

technical field notes
XXXXX April 1st 2025

Experiment:

Hydrophones

hydrophones are microphones for the water. They use piezoelectric material to pick up sounds from the vibrations of flowing water.

I used the hydrophone to analyze the sound and flow of different parts along the mosassuc k river.

My hypothesis was that the microphone would only pick up low frequencies because the mic was underwater, but it actually picked up a range of frequencies.

I did this experiment because in my program the sound of the water being amplified through the space is extremely important in creating the ambiance for the space.

This would be for the active speaker design, where the hydrophone will be connected to some place on the river, and connected to a speaker amplifier that will amplify the sound into the existing horn / pavilion space.

Manual:

This manual is a guide to the existing site conditions, , pictures and findings, experiments in collecting audio field recordings and visualizing them, site intervention sketches, acoustic studies of different materials and horn shapes, and different programs and uses for the intervention.

Field Notes: Field Recordings, Existing Site Conditions and Thoughts

field notes 2025-02-16
all saints drain
built by the work projects administration from 1935-1940

cold
low water level

full of snow, ice, leaves twigs
channel built with bricks

sun glistens along the narrow strip of ice, with unfrozen pockets underneath thin sheets, and apertures of light inbetween

surrounded by trees, reaching together over the scoop

pawtucket-meaning
pawtucket, meaning "at the falls in the river" or "river falls"

much of it has lasted, but not all of it
guarding the gate, a metal grate, there are concrete parts, repairs

the water flows out of the drain, not into the drain

one end is muddy swamp, the other is a river.

to walk in drains, two strides on the left, and two on the right
like a sine wave

---The--hot-tub-pa---

The Dumpster Hot Tub Party

shifting the program of the dumpster, a part of the infrastructure of waste and sewage, into a ritual experience, a community gathering and interaction with water, a public demonstration of the physics of water flow

the water not being that hot presented it sort off as an endurance test, the more people that decided to make the plunge at once the more warmer the water got

reminding me of collective effort and ingenious ritual practices

a ritual that gives thanks to the land, through water flow and the body

abstracting the architecture of the 30ft dumpster

the flow of water, in terms of where it ends up also

Water gives its life everywhere

The acoustics of the tunnel

as the drain tunnel elongates the path for water in one direction to flow it does the same with sound, impulses elongate and echo and reverberate, transporting them further than they would have been otherwise

the sound is also transformed by the end of its path, but the water is not,

a metal pipe hit at one end of the tunnel will be loud and full

but maybe by the other end, only certain resonant frequencies are heard

or the quality of the sound is washed, not so sharp, less attack

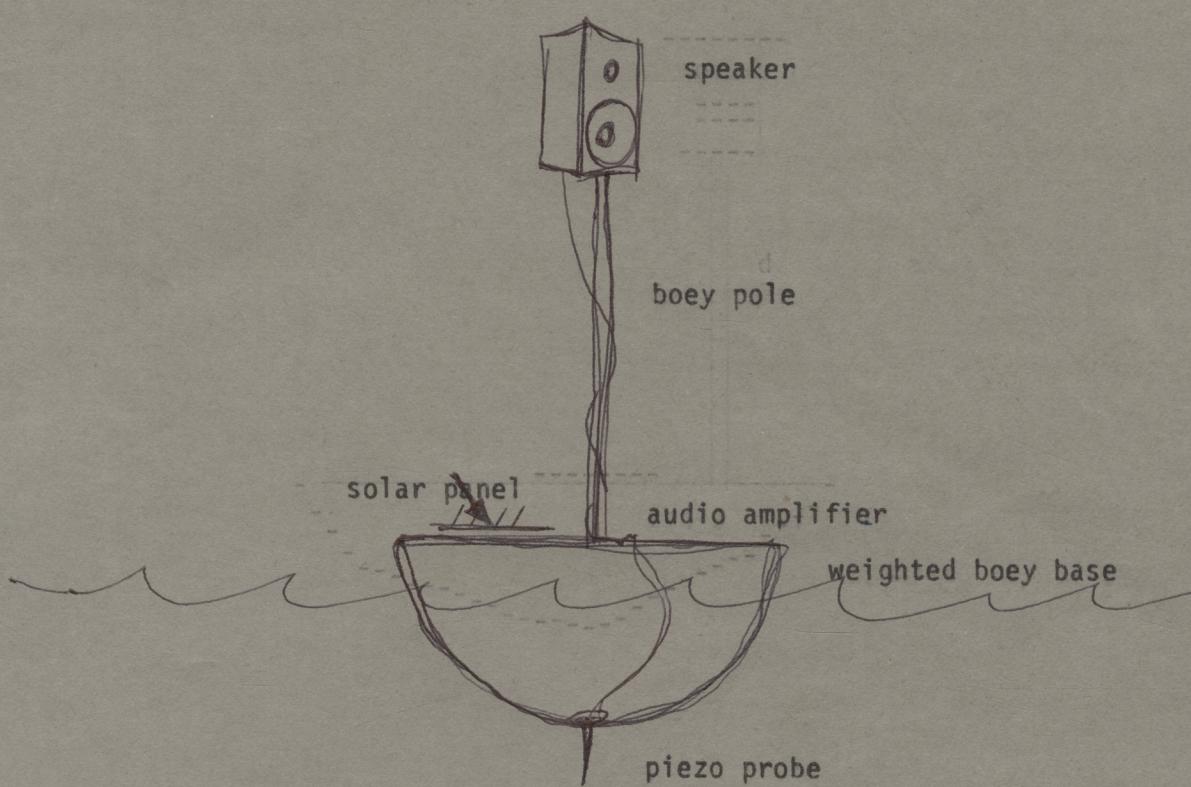
is this the way to transform infrastructure into a ritual

noise into ambiance

The "moshassuck river"

Zoning laws for site

Field Notes: Field Recordings, Existing Site Conditions and Thoughts



Field Notes: Field Recordings, Existing Site Conditions and Thoughts

field notes
2025-02-06

instrumentation

this is the first time i'm pleasantly surprised and excited about real instrumentation!!
anarchaxxx anarchestra has presented to me my entire ethos on experimental instruments. -

i have been looking for a reeded instrument to play as part of the entire experimental anarchist instrument for milenia. the reeded pipe saxophone flute hybrid made by the guy who made all the weird instruments at anarchestra has found me and has embedded its mystical magical fantasy non-linear unquantized magic into my world and i am a absolutely obsessed.

urban metabolism:

i think my intervention will be very simple. i do not want a built architecture. i want to build boeys. a boey that sits on the water, free floating, its powered by the sun and the flow of the water. there is a speaker that is posted, on a long pole flying in the wind, rocking back and forth, but never touching the water the speaker on the post, floating endlessly in the river, on the beach, or far out to sea connected to an amplifier, and a piezo probe connected to the bottom of the boey, the purpose is to amplify the sounds of the water and the wildlife, its path and its journey

the piezo probe amplifier is powered by the solar panel on the boey. this free standing self sustaining everlasting sound installation object free floats, as if free as the water, endlessly, locally, traveling, history. maybe the sound is there is no wifi

the sound is broadcasted on a shortwave radio frequency so you can tune in to the sound when it is local to your nearby environment or city

shortwave radio solar powered water amplifier boey system.
for the anarchist post apocalyptic providence.

what is the architectural intervention for the boey?

