



AREA CONCEPT PLAN

SUBMISSION AND CIRCULATION DRAFT
JANUARY 2016

CIVICWORKS
PLANNING + DESIGN



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INTRODUCTION

1.1 PURPOSE

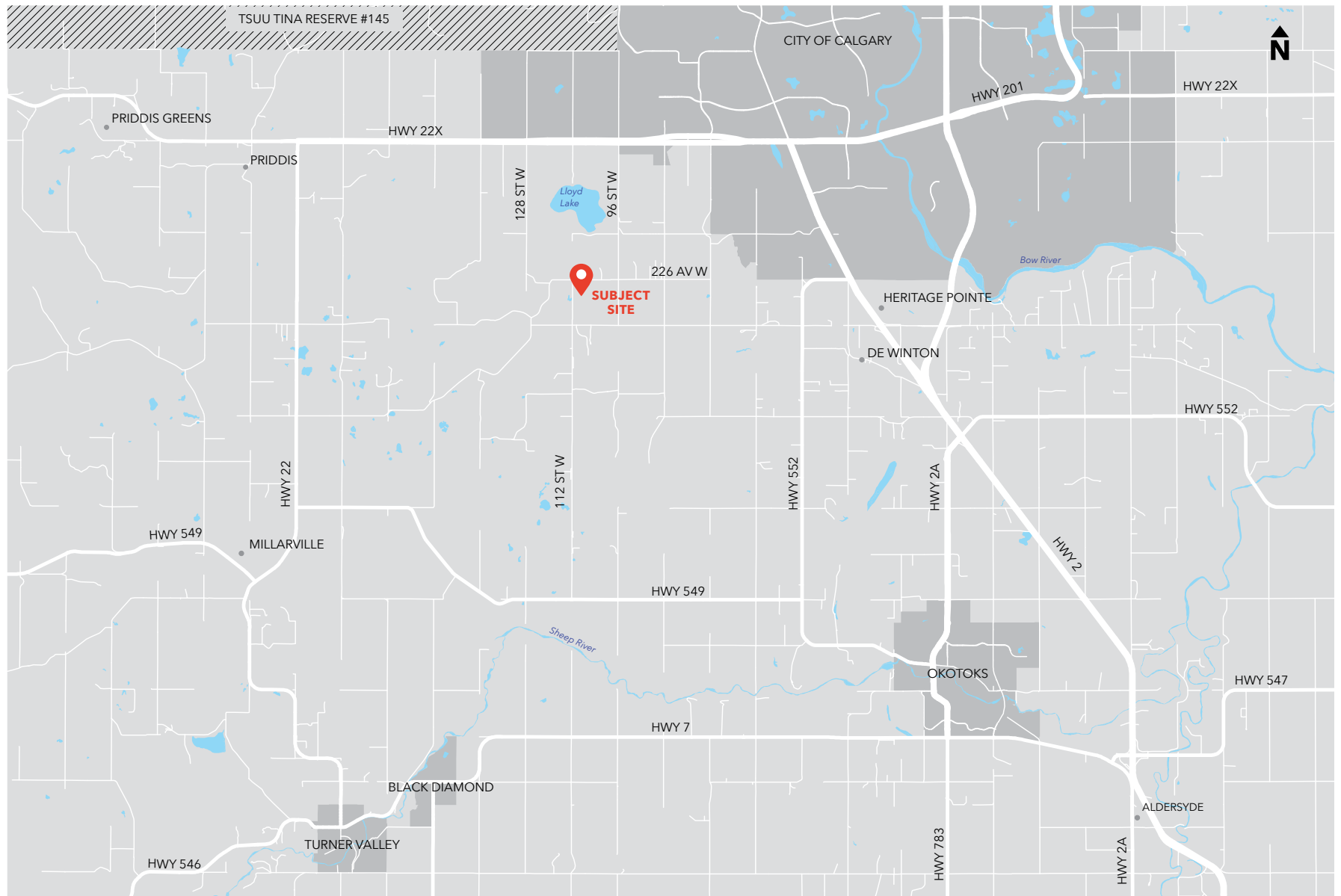
The purpose of The Granary Road Area Concept Plan (ACP) is to establish a comprehensive planning framework for future development of a first class Agricultural Edutainment Park, Farmer's Market and Greenhouse. The Granary Road "Agri-Edutainment" facility is located on land legally described as the north west quarter of Section one (1), Township twenty-two (22), Range two (2) west of the Fifth (5) meridian (refer to **Figure 1 - General Location**), within Municipal District of Foothills. The site contains 145.08 acres (58.71 hectares) acres in total.

This site is currently designated Agricultural District under the Foothills land use bylaw, the Granary Road ACP outlines the future redesignation of a portion of this site to the Agri-Business Land Use District to allow for this use. The promotion of Agricultural business, sustainably grown food and locally grown products, continued education, economic development and tourism are all consistent with the direction of the Municipal District of Foothills Municipal Development Plan (MDP). The Granary Road site will be served by a haul in/haul out water and wastewater program, will retain and promote the necessity of the valuable ravines and riparian areas associated with Pine Creek and introduce a high quality benchmark use in the Municipal District of Foothills.

The Granary Road Farmer's Market & Agri-Edutainment Park promotes local Agricultural business, sustainably grown food and locally grown products, actively supports continued childhood education, economic development and tourism all of which are consistent with the direction of the Municipal District of Foothills Municipal Development Plan providing benefits both locally and regionally.



FIGURE 1 - GENERAL LOCATION

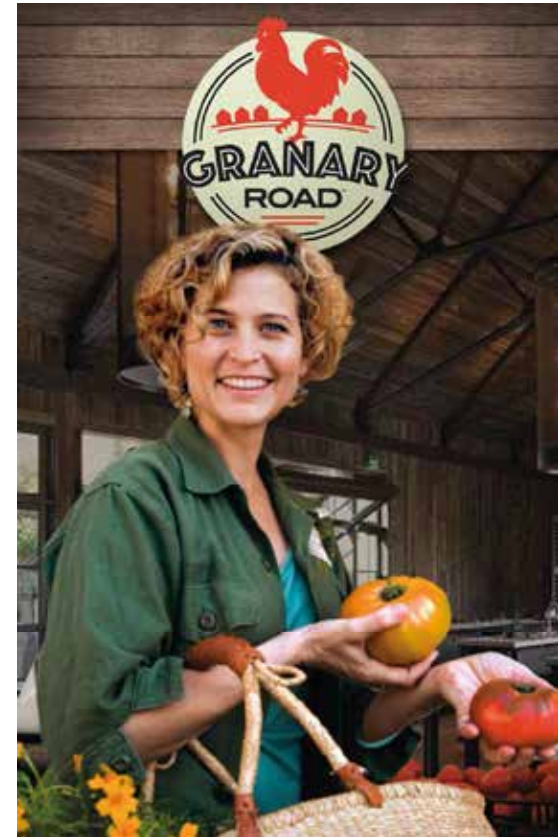


1.2 VISION

Granary Road park consists of four (4) components: (1) The Agri-Edutainment Park, (2) Farmers Market and Greenhouse featuring local products (3) a coffee shop, bakery and restaurant for patrons, and (4) the continued agricultural cultivation and production of crops on site. Each of these four aspects of the site are further detailed within the ACP.

Agri-Edutainment Park:

Granary Road is for children ages one through fifteen, offering fun, education-themed experiences. The term “Edu-tainment” is a word coined from “educational entertainment”. The facility is designed to enhance the educational learning skills of children, as well as offer a creative, safe, and fun experience for families to enjoy. The facility offers an agriculture/science based pathway adventure with learning stations that teach children in an active and playful environment. The learning station components are designed to correspond with the Government of Alberta Education Department’s Science curriculum for school field trips. Over time as the facility becomes more well known, it could provide opportunities such as camps, weekly workshops, and corporate family events.





Farmer's Market & Greenhouse:

In conjunction with the Agri-Edutainment Park, the site programming is designed to celebrate and support the growing trend for trusted, quality foods through its Farmer's Market & Greenhouse. The Farmer's Market and Greenhouse area targets adults interested in the growing segment of organic, healthful foods. The Agri-Edutainment Park is a draw for children, and allows Parents/Grandparents to shop for healthful locally sourced food at one convenient location. A portion of this building will remain open throughout the year to allow for the hosting of corporate events and private functions.



Agricultural Production:

Approximately +/- 100 acres of the property will be apportioned for the cultivation of agricultural crops. Greenhouses, in conjunction with the land, will produce a variety of organic vegetables, fruits and bedding plants. At a future date, trees such as spruce, pine, and poplar, will be planted for sale in the market. It is acknowledged that the proposed tree farm and tree sales may require a separate Municipal Development Permit at the appropriate time. There will also be an apiary (Honeybee) facility, for honey production and educational purposes. The products yielded on the farm are to be sold in the Organic Foods Farmer's Market, these products include but are not limited to herbs, fresh produce, bedding plants and honey products. The continued on-site agricultural operation presents the opportunity to illustrate and teach the real life "farm to table" experience to children. The site will support local food and charity programs such as the Calgary and Area Food Bank, the Heritage Chicken Program and support local 4H initiatives.



Coffee Shop, Bakery and Restaurant:

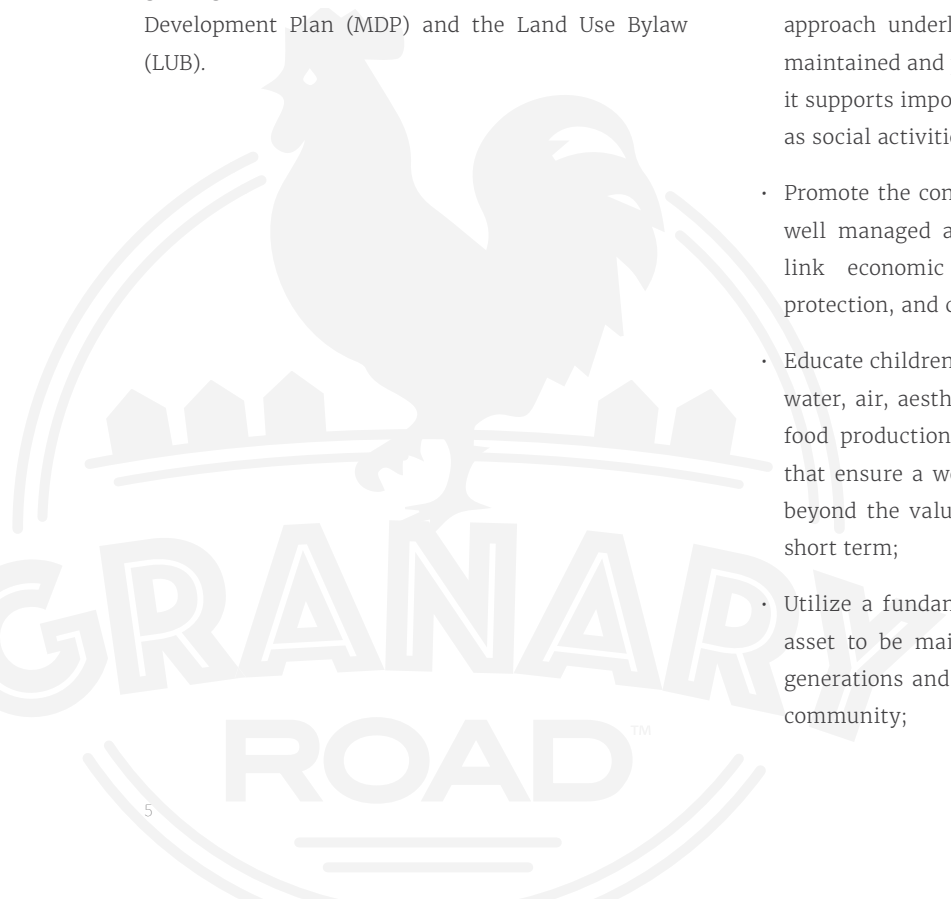
The Farmer's Market & Greenhouse will sell locally sourced food products, have a bakery and restaurant for consumers. The restaurant will be tastefully done welcoming patrons from all walks of life.

1.3 GOALS

The Granary Road ACP outlines a comprehensive development strategy with a foundation in education, sustainable rural agricultural development practices, and utilization of efficient communal servicing infrastructure, which works to maximize and celebrate the preservation of natural areas and minimize environmental impacts. The Granary Road ACP reflects consistency with applicable municipal guiding policy documents such as the Municipal Development Plan (MDP) and the Land Use Bylaw (LUB).

The goals of The Granary Road ACP include:

- Provide a comprehensive development framework for the ACP area in accordance with Municipal District of Foothills guiding policy;
- Recognize and respect the site's proximity to existing agricultural and country residential land uses through site and infrastructure design;
- Support continued agricultural practices and promote local "farm to table" opportunities. This approach underlines that land as an asset to be maintained and protected for future generations as it supports important economic, ecological, as well as social activities;
- Promote the concept of "natural capital" found in well managed and sustainable landscapes which link economic prosperity and environmental protection, and can do so for generations;
- Educate children on the long term benefits of clean water, air, aesthetically pleasing landscapes, local food production, and ecologically sound habitats that ensure a wealth of biodiversity that goes far beyond the value of what can be achieved in the short term;
- Utilize a fundamental philosophy that land is an asset to be maintained and protected for future generations and relate those concepts to the local community;
- Preserve and study cultural heritage, local wildlife, and rural character. Provide opportunities to learn about stories, treasures and cultural landscapes of homesteaders through the ages who give us a sense of belonging and history in agriculture;
- Recognize and conform to Foothills Community Standards Bylaw with regard to hours of operation, outdoor noise, and nuisance;
- Provide an unparalleled educational opportunity to local area children that is curriculum aligned and provides a fun, safe, and entertaining environment;
- Recognize and conform to the Foothills Dark Skies Bylaw by utilizing dark skies complaint fixtures;
- Establish an effective transportation network and efficient communal servicing infrastructure;
- Encourage low-water use and best practices within the development;
- Maximize the preservation of natural areas and valuable wetlands and ravines; and,
- Develop high quality amenities and create a local trail network.



1.4 CONFORMITY WITH APPROVED POLICIES

The Granary Road ACP is subject to the land use polices contained within Municipal District of Foothills Municipal Development Plan and the Land Use Bylaw. The ACP also responds to the County's Agricultural and Economic Development policies which seek to encourage thoughtful design (refer to **Figure 2 - Existing Area Land Use**).

