



DOWNHILL SKI LODGE



BUILDING PROGRAM REFINEMENT STUDY



SEPTEMBER 22, 2020

WARD ARCHITECTURE & PLANNING
YOUNG

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INTRODUCTION

Study Purpose

Tahoe Donner Association (“TDA” or “Association”) engaged Ward-Young Architecture & Planning (“WYA”) to provide a detailed building program and independent recommendation for the size and configuration of spaces for a new lodge at the downhill ski area. The programming process included a review and reconciliation of prior needs assessments for a new ski lodge.

Background

The downhill ski lodge was built in 1971. The lodge has undergone upgrades and remodeling over the years in attempt to maintain a positive and quality user experience as the use of the ski area has increased. However, the lodge has outlived its useful life in several respects, and the Association intends to replace the lodge in the near future. The new lodge will be in the location of the existing lodge, which will be demolished.

Over the past few years, the Association has been studying the needs for a new lodge. These efforts are recapped in notes titled “DHS Subcommittee New Lodge Information/work Complete Summary January 2018 – January 2020”. In June 2017, Ecosign Mountain Resort Planners was engaged by the Association to prepare a master plan for the downhill ski area. Ecosign completed the master plan, “Tahoe Donner Phase 1 – 4, Technical Assessment and Resort Concept” (“Ecosign 2018”) in April 2018, “which is intended to guide investments and provide strategic direction over the next 20 years.” This master plan provided planning level needs analyses and alternative concepts for the ski hill development and a new lodge, including the “Preferred Base Area Concept” plan and the “Proposed Base Lodge Building Program”.

In addition, and supplemental, to Ecosign 2018, the Association has evaluated, through involvement by staff, DHS Sub-committee, Task Force, GP Committee, and Board member input, the needs for a lodge. The outcome of this involvement and review is summarized in the document DHS Subcommittee document referenced above.

Building Program Refinement Study

This study process included:

- review of extensive user statistics compiled by TDA staff for several past years;
- review of DHS Subcommittee/Task Force meeting notes and data;
- review of the 2018 ski area master plan prepared by Ecosign;
- on-site visits to the lodge and multiple conferences with TDA staff to gain understanding of user characteristics, service functions, and operations needs;
- independent evaluation of Comfortable Carrying Capacity of the ski area;
- independent needs analysis and building programming;

A building program provides more detail than only square footage requirements. For successful design of a building, it is necessary to understand user demands on the various services and spaces to be provided, the functional and operational characteristics desired, the relationship of each space to other spaces and the site, and consideration of growth in users to be accommodated in the building over a period of time.

This study provides the Association with:

- independent review and recommendation of appropriate Comfortable Carrying Capacity (“CCC”) and comparison with the Association’s Board direction for designing the lodge for a CCC of 1000;
- a building program, including options for sizing the building;
- a comparative analysis of the study’s building program with prior building programs;
- programmatic diagrams of alternative building configurations (3-story and 2-story options);
- current construction cost information for a building of this size and scope in the Truckee/Tahoe region; and
- preliminary timelines for design and construction of the project.

Study Assumptions

Assumptions, terminology, and statistical information used in this study are recapped in Appendix B of this study.

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BUILDING PROGRAM

General

Architectural programming may be defined as a process of identifying and defining the design requirements for a building and communicating these requirements to the designer. The programming process considers human factors and functions, as well as such form givers as site and climate. An building program addresses space requirements, functional needs of the spaces, the relationships of the spaces, related design criteria (such as energy performance objectives), restrictions on land use and facility form, and the construction budget. Relationships of spaces may be graphically illustrated by diagrams.

A building program is an outcome of a building needs analysis. A building program is not a design, rather the program provides information to the designer needed to design a successful building. The program should be considered as providing direction to the designer, not a rigid formula for creating space. The design process will likely result in deviating from strict adherence to the building program's square footage requirements, as the design process interjects new information about size of spaces, relationships of spaces to one another, circulation, building site influences, building code analysis and compliance, etc. The objective of this study is to provide the Association with an independent analysis of the square footage required for a new downhill ski lodge. Related design criteria, which may be referred to as "Owner's Project Requirements" ("OPR"), such as energy performance and construction budget, are not in the scope of this study.

In programming the space needs for a new lodge, one metric that can be used for comparison is the square footage per skier factor that Ecosign 2018 used (indicated as based on industry standards adjusted for Tahoe Donner's user characteristics). When replacing an existing building, another metric often used is analyzing how the existing spaces meet the current needs and anticipated future user demands and determining program needs based on that analysis. Both metrics may be used for reference in programming the space requirements for the lodge and have been utilized in this study.

In order to facilitate understanding of this study in comparison to prior studies and work of the TDA Staff and DHS Subcommittee/Task Force, and for consistency, terminology and building program organization used in Ecosign 2018 are used in this study with only minor modification. As described in Ecosign 2018, guest services can be broken down into three distinct categories, with several sub-categories falling under each. These are:

STAGING FACILITIES

- Ticket Sales
- Public Lockers
- Equipment Rental & Repair
- Guest Services / Ski School / Adaptive
- Children's Programs / Day Care

COMMERCIAL FACILITIES

- Food & Beverage Seating
- Kitchen & Scramble, Bar
- Bar / Lounge
- Restrooms
- Accessory Retail

OPERATIONAL FACILITIES

- Administration
- Employee Facilities
- First Aid & Mountain Patrol

Ecosign 2018 identifies these categories as the "Functional Space" in a ski lodge. Storage and mechanical (and electrical) equipment space and walls and waste area comprise additional space to be accounted for in the Gross Floor Area of a lodge. As indicated above, this study modifies sub-category titles and organization of programmed spaces to reflect desired terminology, provide a more accurate allocation of space, and better suit the detailed building programming of this study. For example, "Storage" space is an operational necessity, with specific space requirements for various services and functions. The "Building Program" in Ecosign 2018 does not address storage needs specific to the various functional and operational needs of the Tahoe Donner Downhill Ski Lodge. Rather, "Storage" is not considered "Functional Space", and program square footage for storage is determined based on a single square footage/skier factor. While there is a reason for this approach, it does not serve the needs for the detailed analysis provided by this study.

This study modifies some sub-category titles and incorporates an additional category, “Ancillary”, to address space necessary, but not considered as “Functional Space”, as follows:

ANCILLARY SPACE (25% of Functional Space)

Circulation (17%)

Mechanical / Electrical Equipment (2%)

Walls/Waste (6%)

As the actual square footage for these sub-categories will be dependent on the design, square footage allocated to these sub-categories for building program square footage is a percentage factor of the total programmed square footage of the Functional Space. These percentages are based on building averages. Storage has been moved to a sub-category under Operational Facilities – “Storage & Support Space”.

The Building Program provided herein addresses program needs and square footage requirements of each individual space to be incorporated in the building design. Over 70 individual spaces are programmed within the 13 sub-categories listed above.

Staging Facilities

GUEST SERVICES (TICKET SALES)

Guests arriving by shuttle bus, walking from parking lots, or dropped off, will enter the Lobby area from which they will proceed to the Guest Services area. Guest Services will provide for purchasing lift tickets, and private and group lessons for adults. Children’s Ski School customers (children 12 and under) will be directed to the Children’s Ski School area.

There will be two options for purchasing tickets – at staffed POS stations or at freestanding ticketing kiosks. A sales counter with 4 POS stations is needed. Queuing space for 40 customers should be provided leading to the POS stations.

Ticket kiosks will enable for self-service, much like an airline ticket kiosk, with an attendant to assist. The ticketing kiosks are intended to be used primarily by customers familiar with what they need and need little or no assistance. 4 ticket kiosks are needed.

A separate space for Ticketing Manager and three Call Center workspaces, with computers and phones, and a secure location for safe, should be immediately adjacent to Guest Services. Two call center workspaces should provide sales windows for outside walk-up ticket sales, if this can be accommodated in the design. However, providing outside walk-up ticket sales windows needs to be considered and further evaluated with the business plan. This may not be necessary, as the customer base requires significant communication, which is difficult through ticket window glass between interior and exterior.

Wall space for display and 3 retail display racks (freestanding), similar to existing (freestanding racks – 2 – 3’ x 3’, 1 – 2’ x 2’; 44 lf of wall display, most full-wall height)

Dressing Room adjacent to Guest Services.

Adjacent spaces

Dressing Room

Rental Shop

Children’s Ski School Area

Guest Locker Area/Basket Check
Restrooms

Program Area - 1,240 sq. ft.

GUEST LOCKER & BASKET CHECK (Public Lockers)

This area will need to be adjacent to the Rental Shop exit, and close to the Ticket Services for employee efficiency midweek. Seating for approx. 24 guests, as they put on ski boots, ski clothing, helmet, etc. here in preparation to head out to the ski slopes.

Provide adequate circulation space around seating for groups of people to move in and out of the area, assist each other and children, and easily access the lockers and Basket Check window/counter.

Space in this area will be necessary for 30 tall lockers and 250 coin-op lockers.

- Tall lockers – 15" w x 18" d x 98" t
- Coin op lockers – 10 per bank – each bank 5 high x 2 wide, 24" wide x 18" deep

Seating to include 6 – 10' benches.

Provide coin dispenser, hydration station, trash and recycle containers in 2 locations.

Basket Check will provide 1 POS station to support Guest Services ticket sales at busy periods. Shelf racks for Basket check requires 5 units, each 5' w x 2' d. Basket Check will include a ski check service. Ski Check will require rack space for 30 pair of skis.

Lost & Found will be located at Basket Check. Provide shelves for baskets – 2 units of 5' wide x 2' deep.

1 POS station, with computer, monitor, printer, telephone. Adjacency to Rental Shop will allow for staffing efficiency during less busy days; separately staffed on busy days.

Adjacent spaces –

Restrooms
Rental Shop
Guest Services
Exit to ski slope

Program Area - 1,075 sq. ft.

RENTAL SHOP (Equipment Rental & Repair)

The Rental Shop provides ski and snowboard rental equipment – skis, boards, boots, poles, and helmets. The rental equipment demand is higher than the norm for ski areas, due to the TD customer characteristics (i.e. high percentage of beginners/novices). As waiting in a lengthy, time consuming queue before going skiing, or to join a lesson group, is not a positive guest experience, providing adequate space, efficiency in layout and circulation, and efficiency of operation are critical design concerns.

Access to the Rental Shop for the arriving guest will be through either the Guest Services Area or Children's Ski School area. After completing the equipment rental process, customers will exit the Rental Shop to the Guest Locker/Basket Check Area

Customer flow -

- From Ticket Services, customers enter at the Rental Shop entrance queue for
- equipment registration (sign-in) terminals, then to
- boot fitting area, then enter a queue with an area for selecting a helmet, before reaching the
- skis/boards selection and binding adjustment ("DIN") stations, then proceed to
- POS stations, then
- exit the Rental Shop into the Guest Locker/Basket Check Area.

The ski/snowboard selection/DIN stations will accommodate separate queues – one for Rental Shop customers and the other for Children's Ski School program customers and ticket pre-purchase customers. Children's Ski School customers will bypass the equipment registration (sign-in) and enter the boot fitting area. Ticket pre-purchase customers would enter the same queue as Children's Ski School customers. Therefore, there should be two separate circulation paths through the Rental Shop and around a central equipment pick-up/DIN stations.

1. Pre-purchase customer access and Children's Ski School students
2. Register and pay on-site rental equipment customers

Entrance queue - The Rental Shop entrance queuing area should allow for approximately 50 customers.

Self registration – 8 computer terminals are needed, with printer at each terminal.

Boot fitting -Delay in the equipment rental process at the existing Lodge is not at the sign-in terminals, rather the delay is at the boot fitting area. The fitting process takes time and staffing to assist customers with selecting the proper boots.

Adequate space and seating need to be provided for accommodating different size groups (e.g. couples, family groups). Bench seating is ideal, with access from both sides of bench for efficiency (benches not against walls). Space should allow for 30 customers at a time to try-on boots. Space needs to be min. 3x existing area.

24 boot racks are needed (22 for Rental Shop customers, 2 for Children's Ski School) - dimensions of each rack: 74"d x 80"h x 21"w; layout similar to existing, except that more space between racks is needed for efficiency of operation (at min. of 3 ft. to rack row).

Helmets - Current storage is on 5 poles located between boot fitting and DIN queue. This storage and retrieval system works well, except poles are overloaded and difficult to access when busy; need to add storage poles, to total 11 (3 additional poles, if this self-selection and storage system is to be used).

Ski/board selection and DIN queue – space required for approximately 30 customers.

DIN Stations – 10 stations with computer terminals and slip printers needed (existing 6 stations). It takes the binding technician 5 to 10 minutes to select skis/board and adjust binding. DIN stations should be island type, not long counter which prevents the technician from moving around the customer in making adjustments.

Ski Racks – Provide space for 9 ski racks and 2 snowboard racks for Rental Shop customers, plus 2 racks for Children's Ski School equipment. Layout to

be similar to existing (9 existing racks), except that more space between racks is needed for efficiency of operation (add min. of 3 ft. to rack row).