an acoustic space that amplifies the boey stop points. along the river.
a concrete wall or acoustically treated minimal move system or design that creates an open air-/semi enclosed space for deep listening and ambience

what is the space that is furthest from infrastructural sound/the quietest space
what is the space that is interacting with both the wildlife and the humans
and their desired path

along the path of the humans and along the path of the wildlife,

and along the path of the water, that makes its own path/

how might i design this architecturally along along the construction site of where the site is, locally, code

avoid

and

the abstract reorientation of water, or even the intentional disorientation
in the ethos of annikas project
the sign

to siorient

as water flows,

it reorients itself, it makes

the desired

paths as we make desire paths, it moves without hesitation, it makes a history

Field Notes: Field Recordings, Existing Site Conditions and Thoughts

stop
ok
heavy lift

the daxophone
the oragnic materiality
the local wood
the harvested mind
the magiciaon
the tool of technology
to have an aetherial cnnection to nature as insrumentation
this is the new spirituality for music,
all insrumentions should be invented'
first by ritual practuce'a
and not the modernity of acedamia or societal norms of what and in sruement should be
the daxophone

is wooden
the magic of piezoelectronics
in the same way they w0000cc metal pipes uded for infrastructure
for plumping and the structure of buildings, heat and water and hvac, just with a few ho
holes and the right connectpors, can be turned into saxophones, anarhophones,
magichones fantacofones and sonofphones, with ther=ir sonic infomatiojn
information retreival headquarters traveling distance with impossible acoustics

I Longed for this maintnesnt
i longed for this Capital M Musical Maintnence
i need to rosin my bow
i need to change my reeds, i need to suck on the reed, i need the right reeds, i
need to rehair my bow, i need to rosnin my bow, i need the right lengthe for my bow.
i wqanted this

and to have it in the anarchist form
is the best blessing, only i wish i invented it myslef
buy you can only go so far with invention

..
u s b the best b that u can b to u s b and u will see.
that all insrument

s
are locally located
amid the great derangement
locally
in the pit of what
add the dumpster hot tup
the clack click from the typewriter is beginnig to make my ears hært, as all
experiences in documentation whould be physical in therir most organic form.

Field Notes: Field Recordings, Existing Site Conditions and Thoughts

field notes
2025-02-13

today i went to the end of the spillway, where it merges into the river, near the highway. the spillway was a lot quieter near the highway than i had anticipated which is perfect for an acoustic or ambient intervention. the zoning in that area is marked as an industrial development zone, ~~maxxx~~ prioritized for industrial infrastructural projects and warehouse/factories.

i walked through the parking lot next to the small bridge, next to the mills, the lot was filled with abandoned RVs and trailers. where it met the abandoned foresty land there was a gate, and what seemed like a pathway that led to nowhere. the path led down to the spillway end and the river. i found out the river flows in the other direction upon further inspection.

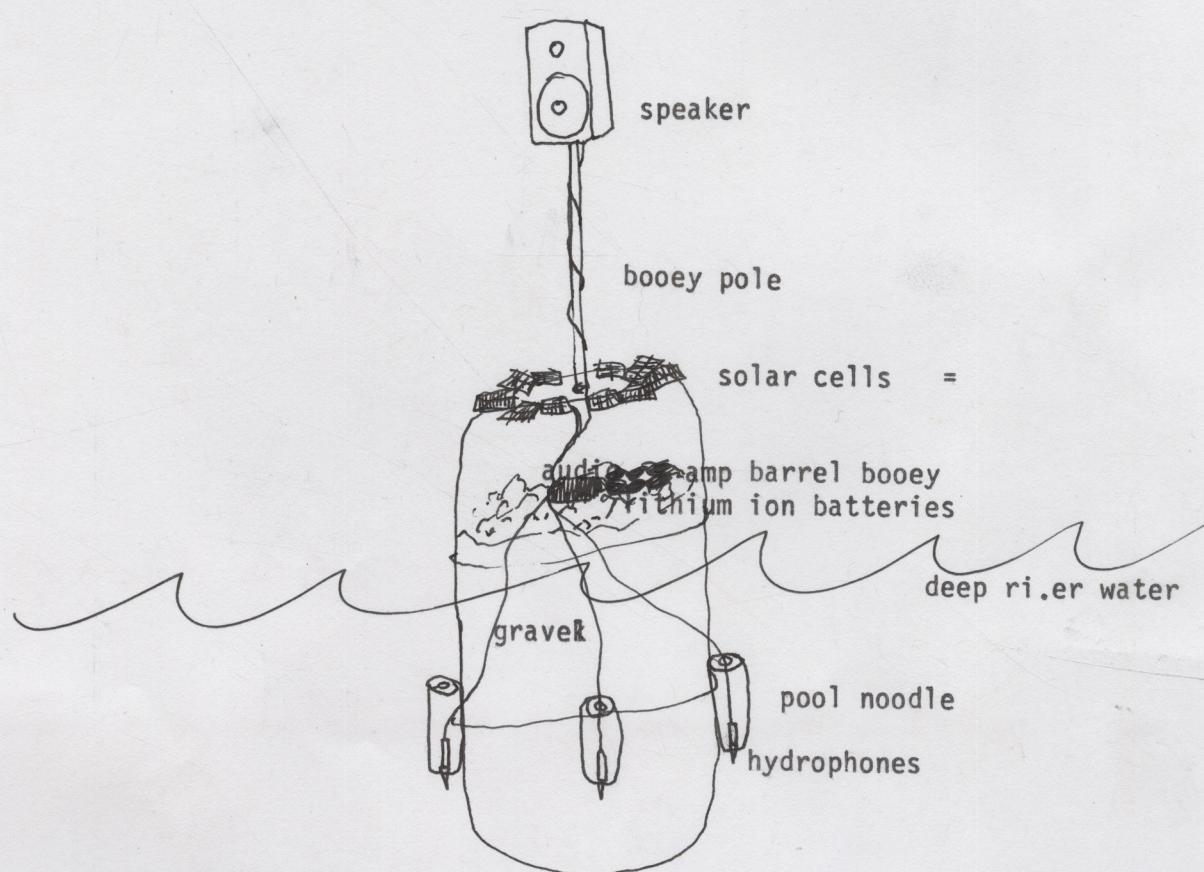
i took a couple of field recordings along the path, one at the bridge and one walking along the path, and another at the end of the spillway.

in one of the abandoned rvs there was a small panasonic crt tv that i want.

i took some more footage on the vhs camera

there was a small garden along the path of the river, that looked like it had not been tended too in a long time. there was a small plateau near the river, but when it rains or the river is full, that plateau most likely is flooded. this made me think of spaces for an architectural "intervention"

P0



Field Notes: Field Recordings, Existing Site Conditions and Thoughts

field notes
2025-03-20

program diagram

winter

the menhaden are migrating upstream in the river

the snow creates another layer of sound absorbtion and isolation for spaces for performance, meditation and research.

the pavillion gets indirect sunlight from the winter sun, as its oriented for the summer.

the sound of the water running over ice in the river reflects into the acoustic space

spring

the garden blooms. the trees and bushes are overgrown. the vines, intertwined along the structure. scientists begin their research and experiments near the river.

spring yoga and sound bath events happen along the river.

summer

the river is low, making space for more active events. people sit by the river after or during rainy summer seasons, listening to the rushing water in the hot summer fog shows and sound installations take place.

fall

an orange and brown bed of leaves lies in the river and slows along the water bed.

leaves pile on top of the pavillion creating more shade as their layers grow thicker.

summer cleanup and winter preparation is in full effect.

book outline

master plan

indicating water flow, pollution, field recordings, wildlife topology, surrounding infrastructure and noise pollution

closer plan of the waterway where your programs will be

investigating different ways of representing water, flow level density, temperature and chemical state (ice water fog etc.)

plan of acoustic intervention

ways of representing sound in the book, pictures of the site

experiment with different ways of representing the density of sound or the quietness of sound through drawings and sonic content,

what is the sound element of the book, is it in the book physically or is played alongside the book, or with a video.

