



40 Mile Park Development Plan

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1 Introduction

The purpose of this Development Plan is to provide a planning direction for further development within 40 Mile Park. This Development Plan will provide a general land use and servicing framework for public recreation amenities, seasonal and overnight campgrounds and long term lease private residential development in the Park.

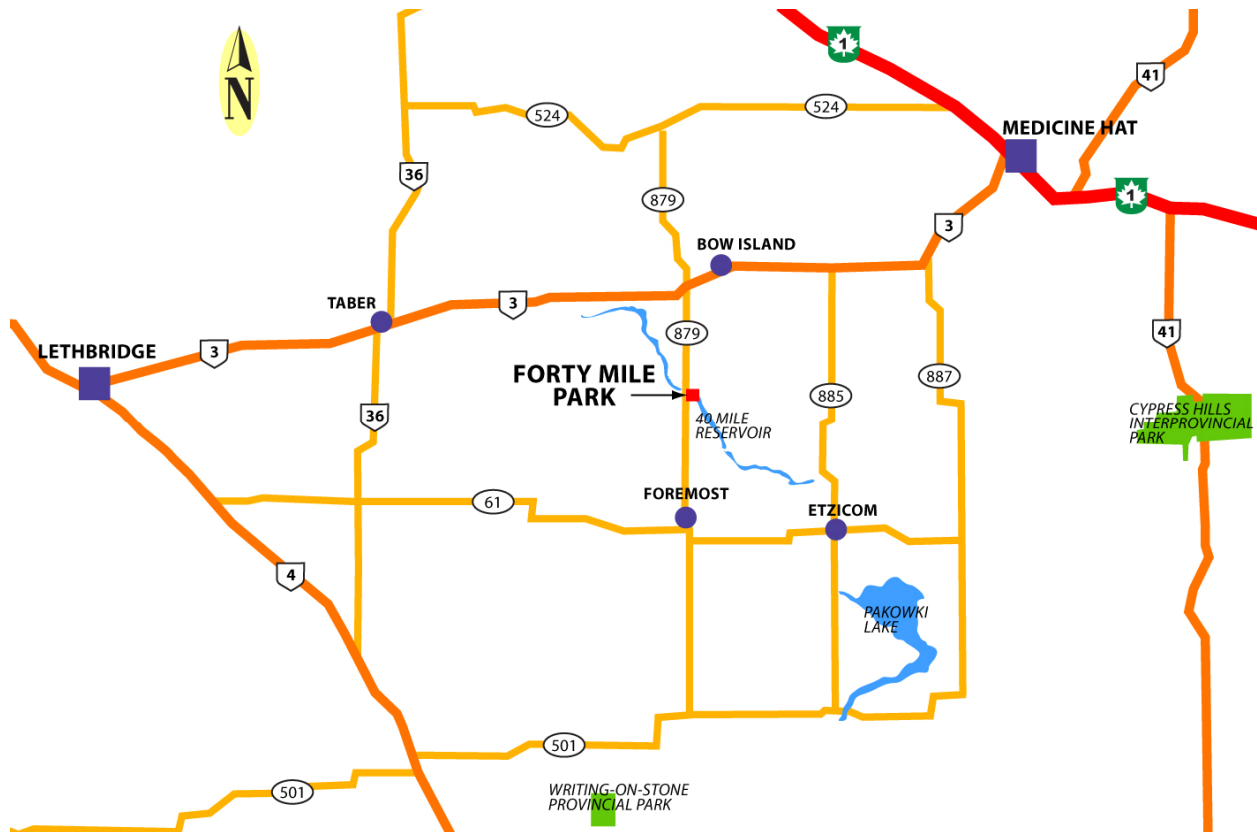
The County of 40 Mile No. 8 (the County) recognizes the value of 40 Mile Park as a regional community asset. In response to current development within the Park and the continued pressure for additional development, the County identified the need to determine the development capacity for the land and lake side to help protect the Park for public benefit. In July 2009, the County retained Scheffer Andrew Ltd. (SAL) to conduct an analysis of the capacity for further development in 40 Mile Park and develop a plan for future growth.



Aerial View of 40 Mile Park looking south

2 40 Mile Park Description

40 Mile Park is located on the 40 Mile Coulee Reservoir approximately halfway between Bow Island and Foremost in the County of 40 Mile in southeast Alberta (E. ½ Sec. 28-8-11-W.4M and S.W. Sec 27-8-11-W.4M). The Park lies 85 km southwest of the City of Medicine Hat and 125 km southeast of the City of Lethbridge. The following map shows the Park its regional context.



The St. Mary River Irrigation District (SMRID) owns and operates the 40 Mile Coulee Reservoir which is an off stream storage reservoir. The primary purpose of the reservoir is water storage for the irrigation district. A secondary function of the reservoir is to provide water-based recreation for residents and visitors of southeast Alberta.

40 Mile Park encompasses 30 hectares (ha) and is bound on the west and south by SMRID canals, the east by the reservoir and the north by the dam and coulee edge. 40 Mile Park is held in private ownership by SMRID but is under a 35 year long term lease agreement with the County to operate a public recreation area on the reservoir.

2.1 Existing Policy

2.1.1 Municipal Development Plan

A Municipal Development Plan (MDP) is a long range, statutory planning document that provides a policy framework for making decisions regarding future growth and development. The current County of 40 Mile MDP was adopted in 2009. Some of the objectives of the MDP are to:

- Manage development to be less resource intensive and less polluting;
- Promote the recreational potential of the County; and
- To conserve the natural environment.

The MDP Recreation Land Use Policies recognize that significant growth adjacent to 40 Mile Reservoir may require Council to authorize a review and update of the 40 Mile Reservoir Area Structure Plan. The MDP also supports recreational development and operation of regional parks and campgrounds by community organizations. Other MDP Land Use Policies aim to protect the natural environment by supporting measures to conserve and protect surface run-off and groundwater resources and by requiring adequate development setbacks adjacent to natural or man-made water bodies in order to minimize disturbance.

The long term existence and use of the Park is supported in the County's MDP.

2.1.2 Land Use Bylaw

A Land Use Bylaw provides guidelines for development of land or buildings by describing the various land use districts, allowable uses and development regulations. The County's current Land Use Bylaw came into effect in 2009 with three land use districts currently applicable to the plan area:

- Water Recreational

The Water Recreational District provides for public and commercial recreational developments such as public day use/picnic areas, snack bars and other commercial facilities in an approved park, campgrounds, marinas/boat launches and other similar recreational uses.

- Recreational Residential 2

The Recreational Residential 2 District permits cottage development and associated uses on a leased parcel. Lease holders are permitted to construct frame constructed cabins, move-in buildings or a variety of recreational travel vehicles, trailers or tents on a lot. Some public recreational uses such as parks and playgrounds are also allowed.

- Recreational Residential 3

The Recreational Residential 3 District allows for temporary holiday accommodation and associated uses on leased parcels. Uses include a range of recreational travel vehicles, trailers and tents.

The Reservoir Vicinity District surrounds 40 Mile Park and permits activities related to agriculture which are compatible with the preservation of irrigation reservoirs or other water bodies from environmental deterioration. Allowed uses include various agricultural uses, reservoir access sites and small scale wind energy conversion systems.

The County's current Land Use Bylaw supports the uses within the Park, however in the long term amendments may be needed to support continued development. The amendments should address minimum lots sizes, site coverage, setbacks and use.

2.1.3 Previous Plans

A Park Committee prepared the 40 Mile Park Master Plan in 1988 to set out the objectives, history, proposal and budget for fundraising and construction of the Park. The document outlined how the original development concept was envisioned and negotiated with the various stakeholders including Alberta Environment, Alberta Recreation and Parks, SMRID and the County. The plan was broken down into seven phases to allow for fundraising and planning with various portions of the phases being completed over a 20+ year period.

Since that time a number of updates and plans have been created by the Park Committee to support further development in 40 Mile Park with most of the Development Plans focused on expanding the number of cabin lots available, creating serviced campsites and adding more recreational opportunities. Several of the concepts outlined in past plans have been implemented.

2.1.4 South Saskatchewan Regional Plan

The Government of Alberta has established a land-use framework that divides the province into seven regions with a requirement for a regional plan for each. 40 Mile Park is located in the South Saskatchewan Regional Plan area. The intent of the regional plan is to establish resource and environmental management outcomes for air, land, water and biodiversity and guide future resource decisions while considering social and economic impacts. Currently the South Saskatchewan Regional Plan drafting process is underway and the County should be cognizant of any requirements or regulations that are drafted that may have an effect on the proposed Development Plan.

2.1.5 Jurisdiction on Water Bodies

The federal government has legislative authority and jurisdiction over all Canadian waters. Boating restrictions may be put in place to address safety concerns or in very rare cases to protect public interests or for an environmental issue. Current activities at 40 Mile Reservoir include swimming, fishing, canoeing, waterskiing and power boating. Federal regulations apply and there are no additional restrictions in place.

2.2 Existing Park Development

Under the 40 Mile Master Plan, the main goal was to make the Park one of the most attractive, functional, water-based recreational areas in the province. The Park has developed into a significant regional attraction and like many recreational water bodies, the reservoir has attracted private residential and public recreation facility development including the following and outlined in Figure 1:

- 120 long term lease cabin lots in areas 'A', 'C' and 'D';
- 31 long term lease campsites in area 'G';
- 86 seasonal campsites in areas 'B', 'F' and 'H';
- 32 overnight campsites in areas 'B' and 'H';
- Boat launch and beach;
- Playground;
- Pavilion;

- Showers, washrooms, laundry; and
- Small store and café.



Aerial view of existing cabin and campground development

The original layout and intent of the Park has changed significantly over the years without a consistent vision on how to balance the needs of the diverse user groups as demands for both public recreation amenities and private residential development have increased. One of the main concerns is to accommodate future demand for various residential and recreational users without affecting the reservoir environment and amenity value.

Expanding 40 Mile Park has been met with challenges due to variables including:

- Revenue sources;
- Potable water supply and sewage disposal;
- Storm water drainage;
- Access and the transportation; and
- Environmental impacts.

The County and Park Committee recognize that limits on total development need to be addressed through past monitoring, Park development capacity and public consultation. Parties involved expressed a significant and conscious emphasis on public use over private (i.e. residential cabin) development.

A Background Study was undertaken with the purpose of identifying capacity constraints for the Park's development including an examination of:

- Public recreation amenities (i.e. beach, playground, trails, etc.);
- Lake development (i.e. docks, boat launch, etc.);
- The transportation network;
- Servicing capacity (i.e. water, sanitary sewer, stormwater, gas, electric);
- Emergency services;
- SMRID operations in the park;
- Cabin development; and
- Campground development.

The background study provided the basis to create a Development Plan for the Park. This report presents a high level review of the Park's capacity constraints as well outlines the Development Plan for the Park.

3 Influencing Factors

Influencing factors for development at 40 Mile Park include the topography, existing development pattern, Park boundary, servicing, Historical Resources Impact Assessment requirements, fire safety and reservoir. These constraints are shown on Figure 2.

3.1 Topography

The Park borders the 40 Mile Coulee Reservoir with an elevation of 817.5 m at the top of dam. Elevations vary throughout the Park from 824 m to 813 m with the highest areas on the north side with an elevation of 824 m in the northwest corner and an average elevation of 822 m on the northeast point. The south side of the Park is generally flatter with higher undulations on the west side. Near the shoreline there are a number of small breaks in the coulee topography which create areas that are not satisfactory for development. Generally speaking, the topography is not a large factor to development. The topography creates unique viewpoints and vistas throughout 40 Mile Park which adds visual interest.

There have been concerns raised regarding the slope stability in the northeast portion of the Park in the long term lease cabin area due to the lack of an appropriate development setback from the reservoir edge, excessive irrigation and the presence of pathways to private docks at the bottom of the coulee. A geotechnical investigation has not been completed to determine a safe setback line for development as part of this report. It is expected that as the northwest escarpment continues to erode geotechnical investigations and remedial efforts will be required in the future to ensure the safe usage of this area.



Northern shoreline showing area with potential slope instability

3.2 Existing Development Pattern

The current development pattern within 40 Mile Park is fragmented and with some areas consisting of a mix of incompatible uses such as cabins and short term camping. This Development Plan strives to separate user groups into distinct nodes to provide areas with similar turnover rates and lifestyle expectations in the Park.

3.3 Park Boundary

The development potential of 40 Mile Park is constrained by the Park boundary as the locations of the adjacent SMRID canals dictate the boundary.

Currently there are approximately 7.8 ha of undeveloped or underdeveloped land within the boundary of the Park especially in the northwest, southwest and east central portions. These areas are currently used for storage and overflow camping or have been developed for primitive camping and lack amenity areas, appropriate buffers, proper accesses and servicing.

It should be noted that lands to the south and west of the Park may be suitable for long term Park expansion if required.

3.4 Servicing

Current servicing includes the provision of electricity to the cabin areas, a portion of the campsites and to the commercial area. There is no municipal water distribution system as Park users haul potable water onsite from service providers. Sewage is stored and pumped out of private holding tanks.

At this time, the County does not want to pursue servicing 40 Mile Park with full municipal water distribution and sanitary sewer. Thus there is a requirement for the provision of self-contained water and sewer systems for residential units. This places a constraint on the number of units that should be developed within the Park as shared servicing cannot be explored, such as the provision of a sewage lagoon. Provision of potable water for campsites is required to meet the Alberta Hotel and Lodging Association's minimum requirement for a primitive campground and provision of this service is essential to the long term development in the Park.

3.5 Historical Resources Impact Assessment

The Historic Resources Management Branch of Alberta Culture and Community Spirit reports that there are number of previously recorded historic resource sites within 40 Mile Park as shown on Figure 3. A number of the sites and areas have been previously disturbed, however there are some resources identified on the undeveloped lands. There is a probability that these historic resource sites will be impacted with further development therefore, a Historic Resources Impact Assessment is required. The County must pursue the Historic Resources Impact Assessment prior to development of the identified areas.

3.6 Fire Safety

Several areas have been developed with inadequate separation between units which has created safety concerns in the event of a fire. Specifically, one area of concern is area 'G' which is utilized for long term lease camping. The majority of the lots have been developed with accessory structures such as fences, sheds, patios and decks which effectively create no separation between campsites. If a fire were started

in one unit, the amount of flammable materials and proximity of units would create a situation where a fire could spread rapidly. The cabins that are located in the northern part of the Park in areas 'C' and 'D' also cause a concern as a number of them likely do not meet minimum setbacks, and thus likely inadequate fire separation. To partially remedy this future development should ensure that proper setbacks are maintained, the amount of accessory structures are minimized and that other means of additional fire protection are explored by the County.

3.7 Reservoir

As previously noted the principal purpose of the reservoir is for irrigation water storage for the SMRID. The reservoir has an aesthetic amenity and is suitable for passive recreation on the shore, recreational fishing and boating. The reservoir is 674.8 ha in size with a length of 10.3 km, a mean width of 0.7 km and a maximum depth of 25.5 m. Due to its primary use as an irrigation reservoir, the water level is subject to significant fluctuations.

As there are limited boating lakes in southern Alberta, 40 Mile Reservoir has been a popular destination for residents and visitors. Most of the water surface of the reservoir is suitable for boating and water sports as there are no islands or other hazards within the reservoir that would decrease the usable boating area.

3.7.1 Reservoir Boating Capacity

The surface area of any water body has a limited capacity for boating. Exceeding this capacity may create conflicts and safety concerns within and between users: swimmers, water skiers, boaters and fishers. Excessive boat use can also cause environmental damage to the reservoir. To calculate the boating capacity the spatial capacity of the reservoir is calculated, based on the size and shape of the usable water surface, and is divided by a minimum spatial requirement for different types of boating use.

40 Mile Reservoir has a total area of 674.8 ha at the full water elevation level of 812.8 m. Since the reservoir water level is subject to fluctuations the boating capacity of the reservoir is also subject to fluctuations due to the reduced water level. During times of low water volume, boating capacity will decrease and restrictions may have to be put in place to limit the number of boats that can utilize the reservoir at one time. For purposes of this report, the reservoir's full capacity was used with the following surface areas subtracted out as areas unavailable for boating:

- Total reservoir area: 674.8 ha
- Shoreline protection buffer: 123.2 ha (60 m wide buffer zone around the entire shoreline)
- Beach and boat launch protection buffer: 2.4 ha (120 m wide buffer zone around the beach and boat launch areas)
- Total area unavailable for boating: 125.6 ha
- Net area available for boating: 549.2 ha

The space required for each boat for safe, enjoyable activity varies between 4 ha for low speed (i.e. still fishing) and 8 ha for high speed (i.e. water skiing). Since information is not available about local patterns of boating use on the reservoir, an average of 6 ha will be used, as the reservoir caters to all types of

users. This means there is an average capacity of 92 boats on the reservoir, with a range somewhere between 69 and 137 boats, depending on the boating usage at full reservoir water level.

Assuming that there is an average of one boat per cabin lot at 40 Mile Park and that approximately 25% of the campers have a boat, the total resident boat population would be approximately 182 boats.

Assuming that 25% of the resident boats would be in use at any one time, peak use of resident boats would be approximately 45 boats, which is 49% of the average boating capacity of the reservoir of 92 boats. This leaves just over half of the reservoir boating capacity available for day use and fluctuations in boating use.

3.7.2 Docks

There are currently a number of private docks that are anchored to the shoreline of 40 Mile Reservoir within the western inlet on both the north and south shoreline. These docks are used by the long term lease and seasonal users of the Park. The Park Committee has a Dock Policy that outlines the requirements for users to construct and maintain a dock on the reservoir. The Park Committee has allocated 80 locations for docks on the shoreline. With a maximum of 2 boats permitted for each dock, this yields a maximum of 160 boats that can be moored for seasonal/long term lease users.

However onsite observations and review of old air photos shows that the actual number of docks on the shoreline is between 40 and 50 every year. While the number of docks is less than allowed, safety issues have been identified in the inlet where the majority of docks are located as it can become congested. Also environmental issues related to water quality with the increased amount of boats in this small area and the degradation of the shoreline by the number of trails to the docks has been identified.



Private docks along the shoreline in western bay

Based on the estimated resident boat population of 182 boats, over 90 docks would need to be made available for long term lease and seasonal users. Since Park users have commented that the inlet is

overcrowded with only 40-50 docks, the Park Committee should consider private shared docks along the shoreline. This would allow for additional docks to be constructed and would reduce the shoreline access points.

3.8 Beach

The original location for the beach was located at the west end of the Park, within the small reservoir that was designed and constructed for swimming. However, this location became unsuitable as a supply of fresh water was not available as envisioned and the area became a health concern for swimmers. The beach was then moved to the east side of the Park adjacent to the boat launch.

The current beach is in good condition and there is a new play structure that was constructed adjacent to the beach. However, due to its location adjacent to the boat launch, there are safety concerns arising from traffic, parking, launching of boats, dock use and pedestrian access with the existing boat launch circulation.



Existing beach looking north onto reservoir

3.8.1 Beach Capacity

The beach is public and available to all Park users. Since the Park has only one beach the capacity of the beach should play an important role in understanding the development capacity at the Park. If the density of beach users is too high people will feel crowded and activity will be impeded.

A beach is usually comprised of a wet beach, dry beach and backshore. Research has shown that the land area requirements of swimmers are more critical than the water surface requirements. At any one time, over 75% of beach users may be found on the dry beach and backshore while only 25% are in the water. As a result, the land area associated with beaches is usually the limiting factor in terms of capacity. To calculate the beach capacity the spatial capacity of the dry beach and backshore is calculated and is divided by a minimum spatial requirement for beach users.

Due to changes to the boat launch access configuration the beach area will be expanded to the south and east however further expansion of the beach on both the land (dry beach) and reservoir (wet beach) side is constrained by the location of the boat launch to the east, the steep slopes off the point to the northwest and the road to the west. The dry beach, including the expanded backshore is approximately 8,800 m². Based on Park observations the desired beach density is low to medium for users. Medium density use is 20 m² of dry beach per person and low density use is 30 m² of dry beach per person. The dry beach and backshore capacity of 40 Mile Park is between 293 and 440 people. The population of 40 Mile is 1,046 people based on 327 units with a projection of 3.2 people/unit. Using the lower beach capacity and assuming that half of the beach capacity will be residents and campers this means that 14% of the 1,046 residents or campers would use the beach in any given day. On busy days the density of the beach will increase and users will experience more crowded conditions.

Assuming that 50% of the beach goers will be day users with an average of 3.2 people/vehicle, the parking requirement for the beach is between 45 and 70 parking stalls. The majority of beach parking should be located adjacent to the beach with additional parking provided in close proximity.

4 Park Development Plan

4.1 Public Input

At the commencement of this project the Park Committee recognized the importance of public involvement in the development of 40 Mile Park. An Open House was held on June 25, 2010 at the Paradise Point Pavilion located in the Park. The purpose of this meeting was to inform the public that the Development Plan was being reviewed as well as listen to concerns and ideas from the public relating to future development within the plan area. Over 40 people attended the Open House and filled out questionnaires on the development of the Park.

