FAITH AND ARCHITECTURE:
Designing from the Heart

by
Currim Suteria

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

This thesis is about faith as foundation for the practice of architecture. In the esoteric interpretation of Islam, the intellect, also known as the "eye of the heart", is the source of all aesthetic and ethical decisions. The heart is seen as the locus of knowledge nourished by the infinite wisdom and love of God.

In this thesis, I humbly share moments of beauty and goodness experienced during my time traveling in Northern Pakistan and studying in Cambridge, Ontario - these moments point to and serve as an affirmation of the Absolute – His signs in all the horizons. Alongside these writings, I worked on reimagining a bench, the design of a box for dried apricots, windows for an apricot orchard, and the design of a small shade garden in Karachi. I moved between working on these, and drawings of precedents and prospective projects – all of these touching each other, being connected.

In the end, this thesis speaks to the joy and love experienced when one works from a place of submission to God. One is embraced with knowledge that allows us to design and make decisions for a better and beautiful world - a reflection of the Hereafter.

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All drawings and photographs, unless otherwise noted, were made by the author.

In the Name of God, the Compassionate, the Merciful

We shall show them Our signs in (all) the horizons and in their souls until it becomes clear to them that it is the Truth. Is it not sufficient (for you) that your Lord is a witness of all things? (Qur'an 41.53)

INTRODUCTION

In Islamic mysticism, the heart (qalb) is the seat of knowledge nourished by God. The Quran uses the word several times, and "often attributes understanding and intelligence to the healthy heart."[1] To polish the heart, is to invoke God's name - it is to participate in remembrance, to meditate upon His signs. Decisions that are made from the heart, are decisions made from a place rooted in God. These decisions are felt as right. They have a sense of proportion, an inner beauty that feels right. Often, the word intellect is used, also known as the "eye of the heart". Discernment is a function of the intellect, and has its roots in the healthy heart. This thesis is about making design decisions from the heart.

This thesis consists of two parts, both of which are intertwined. Firstly, it consists of writings about my time traveling in Northern Pakistan and studying in Cambridge, Ontario. These writings are about moments both lived and imagined. These moments had an inner proportion - a beautiful, good proportion that felt right. This inner proportion points to and serves as proof of the Absolute - His signs in all the horizons. His signs are present everywhere, whether it be the inner glow of human inspiration, the affection between people or the space between birds.

Secondly, alongside these writings, I began to work on four architectural exercises. I worked on reimagining a bench by a lake, a box for dried apricots, windows for an apricot orchard, and a small shade garden for Karachi. For these exercises, as I designed and explored, I worked with decisions that felt right.

Throughout the course of the thesis, I wrote and worked on all four exercises simultaneously. I also referred to precedents, or parts of precedents - projects that I have been drawn to and loved for a long time. Often, on the same piece of trace paper, I moved between the different exercises and precedents. Everything became layered - the writings, precedents and projects touched each other, forming a whole. In the making of this thesis document, I also moved between the various mediums. The space between the various media - writings, images and drawings, has been created to extend this feeling of harmony into the document. In this way, the bench leads to a sunset, the sunset to the colour of apricots, then an afternoon in an orchard, the orchard to a lake and a glacier, and finally, from the water of glaciers to a garden.

This thesis presents the essence of a long journey. This document is a distillation of writing, drawing and making in order to share with the reader this right feeling.



Figure 0.1 Pakistan, with the area visited shaded.

Figure 0.2 Hunza Valley.

A BENCH FOR BORITH LAKE



Fig 1.1 The Passu Cathedrals and other mountains surround the lake in the distance.

We arrived at Borith Lake in the afternoon. A table and some chairs lay vacant – an invitation for tea on a terrace by the water. The water shone a turquoise blue (it shone with changing blues), and the air gently touched the water. There was a slight rustle in the air. It was the rustle of poplar leaves, of faraway leaves, of glaciers shining. The same air that touched the water, had touched the leaves. Here, the air and light together made everything. Everything, together, moved with and lived amidst this slightness.

The air was warm and cool. A kind of silver whiteness, marked by a tinge of ochre fell on everything. Beyond, on the other side, the mountains lay bare and covered in this light. Their inner crimsons and lilacs seemed to appear, washed in this light. The air touched these mountains lightly, keeping everything in place. Rocks that appeared stationary felt like they were going to fall, or were on their way down to the lake. But for now, this afternoon, they were held by the air and rested lightly. We sat, absorbed by the air and the light inside of it. We looked at the lake for a long time.

Farzana's face shone sharp and soft in this light. The air and light touched her hair slightly, marking her curls, making her. Saran, smiled. Last night, he was with Hadiyaa by the fire. He was surrounded by the glaciers of Rakaposhi, glaciers cracking, large places. He stared at the fire. His eyes appeared large and curious, soft and knowing. Today, he sat. His eyes loose and narrow. He said he had not seen anything quite like this. He said he was glad he came. I had missed that smile. It was good to see him like that.

The Maker of this air. The Maker of light and air. Light on ripple, ripple on light. It is, it is. This air, that holds everything together. This air that brings together Saran's face, his eyes with the fire, to him here, Farzana, with the light and breeze making all of us.

I had been drawn to half lap joints for quite some time. I was drawn to the way in which two well-proportioned pieces would come together to create a whole. I was drawn to the logic of the joint.

Before I left for my travels to Hunza, I consistently drew many unfolded elevations of the joint. Upon my return, I started to work on a frame for my parents. In my mind, the frame came second – it was always about the half lap joint.

At first, I worked on a small practice piece. I enjoyed cutting the shoulder with a Japanese saw, and chiseling the piece, bringing it to a proportion that felt right. As I chiseled the lap, I thought of glaciers, the space between birds, and the air that roams above glaciers.

As I worked on the half lap joints for the frame, I also began to reimagine a bench that I had experienced at the Altit Fort gardens. I began to think about the same bench, slightly altered, for a terrace by Borith Lake. I spent many afternoons sitting and laying on this bench. The bench was sited under an old maple tree in an orchard that surrounded the Altit Fort. The proportion of the bench in relation to the size of the tree, and the siting of these two elements within the orchard was of a good order.



Fig 1.2 A half lap practice piece during the chiseling process, on a warm winter day.

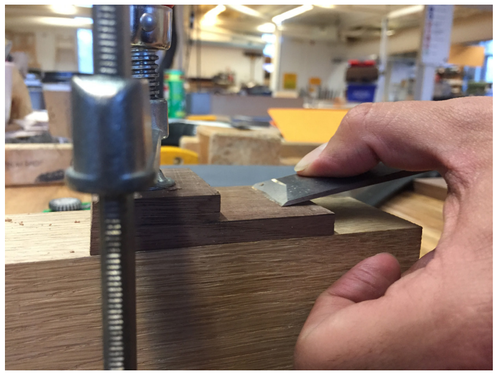


Fig 1.3 Chiseling the practice piece.

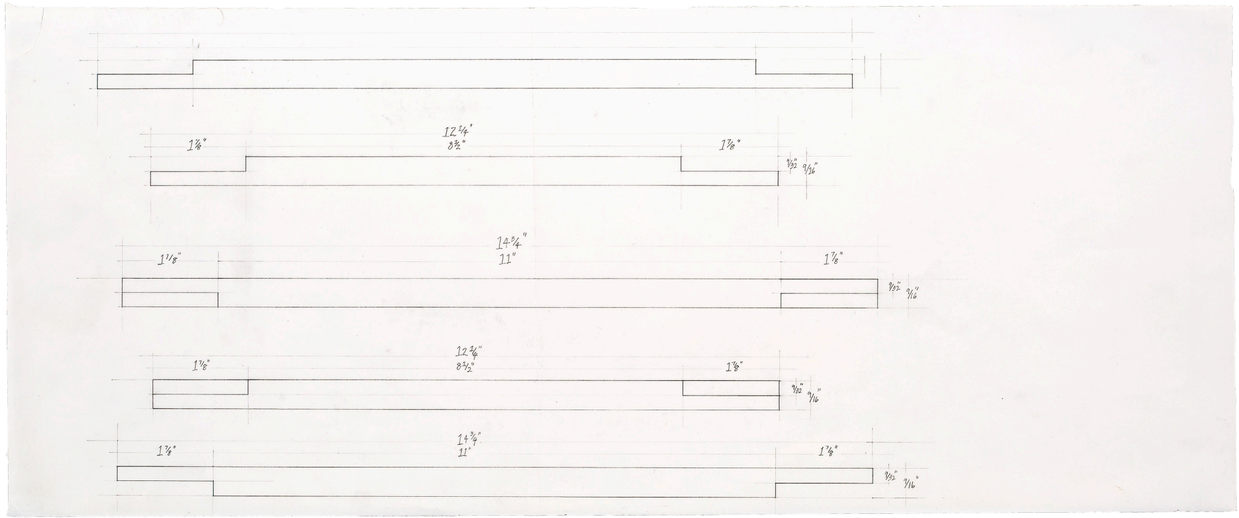


Fig 1.4 A drawing showing the pieces for the frame, and the elevations of the frame.



Fig 1.5 The Altit Fort gardens, as I had remembered them, with the bench (shaded in pencil) under a large Maple tree.



Fig 1.6 The Passu Cathedrals, close to Borith Lake.



Fig 1.7 A rough cut before the lap is filed. Cutting the cut using a Japanese saw was a pleasurable experience.



Fig 1.8 I remember the moment when I took off the piece, and saw the lap and shoulder in relation to the whole piece for the first time. As soon as I had removed the piece, a proportion was beginning to come to be.

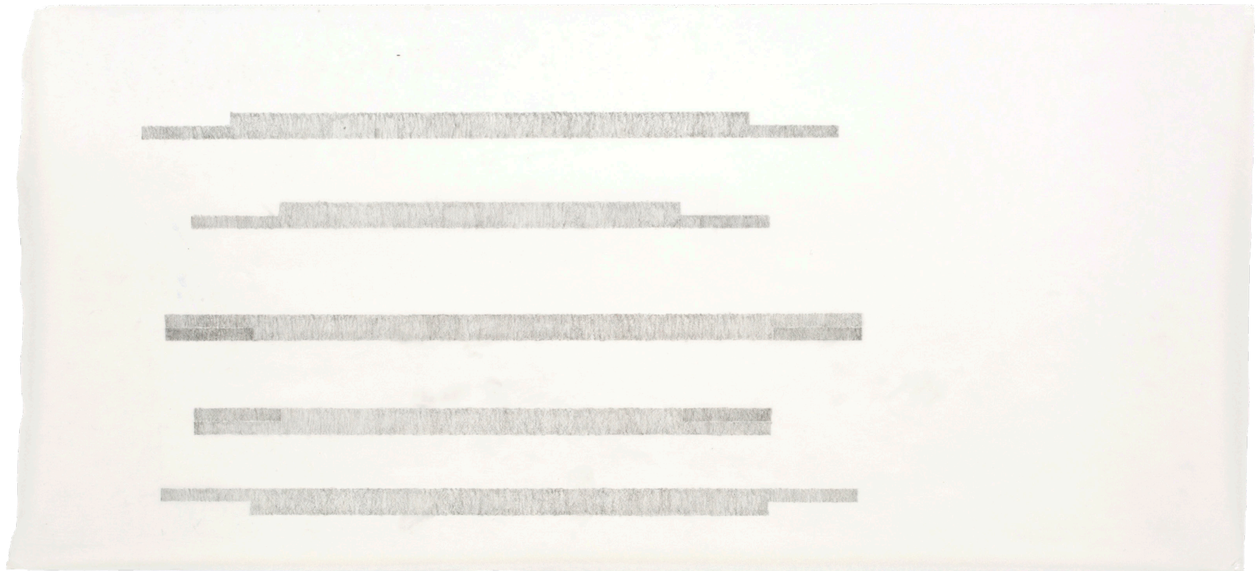


Fig 1.9 A shaded drawing showing the pieces of the frame, and the elevation of the frame.



Fig 1.10 The Miar glacier.

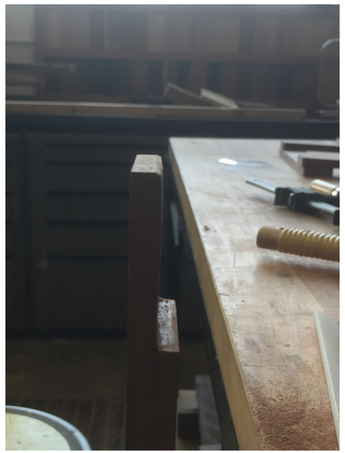


Fig 1.11 A piece after being cut with a Japanese saw.

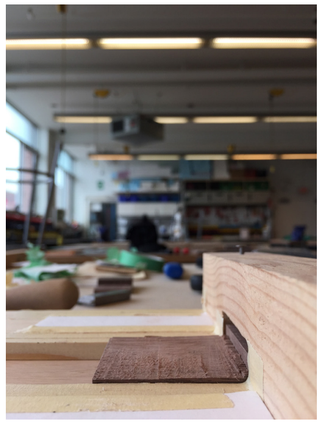


Fig 1.12 The jig that my friend, Bradley Paddock, helped me create for the filing process.

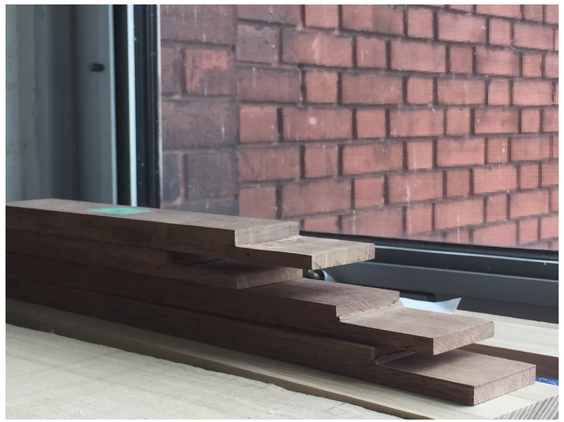


Fig 1.13 Incomplete half laps sitting against the brick wall of the school. There is something in common between the proportion of the pieces (the way in which the lap sits against the shoulder) and the bricks (with the mortar between each brick).



Fig 1.14 I cannot forget this afternoon at Borith Lake. It was a blessing from God.

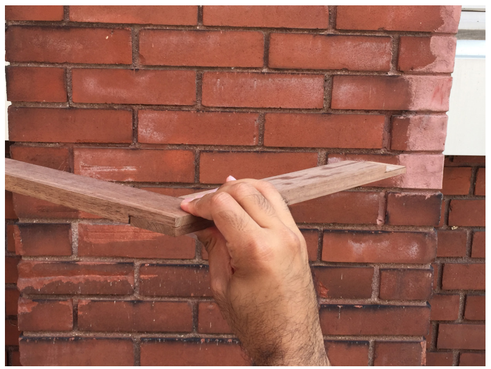


Fig 1.15 The half lap pieces brought together against the school's brick wall.

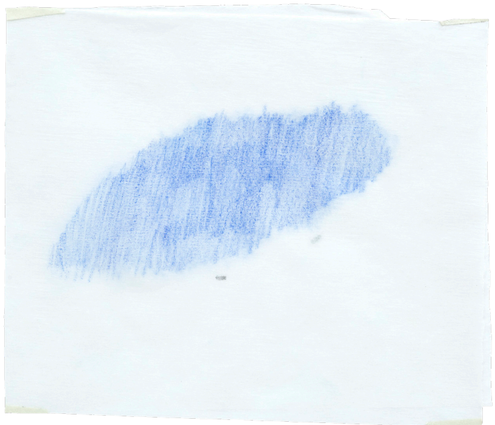


Fig 1.16 A bench for Borith Lake.

As I filed the pieces for the frame, I would often pause and bring the two pieces together. The joy of bringing two well-proportioned pieces to create a half lap joint is difficult to describe. The pieces lay close to me in the wood-shop, and around my desk. The proportion of the half lap joint, the proportion of a bench, and the way it was sited in a garden - they all reflected the same language. A language of order, of goodness.

As I thought about the siting of the bench, I was reminded about the way in which Bijoy Jain decided to place a rock in the courtyard of the Copper House in Chondi, India. In a lecture entitled "Lore", he shares that every time he entered the courtyard after finishing the project, he felt it to be incomplete. After a conversation with his client, who was able to acquire a rock from southern India, they decided to place a rock in the courtyard. The rock is placed off-center - its siting brings everything together. He speaks of the stone pressing against the ground, and embodying the energy of the site.[2] A simple mark in the design creates balance and harmony in plan and in the section of the house, but also within the plan and section of the larger site that is made up of trees, plants, a pool and a stream.

I first drew a measured drawing of the bench. This first iteration was a combination of the proportions as I had remembered them from the Altit Fort gardens and the beginning of a proportion for Borith Lake.

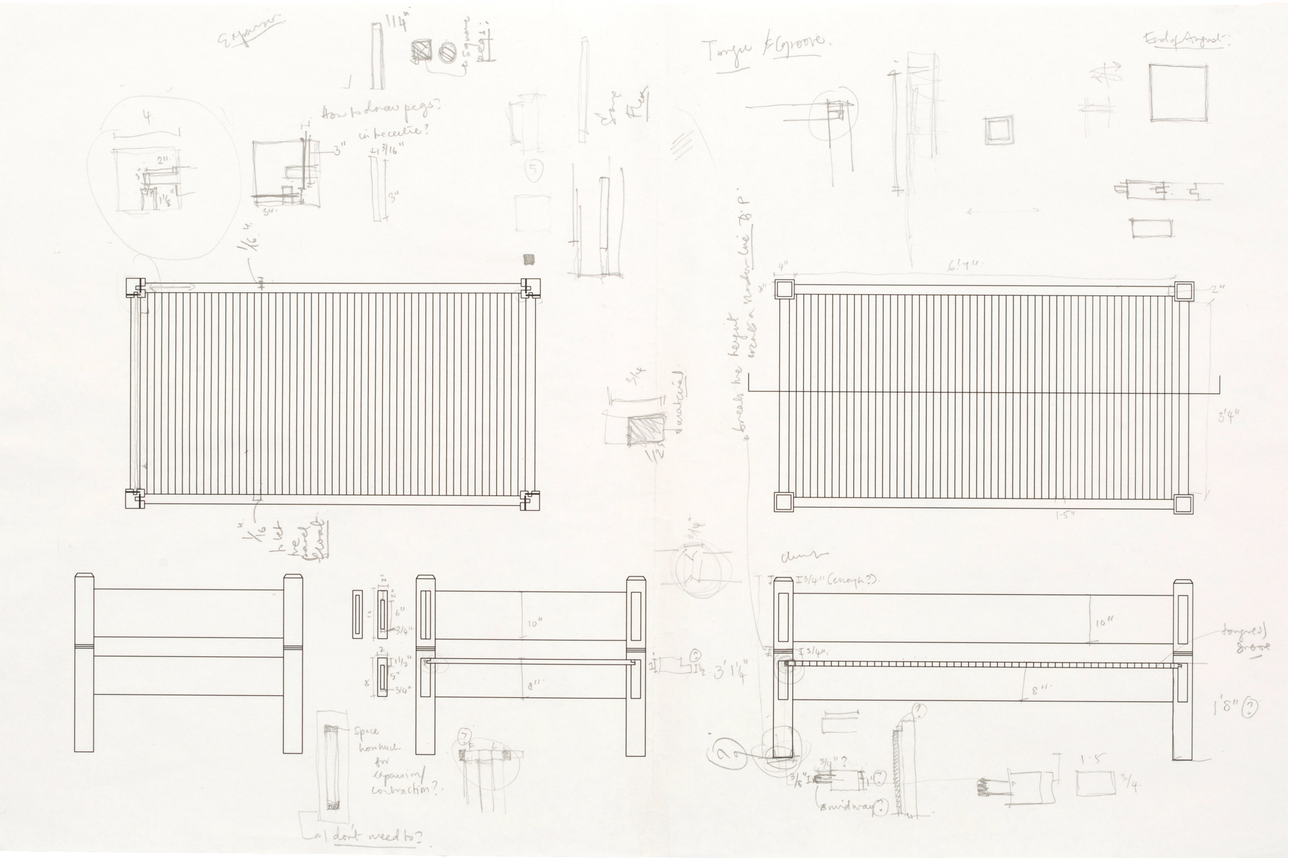




Fig 1.17 A print of an initial AutoCAD drawing. I moved between measuring in my office and drawing in AutoCAD. Details for the bench, discussed with my friend Bradley, are also part of this page.