POS stations - 4 POS stations (3 existing), with queuing space for 15 customers. Each station to have computer, printer, and telephone.

Retail – Located adjacent to the POS stations, similar area to existing. Two small freestanding retail racks and wall display (24 lf existing) should be provided.

Customer Feedback Kiosk – provide 1 customer feedback kiosk (same as at Guest Services) before exiting the Rental Shop.

Exit – to Guest Lockers & Basket Check Area.

Equipment Return – As equipment rental customers return equipment throughout the day, not only at the end of the day, a separate equipment return circulation route is needed to avoid conflicting circulation patterns, disruption of the on-going equipment rental operation, and congestion in the equipment rental area.

Equipment Repair Room - provides space for ski/board repair, tuning, waxing. Approximately 2x the existing space is needed for safe and efficient operation of the equipment and tools use.

Equipment Repair Room shall provide space for:

- desk for computer, monitor and printer for preparing and electronically filing injury reports.
- Storage/rack space for 30 sets of skis and snowboards, for staging of equipment for functional testing due to injury or need of repair.
- Mop sink (floor sink) needed for clean-up, and Stone Grinder requires draining.
- Equipment requirements:
 - Stone grinder (existing) - 27' long x 5' wide - 240v - 3 phase power
 - Waxer (existing) - 15' x 2' - 110v
 - Edger (existing) - 15' x 2' - 110v
 - 2 work tables (existing) – 7' x 2' each
 - Tool cabinet
 - Workbench for function tests of equipment (req'd for injuries)

Adjacent spaces –

Guest Services
Children's Ski School
Equipment Repair Room
Guest Lockers & Basket Check
Exit to ski slope

Program Area - 4,936 sq. ft.

CHILDREN'S PROGRAM (Children's Ski School)

This space is used for staging and program activities related to the Children's Ski School (children 12 and under). It is the "home-base" for children taking ski school lessons. This space will replace the on-slope Yurt currently used for the children's ski school. Customers are directed to this area from the entrance Lobby/Ticket Services area. Children's Ski School is a day-long program, so lesson groups return to this area for breaks, for lunch (provided by the program), and at the end of lesson day.

Adult lessons meet outside (indoor space not necessary for gathering adult lesson groups). Direct or close access from this area to the snow is needed, as well as direct access to the Rental Shop.

The Children's Ski School area will need:

- Queuing area for 30 – 40, plus circulation and gathering area, leading to a counter with 4 POS stations, each with computer, printer, telephone (similar to Guest Services POS stations)
- Lunch/Break Area – for 75 children and their instructors, with 10 folding tables with bench seating, stored until break and lunch times.
- Lunch/Break Area to include 2 sinks, countertop, refrigerator, hot and cold beverage machines, oven (primarily for baking cookies)
- 120 cubbies – 16" w x 16" h x 24" deep, 4 high, located behind/beyond POS stations
- Table storage area
- Wall for retail display – 16 lf.
- Restrooms – 2 unisex

Adjacent spaces

Ticket Services
Rental Shop
Exit to ski slope

Program Area - 2,580 sq. ft.

Commercial Facilities

CAFETERIA SEATING (Food & Beverage Seating)

Food and beverage service is self-service, cafeteria type, used primarily at lunch time and for apres-ski gathering. The Lodge experiences a high percentage of non-skiing guests - other family members such as a parent caring for infant/young child, grandparents, who are not skiers, but occupy seating in the dining area, and may, or may not, purchase food and beverages.

The food service is addressed in a separate section below. The seating area/dining space should provide:

- Boot and gloves drying racks (8' x 2')
- Water bottle refilling station and drinking fountains
- Fireplace with hearth
- Counter space with condiment station(s)
- Entertainment area - stage area for entertainment (can provide additional seating area when no entertainment is scheduled)
- Toddler soft play area (10' x 10' fenced)
- 12 televisions (8 for live tv and 4 for marketing)
- Projector and screen
- Huddle space for IT equipment
- Charging station for phones and computers
- Trash and recycle containers (6)

INDOOR FOOD & BEVERAGE SERVICE SEATING

– provide for 300 seats (20% of Peak Day skier average – 260, plus additional 40 seats occupied by non-skiers).

- Provide 4 tops along the walls and 8 ft. tables (not easily moved)

(Note: For comparison, existing Lodge seating provides 72 seats in bar area; 58 seats in the side (cafeteria) area; total 130 seats; yield at side area is compromised by use of large cafeteria type folding tables.)

If seating area is designed to be divisible into separate spaces, this area could be used for day camps.

Private Room – located adjacent to the seating area, this area is envisioned as a separate room that provides space for the ski area's "premium

product” - the lunch/break area for all-day adult private lessons. The space should accommodate:

- tables with seating for 15,
- video viewing capability,
- countertop space with a sink.

BAR / LOUNGE - Traditional bar and back bar; provide bar space for 30 bar stools at bar.

The Bar should provide: 2 POS stations

- 2 taps
- Reach-in fridge for wine and cider
- 2 mixed drink wells
- 2 ice bins
- 2 hand sinks and 3 well sinks
- Hot chocolate and coffee machines
- 2 walk-up service stations
- Backbar liquor and wine display
- Dishwasher
- Pint and glass storage
- Back stock storage with direct access from Bar

Adjacent spaces –

Indoor Seating Area
Cafeteria Service Area
Bar
Snow “beach”

Program Area - 4,750 (incl. 250 sq. ft. Private Room)

OUTDOOR DINING DECK – A 5000 sq. ft. outdoor eating and gathering area of similar size and function as the existing Lodge’s outdoor deck. This is a very popular spot in good weather. The existing size is adequate.

The Outdoor Dining Deck should provide:

- Picnic table seating for 300
- 27 tables
- Fire pits
- couches
- BBQ food service during good weather busy periods (This is a very popular food service option at the existing Lodge)
 - o Counter for prep
 - o Sink
 - o Ice bin
 - o Roof structure to cover

Access to the Bar would be ideal.

Note: There are very strict Health Department regulations regarding design and operation of outdoor food service facilities to address vector control.

Adjacent spaces –

Cafeteria Service Area
Bar
Restrooms

Program Area - 5,000 sq. ft.

CAFETERIA SERVICE (Kitchen & Scramble, Bar)

This area will provide:

- grab-and-go food and hot food selections,
- queuing area for hot orders, and
- 2 – 3 POS stations.

The area shall be designed to control customer flow to prevent theft between high volume and low volume days, due to differences in staffing.

(Note: The existing Lodge space is tremendously undersized; insufficient seating and circulation area, causing significant congestion, conflicting circulation patterns, obstruction of visibility of signage, and difficult for staff to monitor for theft during high volume days.)

A “scramble-type” service area is preferred, if design allows for food choice stations with minimum staffing on low volume days. Primary food station choices are Mexican food, pizza, and grilled food.

The Cafeteria Service Area should provide:

- Counter space (w/ water service and drains), for
 - o Soda fountain - 10 varieties, requires water supply and drains, CO2 storage, syrup bags w/ easy access to change during high volume
 - o Coffee maker
 - o Coffee maker
 - o Juice fountain
 - o Hot chocolate machine x 2
- Grab-and-go refrigerated cabinet
- Grab and go backstock fridge space (possible in the same unit as above)
- Grill food order and pick up stations, queuing space needed for approx. 40 customers

- Refrigerated table for hot order fixings (e.g. lettuce, tomato, onion, dressing, etc.), queuing space for approx. 10 customers
- Steam table space
- Pizza pickup station
- Garbage and recycle station
- Hidden dry storage, lockable space for all cafeteria area back stock
- 2-3 POS stations, with queuing space for approx. 4 customers (with trays) at each station

Adjacent spaces –

Indoor Seating Area
Bar
Restrooms
Deck

Program Area - 2,350 sq. ft. (incl. Back of House and Kitchen)

Back of House Food and Beverage (“F & B”)

This is the food prep and storage area for all F&B related operations. A “food court” with separate stations for menu options has been considered. However, management staff is concerned about the difficulty to provide staffing needed in order to offer multiple separate food choice options (i.e. food court concept), so design and food offering needs to consider balance between staffing and menu choices, without dedicating staff to single food type.

(Note: The existing Lodge F&B Back of House space is too small for efficient operations and for providing food choice options.)

(Note: Providing banquet capabilities should be considered in finalizing the program, prior to building design. Banquet capabilities would be of benefit if Adventure Center tent (180 capacity) is removed goes away, as the Downhill Ski Lodge could provide the venue for banquet events.)

Program Area - 950 sq. ft. (incl. in Cafeteria Service above)

Kitchen requirements –

- Range - Large flat top, large grill, 6 burners, 2 ranges - at least one convection (may be two units)
- Fryers - 4 with 2 pools each

- Alto-shaam (confirm Cook & Hold or Combitherm Combi Oven)
- Pizza Oven
- Heat Lamp Stations (w/ counter space)
- Slicing machine (tabletop, w/ counter space)
- Prep area – large counter area, sinks (handwashing and prep), shelves for trays, pans, and utensils
- Dishwash area w/ dishwasher, 3 bay sink, counter space for washing trays, dirty pan area, and clean pan area

Dry storage for kitchen supplies, lockable, for ingredients, trays, pans, and other.

Ice machine.

Walk-ins – refrigerator and freezer (Note: minimum 2x current sizes needed)

Mop sink.

Office for F&B Manager, with desk, computer, shelves for reference materials, lockable file cabinet, cash-out location, and safe.

Adjacent spaces –

Cafeteria Seating area
Bar/Lounge area

Program Area - 620 sq. ft. (incl. in Cafeteria Service above)

RESTROOMS

Preferred on each floor. Staff estimates the number of fixtures needs to at least double. Need restrooms near Rental Shop queuing and Guest Locker & Basket Check Area.

RETAIL (Accessory Retail)

Retail soft goods will be offered at other spaces – Rental Shop, Ticket Services, and restaurant; no designated retail shop. Small racks and wall displays will provide retail goods; soft goods only.

Operational Facilities

ADMINISTRATION

A joint administration and management office area, providing workspace for the following personnel:

- Ski Area Manager – private office
- Mountain Manager – private office
- Guest Services/Retail Manager – private office
- Ski School Director – private office
- Ski School Supervisors - 3 workspace cubicles in open office area

Workspace for the following managers and supervisors will be provided within that department's space:

- Ski Patrol Director – private office, located adjacent to the First Aid Room
- Lift Ops Supervisor – private office, located in the Mountain Ops Shop Area (existing "Bottom Shop")
- Tickets Supervisor – workspace cubicle located at Guest Services

The Administration and Management Office Space will provide open office space with

- workspace cubicles for Ski School Supervisors
- Meeting Room, with conference table and chairs for 12
- administrative office equipment and supplies

Alternatively, office and workspace for Ski School Director and Supervisors may be located near the Children's Program, or close to the Ski School meeting place.

Meeting Room (see above) – provides a private area for management meetings and employee coaching. Provide a countertop and sink. Depending on the building design and suitable access control to the building and this Meeting Room, this space could provide a multi-purpose meeting space for other, non-ski resort related uses, such as club meeting space (e.g. Bridge Club, Quilting Club, etc.). Provide IT huddle space for needs of this room.

Building Technology Room - IT rack in a dedicated space in one location, administrative space is preferred; Provide conditioned closet of approximately 50 SF.

Adjacent spaces –

Guest Services
Rental Shop
Children's Program

Program Area - 1,175 sq. ft.

EMPLOYEE FACILITIES

Break Room

This area will be used as a break room for ski area employees. The ski area employs:

1. 120 Ski Instructors (75 – 90 average peak day at one time; assume 80),
2. 30 Mountain Operations employees,
3. 25 Rental Shop employees (15 – 18 on-site at one time),
4. 15 F&B employees,
5. 10 Transportation employees,
6. 10 Ticket Services employees,
7. 8 Pro Patrollers (5 on-site on peak days),
8. 10 NSP volunteers (4 on-site on peak days).

These employee numbers represent average peak day staff on-site. Patrollers (Pro and NSP) do not typically use Break Room during lunch period. Lunch breaks for staff are staggered, except for ski instructors, who must all eat between noon and 1:00. The Break Room will need to accommodate table space for 90 employees at one time. Provide folding cafeteria type tables with stools – TBC.

Provide a Kitchen area within the Break Room with:

- sink
- microwave oven
- dishwasher
- countertop and cabinets
- 1 large or 2 regular refrigerators
- countertop and cabinets, with coffee maker and hot chocolate machine.

Provide space for a vending machine.

Provide comfortable seating for lounging/relaxing/socializing – confirm number of seats.

Provide a wall mounted flat screen tv screen and seating area for training sessions – confirm number of seats, configuration (theater style), type (stacking or folding chairs)

Provide IT "Huddle Space" – space for desk with

computer and printer (enabling computer access for J1 employees).

Adjacent spaces –

Employee Lockers
Employee Restrooms

Program Area - 3,150 sq. ft.

Employee Lockers – 150+- employee lockers are needed, each 1'w x 2'd x 7'h. Each department will need its own locker area or room for its employees' lockers.

