



Austin [re]Manufacturing Hub

Business Plan



Fall 2015



I. Project Overview

In December 2011, the Austin City Council approved Austin's [Zero Waste Master Plan](#), which sets an ambitious goal for City residents, businesses, and organizations to divert more than 90 percent of waste from disposal to productive reuse and recycling by 2040. Through its Zero Waste initiative, Austin is using waste diversion as an opportunity for economic development, creating green jobs and local investment through reuse and recycling policies and programs.

The Austin [re]Manufacturing Hub will create a home for businesses that can utilize the products and materials that are diverted from the landfill as a result of Austin's zero waste policies and activities. Among these policies is a Universal Recycling Ordinance that will require every property in Austin to have recycling access by 2017. The development site is an ideal location for companies within the recycling or reuse supply chain to locate their next facility, as it is located in a light industrial district in Southeast Austin with close proximity to several other recyclers—including metal, construction and demolition, automotive, and wood recyclers—and to major state highways and the Austin-Bergstrom International Airport.



U.S. Assistant Secretary of Commerce for Economic Development Jay Williams announces the EDA Grant for the Austin [re]Manufacturing Hub at Austin City Hall alongside U.S. Representative Lloyd Doggett and former Mayor Lee Leffingwell.

The project has received support from the federal government in the form of a U.S. EDA grant due to the project's strong alignment with the administration's sustainability goals and supporting the growth of American manufacturing. The project will also create needed jobs for the hard-to-employ in one of Austin's most economically disadvantaged neighborhoods.

A 10 acre parcel of land on the northeast corner of the Austin [re]Manufacturing Hub will be offered for sale undeveloped. The remainder of the Hub will be developed in two phases for lease to tenants who will build their own facilities.

II. Background

Most recycled materials collected in Austin are sent out of the state or country to be remade into new products. Building these markets locally can reduce transportation costs, increase market stability, and grow local jobs and investment in the recycling sector.

Circular Economy

Where refuse once met landfills as a resting place, new zero waste efforts open the door to opportunities in promoting a sustainable community with respect to the environment *and* the labor



market: According to the Institute for Local Self-Reliance, for every 10,000 tons of waste land filled, only 1 job is created. Meanwhile for every 10,000 tons of organic materials composted, 4 jobs are created. For every 10,000 tons of recyclables processed, 10 jobs are created. For every 10,000 tons of reusables processed, 75-250 jobs are created.ⁱ

Supporting recycling and reuse efforts keeps items with embodied energy and embedded value circulating in our economy. Austin residents are estimated to dispose of \$43 million in reusable items annually.ⁱⁱ A recent study by the Ellen MacArthur Foundation found that if Europe transitioned to a circular economy, there would be a €0.9 trillion increase in economic output, a €3,000 increase in household income, a 16% reduction in time lost to congestion, and a halving of carbon dioxide emissions.ⁱⁱⁱ By making our recycling and reuse system more efficient and resilient, more items will be able stay in use and be put toward charitable ends or put Austinites to work remanufacturing those items into new products.

Furthermore, as new recycling policies are put into place as Austin progresses toward our Zero Waste goal, having local end markets for the growing volume of recyclables will be key to the effectiveness of these policies. For example, the City Council recently approved the Construction and Demolition Recycling Ordinance which requires 50% of materials from construction projects to be diverted from landfills, and sets goals for reaching 75% and 90% diversion in 2020 and 2025, respectively. The ability for Austin to reach those goals will be dependent on whether there is sufficient demand for these materials within an economically reasonable distance. By attracting companies that can take these recycled materials to the Austin [re]Manufacturing Hub, Austin will lay the foundation for the success of policies and programs like the Construction and Demolition Ordinance.

Sustainable & Equitable Economic Growth

The Austin [re]Manufacturing Hub will act as an economic driver for jobs and investment in the waste-based industry in the Central Austin region, and will move currently unproductive land onto the tax rolls. All tenants at the Hub will be expected to meet economic development performance measures, including:



- Paying all workers at least \$11.39/hour
- Paying all construction workers at least the prevailing wage
- Complying with the M/WBE Procurement Program Rules
- Complying with the City's OSHA Worker Safety Training Requirements

The City-constructed infrastructure at the Hub will not simply provide utility service to this project, but will drive economic development opportunities along a currently underdeveloped corridor along Farm-to-Market Road (FM) 812 and FM 973 in Austin, Texas by bringing waste water service to the area.