1.4.1 MUNICIPAL DEVELOPMENT PLAN

The Granary Road ACP was prepared in conformance with Municipal District of Foothills Municipal Development Plan (MDP). The Granary Road Agri-Edutainment Park supports the vision for the Municipality as outlined in the MDP as follows:

“The MD of Foothills encompasses a diverse rural landscape in which leadership and planning support a strong agricultural heritage, vibrant communities, a balanced economy and the stewardship of natural capital for future generations.” MDP p.4

Like many rural municipalities, Municipal District of Foothills is facing growth pressures and has established an effective strategy to manage growth and retain agricultural land. The Granary Road ACP is located adjacent to an urban centre and contains

an existing recreational amenity. The site has limited opportunity for continued agricultural use due to its direct relationship and proximity to existing urban residential land uses.

1.4.2 LAND USE BYLAW

The Municipal District of Foothills Land Use Bylaw (LUB) (Bylaw #2007-56) regulates land uses within the municipality. The Granary Road Plan Area is currently designated Agriculture (A) District under the Bylaw and as such requires land use redesignation to a land use district that permits this type of application. The land use district which best fits the nature of the application is Agri-Business land use district.

1.4.3 THE GROWTH MANAGEMENT STRATEGY

The Subject Property is identified in the MD's Growth Management Plan as being contained within the North West Growth District. The Growth Management Strategy was developed to help guide and direct future development (or lack thereof) in the MD. The Municipality surveyed their residents and held multiple open houses on the strategy and its intent. A summary of the objectives for the North West District can be found in the plan and it reads as follows:

Continued development pressure is expected in the North West District. This area could likely accommodate minimal to moderate growth in the form of both country residential and cluster residential development. Support may be anticipated for the idea of a more intense form of development such as Hamlet Residential in close proximity to the existing hamlets if appropriate utility infrastructure is available. This growth must be undertaken with careful consideration of the potential impacts on wildlife habitat and watershed areas. P. 33

The Granary Road development will build on the scenic value, rural character and Agricultural history in this area.

THE CONCEPT PLAN AREA

2.1 LOCATION

The Concept Plan Area is located in the north west district of Municipal District of Foothills, direct access is gained from paved roads the west side of the property via 112th Street West and the north side of the property via 226th Avenue. The site is in close proximity to Highway 22x via 96th Street W. (Refer to Figure 2 - Existing Area Land Use & Figure 3 - Air Photo and Topography). A similar use in the MD of Foothills for comparative traffic generation rates and seasonal variance in trips/visits is the Kayben Farms operation north of Okotoks along 32nd Street East. No additional tapering, acceleration or deceleration lanes are constructed at this location.

Policy 2.1.1 Both of the municipal roads providing access to this site are paved and developed to the current municipal standard. The site access locations currently from 112th Street will be retained and accesses upgraded to a standard that can accommodate additional traffic movements. It is not anticipated that any upgrades will be required to 112th Street West or 226th Avenue to accommodate this use.

2.2 LEGAL DESCRIPTION AND LAND OWNERSHIP

The Granary Road Area Concept Plan includes 145.08 acres (58.71 ha) legally described as Ptn NW 1-22-2 W5M. The site was subdivided to isolate an existing residence located in the north east corner on a 6.94 acre (2.80 ha) parcel in 1990. The site is currently held by a numbered company 1136431 Alberta Inc.

2.3 SITE CONTEXT

The following summary provides an overview of the subject property's physical characteristics.

2.3.A SOILS

The soil landscape models of the Granary Road Creek property are all contained within Alberta Soil Viewer polygon 11893, which has been mapped and largely contains orthic black chernozem on moderately fine textured sediments deposited by water. The polygon

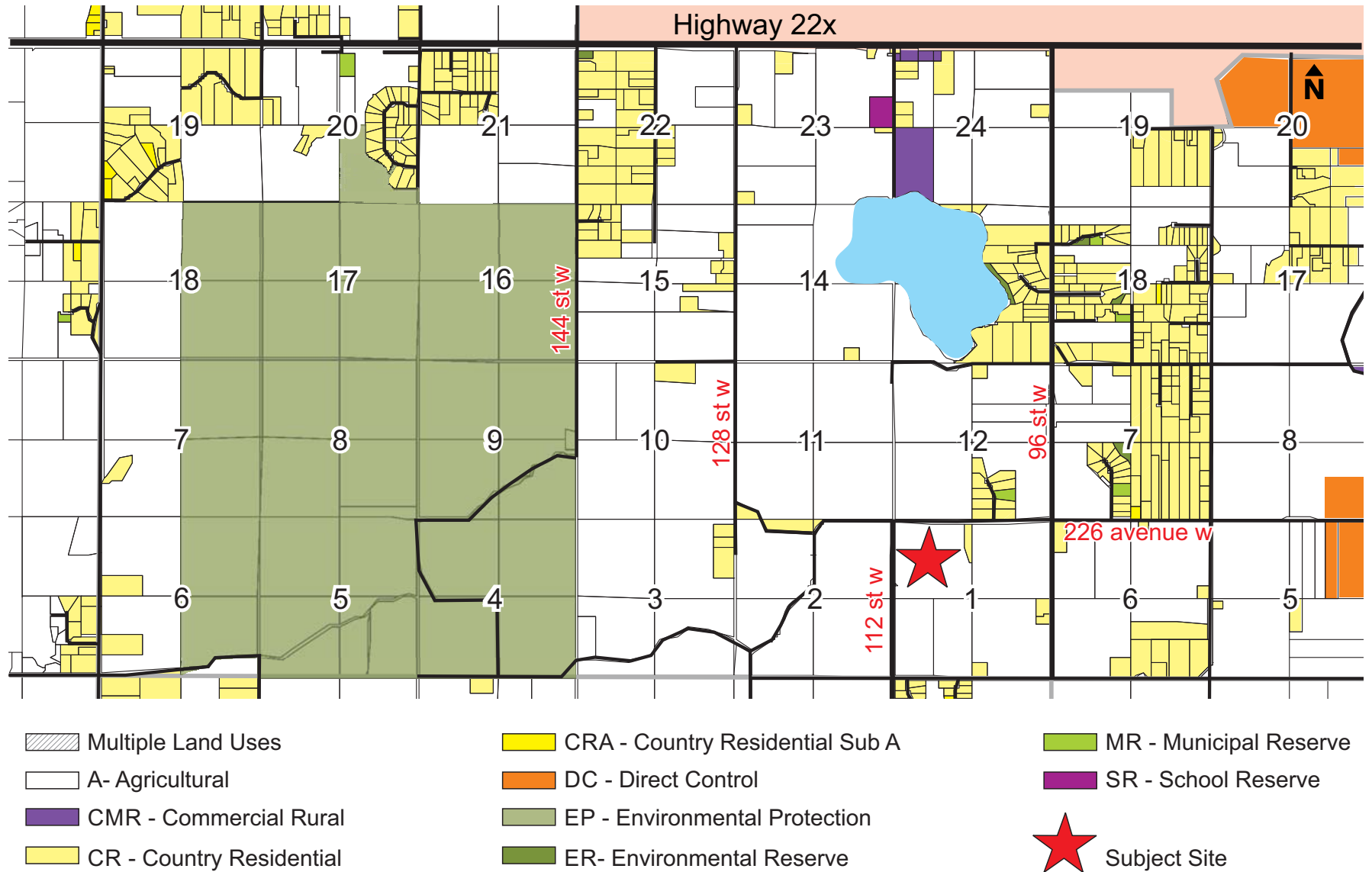
includes poorly drained soils and soils that are coarser textured than the dominant or co-dominant soils. The Canada Land Inventory ranges on this site from Class 3T (moderate to severe limitations for crop production) on the northerly cultivated lands to 4T and 5T (severe limitations for crop production) on land associated with the Pine Creek watershed.

2.3.B WETLANDS

A single wetland occurs totally within the property boundary, and is considered as Class 1 and ephemeral in nature. Cattle grazing and trampling and non-native plant species invasion are the two main factors affecting the native integrity of this wetland occurring on the property. Historic air photo research indicates that this wetland has been cultivated over in the past and the south side driven over and though on multiple occasions. For the purposes of the Granary Road Agri-Edutainment Park, this wetland area is to be enhanced, celebrated, and used to entice bird species and utilized as a wetland interpretive area.

Policy 2.3.b.1 The existing wetland on the site shall be retained and utilized as in interpretive area for the benefit of the Agri-Edutainment Park.

FIGURE 2 - EXISTING AREA LAND USE MAP



2.3.C PINE CREEK

A portion of Pine Creek, and an associated intermittent and unnamed drainage course, are located on the subject property. In accordance with both Provincial and Municipal requirements, a 30m setback has been identified and retained from both sides of the bed and shore of Pine Creek. The Creek and its associated riparian areas will be protected and the formal retention of riparian areas would be interpreted as part of the Granary Road Park.

Pine Creek is a water body known to be frequented by primarily forage fish. Pine Creek, in this location, has Class D status. FWMIS (Fish and Wildlife Management Information Systems) identify three (3) fish inventories of primarily - White Sucker, Lake Chub, Fathead Minnow - these species were live captured.

There are existing wooden plank crossings over Pine Creek that will be retained and all crossing will be undertaken in accordance with the requirements for creek crossings outlined by Alberta Environment. There is a man-made dugout associated with the northerly intermittent drainage course that bi-sects the property in a north to south east manner. This dugout appears to be intermittent and under 2,500 cubic meters in capacity, therefore, exempt from licensing under the Water Act.

Policy 2.3.c.1 A 30m setback shall be established from both sides of the bed and shore of Pine Creek.

2.3.D VEGETATION

Native habitats on the subject property have been significantly fragmented by habitat loss and non-native plant invasion. Existing land clearing on an around the Granary Road lands has resulted in severe fragmentation effects. As such many sensitive species have already been significantly impacted. The relatively abundant supply (80%) of lands with low ecological significance dampens the likelihood of additional incremental development contributing significantly to any regional habitat fragmentation.

2.3.E HISTORICAL RESOURCES IMPACT ASSESSMENT (HRIA)

Historic Resource Act Clearance may be required from the Historic Resources Management Branch of Community and Culture of the Government of Alberta. If requested a formal Clearance request will be submitted.

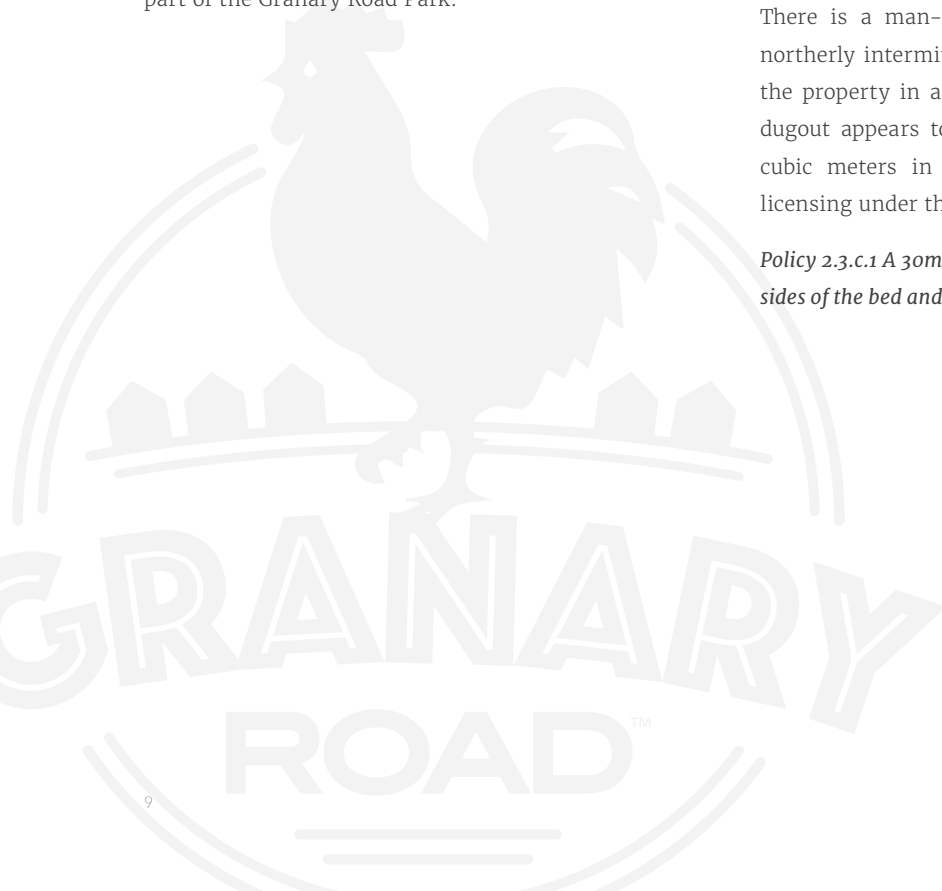
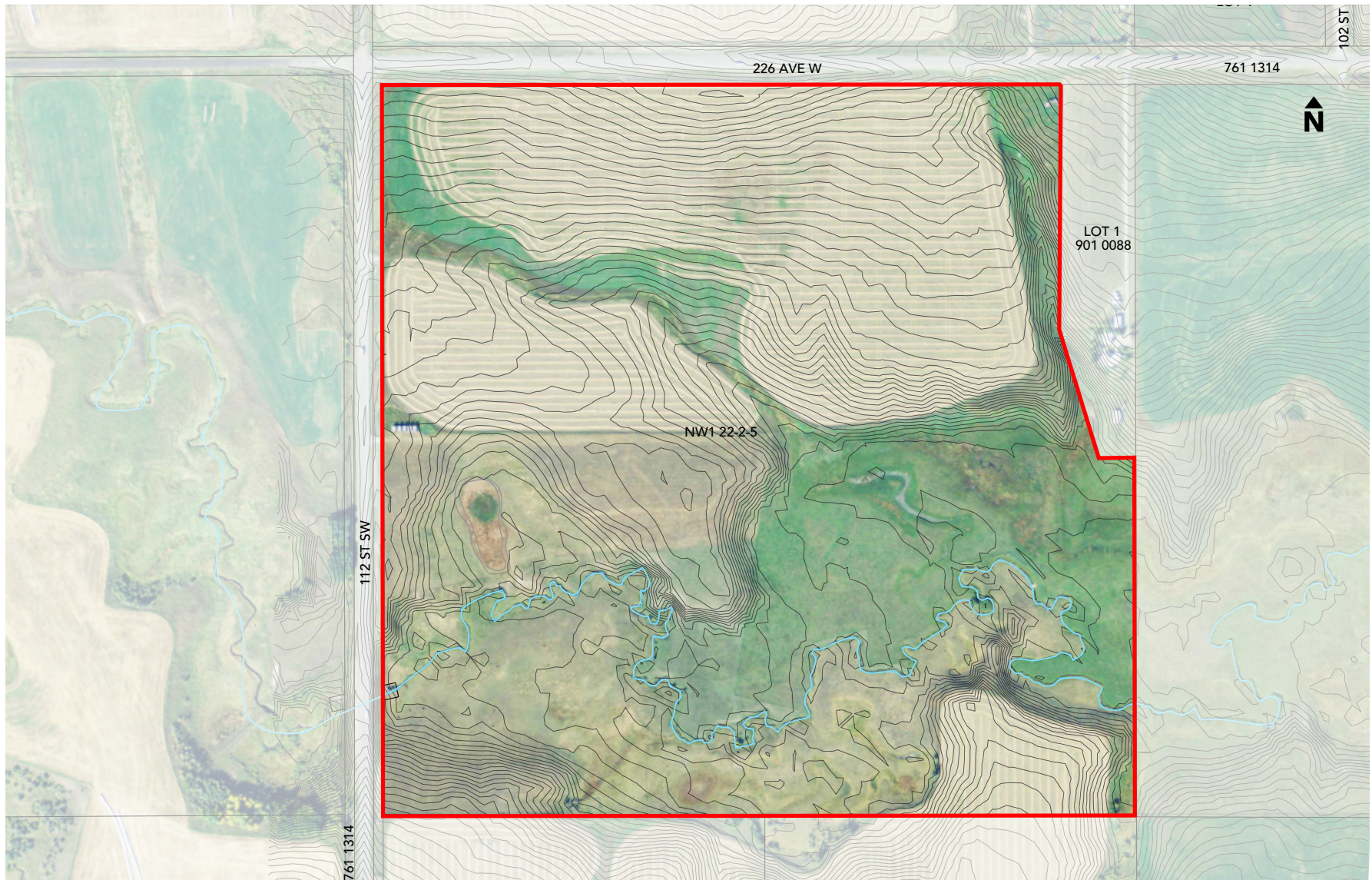


