



# PROJECT

INCUBATED BY TILT [TAOS INITIATIVE FOR LIFE TOGETHER] A  
501C3 ORGANIZATION  
AN INCUBATOR FOR PERSONAL & SYSTEMIC CHANGE





TILT



**LOR**  
FOUNDATION

SP... E LOR FOUNDATION FOR THEIR

SUPPORT & BELIEF





F PRO

# RECYCLING CRISIS





VIGINTY  
A SHED





N D P

MODULAR PANELS





# BUSINESS

A CREATIVE ECONOMIC INITIATIVE EMERGING IN TAOS & QUESTA, NEW MEXICO [TODDWYNWARD@GMAIL.COM](mailto:TODDWYNWARD@GMAIL.COM)  
REPURPOSINGPLASTICTAOS.COM





T NI

“RYNO” HERRERA



350 MEMBERS PAY  
US TO TAKE THEIR  
CLEAN WASTE  
PLASTIC, THEN WE  
COMPRESS IT IN A  
HYDRAULIC BALER







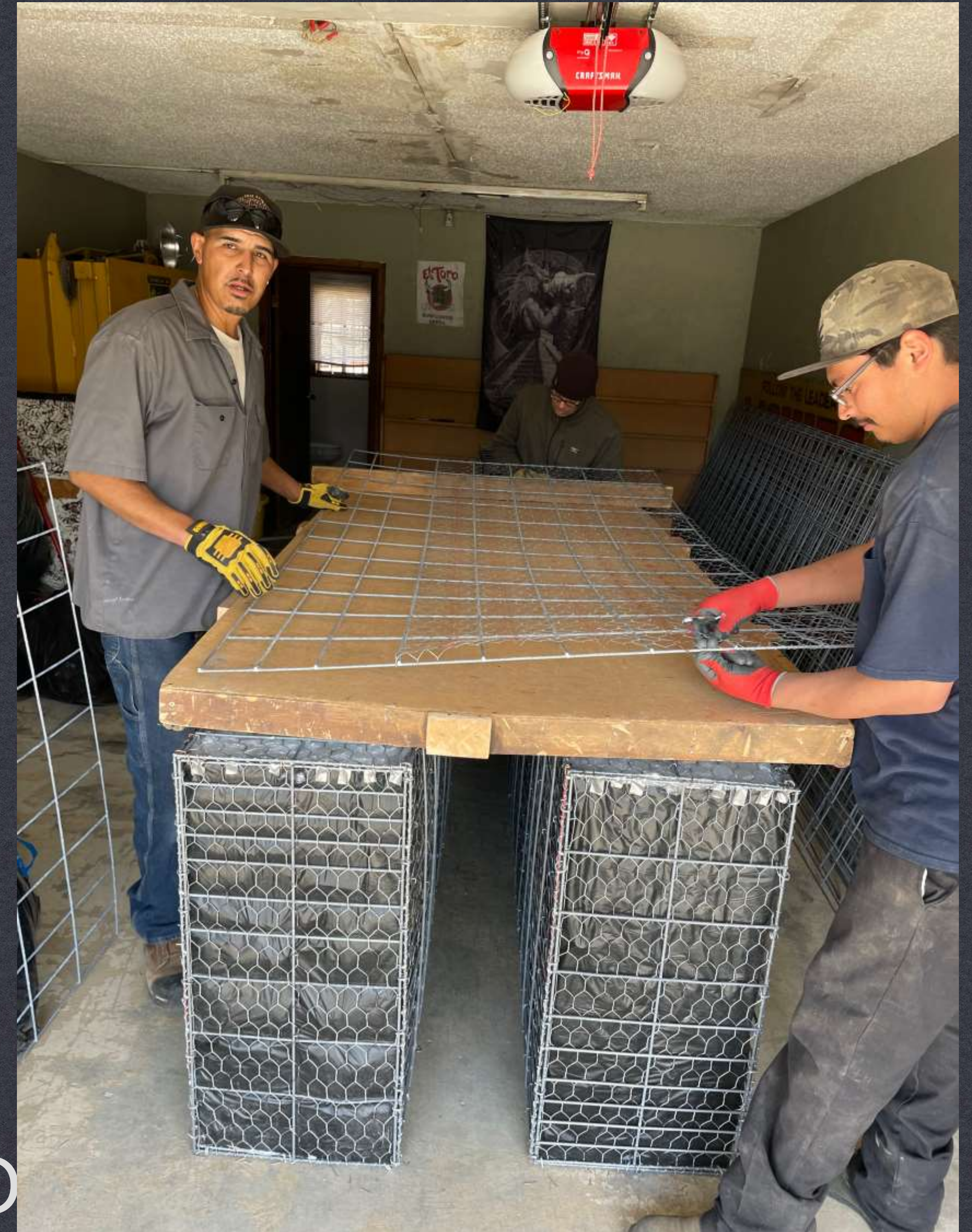
WITH OUR REDI-WALLS WE'VE BUILT SHEDS, WALLS, BARNES, &  
STUDIOS





