

## Appendix H - Facility Cost Data



Appendix H-1:     Factoria Recycling and Transfer Station-  
Preferred Concept, August 22, 2010

Appendix H-2:     Factoria Recycling and Transfer Station  
Preliminary Annual Operating and Maintenance Cost Estimate  
(Full Operations Beginning in Year 2015)



Appendix H-1:      Factoria Recycling and Transfer Station-  
Preferred Concept, August 22, 2010



# FACTORIA RECYCLING and TRANSFER STATION

## PREFERRED CONCEPT

**GENERAL SCOPE:**

This is an update of the former Concept 2 estimate to replace and expand the existing Transfer Station Facility in Factoria, now referred to as the Preferred Concept. While the big picture project programming hasn't changed much, the Preferred Concept features lowered building grades, which in turn lowers most site improvement grades surrounding the new building while reducing the total surface area of new onsite retaining walls. There are several other smaller scope changes as well explained in the estimate narratives. As a general rule, the assumed construction methods, materials and programming from the previous Concept 2 estimate apply to the Preferred Concept scope unless specifically stated otherwise.

With steep hillsides, wetlands, presumably moisture sensitive soils and limited space to work with, the project presents an expensive and challenging site. It is assumed the existing transfer station facility will be required to remain open until adequate portions of the new Transfer Station are constructed and completed to allow the owner to move in and continue operations there. Once the owner has moved, demolition of the existing transfer station and construction of new south and east side soil pin retaining walls may begin. In addition, the existing southwest entrance will be shutdown in order to allow new site improvements there. This will require all traffic to temporarily access the site at the north side from 30<sup>th</sup> Street. It should be verified this will be allowed by permitting authorities. As done in the previous estimate, the Preferred Concept takes the site off as a whole, and then adds in phasing premiums based on qualified assumptions and parameters.

It is still assumed construction will start around May of 2012. The commercial construction market remains exceptionally lean and competitive. However, it is optimistically assumed the market will start to be on the road to recovery by the spring of 2012. The estimate costs are in conservative 2010 dollars, with a construction cost escalation premium added to the bottom line. Other premiums added to the estimate bottom line include sales tax, an allowance for utility company service and hook-up charges, and a preliminary design & logistics contingency.

**INCLUDED:**

- A replaced and greatly expanded transfer station facility.
- Removal of existing northwest lot commercial buildings and paving.
- A limited \$85,000 haz-mat abatement in existing buildings to be demo'd.
- A \$300,000 allowance for wetlands mitigation.
- Extensive onsite retaining walls.
- Premiums for project phasing and providing temporary facilities.
- Extensive onsite earthwork cuts & fills, and excess cut haul-offs.
- \$240,000 for a solar collector panels, plus a limited waste recycling system.
- Imported backfill material in new outside utility trenches.
- A 144,000 cubic foot storm detention vault, plus \$200 K for storm treatment.
- Extensive 12" thick & reinforced onsite concrete paving in Base Estimate.
- Limited improvements at property edge side of 30th Street in Base Estimate.
- Extra-heavy building foundations, but no pile premiums in Base Estimate.
- Pre-fab metal buildings with 6' to 12' high perimeter concrete push walls.
- Interior metal liners in supplemental waste handling building spaces.
- An H-Occupancy spaces that is built within a new HHW building footprint.
- Premium exterior wall cladding at Transfer Station, and translucent panels.
- Bird wire deterrent system & fall protection anchor posts over new buildings.
- Dust suppression system inside most waste handling building spaces.
- A lower level lobby and a special 3-stop elevator at the Administration wing.
- A fuel station with single tank, dispenser and canopy in the Base Estimate.
- Two compactors, a baler, hopper & scale, and a 400 KW back-up generator.
- A new ticket booth with two weigh scales, and foundations for two others.
- Contractor's general requirements, overhead & profit, bond & insurance.
- Allowance for utility company charges and service upgrades.
- A 5% premium for Gold LEED certification, and 9.5% for sales tax.
- A 10% design/logistics contingency, plus a 6.5% cost escalation allowance.

**EXCLUDED:**

- A previous Concept 1 estimate & review--not applicable to this estimate update.
- Relocation of existing large power and gas lines that run at the east side of site.
- Contaminated soils abatement--assumed to be N/A.
- Site improvement work at an existing onsite northeast wetlands area.
- Pre-cast architectural panels over soil-pin walls in the Base Estimate.
- Costs to relocate owner.
- Wet weather premium in Phase 1 mass earthwork, but \$75 K added in Phase 2.
- Any permanent irrigation system.
- Outside gas piping or meter--assumed to be by local gas company at no cost.
- Onsite storm detention ponds--deemed not feasible with limited space.
- New onsite lawn or rain garden areas--planters and general restoration only.
- Offsite improvements beyond immediate property lines in Base Estimate.
- Any methane membrane systems under new building foundations--N/A.
- Insulation in waste handling building spaces.
- Interior metal liners in the main Transfer Station.
- Special blast or haz-mat construction premiums in H-Occ. and HHW buildings.
- A roof platform in the Base Estimate.
- Field painting of exposed metal building structural members.
- Heat in most waste handling spaces--mechanical ventilation with sensors only.
- Furniture or furnishings.
- A 1% budget or any other set aside for art.
- Mobile crushing, truck or shop equipment, or pressure washers.
- Any permanent weigh scales at north site entrance.
- Accelerated project schedule premiums.
- Permits, whether for building, site, wetlands or environmental impacts.
- Third party commissioning of mechanical & electrical systems--by others.
- Testing, design fees, or owner's administration costs.

**BUDGETARY COST ESTIMATE**

PROJECT COMPONENT	Quantity	Unit	\$\$\$	Est. Cost	REMARKS
<b><u>BASE ESTIMATE SUMMARY:</u></b>					
<b>(Includes 18% Contractor G.R. and B. &amp; Insurance Mark-Ups; LEED Premium, Sales Tax, Design &amp; Cost Escalation Contingencies.</b>					
<b>PREFERRED CONCEPT BASE ESTIMATE.</b>	1.00	LS	\$45,745,453	<b>\$45,745,453</b>	See Page 2 for Preferred Concept Base Estimate Breakdown.