FIGURE 3 - AIR PHOTO & TOPOGRAPHY



LAND USE STRATEGY

The following section overviews all seasonal and year round aspects of the Granary Road facility, both indoor and outdoor uses are described in detail.

3.1 OVERVIEW

This section of the Granary Road ACP outlines in greater detail the site programming and building programming, hours of operation and anticipated levels of use both at seasonal peaks and off-season periods. (Refer to **Figure 4A, 4B & 4C - Facility Elevation and Schematic** and **Figure 5 - Granary Road Overall Park Plan** for further detail.)

Policy 3.1.a All aspects of use outlined in the Granary Road Concept Plan recognize and respect overarching municipal bylaws with regard to outdoor noise and nuisance including, but not limited to, the Community Standards Bylaw and the Dark Skies Bylaw.

Policy 3.1.b Specific design components of the Granary Road facility and Granary Road Park pod elements will be provided at the Development Permit and Building Permit Stage.

3.2 GRANARY ROAD FACILITY

The Granary Road Facility, as evidenced by the enclosed perspective elevation and floor plan **Figure 4A and 4B**, will be designed with a high-end aesthetic focus, and is architecturally thematic and designed to reflect rural character and the historic rural style of architecture. The barn will be designed with an open concept with wooden panels, glass

windows, sunroofs and large aluminum/glass garage doors. It is placed on the site below the horizon line in order to reduce its visual impact and height scale in relation to the site and its context.

The facility is a total of 44,856 sq. ft. main floor which can be divided into active segments described as:

- Seasonally Active “Greenhouse” (all segments A+B + Learning Greenhouse) = Total 17,500 sq. ft. (Not open to the public).
- Seasonally Active “The Barn” (Learning Centre, Farmers Market Area/Wing, Coffee Shop, Gift Shop and Restaurant) = Total 25,573 sq. ft. (Open to the Public).
- Year Round Active “Event Centre” (Event Space 170 guests) = 1,783 sq. ft. on main floor and 1298 sq. ft. Upper floor (Open to the public).

FIGURE 4A - FACILITY ELEVATION





FIGURE 4B - FACILITY SCHEMATIC: THE GREENHOUSE

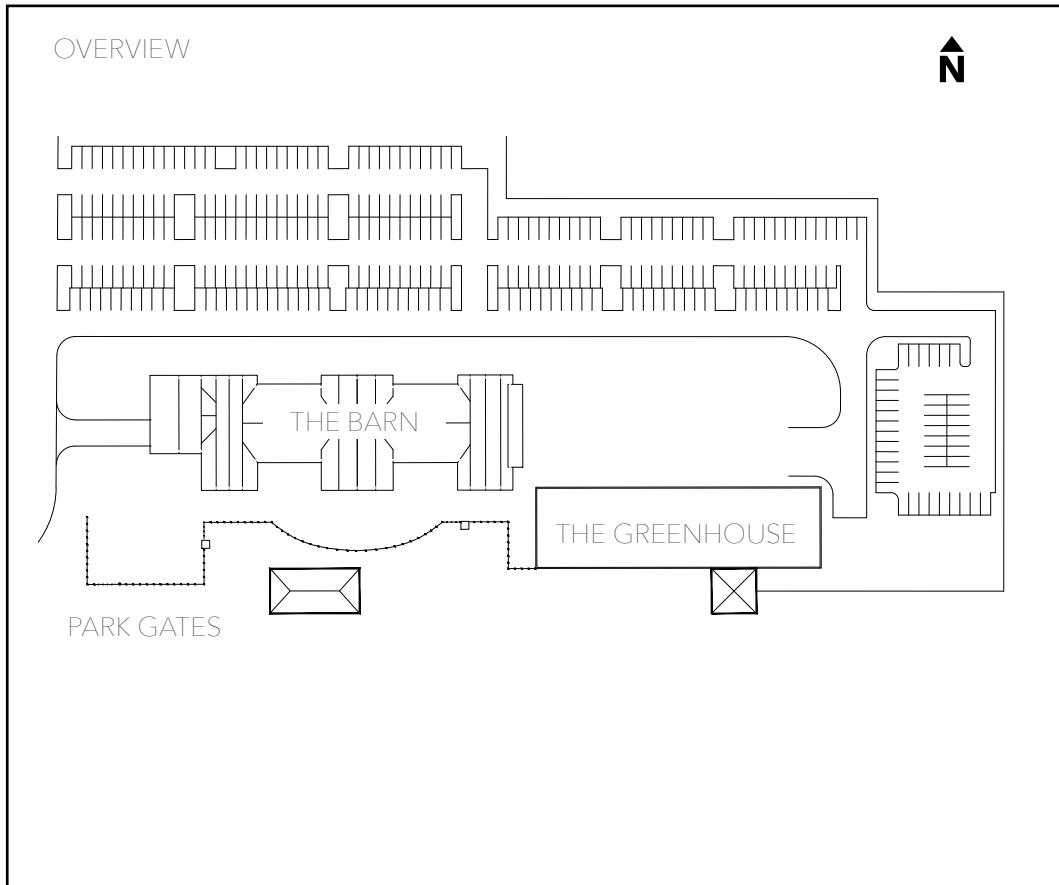
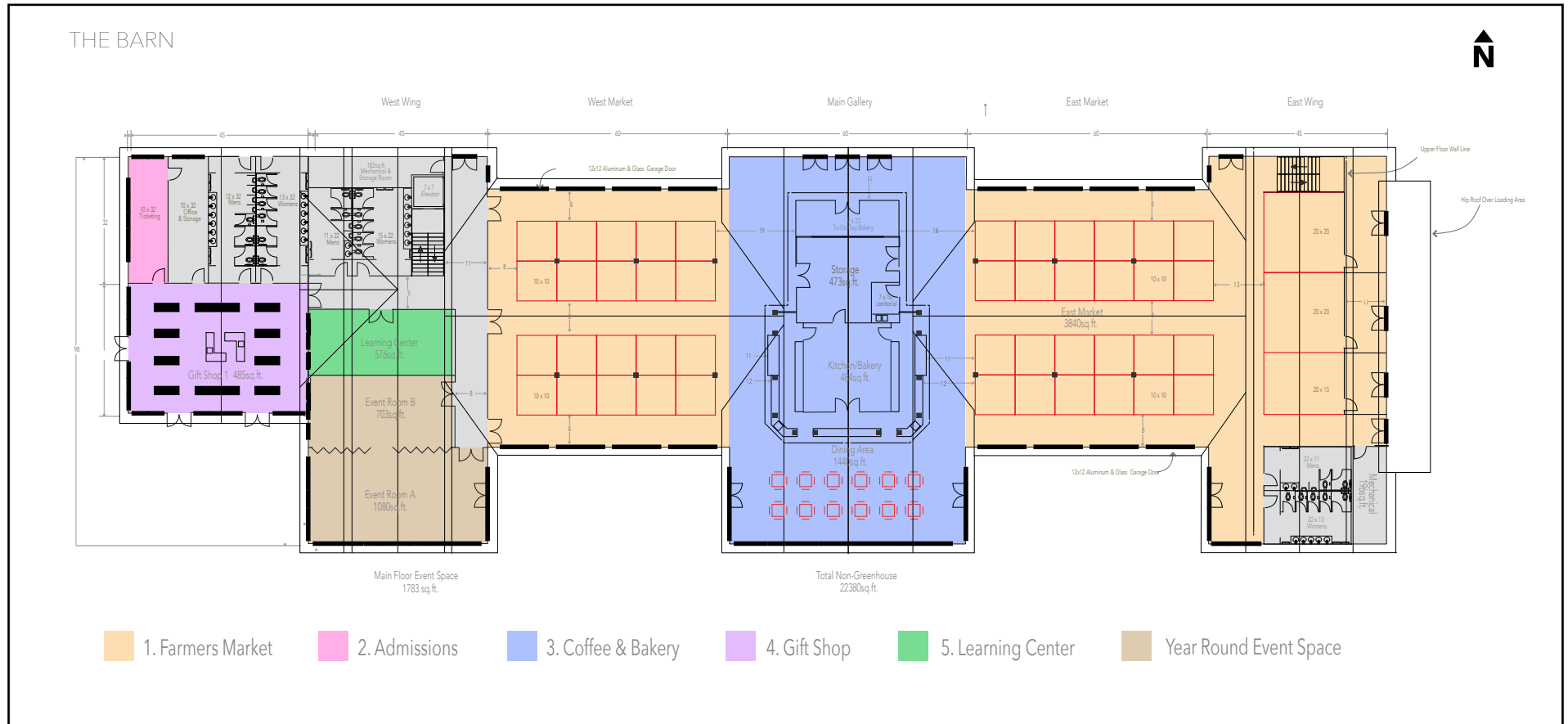


FIGURE 4C - FACILITY SCHEMATIC: THE BARN



3.2.1 SEASONALLY ACTIVE AREA "THE BARN"

(25,573 sq. ft. lower, 4,508 sq. ft. upper) - Active
April to October: This seasonally active area, "The Barn" will act as the first point of contact and central hub of activity in the Granary Road project. A total of five (5) seasonal facility components will be built into "The Barn" establishment including the central wing washrooms.

1

FARMERS MARKET

Thursday to Sunday 9:00 - 5:00pm
April - October

The market area is divided into an East and West Market separated by the open Restaurant/Coffee shop area. It will feature both local and nationally-sourced products, with an emphasis on producers of niche organic items.

The market operates on a "Grow-it, Make-it, Bake-it" basis to cultivate a supportive atmosphere for local agricultural producers and small businesses. The Organic Market & Greenhouse will provide a convenient Market place for the sale of products grown by Granary Road. The Organic Market will compliment the Agri-Edutainment Park for those school grades where an agriculture and ecosystems science curriculum applies. The floor plan (**Figure 4A**) identifies four areas comprising the "East Market" which consist of vendors in stalls which will be available for lease on a seasonal basis.

2

GRANARY ROAD ADMISSIONS

Monday to Sunday 9:00 - 7:00pm
April - October

The admissions/ticketing area will be accessed through the west end of The Barn and entrance to the Agricultural & Science Edutainment Park will be through the Gift Shop. The ticketing area will be the location for the sale of tickets into the Agricultural & Science Edutainment Park and provide information regarding the other facilities in Granary Road. There will be three (3) Granary Road employees to oversee operations at the admissions area; Guest service associates (3).



3

THE ROOST (COFFEE SHOP)

Monday to Sunday 6:30am - 9:00pm
April - October

THE GRIST (BAKERY)

Monday to Sunday 7:00 - 5:00pm
April - October

The Coffee Shop and Bakery is located centrally within the Farmers Market Barn, with a beautiful outdoor patio set up on the south end of the Barn. The Roost and Grist will source its ingredients from local food producers and small businesses. The Roost will service guests with high quality menu items, created from fresh locally sourced food producers. There will be 3 Granary Road employees to oversee operations at the Bakery; Barista (2), Baker (1). There will be 6 Granary Road employees to oversee the operations of the Roost restaurant; Host (1), Server (2), Cook (2), Manager (1).

4

GIFT SHOP

Monday to Friday 10:00 - 6:00pm
Weekends 10:00 - 7:00pm
April - October

The gift shop will be directly in front of the ticketing area and central entrance to the Agri-Edutainment Park. Granary Road products and souvenirs will be available for purchase in the gift shop.

