spirituality.
worship.
building an attitude of worship: preparing the heart and mind.
acknowledgments:

first and foremost i want to thank God. He was the inspiration and guiding light throughout my thesis project. He is the reason i live, without Him i would not have the means to do anything. i could never have gotten through the past 5 years of architecture school without Him leading the way.

i also want to express my great appreciation to my professor, andrew seager. through all my confusion and random thinking you were always able to find some coherency and keep me moving forward by giving me such positive feedback. you always seemed to have a direction for me to pursue when i was unsure of where to go.

my thesis advisor, tony costello. even though you have a thousand-and-one things going on every minute of the day, you still made time to meet with me every thursday. our discussions always left me on “information overload” (that’s a good thing!) with ideas coming from every direction. you were able to keep me on track and always were confident in me, my project, and the direction i was taking it. you have been a great inspiration in my life ever since second year. i can’t thank you enough.

and my friends, family, and fiance, thanks for the support and love. you never doubted me for a second. even when i was in doubt, i gained strength from knowing that you guys were confident that i would pull through. you compromised time when i was under the gun, especially you carlie, and you filled my mind with thoughts and words of encouragement. and in the end, to hear the words, “we are proud of you,” that made it all worth it.

thanks.

so whether you eat or drink, or whatever
what is it that makes a building, structure, or any piece of architecture spiritual [if anything]? is it possible for a piece of architecture to express an attitude of worship? what are the characteristics of a religious/spiritual space? what about a space causes a person's spirit or soul to be stirred? can people grasp a sense of holiness, spirituality, and/or God the moment they step into a designed space? church buildings have been designed for centuries upon centuries, yet some church buildings produce this sense of spirituality, holiness, and attitude of worship while others simply do not. what is the difference between the church structure that does this successfully and the one which does not? these, among many others, are some of the inquiries i will pursue in this thesis project.

the vehicle for exploring these issues is a small church facility set in the village of waitsfield, vermont for a congregation of approximately 35 individuals on any given sunday. in early explorations encountered two recurring themes made themselves very clear in developing a space with the qualities of spirituality and worship. these are simplicity and connectivity to nature. it wasn’t until later in the exploration and design process that the third theme made itself known: the idea of “the journey” which prepares the heart and mind for worship. a deeper understanding of how a space can effect an individual’s emotions, developing a space which reacts and is conducive to the needs of the congregation, as well as developing the design at many different scales from the site to the light fixtures in the sanctuary are several of the thesis objectives. the ultimate goal is this: creating a place where the individual experiences God and is brought closer to their Heavenly Father.

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you do, do it all for the glory of God. I corinthians 10:31
tadao ando

Ando’s work had a noticeable amount of inspiration on my thesis project. His work was the first precedence that was studied and this was when the ideas of simplicity and connectivity to nature first made themselves known. These were two out of the three main concepts for the final design of the Mad River Valley Alliance Church.

Everything from materials to details to ornamentation, or lack-there-of, suggests the move of simplicity. Ando only utilizes the necessities in these spaces of worship. As seen in the photo to the right, the acceptance of light is accomplished through a simple separation in the corner of two walls striving to come together. It is these separations and slits that allow for the shadows to be cast on the interior creating the “decoration and ornamentation.”

In the church of light, as the title suggests, connectivity to nature occurs through the use of natural light. In the church on the water, the connection to the natural environment grows even stronger as the only separation the congregation has from the exterior elements is a large glass wall. Heightening this connection is the fact that the glass wall can be opened entirely and looks directly across a pond that is as still as can be with a cross rising up out of the middle of the water. It is also significant to note that the water extends right up to the exterior of the building. Also of significance is that the point where he connects to nature is usually where he wants the focus of the space to be.

marilyn moyer meditation chapel

Connection to nature is shown in this example through the chapel being completely integrated into the cliffside as well as the large expanse of glass opening to the Cascade Mountain range.

A third concept is present here and that is the idea of progression/approach to the chapel through the long straight pathway the visitor takes to enter the chapel.
Steven Holl was studied for his use of light, specifically his techniques of hidden source lighting combined with color reflection.