Fig 1.18 A drawing showing the Copper House in its surrounding landscape of light, trees, and water. The rock in the courtyard of the house brings the whole place into balance.

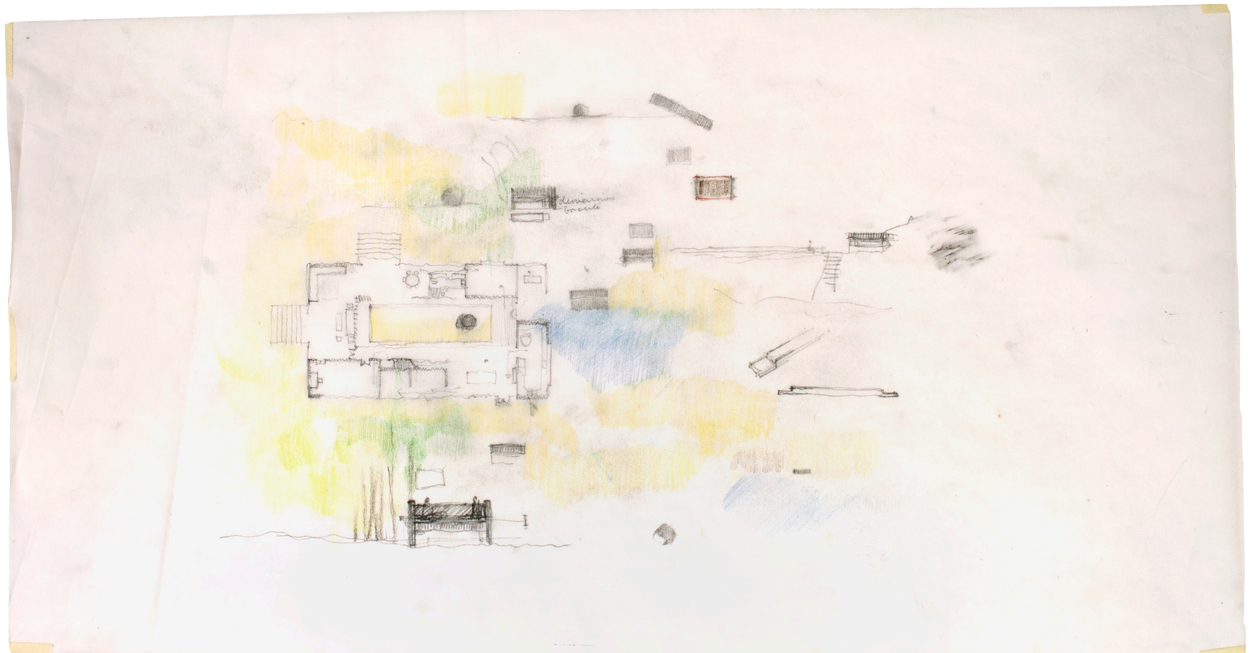


Fig 1.19 The rock shown in relation to the inner workings of the Copper house in plan. Yellow and blue fields surround the house. Sketches of the rock, the bench, a rug for the bench, and pieces of the half lap joint surround the plan.

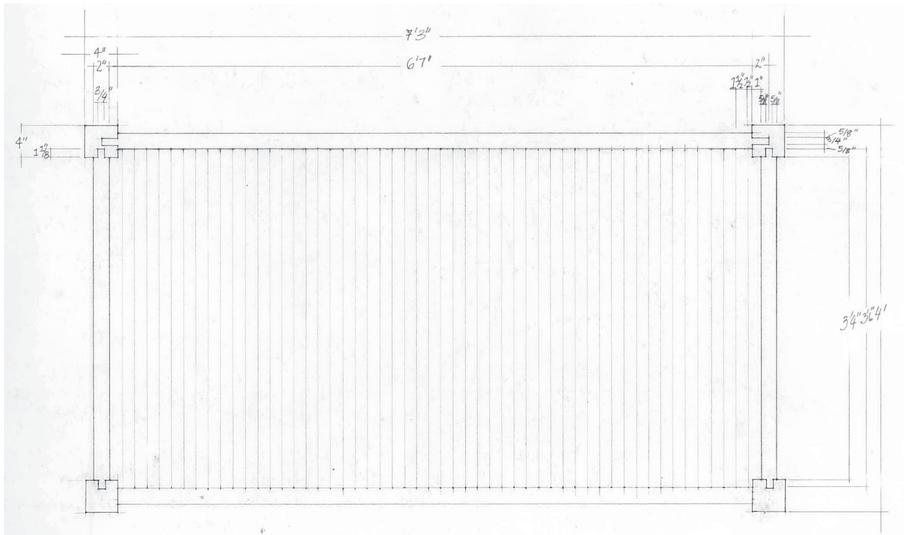


Fig 1.20 An initial plan drawing of the bench. Here the slats are 1 1/2 inch wide.

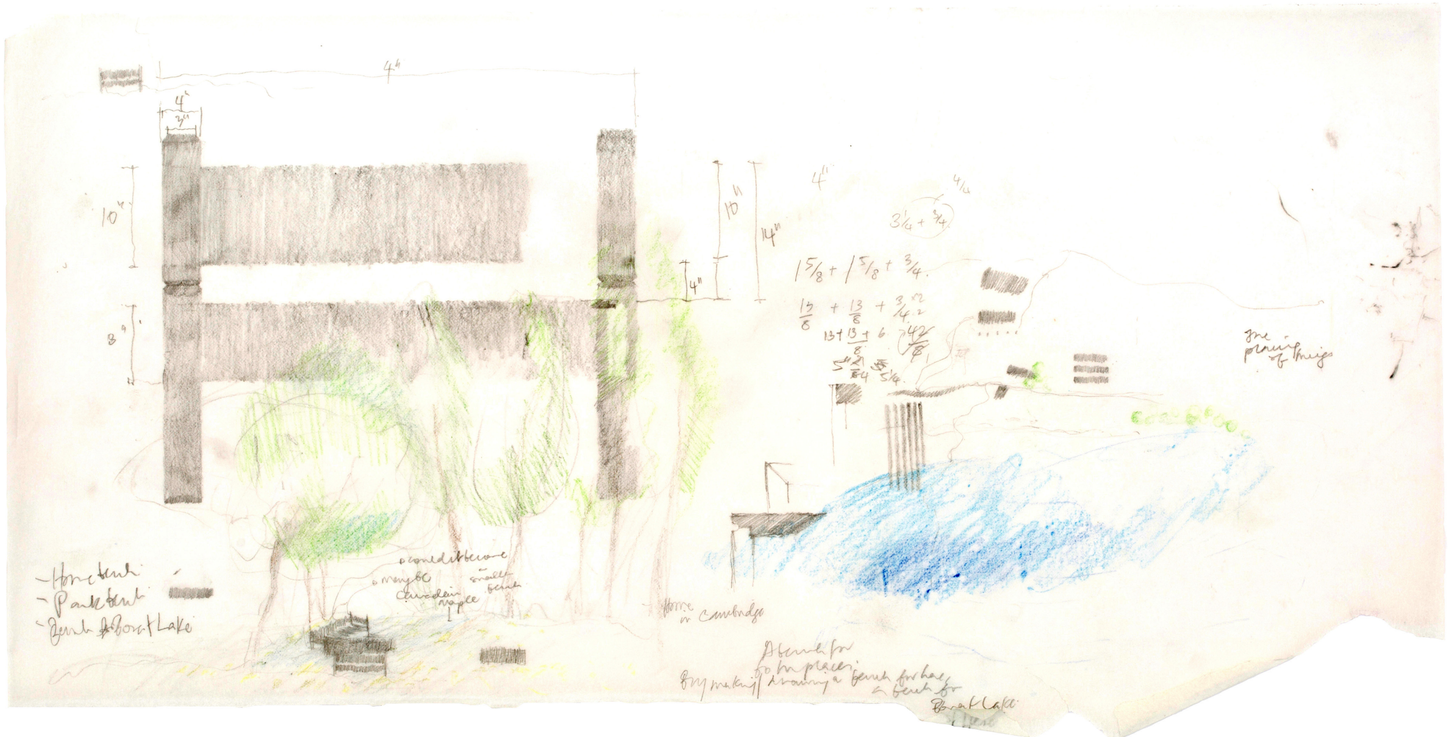




Fig 1.22 Borith Lake

Fig 1.21 A shaded elevation of the bench with the trees (walnut and maple) from my home in Cambridge. I also imagined the bench under these trees (bottom left of trace paper). On the right, the lake, a detail for a lid for a box for dried apricots, and a study of lines for a rug for the bench.

It is in the air of the night sky. We sat on a bench on a terrace of the Inn. One of the two benches that were used to enjoy daily sunsets. The benches that Lal Hussain uncle would sit on. We looked at the sky together. A blanket of stars spread all around us. It crossed in front of me, into the sky - a shooting star, and then, many more. Red, yellow, swirls, diving into each other, into the cosmos beyond. All of this, inside a field of light filled bodies, lighting everything, moving slightly, shimmering. My father for a moment became excited. He said he wanted to see one, and asked me where he should look. I told him that if he looked at the sky for long enough, he would see a shooting star. My mother was next to see one - her finger pointing to the sky, into the disappearing star. This was her first time. This would be his first time. We looked at the sky together - now for him, his chance. Looking at the sky together meant being together. He waited, sitting patiently - he saw one. It crossed right in front of him, as if in front of him. The space and distance between him and a far away star seemed to be filled with magic. Witnessing a shooting star meant seeing the impossible for him, seeing the extraordinary. It meant being with the star that was a gift, his eyes lit by the sky, His gift. He saw a shooting star. He was wrapped in his shawl. I still remember his face.



Fig 1.23 A stone wall close to Borith lake in the evening. I was drawn to the way in which stone sat on top of stone. I was drawn to the way in which the wall seemed to emerge out of the landscape. The wall had a humble proportion.

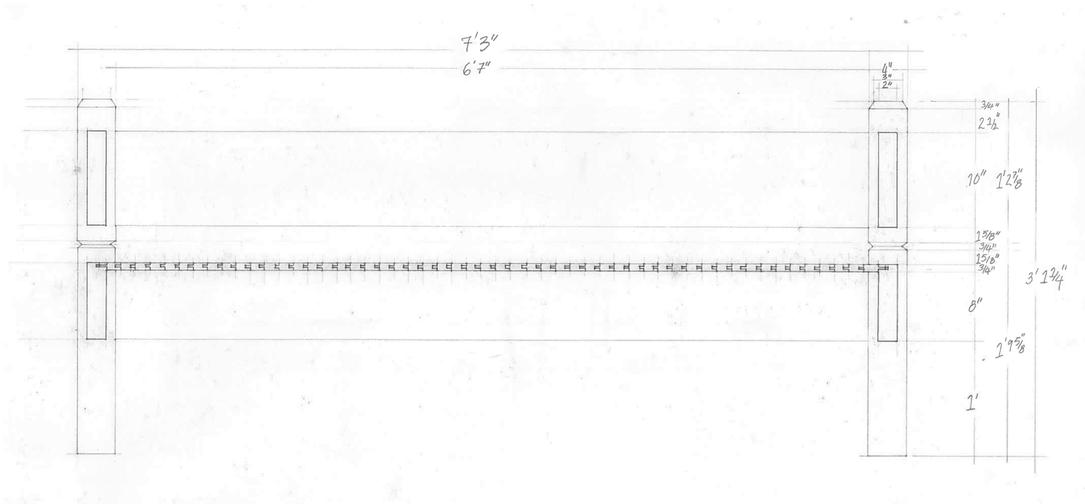
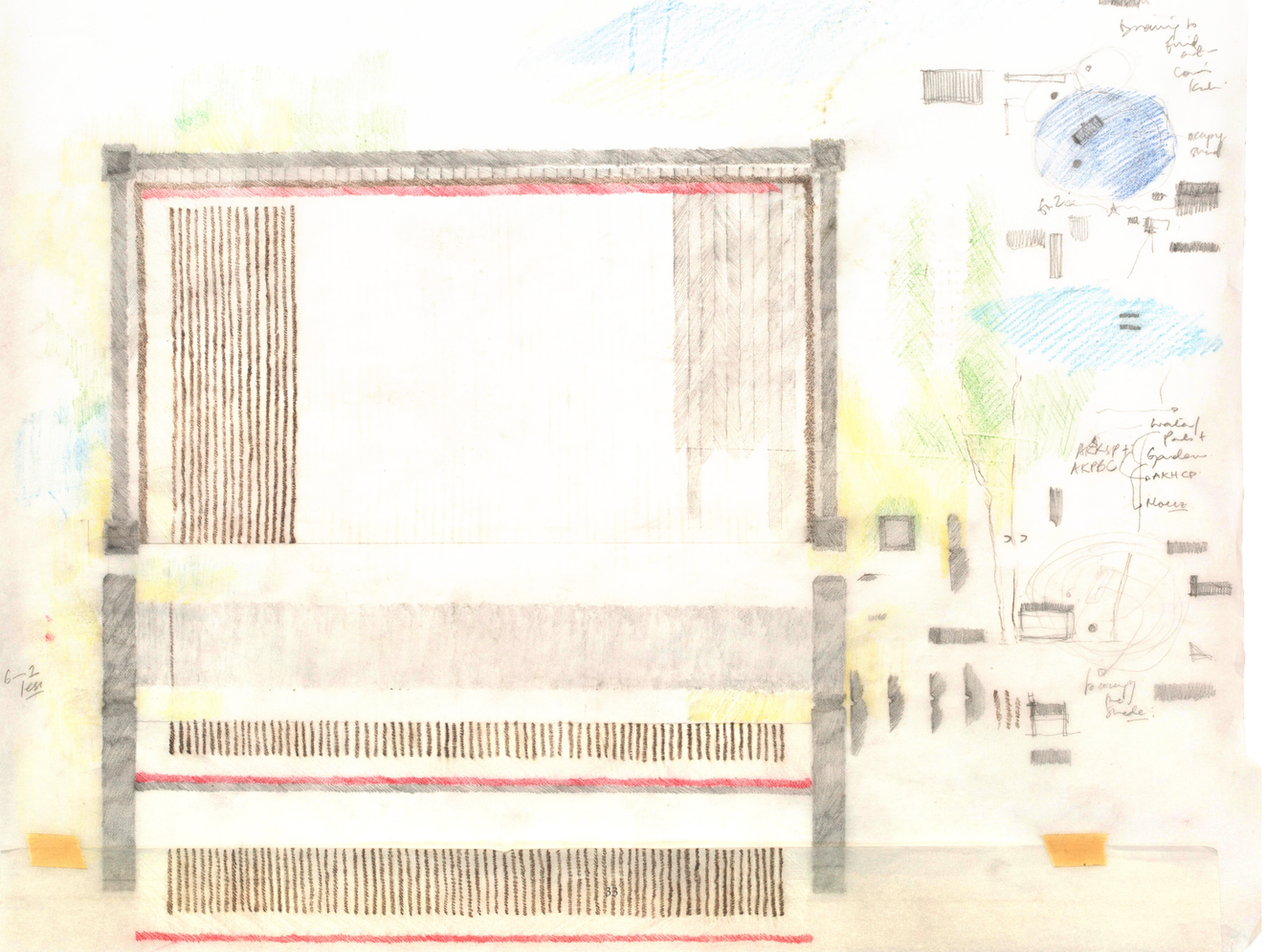


Fig 1.24 An initial section of the bench that involves tongue and groove joinery for the slats. I enjoyed drawing the chamfered top of the post and the ornamental detail that breaks the reading of the post.



As I thought about the way in which the bench would serve as a mark in this landscape, I imagined the bench with a rug. Several years ago, I was gifted a rug by my colleagues in Kabul. I still remember the evening when the rug was gifted to me. Our hostel cook had made my favorite dishes. The rug was made up of brown stripes, in close proximity, with two lines in crimson.

I drew the rug as I remembered it. I created new proportions between the brown stripes, the shade of brown, and the way in which the crimson lines became a part of the rug (I did not remember the way in which the two lines were part of the rug that was gifted to me). The more I thought about the siting of the bench, the more I thought about the way in which the brown lines would appear against the slats, and the way in which the rug would hang over the front seat rail. A 1/2 inch crimson line would serve as an invitation.

The sense of generosity offered by a crimson line, the 4 by 4 inch chamfered top of the post, and the break in the post all contribute to the goodness of a thing.

Fig 1.25 Studies of the brown stripes and crimson lines against the plan and elevation of the bench. At the bottom, a study of the part of the rug that will hang on the front seat rail. On the right, sketches of the detail between the rails, poplar trees...



Fig 1.26 Thin flowers on my way to the Altit Fort gardens.

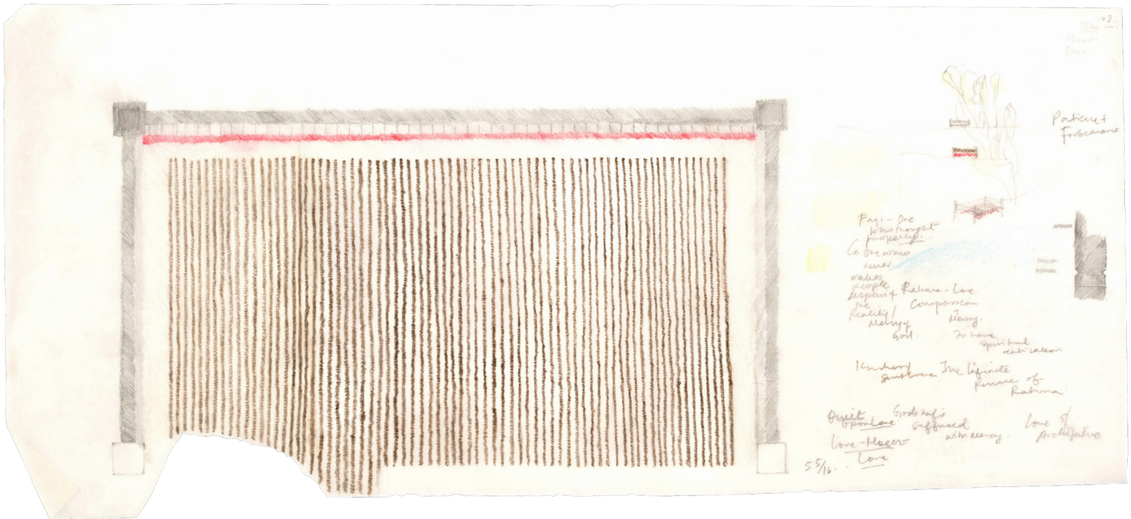
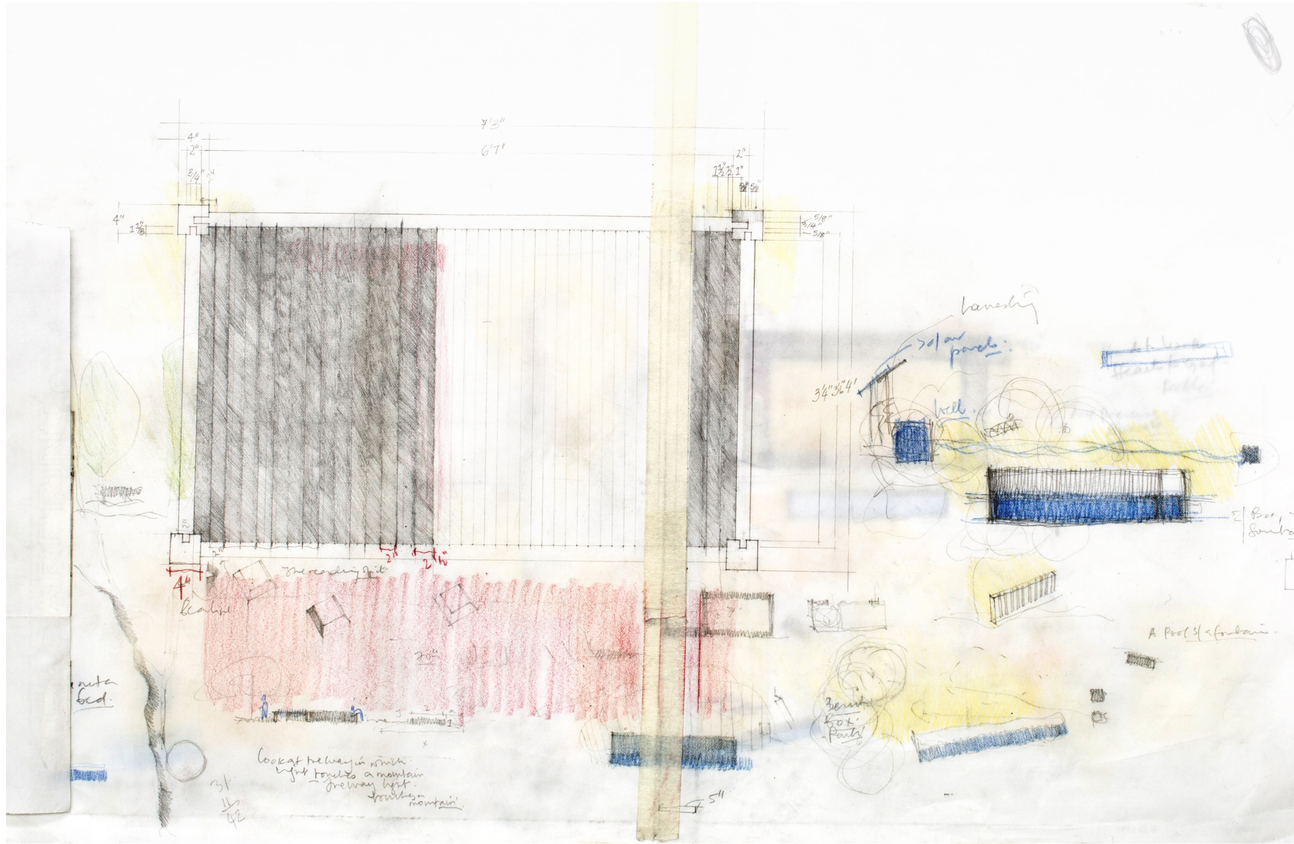


Fig 1.27 A drawing of the rug with proportions I was satisfied with.

