Reference

A field guide for new practices

V.1

Unbuilding

Reference V. 1

2022 Thesis Project
Wintersession Artifact
By Eric Mason

Table of Contents

The following work is an experimentation within architecture to promote a social ideology of reuse, where we must first reframe and dismantle the traditional perceptions of building materials, in order for the discipline of architecture to utilize the practice of unbuilding.

Preface

The particular percentage of waste within the practice of architecture has been at the center of this thesis, thinking particularly about the responsibility architecture holds towards re-imaging the solution to this problem. The discourse questions why the practice hasn't drastically altered its traditional building practices to shift the focus more on the relationship between deconstruction and installation with regards to utilizing the potential of these materials. Within these traditional building practices there is an understanding of time that comes into question in both practice and education – where does the role of the architect begin and end when it comes to the longevity of materiality? These questions are borderline hypothetical because there is an understanding that given an infinite amount of time architects would & should take every moment to design but when does the design leave our hands? What are realistic approaches to planning for deconstruction and unbuilding within the construction industry and the building environment?

It's important to ground this thesis and its ideas in a location to test out how reusing materials will work as a physical and communicative process. The goal is to take a hacking mentality towards material salvaging, and to implement it into a decaying suburban environment as a working "municipal depot". This new library of materials will be available to the public, as well as how to implement them into their current built environment as one would interact with any other traditional Home Depot, Lowes, or "fresh" product home improvement retail store.The definition of the word municipal leads us to think that there should be a governing body that controls the depot, but this thesis will operate in the space against the traditional capital focused mindset. A re-imagining in which one may refuse excessive production of materials, potentially ones they already own, in favor of a dismantling not only the physical materials themselves but also the system in which they previously engaged. The point being to prioritize the power of re-use over relying on buying newly produced materials.

A particular moment stands out from the infancy of this thesis that projects the intentions of this project clearly, being when considering the origins of material waste as a problem. Research showed that material flows have various moments of waste within each particular subcategory of the full process, but ideally the fact that the entire system wasn't cyclical seems like its biggest issue. Things became apparent in the trajectory of the creation of my design stance once I started to realize that the majority of the material waste problem was being solved from the lens of engineers or product designers, creating newer longer lasting products or dealing with more recycling of building materials which both require more natural resources.

Our traditional understanding of time comes into question in both practice and education – where does the architect's role start and stop when it comes to the longevity of materiality? These questions are borderline hypothetical because we know that given an infinite amount of time architects would & should take every moment to design but when does the design leave our hands? How do we realistically approach planning for deconstruction and unbuilding within the construction industry and our buildings?

Introduction

Within architecture there are plenty of branch categories that split off into their own unique realms of niche interests that take hold of students early on in their careers. Inside of the main trunk of this architectural tree we can classify a few things that dip their limbs into each sub-genre of the full scope within both practice and education. Of this central trunk is the focus of this thesis, materiality, more specifically the waste in which our profession adds on to the global scale, tipping it more and more towards self destruction. Within this bleak description is an opportunity to re-examine our relationship with the longevity of building as a practice and shift the focus now towards, the often neglected, literal deconstruction or what this thesis is referring to as “unbuilding’.

There tends to be a misunderstanding of the lifespan of materials we architects tend to consider the design of a building. Most often their purpose stems from the aesthetic or structural vantage point to allow for typical architectural motifs to be implemented in our everyday lives. While these design moves tend to create the most immediately pleasing structures, the simple lack of maintenance can at times render these principles obsolete. In hopes of flipping the narrative towards a practice of unbuilding, architecture should start to consider designing with the lifespan of the materials in mind which potentially brings forth questions of reuse of the inherent value of these structures. Imagine for a moment the potential of the building environment working with each other, borrowing rather than producing, in a way that transfers materiality from one building to the next. This environment is a whole new sandbox in which the practice is only now just starting to step into, potentially moving away from the typical recycling that we know today which is more of an aggregate producing, resource utilizing practice that only acts as a bandage to the overall wound of our impact on the environment.

The uphill fight that most of these revaluing systems tend to go up against when attempting to change a well established practice are those with massive amounts of capital. One can not deny the readily available material flow, that is held up by our practice, the reality of being a major job and income producer. Thinking within this vein tends to allow our idealistic concepts to constantly be thwarted by earlier established businesses just for the simple fact of their history and presents within our society and mindset. Testing and experimentation then become the ground level in which to try and implement a system in which these beliefs can take hold to see if they hold any weight. The community level is most appropriate to start a new venture such as this because a pre established trust can, oftentimes, allow its people to produce the strongest outcomes but working off one another. Repurposing material within a similar community will also often bypass initial conceptions of the dirty, mismatched, or rugged materials being reused onto a new or existing structure, in short the buildings come from the same catalog of materials.

The phase to follow the acceptance of our newly defined system, is to focus on storage and value within the community. Questions of who is allowed to partake in this reusing of materials arise along with what one does with the dismantled pieces once they are taken apart. At this point the second portion of this thesis steps into play to understand the references to anyolgus box stores that already have similar material display structures embedded within their departments that have been tried and tested. More importantly than the physical storage itself is an idea of cataloging the specifics of each material with the prospect of sharing them amongst the community. Either through laborious measuring or digital scanning the importance still relies on a culture of reusing the materials

for maintenance, building, or replacement which might then create a closed loop sharing economy. Focusing less on profit will also allow this new material library to be more honest about worth rather than the traditional structure we know of homes and materials increasing dramatically in price.

It's important to ground this thesis and its ideas in a location to test out how reusing materials will work as a physical and communicative process. The goal is to take a hacking mentality towards materials salvaging and implement it into a decaying suburban environment as a working "municipal depot". This new library of materials will be available to the public as well as how to implement them into their current built environment as one would interact with any other traditional Home Depot, Lowes, or "fresh" product home improvement retail store.

A timeline of material flows will create a sense of awareness for both users of the system that takes place and the people who are involved in contributing to the waste outside of the pre-supposed municipal depot. It also acts as the artifact in which the thesis can visualize its operation and experiments, it starts from a general understanding of material flow and slowly turns into a spread of how newer systems and processes can operate. Included most in the anticipation of the actual thesis process is related statistics, definitions, interests, and precedents to fully document what trains of thought are being questioned before the thesis project takes hold.

A catalogue of parts will act as the inventory for the site and be integrated into the other representation styles for the sake of clarity and potential that each material holds. The catalogue will also allow the community to partake in displaying how they are reusing materials, it's another layer of the material library and how it can be distributed to the people. The catalogue takes a position that it is more important that the materials actually get physically used again rather than prioritizing their next function. The catalogue will act as a system which is as much a plan to dismantle as they are parts to assemble with their representation acting as a kit of parts.

The definition of municipal leads us to think that there should be a governing body that controls the depot, but this thesis will operate in the space against the traditional capital focused mindset. A re-imaging how one operates with the materials that they already own and possess the ability to dismantle themselves rather physically and literally than producing a need for the production of more of the same materials which ultimately end up as waste. The point being to prioritize the power of re-use over relying on buying newly produced materials.

Index A

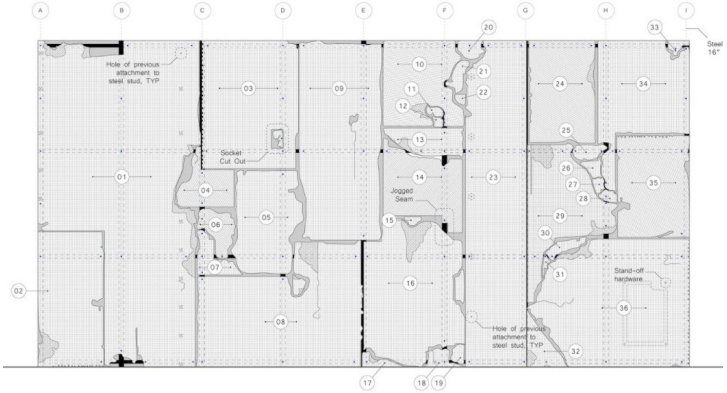
Precedent 1

Unbolting a Greenhouse - Rotor

One of the most relative precedents when thinking about unbuilding is the project Unbolting a Greenhouse by Rotor. The relationship between how to take something apart and then storing or shipping such items for an intended reuse purpose led this thesis to question what other scale could this be done. Within our understanding of building there is a craftsmanship of how to put things together but rarely does one utilize the same practices and patience when dismantling is considered. Photographed is a conversation about the laborious task of doing such a thing which within the typical scope of traditional building practices is often overlooked. Stepping back from this precedent the thesis moves forward with notions of unbuilding at a smaller scale and an understanding that the craftsmanship of unbuilding can be quite laborious.

Precedent 2

Drywall is Forever - New Affiliates

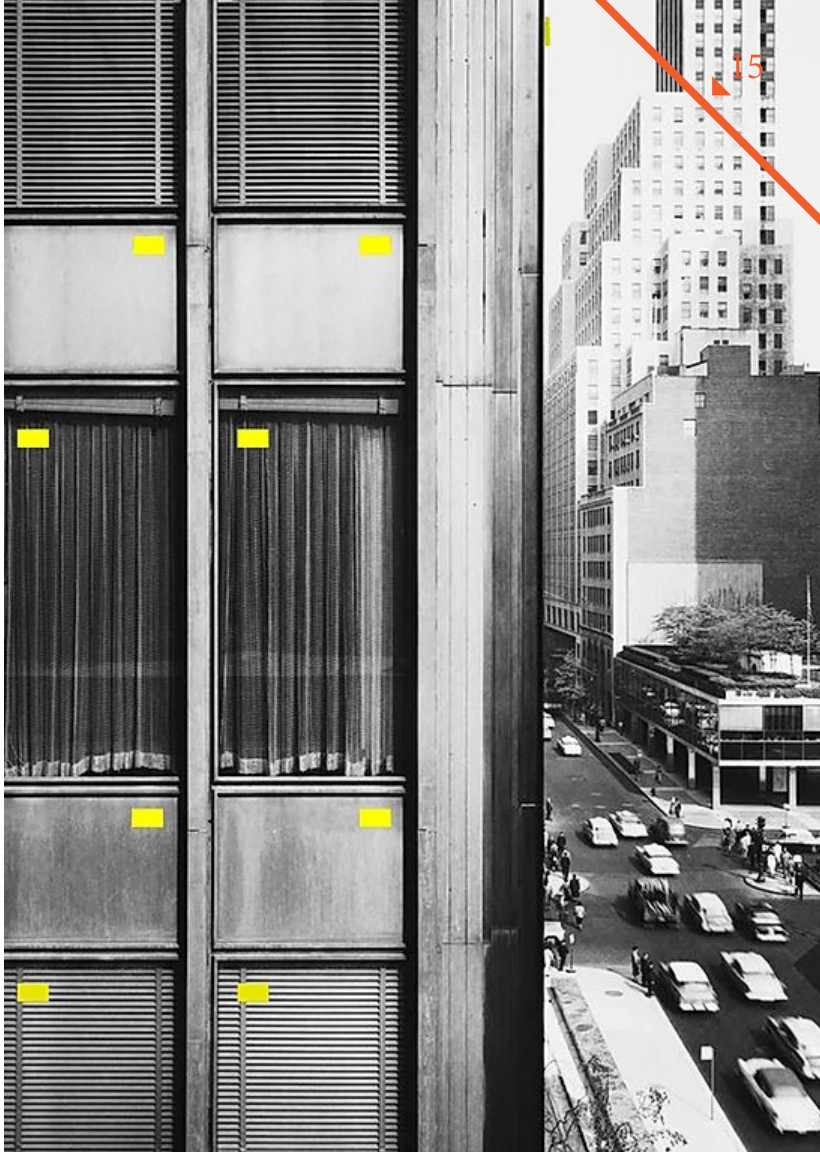


Respect for scraps is the note that is taken when considering the work that New Affiliates has done within their Drywall is Forever project. Inside of the thesis there is an understanding embedded that all materials should be utilized to their full potential but what does that mean for irregular, rotted, warped or split materials. The project mentioned above starts the conversation of how to deal with these pieces in a patchwork manner that requires almost a puzzle solving mindset. The real success is shown in the elevation where each moment is planned out accordingly with the rough dimensions of the broken pieces and how each will fit together to build the most structurally regular wall. The thesis takes note of these architects' goal to work with these thrown away pieces in a way that puts agency into the hands of those who plan out the process of building.