The questions and concerns raised during this meeting were primarily focused on the Park's public recreation amenities and residential development. Potential recreational use of the lake and shoreline was discussed including the provision of an additional boat launch, beach facilities, playground areas, parking and commercial facilities. In addition to the recreational aspect of the lake, there was considerable discussion regarding future residential development at the Park. Concerns were raised regarding the type and location for residential development and how to service these areas

Information received at this public meeting was reviewed, considered and incorporated into the conceptual Development Plan.

4.2 Development Objectives

The below listed development objectives are based on capacity constraints, the comprehensive feedback received from the Park users and discussions with the County and Park Committee.

- Provide an efficient use of land, while balancing the needs of the public recreation and private residential user groups;
- Achieve additional capacity at the boat launch through additional ramps, improved vehicular circulation and parking;
- Create a safer transportation system and provide expanded parking areas throughout the Park;
- Facilitate pedestrian and bicycle mobility throughout the community with a system of trails;
- Develop appropriate sites for a variety of passive and active recreational opportunities; and
- Ensure the utility infrastructure and servicing concept is provided in an efficient and economical manner.

A number of long term lease cabin lots, seasonal and overnight campgrounds, group campgrounds, picnic sites, recreation areas and an expanded boat launch are included in this Plan. Overall this Plan includes:

- 133 cabin lots;
- 90 seasonal campsites;
- 53 overnight campsites;
- 25 long term lease campsites;

- 2 group camping locations with a total of 26 stalls;
- Total Park units = 327

The Development Plan has been broken down throughout the following sections to outline the different areas and the site specific features as shown in Figure 4.

4.3 Campsite Overview

The following section provides an overview of the back-in and pull through campsites including servicing that are proposed in the Development Plan. Refer to Appendix 'A' for typical campsite and servicing details. The proposed campsite layouts and servicing provided are based on industry standards and best practices.

4.3.1 Back-in Campsite Layout

The majority of the campsites will be back-in stalls developed to provide a recreational vehicle parking spur, amenity space and appropriate buffers.

The parking spurs are 4.5 m wide by 18.3 m long (14 ½ ft x 60 ft) which is sufficient to park a vehicle and attached trailer or a recreational vehicle such as a motor home. The preferred spur-to-road angle is 30 to 45 degrees, as measured from the road and should not exceed 60 degrees. Parking spurs should be constructed of compacted gravel, road base, asphalt or concrete. Rounded materials that do not compact well such as pea gravel should not be used. Campsites should be sloped 1.5% to 3% in order to provide positive drainage with a relatively flat camping area.

The campsites also provide 75 m² (over 800 sq. ft) of amenity space located to the right of the parking spur which is ideal because the doors of recreational vehicles are on the passenger side of the vehicle when facing the direction of traffic flow. This amenity space is sized for a tent pad as well as a picnic table, fire pit or pedestal grill, overflow parking, storage and open space. The previous campsite stalls had little separation between units therefore generous setbacks of 4.0 m between campsites are proposed under the new plan for privacy, landscaping, separation and fire safety. Amenity spaces and tent pads should be constructed of compacted sand or road base over landscape fabric on top of compacted earth. These areas should be sloped 1.5% to 3% to drain. Fire pits and pedestal grills are recommended to be placed downwind away from any picnic tables or seating areas to avoid fire hazards and minimize smoke interference. Landscaping should be planted in the buffer areas for beautification, shade, wind abatement, and screening for the campsites.

4.3.2 Pull Through Campsite Layout

Approximately 10% of the overnight campsites will be pull through campsites for larger recreational vehicles. These parking spurs are 4.5 m wide by 33.5 m long (14 ½ ft x 110 ft) and provide 75 m² (over 800 sq. ft) of amenity space. The amenity space is located to the right of the parking spur for the pull through sites and they should be constructed in a similar manner as the general campsites in terms of sloping and materials.

4.3.3 Campsite Servicing

Servicing in campgrounds will be provided in various combinations and locations throughout the Park. Electricity will be provided in a covered and grounded electrical box that is mounted to a post located on the driver's side of the parking spur. Sewer hookups will also be provided at some of the campsites and located to the rear of the spurs. The sewer connections will be linked to a main line that will run into a holding tank that will be required to be emptied on a regular basis. Potable water connections will not be located at individual campsites in order to limit the amount of waste and grey water produced by camping units. Potable water standpipes will be located throughout the campgrounds and users will be required to pump water from these standpipes. Washrooms, garbage receptacles and firewood will also be located throughout the campgrounds in Comfort Stations (see Section 7.1).

4.4 Paradise Point

The detail contained within the Paradise Point area is displayed in Figure 5.

There are numerous public recreation and day use facilities at 40 Mile Park including a boat launch, picnic areas, a Park pavilion, showers, washrooms, laundry and a small convenience store and café. These facilities are located on the east point, in the area originally envisioned for day use, although they have been expanded over the years due to increased demand for public recreation facilities. The Paradise Point area of the Park provides panoramic views of the reservoir from its eastern slopes.



Aerial view of Paradise Point looking southwest

4.4.1 Boat Launch

The boat launch provides the only public access point to the reservoir and it is an important aspect of 40 Mile Park. The location of the boat launch was chosen in the Master Plan for the Park in the bay free from excessive wave action and designed to allow for fluctuation in water level as the SMRID may need to draw water from the reservoir in emergency situations.

The existing launch is oriented perpendicular to the shoreline and roadway which prevents a driver from driving down the boat launch at night into the water. Launching lanes are a minimum of 4.5 m wide with ramps are long enough to extend down to the lowest water surface elevation in case the reservoir needs to be drawn down in emergency situations by SMRID.

Currently there is a major conflict between boaters and beach users as the boat launch is located adjacent to the beach with little spatial separation between the two uses. The parking areas, staging areas, pedestrian accesses, the dock location and the launch location all factor into the conflicts for different user groups. A majority of respondents to the Open House survey felt that additional or upgraded access to the water surface is needed based on these concerns. In order to respond to increased demand, appropriate locations for additional boat launch facilities were identified. After reviewing options it was determined that the boat launch should be expanded at its current location.



Boat launch area showing conflicts with beach

Due to the conflicts with the beach and small area currently available for parking, the parking area for the boat launch has been moved onto the eastern point away from the beach. The parking lot servicing the boat launch is sized to accommodate approximately 52 pull through vehicle and trailer parking stalls and 52 vehicle only parking stalls. Pull through parking stalls are 3.7 m wide x 17.0 m long. Vehicle only

parking stalls are 3.0 m wide x 6.1 m long. The parking lot features a vehicle turn around between parking areas and 3.6 m to 4.2 m wide one-way drive lanes. Vehicle only parking areas are separated from vehicle-trailer parking as the stalls are sized differently. The vehicle only stalls are envisioned for day use, dock use, beach parking and overflow parking for events at the Paradise Point Pavilion. The parking lots have been designed to be constructed in three phases to meet demand as required.

4.4.2 Day Use Dock

There is only one public dock available for short term/day users located adjacent to the boat launch and beach area. The dock is insufficient to serve the long terms needs of these users both in terms of its size and location.

A new day use dock is proposed off the east point to be utilized by boaters to load/unload their boat and have a place to tie up if they want a short term break from the water. This location was selected as it provides sufficient land for parking, is close to commercial facilities, is near the boat launch and is accessible to vehicles. Pedestrian trails are proposed to link the day use dock to the boat launch, beach, commercial facilities and picnic areas.

The day use dock should be a minimum of 2.4 m wide and any extending catwalks should not be less than 0.9 m in width. The slips should be long enough for the largest expected (or average) boat size and should be placed as to not create any maneuvering issues with other boats. It is not anticipated that the slips will be rented out or secure, only available on a first come first served basis. A fueling station is not proposed at the day use dock but may be considered in the long term.

4.4.3 Picnic Areas

Picnic opportunities are available in two areas within Paradise Point. One is on the grassy area behind the beach and boat launch on the incline and the other is on the point north of the beach (see Section 4.5.2). Picnic sites should include a picnic table and a fire pit or pedestal grill on a hard packed surface area. Picnic sites should be a minimum of 50 m² and sloped 1.5% to drain. Picnic tables should be of heavy-duty construction for longest life and least maintenance. Grills or fire pits should be located at the edge of the use area and downwind from the picnic table to avoid any fire hazard.

The grassy incline is ideally suited for picnic and day use since it is close to Park amenities. Picnic tables, fire pits and garbage receptacles should be placed throughout this area to encourage use of this space by beachgoers or those boaters who need a break from the water as it is close to the proposed day use dock. A decorative lighthouse has been proposed in this area by the Park Committee, which could also be used as a central emergency warning system. Additionally, this area may also be used for overflow tent camping when the Park is at full capacity. There is not a high demand for tent campsites therefore no official sites were provided but this picnic area would be well suited to meet these overflow demands.



Proposed picnic area on Paradise Point

4.4.4 Commercial Facilities

The Oliver Hodge Viewing Centre is a small scale commercial building that provides a café, store, washrooms and the only existing public showers and laundry facilities in the Park. This Centre was originally constructed to be an Interpretive Centre but was expanded to include the commercial services to meet demand. The Paradise Point Pavilion is located adjacent to the commercial facility and is available to rent for large gatherings or special occasions.

Both of these facilities are located on the far east end of 40 Mile Park which makes it difficult for Park users to access by foot or bicycle, especially residents on the North Shore. Many long term/seasonal users must drive to these facilities which puts added pressure on the road system and parking areas. Pedestrian access from the beach and other Park areas will be accommodated via the main Park trail.

The commercial facilities are sufficient to meet short term demands however in the long term the commercial facilities could be located in a more central location for better access to more residents and campers. The current area could be retained for day use facilities or an expanded Pavilion facility.

4.5 Sunrise Bay

The detail contained within the Sunrise Bay area is displayed in Figure 6.

4.5.1 Beach

There are minimal changes proposed for the beach as its location and size is constrained by the presence of the adjacent boat launch. Due to changes to the boat launch road network, there will no

longer be a roadway that cuts across the top edge of the beach between it and the grassed areas to the south. This will allow the beach area to be expanded southward and will be much safer for children and families to utilize. The playground will remain in its current location as it was recently constructed. A semi developed Park trail is provided through the backshore area that provides connections to the picnic point, cabin area, boat launch, parking areas and commercial facilities. Benches are provided along the trail for people to sit and enjoy the views of the reservoir from the beach.



Children swimming at 40 Mile Park beach

Parking for the beach will be provided along the realigned roadway alongside the western part of the beach. Additional beach parking is provided in a parking lot behind Waterford Terrace as well as some on the picnic point just north of the beach.

Ideally, boat launches should be separated from beaches by a minimum of 90 m however this is unachievable. Signage, fencing, landscaping, a berm and/or a warning device between the two areas could be placed to help separate these conflicting uses and provide a factor of safety. Any floating or attached docks should be placed away from the boat launch as to not encourage children to be in the area.

4.5.2 Picnic Point

The north point provides an ideal location for a camp kitchen and picnic area as the views of the reservoir are picturesque. The camp kitchen is sized to allow for small groups to utilize at 5.8 m wide x 7.6 m long. Some parking is provided for users of the camp kitchen. A small day use dock is also proposed off this point in the long term to be utilized by boaters who want a short break from the water. Services such as firewood, garbage receptacles, washrooms and a potable water standpipe are proposed on the picnic point. Pedestrian connections are provided to the beach and adjacent cabin area.

4.5.3 Overnight Camping

The existing overflow camping area located east of the Oliver Lodge Viewing Centre will be developed as an overnight camping area. The area will accommodate about 21 campsites on the upper bench. Overnight camping is ideal in this location as the majority of the public amenities are in proximity which allows for easy access. This location for overnight camping will minimize potential conflicts between seasonal and long term lease users as these overnight campsites are isolated and buffered from the long term lease areas.



Area to be utilized for overnight campground

Landscaping should be provided along the edges of the loop for buffering between the beach, boat launch, commercial area and roadways. Natural materials such as large rocks, logs or railroad ties could be used to define the campsites while minimizing environmental impacts. Pedestrian links will be constructed to the main Park trail as well to the commercial area for patrons to utilize. An existing gazebo will be retained in the campground.

The campsites will be provided with electricity but will not be provided sewage connections. Trash receptacles, firewood, a potable water standpipe and visitor parking are located within the campground. Washrooms, showers and laundry are located nearby behind the Oliver Lodge Viewing Centre.

4.6 Waterford Terrace

The detail contained within the Waterford Terrace area is displayed in Figure 7.

Waterford Terrace is a long term lease area located in the middle of the Park; east of the Park Gate and west of the Sunrise Bay and Paradise Point areas. There are currently 34 lots available for long term lease recreation vehicle placement or cabin development in Waterford Terrace. The area is serviced with electricity, temporary washrooms and non-potable water. Residents must haul in potable water and have their sewage pumped out of individual holding tanks. New cabin development will provide individual water and sewage services as well.

Waterford Terrace can accommodate additional lots for long term lease recreation vehicle placement or cabin development. Area 'B' which was previously used for camping is proposed to be redeveloped with 13 cabin lots'. These lots are approximately 15 m wide with a depth of 37 m, which is roughly 555 m² or 6,000 square feet. Since there were conflicts between the campers and the long term lease cabin users in the past due to noise, lifestyles, expectations, etc. it is beneficial to locate additional residential units in this area.

A singular vehicle access point is proposed to this central cabin area from the main Park roadway. A small existing open space and parking area is retained for the users. A new washroom and garbage receptacle is also provided in this open space area. A parking area is proposed behind the new cabin lots for boat or trailer storage and visitor, overflow and beach parking. This parking area should be screened from the cabin lots with fencing and landscaping. A pedestrian connection is proposed from the main trail through the central cabin area to the parking lot for access. Secondary trail connections have been provided to the cabin area from the main Park trail to provide access to the recreation destinations and other areas in the Park.

4.7 Park Gate

The detail contained within the Park Gate area is displayed in Figure 8.



Existing Park Gate bridge and kiosk

Providing safe and efficient access to 40 Mile Park is critical to maintaining the quality of residents and visitor's recreation experience. The entrance area features:

- A kiosk for collecting park fees;
- Two gated incoming lanes, one for day use and one for seasonal and lease holders;
- Gated outgoing traffic lane;
- An entrance feature and informational signs located on the north side of the main road;

- Realigned and expanded roadways to provide better access and egress; and
- A sewage dump station located to the east of the entrance in a lay-by.

Two incoming gated traffic lanes are provided adjacent to the Park Gate kiosk which is moved from its current location to provide the additional space for the entrances lanes. The inside lane is for day users as they have to pay the Park Attendant a fee to enter. The outside lane is for seasonal and long term lease holders as the gate will feature a coded keypad that allows the gate to open electronically. Provision of the dual entrance lanes will help reduce traffic congestion as seasonal and long term lease holders will be able to bypass the Park Gate kiosk. Placement of the kiosk has been designed to allow for a vehicle to tow a recreational trailer and boat trailer at the same time in the inside lane while providing room for a vehicle to pass into the outside lane.

The outgoing traffic lane features a gate that controls outgoing traffic for security reasons. This gate will have a button that would allow Park users to electronically open the gate to exit, instead of requiring someone in the kiosk to open it. This feature would slow traffic down enough to allow for license plates to be read by newly installed security cameras.

The Park entrance feature and informational billboards north of the Park Gate are retained as it provides a welcoming element and central location to display Park events and information. This area should feature wayfinding signage for Park users that directs them to the different areas in the Park. Any type of hazard or special event signage should also be placed in this central location.

40 Mile Park Drive requires minor realignments due to the lane changes and kiosk placement. The lay-by to the sewage dump area has been realigned to separate this area from the main road. Landscaping should be planted on the islands and bump outs to screen this area.

The intersection of the gate road and bridge with Township Road 84 will require upgrading to provide proper channelization. The access roadway is expanded at this intersection to provide wider lanes for vehicles and trailers turning onto the bridge. Concrete barriers should be placed to help the maneuvering and provide the channelization.

4.8 Central Glen

The detail contained within the Central Glen area is displayed in Figure 9.

4.8.1 Picnic and Interpretive Area

A large picnic and open space area is proposed in the Central Glen area bordering the reservoir shoreline. This area is relatively flat and along with the recreation area to the southeast it provides an opportunity for a contiguous open space area. This area was chosen since it is within a 5 minute walk of the majority of Park users. Access to the picnic area is from the adjacent roadway and parking is provided in a parking lot at the end of this roadway. Pedestrian trails have also been placed throughout this area for access to picnic sites as well as for a pathway through the open space as users can observe views of the reservoir from the shoreline. While the northern portion is envisioned for picnic sites the area is large enough to incorporate recreational amenities within the picnic area such as horseshoes, Frisbee golf or field and court sports. A bridge over the channel will provide pedestrian and cyclists with access to the Northshore cabin area.



Existing open space to be utilized for picnic and recreational development in Central Glen

The picnic area should be designed to accommodate a variety of visitors including individuals, families and handicap users. It is suggested to maintain a buffer of 4.5 m between picnic sites to provide users with a sense of private space. A number of picnic sites may be grouped together to provide an area for larger families or groups, with the overall spacing between these sites and the balance set at 7.5 m for privacy and separation.

A large camp kitchen has been proposed in this area. The camp kitchen is 7.5 m wide x 13.7 m long and can hold up to 60 people. A comfort station including washrooms and showers is proposed nearby as well firewood, a potable water standpipe and garbage receptacles are located near the camp kitchen. Pedestrian trails are located adjacent to the camp kitchen for access to other recreation and residential areas.

An archeological site has been identified along the northern shoreline which requires further study by Alberta Community Development. If permitted, this archeological site should be turned into an interpretive site along the pedestrian trail that provides information about the cultural heritage of the region to the public.

The enhancement of this picnic and open space area will balance the active and passive needs of 40 Mile Park users with the preservation of natural open spaces and cultural resources.

4.8.2 Recreation and Playground Areas

A multi-purpose, large open grass area that can be used for a variety of uses is proposed partway between the campgrounds to the west and existing cabins to the east which provides easy access to either user group as well as a buffer between the uses. The area is currently used for Frisbee golf and

could include other active recreational sports such as horseshoes or bocce ball or other uses such as mini golf, field or court sports if the uneven topography can be overcome.

A playground is proposed in the southwest portion of the Central Glen adjacent to 40 Mile Drive. This play area will be utilized by campers in Central Glen and Poplar Pointe as well as by day users in the picnic area. Pedestrian connections are provided via the Park trail and a marked pedestrian crossing is located adjacent to the playground to cross 40 Mile Drive.

4.8.3 Group Camping

A 0.6 ha site is proposed for group camping in the Central Glen area which is ideal for hosting a family reunion or group get-together. This area would accommodate a cluster of approximately 14 campsites and is accessible from the road adjacent to Central Glen. This area is well suited for group camping as it is close to the picnic area, camp kitchen and open recreational space which is beneficial to organized group activity. Campers in group campsites expect to be in closer proximity to each other and separation between sites is not as critical as for family campgrounds. Servicing for the group camping area will include electricity, a water standpipe, and garbage receptacles.

4.8.4 Overnight Camping

An overnight campground loop will be developed in Central Glen to provide an additional 32 overnight campsites in 40 Mile Park. This location is beneficial for overnight camping as it is located close to the Park Gate, picnic sites and recreational areas. It is anticipated that 10% of these campsites will be constructed as pull through sites for larger recreational vehicles. The overnight campground will be serviced with electricity, sewage connections, washrooms, firewood and garbage receptacles. A potable water standpipe and comfort station is located at the nearby picnic and camp kitchen area.

Landscaping should be provided along the northern and southern edges of the loop for buffering between the group campground and Park Maintenance areas. Pedestrian crossings from this campground to the main Park trail and open space and recreational areas are created at appropriate locations.

4.8.5 Park Maintenance

The current Park Maintenance building and Manager's compound will be retained in its current location just north of the Park Gate. This area should be secured for safety purposes and screened to minimize any visual impacts to the greater Park area, especially in light of the proposed campgrounds adjacent to the area. Any future maintenance facilities should be aesthetically designed and screened or moved to another location such as the northwest flex space area (see Section 4.9).

4.8.6 Future Park Facilities/Commercial Area

A 0.9 ha site is proposed just north of the Park Gate to be utilized for future park facilities and/or commercial development. This site is central to the Park and is located on the main vehicle and pedestrian routes making it a prime location for a substantial development.

In the short term this area should be used for low intensity recreational development.

4.9 Poplar Pointe

The detail contained within the Poplar Point area is displayed in Figure 10.

4.9.1 Seasonal Campgrounds

Due to increased demands on short term camping, a number of campsites in area 'F' located in the southwest corner of the Park were made available as a temporary measure approximately 4 years ago. Since then, it has become a popular area to utilize even though the sites are quite small and lack service connections. The natural grassed area to the north has even been utilized during busy times for overflow camping. There is a washroom being constructed to service this area as currently there are only temporary facilities.



Area 'F' to be redeveloped for seasonal campground development

Under the new Development Plan this area will accommodate 65 seasonal campsites in three loops. Open space will be provided for each campground and may feature playgrounds or small scale recreation facilities where appropriate and as demand dictates. Visitor and overflow parking lots will be dispersed throughout the campgrounds as parking will not be permitted along the local campground road. A pedestrian link will connect all facilities within a campground such as comfort stations, parking lots, open spaces as well as provide a connection to the main trail system that loops through the Park. Additional landscaping should be planted throughout the seasonal campgrounds not only for beautification but also to provide shade, wind abatement, and screening for the campers.

