



# REVIVING STONE: ARCHITECTURE FOR LIVING

BY: SHANNON M. FANTASKI

THESIS SUBMITTED TO THE FACULTY OF THE VIRGINIA POLYTECHNIC  
INSTITUTE AND STATE UNIVERSITY IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARCHITECTURE

HANS ROTT, CHAIRMAN

WILLIAM GALLOWAY

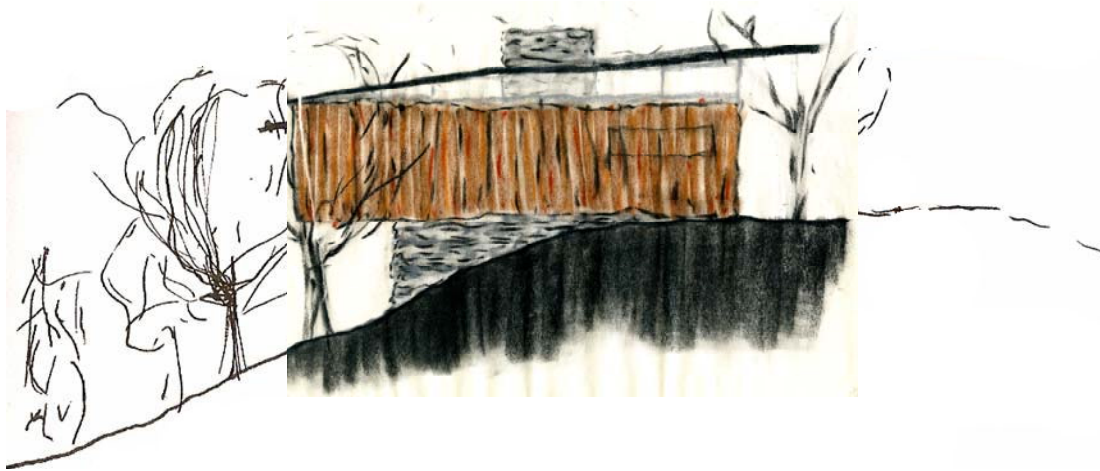
JAMES JONES

BLACKSBURG, VIRGINIA

MAY 4, 2007

# A B S T R A C T

THIS DESIGN PROJECT IS A HOUSE LOCATED IN LOCUST GROVE, VIRGINIA. THE MATERIALS AND SPATIAL CHARACTERISTICS, SUCH AS STONE AND WOOD, ARE INSPIRED BY THE INDIGENOUS BARNs OF THE AREA. ARCHITECTURE CAN BE A MEANS OF COMMUNICATION, IT CAN SPEAK TO US. I CHOSE TO DESIGN A RESIDENCE THAT SPEAKS OF THE PAST YET IS ONE THAT LIVES IN THE PRESENT.



KEYWORDS: BARN, RESIDENCE, STONE, WOOD, LOCUST GROVE, VIRGINIA

# A C K N O W L E D G E M E N T S

TO HANS ROTT, BILL GALLOWAY, AND JIM JONES FOR ALL OF  
YOUR ADVICE.

TO MY FAMILY FOR SUPPORTING ME.

TO THE FRIENDS I HAVE MADE, I AM GRATEFUL TO HAVE  
SHARED THIS EXPERIENCE WITH YOU.

MOST OF ALL, TO MATT FOR YOUR LOVING SUPPORT AND  
PATIENCE. I COULD NOT HAVE DONE THIS WITHOUT YOU.  
THANK YOU.

# C O N T E N T S

I

INTRODUCTION P. 1

II

BARNs P. 3

III

SITE P. 5

IV

HOUSE P. 8

V

MATERIALS P. 17

VI

CONCLUSION P. 22

VII

BIBLIOGRAPHY P. 23

VIII

VITA P. 24



AN ADMIRATION AND FASCINATION FOR THE INDIGENOUS BARN ARCHITECTURE OF VIRGINIA WERE THE BEGINNINGS OF THIS THESIS. MY INTENTION IS NOT TO REDESIGN THE BARN, BUT TO BORROW ELEMENTS FROM ITS DESIGN AND INCORPORATE THEM INTO A RESIDENCE, A WITNESS TO GENERATIONS BEFORE ME, TIME STANDING STILL WITHIN ARCHITECTURE. IT WAS A WAY OF LIFE, TRADITION, CRAFTSMANSHIP, THAT HAS BEEN FORGOTTEN. THERE IS SOMETHING MAGICAL ABOUT THE WAY LIGHT PEAKS THROUGH OLD WOOD SIDING ON A BARN. STONE WALLS STAND STRONG, THE DISTINCT AND NATURAL AGING ONLY EVIDENT BY THE MOSS FORMED ON THEIR JAGGED EDGES. THEY INVOKE THOUGHTS OF A SIMPLER TIME WHEN EACH MAN BUILT HIS OWN HOUSE THAT WAS TO BE PASSED DOWN TO HIS CHILDREN AND THEIR CHILDREN. THEY ARE A REFLECTION OF A WAY OF LIFE.

I BELIEVE THAT YOUR HOME SHOULD REFLECT YOUR LIFE AND THAT SPACIOUS LIVING DOES NOT HAVE TO BE QUANTIFIED IN SQUARE FOOTAGE. BIGGER IS NOT ALWAYS BETTER AND QUANTITY OF SPACE DOES NOT NECESSARILY EQUAL QUALITY OF SPACE.

BY USE OF MATERIALS SUCH AS STONE AND WOOD, THE RESIDENCE POSSESSES A SENSE OF TRADITION. I THOUGHT OF THE STONE WALL AS AN ELEMENT OF THE DESIGN THAT WAS POSSIBLY PREEXISTING AND WILL ALWAYS BE THERE. THUS, IT PROVIDES A SENSE OF PERMANENCE AND ANCHORS THE DESIGN. THE WOOD IS THE PORTION OF THE DESIGN THAT IS THE IMPERMANENT; IT MAY ROT, BE REPLACED, OR EVEN REDESIGNED. THE WOOD PROVIDES RHYTHM, IN STRUCTURE AS WELL AS AN ELEMENT OF THE FAÇADE WITHIN THE DESIGN.



