Doug Barnes Cabin Expansion Design Evolution

March 1, 2016

Presenters:
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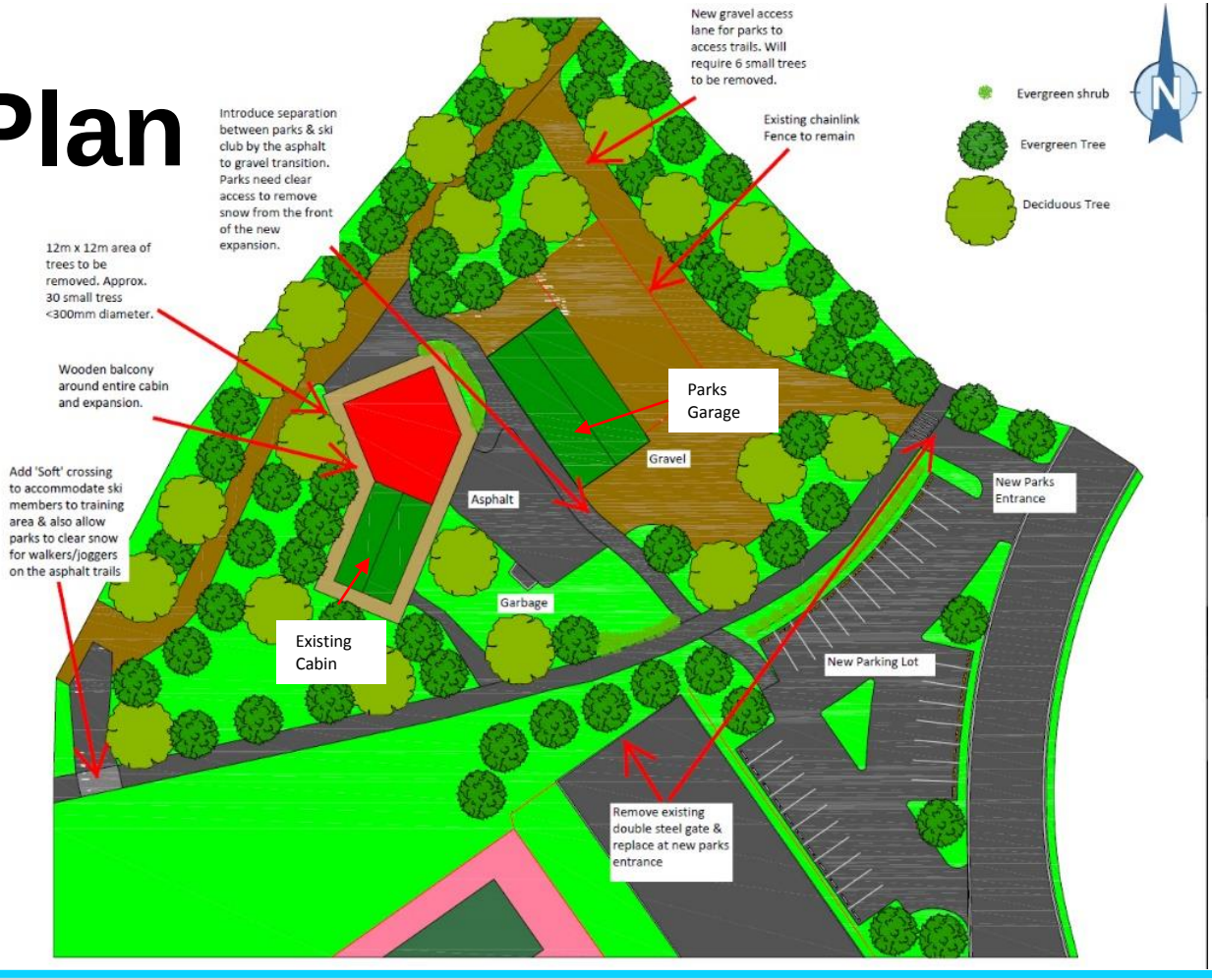
Site Plan


New gravel access lane for parks to access trails. Will require 6 small trees to be removed.
Existing chainlink Fence to remain
Introduce separation between parks & ski club by the asphalt to gravel transition. Parks need clear access to remove snow from the front of the new expansion.
12m x 12m area of trees to be removed. Approx. 30 small tress <300mm diameter.
Wooden balcony around entire cabin and expansion.
Add 'Soft' crossing to accommodate ski members to training area & also allow parks to clear snow for walkers/joggers on the asphalt trails
Parks Garage
Gravel
Asphalt
Garbage
Existing Cabin
New Parks Entrance
New Parking Lot
Remove existing double steel gate & replace at new parks entrance
Evergreen shrub
Evergreen Tree
Deciduous Tree
N

