

# EXHIBITION OF THE SENSES

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### **SPECIAL THANKS TO**

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ADVISOR:

TREY ARMSTRONG, PhD.

THIS PROJECT WAS A WILD JOURNEY TO LOOK AT ARCHITECTURE IN A DIFFERENT WAY. THANK YOU FROM THE BOTTOM OF MY HEART TO ALL THE PEOPLE WHO HELPED GET THIS PROJECT TO THE FINISH LINE. I LEARNED A LOT FROM EVERYONE THAT I SPOKE TO ABOUT THIS PROJECT AND IT HAS MADE ME A BETTER DESIGNER.

I WOULD ALSO LIKE TO THANK MY FAMILY FOR HELPING ME FOLLOW MY PASSIONS AND ULTIMATELY LEADING ME TO THIS PROJECT.

THANK YOU TO MY FIANCE WHO, AS MY FAVORITE DESIGNER, HAS PUSHED ME TO BE AS GREAT AS I CAN BE.

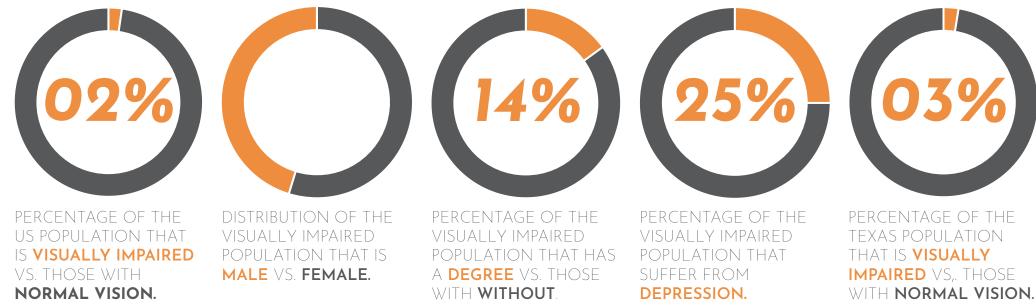
### DESIGNING FOR THE BLIND DESIGNING FOR EVERYONE

POSSIBLY TO A FAULT, THIS PROJECT BEGAN AS A WILD ATTEMPT TO TURN ARCHITECTURE ON ITS HEAD. I KNEW THAT THERE ARE MANY COMMUNITIES THAT HAVE BEEN NEGLECTED BY ARCHITECTURE THROUGHOUT THE YEARS. OUT OF ALL OF THESE GROUPS, I BELIEVE THAT THOSE WHO ARE BLIND ARE FORGOTTEN THE MOST. ARCHITECTURE FOCUSES SO HEAVILY ON THE AESTHETICS AND DETAILS OF THE BUILDING AND FORGETS THAT THERE IS A SECTION OF THE POPULATION THAT HAVE NO WAY OF EXPERIENCING ARCHITECTURE IN THAT WAY. I BEGAN TO IMAGINE THE BUILDING PUSHING THE BOUNDS OF ARCHITECTURE AND REALLY CHALLENGING HOW WE, AS DESIGNERS, COULD **RETHINK OUR IMPRESSION OF ARCHITECTURE. I** WANTED TO CURVE EVERYTHING AS TO AVOID ANY OBSTRUCTIONS IN THE PATH FOR THOSE WHO WOULD USE THE BUILDING, USE BIG BRIGHT COLORS THAT STAND OUT TO ORIENT PEOPLE, AND EVEN RETHINK HOW FIRE EXITS WOULD WORK. THIS ULTIMATELY WOULD HAVE BEEN TOO FAR TO TAKE THE BUILDING. THE BUILDING, TO BE SUCCESSFUL, NEEDED TO CONSIDER THE OTHER DISABILITIES PEOPLE HAVE, THE ABILITIES OF THOSE VISITING, AND THE EVOLUTION OF THE BUILDING. THIS BUILDING COULD NOT DEVIATE FROM TRADITIONAL DESIGNING TO ENSURE SUCCESS. FOR REAL EQUALITY, THE BUILDING NEEDED TO BE A BUILDING THAT ALSO WORKED FOR THOSE WITH NORMAL VISION WHILE INCORPORATING DESIGN DECISIONS FOR THOSE WITH DISABILITIES.

"WE'RE NORMAL PEOPLE" PETE IS A STUDENT AT T.S.B.V.I. WITH A HIGH LEVEL OF VISION DEGREDATION THAT I PERSONALLY CONDUCTED AN INTERVIEW WITH TO ASK ABOUT HIS EXPERIENCES.



### **VISUAL IMPAIRMENT STATISTICS**



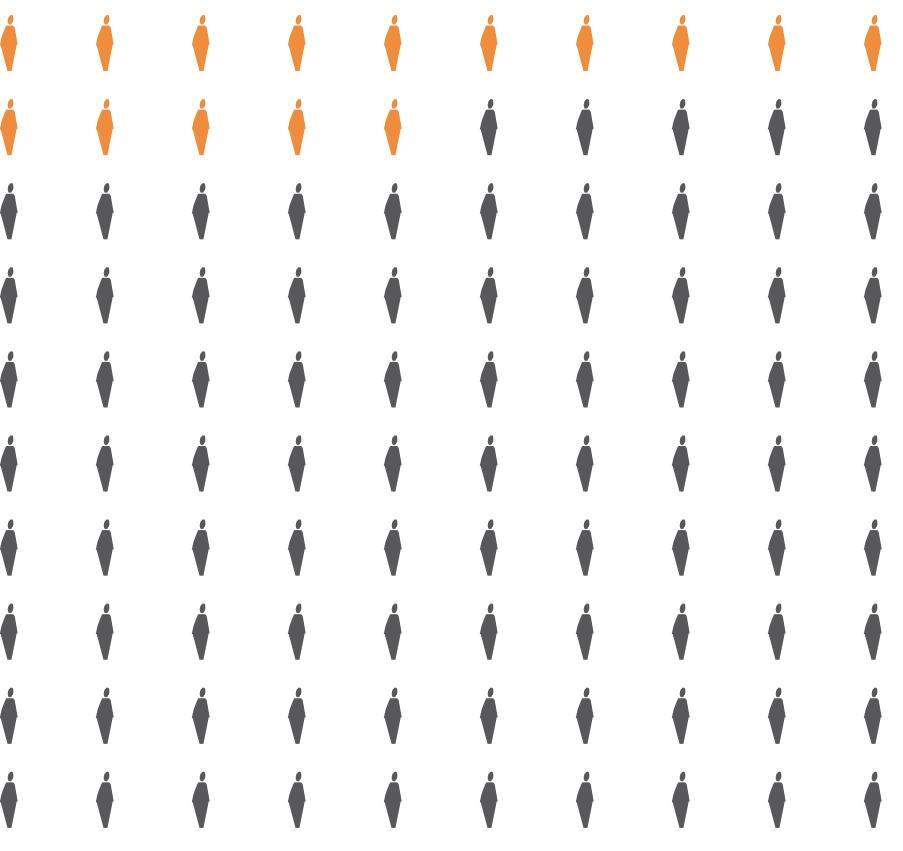
LEGAL BLINDNESS IS DEFINED BY THE FEDERAL **GOVERNMENT AS** HAVING WORSE THAN 20/200 VISION OR HAVING A CONE OF VISION LESS THAN 20 DEGREES (BLINDNESS TO AROUND 8 STATISTICS, 2019). THIS PERCENT OF THE MEANS THAT MANY PEOPLE WHO ARE BLIND STILL HAVE VISION TO SEE QUITE A BIT MORE THAN TYPICALLY ASSUMED. THOSE WITH VISION BETTER THAN 20/200 BUT STILL NOT IDEAL FALL UNDER THE BROADER UMBRELLA

KNOWN AS VISUAL IMPAIRMENT. THERE ARE ALSO AROUND 20 MILLION PEOPLE IN THE U.S. ALONE WITH SOME LEVEL OF VISUAL IMPAIRMENT WHICH EQUATES POPULATION (VISUAL IMPAIRMENTS, 2019). ARCHITECTURE STILL DOES NOT TAKE THIS INTO ACCOUNT WITH DESIGNS AS SHOWN BY THE HIGH EMPHASIS PUT ON SMALL DETAILS THAT GET LOST WITH VISION IMPAIRMENTS.

MANY PEOPLE WHO ARE BLIND STRUGGLE WITH THE IDEA THAT THEY DO NOT BELONG IN SOCIETY WITH OTHERS. MANY OF THE RESOURCES THEY HAVE AT THEIR DISPOSAL ARE SECOND CLASS TO THE REST OF THE POPULATION, THEIR ENTRANCES ARE OFTEN AROUND THE CORNER OR BACK, AND THE WORLD IS DESIGNED AROUND THOSE WITH NO DISABILITY. A CDC STUDY REPORTED THAT 1 OF 4 PEOPLE

WITH VISION IMPAIRMENT HAVE **REPORTED TO** HAVE ANXIETY OR DEPRESSION (VISION LOSS AND MENTAL HEALTH, 2021). THIS MEANS THAT ANY BUILDING PROPERLY DESIGNED FOR THESE PEOPLE MUST NOT ONLY ADDRESS THEIR DISABILITIES, BUT ALSO TRY TO ASSIGN A SENSE OF PLACE TO ENSURE THAT THE ALIENATION THAT ARCHITECTURE HAS FACILITATED IS MINIMIZED.

ONLY 15 PERCENT OF THOSE WHO ARE VISUALLY IMPAIRED ARE **LEGALLY** BLIND. OF THAT 14 PERCENT, ONLY AROUND 5 PERCENT OF THOSE PEOPLE HAVE NO VISION.





# 20/200

# LEGAL BLINDNESS DESIGN PARAMETER

~20/600

### UNIVERSAL DESIGN

### EQUITABLE USE

PROVIDE THE SAME MEANS OF USE FOR ALL USERS: IDENTICAL WHENEVER POSSIBLE: EQUIVALENT WHEN NOT.

AVOID SEGREGATING OR STIGMATIZING ANY USERS.

**PROVISIONS FOR** PRIVACY, SECURITY, AND SAFETY SHOULD BE EQUALLY AVAILABLE TO ALL USERS.

MAKE THE DESIGN APPEALING TO ALL USERS.

#### **FLEXIBILITY IN** USE

PROVIDE CHOICE IN METHODS OF USE. ACCOMMODATE **RIGHT- OR LEFT-**HANDED ACCESS AND USE.

FACILITATE THE USERS' ACCURACY AND PRECISION.

**PROVIDE ADAPTABILITY** TO THE USERS' PACE

ARRANGE INFORMATION COSISTENT WITH ITS IMPORTANCE

> PROVIDE EFFECTIVE PROMPTING AND FEEDBACK DURING AND AFTER TASK COMPLETION.

SIMPLE AND

**INTUITIVE USE** 

ELIMINATE

UNNECESSARY

COMPLEXITY

**BE CONSISTENT WITH** 

USER EXPECTATIONS

AND INTUITION

ACCOMMODATE

A WIDE RANGE

OF LITERACY AND

LANGUAGE SKILLS

#### PERCEPTIBLE INFORMATION

USE DIFFERENT MODES (PICTORIAL) VERBAL, TACTILE) FOR REDUNDANT PRESENTATION OF ESENTIAL INFORMATION.

PROVIDE ADEQUATE CONTRAST BETWEEN ESSENTIAL **INFORMATION AND ITS** SURROUNDINGS.

MAXIMIZE "LEGIBILITY" OF ESSENTIAL INFORMATION.

DIFFFERENTIATE ELEMENTS IN WAYS THAT CAN BE DESCRIBED (I.E., MAKE IT EASY TO **GIVE INSTRUCTIONS OR** DIRECTIONS.

PROVIDE COMPATIBILITY WITH A VARIETY OF **TECHNIQUES OR DEVICES USED BY PEOPLE WITH SENSORY** LIMITATIONS

#### TOLERANCE FOR ERROR

ARRANGE ELEMENTS TO MINIMIZE HAZARDS AND ERRORS: MOST USED ELEMENTS, MOST ACCESSIBLE; HAZARDOUS ELEMENTS ELIMINATED, ISOLATED, OR SHIELDED.

**PROVIDE WARNINGS** OF HAZARDS AND ERRORS.

PROVIDE FAIL SAFE FEATURES.

DISCOURAGE UNCONSCIOUS ACTION IN TASKS THAT **REQUIRE VIGILANCE.** 

#### LOW PHYSICAL **EFFORT**

ALLOW USER TO MAINTAIN A NEUTRAL BODY POSITION

USE REASONABLE **OPERATING FORCES** 

MINIMIZE REPETITIVE **ACTIONS** 

MINIMIZE SUSTAINED PHYSICAL EFFORT



PROVIDE A CLEAR LINE OF SIGHT TO **IMPORTANT ELEMENTS** FOR ANY SEATED OR STANDING USER.

MAKE REACH TO **ALL COMPONENTS** COMFORTABLE FOR ANY SEATED OR STANDING USER.

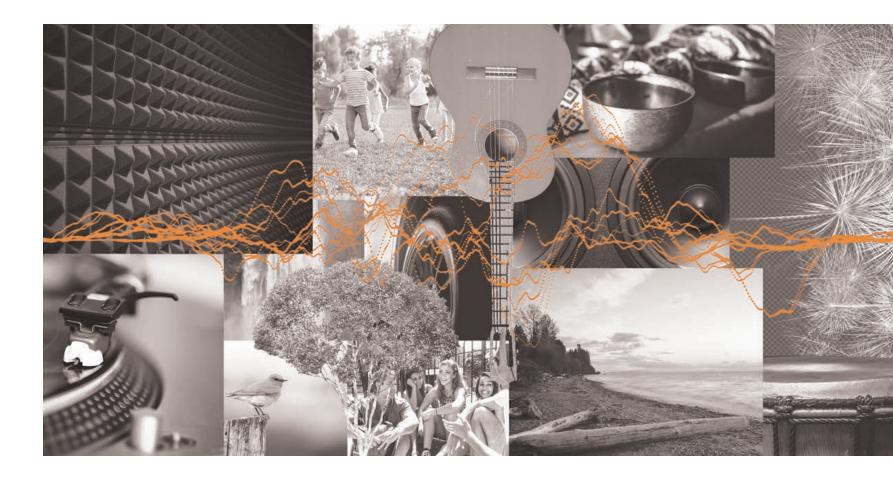
ACCOMMODATE VARIATIONS IN HAND AND GRIP SIZE.

