City of Duluth
Planning Division

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MEMORANDUM

DATE: November 4, 2016

TO: Planning Commission

FROM: John Kelley, Planner II

SUBJECT: Spirit Mountain Recreation Authority Master Plan Update

The City of Duluth has contracted with Ecosign Mountain Resort Planners Ltd. to complete a Master Plan Update for the Spirit Mountain Recreation Area (SMRA). The plan will be updated by the planning staff with support from Ecosign. In 2008, Ecosign completed a report entitled Spirit Mountain Master Plan Preferred Concept. The City then finalized and adopted the Spirit Mountain Recreation Area Master Plan which included the preferred concept. Since then, SMRA has installed a number of the additional recreation activities and facilities outlined in the approved Master Plan, with the most notable being the expansion of mountain bike activities. SMRA and the City would now like to update the Spirit Mountain Recreation Area Master Plan to reflect the facilities already installed and to provide a guideline for future development and fiscal planning for SMRA. Ecosign has been asked to assist the City in completing this task by undertaking the work below.

- Update the Existing Facilities Maps
- Review and analyze the regional demographic profile and how it relates the SMRA model
- Review and report on the state of the ski resort market and the current SMRA business model.
- Analyze integration between the upper and lower base areas and the consideration of a roadway needed to link them.
- Analyze parking capacity to support both the upper and lower base area facilities.
- Review and assess design scenarios for the lower base area and provide a summary analysis of the state of resort market, and recommendations on most favorable scenario, or modified/hybrid scenario. Consider whether the lower area base scenarios are feasible and will they serve SMRA's mission in the context of market trends in the ski resort industry and multi-season recreational interests.

The Ecosign team is currently working on the facilities map, which includes the existing structures and lifts, mountain bike trails, the new zip line, alpine coaster, disc golf course and pump house. The map also contains all existing recreational trails, proposed trails and the proposed Nordic center. Ecosign is also currently working on the demographic profile of the area and market trends within the ski industry and how these relate to the SMRA business model. Ecosign will also take into consideration the proposed Tallus Island Paddle Center and

Kayak Bay development, and how these nearby facilities will interrelate with traditional recreation activities at SMRA.

The planning analysis began in September and is expected to be completed and approved by City Council in January of 2017. Ecosign and City staff are working closely with the SMRA Board and other relevant stakeholders. A public meeting will be scheduled in December to seek input on the information gathered and mapping completed to date. Approval of the Master Plan update will require action by the SMRA Board, City Parks Commission, Planning Commission, and Council.

Spirit Mountain Master Plan:

Mission, Objectives, & Vision / Understanding of Situation & Framework for Action / Master Plan Concepts & Implementation

Version: 6/30/08

Mission.

Mission statement from Minnesota Laws, 1973, Chapter 327 (section 1, mission):

> The purpose of this Act is to facilitate the development of a land area with the following objectives:
>
> - The development of wide-range recreational facilities available to both local residents and tourists;
> - The aiding of the economy of northeastern Minnesota by encouraging private enterprise efforts in conjunction with the recreational facilities; and
> - The preservation of the environment in the area by a timely and intelligent plan of development.

Objectives.

The Spirit Mountain Recreation Area will measure its success in satisfying its mission by the following:

- Provide recreational opportunities available to and accessible by all potential users, local residents and tourists alike.
- Maintain and enhance winter revenues, and, increase revenue generation in spring-summer-fall seasons.
- Revenues cover annual operating costs and maintenance and upkeep of facility. Substantial necessary improvements to the area are covered through established, legislated lodging and food and beverages taxes in which Spirit Mountain is specifically named, along with grants, local and state support and partnerships.
- Increase SMRA's regional economic impact in terms of total tourism dollars generated, enhancement of other regional attractions, and amount of spin-off private sector development.
- Sustained land base, its ecological functions, and its cultural features.

Vision.

The Spirit Mountain Recreation Area will achieve its mission by being:

- A premier four seasons outdoor adventure recreation center, recognized for its unique, multi-faceted recreation facility that meshes mountain terrain, Lake Superior experience, and semi-wild river access, and, accredited as a sustainable "green" facility and operation.

Understanding of Situation.

The following summarizes the team's understanding of the environment within which the master plan is being prepared.