5

GRANARY ROAD LEARNING CENTRES

Monday to Sunday 9:00 - 5:00pm
April - October

One area in the east wing will be provided for educational purposes. One learning centre for classroom activities is in the west wing and a second Learning Area is located in the separate greenhouse (detailed below) for studies on horticulture. Teachers will be provided with educational programs as required and will oversee the study sessions for their students. There will also be trained guides to assist. Field trips and Grade table - School Programs and the integrated curriculum lessons that will be available at Granary Road are as follows: (next page)

Grade	Curriculum Topic (Related activities)
-------	--

- | | |
|---|--|
| 1 | Needs of Animals and Plants (2)
Building Things |
| 2 | Small Crawling and Flying Animals (4)
Exploring Liquids |
| 3 | Animal Life Cycles (2)
Hearing and Sound |
| 4 | Plant Growth and Changes (2)
Wheels and Levers
4.1 Alberta: A Sense of the Land (Social Studies)
4.2 The Stories, Histories and Peoples of Alberta (Social Studies) |
| 5 | Wetland Ecosystems (3)
Weather Watch |
| 6 | Trees and Forests
Air and Aerodynamics
Flight
Evidence and Investigation |
| 7 | Plants for Food and Fibre (4)
Interactions and ecosystems (3) |
| 8 | Freshwater and Saltwater Systems
Mechanical Systems |
| 9 | Environmental Chemistry (2) |

3.2.2 SEASONALLY ACTIVE AREA "GREENHOUSE"

(17,500 sq. ft.)- Active April to October: Granary Road Greenhouse aims to be a supply of organic edible and floriculture products for the surrounding communities. Alberta's greenhouse industry ranks 4th in Canada, spanning over 1.3 million square meters and continues to grow with the increase of consumer demand. Since 2001 the total greenhouse area in Alberta has increased by over 23% and the gross revenue for provincial greenhouses amounted to \$162 million in 2012. While total farms in Canada continue to decline the number of certified organic farms are growing rapidly (66.5% 2001 - 2010) to become the 4th largest in the world. The Canadian organic market grew to \$3.5B in 2012.

The stand alone Greenhouse at the Granary Road facility, will produce a variety of organic vegetables, fruits and bedding plants. They will also support learning activities and the experience centre as a 1,225 sq. ft. learning greenhouse is incorporated into the overall greenhouse floor plan.

The total Greenhouse square footage was not utilized on the parking calculation as this area supports the Granary Road facility operations and is not intended to house additional visitors or attractions. The greenhouse is ancillary and supportive of the Granary Road complex and intended to be both an added learning experience and local product opportunity. There will be three (3) Granary Road staff members to oversee the operations of the greenhouse; Greenhouse Worker (3). Outside of the Learning Greenhouse annex the Greenhouse structure is not open to the public.

Hours of Operation: The Greenhouse will be in operation from April to October. Learning Greenhouse times will commence at 9:00 am to 5:00pm on each week of the season.

3.2.3 YEAR ROUND ACTIVE - EVENT CENTRE

The Event Centre will be a space for public gatherings, corporate retreats, or private functions, ranging from conferences, education sessions, birthday parties, wedding ceremonies and wedding receptions. Granary Road Wedding Packages will be available, including the services of the Roost restaurant and agricultural productions for catering needs. The Event Centre is located in the west wing of the barn and will comprise 2 flexible event halls, office rooms and washrooms. It is intended to accommodate a maximum capacity of 170 persons. In accordance with the Community Standards Bylaw, no outdoor noise, music or festivities are permitted at “night” (defined as after 9:00pm) all activities after this time in the evening are to be confined to the indoor event centre.

Hours of Operation: The Event Centre will be available for rent throughout the year. Event room A: 1080 sq. ft. Event room B: 703 sq ft. from 9:00 am to 12:00am.

Times – All equipment and guests must be cleared from the hall by 1 am.

3.3 AGRICULTURAL & SCIENCE EDUTAINMENT PARK (SEASONAL) - “AGRI-EDUTAINMENT PARK”

The site supports, as an integral component, an Agricultural and Science Edutainment Park, which has been referred to in this Concept Plan as an “Agri-Edutainment Park”. The Park and its component learning pods are described on **Figures 5 and 6**. This Park and its varied learning pods have been strategically developed to introduce kids of every grade level to new learning material through a diverse curriculum in an environment that is interesting and engaging. Curriculum topics including; Animal behaviour, Animal Life Cycles, Global Culture, Environmental Responsibility, Robotics and the Arts are included in the various learning activity pods. Activities will be designed to cater to age groups in accordance to the learning curriculum set by the Alberta Department of Education, engaging age appropriate developmental modes of learning such as visual, tactile, sound, and smell sensory perception.

Every adventure available at the Agricultural and Science Edutainment Park is interactive ranging from passive to active experiences to elicit reactions from the young participants, expanding their horizons both mentally and physically.

Season	School Use / Day (by bus)	Individual Use/Day	Total Visits/Day
Jan. – Mar.	0	200	200
Apr. – Jun.	300 (5 buses)	250	550
Jul. – Aug.	120 (2 buses)	400	520
Sep. – Oct.	300 (5 buses)	200	500
Nov. – Dec.	0	200	200

3.3.1 PARK DESIGN & EDUTAINMENT AREA COMPONENTS

The following describes the aesthetic and physical intent of the Agricultural and Science Edutainment Park, each of the learning pods is conceptually described below and its location generally described on **Figure 5**. Included in **Appendix A** is the Bat Activity Inspiration Playground which provides a more detailed example of a specific learning pod and sets the tone for the balance of the park.

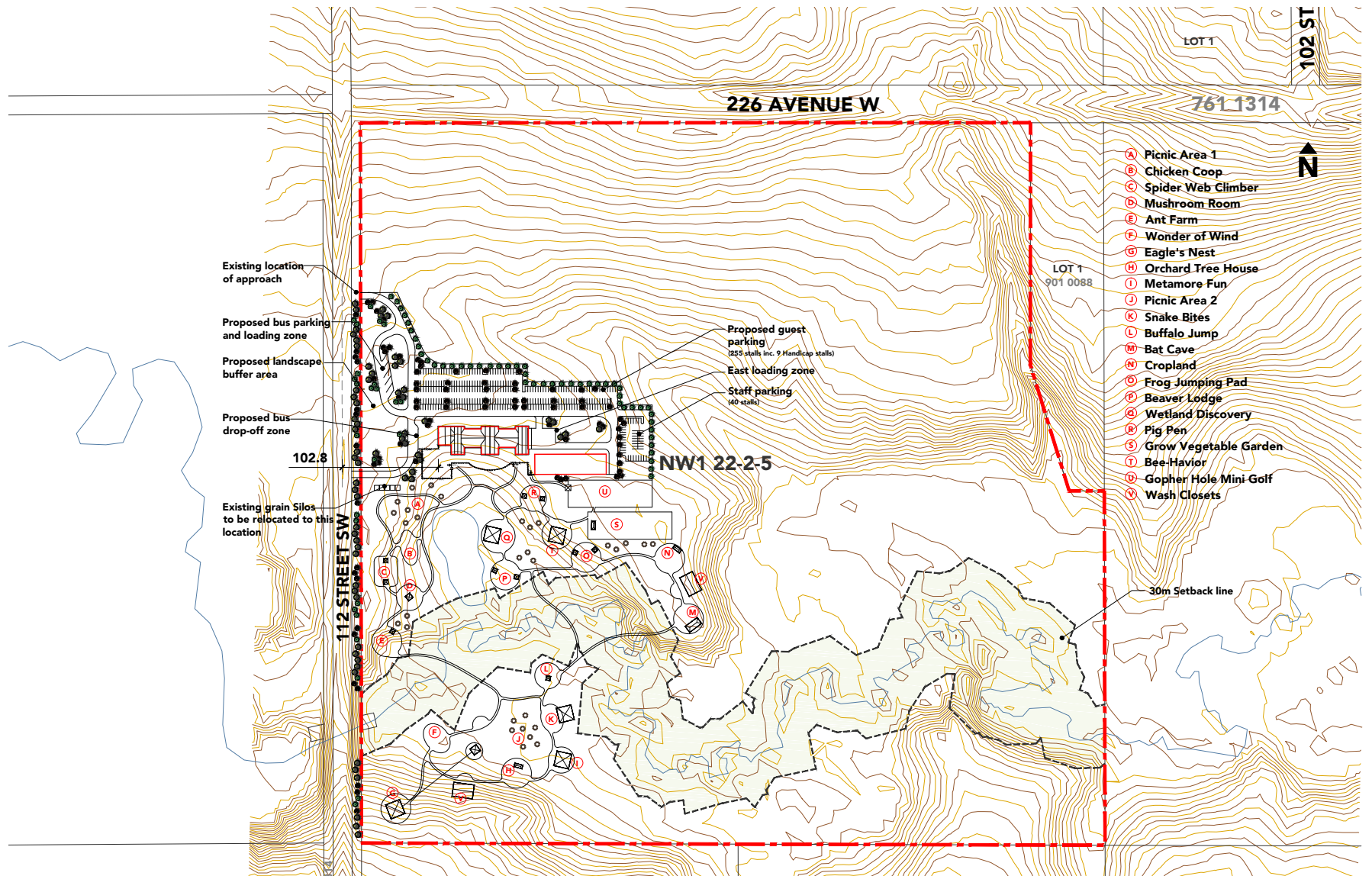
NOTE: All Park Edutainment pod locations (on Figure 5 and Figure 6) and pod descriptions (on the following pages) are conceptual in nature and are meant to provide a sense of context and vision to the Agri-Edutainment Park area. The exact location and exact design of each pod will be finalized at the Development Permit and Building Permit Stages and may vary from what is generally described here.

The Park is designed to accommodate an easy-going mode of learning as children walk along the adventure pathway. The tree-lined pathways wind around a wetland pond and pass over Pine Creek, leading up to an adventure experience of approximately 3 hour duration. Agricultural learning based stations will be spaced along the paths, with options of visiting the Farmer's Market & Greenhouse.

Each Edutainment Area (Pod) is designated for a specific area of study. Pods may be designed in alignment with the subject, such as shaping the area into a flower or a frog lily pad. Pods will have a number of stations for education, a few play structures to promote physical activity and seating areas for parents and guardians. Components on each pod will be named and alphabetically classified for overall organization. The pods will be part of an interconnected pathway system and will have at least one entrance/exit path. The pathway system will range from 1 km to 4.6 km in walking distance. Play structures will be labelled with age ranges and any necessary instructions to ensure safety. All pod areas will be tastefully encapsulated with earth mounding encircling the area with trees. The following generally describes the learning pods and their location is identified by the same alphabetical reference on **Figure 5**.



FIGURE 5 - OVERALL PARK PLAN



A. PICNIC AREA NO.1



Small outdoor picnic areas are provided for children and families who may choose to utilize these areas for eating lunch, resting, or consuming goods purchased within the the Farmers Market area. Waste receptacles shall be located at each picnic area and waste removed by staff every evening.

B. CHICKEN COOP



The Chicken Coop Pod presents an opportunity for participants to take on a role as a poultry farmer; with the task of raising chickens and laying eggs. The chicken life cycle will be a topic of investigation, as well as what processes separate eggs for consumption and eggs to be hatched.

Structural components: Chicken coop structure, learning kiosks, animatronics

Alberta Education Curriculum: Grade 1 students investigate the Needs Animals and Plants in Topic E of their curriculum. Participants are educated on different types of poultry farming styles and methods created to meet the needs of chickens.

C. ARACHNIDS



The Spider Web Climber highlights the importance of spiders in the role of pest control in agricultural practices. Participants are invited to climb a giant spider's web (net) and learn about the conditions spiders requires for survival. The Spider-Claw Grabber will give participants the opportunity to catch other insects lowering a spider model with a pulley systems into a mini insect arena.

Structural components: Large spider web climbing net, info kiosks, play structures, animatronics, insect arena.

Alberta Education Curriculum: Grade 2 students investigate Small Crawling and Flying Animals in topic E of their science curriculum.

D. MUSHROOM ROOM & DECOMPOSERS



The Decomposers pod highlights the importance of decomposers in agricultural practices. Participants are invited into a giant mushroom structure to study the role of decomposers in the nutrient cycle and soil fertility for agriculture. The practice of composting, the varying types and technologies are also presented.

Structural components: Animatronics, Educational info stations

Alberta Education Curriculum: Grade 5 students investigate decomposers in Topic E: Wetland Ecosystems and Grade 7 Students cover decomposition in Unit A: Interactions and Ecosystems.

E. ANT FARM



The Ant Farm highlights how humans can benefit from learning the agricultural practices of ants; modeling practices after social ant communities can provide an alternative agricultural management method. The Ant Farm physically engages the participant by inviting them into a three story life size ant farm, with slides, nets, rings etc.

Structural components: Three storey composite play/discovery structure. Human weight scale, play structures, animatronics

Alberta Education Curriculum: Grade 7 students investigate resource management in Unit B: Plants for Food and Fibre. Grade 1 Student investigate Building Things in Topic C of their science curriculum.

F. WONDER OF WIND



The Wonder of Wind Pod highlights the importance of wind as an integral requirement to human, animal and plant life on earth. Also investigation into the forces and structures use in the historical agricultural practice of grain milling and water pumping. Participants will engage in studies, through interactive study booths, on wind properties and aerodynamics, wind energy used for agricultural practices, and weather prediction tools.

Structural components: Windmill, educational info stations, learning kiosks

Alberta Education Curriculum: Grade 4 students investigate Wheel and Levers in Topic B of their science curriculum, Grade 8 students look into Mechanical Systems in Unit D of their science program. Grade 5 investigate how winds effect climate in Topic D: Weather Watch, Grade 6 investigates Air and Aerodynamics in Topic A and Flight in Topic B.

G. EAGLE'S NEST



The Raptor Bird Pod highlights the process in the consumption food chain. Participants are offered insight as to how being on top of the food chain like the raptor birds, presents the dangers of biomagnification of toxic compounds in our foods. The benefits of organic food sources are presented with comparison models (Organic vs non-Organic). Large eagle model will highlight its anatomy giving insight as to why the eagle is considered a prey and has earned its place as king of its food chain. An eagle zip line structure will outline the pod, providing insight on its flight capabilities.

Structural components: Animatronics, play structures, Learning kiosks, zip-line

Alberta Education Curriculum: Grade 5 students investigate food chains in the Topic E: Wetland Ecosystems and Grade students cover food chains in Unit C: Environmental Chemistry.