PROVIDE ADEQUATE SPACE FOR THE USE OF ASSISTIVE DEVICES **OR PERSONAL** ASSISTANCE.

### SOUND

FOR THOSE WHO ARE ESPECIALLY BLIND, SOUND IS A PRIMARY MODE OF NAVIGATING A SPACE. IT IS USED FOR SAFETY, ALERTING PEOPLE WHO ARE BLIND OF DANGEROUS CONDITIONS SUCH AS A NOISY STREET. THIS DOES NOT MEAN THAT THOSE WHO ARE BLIND HAVE A HEIGHTENED SENSE OF HEARING, BUT RATHER THIS IS A GENERIC HUMAN TRAIT THAT THEY THE SAME WAY THAT ARE MORE RELIANT ON. SOUND SOURCES CAN

ACT LIKE DIFFERENT PAINT COLORS OR MATERIALS THAT WOULD TRADITIONALLY BE USED IN ARCHITECURE. SOUND FOR THIS PROJECT WILL NEED TO BE USED TO INDICATE WHERE SPACES BEGIN, HEIGHTS CHANGE, AND BORDERS HAPPEN. SOUND WILL NEED TO CREATE THE SENSE OF SPACE FOR THE PEOPLE WHO CANNOT SEE THE PROPORTIONS IN DESIGNERS TEND TO EMPHASIZE.





### TOUCH

BUILDINGS ARE DESIGNED TO BE LOOKED AT AND FELT SPATIALLY, BUT RARELY MEANT TO BE TOUCHED. TEXTURE IS A GREAT WAY TO DELINEATE THE DIFFERENT SPACES AND TRANSITIONS BETWEEN THEM. MANY OF THE PEOPLE WHO ARE BLIND USE A CANE TO HELP THEM NAVIGATE THEIR SPACES, WHICH HELPS THEM FEEL THE DIFFERENCE OF FLOORING PATTERNS, RESISTANCE, AND EDGES. THE STUDENTS FOLLOW THE JOINT IN THE CONCRETE PATH WITH THEIR CANE TO KNOW THEY ARE IN THE MIDDLE, RATHER THAN IN DANGER OF RUNNING INTO ANYTHING.

TAKING THIS IDEA INTO ACCOUNT, THE CIRCULATION SPACES ARE A SERIES OF LIGHT COLORED SQUARE TILES THAT PROVIDE A GRID FOR EASIER DIRECTIONAL MOVEMENT. THIS WILL HELP PEOPLE AVOID WANDERING OFF PATH IF THEY DON'T WANT TO. THE EDGES OF THESE CIRCULATION PATHS ARE A DARK RUBBER MATT WITH EMBOSSED HEXAGONS TO INDICATE OBSTRUCTIONS. THIS WILL HELP THE STUDENTS AVOID RUNNING INTO THE WALLS WHEN NAVIGATING THROUGH THE BUILDING. THE LIGHT TILES ARE CONTRASTED BY MATERIALS SUCH AS WOOD, INFUSED

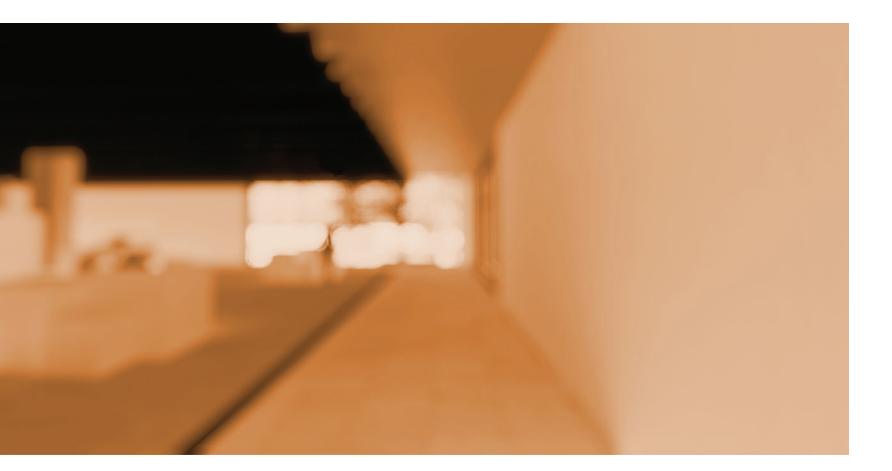
CONCRETE, CORK, AND VARYING JOINT WIDTHS TO DESIGNATE THE DIFFERENCE BETWEEN SPACES FOR CIRCULATION AND SPACES FOR EXPLORATION, OR THE EXHIBITION SPACES. THE WALLS USE A PANEL SYSTEM FOR THOSE WHO ARE NOT BOUND TO A CANE. THERE ARE PANELS OF 3D PRINTED CONCRETE, ACOUSTIC PANELING, RAMMED EARTH, AND BRICKS ATTACHED TO WALLS THAT INDICATE DIFFERENT SPACES. THIS WOULD BE THE EQUIVALENT OF DIFFERENT COLORED ROOMS FOR THE STUDENTS IN A TRADITIONAL ELEMENTARY SCHOOL.

### **SMELL**

SMELL IS A PARTICULARLY DIFFICULT SENSE TO USE IN ARCHITECTURE, BUT ONE OF THE MATERIALS THAT HAS DEFINING SMELLS IS HARDWOOD. THIS IS ALREADY, FOR THE SENSE OF TOUCH, USED IN THE EXHIBITION SPACES, BUT AS A FLOOR, LIMITS THE SMELL TO THE LOWER PARTS OF THE ROOM. TO FIX THIS, THE EXHIBITION SPACES HAVE A RAISED FLOOR WITH INTEGRATED HVAC SYSTEMS TO POSSIBLE, CIRCULATE THROUGH THE ROOM. THE DIFFERENT MATERIALS THAT ARE USED FOR THESE SMELLS ARE CEDAR FLOORING, OAK FLOORING, COFFEE INFUSED CONCRETE TILES, AND CORK. CORK HAS PREVIOUSLY BEEN USED IN THE KENSINGTON PALACE

PAVILION BY HERZOG AND DE MEURON. THE MOST NOTED THING ABOUT THEIR DESIGN, AS REPORTED BY THOSE WHO VISITED THE LOCATION, IS THE SMELL IS SO PARTICULAR THAT IT ALLOWS PEOPLE TO FEEL THE SPACE JUST THROUGH SMELL. THE CONCRETE PANELS HAVE BEEN USED IN TABLES WHICH ARE REPORTED TO KEEP THEIR SMELL FOR YEARS AND ONLY NEED TO BE SPRAYED WITH MAKE SURE THE SMELL CAN, FOR AS LONG AS COFFEE OR OILS TO HAVE THE SMELL RETURN.





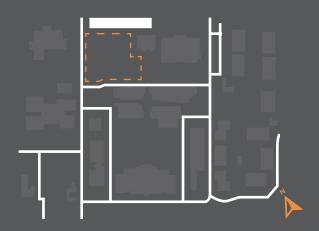
### SIGHT

SIGHT IS THE SENSE
THAT ARCHITECTS ARE
MOST KEEN ON USING.
THIS PROJECT STARTED
WITH THE IDEA OF A
BUILDING WITHOUT THIS
SENSE, BUT DURING THE
RESEARCH PHASE OF
THE PROJECT, IT WAS
CHANGED TO INCLUDE
IT. EVEN PEOPLE WHO
ARE LEGALLY BLIND
HAVE PERCEPTION OF
CONTRAST, LIGHT, AND
SOMETIMES COLORS.
THIS MEANS THAT SIGHT
IS ALSO IMPORTANT
FOR NAVIGATING

SPACES WHILE BEING BLIND, JUST SOME CHANGES NEED MADE. THE CONTRASTING ELEMENTS NEED TO BE LARGE ENOUGH TO NOT BLUR INTO OTHER ELEMENTS. LIGHT CAN BE USED AS AN ELEMENT TO LEAD PEOPLE OR INDICATE SOMETHING. COLORS CAN START TO CONVEY MESSAGES OF THE SPACES AND THE WAY YOU ARE INTENDED TO FEEL IN THEM.



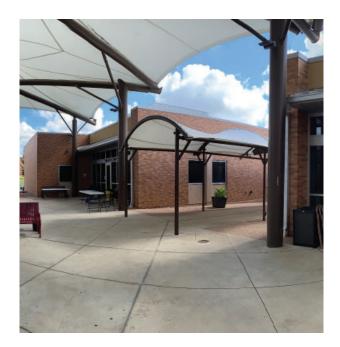




### SITE

THE SITE FOR THE PROJECT IS THE CAMPUS OF THE TEXAS SCHOOL FOR THE BLIND AND VISUALLY IMPAIRED. ON THE CAMPUS, THERE IS AN OPEN FIELD THAT IS NEXT TO THE BUSINESS **ADMINISTRATION** BUILDING THAT USED TO HOUSE A BUILDING OF AN UNDISCLOSED FUNCTION. THE CAMPUS IS LOCATED IN THE MEDICAL CENTER OF AUSTIN WHICH SITS JUST AT THE NORTHERN ÉDGE OF DOWNTOWN.

AUSTIN IS GROWING IN INFLUENCE AND NEW BUSINESSES ARE PUTTING CONTEMPORARY ARCHITECTURE IN THE FABRIC OF THE CITY. AUSTIN HAS A PARTICULAR ESSENCE IN MANY OF THESE EXAMPLES THAT IS AN ECLECTIC, WEIRDNESS. THIS MEANS THE BUILDING TO BE DESIGNED MUST HAVE THAT SAME ESSENCE WHILE HAVING A CONTEMPORARY DESIGN THAT IS ATTRACTIVE.

















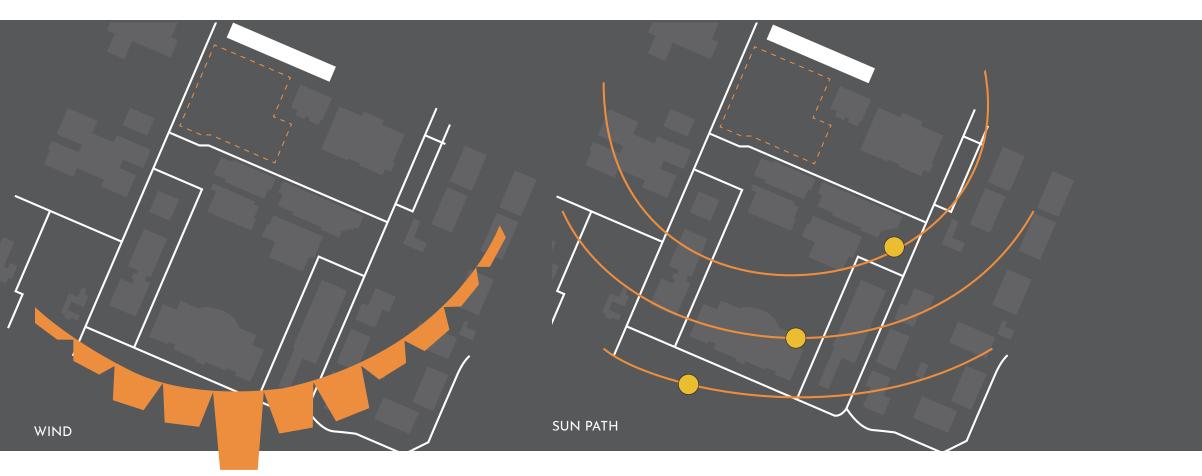




### TEXAS SCHOOL FOR THE BLIND AND VISUALLY IMPAIRED

THE TEXAS SCHOOL FOR THE **BLIND AND VISUALLY IMPAIRED** (T.S.B.V.I.) HAS 11,000 STUDENTS ON AVERAGE THAT ARE ENROLLED AT ANY GIVEN TIME. THE CAMPUS HOUSES AROUND 1,500 STUDENTS ON CAMPUS MONDAY THROUGH SATURDAY. THE STUDENT BODY HAS DIFFERENT CLASSES RANGING FROM THE TRADITIONAL ONES TO A PODCAST CLASS. THE CAMPUS SPRAWLS OVER 73 ACRES OF STATE OWNED LAND. THE CAMPUS IS WELL SPREAD OUT, BUT LACKS QUALITY SHADE. THERE ARE BUILT SHADING DEVICES AND PAVILIONS, BUT THE CONCRETE THEY SIT ON

GETS TOO WARM IN THE TEXAS SUN TO BE PLEASANT. THE ORIENTATION OF THE CAMPUS ALSO DOES NOT LEND ITSELF TO ALLOWING THE PREVAILING WINDS TO FLOW PROPERLY THROUGH THESE AREAS. THE PREFERRED AREAS WOULD BE UNDER A TREE FOR THE LACK OF CONCRETE AND SHADE, BUT THERE ARE VERY FEW TREES FOR THE AMOUNT OF OPEN SPACE ON THE CAMPUS. THE STUDENTS HAVE ARTWORK THAT IS PLACED ON THE WALL THAT IS SHARED WITH THE AUDITORIUM AND MUSIC ROOMS.





