1.19±	1.18%
MANUFACTURED HOME	7.43±	7.37%
ROADS	5.42±	5.38%
TOTAL	100.85±	100.00%

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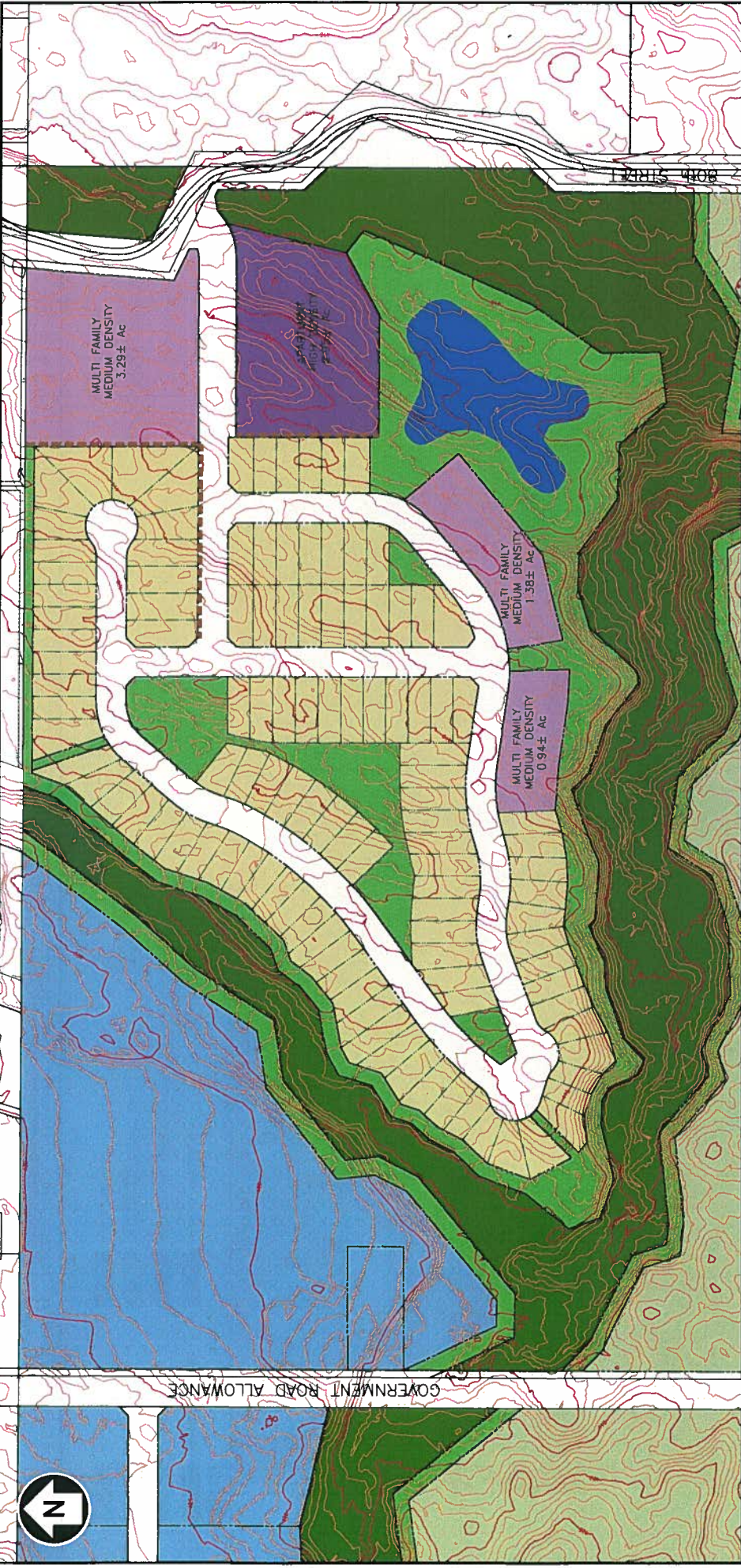
CLIENT  
 WEAVER WELDING

PROJECT  
 AREA STRUCTURE PLAN  
 SW 25-83-22-W5 AND SE  
 26-83-22-W5

DRAWING  
 CONCEPTUAL PLAN  
 SCALE 1:5000

PROJECT NO.: ---  
 DRAWN BY: ---  
 DATE: ---  
 DRAWING NUMBER  
**FIG03**





GOVERNMENT ROAD ALLOWANCE

ROAD STREET

MULTI FAMILY  
MEDIUM DENSITY  
3.29± Ac

MULTI FAMILY  
MEDIUM DENSITY  
0.94± Ac

MULTI FAMILY  
MEDIUM DENSITY  
1.38± Ac

- LEGEND**
- ENVIRONMENTAL RESERVE
  - MUNICIPAL RESERVE
  - LIGHT INDUSTRIAL
  - RESIDENTIAL
  - RESIDENTIAL, MEDIUM DENSITY
  - RESIDENTIAL, HIGH DENSITY
  - RESIDENTIAL, MANUFACTURED HOME SUBDIVISION
  - PUBLIC UTILITY LOT
  - SOLID BOARD WOOD FENCE

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PROJECT  
AREA STRUCTURE PLAN  
SW 25-51-22-W5 AND SE  
28-53-22-W3

DRAWING  
CONCEPTUAL PLAN  
ENHANCEMENT  
SCALE 1:2500

PROJECT NO.:  
DRAWN BY:  
DATE:

DRAWING NUMBER

**FIG03A**

### **3.0 Land Use Concept Plan**

The overall land use concept plan within Figure 3 illustrates a mix of residential uses from low density R1-A to medium density, high density and manufactured home uses. The subsections that follow will provide more detail on these proposed uses.

The M-1 light industrial component of the overall land use concept plan provides for a new industrial park on the west side of 74<sup>th</sup> street and an extension of the yard site for Weaver Welding Ltd. and a new lot to accommodate a fabrication shop.