Thorncrown Chapel was looked at as a great example for connecting with its context: nature. It completely exemplifies its natural wooded surroundings through its use of windows and custom trusses that represent the tree foliage above. It also gives a sense of simplicity through the use of repetitive members.
issues and positions:

what is it that makes a building, structure, or any piece of architecture spiritual [if anything]? is it possible for a piece of architecture to express an attitude of worship? what are the characteristics of a religious/spiritual space? what about a space causes a person’s spirit or soul to be stirred? can people grasp a sense of holiness, spirituality, and/or God the moment they step into a designed space? church buildings have been designed for centuries upon centuries, yet some church buildings produce this sense of spirituality, holiness, and attitude of worship while others simply do not. some would say the qualities that produce this sense of spirituality or holiness are different for each person and are of the intangible world, only perceivable by certain individuals. others could contend that these qualities come from the tangible and that no matter who the individual is, they will experience these characteristics and emotions. what is the difference between the church structure that does this successfully and the one which does not? since the start of people meeting as a group for worship, the people have been known as “the church.” the building does not make up the church, people do. therefore, can a space give rise to these feelings of spirituality, holiness, and the formation of an attitude of worship when there are no people present? or when just one person is there? how does the space change when the congregation is present versus when there is only one individual occupying the space?

architecture has the potential to make people “feel,” it has the ability to “speak” to a person and stir their emotions. in the case of spirituality, the atmosphere of the space plays an important role in suggesting this attitude of worship. adjectives such as somber, solemn, reverent, joyful, etc. come to mind. in creating a space described by these terms, light becomes key. natural, artificial, and hidden source lighting all can be utilized in various ways in defining the atmosphere of the space as somber, joyful, etc. another key component in giving a space a certain feel is materiality. concrete, wood, sheetrock, glass, etc. all change the feeling of a space dramatically. the approach and progression to and through the building can also serve an important role in establishing the atmosphere as well as preparing the individual for worship. worship begins in the soul. if a person’s heart is not right, if their soul is not willing to worship, then no design is going to make that individual...
want to. however, if a person’s soul is willing, the space in which they approach, enter, and worship in can make a significant difference in their “spiritual experience.” this begins to relate to the ideas of “transition,” “thresholds,” “boundaries,” etc. relevant to sacred space.

**defining worship:**

worship can take many different forms. it can be the act of placing your tithe in the offering plate, singing a hymn or praise song, taking part in the Lord’s supper, saying a prayer, reading the Bible, fellowshipping with others, listening to a sermon, or just “being still and knowing that I am God” (psalm 46:10). however, no matter what form worship takes, it can simply be summed up as this: the act of respectfully acknowledging God. that is what all these modes of worship have in common. worship is about giving, not getting.

“a house of worship is not a shelter for an altar; it is a shelter for people...the presence of God is not assured by things or by symbols or by buildings, but by christian people.” _e.a. sovik

in no way is this statement saying that the church building is irrelevant. it simply echoes the idea that “worship begins in the soul,” that God is present in human hearts, He doesn’t dwell in physical structures. this also relates back to the idea of creating a “spiritual” atmosphere. the idea about the house of worship serving the people and the needs that they have in order to commit themselves to completely worship God is also being stressed as well as reinforcing the idea of simplicity, only putting into the design the bare essentials of what the people worshipping need.

architecture should be servant to the church (people) and christian faith, not the other way around.” _edward mills

the building should stand as a means for the members of the church to fulfill the goals and objectives they have set out to accomplish according to God’s plan. the architecture should in no way be a barrier to the people. the final thought by mills in his book the modern church was that of a challenge to the architect to develop a design in a manner which “expresses the eternal nature of the spiritual truths of the faith, understanding, and inspiration.” expressing the truths and the faith of the people who meet inside, this is what the building should do; especially to those who only see it from the exterior.
results...or maybe not
i tried to begin the design process, however it was to no avail. it felt as if i was just spinning my wheels with no direction. much research had been done, yet using that research to create a product was turning into a different story. i discovered that i was going about the design of this building all wrong. sketching floor plans and elevations is not at all what this building is about. figuring out what the exterior of this structure would look like was not going to answer any of the questions i was asking at the beginning of this project regarding spirituality. a new route had to be discovered.
more research
other research:

**japanese architecture**

having this idea of progression and sequence gave me the overiding principle i was seeking, however, i still wasn’t sure what to do with it. i decided to consult japanese designers for influence. they seem to be especially gifted in making a path or progression sequence **meaningful**. that seemed to be the key, how to make this progression to the church building meaningful.

besides seeking to make the progression to the church meaningful, i was also looking at how the japanese deal with threshold, transition, connection to nature, etc. jeff culp made a comment during one of my informal pin-ups that made an impression on me. he said, “the way that the japanese make a transition, threshold, or progression sequence meaningful is through setting up a field and then contrasting that field in some way. for example, look at the image of the stepping stones. the water is the field that the designer has set up, the stones are the contrast to that field. that makes those stones meaningful.”
Visiting Columbus reinforced many of the ideas I had been thinking about and it also brought to life some new ones. I was able to study the approach at the North Christian Church and how Saarinen created a focus on the entry as well as how he used that concept to deal with the automobile and parking. Through the new St. Bartholomew's Catholic Church I was able to get a feel for the types of materials that would best suit the space. St. Peter's Lutheran Church by Gunnar Birkerts was a great case study for natural lighting techniques. Many of the ideas I had been thinking about were brought to life at this church. And one major idea that posted itself was confronted in Eieli Saarinen's first Christian Church. The wall that the individual sees as they are leaving the sanctuary was completely bare. This seems like such a great opportunity for a symbol that the congregation can focus on as they are leaving the church. A symbol of their mission as they leave the confines of the building and break back out into the world.
as i was striving to derive inspiration from the
japanese, i decided to consult those who were
going to be affected the most by my design, the
congregation. i sent some questions via email
polling individuals about their experiences in
"spiritual" spaces. the feedback i received was
priceless. the guiding principle i was looking
for came to mind...it had actually been there all
along, i just didn't know it. it related to the
idea of progression and approach only with more of
an emphasis on preparation. preparing the heart
and mind for worship. this brought a new perspec-
tive into the design of the church facility.

the questions that i posed were:

1. what does worship mean to you?
2. what about a space/environment influences your
   heart or state of mind for worship...if anything?
3. are their certain spaces that you feel more
   spiritual in versus less spiritual in?
4. what creates distractions for you during
   worship? what helps you focus?
5. what environment do you worship best in (church,
   bedroom, nature, etc.)?

when i received responses to these questions, i
was not surprised to find that each individual
relates to these issues differently. worship and
spirituality are such personal issues that it is
not going to be the same for everyone. some
people love worshipping in church while others
love to be alone in nature, surrounded by God's
creation and that is where they worship best.
many different environments can be conducive for
worship. the next idea i received was that per-
taining to preparation. for most people, it
didn't matter where they worshipped, however, their
worship time was affected greatly by their heart
and state of mind. many people like to have time
before sunday morning worship to get there focus
in the correct place...on Christ and the cross.
this became the principle that would drive the
design of the church on the site.
the diagram on the left shows the concept. I decided to separate the parking lot/automobile from the church. Within this separation is where the preparation takes place. So many churches are pavement right up to the front doors. People seek the nearest parking space and rush right into church without even giving it a thought beforehand why they are there. The separation concept allows the individual a time of contemplation when they can be completely surrounded by nature, God's creation, and focus on the act that they are about to engage in: worshipping their Heavenly Father.

...with whom I once enjoyed sweet fellowship as we walked with the throng at the house of God _Psalm 55:14_

Early progression sketches of the path that the individual would walk along.
program summation:

scope of program_
the program for the mad river valley alliance church is a collaboration between designer and client that establishes the spatial needs of a congregation to better prepare and facilitate activities associated with worship and community.

scope of project_
this church facility will consist of a main sanctuary in which the heart of the worship services will take place. other spaces within the building will be a large, open fellowship hall capable of being divided into 3 or 4 smaller classrooms, a nursery, a small kitchen, sr. minister’s office, and 2 restrooms.

programmed space: size:

<table>
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<th>space</th>
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</tr>
</thead>
<tbody>
<tr>
<td>sanctuary [1]</td>
<td>1100 sf</td>
</tr>
<tr>
<td>fellowship hall [1]</td>
<td>900 sf</td>
</tr>
<tr>
<td>classrooms [2 @ 300sf each]</td>
<td></td>
</tr>
<tr>
<td>[2 @ 200sf each]</td>
<td></td>
</tr>
<tr>
<td>sr. minister’s office [1]</td>
<td>120 sf</td>
</tr>
<tr>
<td>nursery [1]</td>
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</tr>
<tr>
<td>kitchen [1]</td>
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<tr>
<td>men’s restroom</td>
<td>100 sf</td>
</tr>
<tr>
<td>women’s restroom</td>
<td>100 sf</td>
</tr>
<tr>
<td>mechanical/storage room</td>
<td>100 sf</td>
</tr>
<tr>
<td>total [net]:</td>
<td>2750 sf</td>
</tr>
</tbody>
</table>

net/gross factor*
*a net to gross factor 10-15% is applied to the total net square feet of 2750 sf to accommodate space required for corridors, stairs, interior and exterior walls, and structure.

total [gross]: 3250 sf
what I found from living in Vermont for nearly 8 months is that the northeast is much different than the midwest. Obviously the geography is an extreme contrast with mountains, forests, crystal clear rivers and streams, etc.; but people’s lifestyles and values seem to be widely different than here in the midwest. “anti-development” is one of the first words that come to mind. For the most part there is very little franchise/“walmart” type development going on. (i.e. montpelier is the only capital in the united states that is without a mcdonald’s). The village setting is much the tradition and people are trying to keep it alive through filling there towns and villages with mom and pop shops and supporting the local farmers, businesses, and entrepreneurs. There is a large concern for the environment and the widespread ideas of sustainability. The people of vermont seem to take life at a much slower pace. It was a refreshing change from the “always-on-the-go” attitude of many places around the country. Vermont as a whole seems spiritually depleted in the sense that there is little practice of religion and few christians in the state. Of those christians present, they definitely have a heart-felt desire for a spiritual revival to take place throughout the state.

The land that was purchased by the mad river valley alliance church is just off of a two-lane highway (route 17) and is about 1-2 miles outside of waitsfield village. There is forest on two sides of the site and views...Well, let me just say there aren’t too many bad ones!
one of the most captivating characteristics of Vermont are the seasons. In the winter it is completely white, however, it isn't called the "green mountain state" for nothing. In the summer it is just as green as it is white in the winter. This is something that must be taken advantage of in the final design. With reference to the site, one of the main objectives is to capitalize on the available resources (i.e. the fact that the site is approximately 50/50 meadow to forest) and keep it as undisturbed as possible.

With respect to context, utilizing the resources that the site surroundings has to offer is the main criterion of the context as well. Among these resources are explicit views and plush vegetation. Fitting within the traditional village setting is also important as this vernacular dominates much of Vermont.
light and materials
learning from the previous attempt at design, i decided to take a different approach into how the building was going to come to be. i decided to study qualities of light, materials, and interior space rather than drawing plans, elevations, and sections. i wanted this church facility to be based on the qualities of the interior, allowing these studies to then create the spacial layout and form the exterior.

i studied light through various models as well as drawing techniques such as charcoal, pen/ink, as well as white colored pencil on black paper.
since materials play such an important role in the overall feeling and quality of a space, they were overlayed onto the light studies to see what the space actually did feel like. this was also done in order to get a more accurate idea of how the light would react to and engage with the materials and their textures.

the featured materials are wood for the floors and ceiling, stone for the wall with windows, and then straw-clay with an earthen plaster finish coat for the rest of the walls. straw-clay is a great opportunity for the church to really become one with their building. i would propose that the congregation collaborate with the yestermorrow design/build school in order cut down the project budget. this would allow the members of the church to be a part of the building process and place a sense of ownership on this facility. the straw-clay technique is very environmentally friendly and can be cost-effective if the price of labor is not involved (the reason why i suggested that the congregation volunteer their time and collaborate with yestermorrow).
from the research gathered and studies conducted the design of the church building was finally going in the direction it should: based on qualities and characteristics that wanted to be present in the final design. at the scale of the building, the sanctuary was the main focus. many renditions of the sanctuary’s interior were drawn and redrawn seeking the proper qualities and characteristics of the space. what lighting qualities to use, what materials and textures would be most conducive to these light qualities, should the ceiling have exposed trusses or hidden rafters, how to keep the space simple, these and more were all issues taken into consideration.