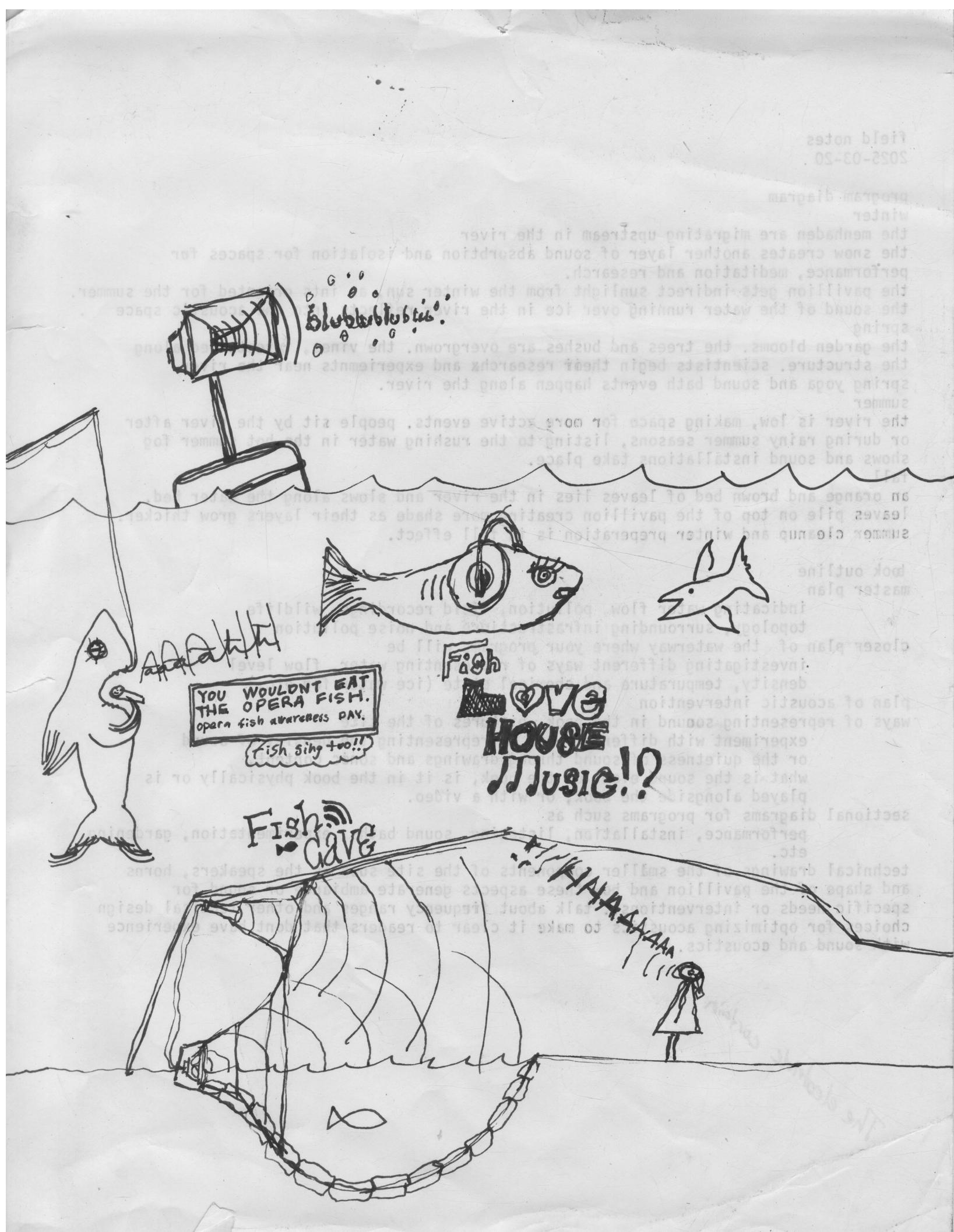
sectional diagrams for programs such as

performance, installation, listening, sound baths, experimentation, gardening etc.

technical drawings of the smaller components of the site such as the speakers, horns and shape of the pavillion and how these aspects generate ambiance or sound for specific needs or interventions.. talk about frequency ranges and other technical design choices for optimizing acoustics to make it clear to readers that don't have experience with sound and acoustics.

The electrode curtain

Field Notes: Field Recordings, Existing Site Conditions and Thoughts



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General Map: Moshassuck River



Sound Decibel Levels Map and Field Recording Locations

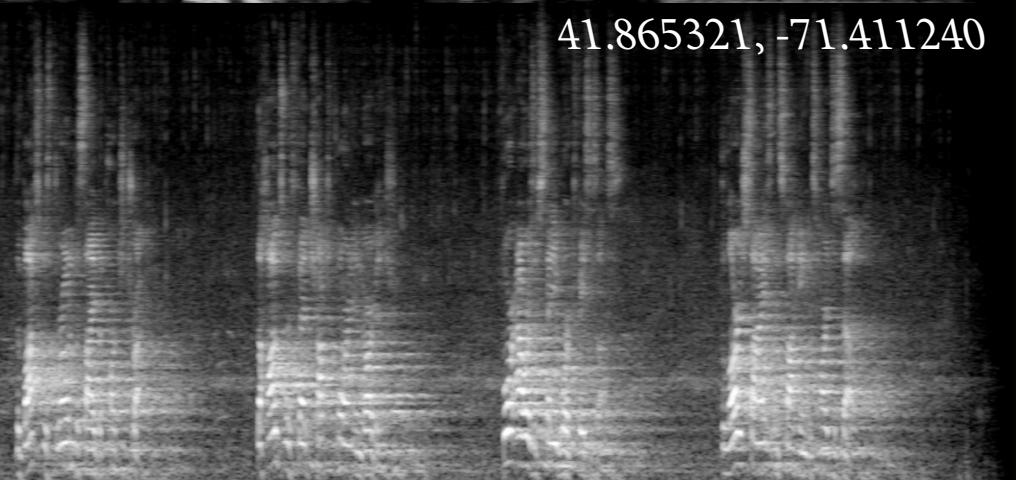
1. Impulse Responses at Base of Tunnel

41.865321, -71.411240



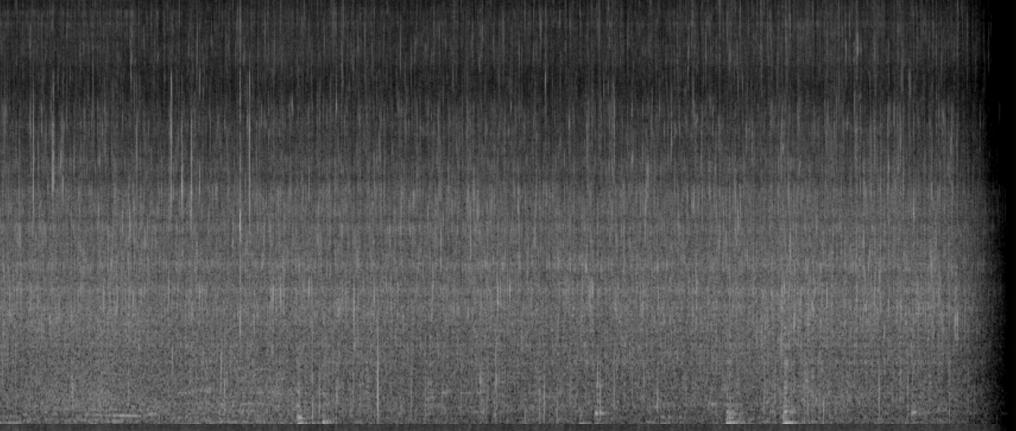
2. Harvard Word List Tunnel Reverberation