### CLIMATE

WHEN VISITING THE CAMPUS, THEY INDICATED A DESIRE FOR MORE COMFORTABLE OUTDOOR SPACE. AUSTIN HAS WARM SUMMERS AND THEREFORE, SHADE AND WIND ARE THE TWO PRIMARY CLIMATE SYSTEMS THAT NEED INTEGRATED. THE CAMPUS IS ORIENTED 28 DEGREES OFF OF NORTH, WHICH

DEFLECTS THE MOST PREVAILING WINDS DURING THE SUMMER, WHEN THE WIND WOULD BE PREFERRABLE. THE SUN, LIKE MOST OF TEXAS, GETS HIGH IN THE SKY AND THEREFORE THE MORE SHADE THAT CAN BE CAST, THE BETTER.

### CASE STUDIES









MUSEO TIFLOLOGICO IS A MUSEUM IN MADRID, SPAIN. THE MUSEUM IS DESIGNED FOR THOSE WHO ARE BLIND. THIS IS THE NUMBER ONE EXAMPLE OF ARCHITECTURE FOR THIS GROUP OF PEOPLE. THE MUSEUM HAS MINATURE MODELS OF FAMOUS ARTWORKS FOR THE PATRONS TO FEEL AND UNDERSTAND WITHOUT THE NEED TO GO THERE. THIS IS A **BIG STEP FOR ACCESSIBLE ARCHITECTURE AS** NOTHING ELSE LIKE THIS EXISTS.

**CASA MAC** IS A HOME IN VICENZA, ITALY BY SO&SO ARCHITECTS. THIS HOME IS FOR AN OLDER LADY WHO IS BLIND AND LIVES ALONE. THE FLOOR IS MADE OF WOOD WITH STONES INSET IN IT TO PROVIDE A TACTILE DIFFERENCE ON HER FEET AS SHE MOVES AROUND. THIS PROVIDES A LANGUAGE FOR HER TO KNOW WHERE SHE IS IN THE HOUSE WITHOUT HER VISION.

#### THE NATIONAL CENTER FOR CIVIL AND HUMAN RIGHTS

WAS RECOMMENDED AS A PREFERRED SPACE BY MY ADVISOR, DR. **ARMSTRONG. DUE TO THIS BEING A COMMENT FROM** 



A PERSON WHO IS BLIND, I BEGAN LOOKING AT IT. THE **BUILDING HAS ENTRANCES** AT TWO DIFFERENT LEVELS AND FEATURES CURVED CIRCULATION. THE BUILDING IS IN ATLANTA. GEORGIA BY H.O.K. ARCHITECTS.



AS HARD PRESSED AS IT IS FINDING PROPER CASE STUDIES THAT PERTAIN TO A PROJECT SUCH AS THIS ONE, THESE FOUR PROVIDE NEARLY ALL THE INFORMATION ON ARCHITECTURE FOR BLIND PEOPLE. THE MUSEUM, AS THE PRIMARY EXAMPLE, IS PROPERLY USING THE DISPLAYS, BUT THE ARCHITECTURE IS GENERIC. THE ARCHITECTURE IN CASA MAC IS SPOT ON FOR THE IDEAS BEHIND IT, BUT YET THIS LANGUAGE WORKS ON THE PERSONAL SCALE OF A HOME AND NOT IN THE PUBLIC. THE NATIONAL CENTER FOR CIVIL AND HUMAN RIGHTS, ALTHOUGH A BEAUTIFUL BUILDING, WORKS WELL WITH THE SITE THAT WAS CHOSEN FOR IT. THAT BEING SAID, THE CURVES IN PLAN ARE NOT PREFERRABLE FOR NAVIGATION BY THOSE WHO ARE BLIND. THE OFFICES WORK FOR HOW TO LAY OUT OUTDOOR SPACE, BUT THE AMOUNT OF STAIRS IS SIMPLY NOT UNIVERALLY DESIGNED. THESE CASE STUDIES GO TO SHOW JUST HOW LITTLE ARCHITECTURE FOR THE BLIND IS BEING ADDRESSED.

#### FIFTH AND TILLERY OFFICES

BY GENSLER IS IN AUSTIN, TEXAS IS IS A GOOD EXAMPLE OF OUTDOOR SPACE IN A CLIMATE THAT MATCHES THE SITE FOR THIS PROJECT. THE ARCHITECTS USED WOOD AS A SUSTAINABLE MATERIAL BUT ALSO USED TREES TO PROVIDE NATURAL SHADE. THERE ARE PONDS THAT ARE PLACED IN THE COURTYARD TO PROVIDE PASSIVE COOLING AS WELL, TO PROVIDE COMFORT AS REQUESTED BY THE CLIENT.

### FORM EXPLORATION

THIS IS THE FIRST VERSION OF THIS BUILDING THAT EXISTED. THE IDEA BEHIND THIS FORM WAS ONE THAT ORIENTED ITSELF WITH THE SOUTHERN WIND DURING THE SUMMER WHICH ALLOWS THE COURTYARD TO BE PASSIVELY COOLED. THE LARGE WALLS THAT FLANK IT WOULD ALSO HAVE WIND INLETS THAT ALLOW THEM TO ACT AS LARGE SOLAR CHIMNEYS.

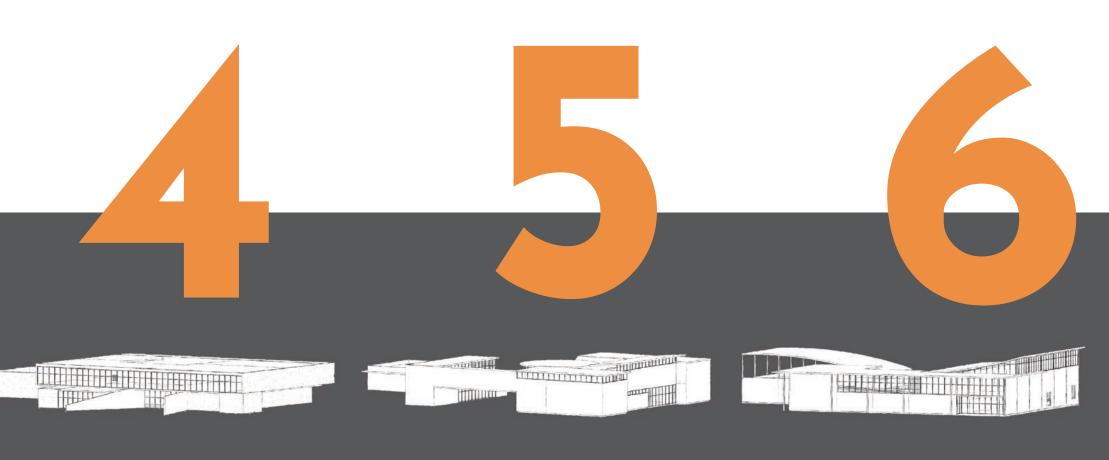
THE SECOND FORM OPTION INCREASED THE PROGRAM AREA BY EXPANDING TO A SECOND LEVEL. THIS MEANT THAT THE ISSUE OF CIRCULATION NEEDED TO BE ADDRESSED. STAIRS SEGREGATE THOSE WHO ARE IN A WHEELCHAIR, BUT RAMPS TAKE UP A LOT OF SPACE. THIS FORM IS WHAT ULTIMATELY LED TO THE USAGE OF UNIVERSAL DESIGN IN THE FINAL PROJECT.

THIS THIRD OPTION USED MORE TRADITIONAL SOLAR CHIMNEYS TO PULL WIND INTO THE COURTYARD. THE DESIGN WAS TO MAXIMIZE FLOOR SPACE WITHOUT NEEDING THE SECOND FLOOR. THE TOWERS WERE INCLUDED IN THE DESIGN TO PUT THE SOLAR CHIMNEY AS A PASSIVE COOLING SYSTEM ON DISPLAY. THIS IS WHERE THE IDEA OF USING THIS TECHNOLOGY ENDED.

MPHTHITTON

HELTA ITA ITA

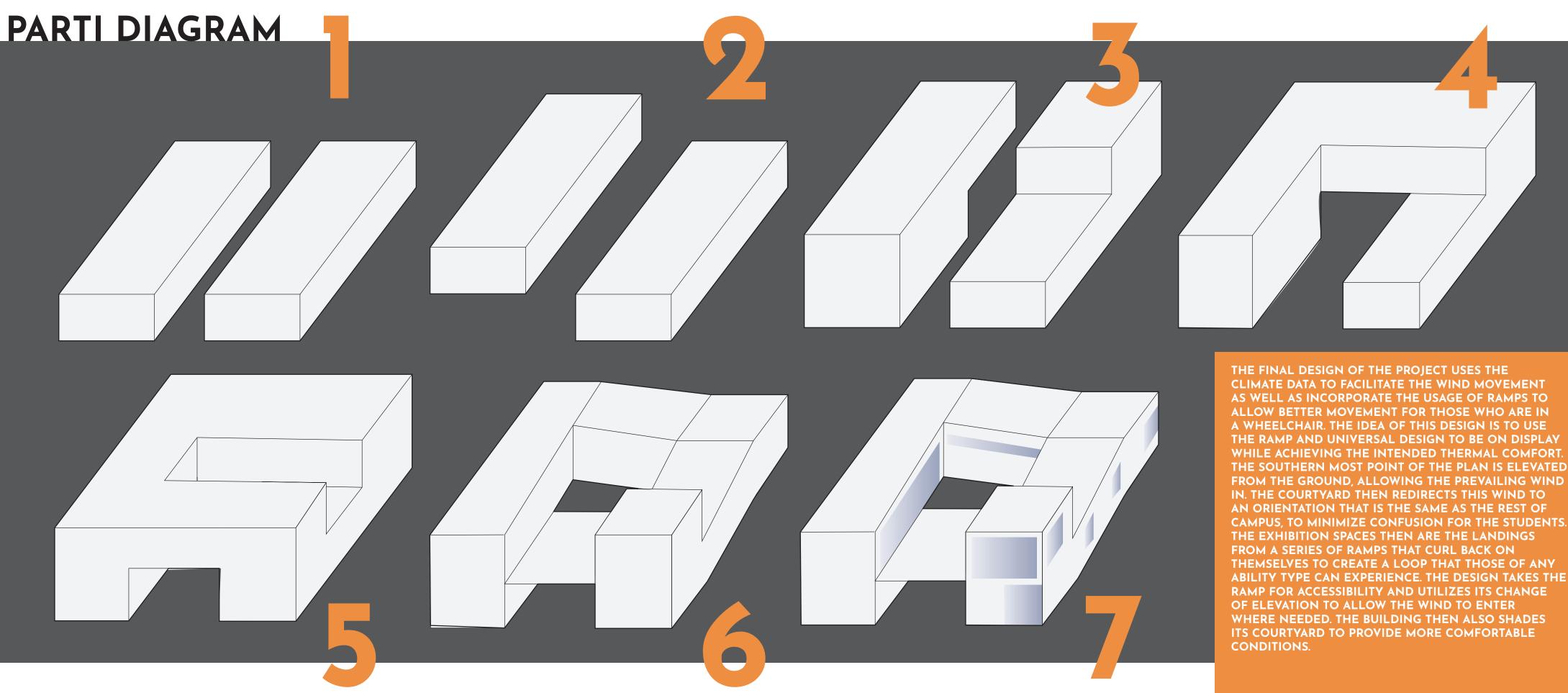
WELLCLITT



IN AN ATTEMPT TO MAXIMIZE FLOOR AREA AND THE DESIGN ESSENCE OF AUSTIN, THIS DESIGN DID NOT FOCUS ON THE CLIMATE, JUST FORM. THIS EXPLORATION DID NOT CONTINUE UNTIL THE FINAL **RENDITION, BUT RATHER GAVE THE** INSIGHT THAT THE CLIMATE AND UNIVERSAL DESIGN WERE OF THE MOST IMPORTANT FACTORS IN THE DESIGN.

THIS DESIGN UNKNOWINGLY LED TO THE END DESIGN QUITE HEAVILY. IT FEATURED A LARGE ROUND RAMP THAT CONNECTED BOTH FLOORS AND SEPARATED THE BUILDING BY A COURTYARD CONNECTED BY A BRIDGE. ULTIMATELY, THE FLOW OF THE SPACE WAS TOO UNORGANIZED AND WOULD PROVE TO BE ULTIMATELY TOO CONFUSING TO THE STUDENTS OR THOSE VISITING.