As I drew the brown lines of the rug against the slats, I realized I was not satisfied with the proportion of the slats. They seemed too fine, given that the landscape of Borith Lake had a light and air quality that seemed endless - the light had a kind of broadness and horizontality. I drew a few iterations of the bench, moving between the dimensions of the slats and the length and width of the bench. As I played with the dimensions of the slats, the dimensions of the bench kept on changing.

I drew the bench a few times. I moved between the proportions of the slats, and the width and length of the bench (I was satisfied with the height of the bench, the chamfered top of the post, and the ornamental detail along the post as I had drawn it first). I decided that the slats would have a thickness of 2 1/2 inches. This dimension for the slats worked with the broadness of the light that was present on the site. I moved away from a tongue and groove joint detail. A spacing of a 1/16 inch between the slats would allow for expansion and for water, air and light to pass through. The occasional slipping of the rug, allows the user to experience the ground below, and that is a beautiful thing.

Fig 1.28 I played with the proportion of the slats. On this page, the thick of the crimson is sketched below, along with the bark of trees seen around. Rectangular slivers of water surround the drawing. The one on the far left has a bench attached to the fountain, with a square shaped water drinking fountain. These are some thoughts for a small garden. Underneath the drawing is a section for a box for dried apricots.



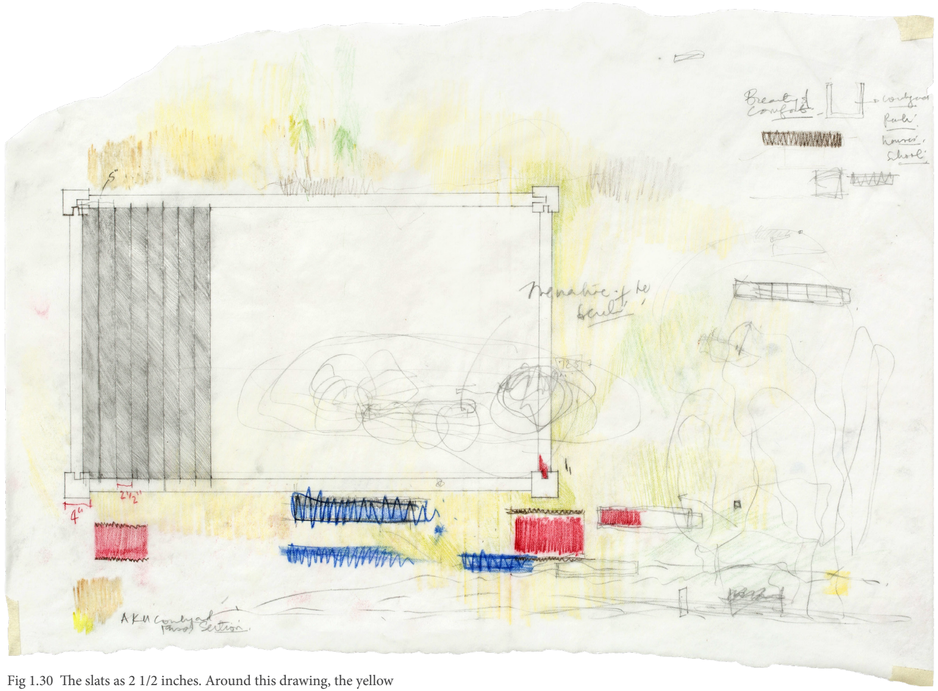


Fig 1.30 The slats as 2 1/2 inches. Around this drawing, the yellow light of Borith Lake, and the crimson from the rug.

Fig 1.29 An axonometric of the bench.



Fig 1.31 I worked between drawing the plan with masking tape and drawing the size of slats.

Fig 1.32 The top-left shows the plan of the bench with a renewed length - with slats measuring 2 1/2 inches in width. Bottom right shows the changing thickness of the slat. The slat was decided to be 1 inch thick. Bottom left shows an axonometric of the post. Drawing the post in this way meant understanding the inner logic of the post - the way in which a post is able to bring three rails together.



Fig 1.33 Borith Lake

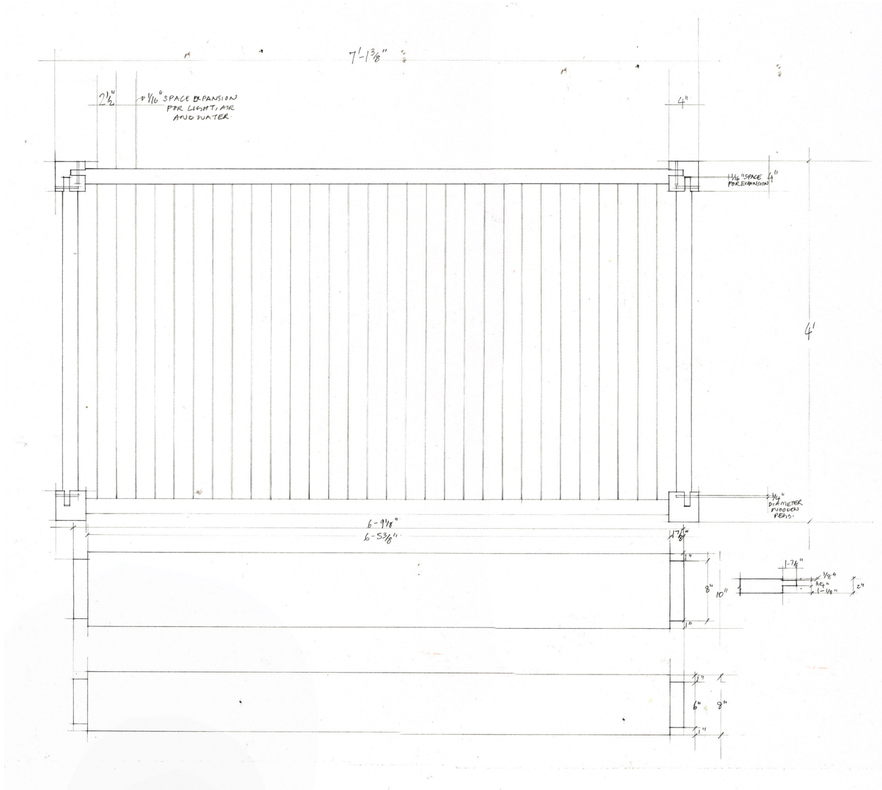


Fig 1.34 Plan of the bench with the rails at the bottom.

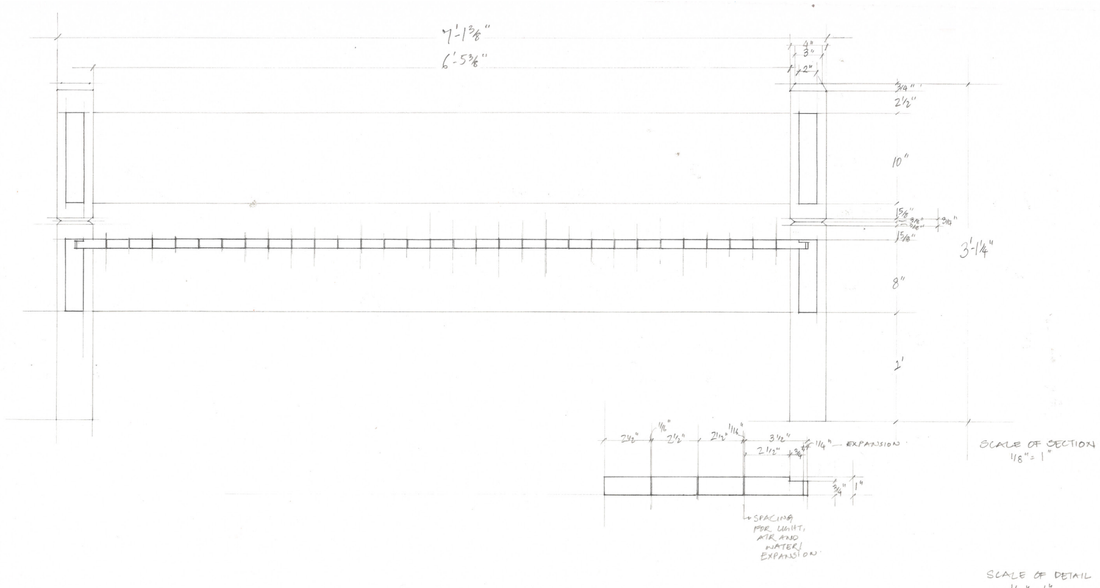
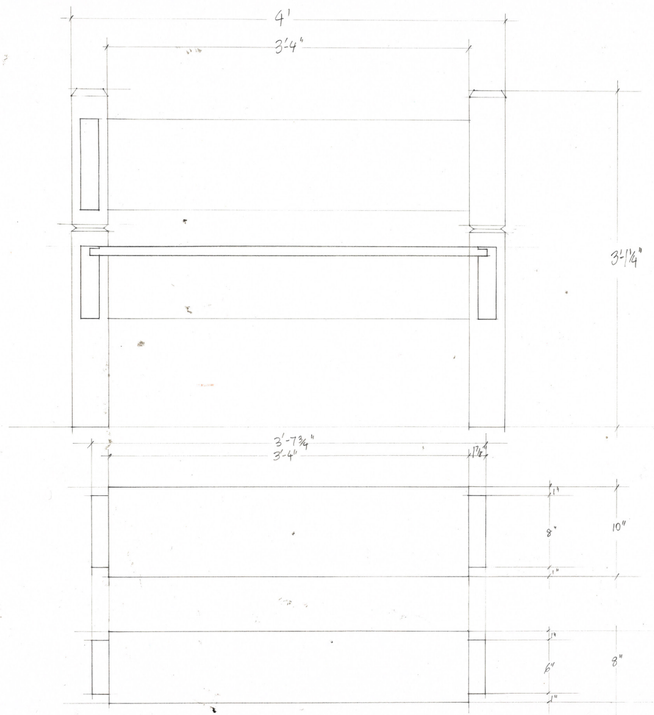


Fig 1.35 Section of the bench, the bottom right of drawing shows the detail of the slats.



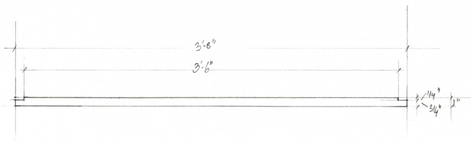


Fig 1.36 Section with rails.

Fig 1.37 On the next page, shaded elevation of the bench.



A BOX FOR DRIED APRICOTS



Fig 2.1 Rakaposhi at sunset.

Every evening, Lal Hussain uncle sat on a bench on the terrace of the Old Hunza Inn. He waited to see his mountains covered in the evening's light. It is the hour of the day that he enjoyed the most. If he spotted me walking around the Inn, he would invite me to sit with him, and request Manzoor to make us all some tea. He sat comfortably, with his left leg propped up, his arms resting on his knee, while his right leg dangling, moving slightly.

Sitting with him meant sitting close to him. It meant coming close to his presence, his words and the air that surrounded him. The evening air belonged to him. Between us, we spoke little. Like the quiet breeze and intimate space between the leaves of poplar trees, our conversations consisted of slight utterances and long silences. He always commented on the fresh air, fruits in his garden, and the three mountains that made up our panorama at the Inn. "Look, Currim, Look at these mountains. Here we have Diran, Rakaposhi and Golden Peak. Allah has given us fresh air, apricots, what else can you ask for? We have everything Currim". He would say these sentences every time with a quiet sense of pride, affirmation and gratitude.

As a child, he was the first to wake up, and peek from his tent, to see the first light of the morning on the high mountains. He remembers those days fondly. I imagine a white tent and uncle as a young boy. I imagine his round face as a young boy, his cheek washed in the morning's first light. His round face, partially hidden, looking east. A face and a tent that is still with me. Today, he says he is eighty and his heart is still not full from looking at these sunsets everyday. All of this sounds soft and gentle in his Urdu.

He experiences the evening, the light as it moves. His eyes are small and narrow, absorbed by this light. He waits, but it is not so much waiting, but a kind of living through of the evening's light. The sky, the clouds, washed with a thousand apricots. The last light on his golden mountain, and the sky starts to loose colour.

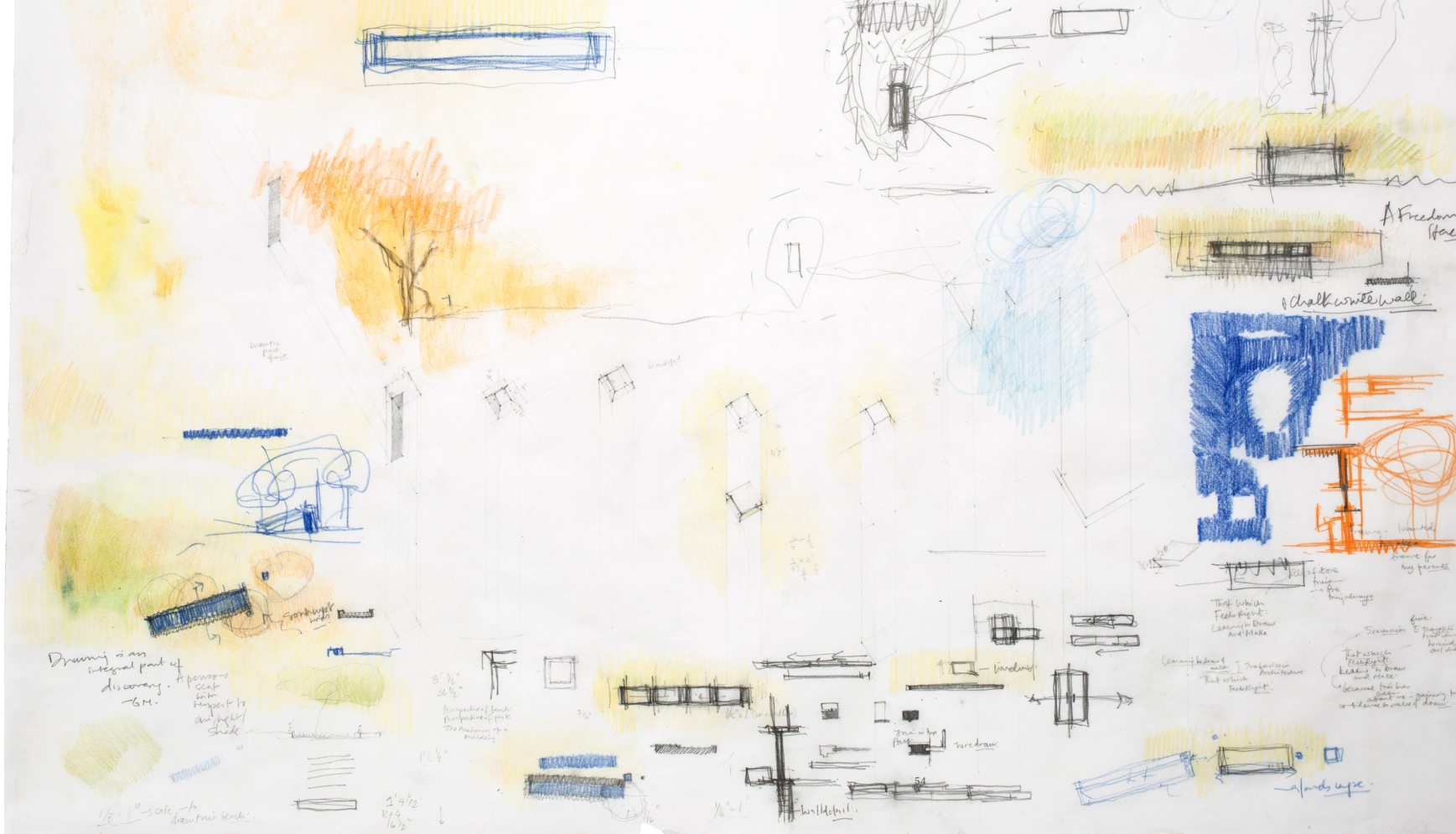


Fig 2.2 A drawing showing different fields of orange against water fountains, fields of apricots, windows to view an apricot orchard, and a fountain for a garden. In the middle are initial drawings of the post of the bench. I had just begun to draw axonometrics with this drawing. I remember the thrill of drawing these axonometrics - the wonderful knowledge of the three dimensional nature of the post. On the far right, the sketch in blue is a sketch showing voids and massed area of Louis Kahn's IIM in Ahmedabad. The way in which Louis Kahn introduces voids in a large brick building became the precedent for the indent at the bottom of the box, which will be discussed later.



Fig 2.3 Apricots

I began to work on a box for dried apricots. As I drew initial drawings for the box, I thought, what does it mean to give dried apricots as a gift? What does it mean to create a container for good health? In an initial drawing, the lid sat flush against the walls. Andrew Levitt, my supervisor, suggested that a slight indent between the lid and the walls would serve as an invitation. We must be generous.

I moved between drawing the lid in section and making it. I worked on the profile of the lid in relation to the proportion of the walls. Alongside the indent, I began to draw Louis Kahn's handrail for the Kimbell Art Museum. The way in which one's hand touches the curl of Kahn's handrail is similar to the way in which one's finger would touch the indent of the box.

Initially I had drawn the four corners of the box using a lap joint. But as I spent more time in the wood shop surrounded by miter joints - I started to imagine the quiet presence of miter joints for the box. I imagined a field of apricots, a plane of apricots against four miter joints and a lid profile that included half a curve and a shoulder. There is something peaceful about four miter joints, accompanied by a lid that would form an indentation as a result of a specific router set-up.



Fig 2.4 An initial cut for the lid.