## FACTORIA RECYCLING and TRANSFER STATION PREFERRED CONCEPT

PROJECT COMPONENT		BUDGETARY COST ESTIMATE				REMARKS
		Quantity	Unit	\$\$\$	Est. Cost	
<b>PREFERRED CONCEPT BASE ESTIMATE BREAKDOWN:</b>						
<b>(Includes 18% Contractor General Requirements and Bond &amp; Insurance Mark-Ups.)</b>						
2.1)	Demolition at Northwest Properties.	1.18	LS	\$239,640	\$282,775	See Page 4 for detailed cost breakdowns.
2.2)	Demolition at the Main Site.	1.18	LS	\$285,700	\$337,126	See Page 5 for detailed cost breakdowns.
2.3)	Mass Earthwork.	1.18	LS	\$1,798,600	\$2,122,348	See Page 6 for detailed cost breakdowns.
2.4)	Wetlands Mitigation.	1.18	LS	\$300,000	\$354,000	" " " " " " " " " " " "
2.5)	Retaining Walls.	1.18	LS	\$3,580,700	\$4,225,226	See Page 7 for detailed cost breakdowns.
2.6)	Outside Utility Work.	1.18	LS	\$1,782,750	\$2,103,645	See Pages 7 & 8 for detailed cost breakdowns.
2.7)	Possible Utility Service Upgrades.	1.18	LS	\$300,000	\$354,000	See Page 9 for detailed cost breakdowns.
2.8)	Site Fixtures & Specialties.	1.18	LS	\$654,640	\$772,475	See Pages 9 & 10 for detailed cost breakdowns.
2.9)	Onsite Paving.	1.18	LS	\$2,090,180	\$2,466,412	See Page 10 for detailed cost breakdowns.
2.10)	Landscaping.	1.18	LS	\$456,000	\$538,080	See Page 11 for detailed cost breakdowns.
2.11)	Possible Street Edge Improvements.	1.18	LS	\$143,700	\$169,566	" " " " " " " " " " " "
2.12)	Site Phasing & Logistics Premiums.	1.18	LS	\$1,305,000	\$1,539,900	See Page 12 for detailed cost breakdowns.
<b>SITE WORK TOTAL:</b>					<b>\$15,265,554</b>	
2.21)	Transfer Station Building.	1.18	LS	\$8,441,500	\$9,960,970	See Pages 13 - 16 for detailed cost breakdowns.
2.22)	Recycling Building Wing.	1.18	LS	\$658,320	\$776,818	See Pages 17 & 18 for detailed cost breakdowns.
2.23)	Administration Building Wing.	1.18	LS	\$1,747,880	\$2,062,498	See Pages 19 & 20 for detailed cost breakdowns.
2.24)	HHW Storage & Canopy.	1.18	LS	\$973,368	\$1,148,574	See Pages 21 & 22 for detailed cost breakdowns.
2.25)	H. Occupancy Building Wing.	1.18	LS	\$428,872	\$506,069	See Page 23 for detailed cost breakdowns.
2.26)	Special Building Plant Equipment.	1.18	LS	\$2,720,000	\$3,209,600	See Page 24 for detailed cost breakdowns.
2.27)	Building Phasing/Logistics Premiums.	1.18	LS	\$268,600	\$316,948	" " " " " " " " " " " "
2.28)	Ticket Booth & Weigh Scales.	1.18	LS	\$366,400	\$432,352	See Page 25 for detailed cost breakdowns.
2.29)	Fuel Island Facility Complete.	1.18	LS	\$240,100	\$283,318	" " " " " " " " " " " "
<b>NEW BUILDINGS:</b>					<b>\$18,697,147</b>	
<b>PREFERRED CONCEPT BASE ESTIMATE SUBTOTAL:</b>					<b>\$33,962,701</b>	
	Add 5% for Gold LEED Administration.	5.00%	LS	\$33,962,701	\$1,698,135	
	Add 9.5% for Sales Tax.	9.50%	LS	\$35,660,836	\$3,387,779	
<b>PREFERRED CONCEPT ESTIMATE with LEED and SALES TAX:</b>					<b>\$39,048,615</b>	
	Add 10% for Design & Logistics Contingency.	10.00%	LS	\$39,048,615	\$3,904,862	
	Add 6.5% for Construction Cost Escalation.	6.50%	LS	\$42,953,477	\$2,791,976	
<b>PREFERRED CONCEPT with LEED, SALES TAX and CONTINGENCIES:</b>					<b>\$45,745,453</b>	
<b>OPTIONS:</b>						
	Enhanced Street Frontage Requirements.	1.00	LS	\$325,000	\$520,000	Possible allowance, to be determined by City of Bellevue.
	Additional Fuel Tank & Dispenser.	1.00	LS	\$100,000	\$160,000	An additional 10,000 gallon pre-cast fuel tank & accessories.
	Architectural Panels Over Soil Nail Walls.	35,590.00	SF	\$25.00	\$1,423,600	Net premium allowance for pre-cast over Base Estimate shotcrete.
	Soil Pin Wall Premiums at All Site Walls.	10,900.00	SF	\$90.00	\$1,569,600	Premium over Base Estimate modular block walls, with panels.
	Waste Some Cuts to an Adjacent Site.	20,000.00	CY	<b>-\$4.00</b>	<b>-\$128,000</b>	In lieu of removing further offsite for a possible fee.
	Borrow Fills from Adjacent Site for Phasing.	44,000.00	CY	<b>-\$14.00</b>	<b>-\$985,600</b>	Used as Phase 1 fills; Phase 2 cuts dumped there later.
	5"/9" 'B' Mix Asphalt in Lieu of Conc. Paving.	140,000.00	SF	<b>-\$7.00</b>	<b>-\$1,568,000</b>	Credit from Base Estimate 12" thick reinforced concrete paving.
	Pile Building Foundations.	63,400.00	SF	\$40.00	\$4,057,600	Allowance, costs can greatly vary depending upon design.
	Parking Canopy and Green Roofs.	9,600.00	SF	\$85.00	\$1,305,600	160' x 60' canopy; green roofs @ canopy & Administration.
	Roof Platform @ Transfer Station.	1.00	LS	\$140,000.00	\$224,000	Allowance, includes additional elevator stop and penthouse.

**NOTES:**

The above Preferred Concept Base Estimate costs include an 18% general mark-up to cover general requirements, overhead & profit, and bond & insurance. Also, a 5% premium is included for Gold LEED administration & certification, plus 9.5% for state and local sales tax. In addition, a 10% design & logistics contingency has been added to the estimate bottom-line, plus another 6.5% allowance for roughly 20 months of construction cost escalation, which from today's standpoint, is anticipated to be near flat for at least the next eight months but could start to rise afterwards. When and by how much is anyone's guess. The above Option costs include a composite 60% mark-up. Soft costs beyond sales tax, such as permits, testing, force account work, design fees, furnishings and owner's administration are not included. Base Estimate line items above that have an 'N/C' noted at their right side means there is 'No Change' in their assumed scope and cost over what was figured in the previous estimate.



**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

**ASSUMED NEW BUILDING AREAS IN PREFERRED CONCEPT:**

Transfer Station @ Tunnel Level:	27,500 SF
Transfer Station @ Tipping Level:	51,000 SF
Recycle Building:	5,400 SF
Administration Elevator @ Tunnel Level:	400 SF
Administration @ Tipping Level:	2,600 SF
Administration Second Floor Level:	2,600 SF
HHW Building:	1,600 SF
H. Occupancy Building:	3,200 SF
New Ticket Booth:	500 SF

<b>PREFERRED CONCEPT</b>	<b>94,800 SF</b>	<b>TOTAL BUILDING AREA</b>
--------------------------	------------------	----------------------------

**SCOPE COST INCREASES OF \$100,000 OR MORE IN THE PREFERRED CONCEPT:**

- 2.3 The site is now a net cut site, with roughly 88,000 CY's of material beyond strippings figured to be removed.
- 2.9 Based on the updated site plan layout, 28,000 SF more of 12" thick reinforced concrete paving is figured than before.
- 2.6 With more onsite paving figured, some storm line extensions and a slightly larger storm detention vault volume is included.
- 2.12 A wet weather premium has been added in the Phase 2 portion of mass earthwork.
- 2.21 With the revised floor plan layout, a greater LF of full height cast-in-place walls are figured at the tunnel level portion of the new Transfer Station.
- 2.21 With a northwest building corner extension added, 2,100 SF more of Transfer Station floor area is figured at the tipping level.
- 2.24 The drive-thru canopy between the Recycling and HHW areas is now figured to be 4,760 SF larger, or nearly double what was figured in the previous estimate.
- 2.27 Costs for a temporary east building enclosure wall, and waterproofing over portions of elevated tipping slabs have been added to the building phasing costs.
- 2.29 The fuel station is slightly further away from the new Transfer Station, and its canopy has increased from 400 SF to 2,000 SF.  
The assumed overall site clearing, grading and improvement area has increased by 20,000 SF, most notably at the expanded southwest site entrance area.