THIS IS THE LAST FORM THAT THE BUILDING TOOK ON BEFORE ULTIMATELY GETTING TO THE FINAL ONE. THE BUILDING USES INVERSELY CURVED ROOFS TO PULL IN THE PREVAILING WINDS FROM UP ABOVE AND DIRECT THEM DOWN INTO THE COURTYARD AND THEN OUT THE OTHER SIDE. THIS DESIGN HAD RAMPS THAT LED TO FLOORS AND USED WIND, BUT IN A DISCONNECTED WAY



THE SOUTHERN MOST POINT OF THE PLAN IS ELEVATED CAMPUS, TO MINIMIZE CONFUSION FOR THE STUDENTS. ABILITY TYPE CAN EXPERIENCE. THE DESIGN TAKES THE





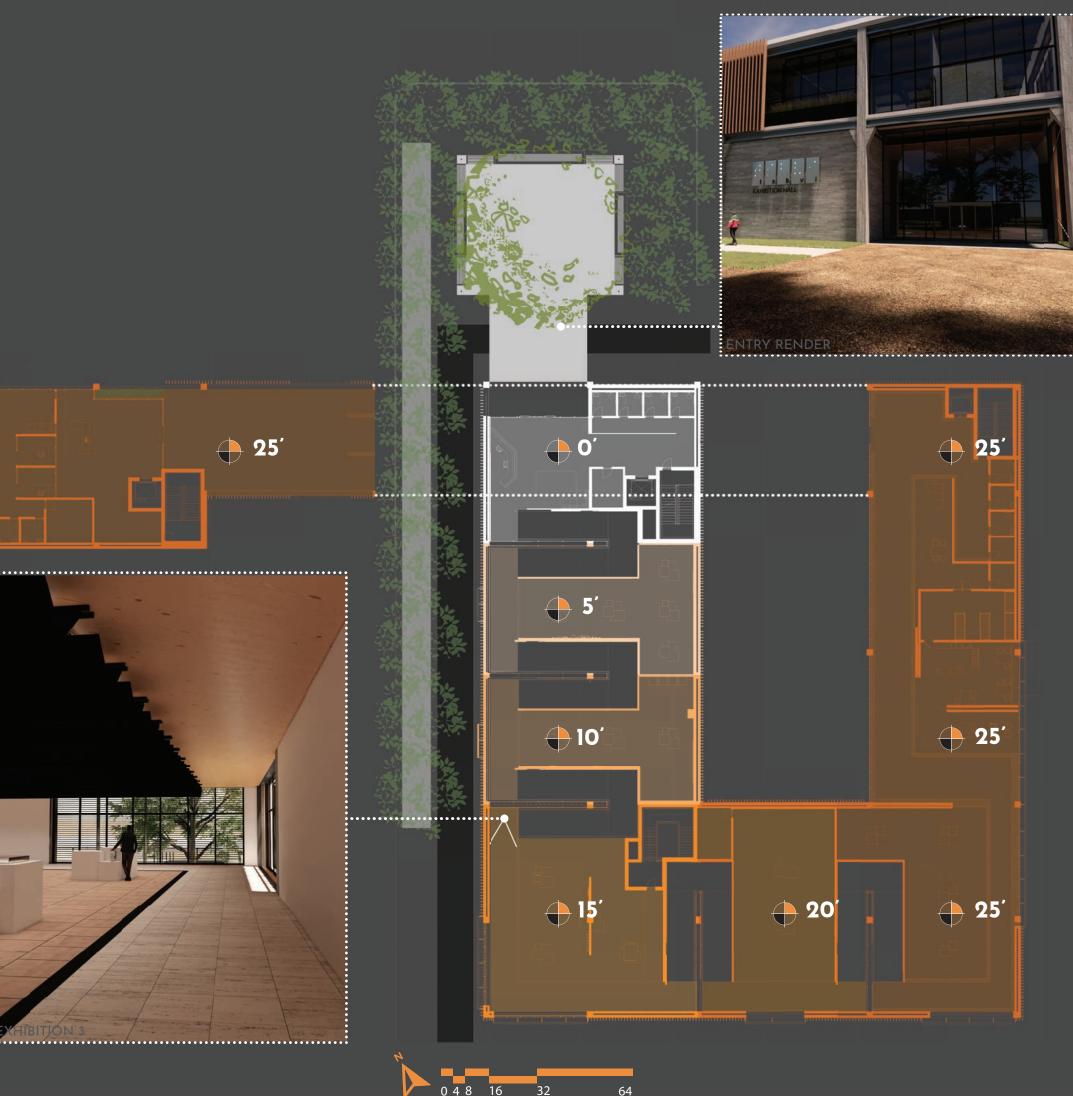


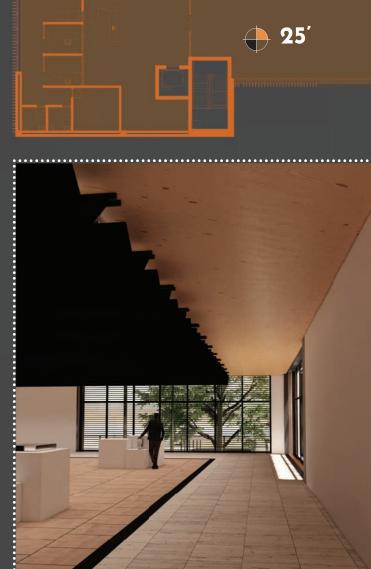
THE SITE PLAN WAS A CRUCIAL PART OF THE DESIGNING PROCESS TO HAVE THE BUILDING FACILITATE WIND MOVEMENT, NOT HAVE CONFUSING ANGLES, AND TO NOT BE DISPROPORTIONATE TO THE OTHER BUILDINGS. THE SITE PLAN ALSO GIVES INSIGHT TO HOW THE BUILDING FUNCTIONS FOR THOSE A PLACE. LANDSCAPE WHO ARE USED TO THE DIRECTIONALITY OF THE EXISTING **BUILDINGS, WHILE** ALSO ALLOWING THE SOUTHERN PORTION OF THE BUILDING TO OPEN TO THE LANDSCAPE AND ACCEPT THE PREVAILING WINDS.

4

ON THE PATH TO EITHER ENTRANCE, THERE ARE TREES MARKING THEM. THE IDEA OF THESE TREES IS TO PROVIDE A PARTICULAR ECHO TO LET THOSE WITH LIMITED VISION KNOW WHERE THEY ARE. IT ALSO PROVIDES A FEELING OF SEQUENCE WHICH WILL HELP THE IDEA OF FINDING ARCHITECTURE USES TREES TO SHAPE THE SPACES THEY DESIGN FOR THIS EXACT **REASON. THE STUDENTS** CURRENTLY HANG OUT IN POORLY DESIGNED AREAS, BUT THIS WILL ALLOW THEM TO BE BETTER AQUAINTED WITH THEIR CAMPUS.

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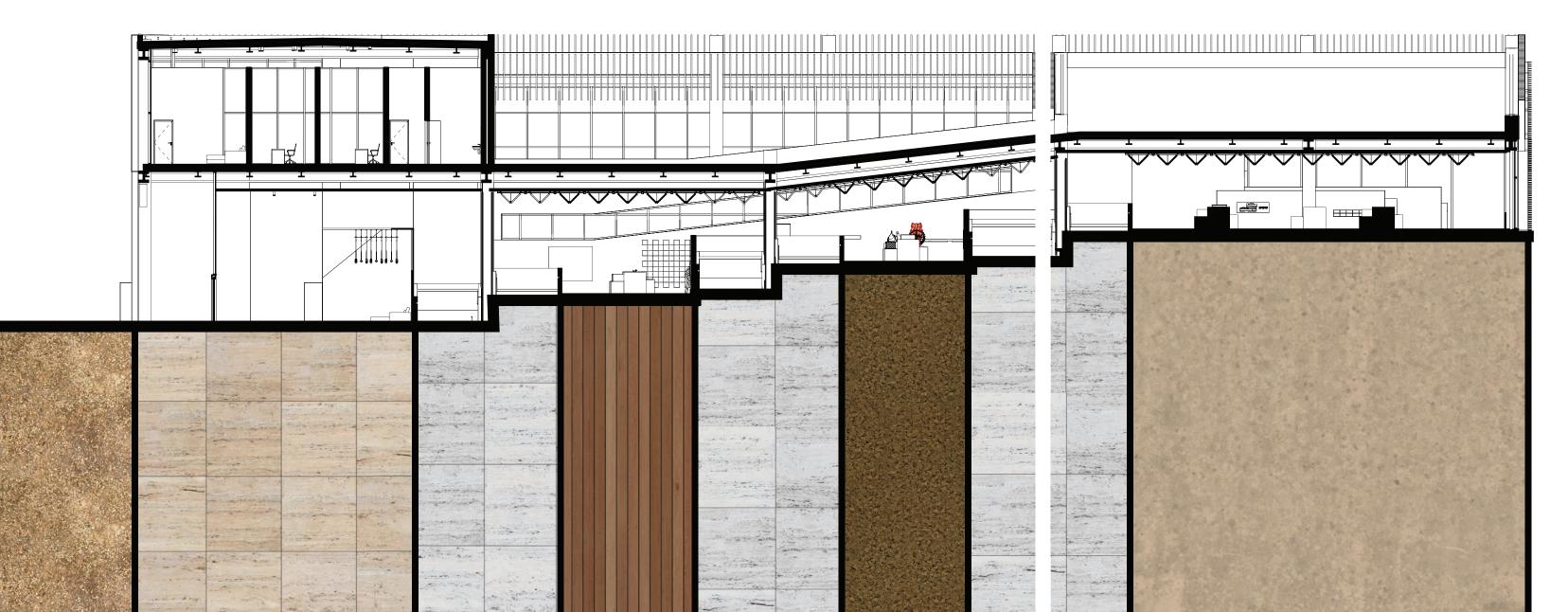
# **FULL PLAN**

THIS PLAN SHOWS THE ELEVATION CHANGES ALONG THE PATHWAY THAT THE BUILDING CREATES. IT BEGINS AT THE LOBBY (+0) AND INCREASES BY 5 FEET PER EXHIBITION SPACE UNTIL IT ULTIMATELY GETS TO THE LAST ELEVATION OF 25 FEET ABOVE GRADE. THIS DIFFERENCE WAS DETERMINED BY THE LONGEST DISTANCE THAT A RAMP CAN GO BEFORE NEEDING A LANDING, 30 FEET. THE RAMPS SEPARATE THE SPACES AND SWITCH BACK ON THEMSELVES TO ARRIVE AT THE 5 FEET HEIGHT. THE SEQUENCE GOES LOBBY, EXHIBITION 1-5, COFFEE/ LOUNGE, THEN ADMINISTRATION, ALL SEPARATED BY DOUBLE RAMPS. THIS SEPARATION OF SPACE IS WHAT ALLOWS THE SPACES TO HAVE INDIVIDUALITY IN THEIR EFFECTS, WHILE ALLOWING THE USERS TO SEAMLESSLY GO FROM ONE TO ANOTHER WITHOUT THE NEED FOR DOORS. THE RAMPS ARE 10 FEET WIDE AND THEREFORE SUPPORT THE USERS GOING BOTH DIRECTIONS. IF THE DESIRE IS TO

NOT RETURN BACK THE SAME WAY. THERE IS AN ELEVATOR IN THE LOBBY OF THE ADMINISTRATION AREA THAT SITS ABOVE THE MAIN LOBBY. OUTSIDE OF THIS PATH ARE THE EDUCATION SPACES AND WHAT IS CALLED THE 'DARK GALLERY' WHICH SITS ALONG THE COURTYARD AND IS 15 FEET BELOW GRADE.

THE IDEA BEHIND LAYING A BUILDING OUT THIS WAY IS TO HAVE A CONTINUOUS PATH THAT PATRONS CAN MOVE ALONG FREELY NO MATTER THEIR ABILITY, WHILE ALSO NOT MAKING THE VERTICAL **CIRCULATION A TEDIOUS TASK. THIS** SERIES OF STOPS ALONG A PATH TO EXPERIENCE THE ART PIECES IS HOW THE BUILDING BECOMES ITS OWN EXHIBITION RATHER THAN A GALLERY OR MUSEUM. THE SPACES HAVE DIFFERENT QUALITIES WHILE THE SENSORY CONDTIONS ON THE RAMP REMAIN THE SAME. THIS UNTRADITIONAL LAYOUT OF A **BULDING REMOVES THE TYPICAL** NOTION OF LEVELS AND MAKES IT MORE OF MICRO LEVELS .

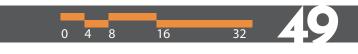




# MATERIALS

IN THE MATERIAL SECTION, IT IS SHOWN THAT THE DIFFERENT PARTS OF THE BUILDING HAVE DIFFERENT MATERIALS ASSIGNED TO THEM. MOST BUILDINGS ARE CONTINUOUS IN THEIR FLOORING MATERIALS. FOR THE SAKE OF MAKING THESE SPACE TURNS INTO SPACES MEMORABLE TO THOSE WHO ARE BLIND, EACH SPACE HAS A DIFFERENT MATERIAL ON THE FLOOR WITH A DIFFERENT BOND PATTERN TO ENSURE THE EASY DIFFERENTIATION OF SPACES. THE CIRCULATION THAT GOES THROUGH THE BUILDING IS A WHITE TRAVERTINE WITH A 1 FOOT BAND

THAT SEPARATES IT FROM THE OTHER MATERIALS MADE OF A HONEYCOMB SHAPED RUBBER. THE IDEA FOR THIS IS TO PROVIDE ENOUGH CONTRAST SO THOSE WHO ARE LEGALLY BLIND CAN TELL WHERE THE CIRCULATION EXPLORATION SPACE. THE WIDTH OF THE BAND IS TESTED AGAINST OTHER SIZES FOR LEGALLY BLIND VISIBILITY TO ENSURE THE HELPFULNESS OF THIS BAND. THIS BAND GOES AROUND THE PROJECT AND SEPARATES ANY DIFFERENT SPACES.

