Clarkson University
8 Clarkson Avenue
Potsdam, NY 13699

Consruction Management Section

TRANSMITTAL

To: Village of Lake Placid and Town of North Elba

Date: March 5, 2020
Project # 2020-001

Project: NYOR Projects Peacock Park

Attn: Mr Erik C. Backus, Mr. Dean Dietrich, anad Mr. Jamie Rogers

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Fax:

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Yours Truly,

Mitchell Schweitzer

Project Manager

ADV ENGINEERING

A DIFFERENT VIEW OF THE FUTURE.

Peacock Park Beach Area and Beach House

03.05.2020

ADV Engineering
8 Clarkson Ave
Potsdam, NY 13699

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Owner's Performance Requirements (OPR)

Peacock Park Beach Area & Beach House

In 2017 the Village Board began a series of renovations to the Village Beach House located in Peacock Park. That park, immediately adjacent to Mirror Lake, is also in need of several upgrades and improvements. As part of the renovation process, the Village Board asked the Appearance Committee to develop a plan for the development of the area immediately adjacent to the beach house. ADV Engineering will work to provide this plan under the auspices of the Appearance Committee.

The following Schematic Design Report is a cumulation of work and design done to the end of the first phase of the design process. This following report will show the established project scope, conceptual design, and relationship of the design to the current site. Our goal within this report is to provide a feasible design that is clearly defined. In doing this, we have also provided voluntary alternative design solutions.

The schematic design report summarizes the design of the projects within the Peacock Park beach area as well as the beach house. These include the renovations done to the deck on the beach house, a dock for the beach area, new pathways, seating/austetics for the beach area, retaining/sitting walls, plantings around herd paths, and fencing around the toboggan chute, utilities, and the lake outlet.

Environmental / Sustainability Goals

The goals for these improvements include:

1. Create an aesthetically pleasing environment
2. Encourage a variety of recreational uses
3. Protect the environment
4. Promote ease of movement
5. Provide for security and safety

Items in Need of Completion

Based upon the five goals described above, the Appearance Committee identified the following items in need of completion.

Beach Area:

Any embedded rocks along the pathway need to be removed. Fencing along the pathway near the Mirror Lake outlet and beach edge needs to be removed and replaced.

Parking Area:

A pedestrian access path to the picnic and kayak launch areas needs to be created. Lighting was initially voiced as a need in the parking area, but after communication with the client, noted in the appendix, lighting has been deemed sufficient.

Beach House Deck:

The existing deck has visual sagging at the center of it and has been deemed unsound. Currently there is a temporary column in the center to avoid collapse and further sagging. There is also visual cracking in the concrete flashing at the base of the support columns which needs to be fixed or replaced. This deck needs to be made structurally sound.

Dock:

A dock within the beach area needs to be installed to serve as a kayak and rowing launch. This should be able to either withstand winter months without impact to structure or be removable. This floating dock will provide a safety net for the current issues with water levels rising throughout New York during the spring and summer time. This dock will stay above water level and be accessible by the public at all times, unlike a permanent dock.

Sitting Wall & Retaining Wall:

A sitting wall on the left side along the pathway south of the Beach House stairs needs to be provided. The retaining wall by the Toboggan Run is in need of minor repairs. There is no information on the extent of the repairs required, including it’s length.

Gazebo Shelter & Picnic Tables:

A place for the public to take cover from weather conditions within the park needs to be provided. These shelters would also be used for storage purposes. Additional picnic tables need to be placed around the park, permanently secured to the ground.

Miscellaneous:

The fencing around the toboggan chute needs to be removed and replaced to keep pedestrians out from underneath the structure. The new utility sheds need to be screened. The herd paths need to be blocked with vegetation such as honeysuckle or a temporary fence.

Equipment and Systems Requirements

Any lighting, cabling, and conduits for the project site will be installed to Lake Placid code requirements and specifications. For the scope of this project, no changes to the existing equipment and systems of the area are planned.

Post-Construction Maintenance

It will be expected that the town of Lake Placid personnel or facilities and services will maintain and operate the building and park area after construction has been completed with a brief training session.

Program Re-Confirmation

Team Responsibilities

The Architecture/Engineering team will provide specifications on quality standards, utility connections, cost estimate, and required forms and documentation. The Construction Managers will develop a schedule, constructability and value engineering reviews, risk management service, and life cycle cost analysis.

Team Goals

After the review of the Peacock Park Area and Beach House requirements, ADV Engineering can re-confirm that design and construction will be able to proceed as originally proposed in the proposal phase. This scope will contain all of the aforementioned requirements and team responsibilities listed above.

Project Scope Profile

General Project Information

Company Name:
ADV Engineering

Project Title:
2020-001 NYOR Projects - Peacock Park Area & Beach House

Company Contact:
Mitchell Schweitzer, Project Manager

Phone Number:
(315) 335-2285

Email Address:
schweimc@clarkson.edu

New Construction Information

Proposed Use
This project is to be used by the general public within the town of Lake Placid for recreation purposes.

Basic Shape
The project contains a rectangular beach house building with a rectangular deck off the building.

Number of Stories
The project contains a beach house that is two stories. The beach house deck in question protrudes off the second story of the building.

Building Height
The roof level of the structure is approximately 20 feet above ground level.

Structural Material

The project's deck is built with (3) 2" x 12" beams and 2" x 12" joists that are 16" on center. The deck is supported with two 2" x 2" columns and masonry rock at the base of the columns.

The project's fencing is to either be built with 3" x 4" x 11' pressure-treated pine rails and 3" x 5" x 7' pressure-treated pine posts or 1" x 6" x 8' cedar boards and 4" x 4" x 6' cedar posts. If the shed option for the toboggan chute is chosen over the fence, 2" x 4" x 12' pressure treated lumber would be used.

Special Building Features

The beach house has a deck attached to the front of the building on the second floor.

Gross Area Summary

Total Area New Construction

The total area of the project's parcel is 4.10 acres. New construction will only take place along the new proposed paths, and if the option of a complete rebuild of the beach house deck is chosen. Everything else in this plan is repair work to existing structure. The area of the new path is going to be 686.11 square feet. The largest proposed area for the deck is 240 square feet.

Site Design

Location

31 Parkside Dr.
Lake Placid, NY 12946
Tax Map #: 42.191-3-4.000

Soil Conditions

Sandy-loamy soil conditions

Topography

See Site Map in Appendix

Roads and Parking

See Site Map in Appendix

Landscaping

See Site Map in Appendix

Applicable Utilities Information

Area Lighting

Lighting in Peacock Park around the beach house and in the new parking area was deemed sufficient. No additional lighting will be designed in the project. See communication on lighting in the Appendix.

Stormwater Management

Per the guide for minor projects with stormwater management provided by Lake Placid and North Elba, stormwater considerations are exempt for this project. The impervious areas affected are no more than 1,000 square feet.

Basics of Design Narrative

Background

The purpose of this project is to determine the specific cost of each improvement to facilitate the creation of an implementation plan. The area of study will also be expanded to include the entire park. ADV Engineering will collaborate with members of the Appearance Committee. The final deliverable will be a public presentation for the purpose of eliciting public comment and support for the project.

Site Design

Pedestrian Access Path:

A pedestrian access path will be located in the area shown in the site plan drawing. It starts directly north of the beach house parking lot and descends down to the Mirror Lake Walkway. The purpose of the path is to facilitate easier access to the beach area, and eliminate the herd paths that form on the hill. The length of the path will be approximately 138 feet, and have a width of 5 feet. ADV Engineering considered three alternatives for the construction of this path: a gravel surface, stamped concrete surface, and paver surface. The proposed location is pictured below.

Figure 1: Site image of where path will go (man towards the left side)

The first alternative was to use a gravel surface for the path. This would be the least expensive option, easiest to construct, and be easy to maintain after installation. However, it is not the preferred alternative. Due to the slope of this path, the gravel surface would be pushed downhill by foot traffic and erosion. If snow removal is required in the winter, then snow removal equipment may push gravel off the surface.

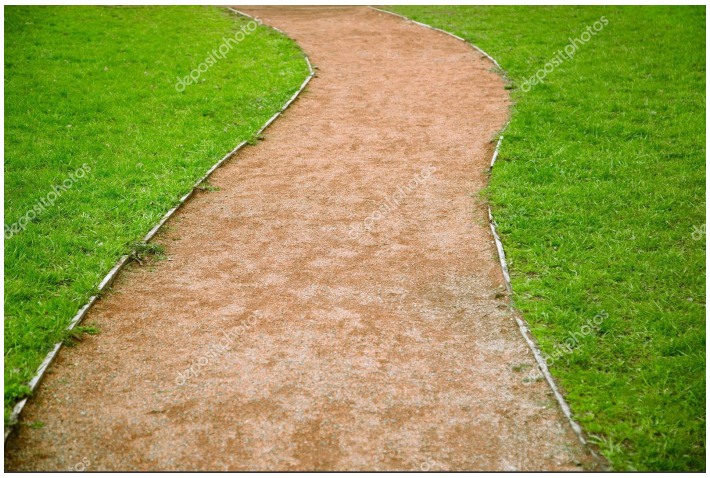


Figure 2: Example of a similar gravel path

The second alternative considered was to use stamped concrete that would be colored to match the Mirror Lake Walkway. The construction would be the same as a regular concrete sidewalk, and it would cost more than a gravel path. It would also be able to handle higher foot traffic than a gravel surface without showing damage. The reason it is not the preferred alternative is due to the challenges of maintenance over the life of the path. Due to the local climate, frost heaves are a concern. Stamped concrete is difficult or impossible to repair depending on how extensive the damage is, so full replacement would likely be necessary earlier than with the preferred alternative.

Figure 3: Example of a similar stamped concrete path

The third and preferred alternative is to use pavers for the surface of the pedestrian path. While this option would be the most expensive to construct, it would be the most aesthetically pleasing, and most environmentally conscious. The Mirror Lake Walkway was constructed with pavers, and the path in the Peacock Park area would match it most closely. In consideration of long-term maintenance, there are advantages to using a paver surface. The surface is modular, and damaged pavers can be replaced without the need to remove a significant portion of the path. Ground movement will not cause pavers to crack like a solid concrete surface. In the event that the surface needs to be re-leveled, or the path needs to be re-routed, pavers can be removed, stored, and reset. There are environmental benefits to this flexibility, because it significantly reduces waste that a full replacement of the paths would produce.

Figure 4: Example of Paver Walkway

Beach House Deck:

The deck facing the lake on the Peacock Park Beach House is not structurally sufficient. Efforts need to be made to design and construct a fix to this deck so as to be available and occupied for future events. In reviewing the perspective residential wood deck construction guide it has been found that the columns of the deck are outside the allowable distance necessary for the beam a beam to be structurally sound. The guide requires a maximum span of 15' between columns for three 2" x 12" pressure treated beams when the joists have a span of 6'. If the joists have a span of 8' the maximum is 13' for the beam span. That being said it is necessary for redesign of the deck supports and immediate halt to use of the deck until this has been fixed. Knowing this it will be important to remove the decking to ensure there were no other mistakes made in the construction of the deck. This should also be done to check to see if the joists are in bad shape for example rotted or deflected, or are in good shape.

The cheapest solution to the sagging will be to replace the temporary post with a permanent one. This would require jacking the deck up and putting another 10" post in its place. Along with this there would need to be footing placed where the post would go. This footing would be required to be 20" in diameter and 1' in depth into the ground. The post would be connected to the beam using a post cap.

Three alternatives were considered for the second floor deck that is attached to the beach house. These alternatives will involve reconstruction of the deck that would be more costly.The idea behind these would be to expand the footprint of the deck to allow for a higher capacity on the deck.

Figure 5: Example of pressure-treated deck

The first alternative design will include a 12’ x 20’ (240 sq ft) rectangular deck plan with a wooden substructure of 2” x 12” pressure treated boards. The decking would be Trex and would be the most expensive option for decking but be easy to maintain after installation, it is not the preferred alternative due to higher cost. Lava rock color trex (match the color of the building) will be used and LR-1 railings to match the Lake Placid aesthetic.

The second alternative considered is to use stained wood. This would be the least expensive option in reconstruction of the deck, but more expensive in the long run due to maintenance costs. The deck would have to get re-stained every two to three years. This design will again be a 12’ x 20’ (240 sq ft) rectangular deck plan with 8’ boards for the deck and a wooden substructure consisting of 2” x 12” wooden boards. 2” x 4” wooden boards will be used for the railing posts and 2” x 6” wooden boards for top of the railings. Last the deck will be finished with a stain that is the matching color of the existing deck color.

The third alternative considered is the the same as the second alternative, but having the deck measure 10’ x 20’. This will be a little bit cheaper than the 12’ x 20’ because it will be using less material.

Dock:

The proposed design for the dock is to use a floating dock that will be 6.5’ wide by 40’, to accommodate small rowing vessels and kayaks. This would be constructed with removable blocks made from high-density polyethylene plastic resin, that can be configured in any way necessary parallel to the lake along the shore as stated in APA regulation . Using 1-11/16” galvanized pipes as piles installed on the shore as anchors for the dock to be attached to. This would have a higher initial cost but long term lower cost due to little maintenance needed and longevity. Installation would be quick and easy not requiring any special experience for installation. The plastic resin is good for preventing damages to kayaks and rowing vessels.

Figure 6: Example of Poly Dock

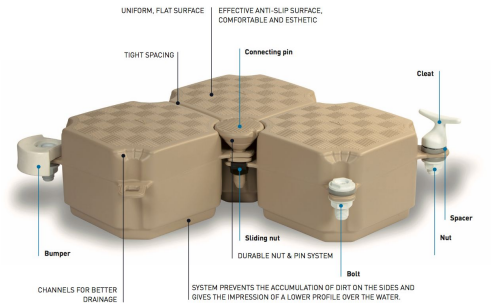


Figure 7: Example of Dock Portions

The alternative design considered is to install a permanent floating dock which would have a cheaper initial cost but higher long term maintenance cost. The permanent floating dock would cover an area of 6'x 48'. The dock would consist of 4 12' sections to make up the whole 48'. It would require a minimum of 0.6 pcf pressure treated wood. This alternative will require a tradesmen to install and would require a period of construction. The wooden design also would need bumpers on the side of them to prevent damage to rowing vessels and kayaks.

Sitting Wall & Retaining Wall:

Figure 8: Sitting Wall

Figure 9: Retaining Wall

Due to the uniform heights of the stones (about 14 inch), the material is recommended for building walls. The stones are heavy enough (500-600 lb each) to make a heavy duty and durable retaining wall, if built properly.

Path Fencing:

With regard to the fencing along the pathway that crosses over the Mirror Lake outlet, the existing fence will be replaced with a new one that will run nearly 120 feet long to provide a safe and enjoyable experience for those on the path. There is currently a part-wooden, part-chain link fence, which is no longer sturdy, between those walking on the path and the steep bank and water below. Two alternatives were considered for the reconstruction of this fence.

The first option is a timber-made split-rail style fence that keeps the aesthetic of the existing wooden part of the fence. This would be a four-foot tall, three-rail fence that is easy and relatively cheap to assemble. With 11-foot rails, this stretch of fencing would require 13 posts on the water side when a 6 inch overlap is accounted for, and four additional posts on the opposite side of the bridge that crosses the lake outlet to protect from falling into the ditch on that side.

Figure 10: Existing fence Area

Made of pressure-treated pine for moderate protection from rot, decay, weathering, and termite damage, both the posts and the rails can be bought commercially. 3 inch by 4 inch by 11 foot rails will be held in place by 3 inch by 5 inch by 7 foot pre-carved posts whose bottom 2.5 feet will be secured into the ground. A preliminary elevation sketch with dimensions can be found in the appendix.

A second option would be to make a timber-made ranch style fence out of cedar boards rather than pine, with four rails rather than three. Slightly more expensive, this alternative would provide more longevity and more effective protection from children climbing through the rails.

Figure 11: Cedar four-board ranch style fence example

Cedar naturally protects from weather, insects and decay, and is renowned for appearance, stability, and durability. 1 inch by 6 in by 8 foot boards will be fastened to 4 inch by 4 inch by 6 foot posts whose bottom 2 feet will be secured into the grounds. A preliminary elevation sketch can be found in the appendix.

Toboggan Chute Fencing:

The proposed design for replacing the fencing around the underside of the Toboggan Chute is to wall-off the area under the chute to the lake-side of the path that crosses under the chute. Similar to a crawl space underneath a deck, this area would not require a foundation. This would create more storage for the beach area, and would effectively keep people from climbing in under the low end of the chute. This option would follow general shed construction, and provides room for variability in material choices. For reference, this idea would be similar to the process of creating a shed underneath an outdoor staircase, just on a much larger scale.

Figure 12: Outdoor shed under stairs

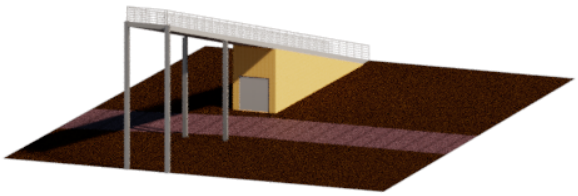


Figure 13: Rendered toboggan chute shed design

The dimension of the walls that would be constructed are not yet exact, as measurements would have to be taken following the land contours underneath the chute. However, rough estimates from LIDAR Elevation data provide that this structure would require 800 square feet of wall on each side, and 300 square feet on the face which would include a large double door. Depending on the storage size requested, this area could change. Construction would consist of pressure treated 2 by 4 boards for framing and plywood siding panels.

If this level of containment is not desired, an alternative design would be to mimic the fencing option chosen for the path fencing redesign, and simply line the area under the chute that the client does not want visitors to access. This option would not ultimately prevent access, but would still serve to deter pedestrians from entering. In this case, a high estimate would be that 200 feet of fencing would be required.