The continued development of Austin's Zero Waste industry provides a strategic opportunity for business recruitment and expansion. With an abundance of raw materials, policy support, and available labor, Austin



has a marketable competitive advantage in the industry, and therefore a unique opportunity to create green jobs for those in our community who are most in need of good employment.

Workforce Development

The zero waste industry has strong potential for employing Austin's discouraged and marginally attached workers that may lack the job history required by most employers. In 2014, recycling activity in the Austin MSA directly generated \$402 million in revenue and employed over 1,000 individuals. When accounting for indirect and induced benefits, the recycling sector of Austin's economy accounted for just over \$720 million in total economic activity, \$110 million in labor compensation, and approximately 2,673 permanent jobs.^{iv} Of these jobs, nearly half have resided in the solid waste collection sub-industry, which typically utilizes refuse & recyclable material collectors – an occupation that requires less than a high school diploma and still offers an hourly wage of \$15.46 in the Austin region.^v

Implementing Zero Waste initiatives in Austin has the potential to generate 1,000 to 5,000 new local, green jobs in recycling and organics collection and processing, materials reuse and repair, and remanufacturing.^{vi} Manufacturing-related recycling and reuse activity alone has the potential to create nearly 1,400 jobs.^{vii}

ARR & EDD will be prioritizing prospective Hub tenants that create jobs for populations with employment barriers such as veterans, previously incarcerated individuals and individuals with disabilities.

ARR & EDD also plan to partner with workforce development groups, educational agencies, and industry associations such as the Del Valle School District, Austin Community College, and the Austin Regional Manufacturer's Association to offer workforce development training specific to this industry at the Austin [re]Manufacturing Hub and raise local awareness about the job opportunities in the recycling manufacturing sector.

III. Guiding Principles

The following principles guide the City's development of the project and will inform its selection of and negotiation with tenants.

Zero Waste Goal

The primary function of each proposed project must contribute to the City of Austin's Zero Waste goal. This includes:

- Value-added processing and manufacturing of would-be waste into new products
- Manufacturing of products that replace a disposable good
- Manufacturing of products that enable the diversion of a waste material from the landfill
- Manufacturing of products which otherwise significantly contribute to the City of Austin's Zero Waste Goal, as determined by Austin Resource Recovery.
- Flexible light industrial space to be leased to projects that meet the above description.
- Incubator or co-working space proposals to house small businesses or non-profits in the recycling, reuse, or upcycling sector.





- A zero waste-related research and development facility.

Mandatory Characteristics

- The City seeks to create well-paying job opportunities at this Hub. All projects at the Hub must be willing to commit to paying all workers at least \$11.39 per hour and to require contractors and subcontractors to pay the prevailing wage to all construction workers.
- In order to ensure fairness of contracting opportunities created at the Hub, all firms locating at the Hub must be willing to comply with the City of Austin's M/WBE Program Requirements and Worker Safety Requirements.
- The prospective tenant must be willing to submit an annual report of volumes diverted from landfills.
- The proposed project must not be a waste-to-energy project.¹

Value-Added Characteristics

- The City of Austin wishes to maximize the number and diversity of businesses and materials processed at the Austin [re]Manufacturing Hub.
- The vision for the Austin [re]Manufacturing Hub is to attract businesses that divert high-priority, hard-to-recover materials and which divert materials to their highest and best use. See Appendix A for a list of material and business-type priorities.
- As an eco-industrial park, the Austin [re]Manufacturing Hub is especially interested in projects that will construct in a manner that will meet a LEED or Austin Energy Green Building rating standard and that will minimize their environmental impact.
- Projects that create jobs for hard-to-employ individuals, such as veterans, formerly incarcerated individuals, refugees, individuals without post-secondary degrees, or other individuals with employment barriers or that will employ a social entrepreneurship business model are especially desired for location at the Austin [re]Manufacturing Hub.
- The likelihood of the project to attract other tenants to the Austin [re]Manufacturing Hub will be considered favorably.

