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Ragged Mountain
Camden Snow Bowl
Camden, Maine

March 29, 2013

Town of Camden
Camden Select Board
Camden, Maine 04843

Re: Camden Snow Bowl Redevelopment

Dear Members of the Camden Select Board,

There are a number of community members and avid skiers including myself who were skeptical when the Ragged Mountain Recreation Committee purchased a 1984 used Riblet chairlift several years ago from Shawnee Peak, to be installed at the Snow Bowl. Usually in ski area development, the first priority is to upgrade the lifts and the snowmaking on the mountain. With a redevelopment budget of \$6.5m, one would expect that installing a new chairlift to replace the 50 + year old lift would have been the top priority, especially since it will be the primary lift for the area, once the T-bar has been removed. I am not aware of any other area in this country, while upgrading their facilities, that has installed a 29 year old used chairlift as their primary and only lift on the mountain other than the beginner hill.


I, therefore, wanted to research the wisdom of this purchase by the RMRC. I called Ross Stevens, the engineer who prepared the 2010 report for rebuilding the Shawnee Peak lift, and Tom Sanford, a Doppelmayr representative. Ross Stevens was concerned as to how the lift has been stored over the past three years, which he said could effect some of the budget items he outlined in his report. He stated all the costs associated with rebuilding the chairlift and installing it needed to be updated since they are now three years old and could vary by more than 20% as to what was outlined in his report. Ross also noted that since the Riblet Tramway Company is no longer in business, the replacement parts will only have a very limited warranty if any at all and the lift itself will not have any manufacturer's warranty.

Tom Sanford is a vice president with Doppelmayr USA which is one of the premier ski-lift manufacturers in the world. Tom has been with the company for many years and is knowledgeable in all aspects of the industry. Tom is also the person Rick Knowlton contacted initially when they considered buying a new lift for the area. I presented a

series of questions to him in order to better understand the issues associated with buying a used lift versus installing a new one [see enclosed]. I believe Tom has been objective in his responses and would want to see the Town make an informed decision over the chairlift issue. It is now clear to me that it makes no sense economically or otherwise for the Town to install a Riblet lift that is no longer manufactured. Aside from all the potential problems that Tom Sanford has noted with a 1984 Riblet lift especially with the chair and grip assembly [see Questions 5 & 6], there is only an approximate 10% difference in the total redevelopment budget between the cost of a new lift versus using the 1984 Riblet lift. Also, of all the RMRC \$6.5m budget items, the chairlift is the only item that cannot be phased-in over time, like trail improvements, bike paths etc. if funds are not available for the entire project. Many of the proposed budget items to be implemented at the Snow Bowl should be reviewed again by the Select Board, since it has been over 5 years since the Town was presented the original proposal. I believe some of the items could be phased-in at a later date or eliminated all together. The balance of these funds could then be applied to a new chairlift. Based on the enclosed information, there is little doubt it is in the best interest of the Town to install a new lift at the Snow Bowl. If a new lift is installed, the Town will have the necessary long term warranties in place and can be assured of safe operation of the area for many years to come. I would propose that when and if the Select Board decides to have a public vote on the Snow Bowl redevelopment, the bond issue be specifically for the installation of a new chairlift.

I would appreciate the opportunity to meet with you at your convenience to discuss this issue in more detail.

Sincerely,


Stephen Smith, AIA

cc. Patricia Finnigan - Town Manager
Rick Knowlton - Chairman RMRC
Peter Gross - Chairman Building Committee
Paul Gibbons - ESQ
John Scholz - Architect
John Morris - Architect



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March 28, 2013

Stephen Smith
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Dear Stephen Smith,

Subject: Questions regarding the chairlift for the Ragged Mountain Snowbowl

I have provided answers to your questions of March 4, 2012 and they are as follows. I have tried to do my best to look at this project in the most unbiased manner possible. Other than Doppelmayr, there are lift manufactures that service the ski industry and have demonstrated the worldwide strength to be servicing our industry well into the future. I suspect they would address your questions in a similar manner.

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Questions concerning the purchase of the 1984 Riblet triple chairlift.

