NOTE:
Westlake Concept Development Plan was adopted with Westside Official Community Plan Bylaw No. 1050 as Appendix B-1 (and a summary included in Section 16) on February 7, 2005; as a result, this March 1998 Plan is a reference document only.
Note: Addendum also included at the end of this reference document.

WESTLAKE CONCEPT DEVELOPMENT PLAN

(DL 503)

Prepared for:

Regional District of Central Okanagan

Prepared by:

Stanley Consulting Group Ltd.

March 1998
1-69-14400

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1.0 INTRODUCTION

1.1 Purpose

An *Official Community Plan (OCP)* was approved for the Lakeview area early in 1997 by the Regional District of Central Okanagan. This plan was designed as a framework for long-term development and deals with such issues as land use, the transportation network, environmentally sensitive areas, utilities, and related issues affecting community form.

The *OCP* contains a provision requiring the preparation of concept development plans *(CDP)* prior to development approvals. This *Westlake CDP* was prepared in conformance with this *OCP* requirement. As such, this plan is intended to be a guide for the future rezoning, subdivision, and development of the area.

1.2 Location

The study area, in its regional context, is shown on ***Figure 1: Location.***

It is located within the *Lakeview Area Official Community Plan* area. It is on the west side of Westlake Road, north of the industrial area along Highway 97. The developing Westridge Estates subdivision is located immediately to the east of the proposed development.

1.3 Process

The major owner initiated discussions with the Regional District with a view to preparing a plan for the development of the lands. *Terms of Reference* were prepared and approved some time ago by the Regional Board. A firm of planners and engineers, Stanley Consulting, was selected by the Regional District to work under its direction to prepare the *CDP* in conjunction with the landowners, various agencies, and other stakeholders. The planning process is funded by the majority landowner.

Numerous meetings and discussions have been held with the administration, the School District, the landowners, adjacent landowners, and other agencies such as the Lakeview Irrigation District and the Ministry of Transportation and Highways. The consultants have met with the Advisory Planning Commission to introduce them to the planning process and the issues associated with it. APC members were taken on a site tour.

A public meeting was held at the Rose Valley Elementary School on June 26, 1997. Over 70 people attended. The planning process was explained and several conceptual alternatives were presented and discussed. The Area Director, staff, and the planning and engineering consultants responded to comments.

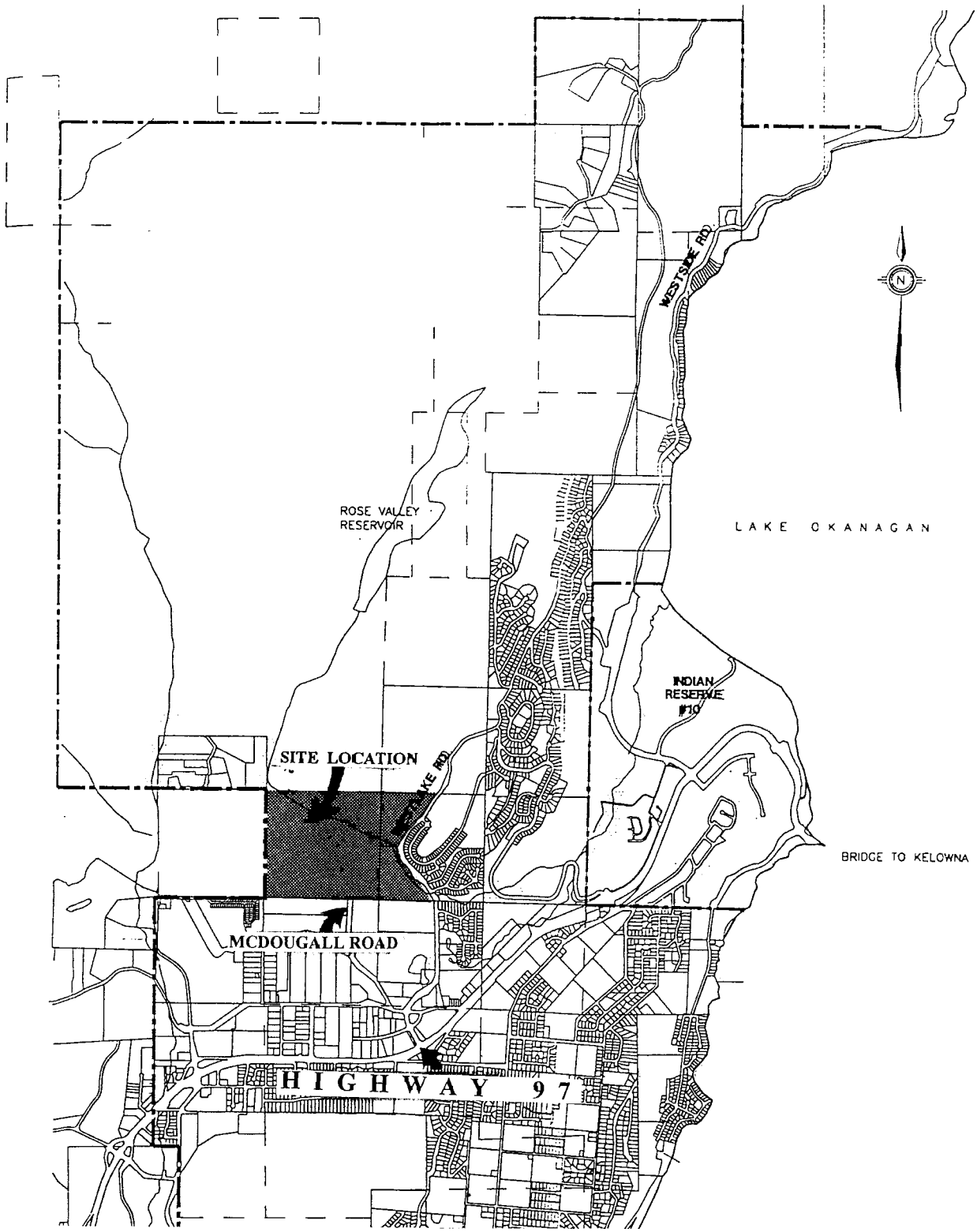

Figure 1: Location

1-69-14400/March98

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A variety of issues were raised and addressed in the planning process. These included the need to conform to *OCP* policy; maintain natural character and topography; the flexibility of individual owners to proceed independently on their own timetable; protection for existing waterlines, access to and a spillway for the Rose Valley reservoir; having an appropriate interface with gravel operations to the south; the choice of an appropriate location for a secondary access; protection of the *high line* for a possible future highway bypass; the desirable size and location of a joint school and park site; and the possibility of interim uses. These issues adequately resolved in the plan through the policies, layout, and guidelines for development. One issue, that of helicopter over-flights, was raised but investigation revealed that it is not a major concern given the minimal number of flights from a pre-existing facility.

The consultants then prepared a draft of a preferred concept as a basis for discussion. It was reviewed, then refined, and presented to the Regional Board and the APC. After these discussions, the preferred concept was converted into the first draft of the *Westlake Concept Development Plan*.

Another public meeting was held on November 27, 1997 at the Mt. Boucherie Community Hall. At that meeting (an open house and public forum), no additional concerns were raised and it appeared that issues raised previously were adequately addressed in the *CDP*.

2.0 PLANNING CONTEXT

2.1 Introduction

Any planning exercise must be cognizant of the setting, the jurisdictional situation, the surrounding areas, municipal policies, and the commitments and expectations of municipal plans already in place. While municipal plans and zoning may be changed to reflect the outcome of this planning process, existing plans and zoning are documented in this Section. Their implications for future planning may be important.

2.2 Context

The plan area is located at about the middle of the west side of the *Lakeview OCP* area. As such, it is on the western fringe of the developed area of Lakeview. Surrounding land uses are as follows:

- **East**: These lands, below the general elevation of the plan area, contain the newly developing single detached residential subdivision of Westridge Estates.
- **South**: These lands as far south as Highway 97 are primarily industrial, with the lands immediately adjacent to the site being mined for gravel. There are three separate operations, with the City of Kelowna pit towards the east and the Kelowna Redi-Mix pit to the west, both being fairly close to the edge of the plan area. The middle operation (Westlake Paving) is working into the slope towards the plan area. Some of immediate area next to the plan area is within the *ALR*. Some of it remains in agricultural use. There is a helicopter facility in the developed industrial area between Stevens Road and Highway 97.
- **West**: Lands to the west are rural. Some rural, small holding, and country residential parcels are to the northwest of the site. Southwest of the site is a mobile home development.
- **North**: Lands to the north are primarily Crown Land, with the western portion in the Okanagan Forest and the eastern portion under license by the Regional District for regional parks purposes. The Rose Valley water reservoir is located north of the plan area.

2.3 Lakeview OCP

The *OCP* designates the plan area as requiring the preparation of a *CDP*. The *OCP's Future Land Use Map* designates the *CDP* plan area as being suitable for *Residential- Low Density*. This designation provides for single detached homes, single detached with suite and duplex homes, and those complementary secondary uses such as daycares, preschools, and parks which are integral parts of a neighbourhood.

The *OCP* designates the plan area as a site for a future school.

The *OCP* also designates the plan area as a potential neighbourhood urban village which may be identified as part of the *CDP* process. Neighbourhood villages are intended as a physical, social, and commercial focal point at the neighbourhood level. They may provide a mix of commercial, institutional and residential uses at densities of up to 30 units/ha. Residential is suggested for low to medium densities, including townhouse development and apartments over commercial.

Other *OCP* land use provisions that need to be addressed in the *CDP* are the restriction on development of slopes over 30%, the sensitive integration of housing on hillsides, the need to buffer industrial lands from residential, and the desirability of parks in conjunction with elementary schools.

2.4 *Westbank OCP*

The *Westbank OCP* borders this area to the west. It designates the adjacent land as *Rural Resource*. This designation is for large parcels of land not intended for development.

2.5 *Access*

The major access to the site is from Westlake Road. Secondary access is through an adjacent industrial area from M^{c}Dougall Road. Access to the Rose Valley water reservoir is across the site.

2.6 *High Line Route*

A corridor has been designated for protection for a new highway across the northwest corner of the plan area.

3.0 SITE ANALYSIS

3.1 Introduction

As noted in the previous section, it is critical that planning fit within the context of neighbouring uses and consider the framework of existing plans. Just as important are the features of the site itself. These include factors intrinsic to the study area, discussed in this section, such as zoning, ownership, physical features (both man-made and natural), and the character of the area.

3.2 Zoning

Almost the entire site is zoned RU-ALR which is intended to *preserve agricultural land which is within the Agricultural Land Reserve.* This land is no longer in the *ALR*, therefore this zoning is no longer appropriate.

As shown on ***Figure 2: Ownership & Zoning,*** a small parcel at the end of M^{c}Dougall Road at the south edge of the plan area is zoned RU3. This is intended for small holdings of a minimum parcel size of 1.0 ha.

These zoning designations can be changed as part of the future planning process as required.

3.3 Natural Features

The plan area has a considerable variety of topographic features. Rose Valley enters the plan area from the northwest as a fairly narrow and steep-sided valley that widens onto a fairly large flat area in the southeast corner. This area is primarily less than 10% slope. From here it drops off to the alignment of Westlake Road. Site topography is noted on ***Figure 3: Slope Analysis.***

The north side of the valley, facing south, rises fairly steeply, to the edge of the site and beyond. This slope has some area over 30%, but with some flatter table areas.

There are a series of parallel ridges, with narrow valleys between, that cross into the site from the southwest. The sides of these ridges sometimes exceed 30%, with rock outcroppings. To the west of that, the land rises steeply, and in some cases at more than 30%, to beyond the edge of the plan area.

Much of the flat area has been cleared as portions were previously used for agriculture, but most of the slopes remain covered by thinly spaced Ponderosa pine with very little understorey growth. North facing slopes are more heavily treed.

Soils are generally thin, with coarse gravel soils in the southeast corner.