Precedent 3

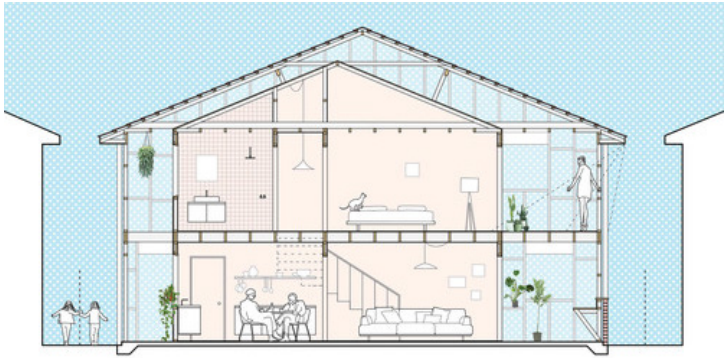
Re-tagging - Home Office

Within the project Re-Tagging by Home Office there is an understanding of the responsibility for architects to incorporate a knowledge of the materials that they use. Within this understanding the project images a physical labeling system which is incorporated onto the actual building itself. This brings to light the idea that is central to this thesis that architects need to also design for unbuilding and cannot just whip their hands off a project once the idealized project is built. Rather this project asks architects to be responsible for their buildings throughout its lifetime and take on the ownership of the potential for each project to be dismantled. Moving forward the thesis sets to incorporate this responsibility by utilizing a, yet to be designed, system that measures and displays each material with the hopes of reuse.



Precedent 4

Offset House - Other Architects



Each precedent within the scope of this thesis brings forward an idea or notion that helps move the understanding of the practice of architecture forward with the expectation of reusing materials. Within the work done by Other Architects, Offset House moves forward with an understanding of how to shift the focus not on materiality but rather how we utilize space within the home, prioritizing a “shell” around the home to offer an erosion of the harsh dividing line between interior and exterior. This project is important to the thesis because it helps realize an afterlife for the suggested reuse of materials to promote more than a DIY function but rather a focus towards community engagement and practices. The work shown here is an example of the potential to take back the ownership of these homes both in respect towards the value of these materials but also using them to reprogram the home.

Index B

Book 1

A Hacker Manifesto - McKenzie Wark

"Property produces the representation of a world that is "Socially constructed" by separating subjective possession from the object possessed."

What is a thesis without a good supporting manifesto? Inside of McKenzie Wark's work A Hacker Manifesto is a substantial amount of push back towards our gig economy that begs to question the connection between value and property. McKenzie is more focused on the digital world and where ownership of websites and apps stop but the same conversations can be had about our built environment. The quote above gives us that immediate impression because with tools to dismantle our traditional ideas of what is socially acceptable or expected within architecture. The structure of the book supports a cutting of objects from their initial nature to find a life within what is referred to as "second nature" which is another way to frame the main ideas of this thesis.

Book 2

Subtraction - Keller Easterling

"Architects trained to make the building machine lurch forward may know something about how to put it into reverse."

Within Keller Easterling's writings it's easy to "go down the rabbit hole" of understanding how things work, occur, represented, or dismantled but overall their work gives an in depth look at the discourse of a single subject and its many categories. In Subtraction there are many connections to understand how subtraction is seen within the architectural profession today, mentioning failures like Pruitt-Igoe or typical practice of suburban sprawl. All of which point towards an idea that the "city" itself is shrinking and our understanding of architecture needs to start treating building as a reactionary process rather than a static solution. The thesis latches onto this book because it's one of few that progress the idea of building removal not just as a process but also as an event that acknowledges its cause and effect on the landscape of the city, suburb and built environment.

Book 3

The Architecture of Closed Worlds - Lydia Kallipoliti

“What is the power of shit?”

The Architecture of Closed Worlds by Lydia Kallipoliti is a treasure chest full of references that speak a similar language that the thesis starts to adopt. In the book itself are precedents of closed systems and an overall diagram that groups them into logical themes of what the architecture is attempting to accomplish. Seeing both the successes and failures of these endeavours is the starting point within the research of this thesis to start to make correlations and decisions on the material sharing economy that is suggested. Questions arise while reading this that start to categorize themselves as either positives or negatives of the closed world, and exactly how individuals participate in this system.

Book 4

The Rule of Logistics - Jesse LeCavalier

The bar code’s capacity to standardize data and enable the efficient management of information provided a foundational layer for today’s logistical systems and their architecture.

Each reference inside of this field guide produces a stance in which the thesis takes alongside or against, anticipating that each will yield some fragment of process towards the overall statement. In Jesse LaCavalier’s The Rule of Logistics, the bread crumbs left behind are that of how big box stores operate and crafted their origin. Obviously parts of this encyclopedia of details, business vendors, material flows, and culture shifts exist antithesis towards the work in this book, however understanding these strategies and why they were successful in our related field will allow us to sort out the problematic decisions quite quickly. Moving forward the thesis takes a position that while there are faults with the current political and capital structure there are inherently traces of its existence that need to transfer into the newly imagined structure in order for it to “hold water”.

Glossary

Building Practices

Traditional approaches to constructing buildings which become practices established within culture
[Relative terms - Depot & Materiality]

Capital

Units of wealth that decides value within an object according to markets typically outside the control of said object
[Relative terms - Depot, Materiality, Sharing Economies & Value]

Catalogue

Library of working parts defined by those who plan to use/observe them
[Relative terms - Building Practices, Depot, & Materiality]

Community

A group of individuals gathered together for a common purpose for a variety of reasons
[Relative terms - Field Guide, Municipal & Sharing Economies]

Deconstruction

Both termanology and physical activity of tearing down something with the intention of understanding it or how it works
[Relative terms - Reframe]

Depot

Physical library of materials and building strategies contained within a centralized easy to navigate storage system
[Relative terms - Building Practices, Capital, Municipal, & Value]

Dismantle

To slowly tear down with respect towards preservation of an object
[Relative terms - Deconstruction, Reframe, Reuse, & Unbuilding]

Field Guide

A portable dictionary/encyclopedia that acts as a reference for a particular activity or species
[Relative terms - Catalogues & Timelines]

Hacking

Using an object for anything but its pre defined/initial purpose usually with the intention of reprogramming the item
[Relative terms - Sharing Economies & Unbuilding]

Longevity

A formal notation for thinking about the large scope of object/ projects
[Relative terms - Timelines]

Materiality

The composition of an object and its basic parts
[Relative terms - Most if not all presented in glossary]

"Medium Design"

Term used by Keller Easterling refers to a space between the definitive and the experimental that acts as an interplay between objects.
[Relative terms - Deconstruction & Reframe]

Municipal

Community resource
[Relative terms - Building Practices, Community & Materiality]

Reframe

Change in scope/program/use of either ideas or objects
[Relative terms - Dismantle, Deconstruction, Subtraction & Unbuilding]

Reuse

Collection of an object intended to be implemented within a system
[Relative terms - Dismantle & Reframe]

Sharing Economies

A bartering type community or flow of materiality that stray away from the normalized capital and value systems
[Relative terms - Community & Municipal]

Subtraction

Void or removal of something longstanding
[Relative terms - Deconstruction, Reframe & Unbuilding]

Timelines

Focus on time scales of objects or processes and their interrelationships
[Relative terms - Catalogues & Field Guides]

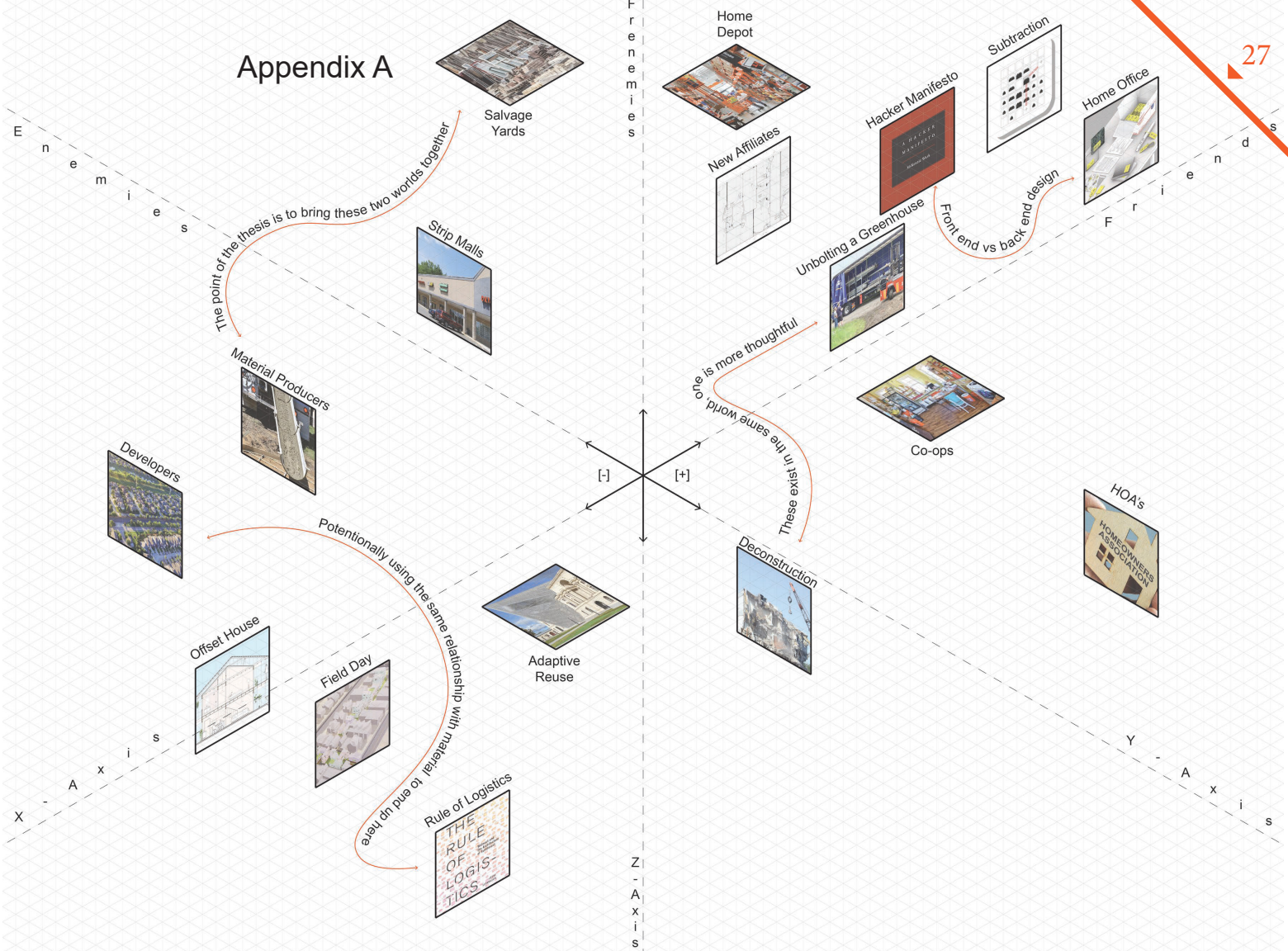
Unbuilding

Removal of materials from architecture
[Relative terms - Deconstruction & Unbuilding]