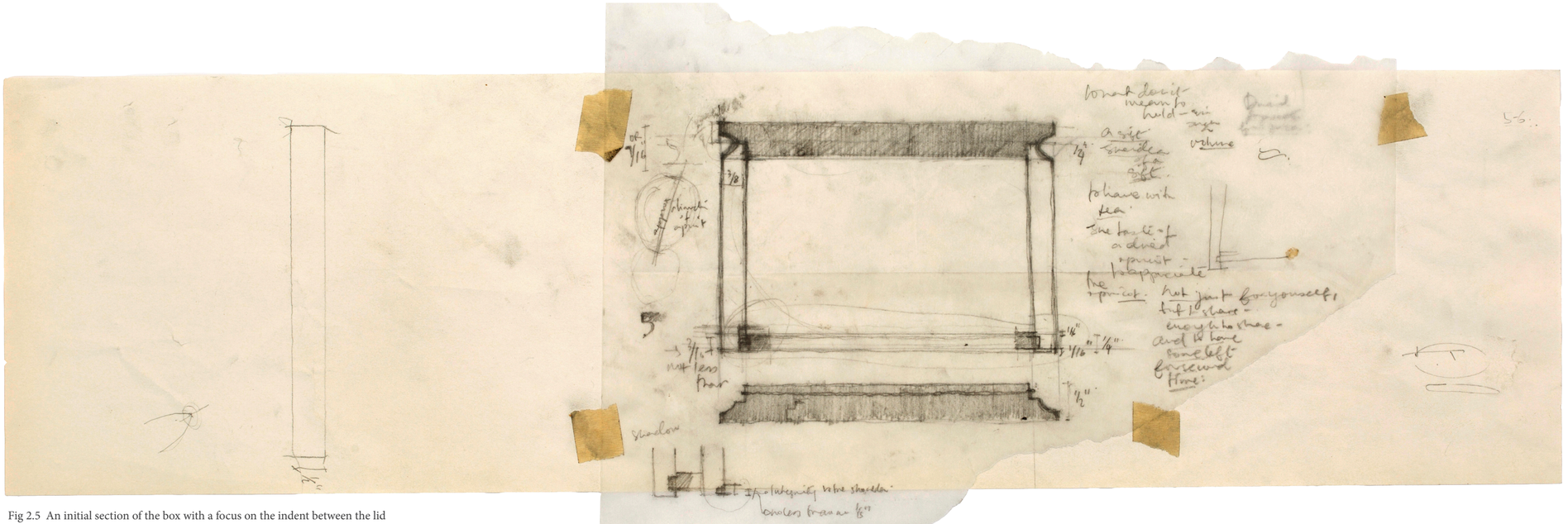


Fig 2.5 An initial section of the box with a focus on the indent between the lid and the walls. There was a sense of what the curve would be like, but here the proportion of the curve seemed too large.

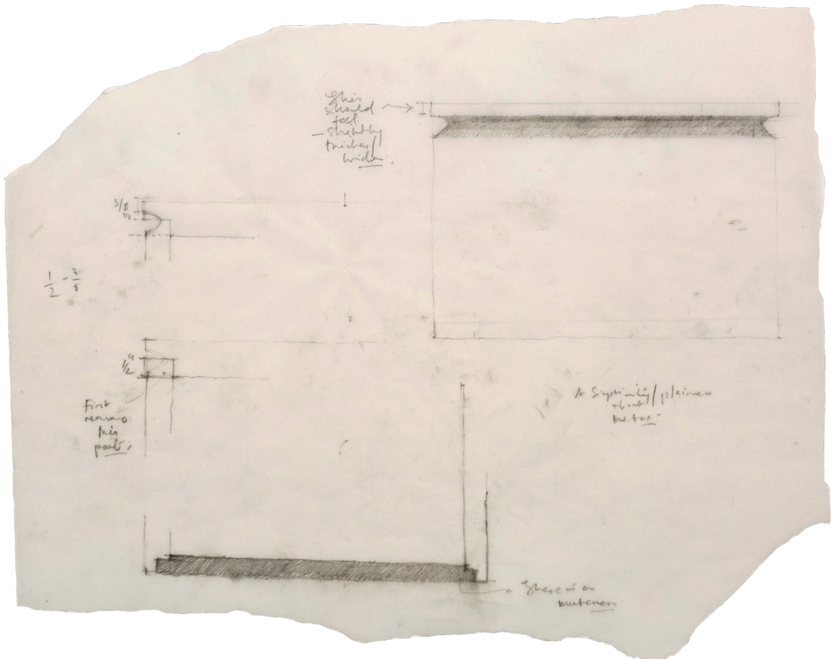


Fig 2.6 Another exploration of the indent, along with the base of the box. Here, I begin to add dimensions.

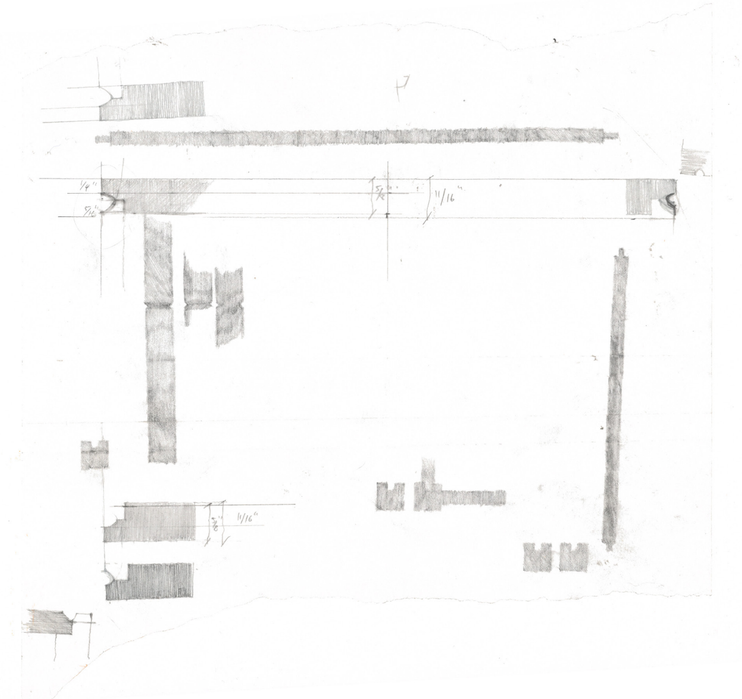


Fig 2.7 Explorations for the curve of the box. Drawings of the rail and the post of the bench in plan, and the ornamental detail in elevation.



Fig 2.8 Young boys playing cricket in the evening.

There was something about this playing field. Every evening, the field would be filled with children and teenagers playing sports. Surrounded by the mountains with snow capped Ultar looming in the background, and the valley of Hunza everywhere, here was a field where everyone played. There were mountains everywhere. A field, a large field, a large empty place for play, surrounded, above, and below, in section, around and everywhere in plan, by poplars and stone houses. Poplars, and in the evening light, as the clouds are filled with the sun's colours. Tall, shimmering trees, everything becoming the evening. A valley below and a valley above. A place with poplars above, a place with poplars below, and all these poplars, and fields of apricots. I think it was the season of apricots. A clearing for everyone to play. Field to valley, field to poplars, poplars to sky, all of this to the mountains, and sky to mountain, the young here played cricket, a local version of volleyball and football. Young Hunzais taking care of their bodies, in this place surrounded by the mountains. I thought that there was something about that. Rakaposhi loomed in the background too - its tip shone in the evening's light. Everyone played. People taking care of their bodies, with the earth, on the earth, with earth made up of poplars, the body of the earth, and glaciers beyond. In this place made up of large stones, glaciers, this beautiful valley, the evening light on Rakaposhi's tip, and a field for play, for good health, play for the body. I think these are good things.

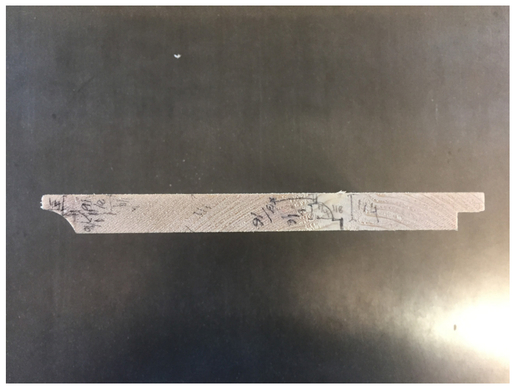


Fig 2.9 An initial exploration of the lid showing a curved cut (the photo on a previous page is a zoomed-in version of this piece) in relation to a shoulder cut. At this stage, I was trying to understand the proportion of different cuts.



Fig 2.10 Manzoor, our cook at the Inn, would often bring me a bowl of apricots.



Fig 2.11 The shoulder on the right is further routered to create an indent for the lid.



Fig 2.12 The cut with the curve and shoulder is placed against a wall with a curved profile to start to see what the meeting of the two could be like.

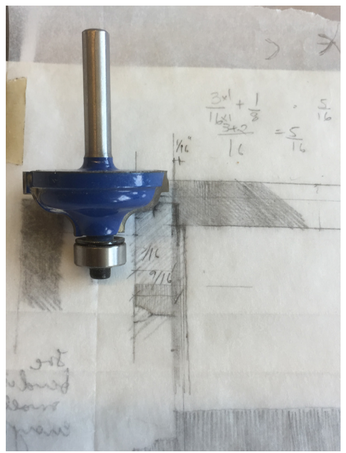


Fig 2.13 After playing with different router bits, I decided to use the router bit shown in the photo above. This bit allowed me to create a profile that felt proportionate in relation to the way in which I wanted one to open a box of dried apricots.

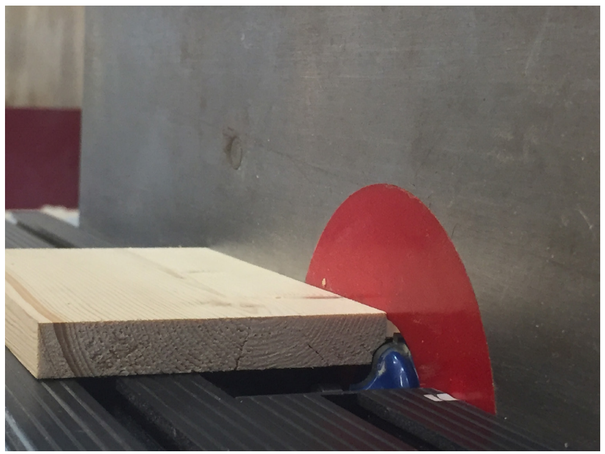


Fig 2.14 The touching of the router bit and a wall piece.

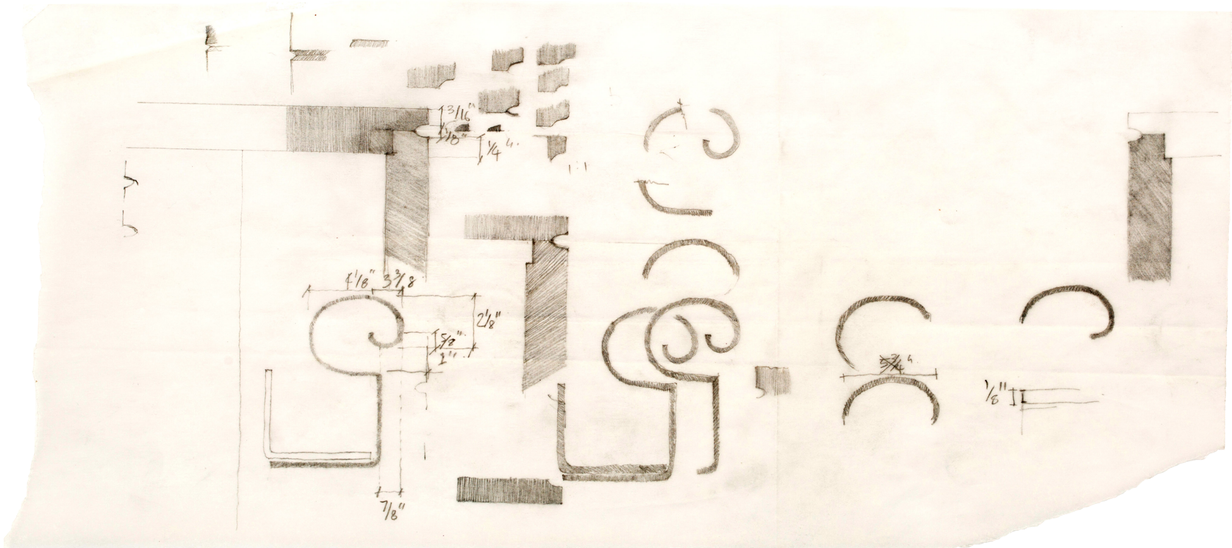


Fig 2.15 The upper left of this drawing shows measurements for the curve. Surrounding it are different lid profiles. Also, present, are sketches of Louis Kahn's handrail for the Kimbell Art Museum.

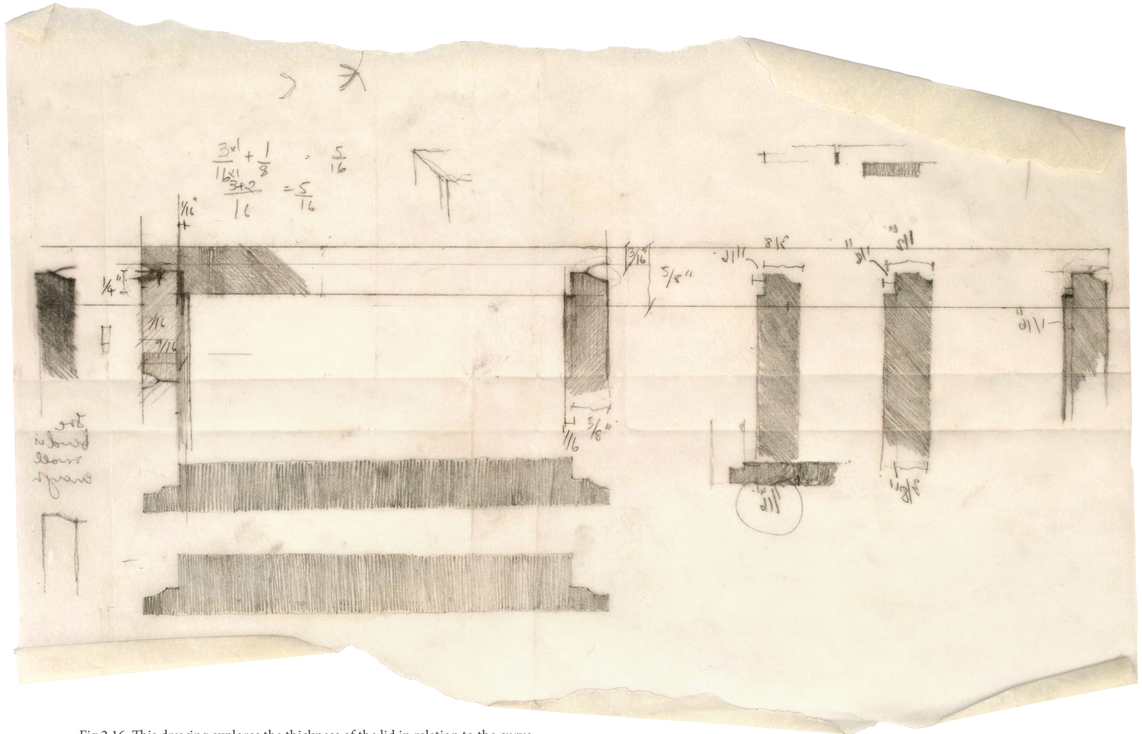


Fig 2.16 This drawing explores the thickness of the lid in relation to the curve. Playing with different lid profiles affected the dimensions of the shoulder. The weight of the lid, the curve of the indent and the shoulder, acted in harmony.

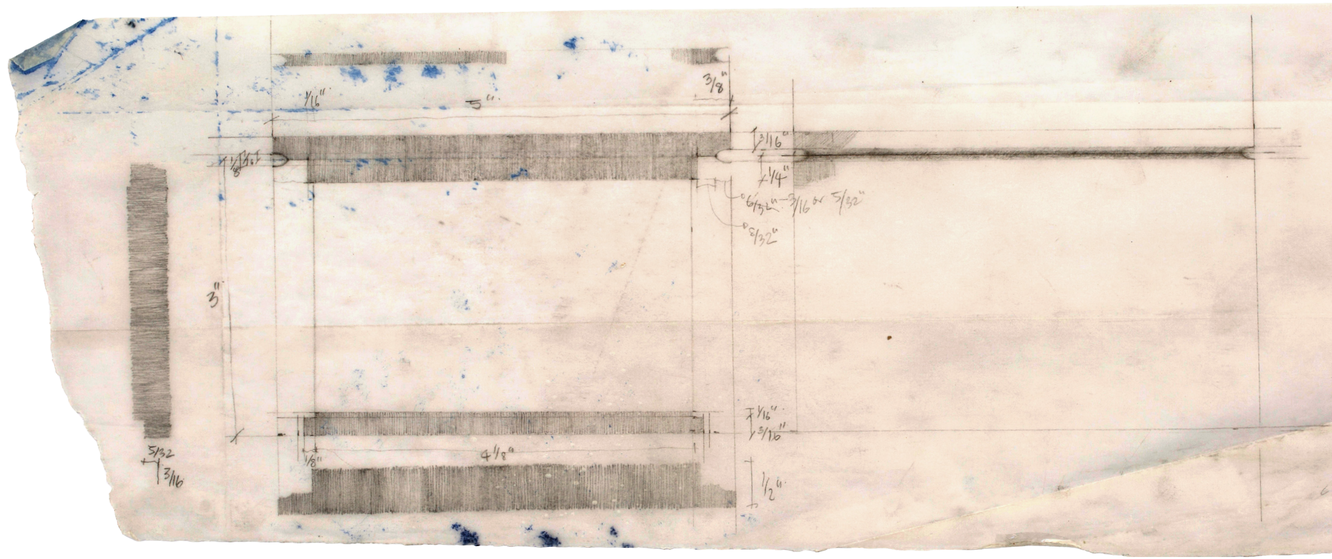


Fig 2.17 A drawing showing the lid in relation to the base and the walls of the box.



Fig 2.18 Dried apricots on a section.



Fig 2.19 Dried apricots against the miter joint in plan. The shaded wall consists of three parts - the curve on the outside, the flat part in the middle and the shoulder for the lid on the inside.



Fig 2.20 Dried apricots with the plan of the box, and a mock-up of the wall.



Fig 2.21 Dried apricots and the coming together of the miter joint.