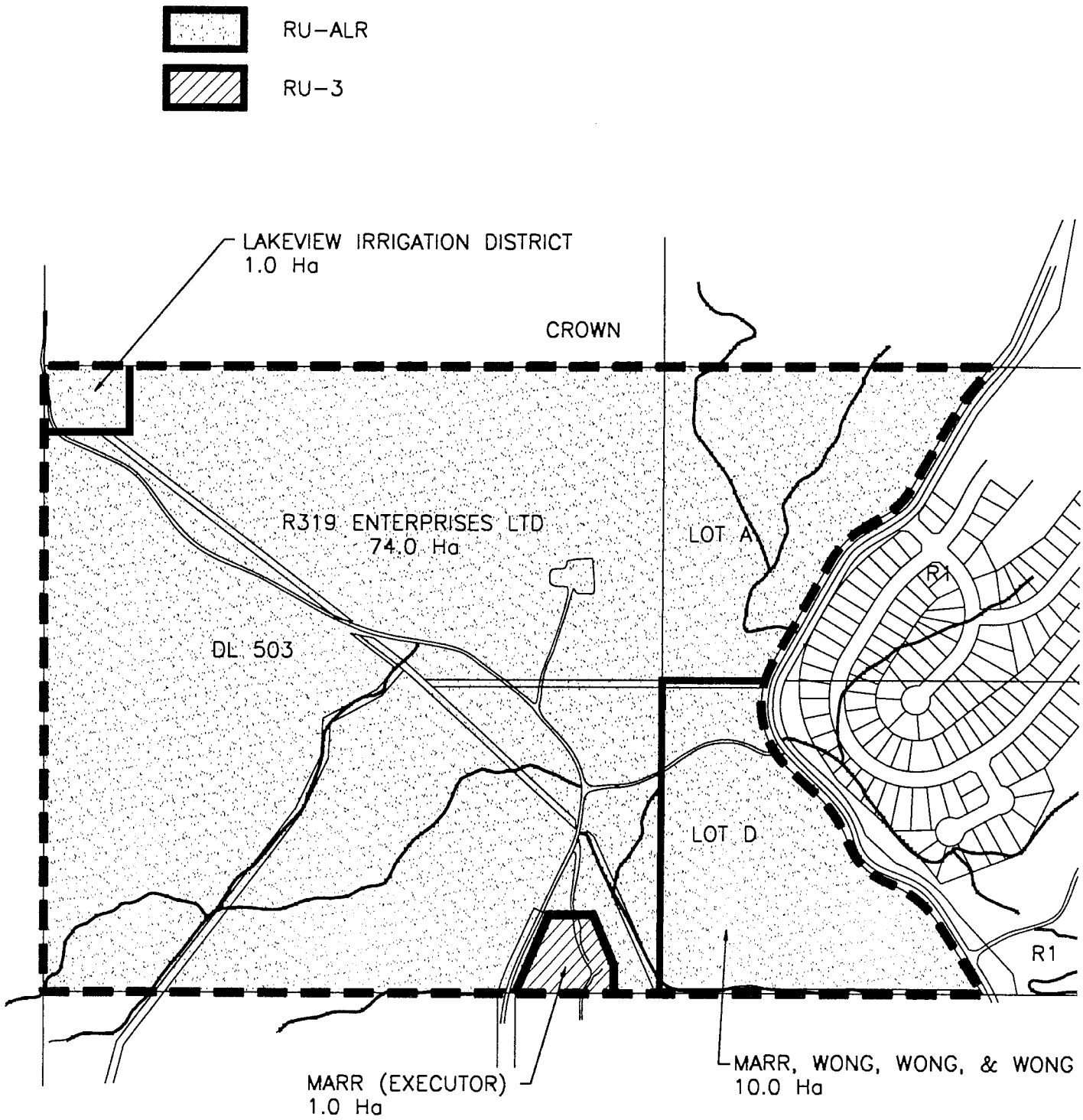


Figure 2: Ownership and Zoning

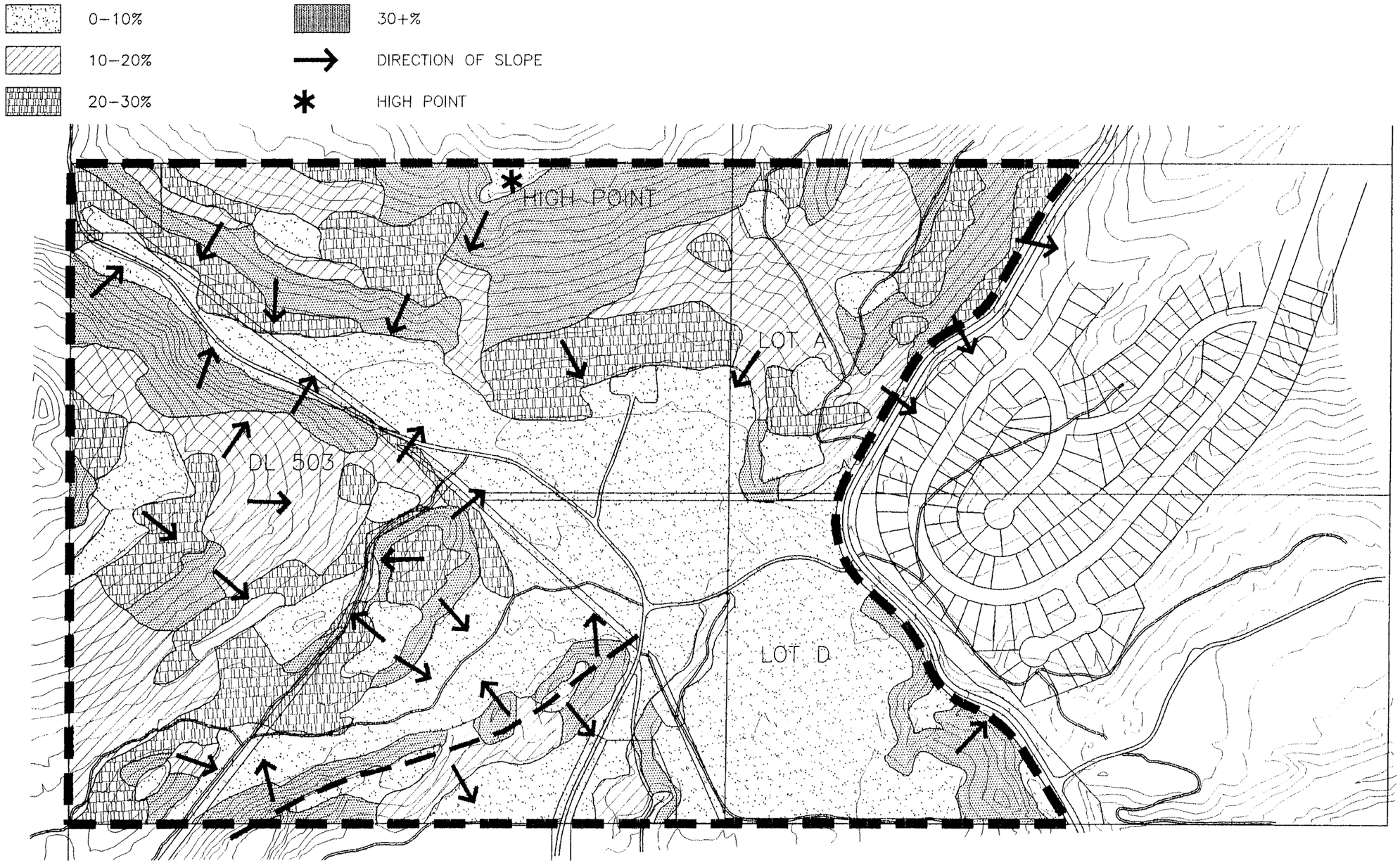


Figure 3: Slope Analysis

There is a small stream down Rose Valley, that disappears into the ground soon after entering the northwest corner of the site. Faulkner Creek is just off the southeast corner of the plan area.

3.4 Ownership

There are four different owners within the proposed planning area. The majority owner is R319 Enterprises Ltd. (Pentar Homes) with approximately 74.0 ha. Approximately 10.0 ha are owned by the Marr and Wong families. A 1.0 ha parcel is held by the Marr Estate. The Lakeview Irrigation District has approximately 1.0 ha associated with its Rose Valley reservoir facilities.

Ownership is shown on ***Figure 2: Ownership & Zoning.***

3.5 Existing Uses

There are two residences on the site. As well, a variety of water lines cross the site. Existing development on the large parcel will be phased out with new development. The owners of the residence on the small parcel on M^{c}Dougall Road may consider redevelopment when services are available should they wish to do so.

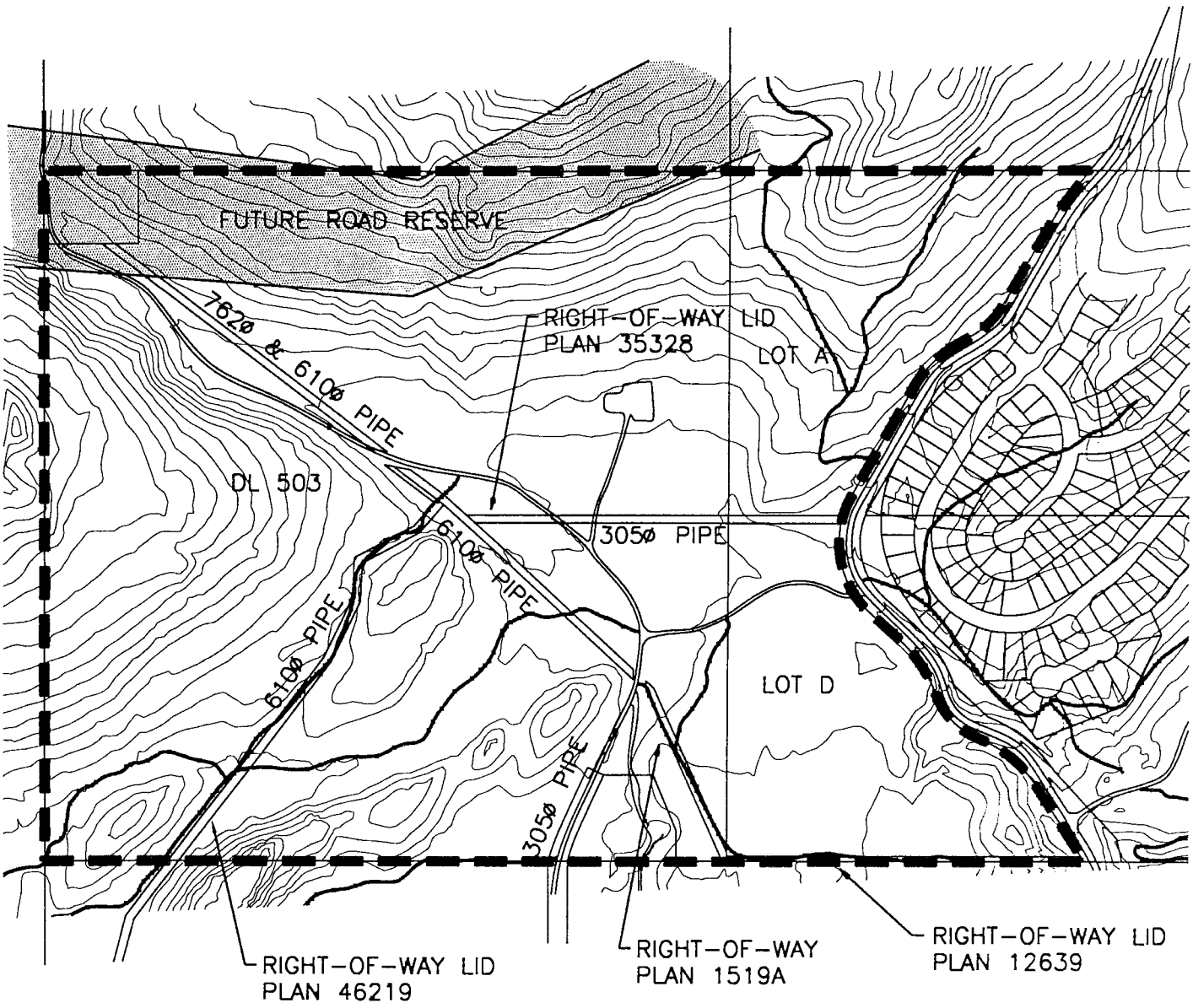
All existing water lines, as shown on ***Figure 4: Rights of Way & Easements***, will be incorporated into the plan. Service access to Rose Valley water reservoir, now provided by easement across the area, will be accommodated in the new plan.

3.6 Development Opportunities

The *CDP* area provides very good development opportunities for residential development, both for single detached and multiple housing.

There appears to be less demand for commercial development given the size of the potential market area, the transportation network, and the approval of another commercial development further north near the Rose Valley School.

The village centre would provide opportunity for some forms of institutional (say religious assemblies or government services) if prospective users can be identified.



NORTH

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Figure 4: Right-of-Ways and Easements

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4.0 POLICIES

4.1 Overall Objective

The overall objective of the *CDP* is to implement the policies of the *OCP*. This section describes policies to incorporate *OCP* objectives and which respond to the unique features of the plan area. They are described in more detail in the following Sections.

4.2 Land Use Policy

The *CDP* polices for land use are as follows:

a) there will be a *village centre* containing a joint school park site, some medium density housing, and a possible commercial/institutional site;

b) surrounding the village centre will be areas of compact single detached and medium density housing located on the flatter lands;

c) single detached housing, at lower densities, will be located on slopes up to 30% and when clustered may include two dwelling housing;

d) the future road reserve will be protected for the *High Line* alignment;

e) slopes over 30% will be maintained in a natural state as part of an integrated open space system; and

f) interim uses other than existing uses and those permitted by existing zoning will not be encouraged, but any proposals will be evaluated on their own merits through the rezoning process with strong consideration of the potential effect on neighbouring properties, public comment, and the impact of completing the neighbourhood.

4.3 Open Space

The *CDP* polices for open space are as follows:

a) a neighbourhood park will be located in conjunction with the proposed elementary school;

b) some smaller local parks will be provided in dispersed locations to ensure that there will be convenient access to local play space;

c) steep slopes will be protected in their natural state for passive recreation and trails; and

d) the open space system will be linked into a continuous system which connects with surrounding opportunities.

4.4 Utilities

The *CDP* polices for utilities are as follows:

a) existing water rights-of way will be incorporated into the design of the area;

b) development will be staged with the economical extension of infrastructure; and

c) capability for a draw down of the Rose Valley water reservoir will be accommodated in the design of the plan area.

4.5 Transportation

The *CDP* polices for transportation are as follows:

a) the road network will be designed on a hierarchical basis of a collector system with local roads providing site access;

b) the design of the local road system will ensure traffic speeds are calmed to ensure the quality of the residential setting;

c) bicycles and pedestrians trips will be supported by a comprehensive route of linkages utilizing bike paths, trails, and/or sidewalks through designated open spaces and along the road system to major destinations on- and off-site;

d) access for authorized service vehicles to the Rose Valley water reservoir will be maintained, but pedestrian access to this area will be discouraged; and

e) there will be flexibility for transit to be accommodated (including any required bus pullouts) on the collector system if this is required in the future.

4.6 Implementation

The *CDP* policies for implementation are as follows:

a) the development will be implemented in a staged manner, over time, through the subdivision approval and rezoning processes;

b) the *Zoning Bylaw* must be amended to accommodate some of the provisions of this *CDP* (such as cluster housing, mixed use, and compact lots);

c) other studies, such as the traffic impact assessment and wildfire hazard assessment and mitigation, will be completed as part of subsequent planning and engineering; and

d) the urban design guidelines will be implemented through the development permit process.

5.0 LAND USE

5.1 Introduction

The major thrust of the *CDP* land use policies is to provide a comprehensively planned residential community. This residential community is to be primarily single detached housing, but will have a variety of housing options. The village centre provides a focus and an opportunity for a broader range of uses, including commercial, institutional, and a combination school/park site. Open space is to form an important part of the community.

These land uses, illustrated on ***Figure 5: Design Concept***, should be considered in conjunction with the transportation and servicing policies in subsequent sections. In addition, design guidelines in Section 8.0 will need to be taken into account.

5.2 Land Use Concept

The land use concept has seven key land use components.

1. Mixed Use Centre: The *OCP* designates this plan area as a suitable location for a neighbourhood village. Although no specific development proposals have been formulated, a key site at the intersection of the main collector (from Westlake Road) and M^{c}Dougall Road has been reserved as a neighbourhood focus. It may include a variety of uses, as follows:

- institutional uses (religious assemblies, neighbourhood meeting house, seniors centre, etc.);
- local commercial services(convenience retail, day care, personal services, but *not* automotive oriented uses such as service stations) with apartments over;
- medium density residential development; and
- recreational (either public or private) uses;

2. Joint School Park Site: The *OCP* designates this plan area as suitable for an elementary school site. It also provides siting requirements (such as flat lands near, but not on, main roads, connection to the pedestrian system, etc.) and a minimum size of 2.8 ha. This school will service not only the plan area, but other residential development in Lakeview. An agreement between the Regional District and School District #23 requires the dedication of 5% of developable land for school site acquisition. All community park dedication sites must be reviewed by the Parks Advisory Committee and approved by the Regional Board prior to dedication.