The campground loops provide potable water standpipes, washrooms, garbage receptacles and firewood for campers. A comfort station is provided between the two large campgrounds that includes additional washrooms as well as shower facilities. Parking for the station is located in close proximity as some campers prefer to drive to utilize these facilities. All of the campsites in Poplar Pointe will be serviced with electricity and sewage connections (see Section 4.3.3 and 7.3).

4.10 Spring Cove

The detail contained within the Spring Cove area is displayed in Figure 11.

4.10.1 Seasonal Camping

Area 'H' is the original campground envisioned in the Master Plan for the Park and is located on the west side of the Park near the old beach area. There are 25 campsites available in area 'H', currently half are for seasonal use and half are for overnight use. This area could be transitioned into a seasonal only campground to create separate campground nodes in the Park. This area continues to be popular due to the layout of the campsites, provision of power and non-potable water, single loop road network and mature trees and landscaping. There is a gazebo located at the north end of Spring Cove with views of the reservoir looking east that will be retained. Pedestrian links are provided in the campground to the main Park trail for connectivity. Washrooms, potable water standpipe, firewood and garbage receptacles are provided in the campground.



Preferred campground layout and landscaping as shown in area 'H'

4.10.2 Long Term Lease Camping

Long term lease camping is available within Spring Cove within the former area 'G'. These lots have similar lease agreements as the cabin lots however only recreational vehicle placement is permitted in this area. There are 31 long term lease campsites available. The majority of the lots have been developed with accessory structures such as fences, sheds, patios and decks and there is no separation between campsites. Since there is no firefighting equipment at 40 Mile Park, concerns with fire prevention have been raised in this area due to the excessive amount of accessory development and lack

of separation. Parking and storage are also concerns in this area as the campsites are not sized to accommodate the additional use.

The long term vision for area 'G' is to phase out the current layout in favour of campsites that are similar in size to the rest of the proposed campsites including parking spur, amenity space and buffer dimensions. Twenty-five (25) campsites would be provided in the long term, which is a loss of 6 sites however the dimensions of the sites and separation helps reduce the fire concerns. The new layout includes appropriate areas for parking and storage. Firewood and potable water are provided adjacent to the existing washrooms. Pedestrian links are provided throughout this campground to provide connectivity to adjacent campgrounds and open space and recreation areas.

The lease agreements should not be renewed until the layout changes can be accommodated, which may also be done in phases depending on lease agreements. The extent and intensity of accessory development should be reduced with regulations on lot coverage and setbacks to ease fire concerns.

4.11 Vista Ridge

The detail contained within the Vista Ridge area is displayed in Figure 12.



Area at the old beach to be utilized for recreation

4.11.1 Recreation Area at Old Beach

The old beach is located in the west portion of 40 Mile Park in a small bay that had a dam constructed on the channel to create an area for swimming. Due to water quality issues this beach was abandoned in favour of a more suitable site on the east side of the Park. The area is well suited for picnic sites or recreational activities such as horseshoes, bocce ball, beach volleyball, mini golf, or field or court sports. There are drainage issues in the area, which creates concern with how to best utilize this space. Any recreational use that is to be constructed at this site will have to take the drainage issues into consideration. If the water quality issues can be overcome, this area could be turned into a beach again for campground usage. A fountain is envisioned in this bay to help aerate the water in the bay as well as

add visual interest to the area since it can be seen from the adjacent campgrounds and cabin sites. The existing parking lot and washrooms will be retained and potable water standpipe, firewood and trash receptacles will be made available.

4.11.2 Group Camping

A 0.5 ha site is proposed for group camping in on the hill south of the main road. This area is well suited for group camping as it is isolated from other user groups. This group camping location is also near the old beach which provides a large open space for recreational use with a trail provided to this area. Additional vehicular parking for the group campers may be accommodated at the old beach parking lot or in the flex space located north of the group camping. A small camp kitchen could be located in this area or at the recreation area at the old beach for group camping patrons to utilize.

4.11.3 Storage and Flex Space

The northwest corner of 40 Mile Park is currently used for storage. There were varying options presented for this space including cabins, campgrounds, storage and Park maintenance. Since the area is quite large, a combination of storage and flex space is proposed.

The area is large, flat, has some tree planting along the roadway and offers good views of the Park and surrounding reservoir lands. For these reasons it will be beneficial for the Park to hold this land available for future development, the form of which can be decided as demand dictates. Development in this area should be screened from the adjacent storage area.



Current storage area in Vista Ridge

A 0.5 ha site is suggested for Park storage for vehicles, boat trailers, recreational vehicles, boats, etc. in the extreme northwest behind the flex space. The Park should endeavor to landscape and use fencing to screen this area from the roadway as much as possible.

4.12 Northshore

The detail contained within the Northshore area is displayed in Figure 13.

The Northshore area encompasses areas 'C' and 'D' which provides 86 long term lease sites available for recreational vehicle placement or cabin development. The cabin development is intended to be temporary in nature with cabins placed on piles or temporary foundations. Since there is no additional land available on the Northshore there is no new development proposed for this area, it is envisioned that the remainder of the recreational vehicles may be removed in the long term and replaced with cabins.



Northshore cabin area

There is a small playground and public washroom located in area 'C' on the Northshore which will be retained in the long term as they are assets for the surrounding residents. Improvements to the Northshore include demarcating parking lots for overflow and visitor parking with materials such as fencing, boulders or post and cable. The Northshore has significant vegetation however additional trees should be planted in and around the parking lots to provide shade and screening.

There are a number of units that are placed very close to each other or the reservoir edge which has raised fire concerns as well as created issues between neighbours over privacy and territory.

There have also been concerns raised regarding the slope stability due to the lack of setback from the reservoir edge, especially on the eastern point. In the long term the County should complete a geotechnical investigation to determine the safe distance for development and any requirements such as limiting irrigation and access along the coulee edge. This investigation should be completed as long term leases come up for renewal as this would be an appropriate time for the County to enforce any geotechnical requirements.

5 Parks, Landscaping and Trails

Figure 14 indicates the numerous public recreation and day use facilities at 40 Mile Park including playgrounds, picnic areas, trails and the Park pavilion. Additional areas for public recreation have been identified throughout the Park as demand has increased for this type of use. There has been discussion in the past in providing additional facilities including ball diamonds, mini-golf, tennis courts, volleyball courts, horseshoe pits and soccer fields within the Park but due to funding limitations they never materialized. The areas that have been identified for public recreation are areas in which these uses could be placed in the future if funding was available.



Existing playground on the Northshore

5.1 Tree Planting and Landscaped Areas

Over the years a conscious effort has been made to plant a large amount of trees throughout the Park to beautify the area, provide windscreen and shade. Comments received from the public suggest they want to see this practice continue. Landscape improvement and tree planting areas are those areas where planting is desired typically around campsites, buildings, parking lots, natural open spaces and recreation areas. During the implementation of plantings, measures must be taken to protect plantings, reduce maintenance, promote healthy establishment and preserve the character of the Park landscape. Tree and plant species should be drought tolerant and Chinook resistant and grow well in the southern Alberta climate to minimize irrigation demand. Trees should be grouped together to simulate a natural tree stand where appropriate. A mix of trees is beneficial for screening, windbreak and visual interest. Grass varieties should be water conserving, tolerant of heavy use and not dependent on chemical fertilizers for their success. Fencing and/or signage should be installed to exclude campers from re-vegetation areas. Since supplemental irrigation is needed, the irrigation system should be expanded throughout the Park.

5.2 Park Trail System

Park trails are beneficial in that they provide an alternative mode of transportation and recreation opportunity. Figure 5 identifies appropriate locations for trail development and is designed to connect one

area to another while maximizing user safety and the Park experience. As such, Park trails are to be sited to minimize soil erosion, damage to natural vegetation, cost of maintenance and circulation conflicts between pedestrians and vehicles.

The proposed trail system is broken down into two categories: semi-developed and developed trails. The semi-developed trails are 1.2 m wide with a granular surface such as crushed gravel, shale or wood chips. Semi-developed foot trails will be provided in the campground loops to function primarily as paths between campgrounds and to connect campsites to comfort stations, other service amenities or to special features in the campground loop. These trails should also connect to the larger trail system to link campers to other recreation areas in the Park. The developed trail will provide a main spine that links the entire Park through the public recreation areas and should be developed with a smooth, compacted granular or paved surface with gentle gradients and a minimum width of 2.4 m. It is anticipated that the developed trail will be used for pedestrians and cyclists.

The trails should be separated from the road wherever possible and should not bisect campsites. Trails should be signed at each road crossing to help direct pedestrians along the route and to alert drivers of these crossings in order to minimize accidents.

Signage along the trail should be regularly indicate the allowed uses, provide directional information and display the distances between destinations. Interpretive signage may be featured to highlight special features or hazards, or for educational purposes.

5.2.1 Footbridge



A footbridge could be constructed over channel

A footbridge over the channel located in the western portion of the Park could be constructed to link the Northshore cabins with the rest of the Park. This bridge should be a minimum of 2.0 m wide, include handrails on both sides and be usable for pedestrians and cyclists. Construction of this footbridge would allow residents on the Northshore to have access to the recreation and picnic areas in Central Glen within

a 5 minute walk. This footbridge would provide access to the Park trails which provides safe pedestrian access and connection to all areas of the Park. Vehicle trips to the east portions of the Park would decrease as Northshore residents would not have as far a distance to travel.

5.2.2 Memory Benches

The Park currently has a “Memory Bench” program through which donations can be made for the right to attach a memorial plaque to a bench to be placed throughout the Park. There are a number of “Memory Benches” placed along the existing trails in the Park and it is envisioned that more benches will be added alongside the trail at strategic locations to take advantage of views and the afternoon shade of existing trees. The proposed trail development plan takes into account the location of these existing benches as well as proposes locations for future benches.



Existing memory bench in 40 Mile Park

6 Transportation Network

6.1 Regional Access

Township Road 84 provides access to 40 Mile Park from Secondary Highway 879. Based on projected population and traffic figures, this road will adequately accommodate development proposed by this plan. During peak times there will likely be traffic line ups on Township Road 84 while vehicles wait to access the Park through the gate and entrance. Since there is only one access into the Park over the narrow SMRID bridge there are few changes to the roadway that would accommodate peak traffic, only a new or expanded bridge over the canal would alleviate the concerns. An emergency access is available at the north end of the Park across the dam.

6.2 Local Access

Generally there are three types of roads that make up the transportation system at 40 Mile Park: arterial, collector and local roads. The main Park arterial road connects the Park entry with the residential areas, campgrounds and other Park facilities. Collector roads connect the main road to other smaller local roads. Local roads provide internal circulation to individual cabin lots and campsites. Placement of consistent directional and wayfinding signage throughout the Park is critical to distinguish between the various areas. The transportation network is shown in Figure 15.

6.2.1 Arterial Road

40 Mile Drive is an arterial road that connects the Park Gate to the rest of the Park generally in an east-west alignment. The arterial loops to the north in the west side of the Park to connect the residential area along the reservoir's north shoreline. The arterial roadway is 7.0 m in width with two way driving lanes.

Comments arose at the Open House that suggested changes were needed to the main Park road to reduce speeds, control dust, make it safer for pedestrians and provide better access and egress. The arterial roadway has been realigned in the west portion of the Park in a curvilinear design which provides traffic calming by restricting the length of sightlines for drivers. Also, access points to the collector and local roads have been provided off this main arterial which requires drivers to slow down as there are more access points to be cognizant of.

The arterial road will be a two lane undivided arterial with numerous access points onto smaller roadways. Right and left turn channelization will likely not be required. As far as possible, the arterial road within 40 Mile Park should be planted with large canopy shade trees to be regularly spaced along the roadway to further visually restrict the roadway.

6.2.2 Collector Roads

To minimize traffic throughout the Park, circulation has been designed to ensure that day-use facilities do not share the same roads with campground loops. This layout minimizes unnecessary vehicular traffic on the campground loop roads and vehicle/pedestrian conflict between campsites and the day-use facilities. Collector roads are 6.0 m in width and have two way driving lanes. One collector with a turnaround loop is located in the Central Glen portion of the Park that provides access to the picnic and recreation areas, group campground and overnight campground. The expanded roadway in Waterford Terrace will be a collector road. Another collector is located on Paradise Point off the arterial that will provide access and

egress to the boat launch and associated parking areas. A collector is provided adjacent to the beach that provides access to the picnic point. Parking is located adjacent to this roadway for beach parking.

6.2.3 Local Roads

Local roads are provided through 40 Mile Park which provide access to campsites and the boat launch. These local roads are narrow which will make them easier to cross for pedestrians. The campground local roads are one way loops designed to be a minimum of 4.2 m. The boat launch roads range from 3.6 m to 4.2 m depending on the function of the road. The local roads in the Northshore cabin areas and long term lease camping in Spring Cove are existing two way roads with a minimum width of 7.0 m and 6.0 m respectively.



Existing local road on the Northshore

6.3 Parking

Parking improvements are needed throughout 40 Mile Park to facilitate access to the beach and boat launch as well as for overflow and storage parking in cabin and campground areas. New or expanded parking lots have been identified throughout the plan. Parking lots should be defined with materials such as fencing, boulders or post and cable to contain and demarcate designated areas. Trees should be planted in and around the parking lots to provide shade and screening.

The parking stalls throughout the Park are sized as follows:

- Pull through vehicle and trailer parking at boat launch: 3.7 m wide x 17.0 m long
- Vehicle only parking at boat launch: 3.0 m wide x 6.1 m long
- General parking: 3.0 m wide x 6.1 m long
- Overflow and storage stalls: 3.0 m wide x 7.6 m long

7 Utility Servicing Plan

The provision and maintenance of utility servicing and infrastructure in 40 Mile Park is a key issue for residents and visitors as suggested in the comments received at the Open House. The capacity of infrastructure to support additional recreational and private residential development in the Park is a function of the capacity of the following utility services:

- Water supply and distribution;
- Sewage treatment and disposal;
- Solid waste management and disposal;
- Stormwater management;
- Gas, electric and telecommunications provision; and
- Fire protection.

7.1 Comfort Stations

Comfort stations should be sited throughout the seasonal and overnight camping and picnic areas that provide washrooms and showers for patrons. Other services such as garbage receptacles, potable water standpipes and firewood could be placed near these stations. They should be placed to minimize intrusions on adjacent picnic or camp sites and vegetative screening should be planted at and near the comfort stations to maximize privacy and minimize disturbance from the activities at the comfort station. Parking will be provided near each comfort station and pedestrian trails will link campsites to these facilities. Placement of lighting should be low intensive and take adjacent campsites into consideration.

7.2 Water Supply and Distribution

There is no municipal water distribution system provided for the users of 40 Mile Park. Park users haul potable water onsite from service providers and rely on a lake intake or rainwater collection for non-potable irrigation water. Due to the prohibitive costs of supplying a potable water system to all the residential lots and campsites in 40 Mile Park, other options had to be explored.

Potable water standpipes will be installed in numerous locations throughout the Park, including existing and proposed development areas. Each standpipe will have a holding tank that will be required to be filled by a service provider. A large holding tank with a distribution system was deemed unviable as provincial regulations with regards to operating a potable water system would have to be met. A guard/control will be put on the standpipes to prevent overuse and control the amount of water that is released. Potable water standpipes must be a minimum of 5.0 m from washrooms or comfort stations.

Holding tanks must be sized to provide the required water capacity for each intended use: potable water standpipes, toilets, sinks and showers. The formula is as follows:

Tank Capacity = requirement (L) * occurrence (times x day) * desired supply (days) * number of people per site * number of sites

The following table provides an example of the required tank capacities based on the suggested water use requirements of 10 litres per use for potable water, 3.2 litres per use for flushing and washing and 50

litres per use for showering. It is recommended to store a week's worth of water per person based on the required amount and daily use occurrence.

Table A – Tank Capacity Example

Use	Requirement	Occurrence	Supply	# of People	# of Campsites	Required Tank Capacity
Potable Water Standpipe	10 litres/person	1 x day	7 days	3.2 ppl/site	32 sites	7,168 litre tank (1,576 Imp.g)
Toilets & Sinks	3.2 litres/flush & wash	4 x day	7 days	3.2 ppl/site	32 sites	9,175 litre tank (2,018 Imp.g)
Shower	50 litres/shower	1 x day	7 days	3.2 ppl/site	32 sites	35,840 litre tank (7,883 Imp.g)

7.3 Sewage Disposal

All sanitary sewage and grey water generated is held in holding tanks, and trucked to the County of 40 Mile municipal sewage lagoon located in the Etzikom coulee. The use of septic tile fields is not an option at the Park due proximity to the reservoir and small lot sizes. Therefore, the continued practice of individual sewage holding tanks will continue for both cabin residents (located above/below ground) and campers (located in their units). The use of sewage holding tanks creates long term concerns with respect to these tanks leaking raw sewage into the reservoir. Unless tanks are properly maintained and regularly tested to ensure there are no leaks or holes, it is likely these tanks will fail and environmental damage will occur. The Park Committee and County should take a leadership role in this respect by providing education to Park users on how to properly maintain and test the tanks for failures.

A small sewage system is proposed for several of the campsite areas. This sewage system would link service connections at the campsites to a central holding tank. The tank will have to be pumped out regularly to ensure capacity. Unserviced campsites will utilize the sewage dumping station located adjacent to the Park Gate.

A number of existing washrooms will remain in 40 Mile Park as well as construction of new facilities throughout the Park to ensure adequate capacity and distances for users as shown on Figure 8. These washrooms will have to be supplied with holding tanks or connected to the sewage system where appropriate.



Existing washroom and potable water standpipe at old beach

Sewage holding tanks should be sized based on the intended use. At the comfort stations the sewage holding tank should be equal in size to the water tank that is used to provide capacity. For example if a 9,000 litre (2,000 Imp.g.) water tank is required at a comfort station than a 9,000 litre (2,000 Imp.g.) sewage tank should be installed. The sewage holding tanks that are provided to supply the seasonal campground connections should be sized to hold a week's supply of sewage based on the potable water requirements. For example if 10 litres/person/day is the requirement used for potable water standpipes and there are 3.2 people per campsite the sewage tank should hold 224 litres (50 Imp. g.) multiplied by the number of campsites serviced. In a 32 campsite loop the capacity of the sewage tank should be 1,600 litres (350 Imp. g.).

7.4 Solid Waste Management and Disposal

Garbage receptacles have been provided at the comfort stations located throughout the Park which are denoted on the plans in Figure 8. These bins will have to be regularly emptied and maintained by Park staff. The existing central garbage area will be moved just south of the Park Maintenance compound to an area on the south side of the main Park road near the Park Gate. This central location is preferred for easy access.

A private service provider supplies regular garbage pick-up to 40 Mile Park and the waste material is trucked to the regional landfill located in the County. Currently there is no provision for communal recycling at 40 Mile Park and this should be considered in the long term for environmental management. Solid waste management and disposal are not considered to be limiting factors to growth at the Park.

7.5 Stormwater Management

The ultimate receiving body for stormwater from the Park is 40 Mile Coulee reservoir. The majority of the Park naturally drains toward the reservoir or is channeled through a system of ditches on both sides of the roads and eventually discharged into the reservoir.

Stormwater runoff should be properly managed to ensure that the water entering the water body is of a good quality. Storm drainage should be handled where possible through natural means. On-site infiltration should be encouraged as much as possible on each site, rather than diverting water to a storm drainage system or onto adjacent properties. Where possible, landscaping should be used to slow surface runoff and permeable surfaces which decrease the rate and amount of runoff should be encouraged. Regulations should be added to the County's Land Use Bylaw that outlines the amount of hard surfacing that is allowed onsite to help address stormwater management concerns.

Aside from road ditches and individual onsite stormwater management no comprehensive stormwater management system with collection ponds is planned for the Park.

7.6 Gas, Electric and Telecommunications

The provision of power, gas, cable, and phone services are all available within 40 Mile Park from various service providers. Based on discussions with these service providers the proposed development at 40 Mile Park will not have a negative impact on the current or future provision of these services.

Electricity lines managed by Fortis Alberta extend into the cabin areas on the Northshore and Central Cabin areas and are available for electricity supplies within the Park.

7.7 Fire Protection

Fire protection is provided from the Village of Foremost and the Town of Bow Island. Both equipment and manpower are provided by these municipalities as there are no equipment or trained manpower at 40 Mile Park. The response time for crews is approximately 20 to 25 minutes which is seen as adequate based strictly on the large size of the County. However, due to the development at the Park, both in terms of number of units and inadequate separation distances between units, the fire response time is considered insufficient. According to the County Fire Chief, there are various options for increasing the level of fire protection including providing spare equipment, training a volunteer fire crew, installing hydrants and main lines or tapping into irrigation lines. The current level of fire protection services is such that it is considered a limitation to development at 40 Mile Park. To mitigate fire concerns buffers have been proposed between campsites. As the Park develops additional fire management strategies should be explored.

8 Implementation and Park Phasing

8.1 Implications for Other Municipal Plans and Bylaws

The implementation of this plan may require amendments to the County's Land Use Bylaw to update or create new land use districts compatible with this plan. Such amendments should address:

- Minimum campground parking spur and amenity space sizes and buffer distances;
- Regulations for accessory structures including the number and size allowed and those that are prohibited;
- Cabin lot dimensions, maximum site coverage and minimum building setbacks;
- Minimum roadway and trail dimensions;
- Servicing requirements; and
- Land uses to include any proposed or future development.