41.865321, -71.411240



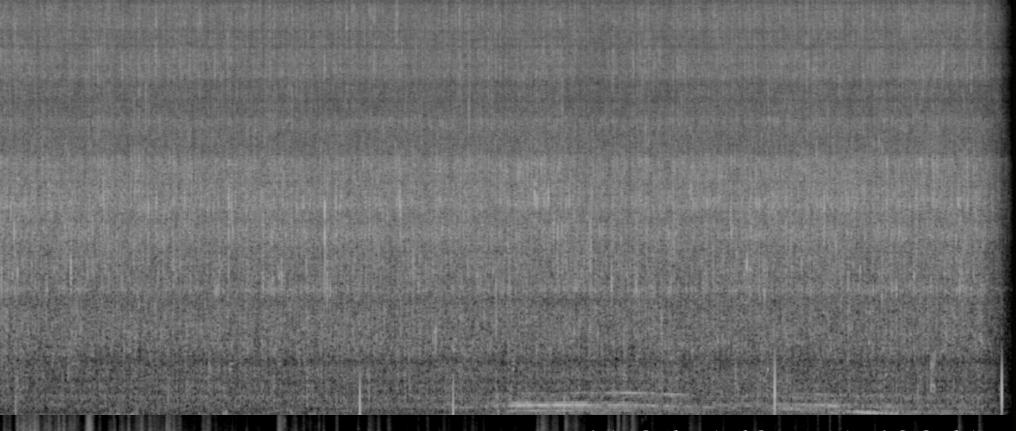
3. Spillway Waterflow at Path Base

41.865321, -71.411240



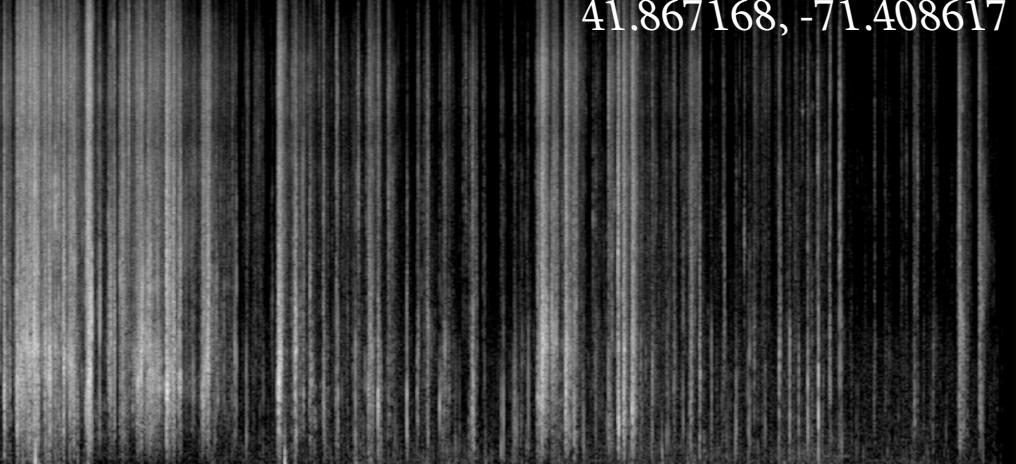
4. Spillway Waterflow at Bend

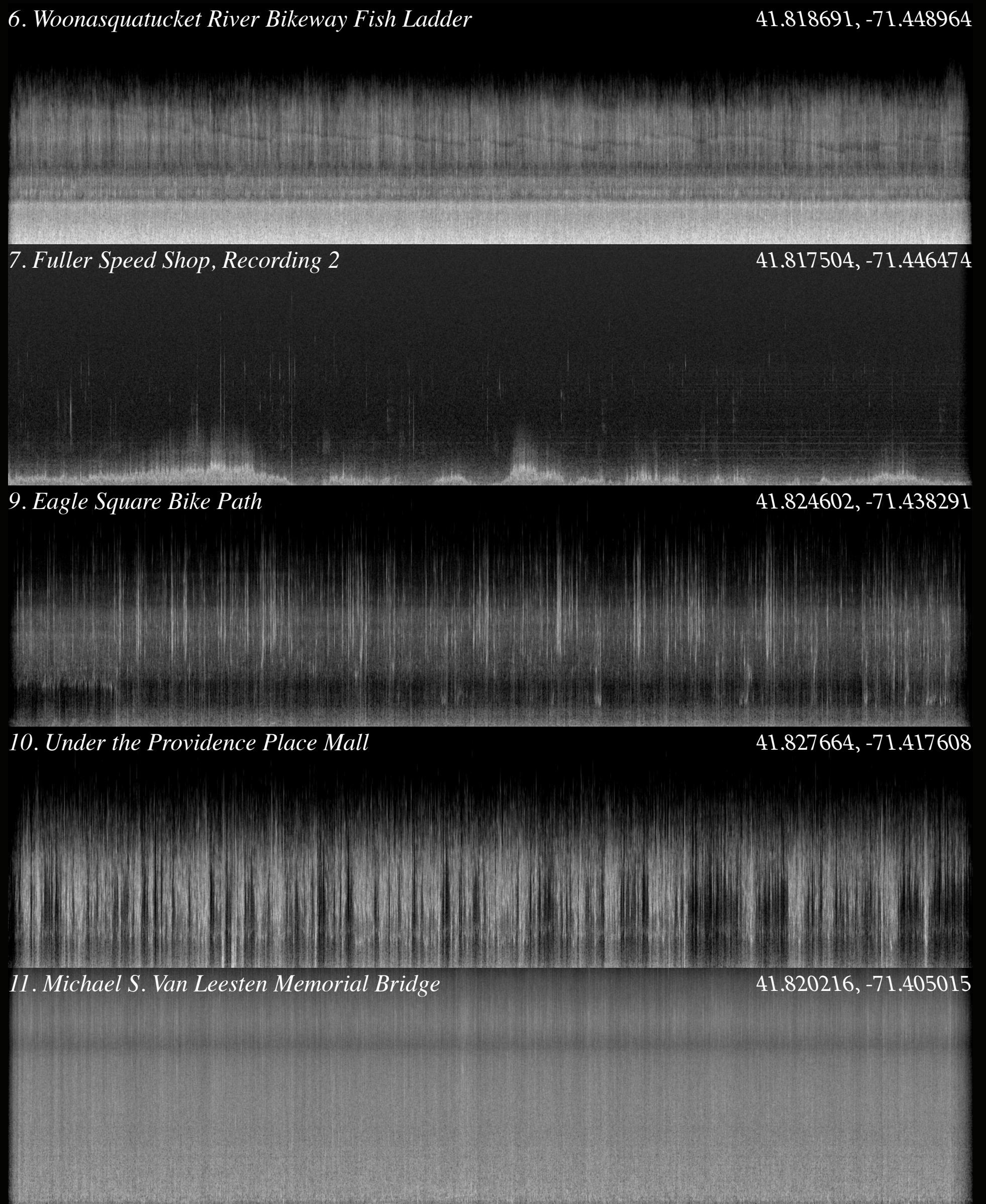
41.866954, -71.409469



5. Walking along the spillway

41.867168, -71.408617



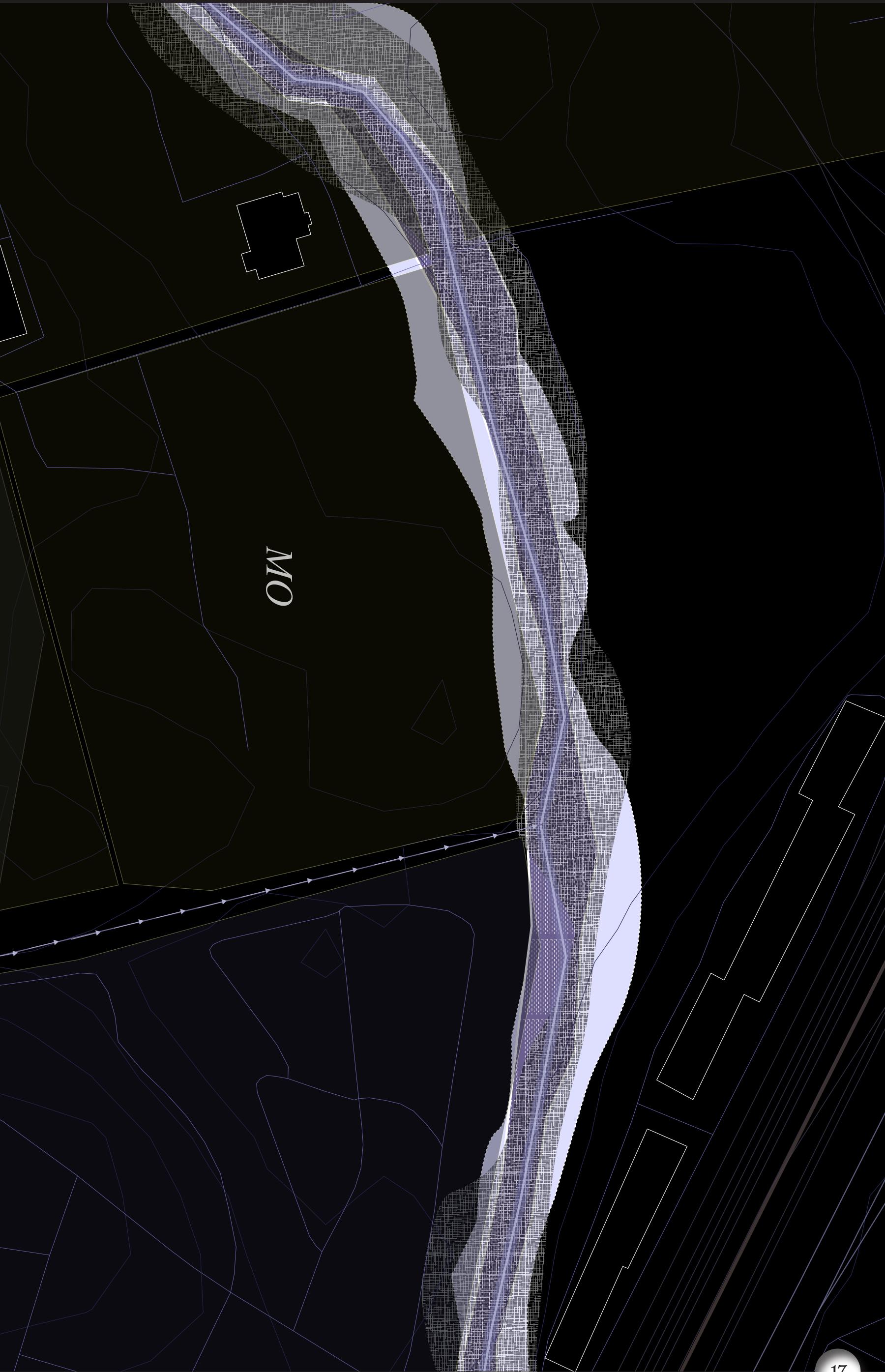