- Mountain Ops and Ski Patrol can be in same area – 20 lockers for Mountain Ops and 15 lockers for Pro Patrol and NSP volunteers.
- Ski School – 100 lockers (120 instructors on staff; up to 90 on-site at one time)
- Other employees (Rental Shop, F & B, Transportation, Guest Services, Administration – approx. 60) – lockers do not need to be provided.

Adjacent spaces –

Break Room
Employee Restrooms

Program Area - 950 sq. ft. (incl. under Break Room above)

Employee Restrooms - Restrooms for 150+ staff members with one shower in each of male and female restrooms.

Adjacent spaces –

Break Room
Employee Lockers

Program Area - 400 sq. ft. (incl. under Break Room above)

FIRST AID ROOM (First Aid & Mountain Patrol)

This space will be used as a patient care area for Patrol staff. The Ski Patrol Director's office will be located here. Patrol staff equipment storage will be included as part of this space.

Location of the First Aid Room is of importance from operational and guest experience aspects. The clinic needs to be near the edge of the snow pillow for reducing patient transport distance

between the snow and the clinic. The location is best if at least partially shielded for skiers on the slope and in the Lodge. Ambulance parking at the clinic should not block shuttle bus circulation and guest drop-off and pick-up.

Provide the following in the First Aid Room:

- 2 treatment tables with privacy opportunities -curtains or portable wall sections will work
- Chairs/couch near each treatment table for family
- Sink
- Cabinet for medical supply storage
- Office space for Ski Patrol Director
- Storage closet for uniforms and evac supplies (ropes, probes, evac rigging, oxygen, and 15 uniforms)
- Desk with computer for patrollers to write reports
- Single accommodation restroom
- Pro Patrol staff and NSP volunteers lockers to be located in/adjacent to Break Room.

Adjacent spaces –

Break Room
Over snow access for transporting injured guests to First Aid Room
Vehicle access (ambulance and private vehicle)

Program Area - 620 sq. ft.

STORAGE & SUPPORT SPACE

The storage requirements that are not included in the other specific areas are addressed here. (Note: The existing Lodge is significantly inadequate in storage space, compromising efficient operations.)

Retail - inventory backstock storage.

Program Area - 225 sq. ft.

Uniform storage (primarily off-season storage) – Hanging storage space is needed for 150 jackets and pants - outerwear, 150 soft shell jackets and vests, 200 t-shirts organized by size, boxes of ball caps and beanies. All outwear items need to be hung during the off season.

(Note: Existing Ski School uniform storage space

is very inadequate at < 100 sq. ft., and stored folded on shelves, making it difficult to find and retrieve a specific size, and return wrong size; inefficient storage system.)

(Note: Mountain Ops uniforms are stored on pegs high on wall above the administrative area; storage system works, but too high for easy retrieval.

Program Area - 400 sq. ft.

Janitorial Closet - Supplies to clean the appropriate sized building – mops and buckets, sponges, chemicals, rags, rubber gloves, garbage, etc. Provide mop sink.

Program Area - 100 sq. ft.

Out-of-Season storage - Day camp storage area for summer season supplies.

Program Area - 1,000 sq. ft. (Note: existing approx. 1500 sq. ft.)

Event equipment storage – Storage space for Santa, glowstick, torchlight, beach party, banana split, Ididarun, Dummy DH, Family match time race, EZ Ups, sound system, tables, etc.

Program Area - 400 sq. ft. (Note: existing approx. 200 sq. ft.)

Snow Removal Equipment Storage – Provide space on each level of the Lodge for snow removal equipment storage. Deck (Upper) Level - 2 snow blowers and a small bobcat; each other level - 2 snowblowers at each level.

Program Area - 300 sq. ft. (approx. 100 sq. ft. on each level)

Laundry room - Provide space for one commercial stackable unit, shelves, and table or countertop for folding.

Program Area - 100 sq. ft.

Mechanical Room - Provide space for building mechanical systems, including heating and ventilating, and snowmelt for pavement/walkways, and deck; electrical service equipment; fire-riser room, etc.

Program Area - 547 sq. ft.

IT Closets - Provide appropriately located closet on each level of the Lodge.

Program Area - approx. 15 sq. ft. at each level

Delivery and Service Area - Loading dock, receiving space, and separate waste handling areas are needed. Provide covered, direct access to back of house for food, goods, and equipment deliveries, and for waste handling. Preferred location would be in bottom level of the lodge with ability for trucks to back up to an interior loading dock. A service elevator should be provided to the F & B Back of House.

Program Area - 1000 sq. ft.

OTHER LODGE PROGRAM AND DESIGN CONSIDERATIONS

Covered vehicle storage - for shuttle buses and a few operations vehicles; provide for snow protected storage; would reduce staff time necessary for snow removal and facilitate timely and efficient bus and vehicle use.

Maintenance Shop - The existing building, “Bottom Shop” is approx. 30’ x 30’ w/ roll-up door, providing for snowmobile storage and lift maintenance and lift equipment storage. The Bottom Shop is located at the bottom of the Race Course run. The size of this existing shop is adequate. Relocating the Maintenance Shop into the new lodge should be considered for aesthetic and safety reasons. However, doing so may not be feasible to square footage constraints, grading for access, and over-the-snow vehicular access.

(Note: Ecosign 2018 recommended removal of the “Maintenance Building” and relocating its function in the new Lodge under the deck, calling it “Maintenance Storage”. If the

maintenance and operations require on-snow access, it is difficult to envision how this works, without further study.

From Staff's Needs Assessment – "Staff has determined that the best future layout for the bottom of the ski area would include switching locations of the bottom shop and C1. We would recommend keeping the bottom shop sq. footage out of any new facility as line of sight and proximity to the lifts is preferred.")

Program Area - 660 sq. ft. (NOT included in the Square Footage Program)

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PROGRAM SQUARE FOOTAGE SUMMARY

The following table summarizes the programmed square footage and includes two options for reduced building size. This summary table provides square footage recommendations for the categories and sub-categories for these three building size options. The three options are:

LODGE PROGRAM SF (WYA)

Total Building Area - 35, 750 sq. ft.

REDUCED LODGE PROGRAM SF (WYA)

Total Building Area - 30,780 sq. ft.

SERVICE REDUCTION LODGE PROGRAM SF (TDA Staff)

Total Building Area – 26, 263 sq. ft.

The “REDUCED LODGE PROGRAM (WYA)” provides reductions in program without significant compromises to the guest experience for the Design Day capacity. The “SERVICE REDUCTION LODGE PROGRAM SF (TDA Staff)” provides further reductions to the program square footage, but would result in considerably greater compromises to the guest experience, even when the number of skier visits are below the Design Day capacity.

Detailed program square footage of individual building spaces comprising the category and sub-category totals is provided as Appendix A (“LODGE PROGRAM SF OPTIONS – DETAIL”) of this study.

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Downhill Ski Lodge Program SF Options - Summary	Existing Lodge SF	Lodge Program SF (WYA)	Reduced Lodge Program SF (WYA)	Service Reduction Lodge Program (TDA Staff)	Notes
STAGING FACILITIES					
Guest Services (incl. Ticket Sales)	516	1,240	1,000	1,000	
Guest Services/Ski School/Adaptive	0	0	0	0	not applicable; SF incorporated in other Staging Facilities.
Guest Lockers & Basket Check (Public Lockers)	340	1,075	850	850	
Rental Shop (Equipment Rental & Repair)	2,640	4,736	4,273	3,580	
Children's Program	1,060	2,580	2,200	2,000	
STAGING SUBTOTAL	4,556	9,631	8,323	7,430	
17 COMMERCIAL FACILITIES					
Cafeteria Seating (Food & Beverage Seating)	2,150	4,750	4,450	3,750	
Cafeteria Service (Kitchen & Scramble, Bar)	1,504	2,350	1,970	2,000	
Bar / Lounge	415	1,600	1,000	980	
Restrooms	995	1,600	1,450	1,300	
Accessory Retail	160	200	0	0	
COMMERCIAL SUBTOTAL	5,224	10,500	8,870	8,030	
OPERATIONAL FACILITIES					
Administration	724	1,175	915	900	
Employee Facilities	1,046	3,150	2,950	2,500	
First Aid Room (First Aid & Mountain Patrol)	486	620	590	500	
Storage & Support Space	1,522	3,525	2,975	1,650	
OPERATIONAL SUBTOTAL	3,778	8,470	7,430	5,550	
TOTAL FUNCTIONAL SPACE	13,558	28,601	24,623	21,010	
ANCILLIARY SPACE (25 % of Functional Space)					
ANCILLARY SUBTOTAL	2,280	7,150	6,156	5,253	
TOTAL BUILDING AREA	15,838	35,751	30,779	26,263	
CCC - Comfortable Carrying Capacity/Design Day estimate		1000	880	770	

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REPLACEMENT “IN-KIND” ANALYSIS

TDA requested a building program for an “in-kind” replacement of the existing lodge. The intent of this program is to utilize the square footage of the spaces in the existing lodge, with increases to address current building code requirements. As detailed elsewhere in this study, the “Total Functional Space” and “Total Building Area” of the existing lodge are 13,558 sq. ft. and 15,838 sq. ft., respectively.

The primary consideration in complying with the building code will be accessibility for disabled persons. In providing a compliant design, this will primarily affect circulation space (corridor widths, elevator) and restroom space. The number of restroom fixture units appears approximately to meet building code requirements for the occupant load of the building, but the space required for fixture units and for maneuvering within the restrooms is deficient. However, the increase in area to provide for sufficient space in the restrooms is less than 500 sq. ft.

Additional space required for circulation to meet building code requirements is similarly modest. An elevator will require about 100 sq. ft. on each floor level, plus circulation/waiting space to and from the elevator. Additional area of approximately 1,000 sq. ft would suffice for elevator related circulation space. Corridors in the existing building appear to be sufficiently wide.

Some functional area within the existing building may not comply due to physical constraints of the structure (e.g. an office space too small) or due to moveable fixtures and equipment that inhibit accessibility within a space. A redesigned lodge of the similar functional square footage would need to address the appropriate size spaces, including

space planning for moveable fixtures and equipment where needed. Additional building area of approximately 1,000 sq. ft. would be adequate to address these concerns.

Therefore, an “in-kind” replacement lodge would need to be approximately 18,500 sq. ft. to comply with current building code requirements.

Note that the number of occupants allowed in each specific functional area of the existing lodge is limited by the California Building Code. For instance, cafeteria seating is considered an assembly occupancy (Assembly Group A-2). This occupancy has an occupant load factor of 15 sq. ft./occupant. The existing Cafeteria Seating area is 2,150 sq. ft. Therefore, the allowable occupancy of the existing Cafeteria Seating area is 143 occupants.

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COMPARATIVE ANALYSIS

The following table, “3 Data Points” compares the building programs developed for the lodge from the following three sources –

- TDA Staff 2016/17
- Ecosign 2018
- WYA 2020

These three building programs do not reflect an “apples-to-apples” comparison in approach and comprehensiveness of the programming process. Some adjustments have been made to certain sub-categories (and noted), to better compare the building programs from these three sources. The TDA Staff 2016/17 Building Program was created internally by TDA Staff. Each space and function in the building was evaluated as to needs for creating a positive guest service experience and for efficient and economical operations. A similar approach was used for this study.

The Ecosign 2018 Building Program is based Ecosign’s planning criteria incorporating on industry standards, with adjustments for the Tahoe Donner user characteristics. However, the Building Program in Ecosign 2018 should be considered a planning level program, developed for master planning purposes. Its approach uses sq. ft./skier averages for each of the sub-categories. It does not provide the level of analysis and detail necessary for building design.

The WYA 2020 Building Program provides the square footage summary of this study, which is the most comprehensive analysis of the needs to be accommodated in a new ski lodge.

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Downhill Ski Lodge Program SF Summary - 3 Data Points	A TD Staff 2016/17 Program SF	B Ecosign 2018 Program SF (1)	C WYA 2020 Program SF (2)	Notes
STAGING FACILITIES				
Guest Services ("Ticket Sales")	2,210	600	1,240	
Guest Services/Ski School/Adaptive	0	2,000	0	"0" indicates applicable SF incorporated in other Staging Facilities
Guest Lockers & Basket Check (Public Lockers)	2,600	800	1,075	
Rental Shop (Equipment Rental & Repair)	2,633	3,510	4,736	
Children's Ski School	2,250	2,250	2,580	Columns A and B - SF "plug", as Children's Ski School was not included in program.
STAGING SUBTOTAL	9,693	9,160	9,631	
COMMERCIAL FACILITIES				
Cafeteria Seating (Food & Beverage Seating)	3,120	4,550	4,750	
Cafeteria Service (Kitchen & Scramble, Bar)	4,475	2,275	2,350	
Bar / Lounge	0	390	1,600	
Restrooms	0	1,200	1,600	
Accessory Retail	517	520	200	
COMMERCIAL SUBTOTAL	8,112	8,935	10,500	
OPERATIONAL FACILITIES				
Administration	1,175	1,000	1,175	
Employee Facilities	2,853	2,100	3,150	
First Aid Room (First Aid & Mountain Patrol)	450	450	620	
Storage	2,300	1,768	3,525	Col B & C Storage SF moved from Ancillary Space for consistency.
OPERATIONAL SUBTOTAL	6,778	5,318	8,470	
TOTAL FUNCTIONAL SPACE	24,583	23,413	28,601	
ANCILLARY SPACE (25 % of Functional Space)				Programming factors applied to net functional areas - Circulation 17%, Mechanical/Electrical 2%, Walls/Waste 6%
ANCILLARY SUBTOTAL	6,146	5,003	7,150	Col B adjusted (+563) for Ancillary area related to addition of Children's Ski School.
TOTAL BUILDING AREA	30,729	28,416	35,751	

(1) Col B SF - adjustments made to square footage of some lines for comparison purpose; see "Program SF Options - Detail" spreadsheet (Appendix A for source of adjustment.

