2017 RALPH RAPSON TRAVELING STUDY FELLOWSHIP

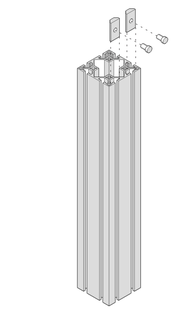
REWEAVING THE INTERSECTION

This project starts with a common ubiquitous framework known to DIY CNC enthusiasts and Makers alike, the T-slot aluminum extrusion. The T-slot extrusion has many uses in a Maker space and is not limited to: CNC Router milling beds for holding down material, CNC tables, machine gantries, building temporary partitions, etc. Digging into the 'Maker's' mentality, this system seemed appropriate in the context of this project as it is a versatile system, comes in various standard extrusion shapes based on necessity, serves several functions and is generally available to the public. It's basically an advanced upgrade to pegboard. This project proposes that the new Center for Public Design, Makerspace and Convenience store explore the possibilities of using this system as a framing material.

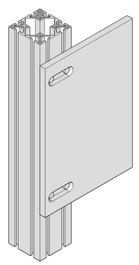
The project starts with looking at a bay for a common CNC (computer numeric controlled) devices that use a top-down gantry system: CNC routers/spindles, CNC lasers, and most 3-D printers and using T-sections for structural members to support the gantry. This meant a 10'x10' standard bay to allow for common sheet goods (4'x8') with some buffer room and an alternating 3'x10' bay in one direction to provide an area for the gantry motor to run and access/maintenance space. That language was carried throughout the site on the Southeast corner of Penn Ave. N and Glenwood Ave. creating the Center for Public Interest Design (CPID), the MakerSpace (MakerLabs) and a park made up of gravel and sand that can be used for fabrication, casting, prototype testing and drone racing. The MakerLabs is made up of (16) 20'x10' bays with 3'x20' bays between them. Every (2) bays has their own dust collection system along with their own hose reel; each becoming their own 'Lab'. These bays are flexible spaces and their use can be changed out easily due to the T-Slots. Intended uses included and are not limited to: Woodworking, Metalworking, CNC prototyping, Electronics, Tinkering, etc. The bays can be equipped with partitions attached to the T-slots and can be changed out to the desired need of the bay. The undulating roof allows for natural light into each of the bays and each bay has a bi-fold door utlizing the T-Track to bring in fresh air from outside. The MakerLabs slots into the Center of Public Interest design creating shared classrooms/conference rooms. Given the slope of the site, material deliveries are delivered to the basement where they are stored. A 2-story space in the MakerLabs allows for a material gantry to hoist materials from below. The Center for Public Interest design has a shared gallery with the MakerLabs showcasing projects and products from each space. This gallery also acts as a public functionary space for events.

Across the corner of Glenwood Ave. and Penn Ave. N. is a new model for convenience stores - acting more of a miniature grocery store/general store rather than your typical convenience store; providing fresh produce and meats in limited quantities. It also contains a small diner/cafe for beverages, quick meals and snacks. The same language of building is reflected in the convenience store, but instead of the 10' grid; it was adjusted to 6'x10' to accommodate aisle space and shelf space. The same language of the undulating roof carries through at a smaller scale to allow daylight into the aisles of the store. The convenience store also has a small patio for eating outdoors and can act as a small farmer's market on the weekends.

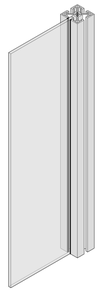
Each of the corner programs straddles the intersection of Glenwood and Penn "Reweaving the Intersection" by not only sharing the same building language, but by also sharing products and goods and ideas.



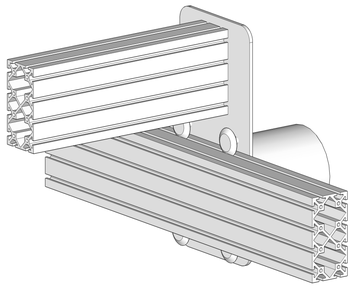
TYPICAL T-SLOT MEMBER AND FASTENERS



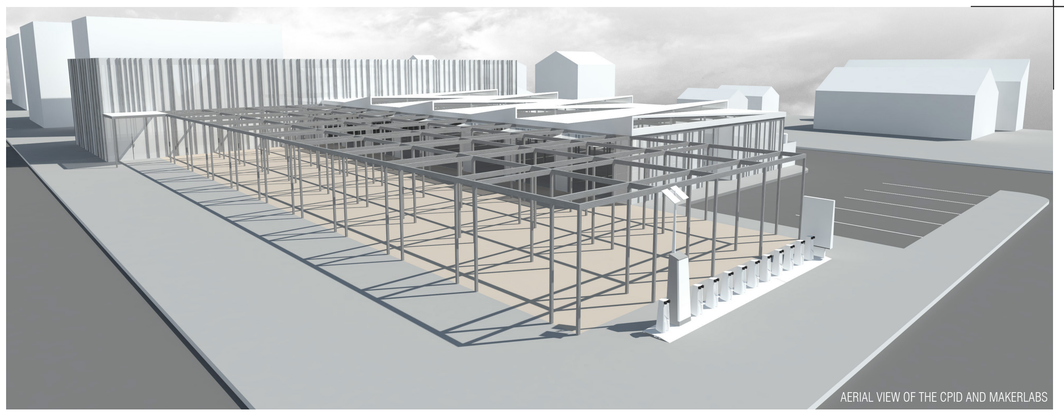
TYPICAL T-SLOT MEMBER WITH SHEET MATERIAL FASTENED TO IT