Figure 14: Rendered toboggan chute fence alternative

Gazebo Shelter & Picnic Tables:

The proposed design for a gazebo shelter in Peacock Park includes a couple different options, varying between a permanent and movable shelter. There is a sufficient amount of area for a shelter to be installed by the tennis courts as seen in the Site Plan. Another proposed location for the shelter is the strip of land by the lake on the other side of the pathway by the tennis courts. The picnic tables are proposed to be installed by the playground area and by the lake by the proposed gazebo.

The permanent gazebo would be an 8 foot by 8 foot shelter and made up of pressure treated wood. This type of wood is inexpensive in comparison to other types and is still durable enough to withstand harsh winters. This makes for easy replacement and maintenance if parts of the gazebo where to get damaged. The gazebo would stand on a slab of concrete since it is cheaper and also is a sufficient way to anchor down a gazebo. Concrete columns would be under each of the posts of the gazebo, with an 8 inch diameter, and going down at least 48 inches underground in accordance with the frost line of the area. The 8 posts sitting on top of the footings would be 10’ x 4” x 4”, and would be attached to the columns by a mount base with anchors secured within the concrete, and screws securing the base to the posts. A simple set of wooden railings would then be placed on all but two of the eight sided gazebo so people can enter from multiple sides. The roof of the gazebo would consist of a series of 2” x 8”s and 2” x 6”s. Over the roof structure would then be more 2” x 6”s screwed to it creating an open roof for the shingles to be secured to. The roof covering would be cedar wood shakes or asphalt shingles, with the wood shakes being more resistant to the weather and durable over the long run.

Figure 15: Permanent Shelter

The movable shelter would be for temporary placement during the winter months, and provide a place for people to place some of their belongings while enjoying the park for winter activities. This would consist of a 10’ x 8’ rectangular shelter with a metal roof deck, with 4 6” x 6” posts attached to a floorboard. The posts would be attached to the board by a mount base. The floorboards would be secured to a system of 2” x 8”s running every 10” and a 2” x 10” perimeter. The whole shelter would be attached to three rails running along the bottom so it could be easily transported to storage while it is not in use. A simple wooden or composite railing system would be 3’ tall and would be placed on three of the four sides of the shelter. The roof structure would consist of another system of 2” x 8”s and a 2” x 10” perimeter. A set of 2” x 6” boards would be used to brace the corners of the gazebo to the roof structure.

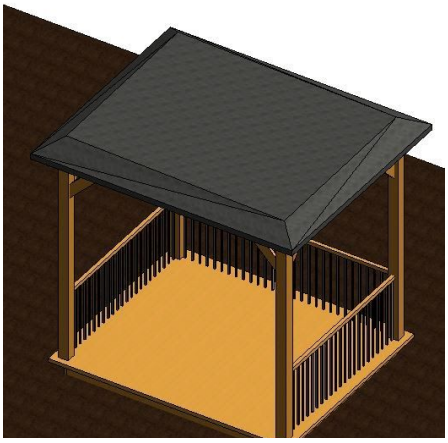


Figure 16: Movable Shelter

A recycled plastic picnic table is proposed due to its low maintenance costs and environmentally friendly nature. Unlike wood plastic picnic tables don't rot over time and do not need to be sealed or painted to look aesthetically pleasing. The tables are made from recycled plastic milk jugs, thus reducing the amount of plastic that is ending up in landfills. The picnic tables would have a 4' x 4' table top with overall dimensions of 82" x 82" including the seating attached to it. Picnic tables to be installed in the area surrounding the playground and/or gazebo area would be permanently secured to the ground by being mounted on buried concrete posts. The table base plate would then be secured to it with anchors.

Figure 17: Example of Picnic Table

Miscellaneous:

Juniper plantings will be planted along the sidewalk on Parkside Drive between the toboggan chute and the church parcel to prevent the use of herd paths down over the steep hill toward the water. Two-gallon plants which will quickly grow to be roughly 2.5 feet tall and 22 inches wide, and will be planted along roughly 50 feet of the sidewalk in this area. Around 30 two-gallon plants can be purchased from a supplier around Albany, and delivered for a small fee.

The utility boxes to the north end of the site near the current location of the kayak racks is to be screened in. The proposed design would be to use the same choice of fencing opted for from the pathway near the lake outlet, and completely encompass the boxes there.

Utility Coordination

The existing utility plan for the Peacock Park area as provided can be found in the appendix. With the exception of any unforeseen utilities - ones not provided in plans or in any drawings - the scope of this project will not interfere with utilities. The floating dock is designed in its location for the purpose of covering the utility line that meets the bank there, but not interrupting it. Ultimately, this will prevent swimmers from stepping on the line. The largest risk of interference with unforeseen utilities would be with the fence post excavations. These holes will only reach 30 inches deep at a maximum, and for the most part will be mirroring previous locations of fence posts.

Architectural Layout

The only structures in this site plan that either are affected by the work of this design, or are in close proximity to the work of this design, are the beach house and the toboggan chute. It is not within the scope of this project to change the layout of these structures within the site plan, with the exception of minor potential changes to the footprint of the deck off of the beach house, discussed in this document. The site plan in the appendix accurately lays out all architecture in this project.

Blocking and Stacking Analysis

The blocking and stacking analysis will not be conducted/needed during this time for the Peacock Park Beach Area and Beach House.

Master Plan Documentation Compliance Check

The Peacock Park Beach Area and Beach House does not currently have a master plan for these proposed additions to the park's area.

AARB Approval

This project will not be sent to the Art and Architecture Review Board until the final design phase.

Electrical Load Letter

An electrical load letter does not need to be sent out, due to no modifications to the existing utility infrastructure.

Project Cost Estimate

The project cost estimate and all of the material cost estimates are done on excel. Full sheets can be found in the appendix, but a summary table can be seen below. The estimate including the items below comes out to $104,069 including tax. Items marked with "Y" to the right side indicate that that item is included in the subtotal for the estimate. The original file is able to be modified with ease to show different alternative pricing.

Project Schedule

The project schedule created starts on Monday, April 20, 2020 tentatively. The project will have a duration of 105 days. This time does not include time for writing grants and waiting for approval from the respective agencies. See appendix for a preliminary schedule.

Value Engineering Study and Recommendation

Dock:

The dock is currently spec'd at 48'. Cutting this length in half would sacrifice some room for loading and unloading of kayaks but would also lead to a significant cut in cost. This would be a valuable change if cost is taking precedence.

Gazebo Shelter & Picnic Tables:

The proposed permanent shelter would at max be able to hold sixteen people. Although this shelter would provide protection from elements replacing this with a number of picnic tables will produce a larger number of seating for beach goers. Assuming most of the use of this area will be during sunny nice days this would be a cheaper solution. The permanent shelter would be better suited for year round seating such as for people that play hockey during the winter.

Deck:

Trex is a durable long lasting decking material but has a high upfront cost. This could be replaced with pressure treated would cut initial costs significantly. This would also provide options for the finishing look of the decking as different stains and paints could be used.

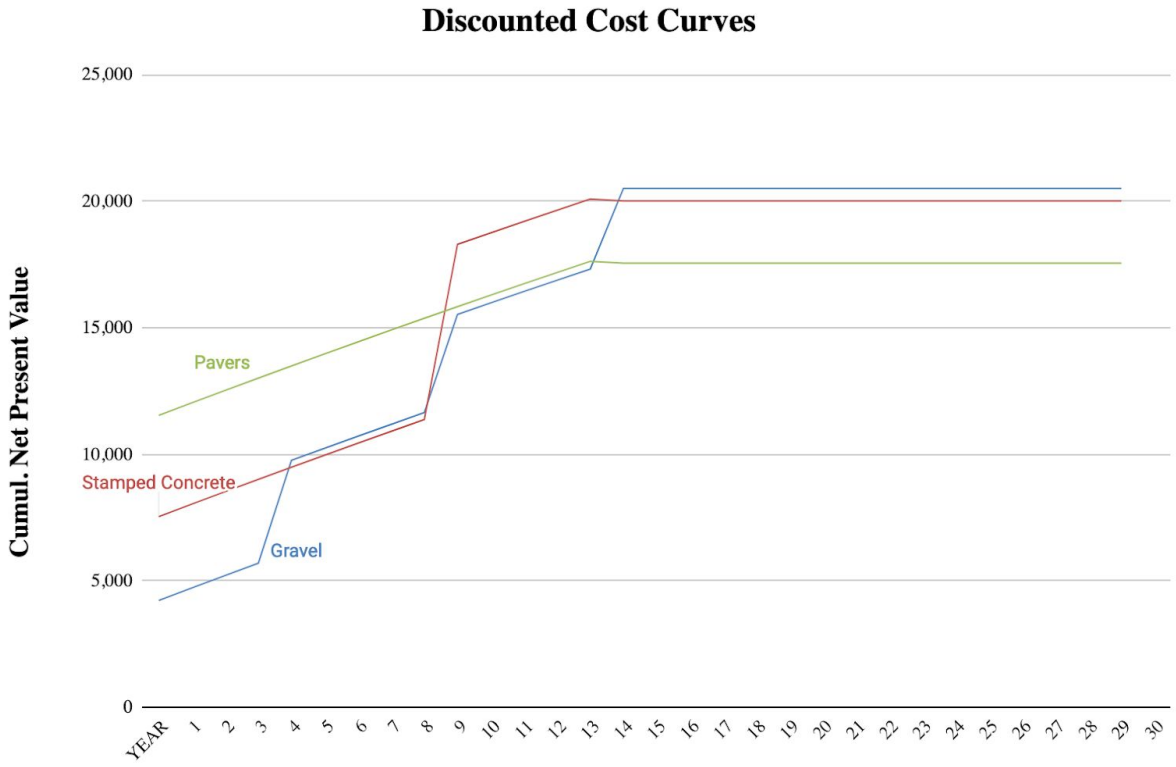
Pathway Fencing:

Choosing to use pressure treated pine wood over cedar in the pathway fencing could save a large amount of money in upfront cost. The proposed design of the three rail system on the pine option makes for less material costs, but if the four rail system is desired this could be easily made out of the cheaper pine material.

Life Cycle Cost vs. First Cost Analysis

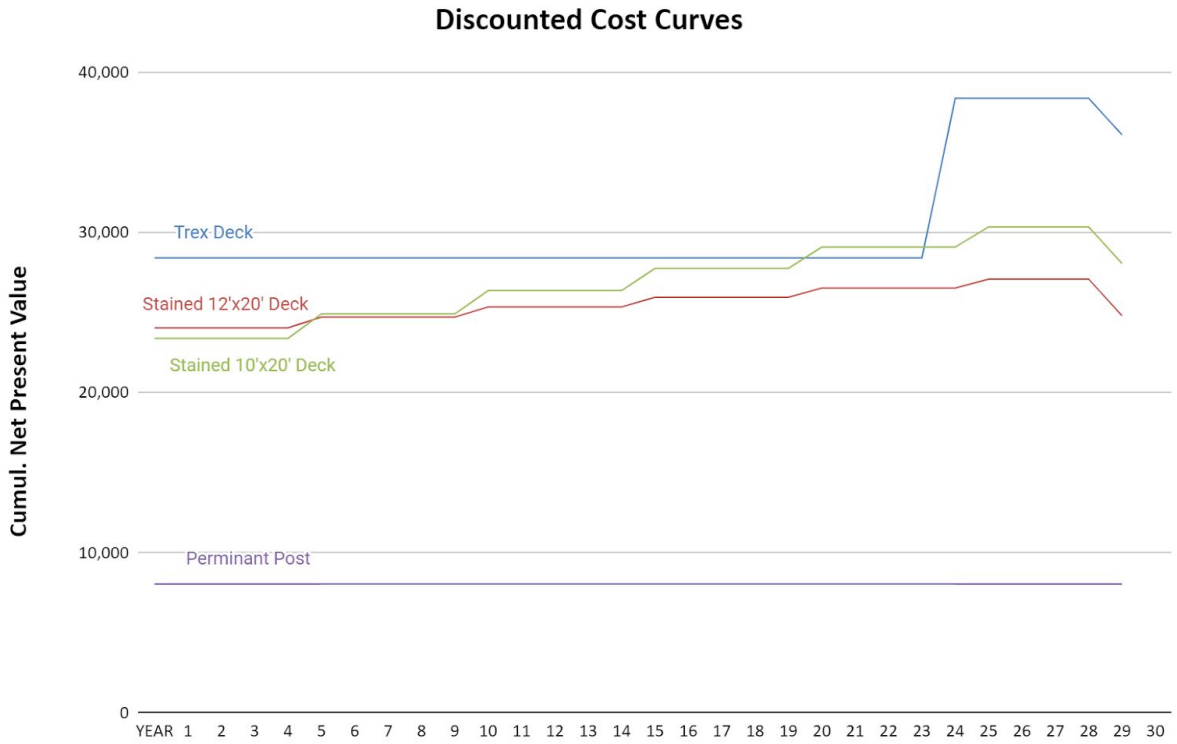
Pedestrian Access Path:

The chart below demonstrates the life cycle cost analysis for the three proposed pathway alternatives. Though variable in cost initially, as time goes on the costs comes to nearly the same amount. For this reason, we propose to make the initial investment in the pavers option, as the client would be getting the best product up front without requiring high repair costs shortly after.



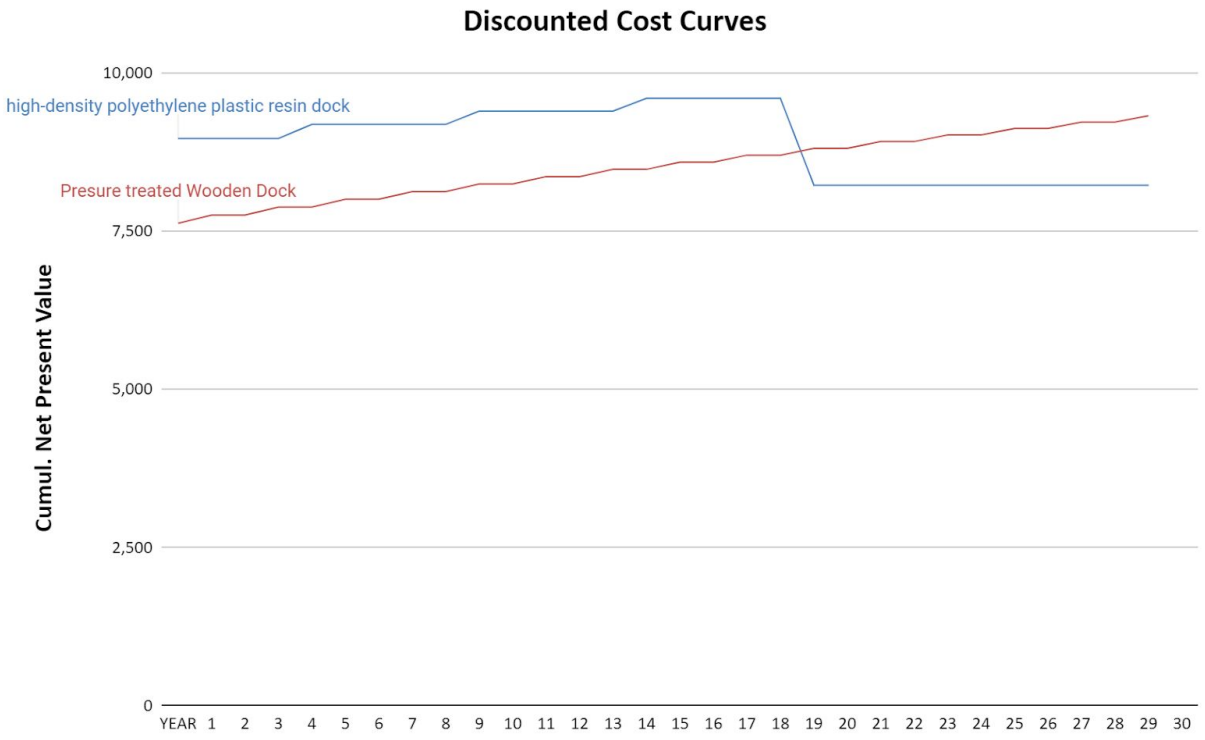
Beach House Deck:

It is clear from a cost efficient point of view that replacement of the temporary post with a permanent one is the most effective solution in keeping the current structure the way it is. The possibility of expanding the deck to a larger square footage has also been explored and the lifecycle costs are shown in the chart below. Looking at this it can be concluded that using a stained wood would lead to a cheaper solution than Trex but would have more frequent maintenance requirements.