8.2 Phasing Plan

The Park could be developed in the sequence shown on Figure 16. The four general phases are designed to accommodate flexibility, and servicing of the Park. However it is possible that market conditions will result in the phases being combined or broken into smaller areas. Independent phasing is also suggested for some areas based on demand.

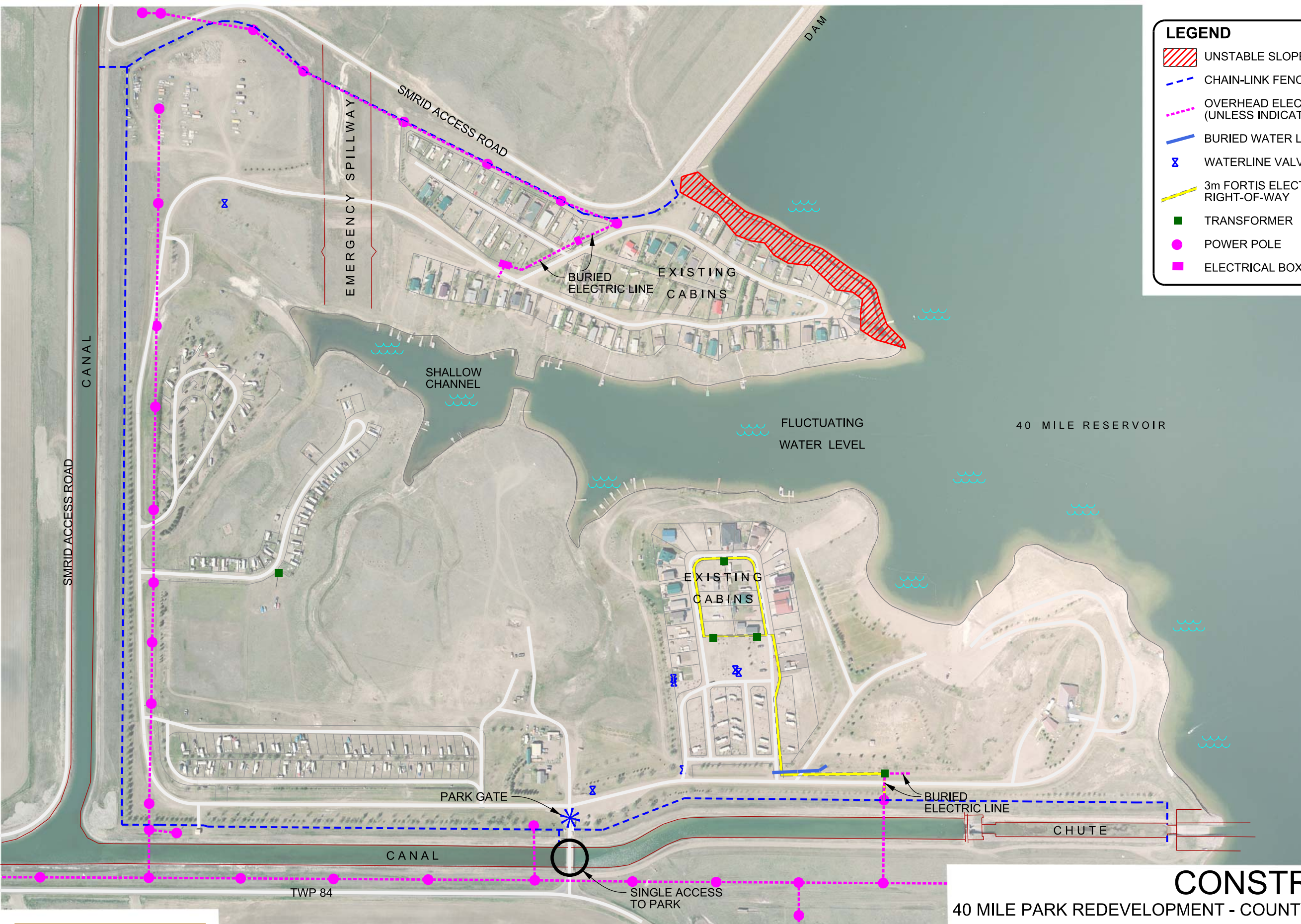
The phasing sequence is intended to provide a logical and orderly development pattern and to accommodate existing uses. The actual phase boundaries and sequence are anticipated to be evaluated prior to development primarily based on cost and Park needs.

LEGEND

- ROAD
- - - CHAIN-LINK FENCE (6')
- PARK FACILITY STRUCTURE
- TOILET
- P PUBLIC PARKING
- TREES
- ⊠ PLAYGROUND



FIG. 1
EXISTING CONDITIONS
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE
 NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:4000
 March, 2011



LEGEND










-  UNSTABLE SLOPE
-  CHAIN-LINK FENCE (6')
-  OVERHEAD ELECTRICAL LINE (UNLESS INDICATED AS BURIED)
-  BURIED WATER LINE
-  WATERLINE VALVE
-  3m FORTIS ELECTRICAL RIGHT-OF-WAY
-  TRANSFORMER
-  POWER POLE
-  ELECTRICAL BOX

FIG. 2

CONSTRAINTS

40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:4000
 March, 2011





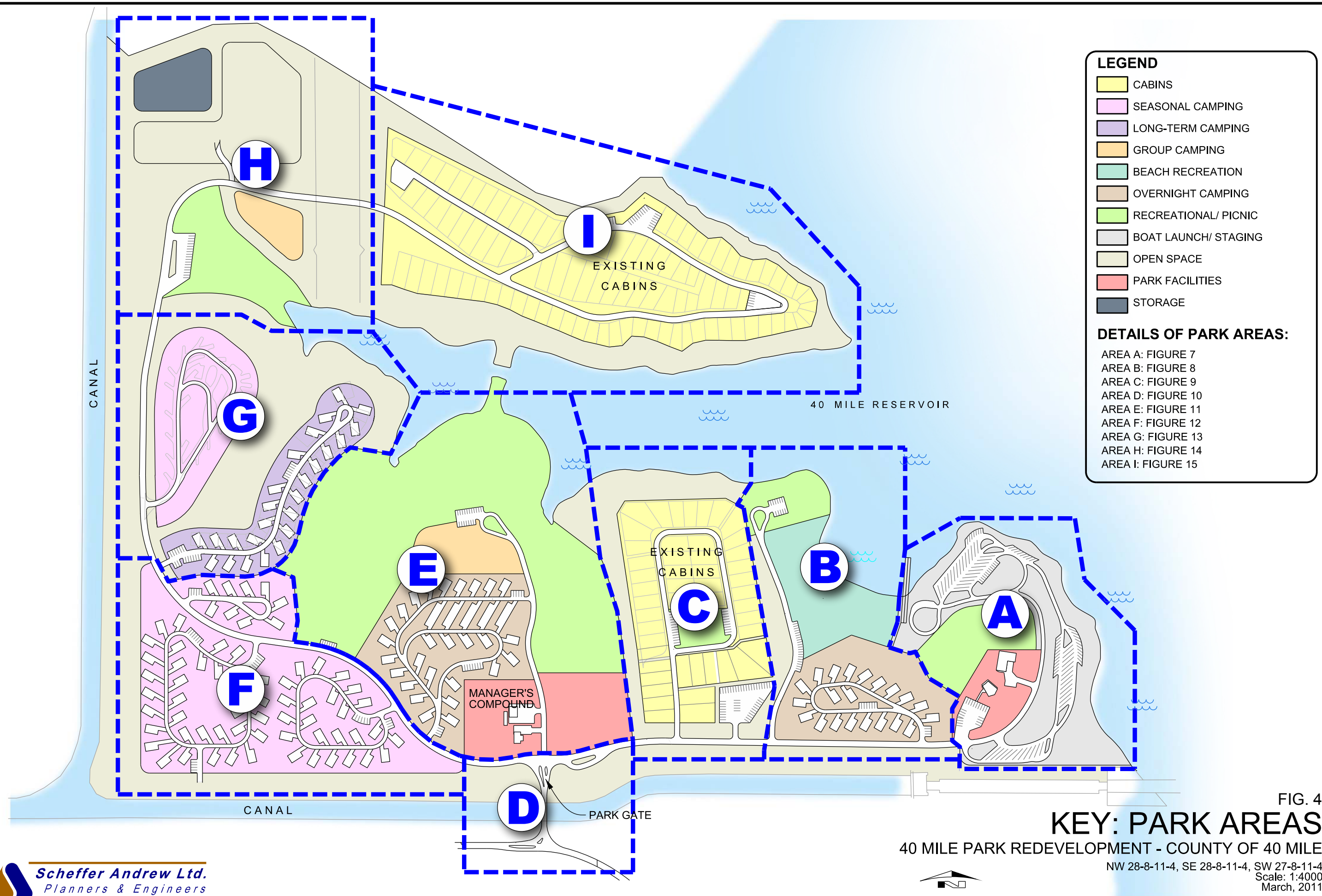
LEGEND

- STONE CIRCLE
- CAIRN
- ▲ FEATURE
- HISTORICAL SITE
- - - POSSIBLE EXTENT OF ARCHAEOLOGICAL SITE

ARCHAEOLOGICAL REFERENCES:
 Alberta Culture - Historic Resources Division
 Archaeological Site Inventory Data
 Borden Numbers DkOu 16, DkOu 17, DkOu 28,
 DkOu 29, DkOu 30, DkOu 31, DkOu 32,
 DkOu 33, DkOu 34, DkOu 35, DkOu 36,
 DkOu 37.
 Document dates: 1981, 1985, 1986

FIG. 3
ARCHAEOLOGICAL SITES
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE
 NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:4000
 March, 2011





LEGEND

- CABINS
- SEASONAL CAMPING
- LONG-TERM CAMPING
- GROUP CAMPING
- BEACH RECREATION
- OVERNIGHT CAMPING
- RECREATIONAL/ PICNIC
- BOAT LAUNCH/ STAGING
- OPEN SPACE
- PARK FACILITIES
- STORAGE

DETAILS OF PARK AREAS:

- AREA A: FIGURE 7
- AREA B: FIGURE 8
- AREA C: FIGURE 9
- AREA D: FIGURE 10
- AREA E: FIGURE 11
- AREA F: FIGURE 12
- AREA G: FIGURE 13
- AREA H: FIGURE 14
- AREA I: FIGURE 15

FIG. 4
KEY: PARK AREAS
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE
 NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:4000
 March, 2011



Area A - Paradise Point



Legend

- DEVELOPED TRAIL (2.4m)
- SEMI-DEVELOPED TRAIL (1.2m)
- MEMORY BENCH
- SHOWERS
- TOILET
- TRASH RECEPTACLE
- LIGHTHOUSE (NON-FUNCTIONAL)
- DAY-USE DOCK
- BOAT LAUNCH
- EXISTING TREES
- PROPOSED TREES

FIG. 5

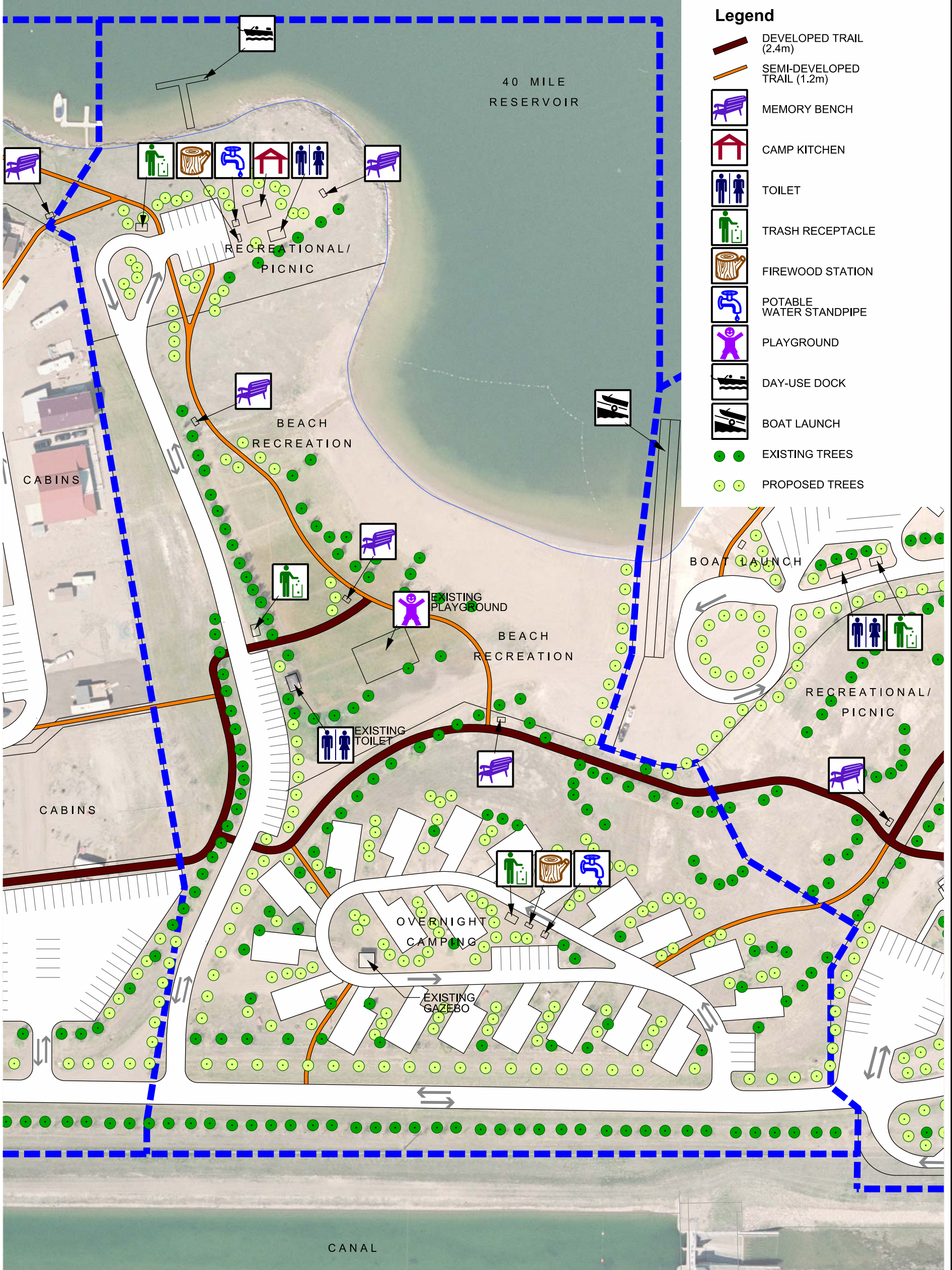
AREA A - DETAILS

40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:1200
 March, 2011



Area B - Sunrise Bay



- Legend**
- DEVELOPED TRAIL (2.4m)
 - SEMI-DEVELOPED TRAIL (1.2m)
 - MEMORY BENCH
 - CAMP KITCHEN
 - TOILET
 - TRASH RECEPTACLE
 - FIREWOOD STATION
 - POTABLE WATER STANDPIPE
 - PLAYGROUND
 - DAY-USE DOCK
 - BOAT LAUNCH
 - EXISTING TREES
 - PROPOSED TREES

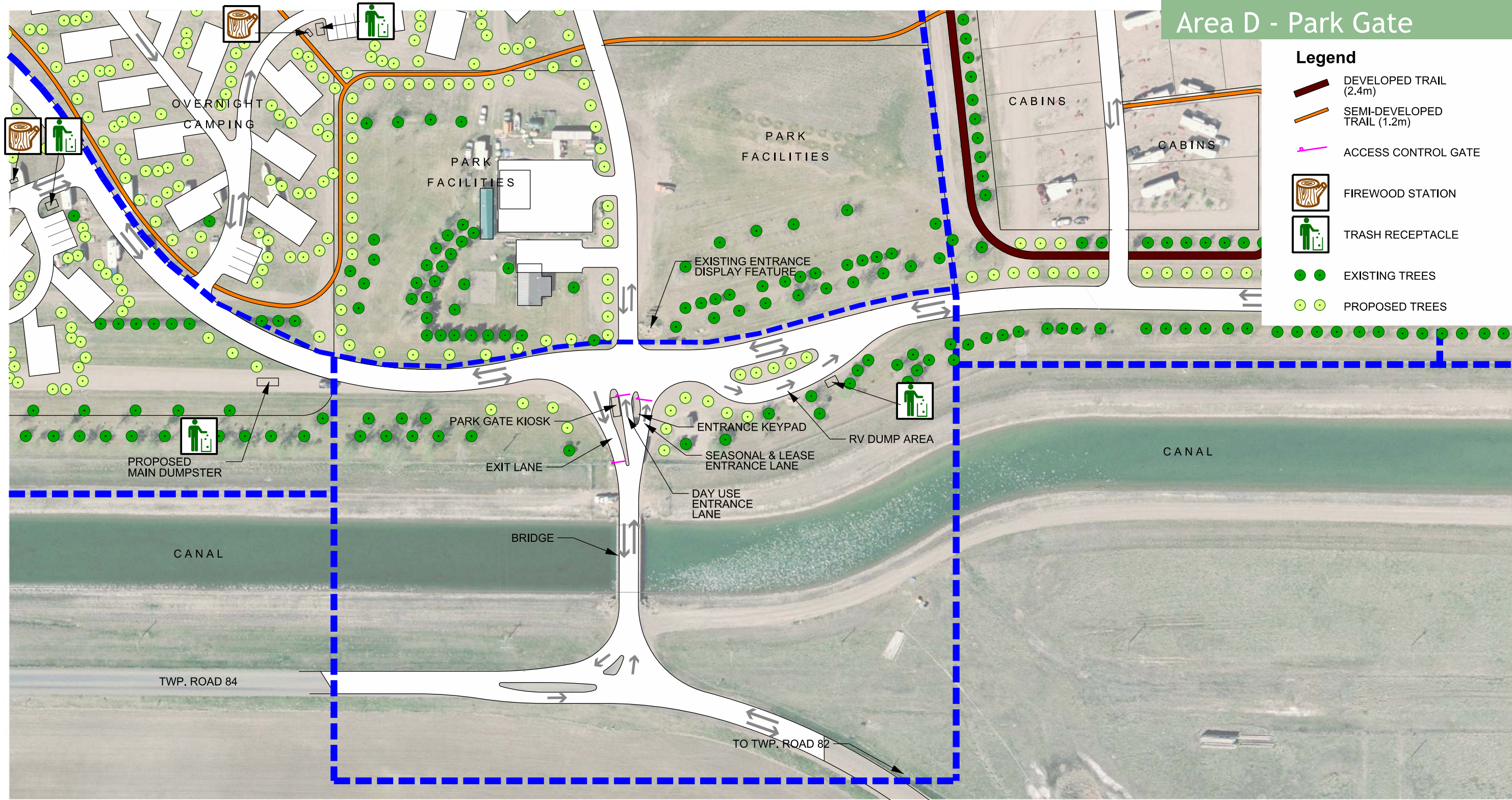
FIG. 6
AREA B - DETAILS

40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
Scale: 1:1200
March, 2011