**SCOPE COST CREDITS OF \$100,000 OR MORE IN THE PREFERRED CONCEPT:**

- 2.5 With the updated site plan grades and layouts, less surface area of shotcrete and soil pin retaining walls is figured in the Base Estimate.
- 2.12 Based on updated grades and layouts, a temporary soldier pile wall used for site phasing work is deemed to be smaller than in the previous estimate.
- 2.12 Based on the updated site plan, fewer subgrade fills are figured, which decreases the quantity of imported fills required to accommodate site phasing.
- 2.21 A permanent full height demising wall and concrete push wall between the Self-Haul and Recycling areas has been deleted.
- 2.22 The Recycling Building Wing is 2,300 SF less in footprint than what was figured in the previous estimate.
- 2.23 The Administration Wing is 200 SF less in footprint, and 400 SF less in overall floor area than what was figured in the previous estimate.
- 2.24&5 The combined and enclosed HHW & H. Occupancy spaces are about 800 SF less than figured in the previous estimate.  
The Construction Cost Escalation allowance has been reduced 1.5%.

**NOTES:**

Roof canopies, both pass-thru and the eyebrow type, are not included in the building floor areas listed above.  
 See Page 2 for the Preferred Concept Base Estimate Summary Breakdown and a list of Options.

**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.1) DEMOLITION AT NORTHWEST PROPERTIES:</b>					
Mobilization.	1.00	LS	\$1,500.00	\$1,500.00	Allowance for northwest building demolition work.
Remove existing west metal building.	26,000.00	SF	\$2.50	\$65,000.00	A single-story structure with a slab foundation and tilt-up façade.
Remove existing east tilt-up building.	21,000.00	SF	\$3.50	\$73,500.00	A two-story high structure with a slab foundations & mezzanine.
Add for possible haz-mat abatement.	1.00	LS	\$35,000.00	\$35,000.00	Allowance for possible lead paint abatement.
Add for utility disconnects.	2.00	LS	\$2,000.00	\$4,000.00	Allowance at northwest buildings to be removed.
			<i>Building Demolition:</i>		<i>\$179,000.00</i>
Mobilization.	1.00	LS	\$1,000.00	\$1,000.00	Allowance for northwest site demolition work.
Minimal erosion control measures.	1.00	LS	\$3,500.00	\$3,500.00	Allowance, primarily along 30th Street edge.
Cut & demo existing street edge.	320.00	LF	\$7.00	\$2,240.00	Sawcut and removal of existing curb & gutter.
Remove existing site fixtures.	1.00	LS	\$2,500.00	\$2,500.00	Allowance for bollards, small fixtures & miscellaneous.
Remove onsite asphalt paving.	52,000.00	SF	\$0.70	\$36,400.00	Assumed to be roughly 3" mix over 4" base.
Cap, abandon & remove onsite utilities.	1.00	LS	\$10,000.00	\$10,000.00	Mostly minor storm systems, plus water & sanitary.
Miscellaneous site demolition & pick-up.	1.00	LS	\$5,000.00	\$5,000.00	Allowance for what isn't addressed, including some fencing.
			<i>Site Demolition:</i>		<i>\$60,640.00</i>
<b>DEMOLITION AT NW PROPERTIES:</b>				<b>\$239,640.00</b>	
Add 18% for General Contractor Mark-Ups:				\$282,775.20	

Building demolition includes the removal of two existing structures at the northwest site area. The west building appears to be a pre-engineered metal building with two north end street-front bays being having tilt-up walls. The east building is a two-story high facility with tilt-up panels around its entire perimeter, a finished second floor mezzanine that covers roughly a third of the building footprint. Both the buildings are figured to have conventional slab-on-grade foundations. No asbestos abatement is figured, but a \$35,000 allowance for possible lead paint abatement is included.

Site demolition in this area primarily consists of removing existing asphalt paving that covers the bulk of the northwest site beyond building footprints. Provisions are also included for minimal erosion control at the 30<sup>th</sup> Street edge, to sawcut and remove an existing south edge curb & gutter, and to cap and abandon existing underground onsite utilities, assumed to be relatively light and which primarily involve existing storm systems. No existing underground tanks, vaults of significant size, or contaminated soils are figured to require removal or be applicable. Removal and replacement of existing utility poles and street lights along the south edge of 30<sup>th</sup> Street are figured in Item #2.11.

**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.2) DEMOLITION AT THE MAIN SITE:</b>					
Mobilization.	1.00	LS	\$1,000.00	\$1,000.00	Allowance for transfer station building demolition work.
Remove existing transfer station.	17,000.00	SF	\$3.00	\$51,000.00	A single-story structure metal building with a slab foundation.
Add to remove lower level foundation.	1.00	LS	\$45,000.00	\$45,000.00	Includes full-height C.I.P. walls, thickened slabs and storages.
Add for possible haz-mat abatement.	1.00	LS	\$50,000.00	\$50,000.00	Allowance, slope to be determined.
Remove existing entrance booth building.	500.00	SF	\$4.00	\$2,000.00	A simple wood-framed structure with a slab foundation.
Add for utility disconnects.	1.00	LS	\$4,500.00	\$4,500.00	Allowance at buildings to be removed.
			<i>Building Demolition:</i>		<i>\$153,500.00</i>
Mobilization.	1.00	LS	\$2,000.00	\$2,000.00	Allowance for bulk of site demolition work.
Remove fencing and guard rails.	2,600.00	LF	\$3.50	\$9,100.00	At most onsite asphalt edges.
Remove existing site fixtures.	1.00	LS	\$6,000.00	\$6,000.00	Allowance for ecology blocks, small fixtures & miscellaneous.
Remove onsite asphalt paving.	90,000.00	SF	\$0.70	\$63,000.00	Assumed to be roughly 3" mix over 4" base.
Add to remove onsite concrete pads & stairs.	1.00	LS	\$6,000.00	\$6,000.00	Allowance, scattered around the site in small quantities.
Remove onsite power poles and lighting.	1.00	LS	\$12,000.00	\$12,000.00	Allowance around buildings and paving to be demo'd.
Cap, abandon & remove onsite utilities.	1.00	LS	\$15,000.00	\$15,000.00	Mostly minor storm systems, plus water & sanitary.
Miscellaneous site demolition & pick-up.	1.00	LS	\$10,000.00	\$10,000.00	Allowance for what isn't addressed.
			<i>Site Demolition:</i>		<i>\$123,100.00</i>
Minimal erosion control measures.	1.00	LS	\$3,000.00	\$3,000.00	Allowance for site demolition work at lower site perimeters.
Add for minor traffic control & coordination.	1.00	LS	\$1,000.00	\$1,000.00	Allowance at existing offsite parking area north of main entrance.
Cuts at existing lower offsite parking lot.	350.00	LF	\$6.00	\$2,100.00	At north side of main entrance at new Helper Parking area.
Remove existing lower offsite modular wall.	1,200.00	SF	\$2.50	\$3,000.00	At existing parking below north side of main entrance, 200 LF x 6'.
			<i>Offsite Main Entrance Demolition:</i>		<i>\$9,100.00</i>
<b>DEMOLITION AT THE MAIN SITE:</b>				<b>\$285,700.00</b>	
Add 18% for General Contractor Mark-Ups:				\$337,126.00	

Site demolition at the balance of the site centers around the existing transfer station, entrance booth and asphalt paving at the south, southwest and east sides of site. Demolition of the existing Transfer Station includes premiums to remove lower level cast-in-place walls, thickened slabs and various small office and storage spaces. A \$50,000 allowance for possible asbestos and other hazardous material abatement is included. The existing entrance booth to be removed is figured to be the equivalent of a residential structure with a simple slab-on-grade foundation.

All asphalt paving to be removed is for now figured to be hauled offsite rather than be ground-up and re-used as fill material. Premiums are included to remove existing onsite fencing, guard rails and scattered concrete and various site fixtures. In addition, a \$12,000 allowance is included to remove existing onsite lighting and power poles, and another \$15,000 allowance to remove various onsite underground utilities. It is assumed there are no existing underground tanks or contaminated soils to deal with.