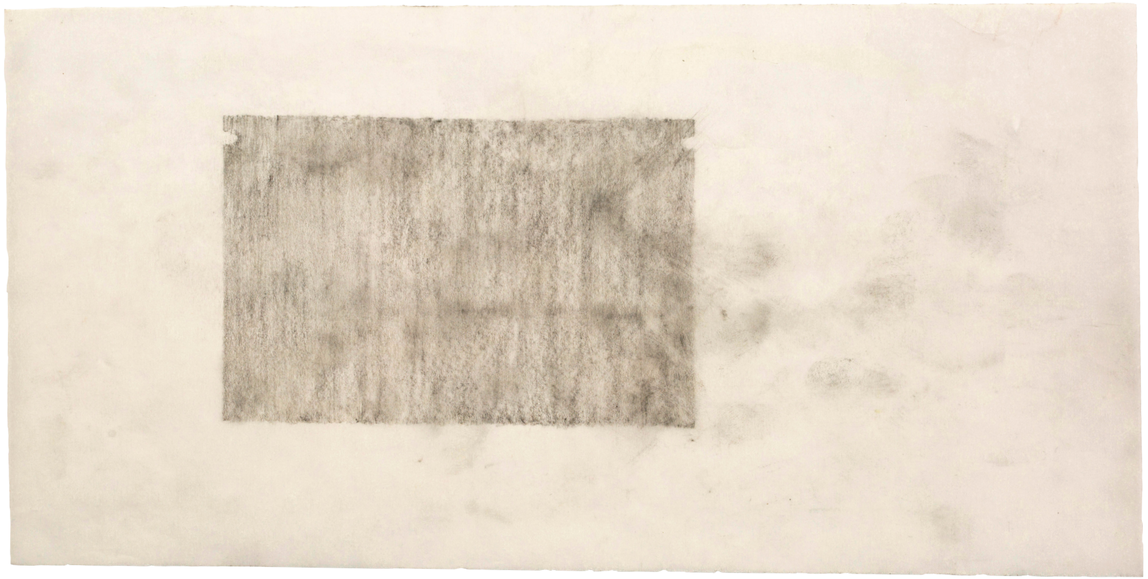
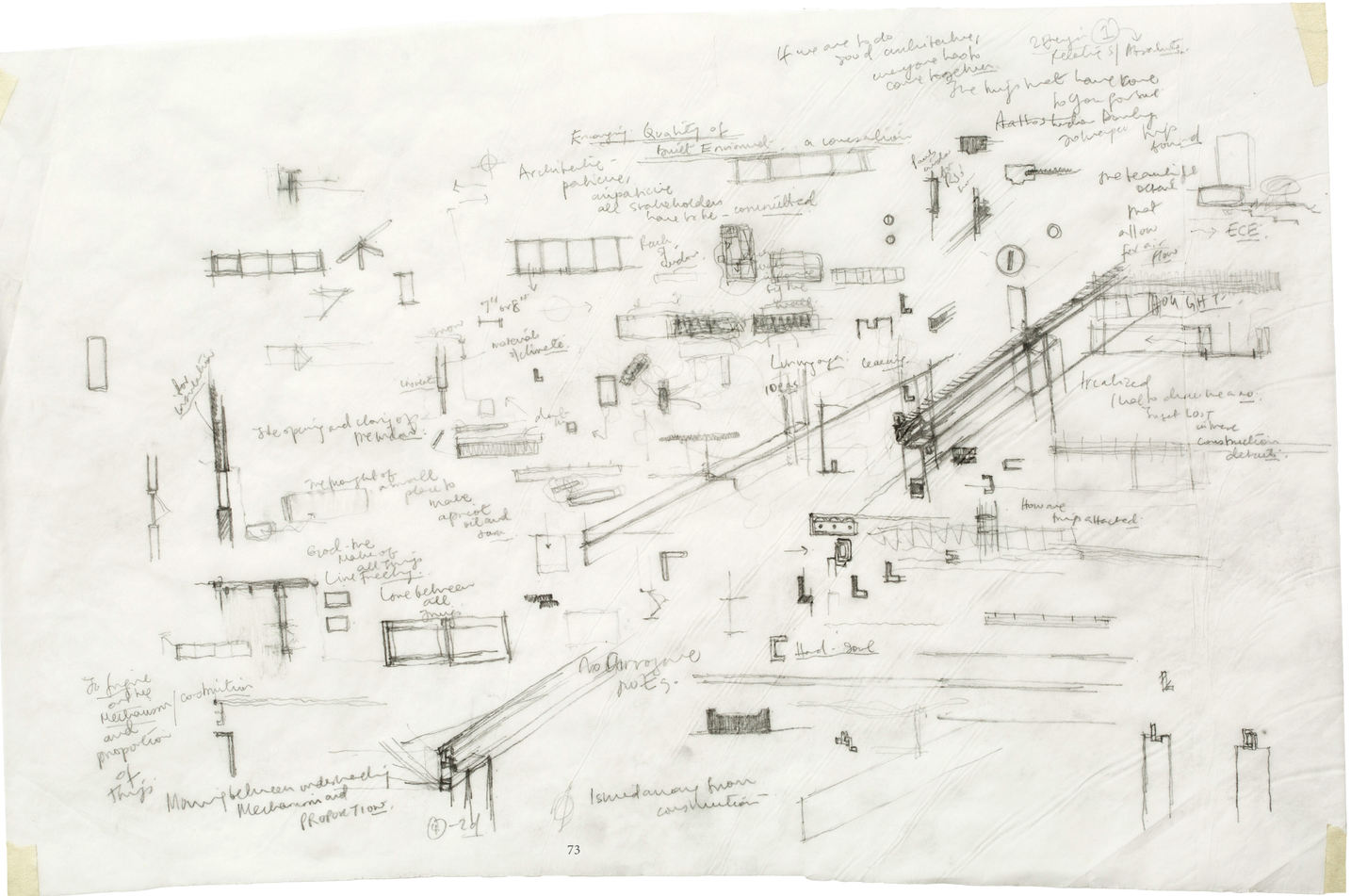


Fig 2.22 Here, the box has a dimension of 5 by 5 inches. I felt that it had be a smaller, and an indent at the base of the box was required to lift it off the ground in a slight way.



The way in which a user would open the box, often led me to think about the way my friend, Timothy Wat, describes the opening of a window in Peter Zumthor's senior's home in Chur. Wat in his thesis entitled "Moments of Spiritual Engagement in Architecture", describes the opening of the window as providing an elderly person with the ability to comfortably open a large window.[3] This as a noble act (on part of the architect).

The window is held by a metal rail both above and below, and has a slender handle. I tried to understand the workings of the rail, and the proportions of the window frame. I found an image of the window open in Peter Zumthor's recent monograph, and consistently traced over this image. Though I was never able to draw the whole window with all its parts, I tried to draw all the parts separately.

The proportions of the larch for the window frame, the workings of the rail (that allow for easy sliding), the proportion of the blocks of tufa (the way in which all of these touch) - all work together to create a pleasant and easy experience for an elderly person to experience the mountains beyond. In his write-up about the project, Zumthor says that "those who want to live there, must apply years ahead".[4]

The nobility in both the proportions of the different pieces and the design (easy sliding and views generously framed; framed in the right way) of this experience is inseparable from the opening of the box. They were always together.

Fig 2.23 A drawing showing different parts of Zumthor's window. The rail along which the window slides open became a prime area of study.



Fig 2.24 Rakaposhi, wheatfields and cherry trees.

Fig 2.25 The sliding of the window in relation to the proportions of the larch frame.



Fig 2.26 Pomegranate trees

Fig 2.27 This drawing is an exploration of the bottom rail of the top window.



Fig 2.28 Pomegranate flowers

I cut a whole lid (5 by 5 inches). It was nice to see the curved profile and shoulder run all around the border. Every time I thought about the lid, I thought about the taste of honey. The taste of honey is the colour of light filled pomegranates, the falling of apricots, and the young playing. It is the sweetness that fills nobility. It is the sweetness of some people, of my friend Ghazanfar, and his father, Sadruddin uncle. Their affection. Their blessings. The silent care of my friend Aleya, of her always asking “How are you?”. God is Most-Loving.

After I had received a bag of dried apricots from Hunza, I realized that the box had to be smaller in scale. I studied ash in the afternoon sun, dried apricots against the ash, and decided that the box would be made using ash. As I shortened the box, my colleague Maryia Sakharevich helped me understand that an indent was required for the way it touched a surface. A profile for the base was required.

The relationship between the proportion of the curve, the section of the wall, and the seating of the lid on the shoulder all worked together. The box was brought to a square of 4 3/8 inches. This proportion would hold enough apricots, so that the gift can be enjoyed.

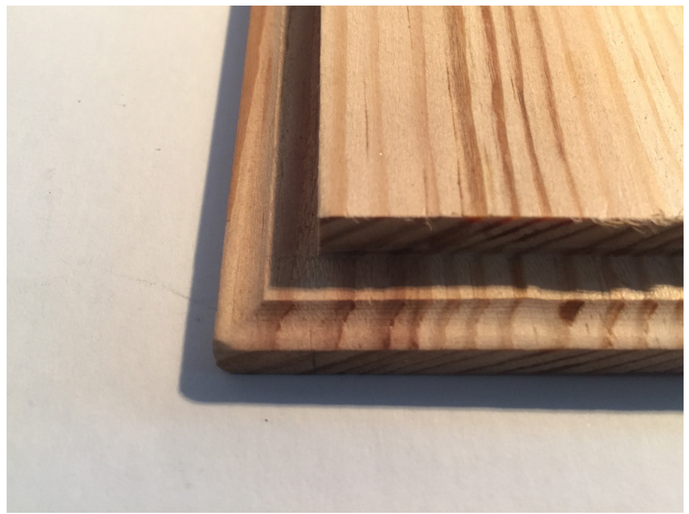


Fig 2.29 As I cut and photographed this mock-up for the lid, I kept on thinking about pomegranate flowers, the taste of honey, and the love of friends. The routered curve that forms the indent is lovely.



Fig 2.30 Pomegranate flowers



Fig 2.31 Dried apricots from Hunza.

Fig 2.32 A smaller proportion for the box. Here, the inner experience of the box as a field of yellow, as a square, is drawn again and again. In the section is also included an indent at the bottom. Long bodies of water surround the drawing. An old drawing of the elevation of the bench with the yellow light of Borith Lake.



Fig 2.33 Here, playing with different lid profiles.

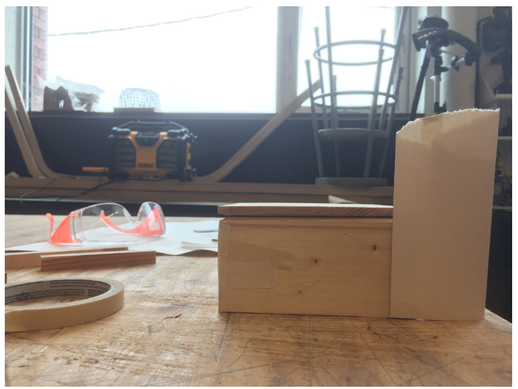


Fig 2.34 The 5 by 5 inch box is made smaller.



Fig 2.35 The table saw is tilted to cut the walls. Cutting miters is intimidating and not easy.

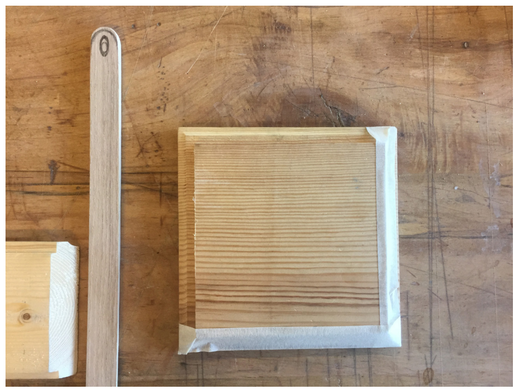


Fig 2.36 Here, the cut of the wall, the stick and lid sit together.

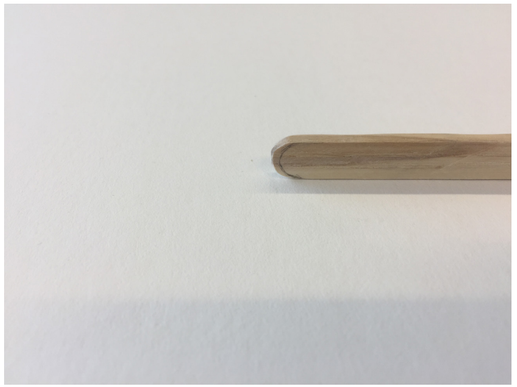


Fig 2.37 One of the initial end profiles of a stick to prop a window open.

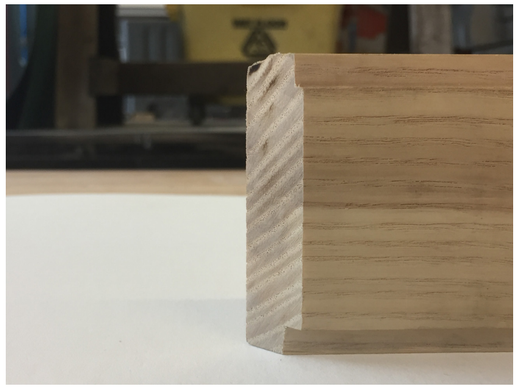


Fig 2.38 The wall for the box. The curved indent at the bottom had yet to be routered.



Fig 2.39 Dried apricots against ash on a cloudy day.

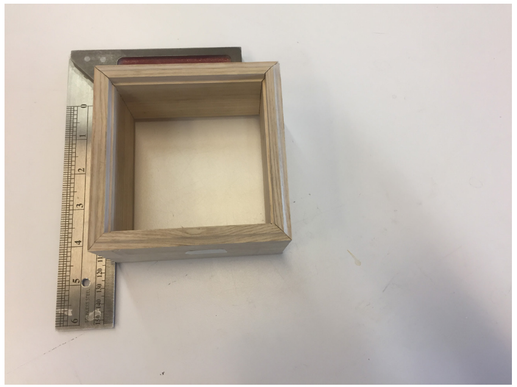


Fig 2.40 The walls are brought together. I realized I could not complete the box - not because I did not have the time. I could not complete it because I realized I don't have the ability to make something in an accurate way.

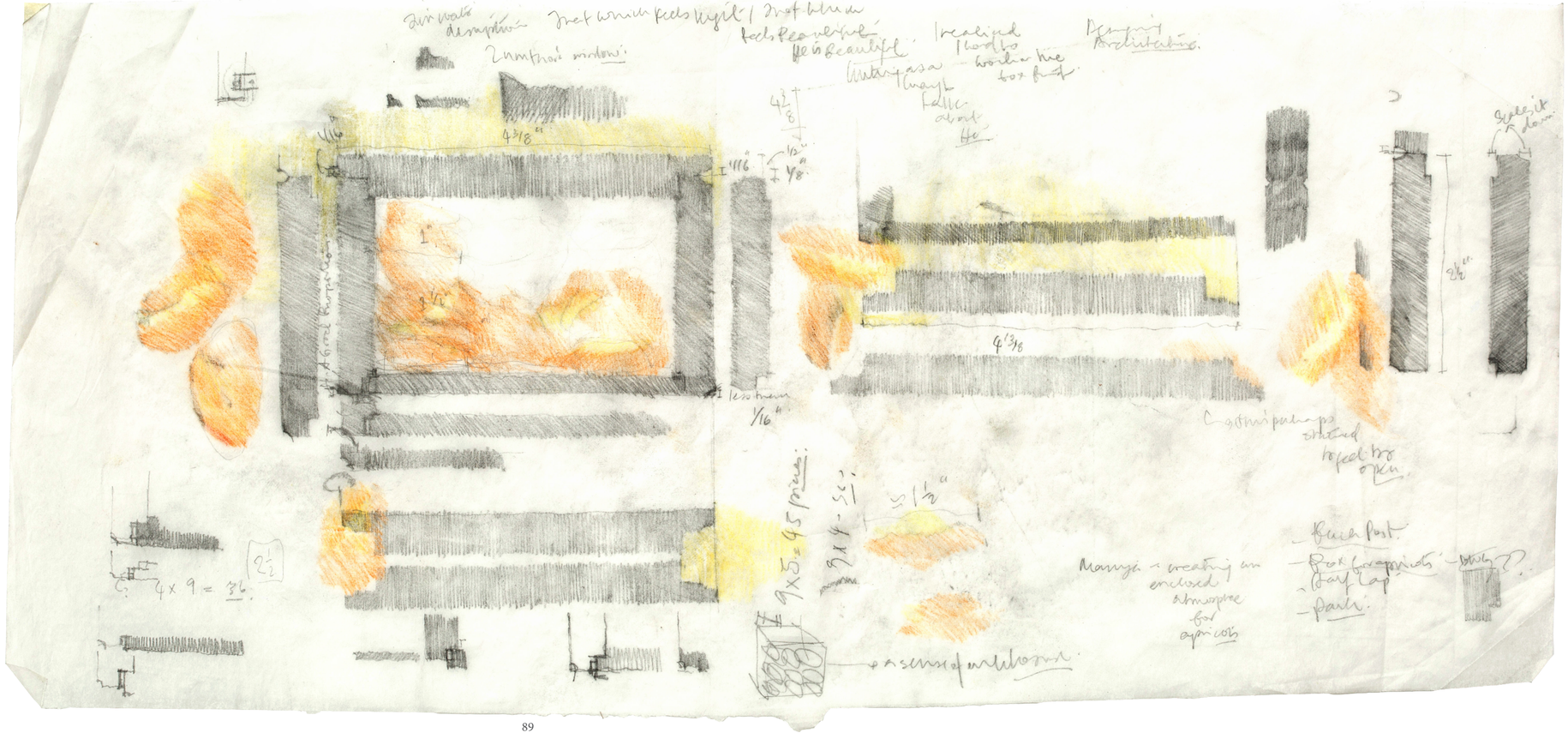


Fig 2.41 This section of the box felt serene. Here was a proportion that worked.



Fig 2.42 A morning at Borith lake.

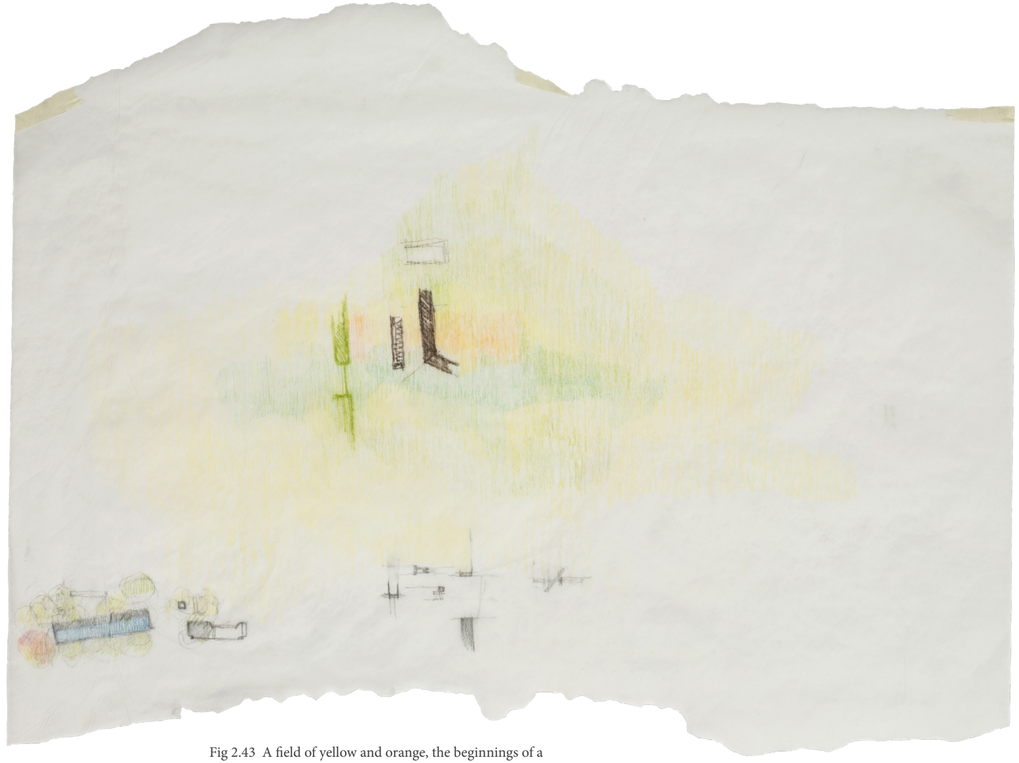


Fig 2.43 A field of yellow and orange, the beginnings of a window section inset in a thick wall and a shade garden below.

An orange, red flower. A full fruit emerges from within the flower. The flower becomes the fruit. Close to the tree, with small leaves and flowers on my face. I was told that the fruit blooms from inside the flower. In the afternoon light, the leaves and flowers of this tree moved in the air, in the cold, warm air of glaciers. The air that moves between mountains. The air touching this. When air and light become one.

At the centre of this, all of this, Is. A kind of process. At the center of this mountain experience, this mountain atmosphere, is an unsayable freshness. I sometimes miss it, I sometimes long for it, sometimes it escapes me, and at most times it is with me.

Here, the petals move, shiver slightly, like the leaves of the surrounding poplar trees. Except that these feel lighter and softer on your fingers. Fingers and petals, together. This kind of Freshness, where things grow from, is a good thing. Yes, there are good things. To speak of this kind of alignment is also not enough. I think we are moving towards something.

