Received 12.20.2021
Revised 01.07.2022
Complete 01.27.2022

EXPERIMENTAL LEASE APPLICATION

1. APPLICANT CONTACT INFORMATION

Applicant	Stuart Ryan
Contact Person	Stuart Ryan
Address	48 Baldwin rd
City	Freeport
State, Zip	ME 04032
County	Cumberland
Telephone	207-615-8907
Email	stuartkeeblerryan@gmail.com
Payment Type	☐ Check (included) ☐ Credit Card

***Note**: The email address you list here will be the primary means by which we will contact you. Please provide an email address checked regularly. If you do not use email, please leave this blank.*

2. PROPOSED LEASE SITE INFORMATION

Location of Proposed Lease Site	
Town	Freeport
Waterbody	Casco Bay
General Description (e.g. south of B Island)	SW side of Williams Island
Lease Information	
Total acreage (4-acre maximum) and lease term (3-year maximum) requested	2.4 acres, 3 years
Type of culture (check all that apply)	☐ Bottom (no gear) ☒ Suspended (gear in the water and/or on the bottom) ☐ Net Pen (finfish)
Is any portion of the proposed lease site above mean low water?	☐ Yes ☒ No

Note: If you selected yes, you need to complete the steps outlined in the section titled: "17. Landowner/Municipal Permission Requirements".

3. GROWING AREA DESIGNATION

Directions: Information for growing area designations can be found here: https://www.maine.gov/dmr/shellfish-sanitation-management/closures/index.html

Growing Area Designation (e.g. "WL"):	WJ
Growing Area Section (e.g. "A1"):	A1

Note: If you are proposing to grow molluscan shellfish in waters classified as anything other than open/approved, you will need to contact the Bureau of Public Health to discuss you plans at the following email: DMRPublicHealthDiv@maine.gov

4. GENERAL LEASE INFORMATION

A. Please complete the table below and add additional rows as needed.

Name of species to be cultivated (*include both common and scientific names*):	**Name and address of the source of seed stock or juveniles**	**Maximum number (or biomass) of organisms you anticipate on the site at any given time**
1. Eastern Oyster *Crassostrea Virginica*	Mook Sea farm, 321 state route 129, Walpole ME Muscongus Bay Aquaculture, PO box 204, Bremen ME	750,000
2.Sugar Kelp or Skinny kelp Saccharina latissima	Atlantic Sea farms, 89 industrial park rd, Saco ME	2,400 feet of kelp line, approximately 12,000 pounds
3.Sea Scallop Placopecten magellanicus	Wild captured spat in Maine	100,000
4.		
5.		

B. Do you intend to possess, transport, or sell whole or roe-on scallops? ☒ Yes ☐ No

If you answered "yes" please contact the Bureau of Public Health to discuss your plans at the following email: DMRPublicHealthDiv@maine.gov

Note: If you are proposing to grow molluscan shellfish, this application also serves as your written operational plan as required in the National Shellfish Sanitation Program (NSSP) Model Ordinance Chapter 2, and must be maintained in your files. If you wish to submit an operational plan separate from this application, please contact: DMRPublicHealthDiv@maine.gov

5. VICINITY MAP

Note: You may embed the maps within the document, or attach the maps to the end of your application. If you attach the maps, please label them according to the instructions provided below. If you attach the map, please label it: 'Vicinity Map'.

Directions: Using a NOAA Chart or USGS topographic map, show the area within a minimum of one-half mile of the proposed lease site.

The map needs to display the following:

- The waters, shore lands, and lines of mean high and mean low water within the general area of the lease
- An arrow indicating true north
- A scalebar
- The approximate lease boundaries

6. BOUNDARY DRAWING

Note: If you attach a drawing, please label it 'Boundary Drawing'.

Directions: Depict the boundaries of the proposed lease site. Provide a drawing with all corners, directions, and distances labeled. Provide coordinates for each corner as follows:

- Coordinate Description
  Provide geographic coordinates for each corner of the lease site in latitude and longitude as accurately as possible (e.g., to the nearest second or fraction of a second). Identify the datum from the map, chart, or GPS unit used to develop these coordinates. The datum will be shown on the map or chart you are using. The Coordinate Description may be provided separately from the Boundary Drawing.

7. RESEARCH PROGRAM AND OPERATIONS

Directions: If you are cultivating more than one species, you will need to provide the below information for each species. Please attach a separate page if needed.

A. Type of study **(check one):** ☐ Scientific Research ☒ Commercial Research

Please note:
a) Scientific research is not kept confidential.
b) Experimental leases for commercial research are not renewable. Results of commercial research are kept confidential.

B. What is the purpose of the study? If scientific, please include a detailed study design.
The purpose of this experimental lease is to test the efficacy of a relatively new oyster aquaculture system developed in New Zealand. We will also explore the efficacy of co-culturing scallops and kelp alongside this oyster aquaculture system.

C. Describe the general culture process for each species proposed.
Oysters will be grown in Hexacyl baskets using the FlipFarm system or in HDPE bags. Seed will be placed in mesh pouches inside Hexacyl baskets until large enough to be transferred to larger mesh baskets. Periodically oysters will be size sorted and graded before reaching market size. Harvest sized oysters will be graded and brough to market. Biofouling will be controlled by flipping the floating gear. Kelp will be deployed between October and May. Seeded kelp line will be deployed along lines submerged 3-6 feet and suspended by buoys. Harvest of kelp occurs in the spring. Sea Scallops will be grown at the site in lantern nets and/or bottom cages. Bottom cages will be deployed in lines of 10 cages with one vertical retrieval line and buoy. Maximum square footage of bottom cages would be 600 sf.

D. What months will the proposed activities (i.e. seeding, tending, and harvesting) occur?
Activity on the lease site could occur year-round, but would be most active from April-November. Oyster seeding will occur in May or June, once seeding has occurred regular tending and harvesting will occur throughout the summer and fall. Flipping the gear for biofouling control will occur 1-2 times per week, and harvesting will occur 1-2 times per week. Site visits will occur as needed intermittently throughout the winter. Harvesting may occur year round.

E. How often will you be at the site during seeding and harvesting periods?
Site visits during seeding and harvesting periods could range from 2-5 days per week.

F. How frequently will you visit/tend the site for routine maintenance (i.e. flipping cages, etc.)?
Routine maintenance at the site could occur 1-5 days per week

G. Describe the harvesting techniques you will use. If you plan on using a drag, please provide the dimensions.
Harvesting will occur by emptying cages/baskets into bins and sorting/grading by hand or tumble sorter for harvest size oysters. Scallops will be removed from lantern nets or cages, and sorted by hand for harvest. Kelp lines will be pulled out of the water and over a boat where kelp will be cut off the line by hand into harvest bags or totes.

H. Describe any overwintering or "off season" plans for the site. For example, will you remove gear from the site and/or deploy gear in different areas within the proposed site? Please include where gear or product will be located if moved from the site.
The gear will be left floating on the surface year round with the exception of very intense storms events such as hurricanes or major nor'easters. During major storm events, the floating gear will be submerged while remaining attached to the moorings. Submerged gear would cover a maximum of 13,000 square feet of bottom substrate during these storm events.

I. What type of machinery (e.g. generator, drag, grading equipment, etc.) will you be using on the site? When and how often will the machinery be used?
The flip farm system utilizes a helix flipper which attaches to a boat and flips the hexacyl baskets, a filling shuttle which brings the baskets into a filling position, and an empty shuttle which brings the baskets into an emptying position. These pieces of equipment are non-mechanized and are moved along the line by the boat or a small battery powered line hauler. These items will remain on the lines during much of the year A tumble sorter will be used extensively for one week in June and one week in September for up to 5 days per week. Outside of those two weeks a tumble sorter will be used intermittently, up to two days per week between April and November. I plan to use a small 40" long tube tumble sorter designed for small skiffs. The tumble sorter will be powered by a 12v marine battery which is recharged via a foldable solar panel. A larger tumble sorter may be utilized during the two weeks of extensive sorting described above A pressure washer may be used less than 5 times per year for no more than 6 hours each time. Pressure washing would occur on site over the water or on the boat. A small generator may occasionally be used if necessary, however I anticipate this being less 5 days per year. If needed I would utilize a generator that is less than 60 decibels such as the Honda EU 2200.

J. Please provide details on any predator control techniques you plan to employ, including the use of bird deterrents. Will you use commercially available or custom equipment? If commercially, available equipment, please include the brand and model names. If custom equipment, please attach a detailed schematic that includes the dimensions, materials, and function of the equipment.
The only predator control will be achieved by flipping gear to prevent fouling, occasional pressure washing, and removing larger predators by hand. Pursuant to changes in the NSSP regarding birds roosting on floating aquaculture gear, I will take steps to reduce or eliminate birds roosting on gear. At this point I do not know whether this will be a problem on site and so the first step will be to monitor the site regularly and take note of large numbers of roosting birds, and/or large amounts of gear covered in bird droppings. If bird roosting becomes problematic, I will first utilize visual detergents such as buoys outfitted with reflective bird deterrents, and/or bird deterring hawk kites (see attached images). If these methods are not effective, I will add zip ties with the tails oriented vertically to physically deter roosting on the gear. If all of the previous methods are not effective, I will sink product for two weeks prior to harvest. Kelp and scallops will always be submerged.

8. EXISTING USES

Directions: Describe the existing uses of the proposed area. Please include the amount of activity, the time of year the activity occurs, frequency, and proximity to the lease site.

A. Describe the existing uses of the proposed area in questions A.1 through A.5 below. Please include the a) type b) time of year c) frequency, and d) proximity to the lease site for each existing use.

1. Commercial Fishing

There is some lobstering that occurs in the area, however Lobster gear however is typically concentrated in the deeper water 100' to 250' west of the proposed lease area. A site visit on 10/24/21 showed three lobster buoys either inside, or within 50' of the proposed lease area.

2. Recreational Fishing

Some recreational fishing may occur in this area, but to my knowledge it is not a hot spot for recreational fishing. I have not personally observed recreational fishing within the proposed lease area.

3. Boating Activities (please also include the distance to any navigable channel(s) from your proposed site at low water)

Boaters do utilize this area, however with intertidal flats between Flying Point, and Sow and Pigs, there is limited vessel traffic. There is a small unmarked channel between the south end of Williams Island and a set of rocks to the east of Pettingill Island. This channel is approximately 8' deep at MLW and is approximately 275' wide. There are submerged rocks both to the east and west of this narrow passage. Given the shallow depth and unmarked rocks larger vessels typically utilize the passage to the north of Williams Island.