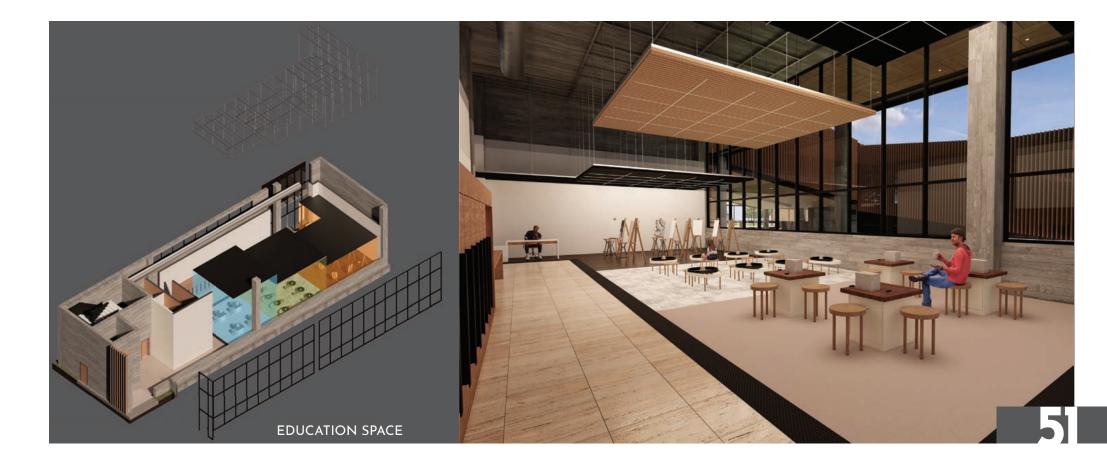


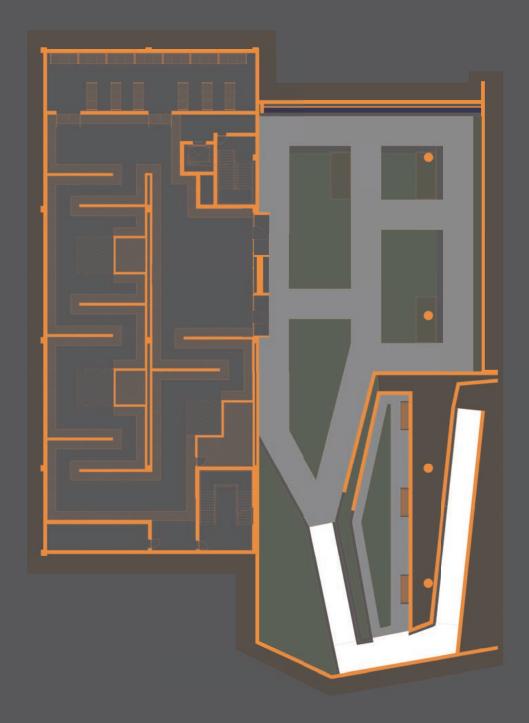


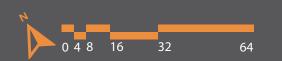
### LEVEL 1 PLAN

THIS PLAN IS THE TRUE LEVEL 1 PLAN. IT SHOWS (2) IS THE PRIMARY THE EXHIBITIONS FADE AWAY AS THE BUILDING RISES ABOVE THE CUT LINE. LEFT BELOW IS THE MECHANICAL ROOM, EDUCATION SPACE, AND THE PATH DOWN TO LEVEL -1. THIS FOR A STRUCTURED PATH (1) IS A SLOPED FLOOR (IT HAS A SLOPE OF LESS THAN 5%) AND DOES NOT REQUIRE THE RULES THAT COME WITH RAMPS. THIS DECISION WAS MADE TO MAXMIZE CONNECTIVITY AND ALLOW FOR MORE INTERACTION WITH THE LANDSCAPE. ALONG THE PATH ARE 'MICRO PARKS' TO MAKE IT A JOURNEY RATHER THAN JUST CIRCULATION.

THE EDUCATION SPACE PROGRAM ON LEVEL 1. THIS SPACE IS TO ACT LIKE A HEADQUARTERS THAT ALLOWS STUDENTS TO USE THE SPACE FREELY WITHOUT THE NEED CLASS. THE SPACE THEN EXPANDS THE AMOUNT OF STUDENTS THAT IT CAN HANDLE. IT HAS STATIONS FOR PAINTING, POTTERY, AND SCULPTING. BECAUSE EACH OF THESE ACTIVITIES ARE PROGRESSIVELY LOUDER, THE CEILINGS **INCREASE IN HEIGHT** TO ACOMMODATE THIS SOUND INCREASE. THIS CREATES SPECIFIC ACOUSTIC SPACE FOR THE STUDENTS IN EACH.



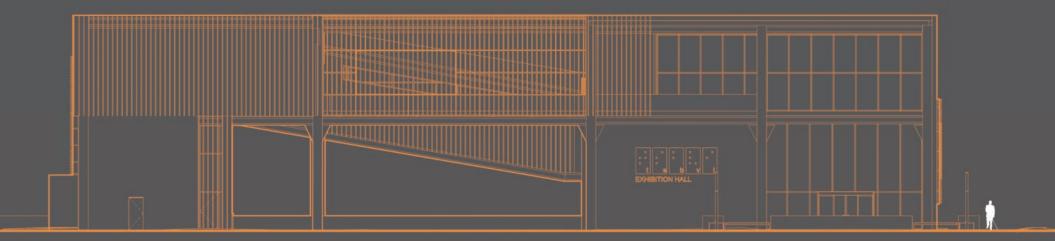




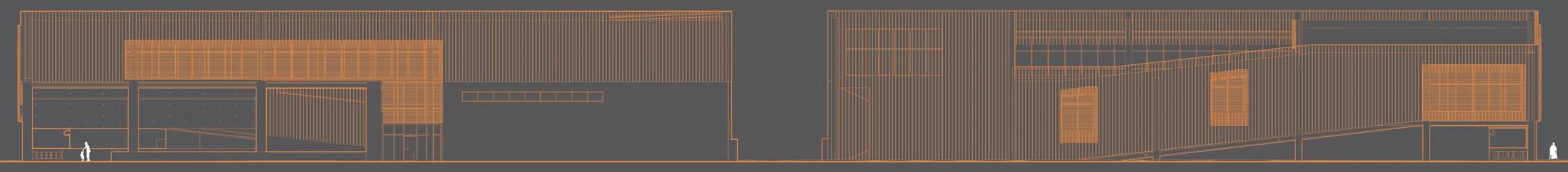
### LEVEL -1

LEVEL -1 IS MOSTLY THE DARK GALLERY BUT IT IS ALSO HOME TO THE COURTYARD FOR PEOPLE TO PLAY IN AND HANG OUT IN. THE COURTYARD AS A CENTER OF THE PROJECT WILL BECOME THE PLACE WHERE BOTH THE STUDENTS DURING THE WEEK AND VISITORS ON THE WEEKENDS WILL SPEND MOST OF THEIR TIME.

# ELEVATIONS



#### **PROJECT NORTH**

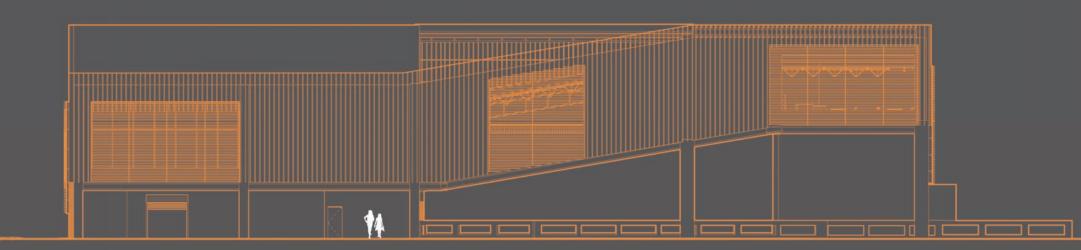


#### PROJECT EAST





### **PROJECT SOUTH**





# FACADE

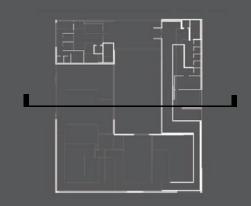
THE FACADE CHOICE IS VERTICAL ENGINEERED WOOD PLANKS THAT MEASURE 2"X12" AND ARE 1 FOOT APART. THEY ARE ATTACHED TO A BLACK HARDIE BOARD SIDING THAT CAUSES THE PLANKS TO DISAPPEAR WHEN SOMEONE LOOKS AT THE FACADE PERPENDICULARLY. THE BUILDING THEN BEGINS TO APPEAR AS TO BE A SOLID WOOD PIECE AS THE VIEWER LOOKS AT AN ANGLE. THE IDEA IS TO PROVIDE INTRICACY FOR THE VIEWER. THE WIND PASSING BY THESE INDIVIDUAL PLANKS WILL ALSO CREATE A SMALL SOUND THAT MAY PROVIDE SOME TYPE OF BEACON SYSTEM FOR THOSE WHO CAN DETECT IT. THE SHADING DEVICES ARE HORIZONTAL TO PROVIDE VIEWS TO THOSE WHO CAN ENJOY IT.

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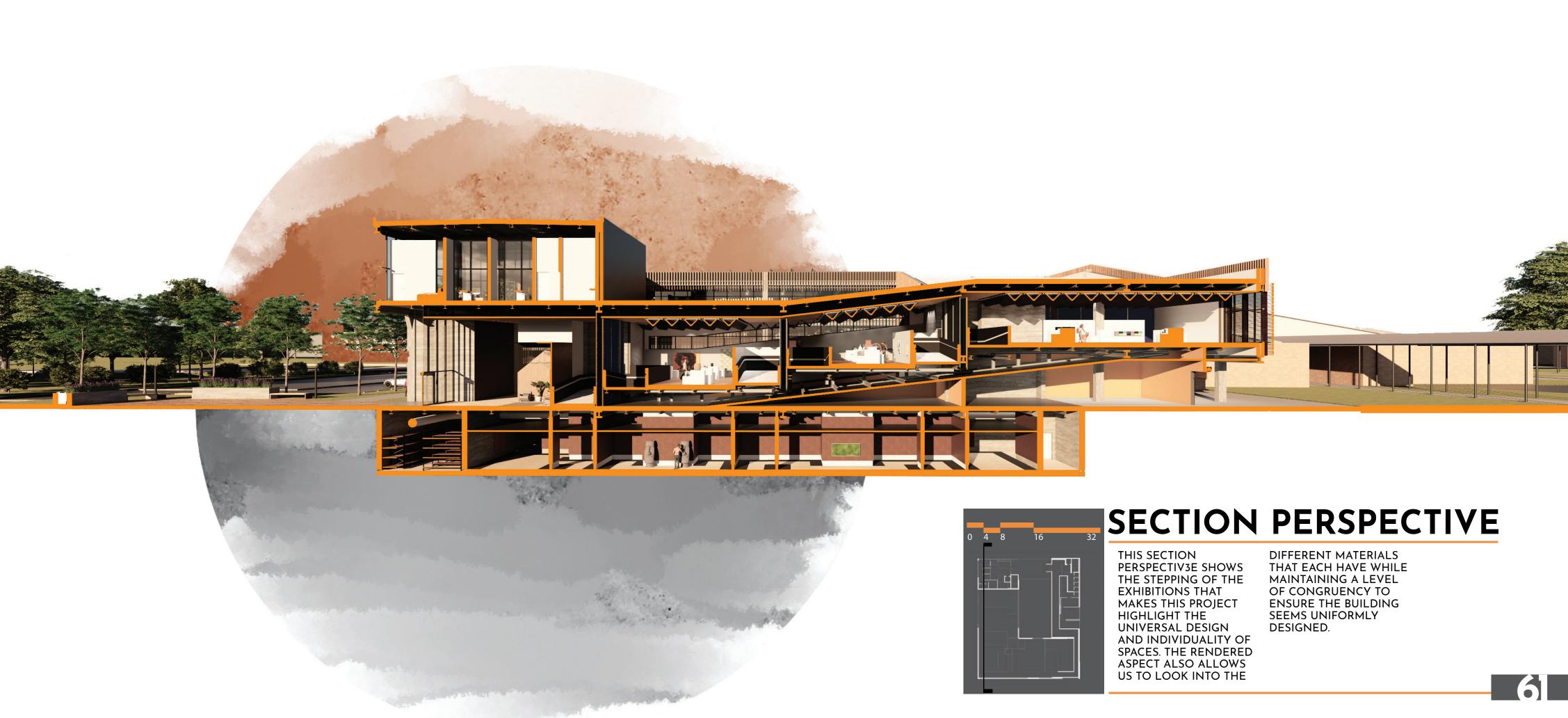