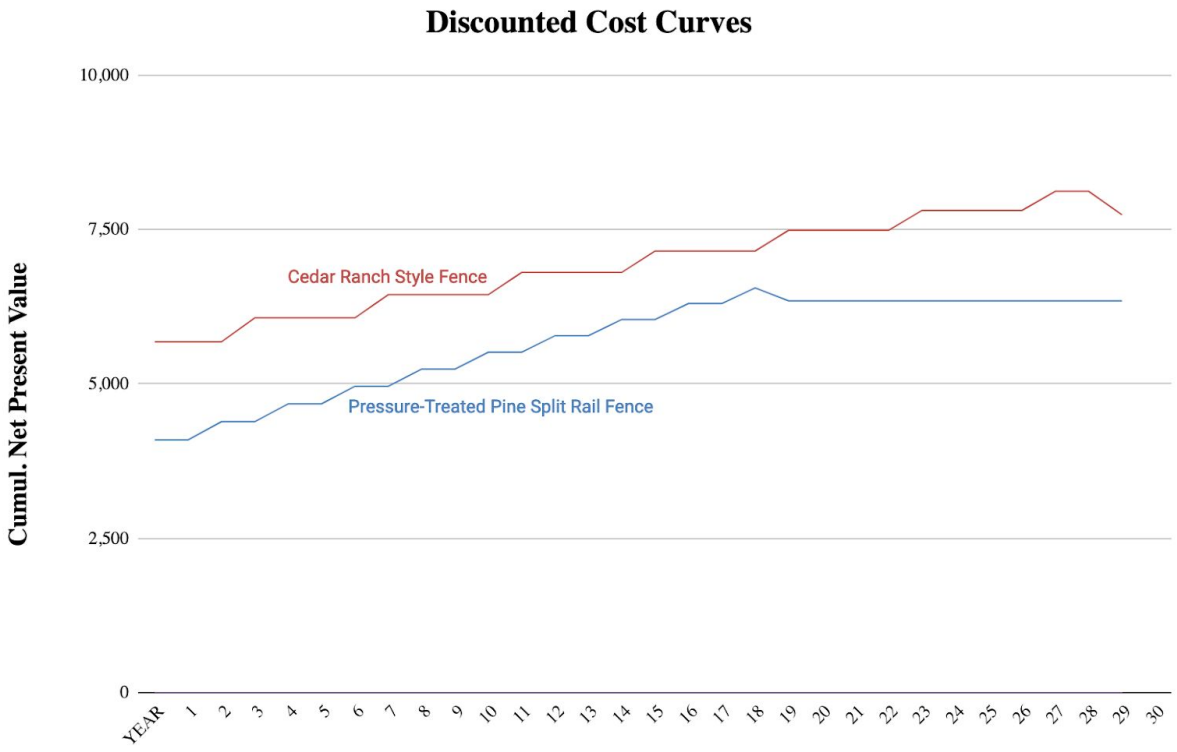
Dock:

The chart below depicts the life cycle cost of the dock alternatives. Although the initial cost of the modular plastic dock is higher the long term cost of the permanent dock will end up higher. Along with this the simplicity, mobility, and adaptability of the modular dock makes it a more compelling solution



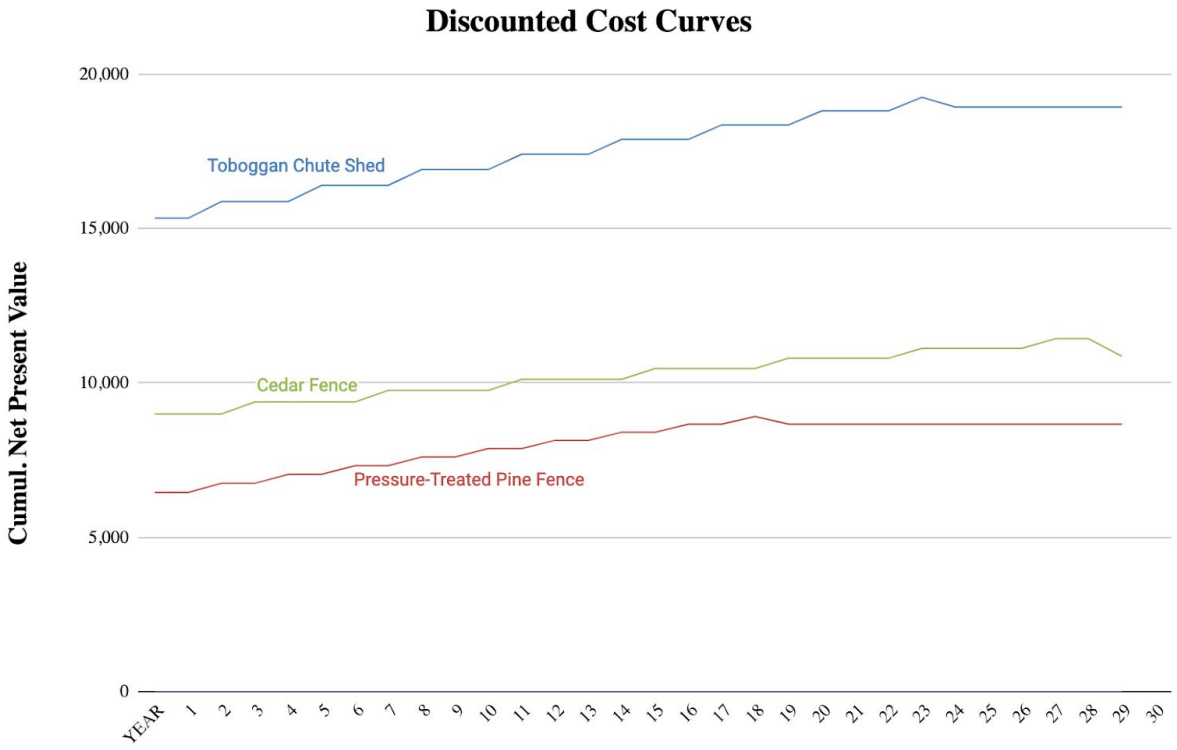
Path Fencing:

For the two fencing options, the chart below shows that for slightly higher cost, the cedar ranch style fence will outlast the pine split rail style. However, with recurring maintenance costs, the overall cost will continue to rise. For this reason, ADV Engineering recommends the implementation of the pressure-treated pine split rail fence, as long as the added safety factors of the cedar ranch style fence don't outweigh the extra cost.



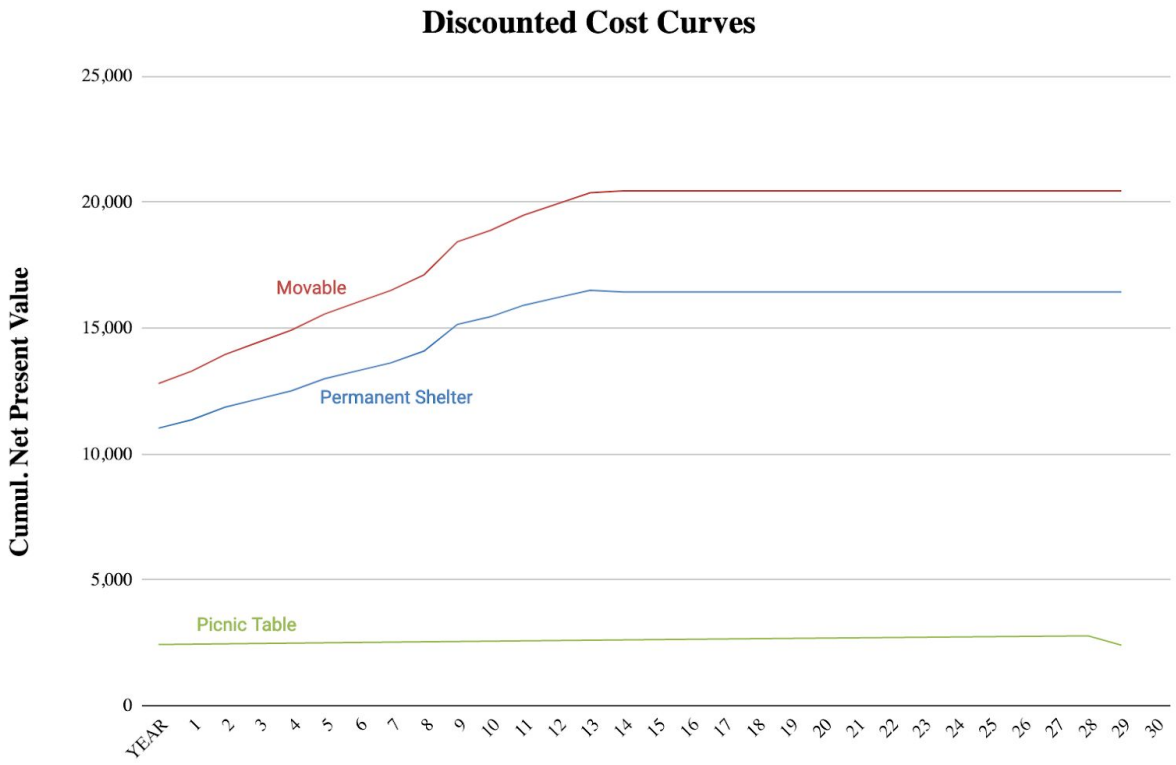
Toboggan Chute Fencing:

The chart below demonstrates the lifecycle cost curves of the three presented options for the fencing replacement around and under the Toboggan Chute. Constructing a shed beneath the chute is by far the most expensive alternative. However, this alternative would provide an extra service to the overall project by adding clean, dry storage to the entire beach area. With the dimensions of this shed being variable depending on what the client wants, ADV Engineering recommends the shed option for preventing pedestrian access to the underside of the chute.



Gazebo Shelter & Picnic Tables:

The main driving factor in suggesting the permanent shelter over the movable one is the cost and inconvenience of moving the shelter each year. As shown in the chart below the lifecycle cost of the movable shelter increases at a higher rate as well as having a smaller salvage value. The chart also gives the life cycle cost of picnic tables which will be much cheaper with the sacrifice of having shelter.



Risk Analysis

At this point in the project, there are risks of the project not being funded by grants and public opinion when the project is displayed to the public there may be changes requested to be made that would delay the project start times and possibly incur more costs. There are also risks of delay of work performed due to permits being withheld by agencies prior to work being completed.

Request for Code Modification Matrix

This aspect is not applicable to this project. All work will be in compliance with North Elba and Lake Placid building code.

Design Review Comments

During meetings with Mr. Dean Dietrich and Mr. Jamie Rogers, it was determined that the lighting section of the Request for Proposal will not be part of the project as the lighting has been determined it is sufficient enough to not require more lighting. See appendix below for confirmation of decision.

References

Town of North Elba Building and Planning Department

http://www.northelba.org/?page=government/code-enforcement

Town of North Elba Building Permit Package

http://www.northelba.org/files/BuildingPermitPacket.pdf

Guide for Minor Projects Stormwater Management - Village of Lake Placid and Town of North Elba, Essex County, NY

http://www.northelba.org/files/Minor-Stormwater-Guidelines.pdf

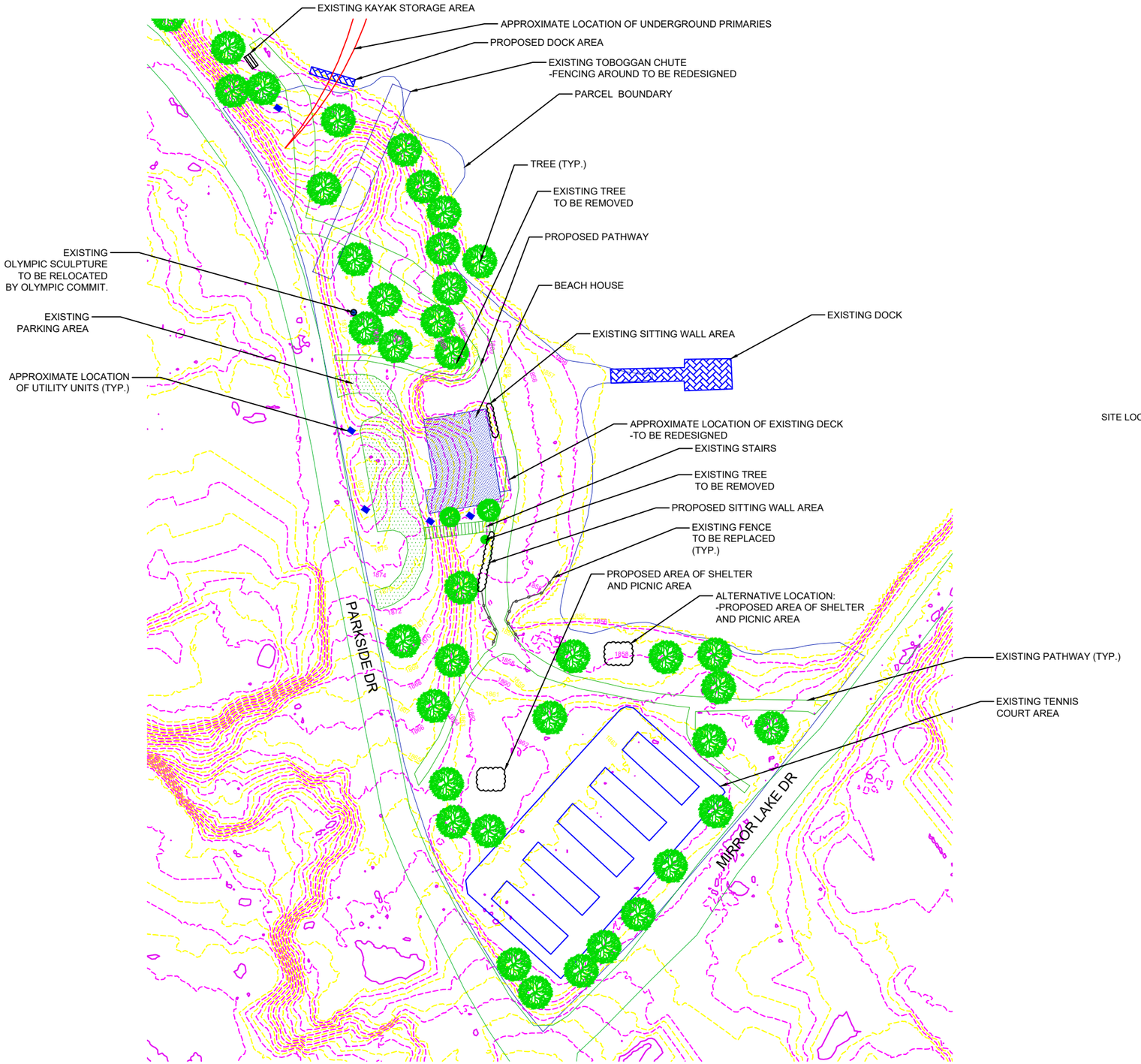
Adirondack Park Agency APA

https://www.adirondackalmanack.com/2010/09/apa-revised-boathouse-and-dock-regulations.html

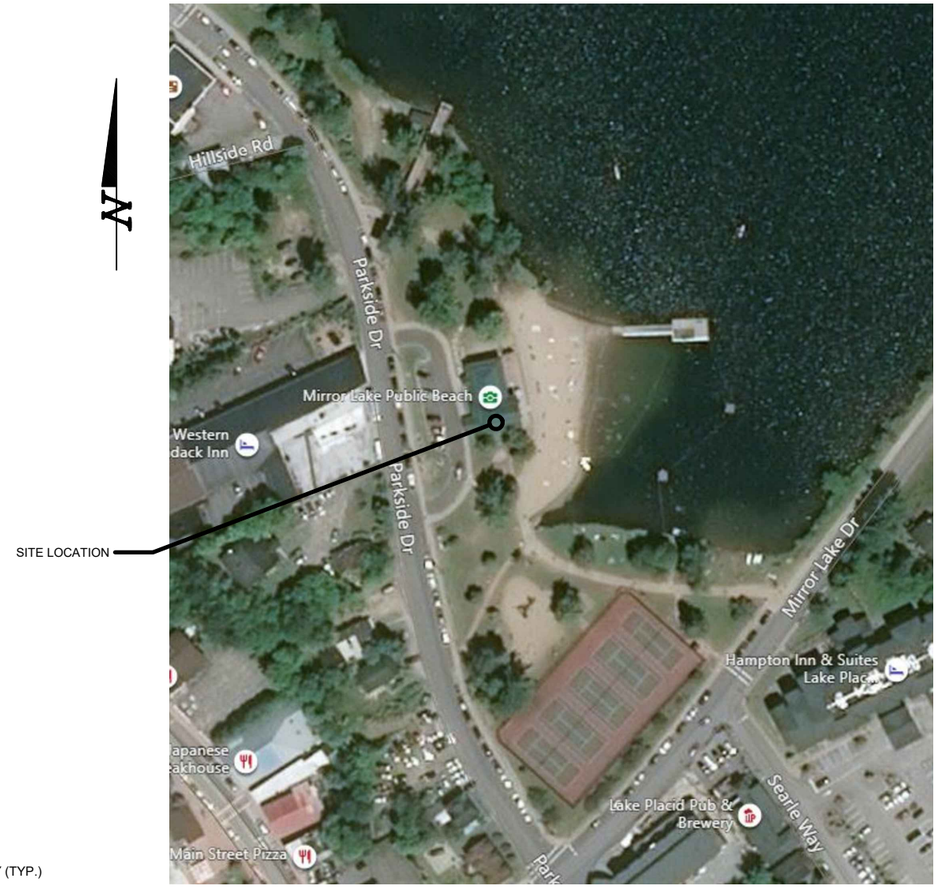
Appendices and Design Drawings

Includes:

- *Drawings*
- *Summary of Estimate*
- *Schedule*
- *Value Engineering*
- *Life Cycle Costs*
- *Risk Analysis Matrix*
- *Design Review Comments*



SITE PLAN
1" = 80'



LOCATION MAP
1" = 60'±

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NO.	DESCRIPTION	DATE	DWN.	CHECKED BY
	REVISIONS			

NOTE:
It is a violation of New York State Education Law Article 145 Section 7209 for any person, unless he is acting under the direction of a licensed professional engineer, to alter an item in any way. If an item bearing the seal of an engineer is altered, the altering engineer shall affix to the item his seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

THIS DRAWING IS THE PROPERTY OF BRET W. WINCHIP ENGINEERING, P.C. ALL DIMENSIONS AND INFORMATION IS TO BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION.

NOTE:
IF "AS BUILT" PLANS AND/OR CONSTRUCTION DOCUMENTATION IS REQUIRED, ENGINEER MUST BE NOTIFIED AND PERFORM SITE INSPECTION PRIOR TO BACKFILL.