Subtenants

¹ A waste to energy (WTE) project is defined as a project that processes solid wastes in a facility that operates above ambient biological temperatures (more than 200 degrees F.) to recover energy or materials, excluding projects that require thermal depolymerization for converting plastics to oil. Plastics-to-oil projects are not considered WTE projects but are considered a downcycling, last resort option for materials that cannot be diverted through traditional recycling or upcycling. The Austin Resource Recovery Zero Waste Master Plan prohibits WTE as an undesirable disposal activity.

Although subtenants cannot be considered for direct lease negotiations with the City of Austin, the City intends to identify opportunities for shared space facilities at the Hub. Information on firms interested in becoming subtenants will, with the firms' permission, be shared with all primary tenants at the Hub for their consideration.

IV. Site Details

Austin Resource Recovery's closed FM 812 landfill sits on 391 acres of City-owned property at 10108 FM 812. The entire property was intended for use as a landfill. However, the landfill began closure after the City airport relocation to Austin-Bergstrom due to the incompatibility of an operating landfill with a commercial airport's flight path. The landfill, which will soon be under 30-year post-closure care within the EPA Subtitle D requirements, occupies approximately 286 acres of the property. There are approximately 105 acres of developable land broken up into one 9.5-acre site on the north side of the landfill and 96 acres located on the southern side of the landfill. The 9.5 acre site will be offered for sale and the 96 acres will be offered for ground lease.

The property, located in Council District #2, was annexed into the City of Austin's full purpose jurisdiction and zoned for Limited Industrial Services (LI) in December 2014. The use of this land for recycling manufacturing is compatible with the surrounding land uses, which include a construction and demolition landfill and recycling operation, metal recycling, automotive parts recycling and wood recycling.





V. Infrastructure Development

Utilities

Water and wastewater mains will be constructed by the City within the property. Electric service is available from Bluebonnet Electric Cooperative. The City will partner with BEC to construct overhead utility infrastructure along the interior road. Tenants will be responsible for bringing utility lines from the edge of their leased area to their facilities. A natural gas pipeline runs through the southern corner of the Hub, which can be tapped if there is sufficient demand from tenants for natural gas service.

Transportation

The interior roadway is anticipated to be developed in two phases. The first phase will open up Areas 1 and 2 for lease. The second phase will be developed to open up Area 3 after Areas 1 and 2 are fully leased or sufficient demand has been demonstrated for tracts in Area 3, whichever is sooner and subject to fund availability (see section V). Sidewalks will be built along FM 973 and FM812. Solar street lights will be installed along the interior roadway.



Green Infrastructure & Signage

A City-constructed pond will provide the storm water detention and water quality needs to tenants in Area 1. Tenants in Areas 2 and 3 will be responsible for developing their own storm water detention and water quality infrastructure within their leased tracts. Storm water will be conveyed through open vegetated channels.

ARR will plant trees along FM 812, FM 923, and the interior roadways in partnership with the Urban Forestry Program. ARR will commission signage made from upcycled materials for wayfinding within the Hub.

VI. Financial Plan

Revenue

To avoid impacting ARR customer rates, design and construction of the interior infrastructure will be funded by a federal grant and cash raised through the following land sales and land leases. In addition, a waste water main needs to be extended along FM 973 to serve the Hub property. Austin Water Utility will construct this line and be reimbursed by ARR over 20 years. The estimated cost to ARR over 20 years is \$2.37 million.