Value

Ranking system with few static qualities
[Relative terms - Building Practices, Capital & Materiality]

Appendix A


Salvage Yards
Home Depot
Subtraction
Hacker Manifesto
Home Office
New Affiliates
Unbolting a Greenhouse
Strip Malls
Material Producers
Developers
Co-ops
HOA's
Deconstruction
Adaptive Reuse
Offset House
Field Day
Rule of Logistics
THE RULE OF LOGISTICS
HOMEOWNERS ASSOCIATION
The point of the thesis is to bring these two worlds together
Front end vs back end design
one is more thoughtful
These exist in the same world,
Potentionally using the same relationship with material to end up here
[-]
[+]
Enemies
Friendies
X-Axis
Y-Axis
Z-Axis

Volume Layout

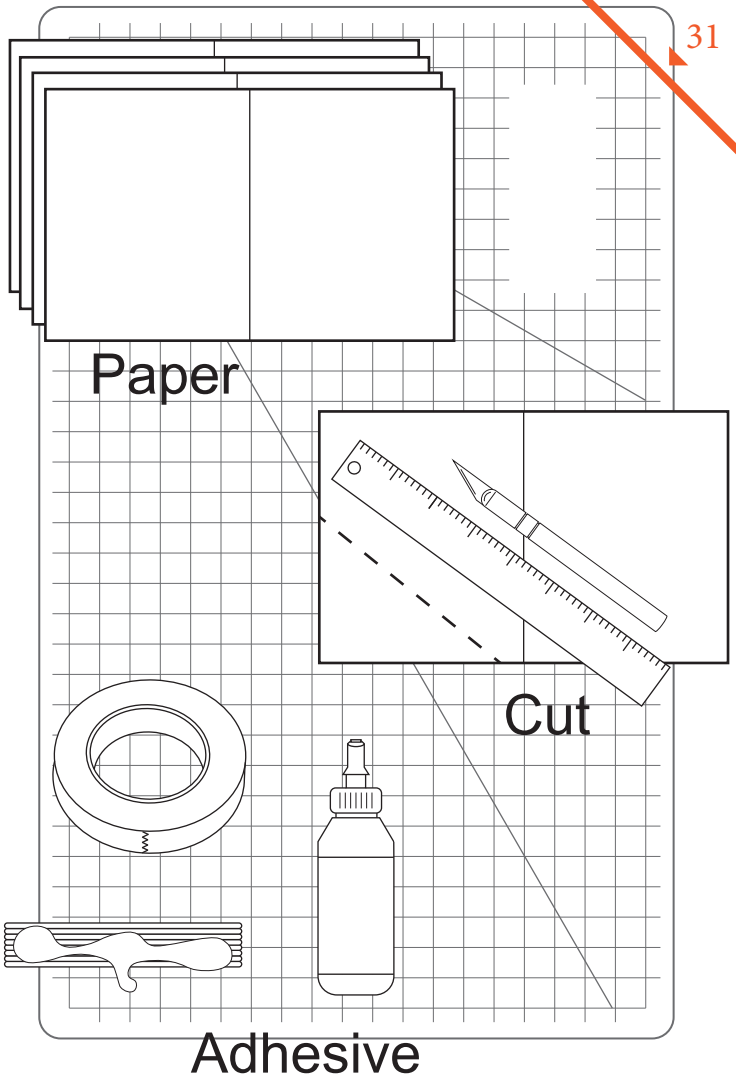
Pre-Thesis Project [Fall & Winter]

Thesis Project [Spring]

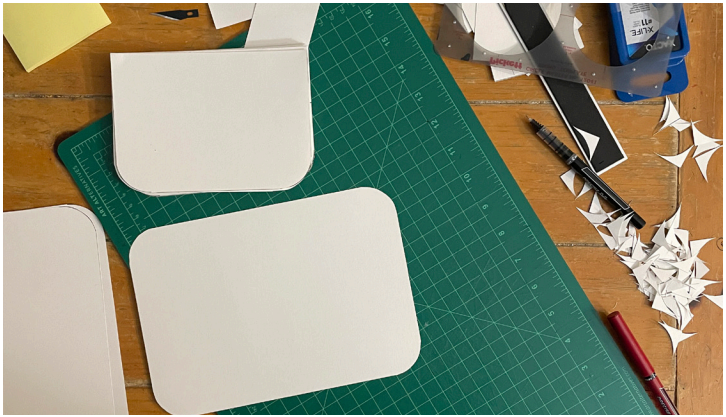
Additions

Tools

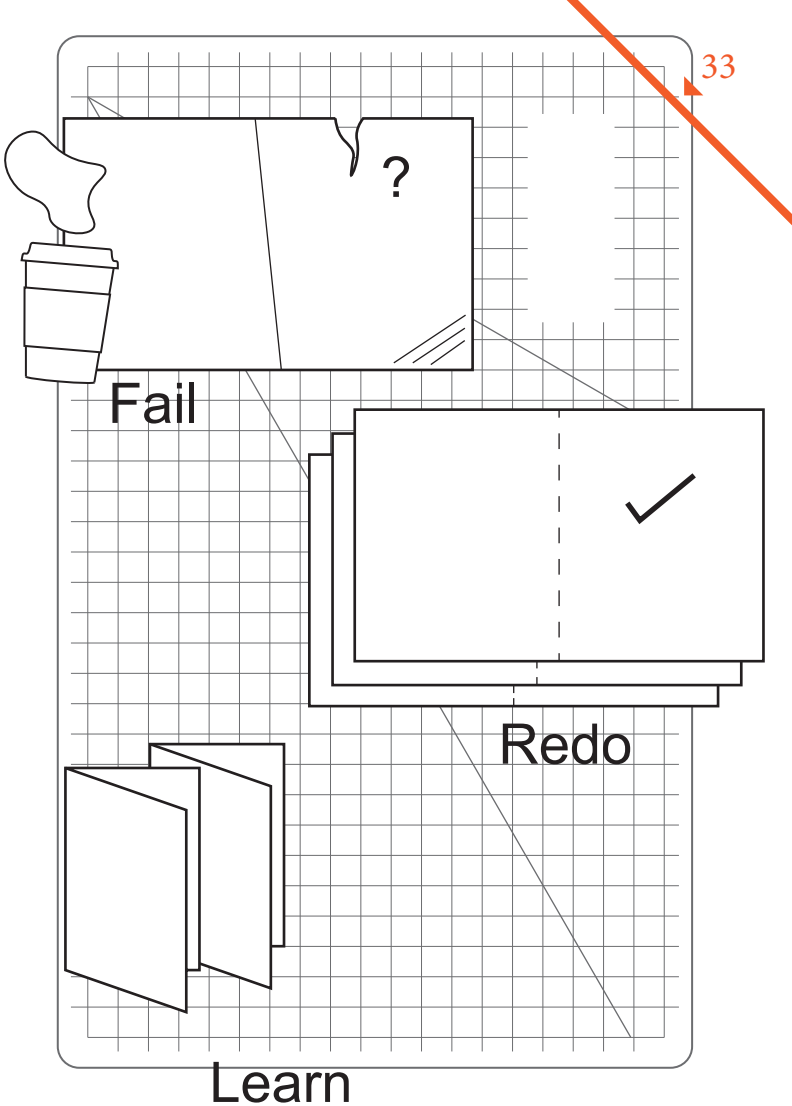
Each volume of the field guide is produced with the same basic tools and depending on the required level of fidelity most can be made at home with basic tools. The requirements to produce a field guide can be broken down into three simple items: paper, a cutting device, and adhesive. Because of its simple construction the field guide is something that can be produced easily by the people of either the system suggested in the next phase of the thesis or by a student wanting to add on to the work in the future or as the work progresses.



Process

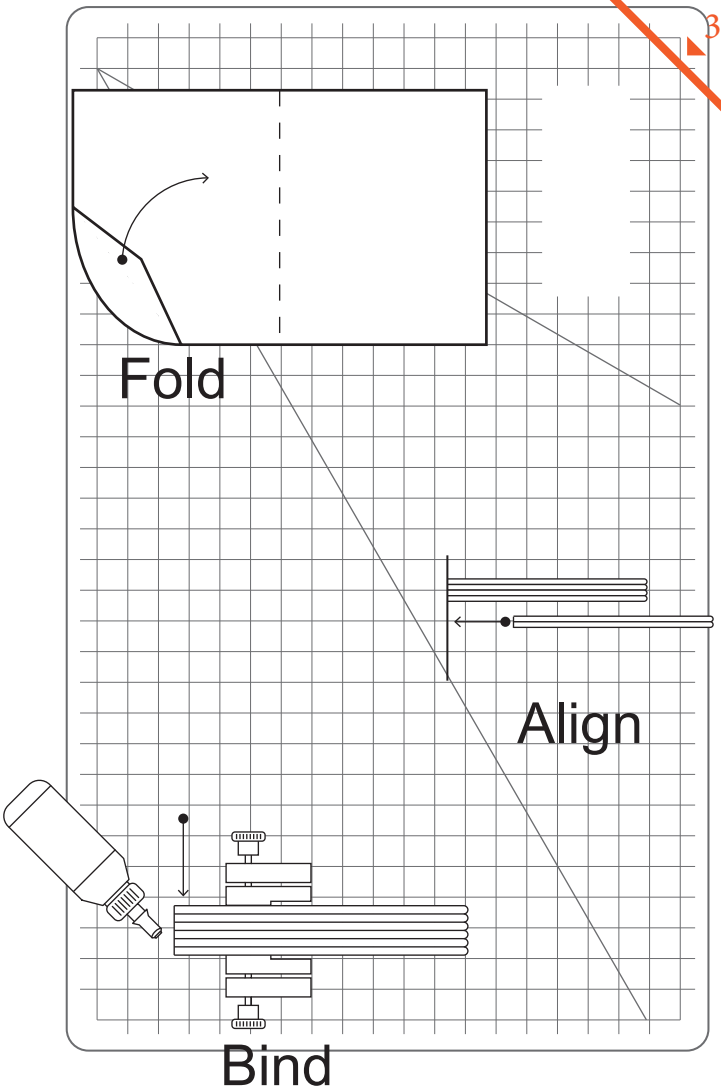


This understanding that anyone can produce these simple field guides leads us to our next phase, process. Embedded in the thesis is an idea that a slowness to unbuilding is necessary to preserve materials which require the practice of architecture to learn a new series of processes which will take some trial and error. In a similar way creating this field guide is both a process to understand its construction but also a way to learn how to share information within a community. Both of these notions are necessary for the supposed system to take off within a neighborhood because of the willingness to change in this new sharing economy.