The west to east and north to south drainage courses are to be preserved in their natural state and represent a sustainable way of separating light industrial and residential uses.

### 3.1 Light Industrial



The 6 ha (14.8 acre) lot proposal to be subdivided from the SW 1/4 Section of 25-83-22-W5M represents an extension of the Weaver Welding Ltd. yard site for their main office building and shop which is located on 107<sup>th</sup> avenue.

The intended industrial use of this site is to store heavy equipment, parts and metal which are integral to their current business.

A smaller 0.3 ha industrial lot subdivision application has been made to the Mackenzie Municipal Services Agency who act in the capacity of subdivision approval authority for the Town of Peace River.

This second lot is intended to accommodate an 80'x140' metal fabrication shop for Weaver Welding Ltd. The 0.30 ha (0.74 acre) lot has been designed to meet the set back requirements of the Land Use Bylaw and allow for adequate onsite parking.

A 12 m (39.37 ft) setback is provided for along the top of the bank which defines the north/south drainage course. The intent is to request MR - Municipal Reserve Credit for this 12 m wide setback as MR credit has been granted for the Lot 13 MR, Blk 1, Plan 792-3078 which forms part of the same drainage course mentioned above.

The 12 m setback will form a natural buffer to the proposed light industrial use, help to stabilize the existing slopes of the N/S drainage course and have sufficient width to accommodate a 1.5 to 2 m pathway or trail.

The 20.12 m wide north/south road allowance along the western edge of the above lots which is an extension of 74<sup>th</sup> street is proposed to be widened by 5.0 m along the eastern edge of the existing road right of way.

An application to rezone the two light industrial lots of the east side of the 74<sup>th</sup> street from R1-A residential to M-1 light industrial has already been made through the Town of Peace River in conformance with this ASP.

The concept plan on the west side of 74<sup>th</sup> street illustrates an additional 12 light industrial lots ranging in size from 0.55 ha (1.36 acres) to 1.53 ha (3.78 acres). The proposed lots have an average width of 75 m and vary in depth from 74 m to 104 m. The land use district for all proposed light industrial lots is M-1 Light Industry.

Two larger industrial lots are proposed along the western edge of this parcel backing onto the CNR rail line.

The CNR right-of-way widens immediately to the southwest of the above two lots but there are currently no plans to utilize this expanded right of way for a rail spur.

According to the real estate personnel at CNR the decision to place a rail spur into one of these industrial lots would be dependent upon the design of the site and buildings and the utilization and need for a rail spur. These are the type of details that usually would be provided through a development permit application.

Given the size of the proposed light industrial lots there is opportunity for the possible consolidation of lots if desired.

A key issue to be resolved is with respect to the proposed industrial road connecting northward into the proposed internal road system within the Westview Area Structure Plan. Currently there is no connection within the approved Westview ASP, this could be addressed with an ASP amendment.

This proposed connection would provide more efficient servicing for the looping of waterlines through both industrial parks.

If the above connection cannot be achieved then the proposed intended road would need to end in a cul-de-sac and could lead to minor transportation for large vehicles.

The west to east drainage course defines the southern property line of the proposed light industrial/ business park. The objective is to retain this feature in its natural state and have it classified as Environmental Reserve when the subdivision of the respective lands takes place. Of note is that a setback from the top of the bank has not been introduced at this location.

### 3.2 Residential (R-1A)



The land use concept plan illustrates a large area of 46.86 ha (115.79 acres) that is proposed for the development of low density single family residential dwellings. The above area currently is described as R1-A Residential under the Land Use Bylaw.

The R1-A SE 1/4 of Sec. 26-83-22-W5M is bounded by the east/west drainage course on the north, the CNR railway on the west, 74<sup>st</sup> street on the east and an undeveloped road allowance along the southern perimeter of this area.

The R1-A portion of the SW 1/4 of Sec. 25-83-22-W5M is defined by the east/west drainage course on the north, the undeveloped extension of 74<sup>th</sup> street on the west and the developed graveled road (80<sup>th</sup> street) on the east. An undeveloped road allowance defines the southern boundary of this residential area.

A continuation of the east/west drainage course heads southward in this area creating a block of residential lands between 80<sup>th</sup> street and the drainage course.

The purpose of depicting this area as Residential R1-A is to remain in conformity with the land use bylaw. The Peace Ridge ASP Concept Plan proposes to retain this area as a

residential holding R1-A zone until such time as the other residential and light industrial areas are fully serviced and developed.

Given the current market the R1-A district of the large area could remain in place for 10 years or more before more detailed planning is put into place for the development of these lands.

It is expected that that medium and high density residential development and perhaps neighborhood commercial land uses would be integrated into the single family residential neighborhoods that would be designed in the latter phases of development of these lands.

The focus within this area structure plan is to provide more detail for the residential and light industrial lots envisioned as being developed within the next 10 years.

Based on the current maximum density for the R1-A district in the Land Use Bylaw approximately 694 single family dwellings could be built on the 115 plus acres presently designated for single family residential use.

### 3.3 Manufactured Home Subdivision



Within the land use concept plan approximately 7.06 ha (17.44 acres) have been dedicated to the development of an upscale manufactured home subdivision. Section 26 - Residential Manufactured Home Subdivision District (R-MHS) is the applicable district under the Land Use Bylaw for this designated area within the ASP.

Manufactured home subdivisions are often dominated by vehicles parked in the front side yard and on the street, often leading to a lower market value of the residential units within the subdivision. In recent years manufactured home builders have introduced new models that have a front entrance. The combination of a front or back entrance and a detached garage makes for a more functional and aesthetically pleasing manufactured home subdivision.

18.5 m to 20 m wide rights of way for local streets, including separate concrete sidewalks and treed boulevards on both sides of the street, are recommended.