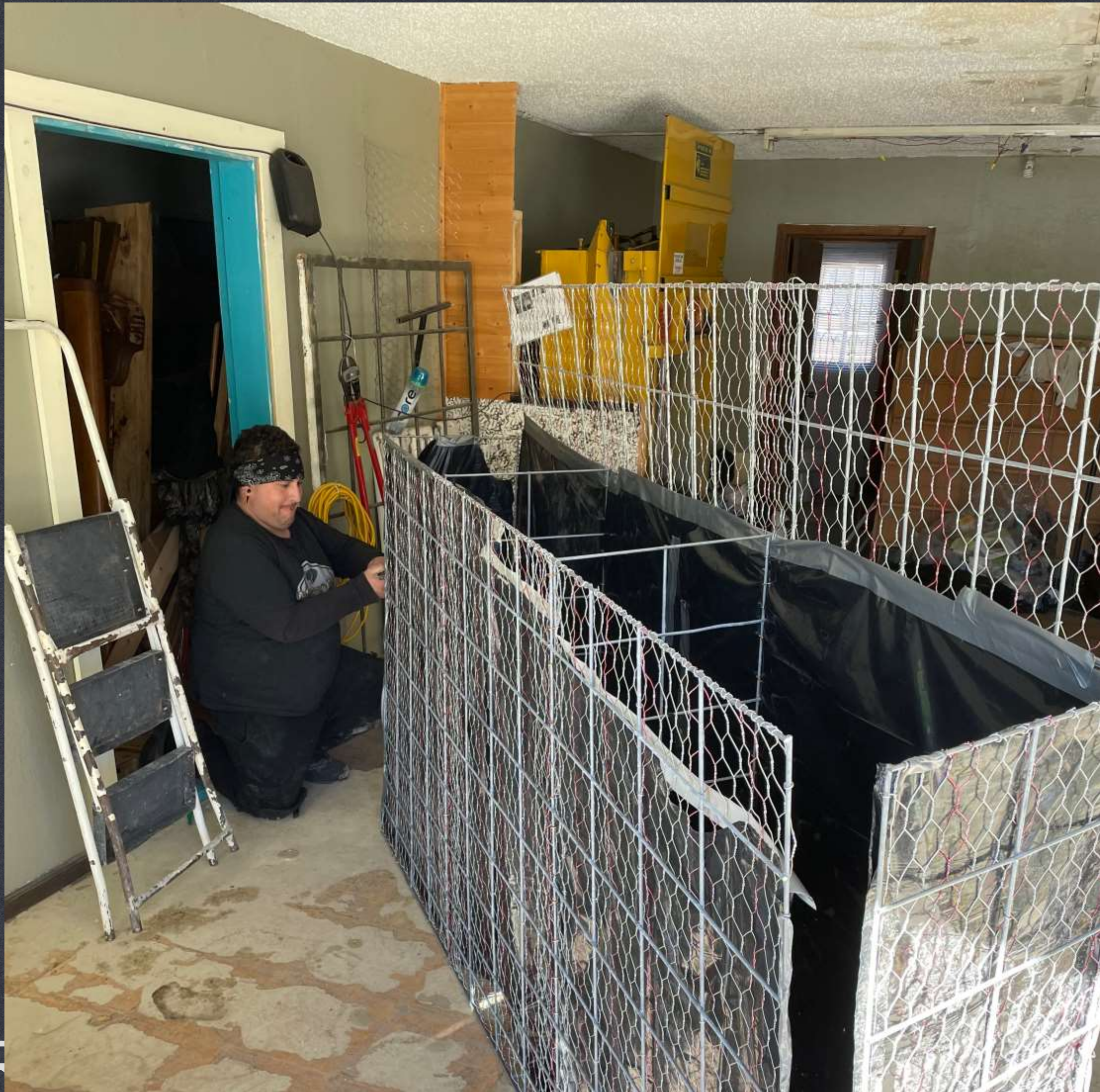
OUR MOST AMBITIOUS PROJECT: A CARPORT & WORKSHOP ON  
CEMENT SLAB





