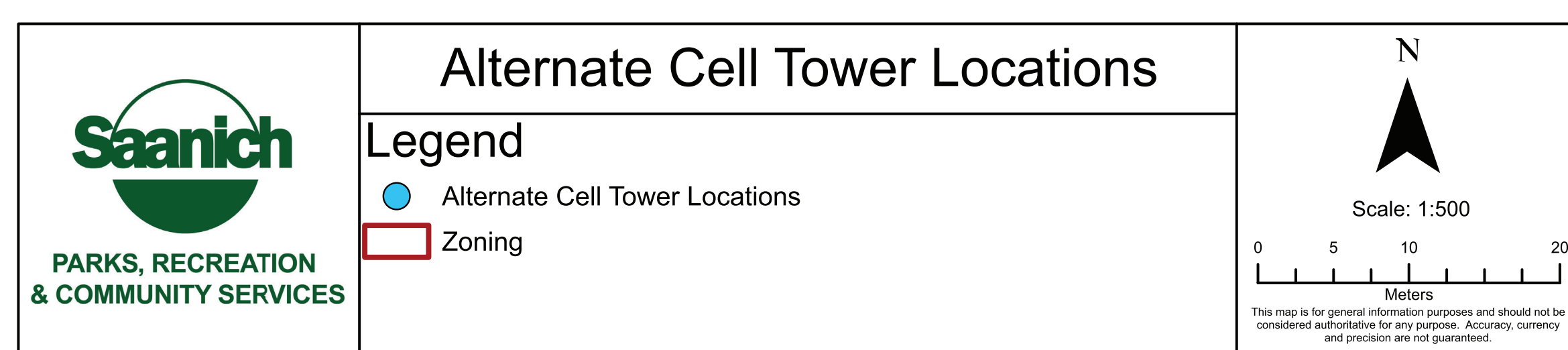


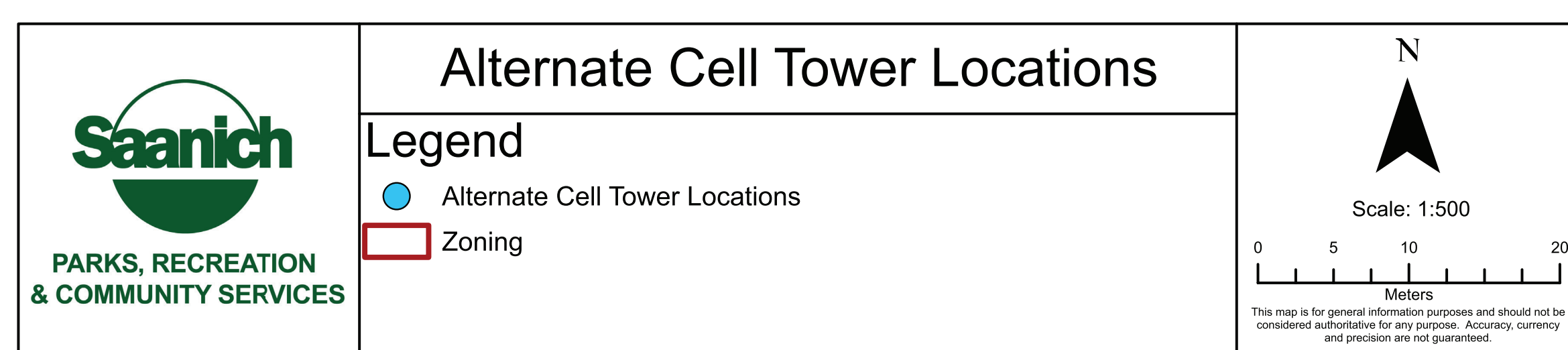
# PKOLS Tower Replacement



## A - New Tower Adjacent to Existing Tower

Environmental Considerations	Construction Considerations	Safety Considerations during Construction	Costs (subject to change)	Recreation and Viewscape Considerations
<ul style="list-style-type: none"> <li>» Removal of trees for road development construction.                             <ul style="list-style-type: none"> <li>▪ Minimum:                                     <ul style="list-style-type: none"> <li>▪ 5-6 semi-mature Douglas Fir</li> <li>▪ 1 Large multi stem Arbutus</li> <li>▪ 1 Garry Oak</li> </ul> </li> <li>▪ Possible:                                     <ul style="list-style-type: none"> <li>▪ 4 Garry Oak depending on conduit re-routing</li> </ul> </li> </ul> </li> <li>» Permanent removal of habitat</li> <li>» Area noted as potential habitat for six species or plant communities at risk.                             <b>Permanent impacts to this location:</b> <ul style="list-style-type: none"> <li>▪ Moss Elfin (<i>Callophrys mossi</i>)</li> <li>▪ Poverty Clover (<i>Trifolium depauperatum t.</i>)</li> <li>▪ Douglas-fir / Arbutus (<i>Psuedotsuga menziesii / Arbutus menziesii</i>)</li> <li>▪ Garry Oak / Ocean Spray (<i>Quercus garryana / Holodiscus discolor</i>)</li> <li>▪ Propertius Duskywing (<i>Erynnis propertius</i>)</li> <li>▪ Garry Oak / California Brome (<i>Quercus garryana / Bromus carinatus</i>)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>» Requires temporary access road to site for drilling and blasting machinery.</li> <li>» Drilling and rock blasting required for road and site preparation.</li> <li>» Park summit would be continuously closed for 6-9 months longer than other options due to equipment and construction techniques required.</li> <li>» Crane would be required to be barged in from the Lower Mainland.</li> <li>» Require geotechnical and structural Engineer report for cable placement.</li> </ul>	<ul style="list-style-type: none"> <li>» Create safe site for construction and future maintenance challenging.</li> <li>» Leveling of some surfaces for worker safety required.</li> </ul>	<ul style="list-style-type: none"> <li>» \$1,201,428.70</li> <li>» Create temporary access road for tower construction.</li> <li>» Decommission temporary road.</li> <li>» Increased crane costs. Barge crane from Vancouver as no crane large enough on Vancouver Island for this location.</li> <li>» Permanent tree removal (additional cost)</li> <li>» Further removal, restoration and tree replacement (Additional Cost)</li> </ul>	<ul style="list-style-type: none"> <li>» Similar visibility to existing viewscape.</li> </ul>