The minimum lot width is 15.24 m and the minimum lot length is 30.48 m. Corner lots are expected to have a minimum width of 16.76 m but this can be reduced by MPC to 15.24 m. The minimum depth for corner sites is 33.53 m.



All lots within the manufactured home subdivision will meet or exceed the regulations within the Land Use Bylaw for R-MHS as previously cited in this document.



Approximately 42 manufactured homes back onto the significant drainage course that runs through the site. A parkway corridor is proposed of at least 12 meters in width on the top of the bank. The actual drainage course is considered to be environmental reserve and the intent is to preserve it in its natural state.

Each of the above lots will have to be graded to accommodate the rectangular form of the home and to ensure that the site drainage is managed carefully.

It is proposed that a trail system be built within this parkway corridor providing access to the west, north and south. Given that a laneways are not being proposed within the manufactured home subdivision, all lots will require a minimum side yard of 3.05 meters to accommodate off street parking. Careful attention will need to be paid to preserve as much of the natural vegetation as possible when developing the trail.

The ravine trail system will need to connect to the proposed park system within the subdivision. At least 4 municipal reserve or park parcels are being proposed within this

subdivision recreational playground equipment may be included in at least one of these municipal reserve parcels.

The manufactured home subdivision would be developed in phases moving from east to west. Depending on market demand and partnerships with manufactured home suppliers the subdivision could be developed in 5 or 6 phases each consisting of 20 or more lots.

### 3.4 Semi-Detached Housing - Residential (R2-A)



Section 22, Residential R-2A of the current land use bylaw provides regulations that are most applicable to the 3.29 acre medium density site as you enter the neighborhood from 80<sup>th</sup> street.

The design of these parcels is intended to accommodate bungalow style side by side dwellings which in the Town of Peace River's LUB are considered to be semi-detached dwellings as opposed to duplexes which are up and down 2 storey units.

The bungalow style dwellings with attached garage are well suited for an adult living retirement community.

This site can accommodate at least 39 semi-detached units, based on maximum density as set out in the LUB.

This project is recommended to be developed as a bare land condominium project which provides for title to the lot and unit with the intended road system as common property owned and maintained by the condo association.



The usual carriageway width for these types of projects is 8 meters, while minimum public road right of ways normally require at least 15 meters of width.

It is also recommend that restrictive covenants be put into place where the landscaping of the development is uniform and maintained by a contractor. Limitations would be placed on fences and the placement of decks to allow for the grounds to be maintained throughout the development. Winter maintenance of common property would be the responsibility of the condo association.

Given the site location, site fencing would need to meet the town's approval at the development permit stage.

### 3.5 Row Housing - Medium Density Residential



The land use concept plan proposes two row housing sites that back onto the ravine (drainage course).

The first is a 1.38 acre site that also backs onto the storm management lake and surrounding parkland. The second is a smaller 0.94 acre site that backs onto parkland. Site design would need to conform to the Land Use Bylaw and would be reviewed at the development permit stage.

Section 23 - Residential Medium Density District (R-3), of the Land Use Bylaw would be most applicable to the row housing units proposed.

While two storey buildings are the most common type of row housing the LUB does allow for a height maximum of 3.5 storeys.

The maximum density is 24 units per acre thus the larger site could accommodate 33 units and the smaller site could produce 22 units.

### 3.6 Apartment - Residential High Density



A 2.95 acre apartment site is proposed within the Land Use Concept Plan of the Peace Ridge ASP adjacent to the collector road entrance to the neighborhood.

The applicable section of the Land Use Bylaw would be Section 24 - Residential High Density District (R-4). A maximum of approximately 104 units could be accommodated on this site under the Land Use Bylaw. Parking requirements under the LUB could be addressed via underground or surface parking, dependant on soil conditions disclosed in a geotechnical report for the site.

Fencing of the site would be reviewed at the development permit stage to ensure it meet town requirements and matches with the overall aesthetic concept of the development.

A 24 meter wide collector entrance is proposed with a landscaped centre median, separate sidewalks, and treed boulevards on both sides of the entrance. Provisions for a transit stop should also be made at this location to facilitate transit use.

The apartment site backs onto a storm management lake which is surrounded by an extensive park system. One or two entrance points from the apartment site to the parkway and trail system are recommended.

An important feature of the apartment building would be ground level retail space. This provision could encourage small local businesses and make the area more attractive to potential homeowners.

### **3.7 Municipal/ Environmental Reserve**



The gross developable area that the Peace Ridge ASP covers is 100.83 ha (249.16 acres). The slough areas, drainage courses and steep side slopes account for approximately 13.99 ha (34.57 acres), or approximately 13.87% of the overall titled area.

When subdivision of the lands proceeds the above natural areas be classified as Environmental Reserve (ER) and left in their natural state.

Natural features of the site would be complimented by parks and trails in support of a more sustainable environment. The introduction of treed boulevards will help to make this proposed development even more environmentally conscious.

Dedicating the natural lands as Enviromental Reserve leave 86.84 ha of developable land to which MR calculations would be applied. Of this 86.84 ha, 8.6 ha (10%) would be required to be dedicated as Municipal Reserve (MR).

The land use concept plan already provides for 7.68 ha or MR which is certainly greater than 10% of the area proposed to be subdivided.



Eventual subdivision of the extensive R1-A lands 46.86 ha would no doubt add another 4.6 ha of MR to that area.

The concept land use plan strategically places 4 MR parcels within the neighborhood with the intent of linking each to an integrated natural or asphalt trail system.



A combination of both passive and active recreational uses would be accommodated with each of these larger parks.

Development of an extensive park surrounding the man made storm management facility is an important feature of the concept plan.

The proposed lake should be designed as a wet pond meeting local and Alberta Environment standards, including water quality considerations.

The concept plan extends a linear park system along the top of the bank of the drainage course or ravine. This system provides interesting potential for the development of nature trails and passive seating areas.