4. Ingress and egress (i.e. coming and going) of shorefront property owners within 1,000 feet of the proposal (e.g. docks, moorings, landing boats on shore, etc.)

There are two docks on Williams Island, both to the north of the proposed lease site. A straight line between the proposed lease and these docks is approximately 560' and 800'. Between the lease site and these docks however there is a large rock outcrop, and a small cove. Any route a boat could travel between the proposed lease and these docks would be greater than 900'. A vessel navigating to these docks would not be impeded by the lease, and would most likely be approaching from the north.

There are no boat landing sites on the SW side of Williams Island. There is a small pocket beach on the south tip of the island which would not be impeded by the proposed lease.

5. Other uses (kayaking, swimming, etc.)

Kayakers and other non-motorized watercraft sometimes travel through this area.

B. Are there private docks, moorings, or other access points within 1,000 feet of the proposed lease? If yes, please include approximate distance from proposed lease.

There are two docks on Williams Island, both to the north of the proposed lease site. A straight line between the proposed lease and these docks is approximately 560' and 800'. Between the lease site and these docks however there is a large rock outcrop, and a small cove. Any route a boat could travel between the proposed lease and these docks would be greater than 900'.

There are two moorings to the west of the proposed lease site, approximately 470' and 560' from the northwest corner of the proposed lease site.

C. Are there public beaches, parks, or docking facilities within 1,000 feet of the proposed lease site. If yes, please describe and include approximate distances from proposed lease.

There are no public beaches, parks or facilities within 1,000' of the proposed lease. Williams Island is privately owned and not open to the public. The southern half of the island is protected from development by an easement, but is not open to the public.

D. Are there any Limited Purpose Aquaculture (LPA) licenses or aquaculture leases within 1,000 feet of your proposed lease site? If yes, please list their acronyms below.

Current and pending aquaculture leases and active LPA licenses may be found here: https://www.maine.gov/dmr/aquaculture/leases/index.html

Referencing the DMR aquaculture webmap on 12/14/21 showed no LPA's or leases within 1,000' of the proposed site.

9. CURRENT OPERATIONS

Directions: If a question does not pertain to your proposed operations, please write "**not applicable**" or "**N/A**."

A. Describe your existing aquaculture operations, including the acronyms of all active leases and/or licenses.

NA

B. What are your plans for any existing leases and/or Limited Purposed Aquaculture (LPA) licenses if the lease is granted? Will any existing leases and/or Limited Purpose Aquaculture (LPA) licenses be relinquished if the lease is granted? If so, please indicate which ones.

NA

10. EXCLUSIVE USE

If your lease is granted, what activities would you request be excluded from occurring within the boundaries of the lease site? In your answer please address applicable commercial and recreational fishing, boating activities, and other activities you listed in the 'Existing Uses' section of this application.

I would request that motorized watercraft stay outside the lease boundaries. Smaller, non-motorized craft would be welcome within the lease area

11. ENVIRONMENTAL CHARACTERIZATION

Directions: Using your knowledge of the area, describe the environment of the proposed lease site. Be sure to include units of measurement in your answers (i.e. feet, cm/s).

A. What are the approximate depths at mean low water?
SE corner- 5 feet SW corner- 12 feet NW corner- 7 feet NE corner- 5 feet

B. What are the approximate depths at mean high water?
SE corner- 14 feet SW corner- 21 feet NW corner- 16 feet NE corner- 14 feet

C. Provide the approximate current speed and direction during the ebb and flow.
0-2 kt. Running north at flood and south at ebb

D. The following questions (D.1 through D.6) may be answered in writing or by submitting a video. If you plan to submit a video, please contact the Department prior to video collection.
1. What are the bottom characteristics (mud, sand, gravel, rock, ledge or some mix, etc.)?
The bottom substrate is mud
2. Describe the bottom topography (flat, steep rough, etc.).

Flat sloping gradually downward from east to west

3. Describe marine organisms by species or common names. Based on your personal observations or other sources of information, are these species abundant, common, or rare?

Cormorants are abundant and regularly seen in this area. There is a bald eagle nest on the north end of Williams Island (over 800' away), and eagles are often seen. Mackerel and stripers are also present during the summer months.

4. Are there shellfish beds or fish migration routes in the surrounding area? If so, please describe.

There are intertidal mudflats where some clamming occurs to the west and southwest of the site, however these are over 1,000 feet away.

5. Describe the presence and extent of submerged aquatic vegetation, i.e. eelgrass, within the proposed lease area. Please include the date of this observation along with the method of observation. If submerged aquatic vegetation is observed, please also describe the abundance below and sketch the limits of the beds in the vicinity map.

DMR's 2018 survey of eelgrass in Casco bay shows that there is no eelgrass in the area of the proposed site. See additional map of proposed lease area and DMR 2018 eelgrass survey. I have not observed eelgrass in the lease area viewing the bottom by boat at low tide.

6. Describe the general shoreline and upland characteristics (rocky shoreline, forested, residential, etc.)

Rocky shoreline with dense forest. At low tide, there is mud below the rocky shore of the Island.

E. Is your proposed lease located within a Maine Department of Inland Fisheries and Wildlife designated Essential Habitat?

☐ Yes ☒ No

Note: The location of Essential Habitats in the State of Maine, along with information on how projects within these areas are reviewed, can be found here: https://www.maine.gov/ifw/fish-wildlife/wildlife/endangered-threatened-species/essential-wildlife-habitat/index.html

If a project is located within an Essential Habitat, applicants are strongly encouraged to contact the MDIFW Environmental Review Coordinator (John.Perry@maine.gov, phone: 207-287-5254) prior to application submission.

F. Will your operations discharge anything into the water such as feed (pellets, kelp, etc.) or chemical additives (therapeutants, chemical treatments, etc.)?

☐ Yes ☒ No

Note: If you answered yes, you must submit a video of the bottom using a method prescribed by the Department. **The video must be filmed between April 1 and November 15.** If a discharge is proposed you will also need to obtain a Maine Department of Environmental Protection (DEP) discharge permit. For information on this permit please contact DEP's Wastewater Licensing Program (Gregg.wood@maine.gov, 207-287-7693). Further sampling may be required by DMR, or DEP, depending on the characteristics of the site or the proposed activities.

12. STRUCTURES *(if applicable)*
If your operations require the use of cages, nets, ropes, trays, or any object (structure) other than the organism to be grown directly on the bottom or buoys to mark the corners of the lease site, you must submit an **Overhead View** and **Cross-Section View** of your gear plans. It is important to note that, unlike Limited Purpose Aquaculture (LPA) Licenses, experimental and standard leases require that all gear, including moorings, must be located within the proposed lease boundaries.

Note: You may embed the gear plans, or attach them to the end of your application. If you attach the plans, please label them according to the instructions provided below.

A) Overhead View (please label this "Overhead View"):
Directions: All dimensions need to labeled with the appropriate units (i.e. 10ft, 10in)

- Show maximum layout of gear including moorings.
- Show dimensions of entire gear layout
- Show approximate spacing between gear.
- Show lease boundaries and the location of proposed markers on all drawings.

B) Cross-Section View (please label this "Cross Section View"**):**
Directions: The cross-section view must show the following:

- The sea bottom
- Profile of gear in cross-section as it will be deployed
- Label gear with dimensions and materials
- Show mooring gear with mooring type, scope, hardware, and line type and size
- Water depth at mean high and mean low water

Note: Please include an additional Cross Section View, depicting the elements listed above, if there will be seasonal changes to gear layout (i.e. over wintering).

C) Gear Description

Directions: List and describe each individual gear type that you will use in the table below.

Specific Gear Type *(e.g. soft mesh bag)*	**Dimensions** *(e.g. 16"x20"x2")*	**Time of year gear will be deployed** *(e.g. Spring, Winter, etc.)*	**Maximum amount of this gear type that will be deployed on the site** *(i.e. 200 cages, 100 lantern nets, etc.)*	**Species that will be grown using this gear type**
Hexcyl baskets	29" x 10 5/8" x 5 7/16"	Year round	6,000	American Oyster
Kelp line	~600' long line	November-May	four ~600' lines	Sugar Kelp, skinny kelp
Lantern nets	20" x 50"	Year round	200	Scallops
Bottom cages	48" x 36" x 16"	Year round	40	Scallops & Oysters
HDPE floating bags	34 x 23 x5	Year round	2,000	American Oyster

D) Gear Drawing (please label this "Gear Drawing").

Directions: Include a drawing of an individual piece of gear for each of the gear type(s) you plan to use. The drawing(s) needs to depict the length, width, and height of each gear type with appropriate units referenced (i.e. 10in, 10ft, etc.).

13. MARKING

Will you be able to mark your site in accordance with DMR regulations, Chapter 2.80? In part, this requires marker buoys which clearly display the lease ID and the words SEA FARM to be located at each corner of the lease.

☒ Yes ☐ No

If you answered no, explain why and suggest alternate markings.

Note: If a lease is granted, you will also be required to mark the site in accordance with appropriate US Coast Guard Regulations. If you have questions about US Coast Guard regulations contact: 1st Coast Guard District, Aids to Navigation Office.

14. RIPARIAN LANDOWNERS AND SITE ACCESS

A. If your lease is within 1,000ft of shorefront land (**which extends to mean low water or 1,650 ft. from shore, whichever is less, according to NOAA charts**), the following supporting documents are required:

1. A labeled copy of a tax map(s) depicting the location of the proposed lease site and including the following elements:
   - Label the map "Tax Map: Town of (name of town)."
   - Legible scale
   - Tax lot numbers clearly displayed
   - The boundaries of the proposed lease

2. Please use the Riparian Landowner List (included on the next page) to list the name and address of every shorefront landowner within 1,000ft of the proposed lease site. Have the tax collector or clerk of the municipality certify the list. Refer to the riparian determination guidance document to ensure all riparian landowners are included: https://www.maine.gov/dmr/aquaculture/forms/documents/RiparianDetermination.pdf

3. If any portion of the site is intertidal you need to complete the steps outlined in "17. Landowner/Municipal Permission Requirements".

B. Will your access to the lease area be across riparian land?

☐ Yes ☒ No

Note: If you selected yes, you will need to complete the landowner permission requirements included in "17. Landowner/Municipal Permission Requirements" of this application.