(2) Col C SF - from "Program SF Options s - Detail" spreadsheet (Appendix A), "Lodge Program SF (WYA)".

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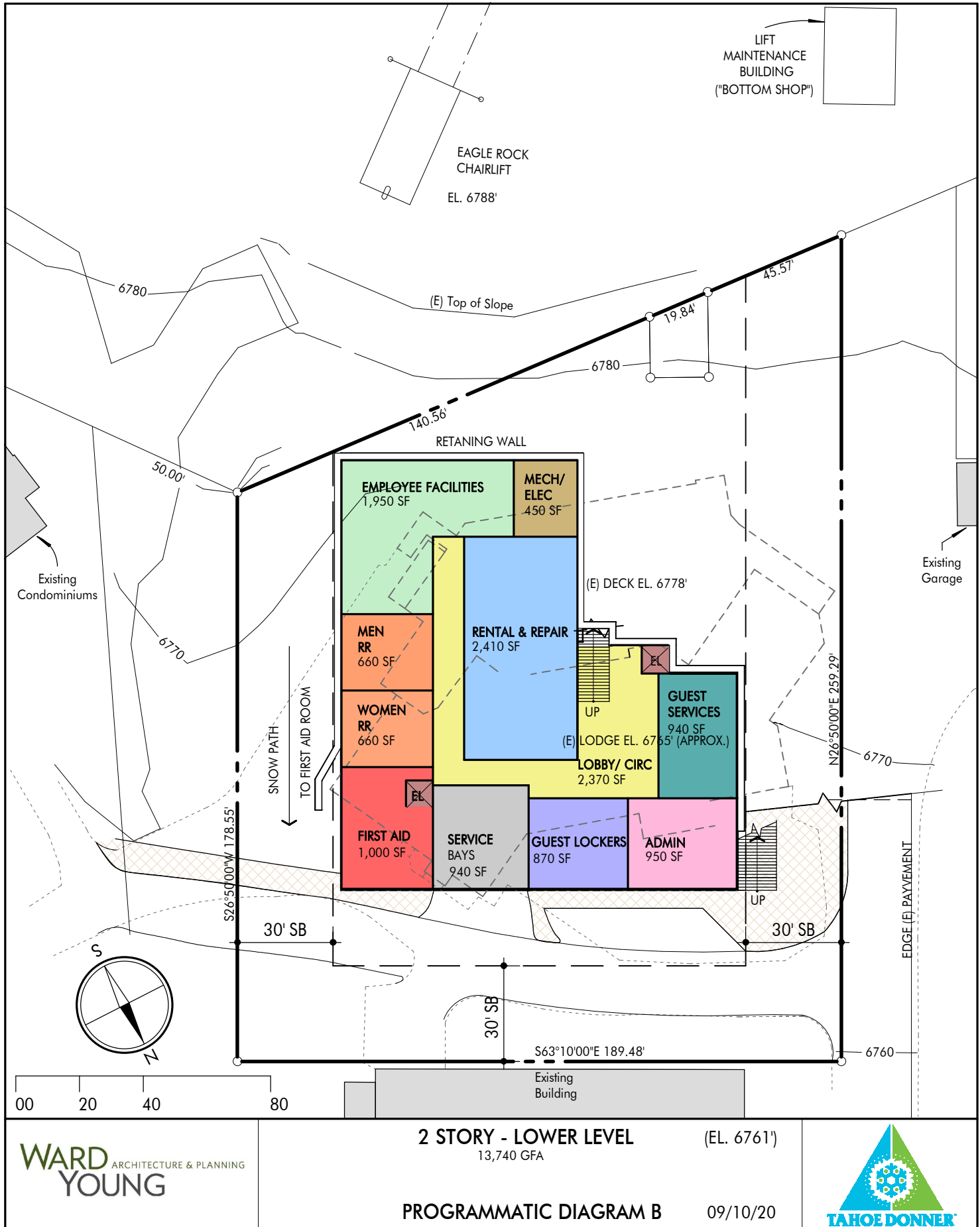
PROGRAMMATIC DIAGRAMS

Following are graphic illustrations of the relationship of the programmed spaces and those spaces to the building site. These illustrations are:

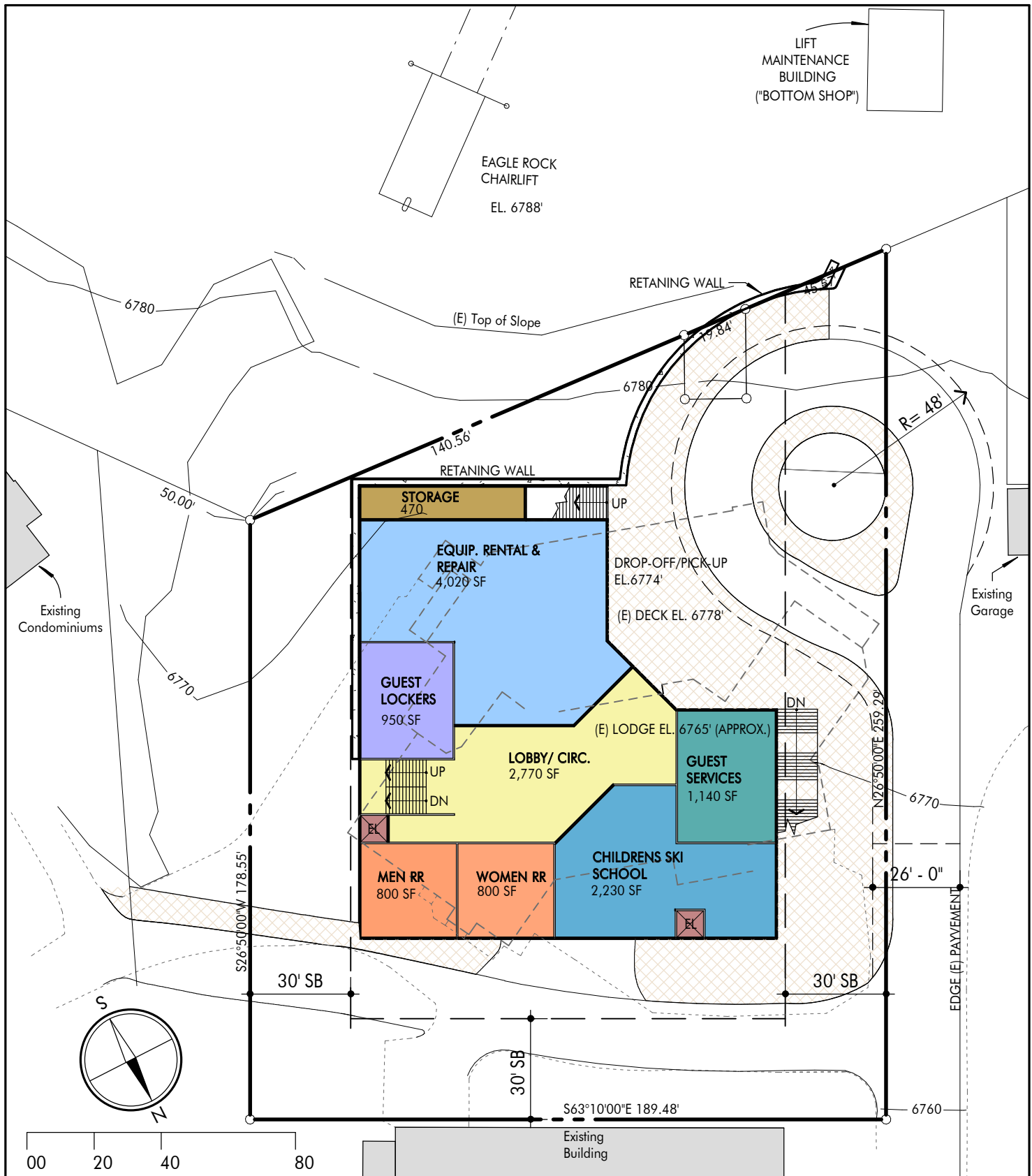
- Programmatic Diagrams for 3-story and 2-story building alternatives
- Site sections for each alternative
- 3D model view of each alternative

The diagrams indicate the approximate footprint area for development and the potential square footage within the footprint for each level of the building. While most of the spaces indicated are reasonably close in size to the Building Program of this study (WYA 2020), the available footprint area indicated is slightly larger than the programmed area. This demonstrates the feasibility of constructing a building of the programmed size on the site. While the diagrammed square footage is slightly larger than the programmed square footage, it is likely design considerations, including building massing and façade articulation and building code requirements, will result in a building of less square footage than indicated by the programmatic diagrams.

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3 STORY - MID LEVEL
13,688 GFA

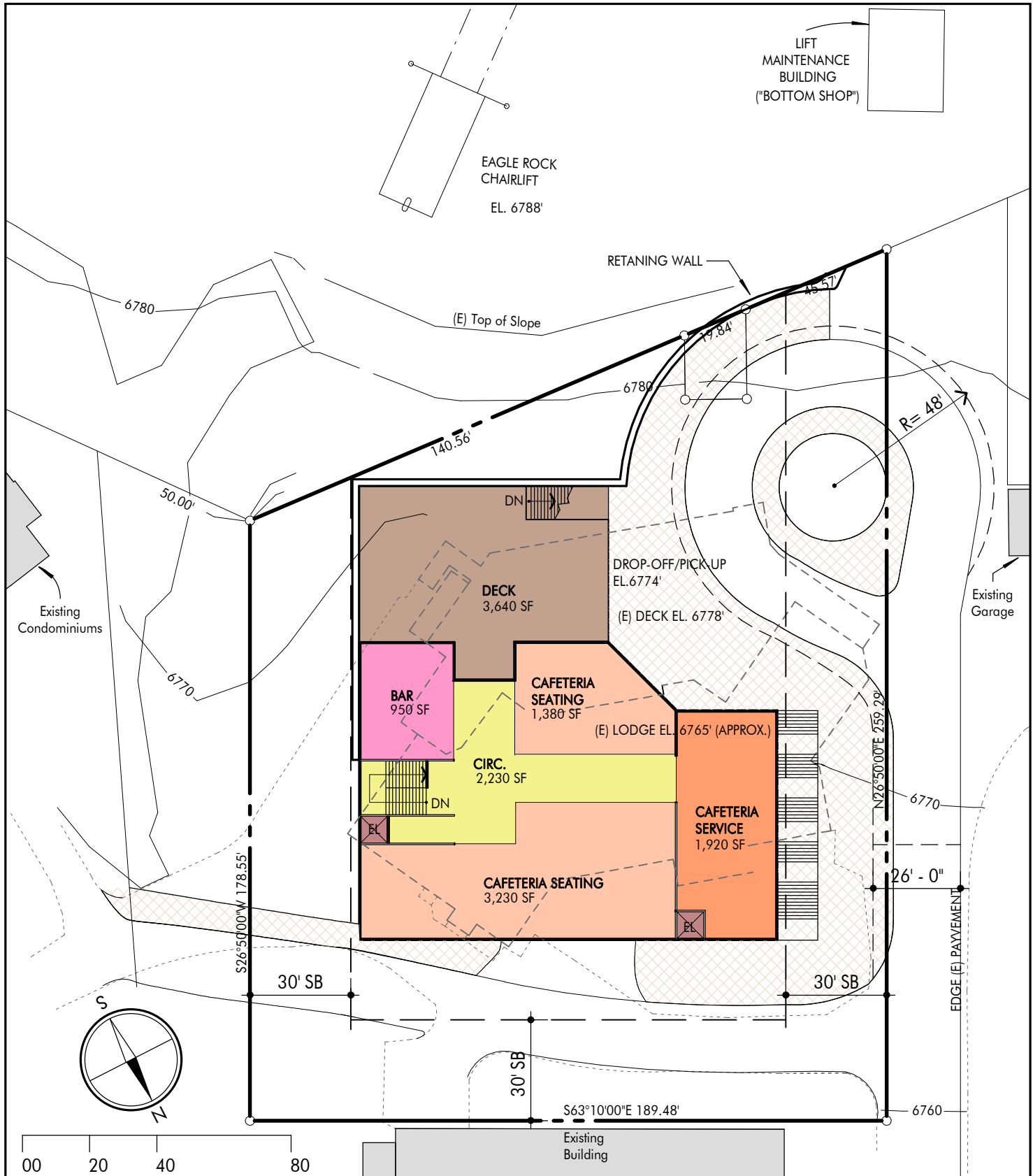
(EL. 6774')