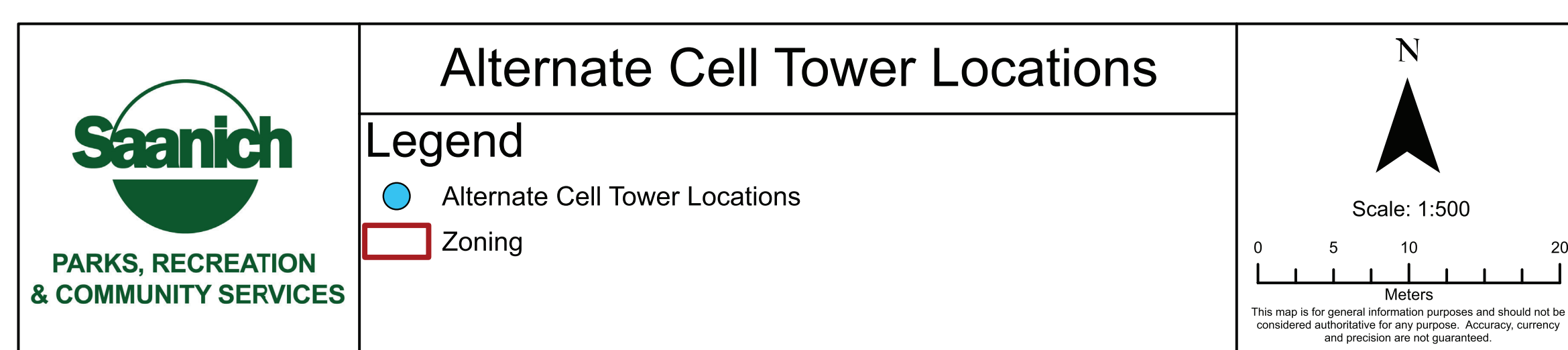
# PKOLS Tower Replacement



## B - New Tower Adjacent to Building at Top of Glendenning Trail

Environmental Considerations	Construction Considerations	Safety Considerations during Construction	Costs (subject to change)	Recreation and Viewscape Considerations
<ul style="list-style-type: none"> <li>» Removal of trees for tower base.                             <ul style="list-style-type: none"> <li>▪ Minimum:                                     <ul style="list-style-type: none"> <li>▪ 2-3 Garry Oak</li> </ul> </li> <li>▪ Possible:                                     <ul style="list-style-type: none"> <li>▪ 1 Douglas Fir</li> </ul> </li> </ul> </li> <li>» Removal native vegetation to accommodate new conduit route.</li> <li>» Area noted as potential habitat for six species or plant communities at risk. <b>Permanent impacts to this location:</b> <ul style="list-style-type: none"> <li>▪ Moss Elfin (<i>Callophrys mossi</i>)</li> <li>▪ Poverty Clover (<i>Trifolium depauperatum t.</i>)</li> <li>▪ Douglas-fir / Arbutus (<i>Psuedotsuga menziesii / Arbutus menziesii</i>)</li> <li>▪ Garry Oak / Ocean Spray (<i>Quercus garryana / Holodiscus discolor</i>)</li> <li>▪ Propertius Duskywing (<i>Erynnis propertius</i>)</li> <li>▪ Garry Oak / California Brome (<i>Quercus garryana / Bromus carinatus</i>)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>» Considered too close to communications building.</li> <li>» <b>Blasting and leveling a large area of surround rock would be required to support monopole base.</b></li> <li>» Smaller crane required</li> <li>» Less conduit needed to building (less signal loss)</li> <li>» Require geotechnical and structural Engineer report for cable placement</li> </ul>	<ul style="list-style-type: none"> <li>» Leveling of some surfaces for worker safety required.</li> <li>» Need to reroute or close Glendenning Trailhead and upper trail.</li> </ul>	<ul style="list-style-type: none"> <li>» \$933,770.70</li> <li>» Need to reroute Glendenning Trailhead (additional cost).</li> <li>» Further removal, restoration and tree replacement (Additional Cost)</li> </ul>	<ul style="list-style-type: none"> <li>» May result in loss of one or two parking stalls.</li> </ul>