T  
FROM PANEL FENCING





PLASTIC SHEETING



TWICE A WEEK OUR  
TEAM SMASHES  
PLASTIC AND  
CREATES REDI-  
WALLS AT OUR  
WORLD HQ IN  
QUESTA, NM







BASKETS





MOVING FINISHED REDI-WALLS OUT THE DOOR & ONTO THE TRAILER





MOVING REDI-WALLS FROM THE TRAILER TO OUR STORAGE LOT





REDI-WALLS IN OUR STORAGE LOT, AWAITING BUYERS AND  
PROJECTS





REDIWALLS ON TRAILER, READY TO BE DELIVERED TO CLIENT'S  
SITE



## PLASTIC PROJECT

TURNING WASTE INTO WALLS IN TAOS, NM



**Plastic is truly a space-age building material, so why not treat it as such?**

Plastic is incredibly lightweight yet has a high tensile strength, is impervious to water, can be shaped and condensed easily, and is only affected by UV light. Once encased by a thick coat of cement stucco within our Redi-Walls, it is entombed in an anaerobic environment absent of oxygen or sunlight where it will not degrade or outgas. It also has a shape memory, and once crushed tries to return to the fabricated shape. This process creates pressure pushing outward, which helps make our panels extremely rigid and have a significant insulation value.

REPURPOSING PLASTIC PROJECT  
[www.repurposingplastictaos.com](http://www.repurposingplastictaos.com)

EIGHT-FOOT-LONG METAL WALL  
PANELS FILLED WITH POST-CONSUMER  
PLASTIC—READY TO STUCCO!



MODEL	Dimensions	Wt: Metal	Wt: Plastic
Big Boy	96" x 50" x 16"	95 lbs	190 lbs
Thin Man	96" x 34" x 16"	64 lbs	126 lbs

### OUR PANELS CAN BE USED IN TWO WAYS:

- 1) They can be stabilized on a rubble foundation in a foot-deep trench to create safe walled spaces for play, gardens, courtyards, parking areas, etc.
- 2) They can be used as sheathing/ insulation/infill walls when supported by post and beam structural support to construct structures such as sheds, barns and garages.



Contact us at [RPPTaos@gmail.com](mailto:RPPTaos@gmail.com) for  
unit pricing and free initial consulting  
for your own building project!

## REPURPOSING PLASTIC PROJECT'S REDI-WALLS



### WHAT MIGHT YOU MAKE?



attractive privacy walls & courtyards



simple storage units & tool sheds



studios & workshops



carports & warehouses

### DO THE RIGHT THING: REPURPOSE!

To register for RPP to repurpose your household plastic:

[repurposingplastictaos.com](http://repurposingplastictaos.com)

For Redi-Wall purchases and creative project consulting:

[toddwynward@gmail.com](mailto:toddwynward@gmail.com)

**PRICED TO SELL**  
**READY TO STUCCO**  
**VOLUME DISCOUNTS**  
**DELIVERY AVAILABLE**

# REDI-WALL BROCHURES & POSTERS



RE  
BUILDERS

FOR

YARD

# RPP's Redi-Walls: Stucco-Ready Panels

## SPEC SHEET & PRODUCT DESCRIPTION

DOUGLAS J. EICHELBERGER, ARCHITECT  
P.O. BOX 1135 RANCHOS DE TAOS, NM 87557  
303-956-5859 [eichelbergerarchitects@gmail.com](mailto:eichelbergerarchitects@gmail.com)

### HISTORY:

The Repurposing Plastic Project [RPP] was born in 2020 by the Taos Initiative for Life Together [TILT] in response to China no longer taking the world's recycling, and Taos County's choice to stop local plastic collection. A group of community members crushed over 400 large bags of post-consumer plastic into the walls of a 10' x12' shed they constructed as a demonstration project, showing a way for the Taos community to keep plastic out of the landfill while finding a positive, constructive use for the plastic. Two years later, this initial volunteer project is now a small business. RPP collects plastic from 350+ dues-paying members county-wide and uses an industrial baler to compress this plastic inside of steel wire panels to manufacture 8' long modular wall sections called Redi-Walls. Easy to install and stucco-ready, they can be used to quickly construct privacy walls, pocket patios, sheds, barns, windbreaks and garages.