1 MIXED USE DEVELOPMENT PERMIT AREA

2 SCHOOL/PARK

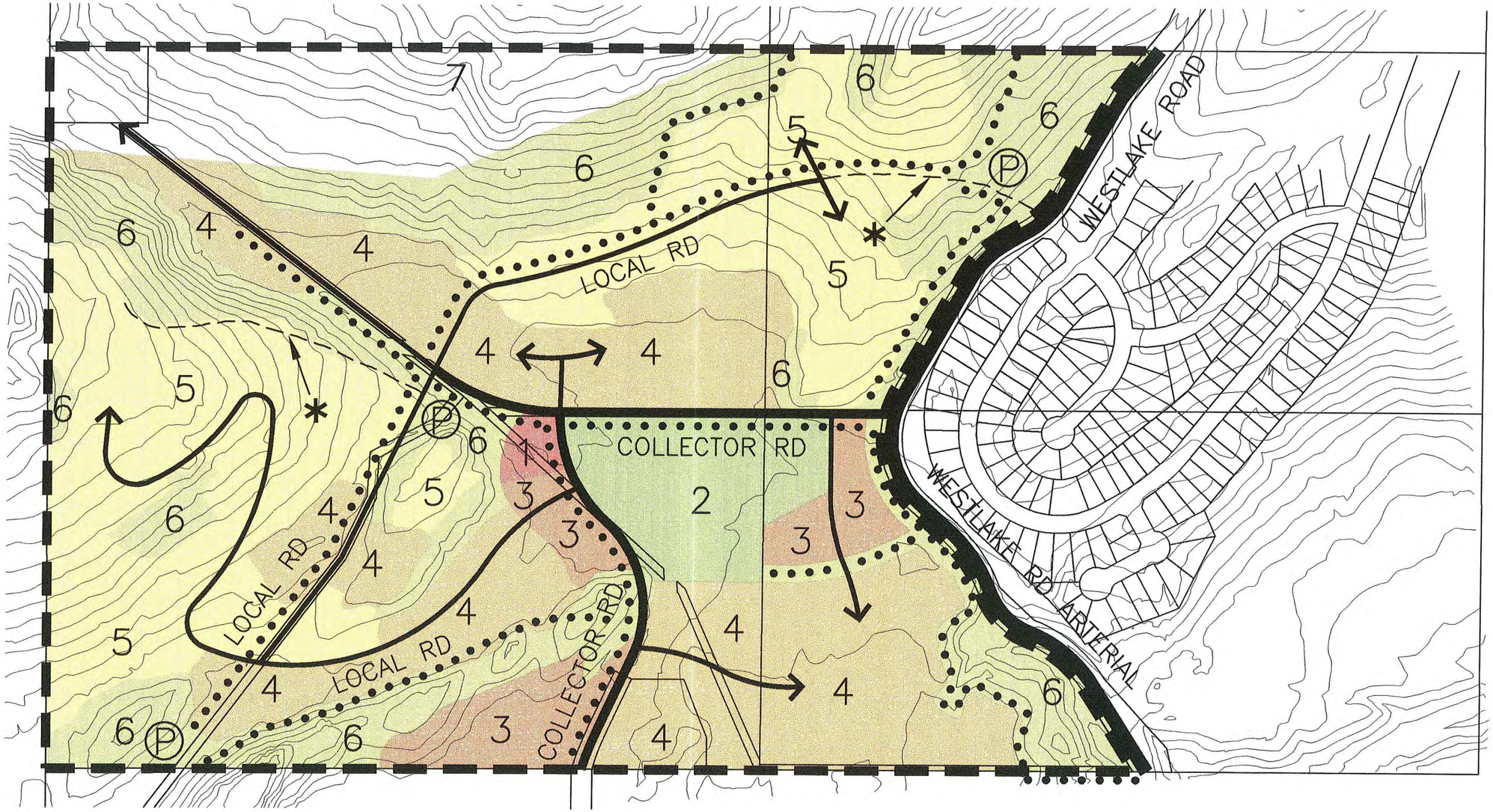
3 MEDIUM DENSITY DEVELOPMENT PERMIT AREA

4 COMPACT HOUSING

5 HILLSIDE HOUSING

6 OPEN SPACE

7 HIGHWAY RESERVE



NORTH

SCALE 1:5000

* POSSIBLE EMERGENCY ACCESS ROUTE AT ±12%

Ⓟ LOCAL PARK

LOCAL ROAD

PEDESTRIAN PATHWAY

Figure 5: Design Concept

The *OCP*'s neighbourhood park standards require 0.6 ha/1000 people. For the proposed population, neighbourhood park space of approximately 1.0 ha is required.

The preference of both the School District and the Regional District is to have joint sites that combine the park and school requirements. As such, a joint school and park site has been located at the intersection of the two collector roadways. This provides both a central location and good access for both pedestrians and vehicles. Approximately 4.25 ha has been allocated to this use in order to provide space for active playing fields (in high demand in the area) and balance the municipal dedication in the plan area. This is comprised of 2.8 ha for the school site and 1.5 of park dedication.

The requirement, after dedication of the joint school park site, is 1.7 ha. Approximately 1.5 ha will be provided outside the central school/park on level sites in various locations for local play space and viewpoints, in addition to a greenway connection on the Marr lands. These areas will be refined through the subdivision process.

This development would generate approximately 170 elementary school students, 90 middle school students, and 100 secondary school students. Middle and secondary students will be accommodated off-site.

3. Medium Density Housing: The *OCP* provisions for village centres suggests residential densities, in the form of townhouses and apartments over commercial, of 30 units/ha. Several sites have been designated around the village core, all with access to the collector roadway system. They would contain a total of about 90 units, for a population in this form of housing of approximately 255.

4. Compact Housing: The predominate form of housing in the *Lakeview OCP* is to be single detached housing. This is also true of this *CDP*. On flatter lands (generally those with slopes less than 10%), as described in Section 8.0 of this *CDP*, more compact housing may be provided than has been typical in the general area. Therefore, in flatter areas suitable for this use, the minimum lot width is 14.0 m and the minimum lot area is 500 m^2.

These areas would contain a total of about 300 units, for a population in this form of housing of approximately 970.

5. Hillside Housing: The *OCP* provides that the predominate type of housing in hillside areas will be low density single detached and two dwelling housing with an emphasis on clustering to preserve steep slopes and environmentally sensitive areas. The general intent is to provide housing which respects the hillside character of the area. Cluster housing is encouraged for sites in excess of 25% slope.

Minimum lot areas should be 835 m^2 for housing on slopes above 10%. As the slopes are variable and some site grading will be appropriate at the subdivision stage, specific lot areas will be determined at the subdivision stage to ensure suitable building sites, access, and private usable open space. Densities, when single detached and two dwelling housing is clustered[1], will be calculated on the basis of 12 units/ha consistent with other hillside housing. Approximately 125 units are proposed for these hillside areas.

6. Open Space: Other than the park space described above in conjunction with the school, considerable areas remain in open space. Primarily, this plan retains larger areas where the majority of land has slopes in excess of 30% or there are significant rock outcroppings. These areas will be retained in their natural state (subject to the provisions of a future wildfire hazard assessment) and be used only for passive recreation. Major sloped areas dedicated for conservation areas will be deducted, at the discretion of the Regional Board (consistent with the policy adopted by on July 26, 1993), from the total lands from which municipal reserves are required to be dedicated. These open lands will also provide a natural appearance for much of the length along Westlake Road.

Trail systems linking the green areas and upland along much of Westlake Road, as shown on ***Figure 5: Design Concept***, will be provided. They will contribute to enhancing the unique forested open space character for the community. One important component is a greenway linkage, across the Marr property, between the school/park site and the open space along Westlake Road, ultimately connecting towards Faulkner Creek. The trail system must be constructed in accordance with the *Subdivision and Development Servicing Bylaw*. A determination of actual standards and width of the *greenway*, whether rural or urban, will be made at the time of subdivision application review depending on the circumstances of the trail.

In addition, these major green spaces will contain smaller park areas. Where the slopes of these areas are flat enough to be used for neighbourhood recreation activities and they are at least 1400 m^2, they will be credited against the required 5% park dedication. The conceptual location of three such sites are shown on ***Figure 5: Design Concept.*** These sites need to comply with accessibility requirements for the disabled.

7. Highway Reserve: Although no firm commitment has been made at this time for the timing or alignment, approximately 8.2 ha have been reserved as an option for future highway corridor requirements. These lands are generally located at higher elevations along the northwest boundary of the plan. No definitive plans have been prepared by MoTH for the design. Any design will have to take the proposed housing areas into consideration with respect to buffering in the corridor. The dedication of municipal reserves should not be required from lands held for highway reserve. This is at the *discretion* of the Regional Board.

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[1] *Cluster housing is single detached or two dwelling housing generally on a strata format where housing is arranged on one larger site to take advantage of site features and maintain open space. Cluster housing will generally be developed in a strata format with conservation areas dedicated to the Regional District. In some cases, site features may dictate that some open space is held by the strata development. Fee simple lots may be appropriate in some locations depending on terrain and access.*

6.0 TRANSPORTATION

6.1 Introduction

In addition to the highway corridor reserve described in the previous section, this section outlines the *CDP's* provisions for transportation facilities for pedestrians, bicycles, vehicles, and transit. These proposals have been developed *hand in glove* with the land use and servicing patterns. A traffic impact assessment must be completed as part of the planning process. It will address design requirements and any off-site improvements to ensure safety and mobility.

6.2 Roadway Network

Westlake Road, the eastern boundary of the plan area, provides the major arterial access to the site. Secondary access is provided from the south along M^{c}Dougall Road. It was selected primarily over the alternative of Dominion Road because it exists to the site, it provides secondary access at an early stage, provides a direct route to the major site uses (schools and higher density development), and reduces the length of collector road required. The traffic impact assessment will determine the need for any roadway improvements necessary to maintain MoTH standards and sightlines.

The major entrance to the plan area, from Westlake Road, would be a collector status roadway to the first major intersection past M^{c}Dougall Road. Beyond this point, it extends as a local roadway and provides gated access to the Rose Valley water reservoir. M^{c}Dougall Road would also be at a collector roadway standard.

The major local road network is also shown. Based on topography and the school location, there is little flexibility with this overall layout. The locations of intersections and the horizontal and vertical alignments of these roadways will be finalized at the subdivision planning stage taking MoTH standards and the design guidelines of Section 8.0 into account.

Staging plans will need to be cognizant for ensuring secondary access to the overall area and the need for emergency access for the two cul-de-sacs that rise up to the steeper west and northern slopes. The alignment for these, conceptually shown on ***Figure 5: Design Concept*** will be refined at the subdivision planning stage. Road standards are as follows:

- Local roads (sidewalks one side) in the medium density housing areas on flatter lands will be 18.0 m wide with a 10.0 m pavement surface.
- Local roads (sidewalks one side) in the low density housing areas on flatter lands will be 17.0 m wide with a 10.0 m pavement surface.
- The M^{c}Dougall Road collector extension will be 20.0 m wide with a 10.0 m paved surface.

- The main collector road from Westlake Road will be 25.0 m wide with separate paved surfaces of 5.5 m wide on each side of a 5.5 m wide spillway for major storm flows and potential draw down of the Rose Valley water reservoir.

- Roads in the hillside development areas will be 17.0 m wide with a 10.0 m paved surface. Grades on the hillside roads will be limited to 8% except on short stretches of straighter road to better fit with topography. Grades on emergency access routes will be steeper (12% ±). These routes can also be utilized as utility corridors and walkways. Emergency access routes will be 4.0 m to 6.0 m wide depending upon the alignment and combined uses.

These road standards will be refined at the subdivision stage as detailed road layout are designed. In particular, reduced standards and other solutions such as single frontage roads, and split drive lanes may be considered for hillside development to reduce impact on the natural landscape.

Off-site roadway improvements are detailed in a separate traffic study which is still under review by the Regional District and MoTH as of the printing of this plan. That study recommends a left turn bay on Westlake Road for traffic turning into the site; a widening of Westlake Road from the narrow section at the south end of the site to the low point at Keefe Creek to accommodate 4.3 m wide lanes and 0.5 m gravel shoulders; right turn bays for the north and south legs of Westlake Road at Industrial Road; and change the through lane to a through/left turn land for the north leg of Westlake Road at Highway 97. In addition, when development levels reach 50% of buildout, the M^{c}Dougall Road access should be improved by asphalt patching, consolidation of the pit crossings, and warning signs. At 75% of buildout, M^{c}Dougall Road would be upgraded to a paved rural collector road with land widths of 3.6 m and 0.5 m gravel shoulders. That traffic study recommends an appropriate funding formula that needs to be finalized.

6.3 *Pedestrians*

Pedestrians will be accommodated through the provision of a system of trails, walkways, and sidewalks along roadways. Sidewalk standards will be determined at the subdivision design stage. The pedestrian system is illustrated on ***Figure 5: Design Concept***.

It will satisfy internal trips to such destinations as the school, parks, village core, and any possible future bus stops either on the collector roadways or on Westlake Road.

It will also accommodate walking to off-site locations such as the Faulkner Creek corridor, the future regional park lands to the north, and the community to the west. It will also be used by students coming to the elementary school from adjacent residential developments. They will cross Westlake Road at the intersection to Westridge Estates and use a walkway on the west side of the Westlake Road.

6.4 Bicycles

The walkway, trail, and local road system provide for both recreational and commuter cycling. Given the low speeds anticipated for both collector and local roads, there is no need for designated bicycle routes.

6.5 Transit

The two collector roadways would provide an opportunity for public bus service. Alternatively, there would be excellent pedestrian linkages to possible transit routes on Westlake Road. At the subdivision stage, when transit needs are better defined, it may be desirable to provide public bus pullouts near the school and/or school.