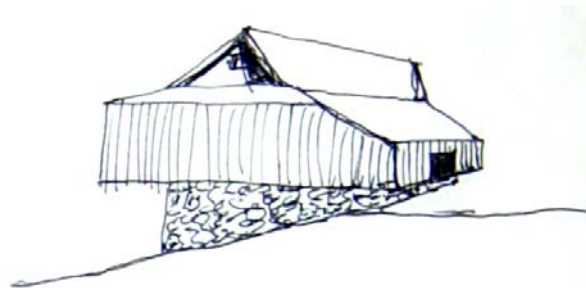


MY STUDY BEGAN WITH THE SITE AND SURROUNDING AREA. MOST INTRIGUING TO ME, WERE THE OLD BARNS, REMNANTS OF THE PAST COEXISTING IN SUBURBAN NEIGHBORHOODS. THE BARN IS AN EXPRESSION OF FORM DEVELOPING OUT OF A UTILITARIAN FUNCTION. EACH SUGGESTS INDIVIDUALITY THROUGH VARYING CHARACTERISTICS THAT IMPLY A SPECIFIC PURPOSE. SIMPLICITY, SYMMETRY, AND BALANCE ARE ALL ELEMENTS OF ARCHITECTURE THAT THE BARN POSSESSES.

WHAT IS IT ABOUT A BARN THAT ALLOWS IT TO BELONG SEAMLESSLY IN THE LANDSCAPE? IS IT THE MATERIALS? THE REMINDER OF A SIMPLER LIFE?

ESSENTIALLY, A BARN IS A STRUCTURE WITH CLADDING. THE MOST IMPORTANT THING THAT I TOOK FROM MY BARN RESEARCH WAS THE MATERIALS. I KNEW THAT I WANTED TO USE STONE AS AN ANCHOR TO THE DESIGN. I ALSO WANTED TO USE WOOD IN A WAY THAT SPEAKS TO THE WAY LIGHT SLICES THROUGH IRREGULARITIES IN THE AGED CLADDING.

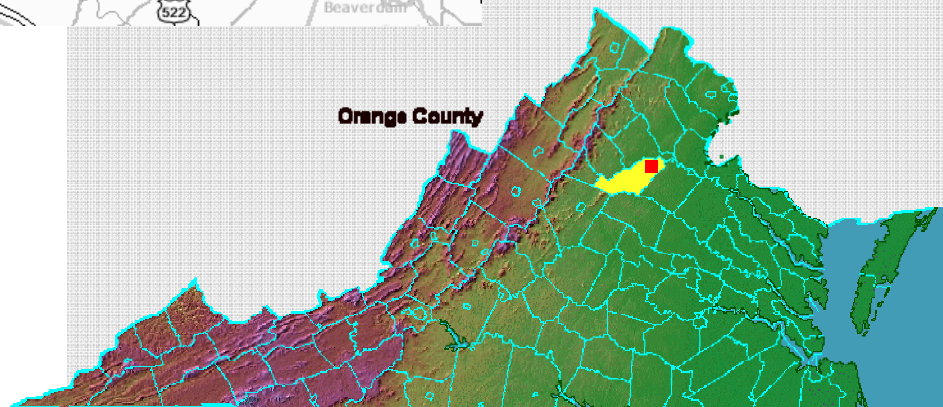
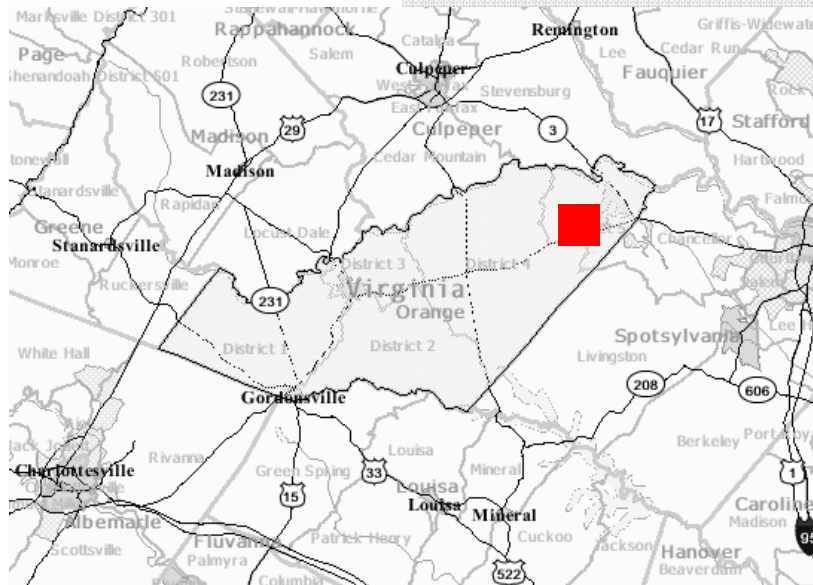