H. ORCHARD TREE HOUSE



The Orchard Treehouse pod highlights the importance of trees in the overall sustainability of the world's agricultural practices. The methods of orchard tree planting, proper layout, and fruit types will be presented. Also the topic of trees providing habitats for natural pollinators such as birds and squirrels to the importance of roots in soil fertility and reduction of soil erosion. Participants will have the opportunity to climbing a tree house to conduct further investigations on trees, fruits and orchards. An opportunity to classify and pick ripe fruits we be available.

Structural components: Treehouse, educational info stations, animatronics, play structures

Alberta Education Curriculum: Grade 6 students investigate Trees and Forests in Topic E of their science curriculum.

I. METAMORE FUN



The Metamorphosis pod highlights the efficiency of plant pollination via butterflies. The concept of metamorphosis is presented and its role in adaptation to environments. Caterpillars are known as pests to agricultural growths, however they redeem for their past nuisances once they morph into butterflies. Participants will have opportunity to view butterfly animatronics in a small conservatory and conduct studies on the life cycle of a butterfly.

Structural components: Small conservatory building/ tent, animatronics

Alberta Education Curriculum: Grade 2 students investigate Small Crawling and Flying Animals in Topic E of their science curriculum.

J. PICNIC AREA NO.2



Small outdoor picnic areas are provided for children and families who may choose to utilize these areas for eating lunch, resting, or consuming goods purchased within the the Farmers Market area. Waste receptacles shall be located at each picnic area and waste removed by staff every evening.

K. SNAKE BITES



Snake Bites is hospitality concession stand providing a small cold service snack and offering refreshments in the Park.

L. FIRST NATIONS AND FARMING / BUFFALO JUMP



The First Nations and Farming Pod highlights the historical agricultural practices of Canada's First Nations people. Participants will have the opportunity to glance into the past of our lands and how people of the past utilized Alberta's natural topography to survive. The method of the buffalo jump and the multiple uses of the buffalo species will be presented. Studies of First Nation's people are interwoven from thereon in the Social Studies curriculum. A tipi structure will house the hand-made tools First Nations Peoples used for agriculture in the past. Kids will have an opportunity to participate in a buffalo jump race, in which a heard of animatronic buffalo will chase them along a track.

Structural components: Artificial buffalo jump cliff, animatronics, educational info stations, tipi tent

Alberta Education Curriculum: Grade 4 students investigate 4.1 Alberta: A Sense of the Land and 4.2 The Stories, Histories and Peoples of Alberta.

M. BAT CAVE



The “Bats” Pod highlights the importance of bats to the ecologic and subsequently the economic aspects of agriculture; Insectivore bats provide a natural pest control mechanism as well as fertilization for soils. The bats pods will feature activities educating participants on the anatomic, physiological, behavioural adaptations developed to survive in their environments. Participants will have the opportunity to view animatronic bats within caves, navigate through mazes using echolocation to simulate the spatial navigation mechanisms bats utilize. The Structure and inspiration for the Bat Activity pod is detailed as a generally illustrative example of learning pod programming in **Appendix A**.

Structural components: Simple above-ground artificial cave system, Climbing wall, mazes, animatronic creatures, wind tunnel, bat house.

Alberta Education Curriculum: Grade 2 students investigate Small Crawling and Flying Animals in Topic E of their science curriculum.

N. CROPLAND



The Plantland pod highlights the biotic and abiotic factors that need to be present for the creation of plant life. The pod highlights how the study of plants has given rise to new and innovative agricultural practices throughout history. Giant plant models dispersed around this pod will give participants an exclusive look into the world of plant life. Each essential prerequisite (water, light, air, nutrients) will have a designated area for participants to gain insight as to why each is considered essential, how each is available and is utilized. A slow moving luge track will outline the pod, in which participants will be transported around the pod while viewing animatronic farmers harvesting crops.

Structural components: Simple luge track, seed pod swings/water plant pond, educational information stations, animatronics.

Alberta Education Curriculum: Grade 4 students investigate Plant Growth and Changes in Topic E in their science curriculum and Grade 7 students investigate Plants for Food and Fibre in Unit B in their science program.

O. FROG JUMPING PAD



The Frog Jumping Pad Pod Highlights the presence of amphibious creatures in wetland ecosystems and their role in the upkeep of the cycles and webs. Participants will have the opportunity to learn how organic agricultural practices decrease the occurrence of genetic mutations in frogs and other freshwater creatures. Mutant frog models (multiple eyes, legs etc.) will inform participants of the type of agricultural mishap what changed their appearance.

Structural components: Play structures, animatronics, giant plant models, in-ground trampolines
Alberta Education Curriculum: Grade 2 students investigate Small and Crawling Animals, Grade 7 students investigate nutrient cycles and food webs in Unit A: Interactions and Ecosystems.

P. BEAVER LODGE



The Beaver Lodge/Dam Pod highlights the advantage of beaver dams in the restoration of wetland ecosystems, its role in balancing environmental chemistry in its local vicinity and flood control. The disadvantages of beaver dams also present a threat to agricultural lands, fishes and roads. Participants will walk across a giant beaver dam/river structure to observe how beavers can both be friends and foes.

Structural components: Artificial beaver dam, kiosk learning centres, animatronics, play structures
Alberta Education Curriculum: Grade 7 students investigate interactions and Ecosystems, Grade 8 students investigate Freshwater and Saltwater Systems and Grade 9 Students investigate Environmental Chemistry in their science program.

Q. WETLAND DISCOVERY



The Wetland pod highlights the importance of the freshwater regions in earth's aquatic biomes: Wetlands. The pod will introduce participants to the wetland's natural provision of resources towards agricultural practices. Participants will be actively engaging with the Alberta wetland, investigating the flora and fauna, the cycles of the wetlands and adaptive changes in the ecosystem. A raised wooden pathway system will allow participants to non-invasively observe this environment. Methods of safely utilizing and this ecosystem for agricultural practices for the future will be furthered by the study of its properties and inhabitants.

Structural components: Wooden pathways on stilts, stations with wetland investigation activities, animatronics.
Alberta Education Curriculum: Grade 5 students investigate Wetland Ecosystems in Topic E of their science curriculum.

R. PIG PEN



The Pig Pen Pod presents an opportunity for participants to take on a role as a farmer; with the task of raising pigs. Participants are educated on different types of farming styles and methods created to meet the needs of pigs. The difference between raising small groups of pigs to large groups are highlighted. Also the technological changes throughout time and how they have made animal husbandry more efficient for farmers.

Structural components: Open pig pen, learning kiosks, animatronics.

Alberta Education Curriculum: Grade 1 students investigate the Needs Animals and Plants in Topic E of their curriculum.

S. GROW VEGETABLE GARDEN



The Grow Vegetable Garden pod highlights the process of food cultivation in the agricultural industry through organic practices. The value of vitamins and minerals present in each vegetable for human biology will be available in charts and graphs. Participants will be able to plant seeds and seedlings based on which vitamin or mineral they would like to ingest, in addition to watching as neighbouring plants grow and produce vegetables. Participants will build upon their previous knowledge of plant growth and expand on it through learning the needs of specific vegetable plants and how those needs are provided in greenhouse settings.

Structural components: Greenhouse garden, animatronics, educational info stations.

Alberta Education Curriculum: Grade 7 students investigate Plants for Food and Fibre in Unit B of their science program.

T. BEE-HAVIOUR

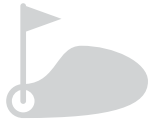


The Bee-haviour Pod highlights the importance of bees in agriculture through its provision of a natural pollination mechanism. There will be introduction to the different species of bees, the crops most frequently pollinated as well as their occupations. Staff members will provide participants an inside look into apiary processes and structures used to create honey. Products from this pod will be available for purchase.

Structural components: Beehive/Apiary house, animatronics

Alberta Education Curriculum: Grade 4 students investigate plant reproductive processes in Topic E Plant Growth and Changes and Grade 7 students investigate interactions and interdependencies in Unit B: Plants for Food and Fibre.

U. GOPHER HOLE MINI-GOLF



The Gophers Pod highlights the setbacks gophers present to agricultural practices. Participants will play Mini-golf and are invited to engage their investigation and problem solving skills to provide methods of pest control and mitigation strategies for gophers and other rodents that affect agriculture.

Structural components: Mini-golf course, educational info stations, learning kiosks, animatronics.

Alberta Education Curriculum: Grade 6 students cover Evidence and Investigation in Topic D of their science curriculum.

V. WASH CLOSETS



This is a small washroom facility within the Park.

SITE SERVICING

The following section details the overall site servicing and landscape buffering components considered the site planning of Granary Road.

4.1 LANDSCAPE SCREENING, BUFFERING, & FENCING

Figure 6 is the Concept overlay air photo. This Figure identifies landscape screening and buffering around the building, within the parking lot, and all along the western side of the quarter section adjacent to 112 Street SW.

Low Impact development strategies such as bioswales and cisterns for rainwater capture and re-use will be incorporated into the site wherever possible. This is proposed in accordance with landscape screening and buffering guidelines that the Municipality requires for uses of this type. The level of landscape screening will be provided in detail at the Development Permit stage with the submission of a formal landscape plan. The intention is to ensure that the site is visually integrated in the landscape, reflects agricultural and rural character and is seamlessly integrated. The Granary Road building has been placed on the site in an area below the horizon to mitigate the impact of a structure of this size. Given the seasonal nature and character of this use, the landscape plan will utilize seasonally various vegetation types; species that require low or no irrigation for survival and the inclusion of low maintenance prairie grasses. The landscape planting strategy can also be used to introduce rural landscape concepts such as the use of

drought tolerant species, xeriscaping, bioswales, and rainwater capture and re-use.

For added screening and site security a perimeter barb wire fence will be included around the outdoor elements comprising the Agri-Edutainment Park. The fence type and style will be included in the Landscape Plan submitted at the Development Permit stage.

Policy 4.1.1 Landscaping, Screening and Buffering Plans shall be submitted to the Municipality at the Development Permit Stage.

4.2 GARBAGE COLLECTION

In facilities like this, garbage collection is critically important. The lack of proper garbage containment and collection can have negative impacts on wildlife and adjacent area landowners. Garbage is to be contained in wildlife proof receptacles throughout the property.

Policy 4.2.1 Every effort will be made to ensure there is no stray refuse, or flying debris, on the property. Garbage collection will be privately contracted and garbage bins will be located on the east end the building in a screened area designed in accordance with Municipal requirements.



FIGURE 6 - CONCEPT OVERLAY AIR PHOTO



4.3 FIRE SAFETY

The Granary Road facility will be required to have additional fire suppression under the Alberta Building Code given its size and intended use. This additional fire suppression may take the form of an underground cistern connected directly to a fire hydrant.

Policy 4.3. The Granary Road fire suppression system will address both seasonally active and year round active areas in the facility and will be designed in accordance with Building Code and to the satisfaction of the MD of Foothills No. 31 Fire Chief.

The facility and the outdoor park in its entirety is a non-smoking environment. The facility is designed for school age children, parent, and grandparents along with and general members of the public. In order to suppress the effects of second hand smoke, no smoking will be permitted within the Granary Road facility or outdoor park. Smoking will not be permitted on outdoor patios and decks. In order to assure that cigarettes and smoking materials are not randomly used and disposed of, there will be outdoor public designated smoking areas with the proper receptacles for smoking materials in the Parking area.

Policy 4.3.2 Granary Road is a non-smoking facility and no indoor or outdoor smoking is permitted. To assure safe disposal of smoking materials proper receptacles will be placed in the parking areas to assure that no stray cigarette butts or smoking materials are disposed of improperly.

4.4 PARKING

Figure 5 delineates a total of two hundred and twenty five (255) parking stalls and nine (9) handicapped stalls, forty (40) staff parking stalls and loading spaces on the east and west ends of the Granary Road facility. The site offers a total of two hundred and seventy four (274) parking stalls which is intended to service the facility during the high season from April to October. The parking calculation does not include accommodation for parking spaces for the greenhouse square footage that is not open to the public.

The Granary Road facility will undertake to direct visitors to car pool and bus to the site to reduce overall vehicle trips. School bus parking and accommodation for school buses is a priority in the parking strategy. No RV parking or overnight parking is permitted. In order to promote car pooling and ride sharing the parking lot should have less stalls than required by the land use bylaw, however, this can only be approved by Council.

In order to reduce site storm water generation by virtue of introducing large paved surfaces, this parking lot will be granular base and will include bioswales to ensure a high degree of site permeability is retained.

The Parking space count was derived in accordance with the MD of Foothills No. 31 Land Use Bylaw Table 9.19D as follows:

Policy 4.4.1 Granary Road will accommodate parking in accordance with the requirements of the land use bylaw. In order to reduce vehicle trips, priority will be given to school bus, bus and car pool ride sharing when visiting the site.

Facility Aspect	Sq. Ft.	Public Access	Parking 1 space/108 ft ²
Barn	25,593	Yes (seasonal)	236
Event Centre	1,783	Yes (year Round)	16
Greenhouse	17,500	Yes Seasonal (portion 1225 sq. ft.)	11
TOTAL			263

UTILITIES AND SERVICING

5.1 POTABLE WATER SUPPLY

The water demand for the Granary Road use will vary from seasonal peaks in July and August to season lows in January and February. Water demand will be varied between uses, the greenhouse, the Barn, the Agri-Edutainment Park all have different demand calculations associated with them. As the facility is geared toward public use, potable water supplies and distribution must be plentiful and available. As a result, the Granary Road development will be fully supported by haul-in potable water supplies. No groundwater is contemplated to support the facility. Potable water will be hauled on an as required basis to a centrally located cistern that will serve all on-site water demand. Existing groundwater wells on the site will continue to be utilized for agricultural and livestock supply purposes only.

Policy 5.1.1 Potable Water shall be supplied to the site from a haul in source and retained on site in a central cistern for distribution purposes. No groundwater is contemplated to support this use.

Policy 5.1.2 The Granary Road facility, including all washroom facilities, will utilize low flow fixtures and water conservation and reuse techniques in all aspects of the water cycle.

5.2 SANITARY WASTEWATER

The proposed development will be serviced by a central sanitary collection system located centrally to the Granary Road facility. This central collection unit will be pumped out and sanitary wastewater hauled away on an as-required basis. Seasonal peaks will be overcome by the central collection and haul-out system. No septic field and tile system will be utilized on site, nor any high efficiency sanitary system that may include or contemplate effluent discharge into the sub-surface soil. Due to the expense of sanitary haul-out all fixtures will be low flow and re-use and re-capture of grey water will be investigated and utilized wherever possible.