Fig 1: work crew building a privacy wall w pocket patios, Questa

### SOCIAL BENEFIT:

By doing one thing—collecting Taos County's plastic & repurposing it to make walls—we're doing a lot of things:

- Offering hope to hundreds of local citizens who are deeply concerned with the closure of the local recycling facility
- Repurposing rather than simply recycling—actually putting "trash" plastic to use, and turning waste into walls
- Diverting plastic from the landfill, reducing the toxic legacy of deteriorating trash plastic we leave for future generations
- Reinvigorating Questa's mainstreet and creating an economic innovation hub in an abandoned storefront
- Offering meaningful employment and a positive team environment to people with a history of incarceration & addiction

### ENVIRONMENTAL SOLUTION:

Plastic is a 'forever' material. We use it for so many things and for so many silly one-time uses. Yet there is no place to throw plastic away—there is no 'away.' Once made, plastic is always with us on this planet—in our homes, in our hands, in our bodies, in our streets, in our waste streams, in our water. Waste plastic is one of our society's most serious problems today. The RPP solution is to take this problem and transform it into potential. Plastic is truly a space-age building material, so why not treat it as such? It is incredibly lightweight yet has a high tensile strength, is impervious to water, can be shaped and condensed easily, and is only affected by UV light. Once encased by a thick coat of cement stucco within our Redi-Walls, it is entombed in an anaerobic environment absent of oxygen or sunlight where it will not degrade or outgas. It also has a shape memory, and once crushed, tries to return to the fabricated shape. This process creates pressure pushing outward, which helps make our panels extremely rigid and have a significant insulation value.

# RPP Redi-Walls: Specifications, Processes, & Uses

### OUR FABRICATION PROCESS:

RPP Redi-Walls [pre-fabricated modular wall sections] are manufactured at our processing facility and world headquarters in Questa, NM. We have a 4" diameter ram-crushing hydraulic baler (fig. 2) that pre-crushes the post-consumer plastic we collect weekly from our 350+ members. The crushed plastic is then put into pre-fabricated baskets made of heavy-gauge steel wire panels and compacted again before the baskets are wired shut. Our professional team uses pneumatic guns to mechanically clamp metal hog-ring fasteners that reinforce and frame each basket. The completed Redi-Walls go to our storage yard in Questa, ready for sale.

### DETAILS of RPP's REDI-WALLS: READY TO TRANSPORT; READY TO STUCCO

**Materials:** Each Redi-Wall consists of post-consumer plastic compressed inside of a steel cage or basket made of #4 (1/4") heavy-gauge gridded fencing. The same steel is used to create the top, bottom and sides of the cage as well as internal diaphragms to stabilize and reinforce the wall panel shape. Black plastic sheeting and chicken wire line the inside of each Redi-Wall so it is ready to stucco.

**Density:** On average, the plastic in our RediWalls is smashed to a density of 4.28 lbs of plastic/sf.

**Fire Resistance:** The Fire Resistance Rating of a 7/8" stucco coating is one hour, which is the minimum required by code for homes. For exterior structures like patio walls and utility sheds that are not needing to comply with residential building codes, we generally apply a 3/4" coat of stucco, which would mean a Fire Rating of slightly less than an hour. Note: without stucco, our RediWalls do not have a Fire Resistance Rating.

**Each Redi-Wall is made of more than 95% [by volume] recycled New Mexico plastic.**

MODEL	Dimensions	Weight: Metal	Weight: Plastic	Volume of Plastic Used
Big Boy	96" x 50" x 16"	95 lbs	190 lbs	44.4 cubic feet
Thin Man	96" x 34" x 16"	64 lbs	126 lbs	29.9 cubic feet