Sponsor Dept./User Requests

- Existing cabin to remain in same location, with the new expansion attached
- Wooden siding to blend with existing cabin and garage
- Walkout basement
- No internal stairs to basement
- Vestibule and enclosed external staircase to basement

Sponsor Dept./User Requests

(Continued)

- The cabin, new expansion, and basement are to serve as three separate units allowing for separate functions to occur simultaneously
- Storage room
- Design kitchen space into two areas – the scullery and the kitchen
- Wrap around balcony
- Large open space in basement

Site Challenges & Considerations

- Walkout basement – excavate 2.5m and tie in trails
- New parking lot for ski club will relieve parking constraints at the neighbouring YMCA facility
- Tree clearing before February 14, 2016, completed
- Unknown foundation of the existing cabin
- Excavating new basement situated close to existing cabin and garage
- Close proximity to 30m drop off/slope

Conceptual Design Drawings

Concept Design Challenges

While the Conceptual Design of the Doug Barnes Cabin Expansion was a good starting point, further Architectural and Engineering professional design reviews brought up these essential design flaws that needed to be addressed:

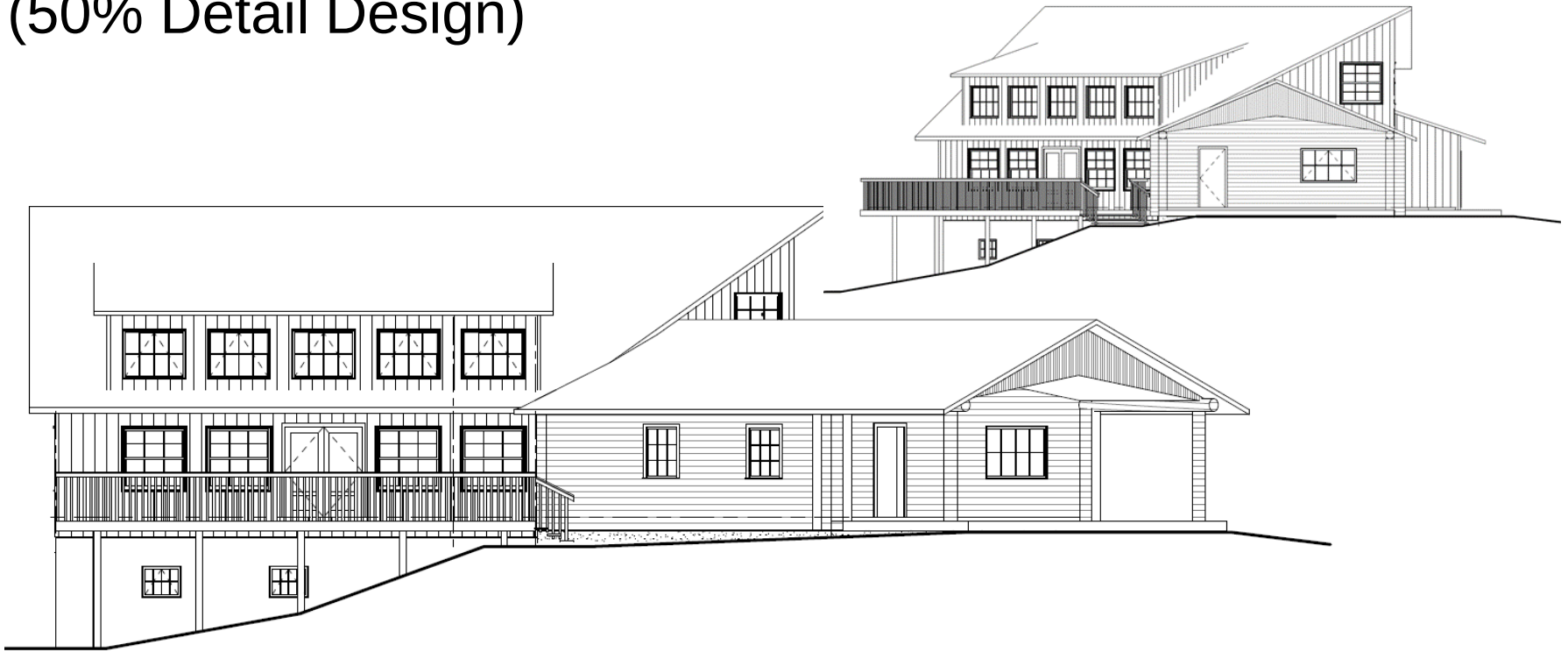
- Mezzanine area is too large – it would require a separate entrance
- Windows are too big and there are too many