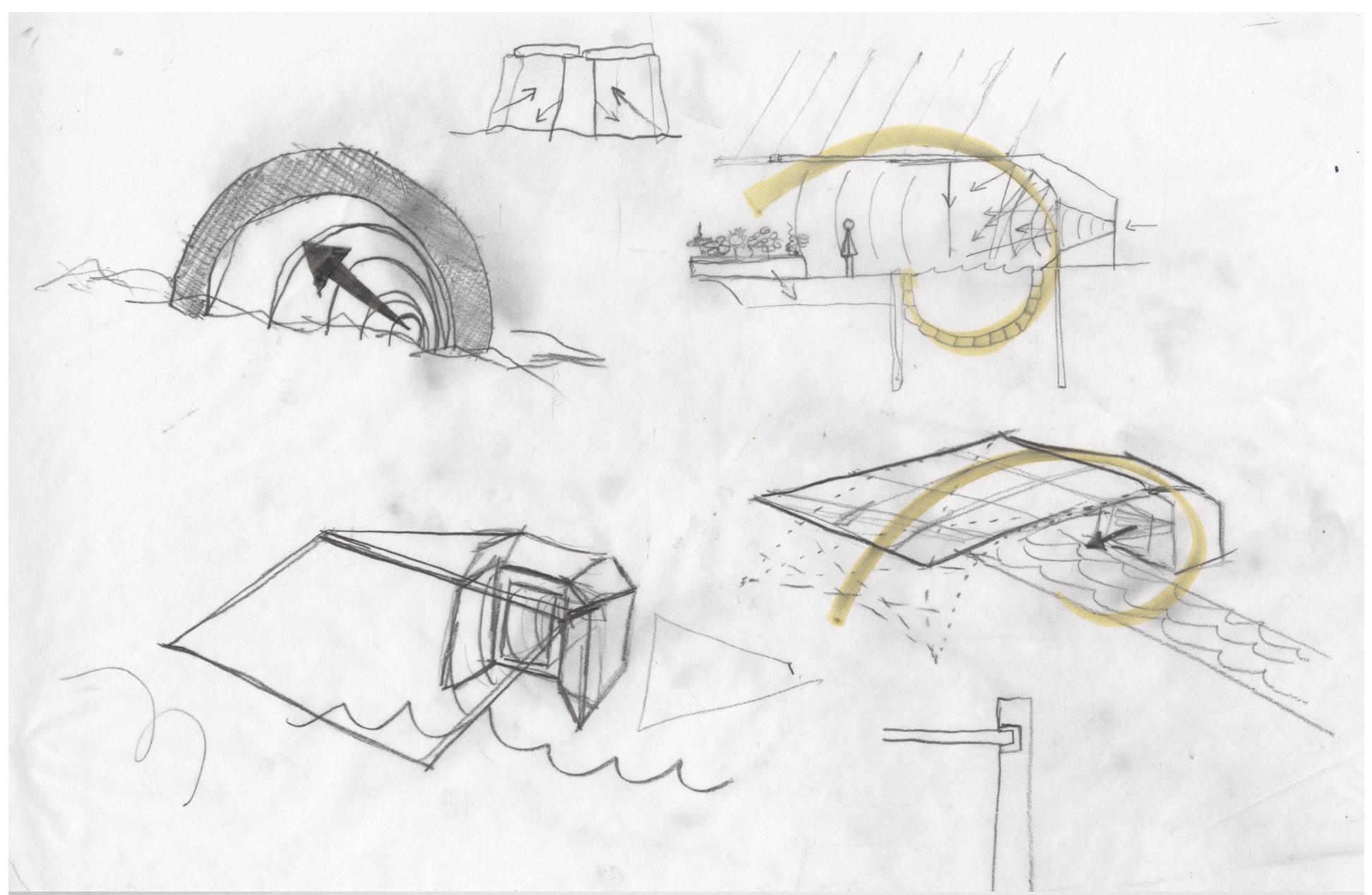
Corresponding Field Recording Locations



Detailed Map



Water Topology Detail



program diagram

winter

the menhaden are migrating upstream in the river
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 the sound of the water running over ice in the river reflects into the acoustic space .
spring