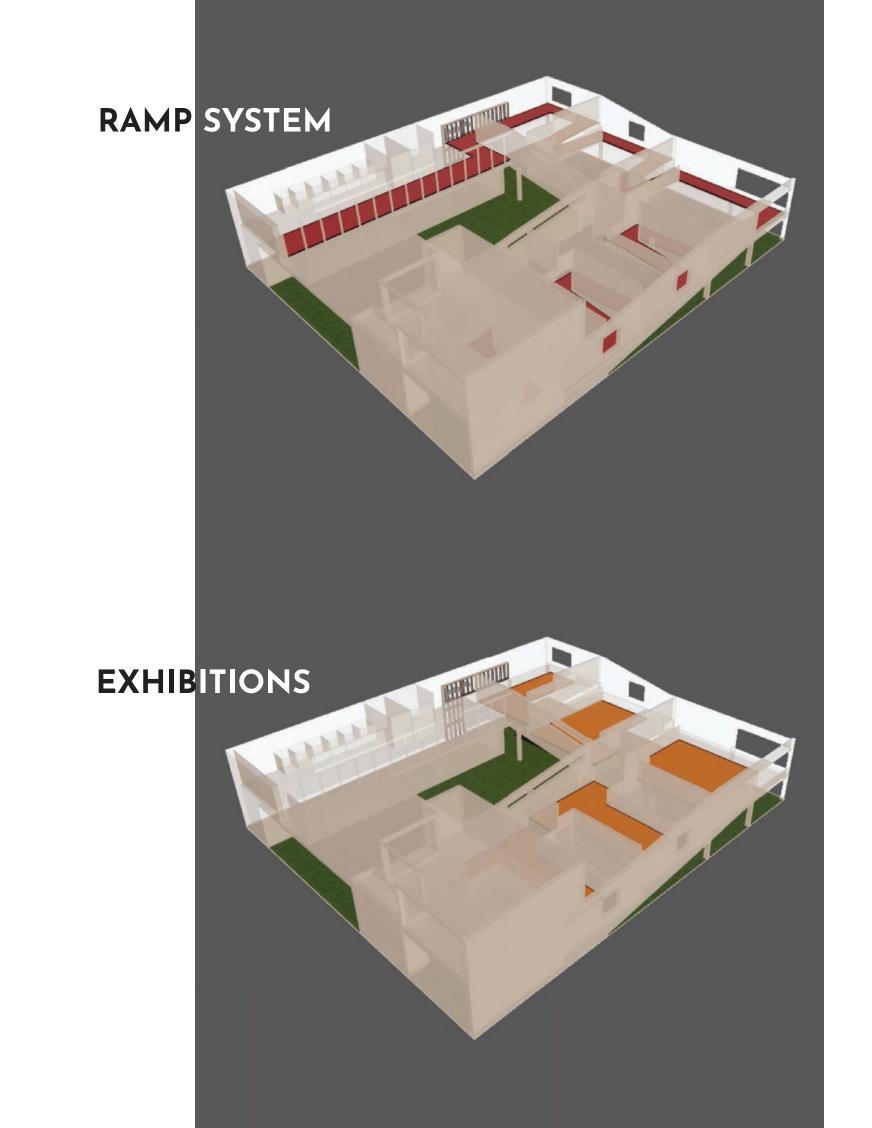


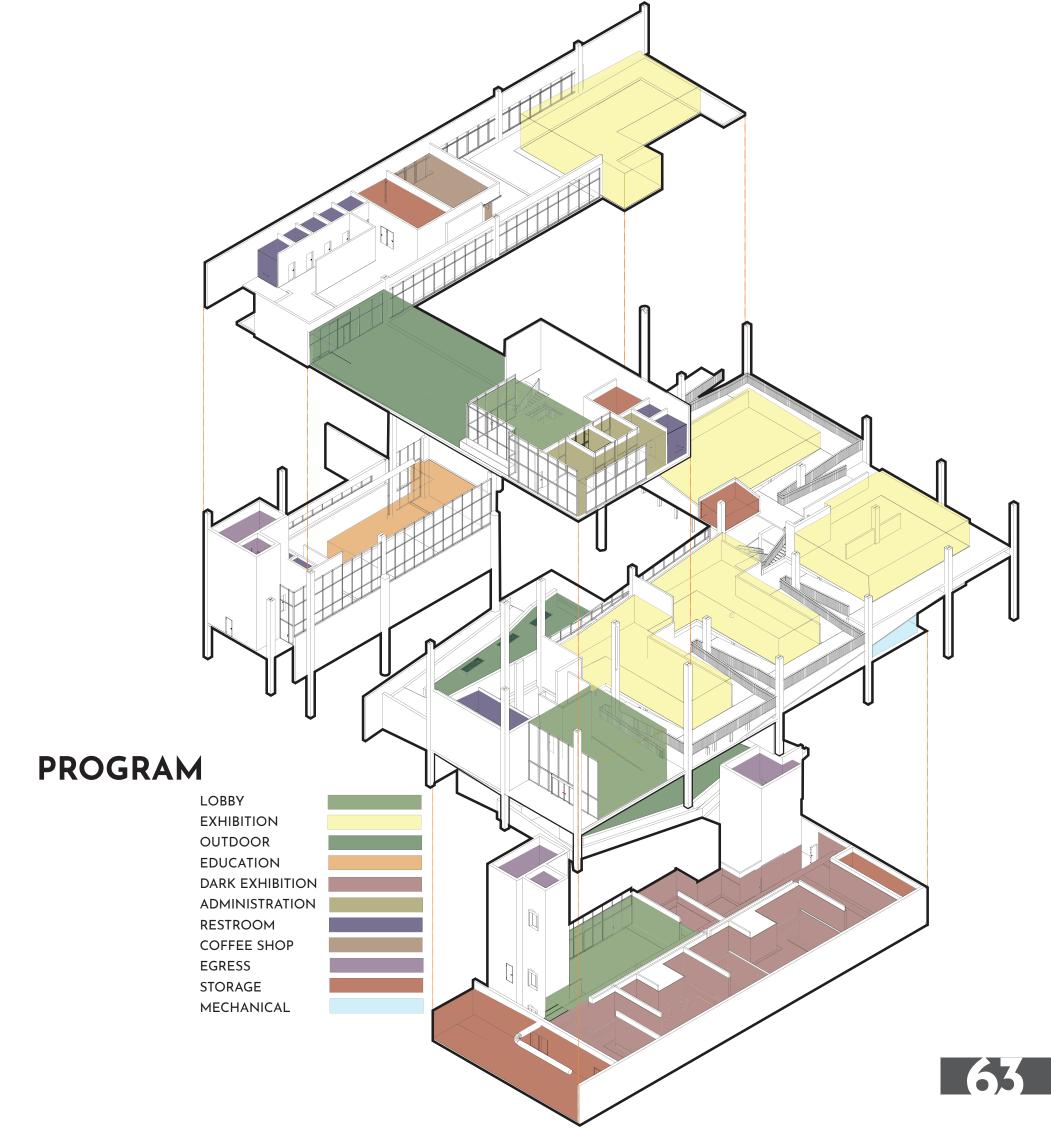
### SECTION A

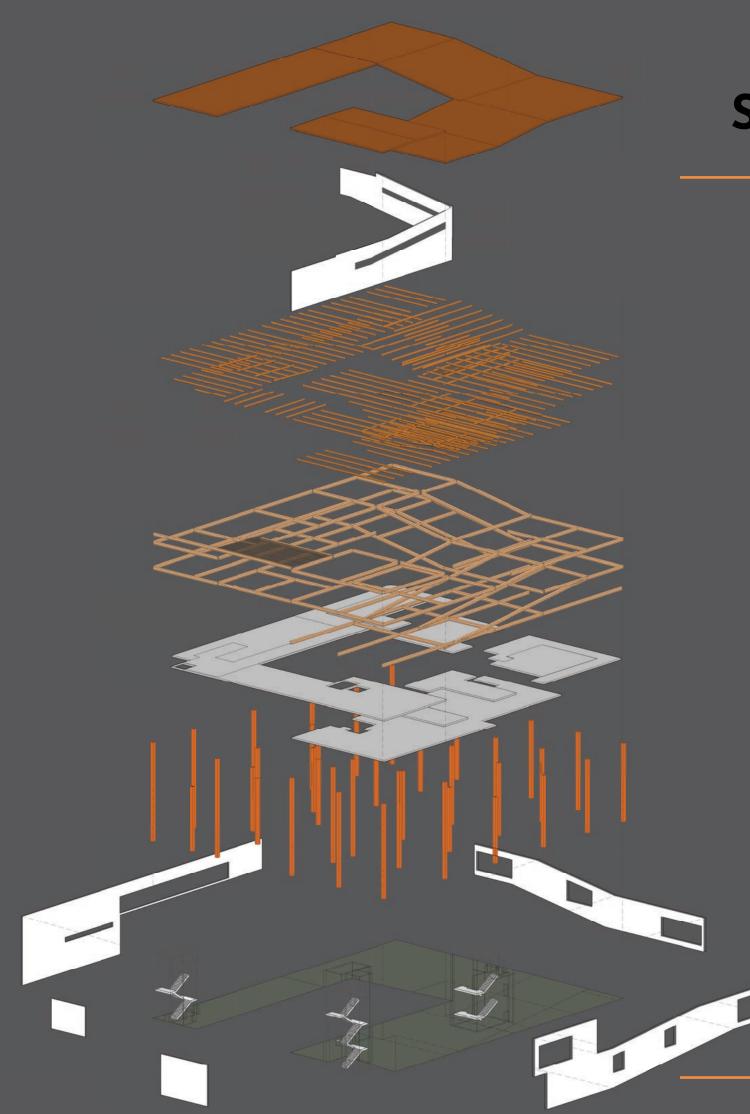


SECTION A









### STRUCTURE

THE STRUCTURAL SYSTEM CONSISTS OF 2' SQUARE INTERNAL CAST IN PLACE CONCRETE COLUMNS WITH THEM TAKING ON A 3' ROUND FORM IN THE OUTSIDE AREAS. THESE COLUMNS AND LARGE MEMBERS ARE TO MINIMIZE THE AREAS. THESE COLUMNS AND LARGE MEMBERS ARE TO MINIMIZE THE OBSTACLES THAT THE PATRONS CAN RUN INTO. THE BUILDING HAS A DOUBLE STRUCTURE TO FOLLOW THE RAMP FORM AS WELL AS LINE UP WITH THE HORIZONTAL FLOORS. THE LARGE STRUCTURE ALSO ALLOWS FOR LARGER SPANS. THESE SPANS ALLOW ADAPTABILITY OF SPACES FOR ADDING PARTITIONS IF NEEDED AT A LATER DATE, MOVING IN LARGER DISPLAYS, AND GIVING AMPLE SPACE FOR THOSE DEPENDING ON IF IN THE FUTURE, THEY NEED MORE ROOM FOR MORE PEOPLE. ADDING PARTITIONS ALSO ALLOWS FOR THE BUILDING TO CHANGE OVER TIME SO THAT THE EXPERIENCE IS DIFFERENT EVERY ERENT EVERY T. THIS ALLOWS R PEOPLE TO WANT ISIT THE SPACE ND IN TURN LEARN ORE ABOUT THE WITH THE NECESSARY COMPONENTS TO BECOME EVEN MORE INTEGRATED INTO THE FABRIC OF AUSTIN.

#### WATERPROOF MEMBRANE-

LOW-E COATED DOUBLE PANE GLAZING

2"X5" BLACK ALUMINUM MULLION

OAK FLOOP 1/16" CUSTOM HEXAGON RU 2'X 2' LIGHT-COLORED TRAVERTINE GUARDRAIL EMBEDDED MULL 1" THICK ACOUSTIC PAD DOUBLE LAYER 3/4" PLYWC 2" RIGID INSULATION WITH MEMBRA CONCRETE CAP WITH FLASHI 6" STEEL DECK WITH FLASHI 6" STEEL DECK WITH CONCR W14X605 STEEL GIRL

#### CEILING INSERT TO COVER STRUC 2"X2" ALUMINUM FI

LOW-E COATED DOUBLE PANE GLAZI

#### 2'X2' CAST-IN-PLACE COLUMN-

#### "X5" BLACK ALUMINUM MULLION -

STREET, STREET,

1-1-1

CAST-IN-PLACE GUARDRAIL	
ORING (OAK, TILE, OR CONCRETE)	
1" THICK ACOUSTIC PADDING	
THICK ACOUSTIC PADDING	
DOUBLE LAYER 3/4" PLYWOOD-	
CAST-IN-PLACE SLAB	

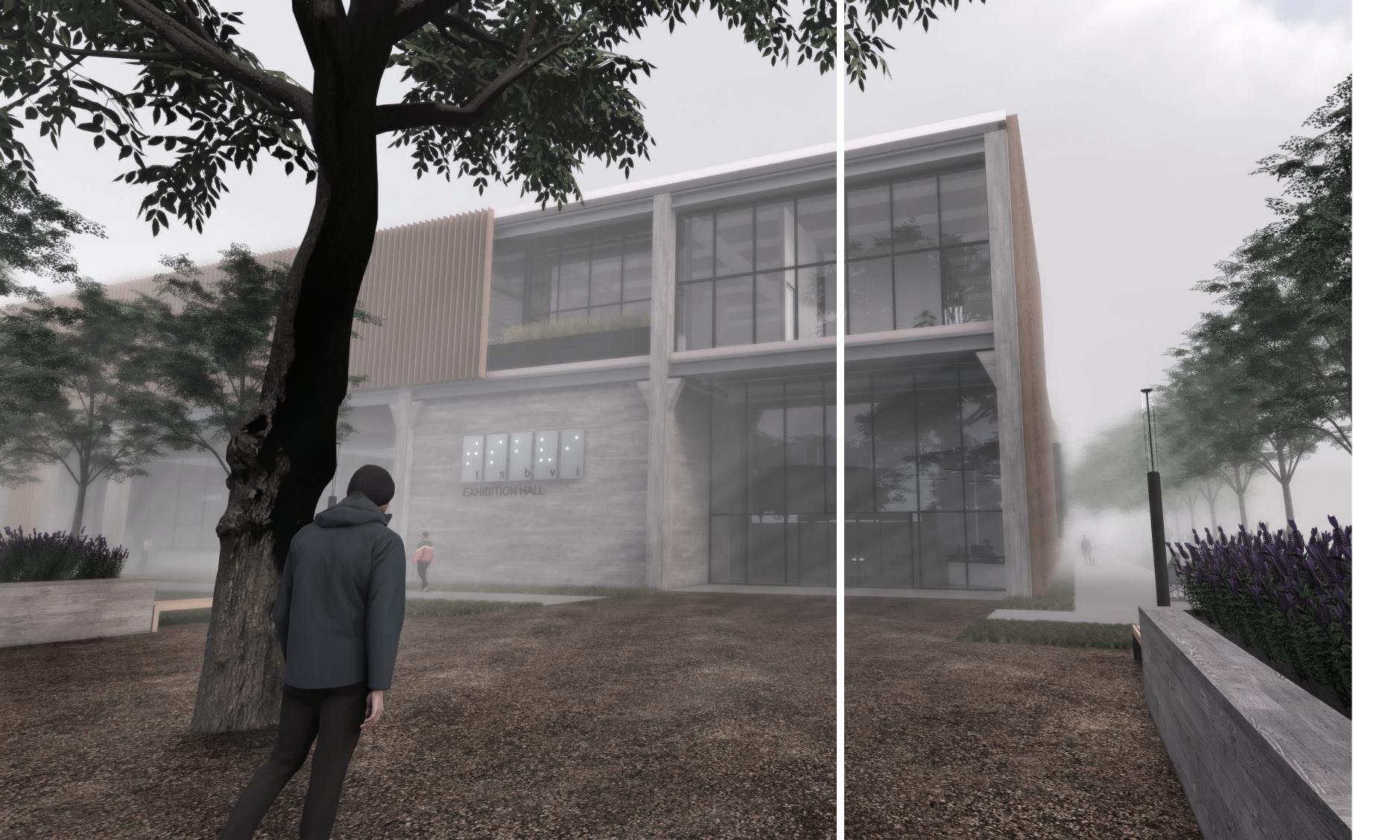
#### T-IN-PLACE RETAINING WALL

4' CONCRETE WALK —

### WALL SECTION



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# PUBLIC ENTRANCE

EVEN ON A FOGGY MORNING, THE ENTRANCE TO THE BUILDING IS PRONOUNCED AND WOULD STILL FUNCTION PROPERLY. THE GRANDNESS INDICATES THE ENTRANCE WHILE THE LANDSCAPING MAKES A COURTYARD OF SOUND TO INDICATE TO THOSE WITH LIMITED VISION THEY HAVE ARRIVED.