WARD
YOUNG ARCHITECTURE & PLANNING

PROGRAMMATIC DIAGRAM A 09/10/2020



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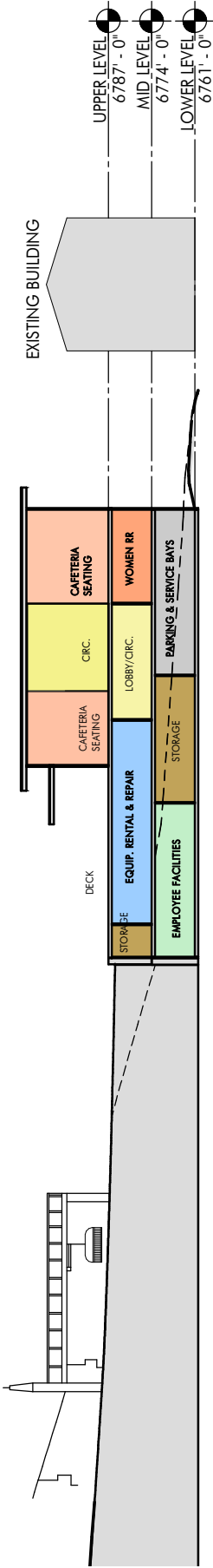
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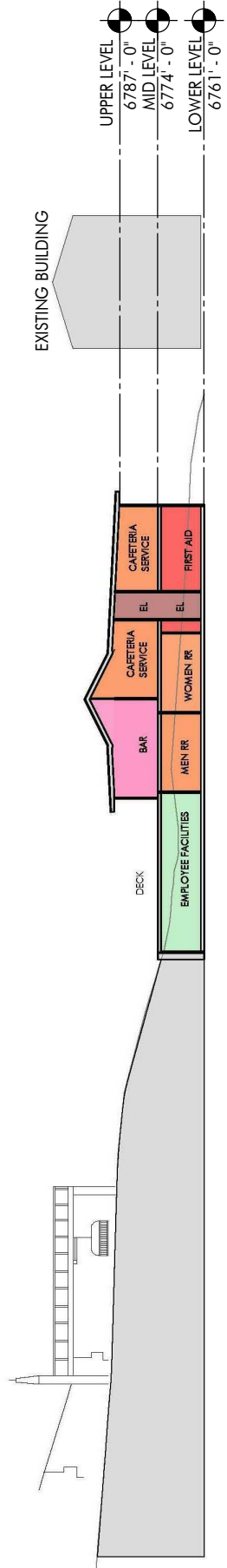
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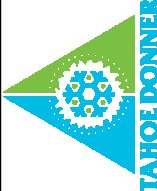
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3 STORY CONCEPT



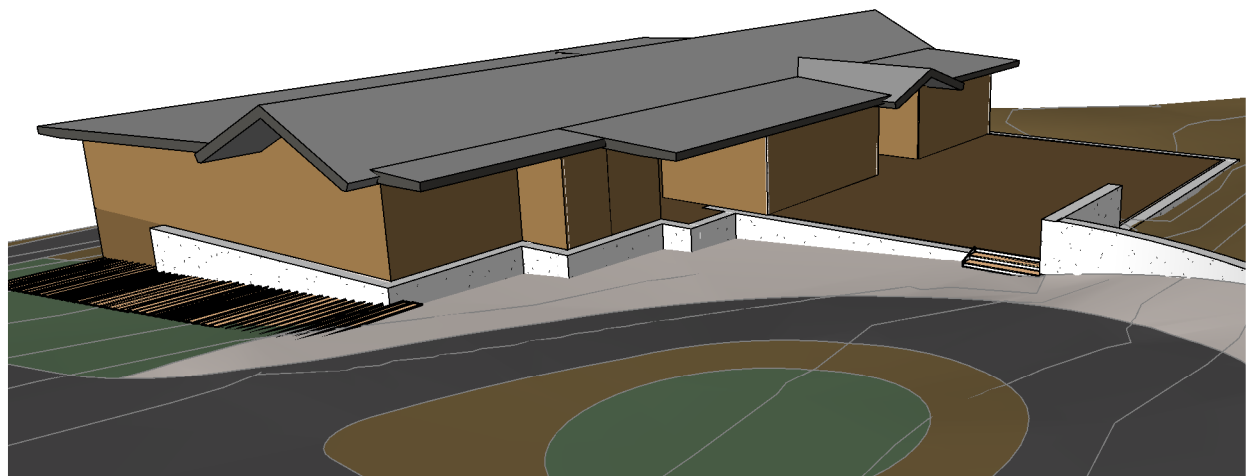
2 STORY CONCEPT

	SITE SECTIONS	 9/10/2020
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3 STORY CONCEPT



2 STORY CONCEPT

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CONSTRUCTION COST

The programmed building square footage is based on the needs analysis and programming process described elsewhere in this study. The programmed square footage was determined without consideration of construction cost or project cost budgets. Two reduced size programmed square footage options are provided to indicate cost effective options for reducing the size of the building, considering space needs priorities, should a construction budget require reduction in the square footage of the building.

Pre-design, a construction cost estimate is normally based on cost/sq. ft. of recently constructed, similar building type and scale, and in the area, or in a locale with similar characteristics, if such building(s) exist. Where comparison buildings deviate in similarity, and/or the proposed project has unique aspects, adjustments must be made to the construction cost factors used for the building being estimated.

“Project Cost” refers to the total cost of the project, including “hard” construction cost and “soft” cost. Hard construction cost includes both building and site work. While total construction cost per square foot is often quoted incorporating both of these factors, it is useful to separate building construction cost from site construction cost, as there may be more variables to take into consideration in comparing the development and infrastructure costs between sites. While there may be readily comparable characteristics between buildings, rarely are the sites similar.

Comparing costs to similar buildings should consider several factors, such as structural systems, materials and products cost escalation, and project delivery approach. As building design develops, cost estimating has an increasing basis for refinement and reducing contingencies.

“Soft” costs include A/E Fees, project management, obtaining entitlements, legal services, cost estimate services, permits, mitigation fees, utility connection fees, etc. Soft costs are often initially budgeted to be 25% of the hard costs.

In developing a budget for construction cost for the lodge, costs of recently constructed or under construction comparable commercial projects are evaluated and adjustments made to make as close of “apples-to-apples” comparison as possible. Unfortunately, no projects reasonably close in comparison to a 3-story, 26,000 to 30,000 sq. ft., with retaining walls ranging from 10 ft. to 27 ft. high for 250+ ft were found. Additionally, criteria for expected outcome (cost, design aesthetic, quality) has not been established. Therefore, it is necessary to work from assumptions about the building. The assumptions used are probably best described as for a building similar to Judah Lodge at Sugar Bowl, perhaps a bit more straightforward in structural system and stacking of floor levels.

At this early stage of project development, it would be best to consider costs as a range that will be narrowed as a building design is developed. The range would be \$550 to \$650/sq. ft. for building construction and \$1.5M - \$2.5M for sitework - hard construction costs. For a 26,000 sq. ft building, the sitework budget would add \$58 to \$96/sq. ft. to the building construction cost. Averaging these figures results in a building and sitework hard construction cost estimate of \$677/sq. ft.

A contingency would typically be added to a cost estimate that is based on some level of definitive estimating “take-off” to cover possible omissions or unknown factors that are not apparent due to the level of the design. As the building design progresses through the design phases of Schematic Design, Design Development, and Construction Documents, the contingency percentage is typically reduced, due to the increasing information about the building design. As there is no building design at this point, and the budget estimate is based on deriving costs from other completed or under construction buildings, a contingency factor, per se, is not included in the cost/sq.ft. estimate above.

Costs for demolition of the existing building, including hazardous material abatement, if needed, are not included in the construction cost estimate above. A budget \$100,000 for demolition should be used until more information is known about the existing building’s materials and systems.

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PROJECT SCHEDULE - PRELIMINARY OPTIONS

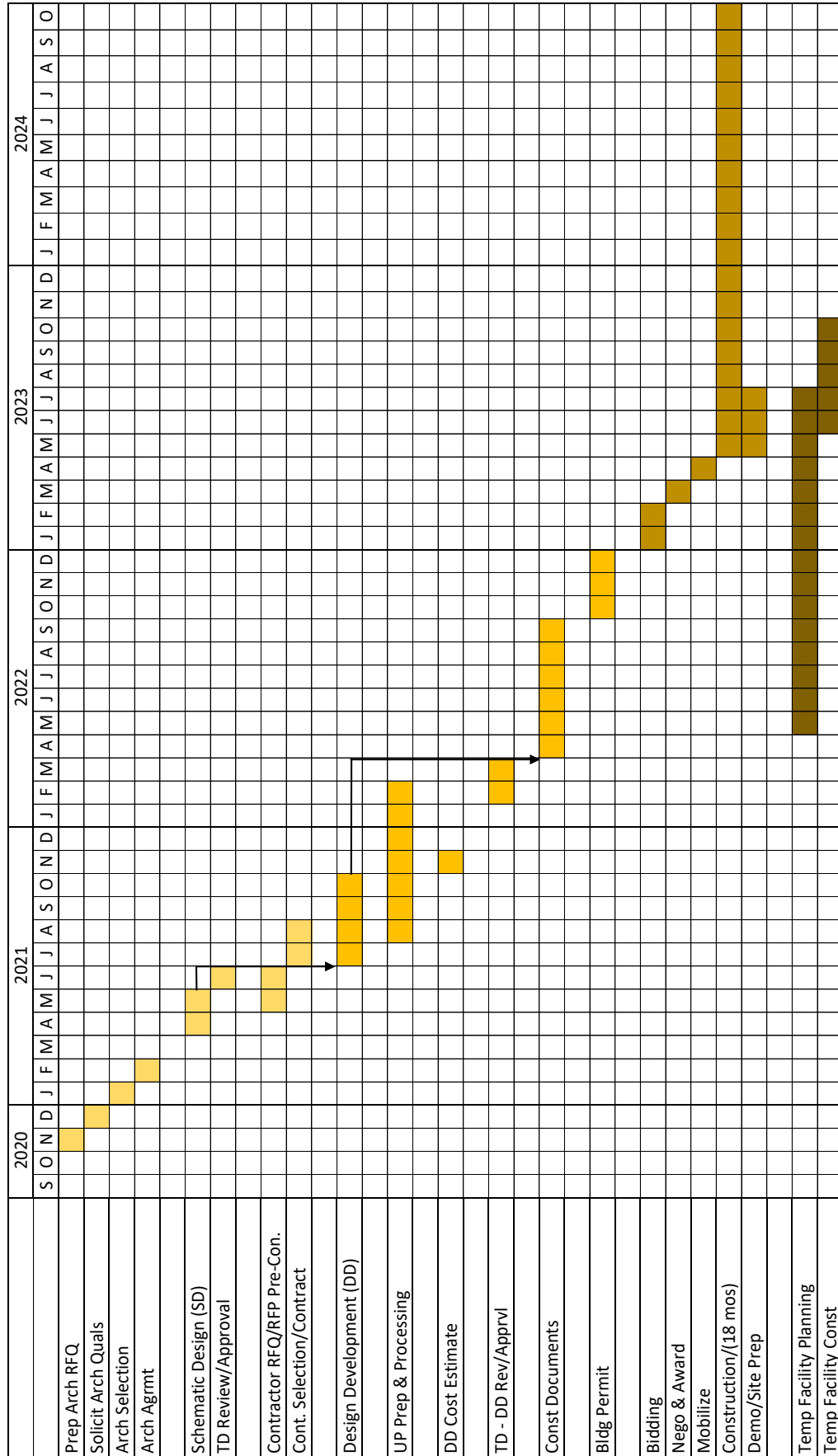
Following are two alternatives for project timelines keyed to an assumed calendar.

- **Sequential Activities** indicate a timeline with development steps occurring in a sequential order, completing each essential step before commencing the next.
- **Concurrent Activities** indicates a timeline when there are overlapping activities in the development process.