An allowance is included for supplemental minor erosion control measures and traffic control coordination below the north side of the existing southwest main site entrance where some sawcutting and chipping of asphalt in an existing offsite parking lot is now indicated to take place. In addition, an existing offsite modular block retaining wall just north of and below the new Helper Parking area is figured to be removed in order to make way for a new block retaining wall.

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.3) MASS EARTHWORK:</b>					
Earthwork mobilization.	1.00	LS	\$2,000.00	\$2,000.00	Allowance for initial project mobilization.
Temporary construction perimeter fencing.	3,600.00	LF	\$3.00	\$10,800.00	Around site perimeters.
Silt fencing.	2,000.00	LF	\$5.00	\$10,000.00	Primarily at down-sloping north and west sides of site.
Temporary construction entrances.	3.00	LS	\$2,000.00	\$6,000.00	Allowance for a minimum of three locations with tire wash areas.
Temporary ponds, ditches & sediment traps.	1.00	LS	\$30,000.00	\$30,000.00	Allowance on a hilly site, to be laid out.
Special protection at creek & wetlands.	1.00	LS	\$15,000.00	\$15,000.00	Allowance at east and north sides of site, details TBD.
Possible crushed rock working surfaces.	40,000.00	SF	\$1.00	\$40,000.00	Allowance as needed on a presumably moisture sensitive site.
Miscellaneous erosion control measures.	1.00	LS	\$25,000.00	\$25,000.00	Allowance, including temporary seeding and maintenance.
			<i>Erosion Control &amp; Site Prep:</i>		\$138,800.00
Earthwork mobilization.	1.00	LS	\$3,000.00	\$3,000.00	Allowance for bulk of earthwork.
Clearing and grubbing of site.	490,000.00	SF	\$0.10	\$49,000.00	Roughly half of site is treed and half are areas to be demo'd.
Removal of onsite strippings.	9,100.00	CY	\$8.00	\$72,800.00	Assumes a 6" average layer.
Onsite cuts.	137,000.00	CY	\$3.00	\$411,000.00	Allowance, based on preliminary site plan elevations.
Add for new onsite detention vault voids.	8,000.00	CY	\$4.00	\$32,000.00	Includes storm vault volume & most gravel backfills in Item #2.6.
Onsite fills.	56,000.00	CY	\$3.50	\$196,000.00	Allowance, with most cuts assumed to be used for subgrade fills.
Remove excess cuts from site.	89,000.00	CY	\$8.00	\$712,000.00	Difference between subgrade cuts and fills.
Minor soft spot overexcavation.	2,000.00	CY	\$30.00	\$60,000.00	Allowance, scope to be further verified.
Finish onsite grading and pick-up.	490,000.00	SF	\$0.10	\$49,000.00	Allowance to bring to finish grades.
Add for working a sloping site.	1.00	LS	\$30,000.00	\$30,000.00	Allowance, including working with backfilled areas and site steps.
Add for possible moisture sensitive soils.	1.00	LS	\$25,000.00	\$25,000.00	A minimized premium with mostly dry weather work.
Earthwork coordination & pick-up.	1.00	LS	\$20,000.00	\$20,000.00	Allowance.
			<i>Earthwork Subgrades:</i>		\$1,659,800.00
<b>MASS EARTHWORK:</b>				<b>\$1,798,600.00</b>	
Add 18% for General Contractor Mark-Ups:				\$2,122,348.00	

Allowances are included for erosion control measures, assumed to consist of silt fencing at low elevation site perimeters, some temporary construction entrances with truck wheel wash-down areas, and various temporary ditches, containment ponds and sediment traps. No temporary pumping and Baker type containment tanks are figured to be required. In addition, premiums are included for protecting an existing small creek at the east side of site, and an onsite wetlands area at the northeast site corner. Temporary construction fencing is included around the site perimeter, which is slightly larger than what was figured in Concept 2, as improvement work at the southwest entrance has expanded. Because of presumed moisture sensitive native soils, an allowance is also included to provide some temporary working surfaces of crushed rock on an as-needed basis.

A total of 490,000 SF of site area is figured to be cleared and grubbed. This takes into account the northwest site area, but excludes the existing northeast onsite wetlands area which for the most part is assumed to remain as is. An average 6" layer of strippings is figured to be removed from site, which includes both heavily tree'd areas, and demo'd building and paved areas covered in Items #2.1 and #2.2. With an existing hilly site that is to be partially leveled out via the use of several high retaining walls as shown on the proposed site plan, an extensive amount of onsite dirt excavation is figured. Site cuts beyond strippings are assumed to be suitable for subgrade fills as long as they don't get too wet. The site is assumed to have moisture sensitive native material, which is why initial mass earthwork is figured to take place in the dryer months. Still, an allowance for 2,000 CY's of possible soft spot overexcavation is figured, along with premiums for working a sloping site with moisture sensitive soils. Per updated building slab elevations noted on the Preferred Concept site plan, the building slabs have been lowered by 6.25', which in turn lowers most of the new paving and other proposed grades surrounding the new structures. As a result, much more cuts than fills are now figured, with the excess assumed to be removed offsite. See the Options on Page 2 to possibly waste some of the excess cuts on an adjacent site. Premiums for breaking up the mass excavation work into phases are covered in Item #2.12.

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.4) WETLANDS MITIGATION:</b>					
Wetlands mitigation.	1.00	LS	\$300,000	\$300,000.00	Allowance, scope and logistics to be determined.
<b>WETLANDS MITIGATION:</b>				<b>\$300,000.00</b>	
Add 18% for General Contractor Mark-Ups:				\$354,000.00	

Currently, there is about 18,000 SF of wetlands at center south portion of the site that is located where a part of the proposed Preferred Concept main building and loading areas will be placed. Another wetlands area at the northeast portion of the site is figured for the most part to remain as-is and not be affected by new construction work. Without having a specific design or scheme, a \$300,000 allowance is presently figured to replace the south center portion of existing wetlands that will have to be removed. Given the limited amount of undeveloped and used onsite space available, it is presumed the new wetlands may have to be reconstructed at a near-by site.

**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.5) RETAINING WALLS:</b>					
Mobilization.	1.00	LS	\$12,000.00	\$12,000.00	Allowance for soil pin wall work.
Shotcrete walls at south & east sides of site.	35,590.00	SF	\$35.00	\$1,245,650.00	8" - 12" thick w/ rebar, a total of 1,240 LF ranging from 6' to 45'.
Add for soil pin and anchor premiums.	35,590.00	SF	\$40.00	\$1,423,600.00	Allowance behind shotcrete walls, size and spacing TBD.
Add for possible underlying footings.	1,240.00	LF	\$70.00	\$86,800.00	Roughly 3'x16" under new soil pin walls w/ steps & footing drain.
Add for long anchors & south property line.	750.00	LF	\$60.00	\$45,000.00	Allowance to contend with limited space to property lines.
Add for working around existing gas lines.	1.00	LS	\$10,000.00	\$10,000.00	Allowance, assumed to be more exploratory.
Add for excavation & backfill premiums.	35,590.00	SF	\$8.00	\$284,720.00	Allowance behind shotcrete walls, and for anchor work.
Add for architectural finishes.	35,590.00	SF	\$5.00	\$177,950.00	Allowance at exposed shotcrete surfaces.
Retaining wall coordination & pick-up.	1.00	LS	\$20,000.00	\$20,000.00	Allowance.
				<i>Soil Nail Walls:</i>	<i>\$3,305,720.00</i>
West modular block retaining wall.	4,690.00	SF	\$18.00	\$84,420.00	At west property line, 520 LF, ranging from 4' to 12' high.
North dock modular block retaining wall.	2,770.00	SF	\$20.00	\$55,400.00	At north side of Self-Haul & Recycling, 240 LF, from 4' to 20' high.
Add for radius premium @ north dock wall.	1.00	LS	\$2,000.00	\$2,000.00	Allowance at north modular block turn.
Helper Parking modular retaining wall.	3,440.00	SF	\$19.00	\$65,360.00	Between existing offsite parking & entrance, 410 LF, 4' to 9' high.
Add for wall backfills and tie-backs.	4,400.00	CY	\$12.00	\$52,800.00	Roughly 1,200 LF x 10' x 10' average.
Add for footing drains & pick-up.	1.00	LS	\$15,000.00	\$15,000.00	Allowance at three sets of walls.
				<i>Modular Block Walls:</i>	<i>\$274,980.00</i>
				<b>\$3,580,700.00</b>	
<b>RETAINING WALLS:</b>					
Add 18% for General Contractor Mark-Ups:					<b>\$4,225,226.00</b>