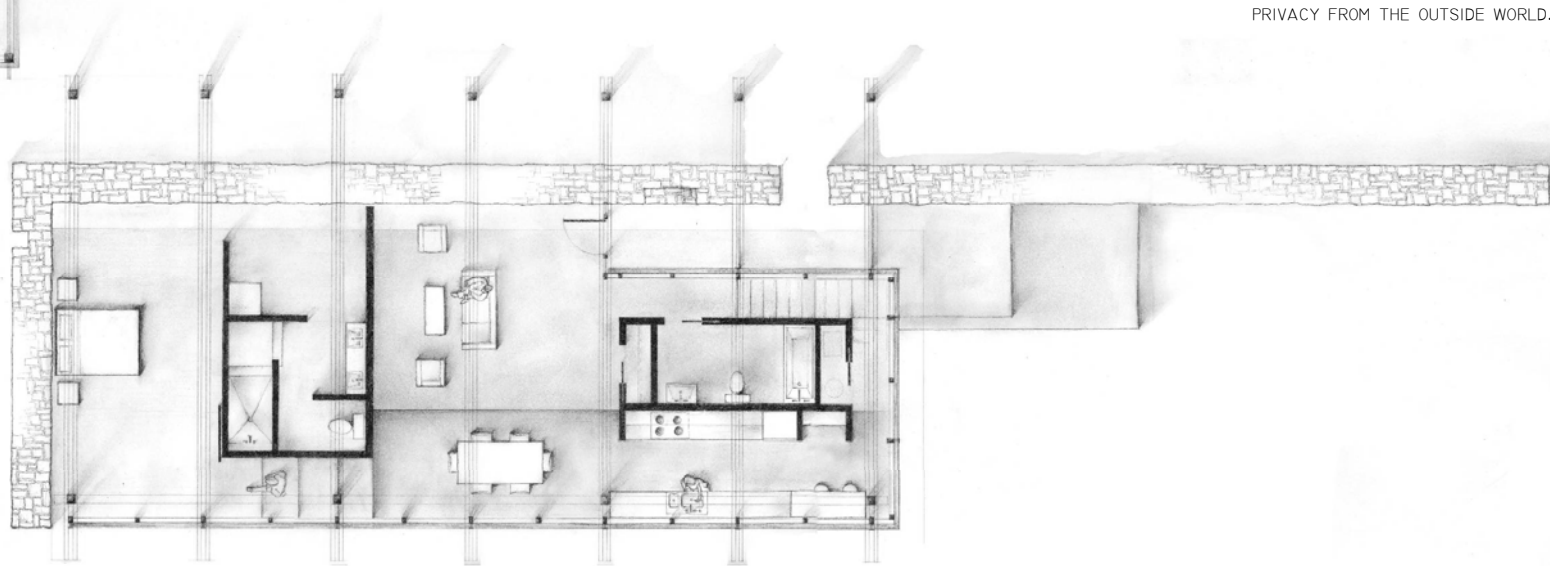
THE SITE IS LOCATED IN LOCUST GROVE, VA., WITHIN A DEVELOPMENT OF ABOUT 30 LOTS. IT IS A BIT OVER 4 ACRES AND HEAVILY WOODED.

THE PLACEMENT OF THE STONE WALL WAS CONCEIVED DIRECTLY FROM SPECIFIC SITE CONDITIONS. THERE IS A NEIGHBORING HOUSE BORDERING THE PROPERTY LINE ON THE SOUTH-WEST SIDE OF THE LAND, AND THE WALL WILL PROVIDE PRIVACY AND SECLUSION.