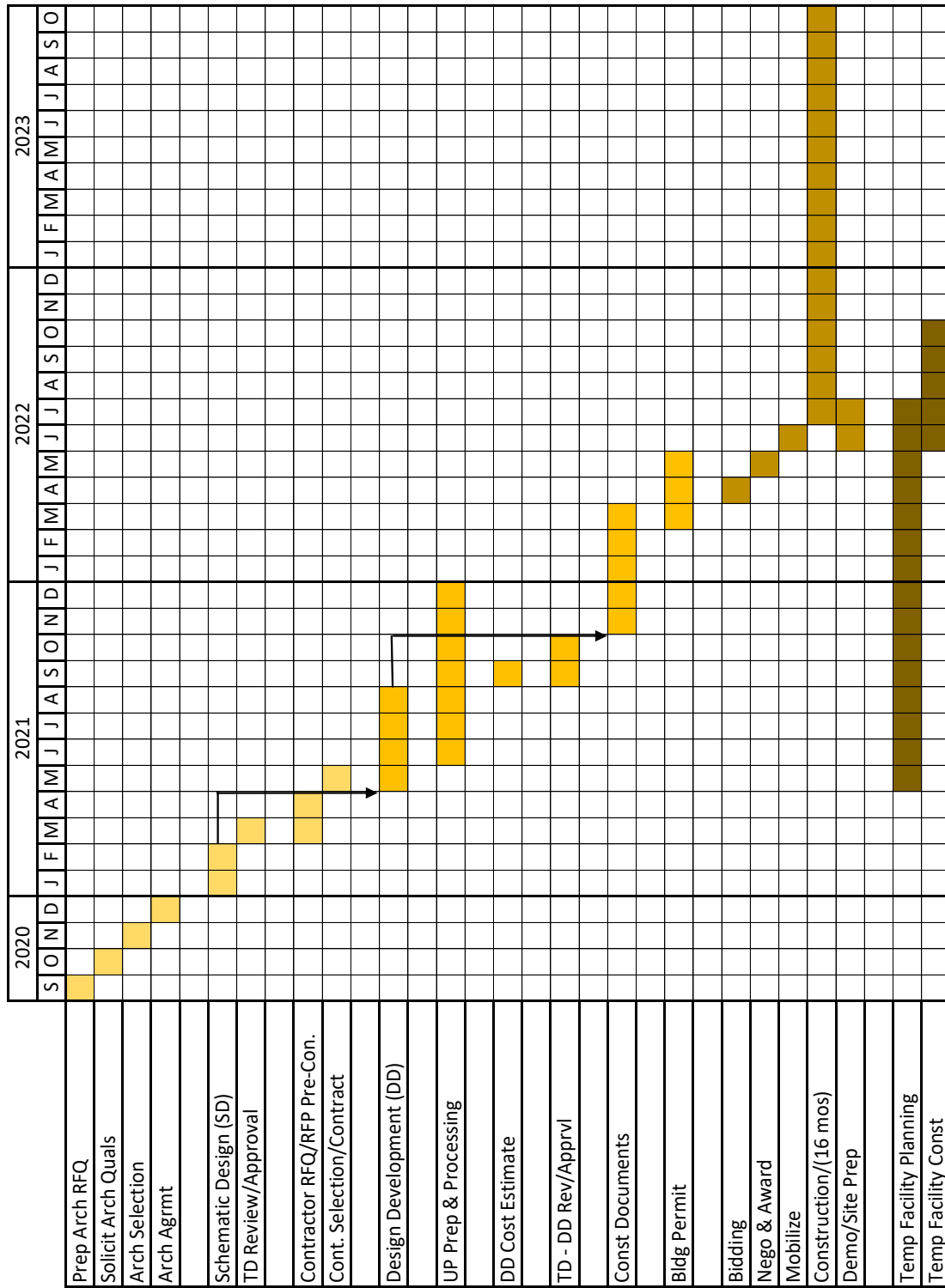
The Concurrent Activities schedule indicates the construction could commence a year earlier than using the Sequential Activities approach. The Concurrent Activities approach does present greater risk of not being achievable and of increased soft costs, and possibly increased hard construction costs. These risks and costs need to be evaluated in comparison to likely increased hard construction costs of starting construction a year later using the Sequential Activities approach – 2023 (Sequential) vs. 2022 (Concurrent), depending on when the building design process begins.

These schedules reflect timelines for design, obtaining entitlements, and construction processes. Several other factors need to be considered as to impacts on the timeline for starting construction, such as member outreach process, TDA review and approval process for project milestones (e.g. design phases), financial analysis and project financing.

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TD DOWNHILL SKI LODGE
Project Schedule B Preliminary
Concurrent Activities



APPENDIX A. PROGRAM SF OPTIONS – DETAIL

The following spreadsheet provides the detail square footage breakdown for the proposed Building Program square footage and the two reduced program area options.

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Downhill Ski Lodge Program SF Options - Detail						Notes: Miguel and Rob	
STAGING FACILITIES							
Guest Services (incl. Ticket Sales)	516	1,240	1,000	1,000	304 sf (sf source: Ecosign 2018), adj. for actual space allocation.		
POS Ticketing counter	216	300	300	280	5 POS stations; POS stations are too small - need to be 6' wider and 24" deeper. (sf source: derived from plan)		4 POS stations (reduced due to providing ticket kiosks); increase width of each POS station - 5' min.; increase depth back wall to front of POS counter.
Ticket Kiosk area	0	300	250	200	none		4 ticket kiosks, plus 1 customer feedback kiosk
Queuing space	260	400	300	275	queue space for 20; sf includes Ticketing circulation, free standing retail racks, access to Dressing and Basket Check (sf source: derived from plan)		provide queue space for 40/min. 30
Retail Space	0	200	110	200	160 sf (sf source: FH plan) not included; 160 sf indicated as "Accessory Retail" under Commercial Facilities, per Ecosign 2018; space includes circ space in ticket sales area; 3 freestanding racks (2 - 3' x 3', 1 - 2' x 2'); 16 lf wall behind POS Stations, 28 lf on other walls, racks extend 1' off wall		provide similar amount of wall area and freestanding rack space
Dressing Room	40	40	40	45	1 - 6' x 6'; space indicated as "Storage", per FH plan		1 - 6' x 6'
Guest Services/Ski School/Adaptive					430 sf total of 260 sf at Lodge + 170 sf at Yurt (sf source: Ecosign 2018); 260 sf applied to Guest Services Queuing Space below, 170 sf applied to Children's Ski School below. 88 sf former Ski School Desk now used for retail storage, incl in "Retail Storage" below.		
Guest Lockers & Basket Check (Public Lockers)	340	1,075	850	850	(sf source: Ecosign 2018 - 200 sf; plus 140 sf Basket Check referenced as "Storage" on FH plan)		not applicable; incl. in Guest Services above
Locker area with seating					Lockers located in "Airlock Entry" and along walls of circulation corridor, no defined locker area; 160 coin-op lockers; 17 tall lockers; 2 benches (sf source: FH plan)		250 coin-op lockers (10 per bank - 5 high x 2 wide, each 24" w x 18" d); 30 tall lockers (15" w x 18" d x 98" h); wall space for coin dispenser (15" x 16" x 60"); hydration station, trash and recycle containers; Seating area with 6 - 10' benches
Basket Check & Ski Check	200	800	575	575	8' x 16' insufficient; 1 - POS station (sf source: "Storage" space derived from plan)		200 Lockers
Lost & Found	140	275	275	275	incl w/ Basket check		1 POS station; shelving - 5 units of 5' w x 2' d; ski check rack for 30 pair
Rental Shop (Equipment Rental & Repair)	2,870	4,736	4,273	3,580	2065 sf (sf source: Ecosign 2018), plus 254 sf Storage at Rental Shop; 250 sf for Children's Ski School equipment in adjacent space, 160 sf Rental Shop Mgr and Equipment Storage/Technical Workstation. (sf breakdown derived from plan)		locate in Basket check; requires approx. 40 sq. ft. floor area; 2 shelving units - 5' w x 2' d.
Queuing space for registration	96	400	300	300	Sf represents circulation space, no queuing space; queuing occurs in adjacent corridor		Storage space included.
Self registration	125	125	125	125	7 self-registration stations, each with computer terminal and printer		queue space for 50/30 min.
Queuing space boot fitting	96	400	300	200			7 self-registration stations, each with computer terminal and printer
Boot fitting and helmet fitting					boot fitting area accommodates approx. 12 people, approx 8' x 16' (128 sf); 8' x 16' service counter, including front side (customer) and back side (attendant) space		queue space for 50/30 min.
Boot storage	192	360	300	240	22 racks - 17' x 25'; rack space too tight for efficient functioning; Children's Ski School boots stored in adjacent storage room		provide bench space for 30/20 min.
Helmet fitting	432	608	608	600	5 pole racks, each require 2' x 2' space; fitting occurs in boot fitting area due to space constraints		22 racks, plus 2 racks for Children's Ski School. - provide 19' x 32' space min.
	0	70	70	70			11 pole racks required; fitting to occur at DIN stations; sf for pole rack floor area

Downhill Ski Lodge Program SF Options - Detail						Notes: Miguel and Rob	
Existing Lodge SF	Lodge Program SF (WYA)	Reduced Lodge Program SF (WYA)	Service Reduction Lodge Program (TDA Staff)	(E) Facilities Notes	Proposed Lodge Program Notes		
84	300	300	150		queue space for 30;		
					10 stations (7 for equipment rentals, 3 for Children's Ski School), each with computer terminal and slip printer; waxer (2' x 2' floor space) adjacent to DIN stations (waxer operation requires 5' x 14' floor area)		
248	600	600	600				
248	293	290	293	9 ski racks / 2 snowboard racks; racks 8' tall; rack space is 7'-6" x 31'-0"; does not include Children's Ski School ski/board equipment stored in adjacent storage room	9 ski racks / 2 snowboard racks, plus 2 racks for Children's Ski School equipment; racks 8' tall; provide rack space of 7'-6" x 39'-0"		
350	400	400	400	3 stations; ski pole racks and misc equipment storage at POS counter behind attendants	4 stations, each with computer, printer, telephone; queuing space for 15; ski pole racks at POS counter behind attendants		
120	120	120	120	16 lf full wall, plus 8 lf above bench (total 24 lf wall space) in POS/checkout area	provide similar retail wall space, 2 freestanding retail racks (similar to Guest Services retail display), 1 customer feedback kiosk in area adjacent to POS/Check-out area		
489	500	400	402	Storage Rm adj to Ski Rentals Check-out - 254 sf (sf source: FH plan), plus children's/day care equipment storage in room adj to Rental Shop - 235 sf (sf source: derived from plan)			
230	400	300	80	Large power equipment and workbench; space shared with Children's Ski School equipment	provide adequate workspace for safe use of equipment		
160	160	160	0	Rental Shop Mgr. desk, injured skier equip. storage, and technical workstation			
1,060	2,580	2,200	2,000	(sf source - Ecosign 2018, with adj. derived from plan)			
				585 sf (source: Ecosign 2018), less 235 sf (sf source: derived from plan) attributed to children's/day care storage applied to Rental Shop Storage above. Function of 350 sf not identified (storage?). Ski School check-in, lunch and break room is provided for at Yurt.			
350				(sf source - Ecosign 2018)			
170				(sf source: Ecosign 2018)			
170				(sf source: Ecosign 2018)			
350				29 seats; 350 sf allocated to F & B seating at Yurt (sf source: Ecosign 2018)			
20				20 sf allocated to Mech, etc. at Yurt (sf source: Ecosign 2018)			
	700	550	355		Queuing space for 40 (400 sf); 4 POS stations, similar to Guest Services POS stations	3 POS/ Queuing for 25	
	180	150	145		120 cubbies req'd - 16' w x 16' h x 24' d, 4 high; located behind POS stations	100 Cubbies	
	1,500	1,300	1,300		Folding tables for 75	Folding Tables for 65	
	200	200	200		2 unisex		
				3,754 sf + 350 sf Yurt F & B seating + 20 sf (sf source: Ecosign 2018)			
4,786	9,631	8,323	7,430				
STAGING SUBTOTAL							
COMMERCIAL FACILITIES							
2,150	4,750	4,450	3,750	2530 sf - 350 sf at Yurt, incl abv in Children's Ski School, with adj per plan (sf source: Ecosign 2018)			
Cafeteria Seating (Food & Beverage Seating)							