Large new retaining walls are figured, based on the updated Preferred Concept site plan, with some wall heights exceeding 40'. Lowered building subgrades and updated layouts have slightly reduced the overall area of new retaining walls previously figured. The longest and highest retaining wall the south & east sides of site is figured to be reinforced shotcrete, with allowances included for soil pins and buried tie-back anchors, the size, spacing and length of which is to be determined. Some of the anchor lengths could conceivably exceed 100'. An allowance is included to survey and possibly work around existing underground gas mains and overhead power lines at the east side of site, but no removal, replacement or relocation of those utilities is figured. Another allowance is included to deal with the new south wall being constructed close to the south property line. This presumably will require extending anchor work wall beyond the property line and restoring offsite areas afterwards. For now, a \$45,000 premium allowance is included to contend with this likelihood, the scope of which is to eventually be addressed. A conventional continuous footing and footing drain is included at the base of the shotcrete walls. Premiums are included to provide a smooth or other type of architectural finish over the exposed faces of the field placed shotcrete. See the Options on Page 2 for an allowance to instead provide pre-cast architectural panels over the shotcrete faces.

Three smaller sets of walls, with heights ranging from 2' to up to 22', are figured to be modular block type. Premiums are included to provide fabric tie-back anchors, backfills and footing drains, plus a radius at one of the walls. See the Options on Page 2 to instead provide shotcrete walls with soil nails and pre-cast architectural panels over them at the Base Estimate modular block wall locations. Also, the removal of an existing offsite modular block wall below the north side of the main southwest entrance is covered in the Item #2.2 Site Demolition work.

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.6) OUTSIDE UTILITY WORK:</b>					
Main line hook-ups & wet taps.	2.00	LS	\$2,800.00	\$5,600.00	Assumed to be at 30th and 32nd Street site entrances.
Possible street cuts & patches.	2.00	LS	\$2,000.00	\$4,000.00	Assumed to be minor at 30th & 32nd Street site entrances.
8" Class 52 main lines.	2,600.00	LF	\$46.00	\$119,600.00	Allowance, includes a loop around the new onsite buildings.
6" Class 52 branch lines.	700.00	LF	\$38.00	\$26,600.00	Allowance to onsite fire hydrants and new buildings.
Add for main line valves and fittings.	40.00	Ea	\$500.00	\$20,000.00	Allowance at new onsite lines.
Add for new onsite fire hydrants.	6.00	Ea	\$2,800.00	\$16,800.00	Allowance onsite, layout to be determined.
Fire sprinkler PIV, DDC, FDC and fittings.	1.00	LS	\$10,000.00	\$10,000.00	Allowance to accommodate fire sprinkler service to new buildings.
Domestic water service to new buidlings.	1.00	LS	\$12,000.00	\$12,000.00	Allowance off of new onsite mains, includes meter(s).
Imported trench backfill premiums.	3,300.00	LF	\$20.00	\$66,000.00	In new water line trenches, roughly 4'x5'.
Water line testing, pick-up & coordination.	1.00	LS	\$5,000.00	\$5,000.00	Allowance.
				<i>Outside Water:</i>	<i>\$285,600.00</i>
<b>OUTSIDE UTILITY WORK, continues on the next page:</b>					

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.6) OUTSIDE UTILITY WORK:</b>					
<i>(Continued from the previous page.)</i>					
Sanitary hook-up.	1.00	LS	\$1,200.00	\$1,200.00	Assumed to be at 30th Street site entrance.
Possible street cuts & patches.	1.00	LF	\$2,000.00	\$2,000.00	Assumed to be minor at 30th Street site entrance.
8" PVC sanitary services.	1,000.00	LF	\$26.00	\$26,000.00	Allowance for new main building to 30th St, 8' deep on average.
6" PVC branch lines.	400.00	LF	\$22.00	\$8,800.00	Allowance from onsite new main to branch building wings.
New sanitary manholes.	4.00	Ea	\$2,200.00	\$8,800.00	Allowance, 48" round, roughly 9' deep on average.
Imported trench backfill premiums.	1,400.00	LF	\$38.00	\$53,200.00	In new sanitary line trenches, roughly 5'x8'.
Add for cleanouts and sanitary pick-up.	1.00	LS	\$3,000.00	\$3,000.00	Allowance.
				<i>Outside Sanitary:</i>	<i>\$103,000.00</i>
Type #1 catch basins.	25.00	Ea	\$850.00	\$21,250.00	Onsite allowance, layout to be determined.
Type #2 catch basins.	15.00	Ea	\$2,600.00	\$39,000.00	" " " " " " " " " " " "
Allowance for trench & area drains.	1.00	LS	\$12,000.00	\$12,000.00	" " " " " " " " " " " "
Various storm filters and flow restrictors.	1.00	LS	\$200,000	\$200,000.00	" " " " " " " " " " " "
12" onsite storm mains, plastic.	3,000.00	LF	\$25.00	\$75,000.00	Onsite allowance of various sizes and depths, averaged.
Possible supplemental onsite storm mains.	500.00	LF	\$25.00	\$12,500.00	Allowance to accommodate greater quantity of onsite paving.
Imported trench backfill premiums.	3,500.00	LF	\$30.00	\$105,000.00	In new storm line trenches, roughly 4'x6'.
Footing & roof drains at new buildings.	1,600.00	LF	\$25.00	\$40,000.00	Around proposed buildings, includes connectors & cleanouts.
Storm coordination & pick-up.	1.00	LS	\$8,000.00	\$8,000.00	Allowance.
				<i>Outside Storm:</i>	<i>\$512,750.00</i>
Excavate and backfill for detention vaults.	8,300.00	CY	\$8.00	\$66,400.00	Set in a fill area, reduces excavation costs, 14,000 SF x 16'.
Cast-in-place walls.	800.00	LF	\$420.00	\$336,000.00	Roughly 12' to 13' x 1' on 2.5' x 1' footings, includes interior walls.
Slab-on-grade and hollow core lids.	12,500.00	SF	\$18.00	\$225,000.00	Assumes a 6" thick SOG, and a 12" thick hollow core lid.
Control structures, access fixtures & misc.	1.00	LS	\$50,000.00	\$50,000.00	Allowance at tops and ends of vault.
Premium for partial detention gravel backfills.	3,000.00	CY	\$25.00	\$75,000.00	Allowance over and around vault.
				<i>Storm Detention System:</i>	<i>\$752,400.00</i>
Primary power trenching & coordination.	1.00	LS	\$20,000.00	\$20,000.00	Allowance, assumed to come from 30th Street.
Secondary power service to main building.	1.00	LS	\$60,000.00	\$60,000.00	Allowance from a new onsite transformer to new main building.
Communications trenching & conduits.	1.00	LS	\$20,000.00	\$20,000.00	Allowance, assumed to come from 30th Street.
New handholes & small vaults.	1.00	LS	\$10,000.00	\$10,000.00	Allowance at new electrical services, to be laid out.
Imported trench backfill premiums.	1,000.00	LF	\$8.00	\$8,000.00	Allowance in electrical trenches, 2'x3' & 3'x3'.
Site electrical coordination & pick-up.	1.00	LS	\$5,000.00	\$5,000.00	Allowance.
				<i>Site Electrical:</i>	<i>\$123,000.00</i>
Outside gas trenching & coordination.	1.00	LS	\$6,000.00	\$6,000.00	Allowance, piping & meter assumed to be by local gas company.
				<i>Outside Gas:</i>	<i>\$6,000.00</i>
<b>OUTSIDE UTILITY WORK:</b>				<b>\$1,782,750.00</b>	
Add 18% for General Contractor Mark-Ups:				\$2,103,645.00	

Outside utilities are not yet laid out so various allowances are presently included in the onsite development scope. A new 8" Class 52 ductile iron water main loop is figured around the new proposed buildings, with provisions included for fire hydrants, and fire sprinkler and domestic services. New onsite water mains are assumed to hook-up to existing 30<sup>th</sup> and 32<sup>nd</sup> Street mains, while a new onsite sanitary service is figured to tie into an existing 30<sup>th</sup> Street entrance line only. For now, imported put run backfill material is figured in all new outside utility trenches. Provisions for new onsite manholes and various branch lines are included in the onsite sanitary work scope.