- 1. Since Riblet Tramway Company is no longer in business, what replacement equipment, terminal parts, etc. will be used to rebuild the chair as described in the letter from Stevens Engineering to Rick Knowlton dated June 29, 2010?**

Many of the fast moving parts such as sheave bearings, sheave liners, etc. are available from suppliers in trade magazines such as SAM (Ski Area Management). Other items like motor, motor controllers, planetary drives and gearboxes can be serviced by local machine shops. Chairs, grips, low voltage controls are lift specific and will need support from a qualified supplier with engineering certificates to back-up the products.

- 2. Is the budget and list of equipment and replacement parts listed by Stevens Engineering accurate? [see letter dated 5/26/10 to Jeff Kueller] Is there any warranty with the work?**

The budget list for Ross Stevens appears to be accurate but it was prepared in 2010 and should be updated. I would assume there are workmanship warranties from the installer. Any new or rebuilt equipment would likely be 30 days.

- 3. What is the opinion of Doppelmayr of the quality of a Riblet Chairlift compared to its own chairlift each being manufactured in 1984?**



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Both pieces of equipment were manufactured when the ski industry was in a strong growth period. Doppelmayr, equipment was more expensive, and geared to passenger comfort and long life of the product with galvanized components. The equipment was designed to a European standard that exceeded the ANSI B-77 standard at the time. Doppelmayr equipment was installed by Doppelmayr crews.

Riblet equipment was mass produced, less expensive and field fit with many welded connections. Riblet components that I have observed were not galvanized. Riblet equipment was sold without installation support. At the time, there was high demand for an economical lift to satisfy skiing's rapid expansion. Most of those Riblet lifts are no longer in service.

4. Explain the difference in design, quality, technology and longevity of a Doppelmayr Chair today from the Riblet Chair and the differences/changes in design since 1984.

ANSI B-77 is the standard that governs design and manufacturing of lift equipment is now on par with European standards. Many smaller lift manufacturing companies have failed due to shrinking market demand for new lift equipment and the increased design requirements of the standard. ANSI's rigorous requirements have put all lifts manufactures on a level playing field with respect to safety. Ski areas are now more inclined to pay for quality and support since the price is no longer as significant between Doppelmayr and other lift manufactures. Doppelmayr equipment has always been built to the highest quality and safety factors in its foundations, terminal structures, driveline, electrical equipment, towers, chair grips and chairs.

5. What is the life cycle of the 1984 Riblet Chairlift once it has been upgraded? Is the extent of the repairs as noted in the Stevens Engineering Report adequate or should there be additional work done on the chairlift?

I do not have a good answer for the life cycle question. Structural steel has a life cycle and I am not qualified to predict a failure scenario. My largest worry is the life cycle of the Riblet chairs and grips. The Riblet grip is attached to the rope by an internal clip. That internal grip design was only used by Riblet. All the grips need to be removed from the haul rope annually, inspected and reinserted. It is a design that has not been used on a new installation since Riblet went out business in 2003. The chairlift has been sitting since the lift was moved from Shawnee. All of the chairs will need to be inspected at the weld and bolted connections by non-destructive test methods and the wall thickness of the chair tubing will need to be tested for internal corrosion. Additionally, the aforementioned non-destructive testing will need to be accomplished and documented before the State of Maine, Tramway Division will certify the installation for public operation.

A destructive cycle test on the carriers is now required by ANSI B-77. This test has never been done on the Riblet chair design. The Riblet chairs were manufactured prior to this requirement being placed in the ANSI standard. All of the current manufactures of chairlifts need to destructive cycle test their carrier design and all current manufactures use an external grip that is attached to the haul rope by means of a hook and crossbow. The tension the grip maintains on the haul rope is accomplished by a spring pack within the body of the grip. Annual grip slip



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testing assures the spring pack is healthy and will achieve another season of operation. External grips are disassembled, cleaned, test and reattached to the chair and rope at a rate of 20% per year.

6. Please explain the annual maintenance and servicing issues associated with buying a 29 year old Riblet lift since they are no longer in business.