### 3.8 Population Projections

Population calculations are shown below based on density parameters in the Land Use Bylaw, and also on historical densities from previous experience in the preparation of area structure plans for other municipalities in Alberta.

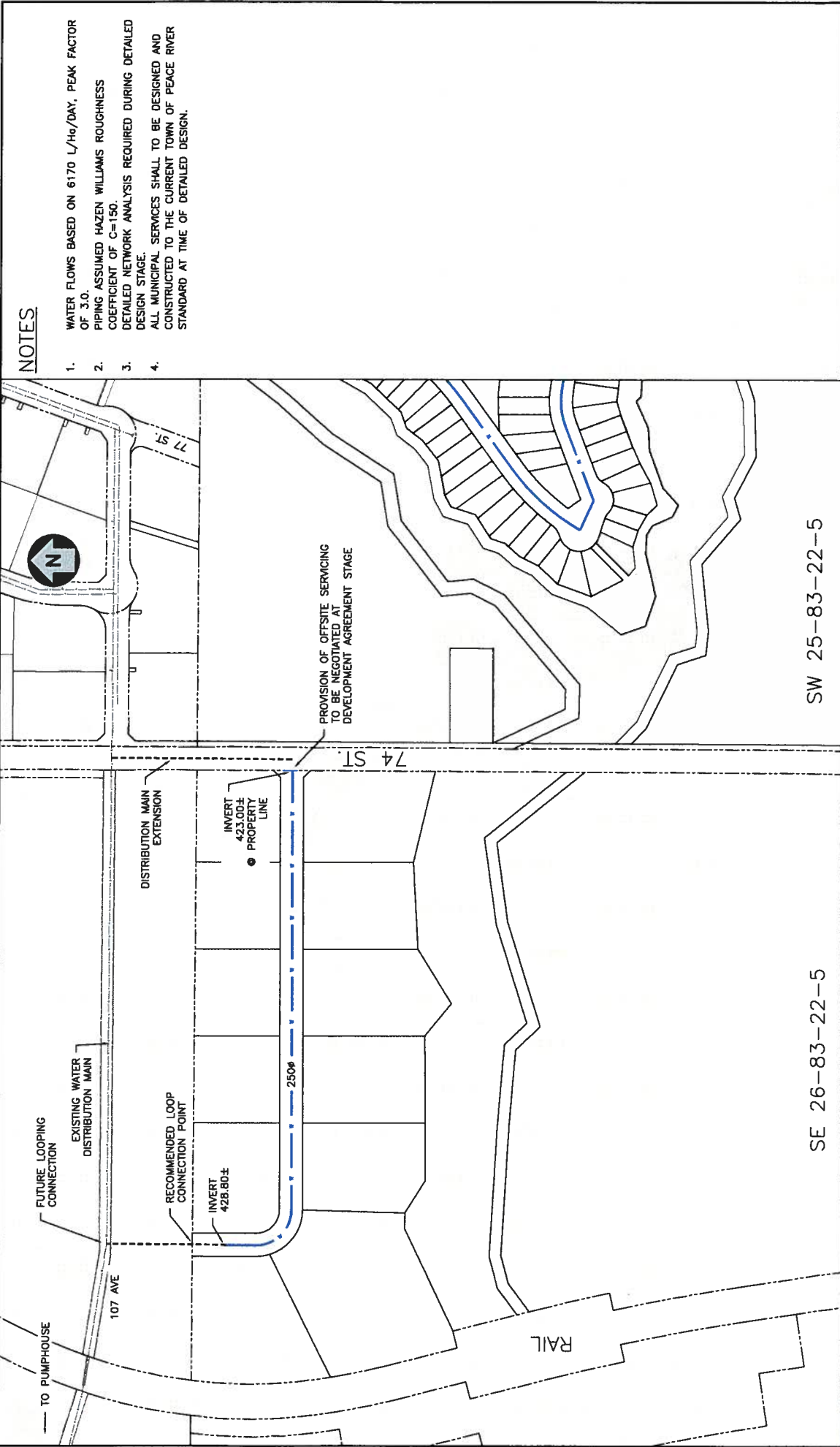
Manufactured home units	114 units x 3.1 people per unit	353 people
Semi-detached condo units	39 units x 2 people per unit	78 people
Row housing	55 units x 2.4 people per unit	132 people
Apartment units	104 units x 2.4 people per unit	249 people
Single family residential	525 units x 3.1 people per unit	1629 people
	<b>Total</b>	<b>2441 people</b>
Potential school population	2441 x 20%	488 students

**NOTES**

1. WATER FLOWS BASED ON 320 L/P/DAY.
2. PIPING ASSUMED HAZEN WILLIAMS ROUGHNESS COEFFICIENT OF C=150.
3. DETAILED NETWORK ANALYSIS REQUIRED DURING DETAILED DESIGN STAGE.
4. ALL MUNICIPAL SERVICES SHALL TO BE DESIGNED AND CONSTRUCTED TO THE CURRENT TOWN OF PEACE RIVER STANDARD AT TIME OF DETAILED DESIGN.



<p><b>spa ENGINEERING</b>  <small>REGISTERED PROFESSIONAL ENGINEERS</small></p> <p>201 - 10125-120 AVE.          GRANDE PRAIRIE, AB          T5V 8N 9S 2.60S5          F. 780.533.1880          WWW.SPA-ENG.CA</p>	<p>CLIENT  <b>WEAVER WELDING</b></p>	<p>PROJECT  <b>AREA STRUCTURE PLAN                  SW 25-83-22-W5 AND SE                  26-83-22-W5</b></p>	<p>DRAWING  <b>CONCEPT                  WATER DISTRIBUTION PLAN                  SCALE 1:3000</b></p>
<p>PROJECT NO.: 11-036</p>		<p>DRAWING NUMBER  <b>FIG 4</b></p>	
<p>DRAWN BY: DE</p>		<p>DATE: 12.10.15</p>	



**NOTES**

1. WATER FLOWS BASED ON 6170 L/Hr/DAY, PEAK FACTOR OF 3.0.
2. PIPING ASSUMED HAZEN WILLIAMS ROUGHNESS COEFFICIENT OF C=150.
3. DETAILED NETWORK ANALYSIS REQUIRED DURING DETAILED DESIGN STAGE.
4. ALL MUNICIPAL SERVICES SHALL TO BE DESIGNED AND CONSTRUCTED TO THE CURRENT TOWN OF PEACE RIVER STANDARD AT TIME OF DETAILED DESIGN.