Topic		Situation	Commentary
Market Related	Winter Dominance	Winter revenues dominate SMRA's budget. But, skiing and snowboarding markets are flattening out. Nordic can be expanded but revenue potential is low. Most likely growth market is tubing and associated activities. This will attract an entirely new market demographic to SMRA with much of it coming from Duluth and immediate area.	For skiing and snowboarding the objective is to retain market, and, position for possible growth. Investments should create efficiencies in all aspects of operations in order to reduce costs and increase profitability within existing level of patronage. Investments in Nordic should enhance and slightly increase usage but must recognize limited financial return. Tubing is where investments can generate increase customer base and generate profits.
	Private Development	Private development on or adjacent to SMRA will require year-round activity level to warrant investment.	SMRA does not control private decisions, but can help create the market to support this investment, and, offer itself as a partner.
	Summer Activity	Catering / banquet business is substantial but still far less than winter revenues. Outside of tubing, summer activities are the only possible areas to explore for substantive new market development and revenue expansion.	Investments should be oriented to expanding multiple event capacity, and, increase operating efficiencies so as to reduce costs and increase profitability. SMRA must undertake experimental stance on finding the right mix of summer activities that match site's features and image, and, generate revenues capable of covering investment and operating costs.
Physical Plant	Lifts	Lifts are obsolete, not flexible and require a substantial labor investment.	Must be replaced. Flexible systems needed for both winter and summer use. Seek to maintain or expand capacity with fewer, better-situated lifts.
	Snowmaking	Inadequate or unreliable water supply, and, a 35-year-old distribution system cannot guarantee that slopes would be open for key holiday ski times.	Situation must be corrected through a new and expanded system with water source being either via the Cloquet water line on property, or, new direct intake water line from St. Louis River.

Topic		Situation	Commentary
	Chalet	Wood framed construction facility has significant amount of Deferred Maintenance and Betterment upgrade requirements particularly the Building Exterior/Envelop and Interior Systems including Toilet Rooms. The facility design is long and linear. Functional conflicts exist due to multiple entrances. Main skier entrance conflicts with the directly adjacent Shipping/Receiving and Trash/Refuse area. Interior arrangement of spaces for skiers is not efficient. Food Service preparation location is not convenient to the spaces it serves.	Remodeling and reconfiguring existing structure is deemed more fiscally viable and appropriate than building new. Improved external and internal flow will make hill more attractive to retain and expand current markets. Improved flow needed to increase capacity and efficiencies and reduce costs for catering/events. New food service preparation kitchen, ideally located within chalet, is critical to building function and success.
	Parking & Customer Flow	There are enough parking spaces but they are not strategically located close to chalet. Insufficient parking at base of hill. Due to multiple building entrances there is inefficient flow of customers from parking to use areas.	Insufficient and/or inefficient parking will reduce attractiveness of site, and, potentially, loss of revenues.
	Base of Hill	No structure capable of acting as second entrance to hill.	Multi-functional structure is needed if year-round hill activity is to be supported, and, if tubing hill is to be developed.

Topic		Situation	Commentary
	Misc. Buildings	Maintenance building has significant deferred maintenance and betterment upgrade requirements, does not meet current space needs, and is improperly located in middle of ski runs Campground control/Nordic building is old and not conveniently located. The Nordic parking area is inadequate. Campground shower buildings are old, one is located in low lying area with possible drainage issues, and neither meet functional requirements due to inadequate amount of toilet fixtures and showers.	These conditions do not necessarily impact revenues, but, they detract from the overall functionality of the facility, and, contribute to a sense of an older, resource-strapped operation. An improved campground / Nordic center and Mountain Villla building is important to enhancing both profit centers.

Further, it is understood that Spirit Mountain was designed from the beginning, and remains so today, a facility intended to generate regional economic impact. To accomplish that mission, Spirit Mountain has foregone opportunities such as large-scale on-site lodging that could significantly boost its revenues and internal profitability. In exchange for not pursuing such opportunities, the Mountain has received limited financial support from the state and city. The City's contribution comes from specially legislated lodging and food and beverage taxes generated, in good part, through the presence and activities of Spirit Mountain. General fund tax dollars do not support the operation. While Spirit Mountain historically has generated revenues sufficient to cover operating expenses and most day-to-day maintenance costs, external financial support is essential to underwriting its physical plant. The stated Objectives reflect this financial relationship, which is critical to the facility's ongoing success.