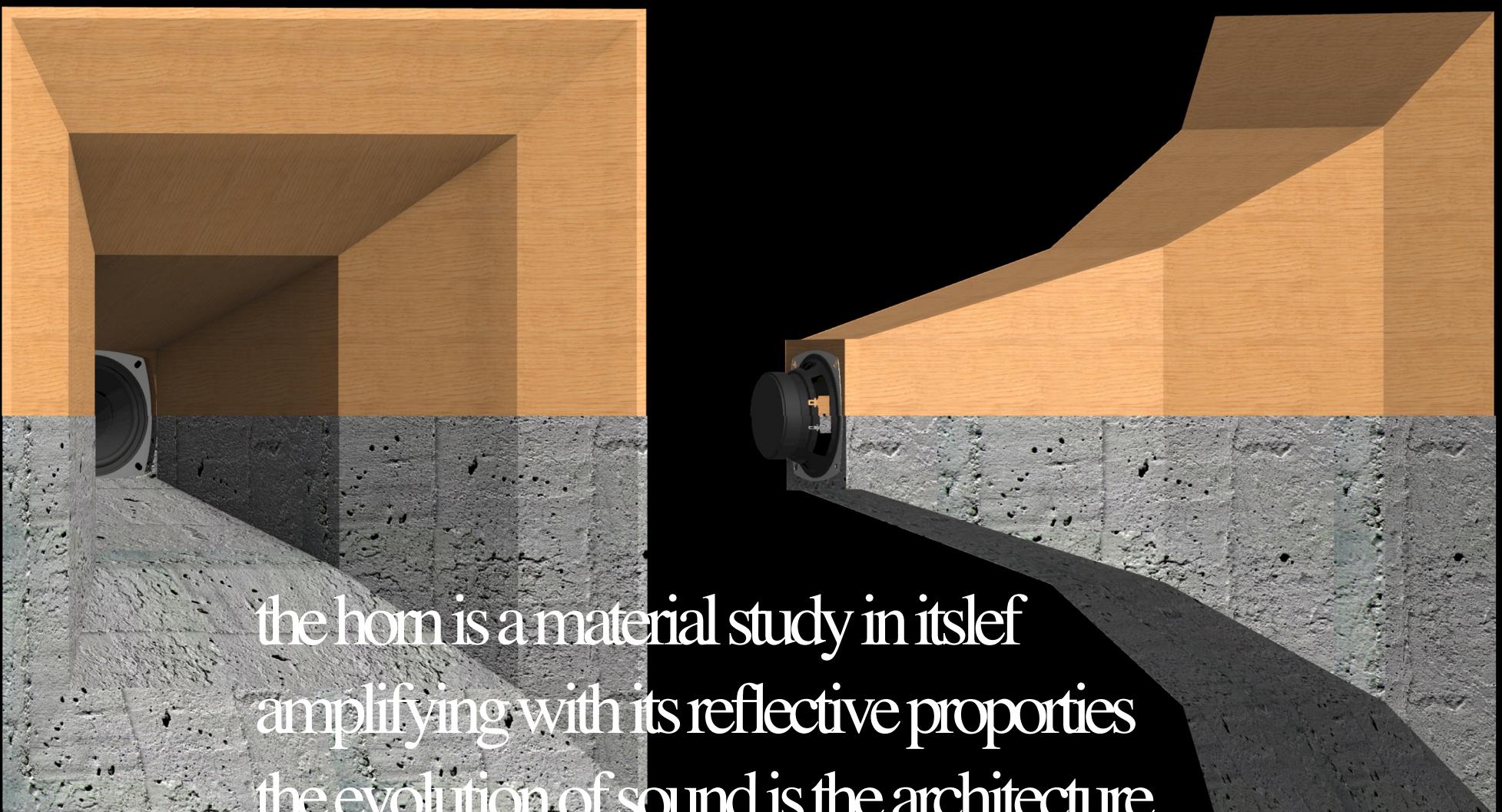
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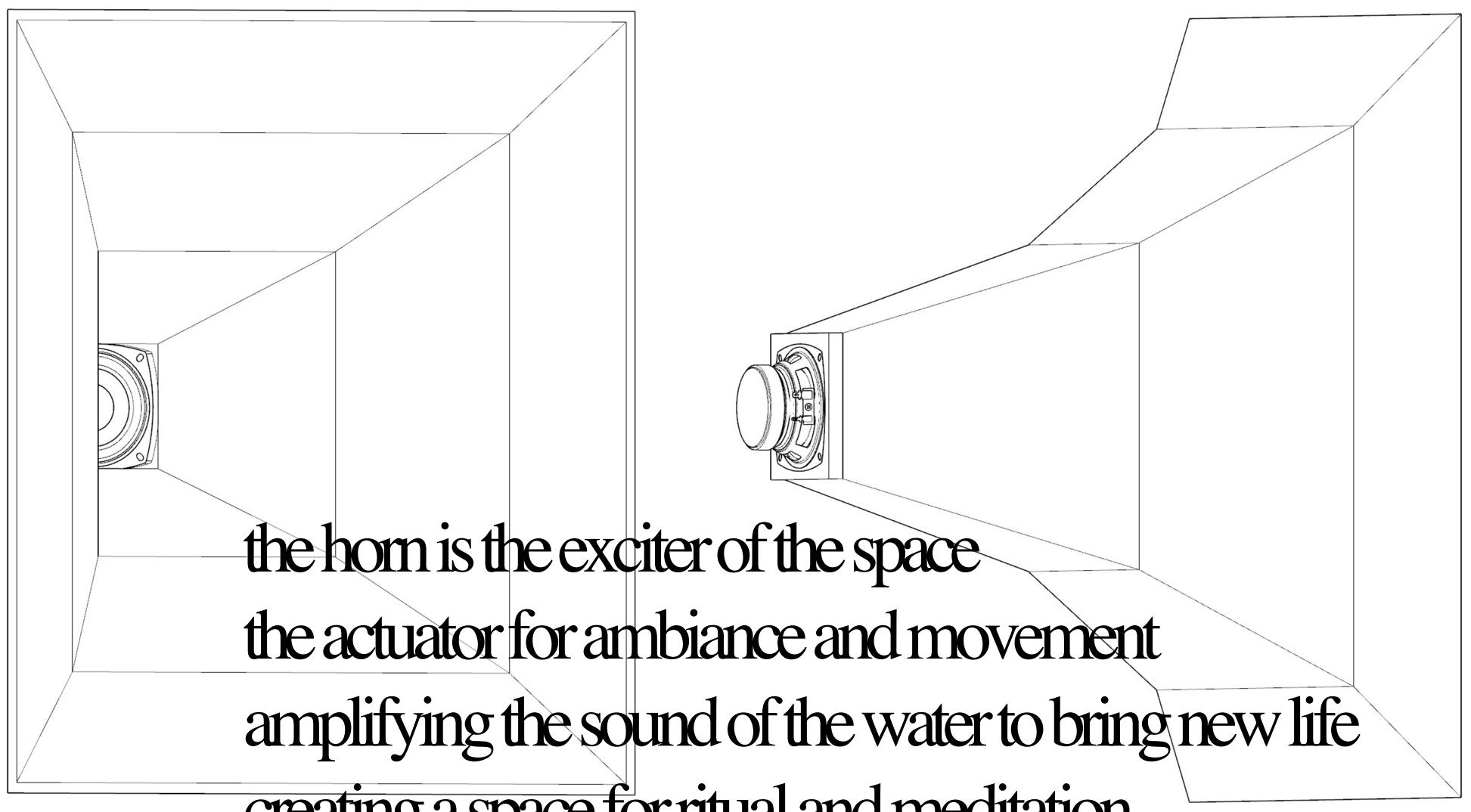
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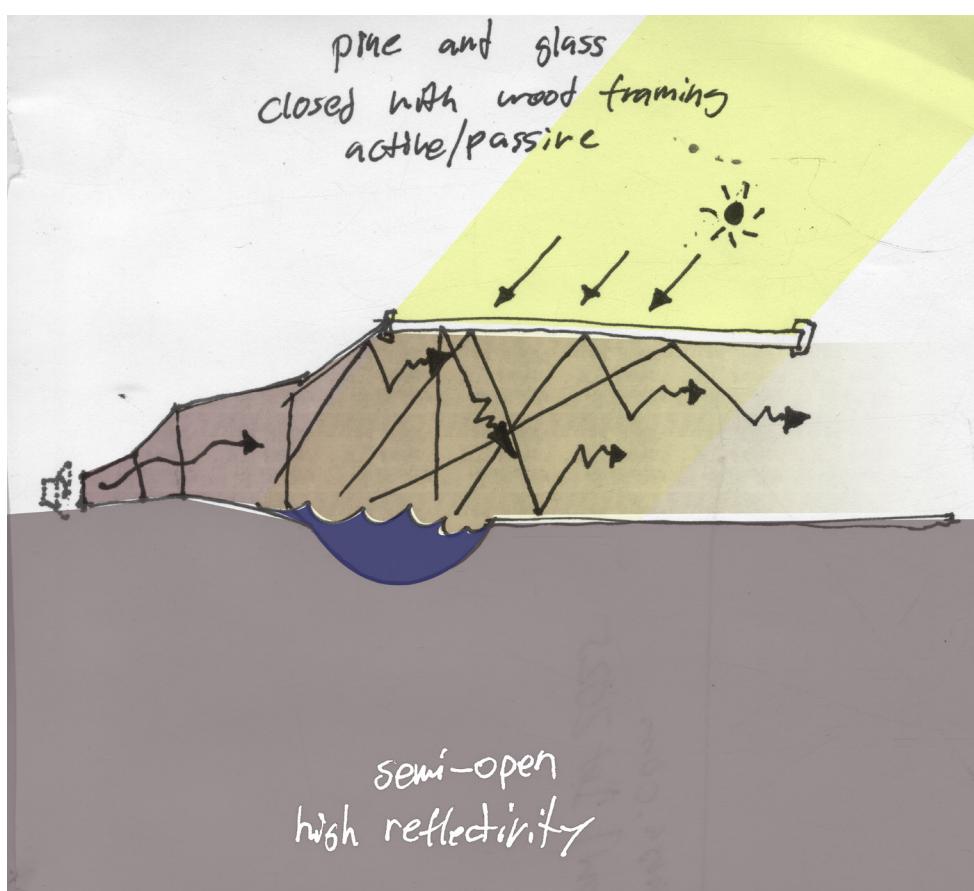