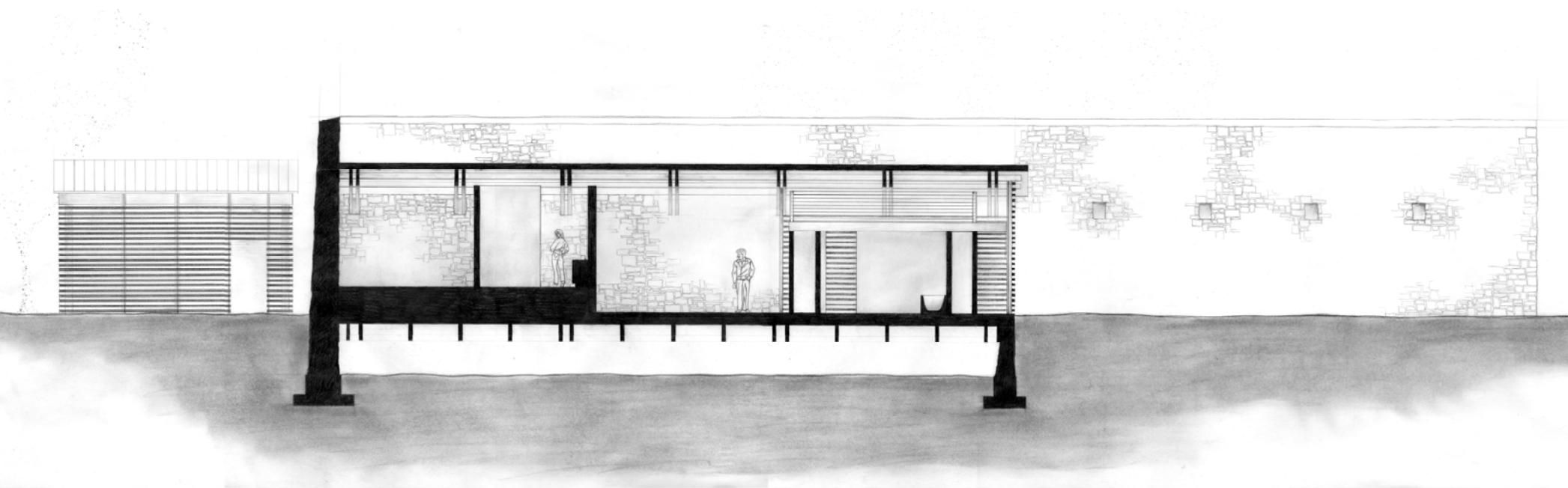




## HOUSE

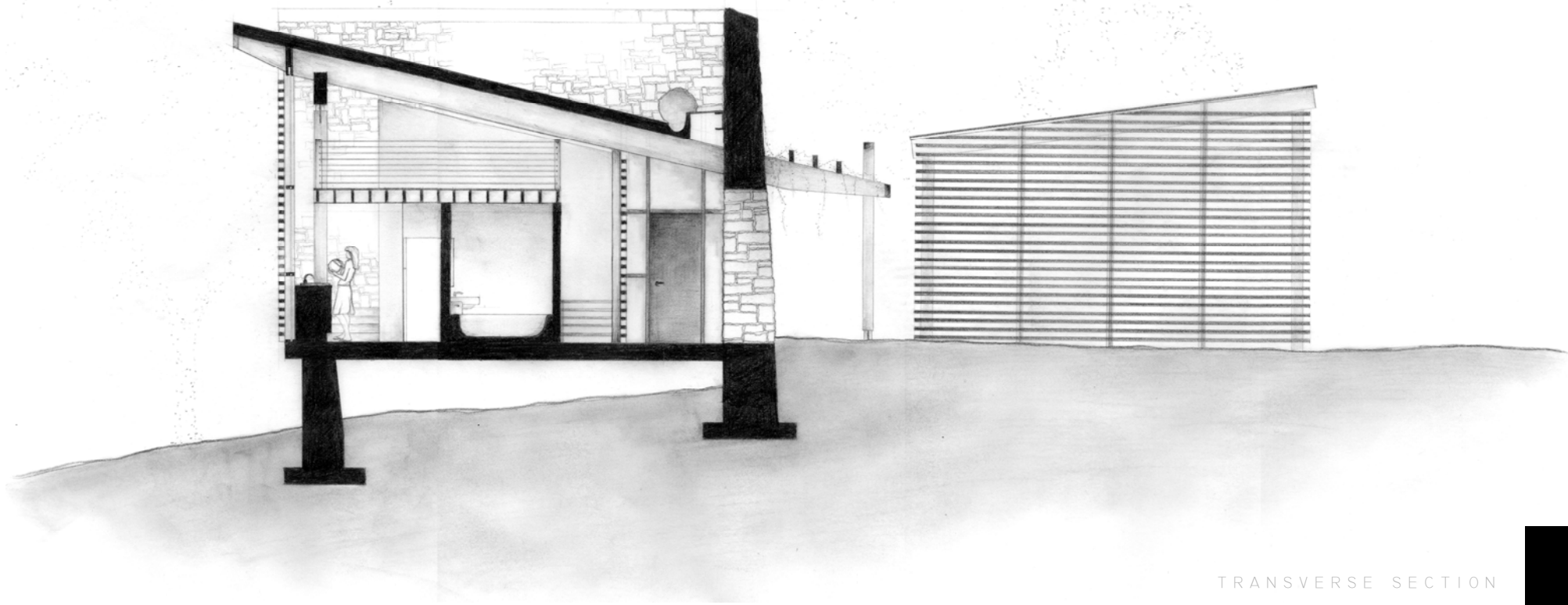


THE HOUSE IS DIVIDED INTO THREE "BAYS": THE ENTRY AND SERVICE AREAS WITH A LOFT ABOVE, THE COMMON LIVING SPACE, AND THE PRIVATE BEDROOM. THE WOOD SCREEN CONTRIBUTES IN DEFINING THESE SPACES. THERE ARE SEVERAL LEVEL CHANGES TO GIVE HIERARCHY TO THE SPACES YET PEOPLE CAN STILL CONNECT VISUALLY FROM DIFFERENT PARTS OF THE HOUSE. THE BEDROOM IS THE ONLY SPACE THAT PARTICIPATES WITH BOTH STONE WALLS. THIS PROVIDES AN EVIDENT BARRIER AND PRIVACY FROM THE OUTSIDE WORLD.