Framework for Action.

All actions proposed for inclusion in the master plan will be consistent with the Vision, make progress toward the Objectives, and lie within the boundaries of the legislated Mission. Actions will be grouped into three broad categories:

- Actions that increase the efficiency of existing operations and thereby reduce operating costs.
- Actions that either generate new streams of net revenues, or, enhance generation of revenues at existing profit centers.
- Actions that do not increase efficiency or generate new net revenues but that otherwise contribute to the achievement of the facility's mission as measured by one or more of the stated objectives.

Master Plan Concepts.

A set of core concepts forms the structure for the master plan. These concepts indicate the strategic direction to be taken by Spirit Mountain and provide the rationale for the suite of implementing actions.

Enhanced Alpine Ski / Snowboard Focus

Alpine skiing and snowboarding have been and are, for the foreseeable future, the core, identifying activities at Spirit Mountain. The majority of existing infrastructure is designed to serve these activities, they generate the bulk of the facility's revenues, and they represent the best sources of enhanced on-going revenues. The key concept for this plan is to build upon this base by enhancing the attractiveness of the facilities serving these activities, and, undertaking physical

and programmatic improvements to better serve this market and thus encourage greater participation.

Family-Oriented Multi-Activity Center

It is a priority of Spirit Mountain to extend its capacity to meet the year-round recreational desires of families and to improve its physical integration into Duluth, especially the western neighborhoods. To this end, Spirit Mountain proposes the creation of a multi-faceted, family-oriented activity center at the base of the mountain. During the winter, a tubing hill will be the central attraction; it will be joined by other outdoor activities to create a colorful, fun-filled family-oriented recreation area. In the summer, a blend of warm-weather activities will occupy the site.

Expanded Year-Round Activity

Spirit Mountain intends to assert its image as a year-round outdoor adventure center by creating new trails on the property and connecting to regional trail systems, establishing itself as a trail system activity and service center, introducing summer time activities such as mountain bike trails, upgrading its campground and adding RV camping, enhancing its Nordic trail system, and exploring such concepts as downhill zip lines, alpine coasters, and kayak/canoe programs on the St. Louis River.

Importance of Trails

Trail systems at Spirit Mountain provide free or low-cost recreational opportunities for residents and visitors. They also offer uses access to areas for enjoyment of the scenery and appreciation of the environmental features of the landscape.

Trails can help integrate Spirit Mountain with regional systems such as the Superior Hiking Trail, Munger Trail, and the Western Waterfront Trail. Trails can also be used to connect Spirit Mountain with other area attractions such as the Duluth Zoo and Lake Superior & Mississippi Railroad.

As part of its year-round programming, Spirit Mountain intends to position itself as a center for trail access, activity, and service.

Efficiency and Flexibility

Much of Spirit Mountain's infrastructure is 30 years old. Replacing this outmoded equipment and systems with 21st century technology will increase productivity, reduce costs, create a more pleasurable experience for users, and offer flexibility for handling a variety of year-round activities on the mountain. Among the key improvements are: a new snowmaking system, redesigned and reconfigured chairlift systems, a reconfigured and upgraded main chalet, new lift ticket handling system, and redesigned parking lots.

Private Development

Sprit Mountain supports and encourages development on private land adjacent to the mountain especially development that provides lodging for mountain users and generally enhances the area as a desirable destination for visitors. In particular, Spirit Mountain encourages development at the base of the mountain, which development would strengthen Spirit Mountain's connections to western Duluth neighborhoods and enhance connections to the St. Louis River.

Forested Land Base Management

A considerable portion of Spirit Mountain's land base is relatively undeveloped high value forested land. This land has inherent ecological values, contains historical-cultural features, and contributes to the overall attractiveness of the facility. Sustaining these values is critical to Spirit Mountain's ongoing success. Undeveloped land above Skyline Parkway was not included as this plan anticipates preservation of the majority of the forested land with the exception of limited expansion of the campground and Nordic trails.