7.0 SERVICING

7.1 Sanitary Sewer

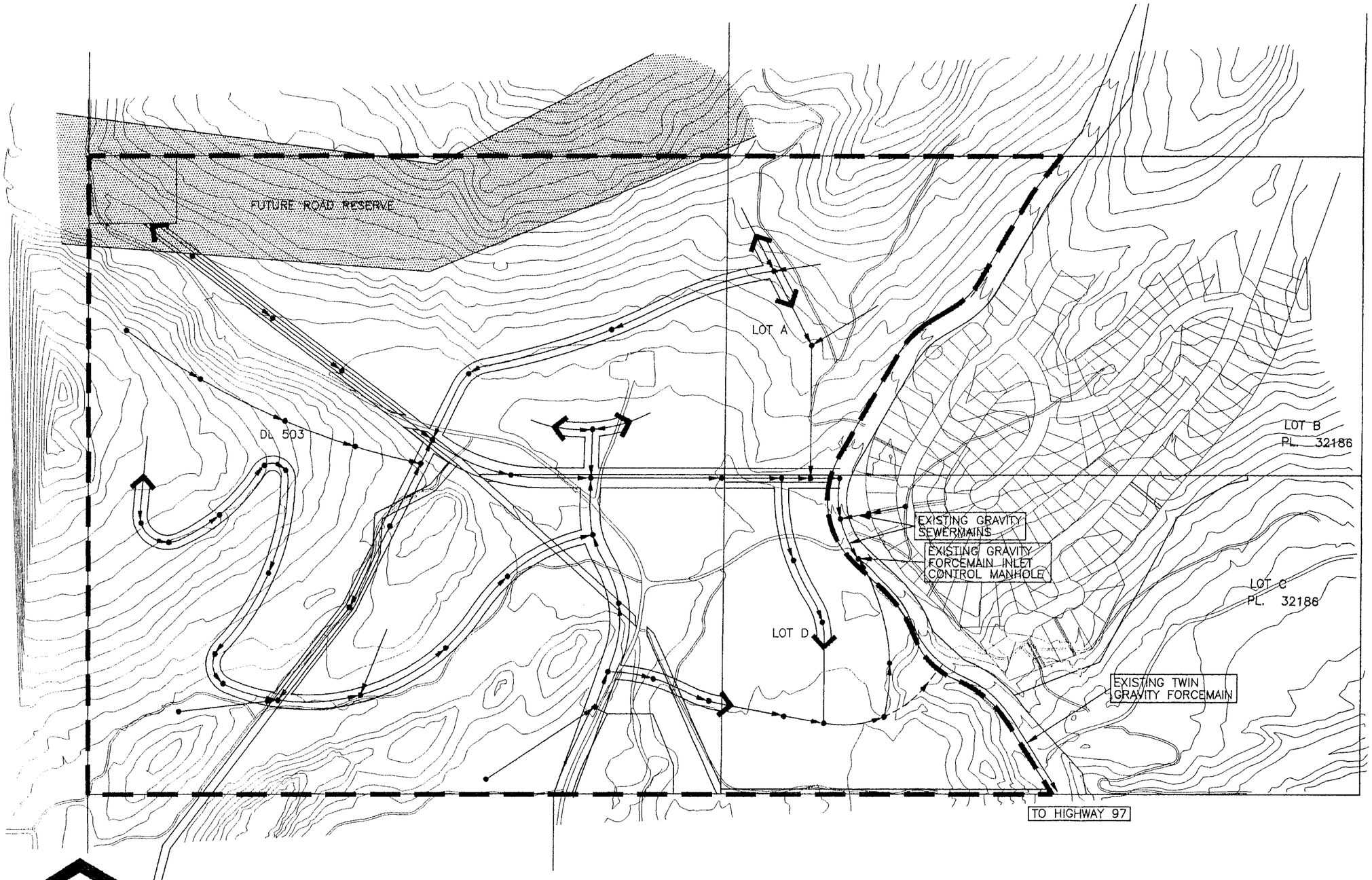
Sanitary sewers currently exist at or near the boundaries of the plan area. There is a gravity sewermain which supplies sewer service to the Westridge, east across Westlake Road. This sewermain drains into a twin forcemain which follows Westlake Road to discharge to a gravity sewermain adjacent to Highway 97. The twin forcemain operates under pressure supplied by a lift station in the Faulkner Creek channel next to Horizon Drive, and by elevation head available at the inlet to the forcemain located on Westlake Road approximately 120 m south of the property line between Lot A and Lot D. Other sanitary sewers exist on Stevens Road at M^{c}Dougall Road and at the north end of Dominion Road, both south of the plan area.

Preliminary design of sanitary sewers to service the plan area indicates gravity sewer service for all of the area can be directed to the gravity forcemain on Westlake Road. In order to ensure proper operation of the forcemain and to maintain system hydraulics, all sewer service should be directed to the inlet control manhole as shown on the attached ***Figure 6: Sanitary Sewer***. One option may be to tie directly to the forcemains at the southeast corner of the plan area, however this would require an inlet control facility which matches the operation and hydraulics of the existing structure. This can be evaluated in more detail at the design stage.

Sewer service to the southwest corner of the site (west of the watermain easement) may require a somewhat deeper sewer along the local roadway which ties to M^{c}Dougall Road opposite the school site (or regrading of the roadway to drain to the northeast). Alternately, sewers could be extended from Dominion Road to the south boundary of the property; however this would involve obtaining easements as it would cross private property. The property along the south boundary of the lands east of M^{c}Dougall Road will drain east and then north to the forcemain inlet structure either through deeper sewers or an alignment which follows the ridge. Sanitary service to all lands north of the main entrance road will be provided by a sewermain in this roadway.

7.2 Storm Drainage

There are three components of the storm drainage system that must be considered for this development. These consist of the minor piped system, flow routes for major storm events, and a flood route for drainage from Rose Valley water reservoir. Current standards for storm water drainage require all runoff to be directed to a natural drainage course. The original drainage course for this property consists of the Faulkner Creek channel which follows the proposed collector entrance road and then Westlake Road. The channel then heads east through a well defined drainage course paralleling Sussex Road and then crossing Horizon Drive in two locations to a point where it intercepts Keefe Creek. Keefe Creek continues to drain to the northeast through IR10 and eventually reaches Okanagan Lake. Culverts have been installed at road crossing points.



NOTE : ALL SEWERMAINS TO BE 200mm ø PVC

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Figure 6: Sanitary Sewer Servicing

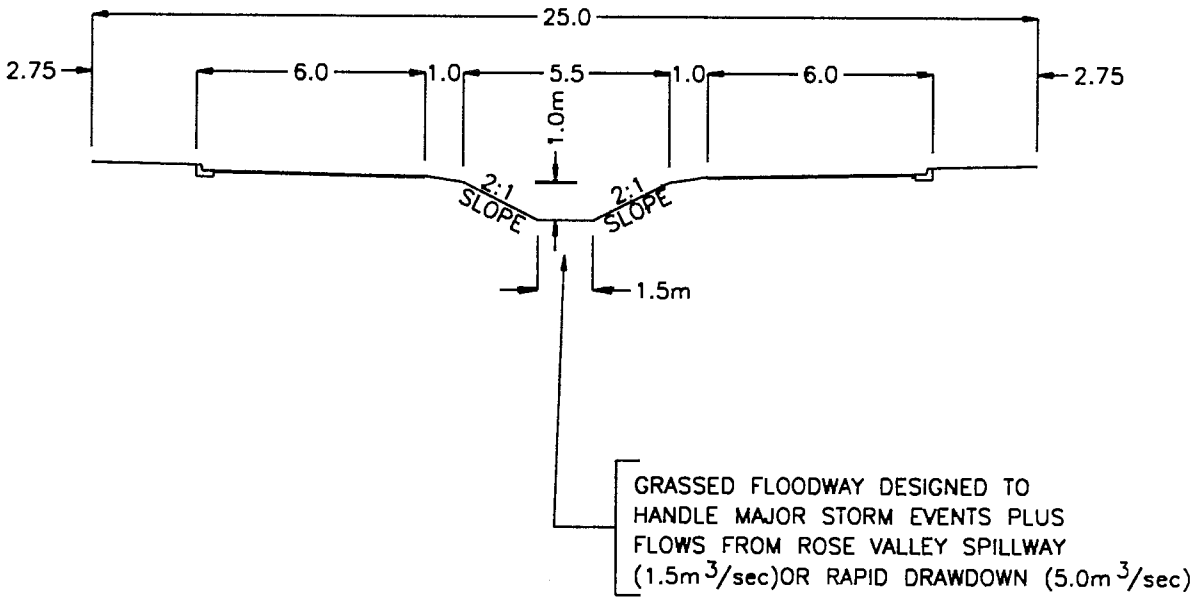
A drainage report completed for development of DL 1117 reviewed existing culvert sizes for the Faulkner Creek channel crossings of Horizon Drive. This report utilized flows from existing development as well as proposed development on District Lots 503, 1117, and 1119. It was determined the culverts (900 mm) were adequate for minor storm events as well as major events under pre-development conditions with some build up of headwater at the Horizon Drive crossing. This report did not look at conditions downstream of Horizon Drive. The Regional District has retained a consultant to complete an overall drainage master plan for the Westside basin however, to date, detailed work has not been initiated.

As noted, management of storm water runoff on this site must consider the upstream effect of Rose Valley water reservoir. Flow into the reservoir is controlled by Lakeview Irrigation District (LID). In recent years, there has not been any flow over the spillway, however correspondence from LID has indicated that any development downstream of Rose Valley water reservoir must consider possible flow over the spillway (stated as 1.5 m^3/sec) as well as potential flows resulting from a rapid draw down of the reservoir (stated as 5.0 m^3/sec). ***Figure 7A: Storm Drain*** provides a concept that has been approved in principal by LID and the MoTH for conveyance of these flows through the development site. This road section is proposed for the main entrance road from Westlake Road to the most westerly intersection of the internal local roadways. From this point to the northwest boundary of the property, the section may be modified to be on the side of the roadway rather than in the centre. This will be finalized at later stages of the development once flows, ditch cross sections, and road alignments have been determined in more detail. It will be sized to accommodate storm flows from the development areas.

Major storm water flows or flows from Rose Valley will be routed along the west side of Westlake Road to the Faulkner Creek channel crossing north of Sussex Drive. At that point, an appropriately sized control structure could be constructed to divert some flow into the Faulkner Creek channel and allow the remainder of the flow to be routed down Westlake Road to Art Pond. Art Pond is a large pond located at the low point on Westlake Road. Although on private land, it could provide an opportunity for overall stormwater management through utilization as a retention and water quality improvement pond.

This pond is the headwaters of Keefe Creek. Keefe Creek, a fish bearing stream, could possibly benefit from increased flows if water quality is maintained. However, one of the main benefits for diverting the major flows to Art Pond is the large undeveloped area which could be available for storm water management as well as the reduced development downstream of this Pond. The Faulkner Creek channel has a major lift station located in the channel bottom and more road crossings than Keefe Creek. Control structures at Art Pond and a crossing of Westlake Road, by an appropriately sized culvert, will be required as well as a possible upgrading of the Keefe Creek culvert across Horizon Drive.

The minor storm drainage system will follow the same alignments as the sanitary sewer system. Consideration of storm water flows during the design of the roadways should allow all major and minor storm flows to be routed to Westlake Road. A separate outfall to the ditch on Westlake Road may be required in the area of the rock cut. Limited areas along the southern boundary of the site may drain to the south, however they are not considered to be a problem. A layout of the potential drainage routes, both minor and major, are provided in ***Figures 7B: Storm Drain*** and ***7C: Storm Drain***.



NORTH

Figure 7a: Storm Drainage
Proposed Entrance Road Cross Section

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Figure 7b: Storm Drainage - Minor Storm System

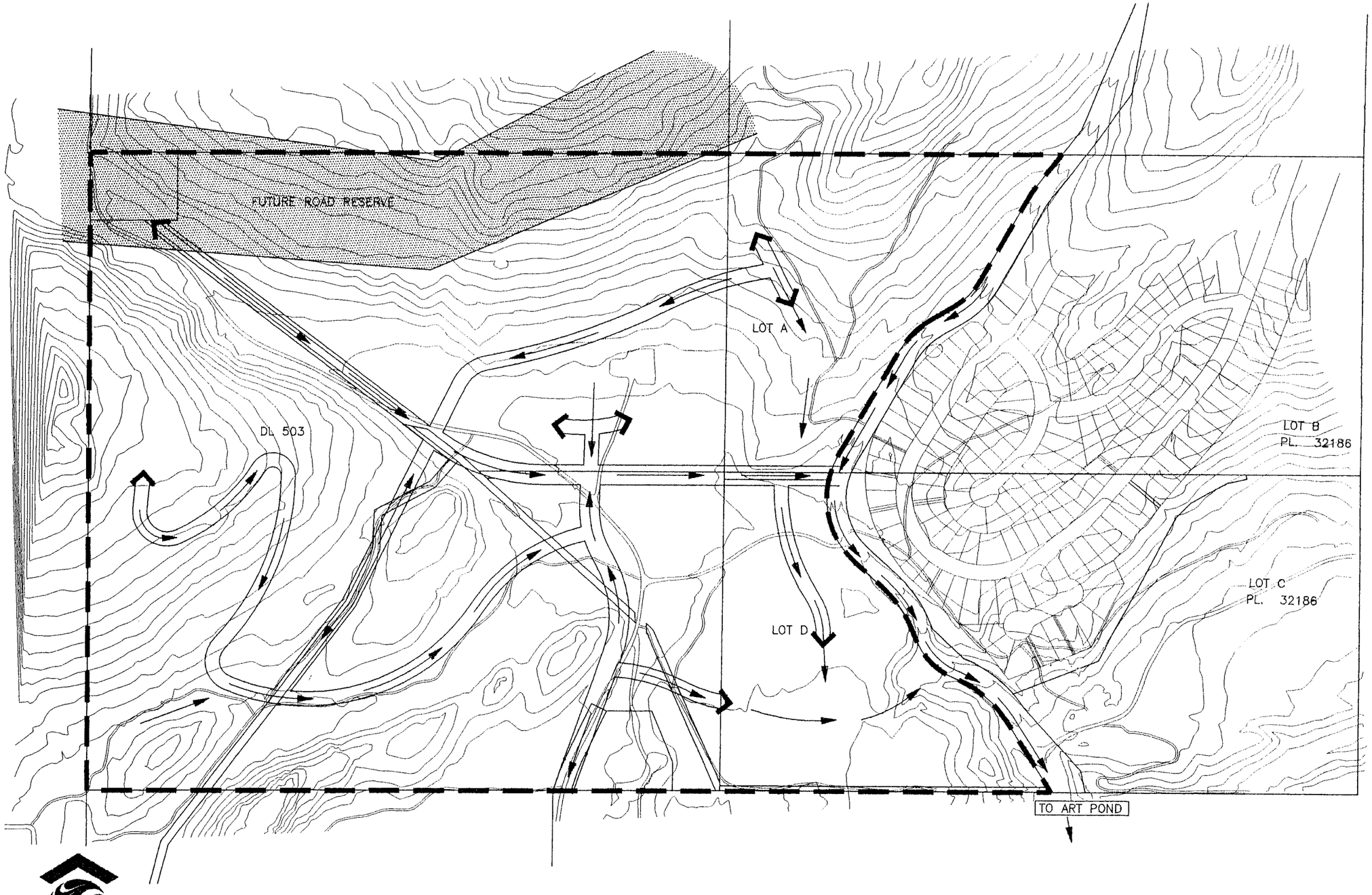

Figure 7c: Storm Drainage - Major Storm Routes

7.3 Water

Lakeview Irrigation District (LID) is the water supply authority for this development. There are a number of existing large diameter watermains owned by LID which cross the site. These mains will provide the backbone of the distribution system required for this development as well as affecting roadways alignments and grades. The mains, ranging in size from 300 mm to 750 mm, provide the water supply system to the entire Lakeview District and are critical to its operation. It will be very difficult and costly to undertake any realignments or modifications to these mains, therefore they must be carefully considered during detailed design and construction of this project.