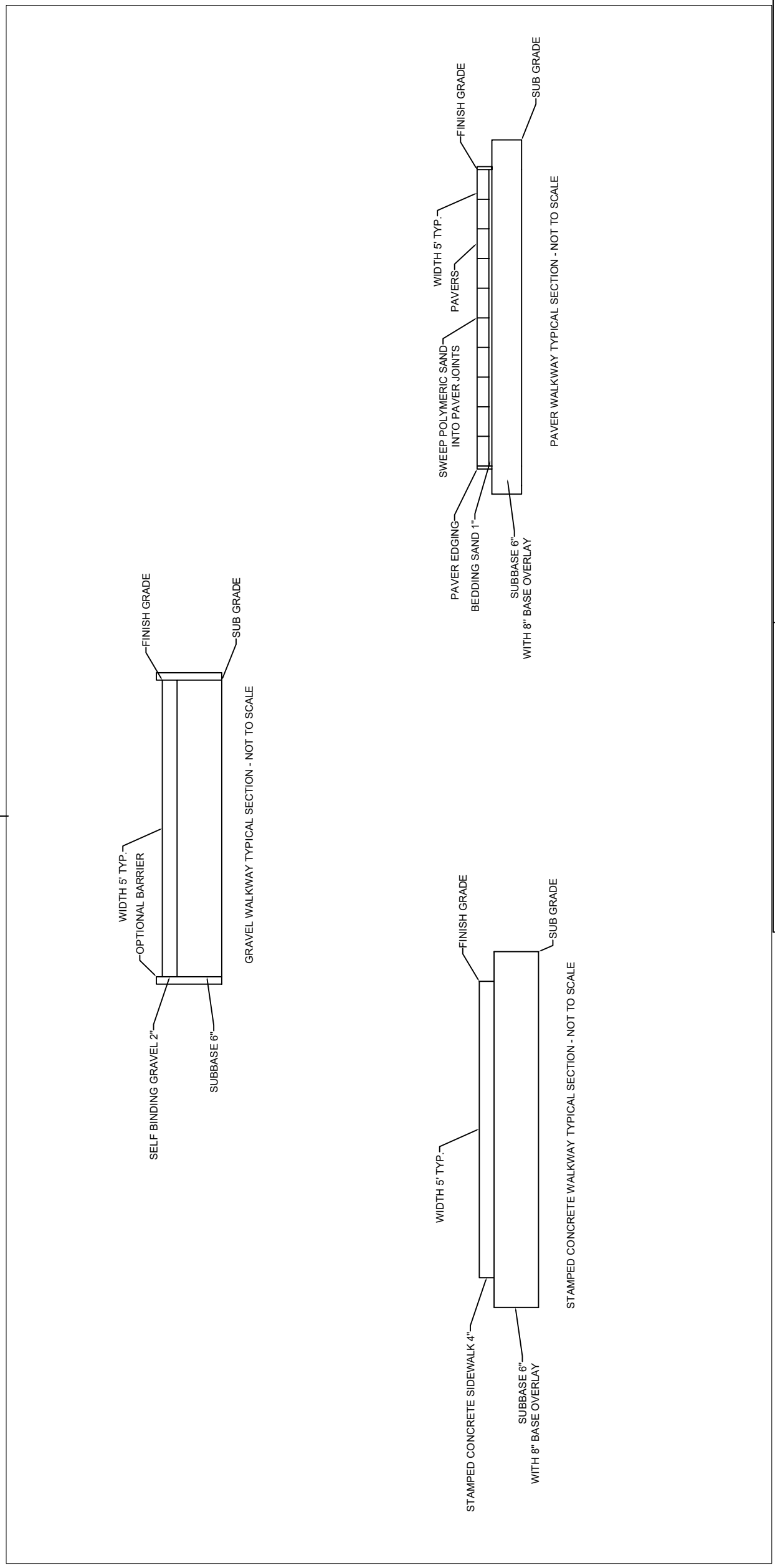
SCALE:	NOTED
DWN. BY:	SDB
CHK'D BY:	
DATE:	03-02-20
SHEET NO.	1 OF 1

ADV ENGINEERING
A DIFFERENT VIEW OF THE FUTURE.

PROJECT:
SITE PLAN
Peacock Park Beach Area and Beach House

31 PARKSIDE DR,
Lake Placid, NY 12946

PROJECT NO.
2020-001



ZONE	REV	PEDESTRIAN PATH TYPICAL SECTIONS

REVISIONS

REV

APPROVED	
03/05/2020	

SIZE	FSCM NO.	DWG NO.	REV
NOT TO SCALE			Sheet

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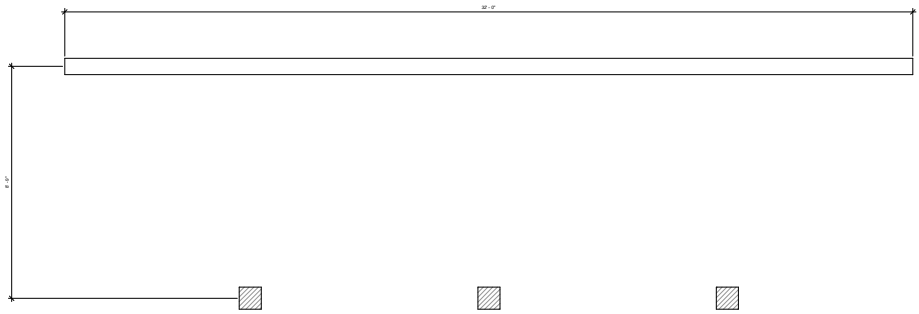

1 Level 1
3/4" = 1'-0"

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No.	Description	Date

10' DECK DESIGN

LAKE PLACID DECK DESIGN

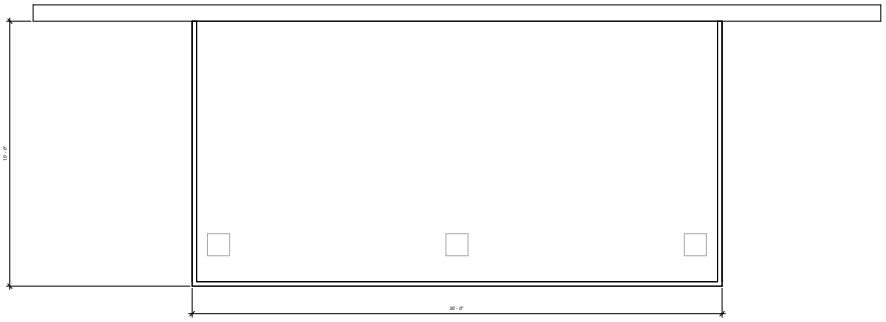
LEVEL 1 FLOOR PLAN

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

101

Scale 3/4" = 1'-0"

1/3/2013 3:30:19 PM



1 Level 2
3/4" = 1'-0"

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No.	Description	Date

10' DECK DESIGN

LAKE PLACID DECK DESIGN

LEVEL 2 FLOOR PLAN

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

102

Scale 3/4" = 1'-0"

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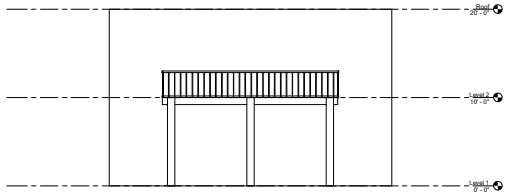
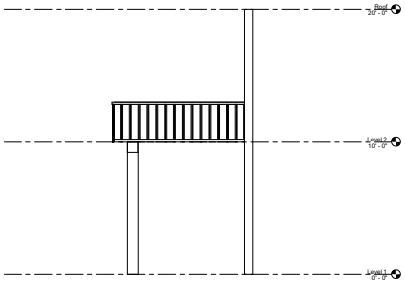
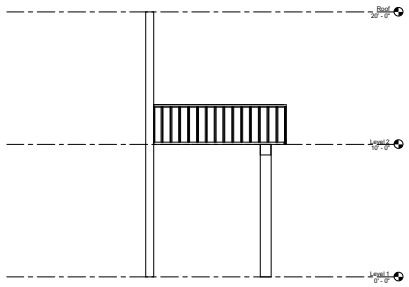
1 North
1/4" = 1'-0"



2 South
1/4" = 1'-0"



3 East
3/8" = 1'-0"



4 West
3/8" = 1'-0"

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No.	Description	Date

10' DECK DESIGN

LAKE PLACID DECK DESIGN

ELEVATIONS

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

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Scale: As indicated

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1 3D1

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No.	Description	Date

10' DECK DESIGN

LAKE PLACID DECK DESIGN

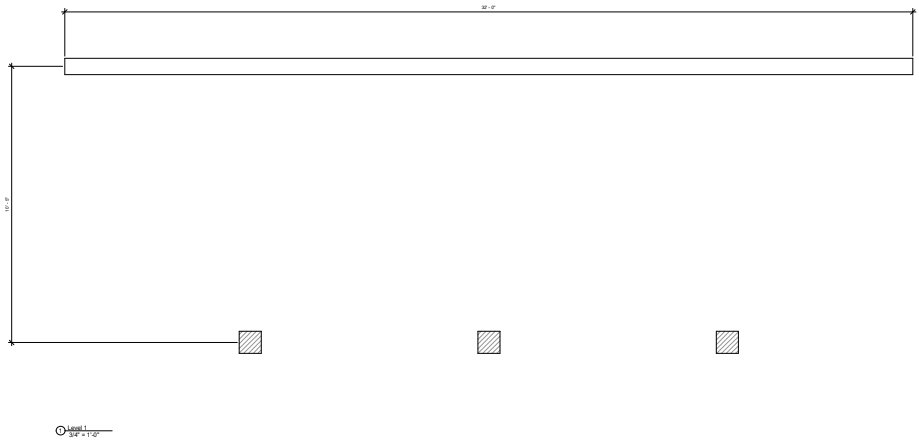
3D VIEW

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

300

Scale

1/4" = 1'-0"



1 Level 1
3/4" = 1'-0"

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12' DECK DESIGN

LAKE PLACID DECK DESIGN

LEVEL 1 FLOOR PLAN

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

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Scale 3/4" = 1'-0"

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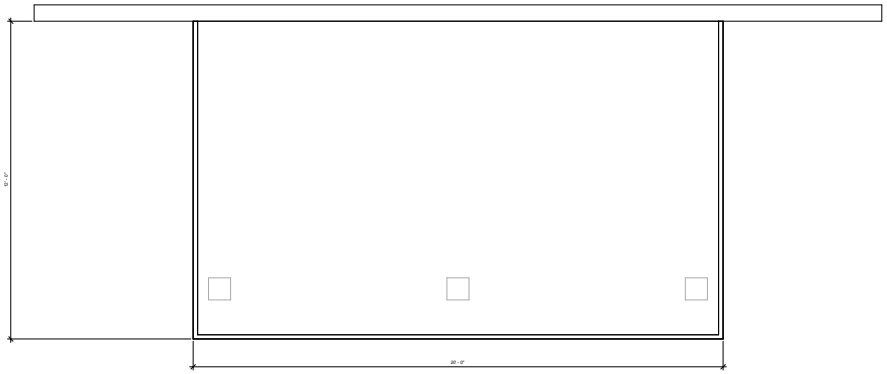

1 Level 2
3/4" = 1'-0"

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12' DECK DESIGN

LAKE PLACID DECK DESIGN

LEVEL 2 FLOOR PLAN

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

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Scale 3/4" = 1'-0"

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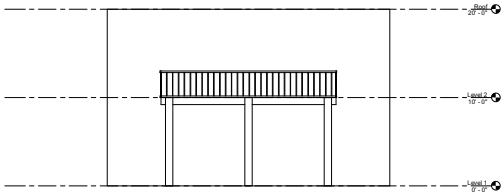
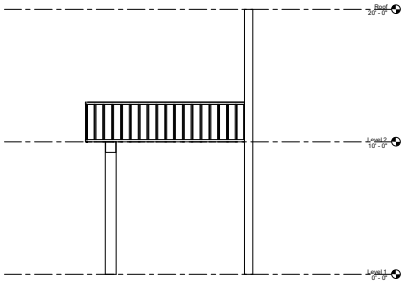
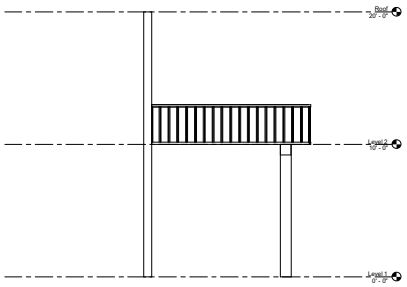
North
1/4" = 1'-0"



South
1/4" = 1'-0"



East
3/8" = 1'-0"



West
3/8" = 1'-0"

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No.	Description	Date

12' DECK DESIGN

LAKE PLACID DECK DESIGN

ELEVATIONS

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

200

Scale: As indicated

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1 3D1

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No.	Description	Date

12' DECK DESIGN

LAKE PLACID DECK DESIGN

3D VIEW

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

Scale: 300

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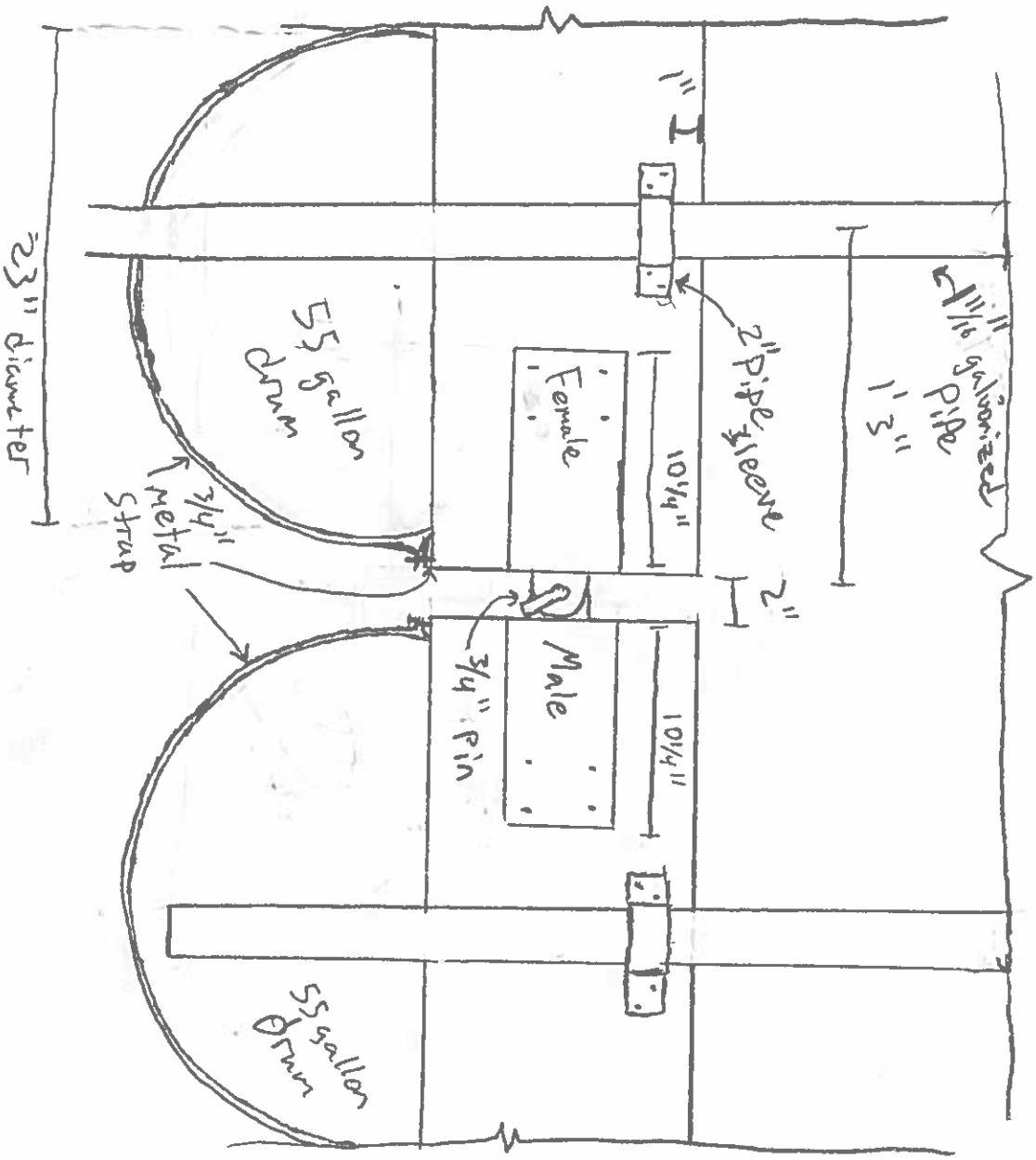
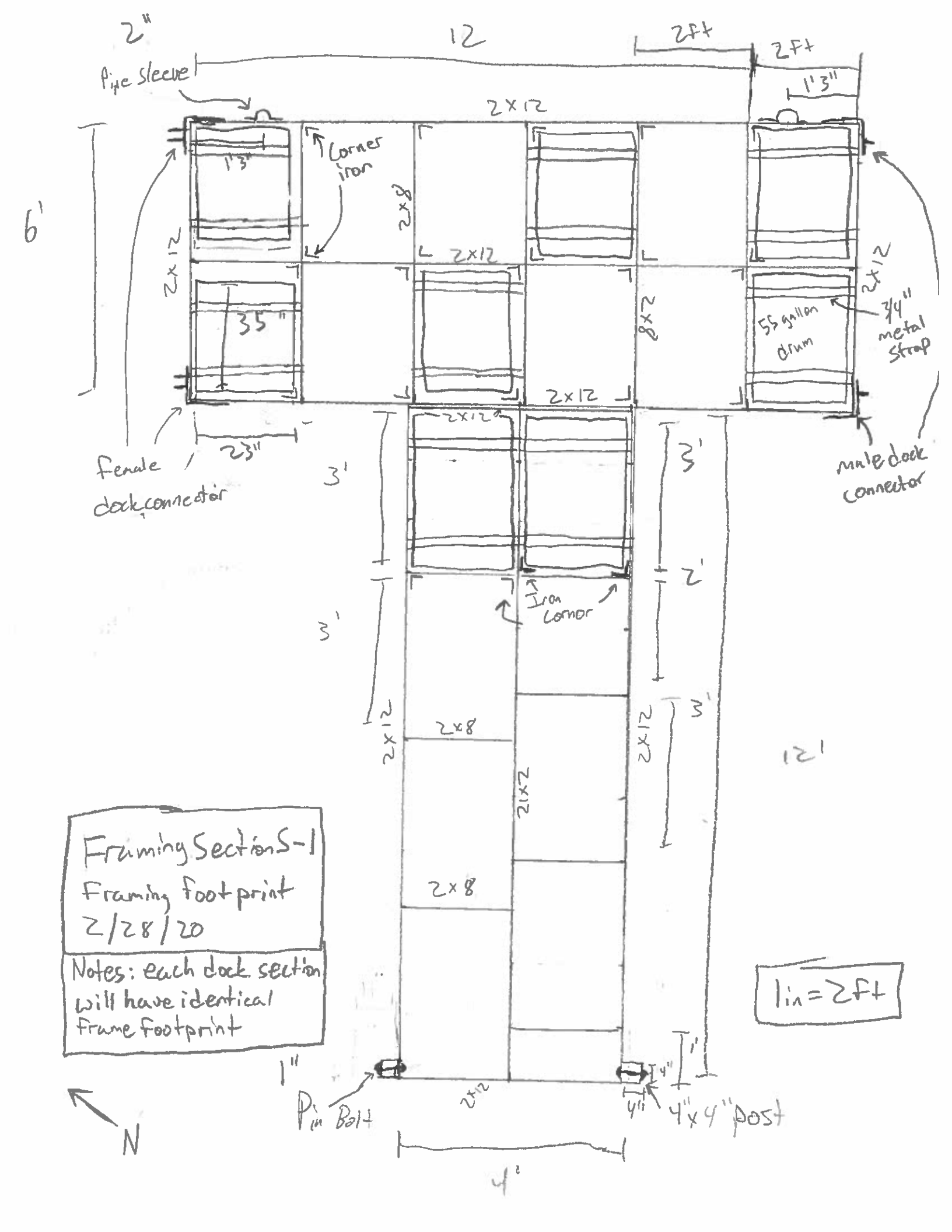
Layout A-1
Dock Layout
2/27/20