American Indian Cultural Values

Spirit Mountain has spiritual value to the regional Ojibwe, who view the mountain as a sacred component of the Ojibwe's westward migration. While the entire mountain may be considered sacred, particular areas at the peak are of greatest concern. If anything is to be done to provide access, identify areas, or create amenities for this area, it will be only done as a fully cooperative venture with regional Ojibwe.

Sustainable / Green Development

Integral to the design and implementation of this master plan is the concept of sustainable development. This concept is reflected in a desire to minimize the expansion of the footprint of existing development, to redevelop existing structures and use areas, implement energy efficiencies in design and operations, secure a snowmaking water supply that does not use treated water, use of pervious parking lot surfaces, and creation of surface water runoff control structures.

Master Plan Implementation Actions.

Spirit Mountain will undertake the following major actions to implement the master plan.

Realigned and Upgraded Chairlifts

- Replace aging equipment that is nearing the end of its useful life span.
- Use high capacity lift systems to reduce the number of operating lifts and increase the operating efficiency of the facility.
- Increase the number and quality of beginner lift systems to increase the desirability of the facility for first time beginners' skiers and school groups.
- Implement a lift ticket scanning and card access system.

Enhanced Snowmaking System

- Increase snowmaking capacity from 2,700 gpm to 6,000 gpm, and, additional snow sticks to augment snow guns will increase coverage and reduce operating cost. System is to be capable of supporting Snocross event, expanded ski runs, and future tubing/Nordic areas. System is to be capable of insuring SMRA is fully open for skiing by the December holiday week each season.
- Install new pumping package and pump house to replace 35-year-old system.
- Replace Duluth City water with either Cloquet pipeline water or water directly out of the St. Louis River.

Grand Avenue Development

- Develop 8-lane tubing hill serviced by "moving carpet" lift system.
- Develop year-round children/family adventure play area.
- Construct a base-of-the-hill service chalet to serve tubing hill and, provide year-round access to hill for users, mountain bike rental, mountain bike terrain park and associated activities, provide secondary ski/snowboard rental facility, food service area, and resting/warming space.
- Expand parking and create improved entrance and DTA access point. As this will necessitate removal of the existing soccer field, SMRA will initiate actions with the City to relocate the field to another West Duluth location.

Renovate Existing Chalet

- Create new "monumental" entrance at north end of chalet convenient to the expanded parking area, with an improved drop-off/pick-up area. Entrance to include expedited ticketing to facilitate directed flow of users.
- New entrance to separate skier entrance from shipping/receiving and trash/refuse areas.
- Develop use nodes / plazas along east side of chalet to link interior and exterior spaces and break up linear flow of the chalet.
- Develop new prep kitchen, central food storage, beverage service, and ware washing facility centrally located on second floor. Satellite serving kitchens are to be located on other floor levels.
- Reconfigure banquet rooms to provide more flexible space.
- Create a new bar/lounge and restaurant on the lower level below the Moosehead Lounge for convenient skier use. This will allow flexible alternative use of the Moosehead Lounge for banquets and special events during the winter season.

- Space functionality reorganization to improve flow for users (e.g., ski rentals, lockers, booting area, children's program space, etc.).
- Upgrade existing chalet to address deferred maintenance and betterment needs including toilet facilities and accessibility issues.