Policy 5.2.1 The Sanitary Wastewater collection system shall be designed in accordance with the applicable municipal, provincial, and federal standards and shall be provided to the satisfaction of the MD of Foothills no. 31.

Policy 5.2.2 The Concept Plan Area shall be designed to allow future connection to a regional wastewater system should one be established in the future.

Policy 5.2.3 As a component of any subdivision or development application, the applicant may provide information regarding the opportunity to recycle their wastewater for irrigation to the satisfaction of the Municipality.



5.3 STORMWATER MANAGEMENT

The existing drainage within the site is characterized by natural drainage courses and the road ditches along the municipal road system. The existing land use is mostly dominated by pasture/grass land. Drainage from the site and offsite catchments ultimately discharge into the Pine Creek via natural drainage path/overland flow. The greatest generator of storm water will be the Granary Road facility building. It is intended that rainwater capture and re-use in the rainwater leaders, the parking lot and the utilization of low Impact Development Strategies be incorporated to ensure sufficient rainwater capture and no direct discharge into Pine Creek. If required a stormwater catchment facility may be constructed on site to ensure the 1:100 year peak flows are captured and not directly discharged into Pine Creek.

The goal of the development is to not increase the naturally occurring flows into Pine Creek, the facility goal is to capture all post development flow and re-use it on site. It is anticipated that a Stormwater Management Plan and Lot Grading Plan will be a requirement at the Development Permit Stage.

The Stormwater Management Plan will be designed to meet Alberta Environment's (AENV) water quality and quantity objectives with an allowable release rate dictated by the downstream culvert capacity and existing flow regime of the natural drainage path. The Stormwater Management Plan will be designed and constructed to manage the quantity and quality of runoff released from the site.

Policy 5.3.1 A Stormwater Management Plan and Lot Grading Plan will be required as part of the detailed design that will address the existing and proposed drainage, stormwater quantity and quality requirements, and the appropriate offsite release rate. The stormwater management concept plan will be submitted to the MD of Foothills No. 31 and Alberta Environment for review and approval.

5.4 SHALLOW UTILITIES

The Granary Road facility will be provided with telephone, gas, and power services. These services shall be located on a separate easement registered on title.

Policy 5.4.1 Shallow utilities shall be provided within the Granary Road facility at the sole expense of the Developer and shall be located within appropriate utility right of way

5.5 PROTECTIVE SERVICES

Police Service to the Granary Road facility is provided by the Royal Canadian Mounted Police Okotoks Detachment and MD of Foothills no. 31 Community Peace Officers.

Fire protection will be provided by the MD of Foothills (Heritage Pointe Station). The Granary Road facility will be serviced by 911 emergency services with a formal Emergency Response and Management Plan developed in conjunction with, and formally provided to, all EMS, Fire and Police services. An emergency fill line will be provided on the potable water reservoir exterior to permit a water tanker to fill itself as a source of water for firefighting regionally and locally.

Policy 5.5.1 An Emergency Management and Response Plan shall be submitted at the Development Permit stage to the satisfaction of the MD of Foothills No. 31, RCMP Okotoks, detachment, Foothills Fire Department, and local EMS.

PUBLIC CONSULTATION

A public meeting to review The Granary Road Concept Plan was held on Tuesday January 12th 2016.

A summary of the public meeting, invitation, and community feedback can be found in **Appendix B**.



APPENDIX A

A wide-angle landscape photograph showing a long, straight asphalt road that recedes into the distance. The road is flanked by green fields and a fence line. In the middle ground, there are several buildings, including a large white house and a barn, surrounded by trees. The background features rolling green hills and a range of large, rugged mountains with patches of snow under a sky filled with soft, white clouds. The overall scene is bright and clear, suggesting a sunny day.

BAT ACTIVITY INSPIRATION



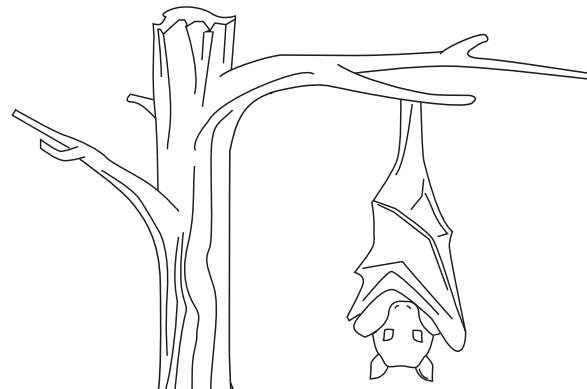
A Anamatriotic Bat Cave Entrance

Giant bat hanging from realistic fake dead tree. Bat moves its eyes to look at people coming into the cave entrance, opens wings and mouth.

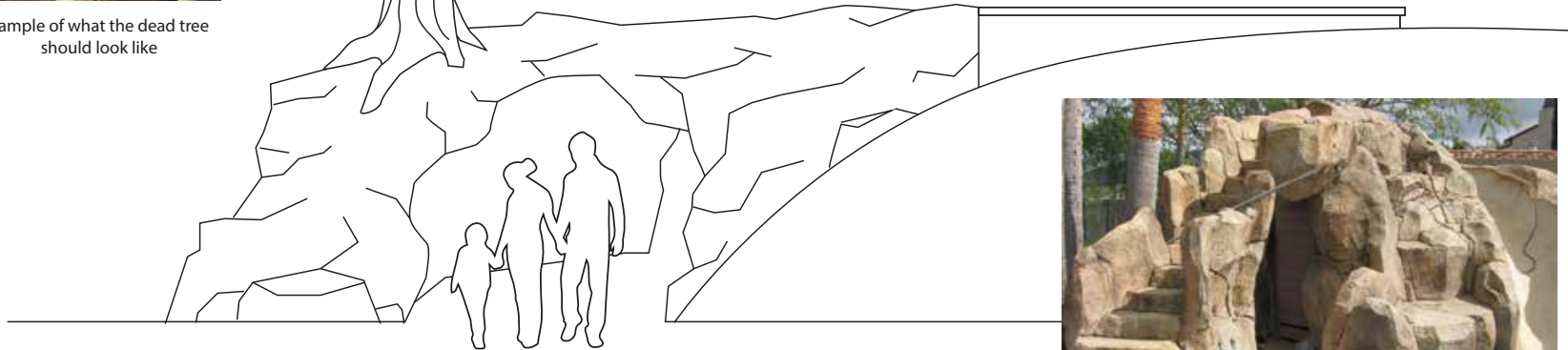
Cave entrance allows visitors to go directly into the maze area or follow the interactive learning cavern.



Sample of what the dead tree should look like



Actual bat hanging from a branch



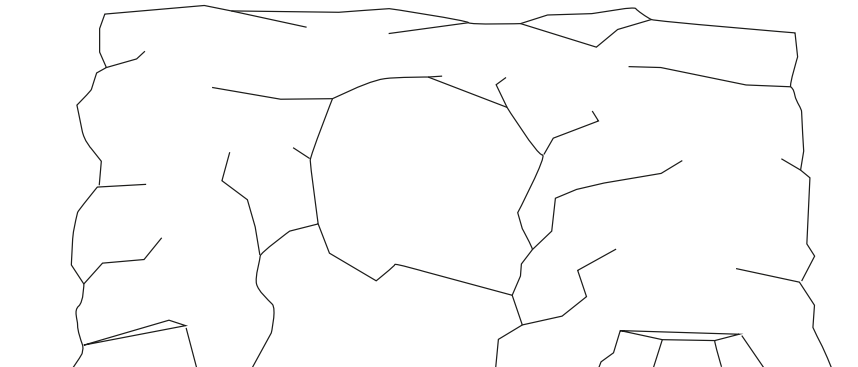
Sample of what the fake rock and cave entrance should look like



Cave Stations

All cave stations (B, D, F, & H) have a facade made out of fake rock on the front exterior and with a window (consider smoked plexiglass) or opening to the Maze Area (.).

The interior should look like a cave with stalagmites and stalactites with dramatic lighting. Each station will have an anamorphic bat experience behind plexiglass along with many other bat factoids.



Note: Exterior Cave Stations should all be sculpted a little differently.

B

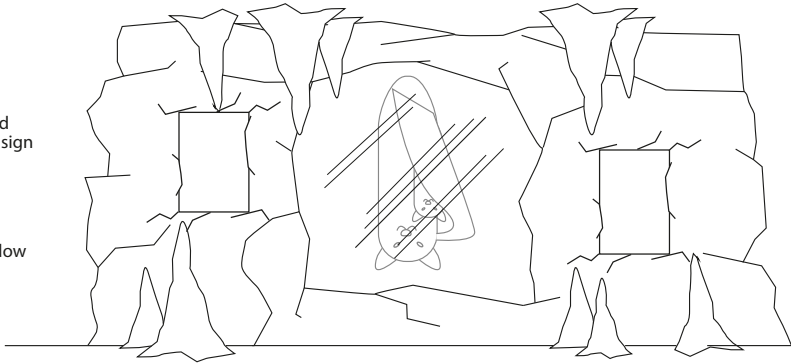
Anamnetronic Mom & Baby Bat

Mother bat caring for baby opens wings as baby moves into feeding position

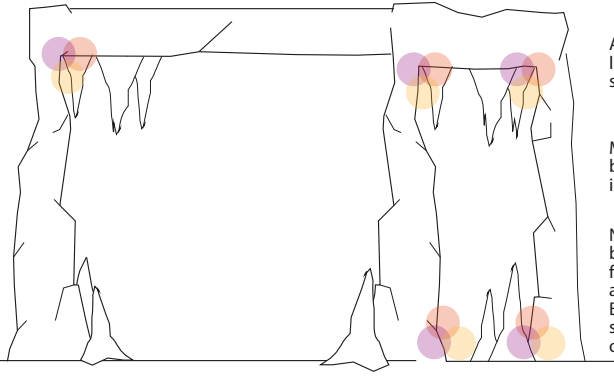


Inset for printed acrylic bat fact sign

Plexiglass window



Interior display wall with anamnetronic mom & baby bat hanging in interior chamber.



Side view of Cave Station with interior details on the walkway and interior chamber

Add dramatic lights like the sample shown

Mom & baby bat hang in interior chamber

Note that this back wall and the front wall curve as shown in the Bat Experience site plan on pg. 2 of this document

Note that all Cave Stations should have a similar interior cave like sculpting, coloring and lighting.



Bat House Walk Through

Visitors walk through a wood scaled up bat house with zig-zag "cross-cut" entrance and exit plus interior exhibits that explain about bat conservation and display samples of actual bat house styles.

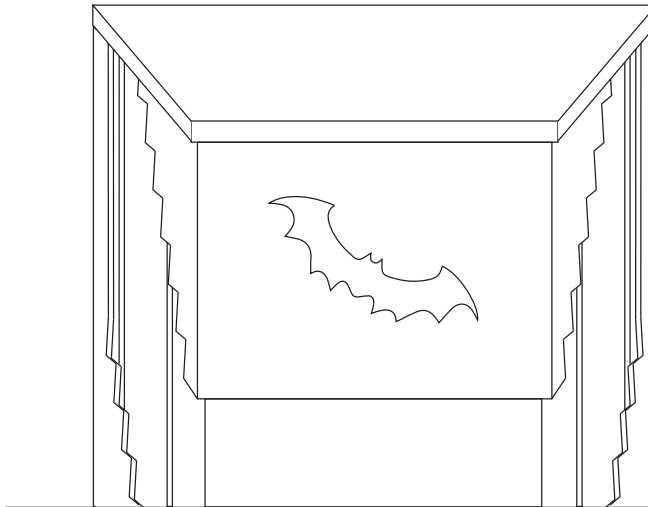


Sample shadow box with guitar in it.

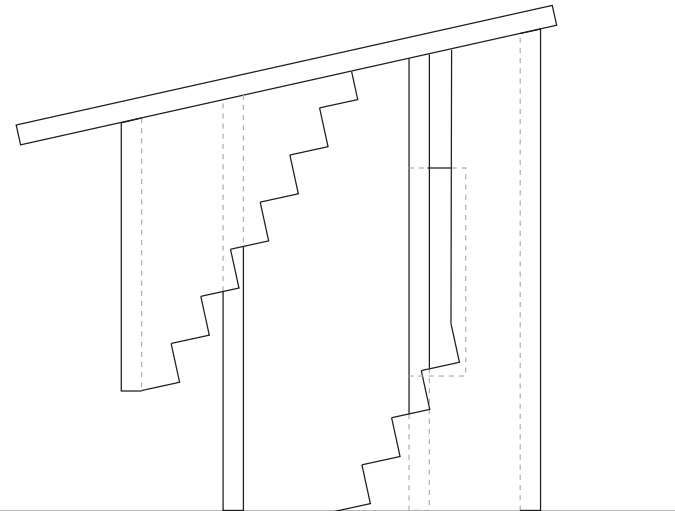


Interior Back Wall with 6' x 6' lighted shadow box that will have bat conservation content inset into it

Interior Front Wall with 6' x 6' lighted shadow box that will have sample bat houses mounted in it



Front View with angle roof line to back wall, bottom shortened front wall (like a real bat house), and bat silhouette cut-out



Side view with zig-zag cut-out entrance

D

Anamatriotic Bat Ceiling Screamer

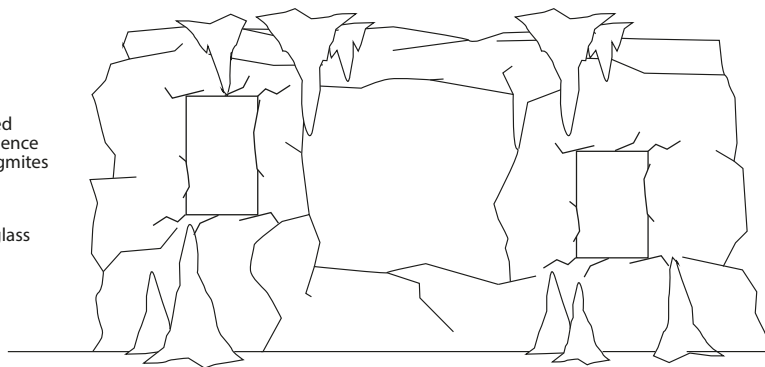
Similar in construction to Bat Station B, but the plexiglass covered display is on the ceiling with 40+ cave bats clutching the interior fake stone ceiling (see example). The bats should move around a bit and make screeching bat noises. Possible have one or two fly back and forth.