# EDUCATION ENTRANCE

LINED WITH SMALL TREES, THE ENTRANCE TO THE EDUCATION SPACE IS SEPARATE FROM THE REST OF THE BUILDING TO GIVE THE STUDENTS THEIR PRIVACY. THE IDEA IS TO ALSO GIVE THEM THEIR SPACE TO FEEL AT HOME.





### COURTYARD

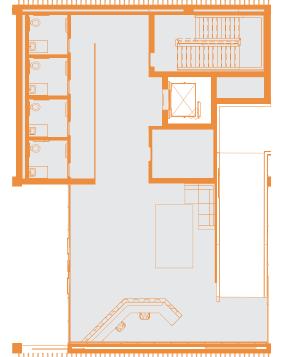
THE COURTYARD IS THE PLACE FOR STUDENTS TO HANG OUT AND ENJOY THE OUTDOORS. THE ADMINISTRATION CURRENTLY HAS WHITE TENTS SET UP TO PROVIDE THIS KIND OF SPACE, BUT IT IS LACKLUSTER. AS TIME PROGRESSES, THIS MAY BE THE SPOT FOR THE COMMUNITY TO COME TOGETHER.

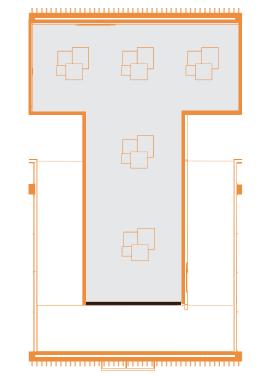
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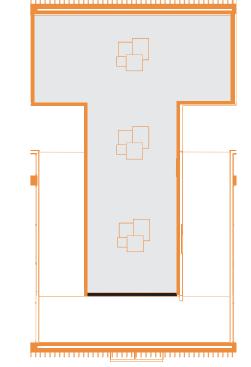


#### LOBBY

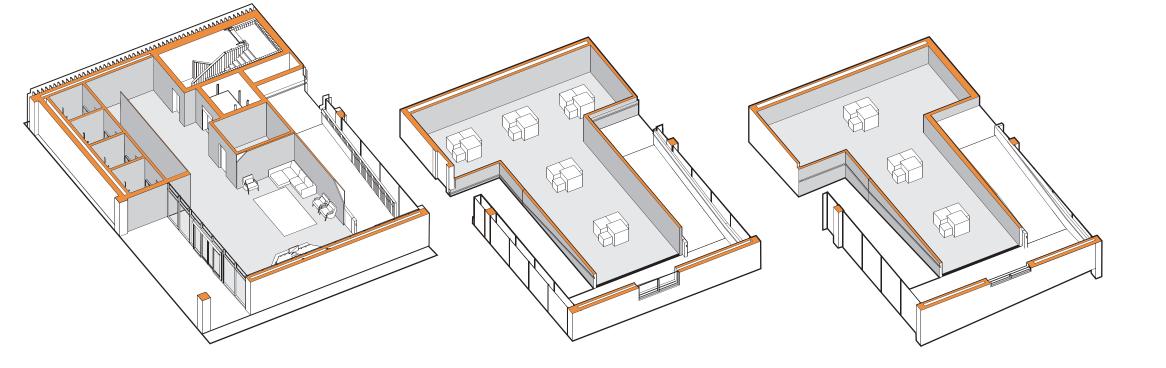
#### **EXHIBITION 1**





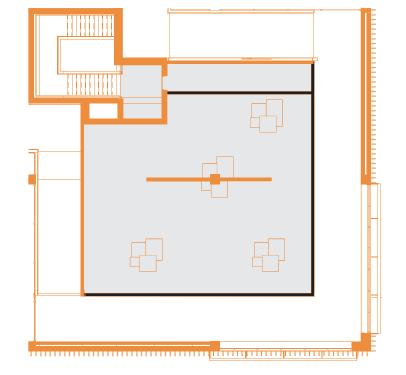


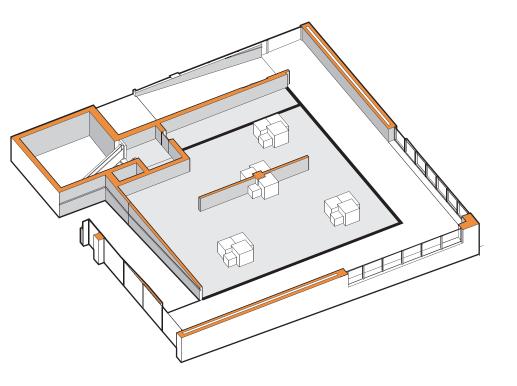
**EXHIBITION 2** 





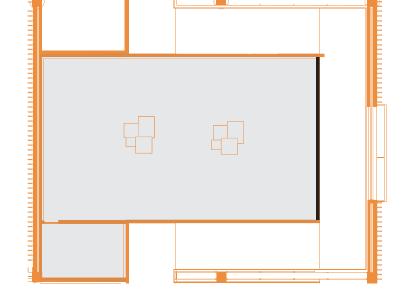
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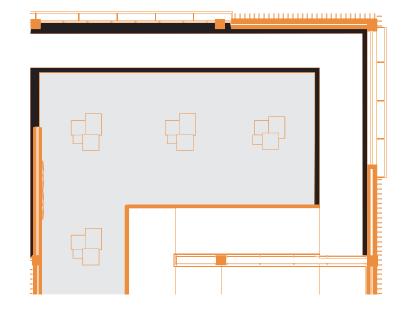


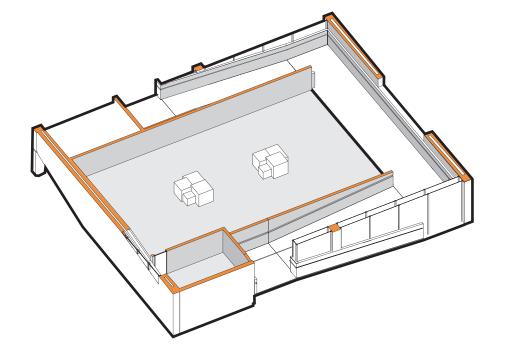


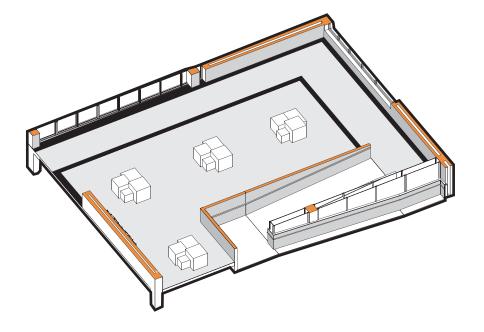
#### EXHIBITION 4

#### EXHIBITION 5





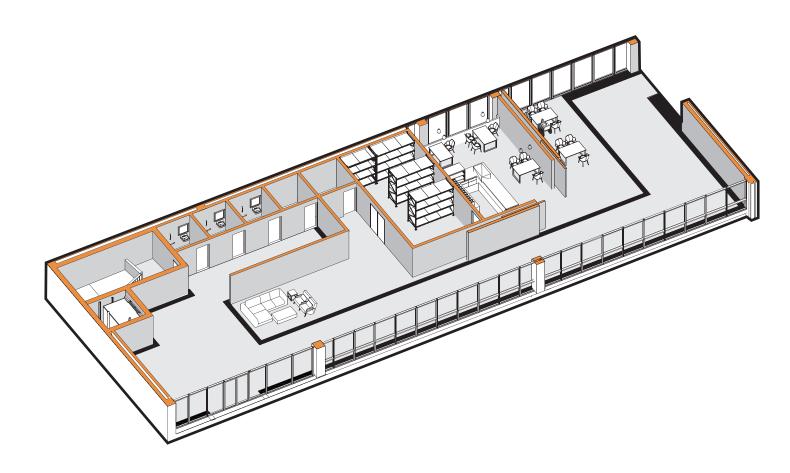




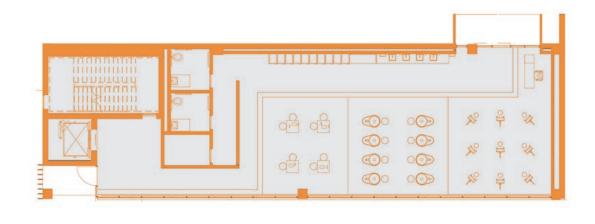


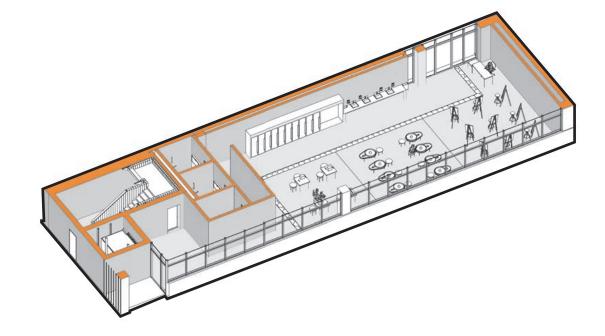
### COFFEE/LOUNGE



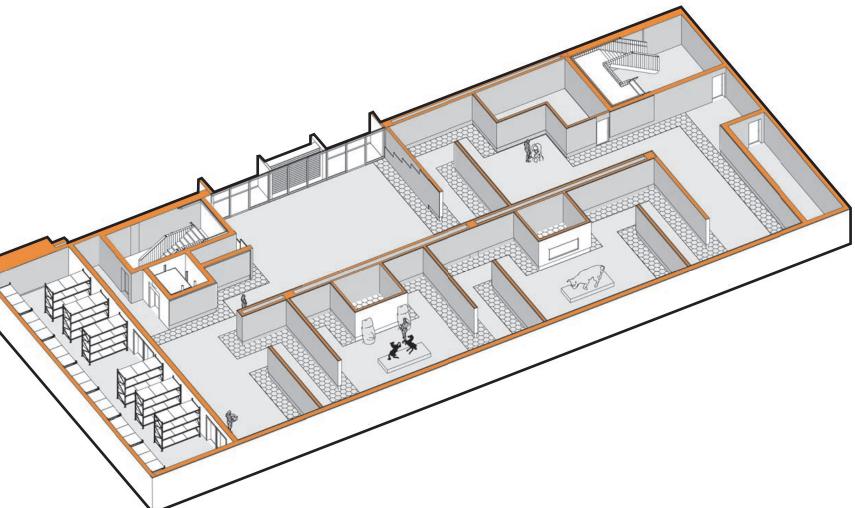


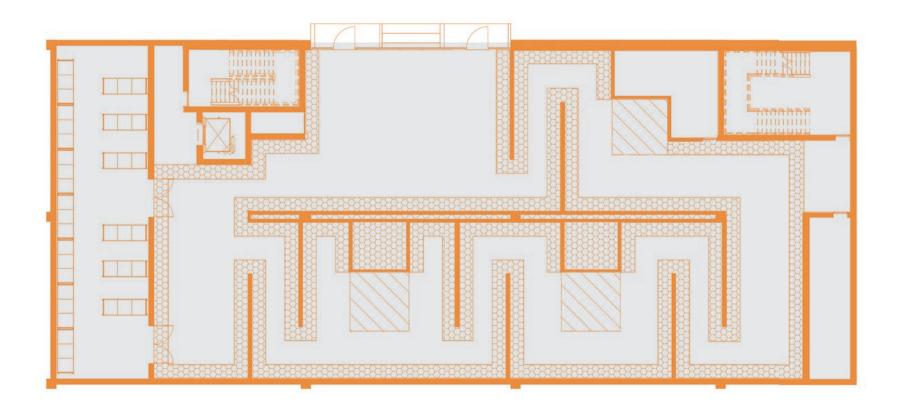
#### EDUCATION SPACE













#### DARK GALLERY





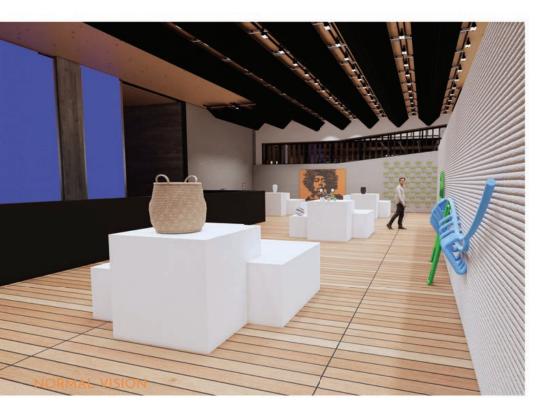




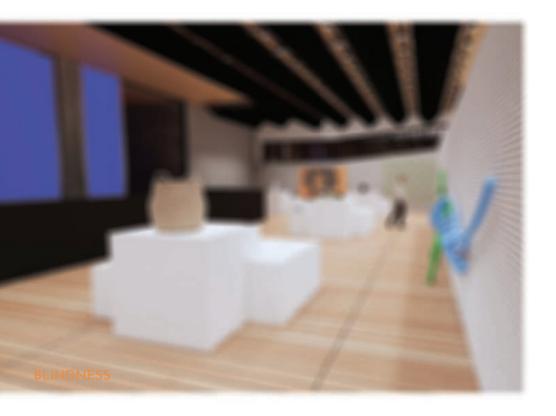
### LOBBY

THE LOBBY IS THE FIRST PUBLIC SPACE IN THE BUILDING AND INCORPORATES SOME DIFFERENT TACTICS TO ORIENT THOSE VISITING FOR THE FIRST TIME. AS EVIDENT IN THE RENDER COMPARISONS, THE FLOOR IS HIGHLIGHTED TO SHOW THE TACTILE FEEL OF THE REGULAR TILES. THESE TILES ARE 2' SQUARE TRAVERTINE BUT THE

JOINTS ARE ORIENTED TO THE BUILDING TO ALLOW THOSE WHO USE A CANE TO FIND THEIR WAY. THE ACOUSTIC CEILINGS ARE HIGHLIGHTED TO EMPHASIZE THE FACT THAT THEY PROVIDE ACOUSTIC SPACES, ONE FOR WAITING AND THE OTHER FOR THOSE WHO ARE NEEDING ASSISTANCE.