Improved Camping, Parking, and Nordic Areas

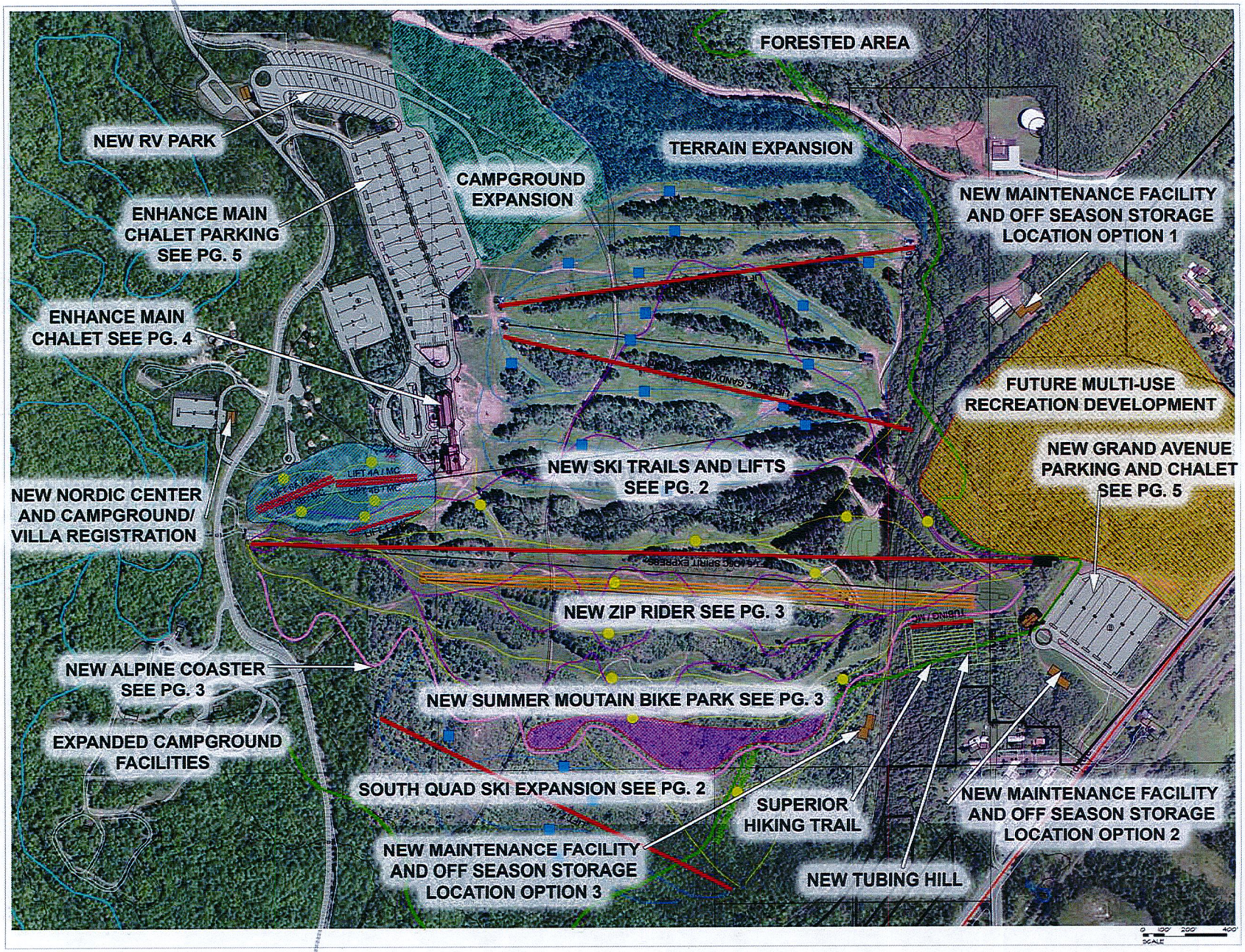
- Redevelop and reconfigure top of the hill parking to be more convenient for users and within a comfortable skier/snowboard walking distance of the facilities.
- Relocate drop-off area, reconfigure bus unloading/loading area, and create VIP parking area.
- Develop fully serviced RV camping area at top of hill convenient to chalet and campground service building.
- Upgrade existing campground service building so as to serve campground, Nordic ski area, and villa rentals.
- Add new camping area with rental cabins, "yurts", and tenting spaces.
- Establish short, lighted trail loop, possibly with snowmaking capacity, for Nordic trail system.

Summer Facilities

- Install new recreational summer facilities such as a zip line ride, mountain biking trails with lift access, disc golf, and mountain bike terrain park.
- Install alpine slide/coaster to expand summer market and further utilize the lift and lodge facilities for a longer portion of the year.
- Integrate use of both upper and Grand Avenue facilities to provide and support summer activities.
- Create new hiking trails across the property and connecting with the Duluth Zoo and Munger / Western Waterfront Trails.
- Spirit Mountain will work cooperatively with the Superior Hiking Trail Association to minimize impacts to the Superior Hiking Trail that may result from expansion or new development.