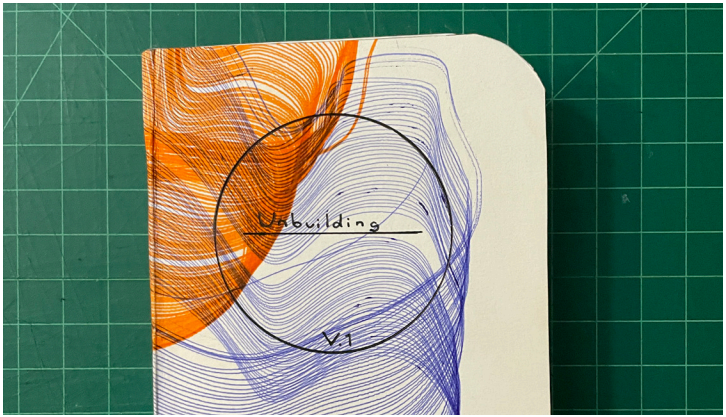


Craft

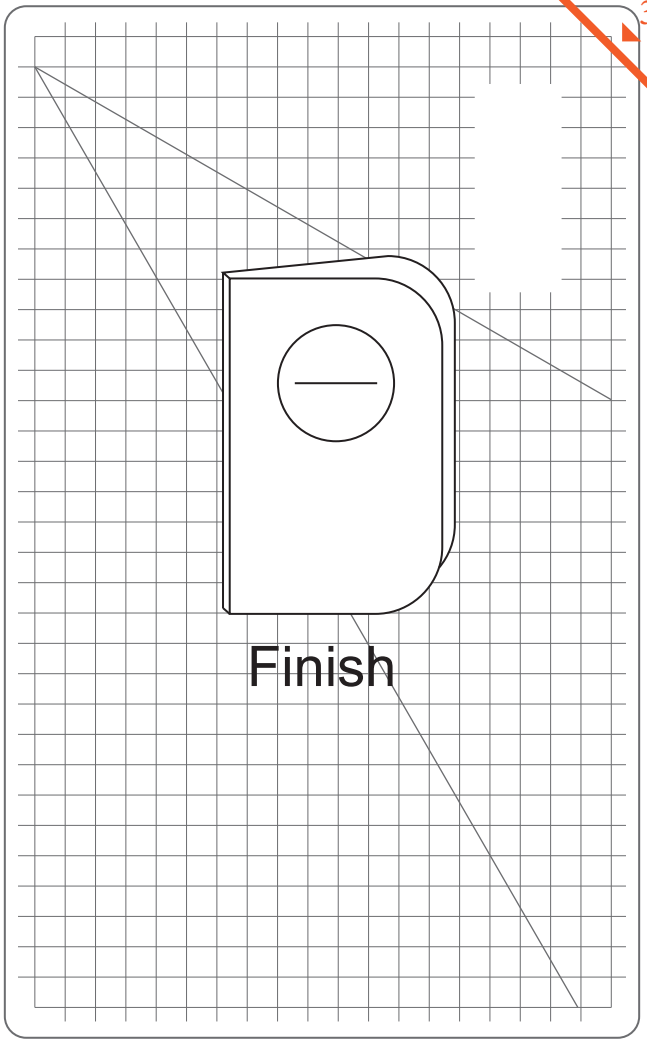
A display of information is necessary to communicate how things are done but the actual act of doing them is the “proof in the pudding” that people need to see to believe. Through iteration and experimentation these field guides are an easy way to practice and understand the importance of craft, especially considering the amount of time and effort that will go into gathering materials. This entire practice of creating these field guides has almost a direct correlation to the system that will be designed next semester in one way or another with the process of craft being the most important.



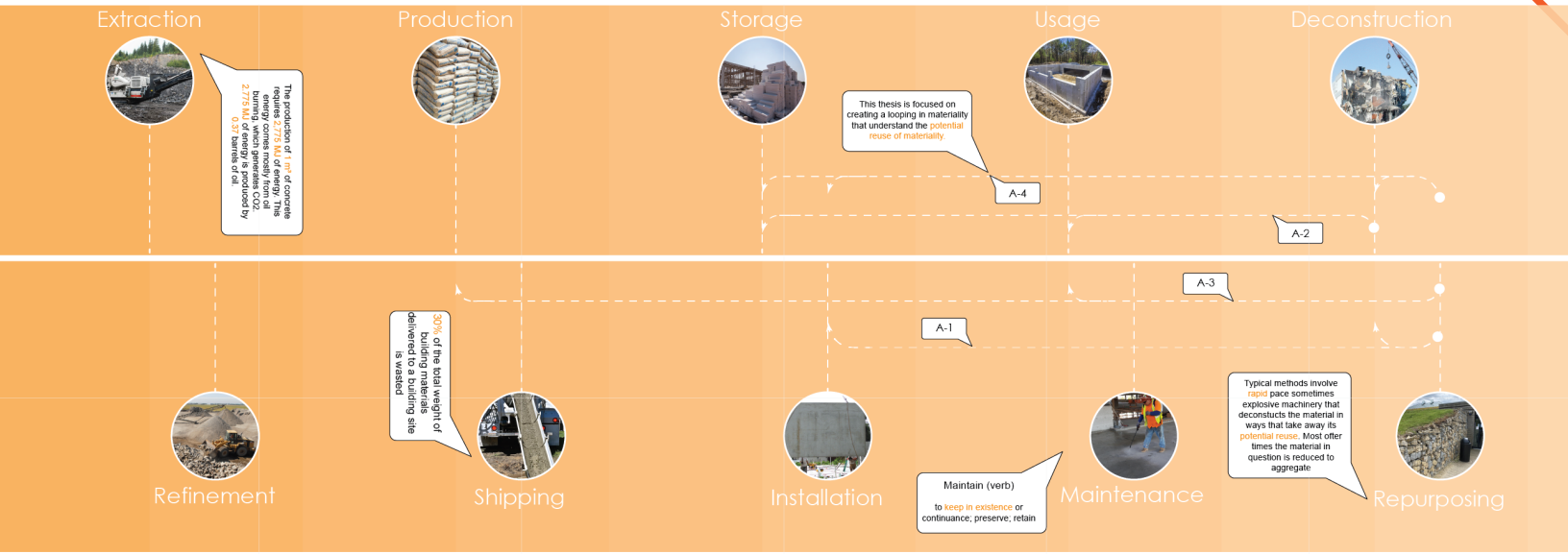
Expansion



The intention of both this system we are referencing, to be designed next semester, and these field guides is that they can be produced again and again to change our relationship with materials and how we unbuild. It is the hope of this thesis that the creation of these volumes goes on to also be used in practice and personal careers which continue to act as experimentations with materials and dismantling traditional unbuilding practices. Architecture is an ongoing conversation about how we view, build, interact and so much more, all of which these field guides can start to catalogue, document, photograph, and add to a timeline.