Downhill Ski Lodge Program SF Options - Detail					Existing Lodge SF	Lodge Program SF (WYA)	Reduced Lodge Program SF (WYA)	Service Reduction Lodge Program (TDA Staff)	(E) Facilities Notes	Proposed Lodge Program Notes	Notes: Miguel and Rob
Cafeteria seating					2,010	4,500	4,200	3,750	150 seats; 2530 sf - 350 sf at Yurt (sf source: Ecosign 2018), less 170 sf for bar stool space at Bar (sf source: derived from plan)	300 seats, mix of 4-tops and larger tables reduced plan - 280 seats	250 seats
Entertainment Niche					140	0					
Children's Soft Play Area						0					
Cafeteria Private Room						250	250			seating for 16; 4 - 4 top tables reduced plan - private room could double as Administration Conference Room (Conference Room deleted from Administration below)	
Cafeteria Service (Kitchen & Scramble, Bar)					1,504	2,350	1,970	2,000	800 sf (sf source: Ecosign 2018), plus areas incorrectly identified as "Storage" and "Admin" (sf source: FH plan)		
Queuing/Order/Waiting/Pick-up/Cashiers area					600	700	600	600	800 sf (sf source: Ecosign 2018), less 200 sf identified as "Kitchen" (sf source: FH plan), correctly attributed to 64 sf Women's Restroom and 136 sf to Bar		
Kitchen					268	620	500	520	310 sf (sf source: FH plan), less 42 sf storage area (added to BOH)		
Back-of-House (storage and walk-ins)									Dry storage - 6' x 12' adj to Kitchen, 10' x 10' adj to seating area, 6' x 11' adj to food service, 6' x 9' adj to Kitchen (attic), and 6' x 6' adj to delivery area (328 sf) - inadequate dry storage and operationally inefficient due to multiple locations. Walk-ins - 1 refrigerator (5'-9" x 7'-6" inside) and 1 freezer (5'-6" x 8'-0" inside), totalling approx. 100 sf. (sf source: "Admin" on FH plan)	2x existing dry storage and 3x existing walk-ins (including accomodating legs) space required - totalling 950 sf.	
F & B Manager's Office					594	950	800	800	approx. 100 sf. (sf source: "Admin" on FH plan)		
Bar / Lounge					42	80	70	80	(sf source: derived from FH plan) 0 sf (sf source: Ecosign 2018), as Bar area included in "Kitchen & Scramble, Bar" abv., and Bar seating incl in "Food & Beverage Seating" abv.		
Bar					415	1,600	1,000	980		need bar stools for 30; can be mix of stools at bar and high-top tables with stools (e.g. 1 or 2 - 8 tops); 2 walk-up service stations: 1 window service to Deck (if possible); need double existing space; accessory retail wall space at bar back.	25 Stools
Bar Storage					406	900	600	300	236 sf for Bar, plus 170 sf floor area for 14 bar stools at bar (deducted from Cafeteria seating sf) (sf source: derived from FH plan)		
Lounge					9	100	100	80	Bar Closet - 9 sq. ft. (3' x 3'); other bar storage combined with F&B Storage Rm. no existing "Lounge" area; large percentage of cafeteria seating is used by guests for lounging, reducing seating turnover	Liquor and bar dry storage - 100 sq. ft. needed new program component; provide "Lounge" area accomodating 30 guests, which can be used for food service, but lower turnover of seating	
Restrooms					995	1,600	1,450	1,300	930 sf (sf source: Ecosign 2018), plus 65 sf Upper Floor Women's Restroom space indicated as "Kitchen".	approx. 50 sf/stall req d	
Accessory Retail					160	200	0	0	160 sf located in Ticket Sales/Guest Services (sf source: Ecosign 2018); does not incl additional 120 sf retail area at Rental Shop check-out.		Took out of Upstairs (located in Guest Location)
COMMERCIAL SUBTOTAL					5,224	10,500	8,870	8,030	4,420 sf (sf source: Ecosign 2018), with adj per plan and notes abv.		
OPERATIONAL FACILITIES											
Administration					724	1,175	915	900	917 sf (sf source: Ecosign 2018), with adj. per actual function of space.		
Guest Services ("Ticketing") Manager					130	80	80	80	1 office, included Retail Manager (sf source: FH plan "Admin")		

Downhill Ski Lodge Program SF Options - Detail					Proposed Lodge Program Notes		Notes: Miguel and Rob	
	Existing Lodge SF	Lodge Program SF (WYA)	Reduced Lodge Program SF (WYA)	Service Reduction Lodge Program SF (TDA Staff)	(E) Facilities Notes			
Call Center	185	150	150	150	3 workstations, each approx. 5' x 5' space; area includes storage and uniform storage hung high on wall (sf source: two "Storage" areas on FH plan)	3 workstations / POS stations - each approx. 6' x 8' space; 2 with outside sales/info window		
Admin Support & Customer Service					office equipment and storage located adj to ticketing/call center, includes Lost & Found overflow storage and serves as "scream room" 65 sf; Admin Storage in Ski Area Manager's Office - 94 sf			
Offices					Ski Area Manager's Office, incl. 2nd workstation, does not incl. Admin. Storage - 120 sf; Ski School Director and Asst Dir office in Ski Instructors' Break/Locker Room area - 74 sf (sf source: derived from plan)	4 private offices - Ski Area Manager, Mountain Manager, Ski School Director, Guest Services/Retail Manager; 3 cubicle workspaces for Ski School Supervisors		
Conference Room (for 12)	0	240	0	0		For Reduced Lodge - Consider using Cafeteria Private Room		
Server/IT Room	56	40	40	40	1 closet accessed from First Aid Room			
IT Closet on each floor	0	45	45	45				
Employee Facilities	1,046	3,150	2,950	2,500	(sf source: Ecosign 2018)			
Break Room w/ kitchen facilities	734	1,500	1,400	1,170	250 sf multi-user Break Room (seating for 6), with 7 full lockers for Mtn Ops, 14 half lockers (sf source: derived from plan); Ski Instructors have separate Break Room w/ Equipment Storage - 625 sf (sf source: derived from plan)	tables with seating for 90/80 min. at one-time (includes ski instructors)	80 seating	
IT Huddle Space/Community Computer space		20	20	20	40 full lockers, require sharing due to number of instructors (currently 120); due to lack of space for lockers, skis and boards must be stored in open, unsecured (sf source: derived from plan)	provide computer workstation		
Ski Instructors Locker Room	228	800	700	640		provide 100 full lockers	80 Full Lockers	
Mountain Ops Locker Room		200	200	180	see "Break Room" above; currently 30 employees located in First Aid Room	20 full size lockers; locate adjacent to, or with Patrol Lockers (current staff of 30)		
Patrol Lockers		150	150	100		15 full size lockers; locate adjacent to, or with Mtn Ops Locker Room	12 lockers	
Locker Room for Rental Shop, F & B, Transportation, Tickets employees	0	0	0	0	none existing	not required		
Restrooms	84	400	400	350	Ski Instructors Restroom (sf source: derived from plan)	400 sf provides for 8 stalls total - women - 4 toilets; men - 2 toilets, 2 urinals		
Vending area		40	40	20				
Supply Closet		40	40	20				
First Aid Room (First Aid & Mountain Patrol)	486	620	590	500	(sf source: Ecosign 2018)			
First Aid Room	486	420	400	400	includes 2 patient care beds, storage for equipment and supplies, ski patrol lockers (sf source: Ecosign 2018 and FH plan)	space is adequate if lockers are relocated		
Patrol Lockers		0	0	0	15 lockers (1' x 2' x 7') located in First Aid Room	locate adjacent to/or with Mtn Ops Locker Room		
Patrol Director's Office	0	80	70	80				
Restroom	0	60	60	0	no restroom at First Aid Room	provide single accommodation restroom		
Supply Closet		20	20	20				
Equipment Closet		40	40	0				

Downhill Ski Lodge Program SF Options - Detail					Service Reduction Lodge Program (TDA Staff)	Reduced Lodge Program SF (WYA)	Lodge Program SF (WYA)	Existing Lodge SF	(E) Facilities Notes	Proposed Lodge Program Notes	Notes: Miguel and Rob
Storage & Support Space											
Retail Storage					1,292	3,525	2,975	1,650	2,915 sf identified as ancillary space moved to Operational Facilities, with adj. for incorrectly identified space attributed to other uses.		
Uniform Storage					188	225	200	150	100 sf, plus 88 sf Ski School Desk now used for storage no central storage location - some uniform storage in storage closet near Ski Rentals; other storage on hooks high on wall above administration office area; inventory control difficult		
Winter Event Storage					60	400	300	250		locate with, or adjacent to, Laundry	
General/Storage					375	400	350	350	15' x 25' (approx.) in underfloor space, partially excavated		
Snow Removal Equip Storage (at each level)					424	1,000	950	450			
Laundry Room					0	300	225	250		provide 100 sf equipment storage on each level	
Custodial Supplies					135	100	100	100		locate with, or adjacent to, uniform storage existing sf adequate for custodial supplies; need to include mop sink and flammables cabinet	
Delivery and Service					110	100	100	100	2 closets - 40 sf and 70 sf; no mop sink		
OPERATIONAL SUBTOTAL					0	1,000	750	0	Very little suitable space within building		
					3,548	8,470	7,430	5,550			
TOTAL FUNCTIONAL SPACE							24,623	21,010			
ANCILLARY SPACE (25 % of Functional Space)					13,558	28,601			Circulation, Mechanical/Electrical, Walls/Waste		
Circulation (17%)					2,080	4,862	4,186	3,572	(sf source: Ecosign 2018 and FH plan)		
Mechanical (2%)					200	572	492	420	(sf source: derived from plan/field measurements)		
Walls/Waste (6%)					0	1,716	1,477	1,261	included in sf of spaces		
ANCILLARY SUBTOTAL					2,280	7,150	6,156	5,253	5,215 sf, less 2,915 sf "Storage" area moved to Operational Facilities, abv. (sf source: Ecosign 2018)		
TOTAL BUILDING AREA					15,838	35,751	30,779	26,263	15,838 sf (sf source: Ecosign 2018); 660 sf Operational Facility - "Bottom Shop" not included.	Consider incorporating in Lodge in order to remove existing Bottom Shop building from bottom of ski slope; existing 660 sf adequate.	
CCC - Comfortable Carrying Capacity/Design Day estimate											

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APPENDIX B. WORKING PAPER - STUDY ASSUMPTIONS

TAHOE DONNER DOWNHILL SKI LODGE STUDY

Working Paper – Study assumptions

May 13, 2020

General

In programming the space needs for a new lodge, one metric that can be used is the square footage per skier factor that Ecosign 2018 used (represented to be industry standards adjusted for Tahoe Donner's user characteristics). When replacing an existing building, another metric can be developed by analyzing how the existing spaces meet the current and projected needs. Both of these metrics can be considered in programming the space requirements for the Lodge.

From a guest service perspective, the existing Food & Beverage seating and service areas, and Rental Shop, are Lodge areas that are clearly undersized for the current demand and operational efficiency. The following sets forth assumptions to be used in developing metrics to assist in programming the size of these spaces.

Definition of terms

In evaluating capacity of the existing Lodge and planning for the new lodge, to be consistent, the following terms will be used.

Skier (Comfortable) Carrying Capacity (SCC) – The number of skiers that a given ski area can comfortably support on the slopes and lifts without overcrowding, or those that may be accommodated at one time and still preserve a congenial environment. A ski area's comfortable carrying capacity is a function of VTF demand per skier, VTF supplied per hour, difficulty of terrain and scope of support facilities. The Skier Carry Capacity of an area is calculated assuming all the terrain is available for skiers and that the skiers are evenly distributed over the available terrain. If weather and or snow conditions make parts of the area more attractive than others, the more attractive areas may feel overcrowded even though there are fewer skiers on the mountain than the area's theoretical SCC. Skier Carrying Capacity assumes that there will be lift queues of up to approx. 10 minutes. SCC is also commonly referred to as "Mountain Capacity", Comfortable Carrying Capacity (CCC), or "Skiers at one time (SAOT)".

(Ecosign 2018, p. I - 4)

Note: Typically, a ski area's base facilities are sized to accommodate the CCC of the mountain terrain and uphill lift capacity. It has been established by Ecosign 2018 that Tahoe Donner's mountain terrain and uphill lift capacities are not the existing constraints on CCC. Furthermore, it is not Tahoe Donner Association's intent to maximize the ski area's utilization by upgrading the lift system to be in balance with the skiable terrain (trail system). As a result, the ski area's base facilities and amenities will determine the Comfortable Carrying Capacity of the ski area.

Peak Day – maximum number of Skiers on the busiest of days; facilities will be busier than customers would prefer, which is "acceptable" 5 – 10 days of the season.

(Ecosign 2018, p. II - 15)

Design Day – The number of skiers for which a ski area's base facilities are designed. Typically, the Design Day is 15% to 25% less than the anticipated peak business level, on the basis that should be adequate for most days of the year.

(Ecosign 2018, p. II - 15)

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Skier Visits / Skiers – the total number of lift tickets sold, whether full-day or half day, adults or children.

Visitors / Guests – the number of people using the Lodge, Skiers and non-skiers.

Statistical Recap for Assumptions

Existing Trail Capacity – SCC = 1,980 skiers

Existing Lift Capacity – SCC = 1,130 skiers

(Ecosign 2018, p. II - 12)

Improved Lift Capacity potential – SCC = 1,900 with multiple lift improvements

SCC = 1,572 if/when only Eagle Rock chairlift upgraded

(Ecosign 2018, p. II - 12)

Peak Day Skiers for planning purposes –

	Peak Day	Ave. Top 10 Days
2015/16 season	1,812	1,468
2016/17 season	1,632	1,249
Average	1,700	1,300

Peak Day – 32% of Skiers (544) are Members and Member Guests
68% of Skiers (1,156) are general public arriving by car
For the day.

(Ecosign 2018, p. II - 15)

Design Day - 1,300 Skiers; 75% of Peak Day average of 1700 Skiers.

(Ecosign 2018, p. II - 15)

Note: If the Design Day were to be based on an average of the Top 10 Peak Days for the two seasons referenced above, the Design Day would be approx. 1000 Skiers (75% of 1300 Skiers - average of Top 10 Peak Days).

Existing Lodge CCC - 1,000 CCC (“Visitors”); constraint is Lodge and parking; 1,400 w/ compromise in service level; > 1,500 – experience “not as desirable” for visitors and employees, per “management”.