SW 25-83-22-5

SE 26-83-22-5

 201 - 10126-120 AVE. 10000 PEACERIVER, AB TEL 819 780-5326 P. 780-5326025 WWW.SPACONCA.COM WWW.SPACONCA.CA	CLIENT WEAVER WELDING	PROJECT AREA STRUCTURE PLAN SW 25-83-22-WS AND SE 26-83-22-WS	DRAWING CONCEPT WATER DISTRIBUTION PLAN SCALE 1:3000	PROJECT NO.: 11-036 DRAWING NUMBER DRAWN BY: DATE: 12.10.15	<b>FIG 5</b>

## 4.0 Servicing

### 4.1 Water



The single family residential holding zone (R1-A) and the manufactured home subdivision portions of the area structure plan are able to be serviced through two servicing points shown on Figure 4 utilizing 250 mm diameter polyvinyl chloride (PVC) piping. Water will be distributed throughout the development to offset the pressure losses due to elevation changes on site.

Preliminary modeling indicates that fire flows of 75 L/s would be available with residual pressures of 170 kilopascals, assuming a supplied pressure from the Town's existing system of 310 kilopascals.

The layout of the road right of ways within the residential area of the ASP create two internal loops which will help to minimize pressure losses in order to maximize the availability of water for fire flows and resident demands .

The Town's General Municipal Servicing Standards set the maximum spacing for fire hydrants at 300 meters for residential areas and 150 meters for industrial areas. Preliminary engineering design suggests that fire hydrants be located every 150 meters for residential areas and every 90 meters for the industrial areas.

The industrial area on the west side of 74<sup>th</sup> Street can be serviced with a 300 mm PVC water main as illustrated in Figure 5. Preliminary calculations indicate that, assuming a supplied pressure of 310 kilopascals (45 psi) at connection 1, a fire flow of 225 L/s would result in a residual pressure of approximately 181 kilopascals at the north end of the road right of way.

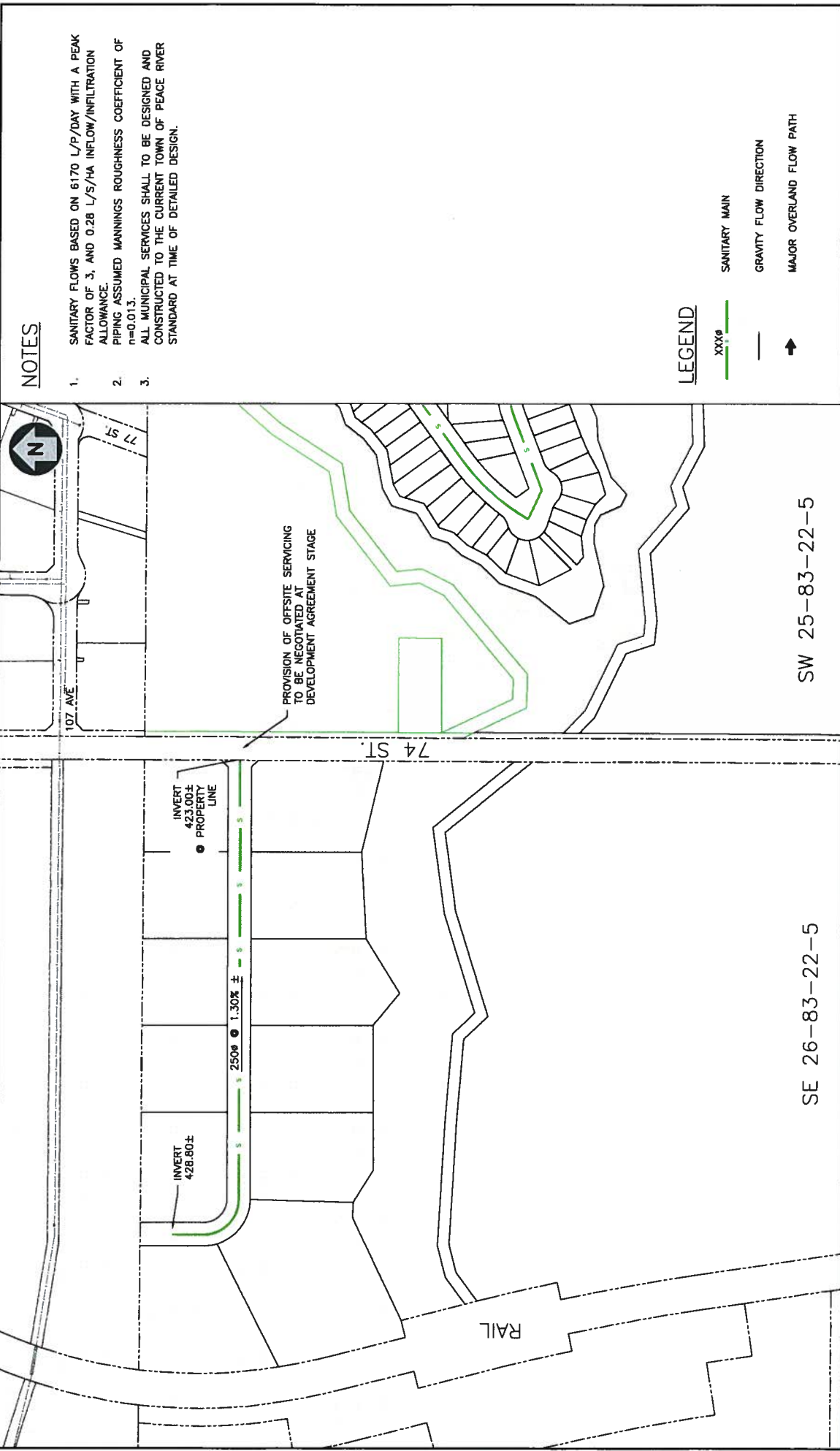
It is recommended that the northern road right of way extend into the Westview Area Structure Plan development which would provide for more efficient servicing of the industrial area. The looping of the waterline would help to increase working water pressures and maximize available fire flows during an emergency event.