C. How will you access the proposed site?

I will access the site via boat from either Mere point boat launch or Freeport harbor.

RIPARIAN LANDOWNER LIST

*THIS LIST MUST BE **CERTIFIED** BY THE TOWN CLERK*

On this list, please include the map number, lot number, and the current owners' names and mailing addresses for all shorefront parcels within 1,000 feet of the lease site. It is the applicant's responsibility to assemble the information for the Town Clerk to certify. The Town Clerk *only* certifies that the information is correct according to the Town's records. Once you have completed the form, ask the Town Clerk to complete the certification section below. If riparian parcels are located within more than one municipality, provide a separate, tax map and certified riparian list for each municipality.

TOWN OF: **Freeport**

MAP #	LOT #	Landowner name(s) and address(es)
ISL	Block:WLM Lot: 0	Diane Partridge 62668 Standley Lane La Grande, OR 97850
ISL	Block:WLM Lot: 2	Benjamin King & Lynn Curtis 123 Main Street Orono, ME 04473
ISL	Block:WLM Lot: 3	Parker Family Holdings LLC 71 Shavano Drive Aspen, CO 81611

Please use additional sheets if necessary and attach hereto.

CERTIFICATION

I, Christine Wolfe, Town Clerk for the Town of Freeport certify that the names and addresses of the property owners listed above, as well as the map and lot numbers, are those listed in the records of this municipality and are current as of this date.

SIGNED: Christine Wolfe **DATE:** 12/02/2021

15. ESCROW ACCOUNT OR PERFORMANCE BOND

Check the category that describes your operation:

Check Here	Lease Category	Amount of Required Escrow or Performance Bond
☐	**No gear/structure, no discharge**	None
☐	**No gear/structure, discharge**	$500.00
☐	**≤ 400 square feet of gear/structure, no discharge**	$1,500.00
☒	**>400 square feet of gear/structure, no discharge**	$5,000.00*
☐	**Gear/Structure, discharge**	$25,000.00

*DMR may increase the bond/escrow requirements for leases with more than 2,000 feet of structure.

I, (*printed name of applicant*) Stuart Ryan have read DMR Aquaculture Regulations 2.64(12)(B)) and if this proposed lease is granted by DMR I will either open an escrow account or obtain a performance bond, depending on the category of lease.

Stuart Ryan 12/22/21

Applicant Signature **Date**

Note: *Add title if signing on behalf of a corporate applicant.*

ADDITIONAL APPLICANTS: Each applicant must sign this section indicating that they will open an escrow account or obtain a performance bond. Use the space below for additional persons listed on the application. You may attach additional pages, if necessary.

I, (*printed name of applicant*) _____ have read DMR Aquaculture Regulations 2.64(10)(D) and if this proposed lease is granted by DMR I will either open an escrow account or obtain a performance bond, depending on the category of lease.

_____ _____

Applicant Signature **Date**

Note: *Add title if signing on behalf of a corporate applicant.*

16. APPLICANT SIGNATURE PAGE

I hereby state that the information included in this application is true and correct. I have also read and understand the requirements of the Department's rules governing aquaculture and the application instructions pertaining to the experimental lease process.

Printed name: Stuart Ryan

Title (*if corporate applicant*): _____

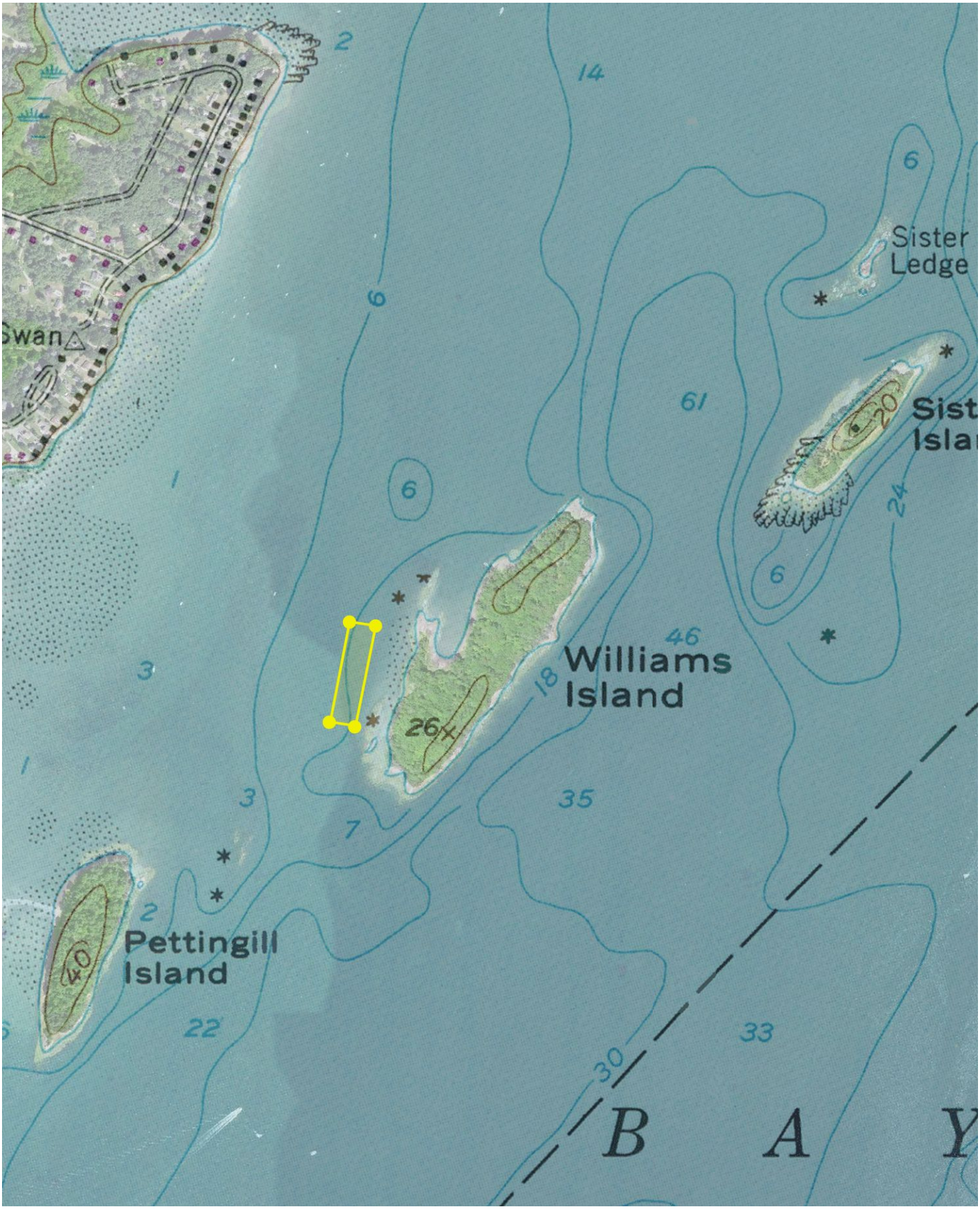
Signature: _____ Date: 12/22/21

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Note:

- All applicants must sign and date this page. Please use the space below, if additional signatures are required.
- Corporate applicants, please be sure to include the title (i.e. President, Treasurer, etc.) of the individual(s) signing on the company's behalf.

Vacinity Map

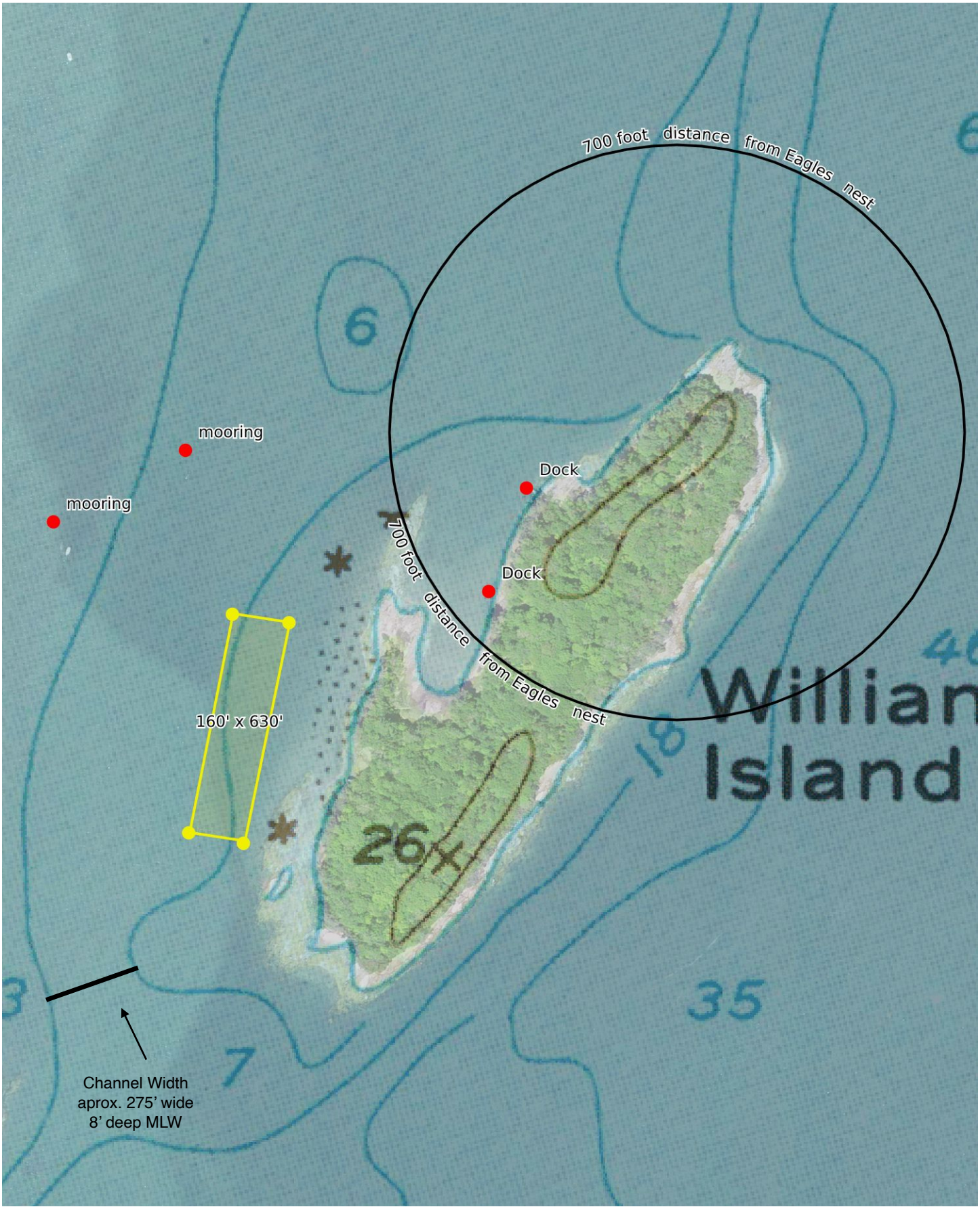


Mercator Projection
WGS84
UTM Zone 19T
CALTOPO

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 km
0.1 0.2 0.3 0.4 0.5 0.6 mi
Scale **1:9722** 1 inch = 810 feet