the horn is a material study in itself
amplifying with its reflective properties
the evolution of sound is the architecture
surrounding it



the horn is the exciter of the space
the actuator for ambiance and movement
amplifying the sound of the water to bring new life
creating a space for ritual and meditation





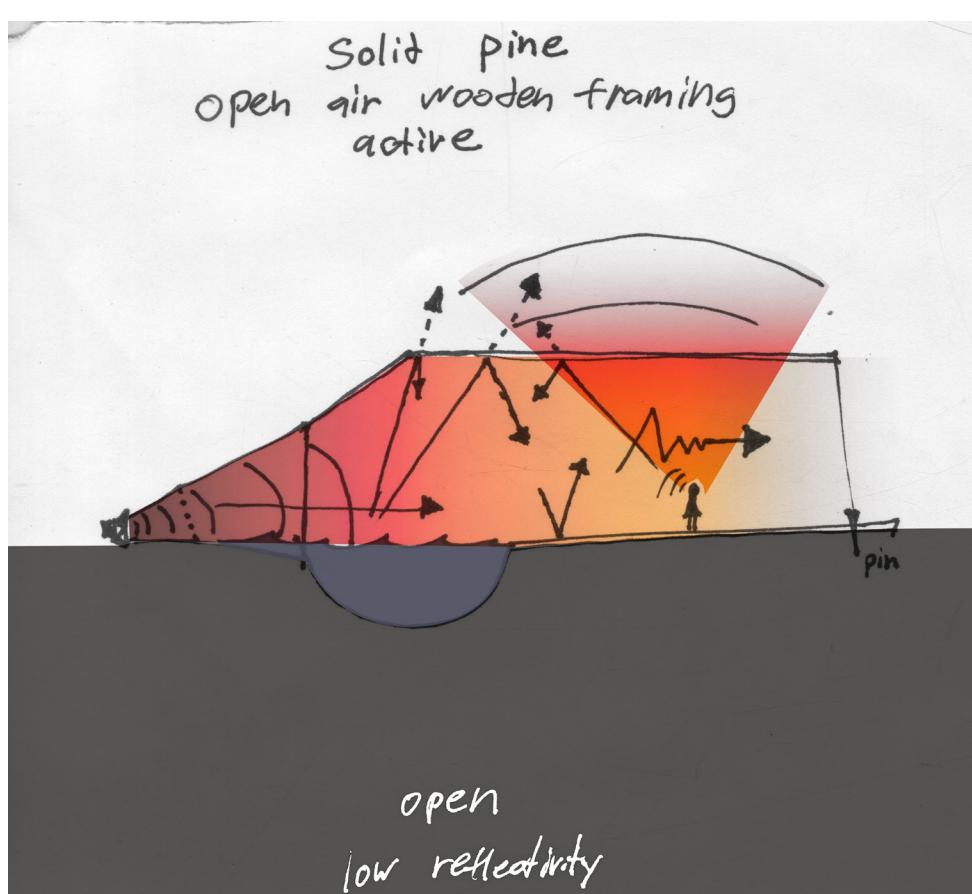
Pine and Glass Closed with Wood Framing Active/Passive

This design utilized glass as a reflective material for sound. Sound will bounce in the space, actively from the speaker cone, or passively from the horn design embedded in the pavilion.

The lightweight wood framing provides structure to hold the horn and glass pane(s).