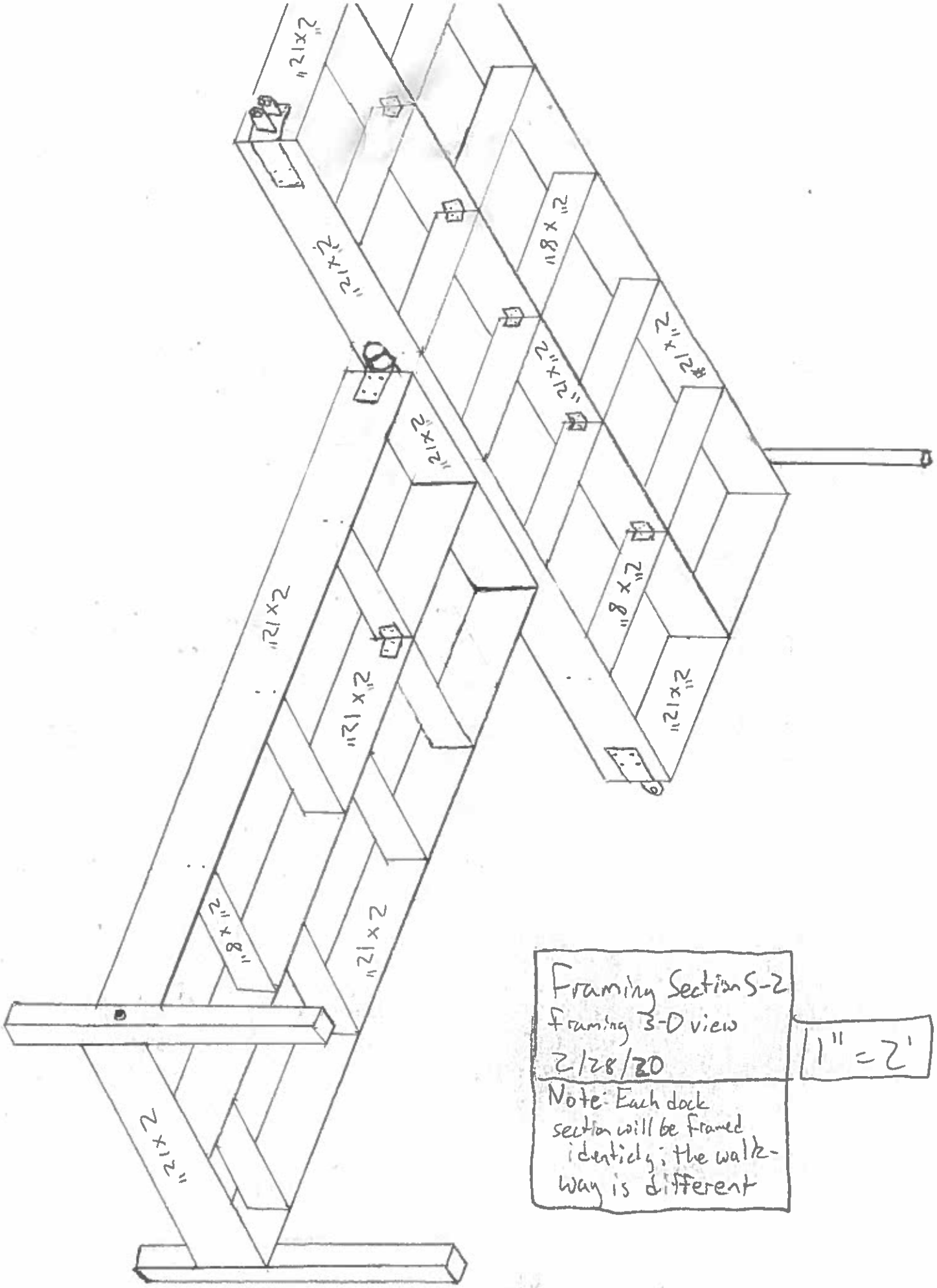
1/4" = 1'



Section View A-2
Connector View
2/29/20

1.5" = 1'

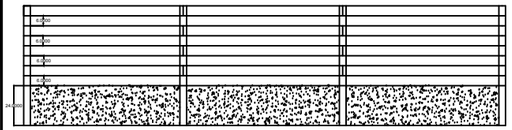

2"
12
2ft
2ft
Pipe sleeve
1'3"
2x12
Corner iron
6'
2x8
2x12
2x12
35"
8x12
55 gallon drum
3/4" metal strap
2x12
2x12
23"
female dock connector
male dock connector
3'
3'
2'
Iron corner
3'
2x12
2x8
2x12
2x12
2x8
12'
1"
Pin Bolt
2x12
4"
4"x4" post
1'
4'
N
Framing Section S-1
Framing footprint
2/28/20
Notes: each dock section will have identical frame footprint
1in = 2ft



Framing Section S-2
Framing 3-D view
2/28/20

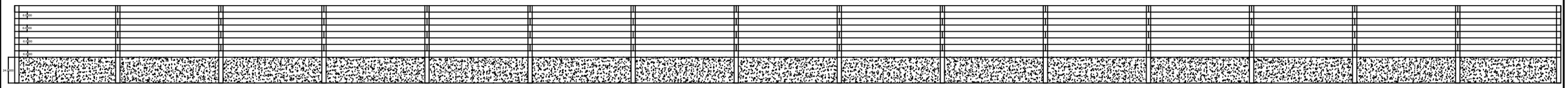
1" = 2'

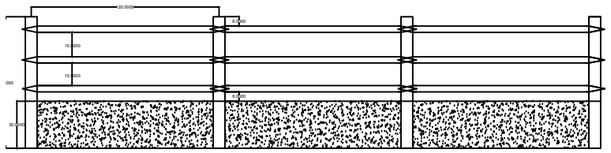
Note: Each dock section will be framed identicly; the walk-way is different



Four Board Cedar Alternative

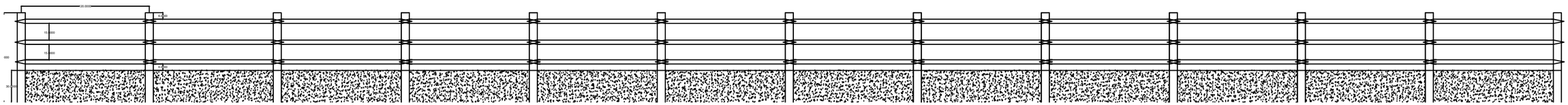
inches

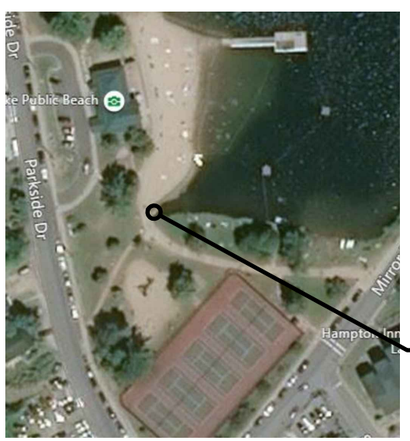




Three Board Pine Alternative

inches





LOCATION MAP

1" = 60'±

SITE LOCATION

N

PRELIMINARY

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NOTE:

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NOTE:

IF "AS BUILT" PLANS AND/OR CONSTRUCTION DOCUMENTATION IS REQUIRED, ENGINEER MUST BE NOTIFIED AND PERFORM SITE INSPECTION PRIOR TO BACKFILL.

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DATE:	
SHEET NO.	1 OF 1

ADV ENGINEERING

A DIFFERENT VIEW OF THE FUTURE

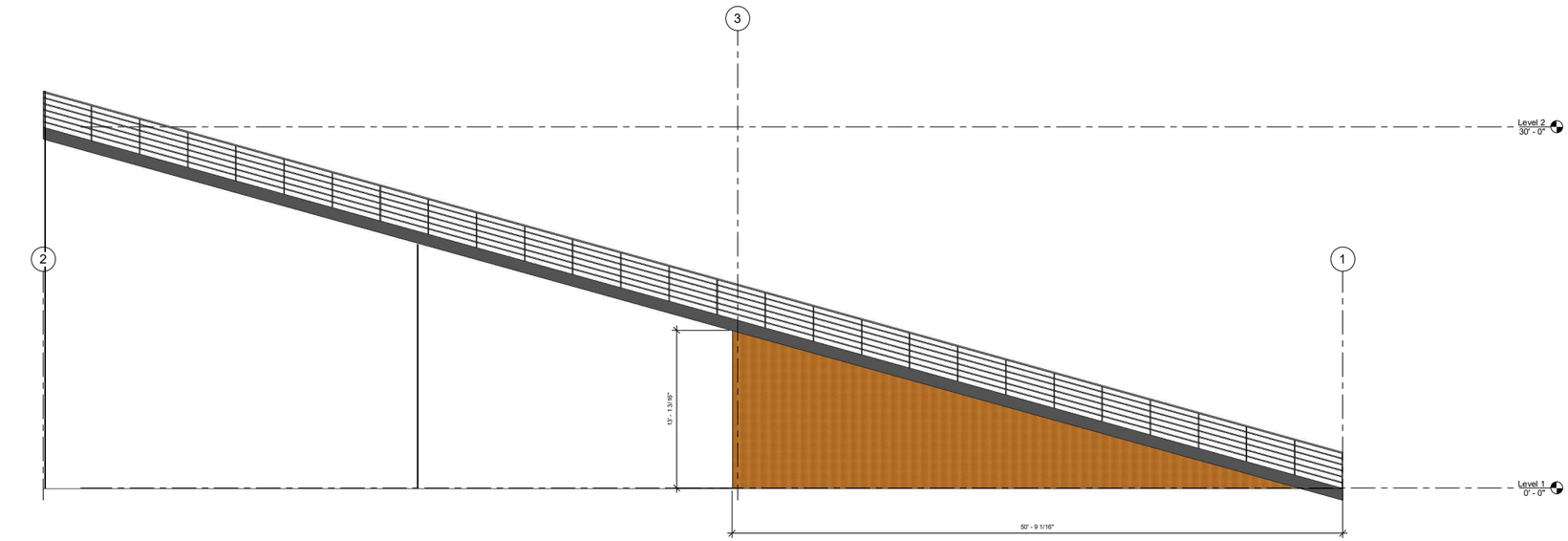
PROJECT:

Pathway Fencing

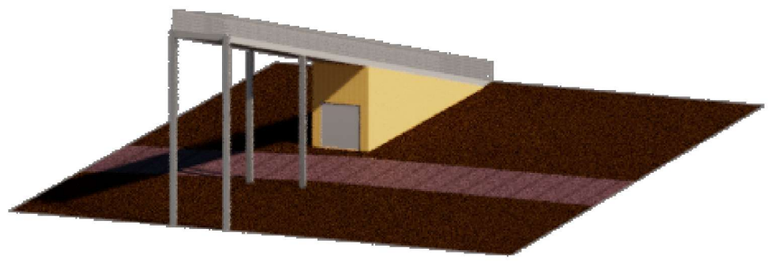
Peacock Park Beach Area and Beach House

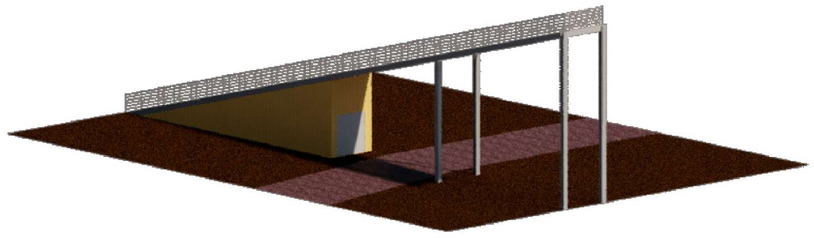
31 PARKSIDE DR,
Lake Placid, NY 12946

PROJECT NO.
2020-001



1 East
1/4" = 1'-0"





ADV ENGINEERING
A DIFFERENT VIEW OF THE FUTURE.

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ADV Engineering
schweimc@clarkson.edu
Project Manager: Mitch Schweitzer

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No.	Description	Date

Owner

Project Name

Toboggan Chute
Shed Alternative

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

Lake Placid NY

Scale 1/4" = 1'-0"

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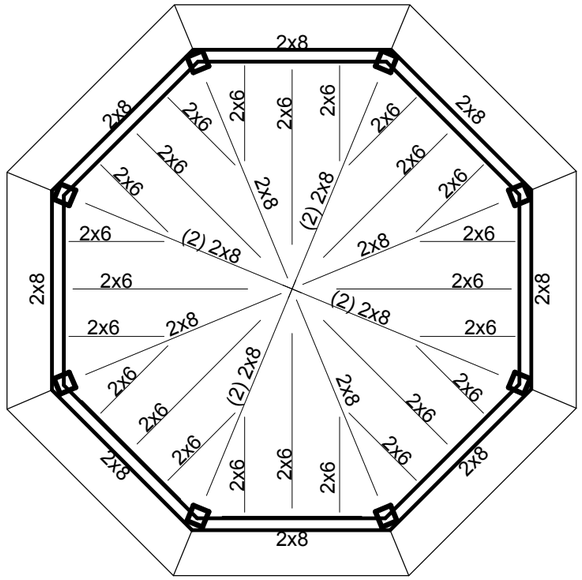
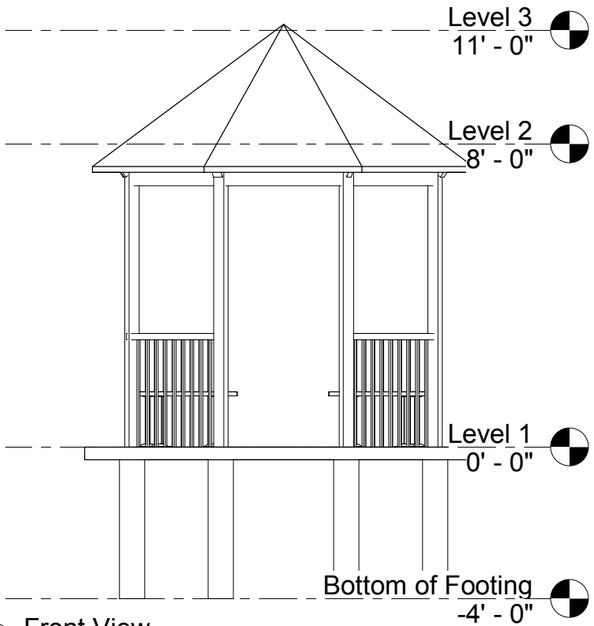
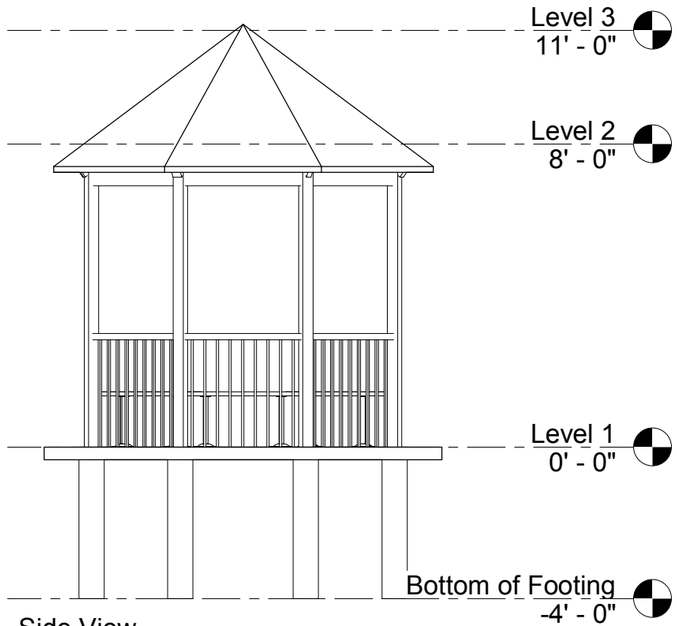
1 {3D}



4 Roof Frame Layout
3/8" = 1'-0"



2 Front View
1/4" = 1'-0"



3 Side View
1/4" = 1'-0"

ADV ENGINEERING
A DIFFERENT VIEW OF THE FUTURE.