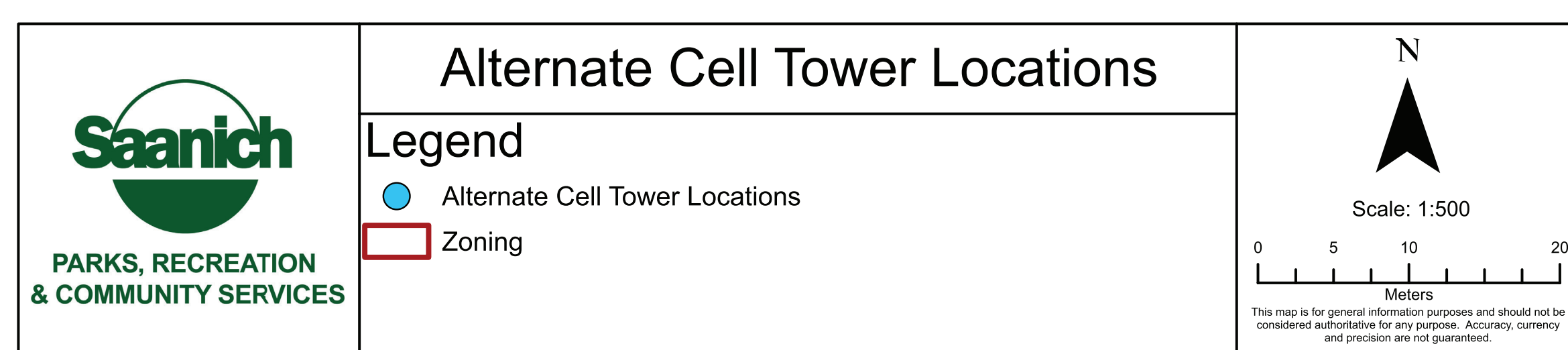
# PKOLS Tower Replacement



## C - New Tower on North Side of Building

Environmental Considerations	Construction Considerations	Safety Considerations during Construction	Costs (subject to change)	Recreation and Viewscape Considerations
<p>» Removal of trees for road development construction.</p> <ul style="list-style-type: none"> <li>Minimum:                             <ul style="list-style-type: none"> <li>1 Douglas Fir</li> <li>2 Garry Oak</li> </ul> </li> </ul> <p>» Some habitat loss, but likely less than Option A.</p> <p>» Area noted as potential habitat for six species or plant communities at risk. <b>Permanent impacts to this location:</b></p> <ul style="list-style-type: none"> <li>Moss Elfin (<i>Callophrys mossi</i>)</li> <li>Poverty Clover (<i>Trifolium depauperatum t.</i>)</li> <li>Douglas-fir / Arbutus (<i>Psuedotsuga menziesii / Arbutus menziesii</i>)</li> <li>Garry Oak / Ocean Spray (<i>Quercus garryana / Holodiscus discolor</i>)</li> <li>Propertius Duskywing (<i>Erynnis propertius</i>)</li> <li>Garry Oak / California Brome (<i>Quercus garryana / Bromus carinatus</i>)</li> </ul>	<p>» Considered too close to communications building. Blasting and leveling a large area of surround rock would be required to support monopole base.</p> <p>» Smaller crane required</p> <p>» <b>Blasting and drilling to create site and conduit.</b></p> <p>» Less conduit needed to building (less signal loss)</p> <p>» Require geotechnical report and Structural Engineer report</p>	<p>» Simple to secure site for safety.</p>	<p>» \$933,770.70</p> <p>» Further removal, restoration and tree replacement (Additional Cost)</p>	<p>» Removal of large Douglas Fir more noticeable from skyline</p> <p>» Tower not prominent in skyline.</p> <p>» May result in loss of one or two parking stalls.</p>