MN -15° N

Boundary Drawing



Boundary Drawing
WGS84
UTM Zone 19T

CALTOPO

0.1 0.2 0.3 0.4 0.5 km
0.1 0.2 0.3 mi

Scale **1:4456** 1 inch = 371 feet

MN
-15.0º

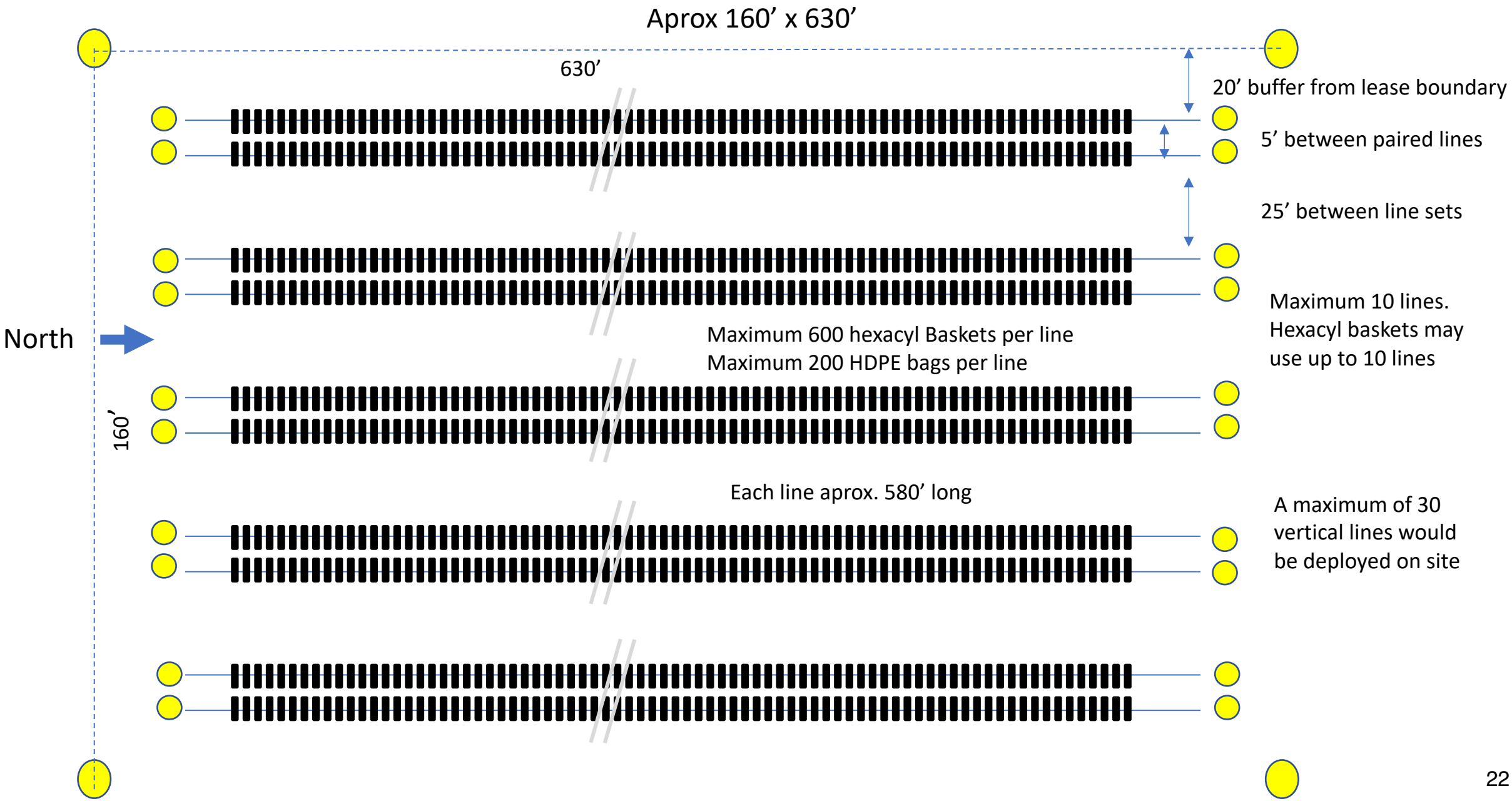
GPS coordinates of Proposes Experimental aquaculture lease
Stuart Ryan, SW side of Williams Island.

Corner positions determined by navionics GPS application as well as CalTopo mapping software using NOAA marine chart and USGS topographic map layers

Corner position	**Coordinates E** (decimal degrees)	**Coordinates N** (decimal degrees)
SW	43.81174	-70.05248
SE	43.81166	-70.05189
NW	43.81345	-70.05201
NE	43.81338	-70.05140

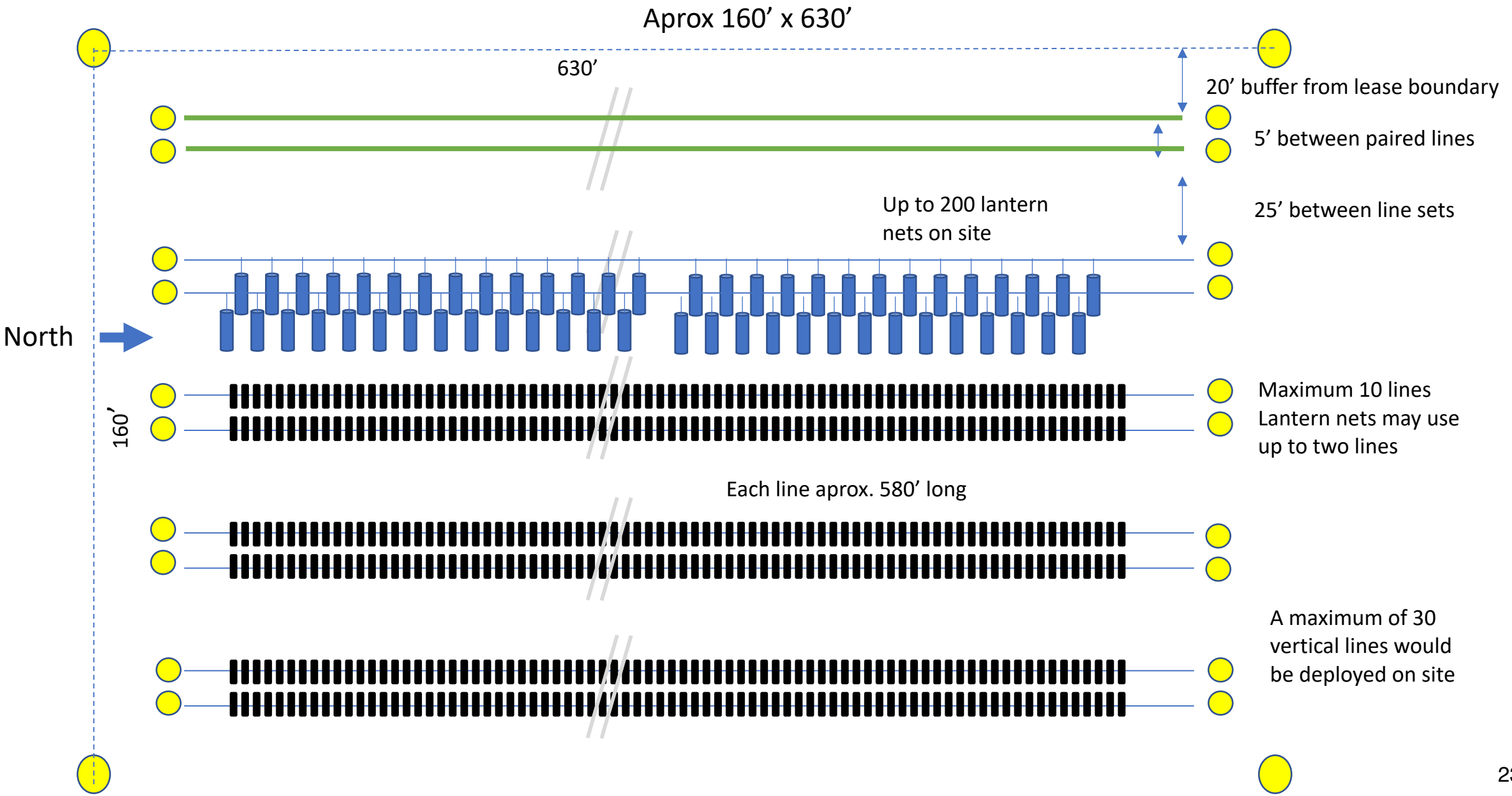
Overhead Site Plan Hexacyl Baskets & Bags

(not to scale)