Area D - Park Gate

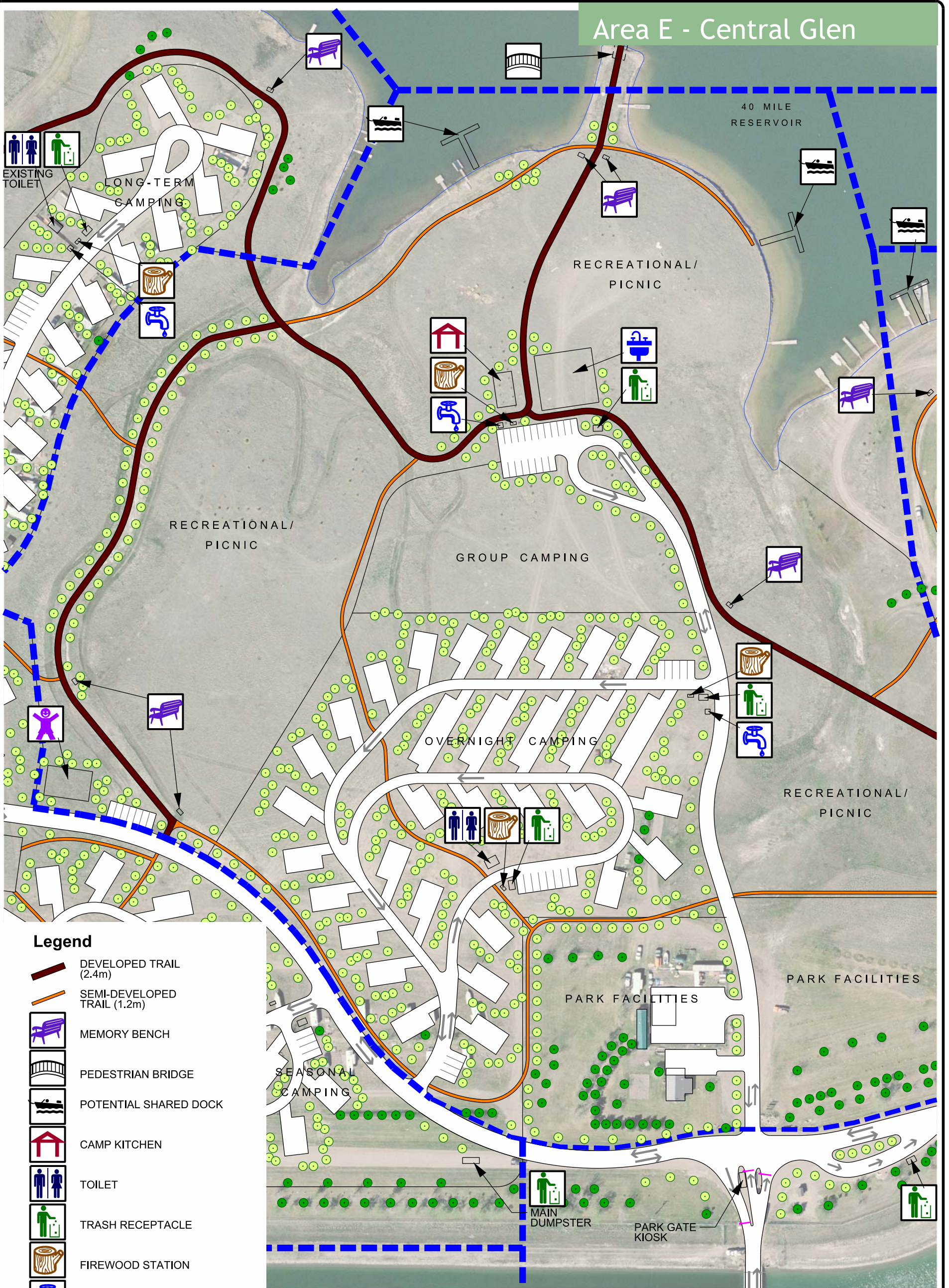


- Legend**
- DEVELOPED TRAIL (2.4m)
 - SEMI-DEVELOPED TRAIL (1.2m)
 - ACCESS CONTROL GATE
 - FIREWOOD STATION
 - TRASH RECEPTACLE
 - EXISTING TREES
 - PROPOSED TREES

FIG. 8
AREA D - DETAILS
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE
 NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:1200
 March, 2011



Area E - Central Glen



Legend

- DEVELOPED TRAIL (2.4m)
- SEMI-DEVELOPED TRAIL (1.2m)
- MEMORY BENCH
- PEDESTRIAN BRIDGE
- POTENTIAL SHARED DOCK
- CAMP KITCHEN
- TOILET
- TRASH RECEPTACLE
- FIREWOOD STATION
- POTABLE WATER STANDPIPE
- PLAYGROUND
- COMFORT STATION (SHOWERS, TOILETS)
- EXISTING TREES
- PROPOSED TREES

FIG. 9
AREA E - DETAILS

40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
Scale: 1:1500
March, 2011



Area F - Poplar Pointe

- Legend**
- DEVELOPED TRAIL (2.4m)
 - SEMI-DEVELOPED TRAIL (1.2m)
 - MEMORY BENCH
 - TOILET
 - TRASH RECEPTACLE
 - FIREWOOD STATION
 - POTABLE WATER STANDPIPE
 - PLAYGROUND
 - COMFORT STATION (SHOWERS, TOILETS)
 - EXISTING TREES
 - PROPOSED TREES

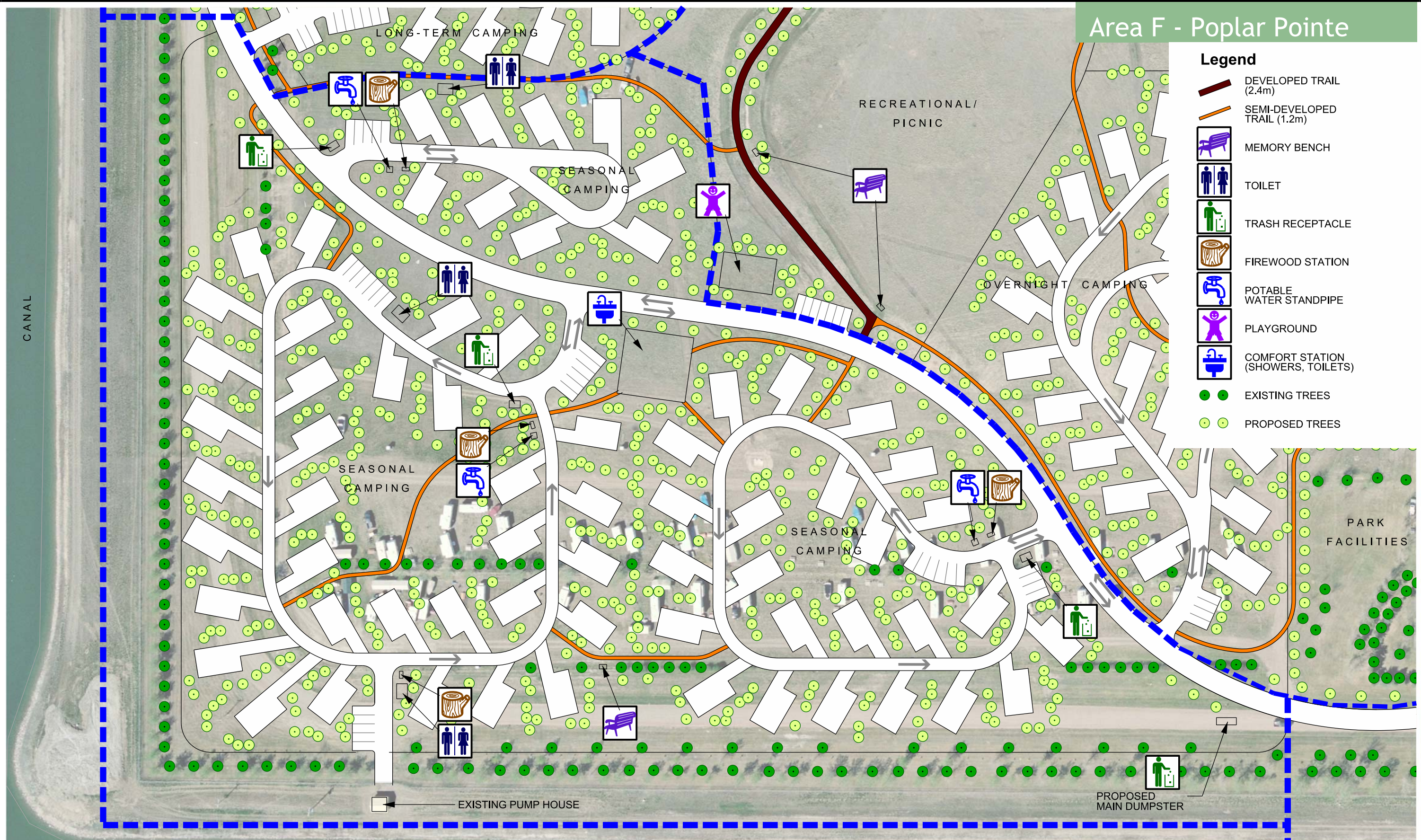


FIG. 10

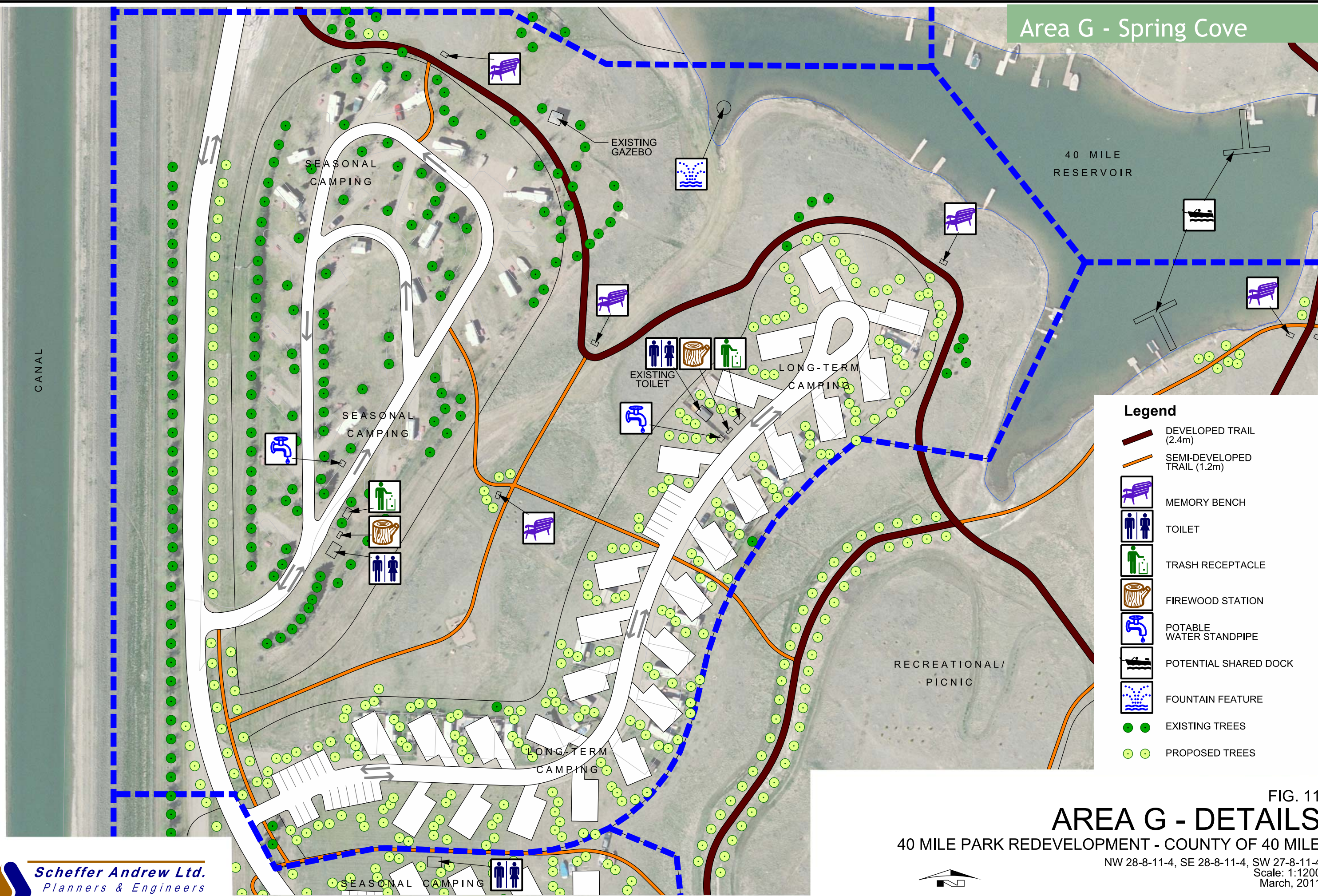
AREA F - DETAILS

40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:1200
 March, 2011



Area G - Spring Cove

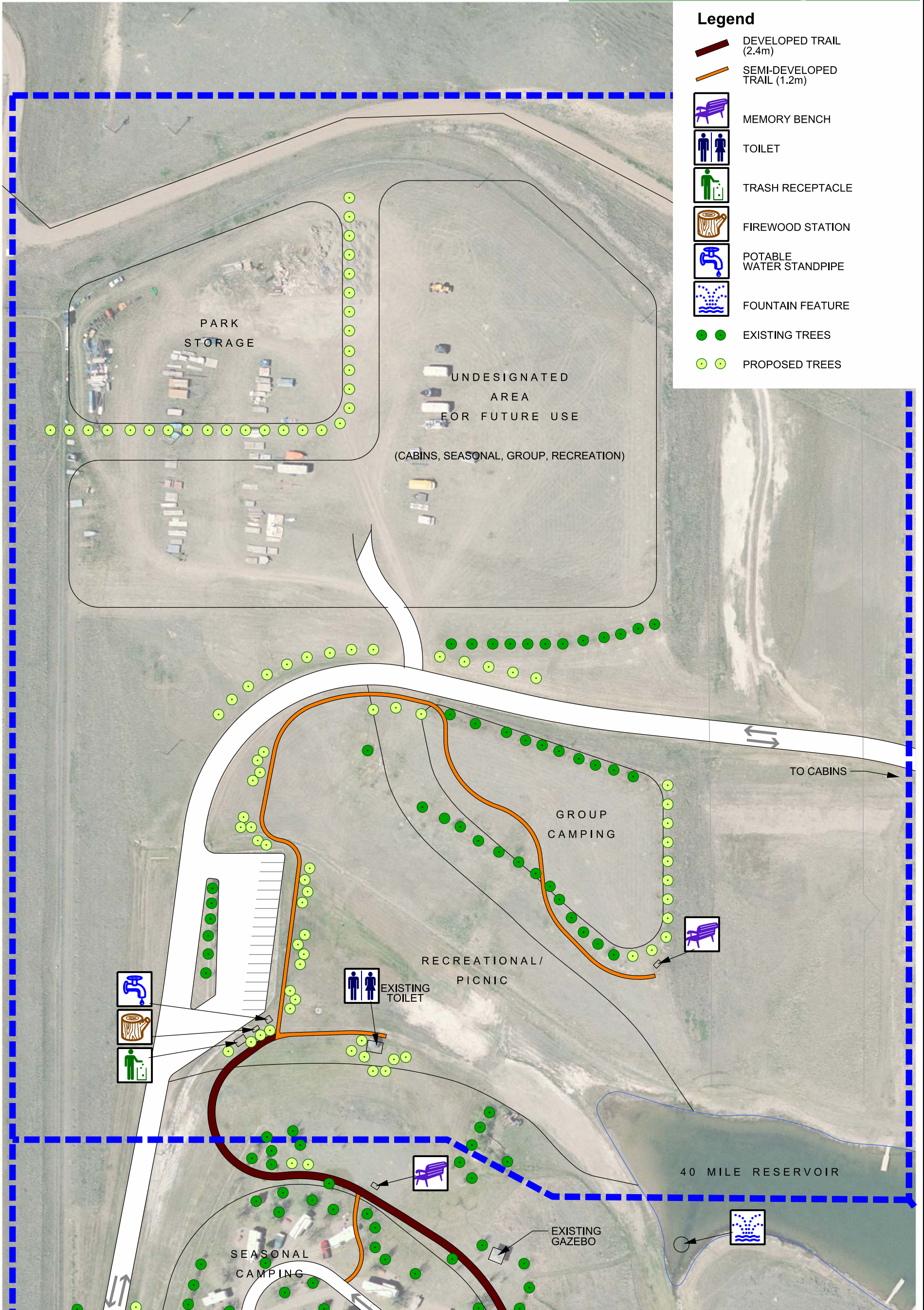


Legend

- DEVELOPED TRAIL (2.4m)
- SEMI-DEVELOPED TRAIL (1.2m)
- MEMORY BENCH
- TOILET
- TRASH RECEPTACLE
- FIREWOOD STATION
- POTABLE WATER STANDPIPE
- POTENTIAL SHARED DOCK
- FOUNTAIN FEATURE
- EXISTING TREES
- PROPOSED TREES

FIG. 11
AREA G - DETAILS
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE
 NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:1200
 March, 2011

Area H - Vista Ridge



- Legend**
- DEVELOPED TRAIL (2.4m)
 - SEMI-DEVELOPED TRAIL (1.2m)
 - MEMORY BENCH
 - TOILET
 - TRASH RECEPTACLE
 - FIREWOOD STATION
 - POTABLE WATER STANDPIPE
 - FOUNTAIN FEATURE
 - EXISTING TREES
 - PROPOSED TREES

FIG. 12

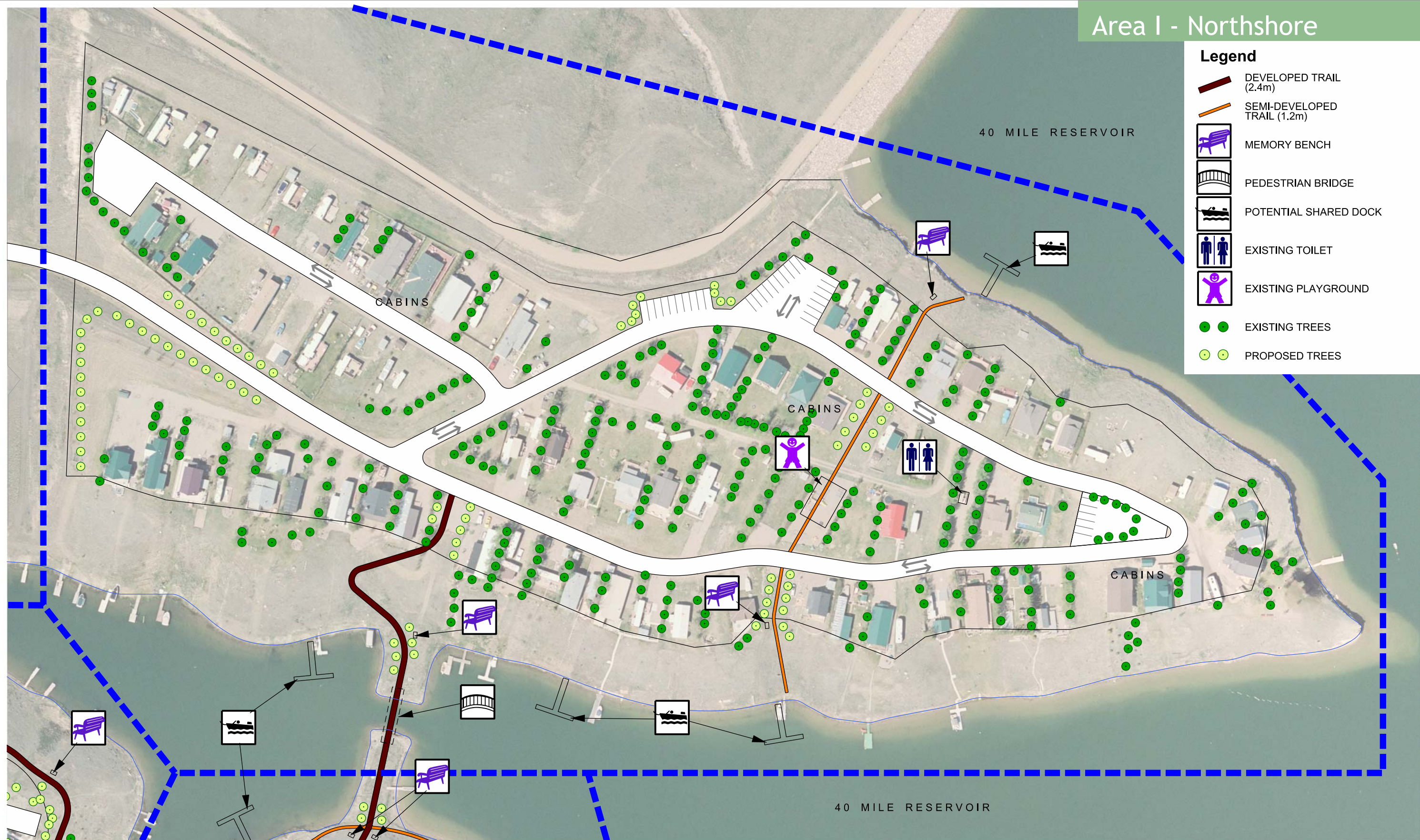
AREA H - DETAILS

40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:1200
 March, 2011



Area I - Northshore



Legend

- DEVELOPED TRAIL (2.4m)
- SEMI-DEVELOPED TRAIL (1.2m)
- MEMORY BENCH
- PEDESTRIAN BRIDGE
- POTENTIAL SHARED DOCK
- EXISTING TOILET
- EXISTING PLAYGROUND
- EXISTING TREES
- PROPOSED TREES

FIG. 13

AREA I - DETAILS

40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:1500
 March, 2011



LEGEND

- RECREATIONAL/PICNIC
- BEACH RECREATION
- BOAT LAUNCH / STAGING
- OPEN SPACE
- DEVELOPED TRAIL (2.4m)
- SEMI-DEVELOPED TRAIL (1.2m)
- MEMORY BENCH
- POTENTIAL SHARED DOCK
- PLAYGROUND
- LIGHTHOUSE (NON-FUNCTIONAL)
- FOUNTAIN FEATURE
- EXISTING PARK FACILITY STRUCTURE



FIG. 14
RECREATIONAL AREAS / TRAILS
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:4000
 March, 2011