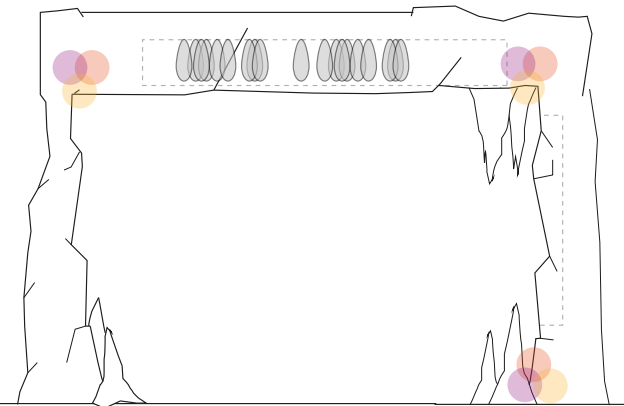
Interior Front Wall with 6' x 6' lighted shadow box that will have sample bat houses mounted in it

Inset for printed acrylic cave science facts like stalagmites & stalactites

No glass



Interior display wall



Add dramatic lights like the sample shown

Shadow box with bat factoids

Side view of Cave Station indicating ceiling chamber and back wall shadow box positioning

E Bat Wing Span Wall

Bats come in a large variety of sizes. Their wingspans range from the Flying Fox with a 5.5' wingspan to the tiny Bumblebee Bat with a 6.7" wingspan. The Bat Wing Walls lets visitors compare their own wingspan with the Flying Fox by stretching out in it's cut out silhouette or their hand size in the cut-out of the Bumblebee Bat.

The front wall is a metal/iron sheet with the biggest bats silhouettes cut all the through. The wall is supported by two metal/iron columns on each end with a beam across the top. The top beam has a cavity for projection device which will project a looping bat fact video on the upper back wall. The back wall also has cut-out bat silhouettes but these bats will have a wall 4" behind them and could have light glowing around them. The top of the back wall will be the projection screen for bat fact video. Each bat silhouette will have an angled printed acrylic sign with a picture and fun facts about the bat.

Ideally this station would not have a roof, but the walls should be made roof-ready in case we need to cover the display wall so the video images are not obscured by sunlight.

Metal wall cut-out

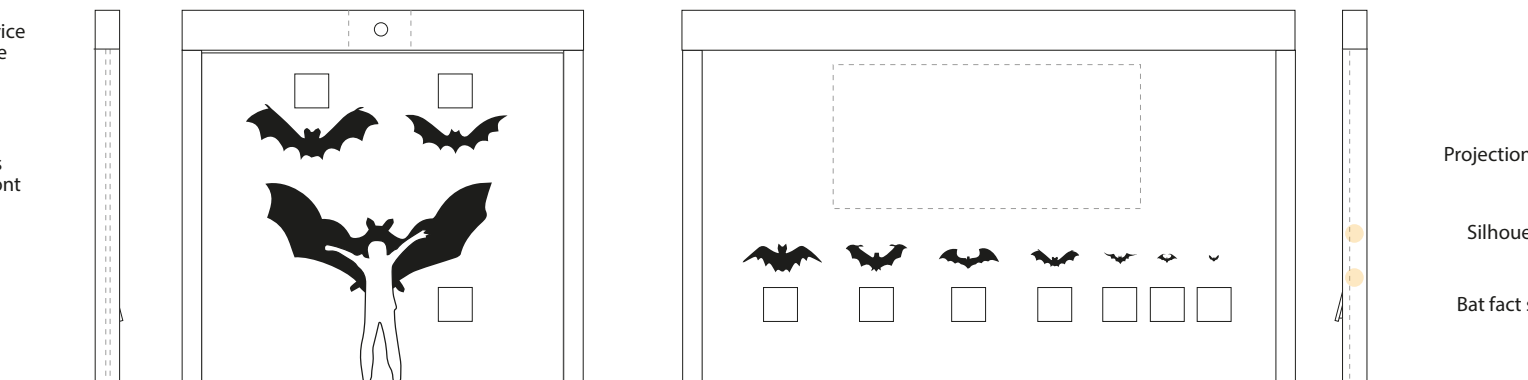


Backlit metal wall cut-outs

Projection device cavity and hole

Bat silhouettes cut-outs on front wall go all the way through to the outside

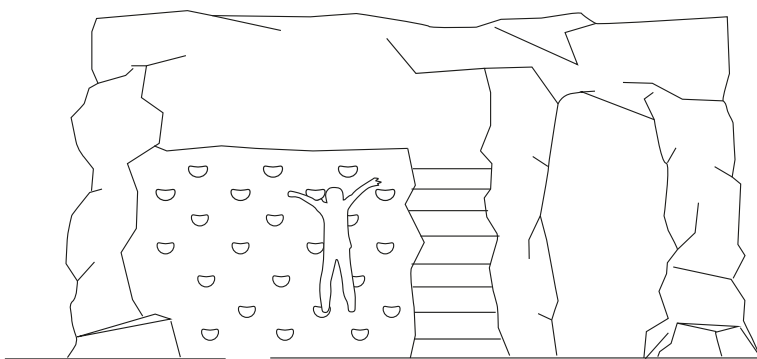
Artwork for silhouettes still to come



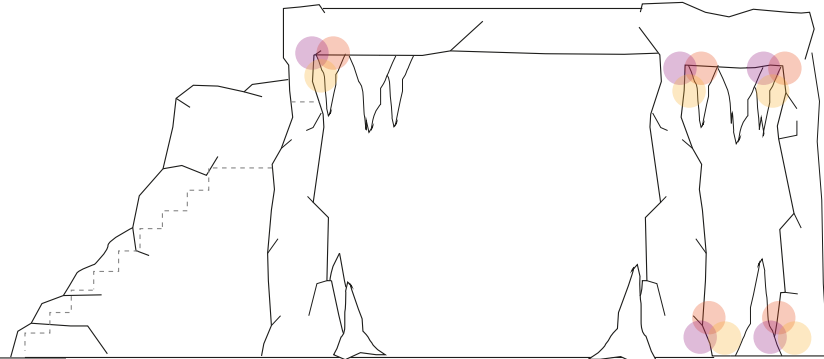
F

Bat Wall Climber

Exterior features a climbing wall where kids mimic the way the anamorphic bats are crawling up the wall in the interior chamber. Climbing anamorphic bats should lift and turn heads if possible.



Front exterior view of Climber Cave Station with kid sized climbing wall, steps and doorway



Side view of Cave Station with interior details on the walkway and interior chamber

Add dramatic lights like the sample shown

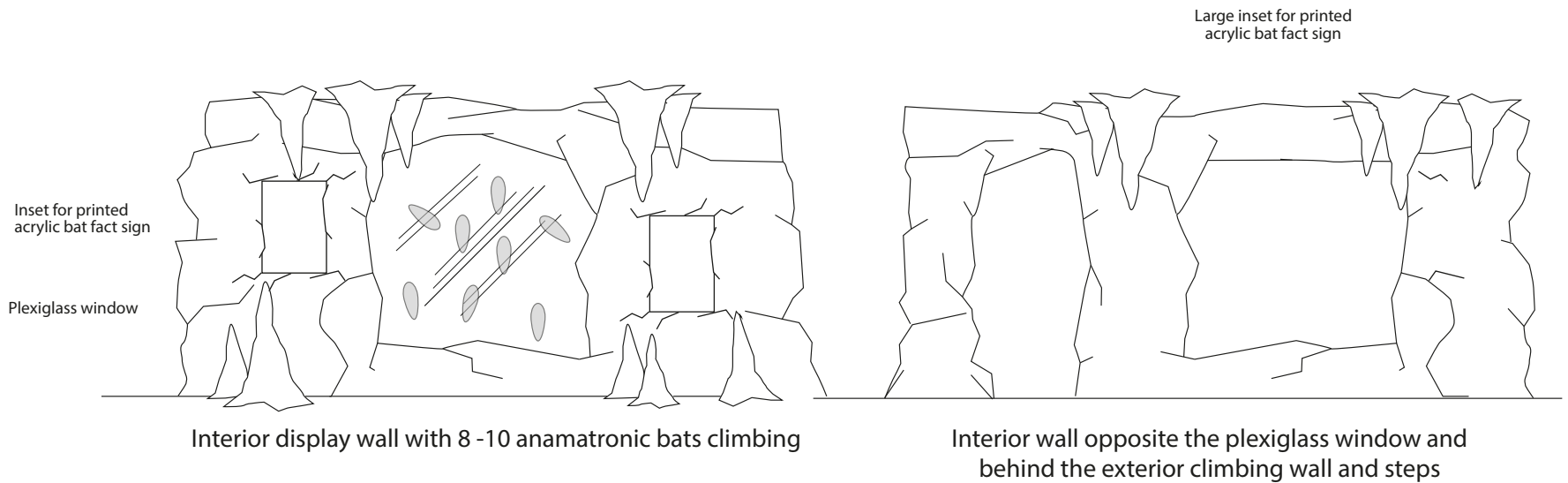
Anamorphic climbing bats on this wall

Note that this back wall and the front wall curve as shown in the Bat Experience site plan on pg. 2 of this document



Bat Wall Climber

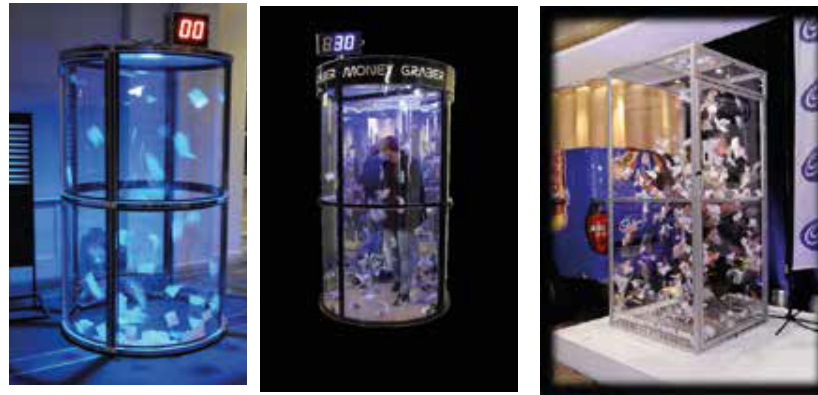
Interior views.



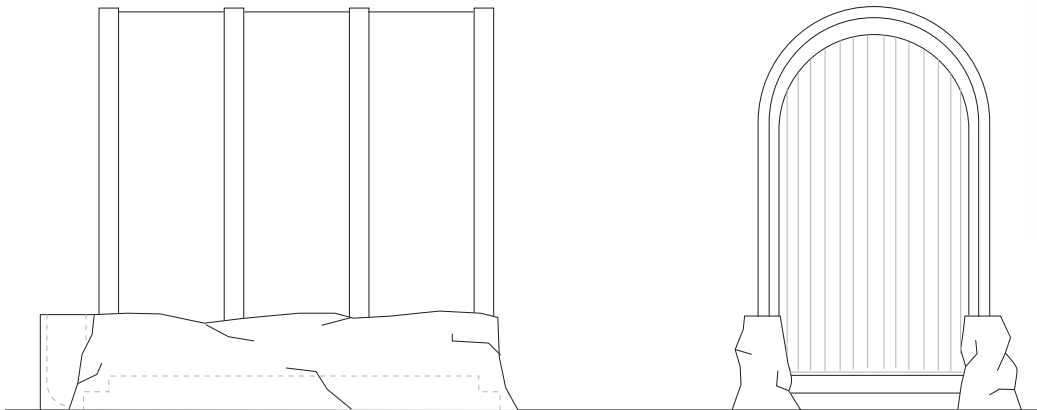
G Bat Insect Air Chamber

Brown bats can eat up to 1000 mosquitoes in an hour. Visitors can appreciate this phenomenon by stepping into the Bat Insect Air Chamber. When a user steps through the clear rubber/plastic strip curtain they trip the air chamber mechanism and thousands of clear plastic pieces (2" x 3") with a mosquito printed on it start swirling around them at a very fast rate making it difficult to grab them. The chamber has an auto shutoff after 20 seconds unless someone else enters the chamber.

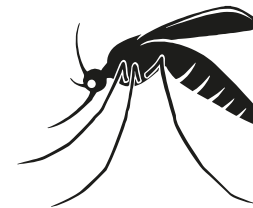
Visitors drop their "insects" they grabbed into a bin on the outside of the exit which has a vacuum that sucks the plastic pieces back into the chamber.



Examples of Air Chambers



Examples of Curtain for Entrance and Exit of the Chamber

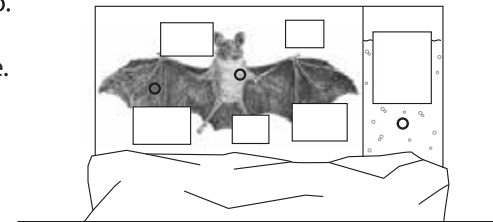


Art Work for Clear Mosquito Plastic Pieces

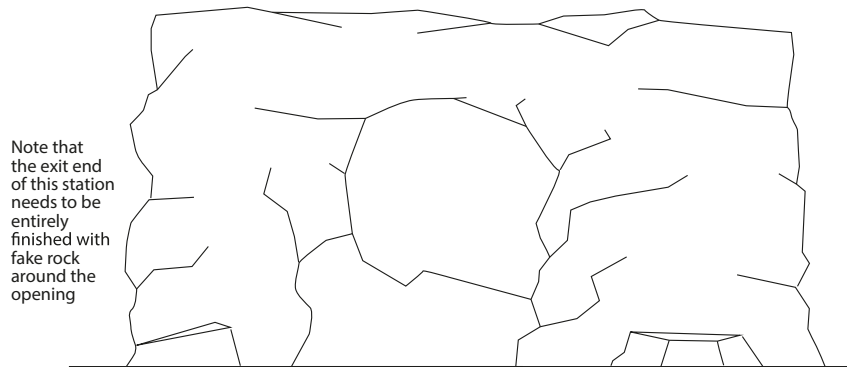
H Bat Anatomy

Visitors walk past and around an acrylic two compartment case with a 360° view of a scaled up, very realistic Alberta Brown Bat. The wings are made of a tear-proof vinyl so visitors can reach in a small hole in the acrylic to feel the bat wing. They can also reach into a hole in the acrylic in front of the chest and back of the bat so they can feel the bat fur.