Lake Placid
Peacock Park

No.	Description	Date

Permanent Shelter

Project number	2020-001
Date	03/05/2020
Drawn by	MNM
Checked by	MS

S101

Scale As indicated

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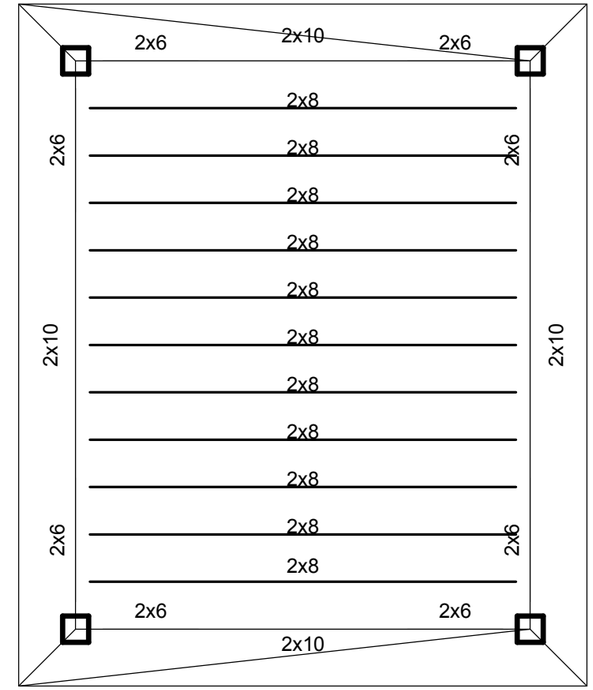
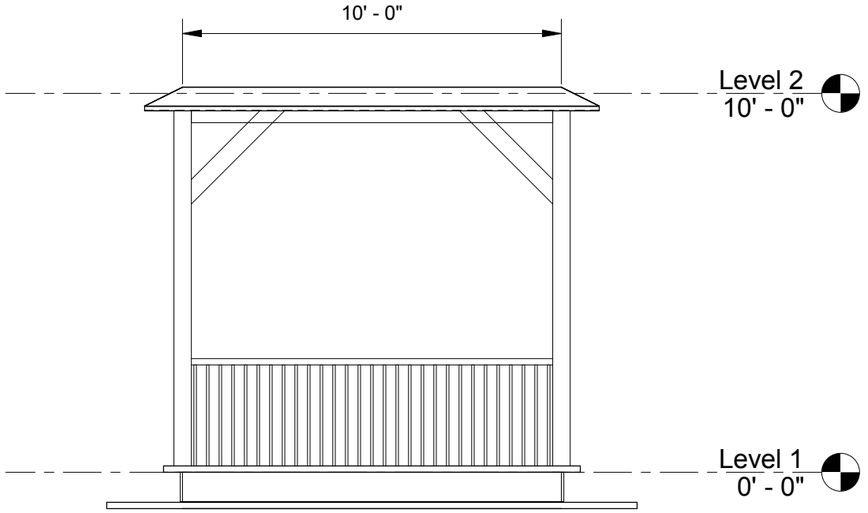
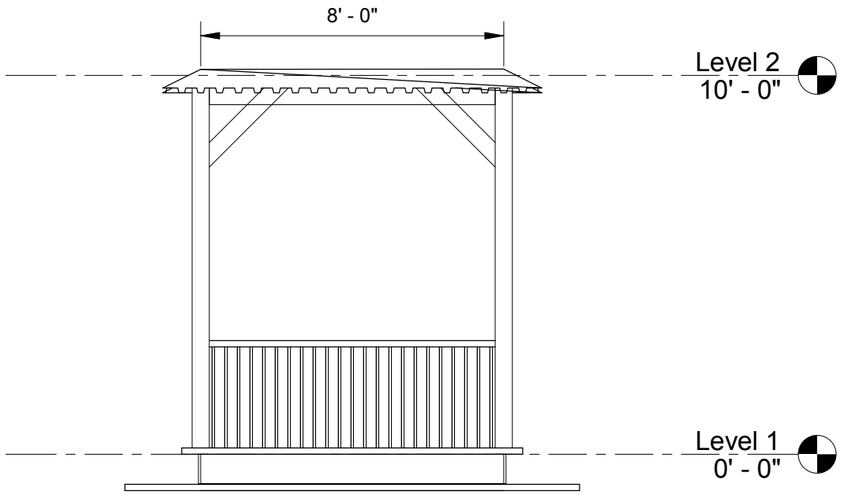
4 {3D}



3 Roof Frame Layout
3/8" = 1'-0"



1 Front View
1/4" = 1'-0"



2 Side View
1/4" = 1'-0"

ADV ENGINEERING
A DIFFERENT VIEW OF THE FUTURE.

Lake Placid

Peacock Park

No.	Description	Date

Movable Shelter

Project number	20202-001
Date	03/05/2020
Drawn by	MNM
Checked by	MS

S102

Scale As indicated

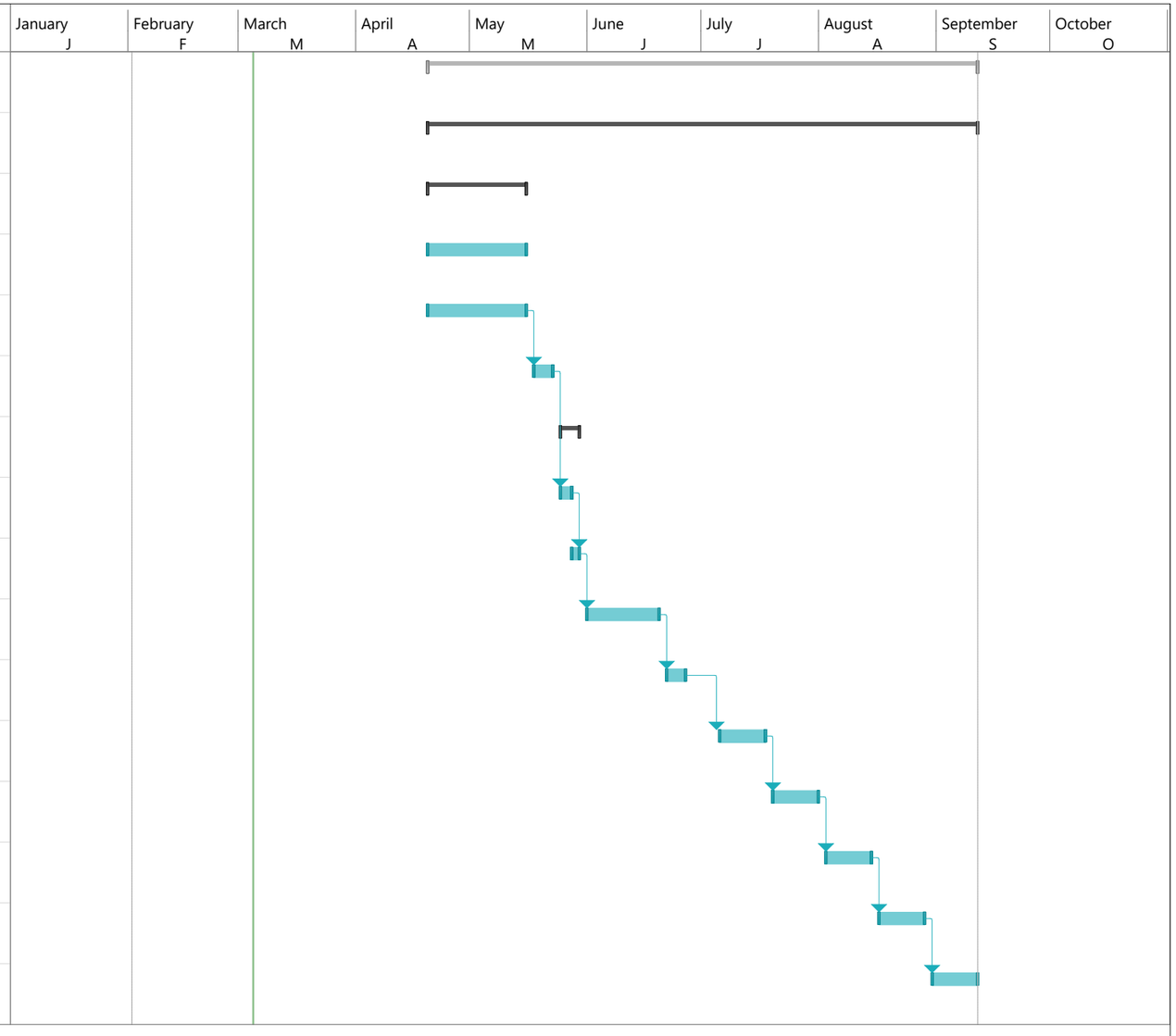
3/5/2020 1:50:23 PM

2020-001 NYOR Projects Peacock Park
Schematic Design Estimate
03/05/2020

Summary of Estimate

	Material	Quantity	Unit	Price/Unit	Total	Included in Estimate Total (Y/N)
Dock						
Alternative 1	Plastic Resin	260	SF	$36.00	$9,360	Y
Alternative 2	Pressure Treated Board	288	SF	$27.00	$7,776	
Deck						
Alternative 1	Trex	240	SF	$79.00	$18,960	Y
Alternative 2	Pressure Treated Wood	240	SF	$61.00	$14,640	
Alternative 3	Pressure Treated Wood	200	SF	$69.00	$13,800	
Alternative 4	Pressure Treated Wood Post Replacement	1	LS	$3,700	$3,700	Y
Shelter						
Alternative 1	Permanent Shelter	64	SF	$168.00	$10,752	
Alternative 2	Movable Shelter	80	SF	$160.00	$12,800	Y
Alternative 3	Recycled Plastic ADA Picnic Tables	2	EA	$1,300.00	$2,600	Y
Pathways						
Alternative 1	Gravel	138	LF	$27.00	$3,726	
Alternative 2	Stamped Concrete	138	LF	$51.00	$7,038	
Alternative 3	Pavers	138	LF	$80.00	$11,040	Y
Fencing & Plantings						
Alternative 1	Pine Fence at Outlet	140	LF	$30.00	$4,200	
Alternative 2	Cedar Fence at Outlet	140	LF	$41.00	$5,740	Y
Alternative 3	Tobboggan Chute Shed	1	LS	$15,500.00	$15,500	Y
Alternative 4	Tobboggan Chute Fence Mimic Pine	1	LS	$6,500.00	$6,500	
Alternative 5	Tobboggan Chute Fence Mimic Cedar	1	LS	$9,000.00	$9,000	
Alternative 6	Utilites Screening	40	LF	$41.00	$1,640	Y
Alternative 7	Herd Path Plantings	30	EA	$34.00	$1,020	Y
Sitting Wall						
	Stone	50	LF	$200.00	$10,000	Y
Retaining Wall						
	Stone	20	LF	$200.00	$4,000	Y
				Subtotal	$96,360	
				Tax	$7,709	
				Total	**$104,069**	

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
0		**20200305 - Schematic Design Schedule**	**105 days**	**Mon 4/20/2**	**Fri 9/11/20**	
1		**1 NYOR Projects Peacock Park**	**105 days**	**Mon 4/20/2(**	**Fri 9/11/20**	
2		**1.1 Permiting**	**20 days**	**Mon 4/20/2(**	**Fri 5/15/20**	
3		1.1.1 APA Permit for In-Water Work	20 days	Mon 4/20/20	Fri 5/15/20	
4		1.2 Submittals	20 days	Mon 4/20/20	Fri 5/15/20	
5		1.3 Mobilization	5 days	Mon 5/18/20	Fri 5/22/20	4
6		**1.4 Removals**	**5 days**	**Mon 5/25/2(**	**Fri 5/29/20**	
7		1.4.1 Tree Removals	3 days	Mon 5/25/20	Wed 5/27/20	5
8		1.4.2 Fence Removals	2 days	Thu 5/28/20	Fri 5/29/20	7
9		1.5 Deck	15 days	Mon 6/1/20	Fri 6/19/20	8
10		1.6 Dock	5 days	Mon 6/22/20	Fri 6/26/20	9
11		1.7 Pathways	10 days	Mon 7/6/20	Fri 7/17/20	10
12		1.8 Shelter	10 days	Mon 7/20/20	Fri 7/31/20	11
13		1.9 Fencing	10 days	Mon 8/3/20	Fri 8/14/20	12
14		1.10 Sitting Wall	10 days	Mon 8/17/20	Fri 8/28/20	13
15		1.11 Retaining Wall	10 days	Mon 8/31/20	Fri 9/11/20	14



Project: 20200305 - Schematic
Date: Thu 3/5/20

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

SUMMARY OF VALUE ENGINEERING RECOMMENDATIONS

Project Code: 2020-001 **Date:** 3/5/2020

University Name: Clarkson University

Project Name: NYOR Projects Peacock Park

Item No.	Item Description	Potential Savings ($ 000)	Recommended Disposition *			Final * Action	Final Savings ($ 000)
			A /E	CM	University		
1	Recude dock size by half	3.5	A				
2	Cut shelters add eight pinic tables	3	E				
3	Instead of Trex use pressure-treated wood	5	A				
4	Pine instead of cedar fencing at outlet	1.5	A				

* A - Accept M - Accept, as modified R - Reject

Attach to any additional clarifying remarks on a separate sheet. Reference the Item Number.

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University — **By:** ADV Engineering

Project Title: NYOR Projects Peacock Park — **Date:** 43893

Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 1

Alternative Description: Gravel

For Energy Studies, Specify Type Of Fuel:

(check appropriate box)	COAL	ELECTRIC	OIL	GAS	OTHER (describe):

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							**PRESENT WORTH**		
	Specify annual escalation rates used for each cost category below.							**DISCOUNT**		
	5.0%	5.0%	5.0%	5.0%	5.0%					
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	**TOTAL ESCALATED COST**	**FACTOR AT *6%* PER ANNUM**	**TOTAL PRESENT VALUE**	**CUMULATIVE PRESENT VALUE**
1	3,726				500		4,226	1.000	4,226	4,226
2					525		525	0.943	495	4,721
3					551		551	0.890	491	5,212
4					579		579	0.840	486	5,698
5		4,529			608		5,137	0.792	4,069	9,767
6					638		638	0.747	477	10,244
7					670		670	0.705	472	10,716
8					704		704	0.665	468	11,184
9					739		739	0.627	463	11,647
10		5,780			776		6,556	0.592	3,880	15,528
11					814		814	0.558	455	15,982
12					855		855	0.527	450	16,433
13					898		898	0.497	446	16,879
14					943		943	0.469	442	17,321
15		7,377			990	1,160	9,527	0.442	4,214	21,535
16								0.417		21,535
17								0.394		21,535
18								0.371		21,535
19								0.350		21,535
20								0.331		21,535
21								0.312		21,535
22								0.294		21,535
23								0.278		21,535
24								0.262		21,535
25								0.247		21,535
26								0.233		21,535
27								0.220		21,535
28								0.207		21,535
29								0.196		21,535
30								0.185		21,535
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									**21,535**	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University **By:** ADV Engineering

Project Title: NYOR Projects Peacock Park **Date:** 43893

Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 2

Alternative Description: Stamped Concrete

For Energy Studies, Specify Type Of Fuel:

(check appropriate box)	COAL	ELECTRIC	OIL	GAS	OTHER (describe):

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							**PRESENT WORTH DISCOUNT**		
	Specify annual escalation rates used for each cost category below.	5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	**TOTAL ESCALATED COST**	**FACTOR AT *6%* PER ANNUM**	**TOTAL PRESENT VALUE**	**CUMULATIVE PRESENT VALUE**
1	7,038				500		7,538	1.000	7,538	7,538
2					525		525	0.943	495	8,033
3					551		551	0.890	491	8,524
4					579		579	0.840	486	9,010
5					608		608	0.792	481	9,491
6					638		638	0.747	477	9,968
7					670		670	0.705	472	10,440
8					704		704	0.665	468	10,908
9					739		739	0.627	463	11,372
10		10,918			776		11,694	0.592	6,922	18,293
11					814		814	0.558	455	18,748
12					855		855	0.527	450	19,199
13					898		898	0.497	446	19,645
14					943		943	0.469	442	20,087
15					990	1,160	2,150	0.442	951	21,038
16								0.417		21,038
17								0.394		21,038
18								0.371		21,038
19								0.350		21,038
20								0.331		21,038
21								0.312		21,038
22								0.294		21,038
23								0.278		21,038
24								0.262		21,038
25								0.247		21,038
26								0.233		21,038
27								0.220		21,038
28								0.207		21,038
29								0.196		21,038
30								0.185		21,038
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									**21,038**	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University — **By:** ADV Engineering

Project Title: NYOR Projects Peacock Park — **Date:** 43893

Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 3

Alternative Description: Pavers

For Energy Studies, Specify Type Of Fuel:

(check appropriate box)	COAL	ELECTRIC	OIL	GAS	OTHER (describe):