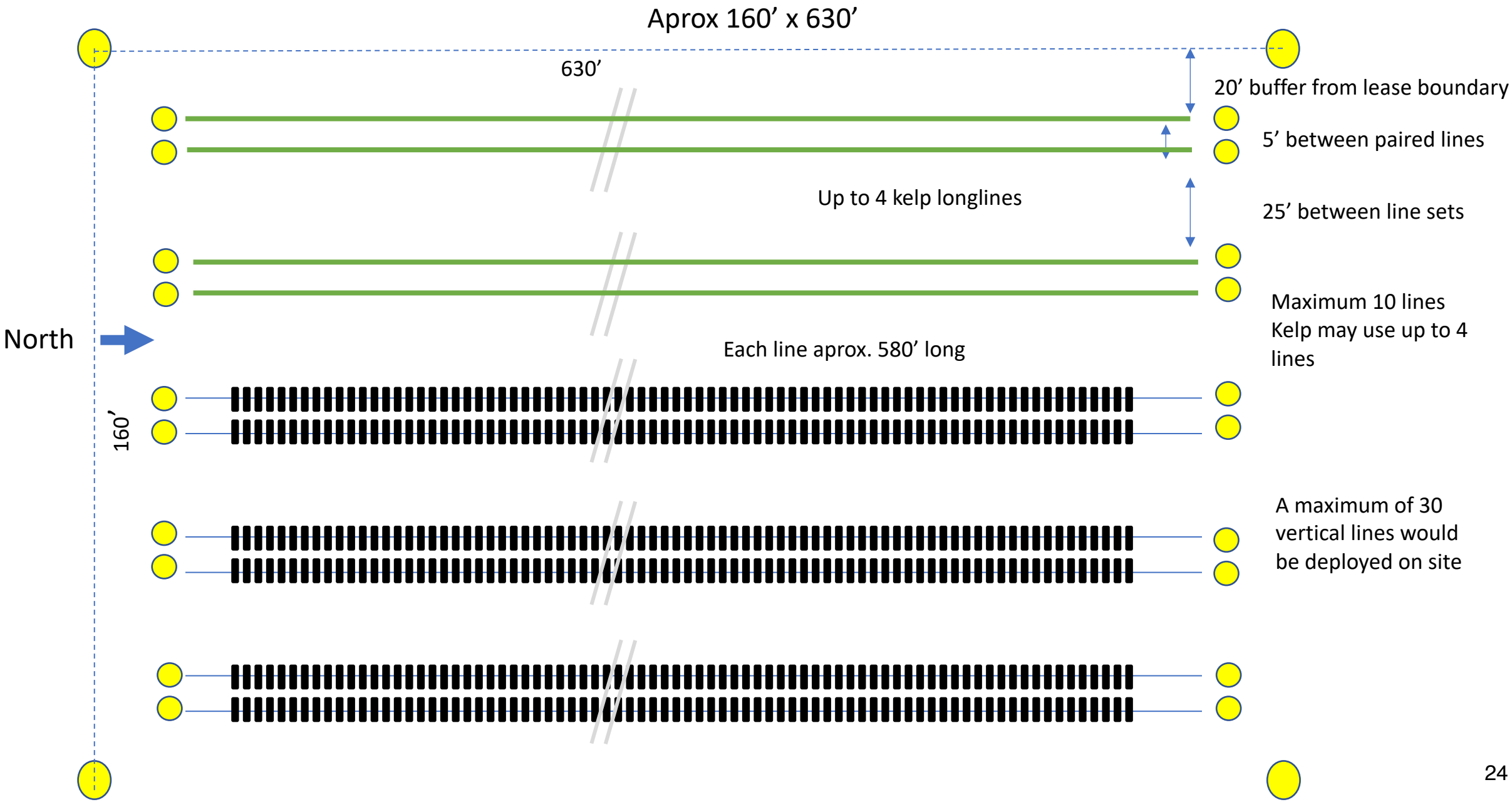
Overhead Site Plan Lantern Nets

(not to scale)



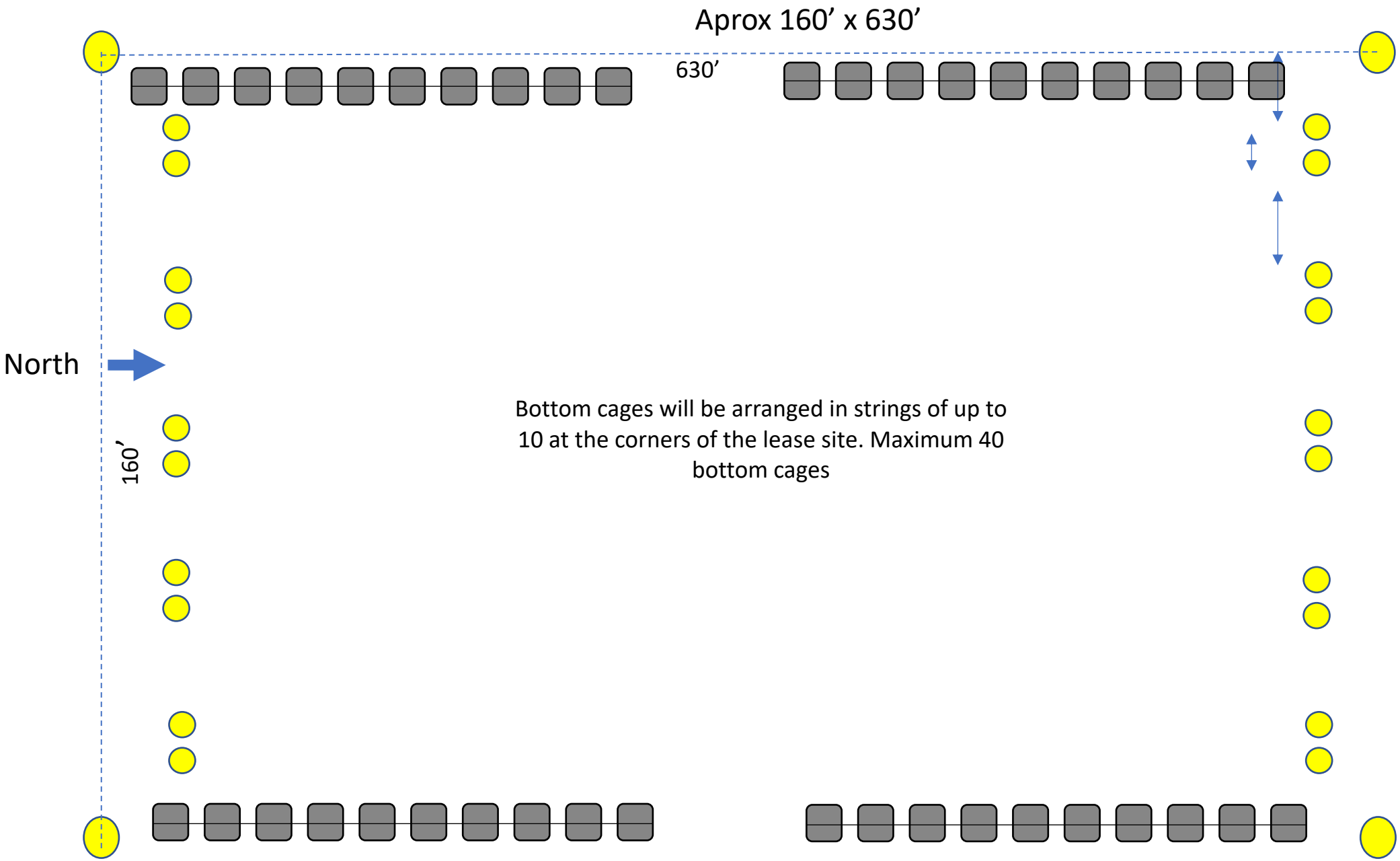
Overhead Site Plan Kelp

(not to scale)



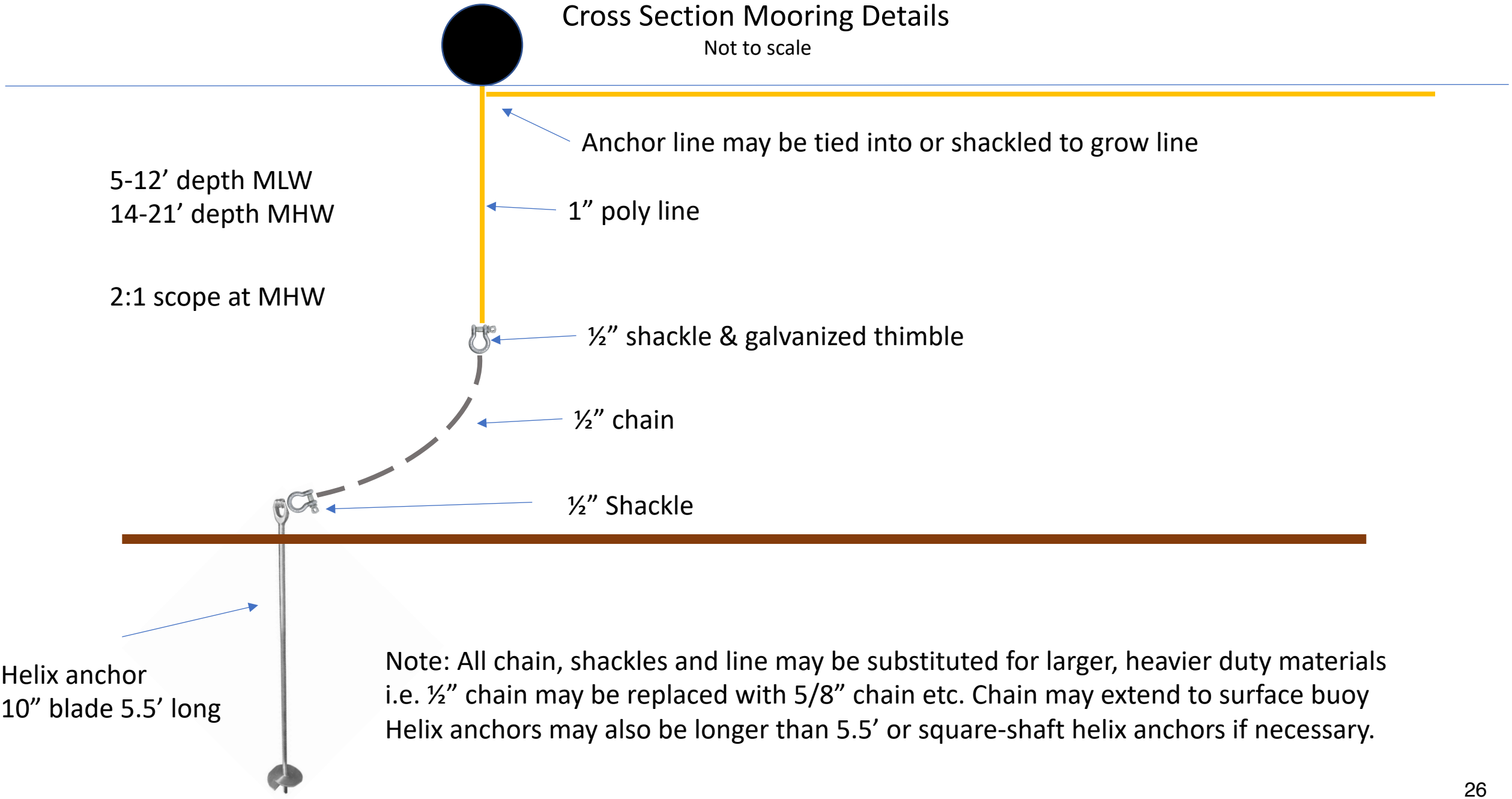
Overhead Site Plan Bottom Cages

(not to scale)