The flower will become a fruit. The flower will lovingly give way to its fruit. The lightness of the flower becomes the skin, and then a full seeded body of a handsome fruit.

Here, in this moment of deep wonder, against Rakaposhi, and distant wheat fields, there is the coming of a fruit. This fruit, full of red seeds, full with its skin thick and red, soft and deep, a deep blue, with traces of a distant yellow, a kind of staining - in our hands.

Here, knowing that a flower becomes a fruit, the slight crisp wind of an afternoon, the light that touched everything - all of this knowledge, all at once.

That a crown would emerge from a flower is a beautiful thing.

WINDOWS FOR AN APRICOT ORCHARD

When Andrew suggested that I design a window to view an orchard, I imagined four windows to view an apricot orchard. I drew four windows against a field of orange, yellow and green, again and again. Every time I drew the windows, I knew of a specific proportion that I was trying to achieve for this particular orchard. I imagined the windows to be a part of a small study, with a restroom, a single bed, and a long desk. The site for the four windows consisted of the orchard, a lake like Borith Lake, mountains like the Passu Cathedrals, and a glacier on the other side of the cathedrals.

I consistently looked at a window that Studio Mumbai had designed and constructed for the kitchen of the Copper House in Chondi, India. I was drawn to the way in which the window opened – the way in which the user was engaged in opening the window. Like an awning window, the window opened into a garden of trees and plants using the mechanism of a butt hinge. A user interacts with the surrounding landscape in a particular way, due to the possibility that a butt hinge provides to an architect. A wooden stick is attached to the window using a smaller butt hinge (a hinge with a square profile shown in a drawing later). When the window is opened, the stick can be adjusted along two indents that are part of the frame.



Fig 3.1 A garden with small buildings and windows. We rested here before we started our trek across the Bualtar Glacier.



Fig 3.2 The top right shows two buildings plastered in a lime finish (one is a study, and the long building is a place to make apricot jam). In the middle, a pathway for the apricot orchard ultimately leads to the study. This pathway is similar to the pathway that lead to the bench at the Altit Fort gardens.



Fig 3.4 Apricots drying.

Fig 3.3 The blue of the lake merges with the orange and yellow of the orchard. I drew this sectional relationship again and again. The relationship between the study, the orchard, the lake and the mountains was of a proportion - the proportion of peaceful rest that comes from the remembrance of our Lord.



Fig 3.5 Here in my office, I played with the height of the blinds to understand the proportion of the window.



Fig 3.6 The window opens with a stick. I tried to understand how a butt hinge is made; and the way of its rotation. I imagined the butt hinge, its rotation, and an opened window against Borith Lake. The extension on the bottom rail allows passage for rainwater.



Fig 3.7 I drew the window several times in AutoCAD. Each time I printed a proportion, I drew on top of it. The proportion of the frame, both in elevation and section, in relation to the opening, along with the spacing in between the windows had to feel right.

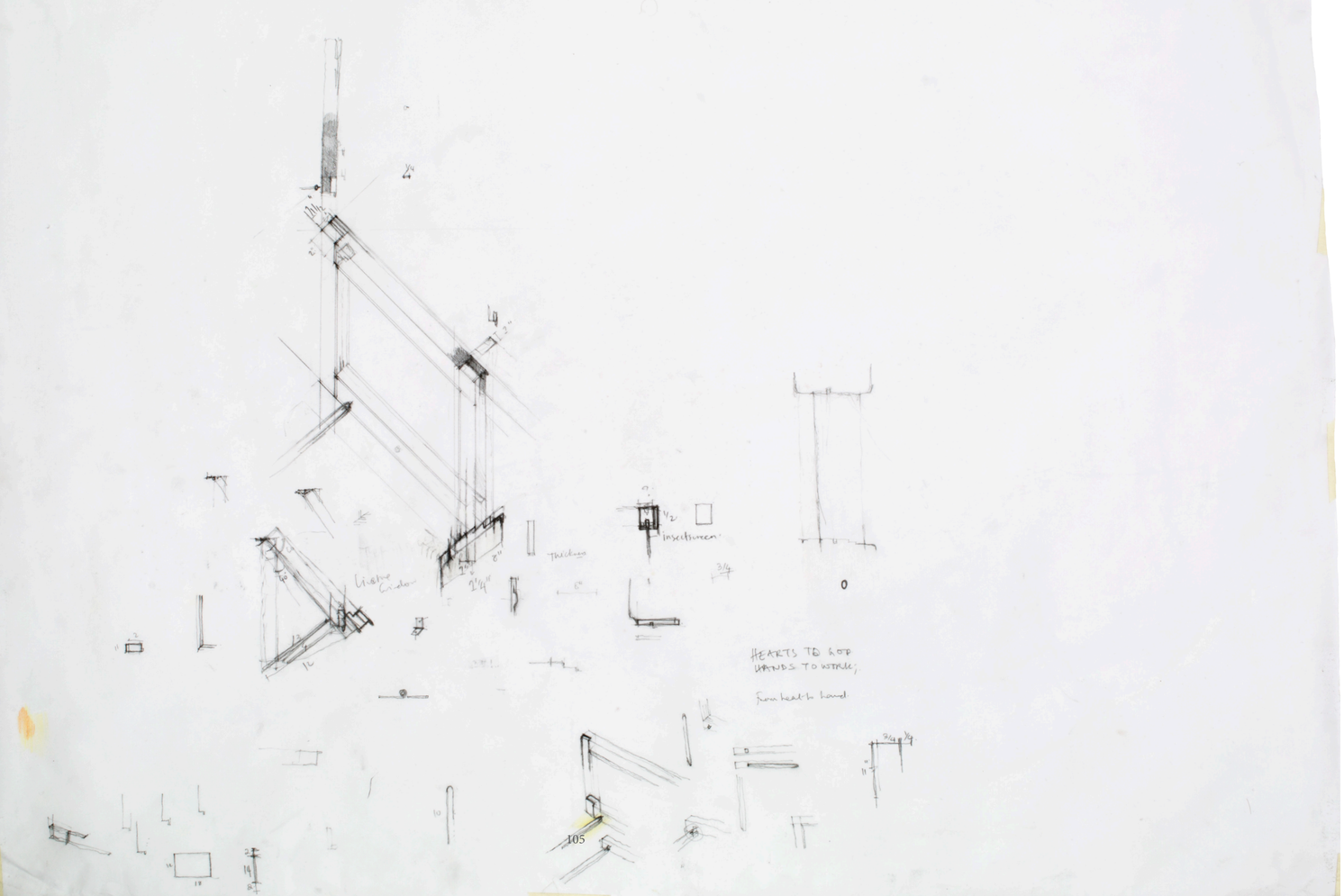




Fig 3.9 The shade of cherry trees in the orchard shown earlier.

Fig 3.8 I drew an axonometric to study the proportion of the frame and its relation to the thickness of the lime plastered wall. The frame moves between a thickness of 1 1/2 and 1 1/4 inches. Here, the frame is made of lap joints. The section of the window inset in a thick wall, along with the stick, made a harmonious combination.

I imagined an elderly woman sitting on the ground, cross legged, making sticks under one of the apricot trees in the orchard. She sands thin pieces of white poplar - these sticks are used to prop the windows open. I drew the stick of the window of the Copper House, attached to the frame using a butt hinge, and I drew our stick - the stick the woman was making - with a slight circular profile on the top and a slanted bottom. The stick would be approximately 10 1/2 inches long, 3/16 inch thick and 3/8 inch wide.

Sanding the stick was most enjoyable, especially by the window in the wood shop at our school. I first sanded the stick using 120 grit sandpaper. I directly moved to 600 grit sandpaper. Sanding with 600 grit sandpaper is like large round apricots washed in cold water.

The stick is attached to the window using a hook. When the window is open, the rounded edge of the stick touches the inner surface of the hook - almost as if stick and hook are one in pressure. I imagine the air and light from the orchard touching the slight extension of the bottom frame and the slanted bottom of the stick - as it makes its way into the room. When closed, the stick dangles, resting slightly, on the sill.

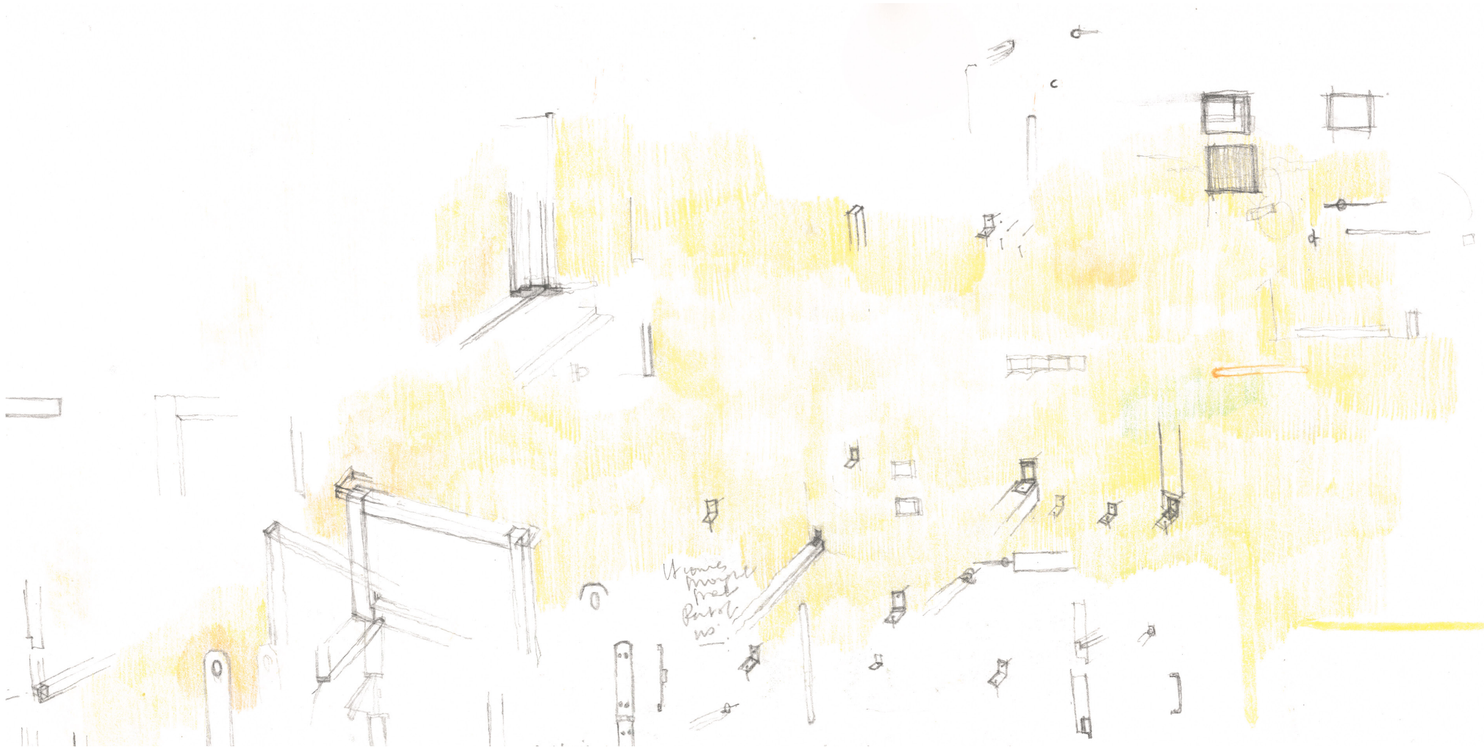


Fig 3.10 Studio Mumbai uses a smaller, square shaped hinge for the stick. The way in which small pieces touch each other can influence the experience of a whole thing.

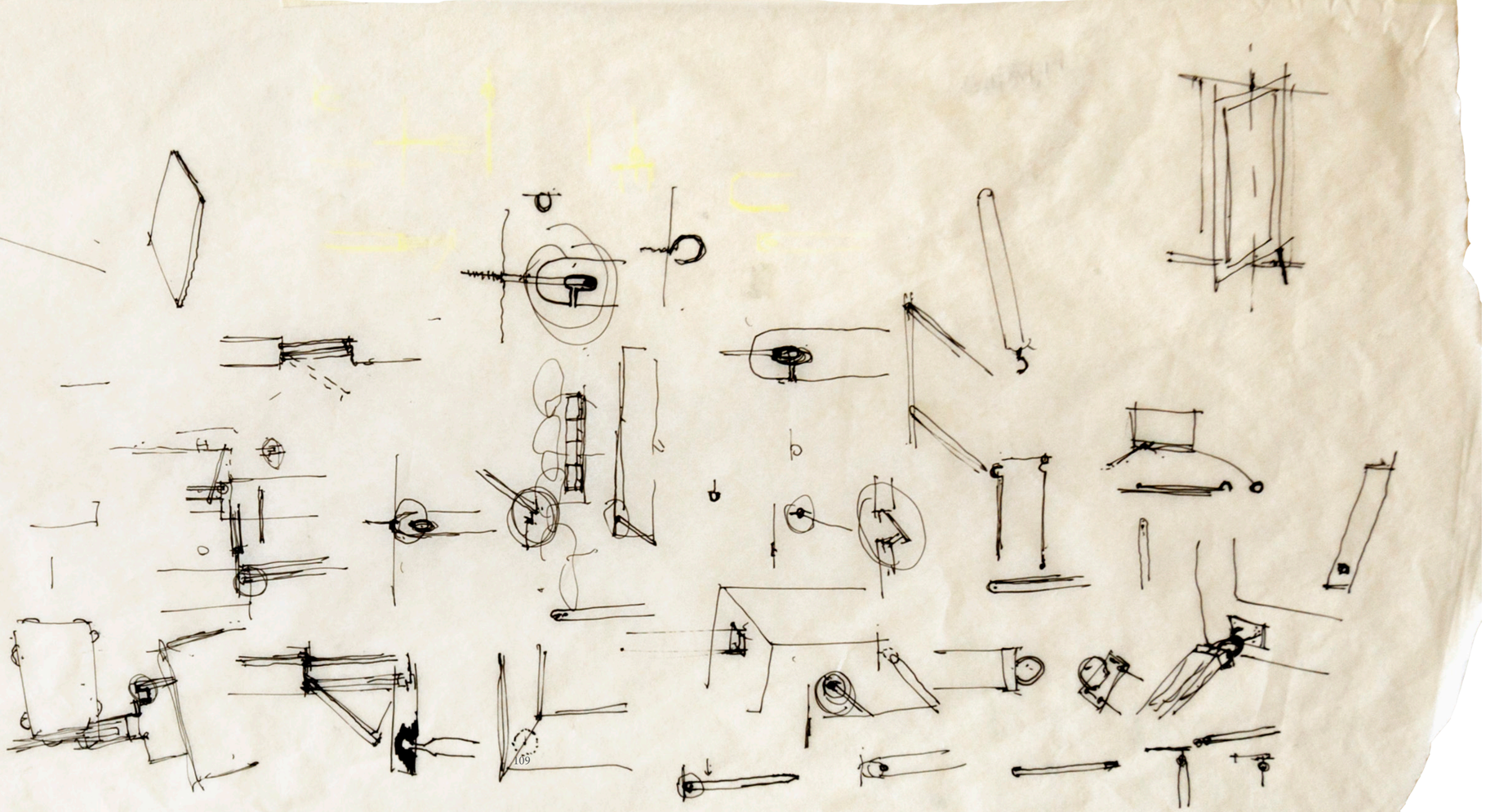




Fig 3.12 The first batch of sanded sticks. Here, the hole of the stick was designed as a hook, which did not work.

Fig 3.11 My friend Jaliya Fonseka helped me detail the stick. He patiently explained to me how this could work. We explored different ways for a stick to be attached to the frame.



Fig 3.13 The second set of sticks. In this set, I began to play with the thickness and width of the stick. The sticks began to appear too thick. The last stick, on the far right came closer to the proportion that was on my mind.

Fig 3.14 A drawing showing the section of the window frame, the thickness of the wall (I moved between 12 and 13 inches), and pomegranate flowers.



Fig 3.15 Sanding pieces of white poplar - the final set of sticks.



Fig 3.16 Sanding the end of the stick (with 600 grit sandpaper) that will sit against one of the indents. The bottom of the stick, in section, would have a slight curve.



Fig 3.17 I had never used a drill bit in this kind of way. I had been intimidated by the machine for a long time. A machine that can be gradually brought down to make a hole in a stick is a good invention. A machine can make a hole.



Fig 3.18 Sanding the hole for one of the sticks.

Rakaposhi was the mountain that had caught my attention on the day of my arrival in Hunza. Its peak, sharp and graceful, spread its arms. It had been with me, outside my window, during my days in Nasirabad. It had been with me, during my days at the Old Hunza Inn. It had become part my everyday activities, washing kurtas, reading, eating meals. It was the backdrop to all my activities. To my trips, along the Karakoram Highway between Nasirabaad and Karimabad, between Nasirabad and Gilgit. It had a kind of presence outside, from my screened window. It had a kind of presence outside, with the wheat fields in front, and it had a kind of presence from the verandah at the Old Hunza Inn (in each case it stood, with a different setting, but always framing us, framing me). It was a mountain that was always with me. There were days when its peak was covered in mist and then there were days when it shone, wet. The thought of trekking to its base camp seemed like a far fetched idea and an almost impossible pursuit. It was the mountain that had enamoured Khizer since his arrival. It had captured the hearts of many. Khizer always spoke of the mountain with adoration, and was determined on trekking to its basecamp during this trip. His love and motivation made us all want to do it. In the midst of some conversations, he would suddenly smile, and excitedly comment on its graceful and sharp arms. It had been with us for a while.



Fig 3.19 Rakaposhi

I made two proportions - almost in a way returning to the axonometric shown earlier. In the first study, the width of the frame, 1 1/2 inches, felt too thick. The window, made of walnut, would become heavy. The weight and the proportion of the windows had to respond to the quality of the orchard. The opening in the window seemed wider than I had imagined. In the second mock-up, I created a smaller proportion that came closer to what I had imagined. I realized that the opening had to become 1/8 inch shorter.

A 1/8 inch change in the width of the opening, the 1 1/4 inches thickness of the frame, and a 1 inch spacing between each frame would allow all four windows to work in harmony.

I remember our nights in Hunza. We would often sit in the communal dining room surrounded by large insect screens. For our windows, I imagined four small insect screens placed below the user's desk. When needed, a screen can be inserted in the frame. In section, a 6 inch wide plastered white space on the inside provides a small place for books and colour pencils. The shadow of the frame and the sticks will fall on this ledge.



Fig 3.20 Drawing with masking tape, in front of me.



Fig 3.21 A quick mock up. Here the width of the frame seemed too thick given the nature of the orchard, and the way in which an open window came into contact with the orchard.



Fig 3.22 The second mock-up with a stick. The opening in this mock-up had to be reduced by 1/8 inch.

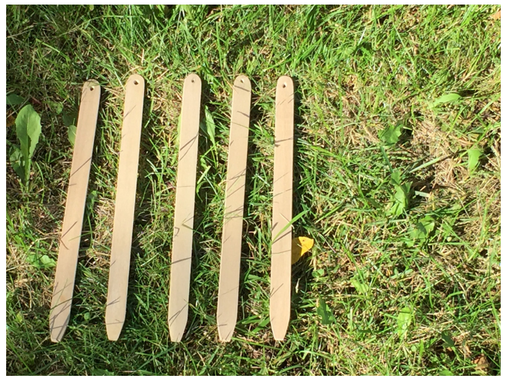


Fig 3.23 The final set of sticks.