Concept Design Challenges
(Continued)

- Siding cannot be matched to existing cabin. Will take away the cabin feel
- Spiral staircase to basement is not to code – not permitted
- Building is too close to garage – fire safety issue
- Expansion encroaches too far into the existing trail system
- Building height exceeds current LUB 99/059

Current Design Drawings

(50% Detail Design)



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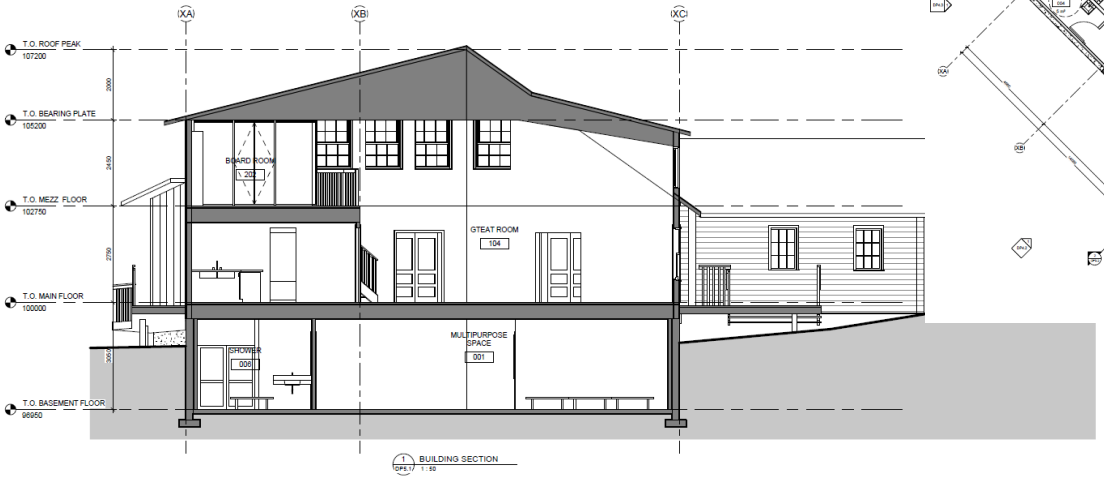
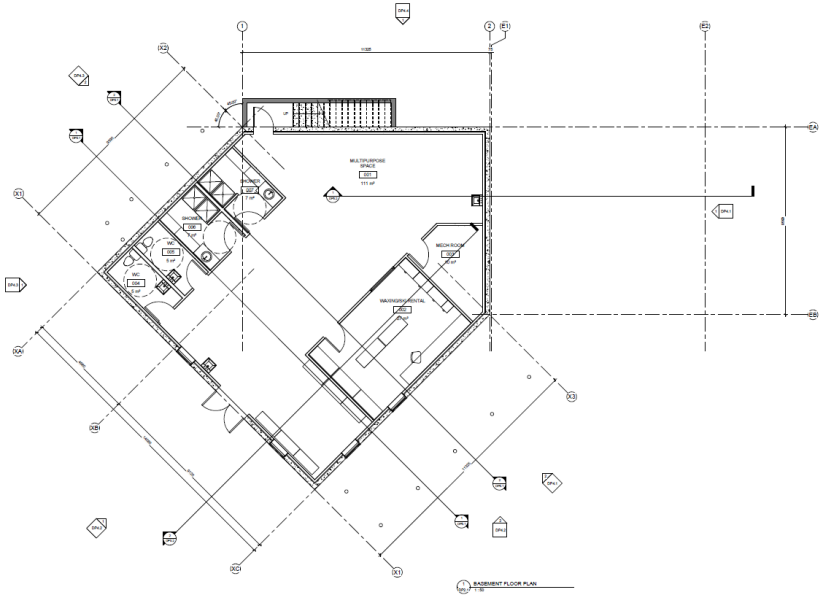




Estimated Construction Costs

(50% Detail Design)

Item	Cost
New Expansion & Cabin Upgrades	$1,764,358
Paved Parking Lot	$ 459,095
Subtotal	$2,223,453
Contingency (10%)	$ 222,345
TOTAL BUILDNG	**$2,445,798**
Approved Budget	$2,600,000

Estimated Cost of Ownership

Doug Barnes Cabin Expansion Total Cost of Ownership Estimate (40 year projection)

A	B	C	D	E	F	
Projected Capital Investment (predesign, design and construction). One-time fixed cost. (Construction $2.6M + Design $150K + Predesign $100K)	Cost of borrowing (Not applicable as fully funded by CIR)	Life Cycle Maintenance cost plus 2.0% inflation (compounded annually)	Indoor Operating Subsidy, plus 1.1% inflation (compounded annually)	Outdoor Operating Cost, plus 2.0% inflation (compounded annually)	Total Cost of Ownership(TCO) (A+B+C+D+E)	
2,850,000	-	39,000	150,000	52,000		
		(base year)	(base year)	(base year)		
$ 2,850,000	**$ -**	**$ 2,355,677**	**$ 7,486,111**	**$ 3,140,903**	**$ 15,832,691**	**Future Value**

Assumptions:

1) There are no borrowing costs associated with this project, fully funded by Capital Infrastructure Reserve (CIR).