Annual maintenance will need to be rigorous as with any people carrying device. The Riblet towers and chairs are not galvanized steel and will require continual painting and maintenance. This maintenance would not be necessary if a new lift was purchased with galvanized chairs, towers, crossarms and sheave assemblies like the new Spillway lift at Sugarloaf. Again, my largest annual maintenance concern is the condition of the chairs and grips. If any of them begin to show signs of fatigue, then they are all suspect for failure. There is not a good alternative for replacement chairs and grip. I know of no manufacture that would want to accept the product liability of the entire Riblet lift by installing and certifying a modified chair and grip design to work on Riblet sheave assemblies and bullwheels.

7. What are the disadvantages of trying to repair and replace the equipment on the 1984 Riblet Chairlift?

Driveline parts can be repaired or replaced. It is the line equipment (chairs, grips, sheave assemblies) that will be problematic. The only parts I know of for replacement are some other ski area's retired equipment. Because of this, it can often take time to get the replacement parts, the parts must be a direct replacement part to maintain the integrity of the critical mechanical and electrical components or there is also the possibility of an insurance/liability issue for the area when using non-compatible parts.

8. Why was it advantageous for Shawnee Peak to buy a 25 year old Doppelmayr Chair from Loon Mountain and not for the Camden Snow Bowl to buy a 29 year old Riblet Chairlift from Shawnee Peak?

Shawnee bought the used lift from Loon to replace the Riblet because of customer complaints. The ride to the top was too slow; there were too many stops and slows from configuration and narrowness of the Riblet chair and the ride was uncomfortable. The lift from Loon has chairs that are like Shawnee's Doppelmayr CTEC Quad and Sunnyside lift. They are wider at the shoulder and easier to load with fewer resulting stops and slows. Shawnee's Doppelmayr replacement lift runs at 500 feet per minute rather than the 400 to 425 FPM of the Riblet with fully loaded carriers, minimal stops and slows because of the wider (71" vs 62" at the shoulder, 60" vs 55" at the seat) more comfortable chair and a loading conveyor.

9. Is there a difference in the installation cost of the Riblet Chair versus a new Doppelmayr Chair? [see letter 5/18/10 Stevens Engineering to Jeff Kueller] The installation costs as outlined appear to be low?



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A new Doppelmayr lift should cost about the same to install as the Riblet. Keep in mind that in addition to installing the Riblet, there are all the costs associated with upgrades and repairs described in correspondence from Stevens engineering. These figures in the Stevens report were prepared in 2010 and need to be updated.

Doppelmayr would bring in our crew from either Salt Lake City, UT Harman, WV or Woodstock, NH, and would provide a design/ build installation of a Doppelmayr lift to your specifications with a warranty for the work and equipment.

10. Please advise the Town of Camden on why it is more economical in the long run to buy a Doppelmayr Chairlift instead of trying to repair a 1984 Riblet Chair. Are there any price incentives available?

I believe the incentive for a new piece of equipment is the life expectancy of the equipment purchased, needs to meet your long term goals of Ragged Mountain. If the intention is to purchase another used lift when the Riblet's grips and chairs ultimate fail or to consider using Ragged Mountain for activities other than skiing in 10 or 15 years, then a used lift might make sense. If the plan is to revitalize the ski area and to have skiing serviced by a reliable lift for the next 40 to 45 years, I believe the choice is to buy new. I am updating my lift equipment pricing with our engineering department in Salt Lake City, and will get you a proposal as soon as possible for you to compare costs. Doppelmayr offers a 2 year / 2400 hour warranty on all of our equipment and have 24 hour service for the repair and maintenance of all our lifts equipment.

The other important issue to consider is long term product liability of a lift purchased from and existing manufacture with history and diversification. Doppelmayr being the largest cable conveyance company in the world has excellent product liability coverage for all the lifts that are part of our product family.

A major issue for the Camden Snow Bowl to consider is that the 30 year old rebuilt Riblet chairlift will be the only lift that will service the ski area other than a small beginner lift. If there are problems with the lift in the future, there could be substantial down time in the operation of the area if certain parts are not readily available. I am personally not aware of any other ski area that has installed a 30 year old rebuilt lift as the primary and only lift to service the mountain.

Best regards,

A handwritten signature in blue ink that reads 'Thomas Sanford'.

Thomas Sanford
Doppelmayr USA
Vice President of Sales