The existing supply system can provide water service to approximately elevation 550 m. Above this, a new pressure zone must be created. There are two areas of the proposed development which are above the existing pressure zone and will therefore require a booster station and reservoir to provide water service. The Westridge Estates development on the east side of Westlake Road also has property above the 550 meter elevation and will also require a new pressure zone. The new facilities required to create the next pressure zone should be sized with the needs of these two developments as well as any adjacent lands that may be serviced in the future.

Figure 8: Watermain provides a preliminary layout of the proposed water distribution system. Water service to the upper zone (elevation 550 m to 600 m) will be provided by a pump station tied to the existing mains and a reservoir at elevation 635 m. The reservoir should be located on lands north of the development (Regional District park lands) in order to achieve the elevation required and provide opportunity for reasonable access via the existing trail system. The location of the booster station is variable and will depend upon development phasing of both the Westridge and Westlake lands. Both the pump station and reservoir require adequate truck access. The pump station should be located as close to Westlake Road as possible to reduce the length of extension of three phase power. Two possible locations for the pump station have been indicated on ***Figure 8: Watermain***, however as noted these can be modified to suit development phasing. In order to provide service to the westerly area of the upper pressure zone, some dual watermains will be necessary through the lower zone.

The reservoir and pump station must meet the requirements of the Lakeview Irrigation District and any other relevant government agency. The reservoir should be sized for peak hour demands (balancing storage) as well as provide fire storage. Sizing of the reservoir and pump station will be based on the type of development, required fire flows and number of units serviced. The pump station should be capable of supplying maximum day demands with standby pumping capacity in case of pump failure.

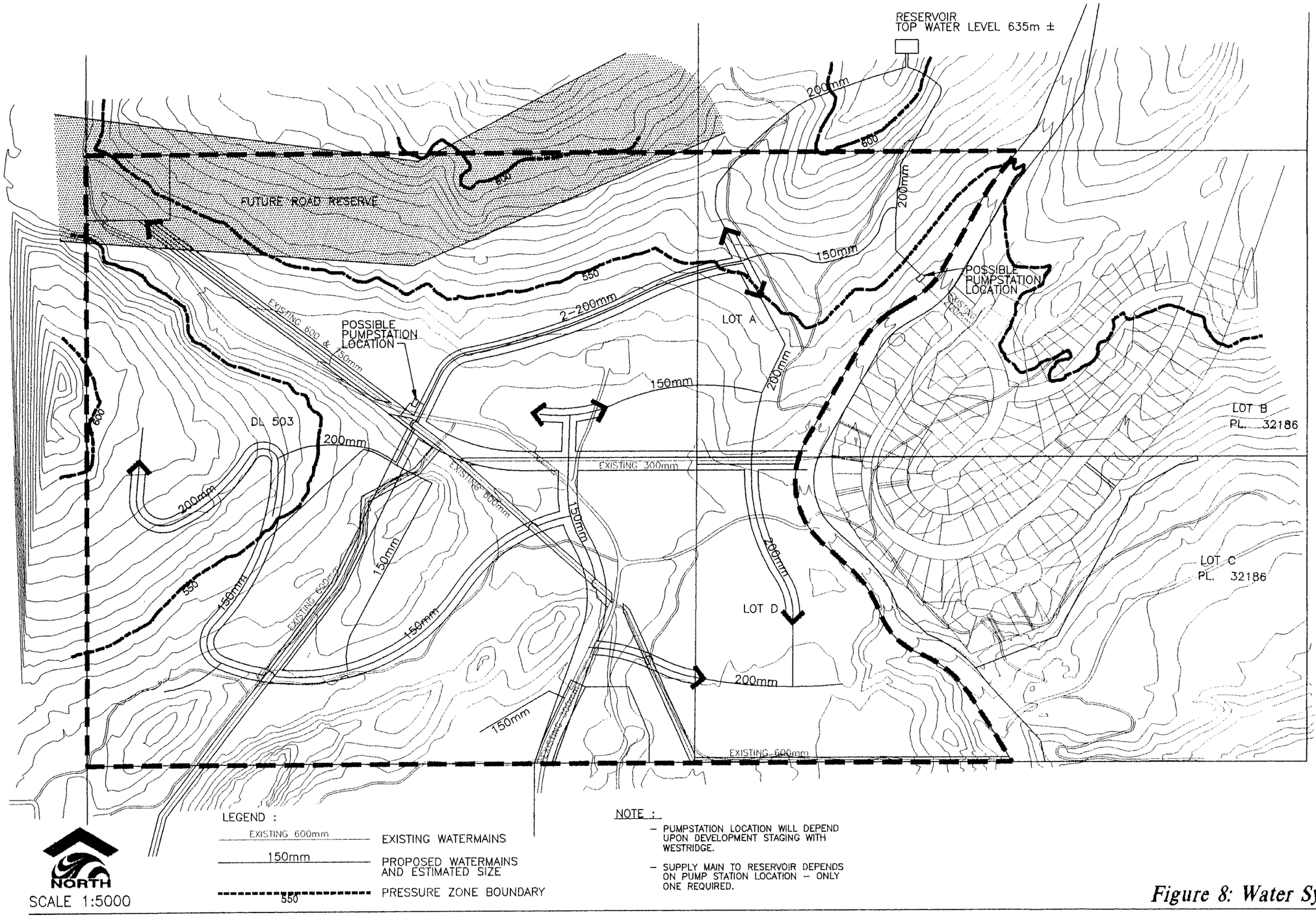

Figure 8: Water System

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7.4 Fire Protection

Fire protection in the development will be provided by the water distribution system through adequately sized mains and hydrants spaced at intervals defined in the *Subdivision Servicing Bylaw*. Hydrant spacing, to Lakeview Irrigation District standards of 100 m and at intersections where possible, will be reduced in higher density development areas and at the school site. Fire flows will be available in the lower pressure zone through direct gravity feed from the Rose Valley Water Reservoir. The upper zone will contain sufficient reservoir storage to provide fire flows to the service area. Fire flow criteria will meet or exceed standards set by Lakeview Irrigation District and the Regional District.

7.5 Shallow Utilities

During the initial stages of the planning process, all shallow utility companies (hydro, gas, telephone, and cable television) were contacted to obtain their input to the development. Companies that did respond stated that they would be able to provide service to this development. It should be noted that three phase power is available on Westlake Road. Extensions into the site to service the multi-family development, school site, and water booster station can readily be achieved along the main entrance road.

8.0 GUIDELINES

8.1 Introduction

Because of the importance of urban character to the area, the *Lakeview OCP* designates certain areas as requiring development permits, according to the provisions of the *Municipal Act*. Before subdivision or development can occur in a development permit area, a permit must be approved and issued by resolution of the Regional Board.

The *OCP* requirements for development permit areas, as they affect the *Westlake OCP*, only apply to the form, siting, character, and landscaping of the village centre (including multiple housing). This section contains these guidelines for development permit process and other guidelines that the land owners, the School District, the Regional District, MoTH, and others may wish to consider in the continuing planning for the *CDP* area. These guidelines strive for a balance between the need to implement public policy and flexibility to make design decisions at the appropriate stage of planning and development.

When guidelines suggest the use of natural colours, this is interpreted as a wide range of earth tones (greys, browns, beiges, etc.) with attractive muted shades of green, blue, gold, and yellow typical of the area. The landscape is also highlighted with brighter colours throughout the year (wildflowers in summer, some shrub stems in winter, etc.). Therefore, bright accents against a wide range of the more muted backgrounds is very attractive and can inspire the choice of colours in new buildings.

Figure 5.0 Design Concept shows the different land use areas to which the following guidelines apply.

8.2 Area 1: Mixed Use

This area, at the intersection of the main collector road with M^{c}Dougall Road, is central to the neighbourhood. Although future uses will depend on market demand, the site is appropriate for a variety of uses (or mix of uses) including local commercial with apartment housing over it, recreational, or institutional uses. Commercial development will be subject to development permits. Guidelines are as follows:

a) Buildings and landscaping will be of a design and quality deserving of this potential *landmark* site. There shall be a strong vertical architectural element such as a clock tower and some expression of the site as a central focus of the neighbourhood.

b) Site design shall give predominance to the pedestrian. This requires access along the north edge for children walking to and from school, pedestrians from adjacent residential areas accessing the site, and residents from within the development.

c) Any development should ensure a compatible relationship between non-residential uses and adjacent residential development through normal setbacks in the *Zoning Bylaw*, site landscaping and fencing, and the buffering of service elements (including on-roof units, garbage and loading areas, parking areas, and ensuring lighting does not shine directly on adjacent residential properties).

d) In order to ensure a small scale development, individual *commercial* establishments should be restricted to a maximum of 250 m^2, except daycare centres may be larger.

e) Any commercial buildings should be designed with a residential character (sloped roofs, attention to domestic scaled architectural elements, limited signage, facades broken into separate elements, landscaping consistent with the residential environment, and colours that reflect the natural landscape.)

f) Buildings will be located towards the road with parking located to the rear or side. Parking shall be screened by vegetation.

g) Building materials will feature rock, stone, and wood accents to reflect the natural landscape of the area. Natural landscaping will favour drought tolerant, low water requirements, and plants that are appropriate for the Okanagan environment.

h) Any residential development at medium density shall conform to the guidelines of Area 3. Apartments over commercial development require the provision of private open space (decks, terraces, at grade patios, etc.). Underground residential parking is preferred if economical.

8.3 *Area 2: School/Park*

The joint school and park site is one of the central organizing features of the site. Guidelines are as follows:

a) The school shall be oriented towards the north or west collector. Off street loading bays for buses and parents shall be incorporated into site design.

b) Site design should recognize the current property boundaries such that site development may be staged.

c) Buildings and landscaping will be of a design and quality deserving of this significant community asset.

d) Site design shall give predominance to the pedestrian. This requires the site plan have a strong orientation to linkages with the *CDP*'s sidewalk/pathway system.

e) Any development will ensure a compatible relationship with surrounding residential development through setbacks of facilities and playing fields, site landscaping (including fencing as appropriate), the buffering of service elements (including on-roof units, garbage and loading areas, parking areas, etc.).

f) The school will be designed with a residential character (sloped roofs, attention to detailed architectural elements, facades broken into separate elements, colours that reflect the natural landscape, etc.).

g) Parking shall be screened by vegetation.

h) Building materials, including play equipment, will feature rock, stone, and wood accents to reflect the natural landscape of the area. Colours shall be sympathetic to the natural setting. Natural landscaping will be used to define the edge of the site in a manner consistent with the overall design theme for the collector roadway. It will favour drought tolerant, low water requirements, and plants that are appropriate for the Okanagan environment.

i) Site contouring will be done, where possible, in incremental steps to avoid excessive retaining walls.

j) Lighting will be designed to ensure security of the site without impinging on adjacent residential developments.

8.4 *Area 3: Medium Density*

Medium density development forms an additional defining element of the village centre. Medium density housing is subject to development permits. Guidelines are as follows:

a) Buildings and landscaping will be of a design and quality that helps makes a strong statement about the character of the community. Materials used should be high quality which are durable and only require low maintenance.

b) Individual driveway access to collector roadways shall be limited for each development through the use of lanes and internal site accesses.

c) The street frontages of the development should have a strong orientation to the street with individual dwellings with an individual street *address* (i.e., pedestrian access to the street for a front door). Gated communities will not be permitted. Buildings should be located close to the street with parking access off lanes or internal site roads.

d) Underground parking is preferred if economical.

e) Site design shall give predominance to the pedestrian. Site open space and paths will be oriented to connect with the neighbourhood path/sidewalk system. Existing easements will be incorporated into the walkway and open space system of the development.

f) Any development will ensure a compatible relationship with adjacent lower density residential, park, and school development through normal setbacks of the *Zoning Bylaw*, site landscaping and fencing), the buffering of service elements (including on roof units, ground level garbage and loading areas, parking areas, and the location of driveways.).

g) Where this housing abuts on the southern boundary along industrial lands, housing should be located away from the southern boundary so that no dwelling will be located closer than 20.0 m to the property line of the gravel operations. This will be enforced through a restrictive covenant with a no-build zone and a requirement to retain significant vegetation. There must be an solid screen fence (1.8 m in height), on a minimum 1.0 m high berm, to act as a significant screen, buffer for industrial noise and dust from future gravel operations, restrict pedestrian access to the gravel operations, and complement setbacks and buffering treatments to be put in place by adjacent gravel or industrial operators. Fencing will be supplemented by trees to accentuate the buffer, spaced on average of 10.0 m along the fence, of a minimum caliper of 60 mm with a minimum clearstem height of 1.5 m for deciduous trees and a minimum of 2.5 m high for conifers. Where significant existing vegetation can be retained, the berm should not be provided.

h) Where abutting open space along Westlake Road, there shall be a minimum landscaped buffer strip on-site of at least 5.0 m width.

i) Medium density housing shall not exceed 2 ½ storeys.

j) The intent is that housing oriented to households with children, (i.e., with direct access to grade) will be the predominate housing form. No more than 20% of housing shall be stacked over other housing such that it does not have direct access to grade.

k) Building design will ensure the characteristics and massing of development is sympathetic to the domestic scale of adjacent single detached housing areas. Developments will have attention to architectural design to reduce the overall massing (such as by a variety of facades, breaking up the facade to emphasize individual dwellings or small groups of dwellings, and providing attention to architectural details such as sub-roofs, dormers, balconies, bay windows, etc.). The upper storey adjacent to single detached housing shall be set back at least 3.0 m beyond the normal *Zoning Bylaw* requirement at ground level.

l) Building materials will feature rock, stone, and wood accents to reflect the natural landscape of the area. Colours shall be sympathetic to the natural setting.

m) Natural landscaping will favour drought tolerant, low water requirements, and plants that are appropriate for the Okanagan environment. Landscaping should have a residential character and be relevant to individual ground floor residential units as opposed to a *commercial style* treatment of the overall building site.

n) As many existing trees should be retained as practical. Where existing vegetation is not retained on-site at the ratio of one tree per dwelling, new plantings should be made on site to reach this ratio. They should be of a minimum caliper of 60 mm with a minimum clearstem height of 1.5 m for deciduous trees and a minimum of 2.5 m high for conifers.

o) Site contouring will be done in incremental steps or terraces to avoid excessive retaining walls. Individual retaining walls will be limited to a height of 2.0 m.