2) 2.0% inflation used for the lifecycle maintenance cost

3) 1.1% inflation used for the operating subsidy.Lower inflation rate due to inflationary impact on revenue component

4) 2.0% inflation used for the outdoor operating cost

5) Life cycle maintenance cost estimated at 1.5% of $2.6M construction cost

6) Total Cost Ownership amount above is the inflationary costs over 40 years not Net Present Value(NPV)

Cost Savings of Current Design

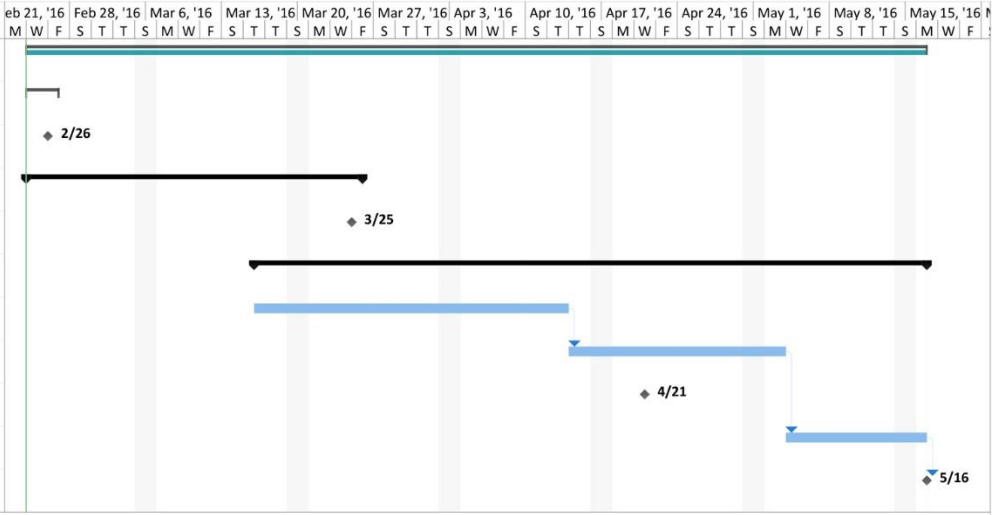
- Removed internal glass from Mezzanine
- Less exterior windows
- Excavation materials from the basement will remain onsite
- There will be no internal staircase to the basement
- More interior open space – less construction materials required

Moving Forward

- 100% of the design will be completed with the current layout
- The geotechnical report is completed, the foundation design is in progress
- Request for tender will be submitted by the end of March 2016
- The grading plan has been completed; trees have been removed

Schedule

ID	Task Name	Duration	Start	Finish
1	**Doug Barnes Cabin Expansion**	**59 days**	**Wed 2/24/16**	**Mon 5/16/16**
2	**Development Permit**	**3 days**	**Wed 2/24/16**	**Fri 2/26/16**
3	Submit DP	0 days	Fri 2/26/16	Fri 2/26/16
4	**Detailed Design**	**23 days**	**Wed 2/24/16**	**Fri 3/25/16**
5	95% design completion	0 days	Fri 3/25/16	Fri 3/25/16
6	**Preparation of tender documents**	**44 days**	**Wed 3/16/16**	**Mon 5/16/16**
7	Prepare tender contracts & drawings	21 days	Wed 3/16/16	Wed 4/13/16
8	Advertise on APC (Alberta Purchasing Connection)	14 days	Thu 4/14/16	Tue 5/3/16
9	Pre-bid meeting	0 days	Thu 4/21/16	Thu 4/21/16
10	Tender Evaluation Period	9 days	Wed 5/4/16	Mon 5/16/16
11	Award Contract	0 days	Mon 5/16/16	Mon 5/16/16



Project: Doug Barnes Cabin
Date: Wed 2/24/16

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline	
Split	External Tasks	Inactive Summary	Manual Summary	Progress	
Milestone	External Milestone	Manual Task	Start-only	Manual Progress	
Summary	Inactive Task	Duration-only	Finish-only		

Tentative Construction From June to November 2016

Thank You

Questions?