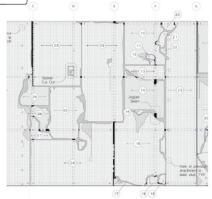


The Timeline



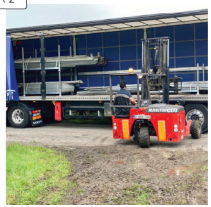
A-1

New Affiliates



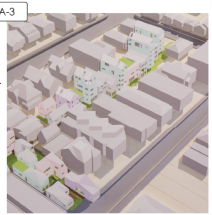
A-2

Rotor



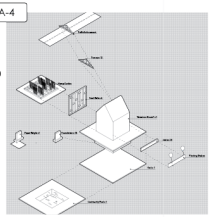
A-3

Field Day

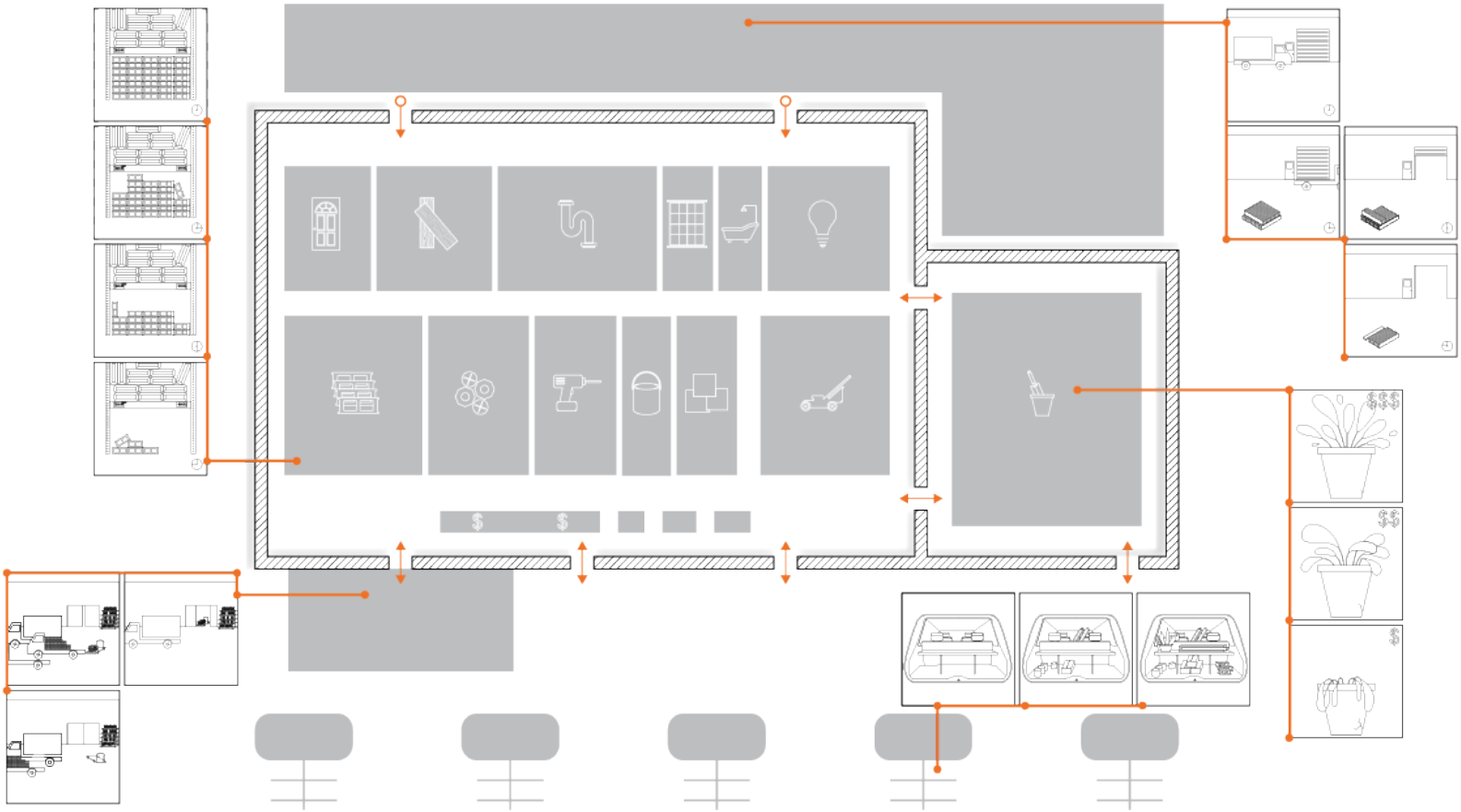


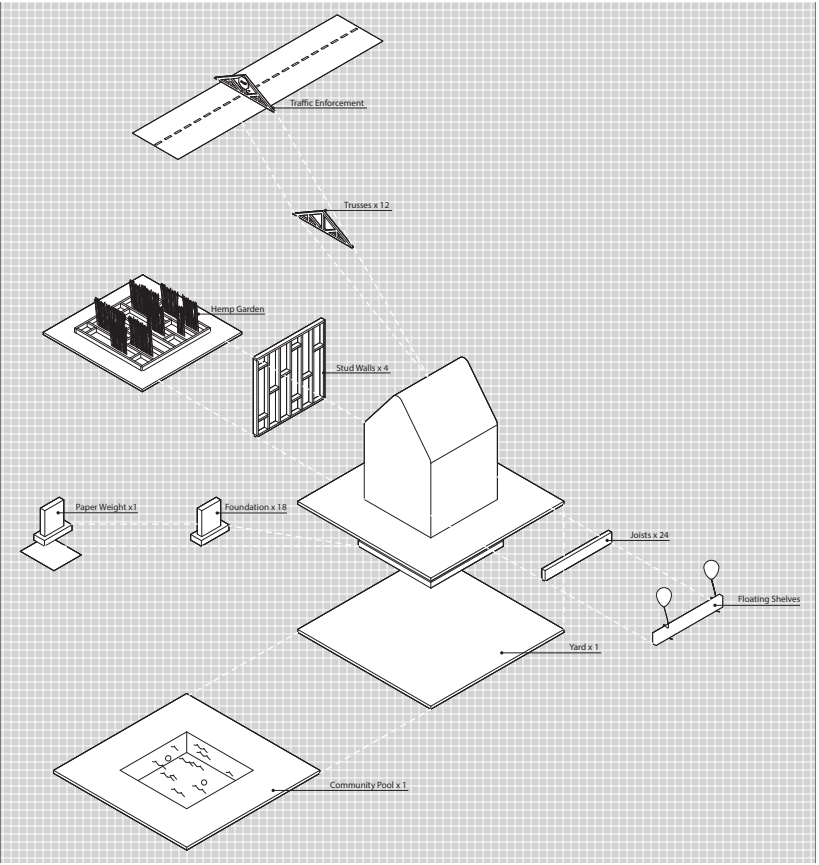
A-4

Thesis Catalogue



The Depot

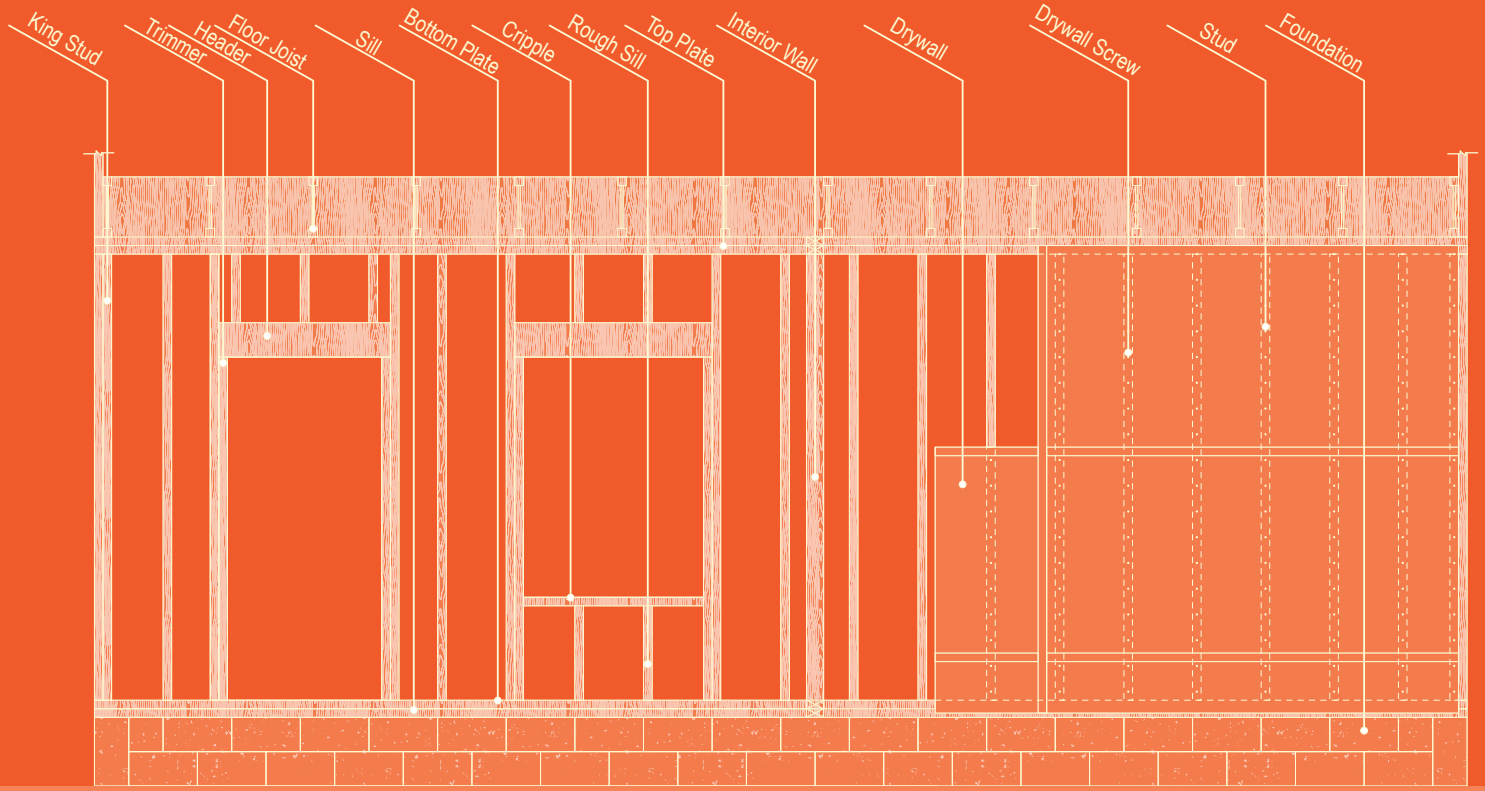



Traffic Enforcement
Trusses x 12
Hemp Garden
Stud Walls x 4
Paper Weight x1
Foundation x 18
Joists x 24
Floating Shelves
Yard x 1
Community Pool x 1

How to Culture

A field guide for new practices

V.3

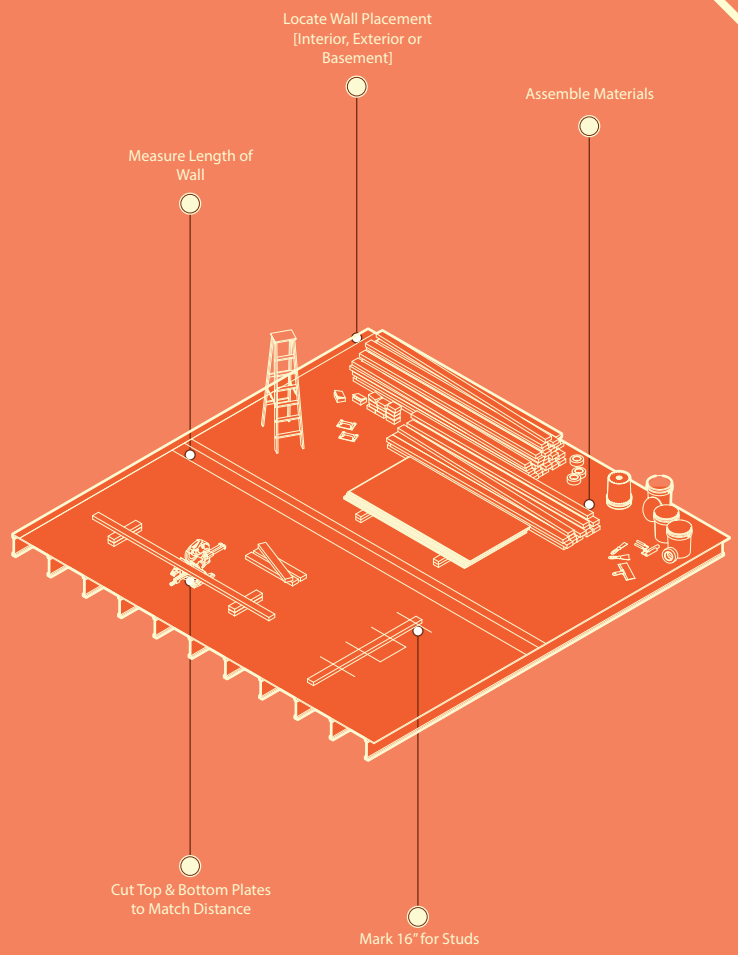

King Stud
Trimmer
Header
Floor Joist
Sill
Bottom Plate
Cripple
Rough Sill
Top Plate
Interior Wall
Drywall
Drywall Screw
Stud
Foundation

“The Wall” - [Wood Stud Construction]

-----Material Collection & Set up-----

1. Assemble Materials
2. Locate Wall Placement [Interior, Exterior or Basement]
3. Measure Length of Wall
4. Cut Top & Bottom Plates to Match Distance
5. Mark 16” for Studs

Notes



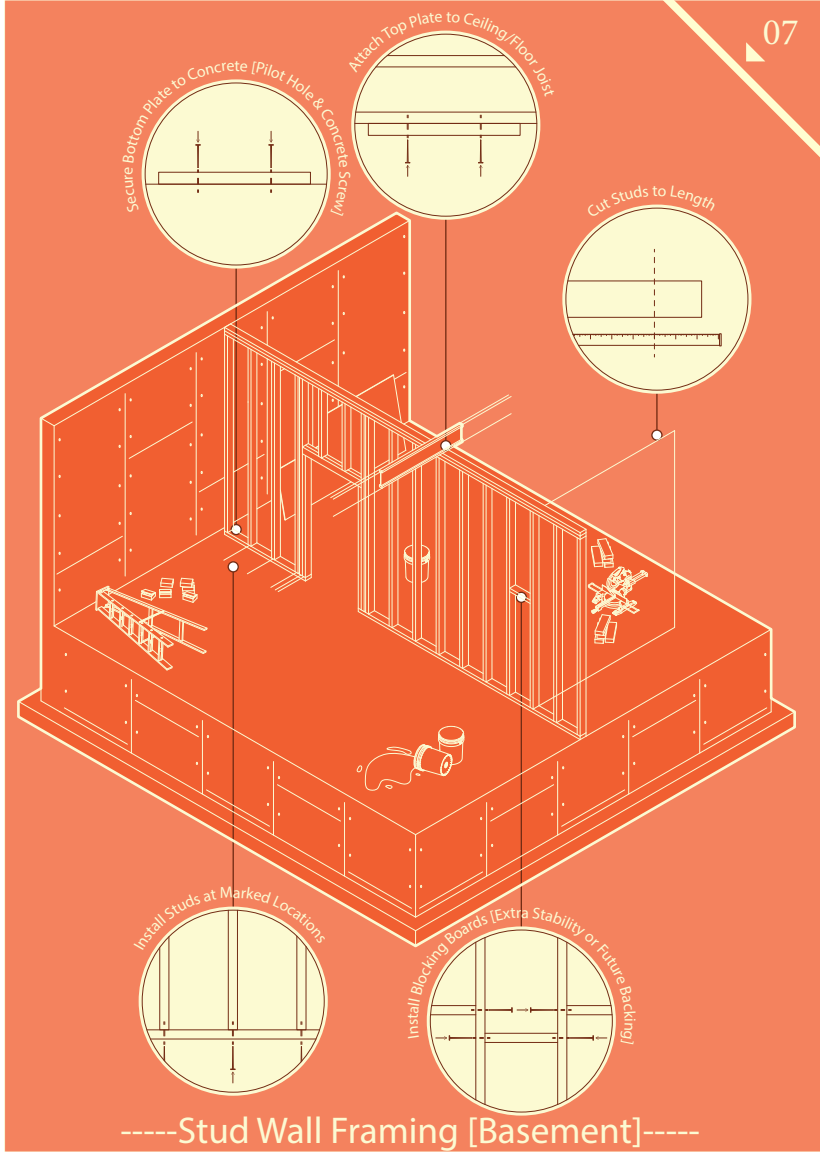
-----Material Collection-----

“The Wall” - [Wood Stud Construction]