It is recommended that a detailed water distribution model be created and analyzed during the design phase of the proposed development to confirm water main sizes for the whole area.

The Town has three water reservoirs and it is assumed that this area would be supplied by the reservoir to the northwest of this site.







**NOTES**

1. SANITARY FLOWS BASED ON 6170 L/P/DAY WITH A PEAK FACTOR OF 3, AND 0.28 L/S/HA INFLOW/INFILTRATION ALLOWANCE.
2. PIPING ASSUMED MANNINGS ROUGHNESS COEFFICIENT OF n=0.013.
3. ALL MUNICIPAL SERVICES SHALL TO BE DESIGNED AND CONSTRUCTED TO THE CURRENT TOWN OF PEACE RIVER STANDARD AT TIME OF DETAILED DESIGN.

**LEGEND**

- XXX6 SANITARY MAIN
- GRAVITY FLOW DIRECTION
- ➔ MAJOR OVERLAND FLOW PATH

<b>spa ENGINEERING</b> 201 10126-120 AVE. TEBBING PARKET, AB P. 780.532.025 F. 780.532.020 WWW.SPACND.CA	CLIENT WEAVER WELDING	PROJECT AREA STRUCTURE PLAN SW 25-83-22-W5 & SE 26-83-22-W5	DRAWING CONCEPT SANITARY SEWER PLAN SCALE 1:3000	PROJECT NO.: 11-036 DRAWING NUMBER 11-036
	DRAWN BY: JBS DATE: 12.10.15	<b>FIG 7</b>		

## 4.2 Sanitary



The Developer and the Developer's Engineer are responsible to ensure that the sanitary sewer system is designed and constructed according to accepted Engineering practice, local, and provincial standards.

Section E of the Town's General Municipal Servicing Standards provides the detailed requirements of the sanitary sewer system that will meet the needs of the eventual development of these lands.

A gravity sanitary sewer system is proposed to service the proposed development of the area structure plan as illustrated in Figure 6. A 200 mm PVC piping system is proposed to convey flows throughout the development to a single service point at the eastern edge of the plan area.

The preliminary design allows for inflow and infiltration as per the Town's specifications as well as 300 L/ha/day of flow for the residential uses proposed within the land use concept plan.

Tie in locations and depths of the sanitary mains will be confirmed at the detailed design stage in compliance with the Town's Engineering Standards.

Based on flows of 6,170 L/ha/day, a peaking factor of 3, and 0.28 L/s/ha inflow/infiltration allowance, sewage flows in the proposed industrial subdivision can be accommodated by a 250 mm PVC main within the north/south road allowance as illustrated in Figure 7. Again the sanitary servicing requirements within Section E of the Towns General Municipal Servicing Standards will have to be met for the development of these lands to proceed.

**NOTES**

1. STORM MAINS TO BE SIZED AS PER TOWN OF PEACE RIVER STANDARDS.
2. STORMWATER POND TO BE DESIGNED TO ALBERTA ENVIRONMENT STANDARD.
3. WEIGHTED RATIONAL C FACTOR OF 0.40 USED TO DETERMINE APPROXIMATE STORMWATER RETENTION REQUIREMENTS.
4. ALL MUNICIPAL SERVICES SHALL TO BE DESIGNED AND CONSTRUCTED TO THE CURRENT TOWN OF PEACE RIVER STANDARD AT TIME OF DETAILED DESIGN.
5. DESIGN CONSULTANT SHALL RECEIVE APPROVAL FROM ALBERTA ENVIRONMENT FOR CREEK OUTFALL PRIOR TO CONSTRUCTION.
6. DESIGN CONSULTANT SHALL PERFORM THE NECESSARY STUDIES TO ESTABLISH THE ALLOWABLE RELEASE RATE FOR ALL OUTFALLS TO ST. GERMAINE CREEK AND ADJUST DETENTION VOLUME ACCORDINGLY.



**LEGEND**

- STORM MAIN
- GRAVITY FLOW DIRECTION
- ➔ MAJOR OVERLAND FLOW PATH

<b>spa ENGINEERING</b> Structural, Mechanical & Electrical 201 - 10126-120 Ave. Grande Prairie, AB P. 780.532.6039 F. 780.532.1880 www.spa-eng.ca	CLIENT WEAVER WELDING	PROJECT AREA STRUCTURE PLAN SW 25-83-22-W5 & SE 26-83-22-5	DRAWING CONCEPT STORM WATER MANAGEMENT PLAN SCALE 1:3000	PROJECT NO.: 11-036 DRAWING NUMBER <b>FIG 8</b>
	DRAWN BY: DE DATE: 12.10.15			

### 4.3 Storm Management System



The Developer and the Developer's Engineer are responsible to ensure that the storm sewer system is designed and constructed to meet the Town's Engineering Standards and in the case of storm drainage also the requirements of Alberta Environment.

The proposed development of the asp area can be serviced with a conventional dual drainage system consisting of a piped minor system and a major surface drainage system and storm management facility.