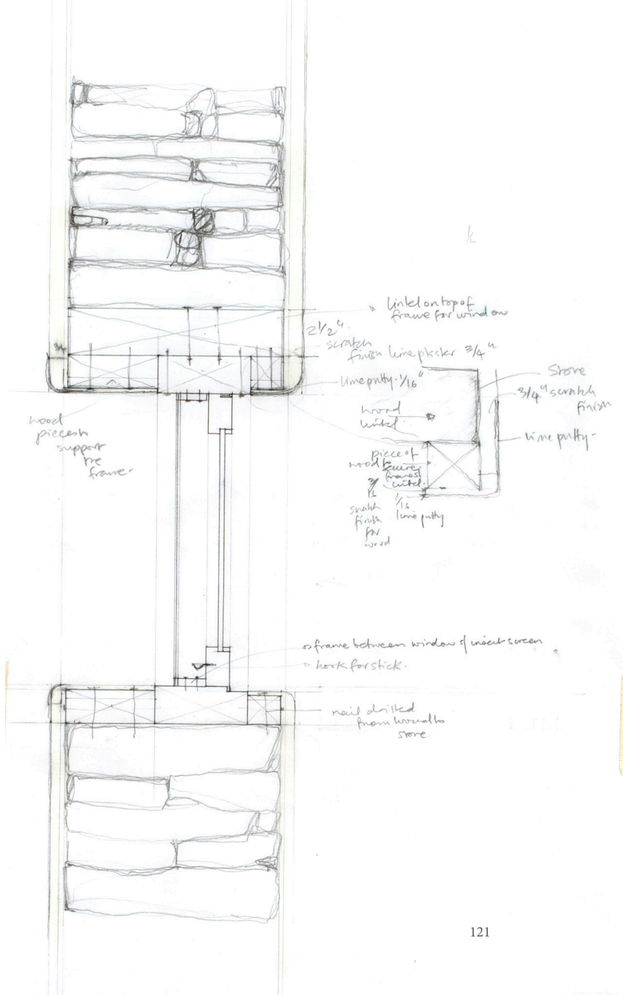
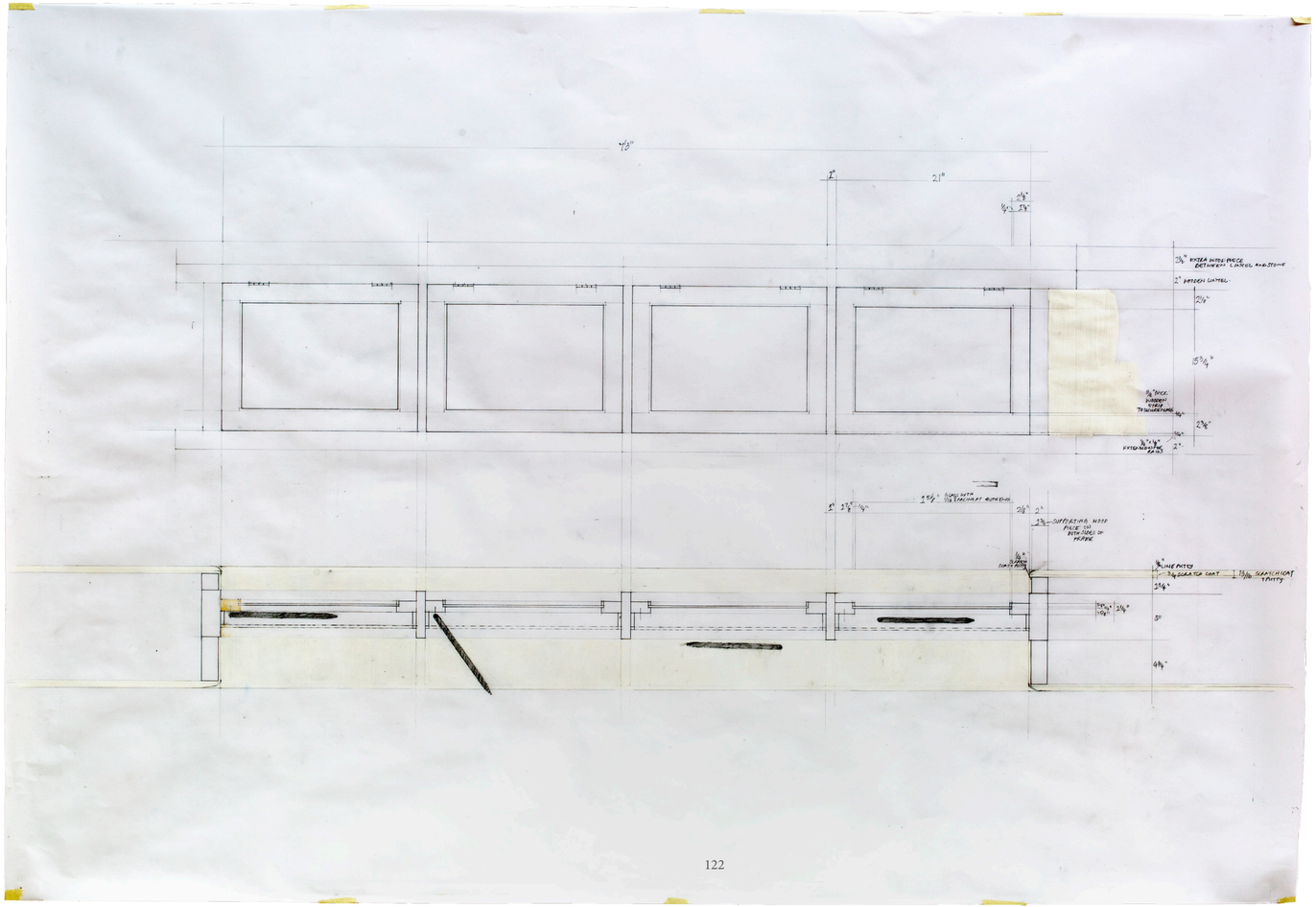


Fig 3.24 A section of the window. The lintel here is too small to hold a wall of stone. An insect screen is part of the assemblage - a screen to enjoy the air of glaciers, in the evening.

Fig 3.25 An elevation and plan of the final windows.



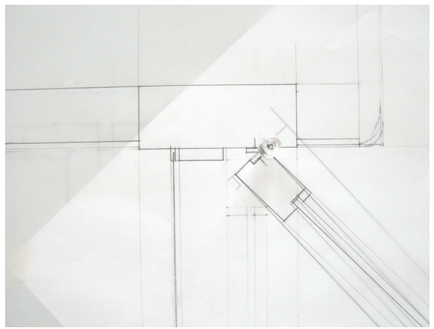


Fig 3.26 My friend Jaliya suggested that I use a pin to understand and draw the rotation. A pin is used to rotate a drawing - the very act of rotating a drawing is most beautiful.

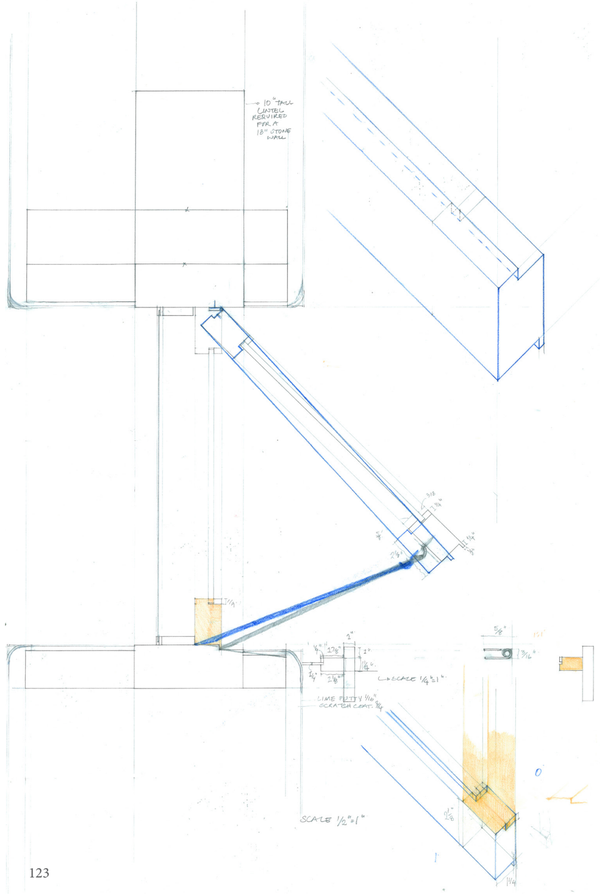




Fig 3.28 Apricots on the ground.

Fig 3.27 The window open. At the bottom is a drawing showing how the two pieces come together. A lime plaster coat of 3/4 inch will create a lovely sill.

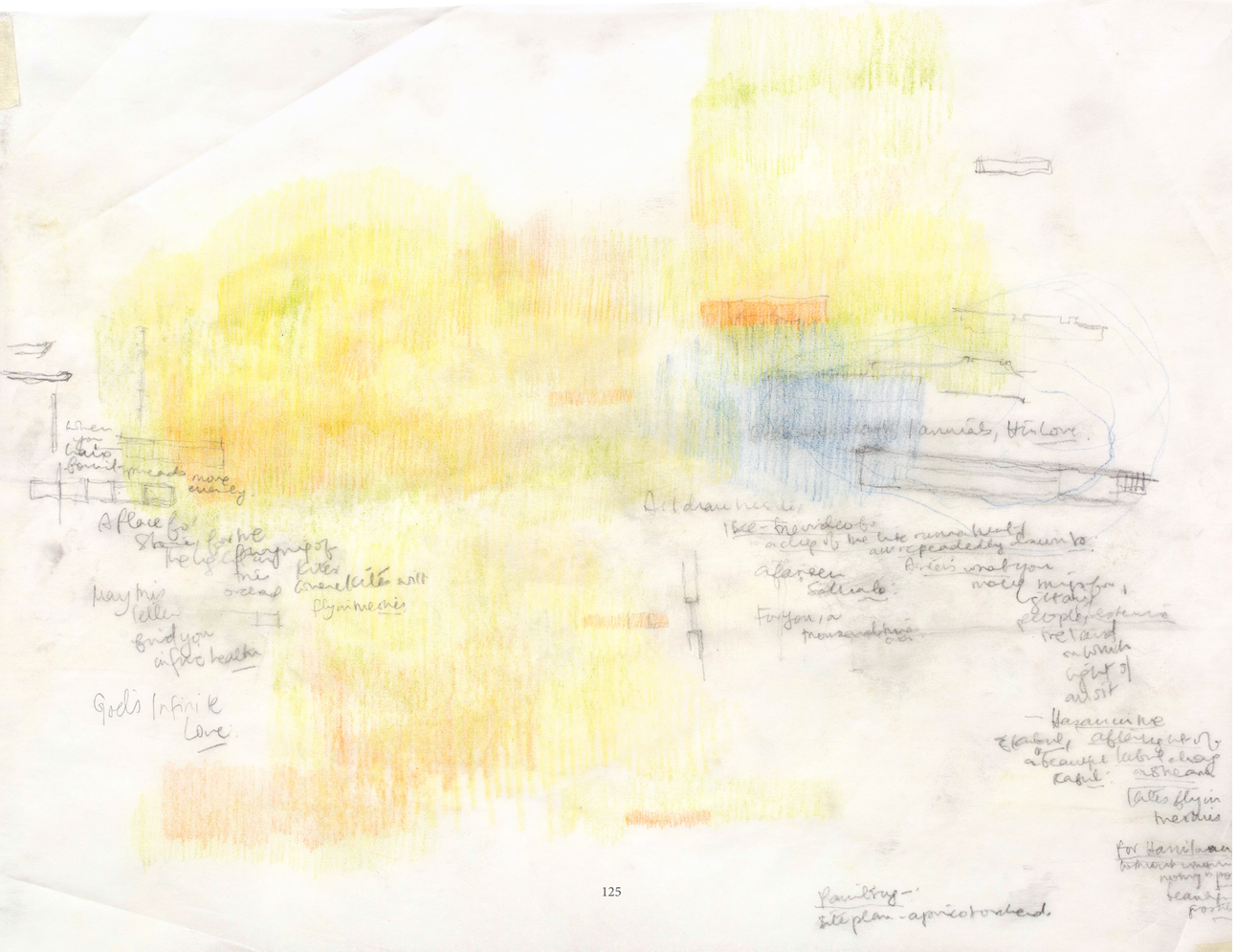




Fig 3.30 Borith Lake

Fig 3.29 Fields made up of orange, yellow and blue, and some green. These are sketches of the apricot orchard. The development of a fountain on the left in pencil.



Fig 3.31 Our night at Rakaposhi's base camp.

A silver field presented itself to us. The mountain was quietly sitting there, present with everything around it. It was part of a field, spilling slowly, spilling into glaciers and a dark blue, silver field, into smaller puddles of ice.

The glacier, glaciers, the land in front of us, glaciers beyond, everything formed the cold crust of the earth. One could hear the occasional cracking of ice, falling into something, making deep holes. Suddenly in a moment, the infinite depth of the earth's icy crust was made known, but also beyond me. A whole world of sleeping ice lay buried, below layers and layers of other sleeping ice.

The silvering of the land, made me feel, I was inside something, I had arrived on a silver floor, surrounded by silver mountains. I had come to a silver place. It had become a place. A kind of silver atmosphere. In this silver place, where the light touched and covered everything, becoming into one another, where sky, glacier and mountain came so close together. These mergers were washed in this light. All these forms and skies, became into one another. And we were made close, had come close to this forming into one another, where sky becomes part of the glacier, rising, the mountain into the sky, and spilling in the field, all washed by the moon's pink, yellow light. I experienced a kind of intimacy into and with this blending. We were together, in these relationships, becoming it. The far away white mountains, Diran and Golden Peak, seemed closer, forming the glacier, and becoming the land we stood on. The clearing I stood on. The clearing, around where all these mergers of moraine, sky, glacier and mountain happened, the land, like an opening, a slight and vast opening, for us to be washed in this light, to come close to these mergers, groans and utterances between land and sky. Everything seemed to envelope us, taking care of us that night, around, on this land, becoming moraine, glacier and sky.

The moon that night marked everything. It was there, staining the clouds around it with yellows and pinks. It was a cloudy night, and there were barely any stars to be seen. The moon and clouds played, slow but constant hide and seek. Saran's small face lit slightly by this light. He asked me how I was doing, and I told him I was well, thinking. He smiled. He said that something had been on my mind. He always had a way in. I remember that moment distinctively.

Here, there, it was the air of the clearing, of the light around the moon, of Saran, his affection for Hadiyaa, and Farzana somewhere far away. Saran had filled the air. He was content, happy to see Hadiyaa. He had stood by the fire. He played on the ice the next day. He played and happily endured the ice. The ice that burnt his feet. He played.

Our fire crackled against these happenings, utterances, and groans, against this vastness, lighting Saran and Hadiyaa's face, marking the laughter and smiles of others who danced around it.

A SHADE GARDEN FOR KARACHI



Fig 4.1 A morning around Rakaposhi's basecamp.

Glaciers had become part of my imagination for a long time. Large repositories that provide water are an immense blessing. I worked on two small dishes to drink glacial water - these thoughts merged with thoughts for a garden. The thought of a shade garden with water present in a slight way - water for both pleasure and thirst - stayed with me. The way in which water would be present in a dish is the same way in which water would be present under the shade of Amaltas (Golden Shower) and Lignum trees.

I imagined a young man drinking water from the end of a glacier. With his hands together, forming a bowl, he drinks this water with care and understanding. I wanted to make a bowl for this image. A bowl that would become a symbol for the careful use of water. As I sanded the first bowl, another bowl began to emerge in my mind. My professor, Fred Thompson, had shared a description of a small Japanese tea cup that would hold barely a sip of water. With this description in my mind, I worked on a second bowl. Here, the dip was in the middle.

Everything played lightly - the running of water, the trickling, the gushing in hidden places, melting, the breaking, amidst layers of green, blue and white. Sounds, both far and close, both real and imagined seemed to be forming a quiet place of sorts. Richard sat, perched on a rock, listening to this ice world around him, moving and creating. The Creator creating. The sublime idea of ice that is of the earth, moving was beyond my comprehension. It is believed that the Bualtar glacier moved six inches everyday. I had little understanding of speed and relativity in moments like these. What six inches meant against Richard sitting on a Rock - I could not understand. The moraine was now very far, and farther in my memory. I did not know how long it had been since we descended. I did not know where I was on the glacier. My time from Hopar and to Shishkin was immeasurable. I only knew that I was on an endless body made up of ice and debris. I was learning how to walk on ice that belonged to the earth, and that is what had consumed me.

But it was the air on the ice. A cool, slight breeze roamed the endless glacier, filling my thoughts with no sense of time or distance. The air touched our jackets, backpacks and skin lightly, moving around us, against us. I was absorbed by this slight air, breathing heavily, not knowing my place. I enjoyed not knowing. In my mind, a place had come to be, a place made up of ice, that would roll on forever, spilling continuously. The air stayed against our jackets and backpacks lightly.



Fig 4.2 On the Bualtar glacier. I imagined the young man drinking water from a place like this.



Fig 4.3 I began to file a small piece of grey soapstone. A deeper corner began to emerge. This would be a place to hold a sip of water.



Fig 4.4 A drawing made up of some of the glaciers of northern Pakistan - melting, feeding other plains. At the bottom, are sketches for a second dish, Borith lake, and pieces for a picture frame for my parents.



Fig 4.5 Soapstone is a lovely material to work with. The corner for water begins to further deepen while extending into a planar surface for a sip.



Fig 4.6 A peaceful view of the wheatfields outside, from my bedroom in Nasirabad. Water was brought to the fields from a nearby glacier.



Fig 4.7 I wet the piece from time to time, to see how water would sit and appear in the dish. I continued to file the dish until I arrived at a form that I was content with.



Fig 4.8 The dish before it is finished.



Fig 4.9 Flowers on my way to the Altit Fort gardens. These flowers grew out of a wet area.



Fig 4.10 The start of the second dish. Here, the way in which I began to file the piece indicates a hint of the form in my mind.



Fig 4.11 Pausing to see the form during the sanding process.



Fig 4.12 One of my favourite photographs of the second dish. The profile appeared, exactly the way it had appeared in my imagination. All praise is due to God.



Fig 4.13 The dish, wet with water.



Fig 4.14 Rakaposhi, after the mist has lifted.



Fig 4.15 Flowers on my way to the Altit Fort gardens.



Fig 4.16 The second dish.

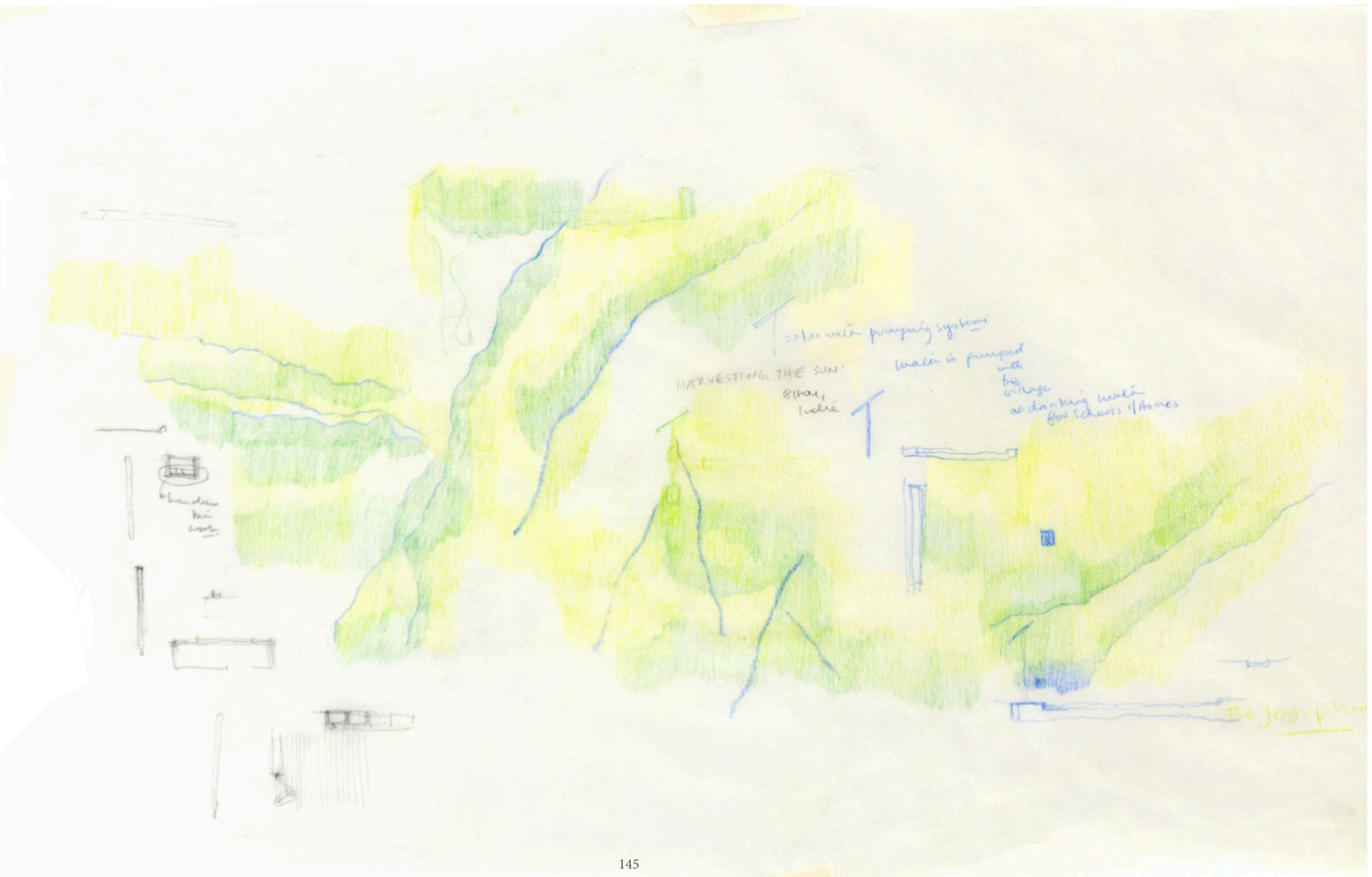




Fig 4.18 This photo was taken on my first trek down to the Hunza river with Mansur uncle. He pointed to the vegetation here, and spoke about water as the basis for life.