-----Stud Wall Framing [Basement]-----

6. Secure Bottom Plate to Concrete [Pilot Hole & Concrete Screw]
7. Attach Top Plate to Ceiling/Floor Joist
8. Cut Studs to Length
9. Install Studs at Marked Locations
10. Install Blocking Boards [Extra Stability or Future Backing]

Notes

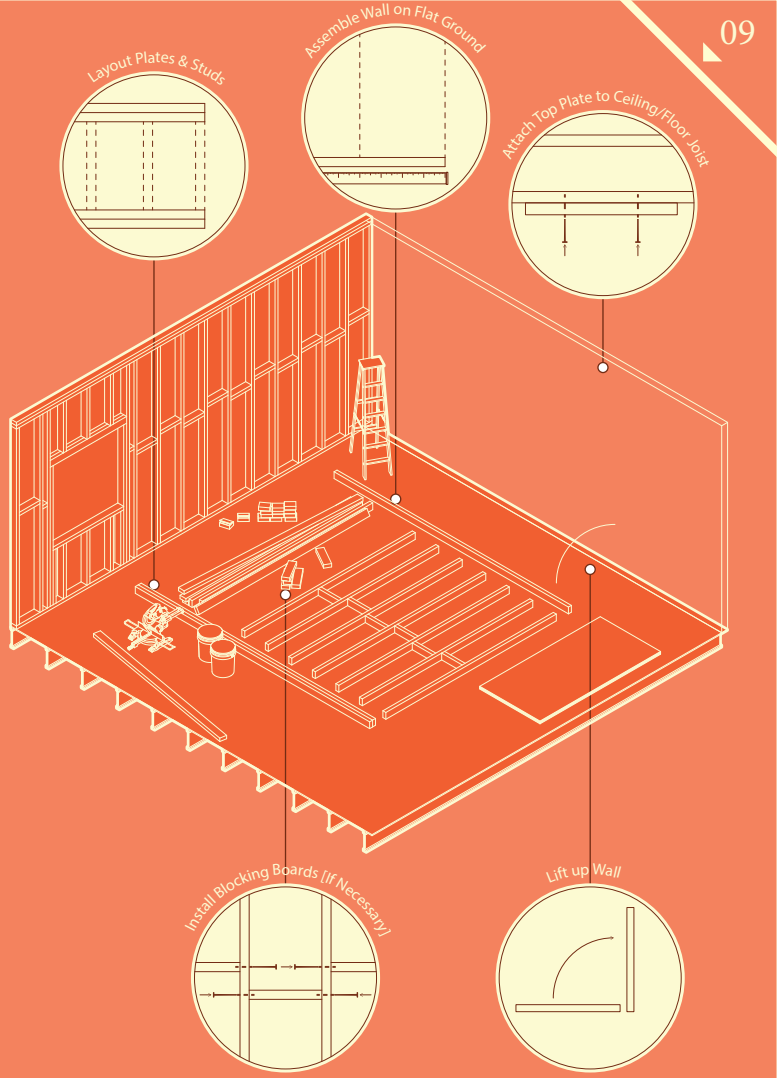


“The Wall” - [Wood Stud Construction]

-----Stud Wall Framing [Exterior/Interior]-----

11. Layout Plates & Studs
12. Assemble Wall on Flat Ground
13. Install Blocking Boards if Necessary
14. Lift up Wall [Individual vs Communal]
15. Shim & Check for Plum
16. Secure to beam/joist

Notes



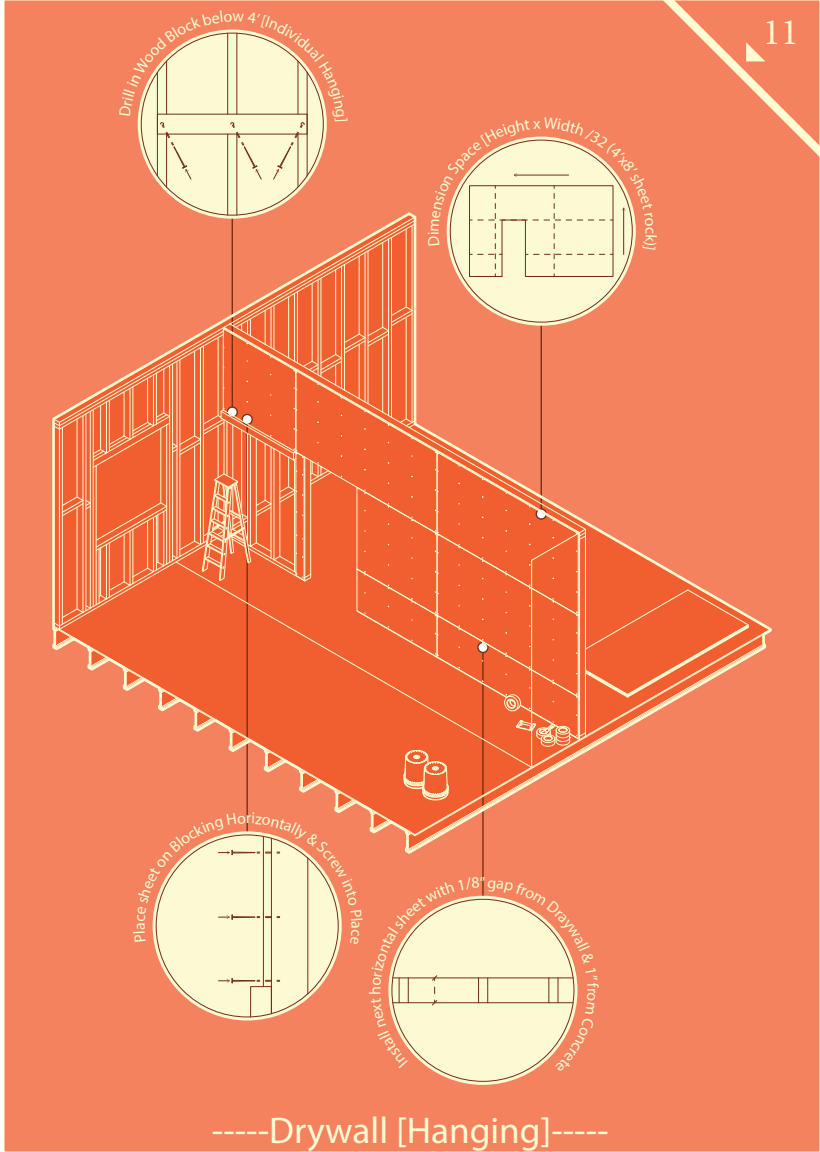
-----Stud Wall Framing [Exterior/Interior]-----

“The Wall” - [Wood Stud Construction]

-----Drywall [Hanging]-----

17. Dimension Space [Height x Width /32 (4’x8’ sheetrock)]
18. Mark 4’ Portions Wide
19. Drill in Wood Block below 4’ [Individual Hanging]
20. Place sheet on Blocking Horizontally
21. Screw Top and Bottom into each Stud
22. Drill in more screws to finalize placement
23. Install next horizontal sheet with 1/8” gap from last
24. Cut Extra Drywall and hang
25. Leave 1” gap on bottom for trim [Drywall should not be touching Concrete]

Notes

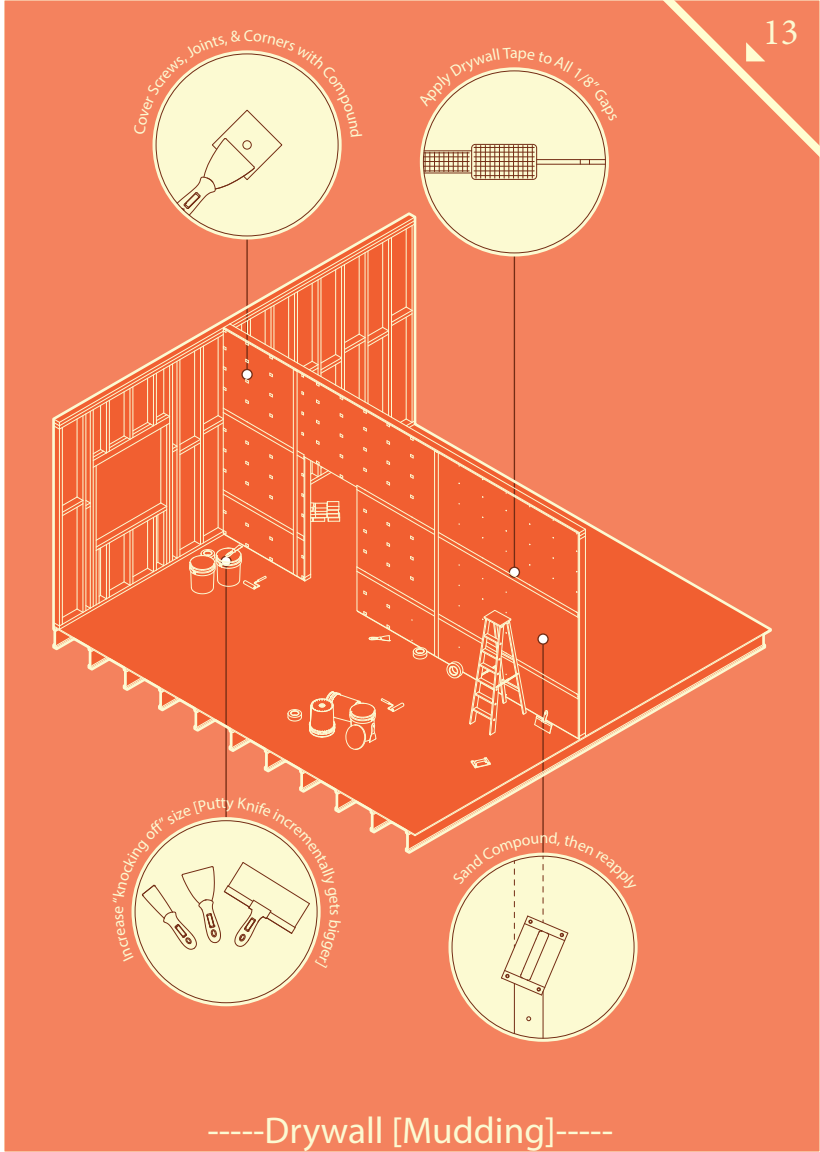


“The Wall” - [Wood Stud Construction]