Other Actions

- Explore cooperative promotion with other western Duluth tourism attractions especially related to enhancing non-winter traffic and revenues.
- Work with Nordic ski users to develop major Nordic events.
- Devise a management plan for the undeveloped, forested area of the SMRA property, which plan will focus on maintenance and enhancement of ecological values and functions, and, protection of cultural sites and values.
- Indicate a receptiveness to and encouragement of private development on adjacent lands, which development could be integrated into SMRA functions.



SpiritMountain

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Applied Insights

Legend

Ski Trail Ability Level
Easier
More Difficult
Existing Lifts
Proposed Lifts
Proposed Zip Rider
Proposed Alpine Coaster
Proposed Summer Mountain Bike Trails
Proposed Winter Beginner Ski Area
Future Multi-Use Recreation Development
Terrain Expansion
Proposed Summer Mountain Bike Park
Proposed Campground
Carrousel

No.	Date	Revision Description

SPIRIT_MOUNTAIN
RECREATION_FACILITY
FINAL_CONCEPT

Project	6240-0032
Date	06/06/2008
Drawn By	TS
Checked By	ET

Drawing Number
1

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Applied Insights

Legend

- Ski Trail Ability Level
  - Easier
  - More Difficult
  - Most Difficult
  - *see text for lift and trail details.
- Mountain Restaurant
- Ski Patrol
- Existing Lifts
- Proposed Lifts
- Proposed Winter Beginner Ski Area
- Future Multi-Use Recreation Development
- Terrain Expansion
- Campgrouns Expansion
- Carrousel

No.	Date	Revision Description

SPIRIT_MOUNTAIN
RECREATION_FACILITY
MOUNTAIN_PREFERRED
CONCEPT_WINTER

Project	8240-0032
Date	06/09/2008
Drawn by	TS
Checked by	ET

Drawing Number 2

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Applied Illustrations

Legend

- Mountain Restaurant
- Ski Patrol
- Existing Lifts
- Proposed Lifts
- Proposed Summer Mountain Bike Park
- Carrousel
- Proposed Zip Rider
- Proposed Alpine Coaster
- Proposed Summer Mountain Bike Trails
- Future Multi-Use Recreation Development
- Campground Expansion