8.5 *Area 4: Compact Housing*

Compact housing is proposed for flatter sites surrounding the village centre. Guidelines are as follows:

a) Minimizing the width of local roadways to 17.0 m and other traffic calming measures (mini-traffic circles in intersections, reduced corner radii, raised pedestrian crossings, variety in paving materials, channelization and throating of intersections, etc.) will be used to self-enforce lower speeds and accentuate the area as a traffic-calmed residential precinct.

b) Housing with direct individual driveway access to the collector roads should be avoided where practical by designs that incorporate flanking lots or rear lanes. Houses will be located close to the street (6.0 m) provided there is adequate space for vehicle parking. Where lanes are provided, the setback can be further reduced to 4.5 m.

c) The local sidewalk system along the road shall provide access to the village centre uses and the neighbourhood trails and open space system.

d) Where this housing backs on the southern boundary along industrial lands, the lot depth shall be such that no dwelling will be located closer than 20.0 m to the rear property line. This will be enforced through a restrictive covenant with a no-build zone and a requirement to preserve significant vegetation where practical. There must be an opaque fence (1.8 m in height), on a 1.0 m high berm, to act as a significant screen, buffer for industrial noise and dust from future gravel operations, restrict pedestrian access to the gravel operations, and complement setbacks and buffering treatments to be put in place by adjacent gravel or industrial operators. Fencing will be supplemented by trees to accentuate the buffer, spaced on average of 10.0 m along the fence, of a minimum caliper of 60 mm with a minimum clearstem height of 1.5 m for deciduous trees and a minimum of 2.5 m high for conifers.

e) Where abutting Westlake Road, there shall be a minimum landscaped buffer strip 5.0 m wide.

f) Building height should be limited to two stories. Reductions in front yard setbacks to form a more pleasing environment along narrower local roads should be considered in rezoning provided it should be at lest 6.0 m when there are garages facing the street. Sideyard setbacks should be 1.5 m.

g) Building materials will have rock, stone, and wood accents to reflect the natural landscape of the area. Colours shall be sympathetic to the natural setting.

h) Natural landscaping will favour drought tolerant, low water requirements, and plants that are appropriate for the Okanagan environment.

i) As many existing trees should be retained as practical. Where existing vegetation is not retained on-site at the ratio of one tree per dwelling, new plantings should be made to reach this ratio. These trees may be planted either on individual lots, public open space, boulevards, or other locations which will benefit the development as a whole. Required trees should be of a minimum caliper of 60 mm with a minimum clearstem height of 1.5 m for deciduous trees and a minimum of 2.5 m high for conifers.

j) Where housing backs onto open space and there are existing mature trees, they should not be removed within 2.5 m of the open space lands.

k) Site contouring will be done in incremental steps to maintain existing trees and avoid excessive retaining walls.

8.6a Area 5: Hillside Housing

Low density residential development is proposed for steeper slopes, generally above 10% but not over 30%. The guidelines to protect natural character are:

a) Development on hillsides may require a geotechnical study to confirm slope stability and potential mitigation measures.

b) Lot sizes and densities should conform to that specified in Section 5, but cluster housing is encouraged on slopes over 25%.

c) As stated in the *OCP*, alternative lot configurations (including strata developments, panhandle lots, substandard frontage lots, etc.) should be used to protect the natural environment.

d) Private driveways, shared where possible, should be used to minimize the length and impact of municipal roads. Driveways should intersect with local roads at an angle not less than 70°.

e) Because of the prominent visual location of some of these areas, buildings and landscaping will be of a design and quality that reflects the natural character of the community. There shall be at least two trees per lot which may be comprised of existing trees or new trees. Required trees should be of a minimum caliper of 60 mm with a minimum clearstem height of 1.5 m for deciduous trees and a minimum of 2.5 m high for conifers.

f) For the lots at the top of the knoll west of the village centre area, there should be planting of one additional coniferous tree per lot. These lots shall have a minimum yard of not less than 10.0 m deep along the top of the bank.

g) Building materials will feature rock, stone, and wood accents to reflect the natural landscape of the area. Colours shall be sympathetic to the natural setting. Sloped roofs are required.

h) Natural landscaping will favour drought tolerant, low water requirements, and plants that are appropriate for the Okanagan environment. Features such as rock outcroppings shall be retained and featured in landscaping design.

i) Site contouring will be done in incremental steps to avoid excessive retaining walls. Buildings should be terraced to limit the downslope wall, without setbacks of upper storeys, to 2 storeys.

j) Where hillside housing abuts Crown Land, fencing shall be provided in conformance with the *Lakeview OCP*.

8.6b Area 5: Hillside Cluster Housing

Low density, single family residential cluster housing on hillsides will be sited on lands with challenging terrain where conventional subdivision layouts are considered too intrusive on the natural setting. The guidelines for cluster housing on hillsides are:

a) The housing form will be conventional single family and two family residential architecture.

b) Housing units are to be clustered in groupings where the total units do not exceed the density of 12 units/ha.

c) The entire cluster site is to be subdivided into ownership or stratified sites which include one housing unit.

d) Land outside the building site, excluding an area of managed landscaping equal to the footprint area of the home and necessary driveways, shall remain in a natural state.

e) Single detached housing cluster groupings are encouraged to have joint use driveways. Such driveways shall be registered as access easements on title.

f) Building separations shall be in conformance with the BC Building Code.

g) Buildings materials will have rock, stone and wood accents to reflect the natural landscape of the area. Colours shall be compatible with the natural setting.

h) Natural landscaping is encouraged with drought tolerant, low water requiring plants.

i) As many existing trees shall be retained as are practical.

j) Size contouring will be done in incremental steps of retaining walls of no more than 2.0 m in height.

k) Cluster single family residential development on hillsides shall be consistent with the hillside housing guidelines detailed in part 8.6a.

8.7 Area 6: Open Space

These areas, dispersed through the plan area, are important to protect the natural environment, allow passive recreation, and accentuate the character of the development as being in a natural setting. Guidelines are as follows:

a) All open space slopes shown on the land use concept map that are, for the most part, in excess of 30% will remain in the natural state primarily for passive enjoyment and interpretation of the natural environment. These areas will be transferred to the Regional District for park and conservation.

b) Natural vegetation in these areas shall be retained with the exception of alterations required for the proposed trail system, required secondary/emergency access routes, and to implement any wild fire risk reduction requirements.

c) The greenway and trail systems will be designed to provide convenient access to green spaces and destinations from residential areas. They should maintain a certain degree of naturalness; have a natural surface except where required for vehicular emergency access; and be wide enough, no less than 10.0 m, and wider in cases to allow for a meandering path, additional plantings, and to ensure they are perceived as public green spaces rather than narrow walkways.

d) The specific siting of the greenway between Faulkner Creek and the proposed school and park site should be determined at the time a subdivision plan is submitted. The physical manifestation of the greenway on the site should satisfy the greenway design objectives of wildlife habitat and recreational opportunities.

e) Where public open space abuts Crown Land, fencing is not required in order to allow continuity of the open spaces.

f) If there is not a pedestrian greenway, there shall be a minimum landscaped buffer of not less than 5.0 m along Westlake Road.

8.8 Area 7: Collector Roads

These two roadways are a defining feature for the neighbourhood. Guidelines are as follows:

a) A consistent landscape theme for public boulevards shall be developed for these collector roadways.

9.0 IMPLEMENTATION

9.1 Introduction

A plan is not implemented overnight. This comprehensive development plan is just one step in a series of collective actions that require the input of property owners, the Regional District administration, the Regional Board, other governmental and servicing agencies (including MoTH as the subdivision approval agency and the School District, etc.), and the community at large.

9.2 OCP

No changes are required to the *Official Community Plan* as a result of the preparation of this *Comprehensive Development Plan* for the Westlake area. However, the Regional District may wish to amend the map showing development permit areas to include the multiple family, commercial, and village centre areas as required development permit areas.

This plan may be adopted as part of the *OCP* by the Regional Board, if that is the prevailing process, after a formal public hearing.

9.3 Rezoning

Applications for rezoning in conformance with the final end use, another important step in the planning process, are made by individual property owners when they wish to advance their development and planning interests in conformance with this plan. There have been suggestions for an interim use of the Marr property, but no use should be approved which would have a negative impact on adjacent residential development or the desire to complete the neighbourhood in an expedient manner. Any proposal shall be considered on its own merits through the rezoning process.

Regional District requirements will be dealt with before rezoning occurs. There is public input into this rezoning process.

Some precincts can be regulated through the use of existing zones in *Zoning Bylaw #176*. However, the Regional District is planning a comprehensive redrafting of the *Zoning Bylaw* which can include new zones, as required, to implement this *CDP*. If this is not completed in time, it would be appropriate to draft new standard zones where the existing zones are inadequate to properly regulate new forms of development (i.e., cluster housing, or compact housing with smaller lot areas and reduced setbacks from those in the existing *Zoning Bylaw*, etc.). In some cases, it may be more appropriate to use a site-specific comprehensive development zone where that will ensure development conforms to plan policies and guidelines.

It is anticipated that some other studies will be required before rezonings. This will include a traffic impact assessment and a wildfire hazard assessment (this should consider extension of the fuel break along the northern boundary of the site).

9.4 Subdivision

Subdivision will be required, on a phased basis, as the various owners wish to proceed with their development plans. Subdivisions will go through the normal review and approval process. Details of subdivision design, including road widths, will be determined on an application by application basis. Development will be assessed a capital charge, on a per unit basis, that will be due with each subdivision phase.

However, given the approval of this *CDP*, the subdivision process should be relatively expeditious.

9.5 Development Permits

The plan area includes designated development permit areas (i.e., any commercial development in the village mixed use area and any medium density housing as shown on Areas 1 and 3 on *Figure 5: Design Concept*) to provide additional assurance that development will be in conformance with Regional District objectives. These were described in Section 8.0.

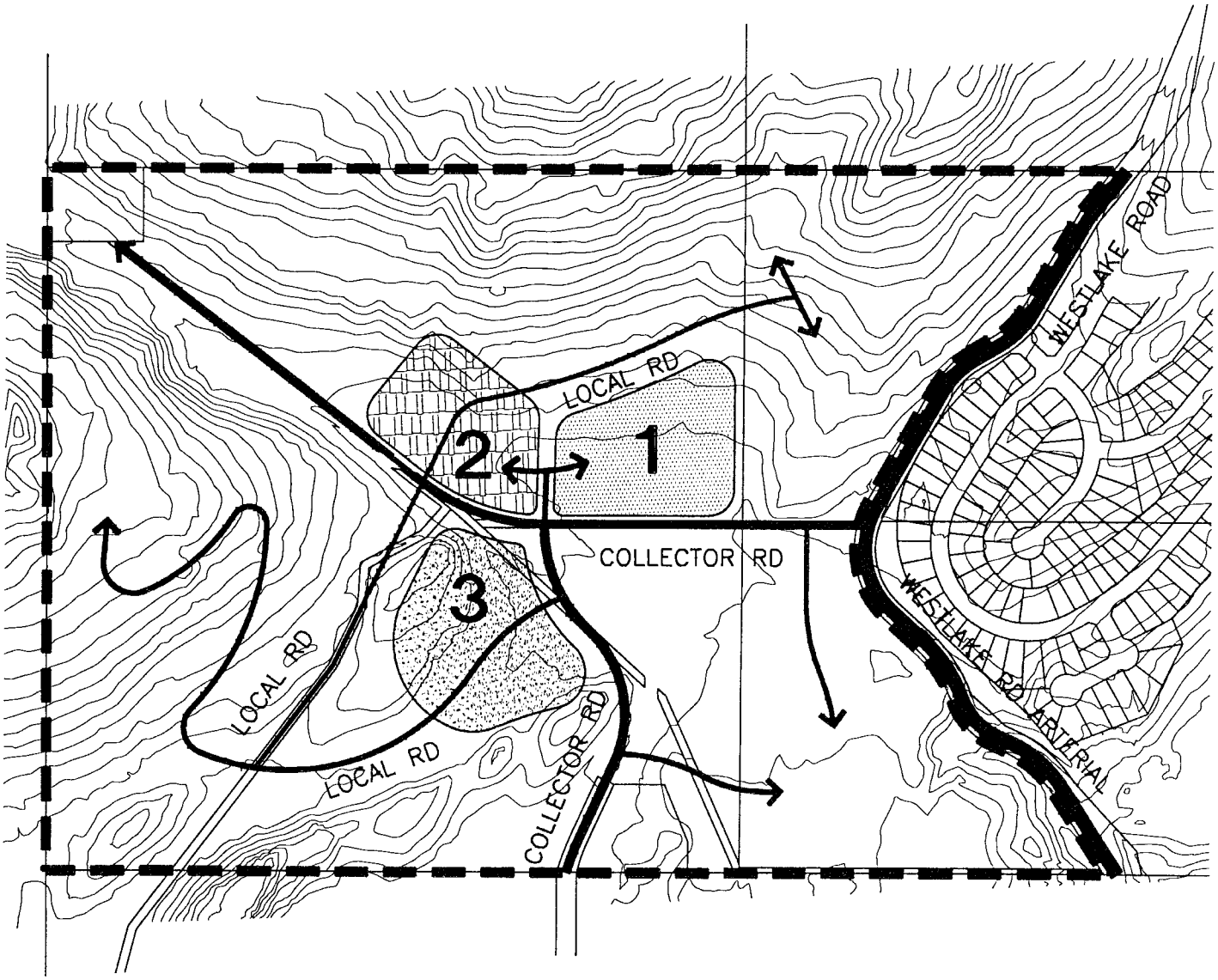
9.6 Staging

Staging of development will depend on market conditions, access, and servicing. Staging is shown on *Figure 9: Staging*. The first three phases anticipated are shown. There is flexibility for developing the Marr property or the school site once services are brought to the site by early phases. Later phases will occur in a contiguous fashion.

Market conditions are determined by the property owners and can vary with the rate of development and type of housing produced. It is anticipated that development will proceed from West Lake Road to the west as services and primary access will initiate at that point. Development on Lot D may be delayed, depending upon the land owners plans.

District Lot 503 and Lot A can proceed at rates set by market conditions. Development can proceed adjacent to the main collector entrance road and M^{c}Dougall Road extension and then proceed into the higher areas. If the subdivisions proceed to the upper water pressure zone (above elevation 550 m), the water booster station and reservoir will be required.

The development scenario outlined in the *Appendix* is suggested as a guide in which development is spread over a ten year period. It has been used, in the accompanying traffic impact assessment, to determine the requirements for roadway improvements relative to development levels. It may, of course, vary substantially from year to year as adjustments are made in response to market conditions and developer intentions.