The new onsite storm system is assumed to be self-contained with conventional underground piping and basin collectors figured. In addition, a \$200,000 allowance is included for various storm filters and other treatment fixtures. Also included are provisions for roof and footing drains around the proposed new buildings. With a greater overall quantity of onsite paving shown in the updated site plan layout, an allowance is included for supplemental onsite storm main lines.

A new underground storm detention vault is figured to be placed in the northwest 'Hot Load' paved area. It's inside footprint is still figured to be 100' x 120', but with more onsite paving indicated on the updated site plan, the assumed vault interior clearance has changed from 11' to 12'. Excavation costs for the vault are minimized since it is presumed to be placed in a fill area, but most backfills around on over it are figured to be imported gravel. The vault is figured to have cast-in-place walls set on continuous footings, and a 6" thick slab-on-grade with waterstops. The lid is assumed to consist of 12" thick hollow core without any concrete topping. Interior cast-in-place walls are included to help support the lid, assumed to be designed to accommodate highway-type loads. No waterproofing or footing drains are included.

Provisions for primary power and communications service conduits are figured, along with a \$60,000 allowance for a secondary service from an onsite power transformer to the new main building. Provisions are also included for various electrical handholes and vaults. Allowances for outside primary power wire, a transformer and communications wire costs, figured to be by local utility companies, are covered in Item #2.7.

Outside gas piping and a meter is assumed by the local gas company at no cost. Provisions for gas service trenching and coordination are included.

**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.7) POSSIBLE UTILITY SERVICE UPGRADES:</b>					
Possible water service extension upgrade.	1.00	LS	\$80,000	\$80,000.00	Allowance, scope and offsite extension lengths TBD.
Primary power onsite service & transformer.	1.00	LS	\$50,000	\$50,000.00	Allowance, actual costs to be determined.
Possible offsite power service upgrades.	1.00	LS	\$120,000	\$120,000.00	Allowance, scope and offsite extension lengths TBD.
Communications services to buildings.	1.00	LS	\$50,000	\$50,000.00	Allowance, actual costs to be determined.
<b>POSSIBLE UTILITY SERVICE UPGRADES:</b>				<b>\$300,000.00</b>	
Add 18% for General Contractor Mark-Ups:				<b>\$354,000.00</b>	

Allowances are included for utility company hook-up and service costs, and for possibly upgrading offsite services to accommodate the loads of the proposed facility. At this point, the allowances are guesses, the scope of which will require further investigation and review as the design progresses. This allowance does not include building, mechanical, electrical and site permits, or their plan check costs.

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.8) SITE FIXTURES &amp; SPECIALTIES:</b>					
Pole mounted parking lot type light fixtures.	20.00	Ea	\$3,000.00	\$60,000.00	Allowance around site peimeters and onsite access roads.
Pedestrian light bollard fixtures.	2.00	Ea	\$800.00	\$1,600.00	Allowance, locations to be determined.
Add for underground services.	3,200.00	LF	\$19.00	\$60,800.00	Allowance, with imported trench backfills.
Add for exterior lighting control panel.	1.00	LS	\$8,000.00	\$8,000.00	Allowance, including possible nominal accent lights & hook-ups.
				<i>Site Lighting:</i>	<i>\$130,400.00</i>
Site monitoring cameras.	8.00	Ea	\$2,400.00	\$19,200.00	Allowance, most mounted on light pole fixtures.
Add for underground services.	2,000.00	LF	\$15.00	\$30,000.00	Allowance, with imported trench backfills.
Add for site monitoring equipment.	1.00	LS	\$2,000.00	\$2,000.00	Allowance, to be specified.
				<i>Site Camera Monitoring:</i>	<i>\$51,200.00</i>
Water recycling tanks, pumps & accessories.	1.00	LS	\$32,000.00	\$32,000.00	Allowance, primarily from new building roof drainage.
Add for piping supply and return lines.	300.00	LF	\$30.00	\$9,000.00	Allowance, to be laid out.
Add for electrical service & hook-ups.	1.00	LS	\$9,000.00	\$9,000.00	" " " " " " " "
Add for equipment & plumbing in building.	1.00	LS	\$35,000.00	\$35,000.00	" " " " " " " "
				<i>Water Recycling System:</i>	<i>\$85,000.00</i>
Architectural masonry screen walls.	3,200.00	SF	\$30.00	\$96,000.00	Reinforced, with accents, pre-colored and sealed, 400 LF x 8'.
Add for continuous footings.	400.00	LF	\$32.00	\$12,800.00	Assumed to be 2'x1'.
Add for possible fence gates.	1.00	LS	\$10,000.00	\$10,000.00	Allowance, to be laid out and detailed.
				<i>Screen Walls &amp; Enclosures:</i>	<i>\$118,800.00</i>
Steel pipe bollards.	24.00	Ea	\$600.00	\$14,400.00	Allowance around site, half 6" round, and half 12" round.
Main site entrance monument sign.	1.00	LS	\$10,000.00	\$10,000.00	Allowance at southwest entrance.
Secondary site entrance monument signs.	2.00	LS	\$4,500.00	\$9,000.00	Allowance, locations to be determined.
Directional & handicap signage.	30.00	Ea	\$240.00	\$7,200.00	Allowance around site.
Dock leveler, bumpers and hand rails.	1.00	LS	\$8,000.00	\$8,000.00	Allowance at north loading dock below Self-Haul area.
Loose ecology blocks & concrete barriers.	1.00	LS	\$15,000.00	\$15,000.00	Allowance, locations and extent to be determined.
Miscellaneous specialites.	1.00	LS	\$12,000.00	\$12,000.00	Allowance for bike racks, trash bins, benches, flag pole, misc.
				<i>Site Fixtures &amp; Specialties:</i>	<i>\$75,600.00</i>
Chainlink fencing at southwest entrance.	200.00	LF	\$38.00	\$7,600.00	Assumed to be 8' high at main entrance, from wall to wall.
Chainlink fencing at north entrance.	600.00	LF	\$38.00	\$22,800.00	8' high at secondary entrance, from retaining wall to retaining wall.
Add for manual entrance gate premiums.	2.00	LS	\$7,000.00	\$14,000.00	Allowance, assumed to be steel fabricated, not chainlink.
Chainlink fencing at top of retaining walls.	2,410.00	LF	\$44.00	\$106,040.00	Mostly 4' high & PVC coated chainlink, 10% ornamental.
				<i>Site Fencing:</i>	<i>\$150,440.00</i>
Highway type guardrails.	960.00	LF	\$45.00	\$43,200.00	At edges of onsite access roads close to retaining wall overlooks.
				<i>Site Guardrails:</i>	<i>\$43,200.00</i>
<b>SITE FIXTURES &amp; SPECIALTIES:</b>				<b>\$654,640.00</b>	
Add 18% for General Contractor Mark-Ups:				<b>\$772,475.20</b>	

The SITE FIXTURES & SPECIALTIES narrative is listed on the next page.