Fig 4.17 Streams and green plains. The lower right shows a sketch for a fountain-bench and a solar panel. I came across a project in rural Bihar in which solar panels are being used to pump underground water to irrigate crops. I think this is a noble thing.

I wanted to create a small garden for the city of Karachi - the city of my birth. I grew up in Karachi with barely any places for rest and contemplation. I imagined an atmosphere made up of fine leaves, and a water tray in a dense city. Karachi is Pakistan's largest city with a population of approximately twenty one million people. A garden for a bustling city would allow pedestrians to enjoy a break on a hot, sunny day.

I moved between several projects. The relationship between a reflective pool, benches, and rows of serviceberry trees at the Aga Khan park in Toronto became a prime precedent. Here, water is present, quiet and large. The way in which one's eye meets the water, through the branches of trees is of a precise and exact proportion. It is this particular sense of proportion, the proportion of the moment (not a measurable proportion), that I tried to emulate.

I also remembered the main courtyard of the Aga Khan Hospital in Karachi. Set amidst a network of courtyards and fountains, this particular courtyard serves as a waiting place for loved ones. The courtyard is dotted with rows of Lignum trees. Each tree is bordered by a set of four benches, whose curved profile I consistently drew. The curved profile of these benches, met with the simplicity of Francis Kéré's indent around a tree. A long white bench, with a water tray inset began to emerge.

Fig 4.19 An initial drawing for a garden, on a triangular site close to a friend's house in Karachi. I designed a water body and a seating area, under the shade of trees. On the top right, and bottom left are sketches of the pools and benches (in plan) of the Aga Khan park. In the middle are sketches of the benches at the hospital. The meeting of a half lap joint surrounds the curve of benches.





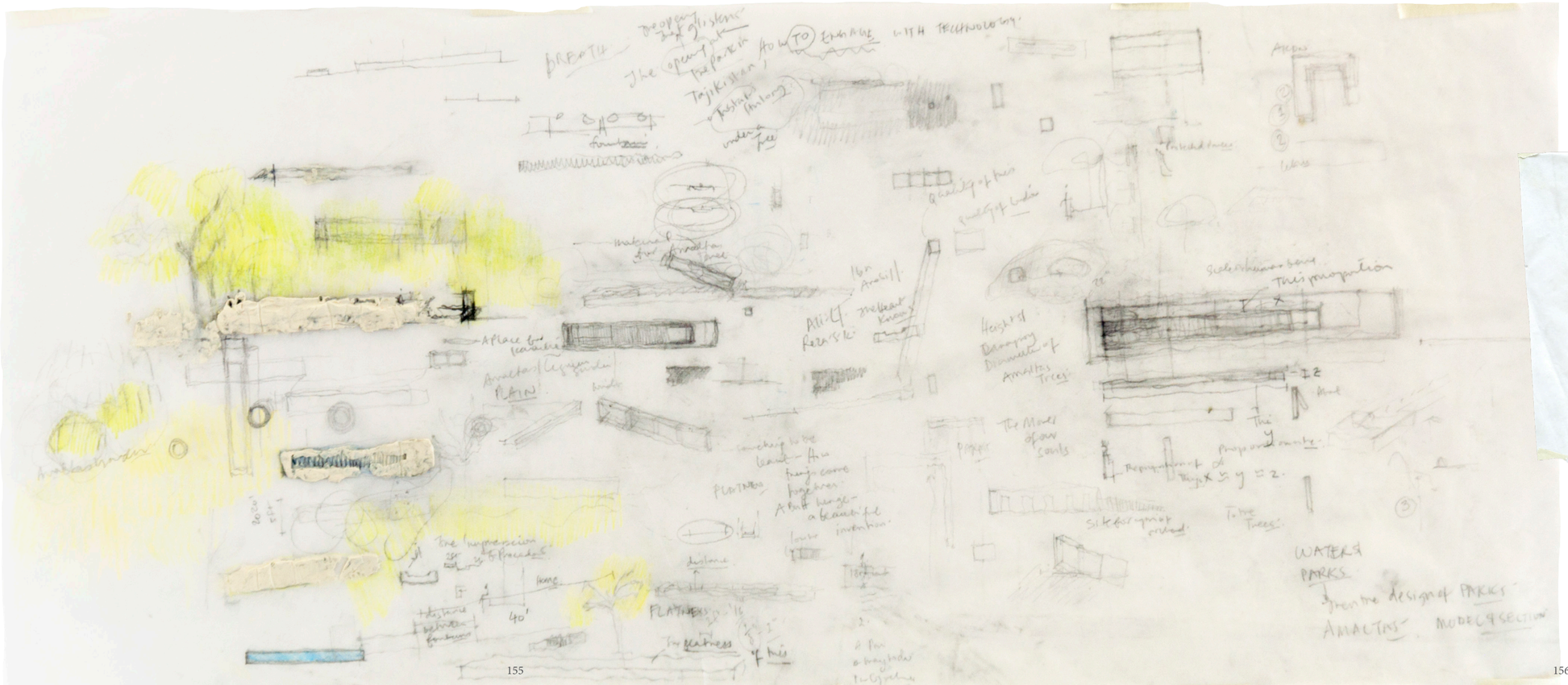
Fig 4.21 Poplar trees

Fig 4.20 This is another initial drawing for the garden. Here, I was exploring the proportions of a seating area, in relation to the water body. The water is positioned along the south western edge of the site. In Karachi, the sea breeze comes from the south west. I imagined the breeze to be cooled by the water tray, filling the entire site. The shaded area on the right side (in blue and green) is representative of my daily walks across St Andrew's park in Cambridge. I drew the shade of maple trees that provide an area for rest and conversation.



Fig 4.22 I came across a small intervention by Francis Kéré in which he creates an indent (almost oval in shape) around a tree close to a school in Burkina Faso. Along the edge of the indent, he designs another step. I was drawn to the simplicity of Kéré's section (left center) and plan (top center). This inspired the kind of relationship that I wished to create between humans and trees. In the bottom center are sketches where Kéré's section and plan met with my thoughts for the garden.

Fig 4.23 Pakistan has the highest number of glaciers outside the polar ice-caps. I wanted to draw these glaciers - again and again, for a long time. Here is a map showing the glaciers of northern Pakistan, which becomes an underlay for sketches for the fountain. The fountain is sketched in plasticine. The colour and texture of off-white plasticine is the colour of white terrazzo on a sunny, breezy afternoon. Surrounding the plasticine sketches is the vivid yellow of Amaltas trees.



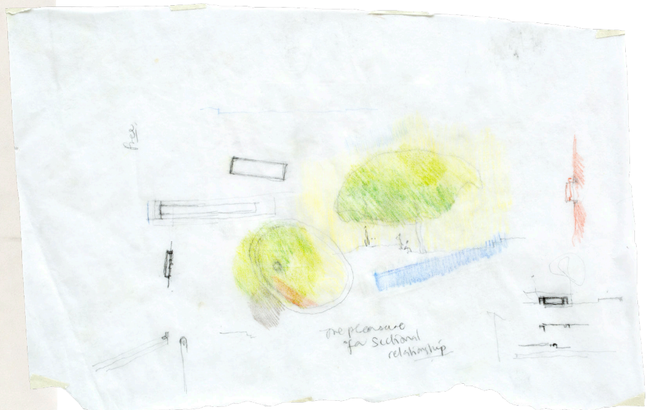


Fig 4.25 Kéré's plan and section and a pool of water.

Fig 4.24 In the middle and far-right, a fine-tuning of the proportion for the fountain-bench. The yellow of Amaltas flowers colourfully surrounds another plasticine sketch. The plasticine sketch of the fountain in plan is the kind of proportion that I was aiming for.



Fig 4.27 A study of the proportion of the water tray in relation to the seating area. The water tray is set within a green place.



Fig 4.28 Little streams of water on the Bualtar glacier.

Fig 4.26 I was drawn to the pool that Bijoy Jain designed for the Palmyra House in Nandgaon, India. The pool is bordered by a stone seating area. The pool sits between two tall volumes covered in palmyra louvers. These three volumes sit within a coconut plantation. I drew this pool in relation to a fountain for the garden. A square drinking fountain surrounds the plan. I also drew the merger of miter joints, and blue inside of it.



Fig 4.29 Carving out the indent for the water tray.



Fig 4.30 I was very pleased with the proportion of each element, and its relationship to the other. Under the three pieces is a plan of the Amaltas and Lignum trees.

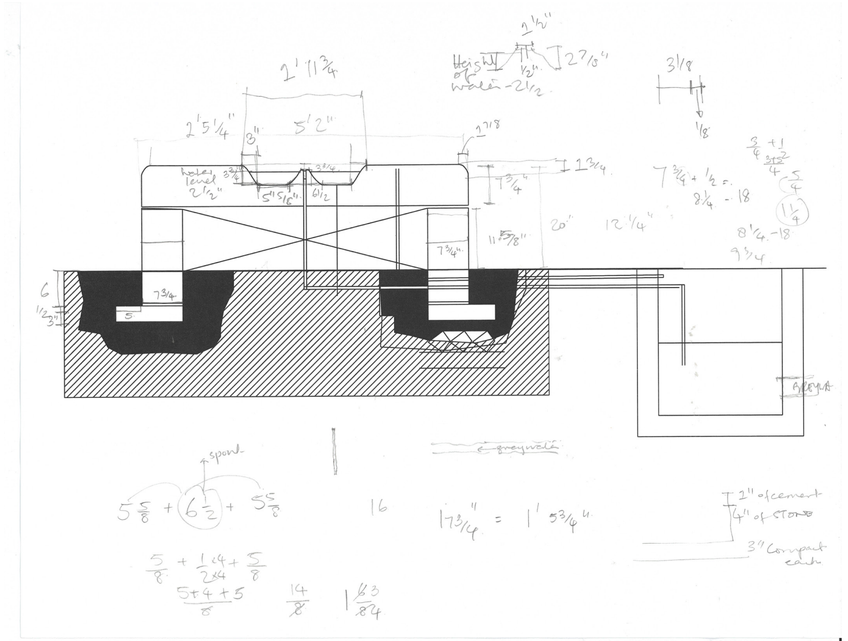


Fig 4.31 A section of the bench that I discussed with my friend Murtaza Noordin. Murtaza has the wonderful ability to complete my sentences in architecture.

The south end of the fountain is made of a large platform that measures 5 feet 2 inches by 9 feet 4 5/8 inches. I imagine a place for a group of friends to sit cross-legged under the shade of a large Amaltas tree. The terrazzo that runs on both sides of the water tray is 19 inches wide (this includes the curved edge of the bench). Spouts for the fountains are spaced in a way as to frame the comfortable seating of two. On the north side, is a smaller seating area that measures 5 feet 2 inches by 4 feet 1 1/2 inches. The proportions of these various kinds of seating both in plan and section, is complemented by a low lying bench/concrete bed on the south west edge of the site. A water drinking fountain is planted on the south end of the site. This fountain, under the shade of an Amaltas and an Acacia tree signals a way to enter the site. Six poles with solar panels mark the north end of the site. While thinking about harmony in plan, I came across Louis Kahn's words "that a plan is a society of rooms. A real plan is one in which the rooms have spoken to each other."[5] The dimensions and the spatial relationship between the fountain-bench, the platform and a water drinking fountain is filled with a good proportion. A cut in the ground leading to a square indent (inspired by Francis Kéré's indent and tree) allows excess rain-water to be channeled into the ground. The square cut in the ground measures 9 by 9 feet. Here, friends and family can sit around, while in section, trees and the rest of the garden appears 14 inches above them.

And then, the rest of the north side consists of a group of Amaltas trees. Like the group of maple trees at St Andrew's park, here one can lay a bedsheet, and lie down.

Fig 4.32 A painted and coloured plan and elevation of the garden.



Fig 4.33 Fields somewhere in Hunza.

Fig 4.34 Plan of the bench, painted section of the bench and the concrete bed.

I look at the branches in trees, and I think about the Mover of birds, and the changing space between them. This space is filled with grace and strength. His strength. All strength is from Him. There is a proportion here, the air of order and freedom, of discipline.

There are birds and glaciers, birds above glaciers. Glaciers and branches, and the lines that make up branches. The moving of white butterflies. All praise is due to God.

I imagine the shadow of moving Lignum leaves on the opening for the nozzle. The opening is 1/2 inch wide. The outer circle of the spout is 1 1/2 inches wide. Inches and leaves together.

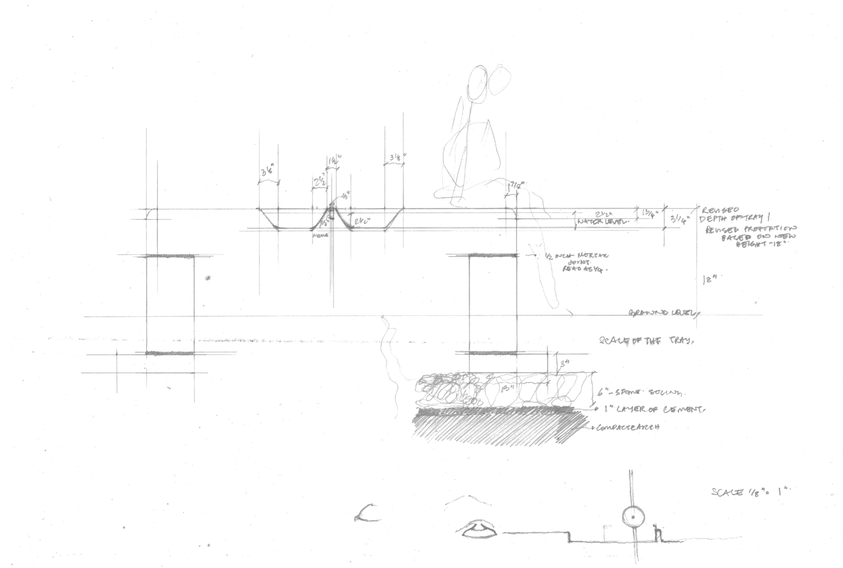


Fig 4.35 The final section of the bench.

CONCLUSION

I'm very grateful for the gift of this thesis. All things good and beautiful are due to God - all praise is due to Him, the Giver of gifts.

This thesis has been a journey in starting to learn how to touch in a measurable way. For a long time, I had thoughts about architecture that felt right in my imagination, but I shied away from drawing and making in a measurable way. I did not know how to draw and make, to lay on the ground - to touch the physical world in a measurable way. I did not know how things came together. Through the practice of slowly drawing, making, measuring, and labeling in a simple and repetitive way, I have begun to learn how to create in a measured way. I am very grateful for this.

In this thesis, I also share my deepest intuitions about the beauty and goodness present in places and people, and the transcription of these "signs" into form and drawings. The heart that "sees" these as signs of the Divine, is the heart can design.

As I reflect on the duration of the thesis, I realize that it has taken some time to articulate and share the following: It is my deepest conviction that when we practice from a place that surrenders wholeheartedly to God, we open ourselves to His grace. It is His grace that is the very grounding for good decisions. An internal posture of humility before God and devotion to Him becomes foundational for such a practice. God's embrace is filled with love and knowledge. This knowledge fills our work with an immense love and indescribable joy - a joy and love that penetrates into our work, imbuing the spaces and places we create with quality. This knowledge allows us to create a world that is truly good and beautiful – a reflection of the Hereafter.

ENDNOTES

1. William C. Chittick, *The Sufi Path of Knowledge: Ibn al-Arabi's Metaphysics of Imagination* (Albany: State University of New York Press, 1989), 107.

2. Bijoy Jain, "Lore," YouTube video, 1:21:18, from a lecture recorded as part of the Aga Khan Program Of Islamic Architecture at the Harvard Graduate School of Design on February 14, 2017, posted by "Harvard GSD," February 16, 2017, https://www.youtube.com/watch?v=gxTbj0a4CGk.

3. Timothy Wat, "*Moments of Spiritual Engagement in Architecture: A Search for Awareness of Life and Architecture*" (Master's thesis, School of Architecture, University of Waterloo, 2014), 10-11.

4. Peter Zumthor and Thomas Durisch ed., *Peter Zumthor, 1985-2013: Buildings and Projects* (Zurich: Scheidegger & Spiess, 2014), 123.

5. John Lobell and Louis I. Kahn, *Between Silence and Light: Spirit in the Architecture of Louis I. Kahn* (Boulder, CO: Shambhala, 1979), 36.

NOTE ON BIBLIOGRAPHY

A group of writers and poets have served as companions during the course of this thesis. Their work is rooted in the study of Islamic spirituality, Perennial philosophy and the Traditionalist School. Though the bibliography offers a list of these influences, I would like to mention a few words about some of the sources that I consistently returned to. I would like to extend my heartfelt gratitude to these writers for their words of wisdom.

Ali Lakhani's collection of essays entitled "The Timeless Relevance of Traditional Wisdom" presents an argument for morality and beauty rooted in the Divine. His essay entitled "The Metaphysics of Poetic Expression" became a prime source of understanding artistic practice in relation to the Divine. His book became a constant source of encouragement. William Chittick's study on Ibn Arabi entitled "The Sufi Path to Knowledge: Ibn Arabi's Metaphysics of the Imagination", is an extensive study of Ibn Arabi's teachings. I moved between various parts of the book, but primarily focused on Chittick's explanation of "The Heart" as the seat of knowledge. Chittick's book on Rumi entitled "The Sufi Path of Love: The Spiritual Teachings of Rumi", thematically discusses some of Rumi's verses from his Masnavi and Diwan. I was drawn to selected verses in the chapters entitled "The Garden of Spring", "The Heart" and "The Ego and the Intellect". Seyyed Hossein Nasr's paper entitled "Intellect and Intuition: Their Relationship from an Islamic perspective" examines the word "intellect" from an Islamic perspective and its relationship to the heart and the world of imagination.

The first chapter in Reza Shah Kazemi's book "Justice and Remembrance: Introducing the Spirituality of Imam Ali" became a source of constant joy and affirmation. In the section entitled "Introducing Imam Ali and his Spiritual Ethos", Shah-Kazemi explains the Imam's view of the intellect as a spiritual faculty. His discussion on joy, and on recognizing and embodying beauty and virtue as traits of the intellectual has resonated with me.

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