Funding Source	Revenue	Status
U.S. EDA Public Works Grant	Up to \$1,000,000	Grant awarded 07/01/14 & authorized 08/07/14. Funds provided on reimbursement basis. The total value of the grant may be less than \$1,000,000 depending on the final costs of grant-eligible expenditures.
Austin Water Utility Loan	\$2,370,000	Design phase
Bolm Road Lease (District 3) to Skillpoint Alliance	\$1,340,000	Lease Approved by Council 08/20/15. Payment due 1/31/2016.
Winnebago Lane (District 2) Sale	\$1,450,001	Bid Complete & Winning Bidder Identified.
Sale of 9.5 Acres of Remanufacturing Hub Along FM 973 (District 2)	\$675,000 (Appraised value)	Appraisal Completed
Sale of 25 Acres within FM 812 Landfill (District 2)	\$1,400,000* (Appraised value)	Appraisal Completed
Estimated Total	\$8,235,001	

**Some revenue from this sale will need to be directed toward rerouting drainage channels, which currently flow to the area proposed for sale, to within the property retained by the City.*

The exact revenue raised by these land sales will not be determined until sealed bids for the 9.5 and 25 acre sites are received, as appraised values represent only the minimum bid. If land sales do not immediately generate funds for the entire project, Phase 2 will be put on hold until sufficient funds can be raised by lease revenues or alternative funding sources. If land sales raise more funds than needed for the Hub, remaining funds will be directed toward the ARR Northeast Service Center facility development on Johnny Morris Road.

Estimated Costs

The total estimated development cost of the Austin [re]Manufacturing Hub is approximately **\$7.5 million**. Operations and maintenance costs, estimated at \$70,000 per annum, will be paid for out of the ARR operating budget and are expected to be covered by lease revenues. Property management services will be provided by the Building Services Department. Landscaping of common areas will be done using existing ARR staff and equipment on site. Spot crackseal roadway maintenance will be needed annually with fog seal or seal coat needed once every 8-10 years and overlay every 15-20 years.

VII. Project Milestones

December 1, 2015:	Engineering Design Restart
February 1, 2016:	Last Date for 2 Properties to Open for Bidding to Meet EDA Deadlines
March 15, 2016:	Start of Bid Phase
May-June 2016:	Lease Agreements brought to City Council for Approval (anticipated)
July 1, 2016:	EDA Deadline for Start of Construction
December 15, 2016:	City Construction Complete
January 1017:	Tenant Construction Begins
July 1, 2017:	EDA Deadline for Completion of City Construction



Appendix A: Target Business Uses

Top Priority

- Gypsum Board recycling
- Paper carton converting
- Plastics #3-7 processing or manufacturing
- Glass processing or manufacturing
- Ceramics recycling
- Electronics reuse, repair or recycling
- Commercial appliance repair
- Scrap tires processing or manufacturing
- Mattress recycling
- Paint recycling
- Furniture repair, refurbishment, or recycling
- Upcycling
- An incubator, co-working space, or spec building to be subleased by the developer to recycling, reuse or upcycling manufacturers only
- A recycling research and development facility

Medium Priority

- Automobile recycling
- Grease trap waste recycling
- Non-ferrous metals recycling
- Paper, cardboard and wood fiber recycling
- Other construction and demolition debris recycling

Low Priority

- Battery recycling
- Ferrous metals recycling
- Automobile shredder only
- Plastics #1-2 processing or manufacturing
- Yard waste composting
- Other value-added processing and manufacturing of would-be waste into new products

Other Eligible Manufacturers

Manufacturers which:

- Create products that replace a disposable good
- Create products that enable the diversion of a waste material from the landfill.
- Create products which otherwise significantly contribute to the City of Austin's Zero Waste Goal, as determined by Austin Resource Recovery



Appendix B: Zero Waste Occupational Table

Source: Texas Workforce Commission, Capital Area Workforce Development Long-term Occupational Projections