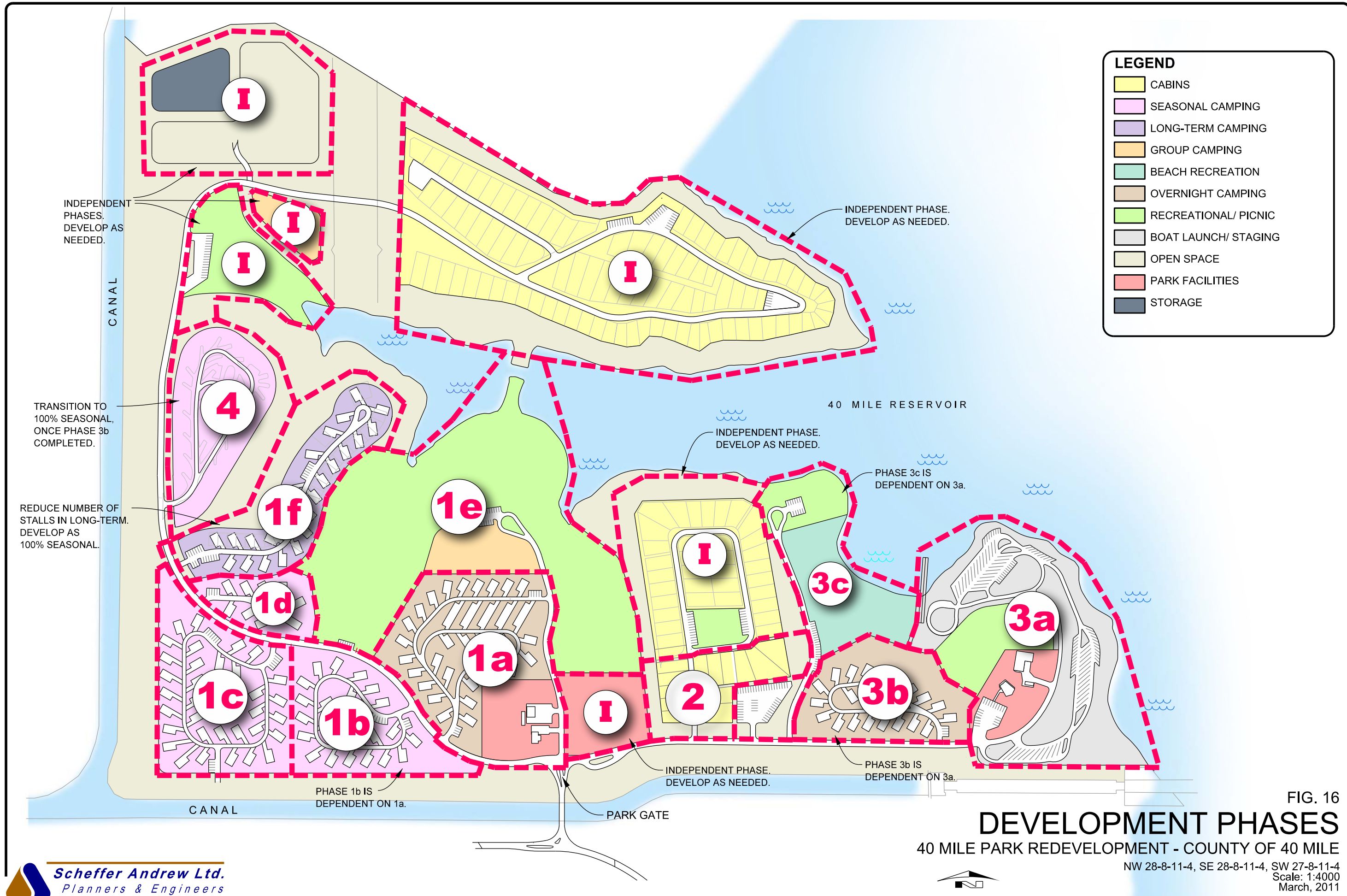


LEGEND

- PARKING AREA
- 7.0m ROAD
- 6.0m ROAD
- 4.2m ONE-WAY ROAD
- 3.6m ONE-WAY ROAD
- TOWNSHIP ROAD
- INDICATES ONE-WAY TRAFFIC DIRECTION
- EXISTING PARK FACILITY STRUCTURE



FIG. 15
TRANSPORTATION
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE
 NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:4000
 March, 2011



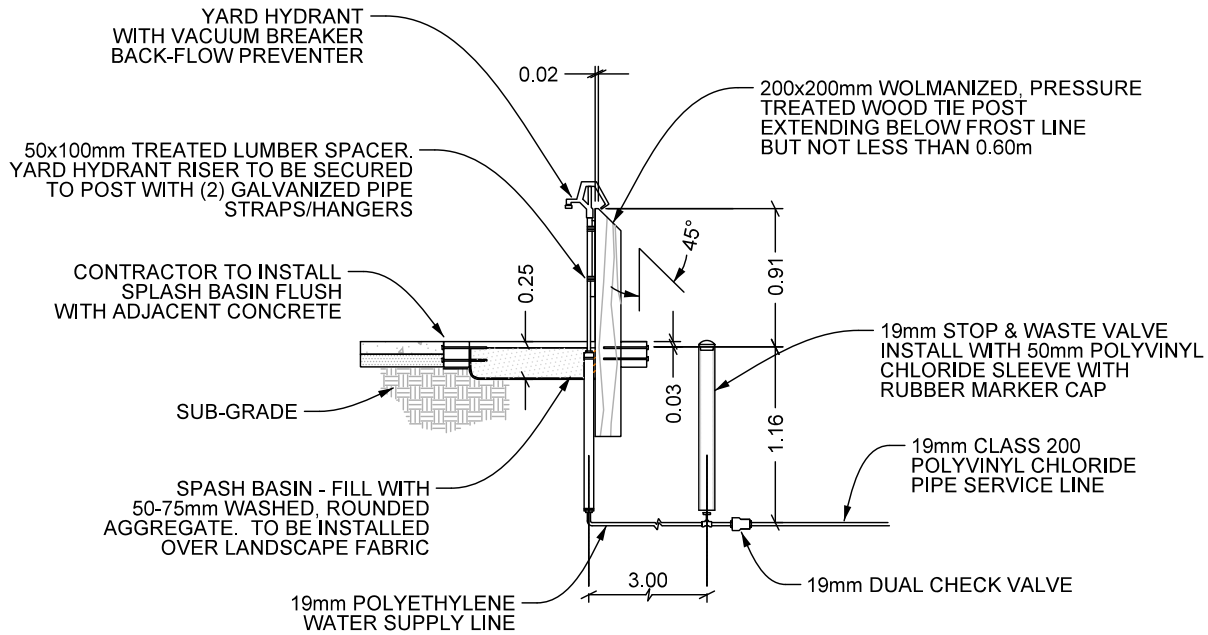
LEGEND

- CABINS
- SEASONAL CAMPING
- LONG-TERM CAMPING
- GROUP CAMPING
- BEACH RECREATION
- OVERNIGHT CAMPING
- RECREATIONAL/ PICNIC
- BOAT LAUNCH/ STAGING
- OPEN SPACE
- PARK FACILITIES
- STORAGE

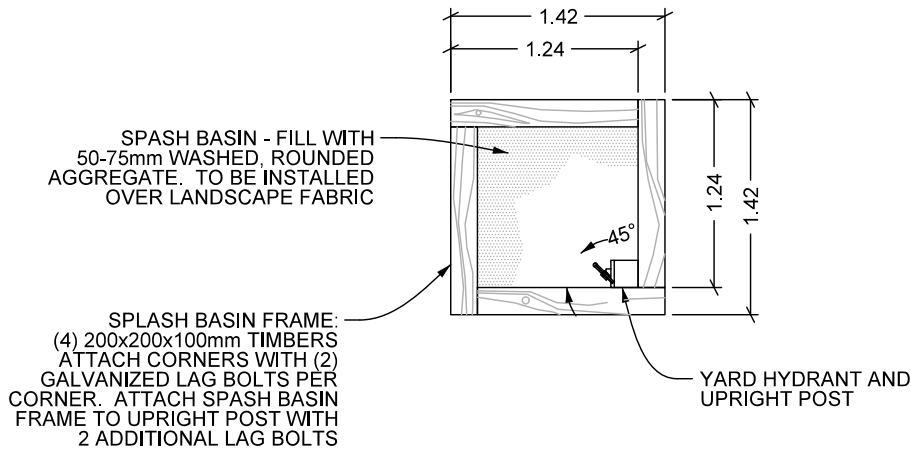
FIG. 16
DEVELOPMENT PHASES
 40 MILE PARK REDEVELOPMENT - COUNTY OF 40 MILE
 NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: 1:4000
 March, 2011

Appendix

Templates and Details



WATER STANDPIPE ELEVATION VIEW



WATER STANDPIPE PLAN VIEW

WATER STANDPIPE DETAIL

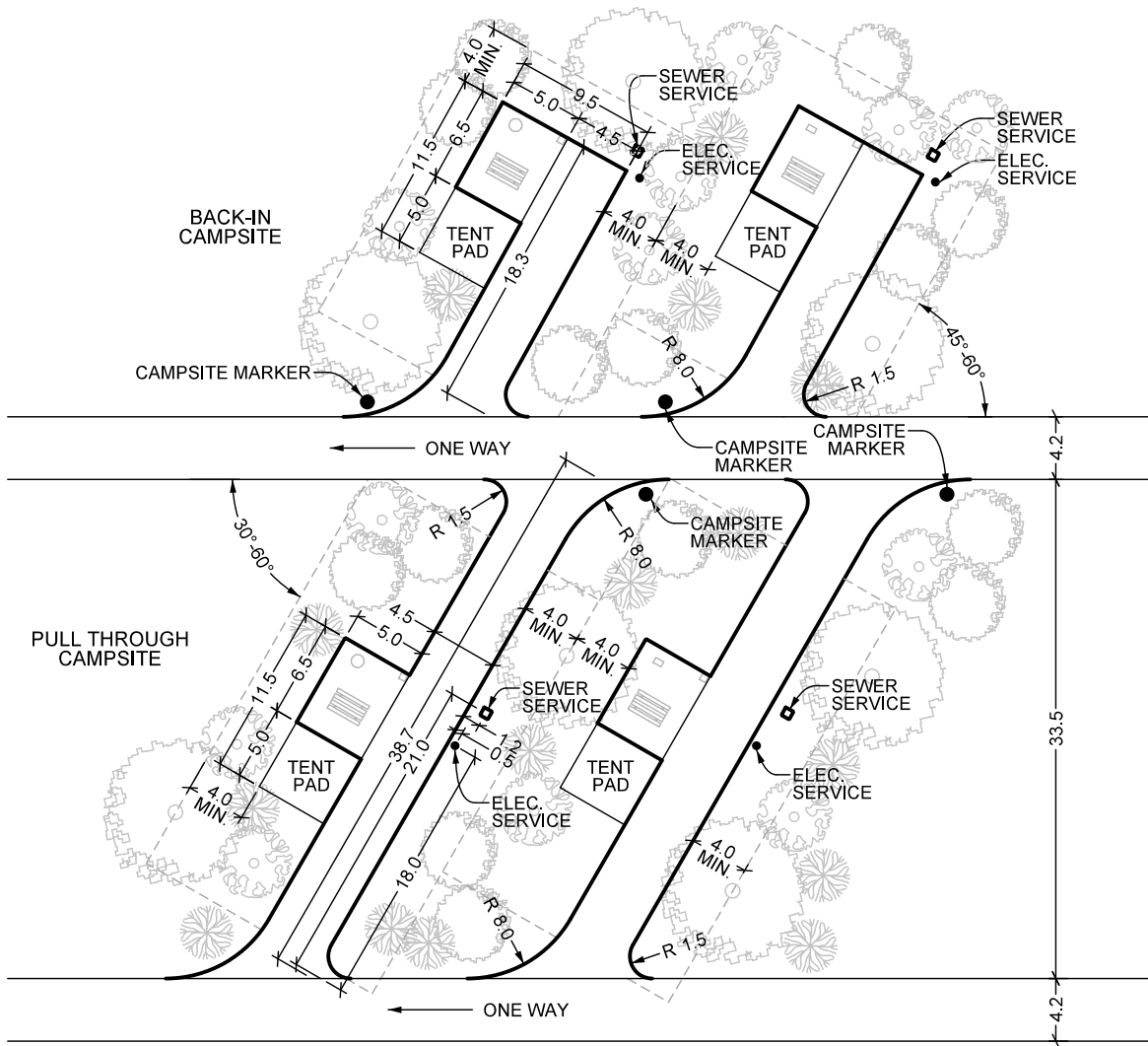
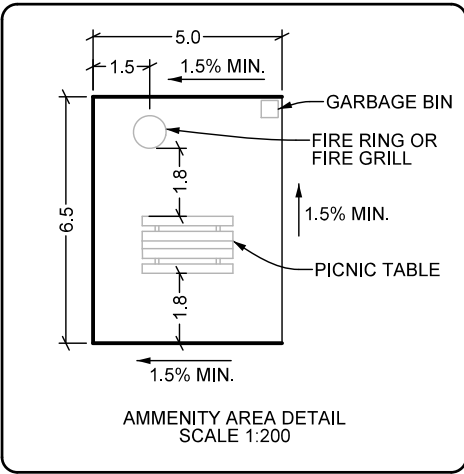
40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

**ALL DIMENSIONS ARE IN METRES

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4

Scale 1:50

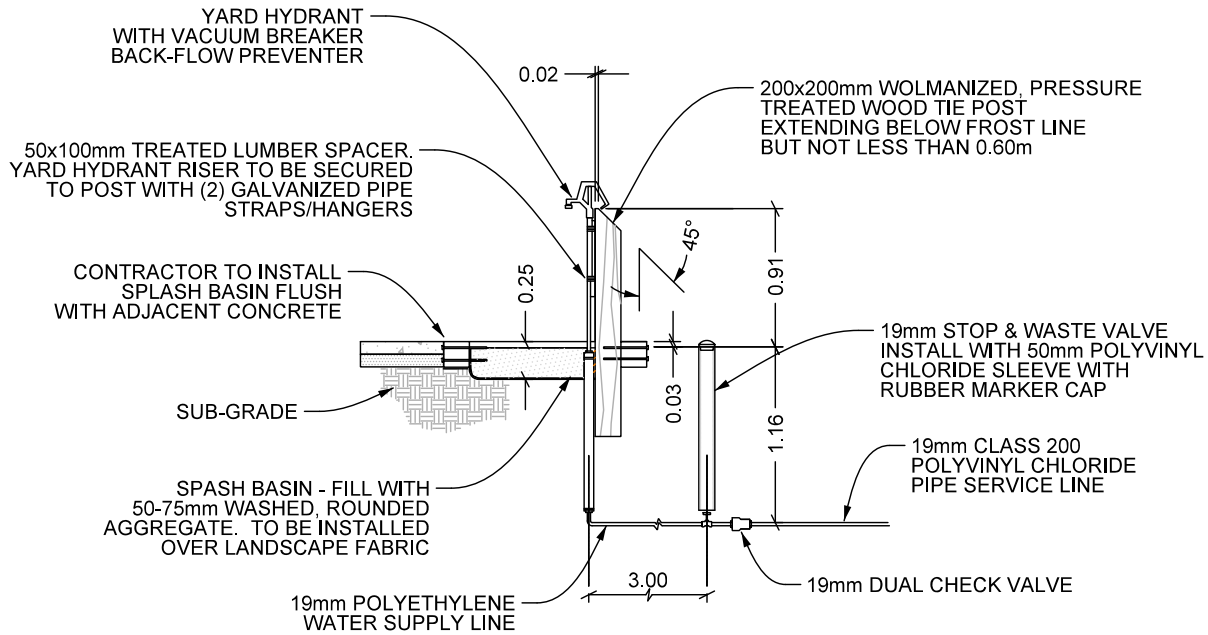
March, 2011



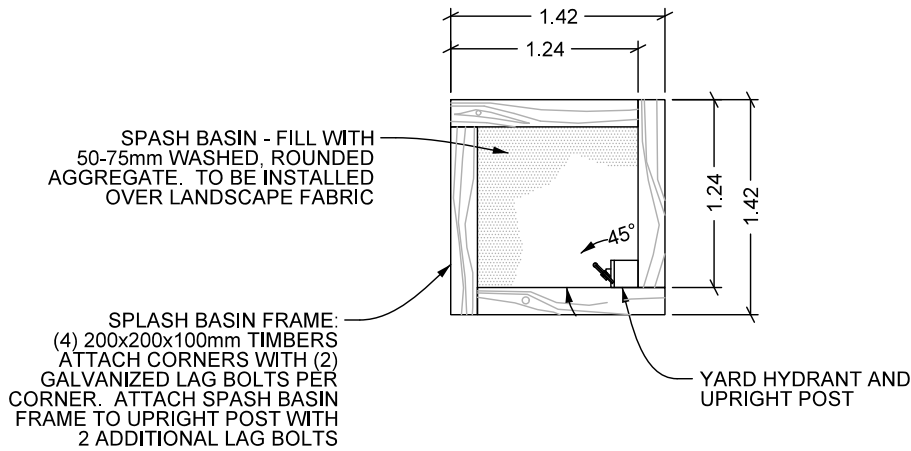
CAMPSITE LAYOUT TEMPLATES

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

**ALL DIMENSIONS ARE IN METRES



WATER STANDPIPE ELEVATION VIEW



WATER STANDPIPE PLAN VIEW

WATER STANDPIPE DETAIL

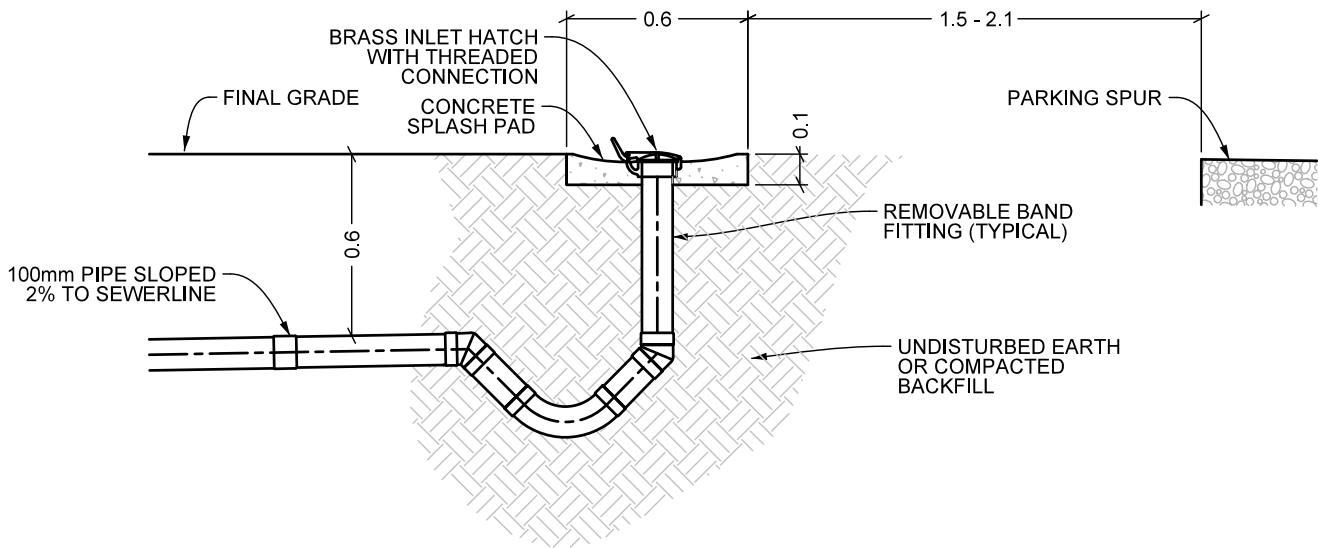
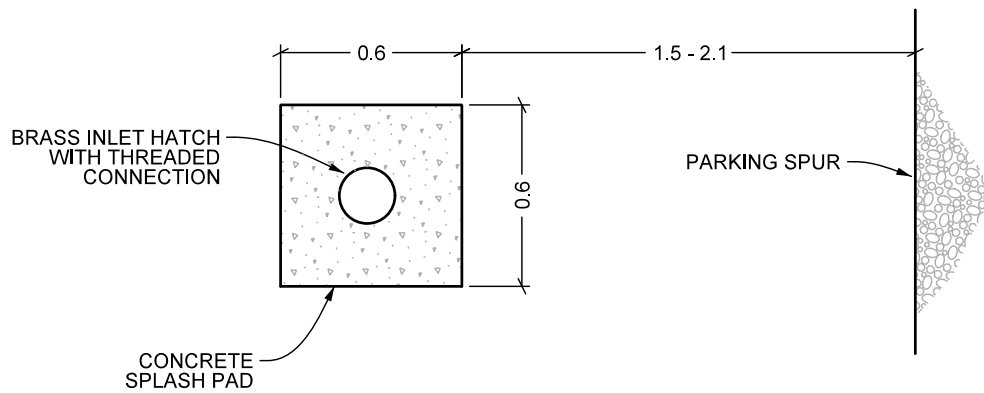
40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