## FACTORIA RECYCLING and TRANSFER STATION PREFERRED CONCEPT

**SITE FIXTURES & SPECIALTIES NARRATIVE:**

Allowances are included for site lighting and monitoring, featuring 20 parking lot type light fixtures, 2 pedestrian bollard light fixtures, 8 pole mounted cameras, plus provisions for underground services, controllers and equipment.

Also included is \$85,000 for an outside water recycling system, both inside and outside the new buildings. The system is figured to use building roof run-off that drains to storage tanks, and is then filtered and pumped back to flush toilets and urinals. Some auxiliary storage may also be available for limited outside hose bib use, but not irrigation.

A total of 400 LF of onsite screen walls are figured around site fixtures and equipment such as a generator and dumpsters, assumed to consist of reinforced architectural masonry with various trim accents, set on top of continuous concrete footings. Some manual swinging gates are also included. In addition, provisions are included for steel pipe bollards, three monument entrance signs, onsite directional signage, a dock leveler & bumpers, ecology blocks and loose concrete barriers, and various site specialties.

8' high galvanized chainlink fencing with manual swinging steel fabricated gates are figured at the north and southwest site entrances, totaling roughly 800 LF, starting from one end of a nearby site retaining wall and ending at another. In addition, fencing is figured at the tops of all new onsite retaining walls, 90% assumed to be 4' high PVC coated chainlink, and the 10% balance ornamental type. Also, highway type guardrails are figured at selective onsite road edges that are close to retaining wall overlooks.

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.9) ONSITE PAVING:</b>					
Backhoe trenching for site concrete.	96.00	Hr	\$100.00	\$9,600.00	Allowance for site concrete work.
Cast-in-place curbs & gutters.	7,840.00	LF	\$22.00	\$172,480.00	At typical onsite access road, parking lot edges, plus fuel island.
Interior cast-in-place curbing.	240.00	LF	\$20.00	\$4,800.00	At east & west sides of HHW drive-through canopy area.
Possible cast-in-place storm gutters.	400.00	LF	\$40.00	\$16,000.00	Allowance in selected large open paved areas to catch basins.
Loading dock premium.	1.00	LS	\$12,500.00	\$12,500.00	Possible 4' high walls, bumpers, steps and leveler.
Onsite 4" concrete paving.	3,000.00	SF	\$5.00	\$15,000.00	Allowance, at south side of new Administration & misc.
Add for architectural plaza premiums.	1.00	LS	\$2,000.00	\$2,000.00	Allowance for concrete flatwork accents and features.
Onsite 12" thick reinforced concrete pads.	1,200.00	SF	\$12.00	\$14,400.00	At north fuel station, generator, dock and misc.
Onsite 12" thick reinforced road paving.	140,000.00	SF	\$11.50	\$1,610,000.00	At new onsite paving west of Self Haul, includes Hot Load area.
Concrete tie-ins, coordination & pick-up.	1.00	LS	\$8,000.00	\$8,000.00	Allowance.
Site clean-up coordination & pick-up.	20.00	MD	\$520.00	\$10,400.00	Onsite allowance.
			<i>Concrete Paving:</i>		\$1,875,180.00
New 4"/6" porous asphalt paving.	42,000.00	SF	\$5.00	\$210,000.00	At paving east of Transfer Station, plus Administration parking.
Add for asphalt paving tie-ins & coordination.	1.00	LS	\$2,000.00	\$2,000.00	Allowance.
Onsite striping.	1.00	LS	\$3,000.00	\$3,000.00	Onsite allowance, including at concrete paving
			<i>Asphalt Paving:</i>		\$215,000.00
<b>ONSITE PAVING:</b>				<b>\$2,090,180.00</b>	
Add 18% for General Contractor Mark-Ups:				\$2,466,412.40	

For now cast-in-place gutters are figured at typical onsite road and parking lot edges, both at concrete and asphalt paving. They are also figured around a north Fuel Island station and at the east and west sides of the HHW pass-through canopy area. In addition, a total of 400 LF of possible concrete gutters leading to storm basins are included in a few onsite paving areas. A \$12,500 premium allowance is included for a small loading dock noted at the north side of the Transfer Station, meant to cover 4' high stem walls on footings, steps, and a recess for a leveler. The leveler itself, loading dock bumpers and some hand rails at the steps are covered in Item #2.8. An allowance for a set of exterior stairs near the loading dock area, meant to go from the lower to main levels of the new building in the previous estimate has been deleted.

Only a small quantity of concrete sidewalks are figured, primarily at the south side of the new Administration building wing, with minor supplemental provisions included for what may not yet be addressed. Provisions for some thicker reinforced concrete utility pads are figured, notably at the north a Fuel Station, a generator, and likely at a power transformer and set of dumpsters. In addition, allowances are included for minor miscellaneous concrete tie-ins, coordination, and for general site clean-up.

The general onsite paving intent is for commercial truck access routes and loading areas to have thick reinforced concrete, and non-commercial routes to have asphalt. All onsite access road, parking and loading area paving not serving the Recycling, HHW and Self-Haul wings is figured to be 12" thick, with two layers of light rebar on gravel base. This is with the exception of a small parking lot at the south side of the new Administration wing. See the Options on Page 2 to instead provide a thick asphalt paving cut instead of 12" reinforced concrete. Based on the updated site plan layout, an additional 28,000 SF of 12" thick concrete paving is figured over what was in the previous estimate.

New onsite asphalt paving is figured at the east side of the Transfer Station and a small parking area at the south side of the Administration wing, for now figured to be 4" of 'a porous type mix over 6" of crushed base. Also included is a striping allowance at both new onsite concrete and asphalt paving. There is 4,000 SF more asphalt paving figured in this estimate than in the previous.



**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.10) LANDSCAPING:</b>					
Plantings in onsite planter areas	40,000.00	SF	\$2.50	\$100,000.00	Groundcover & shrubs in island, accent & building areas.
Plantings in onsite open areas.	80,000.00	SF	\$1.00	\$80,000.00	Lighter groundcover and shrubs in more open onsite areas.
Add for imported topsoil and mulch.	120,000.00	SF	\$0.85	\$102,000.00	6" of 3-way mix and 3" of mulch in planter and open areas.
Add for new trees.	100.00	Ea	\$280.00	\$28,000.00	Allowance, assumed to be 2" to 3" caliper native type trees.
Add for hand watering.	1.00	LS	\$12,000.00	\$12,000.00	Allowance during plant establishment period.
Landscaping restoration in outlying areas.	124,000.00	SF	\$1.00	\$124,000.00	Allowance for light topsoil, possible seeding & minimal plantings.
Landscaping maintenance & pick-up.	1.00	LS	\$10,000.00	\$10,000.00	Allowance.
<b>LANDSCAPING:</b>				<b>\$456,000.00</b>	
Add 18% for General Contractor Mark-Ups:				\$538,080.00	

New landscaping is broken up into three general categories: 1) planters at parking lot islands, accent spaces and near buildings, 2) open areas with a less density of plantings, and 3) outlying areas that are for the most part disturbed native areas at the site perimeters that are to be restored. No irrigation is figured in the landscaping work. New groundcovers, plantings and relatively mature trees are typically figured to be native type and drought resistant. In the interest of minimizing water consumption, no developed lawns are figured beyond wildflower type seeding at outlying perimeter areas. Planter and open areas are figured to receive 6" of 3-way mix type topsoil and 3" of mulch topping. Only a fraction of the topsoil figured there is included in outlying areas. A premium is included for the hand watering of landscape areas during its establishment period.