The piped minor system needs to be designed to meet local standards while the major system will need to be designed to the satisfaction of Alberta Environment to accommodate the storm runoff of a 1:100 year storm event while restricting outflows to predevelopment rates.

The intent of the major drainage system is to provide sufficient surface flow management in order to minimize flooding and property damage during a 1:100 year rainfall event. The design of the major system must not be limited to the proposed

development area but must also consider surface flows from adjacent areas and the impact on downstream development and receiving water bodies.

The storm management facility or Lake proposed within the residential area of the area structure plan is an important element of the overall design of the land use concept plan. The objective of this water body is to offer both passive and active recreational opportunities to the residents of the area. The land surrounding the Lake will form part of an extensive park system with trails and seating areas and active play space.

The key to success for this park system is for the manmade Lake to sustain a level of water that is both aesthetically pleasing and functional. Preliminary calculations indicate that this facility will need to store at least 5000 cubic meters of runoff but this figure will need to be confirmed at the detailed design stage. A license from Alberta Environment will be required for this storm management facility and the related outfall to St. Germaine Creek once detailed design of the facility is complete. The Federal Department of Fisheries and Oceans may also need to be consulted respecting the release of water into St Germaine Creek.

The proposed industrial area to the west is intended to have a rural cross section road right of way with surface ditching to manage storm runoff from the road surface. In the configuration shown on the land use concept, these industrial lots would require on-site stormwater management unless a shared stormwater facility is constructed. Further research will be done at the design stage of development to investigate whether a shared storm management facility is more practical.

The important factors in utilizing a rural cross section with ditches in an industrial area is to ensure that the grading of the ditch and the placement of driveway culverts are constructed in a manner that allows for positive drainage over the long run. Ditches would need to be designed and constructed to ensure long term ability to convey storm water flows adequately and also be aesthetically pleasing. This would include cross section, slope, and finishing considerations. The Developer of the subdivision is often the best person to ensure that the ditches are properly graded, seeded and that culverts are placed in pre-developed driveways.



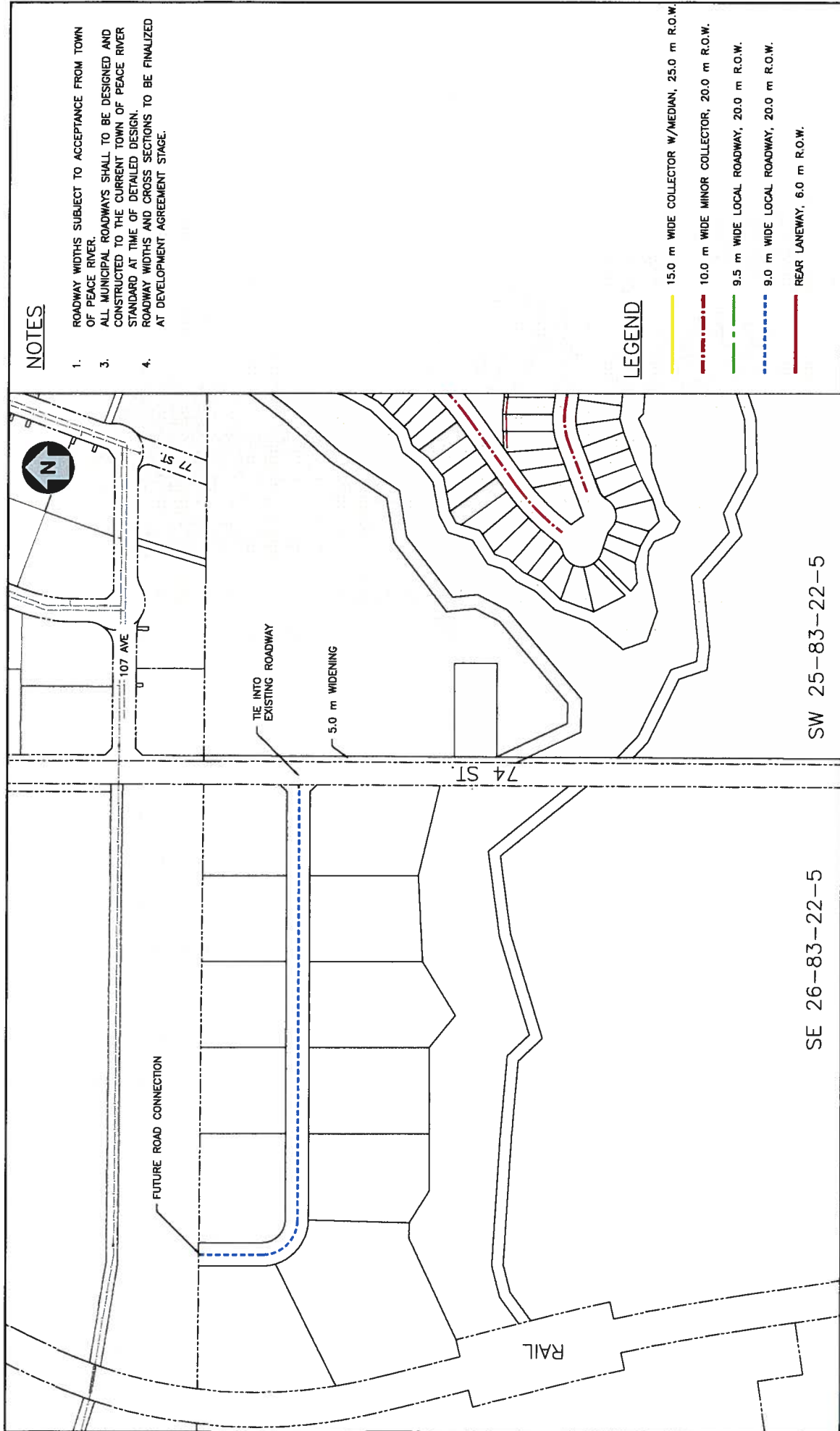
**NOTES**

1. ROADWAY WIDTHS SUBJECT TO ACCEPTANCE FROM TOWN OF PEACE RIVER.
2. ALL MUNICIPAL ROADWAYS SHALL TO BE DESIGNED AND CONSTRUCTED TO THE CURRENT TOWN OF PEACE RIVER STANDARD AT TIME OF DETAILED DESIGN.
3. ROADWAY WIDTHS AND CROSS SECTIONS TO BE FINALIZED AT THE DEVELOPMENT AGREEMENT STAGE.