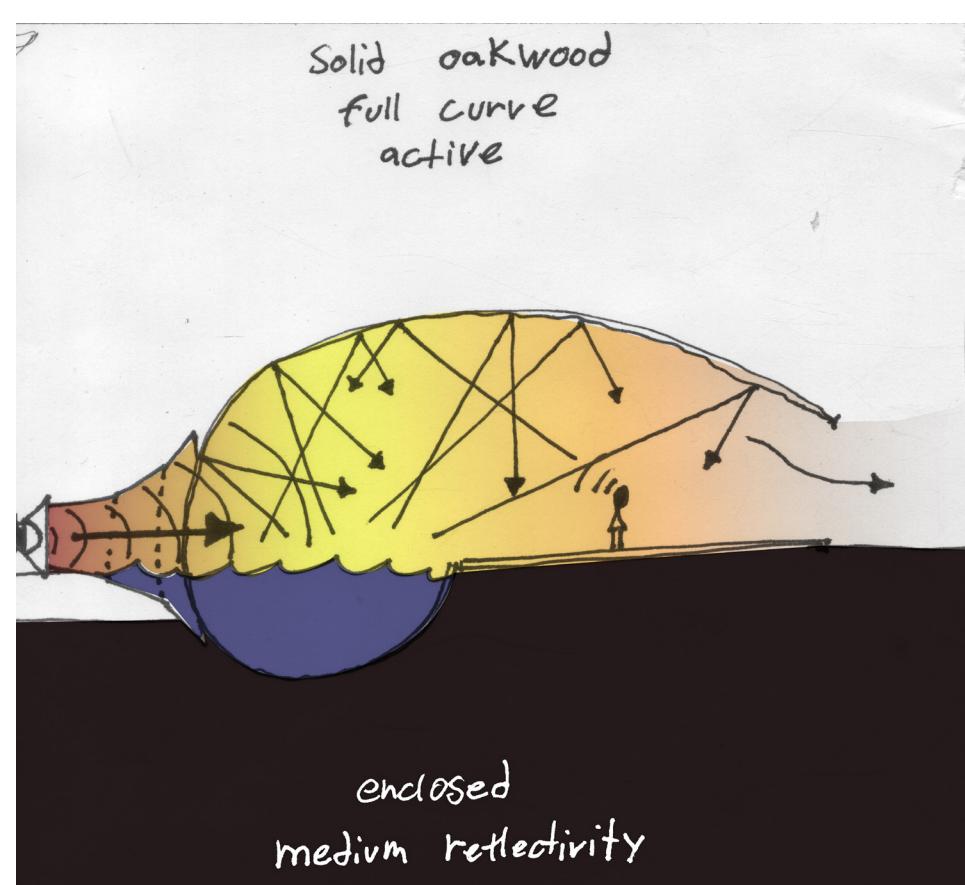
Glass NRC (Noise Reduction Level): 0.05
Pine NRC: 0.3

Wood and Sheet Metal are the most reflective materials, I want reflective material for the horn, to amplify sound, so the horn will most likely be a hardwood or steel.



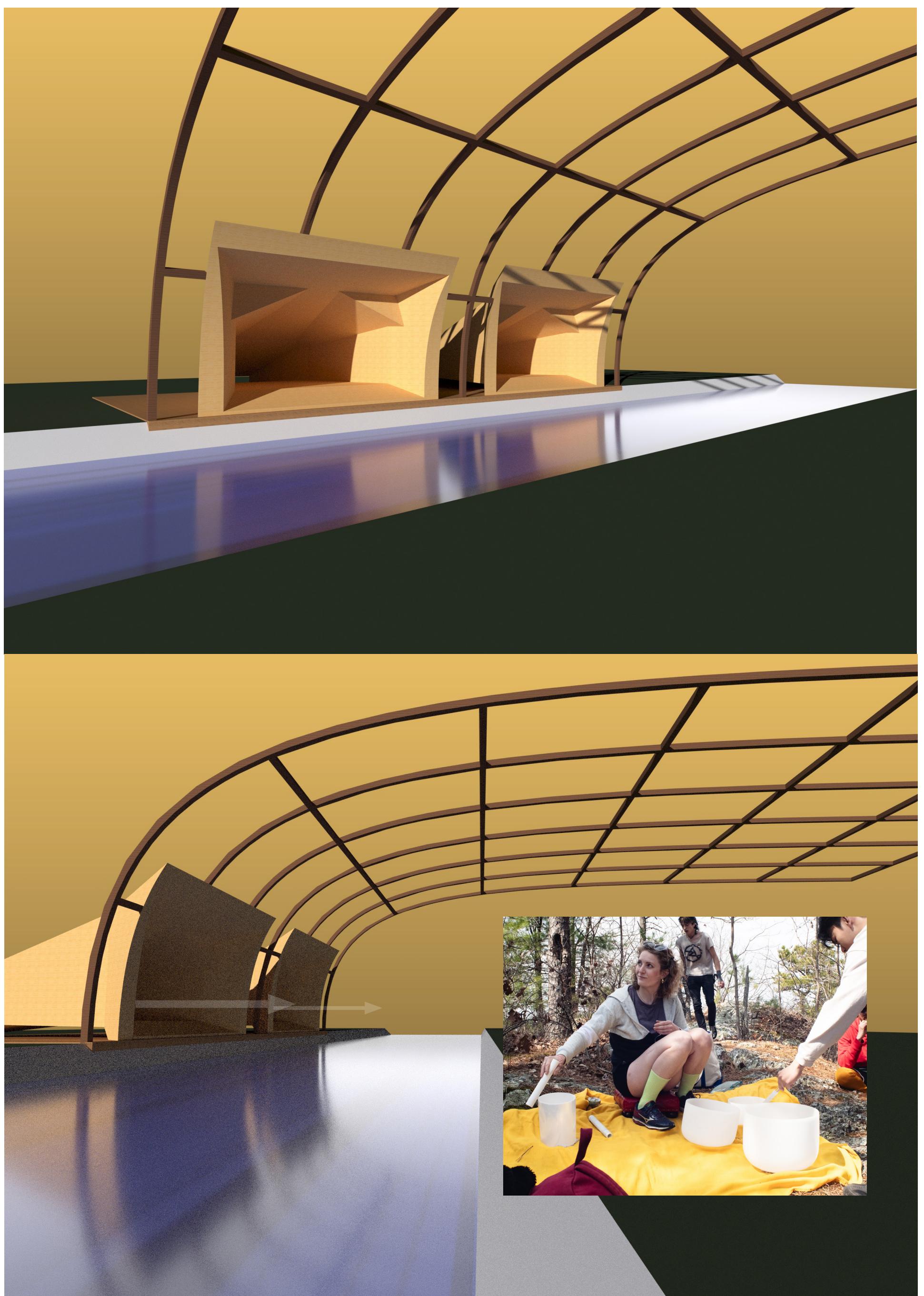
Solid Pine Open-Air Wooden Framing Active Speaker

This design uses only the horn as the solid enclosed space, with the idea that the sound of the water is amplified into the framed space, but there is no reflective properties of the space. This can be an option for a program in the idea that the space is modular in that capacity. Maybe the wood framing holds a textile like reflare that is reflective, and can be places there during performances or ritual events. Whereas in other seasons or site conditions it is more helpful to be open.



Solid Oak Full Curve Active

This design utilizes the idea of a solid curved oak pavilion, that curves up from the end of the river onto the land, with a weighted hardwood underneath the horn. This design is for optimal deep listening. The sound of the water acoustically reflects off of the rounded oak walls to encapsulate the sound, this program is for ambient rituals such as yoga, meditation and listening. This design can be passive, with the horn amplifying the existing nature behind, or active using a speaker driver at the throat of the horn to amplify sound, but it is not necessary.



Program Renderings