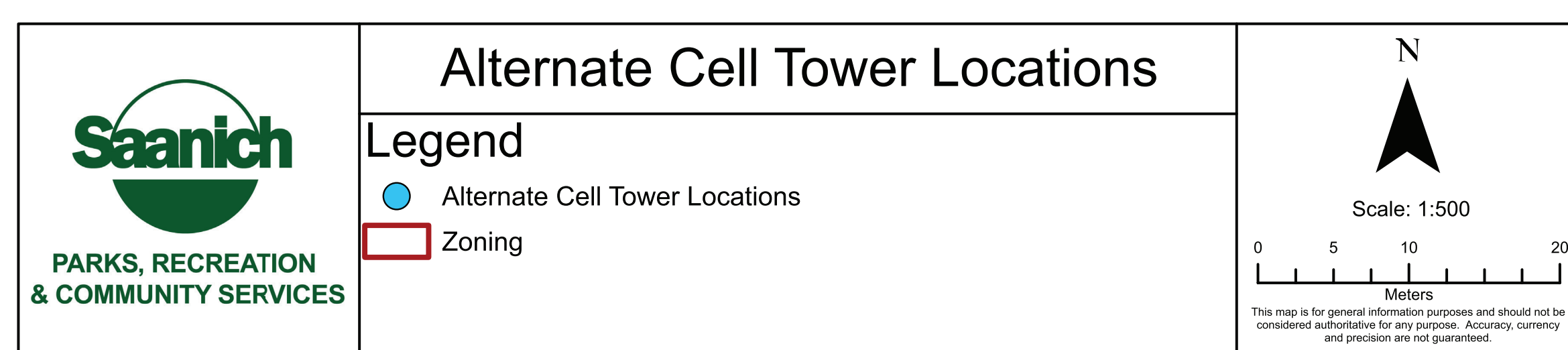
# PKOLS Tower Replacement



## D - New Tower Adjacent to The PKOLS Welcome Sign

Environmental Considerations	Construction Considerations	Safety Considerations during Construction	Costs (subject to change)	Recreation and Viewscope Considerations
<ul style="list-style-type: none"> <li>» Possible removal of Garry Oak</li> <li>» Possible pruning of Douglas Fir</li> <li>» Some habitat loss, but likely less than Option A.</li> <li>» Area noted as potential habitat for six species or plant communities at risk. <b>Permanent impacts to this location:</b> <ul style="list-style-type: none"> <li>▪ Moss Elfin (<i>Callophrys mossi</i>)</li> <li>▪ Poverty Clover (<i>Trifolium depauperatum t.</i>)</li> <li>▪ Douglas-fir / Arbutus (<i>Pseudotsuga menziesii / Arbutus menziesii</i>)</li> <li>▪ Garry Oak / Ocean Spray (<i>Quercus garryana / Holodiscus discolor</i>)</li> <li>▪ Propertius Duskywing (<i>Erynnis propertius</i>)</li> <li>▪ Garry Oak / California Brome (<i>Quercus garryana / Bromus carinatus</i>)</li> </ul> </li> <li>» Permanent impacts to location.</li> </ul>	<ul style="list-style-type: none"> <li>» Drilling and rock blasting required for site preparation</li> <li>» Smaller crane required</li> <li>» Parking lot disturbance for conduit.</li> <li>» <b>Some blasting and drilling to create site.</b></li> <li>» Require geotechnical and structural Engineer report for cable placement</li> </ul>	<ul style="list-style-type: none"> <li>» Simple to secure site for safety.</li> </ul>	<ul style="list-style-type: none"> <li>» \$817,770.70</li> <li>» Possible pruning and possible tree removal (Additional Cost)</li> </ul>	<ul style="list-style-type: none"> <li>» Need to relocate WSÁNEĆ sign and Charter rock.</li> <li>» Removal of large Douglas Fir more noticeable from skyline</li> <li>» Tower not prominent in skyline.</li> </ul>