LONGITUDINAL SECTION

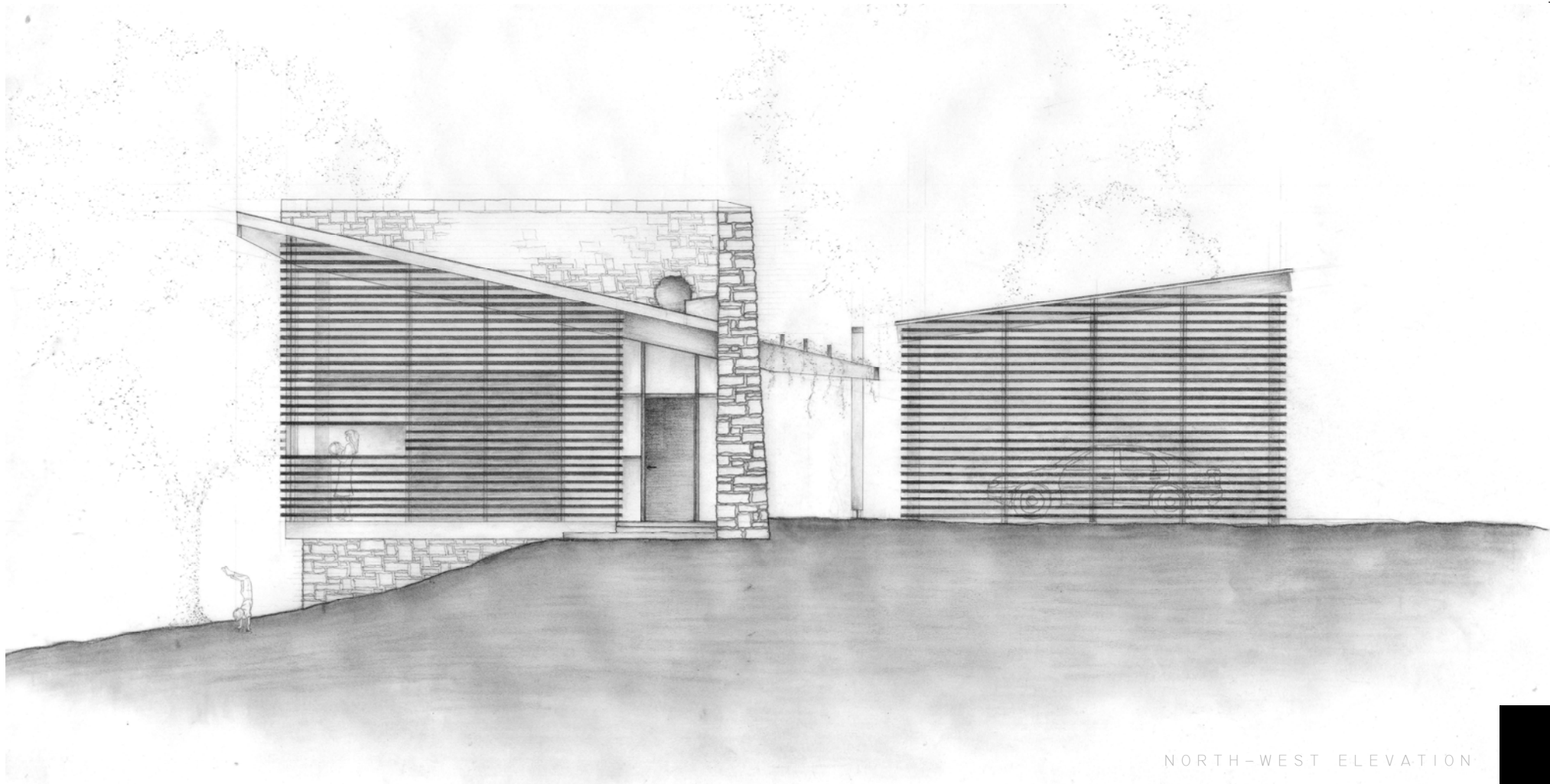




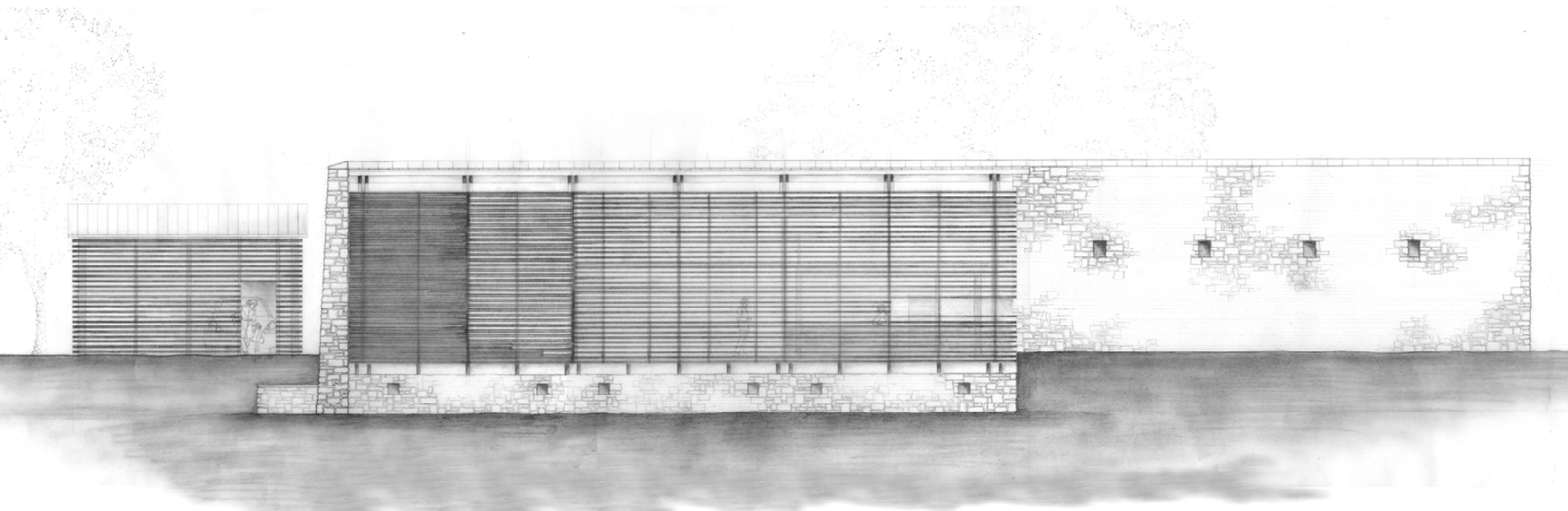
TRANSVERSE SECTION



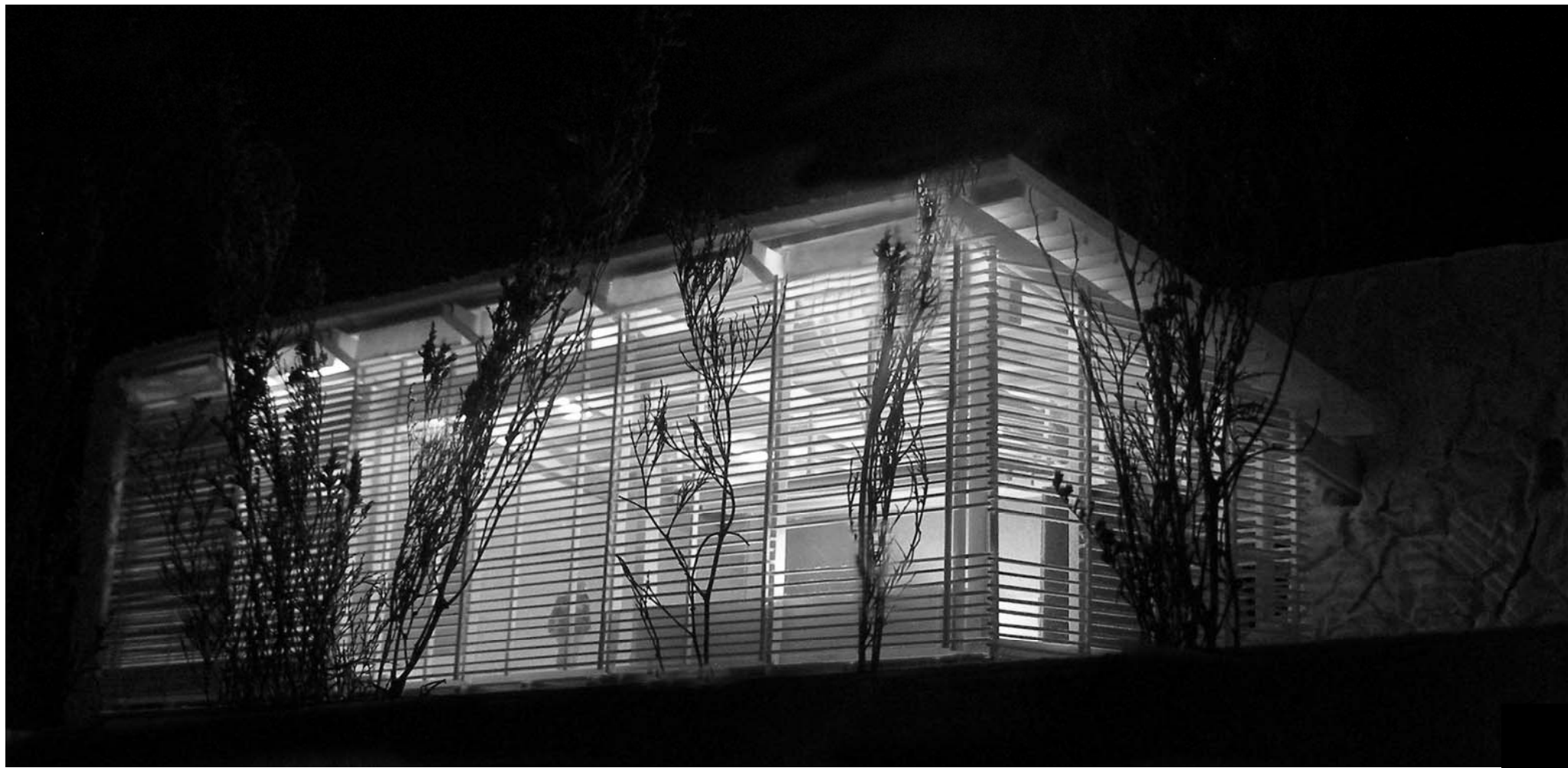


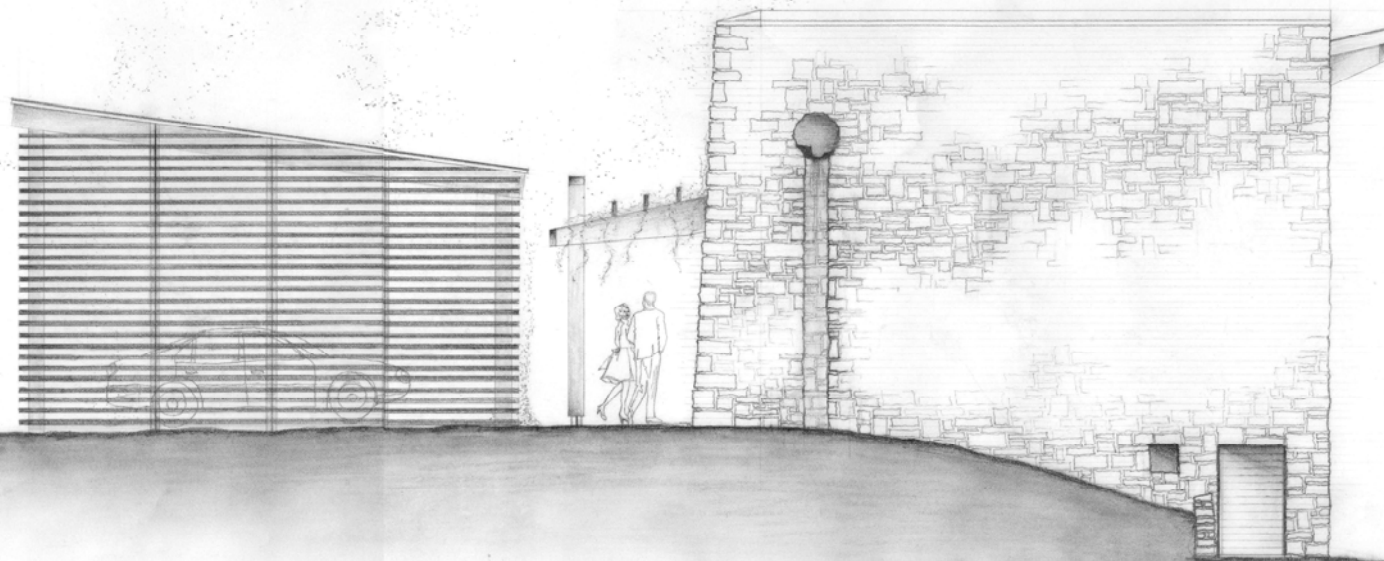


NORTH-WEST ELEVATION

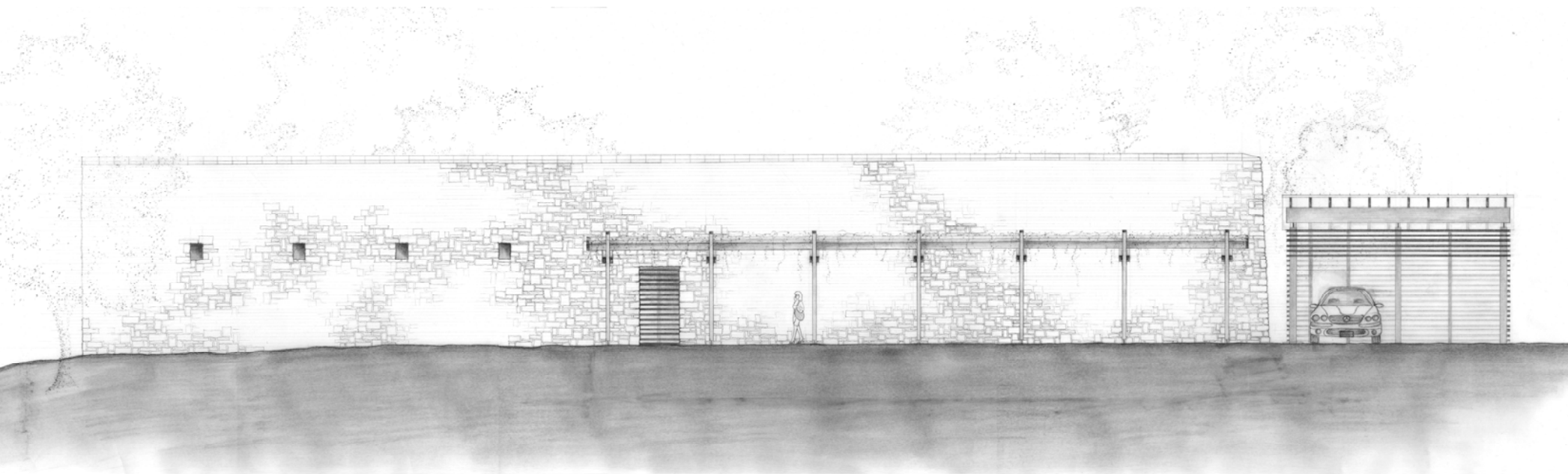


NORTH-EAST ELEVATION





SOUTH-EAST ELEVATION



SOUTH-WEST ELEVATION

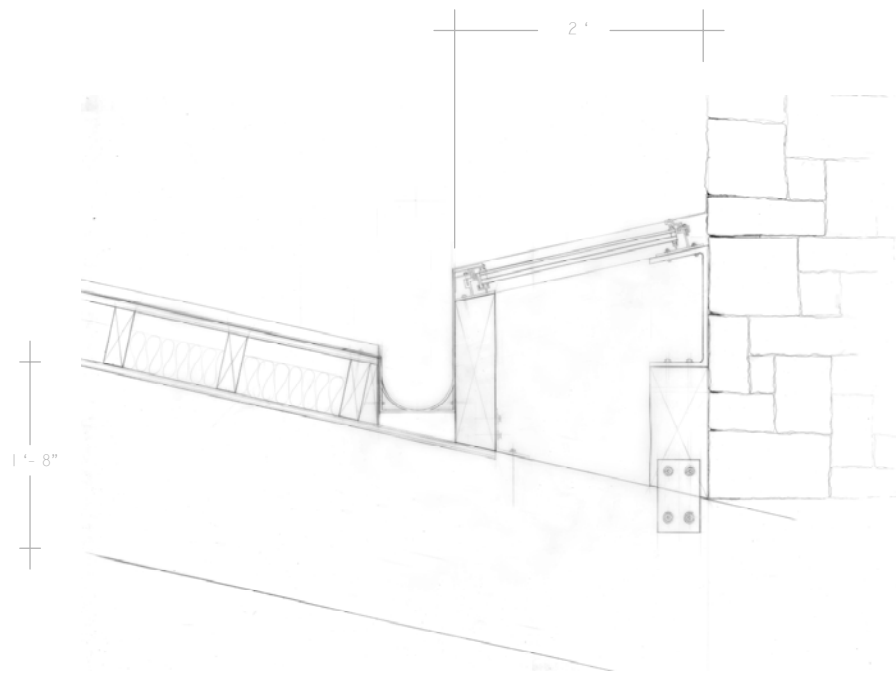