No.	Date	Revision Description

SPIRIT_MOUNTAIN
RECREATION_FACILITY
MOUNTAIN_PREFERRED
CONCEPT_SUMMER

Project	6240-0032
Date	06/06/2008
Drawn by	TS
Checked by	CT

Drawing Number
3

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Applied Insights

Legend

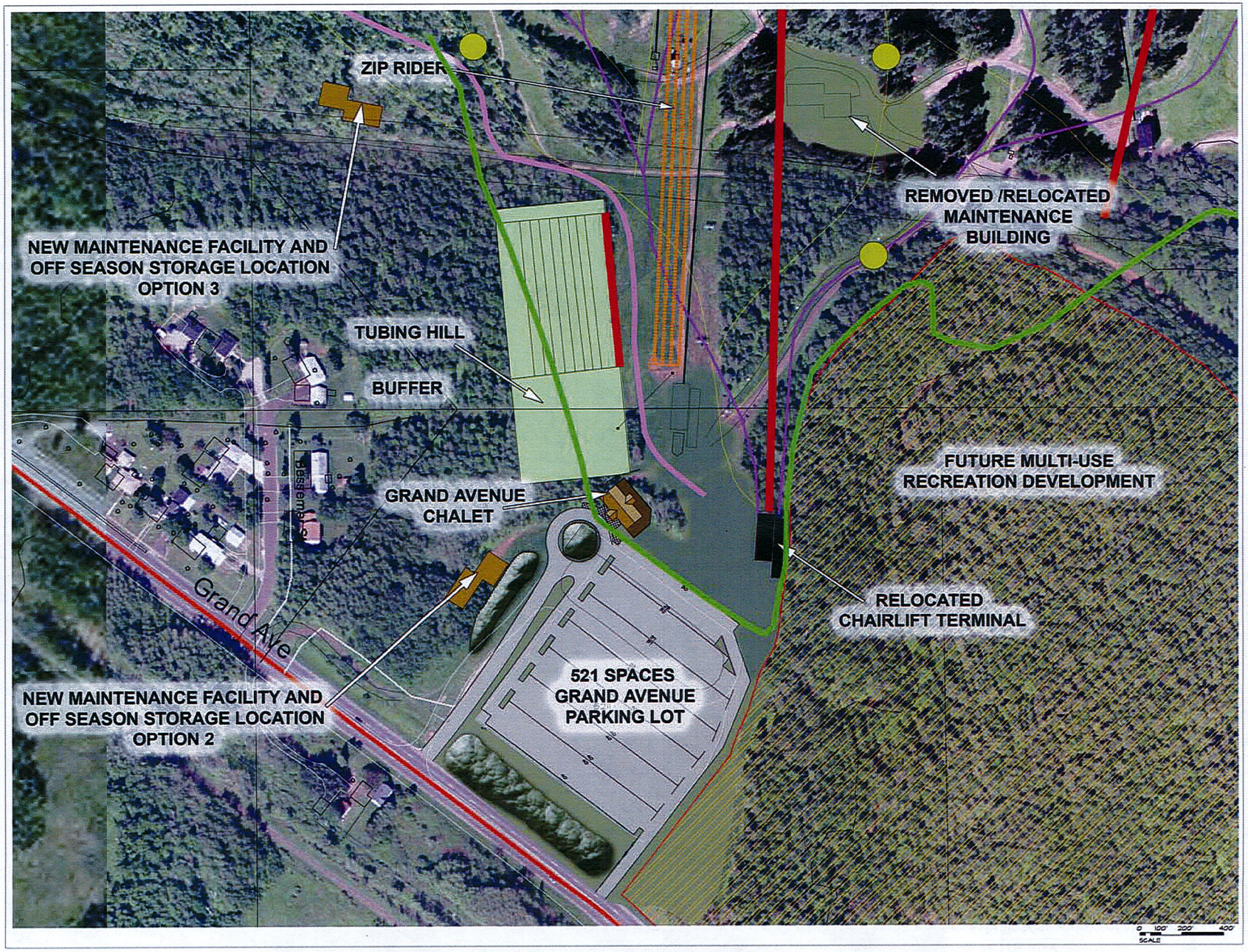
- Mountain Restaurant
- Ski Patrol
- Existing Lifts
- Proposed Lifts
- Proposed Zip Rider
- Future Multi-Use Recreation Development
- Proposed Winter Beginner Ski Area
- Campground Expansion
- Carrousel