Fig 2: 4" diam ram-crushing baler



Fig 3: Redi-Walls at our Questa HQ



Fig 4: plastic walled post & beam barn

### INSULATION VALUE:

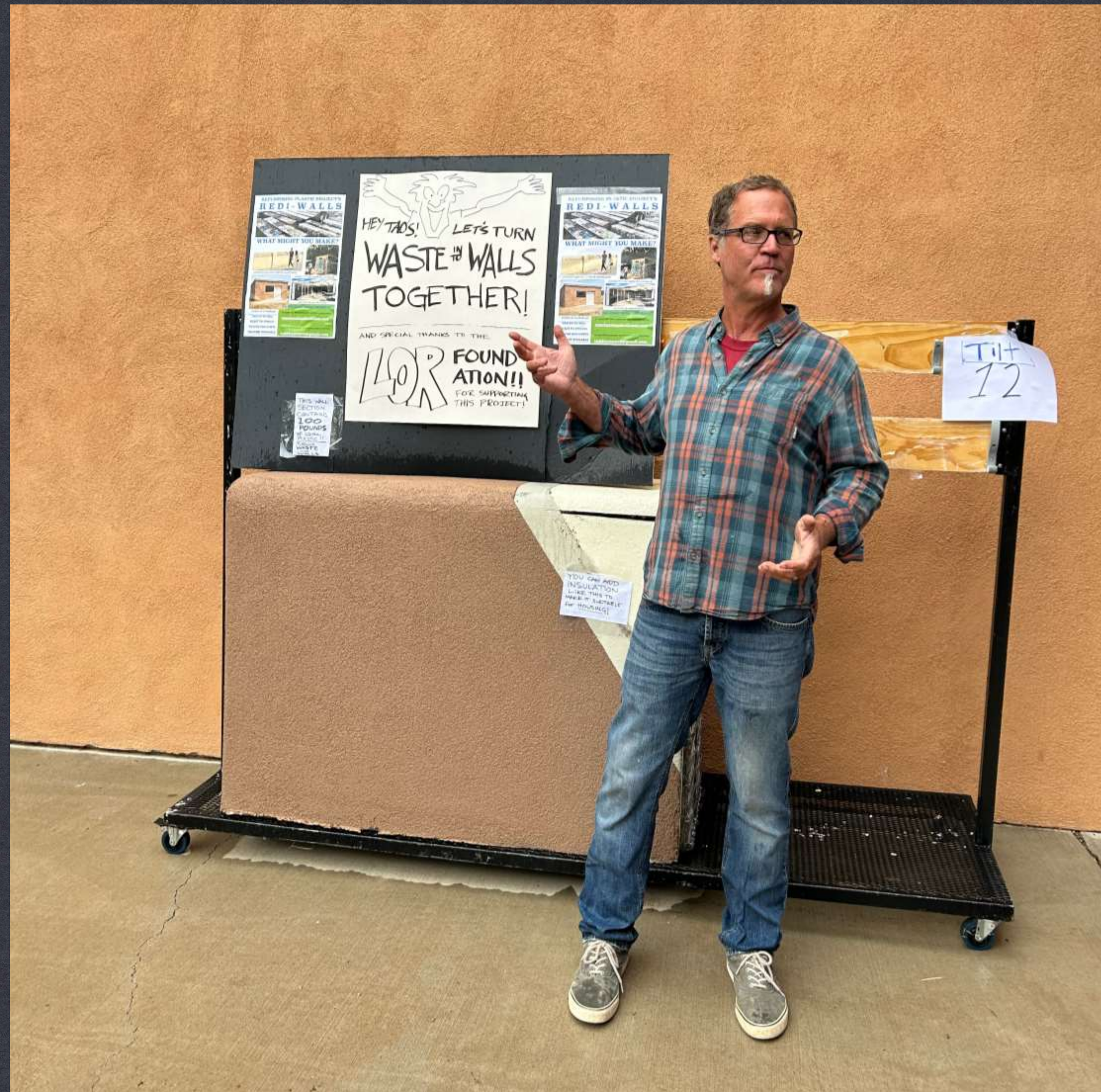
A sample panel was tested by architect Doug Eichelberger and a team of engineers at Johns Manville Manufacturing Company in Denver, CO and was found to have an R value of approx. R-1/ inch. Our current panels are more dense and should exceed that value, but this is not certain. Further tests are ongoing.

### OUR PANELS CAN BE USED IN TWO WAYS:

- 1) **Privacy walls and pocket patios** (fig. 1) can be created by stabilizing the panels on a rubble foundation in a foot-deep trench, to create safe spaces for play, garden courtyards, parking areas, etc.
- 2) Supported by post and beam structural support, our panels can be used as **sheathing/ insulation/infill walls** to construct structures such as sheds, windbreaks, barns and garages (fig.4).