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							**PRESENT WORTH**		
		Specify annual escalation rates used for each cost category below.						**DISCOUNT**		
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	**TOTAL ESCALATED COST**	**FACTOR AT *6%* PER ANNUM**	**TOTAL PRESENT VALUE**	**CUMULATIVE PRESENT VALUE**
1	11,040				500		11,540	1.000	11,540	11,540
2					525		525	0.943	495	12,035
3					551		551	0.890	491	12,526
4					579		579	0.840	486	13,012
5					608		608	0.792	481	13,493
6					638		638	0.747	477	13,970
7					670		670	0.705	472	14,442
8					704		704	0.665	468	14,910
9					739		739	0.627	463	15,374
10					776		776	0.592	459	15,833
11					814		814	0.558	455	16,288
12					855		855	0.527	450	16,738
13					898		898	0.497	446	17,185
14					943		943	0.469	442	17,627
15					990	1,160	2,150	0.442	951	18,578
16								0.417		18,578
17								0.394		18,578
18								0.371		18,578
19								0.350		18,578
20								0.331		18,578
21								0.312		18,578
22								0.294		18,578
23								0.278		18,578
24								0.262		18,578
25								0.247		18,578
26								0.233		18,578
27								0.220		18,578
28								0.207		18,578
29								0.196		18,578
30								0.185		18,578
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									**18,578**	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
Project Title: NYOR Projects Peacock Park
Project Code: 2020-001

By: ADV Engineering
Date: 03/03/20

ALTERNATIVE DESCRIPTION:

Alternative Number: 1
Alternative Description: Trex Deck

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	18,797	0	9,600	0	0	0	28,397	1.000	28,397	28,397
2		0	0	0	0	0	0	0.943	0	28,397
3		0	0	0	0	0	0	0.890	0	28,397
4		0	0	0	0	0	0	0.840	0	28,397
5		0	0	0	0	0	0	0.792	0	28,397
6		0	0	0	0	0	0	0.747	0	28,397
7		0	0	0	0	0	0	0.705	0	28,397
8		0	0	0	0	0	0	0.665	0	28,397
9		0	0	0	0	0	0	0.627	0	28,397
10		0	0	0	0	0	0	0.592	0	28,397
11		0	0	0	0	0	0	0.558	0	28,397
12		0	0	0	0	0	0	0.527	0	28,397
13		0	0	0	0	0	0	0.497	0	28,397
14		0	0	0	0	0	0	0.469	0	28,397
15		0	0	0	0	0	0	0.442	0	28,397
16		0	0	0	0	0	0	0.417	0	28,397
17		0	0	0	0	0	0	0.394	0	28,397
18		0	0	0	0	0	0	0.371	0	28,397
19		0	0	0	0	0	0	0.350	0	28,397
20		0	0	0	0	0	0	0.331	0	28,397
21		0	0	0	0	0	0	0.312	0	28,397
22		0	0	0	0	0	0	0.294	0	28,397
23		0	0	0	0	0	0	0.278	0	28,397
24		0	0	0	0	0	0	0.262	0	28,397
25		19,351	1,613	0	19,351	0	40,314	0.247	9,957	38,354
26		0	0	0	0	0	0	0.233	0	38,354
27		0	0	0	0	0	0	0.220	0	38,354
28		0	0	0	0	0	0	0.207	0	38,354
29		0	0	0	0	0	0	0.196	0	38,354
30		0	0	0	0	(12,348)	(12,348)	0.185	(2,279)	36,075
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									36,075	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University — By: ADV Engineering
Project Title: NYOR Projects Peacock Park — Date: 03/03/20
Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 2
Alternative Description: Stained 12'x20' Deck

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT	
	Specify annual escalation rates used for each cost category below.								
		5.0%	5.0%	5.0%	5.0%	5.0%			
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	14,427	0	9,600	0	0	0	24,027	1.000	24,027	24,027
2		0	0	0	0	0	0	0.943	0	24,027
3		0	0	0	0	0	0	0.890	0	24,027
4		0	0	0	0	0	0	0.840	0	24,027
5		0	0	0	0	0	0	0.792	0	24,027
6		383	128	0	383	0	893	0.747	668	24,695
7		0	0	0	0	0	0	0.705	0	24,695
8		0	0	0	0	0	0	0.665	0	24,695
9		0	0	0	0	0	0	0.627	0	24,695
10		0	0	0	0	0	0	0.592	0	24,695
11		489	163	0	489	0	1,140	0.558	637	25,331
12		0	0	0	0	0	0	0.527	0	25,331
13		0	0	0	0	0	0	0.497	0	25,331
14		0	0	0	0	0	0	0.469	0	25,331
15		0	0	0	0	0	0	0.442	0	25,331
16		624	208	0	624	0	1,455	0.417	607	25,939
17		0	0	0	0	0	0	0.394	0	25,939
18		0	0	0	0	0	0	0.371	0	25,939
19		0	0	0	0	0	0	0.350	0	25,939
20		0	0	0	0	0	0	0.331	0	25,939
21		796	265	0	796	0	1,857	0.312	579	26,518
22		0	0	0	0	0	0	0.294	0	26,518
23		0	0	0	0	0	0	0.278	0	26,518
24		0	0	0	0	0	0	0.262	0	26,518
25		0	0	0	0	0	0	0.247	0	26,518
26		1,016	339	0	1,016	0	2,370	0.233	552	27,070
27		0	0	0	0	0	0	0.220	0	27,070
28		0	0	0	0	0	0	0.207	0	27,070
29		0	0	0	0	0	0	0.196	0	27,070
30		0	0	0	0	(12,348)	(12,348)	0.185	(2,279)	24,791
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									24,791	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
Project Title: NYOR Projects Peacock Park
Project Code: 2020-001
By: ADV Engineering
Date: 03/03/20

ALTERNATIVE DESCRIPTION:

Alternative Number: 3
Alternative Description: Stained 10'x20' Deck

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
	5.0%	5.0%	5.0%	5.0%	5.0%					
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	13,774	0	9,600	0	0	0	23,374	1.000	23,374	23,374
2		0	0	0	0	0	0	0.943	0	23,374
3		0	0	0	0	0	0	0.890	0	23,374
4		0	0	0	0	0	0	0.840	0	23,374
5		0	0	0	0	0	0	0.792	0	23,374
6		766	511	0	766	0	2,042	0.747	1,526	24,900
7		0	0	0	0	0	0	0.705	0	24,900
8		0	0	0	0	0	0	0.665	0	24,900
9		0	0	0	0	0	0	0.627	0	24,900
10		0	0	0	0	0	0	0.592	0	24,900
11		977	652	0	977	0	2,606	0.558	1,455	26,355
12		0	0	0	0	0	0	0.527	0	26,355
13		0	0	0	0	0	0	0.497	0	26,355
14		0	0	0	0	0	0	0.469	0	26,355
15		0	0	0	0	0	0	0.442	0	26,355
16		1,247	832	0	1,247	0	3,326	0.417	1,388	27,743
17		0	0	0	0	0	0	0.394	0	27,743
18		0	0	0	0	0	0	0.371	0	27,743
19		0	0	0	0	0	0	0.350	0	27,743
20		0	0	0	0	0	0	0.331	0	27,743
21		1,592	1,061	0	1,592	0	4,245	0.312	1,324	29,067
22		0	0	0	0	0	0	0.294	0	29,067
23		0	0	0	0	0	0	0.278	0	29,067
24		0	0	0	0	0	0	0.262	0	29,067
25		0	0	0	0	0	0	0.247	0	29,067
26		2,032	1,355	0	2,032	0	5,418	0.233	1,262	30,329
27		0	0	0	0	0	0	0.220	0	30,329
28		0	0	0	0	0	0	0.207	0	30,329
29		0	0	0	0	0	0	0.196	0	30,329
30		0	0	0	0	(12,348)	(12,348)	0.185	(2,279)	28,050
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------>									28,050	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
Project Title: NYOR Projects Peacock Park
Project Code: 2020-001

By: ADV Engineering
Date: 03/03/20

ALTERNATIVE DESCRIPTION:

Alternative Number: 4
Alternative Description: Perminant Post

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	4,450	0	3,600	0	0	0	8,050	1.000	8,050	8,050
2		0	0	0	0	0	0	0.943	0	8,050
3		0	0	0	0	0	0	0.890	0	8,050
4		0	0	0	0	0	0	0.840	0	8,050
5		0	0	0	0	0	0	0.792	0	8,050
6		0	0	0	0	0	0	0.747	0	8,050
7		0	0	0	0	0	0	0.705	0	8,050
8		0	0	0	0	0	0	0.665	0	8,050
9		0	0	0	0	0	0	0.627	0	8,050
10		0	0	0	0	0	0	0.592	0	8,050
11		0	0	0	0	0	0	0.558	0	8,050
12		0	0	0	0	0	0	0.527	0	8,050
13		0	0	0	0	0	0	0.497	0	8,050
14		0	0	0	0	0	0	0.469	0	8,050
15		0	0	0	0	0	0	0.442	0	8,050
16		0	0	0	0	0	0	0.417	0	8,050
17		0	0	0	0	0	0	0.394	0	8,050
18		0	0	0	0	0	0	0.371	0	8,050
19		0	0	0	0	0	0	0.350	0	8,050
20		0	0	0	0	0	0	0.331	0	8,050
21		0	0	0	0	0	0	0.312	0	8,050
22		0	0	0	0	0	0	0.294	0	8,050
23		0	0	0	0	0	0	0.278	0	8,050
24		0	0	0	0	0	0	0.262	0	8,050
25		0	0	0	0	0	0	0.247	0	8,050
26		0	0	0	0	0	0	0.233	0	8,050
27		0	0	0	0	0	0	0.220	0	8,050
28		0	0	0	0	0	0	0.207	0	8,050
29		0	0	0	0	0	0	0.196	0	8,050
30		0	0	0	0	0	0	0.185	0	8,050
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									8,050	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
Project Title: NYOR Projects Peacock Park
Project Code: 2020-001

By: ADV Engineering
Date: 03/03/20

ALTERNATIVE DESCRIPTION:

Alternative Number: 1
Alternative Description: high-density polyethylene plastic resin dock

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	8,000	0	960	0	0	0	8,960	1.000	8,960	8,960
2		0	0	0	0	0	0	0.943	0	8,960
3		0	0	0	0	0	0	0.890	0	8,960
4		0	0	0	0	0	0	0.840	0	8,960
5		0	36	0	243	0	280	0.792	221	9,181
6		0	0	0	0	0	0	0.747	0	9,181
7		0	0	0	0	0	0	0.705	0	9,181
8		0	0	0	0	0	0	0.665	0	9,181
9		0	0	0	0	0	0	0.627	0	9,181
10		0	47	0	310	0	357	0.592	211	9,393
11		0	0	0	0	0	0	0.558	0	9,393
12		0	0	0	0	0	0	0.527	0	9,393
13		0	0	0	0	0	0	0.497	0	9,393
14		0	0	0	0	0	0	0.469	0	9,393
15		0	59	0	396	0	455	0.442	201	9,594
16		0	0	0	0	0	0	0.417	0	9,594
17		0	0	0	0	0	0	0.394	0	9,594
18		0	0	0	0	0	0	0.371	0	9,594
19		0	0	0	0	0	0	0.350	0	9,594
20		0	76	0	505	(4,735)	(4,154)	0.331	(1,373)	8,221
21		0	0	0	0	0	0	0.312	0	8,221
22		0	0	0	0	0	0	0.294	0	8,221
23		0	0	0	0	0	0	0.278	0	8,221
24		0	0	0	0	0	0	0.262	0	8,221
25		0	0	0	0	0	0	0.247	0	8,221
26		0	0	0	0	0	0	0.233	0	8,221
27		0	0	0	0	0	0	0.220	0	8,221
28		0	0	0	0	0	0	0.207	0	8,221
29		0	0	0	0	0	0	0.196	0	8,221
30		0	0	0	0	0	0	0.185	0	8,221
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									8,221	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
By: ADV Engineering
Project Title: NYOR Projects Peacock Park
Date: 03/03/20
Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 2
Alternative Description: Presure treated Wooden Dock

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	5,220	0	2,400	0	0	0	7,620	1.000	7,620	7,620
2		0	32	0	105	0	137	0.943	129	7,749
3		0	0	0	0	0	0	0.890	0	7,749
4		0	35	0	116	0	150	0.840	126	7,875
5		0	0	0	0	0	0	0.792	0	7,875
6		0	38	0	128	0	166	0.747	124	7,999
7		0	0	0	0	0	0	0.705	0	7,999
8		0	42	0	141	0	183	0.665	122	8,121
9		0	0	0	0	0	0	0.627	0	8,121
10		0	47	0	155	0	202	0.592	119	8,240
11		0	0	0	0	0	0	0.558	0	8,240
12		0	51	0	171	0	222	0.527	117	8,357
13		0	0	0	0	0	0	0.497	0	8,357
14		0	57	0	189	0	245	0.469	115	8,472
15		0	0	0	0	0	0	0.442	0	8,472
16		0	62	0	208	0	270	0.417	113	8,585
17		0	0	0	0	0	0	0.394	0	8,585
18		0	69	0	229	0	298	0.371	111	8,696
19		0	0	0	0	0	0	0.350	0	8,696
20		0	76	0	253	0	329	0.331	109	8,804
21		0	0	0	0	0	0	0.312	0	8,804
22		0	84	0	279	0	362	0.294	107	8,911
23		0	0	0	0	0	0	0.278	0	8,911
24		0	92	0	307	0	399	0.262	105	9,015
25		0	0	0	0	0	0	0.247	0	9,015
26		0	102	0	339	0	440	0.233	103	9,118
27		0	0	0	0	0	0	0.220	0	9,118
28		0	112	0	373	0	485	0.207	101	9,218
29		0	0	0	0	0	0	0.196	0	9,218
30		0	123	0	412	0	535	0.185	99	9,317
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									9,317	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
Project Title: NYOR Projects Peacock Park
Project Code: 2020-001

By: ADV Engineering
Date: 03/05/20

ALTERNATIVE DESCRIPTION:

Alternative Number: 1
Alternative Description: Pressure-Treated Pine Split Rail Fence

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	1,214	0	2,880	0	0	0	4,094	1.000	4,094	4,094
2		0	0	0	0	0	0	0.943	0	4,094
3		0	221	0	110	0	331	0.890	294	4,388
4		0	0	0	0	0	0	0.840	0	4,388
5		0	243	0	122	0	365	0.792	289	4,677
6		0	0	0	0	0	0	0.747	0	4,677
7		0	268	0	134	0	402	0.705	283	4,961
8		0	0	0	0	0	0	0.665	0	4,961
9		0	295	0	148	0	443	0.627	278	5,239
10		0	0	0	0	0	0	0.592	0	5,239
11		0	326	0	163	0	489	0.558	273	5,512
12		0	0	0	0	0	0	0.527	0	5,512
13		0	359	0	180	0	539	0.497	268	5,779
14		0	0	0	0	0	0	0.469	0	5,779
15		0	396	0	198	0	594	0.442	263	6,042
16		0	0	0	0	0	0	0.417	0	6,042
17		0	437	0	218	0	655	0.394	258	6,300
18		0	0	0	0	0	0	0.371	0	6,300
19		0	481	0	241	0	722	0.350	253	6,553
20		0	0	0	0	(632)	(632)	0.331	(209)	6,344
21		0	0	0	0	0	0	0.312	0	6,344
22		0	0	0	0	0	0	0.294	0	6,344
23		0	0	0	0	0	0	0.278	0	6,344
24		0	0	0	0	0	0	0.262	0	6,344
25		0	0	0	0	0	0	0.247	0	6,344
26		0	0	0	0	0	0	0.233	0	6,344
27		0	0	0	0	0	0	0.220	0	6,344
28		0	0	0	0	0	0	0.207	0	6,344
29		0	0	0	0	0	0	0.196	0	6,344
30		0	0	0	0	0	0	0.185	0	6,344
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									6,344	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
Project Title: NYOR Projects Peacock Park
Project Code: 2020-001

By: ADV Engineering
Date: 03/05/20

ALTERNATIVE DESCRIPTION:

Alternative Number: 2
Alternative Description: Cedar Ranch Style Fence

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	2,320	0	3,360	0	0	0	5,680	1.000	5,680	5,680
2		0	0	0	0	0	0	0.943	0	5,680
3		0	0	0	0	0	0	0.890	0	5,680
4		0	232	0	232	0	463	0.840	389	6,069
5		0	0	0	0	0	0	0.792	0	6,069
6		0	0	0	0	0	0	0.747	0	6,069
7		0	0	0	0	0	0	0.705	0	6,069
8		0	281	0	281	0	563	0.665	374	6,443
9		0	0	0	0	0	0	0.627	0	6,443
10		0	0	0	0	0	0	0.592	0	6,443
11		0	0	0	0	0	0	0.558	0	6,443
12		0	342	0	342	0	684	0.527	360	6,804
13		0	0	0	0	0	0	0.497	0	6,804
14		0	0	0	0	0	0	0.469	0	6,804
15		0	0	0	0	0	0	0.442	0	6,804
16		0	416	0	416	0	832	0.417	347	7,150
17		0	0	0	0	0	0	0.394	0	7,150
18		0	0	0	0	0	0	0.371	0	7,150
19		0	0	0	0	0	0	0.350	0	7,150
20		0	505	0	505	0	1,011	0.331	334	7,485
21		0	0	0	0	0	0	0.312	0	7,485
22		0	0	0	0	0	0	0.294	0	7,485
23		0	0	0	0	0	0	0.278	0	7,485
24		0	614	0	614	0	1,229	0.262	322	7,806
25		0	0	0	0	0	0	0.247	0	7,806
26		0	0	0	0	0	0	0.233	0	7,806
27		0	0	0	0	0	0	0.220	0	7,806
28		0	747	0	747	0	1,493	0.207	310	8,116
29		0	0	0	0	0	0	0.196	0	8,116
30		0	0	0	0	(2,058)	(2,058)	0.185	(380)	7,736
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									7,736	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
Project Title: NYOR Projects Peacock Park
Project Code: 2020-001