NORTH

SCALE 1:7500

Figure 9: Staging

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APPENDIX 1: LAND USE, POPULATION, & STUDENTS

LAND USE/ POPULATION STATISTICS[1]

LAND OWNER	LAND USE	HA.	UNITS	POP'N	STUDENTS	"	"
					ELEM	MID	SEN'R
PENTAR HOMES	Highway Reserve	7.2	0	0	0	0	0
	Open Space (>30%)	16.0	0	0	0	0	0
	School/Park[2]	3.5	0	0	0	0	0
	Local Parks	1.5	0	0	0	0	0
	Low Density	17.5	210	670	70	35	45
	Hillside Residential	25.9	125	400	40	20	25
	Medium Density	2.0	60	170	20	10	10
	Mixed Use/Instit'n	0.4	0	0	0	0	0
Sub total		**74.0**	**395**	**1240**	**130**	**65**	**80**
MARR AND WONG	Open Space (>30%)	1.50	0	0	0	0	0
	Walkway	0.15	0	0	0	0	0
	School/Park/Walk[3]	0.85	0	0	0	0	0
	Low Density	6.50	80	260	25	15	15
	Medium Density	1.00	30	85	10	5	5
Sub total		**10.0**	**110**	**345**	**35**	**20**	**20**
MARR[4]	Low Density	1	13	40	4	2	3
Sub total		**1.0**	**13**	**40**	**4**	**2**	**3**
LAKEVIEW IRRIGATION DISTRICT	Highway Reserve	1.0	0	0	0	0	0
Sub total		**1.0**	**0**	**0**	**0**	**0**	**0**
TOTAL		**86.0**	**518**	**1625**	**169**	**87**	**103**

[1] These figures are estimates only. They are based on understandings with the landowners about the most appropriate manner of providing the school and park land under the circumstances of the plan and the willingness of landowners to ensure significant open space will be transferred to public ownership. Actual numbers will depend on more detailed subdivision planning and layouts. The proposed dedication formula outlined below are at the sole discretion of the Regional Board. Without landowner agreement for the dedication of the major open space areas, a strict interpretation of the *Municipal Act* provisions would be utilized.

[2] The total requirement for school and park lands from the Pentar lands are calculated on the basis of 10% of the lands proposed for subdivision, pursuant to Section 942 (6) of the *Municipal Act*. After deducting the 16.0 ha of lands over 30% to be transferred to the Regional District and the 7.2 ha of highway reserve to be purchased by MoTH, the remaining lands are 50.8 ha, therefore 10% is approximately 5.0 ha.

[3] The total requirement for school and park lands from the Marr Wong lands are calculated on the basis of 10% of the lands proposed for subdivision, pursuant to Section 942 (6) of the *Municipal Act*. After deducting the 1.5 ha of lands over 30% to be transferred to the Regional district, the remaining lands are 8.5 ha, therefore 10% is approximately .85 ha.

[4] Because there is no requirement for either park or school land from this property, these lands shall pay money-in-place of land according to the provisions of the *Municipal Act*.

Type of Housing				Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8		Year 9		Year 10	
				1998		1999		2000		2001		2002		2003		2004		2005		2006		2007	
	Units	People	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n	Units	Pop'n
		/Unit																					
Single Detached	303	3.2	970	43	139	43	139	43	139	43	139	43	139	43	139	43	139						
Hillside Detached	125	3.2	400							18	57	18	57	18	57	18	57	18	57	18	57	18	57
Medium Density	90	2.8	252					11	32	11	32	11	32	11	32	11	32	11	32	11	32	11	32
Totals	518		1622	43	139	43	139	55	170	72	227	72	227	72	227	72	227	29	89	29	89	29	89
This development scenario is to give some indication of how the development would be spread over a ten year period assuming realtively constant market conditions.																							
It is expected that there will be considerable variation year to year depending on market conditions and developer intentions.																							

Addendum to

Environmental Impact Assessment of Proposed Subdivision and Development of Parts of Westlake Concept Development Plan Area, District Lots 503 and 1119, Osoyoos Division of Yale District.

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Original Prepared December 4, 1998
Addendum Prepared August 17, 2006

TABLE OF CONTENTS

1.0 BACKGROUND

An Environmental Impact Assessment (EIA) was prepared in 1998 in support of the Westlake Concept Development Plan (Gyug 1998). This area has now been partially developed and built out by Rose Valley Ventures Ltd., into the subdivision known as Rose Valley Properties. This addendum was prepared for the proposed hillside subdivision development of the northeast portion of the properties, hereafter referred to as Lot 1 and Lot 2 (Figure 1). Lot 2 is proposed for gifting to the Regional District of the Central Okanagan as parkland that would be added to Rose Valley Regional Park which is adjacent to the site to the north. All hillside suburban development would be on Lot 1.

This EIA is being prepared at the request of the Regional District of the Central Okanagan to bring the ecological mapping of the area up-to-date with the Central Okanagan Sensitive Ecosystem Inventory that was mapped in 2001, and with the hillside guidelines outlined for the Westlake neighbourhood in the current (2005) Official Community Plan.

Much of the area of Lot 1 proposed for development was considerably altered from the semi-natural state in which it existed in 1998 with the construction of a tank reservoir and major water main servicing a large area of the Westlake neighbourhood in 2004-2005. The proposed road beds for the development of Lot 1 were constructed at that time as they were needed for access to the tank reservoir, and/or as the water main route. An EIA for the reservoir and access route were prepared in 2004 (Gyug 2004) but the EIA was prepared at the request of the Regional District Parks Department, and only covered where the areas to be disturbed within Rose Valley Regional Park.

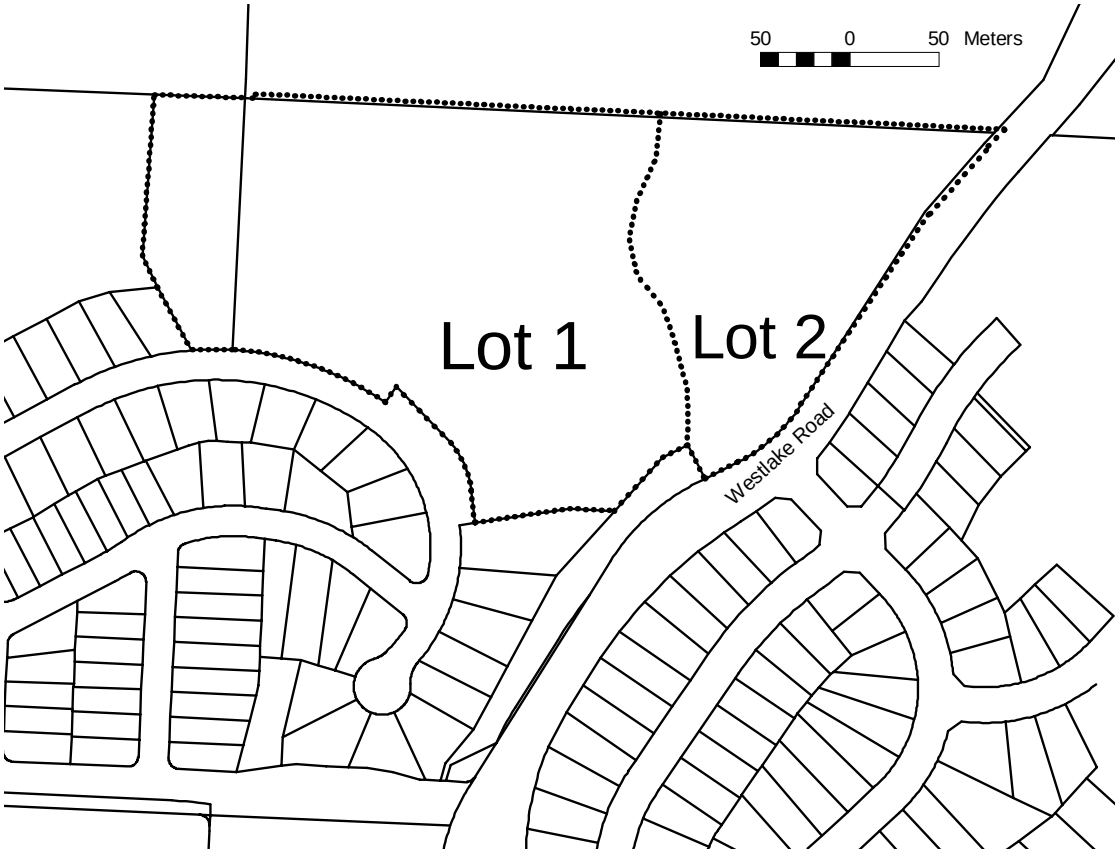

Figure 1. Rose Valley Properties proposed developments on Lot 1 and Lot 2 in the northeast corner of the properties. Rose Valley Regional Park forms the northern boundary of Lots 1 and 2.

2.0 SCOPE OF ASSESSMENT AND METHODS USED

Regional District Terrestrial Ecosystem Mapping (TEM) and Sensitive Ecosystem Inventory (SEI) mapping were examined to determine if the area provided habitat for any priority wildlife species, or contained sensitive ecosystems. The British Columbia Conservation Data Centre Red- and Blue-listed species occurrence information and the Okanagan Region wildlife database maintained by the Ministry of Water, Land and Air Protection had been previously examined (Gyug 2004) and there were determined to be no known sensitive wildlife species occurring in the area of the properties. Site reconnaissance consisted of visits to the site in 1998 (one visit to the northeast portion of the property in late fall 1998), and again in 2004 (3 visits to the northeast portion of the property in mid-summer) and two short (<1 hour) visits to the site on July 11 and August 16, 2006.

All terrestrial vertebrate wildlife that was observed, or distinctive sign seen, on the site was noted. The TEM and SEI mapping were overlaid on an aerial photos of the area and field checked to ensure the accuracy of the mapping. The SEI mapping was updated to take into account the suburban development to the south of the area, then the more recent disturbances that had taken place within the development area, and finally to consider which ecosystems would be left intact after development had taken place.

3.0 DESCRIPTION OF APPLICATION AREA

3.1 Surrounding Land Uses

The area directly to the south of the application area is the subdivided and developed area of Rose Valley Properties. The areas to the north of the application area are part of the Crown Land leased as park land as part of Rose Valley Regional Park. Westlake Road bounds the east of the application area. The west boundary of the application area is the water main route to the tank reservoir constructed in 2004-2005. Beyond the water main route are steep slopes and potential further development of Rose Valley Properties.

3.3 Ecosystem Mapping

Open forests of Ponderosa Pine and Douglas-fir are found throughout the application area with understories dominated by Bluebunch Wheatgrass and Balsamroot sunflower. There are no stream courses in the application area, although the single gully that drains from the north through the western portion of Lot 1 does act as a conduit for some underground drainage based on moister soil regimes in those areas. Overground drainage in this gully has only been observed once in recent years (the spring of 1997) during spring thaw (Charles Higgins, Stantech Consulting, pers. comm., 1998). There were no plots from the Sensitive Ecosystems Inventory near the application area that may have helped in interpretation or provided extra data for the area.

Figure 2 shows the original Terrestrial Ecosystem Units of the polygons which are on, or partly on, the application site. This mapping was developed in 2001 based on aerial photography that was taken before any of the suburban development of Rose Valley Properties. Most polygons on Figure 2 are multipart polygons with the first number preceding the Ecosystem Unit representing the decile proportion of that unit in the polygon. The two-letter codes in upper case represent the Ecosystem Units. The lower-case letters are site modifiers and the final number is the structural stage on a scale of 1 to 7, where 1 represents unvegetated; 2, herb/grass stage; 3, shrub stage; and 4 to 7 represents progressively older forest stages.

The Ecosystem Units (Figure 2) found in or near the application area included (units considered sensitive by Iverson and Cadrin, 2003, marked with an asterix):

PC* Ponderosa Pine – Bluebunch wheatgrass – Cheatgrass
PT* Ponderosa Pine – Red three-awn
PW* Ponderosa Pine – Bluebunch wheatgrass – Idaho fescue
RW Rural Housing
SP Douglas-fir/Ponderosa Pine – Snowbrush – Pinegrass
UR Urban/Suburban (developed sites, and for the purposes of this mapping, sites with fill or road development that are not reflected on the available aerial photography in Figure 2).

Site modifiers used in the legend are:
c coarse-textured soils
s shallow soils
v veneer (very thin) soils
w warm (south) steep aspects

The only Sensitive Ecosystems described for the Central Okanagan (Iverson and Cadrin 2003) and found on the application area are WD which are Coniferous Woodlands in the young forest stage in polygons with PC, PT and PW ecosystem units. Coniferous Woodlands are the most common Sensitive Ecosystem in the Central Okanagan, comprising 15.6% of the total mapped area (Iverson and Cadrin 2003). Mature woodlands had higher conservation priorities than young woodlands, and all the woodlands in the application area would fit into the young category (Age Class 5, Figure 2) with the exception of a few older trees.

The species modeled in the Central Okanagan TEM were: Painted Turtle, Western Rattlesnake, Gopher Snake, Flammulated Owl, Western Screech-Owl *macfarlanei* subspecies, Lewis' Woodpecker, Townsend's Big-eared Bat, Badger, Mule Deer and California Bighorn Sheep. The models were run for the Rose Valley area in 2004 (Gyug 2004). Only for the Flammulated Owl was there any predicted high-quality suitable habitat in the application area, but there was not considered to be any suitability on the area of Lots 1 and 2 based on the lack of any suitable nesting trees. The area showed generally moderate suitability for winter Mule Deer.