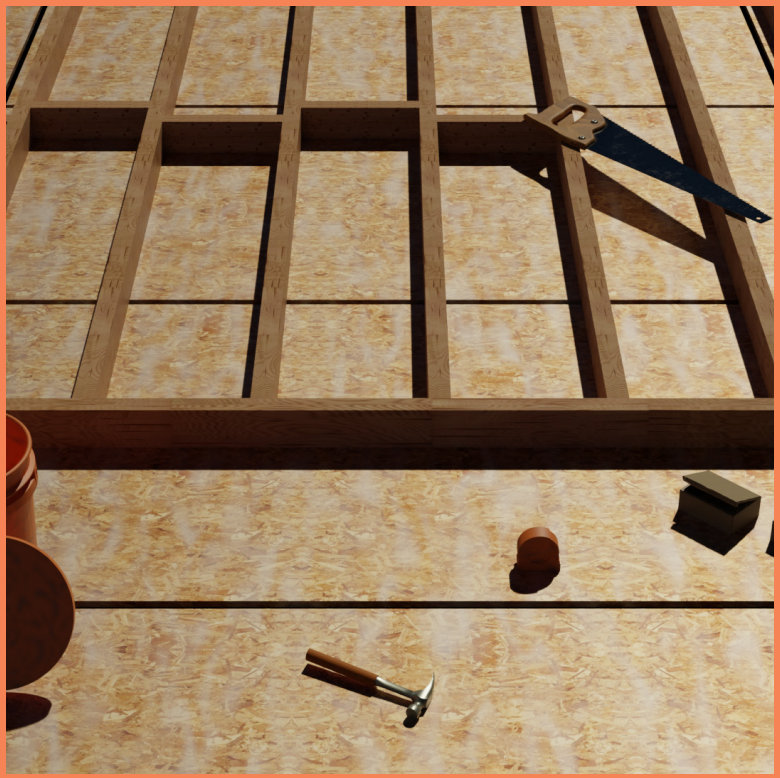
-----Drywall [Mudding]-----

26. Cover Screws, Joints, & Corners with Compound
27. Apply Drywall Tape to All 1/8” Gaps
28. Smooth Tape
29. Let Compound Dry
30. Sand Compound
31. Apply Second Coat [General Joints, Butt Joints, & Corner Joints]
32. Increase “knocking off” size [putty knife incrementally gets bigger]
33. 2nd Sand Dry
34. Apply lightweight compound with ¾” nap roller [Avoid Corners & hit Seems]
35. Final Sand