**LEGEND**

- 15.0 m WIDE COLLECTOR W/MEDIAN, 25.0 m R.O.W.
- 10.0 m WIDE MINOR COLLECTOR, 20.0 m R.O.W.
- 9.5 m WIDE LOCAL ROADWAY, 20.0 m R.O.W.
- 9.0 m WIDE LOCAL ROADWAY, 20.0 m R.O.W.
- REAR LANEWAY, 6.0 m R.O.W.

<p>101 - 10126-120 AVE, 8500 S. PARKWAY, AB TSV B19 P. 780.332.6035 WWW.SP&amp;E.NL.CA</p> <p>CLIENT WEAVER WELDING</p>	<p>PROJECT AREA STRUCTURE PLAN SW 25-83-22-45 AND SE 26-83-22-45</p>	<p>DRAWING CONCEPT WATER DISTRIBUTION PLAN SCALE 1:500</p>	<p>PROJECT NO.: 11-036 DRAWING NUMBER</p>
	<p>DRAWN BY: JDS</p>	<p>DATE: 12.10.15</p>	<p><b>FIG 9</b></p>



**NOTES**

1. ROADWAY WIDTHS SUBJECT TO ACCEPTANCE FROM TOWN OF PEACE RIVER.
3. ALL MUNICIPAL ROADWAYS SHALL TO BE DESIGNED AND CONSTRUCTED TO THE CURRENT TOWN OF PEACE RIVER STANDARD AT TIME OF DETAILED DESIGN.
4. ROADWAY WIDTHS AND CROSS SECTIONS TO BE FINALIZED AT DEVELOPMENT AGREEMENT STAGE.

**LEGEND**

- 15.0 m WIDE COLLECTOR W/MEDIAN, 25.0 m R.O.W.
- 10.0 m WIDE MINOR COLLECTOR, 20.0 m R.O.W.
- 9.5 m WIDE LOCAL ROADWAY, 20.0 m R.O.W.
- 9.0 m WIDE LOCAL ROADWAY, 20.0 m R.O.W.
- REAR LANEWAY, 6.0 m R.O.W.

<b>spa ENGINEERING</b> <small>201 - 10126-120 AVE.          GRANDS PRAIRIE, AB          T7B0.S3Z.8035          F. 780.532.1880          WWW.SPA-ENG.CA</small>	CLIENT WEAVER WELDING	PROJECT AREA STRUCTURE PLAN SW 25-83-22-W5 AND SE 26-83-22-W5	DRAWING CONCEPT WATER DISTRIBUTION PLAN SCALE 1:3000	PROJECT NO.: 11-036 DRAWN BY: JDS DATE: 12.10.15	DRAWING NUMBER <b>FIG 10</b>
	SW 26-83-22-5				



## 4.4 Roads, Sidewalk and Trail Systems



The proposed local residential streets occupy a maximum right of way of 20 meters with a 10 meter wide asphalt surface. This right of way allows for a separate sidewalk on both sides of the street with a grassed and treed boulevard. The manufactured home subdivision also proposes an extensive laneway system within a 6 meter right of way.

Separate sidewalks 1.5 meters wide and boulevards can also be achieved within an 18 meter right of way and the decision to construct which one will be made at the development stage.

Separate sidewalks with grassed and treed boulevards provide for a more aesthetically pleasing, pedestrian friendly, green, streetscape. More often than not, maintenance of the boulevard grass and trees is managed by the individual home owner even though it is public domain.

Concrete sidewalks are proposed to be a minimum of 1.5 meters wide with curb ramps at all curbed intersections.

A 25 meter row is proposed at the entrance to the development off of 80<sup>th</sup> street. This right of way would be large enough to accommodate 15 meters of asphalt, separate

sidewalks and boulevards and a prominent landscaped median. The entrance would reinforce the upscale nature of the development.

The minor collector and entrance collector roads would be able to accommodate public transit stops at strategic locations throughout the neighborhood.

With respect to street lighting it is recommended that a classical (historical) or traditional light standard be utilized to support the strong pedestrian environment that is being advocated within the residential portion of the ASP.

The Developer will be responsible for the development of a trails and pathway landscaping plan for the residential neighborhood. The intent is to utilize a combination of 2 meter wide asphalt trails and 1.5 meter natural trails to connect all of the parks proposed within the development.



Nature trails adjacent to areas designated as environmental reserve are best to be constructed of natural material as opposed to asphalt. Asphalt trails are more typically built within the park areas surrounding the storm management lake and through the integrated linear park system that is being proposed in the manufactured home subdivision

The proposed local industrial road right of way is 20 meters wide with a minimum of 9.0 meters of asphalt road surface. In keeping with the profile of industrial roads in the adjacent existing industrial subdivisions the industrial road cross section contains ditches to manage the drainage from the road.

Again the land use concept plan within the ASP proposes that this industrial road connect northward to the Westview ASP industrial area that has yet to be developed to provide a more efficient servicing system for this area.



## 4.5 Shallow Utilities

The Town's General Servicing Standards set out the requirements for the provision of shallow utilities. ATCO have the franchise agreement for providing both natural gas and power to the Town while Telus is responsible for the provision of telephone & internet communication. Coordination with the shallow utility providers is critical at the development stage but also important at the preliminary design & engineering stages in order to facilitate the efficient expansion of shallow utilities into the neighborhoods being subdivided.