keeping the space simple was constantly kept in mind throughout the design process. i did not want to have a lot of distracting symbolism and other elements cluttering the space and taking the focus away from what it should be on, the cross. simplicity is seen in the final design through the repetition of the truss members, the use of no ornamentation with the exception of the “cross of light” at the front and center of the sanctuary, and the clean geometric form of the plan.

the connection to nature is developed most throughly through the “journey” that the individual is taken on when they arrive at the site. they park at the edge of the woods and then cross the threshold of the parking lot to the forest. they are immediately engulfed by God’s creation. experiencing this environment of diversely changing seasons can only enhance one’s attitude of worship. other connections to nature occur through the use of natural lighting and natural materials such as stone, wood (trusses and floors), and straw-clay walls.
another way of studying materials was done through the use of watercolor. Using materials on the exterior that would respond to the natural environment of the site as well as the Vermont vernacular was priority. The straw-clay walls are clad in local vertical cedar siding, stones are used for the main vertical elements on the north and east elevations, and the roof is galvanized standing seam roofing.
the progression sequence begins with the automobile. the visitor is brought onto the site and the drive is located at the edge of the woods along with the parking lot. the individual parks their car and proceeds onto the path. a series of thresholds are crossed as the individual progresses deeper and deeper into God’s creation gradually taking their mind off the pressures and stresses of the world and focusing it more on the act and attitude of worship. when the final turn is made on the path, a large cross is in view at the entry of the church. the visitor directly engages this wooden cross as they pass under it and are encouraged to feel it with their hands. the advantage to the location of the cross at the entry is that the visitor also passes under it as they leave the building reminding them of their focus as they head out into the world.
the site was left as unscathed as possible. taking advantage of the site's existing features such as the forest/meadow ratio was important. the meadow was left as open as possible in order to accommodate community events as well as a pond to allow for baptisms. the parking was placed at the edge of the woods and the church building was placed partially in the woods and partially protruding into the meadow.

three parking concepts were considered, the parking hidden in the woods to hide the automobile, the parking in the meadow to keep the site as untouched as possible, and the parking just at the edge of the woods. the third concept was chosen for further development with the idea that the woods would overtime be able to grow around the parking lot and eventually almost overtake it, reclaiming it as its own. there would also be more opportunity for hiding the automobiles while destroying as few trees as possible.
to fulfill the final objective of this thesis project, to carry out the design at as many scales as possible, a prototype of a sanctuary lamp was designed. It has been said that “a great designer can take a concept and develop it at the scale of the site, the building, and even the details of the interior such as the pulls on the doors.” This lamp prototype mimics the stone vertical walls on the north elevation as well as the idea of the “cross of light” that occurs at the front and center of the sanctuary as well as along the path in the lighting elements.
the main issue that was raised during my final review was in reference to the parking. With the way that the site was dealt with in such a delicate manner, the parking lot seems so intrusive and overbearing. One suggestion, which seems like an extremely feasible one, was to scatter the parking throughout the site or perhaps use the idea of terracing to break the parking lot down into less of an expanse of pavement. Another idea that was discussed is the idea of placing "scripture stones" within the stone retaining walls along the path. These would allow for even more contemplation to arise. On the interior, questions arose regarding the west wall and how it was to be dealt with. A great answer to this question is that it would be left as is and handed over for the congregation to claim as theirs. If this is done, the joint between the west wall and north wall becomes critical and must be dealt with in such a way as to differentiate between the two walls since they are so similar now.

The final step: present this project to the members of the mad river valley alliance church.

"Sell this to them [the congregation], Jeremy. Don't let them put up a steel building!"

_doug from maa
bibliography:


God. *The Holy Bible*.


www.thorncrown.com

www.thegrotto.org