The second part of the case is gray smoked semi-transparent and filled with a squishable material that looks and feels like bat guano. Visitors can reach into holes on both sides to feel the texture of guano through a tear proof latex glove that is attached to the case.

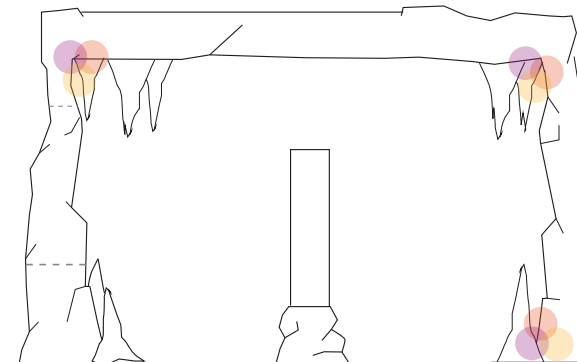


- Bat anatomy fact signs
- Fur touch
- Wing touch
- "Gauno" touch
- Fake stone to match the "cave" interior



Note that the exit end of this station needs to be entirely finished with fake rock around the opening

Exterior View



Add dramatic lights like the sample shown

Anamnetronic climbing bats on this wall

Note that this back wall and the front wall curve as shown in the Bat Experience site plan on pg. 2 of this document

Side view of Cave Station with interior details on the walkway and interior chamber



Blind Bat Labyrinth Bigger Kids

Bats have the uncanny ability to fly blind at night using their sonar to expertly navigate the night sky. Visitors to the Blind Bat Labyrinth will mimic that experience as they navigate this tricky human sized maze wearing a bat shaped helmet.

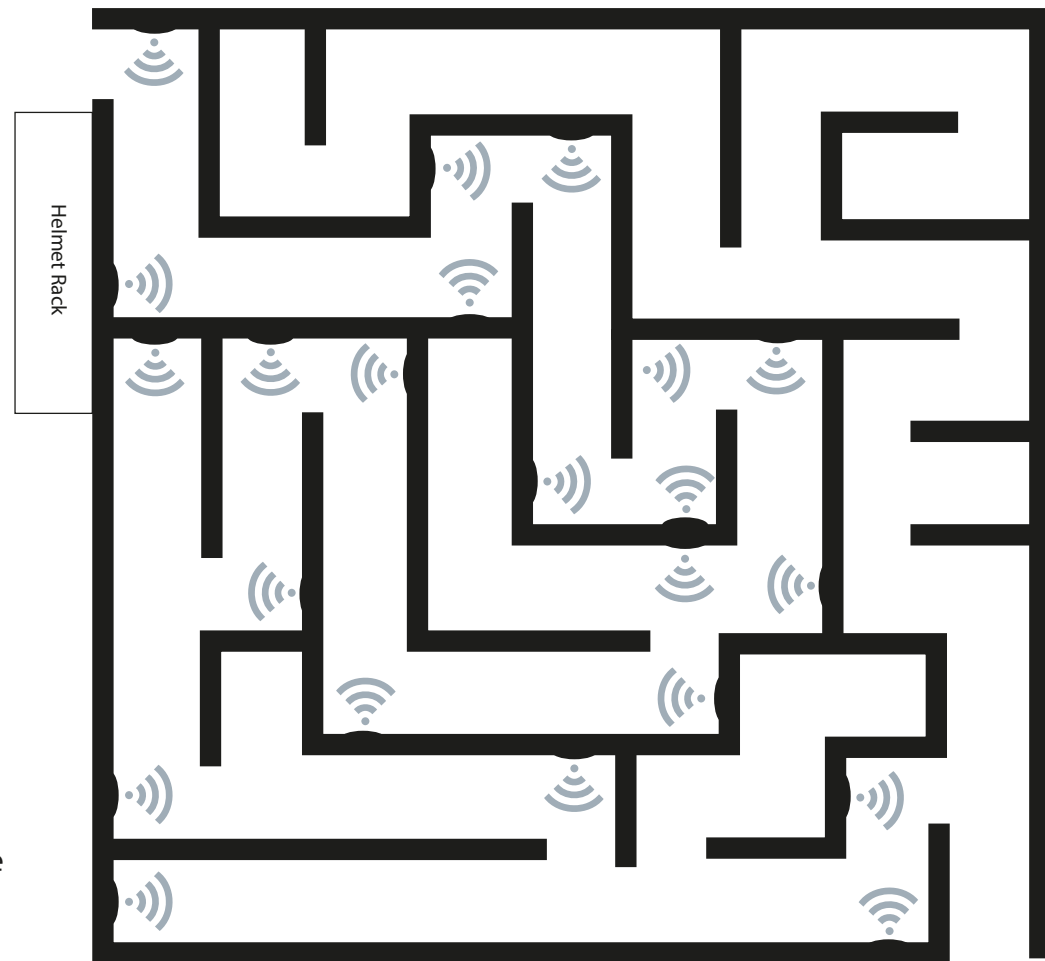
The helmet is outfitted with headphones that hear beeps in their left or right ear. The beeps get more rapid as the user gets closer to devices placed in the padded walls of the maze. The helmet has a semi-opaque visor that dramatically limits what they can see to only shadows at very close proximity.

The maze walls should be 8' tall and 1' wide with foam padding up to 6'. The pathways should be 5' wide. The maze should be devised so walls and sonar devices can be moved to change the path through the maze.

The helmet should be made out of lightweight thin plastic and have a disposable thin plastic liner for hygiene reasons.

The surface of the maze should be orange (PMS 1375C) and the maze walls should be purple (PMS 2597C).

Helmet Model

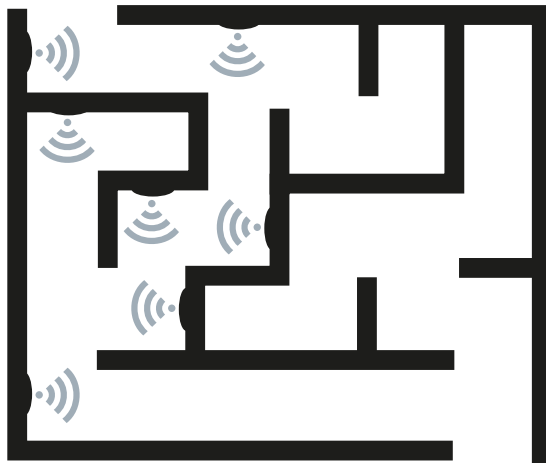




Blind Bat Labyrinth Smaller Kids

Younger visitors can also experience the magic of navigating with their ears in this 4' tall smaller maze. Youngsters do not wear helmets but rather listen for the sound of directional speakers placed in the walls of the corridor that will lead them to the maze exit. Color also be used to clue them to the right path.

The surface under the maze should be bright green (PMS 389C), the padded walls without speakers should be orange (PMS 1375C) and the walls with speakers should be bright blue (PMS 298C).



APPENDIX B

A scenic landscape featuring a long, straight road stretching through a valley towards snow-capped mountains under a cloudy sky. The foreground shows green fields and a fence, while the middle ground includes farm buildings and trees.

OPEN HOUSE SUMMARY

January 12, 2016 Open House

Total Attendees: 81 signed in (*estimated 120 attendees*)

Feedback Form Summary:

Total Feedback Forms Submitted: 25

- 22 consider themselves direct neighbours.
- 12 participants were considered “*positive*” towards the development.
- 4 participants were considered “*negative*” towards the development.
- 9 participants were considered to be “*neutral*,” expressing moderate concerns or not providing feedback.

Primary issues highlighted in feedback forms:

- The majority of conversations and attendees were supportive of the Granary Road proposal
- 15 participants expressed concerns with traffic and road congestion.
- 6 participants expressed concerns with water and sewage.
- Significant concern expressed over site access and SW leg of Stoney Trail.
- 226 Ave is a highly travelled cycle route – concern for cyclists’ safety.
- Scepticism about long term hauling of water and sewage.

Detailed Feedback Form Responses are included on Page 51.

BLANK FEEDBACK FORM

FEEDBACK FORM

Thank you for attending the Granary Road open house.
Your feedback is appreciated.



Please complete this form and return prior to leaving, or complete by January 18 and fax to: 403.201.5344.

Would you consider yourself a direct neighbour to the proposed development? yes no

Are there opportunities or constraints that you would like us to be aware of as we move forward with the Granary Road proposal?

What is your general impression of the proposal? Are there concerns you think that we should understand? Do you require any clarification on the proposal?

Was this meeting format an effective way for community members to talk to development team members and learn more about the proposed project? What did you like or dislike about the format?

Do you have other suggestions for communicating with community members about the proposal?

Would you like to receive an update on the proposal? Please provide your name and contact information below.

NAME: _____

EMAIL: _____

DETAILED FEEDBACK FORM RESPONSES

	DIRECT NEIGHBOUR	OTHER OPPORTUNITIES/CONSTRAINTS?
1	yes	n/a
2	n/a	n/a
3	yes	Traffic. Absolutle no reference for upgrade
4	yes	bicyclists using your parking lot as a "start off" point. Increased traffic including noice from school buses. Nighttime lights and noise
5	yes	n/a
6	yes	traffic and bikers area a major concern. We will have to pass this concept each day. Property values? Stoney trail is already a problem
7	yes	n/a
8	yes	n/a
9	yes	road congestion, currently very narror 2 lane road, 280 parking stalls (planned) constant in and out from on exit. Perhaps look at 2 for case of traffic back ups for the locals. Also water and sewage are a concern to maintain 5-10 years out.
10	no	n/a
11	yes	it does not belong here. No benefit.
12	yes	n/a
13	yes	city traffic on 37th st and or 24th st
14	yes	increased traffic, water particularly in the future, disposal of sewage
15	yes	my only concern is the increased traffic. I ride my horse along the roads.
16	yes	like farmers market and restaurant
17	yes	n/a
18	yes	although the proposal talks of tanking in water, I hope that will remain the case as I would be concern about a large water use degrading nearby domestic wells
19	yes	traffic. Special function noise
20	yes	traffic
21	yes	as a neighbour (white post lane) I would be available as an arborist to assist with advise on your tree investment
22	yes	no
23	yes	how do you propose to handle traffic patterns in light of proposed closures of 24 st and 37 st @ 22x
24	yes	1. Traffic, 37th St and 226 Ave are already very busy especially in the summer time, how does the team plan to negate the traffic issues? If water is to be hauled in and out this will bring in a lot of heavy traffic, as well as small traffic, how is the MD planning to deal with the columes and dangers associated with it? 2. Noise violations? there seemed to be multiple answers on hour, ie: winter hours vs summer hours, parties and weddings vs. normal operations
25	yes	We wish you great success (very glad the beavers aren't real)

GENERAL IMPRESSION?	WAS THIS MEETING EFFECTIVE?	SUGGESTIONS FOR COMMUNICATION
looks great	it was good	n/a
n/a	n/a	n/a
Will not benefit community at all	smokescreen for ulterior developments	n/a
n/a	it would have been nice to have a bit of a presentation at the beginning and then let people walk around and view charts and talk with stakeholders	We've appreciated having Tom keep us in the loop
do not like at all	no. nothing different than mail out.	more of a q&a
again traffic concerns and property values. There will be additional pressure to 96/112 street with water hauling, sewage removal, deliveries, customers, buses, public vehicles, repair vehicles, people, etc. not impressed given what a long time it took to get a beautiful paved road already	n/a	please just keep us informed which ever way you are able
n/a	n/a	n/a
I am very concerned about the increased traffic on 226 ave especially with the amount of cyclists	would have preferred a formal presentation	
good concept. People have moved to the country for quiet. I doubt you will have control over excess noise based on your expected income from the rental of the building	it was okay. Very repetitive. Mr walter and kristi contradicted each other a lot	provide more detail on the regulations you plan to follow to keep us a viable supporter of your plan. Can you email me concept plan when available?
very good	yes	n/a
I don't think the area/location will make my life better. Red Deer Community Hall?	No not at all	id like to hear more comments from our neighbours
transportation links (conditions of roads) as no direct access from ring road	very good info provided by mail not an awful more tonight	do appreciate the opportunity to be involved
interesting	too many folks trying to get info at one time with limited team members	n/a
good	yes	email or newsletter
I think it will be an exciting addition to our community and great opportunities for my children	a meeting that was more structured may have been a better way to community then question and answer time	n/a
understand proposal. Worried about traffic	like open house	email/mail format good
farmer's market coffee shop ideal for area development	liked the format, very informative, convient location	email/mail
concerns for traffic and noise	disliked - was hoping for a presentation and group discussion. I lined up to ask questions but most of what I picked up was through listening in. people just kept pushing in front of me	yes - a presentation would be good with the opportunity for questions and discussion basewd on it. This format was just a scrum to look at 4 boards which were reproductions of what was already in our letter
seems like a good concept	ok. Presentation would have been good.	some kind of local involvement
traffic is a concern however concept is good	generally well done. Tank you for conducting this meeting for public feedback prior to formal process	please consider traffic issues
I am favorably impressed. Long term once the land is redesignated Ag/Bus could land be be used for retail (gas stn, etc)	I would have apreciated a presentation with question and answer session. But I did enjoy the informal one on one with the owners of the land	I though the mailout was outstanding
sounds good	n/a	n/a
Concerns: water. How do you propose to meet the water requirements?	yes	n/a
We have concerns about the proposal, it is a very big project and can potentially create a lot of problems for the surrounding community. We think the bad will outweigh the good. Clarification would be appreciated	We felt there were key members of the team missing. We were hoping for a more formal presentation of some kind, with a question and answer period. With so many people talking at once it was difficult to hear other questions being asked and the answers.	A more formal presentation would be great, or allow individuals to contact the team for appointments to address questions
The main concern is water - will the water be trucked? And if so will that change in the future? Will the creek stay untouched?	it was informative	n/a