## M A T E R I A L S

## S T O N E

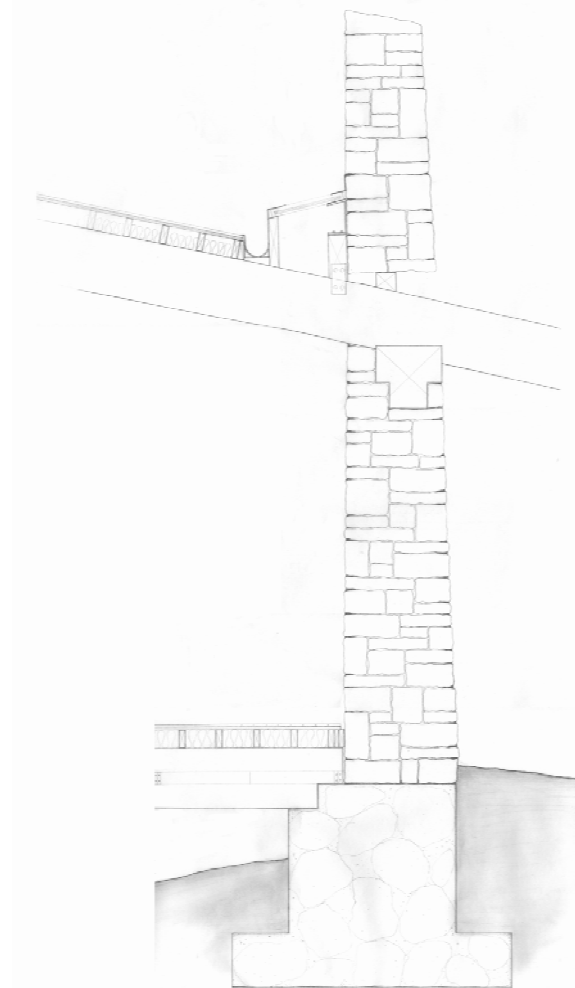


STONE EMBODIES A SORT OF ROUGH ELEGANCE. ITS TACTILE SURFACE IS REVEALED BY LIGHT AND SHADOW AND ITS IMPERFECTIONS ARE HONEST AND ABRUPT. THE STONE WALL IN THE DESIGN IS A “TRUE” STONE WALL. IT IS DRY STACKED AND MORTAR IS ONLY ADDED TO PROTECT FROM WATER AND INSECTS. THIS IS OBVIOUSLY NOT COMMON PRACTICE TODAY. COMMON PRACTICE DICTATES EVERYTHING MUST BE PACKED WITH INSULATION AND PROTECTED FROM WEATHER. BUT STONE CAN WITHSTAND MANY YEARS OF WEATHERING AND ITS AGING IS ONLY EVIDENT BY NATURE RECLAIMING WHAT IS HERS.

THE WALL IS APPROXIMATELY 20 ‘ HIGH AND AT ITS BASE IT IS 3 ‘ THICK, TAPERING TO 2 ‘ AT ITS PEAK. TO ENHANCE THE STONE AND ITS PRESENCE, THE ROOF INCORPORATES GLASS AT THE CONNECTION WITH THE STONE.



