

**Sandhill Estate**

**Fire Protection Plan**



Prepared for:  
Lacombe County

Prepared by:  
Stantec Consulting Ltd

November 29, 2016

## Table of Contents

<b>1.0</b>	<b>PROPOSED FIRE MITIGATION MEASURES.....</b>	<b>1</b>
1.1	TOWN OF BLACKFALDS FIRE AND RESCUE.....	1
1.2	FIRESMART .....	2
1.3	BUILDING STANDARDS AND EXPOSURE PROTECTION .....	2

The Sandhill Estates development has been planned as a fourteen lot development integrated into the existing community of Burbank. The overall vision of Sandhill Estates is to provide moderately-sized country residential lots that provide residents an opportunity for rural lifestyle with the convenience of amenities and services available in Lacombe County at Burbank and the Town of Blackfalds.

## 1.0 PROPOSED FIRE MITIGATION MEASURES

The Sandhill Estate development proposes the following Fire Plan as a means of fire protection:

- Response time from Town of Blackfalds Fire Department;
- FireSmart Principles to reviewed to address wildfire protection and containment within the natural areas preserved in the plan area and adjoining undeveloped area;
- Structures will be constructed to a higher standard to better protect exposures and create proper separation of structures;
- Considerations with respect to fire protection during construction.

### 1.1 TOWN OF BLACKFALDS FIRE AND RESCUE

The location of the Sandhill Estates development is within 4.0 km of the Town of Blackfalds Fire Department located at 4308 South Street. Direct access to the Plan Area from the Fire Department is via Vista Trail and Highway 597.

#### Response Time Components

NFPA 1710 (2010 Edition) references three segments from NFPA 1221 – the alarm transfer time, the alarm answering time, and the alarm processing time.

- The alarm transfer time is the time interval from the receipt of the emergency alarm at the public service answering point (PSAP) (for example, a 911 call centre maintained by a police agency) until the alarm is first received at the fire department communication centre.
- The alarm answer time is the time interval that begins when the alarm is received at the communication centre and ends when the alarm is acknowledged at the communication centre.
- The alarm processing time is the time interval from when the alarm is acknowledged at the communication center until response information begins to be transmitted via voice or electronic means to emergency-response facilities (ERFs or fire stations) and emergency-response units (ERUs or fire apparatus).

NFPA 1720 (2010 Edition) applies to volunteers who typically don't have personnel on-duty in stations and instead respond to page-out from home, work, or elsewhere. In general, 1720 provides the following benchmarks:

- Rural Zones with <500 people/sq. mi. call for 6 staff to assemble an attack in 14 minutes, 80% of the time.

## **1.2 FIRESMART**

FireSmart is an initiative by Partners In Protection of Edmonton, Alberta with the main goal of minimizing the risk of wildfire. Key elements of the FireSmart initiative focus on education, natural landscape, and architectural controls. In developing Sandhill Estates, the Developer shall implement the following guidelines set out by Alberta Sustainable Resource Development and FireSmart through development controls with the homeowners. The homeowners association shall initiate the FireSmart Community recognition program which includes ongoing monitoring of compliance, community information distribution and training.

- Require a minimum 10 meter fuel-reduced area around structures within the property boundary;
- Remove limbs of coniferous trees within 2 meters of the ground. No grubbing in this zone to protect living roots;
- Ladder fuels (lower branched and shrub layer) must be reduced to limit the spread of ground fires;
- Remove any deadfall and combustible debris annually;
- Encourage the use of FireSmart Building materials in home construction;
- Consider additional engineered features such as those presented in NFPA 1144 to reduce the potential for ignition of homes from wildfire.

## **1.3 BUILDING STANDARDS AND EXPOSURE PROTECTION**

The following standards and guidelines shall be implemented in the development. These will be included in and enforced through the development design controls.

- Pre-identify the building pocket based upon the Lacombe County Land Use Bylaw to maximize separation from each building;
- Construct exposing building faces with a 45 minute fire resistance rating, using only noncombustible cladding materials which do not melt under 700 C;

- Provide unvented soffits protected with 6.3 mm thick Hardie board, 12.7 mm thick type X gypsum board, or 12.7 mm thick plywood under a non-combustible exterior;
- Where practical, separate detached garages, sheds, fire pits, or other structures with a minimum separation distance of 9m from the primary residence on the same lot.

## 9.0 FIRE PROTECTION DURING CONSTRUCTION

The following guidelines shall be implemented and enforced by the developer during construction of structures in the development:

- Establish a fire safety plan for the construction site in consultation with neighboring fire departments;
- Provide and maintain access roads conforming to the AFC article 5.6.1.4 prior to construction of structures;
- Arrange for a mutual aid / automatic aid agreement with the Blackfalds Fire Department prior to construction of structures;
- Appoint an individual qualifies as a Safety Codes Officer in the Fire discipline or certified through NFPA 1031 or recognized Fire Prevention officer to supervise all fire prevention during construction;
- Permit smoking only on designated non-combustible pads with no smoking signs posted throughout the rest of the construction site;
- Establish global hot work procedures applicable to all contractors and individuals on the site;
- Separate construction sheds and trailers away from residential buildings by at least 15 meters and 9 meters from each other;
- Provide suitable fire extinguishers within 10 meters of all construction areas.