By: ADV Engineering
Date: 03/05/20

ALTERNATIVE DESCRIPTION:

Alternative Number: 1
Alternative Description: Toboggan Chute Shed

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	2,689	0	12,640	0	0	0	15,329	1.000	15,329	15,329
2		0	0	0	0	0	0	0.943	0	15,329
3		0	331	0	276	0	606	0.890	540	15,869
4		0	0	0	0	0	0	0.840	0	15,869
5		0	0	0	0	0	0	0.792	0	15,869
6		0	383	0	319	0	702	0.747	525	16,393
7		0	0	0	0	0	0	0.705	0	16,393
8		0	0	0	0	0	0	0.665	0	16,393
9		0	443	0	369	0	813	0.627	510	16,903
10		0	0	0	0	0	0	0.592	0	16,903
11		0	0	0	0	0	0	0.558	0	16,903
12		0	513	0	428	0	941	0.527	496	17,399
13		0	0	0	0	0	0	0.497	0	17,399
14		0	0	0	0	0	0	0.469	0	17,399
15		0	594	0	495	0	1,089	0.442	482	17,880
16		0	0	0	0	0	0	0.417	0	17,880
17		0	0	0	0	0	0	0.394	0	17,880
18		0	688	0	573	0	1,261	0.371	468	18,348
19		0	0	0	0	0	0	0.350	0	18,348
20		0	0	0	0	0	0	0.331	0	18,348
21		0	796	0	663	0	1,459	0.312	455	18,803
22		0	0	0	0	0	0	0.294	0	18,803
23		0	0	0	0	0	0	0.278	0	18,803
24		0	921	0	768	0	1,689	0.262	442	19,246
25		0	0	0	0	(1,290)	(1,290)	0.247	(319)	18,927
26		0	0	0	0	0	0	0.233	0	18,927
27		0	0	0	0	0	0	0.220	0	18,927
28		0	0	0	0	0	0	0.207	0	18,927
29		0	0	0	0	0	0	0.196	0	18,927
30		0	0	0	0	0	0	0.185	0	18,927
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									18,927	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University — By: ADV Engineering
Project Title: NYOR Projects Peacock Park — Date: 03/05/20
Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 2
Alternative Description: Pressure-Treated Pine Fence

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.									
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	1,942	0	4,512	0	0	0	6,454	1.000	6,454	6,454
2		0	0	0	0	0	0	0.943	0	6,454
3		0	221	0	110	0	331	0.890	294	6,748
4		0	0	0	0	0	0	0.840	0	6,748
5		0	243	0	122	0	365	0.792	289	7,037
6		0	0	0	0	0	0	0.747	0	7,037
7		0	268	0	134	0	402	0.705	283	7,321
8		0	0	0	0	0	0	0.665	0	7,321
9		0	295	0	148	0	443	0.627	278	7,599
10		0	0	0	0	0	0	0.592	0	7,599
11		0	326	0	163	0	489	0.558	273	7,872
12		0	0	0	0	0	0	0.527	0	7,872
13		0	359	0	180	0	539	0.497	268	8,139
14		0	0	0	0	0	0	0.469	0	8,139
15		0	396	0	198	0	594	0.442	263	8,402
16		0	0	0	0	0	0	0.417	0	8,402
17		0	437	0	218	0	655	0.394	258	8,660
18		0	0	0	0	0	0	0.371	0	8,660
19		0	481	0	241	0	722	0.350	253	8,913
20		0	0	0	0	(758)	(758)	0.331	(251)	8,662
21		0	0	0	0	0	0	0.312	0	8,662
22		0	0	0	0	0	0	0.294	0	8,662
23		0	0	0	0	0	0	0.278	0	8,662
24		0	0	0	0	0	0	0.262	0	8,662
25		0	0	0	0	0	0	0.247	0	8,662
26		0	0	0	0	0	0	0.233	0	8,662
27		0	0	0	0	0	0	0.220	0	8,662
28		0	0	0	0	0	0	0.207	0	8,662
29		0	0	0	0	0	0	0.196	0	8,662
30		0	0	0	0	0	0	0.185	0	8,662
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									8,662	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University — By: ADV Engineering

Project Title: NYOR Projects Peacock Park — Date: 03/05/20

Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 3

Alternative Description: Cedar Fence

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)	0	0	0	0	Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
		Specify annual escalation rates used for each cost category below.								
		5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT 6% PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	3,712	0	5,280	0	0	0	8,992	1.000	8,992	8,992
2		0	0	0	0	0	0	0.943	0	8,992
3		0	0	0	0	0	0	0.890	0	8,992
4		0	232	0	232	0	463	0.840	389	9,381
5		0	0	0	0	0	0	0.792	0	9,381
6		0	0	0	0	0	0	0.747	0	9,381
7		0	0	0	0	0	0	0.705	0	9,381
8		0	281	0	281	0	563	0.665	374	9,755
9		0	0	0	0	0	0	0.627	0	9,755
10		0	0	0	0	0	0	0.592	0	9,755
11		0	0	0	0	0	0	0.558	0	9,755
12		0	342	0	342	0	684	0.527	360	10,116
13		0	0	0	0	0	0	0.497	0	10,116
14		0	0	0	0	0	0	0.469	0	10,116
15		0	0	0	0	0	0	0.442	0	10,116
16		0	416	0	416	0	832	0.417	347	10,462
17		0	0	0	0	0	0	0.394	0	10,462
18		0	0	0	0	0	0	0.371	0	10,462
19		0	0	0	0	0	0	0.350	0	10,462
20		0	505	0	505	0	1,011	0.331	334	10,797
21		0	0	0	0	0	0	0.312	0	10,797
22		0	0	0	0	0	0	0.294	0	10,797
23		0	0	0	0	0	0	0.278	0	10,797
24		0	614	0	614	0	1,229	0.262	322	11,118
25		0	0	0	0	0	0	0.247	0	11,118
26		0	0	0	0	0	0	0.233	0	11,118
27		0	0	0	0	0	0	0.220	0	11,118
28		0	747	0	747	0	1,493	0.207	310	11,428
29		0	0	0	0	0	0	0.196	0	11,428
30		0	0	0	0	(3,087)	(3,087)	0.185	(570)	10,858
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									10,858	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University — **By:** ADV Engineering

Project Title: NYOR Projects Peacock Park — **Date:** 43893

Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 1

Alternative Description: Permanent Shelter

For Energy Studies, Specify Type Of Fuel:

(check appropriate box)	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
					Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							**PRESENT WORTH**		
	Specify annual escalation rates used for each cost category below.							**DISCOUNT**		
	5.0%	5.0%	5.0%	5.0%	5.0%					
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	**TOTAL ESCALATED COST**	**FACTOR AT *6%* PER ANNUM**	**TOTAL PRESENT VALUE**	**CUMULATIVE PRESENT VALUE**
1	10,689		336				11,025	1.000	11,025	11,025
2			353				353	0.943	333	11,358
3			448		110		558	0.890	496	11,854
4			389				389	0.840	327	12,181
5			408				408	0.792	323	12,505
6			518		128		646	0.747	483	12,987
7			450				450	0.705	317	13,305
8			473				473	0.665	314	13,619
9			600		148		748	0.627	469	14,088
10			1,762		20		1,782	0.592	1,055	15,143
11			547				547	0.558	306	15,449
12			694		171		865	0.527	456	15,905
13			603				603	0.497	300	16,204
14			634				634	0.469	297	16,502
15			804		198	(1,161)	(159)	0.442	(70)	16,431
16								0.417		16,431
17								0.394		16,431
18								0.371		16,431
19								0.350		16,431
20								0.331		16,431
21								0.312		16,431
22								0.294		16,431
23								0.278		16,431
24								0.262		16,431
25								0.247		16,431
26								0.233		16,431
27								0.220		16,431
28								0.207		16,431
29								0.196		16,431
30								0.185		16,431
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									**16,431**	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University
By: ADV Engineering
Project Title: NYOR Projects Peacock Park
Date: 43893
Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

Alternative Number: 2
Alternative Description: Movable

For Energy Studies, Specify Type Of Fuel:

(check appropriate box)	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
					Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.	5.0%	5.0%	5.0%	5.0%	5.0%				
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT *6%* PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	12,296			500			12,796	1.000	12,796	12,796
2				525			525	0.943	495	13,291
3			77	551	110		739	0.890	657	13,949
4				579			579	0.840	486	14,435
5				608			608	0.792	481	14,916
6			89	638	128		855	0.747	639	15,555
7				670			670	0.705	472	16,028
8				704			704	0.665	468	16,495
9			103	739	148		990	0.627	621	17,116
10			1,241	776	189		2,206	0.592	1,306	18,422
11				814			814	0.558	455	18,877
12			120	855	171		1,146	0.527	604	19,481
13				898			898	0.497	446	19,927
14				943			943	0.469	442	20,369
15			139	990	198	(1,152)	174	0.442	77	20,446
16								0.417		20,446
17								0.394		20,446
18								0.371		20,446
19								0.350		20,446
20								0.331		20,446
21								0.312		20,446
22								0.294		20,446
23								0.278		20,446
24								0.262		20,446
25								0.247		20,446
26								0.233		20,446
27								0.220		20,446
28								0.207		20,446
29								0.196		20,446
30								0.185		20,446
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									**20,446**	

LIFE CYCLE COST WORKSHEET

PROJECT DESCRIPTION:

Agency Name: Clarkson University — **By:** ADV Engineering

Project Title: NYOR Projects Peacock Park — **Date:** 43893

Project Code: 2020-001

ALTERNATIVE DESCRIPTION:

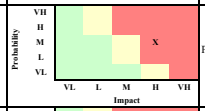
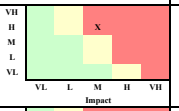
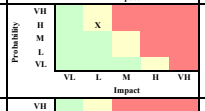
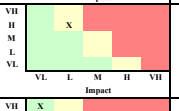
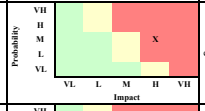
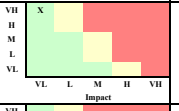
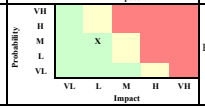
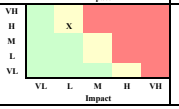
Alternative Number: 3

Alternative Description: Picnic Table

For Energy Studies, Specify Type Of Fuel:	COAL	ELECTRIC	OIL	GAS	OTHER (describe):
(check appropriate box)					Labor

	a	b	c	d	e	f	g = a+b+c+d+e+f	h	i = g x h	
	ESCALATED COSTS, BY CATEGORY, BY YEAR							PRESENT WORTH DISCOUNT		
	Specify annual escalation rates used for each cost category below.		5.0%	5.0%	5.0%	5.0%	5.0%			
YEAR	INITIAL CAPITAL COST	REPLACEMENT COST	FUEL / ENERGY COST	OTHER OPERATING COST	MAINT. & REPAIR COST	SALVAGE VALUE	TOTAL ESCALATED COST	FACTOR AT *6%* PER ANNUM	TOTAL PRESENT VALUE	CUMULATIVE PRESENT VALUE
1	2,422		14				2,436	1.000	2,436	2,436
2			15				15	0.943	14	2,450
3			15				15	0.890	14	2,464
4			16				16	0.840	14	2,478
5			17				17	0.792	13	2,491
6			18				18	0.747	13	2,504
7			19				19	0.705	13	2,518
8			20				20	0.665	13	2,531
9			21				21	0.627	13	2,544
10			22				22	0.592	13	2,557
11			23				23	0.558	13	2,569
12			24				24	0.527	13	2,582
13			25				25	0.497	12	2,594
14			26				26	0.469	12	2,607
15			28				28	0.442	12	2,619
16			29				29	0.417	12	2,631
17			31				31	0.394	12	2,643
18			32				32	0.371	12	2,655
19			34				34	0.350	12	2,667
20			35				35	0.331	12	2,679
21			37				37	0.312	12	2,690
22			39				39	0.294	11	2,702
23			41				41	0.278	11	2,713
24			43				43	0.262	11	2,724
25			45				45	0.247	11	2,736
26			47				47	0.233	11	2,747
27			50				50	0.220	11	2,757
28			52				52	0.207	11	2,768
29			55				55	0.196	11	2,779
30			58			(2,058)	(2,000)	0.185	(369)	2,410
TOTAL PRESENT VALUE LIFE CYCLE COST (sum of column "i") ------->									**2,410**	

Risk Management Register for Project 2020-001 NYOR Projects Peacock Park

Risk Identification								Qualitative Risk Assessment			Order of Magnitude	Risk Response Plan		Mitigated Qualitative Risk Assessment			Monitoring and Control		
#	RMP No.	Status	Risk Category	Risk Event	Cause	Effect	Threat or Opportunity	Primary Objective	Probability	Impact	Risk Matrix	Worst/Best Case Impact (in $, time, scope/quality, longevity)	Response Strategy	Response Actions	Probability	Impact	Mitigated Risk Matrix	Responsible Entity	Interval or Milestone Check	Status: Date and Review Comments
1		Active	Organization	Project Not Funded	Grants and fundrasing cannot be completed	Project Delayed	Threat	Time	Medium	High		Project Delayed until funding secrured	Transfer	Create different options at different price points to allow choices in completed work	High	Medium		Client	Monthly	
2		Active	External	Public Objections	Public opinion of project to add more items to the project	Project Cost Increases	Threat	Cost	Low	High		Increased coats to project estimate	Avoid	Plan for multiple different options within project design for a decision	High	Low		Project Designer	Weekly	
3		Active	Project Management	Estimating Errors	Inexperience	Cost estimate inaccurate	Threat	Cost	Medium	High		Cost estimate lower than expected and funding cannot cover project costs	Avoid	Include other personal in the estimating process	Very High	Very Low		Estimator	Weekly	
4		Active	External	Permit delays	Permits or agency actions are delayed or take longer then expected.	Project Delayed	Threat	Time	Medium	Low		Project delayed until permits issued	Transfer	Require project owner to obtain final permits for buidling	High	Low		Client	Monthly	

From: **Jamie Rogers** jrogers5343@gmail.com
Subject: Re: CE490 - 2020-001 NYOR Projects Peacock Park ADV Engineering RFI 002
Date: February 28, 2020 at 3:46 PM
To: Dean Dietrich deandietrich@verizon.net
Cc: Mitchell Schweitzer schweimc@clarkson.edu, Erik C. Backus, PE, LEED AP BD+C ebackus@clarkson.edu, Jim Billings jbilling@clarkson.edu

JR

Dean,

I do believe you are correct, Mitch, you will see in the photo's a few of the lights Dean is writing about.

Mitch I know we spoke about lighting in our first call, but after walking the park and taking pictures for you, I think the lighting is sufficient.

That's my thinking, and thanks again Mitch to you and your team.

Jamie

Oh, I free to speak next week at 8 am on Tuesday if you wish.

On Fri, Feb 28, 2020 at 1:50 PM Dean Dietrich <deandietrich@verizon.net> wrote:

> My recollection is the Appearance committee felt the new locations for the street lights was sufficient. They ended up with enough spill on the driveway. We also installed new poles on the Toboggan pathway so that should be OK. The next meeting is Wed march 4. I will have a definite answer then
>
> Dean Dietrich
>
> > On Feb 28, 2020, at 12:36 PM, Mitchell Schweitzer <schweimc@clarkson.edu> wrote:
> >
> > All,
> >
> > We have a Request for Information regarding the Peacock Park Beach House Area.
> >
> > Thank you,
> > Mitch
> >
> > Mitchell Schweitzer
> > Clarkson University
> > Engineering & Management B.S. ’20
> > Past President, Clarkson University Rod & Gun Club
> >
> > <20200228 CE490 RFI 002.xlsx>

From: **Jamie Rogers** jrogers5343@gmail.com
Subject: Re: Meet Now on Skype
Date: February 21, 2020 at 4:07 PM
To: Mitchell Schweitzer schweimc@clarkson.edu
Cc: Dean Dietrich deandietrich@verizon.net

JR

Mitchell,

I have sent you photos of the Beach House area, hope you have received them.

Below are the answers to the questions based on our call and what I have in my notes.

The deck facing the lake has a capacity of 12 people, it does look like you could extend the deck out to the lake. With that said, I need to get you better pictures, I was in a hurry because I was double parked.

You should be able to see the path to the dock area, currently it is used for the toboggan rides.

You can see the style of lights, and I do think it is pretty well lit.

You should be able to see where picnic tables are, and could go.

Your sitting wall idea could go on either, or both hills left and right of the Beach House.

What I still need to get to you; Beach House plans and contours of the entire park area and better photos of the deck area.

If you would like to set up another call and go over the pictures I would be happy to do that.

Please feel free to reach out to me if you need anything else. I have Cc ed Dean on this email, Dean is our team leader keeping track of all your teams projects, we need to keep him in the loop and he may have feedback on our discussions as well.

Thank you for all your ideas and work,

Jamie

On Tue, Feb 18, 2020 at 8:20 AM Mitchell Schweitzer <schweimc@clarkson.edu> wrote:

> You have been invited to meet on Skype. Click here to join the meeting https://join.skype.com/O32cA1PRpXjO

Good morning!
I apologize for the delay in this message. I just heard back from my supplier in Albany and they have a variety that is hardy here but the smallest size they have is 2 gallon. The plants are $17 each in that size. The next size up is 3 gallon and the plants are only $20. It would be my suggestion that you use the smaller size up above and then use the larger size down below because you will get away with fewer plants, and I think being able to save some money. The delivery charge for them to come up here is $100. I was originally figuring a 1 gallon size pot and thinking you would need at least 30 plants. In the larger size, you will definitely be able to get away with much fewer. Please feel free to give me a call if you have any questions. 518-524-2211
Cherise

On Mon, Apr 30, 2018, 7:27 PM Cherise Bixler <lpbeautification@gmail.com> wrote:
Thanks!