(Ecosign 2018, p. II - 13)

The existing Lodge currently provides 68% of the recommended total functional floor space for 1,300 Skiers, based on Ecosign’s square footage targets developed for Tahoe Donner. According to the target space/Skier, the existing ski area could comfortably satisfy 882 Skiers (or theoretical peak of 1,150 Skiers) “which is much lower than usual busier periods confirming the feedback from users and the task force.”

Using Ecosign’s planning standards, the existing Lodge theoretically provides a Design Day capacity of 882 skiers.

(Ecosign 2018, p. II - 22)

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Note: TD Staff does not agree with the Ecosign's estimate of the CCC of the existing Lodge. Staff has indicated that the Lodge is packed full of users, with guests sitting in the stairwells, with under 500 Skiers. See "Assumptions" below for explanation.

Food & Beverage seating capacity

Day Lodge indoor – 150 seats; 3 turns/seat; guests served 450.

Day Lodge outdoor – 220 seats; 3 turns/seat ; guests served 660.

Total seats – 370; guests served 1,287

(Ecosign 2018, Table II.16, p. II - 25)

Note: TD Staff agree with the number of seats, but do not agree with the number of turns and resulting capacity for guests served. See "Assumptions" below for explanation. Staff recommended 300 seats minimum (Design Day - 300 seats x 1.5 turns = 450 minimum).

(TD Staff, April 2020)

Existing Food & Beverage Service capacity -

The Kitchen and Scramble service area is 39% of Ecosign's recommendation of SF/Skier, serving a theoretical CCC of 501 Skiers.

(Ecosign 2018, P. II – 23, Table II-15)

TD Staff estimates the existing Kitchen and Scramble service has a CCC of 650 - 750 Skiers. With 1000 Skiers, wait time for a hamburger is 20 to 30 minutes.

(TD Staff, April 2020)

Rental Shop –

Existing Rental Shop operational characteristics:

- 2065 sq. ft. for front and back-of-house operations, plus 400 sq. ft. for equipment repair area. Size is approx. 30 – 40% of industry standard for number of units.
- High percentage of Skiers rent equipment (market characteristic).
- Existing inventory accommodates rental needs with 1900 Skier visits.
- Approx. 40% to 45% of skiers rent equipment.
- Wait time – from entering the registration queue to exiting the Rental Shop, 30 minutes is acceptable.
 - o Wait time is 25 min. on a typical busy day – 600 to 700 Skiers.
 - o Wait time over 1 hour with 1500 Skiers

A limited amount of additional inventory is needed. Additional space is needed for increasing operational efficiency and improving customer experience.

(TD Staff, April 2020)

Bottom Shop –

Existing stand-alone building at bottom of Race Course run; 660 sq. ft. Provides space for parking 4 snowmobiles, tool shop, parts stores, Lift Ops Manager workspace, and Transportation Management workspace.

(TD Staff, April 2020)

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New Lodge Size Recommendation –

- 1300 CCC/1700 Peak Day - 23,349 sq. ft.
- 1425 CCC/1900 Peak Day (Preferred Concept) - 25,603 sq. ft.
(Ecosign 2018, p. II-23 and p. IV-24)

Assumptions

Visitors / guests – represent Skiers and non-skiers; TD staff estimate non-skiers add 30% - 50% to the number Skiers using the Food & Beverage seating and service areas, and restrooms. For this Study, 30% is used.

Design Day / CCC – to be determined. New Lodge sizing for 1000 and 1200 CCC provided for consideration.

Visitor / Guest characteristics –

- Higher than typical percentage of beginner skiers and occasional skiers who need to rent equipment and take lessons;
- High percentage of non-skiers to skiers occupying food and beverage service seating area

Existing Lodge Food & Beverage seating capacity –

- 350 Skiers on a bad weather day (max. capacity, with little or no use of Deck for eating);
- 700 – 800 Skiers on sunny days when deck is in use;
- 1000 Skiers (1300 – 1500 Visitors) is “pushing the limit”.

(TD Staff, April 2020)

Turnover of food and beverage seats by Skiers and non-skiers is lower than industry norms, due to Visitors / Guests 1) not turning over seats, and 2) spreading personal items out, taking up more than one seat/person. Therefore, the normal seat turnover of 3x (per Ecosign 2018) that might be expected does not occur.

- Of the 150 seats indoors, 30% of the seats do not turn over, due to non-skiers “camping out” for a good part of the day.
- With non-skiers camping out, and skiers and non-skiers who spread out, the net effect is that the normal capacity of guests served comfortably, based on 3 turnovers, is reduced. Seats can only be expected to turnover 1.5 times.

Note: In addition to non-skiers “camping out” and patrons spreading out, assuming 3 turnovers is high, due to the high percentage of skiers in ski lessons who all must eat in a certain time frame. This results in those skiers not having the option of spreading their lunch period out over the normal 2 to 3-hour period, also reducing the turnover potential.

(TD Staff, April 2020)

Based on the above, the comfortable capacity (Design Day Capacity) of the existing 150 seats is 225 people indoors during 2 to 3-hour lunch period. Assuming the Design Day Capacity is 70% of the Peak Day capacity, the Peak Day capacity is considered to be 321 Visitors (Skiers and non-skiers).

TAHOE DONNER DOWNHILL SKI LODGE STUDY

Working Paper – Study assumptions

May 13, 2020

The existing 2180 sq. ft. area with 150 seats yields just under 15 sq. ft. per seat. The existing seating density of the cafeteria type food service is within the norm for ski areas, which ranges between 12 – 15 sq. ft. per seat. At 12 sq. ft. per seat, the area might be able to accommodate 180 seats.

TD Staff's estimate is the existing seating accommodates 350 Skiers on a bad weather day, but the seating area is "packed".

The Ecosign 2018 report addresses indoor space required for the Lodge and does not factor in outdoor Deck area for adding to space to accommodate Food & Beverage seating needs. Therefore, seating area sizing should accommodate the Design Day with bad weather conditions. This seems a reasonable approach for a positive user experience. However, some adjustment may be made, considering that most Design Days and Peak Days likely occur with sunny/good weather.

Assumptions for sizing food and beverage service seating area for new Lodge:

- the user characteristics are unlikely to change;
- the utilization of the existing seating area could be increased somewhat by 1) different tables/seating types to get higher efficiency (making it less desirable to "spread out"), 2) providing space to hang/store clothing and personal items, and 3) some use of seating on the Deck, even on bad weather days (although not a positive guest service option).
- Yield of sq. ft. per seat may need to be 15+ with incorporating program needs for an entertainment "niche" and a soft play area for children.

Size F & B seating area to accommodate 300 seats, minimum, to accommodate a Design Day of 450 Visitors (300 seats x 1.5 turns).

Rental Shop –

Approx. 33% more space is needed for existing operations.

Bottom Shop –

Incorporate space in new Lodge – TBD.

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APPENDIX C. - COMFORTABLE CARRYING CAPACITY ANALYSIS

A review of the appropriate Comfortable Carrying Capacity (“CCC”) was conducted and compared to the Task Force recommendation of 1,000 CCC to be used in sizing the lodge. The following recaps this review.

Statistical Recap

Existing Lift Capacity =	1,130	(p. II-12, Ecosign 2018)
Improved Lift Capacity =	1,900 per Ecosign recommendation, multiple lift improvements 1,572 if/when only Eagle Rock chairlift upgraded	(p. IV-5, Ecosign 2018)
Existing Trail Capacity =	1,980	(p. II-12, Ecosign 2018)
TD Management –	1,000 CCC (“Visitors”); constraint is Lodge and parking; 1,400 w/ compromise in service level; > 1,500 – experience “not as desirable” for visitors and employees	(p. II-13, Ecosign 2018)

Ecosign 2018 comparative analysis for Skier Service Space (Lodge Sizing) -
1,300 CCC aka “Design Day” (Peak Day 1,700); Design Day typically calculated as 15% to 25% lower than anticipated Peak Day; 25% used.

(p. II-15, Ecosign 2018)

- Notes -
- 1) “Peak Day” of 1,700 seems to be based on average of Peak Days – 1,812 (2015/16 season) and 1,632 (2016/17 season).
 - 2) On Peak Day - 32% of skiers (544) are Members and Guests, 68% (1,156) are general public arriving by car for the day. (p. II-15, Table II.12, Ecosign 2018)

Ecosign 2018 “Preferred Concept”(based on discussions with TD staff over the design period)
1,900 Peak Day
1,425 “Design Day” (CCC) (75% of Peak Day)

p. IV - 7 Ecosign 2018

Potential Growth Considerations

From Task Force meeting notes, a Task Force member observed, “The number of homes currently constructed in Tahoe Donner is approximately 90% of the total of available lots. At the current rate of construction, the number of Tahoe Donner homes will increase by about 10% over the next 10 to 20 years. Since the new lodge will have a useful life that exceeds this timeframe, any new lodge should be sized to accommodate 10% more members than the number of users today.”

There are approximately 650 vacant lots.

There are 544 Members and Guests at the Ski Area on a Peak Day (p. II-15, Table II.12, Ecosign 2018).

Question - Will Tahoe Donner experience an increasing percentage of primary residents during the planning timeframe? If so, will these full-time residents increase the total skier days and add to the skier visits and number of Peak Days?

Initial thoughts on CCC

Based on the data, planning a new Lodge for CCC of 1000 does not seem to be sufficient for long-term planning for the facility. This would equate to a Peak Day of 1333. While Peak Days most frequently occur with sunny weather, when outdoor seating can assist with accommodating the seating demand, there is no such “overflow” accommodation for all the other skier services required to provide a positive user and employee experience.

Basis for PROGRAM SQUARE FOOTAGE

The program square footage is based on an assessment of requirements for the current Visitor/Guest demand at the existing Ski Lodge, including market characteristics and demographics of the Visitors/Guests, providing a reasonable level of guest service to meet owner/member expectations, planning for the various specific uses and functions to be provided, and building code and accessibility requirements.

Skier Visits Records

The historic business levels at Tahoe Donner ski hill, per Tahoe Donner records:

- 2019/20 Season
 - o Top Two Peak Days – 1,407 Skiers (Jan. 18), 1,504 Skiers (Feb. 16); peak pricing and constraining visits in effect.
 - o Average Top Ten days – 1,350 Skiers
- 2018/19 Season
 - o Peak Day – 1,479 Skiers
 - o Average Top Ten Days – 1,196 Skiers (ample snowfall year)
- 2017/18 Season
 - o Peak Day – 818 Skiers
 - o Average Top Ten Days – 745 Skiers
- 2016/17 Season
 - o Peak Day – 1,632 Skiers (lowering trend, but higher revenue due to increased ticket pricing)
 - o Average Top Ten days - 1,249 Skiers (this was a big snowfall year)
- 2015/16 Season
 - o Peak Day – 1,812 Skiers (higher revenue due to increased ticket pricing)
 - o Average Top Ten Days – 1,468 Skiers
- 2014/15 Season
 - o Average Top Ten Days – less than 1,000 Skiers (minimal snow year, open only select days)
- 2013/14 Season
 - o Average Top Ten Days – less than 500 Skiers (no snow year, open only select days)
- 2012/13 Season
 - o Average Top Ten Days – 1,567 Skiers

Skier Visit Averages

- Average Top Ten Days, seasons 2018/19 and 2019/20 – 1,273 skiers
 - o Results in a Design Day of 955 skiers
 - o Snowmaking and peak period pricing in effect
- Average Top Ten Days, 5 of last 8 years (not including 3 low/no snow years) – 1,366 Skiers
 - o Does not include 3 low/no snowfall years, as not reflective of demands on Lodge services.

- Average Top Ten Days, last 8 years – 1,134 Skiers
 - o Includes 3 low/no snowfall years
- 2019/20 Season – 20,000 Skier Visits over 19 day peak period; 52% of seasons visits and revenue (season ended mid-March due to coronavirus); averaged 1,074 Skiers/Day

Assumptions to be used in programming for Lodge

- Program for “existing” demand; Board will need to provide direction on using a higher CCC to accommodate growth.
- Design Day, or Comfortable Carrying Capacity, shall be 25% less than Average Top Ten Peak Days.
- Design Day – 1,366 Skiers x .75 = 1,002 Skiers; use 1,000 Skiers for programming (per Board direction)

Note: Staff estimates (“conservative”) total number of Visitors/Guests utilizing the Lodge facilities is minimum of 35% more than Skier Visits.

Definitions

- **Peak Day Average** – Average of Top Ten Days during the season.
- **Design Day / CCC** – Design Day is the number of Skiers for which a ski area’s base facilities are designed. Per Ecosign 2018, typically, the Design Day is 15% to 25% less than the anticipated peak business level (see “Peak Day” above), on the basis that should be adequate for most days of the year.
- **Skiers, or Skier Visits** – Number of lift tickets sold.
- **Visitors / Guests** – represent Skiers and non-skiers; TD staff estimates non-skiers add 30% - 50% to the number Skiers using the Food & Beverage seating and service areas, and restrooms.