	Occ Code	Occupational Title	Typical Education needed for Entry into	Work Experience in a	Hourly Wage	
			Occupation	related Occupation	2014	Annual Wage 2014
Zero Waste	13-1081	Logisticians	Bachelor's degree	None	\$42.58	\$88,563
	17-2031	Biomedical Engineers	Bachelor's degree	None	\$49.83	\$103,641
	17-2041	Chemical Engineers	Bachelor's degree	None	\$57.08	\$118,733
	17-2131	Materials Engineers	Bachelor's degree	None	\$42.03	\$87,430
	17-3024	Electro-Mechanical Technicians	Associate's degree	None		
	17-3025	Environmental Engineering Technicians	Associate's degree	None	\$26.64	\$55,417
	19-1012	Food Scientists & Technologists	Bachelor's degree	None		
	19-1013	Soil & Plant Scientists	Bachelor's degree	None		
	19-1021	Biochemists & Biophysicists	Doctoral or professional degree	None	\$33.09	\$68,824
	19-1022	Microbiologists	Bachelor's degree	None	\$22.95	\$47,743
	19-1023	Zoologists & Wildlife Biologists	Bachelor's degree	None	\$29.72	\$61,818
	19-1031	Conservation Scientists	Bachelor's degree	None	\$26.66	\$55,456
	19-1032	Foresters	Bachelor's degree	None		
	19-1099	Life Scientists, All Other	Bachelor's degree	None		
	19-2031	Chemists	Bachelor's degree	None	\$30.11	\$62,626
	19-2032	Materials Scientists	Bachelor's degree	None	\$39.73	\$82,648
	19-2041	Environmental Scientists & Specialists, Inc. Health	Bachelor's degree	None	\$29.72	\$61,824
	19-2042	Geoscientists, Ex. Hydrologists & Geographers	Bachelor's degree	None	\$40.43	\$84,091
	19-2043	Hydrologists	Master's degree	None	\$30.70	\$63,858
	19-4011	Agricultural & Food Science Technicians	Associate's degree	None		
	19-4031	Chemical Technicians	Associate's degree	None	\$18.51	\$38,511
	43-5011	Cargo & Freight Agents	High school diploma or equivalent	None	\$18.97	\$39,457
	43-5061	Production, Planning, & Expediting Clerks	High school diploma or equivalent	None	\$23.11	\$48,078
	43-5071	Shipping, Receiving, & Traffic Clerks	High school diploma or equivalent	None	\$13.79	\$28,685
	43-5081	Stock Clerks & Order Fillers	Less than high school	None	\$12.82	\$26,660
	43-5111	Weighers, Measurers, Checkers, & Samplers, Recordkeeping	High school diploma or equivalent	None	\$10.95	\$22,774
	51-4041	Machinists	High school diploma or equivalent	None	\$20.01	\$41,627
	51-4111	Tool & Die Makers	High school diploma or equivalent	None		
	51-4121	Welders, Cutters, Solderers, & Brazers	High school diploma or equivalent	None	\$17.88	\$37,181
	51-9012	Separating, Filtering, Clarifying, Precipitating, & Still Machine Setters, Operators, & Tenders	High school diploma or equivalent	None	\$18.85	\$39,213
	53-7051	Industrial Truck & Tractor Operators	Less than high school	None	\$13.99	\$29,097
	53-7062	Laborers & Freight, Stock, & Material Movers, Hand	Less than high school	None	\$12.13	\$25,228
	53-7063	Machine Feeders & Offbearers	Less than high school	None		
	53-7064	Packers & Packagers, Hand	Less than high school	None	\$11.59	\$24,106
	53-7081	Refuse & Recyclable Material Collectors	Less than high school	None	\$15.46	\$32,157
	53-7199	Material Moving Workers, All Other	Less than high school	None		



ⁱ *Waste to Wealth: Recycling Means Business*, Institute for Local Self-Reliance, December 10, 2008, <<http://www.ilsr.org/recycling/recyclingmeansbusiness.html>>

ⁱⁱ *Austin Zero Waste Strategic Plan*, Austin Resource Recovery December 4, 2008, page 6.

ⁱⁱⁱ *Growth Within: A circular economy vision for a competitive Europe*, Ellen MacArthur Foundation, McKinsey Center for Business and Environment, and SUN, June 2015.

<http://www.ellenmacarthurfoundation.org/news/circular-economy-would-increase-european-competitiveness-and-deliver-better-societal-outcomes-new-study-reveals>

^{iv} *The Current and Potential Economic Impacts of Austin Recycling - and Reuse-Related Activity*, TXP, May 2015, 22.

^v Texas Workforce Commission, Capital Area Workforce Development Long-term Occupational Projections

^{vi} *Austin Resource Recovery Master Plan*, Austin Resource Recover, December 15, 2011, page 51.

^{vii} *The Current and Potential Economic Impacts of Austin Recycling - and Reuse-Related Activity*, TXP, May 2015, 1.