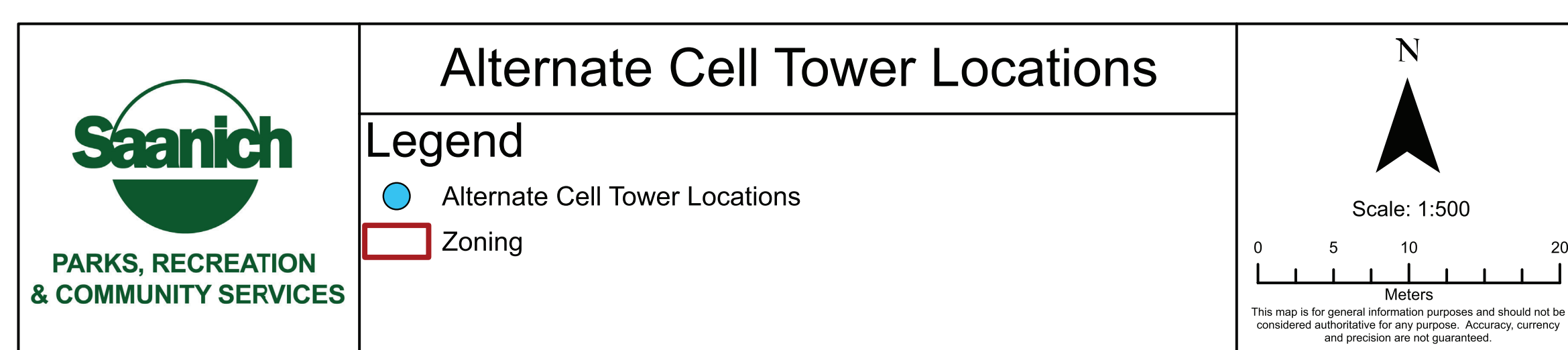
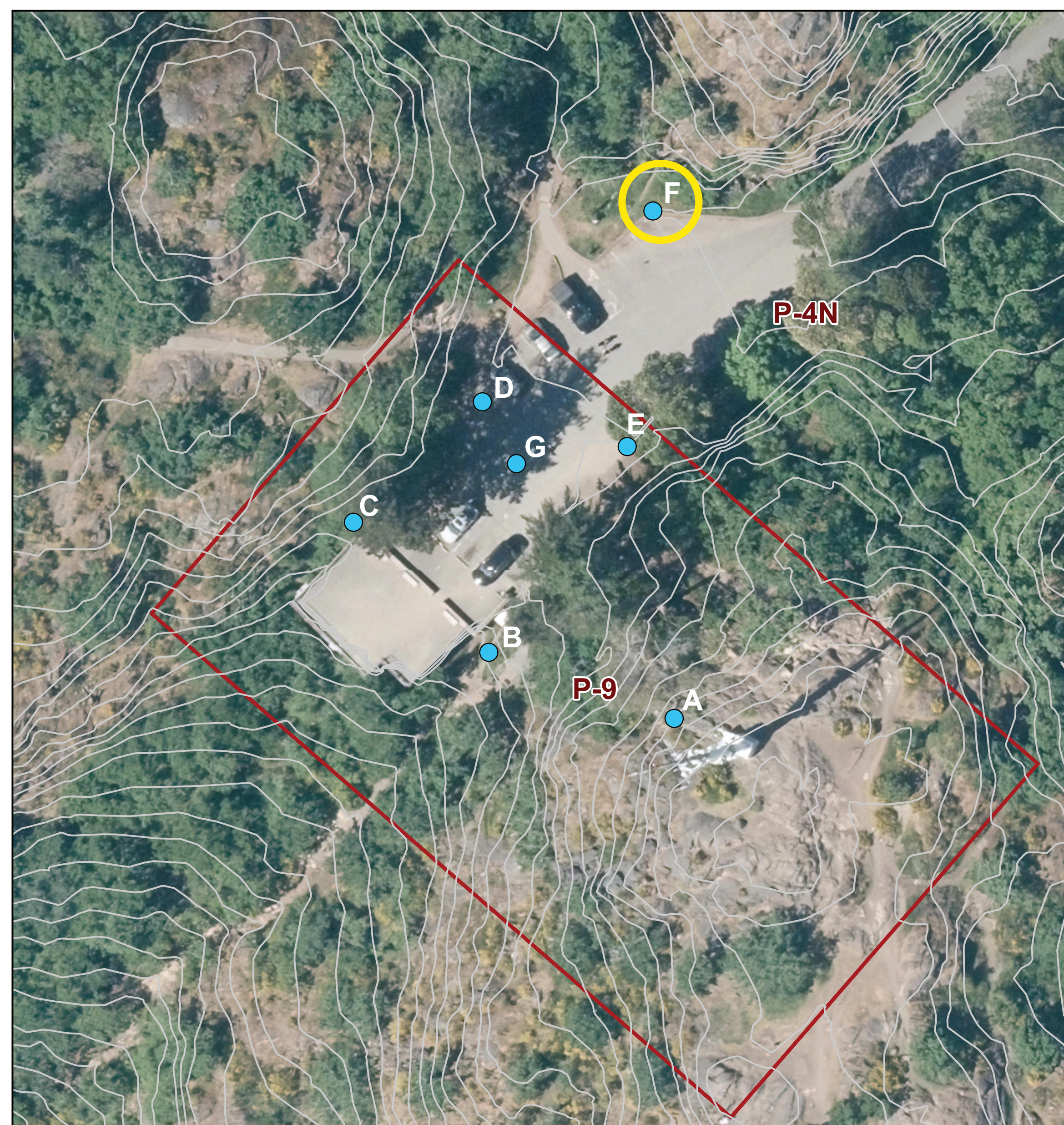
# PKOLS Tower Replacement