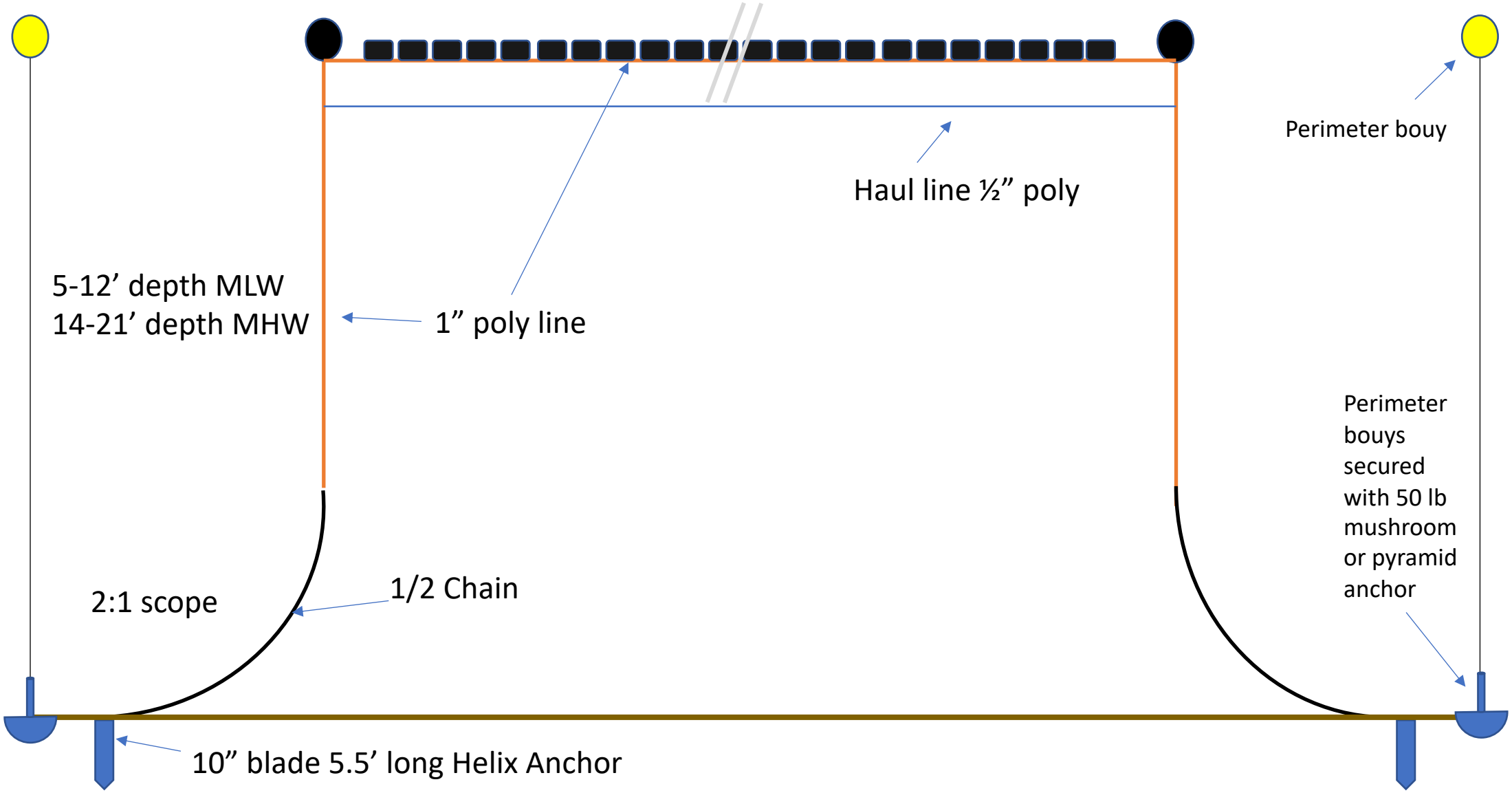
Cross Section Mooring Details

Not to scale



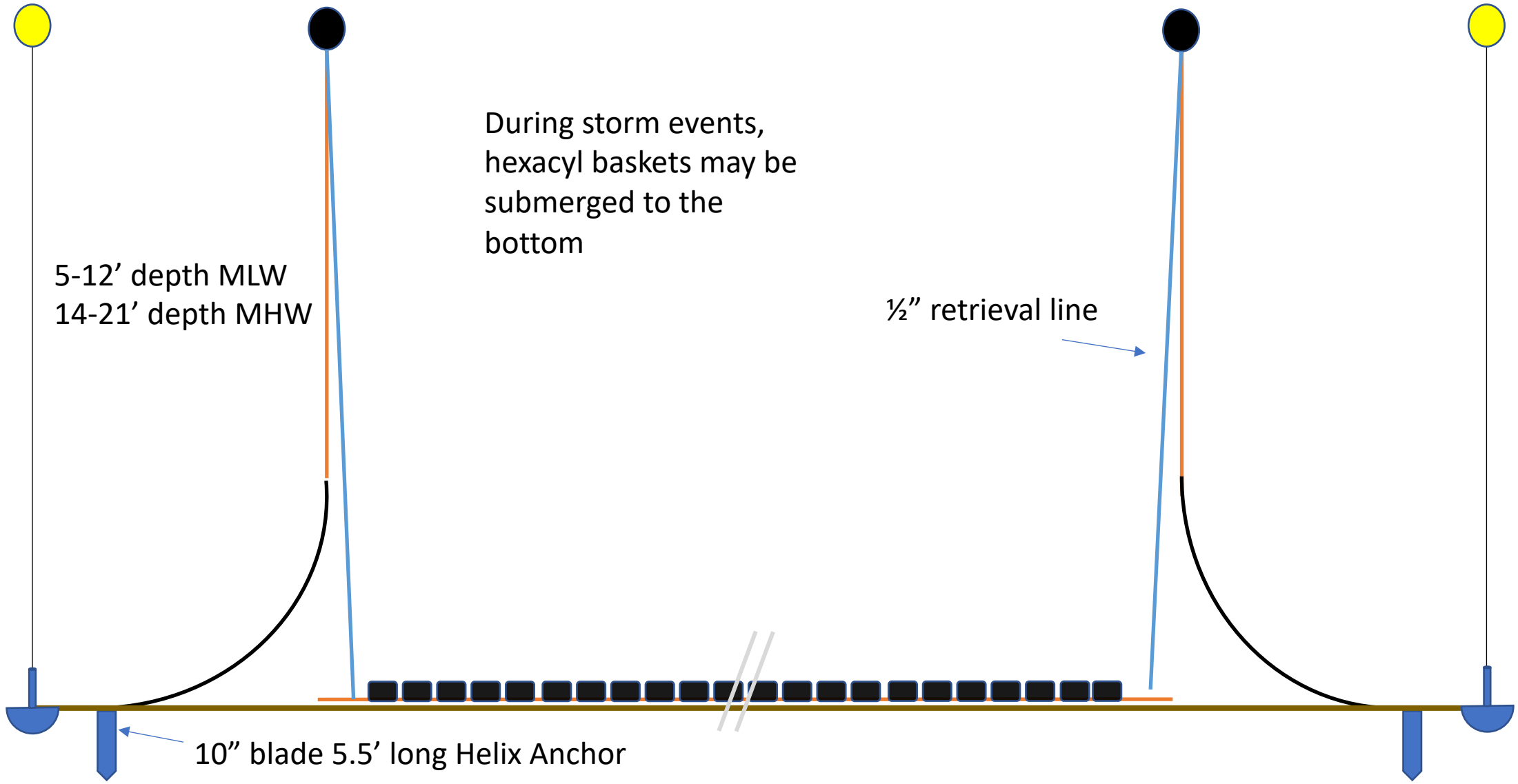
Note: All chain, shackles and line may be substituted for larger, heavier duty materials i.e. ½” chain may be replaced with 5/8” chain etc. Chain may extend to surface buoy Helix anchors may also be longer than 5.5’ or square-shaft helix anchors if necessary.

Cross Section Site Plan Hexacyl Baskets
(not to scale)



Cross Section Site Plan Hexacyl Baskets submerged

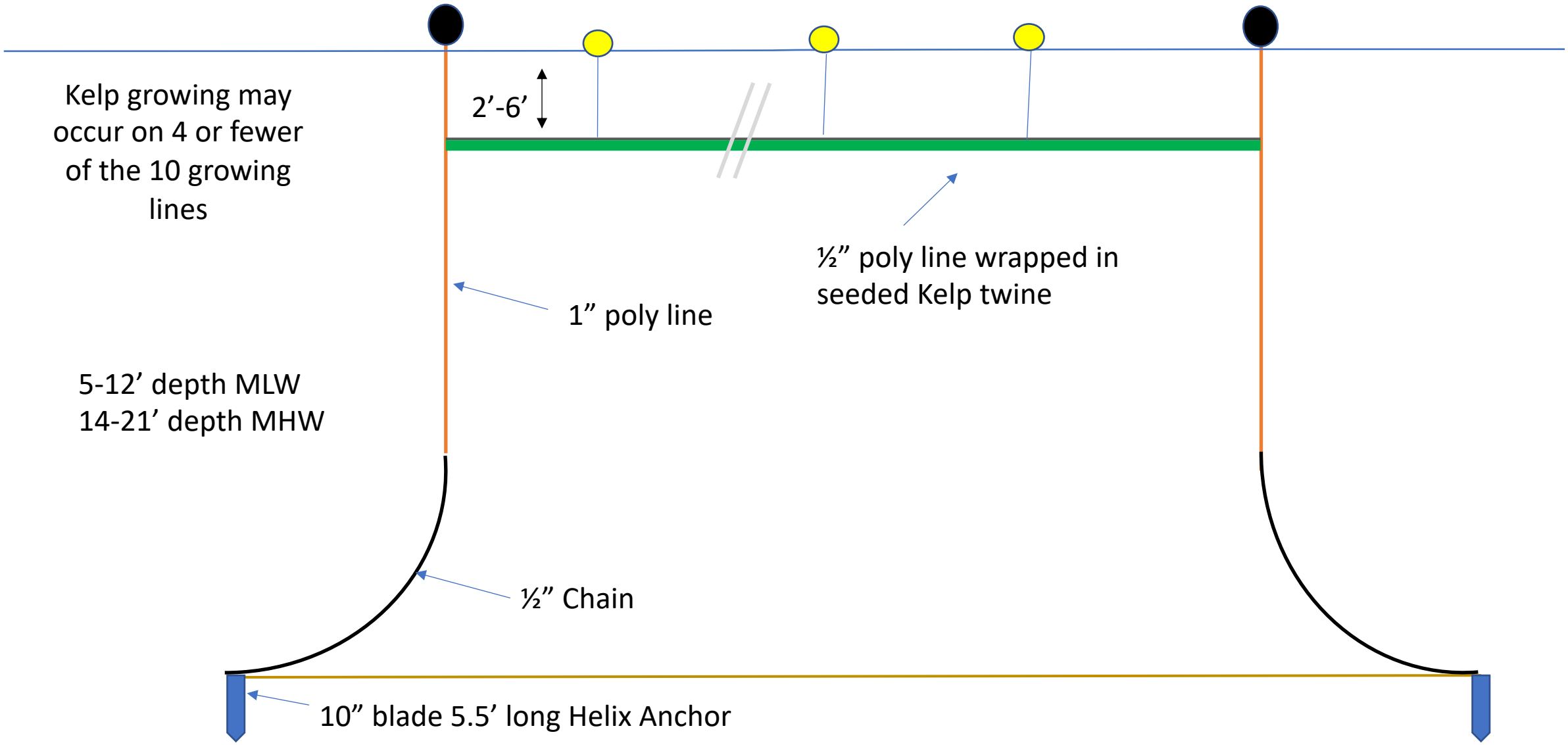
(not to scale)