*We welcome other innovative uses and creative applications of our product by DIY backyard builders, community groups and professional contractors alike. For sales or questions, contact [rpptaos@gmail.com](mailto:rpptaos@gmail.com).*





CUSTOMER EDUCATION SESSIONS





OUTREACH INTO THE COMMUNITY





“INVENT EVENT” COMMUNITY-WIDE EDUCATION EXPO FOR  
MAKERS & INNOVATORS





WHEN WE SHOWED UP, WE ATTRACTED SOME GOOD  
ATTENTION



# MOBILIZING OUR VOLUNTEER BASE



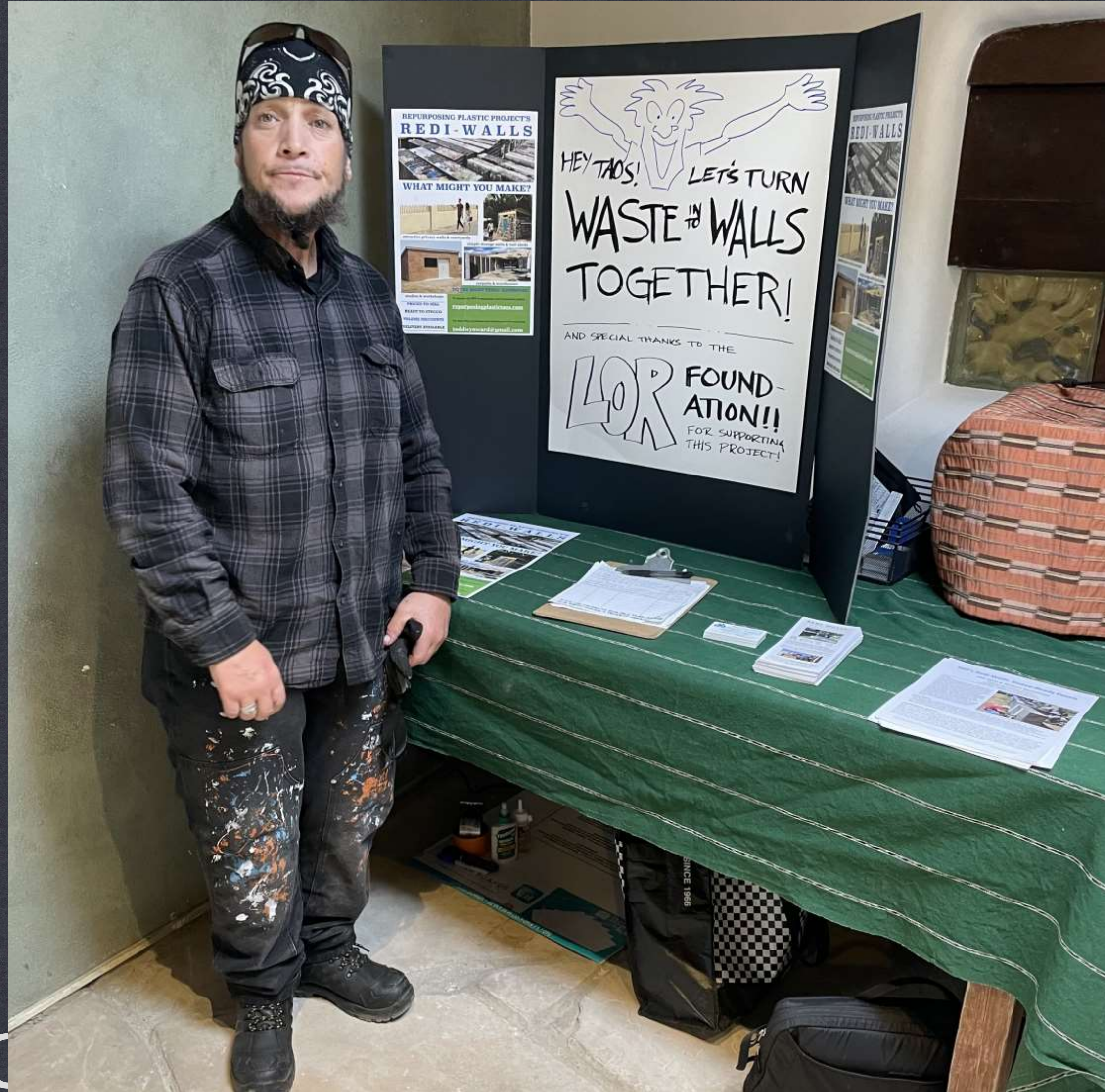




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FOOT]





REDI-WALLS???