## E - New Tower Adjacent to Water Cistern

Environmental Considerations	Construction Considerations	Safety Considerations during Construction	Costs (subject to change)	Recreation and Viewscape Considerations
<ul style="list-style-type: none"> <li>» Removal of 1 Arbutus tree</li> <li>» Some native tree removals (Arbutus, possibly others) to allow for rock excavation.</li> <li>» Permanent habitat loss due to vegetation removal.</li> <li>» Area noted as potential habitat for six species or plant communities at risk. <b>Permanent impacts to this location:</b> <ul style="list-style-type: none"> <li>▪ Moss Elfin (<i>Callophrys mossi</i>)</li> <li>▪ Poverty Clover (<i>Trifolium depauperatum t.</i>)</li> <li>▪ Douglas-fir / Arbutus (<i>Psuedotsuga menziesii / Arbutus menziesii</i>)</li> <li>▪ Garry Oak / Ocean Spray (<i>Quercus garryana / Holodiscus discolor</i>)</li> <li>▪ Propertius Duskywing (<i>Erynnis propertius</i>)</li> <li>▪ Garry Oak / California Brome (<i>Quercus garryana / Bromus carinatus</i>)</li> </ul> </li> <li>» Permanent impacts to location.</li> <li>» Permanent removal of habitat</li> </ul>	<ul style="list-style-type: none"> <li>» Requires blasting for site preparation</li> <li>» Smaller crane required</li> <li>» <b>Blasting and drilling to create site and conduit.</b></li> <li>» Parking lot disturbance for conduit.</li> <li>» <b>May require parking lot closure during construction.</b></li> <li>» Require geotechnical and structural Engineer report for cable placement.</li> </ul>	<ul style="list-style-type: none"> <li>» Simple to secure site for safety.</li> </ul>	<ul style="list-style-type: none"> <li>» \$904,770.70</li> <li>» <b>Possible relocation of water cistern (Additional Cost)</b></li> <li>» <b>Tree removal (Additional Cost)</b></li> </ul>	<ul style="list-style-type: none"> <li>» Tower not prominent in skyline</li> </ul>