ROOF AND DRAINAGE DETAIL



TYPICAL STONE WALL SECTION



## M A T E R I A L S

## W O O D

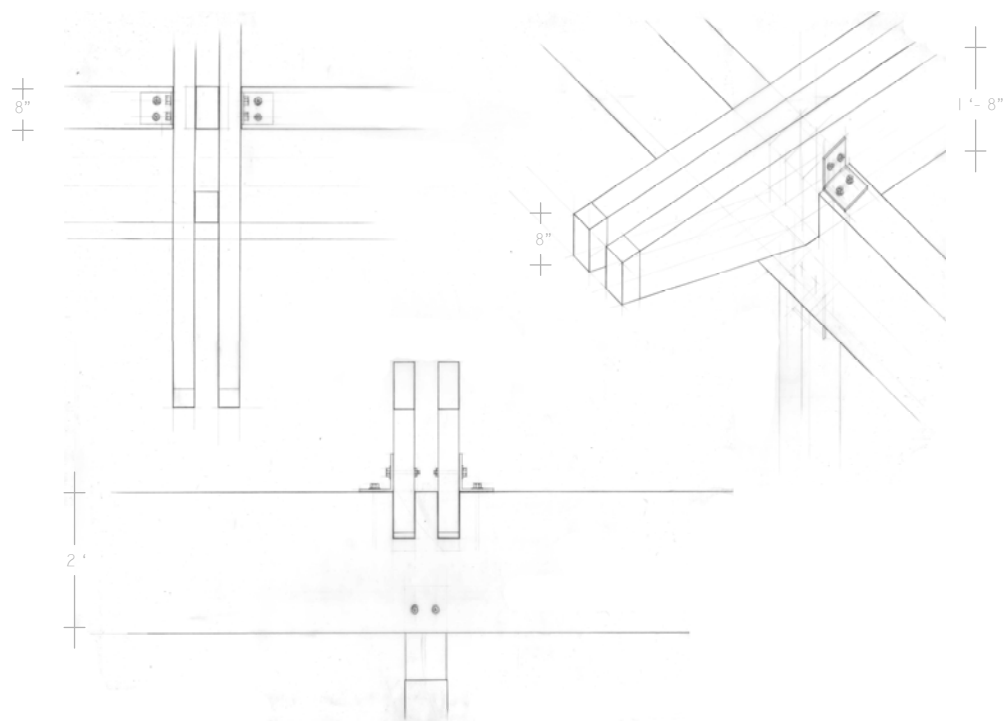


THE WOOD CONSTRUCTED PORTION OF THE HOUSE HAS MULTIPLE LAYERS. THE FIRST IS A WOOD SCREEN MADE OF 2"x4" LARCH SLATS. THIS SCREEN FILTERS NATURAL LIGHT AND INTRODUCES A HORIZONTALITY TO THE SPACE. THE SLATS ALSO CONTRIBUTE TO THE DEFINITION OF THE SPACES WITHIN. THE BRIGHTER SPACES ARE THE COMMON AREAS WITHIN THE HOUSE WHILE THE SOFTER, LOWER, LIGHT IS RESERVED FOR THE MORE PRIVATE AREAS.

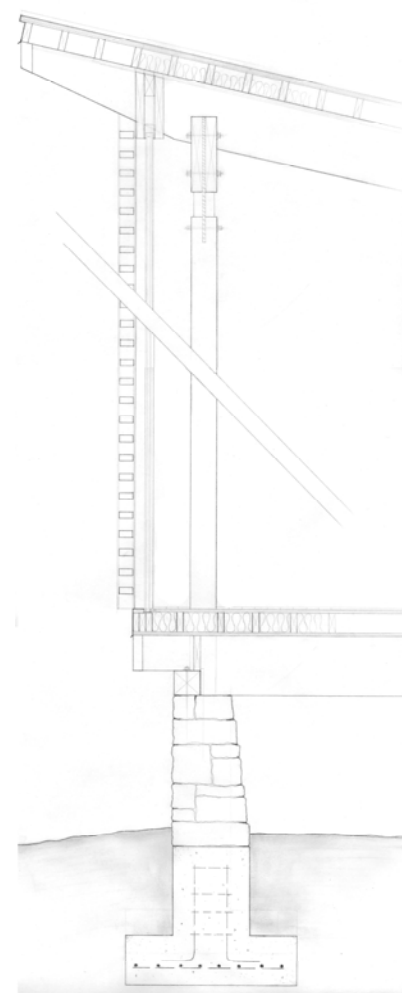
THE SECOND LAYER IS A GLASS CURTAIN WALL THAT ACTS AS THE WEATHER BARRIER. THE GLASS SHARES THE WOOD POST SUPPORTS OF THE SCREEN.

THE THIRD IS THE PRIMARY STRUCTURAL LAYER. THE COLUMNS ARE LARGER AND MORE PROMINENT AND ARE OF SOUTHERN RED OAK. BECAUSE THE SPACE IS SMALL, THE STRUCTURAL MEMBERS ARE DESIGNED TO FEEL LIGHT. FOR INSTANCE, THE HEADER BEAM DOES NOT TOUCH THE COLUMNS BUT IS JOINED BY A STEEL CRUCIFORM. THE ROOF JOISTS ALSO REFLECT THIS IDEA.

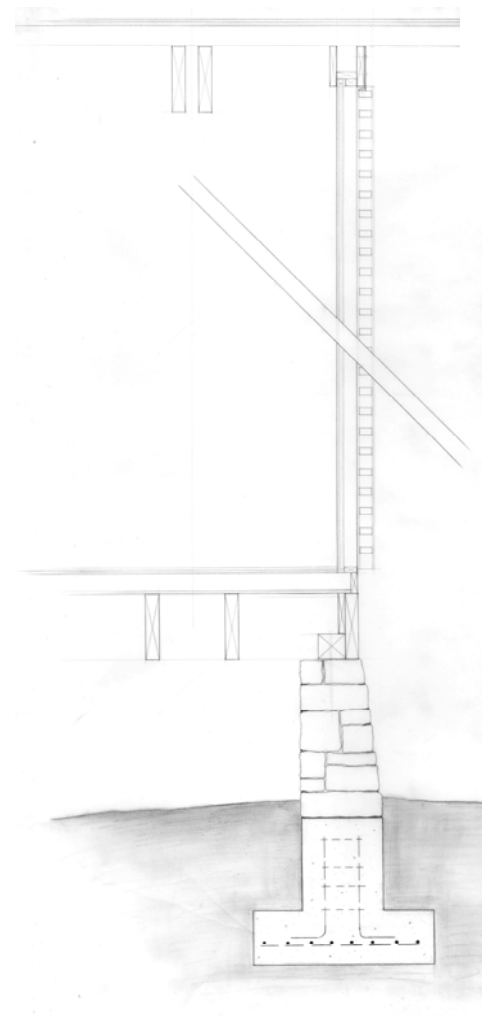




WOOD STRUCTURE DETAIL



TYPICAL WOOD WALL SECTION



## C O N C L U S I O N



ARCHITECTURE CAN IMPROVE THE WAY WE LIVE. IT CAN  
INFORM AND CONTRIBUTE TO OUR WELL-BEING. SPATIAL  
QUALITY CAN BE ACHIEVED BY MEANS OF LAYERS,  
MATERIALS, LIGHT, SCALE, AND MOVEMENT.  
UNFORTUNATELY, MANY CORRELATE QUALITY OF LIVING  
WITH QUANTITY OF LIVING SPACE.

ARCHITECTURE SHOULD LIVE AND BREATHE JUST AS THOSE  
WHO DWELL WITHIN IT. EACH SHOULD REFLECT WHO WE  
ARE AND WHO WE WANT TO BE.

ALL PHOTOGRAPHS WERE TAKEN BY AUTHOR

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

MASTER OF ARCHITECTURE

MAY 2007

VIRGINIA COMMONWEALTH UNIVERSITY

BACHELOR OF FINE ARTS

INTERIOR DESIGN

DECEMBER 2003