T-SLOT MEMBER WITH TRANSLUCENT POLYCARBONATE PANEL AND GLAZING STRIPS



T-SLOT MEMBERS USED AS A GANTRY TRACK AND GANTRY ARM



AERIAL VIEW OF THE CPID AND MAKERLABS

INTERIOR VIEW OF MAKERLABS

EXTERIOR VIEW OF CPID AND MAKERLABS

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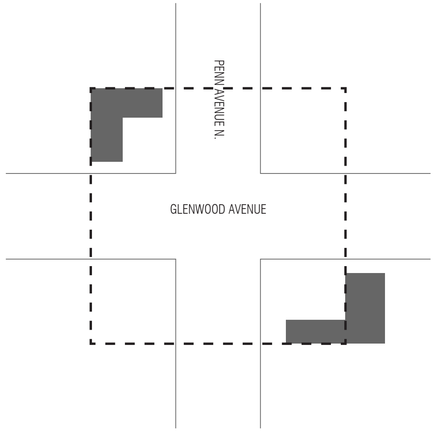
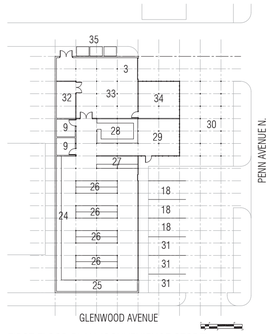


SITE DIAGRAM

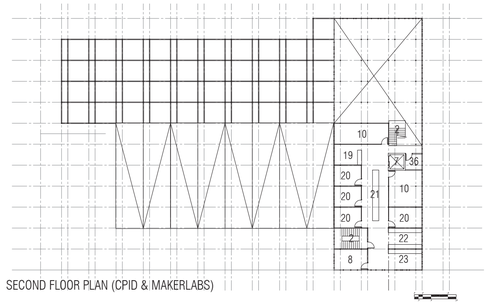
SITE PLAN

LEGEND

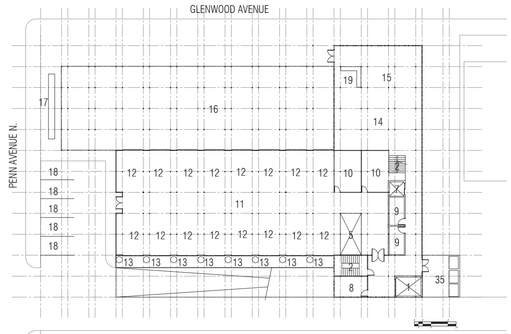
1. FREIGHT ELEV.
2. STAIR
3. RECEIVING
4. MATERIAL STORAGE
5. MATERIAL GANTRY
6. HVAC AND AIR SYSTEMS
7. ELEVATOR
8. STORAGE
9. RESTROOM
10. CONFERENCE ROOM/CLASSROOM
11. CORRIDOR
12. FLEX MAKER LAB
13. DUST COLLECTOR
14. GALLERY
15. LOBBY/PUBLIC FUNCTIONARY
16. PARK
17. NICE RIDE STATION
18. PARKING STALL
19. RECEPTION
20. OFFICE
21. WORK AREA
22. COPY ROOM
23. BREAK ROOM
24. PRODUCE
25. MEATS
26. DRY GOODS & MISC.
27. CASHIER
28. DINER/FOOD PREP
29. DINING
30. PATIO
31. EV PARKING STALL
32. MECH
33. STORAGE
34. OPEN OFFICES
35. GARBAGE & RECYCLING
36. ELEVATOR ROOM



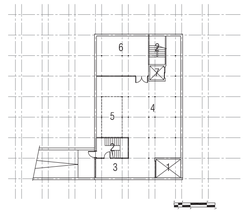
FIRST FLOOR PLAN (CONVENIENCE STORE)



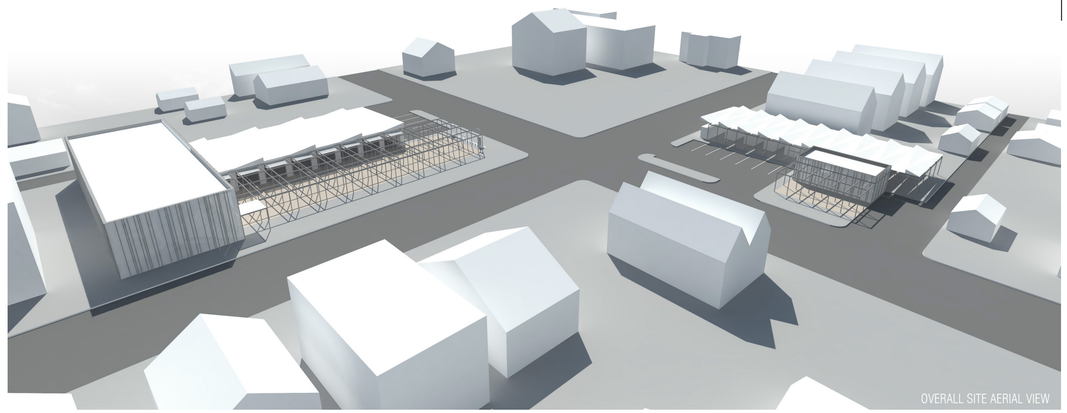
SECOND FLOOR PLAN (CPID & MAKERLABS)



FIRST FLOOR PLAN (CPID &MAKERLABS)



BASEMENT FLOOR PLAN (CPID &MAKERLABS)



OVERALL SITE AERIAL VIEW

CONVENIENCE STORE VIEW

ELEVATION PERSPECTIVE OF MAKERLABS