**ALL DIMENSIONS ARE IN METRES

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4

Scale 1:50

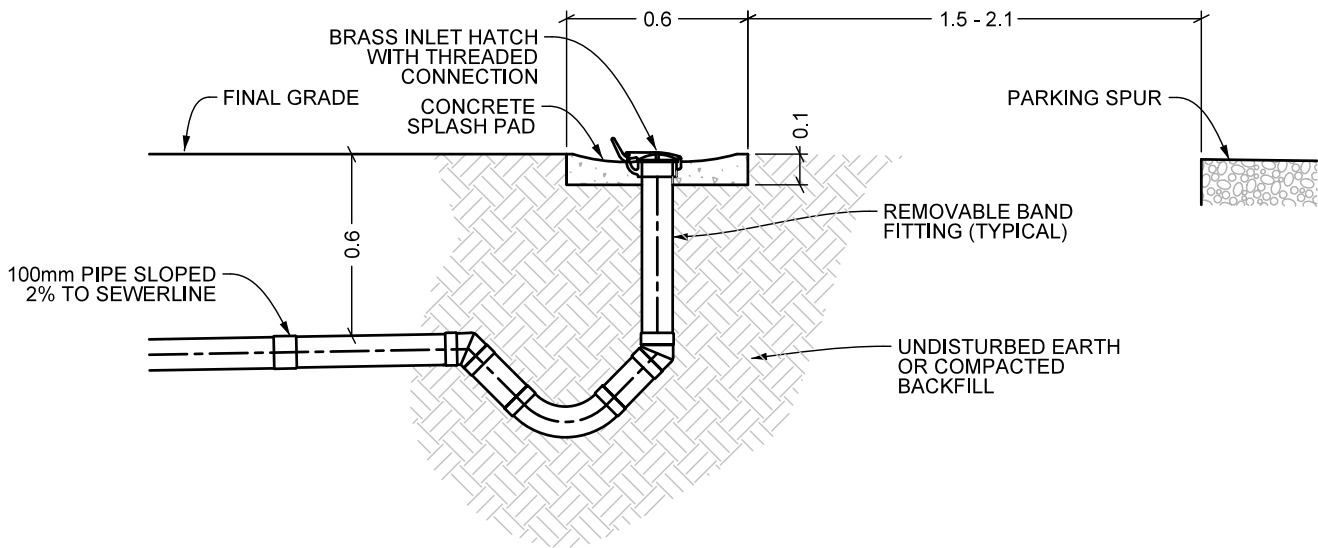
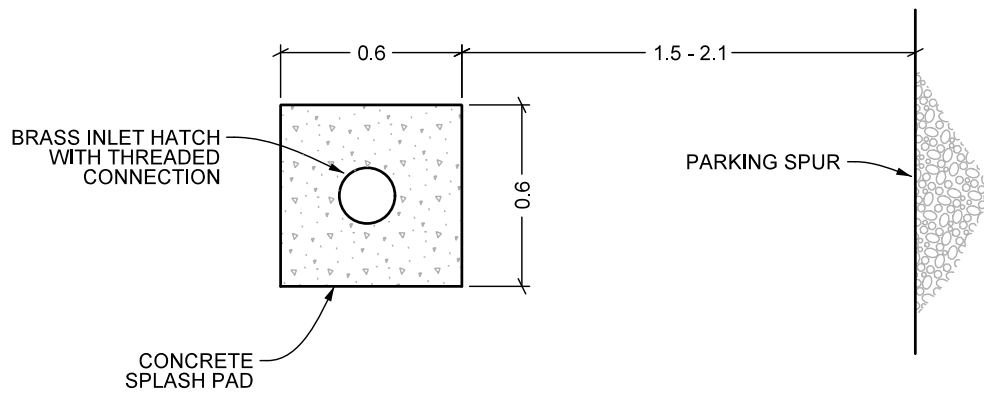
March, 2011



CAMPSITE SEWER DROP DETAIL

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

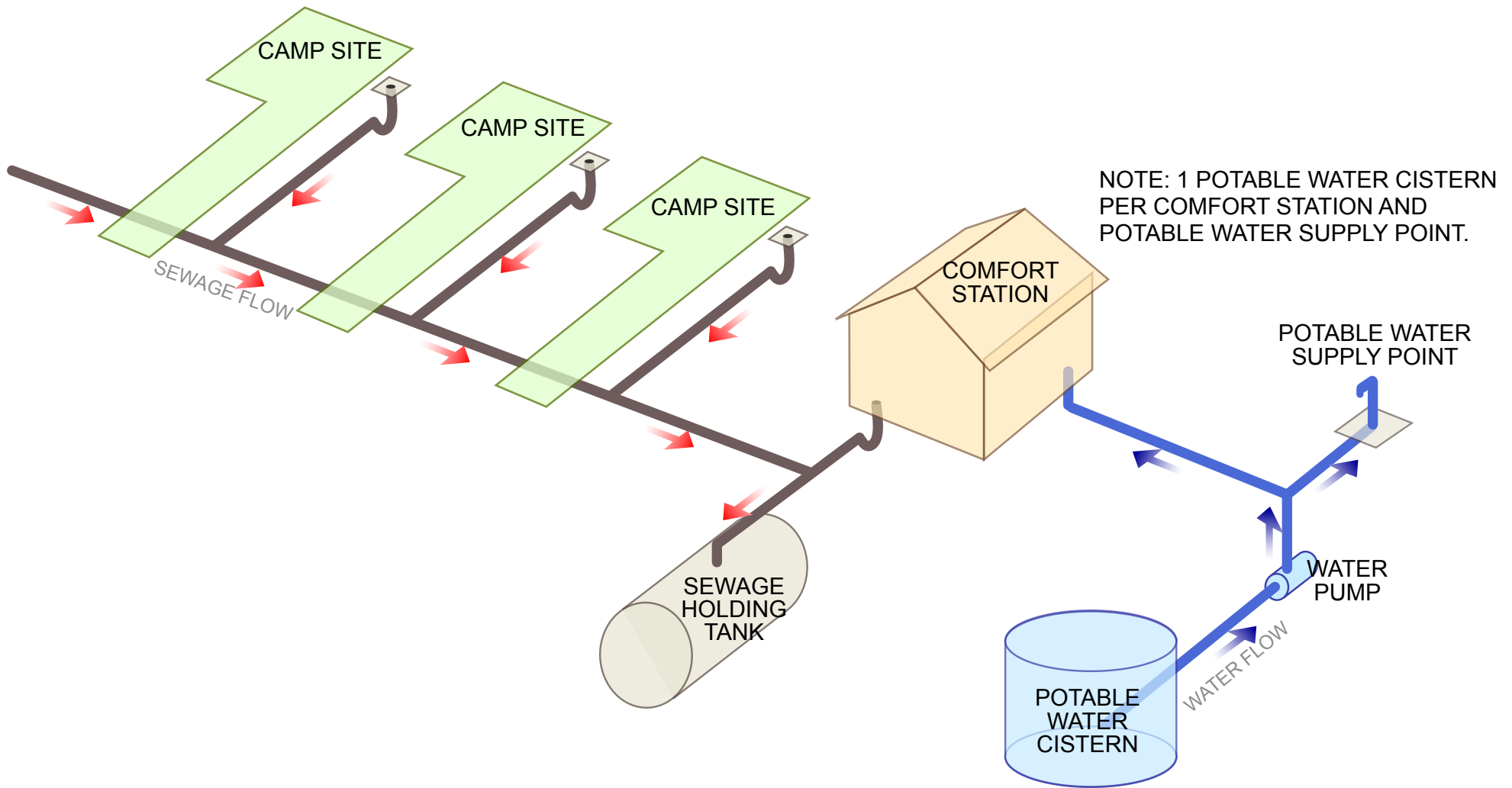
**ALL DIMENSIONS ARE IN METRES



CAMPSITE SEWER DROP DETAIL

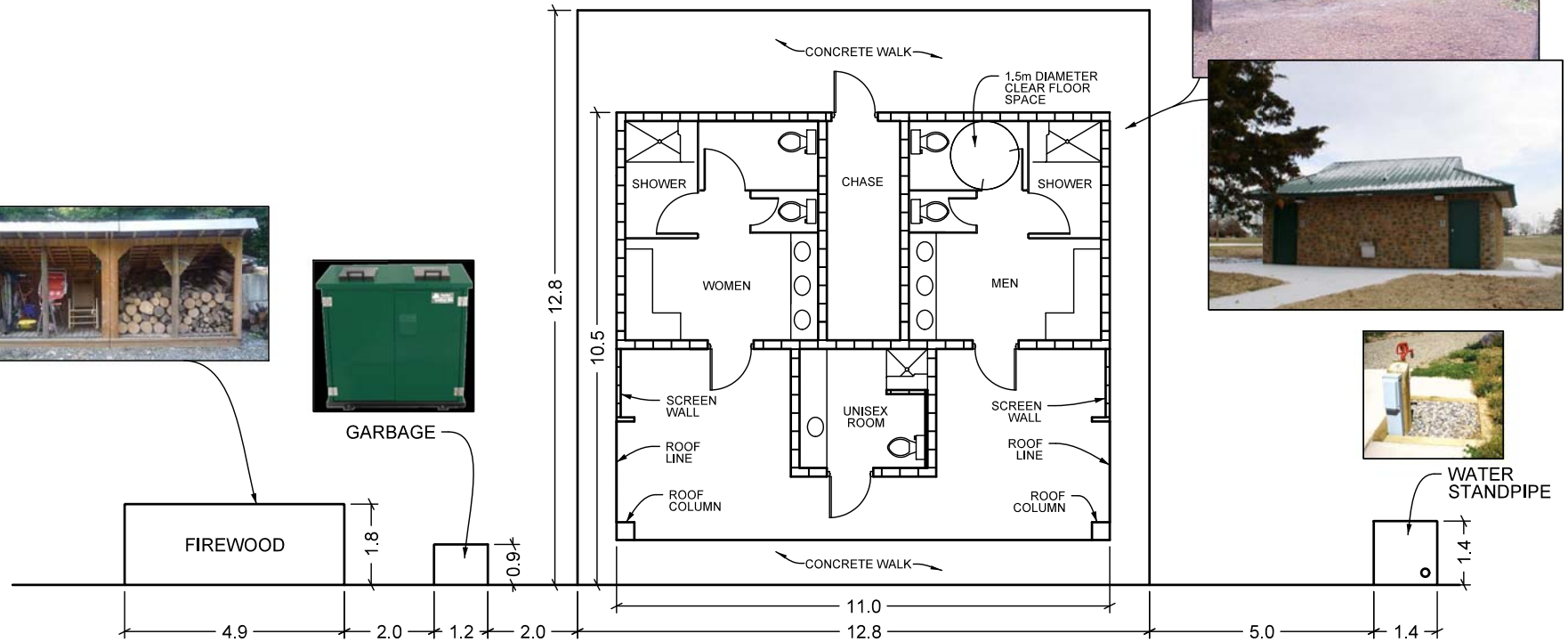
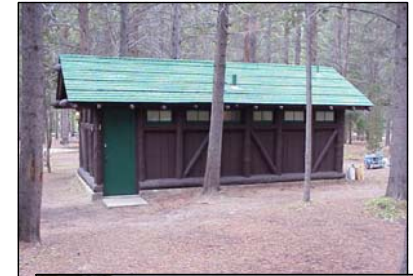
40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

**ALL DIMENSIONS ARE IN METRES



SYSTEMS SCHEMATIC:
 POTABLE WATER SUPPLY & SEWAGE COLLECTION
 40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale: NTS
 March, 2011

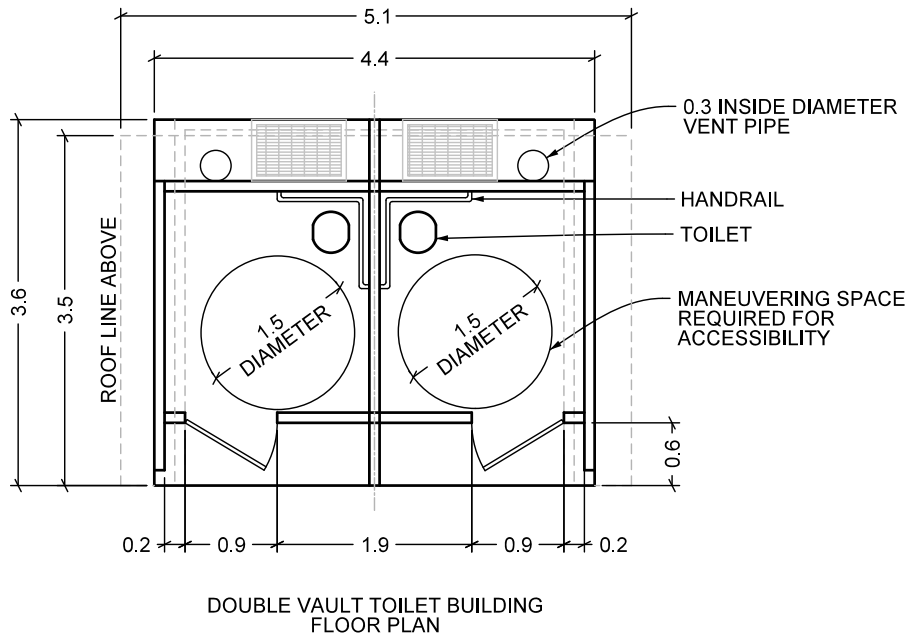
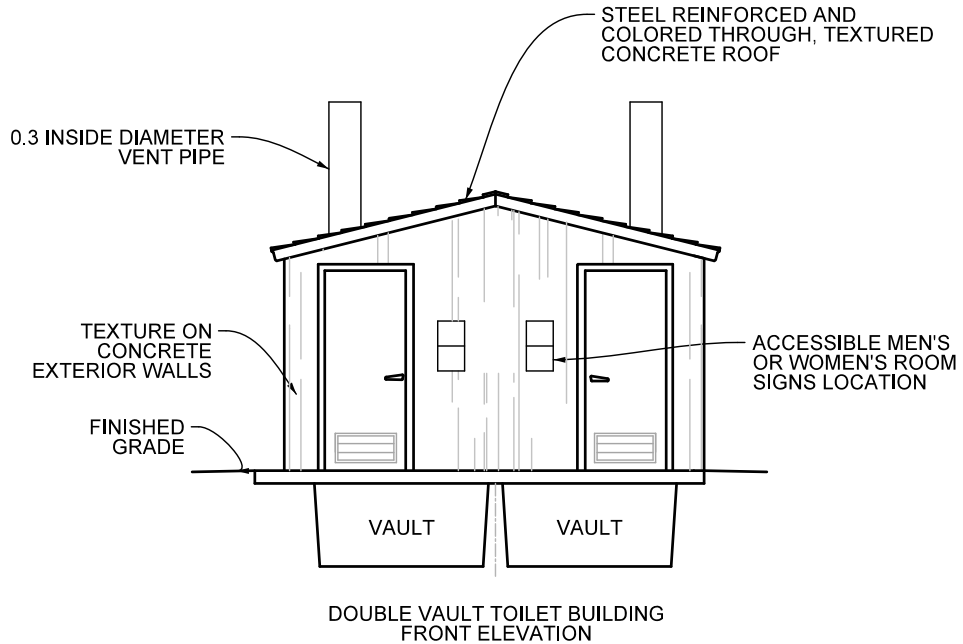


**ALL DIMENSIONS ARE IN METRES

COMFORT STATION DETAIL

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale 1:150
 March, 2011

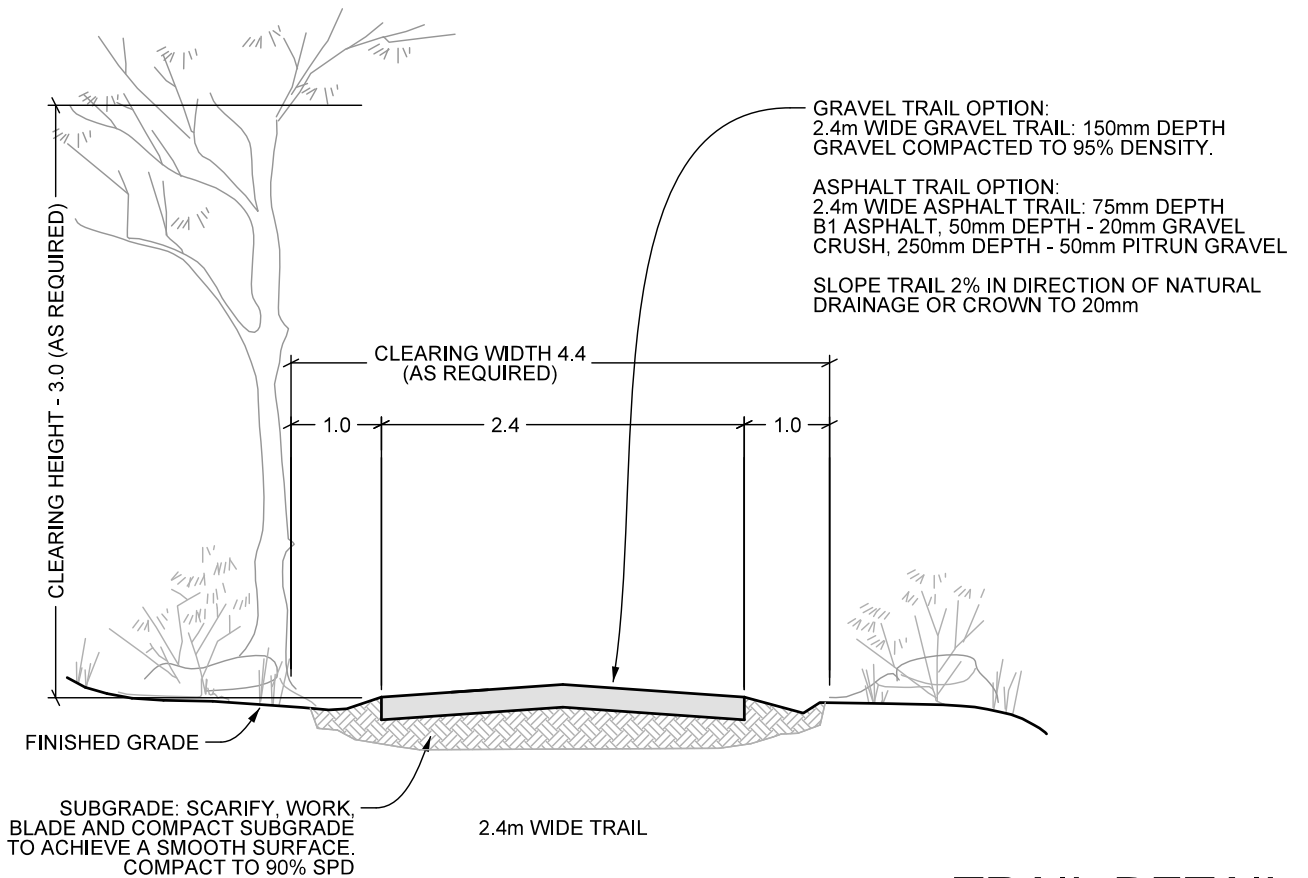
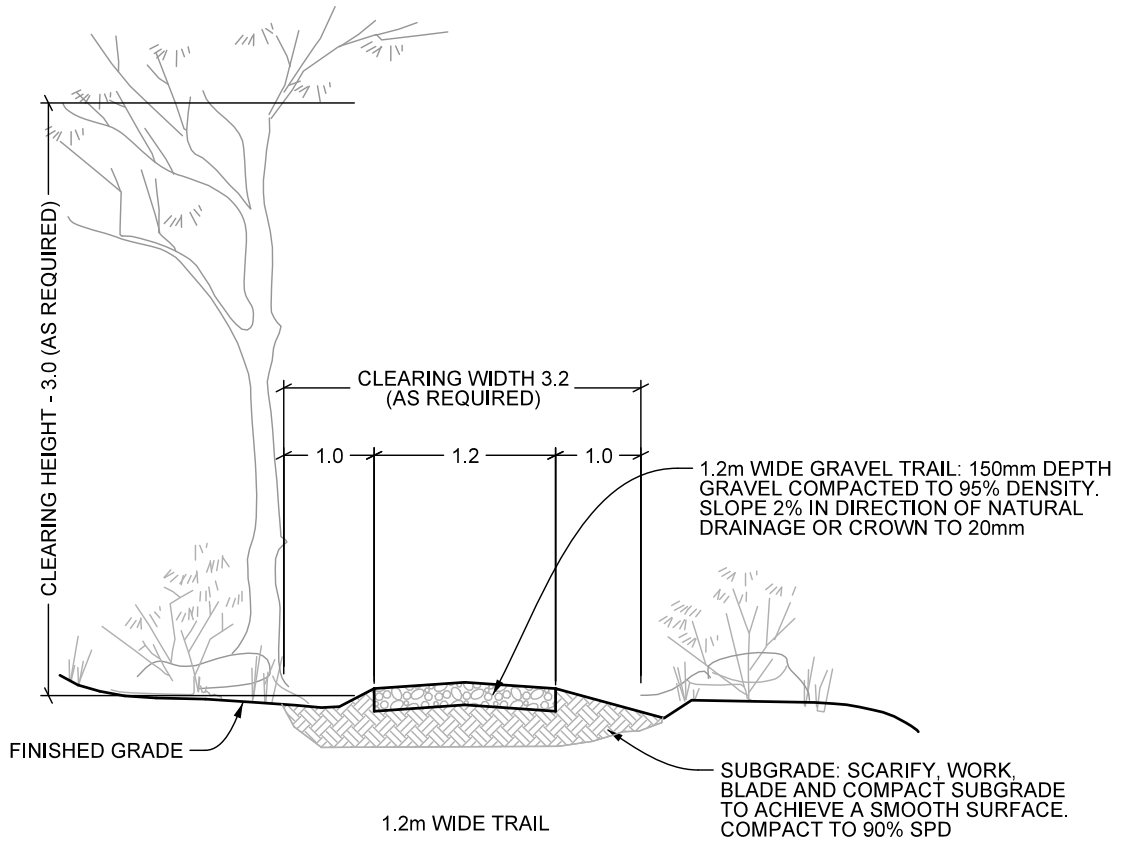