Cross Section Site Plan Kelp Line

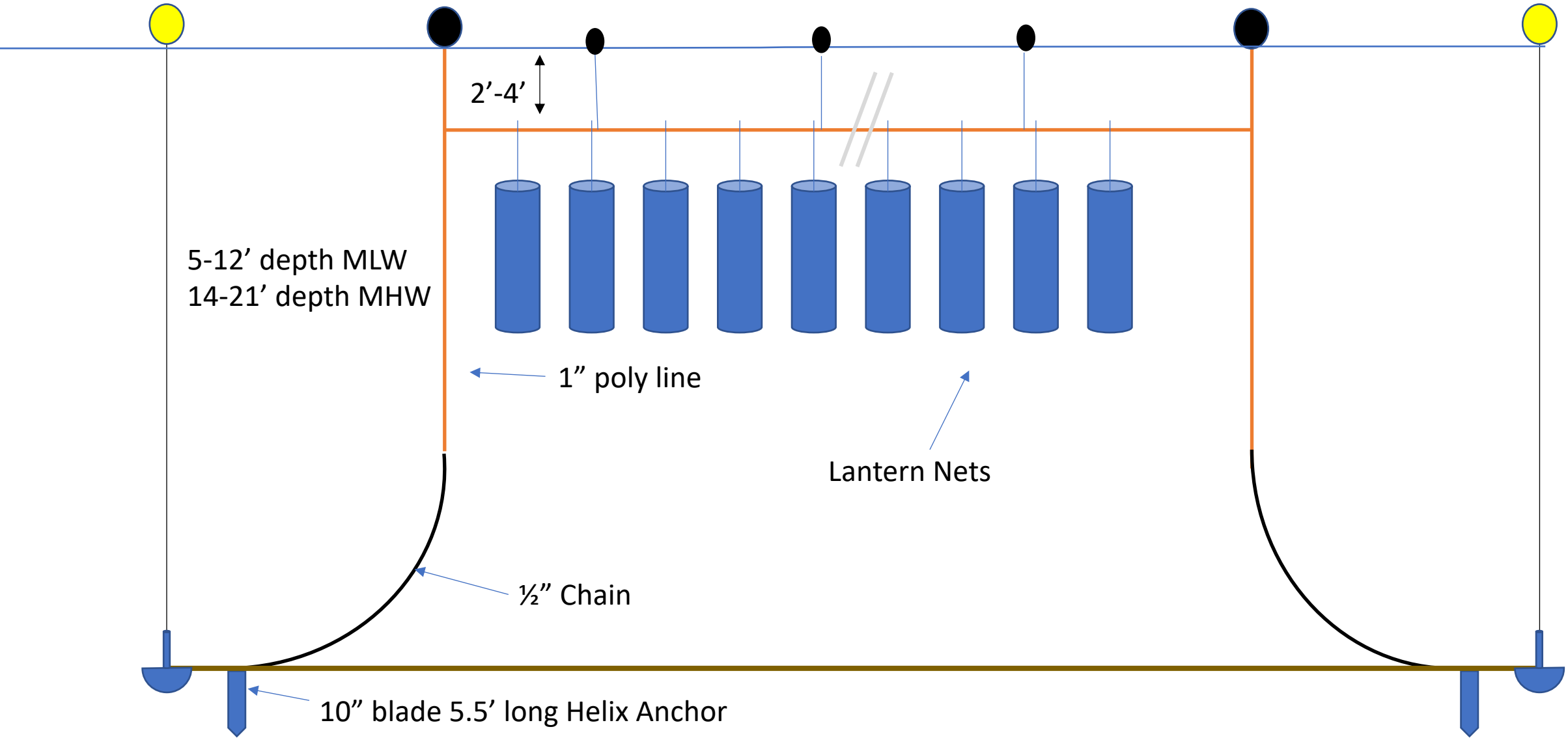
Note: kelp line would be deployed primarily at the deeper western side of lease area

Not to scale



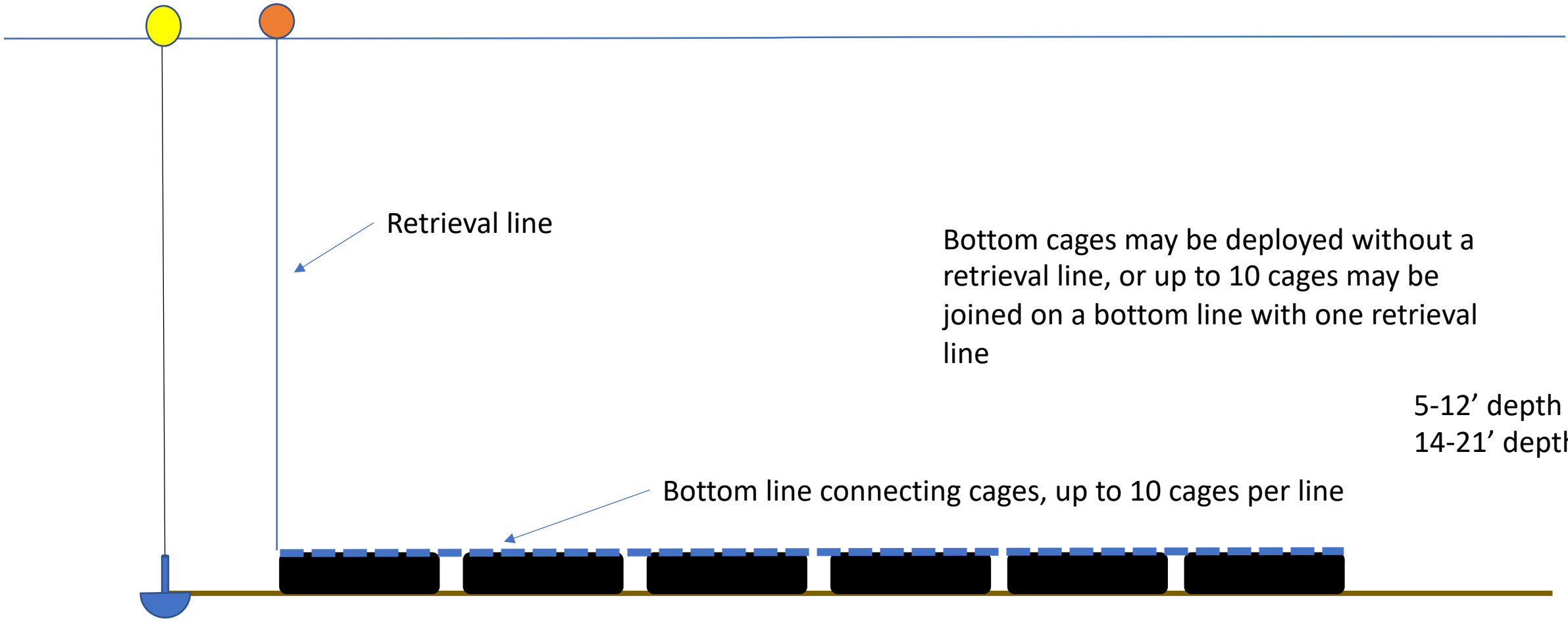
Cross Section Site Plan Scallops

(not to scale)



Cross Section Site Plan Bottom Cages

Bottom cages may be used for oysters and/or scallops
Not to Scale



Bottom cages may be deployed without a retrieval line, or up to 10 cages may be joined on a bottom line with one retrieval line

5-12’ depth MLW
14-21’ depth MHW

Gear Diagram Hexacyl Baskets

HEXCYL BASKET SPECIFICATIONS

HEXCYL SHELLFISH BASKETS

FIVE SIZES Click on images	Hexcyl Pro 0304	Hexcyl Pro 0507	Hexcyl Pro 1014	Hexcyl Pro 1521	Hexcyl Pro 2028
					
Mesh Size	3mm (1/8")	5mm (3/16")	10mm (7/16")	15mm (5/8")	20mm (3/4")
Shellfish Size	5mm (3/16") minimum	10mm (7/16") minimum	20mm(3/4") minimum	40mm(1-1/2") minimum	70mm(2 3/4") minimum
Volume	25 litres (6.6 gallons)				
Dimensions	732mm (29") long 270mm (10 5/8") wide 140mm (5-7/16") high				

MATERIAL SPECIFICATIONS

Our baskets and clips will outperform other plastic baskets because we use a specially developed Ultra High Impact Resistant materials known for sub zero temperature performance. All materials have the highest possible Ultra Violet resistance. We have had product in the field for over 10 years.