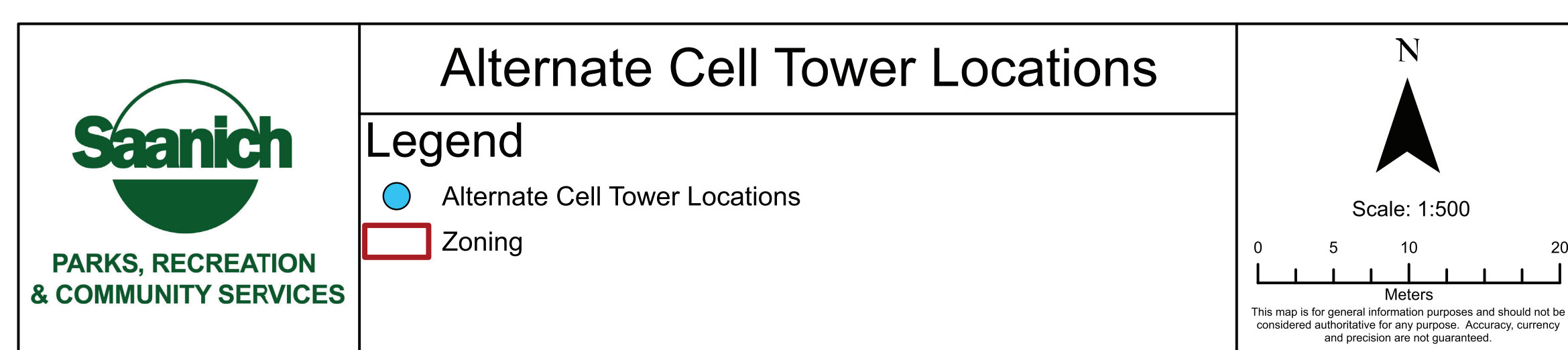
# PKOLS Tower Replacement



## F - New Tower Adjacent to Trail to Summit Lookout

Environmental Considerations	Construction Considerations	Safety Considerations during Construction	Costs (subject to change)	Recreation and Viewscape Considerations
<ul style="list-style-type: none"> <li>» Removal of two small Arbutus trees</li> <li>» Area noted as potential habitat for six species or plant communities at risk. <b>Permanent impacts to this location:</b> <ul style="list-style-type: none"> <li>▪ Moss Elfin (<i>Callophrys mossi</i>)</li> <li>▪ Poverty Clover (<i>Trifolium depauperatum t.</i>)</li> <li>▪ Douglas-fir / Arbutus (<i>Pseudotsuga menziesii / Arbutus menziesii</i>)</li> <li>▪ Garry Oak / Ocean Spray (<i>Quercus garryana / Holodiscus discolor</i>)</li> <li>▪ Propertius Duskywing (<i>Erynnis propertius</i>)</li> <li>▪ Garry Oak / California Brome (<i>Quercus garryana / Bromus carinatus</i>)</li> </ul> </li> <li>» Permanent impacts to location.</li> <li>» Permanent. habitat loss of native vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>» Too far from communications building. Would require pull boxes for cables.</li> <li>» Signal compromised due to cable distance too long</li> <li>» Drilling and rock blasting required for road, site preparation</li> <li>» Smaller crane required</li> <li>» Outside of P-9 zone requires rezoning of P-4N parkland</li> <li>» Some blasting and drilling to create site.</li> <li>» Parking lot disturbance for conduit.</li> <li>» Require geotechnical and structural Engineer report for cable placement.</li> </ul>	<ul style="list-style-type: none"> <li>» Simple to secure site for safety.</li> </ul>	<ul style="list-style-type: none"> <li>» \$904,770.70</li> <li>» Tree removal (Additional Cost)</li> </ul>	<ul style="list-style-type: none"> <li>» May require parking lot closure during construction.</li> <li>» May require rerouting of trail to summit.</li> <li>» Permanent loss of two or more parking stalls</li> <li>» Tower not prominent in skyline</li> </ul>