DOUBLE VAULT TOILET DETAIL

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

**ALL DIMENSIONS ARE IN METRES

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
Scale 1:75
March, 2011



TRAIL DETAIL

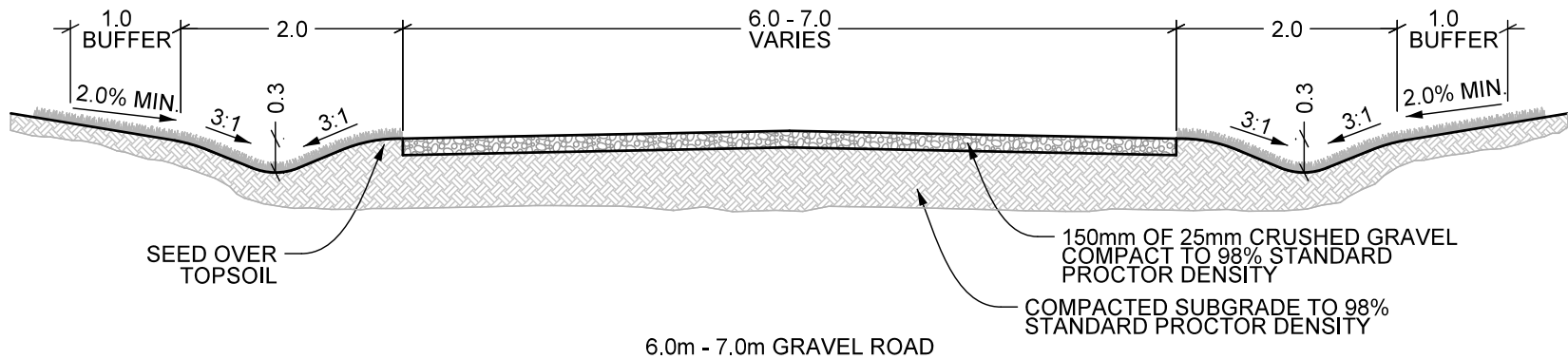
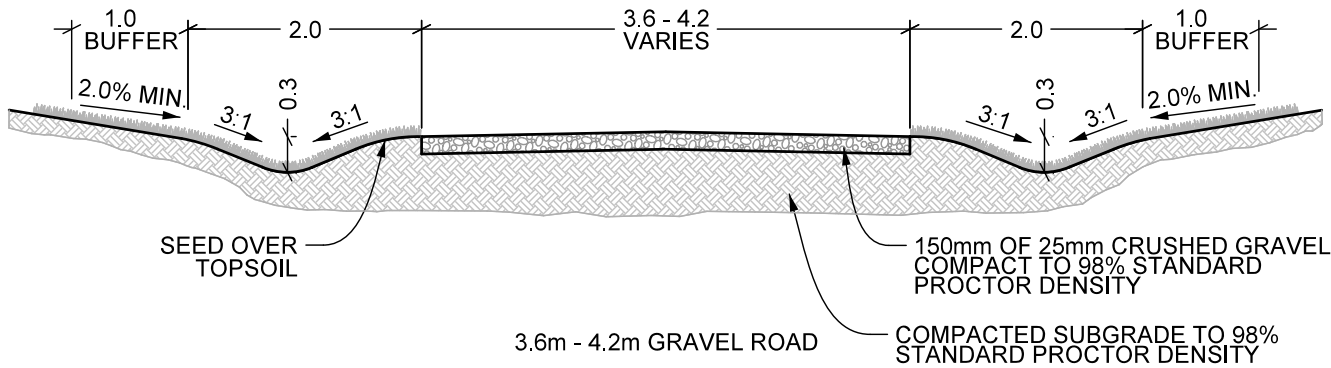
**ALL DIMENSIONS ARE IN METRES

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4

Scale 1:50

March, 2011



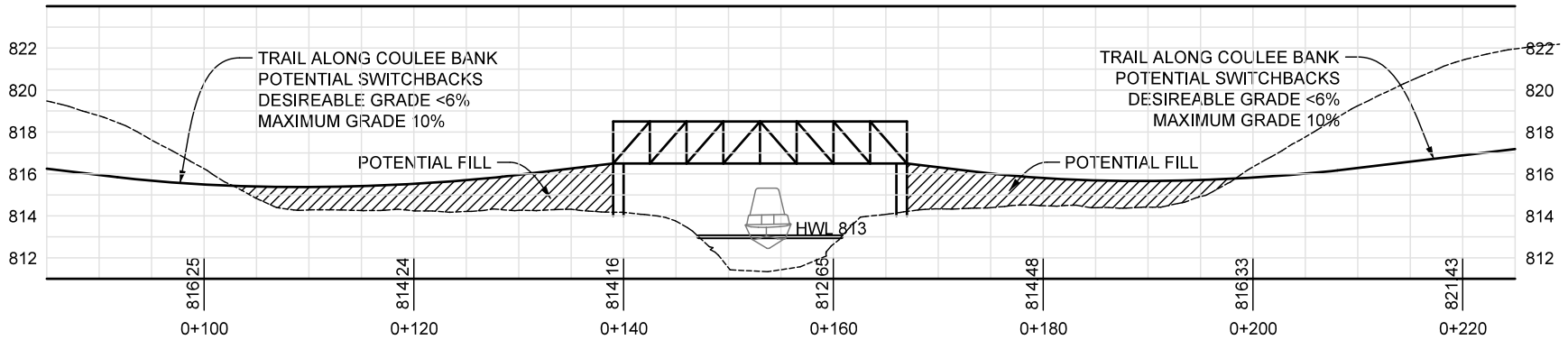
GRAVEL ROAD DETAIL

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

**ALL DIMENSIONS ARE IN METRES



*SPILLWAY ANALYSIS REQUIRED TO CONFIRM THAT EMERGENCY OVERFLOW CAPACITY IS MAINTAINED
 *BRIDGE CONFIGURATION, DESIGN, AND ENGINEERING YET TO BE COMPLETED

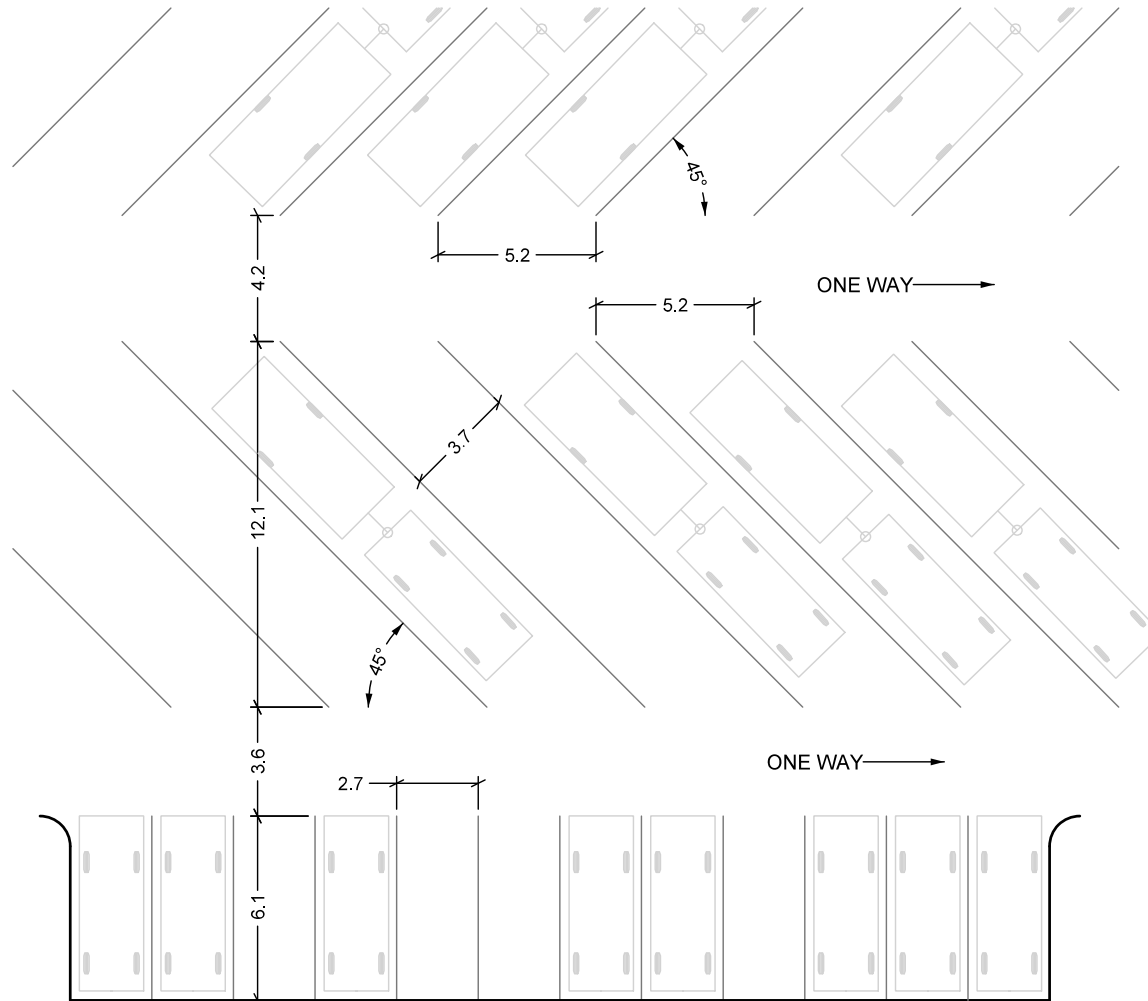


**ALL DIMENSIONS ARE IN METRES

PEDESTRIAN FOOTBRIDGE

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

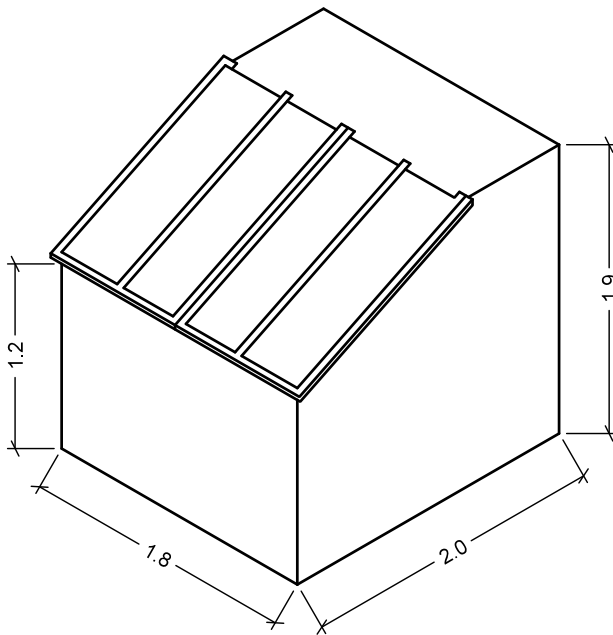
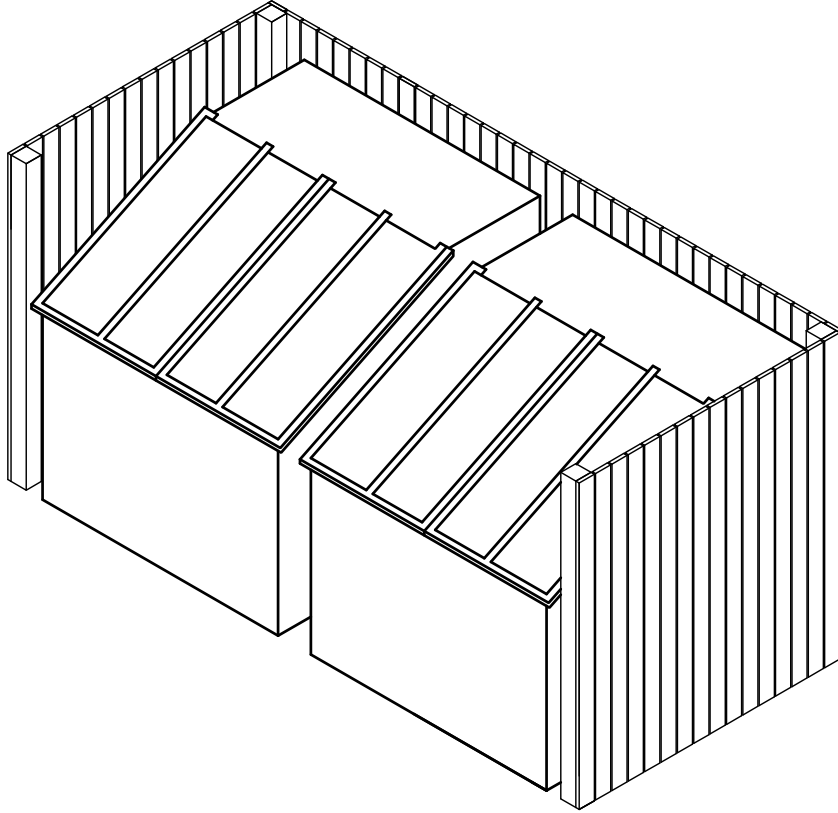
NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
 Scale 1:650
 March, 2011



**ALL DIMENSIONS ARE IN METRES

BOAT LAUNCH PARKING

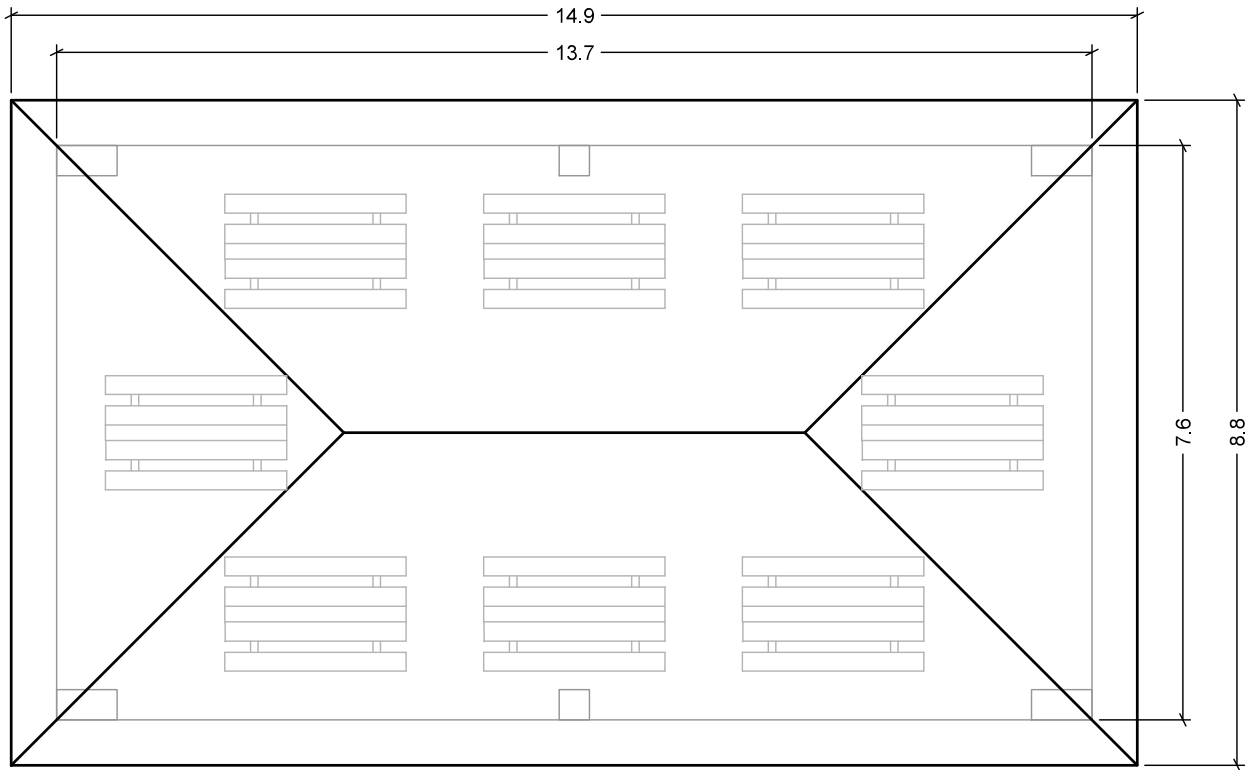
40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE



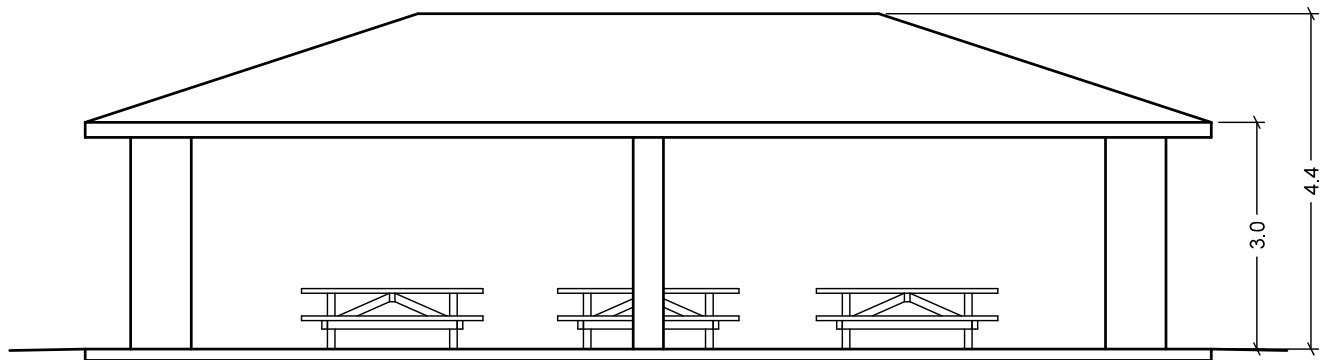
**ALL DIMENSIONS ARE IN METRES

TYPICAL MAIN DUMPSTER DETAIL

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE



CAMP KITCHEN
FLOOR PLAN



CAMP KITCHEN
FRONT ELEVATION



LARGE CAMP KITCHEN DETAIL

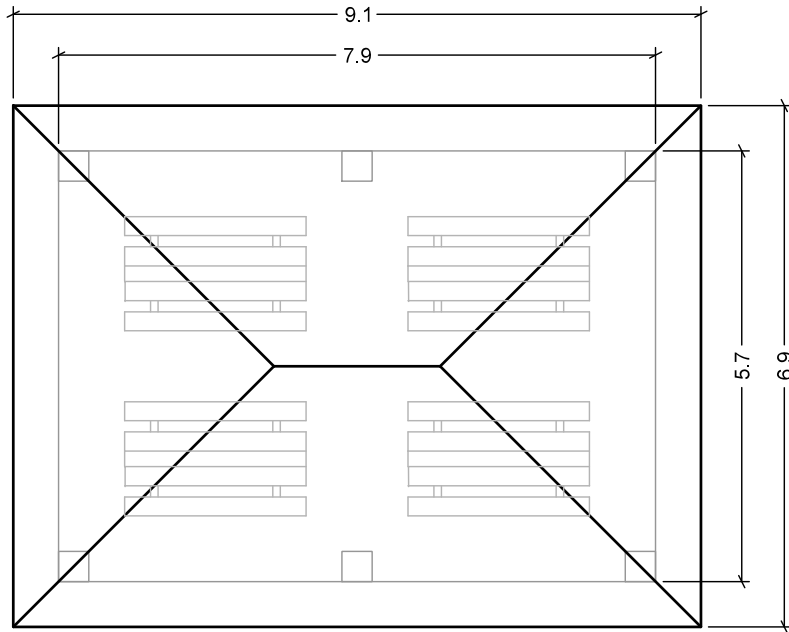
40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

**ALL DIMENSIONS ARE IN METRES

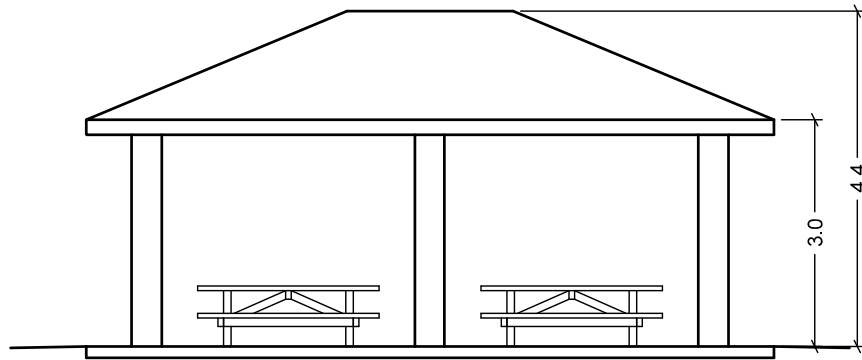
NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4

Scale 1:100

March, 2011



CAMP KITCHEN
FLOOR PLAN



CAMP KITCHEN
FRONT ELEVATION



**ALL DIMENSIONS ARE IN METRES

SMALL CAMP KITCHEN DETAIL

40 MILE PARK DEVELOPMENT PLAN - COUNTY OF 40 MILE

NW 28-8-11-4, SE 28-8-11-4, SW 27-8-11-4
Scale 1:100
March, 2011