Notes



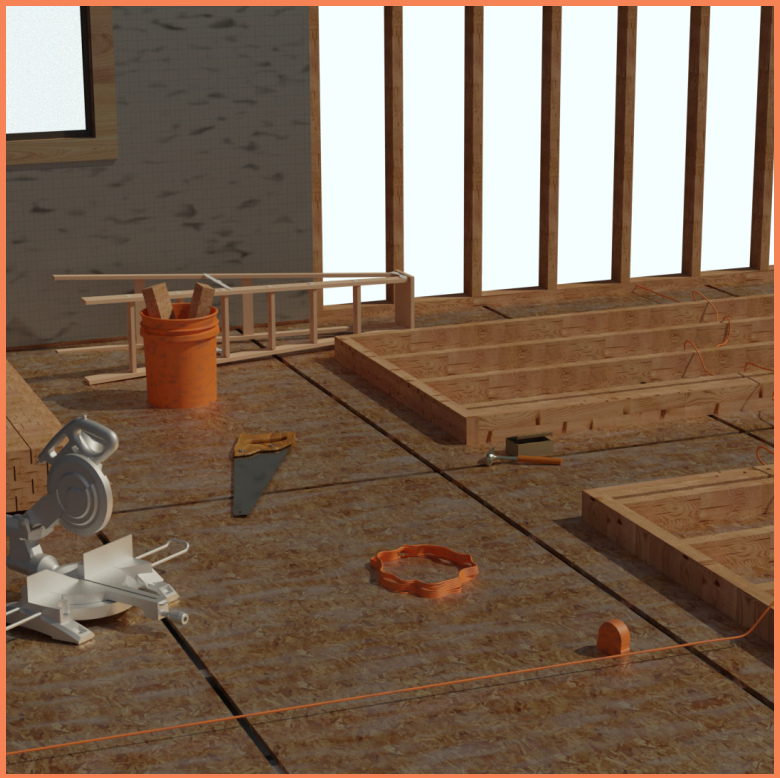
Assemble Materials



Mark 16" for Studs

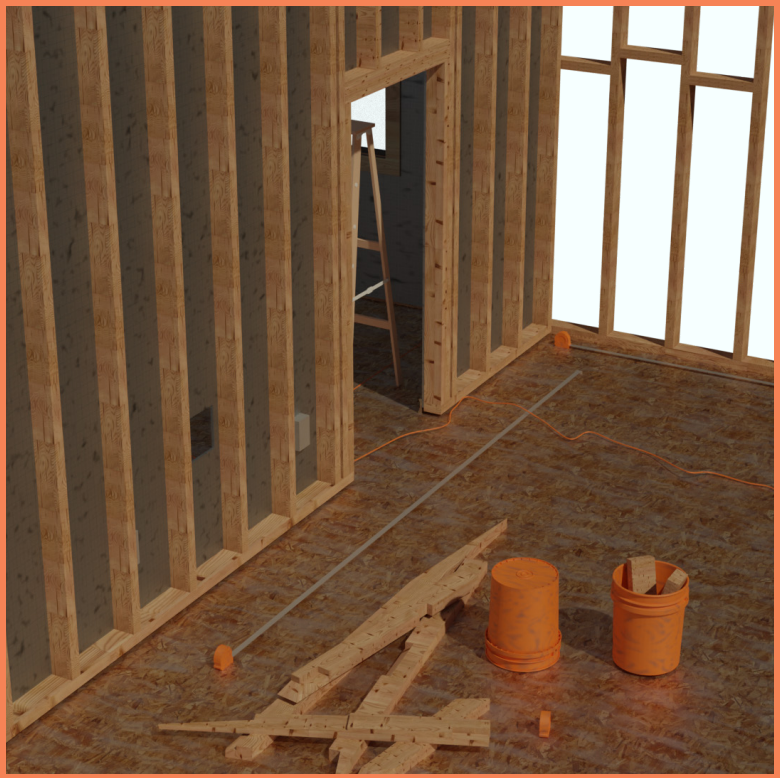
Secure Plate to Concrete

Install Blocking Boards

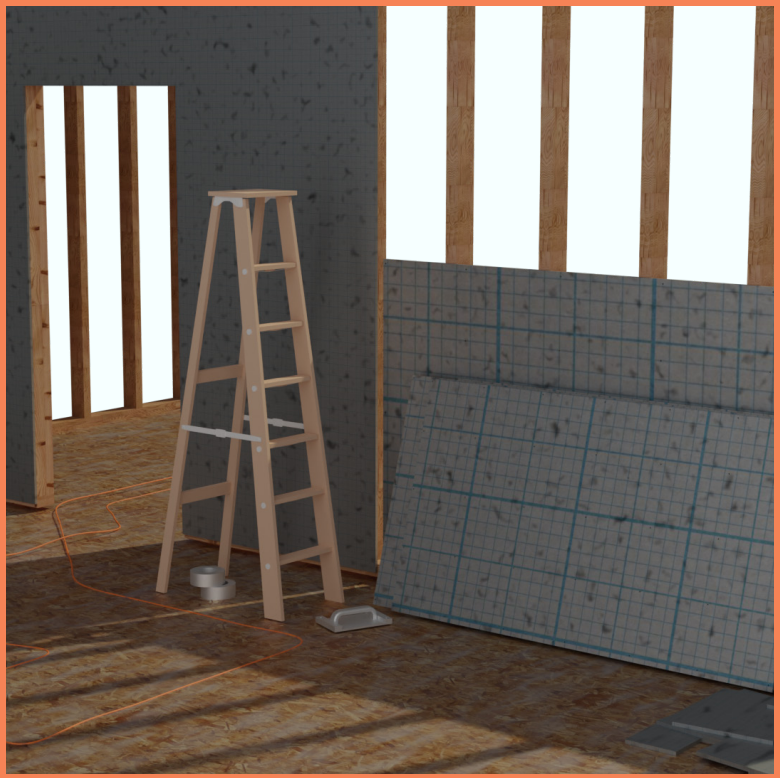


Layout Plates & Studs

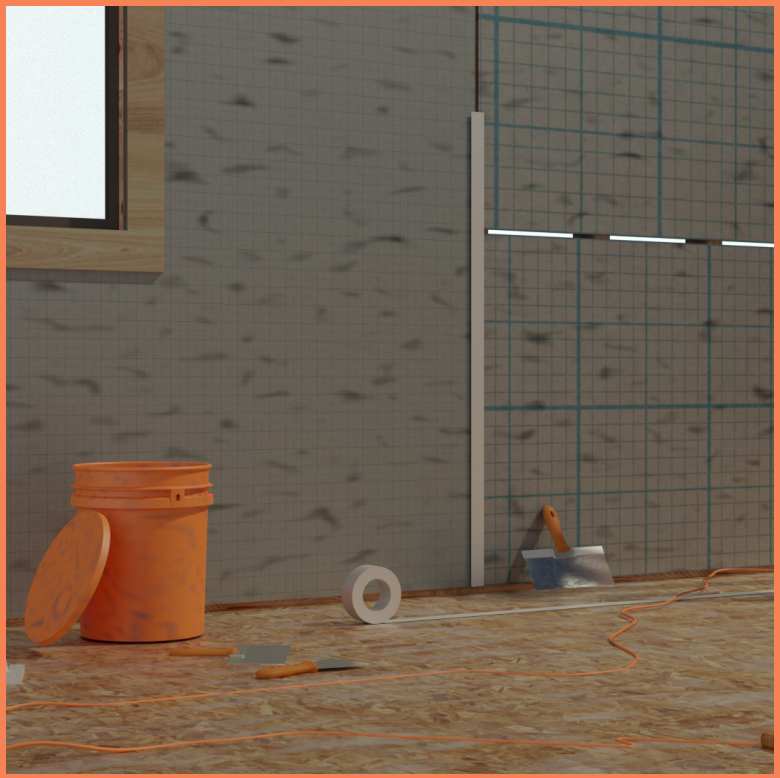
Secure to beam or joist



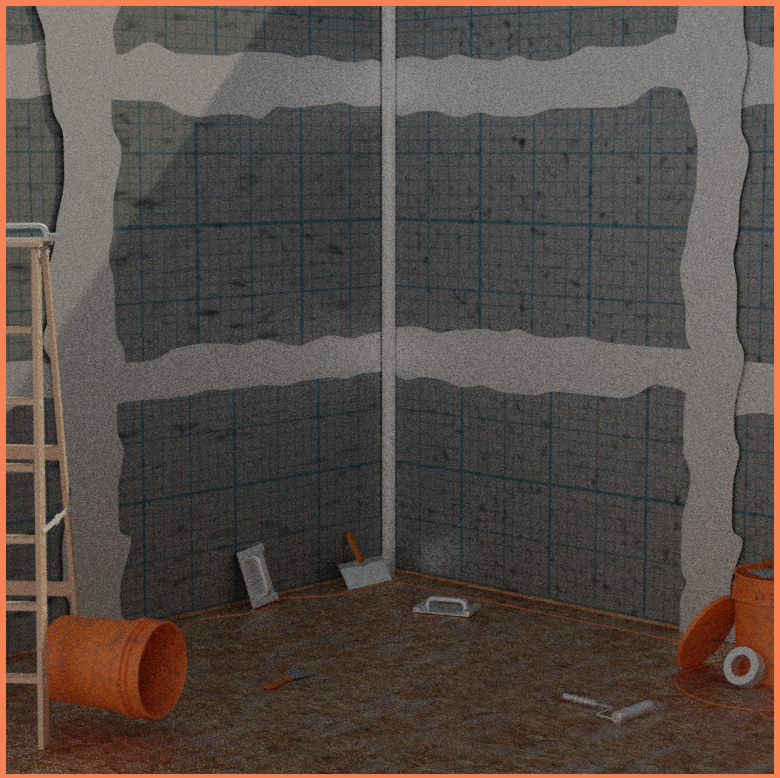
Dimension Space



Leave gap for Trim

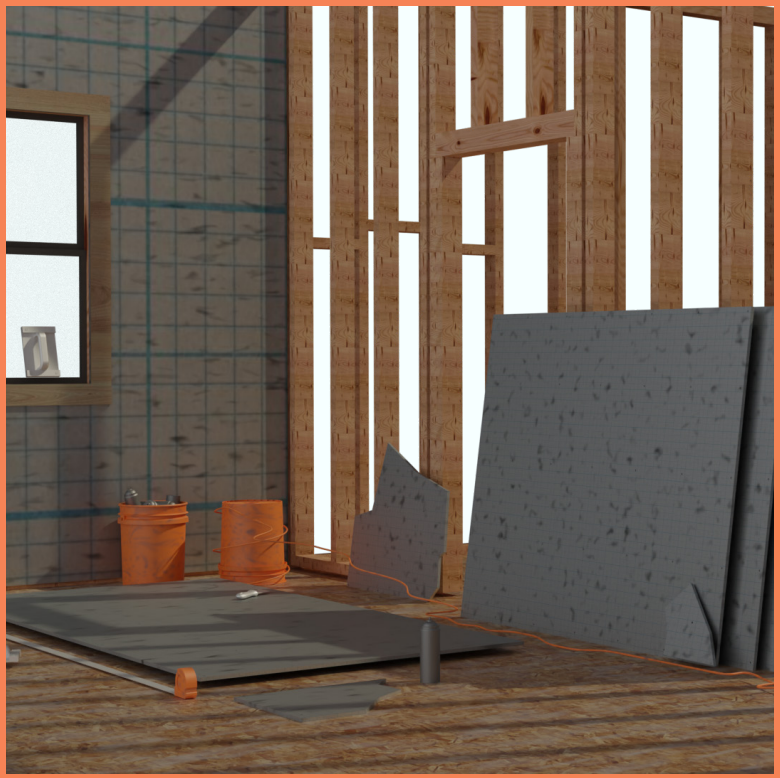


Cover Joists with Tape



Final Sand

Probe to find Stud



Catalog & Dimension

Knock out Blocking

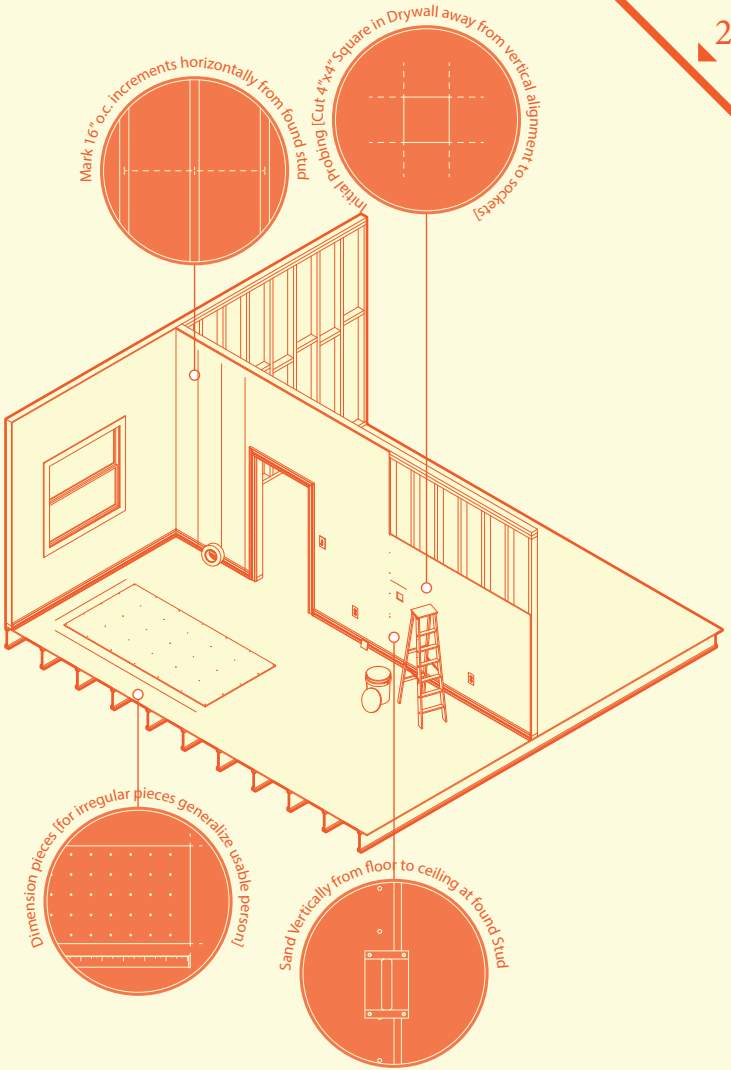
Prepare to Transfer

“The Wall” - [Wood Stud Construction]

-----Unbuilding [Drywall]-----

38. Initial Probing [Cut 4”x4” Square in Drywall away from vertical alignment to sockets]
39. Find Stud
40. Sand Vertically from floor to ceiling at found Stud
41. Mark 16” o.c. increments horizontally from found stud
42. Cut through drywall tape at 4’ increments
43. Drill out all screws in sheet and remove section [Work top down]
44. Dimension pieces [for irregular pieces generalize usable person]
45. Catalog dimension of drywall
46. Mark dimensions on individual pieces
47. Repeat & finish

Notes



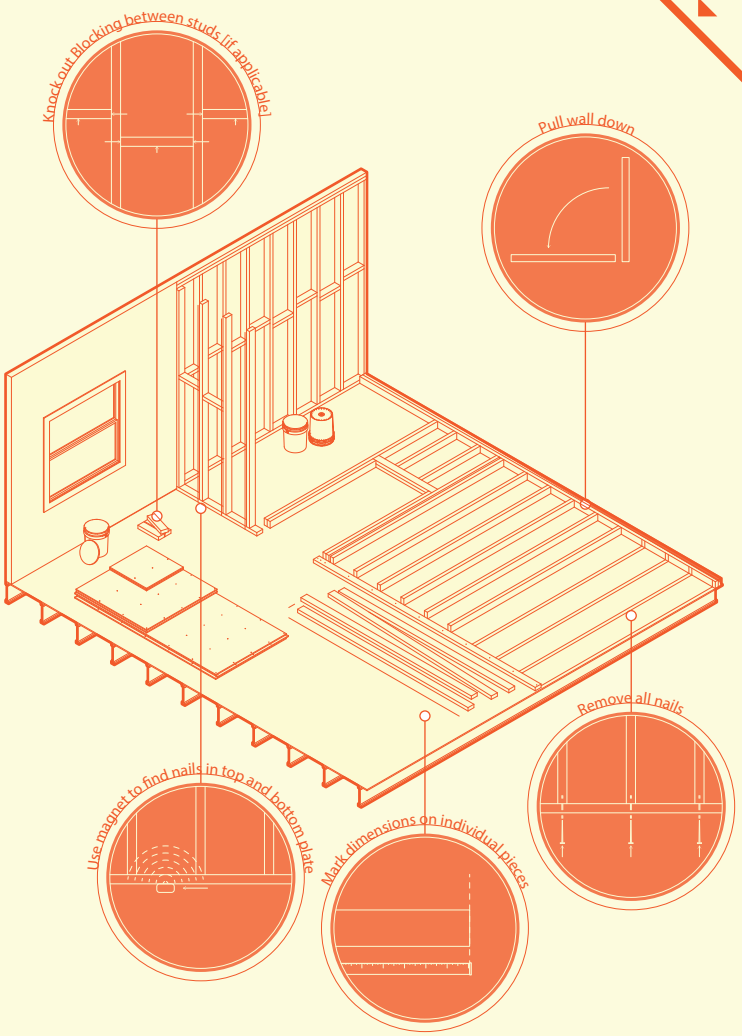
-----Unbuilding [Drywall]-----

“The Wall” - [Wood Stud Construction]

-----Unbuilding [Stud Wall]-----

48. Knock out Blocking between studs [if applicable]
49. Pull out nails using the nail puller outer 5000
50. Use magnet to find nails in top and bottom plate
51. Remove nails
52. Pull wall down
53. Knock off top and bottom plate
54. Remove all nails
55. Dimension pieces [for irregular pieces generalize usable person]
56. Catalog dimension of drywall
57. Mark dimensions on individual pieces

Notes



-----Unbuilding [Stud Wall]-----

“The Wall” - [Wood Stud Construction]

-----Material Storage-----

58. Unload material by category

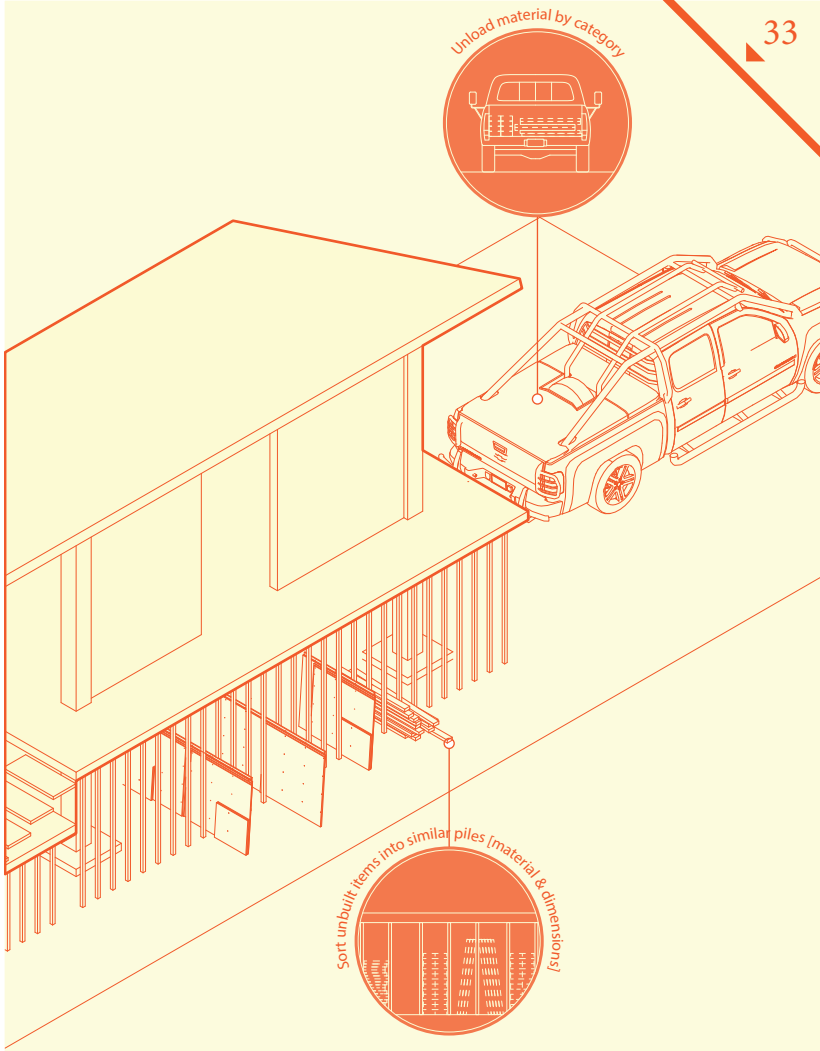
59. Sort unbuilt items into similar piles [material & dimension]

60. Return Tools

61. Expore learning evironment

62. Browse Material selection for future projects

Notes



-----Unbuilding [Storage]-----