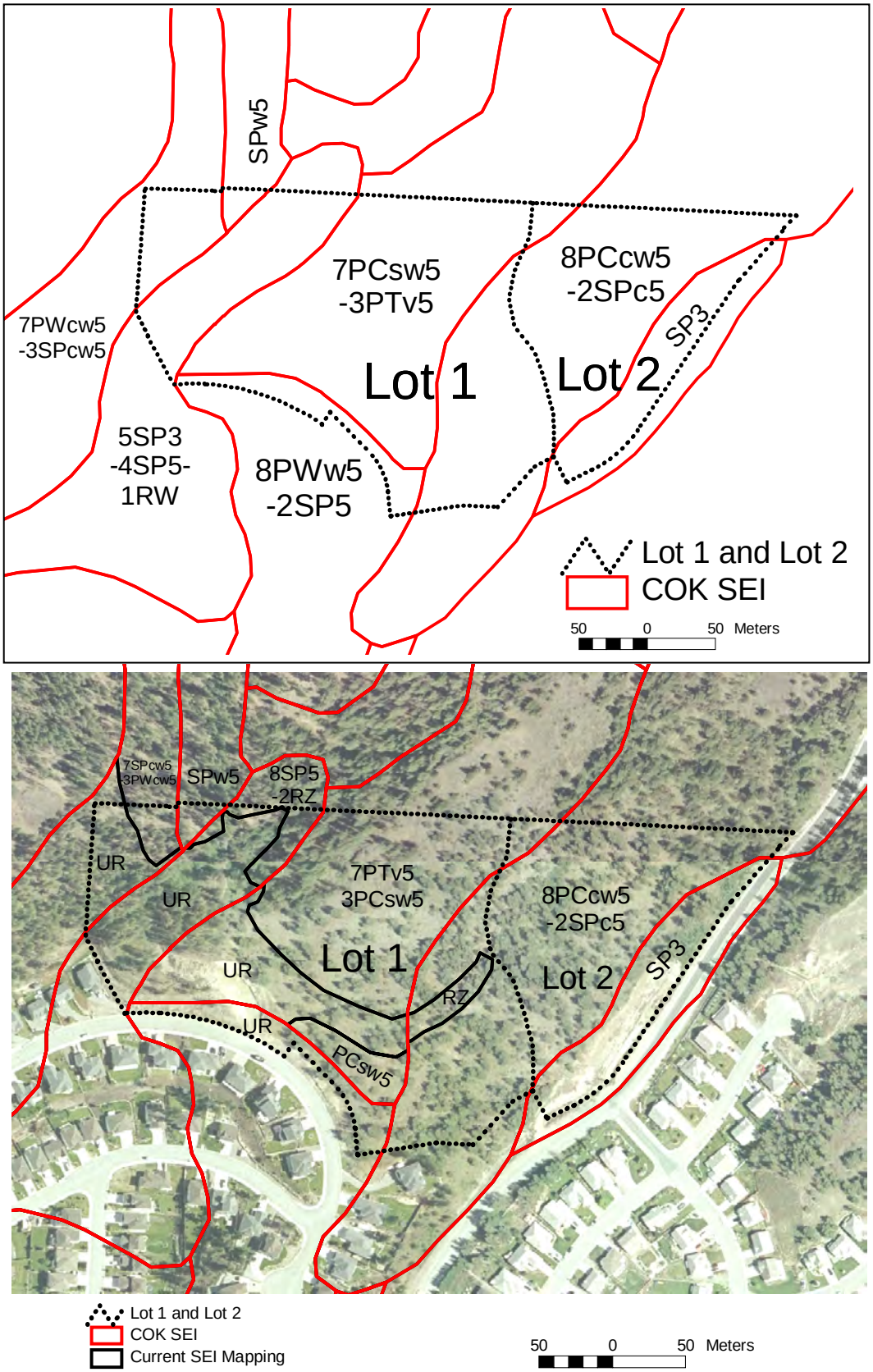

Figure 2. Terrestrial Ecosystem Units of Lots 1 and 2, northeast corner of Rose Valley Properties, based on Central Okanagan Terrestrial Ecosystem Mapping (Iverson and Cadrin 2003) as this existed prior to any development of Rose Valley Properties (top) and as they currently exist (bottom).

4.0 SITE RECONNAISSANCE

4.1 Plant Species

The co-dominant tree species in the application area are Ponderosa Pine and Douglas-fir. Almost all the large trees on the properties had been harvested at some time in the past. There were very few larger trees remaining, with most of those on very rocky sites with very poor growth form that would make them of low commercial value. However, there are numerous, and sometimes dense, smaller Ponderosa pine and Douglas-fir regenerating on the site since the logging occurred. A fuller treatment of plants and plant associations on the site can be found in the full text of the main EIA (1998) or the EIA for the water utility right-of-way (2004).

The shrub layer is generally very sparse with Saskatoon, Tall Oregon-grape and Snowberry being among the most common. Shrubs only occurred in dense clumps in the wet draws (Ecosystems DS, SP and DP) that have now largely been covered with fill or removed for road or water main construction. The dominant grass species throughout most of the site is Bluebunch Wheatgrass with Pinegrass also present in areas of denser tree canopy. Arrow-leaved Balsamroot is one of the most prominent herbs on the site. Poison Ivy was common in the DP gully area in the central part of Lot 1, which is to be developed and which is now partly filled, and is abundant in the gully as it continues north into Rose Valley Park.

4.2 Bird Species

Because much of Lot 1 of the application area has been highly modified, there were very few bird species remaining in the area, with the single exception being Red-Breasted Nuthatch in on the short visit on August 16, 2006. However, more detailed surveys of August 2004 found the following species on the application site (from Gyug 2004, but only considering those species detected on Lot 1):

Mourning Dove	throughout
Common Nighthawk	Family of 3 fledged young seen on rock knobs north of site, with potential for occurrence on rock outcrops (Ecosystem Unit PT) that will not be developed on Lot 1.
Calliope Hummingbird	In open portion of shrub gully (SP) which is now filled.
Western Wood-Pewee	coniferous forests throughout
Clark's Nutcracker	in mature ponderosa pine trees
Black-billed Magpie	throughout
Common Raven	throughout
Mountain Chickadee	in coniferous forests throughout
Red-breasted Nuthatch	in Douglas-fir coniferous forests
Pygmy Nuthatch	in ponderosa pine forests throughout
American Robin	throughout
Vesper Sparrow	In shrubs and denser grasses in gully (SP)
Song Sparrow	In dense shrubs in gully (SP)

None of these species are Red- or Blue-Listed in B.C. The site did not appear to contain any raptor nests, and the areas to be developed as part of Lot 1, did not contain any older trees suitable for either raptor nests or for cavity nesting birds, and based on my knowledge of the breeding birds in the area, did not appear to be suitable habitat for any Red- or Blue-listed species in B.C.

4.3 Other Wildlife Species

The only wild mammals seen in the application area during any of the site visits (1998, 2004 and 2006) were Red Squirrels and Yellow-pine Chipmunks. Mammal sign included fresh Northern Pocket Gopher sign in the few places in the application area that had deeper soils and relatively open canopies, and deer tracks, pellet groups and browsed plants throughout the application area, but particularly on rock outcrops in the area. No snake hibernacula were found within the application area. There were no good rock clefts (generally horizontal and deep within the rock) that might provide for such hibernacula within the application area.

5.0 POTENTIAL WILDLIFE and ECOSYSTEM EFFECTS

None of the Red-listed Plant Associations listed by the British Columbia Conservation Data Centre occur in the application area. The majority of the application area is within or adjacent to habitats rated as Sensitive Ecosystems in the Central Okanagan—principally Coniferous Woodlands. The application will develop some of these Coniferous Woodland ecosystems but these are the most common of the Sensitive Ecosystems in the Central Okanagan and are not currently in short supply.

No Red-listed vertebrate species are known to occur, or do likely occur, in the application area. Except for the snakes listed in the next paragraph, the area is also unlikely to contain any Blue-listed species. The area has been almost completely logged over sometime well in the past. This logging has long ago negated use of most of the area by most cavity-nesting birds or bats, particularly those listed species that might otherwise be expected in Ponderosa Pine forests such as White-headed Woodpeckers and Lewis's Woodpeckers.

The primary Blue-listed vertebrate species that occurred on Rose Valley Properties before development were snakes, in particular, Gopher Snakes, Western Yellow-bellied Racers and Western Rattlesnakes (Gyug 1998). No hibernacula of these species were found in the application area, although these snake species may occur in the application area uncommonly.

The current moderate use of the application area by wintering Mule Deer will likely continue in those areas not developed because these areas will maintain a common border and direct connectivity with Rose Valley Regional Park to the north.

6.0 ASSESSMENT of DEVELOPMENT and PROPOSED MITIGATIVE MEASURES

The development of Lots 1 and 2 as proposed by Rose Valley Ventures (Figure 2, bottom) is consistent with the Hillside Housing Guidelines of the Westside Official Community Plan (2005, Appendix B-1, Section 5.2.5). The steep forested slopes of Lot 2 that was scheduled as Open Space in the OCP will be gifted to the Regional District to become part of Rose Valley Regional Park.

Of the total areas of Lots 1 and 2 (7.4 ha), only 3.0 ha will be developed into single-family dwelling lots, with this development clustered into one area of Lot 1 rather than spread out throughout the entire area. The 3.0 ha of development includes the actual lot areas as well as sliver areas or very small areas between lots and roadways that will not remain in any natural state due to their small size and likely disturbance during construction. In total there will be 35 lots in 3.0 ha for a density of 11.7 units/ha in the developed area which is consistent with the OCP hillside guidelines of 12 units/ha. The total density averaged over the entire area of 7.4 ha is 4.7 units/ha.

The minimum lot size recommended in the Hillside Guidelines (OCP, Appendix B-1, Section 5.2.5) is 835 m^2 on land >10% in slope, which is most of the area considered for development in Lot 1. Lot sizes of the 35 proposed lots range from 455 m^2 to 752 m^2. It is not recommended that the development footprint be increased. Within the current development footprint (lots, roads and slivers of areas between lots and roads) it is not considered that any significant natural habitat will remain. Even if lot size were increased within the proposed development footprint, there would still not be any significant natural habitat remaining within the developed area. The decision of whether to allow small lots, or to allow fewer but larger lots within the same footprint, does not depend on any biological criteria in this instance since the developed area will be considered alienated habitat in either case.

In total, 60% of the Lots 1 and 2 area will remain undeveloped and will remain in a natural state (Figure 3). This includes not only the steepest slopes (Ecosystem Units PC and SP), but also shallow-soiled rock outcroppings (Ecosystem Unit PT) in the north-central part of Lot 1. Because of the relatively large proportion of this area that will remain in a natural state, no additional mitigative measures are proposed for the current development of Lot1 that have not already been considered in the text of the 1998 EIA (Gyug 1998).

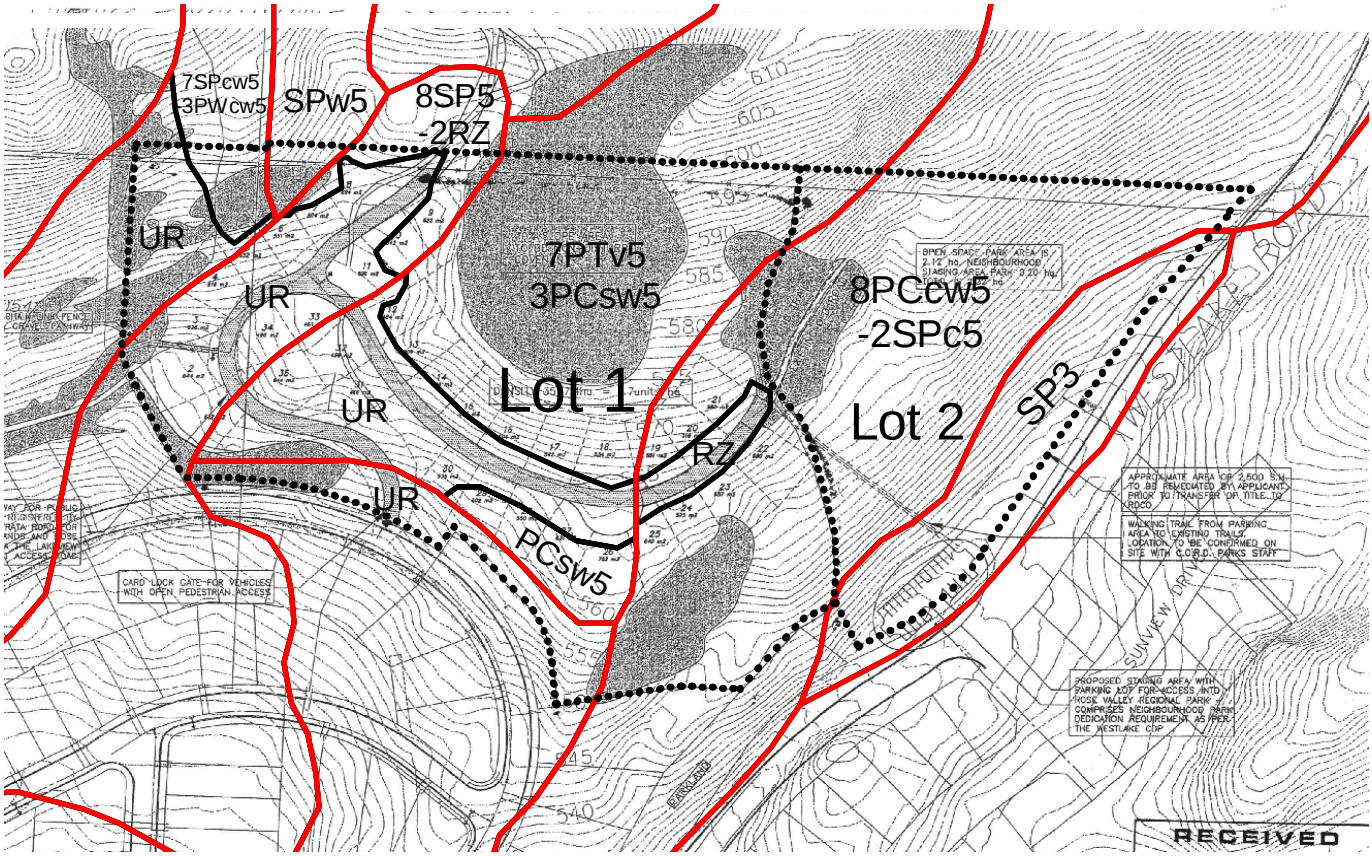

Figure 3. Terrestrial Ecosystem Units of Lots 1 and 2, northeast corner of Rose Valley Properties, based on Central Okanagan Terrestrial Ecosystem Mapping (Iverson and Cadrin 2003) as they currently exist showing the areas proposed for single-family hillside housing and roadways (which have already been roughed in for reservoir access and for water-main routing..

7.0 LITERATURE CITED

Iverson, K. and C. Cadrin. 2003. Sensitive Ecosystems Inventory: Central Okanagan 2000-2001. Volume 1: Methodology, Ecological Descriptions, Results and Conservation Tools. Technical Report Series No. 399, Canadian Wildlife Service, Pacific and Yukon Region, British Columbia.

Gyug, L.W. 1998. Environmental Impact Assessment of Proposed Subdivision and Development of Parts of Westlake Concept Development Plan Area, District Lots 503 and 1119, Osoyoos Division of Yale District. Prepared for Rose Valley Ventures Ltd., Kelowna, B.C.

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Regional District of the Central Okanagan. 2005. Westside Official Community Plan. Appendix B-1. Westlake Concept Development Plan.

8.0 PROJECT PERSONNEL

Les W. Gyug, B.Sc., M.Sc., is a Registered Professional Biologist with the College of Applied Biology of British Columbia. He has resided in the Westbank area since 1990. He specializes in inventory of vertebrate wildlife species including birds, mammals, reptiles and amphibians. He has worked on and contributed to ecosystem inventory projects throughout southern B.C. since 1981. Les was responsible for all aspects of this report.

This report was prepared on August 17, 2006, by:

(Original signed under seal of the College of Applied Biology of British Columbia)

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