No.	Date	Revision Description

SPIRIT_MOUNTAIN
RECREATION_FACILITY
RV_PARK_AND_PARKING

Project	6240-0032
Date	06/06/2008
Drawn by	TS
Checked by	ET

Drawing Number
4



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Applied Insights

Legend

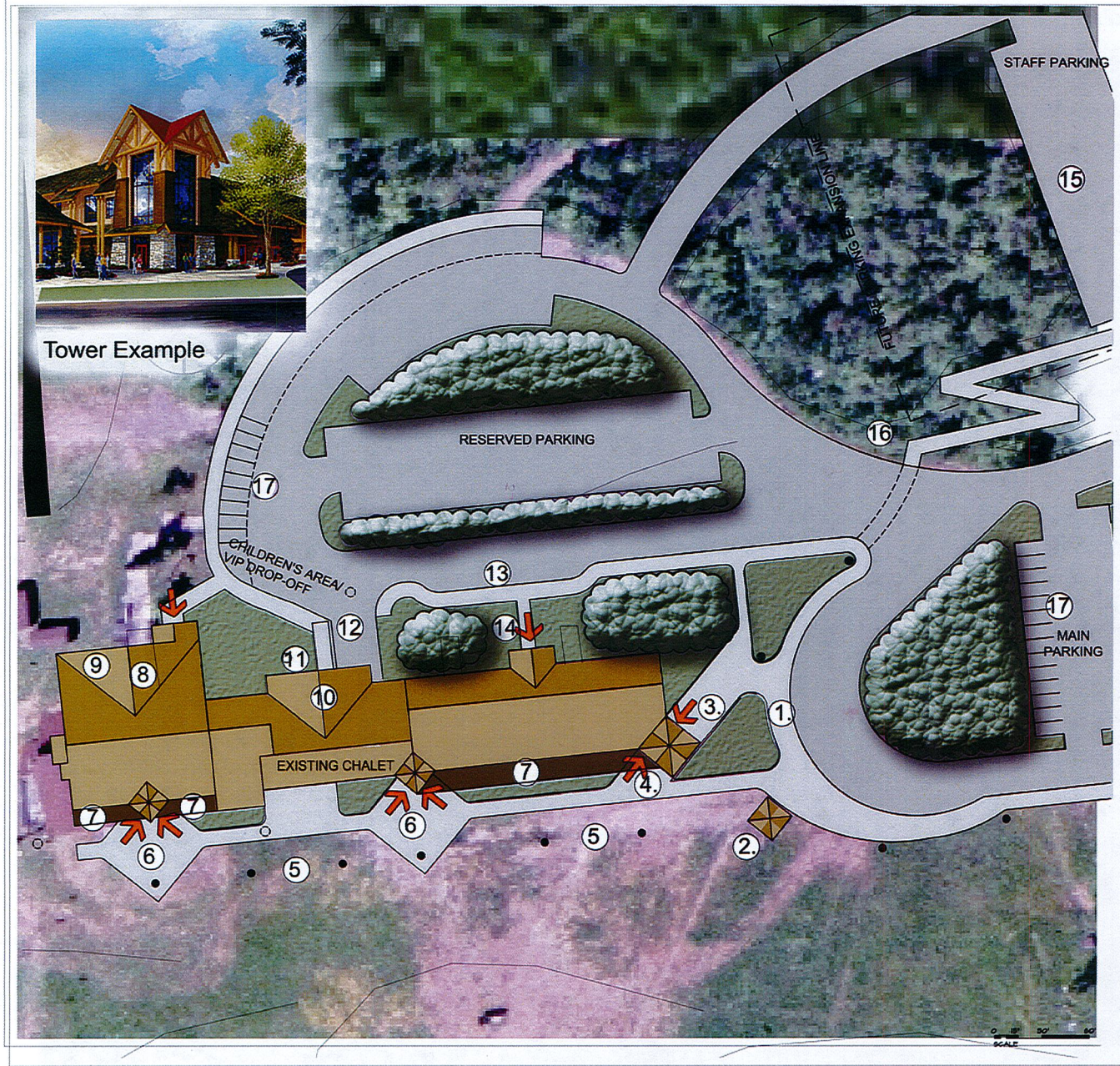
Ski Trail Ability Level
Easier
More Difficult
Existing Lifts
Proposed Lifts
Proposed Zip Rider
Proposed Alpine Coaster
Proposed Summer Mountain Bike Trails
Future Multi-Use Recreation Development
Proposed Tubbing Hill

No.	Date	Revision Description

SPIRIT_MOUNTAIN
RECREATION_FACILITY
GRAND_AVENUE_DEV
CONCEPT_A

Project	6240-0032
Date	06/06/2008
Drawn by	TS
Checked by	ET

Drawing Number
5



NOTE KEY

1. Main Visitor drop-off/pick-up.
2. Information Kiosk.
3. New Monumental Main visitor entry with view to ski hill and St. Louis River welcoming patrons into the Day Lodge/Banquet Hall.
4. Lower Level entry to Accessory Retail conveniently located to improve patron flow.
5. Promenade with banner poles and landscaping
6. New secondary entry feature to accentuate identity of vertical circulation, reduce linear building characteristics and create a unifying design theme.
7. New and/or modified outdoor deck with view to ski hill and St. Louis River.
8. Future building expansion for Children's Program.
9. Moosehead Saloon outdoor dining deck.
10. New Main Production Kitchen addition.
11. Reserved parking area access to hillside, covered courtyard and new Bar/Lounge.
12. Shipping/Receiving loading dock.
13. Bus and Secondary drop-off/pick-up.
14. Secondary entrance to Day Lodge/Banquet convenient to reserved parking area.
15. Overflow and staff parking.
16. Access from overflow and staff parking to main entry.
17. Designated Handicapped Parking Spaces

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Applied Insights

No.	Date	Revision Description

SPIRIT_MOUNTAIN
RECREATION_FACILITY
EXISTING_CHALET
CONCEPT_'A'

Project	6240-0032
Date	06/06/2008
Drawn by	TD
Checked by	RS

Drawing Number 6