## **EXHIBITIONS**

THERE ARE FIVE TOTAL EXHIBITION SPACES ABOVE GRADE AND THEY HAVE SIMILAR METHODS OF INCORPORATING THE SENSES. THE WALLS ARE MADE AS A PANEL SYSTEM TO PROVIDE A TOUCH SENSATION FOR THOSE WHO WISH TO FOLLOW ALONG THE WALL. FOR THOSE WHO USE A CANE, EACH EXHIBITION SPACE HAS A DIFFERENT

FLOORING THAT HAS DIFFERENT JOINTS THAT HAVE A DIFFERENT FEELING AS WELL. THE ACOUSTIC PANELS ARE ADJUSTABLE IN ALL OF THEM TO ALLOW FOR THE CHANGING OF THE SOUND QUALITY IN THE SPACE WITHOUT NEEDING TO CHANGE THE CEILING.

# **EXHIBITIONS**



#### **EXHIBITION 2**

**EXHIBITION 3** 

**EXHIBITION 4** 

**EXHIBITION 5** 

THE OTHER EXHIBITION SPACES FOLLOW THE SAME LANGUAGE OF SENSES. A COUPLE OF THE OTHER WALL PANELS THAT ENVOKE THE SENSE OF TOUCH ARE ACOUSTIC PANELS AND RAMMED EARTH PANELS. THE FLOORS ALSO HAVE DIFFERENT FEELINGS ALTHOUGH THAT IS NOT THEIR MAIN FUNCTION. THE FLOORS ARE INTENDED TO PROVIDE EACH SPACE WITH A SMELL. THEY ARE RAISED FLOORS WITH THE H.V.A.C. SYSTEM DESIGNED TO PERCOLATE THROUGH THE MATERIAL TO FILL THE SPACE WITH AN INDIVIDUAL SMELL. SOME OF THESE MATERIALS ARE CORK, DIFFERENT HARDWOODS AND EVEN SCENTED CONCRETE PANELS. ALL OF THE ACOUSTIC PANEL SYSTEMS ARE SHOWN HALFWAY UP, BUT AS THE STUDENTS PUT SPECIFIC ARTWORK ON DISPLAY, THEY WILL CHANGE. THE SPACE NAMED "EXHIBITION 2" IS PERMANENTLY DESIGNED TO BE A QUIET SPACE. THE FLOORS AND WALLS ARE HIGHLY SOUND SUPPRESSIVE MATERIALS.









# **COFFEE/LOUNGE**

THE COFFEE AND<br/>LOUNGE AREA IS MORE<br/>ABOUT MEANDERINGAS IT GOES (LIKE IN THE<br/>EXHIBITIONS) STONE<br/>IN THE CIRCULATION AROUND WITHOUT NECESSARY DIRECTION. THE SPACE USES THE SMELLS OF A COFFEEWOOD FLOOR. THESHOP TO DRAW PEOPLEBLINDNESS RENDER THERE BUT THEN ALLOW THE SOUNDS TO EMIT OUT OF THE SLIDING DOORS WHICH INDICATES THE ROOM'S PURPOSE. THE FLOORS HAVE DIFFERENT FEELINGS

SPACE, A 1 FOOT HEXAGONAL RUBBER BAND, AND THEN A SHOWS THE REASON FOR THE BAND AS A WAY TO ALERT THOSE WHO ARE LEGALLY BLIND THAT THE EDGE OF THE WALKWAY IS THERE.





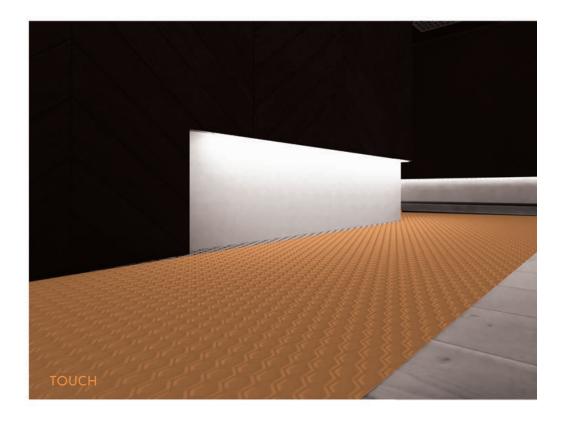




# EDUCATION SPACE

THE EDUCATION SPACE WORKS AS A SERIES OF THREE ACOUSTICALLY DIFFERENT SPACES PUT INTO ONE ROOM. THE ACTIVITIES GET PROGRESSIVELY LOUDER AND THEREFORE NEED HIGHT ACOUSTIC CEILINGS. THE FLOORS ALSO RESPOND TO THIS BY THE HARDNESS OF THE MATERIAL, GOING FROM WOOD, TO TILE, TO FINISHED CONCRETE.









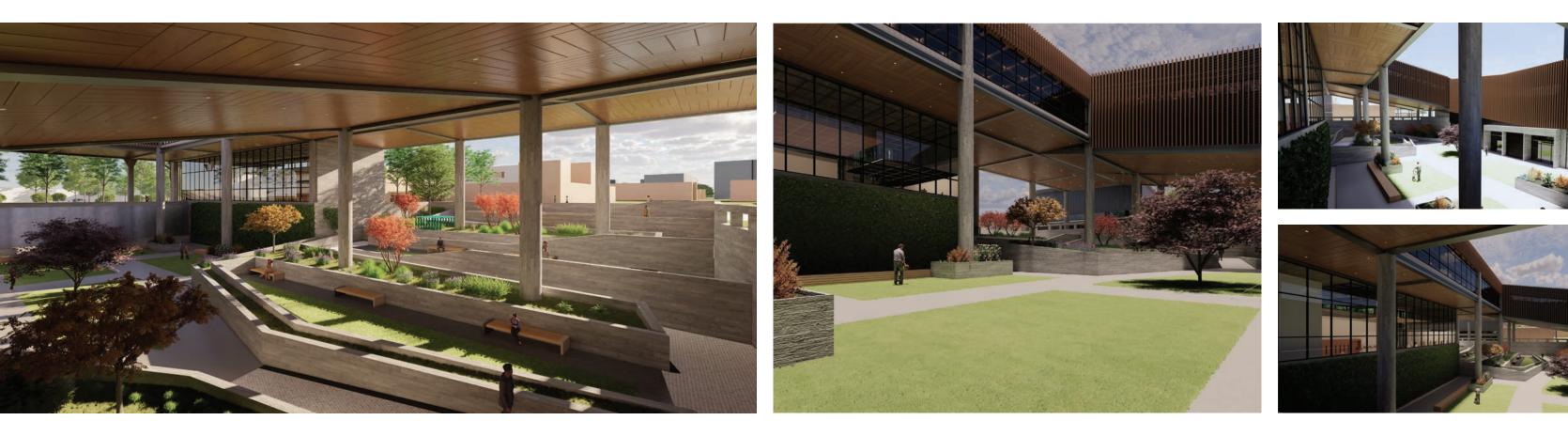
# DARK GALLERY



# WIND FORM

THIS IS THE HOWHERE WHILE SLOPINGTHE FORM OF THEDOWN TO EVENTUALLYBUILDING ALLOWS THE15 FEET BELOW GRADE. SOUTHERN WINDS TO ENTER THE COURTYARD BIGGEST AREA ON THE IN A SITE THAT DOES NOT LEND ITSELF TOIT GETS SMALLER, THEORIENTATION TO THEWIND PICKS UP ANDSOUTH. THE BUILDING ISCOOLS THE USERS 20 FEET ABOVE GRADE DOWN MORE.

THIS PROVIDES THE SOUTH AND THEN AS



## COURTYARD

THESE RENDERS SHOW THE COURTYARD FROM DIFFERENT VIEWS TO GIVE AN IDEA OF HOW THE SPACE FEELS. THE BUILDING OPENS UP TO GIVE THE SPACE A SEPARATION FROM THE REST OF CAMPUS WHILE ALSO PROVIDING OF THE REST OF THE A COMFORTABLE SPACE. THE SENSES ARE USED HERE IN A CHANGING WAY. THE SEASONS WILL CAUSE THIS SPACE TO CHANGE

SMELLS, SOUNDS, AND FEELINGS JUST FROM HOW NATURE WORKS. THE CAMPUS LACKS THE AMOUNT OF NATURE IT DESERVES AND THIS SPACE PROVIDES THAT NEEDED BALANCE FROM THE HARDNESS CAMPUS.



### **EXPLORATION**

THESE VIEWS ARE TO SHOW THE VARIOUS VIEWS TO BE EXPECTED AS A PERSON MOVES AROUND THE BUILDING OUTSIDE THE SPACES SPECIFIED BEFORE. THESE SPACES HAVE THEIR OWN FEELINGS, JUST NOT AS CONTROLLED AS SOMEWHERE LIKE THE EXHIBITION SPACES. THE OUTSIDE OF THE BUILDING SHOWS HOW THE FACADE WAS

CHOSEN TO HAVE A SOLID LOOK WRAP ONTO ITSELF AS IF IT WERE CONSTRUCTED AS ONE PIECE PLACED ON THE COLUMNS.





#### DESIGNED FOR THE BLIND DESIGNED FOR EVERYONE

# CONCLUSION

THIS PROJECT SET OUT WITH GOALS THAT CHANGED OVER THE PROGRESS OF THE DESIGN. ONE OF THE GOALS THAT MADE IT ALL THE WAY TO THE END OF THE DESIGN WAS TO PROVIDE A SPACE FOR ALL PEOPLE. THROUGH THE IDEALS OF UNIVERSAL DESIGN, THIS DESIGN ACHIEVES THE INTENDED AMOUNT OF INCLUSION. ANOTHER GOAL WAS TO PROVIDE A SPACE THAT ALLOWS THE STUDENTS TO FEEL A SENSE OF PLACE IN A WORLD THAT OFTEN DOES NOT PROVIDE IT. THROUGH LISTENING TO THE STUDENTS CONCERNS, RESEARCH, AND INTERVIEWS WITH A BLIND PSYCHOLOGIST, THE DESIGN INTEGRATES ALL THE NEEDED

INGREDIENTS TO FACILITATE THIS EFFECT. LASTLY, THE PROJECT HAS A GOAL OF MAKING A FACILITY THAT TIES THE SCHOOL INTO THE FUTURE OF AUSTIN. WITH A CONTEMPORARY DESIGN THAT ALSO SERVES FOR THE SENSORY NEEDS OF THE STUDENTS, THIS PROJECT ACHIEVES THIS GOAL. IN THE END, THE PROJECT NEEDED TO BLEND MANY DIFFERENT ASPECTS TO BE SUCCESSFUL, AND THROUGH MANY DIFFERENT MERGES OF IDEAS; THE DESIGN HAS SUCCESSFULLY DONE THAT.

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#### FIGURE INFORMATION CITATION

PAGES 14-15:	CHARTS:
	Information calculated from various sources.
	TEXT:
	"Blindness Statistics." Blindness Statistics   National Federation of the Blind, Jan. 2019, https://nfb.org/resources/ blindness-statistics.
	"Visual Impairments." Health Policy Institute, Georgetown University, 13 Feb. 2019, https://hpi.georgetown. edu/visual/#:~:text=Almost%2020%20million%20Americans%20%E2% 0%94%208,people%20age%20 65%20and%20older.
PAGES 18-19:	PRINCIPLES:
	"The 7 Principles." Centre for Excellence in Universal Design, https://universaldesign.ie/what-is-universal-design/ the-7-principles/the-7-principles.html.
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PAGES 32-33:	AERIAL IMAGE:
	Google Earth 7.3.6.9345, (2022), Austin, TX, 30°18′59.96″N, 97°44′19.69″W.
PAGES 34-35:	CLIMATE DATA:
	2020. Climate Consultant 6.0. Energy Design Tools.
PAGES 36-37:	CASE STUDIES (from left to right):
	"Museum for the Blind." Turismo Madrid, https://www.esmadrid.com/en/tourist-information/museo-tiflologi co-de-la-once.
	González, María F. "Designing a New Home for a Blind Client." ArchDaily, 23 Aug. 2018, www.archdaily. com/897946/teaching-a-blind-client-how-to-read-her-new-home-so-and-so-studio. Accessed 21 Apr. 2023.
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- "What Is Universal Design." Centre for Excellence in Universal Design, https://universaldesign.ie/what-is-univer sal-design/.
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# THANK YOU