PRODUCT EXPO AT TILT IN DOWNTOWN TAOS





PRESENTING OUR REDI-WALLS TO TAOS COUNTY SOLID WASTE





FOR ISSUE

HUMAN HABITATION?



# TAKING THE RPP REDI-WALL TO THE NEXT LEVEL, #1: A PROFESSIONALLY-BUILT CARPORT/WORKSHOP

- ARCHITECT-DESIGNED PLANS
- P&Z APPROVED
- VERTICAL APPLICATION
- INFILLING POST & BEAM STRUCTURE







W  
PROJECT

C



VERTICAL REDI-  
WALLS WERE  
USED AS INFILL  
IN POST & BEAM  
STRUCTURE







TAOS COUNTY P&Z



# TAKING THE RPP REDI-WALL TO THE NEXT LEVEL, #2: INSTALL A PARKING WALL FOR AN ECO- HOTEL

- OUR FIRST INVOICE  
PRODUCED FOR A  
CORPORATE BUSINESS  
CLIENT!
- TRENCH EXCAVATION &  
STUCCOING NOT INCLUDED  
IN OUR BID

## TILT [TAOS INITIATIVE FOR LIFE TOGETHER] & THE REPURPOSING PLASTIC PROJECT



**Attn:** Hotel Associates LLC  
10 E. Yanonali St Suite 109  
Santa Barbara CA 93101

**Project Title:** RPP Wall Project Hotel Willa. **Date:** 7/1/23

**Project Description:** This scope of work consists of delivering, installing & attaching 162' linear feet of privacy wall, ready to stucco. Excavation & stucco work not included.

**Invoice #:010-2022. Terms:** 50% in advance; 50% within 30 days of completion. Checks to be issued to: TiLT and mailed to: 215 La Posta Rd Taos NM 87571.