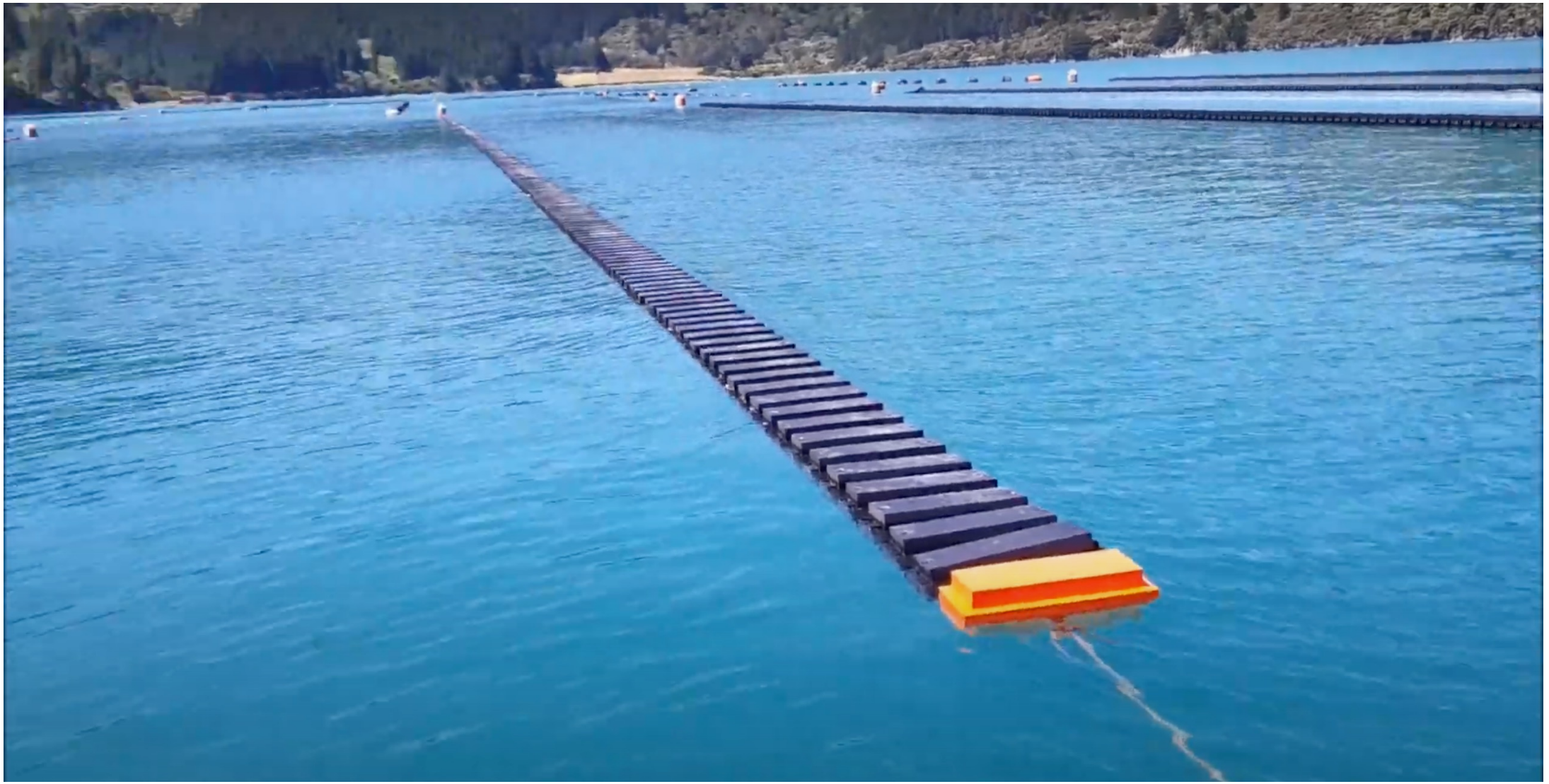
HEXCYL Basket/Lid 2	Ultra high Impact grade Material Food Grade - When used in accordance with FDA application guidelines, this product meets the requirements of FDA 21 CFR 177.1520 (c) 3.1a and AS2070-1999 section 4.1.1(a). Flamability - DIN 4102 B2: normal combustibility similar to wooden pallets.
HEXCYL Clips 7	Ultra high impact grade, UV Stable material

PACKING and TRANSPORT

Adelaide Shipping Port is 13 km(13 minutes) from our manuacturing and container loading site at Wingfield, South Australia, 5014

Hexacyl Baskets with Floats on a Longline

Note: orange float is not required, all gear will be black



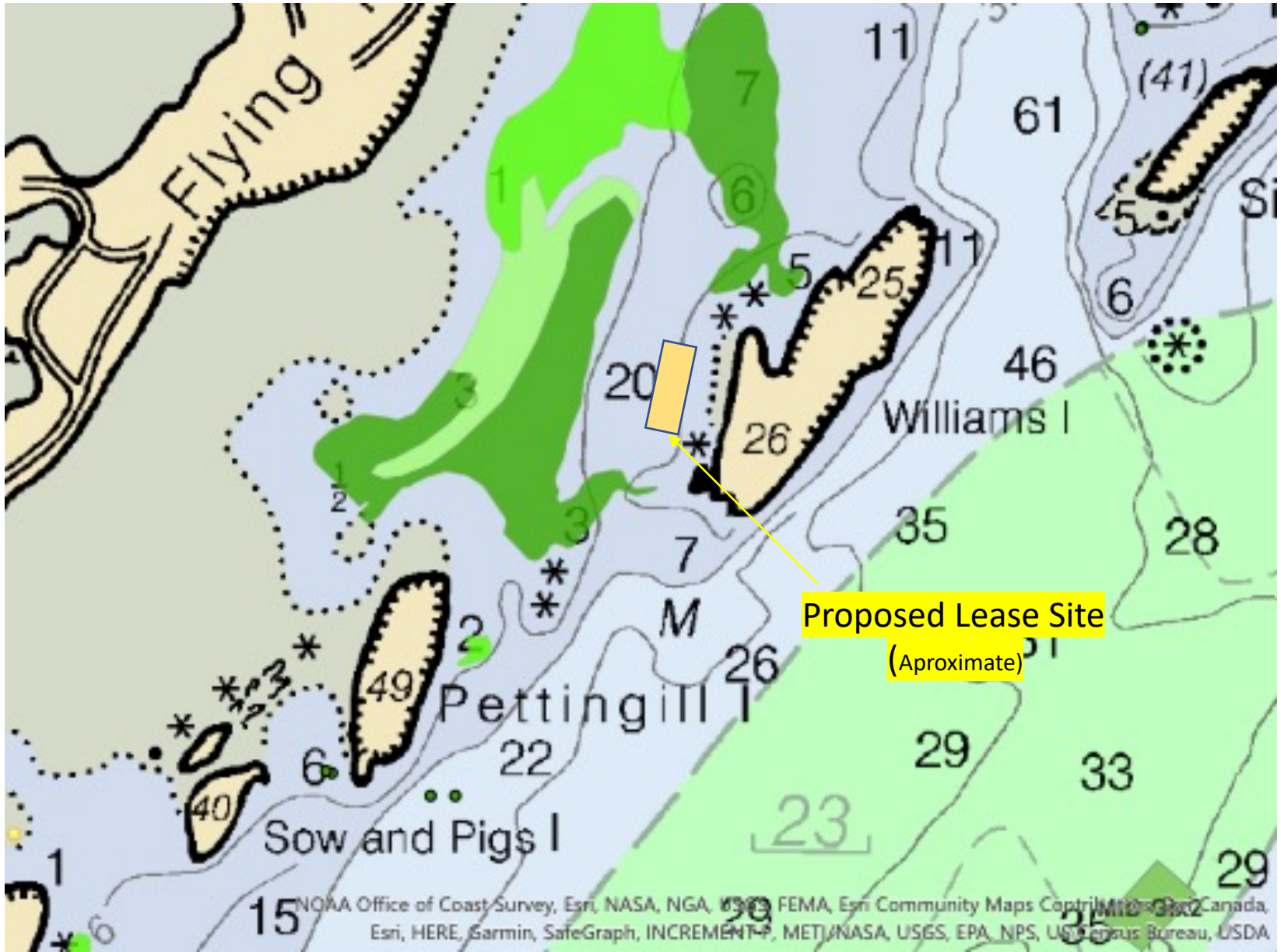
Gear Drawings

Bottom Cages
43” x 36” x 16”

Floating HDPE bags
34” x 23” x 5”

Lantern Nets
20” x 49”

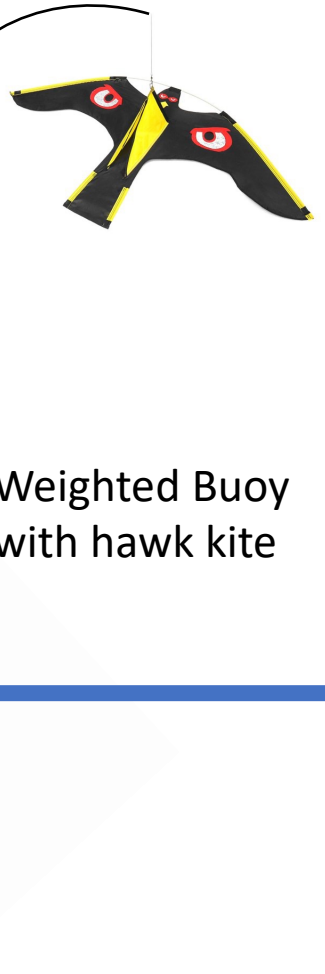
Lease Site Relative to 2018 casco bay eelgrass extent



Bird Deterrent Methods

not to scale

Buoys with reflective bird deterrents



Weighted Buoy with hawk kite

Extra long zip ties with ends oriented upwards to deter roosting

PROPERTY MAPS
TOWN OF FREEPORT, MAINE

James H. Thomas
gisSolutions of Maine
Cumberland, Maine
jht@maine.rr.com

Revised to April 1st

These maps are intended to be used for the purpose of Property Tax Assessments and should not be used for conveyances.

Scale: = 600

Hooks
Matchline
ROW
Streams
TownBoundar
Shore

Subject Map
Bordering Map
Bordering Map
Bordering Map
Bordering Map

2021
MAP: ISL

600 300 0 600 1,200
Feet

MAQUOIT BAY

BOWMAN ISLAND

SISTER ISLAND

WILLIAMS ISLAND

PETTINGILL ISLAND

SOW AND PIG

BUSTINS ISLAND

CRAB ISLAND

LITTLE BUSTINS ISLAND

FRENCH ISLAND

YARMOUTH