# PKOLS Tower Replacement

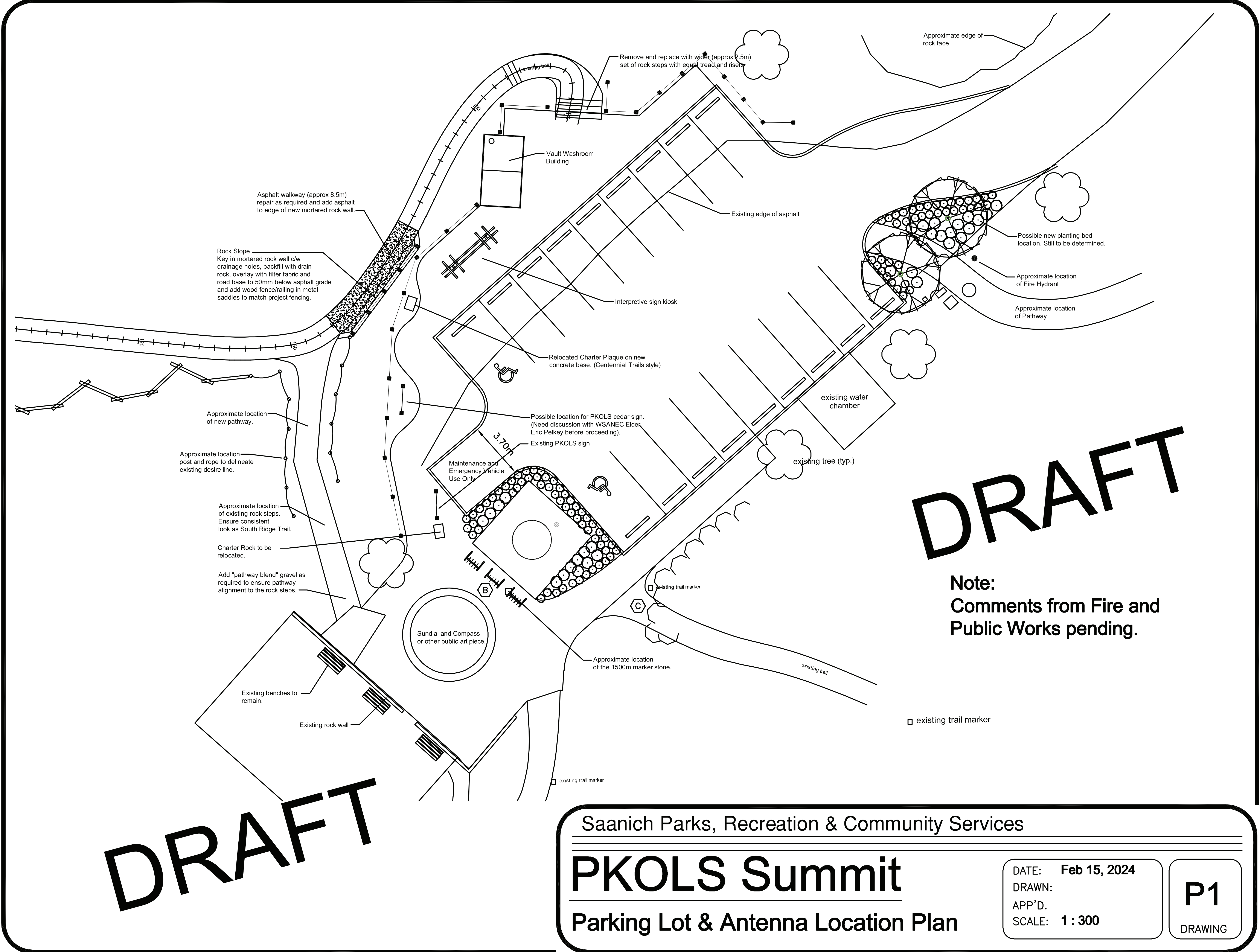


## G - New Tower in Parking Lot

Environmental Considerations	Construction Considerations	Safety Considerations during Construction	Costs (subject to change)	Recreation and Viewscape Considerations
<ul style="list-style-type: none"> <li>» No tree removal</li> <li>» No damage to habitat.</li> <li>» No impacts to species at risk as area is already disturbed.</li> </ul>	<ul style="list-style-type: none"> <li>» Require geotechnical and structural Engineer report for cable placement.</li> <li>» Smaller crane required.</li> </ul>	<ul style="list-style-type: none"> <li>» Simple to secure site for safety.</li> <li>» Future maintenance easier and safer.</li> </ul>	<ul style="list-style-type: none"> <li>» \$771,232.34</li> <li>» No restoration costs.</li> </ul>	<ul style="list-style-type: none"> <li>» Tower not prominent in skyline, including from lookout (large Douglas fir assists camouflage).</li> </ul>

# PKOLS Tower Replacement

## Parking



Saanich Parks, Recreation & Community Services

### PKOLS Summit

Parking Lot & Antenna Location Plan

DATE: Feb 15, 2024	<b>P1</b> DRAWING
DRAWN:	
APP'D:	
SCALE: 1 : 300	