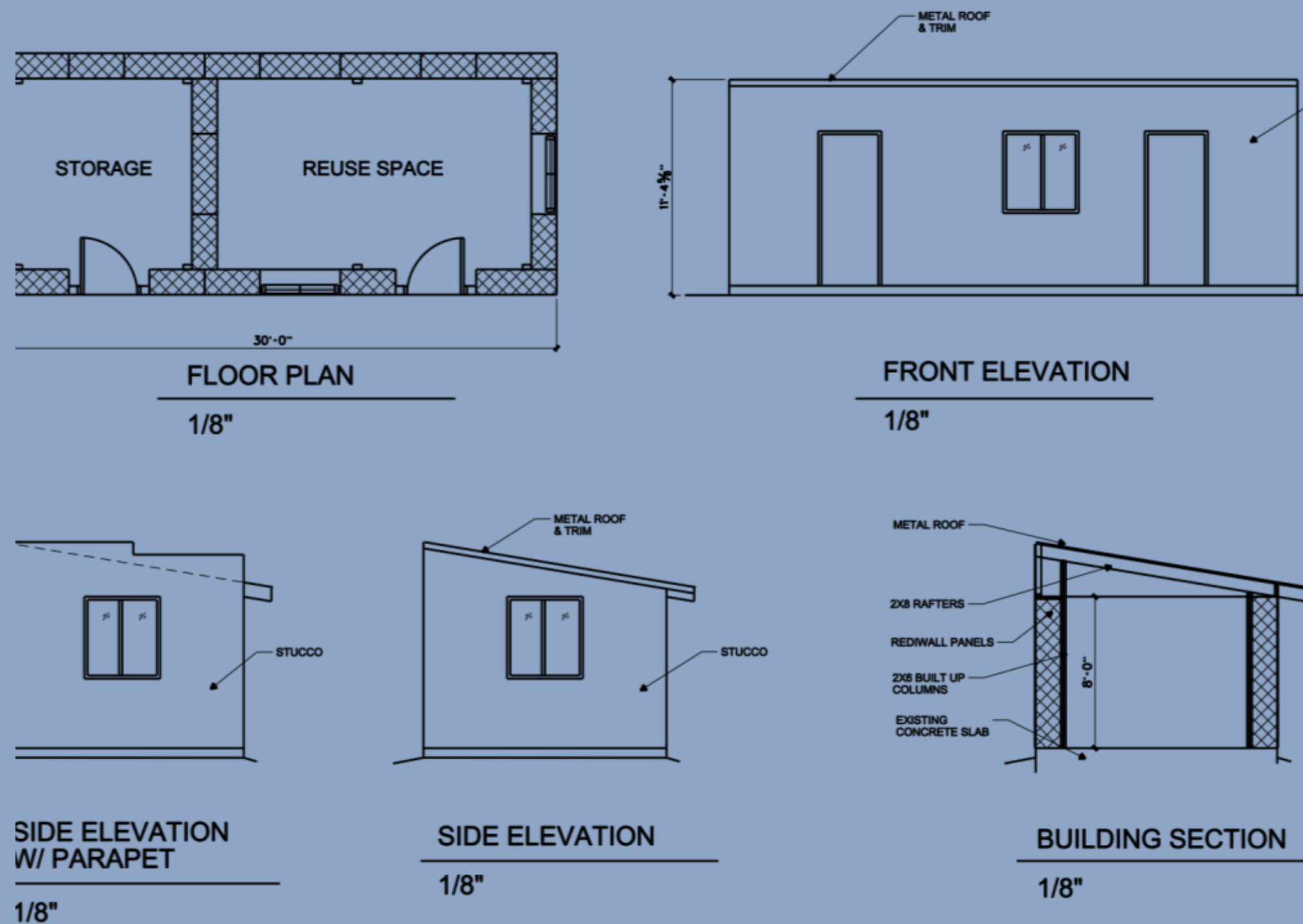
575-770-8681  
toddwynward@gmail.com

215 La Posta Rd,  
Taos NM 87571

Description	Quantity	Unit Price	Cost
LABOR			
Delivery of 20 RPP modular walls from Questa	3	\$200.00	\$600.00
Site Prep: improve trench, tamp, level 50 tons gravel in 162' of trench [2 man crew]	2	\$80.00	\$160.00
Carry, Install & dry-fit 20 250 lb wall sections in trench [4 man crew]	3	\$160.00	\$480.00
Monolithic attachment all Redi-walls using pneumatic hog ring gun; lath all joints backfill and tamp for final stabilization; complete all prep for plastering [4 man crew]	8	\$160.00	\$1,280.00
Concrete caps on all wall top surfaces [4 man crew] 162 lf of concrete	4	\$160.00	\$640.00
Design consulting & project management	16	\$35.00	\$560.00
MATERIAL			
8" x 50" x 16" RPP modular wall section, ready to stucco	20	\$275.00	\$5,500.00
Materials: sand and gravel delivered; cement, lath, hog rings, rebar, etc			\$1,342.50
Equipment Rental: pneumatic hog ring gun, cement mixer			\$300.00
		Subtotal	\$10,862.50
Overages/Contingencies		10.00%	\$1,236.00
Tax		None	
<b>Due to TiLT/Repurposing Plastic to install &amp; connect 162 ft of walls</b>		<b>Total</b>	<b>\$12,098.50</b>

By signing below, Hotel Associates LLC pledges to send a deposit of \$2500 in the next 30 days, and confirms its intent to commence this project before June 2024.  
Agent: \_\_\_\_\_ Date: \_\_\_\_\_





PLASTIC RECYCLING PROJECT- REUSE SHED



TAKING THE RPP REDI-WALL 3:

A RAID GRANT TO BUILD A RE-USE COLLECTION

SHED MADE OF RE-USED PLASTIC!



WHATEVER WE  
BUILD,  
WHEREVER IT'S  
SEEN, WE WANT  
THE TRUTH:

THE TRUTH WINDOW, THAT  
IS!







THE LAST WORD: BUILDING WITH REPURPOSED PLASTIC IS GLOBALLY  
SCALABLE—BUT IT REQUIRES SUPPORT FROM LOCAL GOVERNMENT &  
MARKET EMBRACE BY THE LOCAL COMMUNITY





TURNING WASTE INTO WALLS IS A COMMUNITY EFFORT

[TODDWYNWARD@GMAIL.COM](mailto:TODDWYNWARD@GMAIL.COM)

[RPPTAOS@GMAIL.COM](mailto:RPPTAOS@GMAIL.COM)

[REPURPOSINGPLASTICTAOS.COM](http://REPURPOSINGPLASTICTAOS.COM)