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.11) POSSIBLE STREET EDGE IMPROVEMENTS:</b>					
Remove existing street side power poles.	2.00	LS	\$8,000.00	\$16,000.00	Allowance at south side of 30th Street along property lines.
Possible new underground power to site.	1.00	LS	\$60,000.00	\$60,000.00	Allowance along 30th Street, to be done by power company.
Possible new communications to site.	1.00	LS	\$20,000.00	\$20,000.00	Allowance at 30th Street edge, to be done by utility companies.
Possible new pole street light fixtures.	2.00	LS	\$6,000.00	\$12,000.00	Allowance along 30th Street, to be done by power company.
Possible minor revamping of street storm.	1.00	LS	\$5,000.00	\$5,000.00	Possible new basins, most new piping assumed to remain.
New curb & gutter and street patching.	320.00	LF	\$40.00	\$12,800.00	Allowance at south 30th Street edge.
Street side traffic control & coordination.	1.00	LS	\$6,000.00	\$6,000.00	Allowance, more parking than traffic along 30th Street.
Site clean-up and pick-up.	1.00	LS	\$5,000.00	\$5,000.00	Allowance along 30th Street.
			<i>30th Street Edge Improvements:</i>		<i>\$136,800.00</i>
Patching and restoration at existing parking.	200.00	LF	\$12.00	\$2,400.00	Allowance below north side of main southwest entrance.
Add for minor traffic control & coordination.	1.00	LS	\$1,000.00	\$1,000.00	Allowance at north side of existing southwest entrance area.
Site clean-up, planter restoration & pick-up.	1.00	LS	\$3,500.00	\$3,500.00	Allowance at 32nd St. at main entrance and outside lower parking.
			<i>Minor 32th Street Restoration:</i>		<i>\$6,900.00</i>
<b>POSSIBLE STREET EDGE IMPROVEMENTS:</b>				<b>\$143,700.00</b>	
Add 18% for General Contractor Mark-Ups:				\$169,566.00	

The bulk of likely street improvement costs are deemed to occur along the south side of 30<sup>th</sup> Street between the property lines. Two existing utility poles are figured to be removed and replaced with new underground power and communications services to site. This is in addition to Possible Utility Service Upgrade allowances figured in Item #2.7. Two new pole mounted street lights with new underground power services to them are figured as well. While the existing south side 30<sup>th</sup> Street curb & gutter is figured to be replaced, only minor storm revisions are included, with most existing storm piping assumed to remain in place. Ditto with existing sanitary piping. Possible offsite water service upgrades are covered in Item #2.7. Minor asphalt street edge patching is included, along with provisions for traffic control, coordination and site clean-up. See the Options on Page 2 for an allowance to greatly enhance the scope of street work that could conceivably be required by the city.

A small portion of existing offsite parking paving at the north side of the main southwest entrance is figured to be patched and restored. It is assumed that no storm system or other outside utility revamping is required in the existing parking lot. Also included is an allowance for minor offsite landscaping restoration in the area of where an existing modular block retaining wall is figured to be removed in order to accommodate a new one near the new Helper Parking. Minor traffic control and coordination premiums are also included.

**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.12) SITE PHASING &amp; LOGISTICS PREMIUMS:</b>					
Cut & revamp a portion of existing paving.	100.00	LF	\$20.00	\$2,000.00	Premium at existing edge that overlooks new Transfer Station.
Temporary soldier pile wall.	3,000.00	SF	\$75.00	\$225,000.00	Outside SE corner of new Transfer Station tunnel level, 120' x 25'.
Add for earthwork & grading premiums.	1.00	LS	\$10,000.00	\$10,000.00	Allowance to accommodate temporary soldier pile wall.
Minor storm revisions.	1.00	LS	\$2,000.00	\$2,000.00	Allowance at portion of existing loop that gets removed.
Add for temporary barricades.	1.00	LS	\$4,000.00	\$4,000.00	Allowance at existing Transfer Station loop edges.
Remove soldier pile work in later phase.	3,000.00	SF	\$15.00	\$45,000.00	Allowance after owner is moved into new Transfer Station.
			<i>Temporary Soldier Pile Wall:</i>		<i>\$288,000.00</i>
Additional temporary fencing & barricades.	1.00	LS	\$4,000.00	\$4,000.00	Premium to facilitate two general site phases.
Additional demo & earthwork mobilizations.	2.00	LS	\$2,000.00	\$4,000.00	Premium for breaking mass earthwork into two general phases.
Phased subgrade cuts not used as fills.	44,000.00	CY	\$20.00	\$880,000.00	Cuts from existing Transfer area removed rather than used as fills.
Phased earthwork inefficiencies.	1.00	LS	\$25,000.00	\$25,000.00	Premium for breaking mass earthwork into two general phases.
Possible wet weather premiums.	1.00	LS	\$75,000.00	\$75,000.00	Phase 2 mass earthwork may take place during wetter months.
Phased outside utility inefficiencies.	1.00	LS	\$10,000.00	\$10,000.00	Premium for breaking utility work into two general phases.
Phased electrical service premiums.	1.00	LS	\$4,000.00	\$4,000.00	Premium to break outside electrical work into two phases.
Phased inefficiencies at southwest entrance.	1.00	LS	\$2,000.00	\$2,000.00	Coordination allowance, assumed to be minor.
Possible short site shutdown to move owner.	1.00	LS	\$3,000.00	\$3,000.00	" " " " " " " " " " " "
Miscellaneous coordination premiums.	1.00	LS	\$10,000.00	\$10,000.00	Allowance.
			<i>General Site Phasing Premiums:</i>		<i>\$1,017,000.00</i>
<b>SITE PHASING &amp; LOGISTICS PREMIUMS:</b>				<b>\$1,305,000.00</b>	
Add 18% for General Contractor Mark-Ups:				\$1,539,900.00	

The existing transfer station facility is figured to remain in operation while the new one is being constructed in its initial phase. The first phase of the new Transfer Station is assumed to include the entire tunnel level, the Administration wing, and the tipping level that covers the tunnel level footprint below. Also included is a slab-on-grade portion of the tipping level and its roof structure above to the west Self Haul boundary that lines up with the east tunnel level wall. Upon completion of the initial building phase, the owner will then move into the partial facility, and abandon the existing transfer station. This will then allow the continuation of the phased site work, and the construction of the Self-Haul, Recycling and HHW portions of the new building facility. Provisions to construct and later remove a temporary wall at the tipping level between the building phases is covered in Item #2.27.

In the first phase, a temporary soldier pile wall is figured to be constructed outside the southwest corner of the tunnel level footprint of the new Transfer Building. With the updated site layout and slightly revised phasing, the temporary soldier pile wall is figured to be smaller than what was in the previous estimate. Minor cutting and the barricading a portion of an existing paved access road loop edge that overlooks the temporary soldier pile wall is included. The temporary soldier pile wall and barricades are figured to be removed after the owner is moved into the new Transfer Station, and demolition of the existing transfer station may commence.

Site improvements at the existing facility and the balance of the site will require the shutting down of the existing southwest site entrance. This means that all public site access will have to come from the north side of site via 30<sup>th</sup> Street. It should be verified that this will not lead to permitting problems from the local authorities. Provisions to set up a temporary ticket booth and temporary weight scales when 30<sup>th</sup> Street is being used as the main entrance are covered in Item #2.27.

With the phasing of the site improvements, premiums are included for additional site mobilizations and construction inefficiencies, plus a \$75,000 allowance has been added for possibly doing the Phase 2 portion of mass earthwork operations during wetter months. By far the biggest premium however deals with the logistical sequencing of the mass earthwork, where large quantities of cuts at the existing transfer station area will not be allowed to be used as fills at the northwest area of the site, as the latter occurs before the former. Thus, more excavation haul-offs and imported rather than native fills will be required than would otherwise be necessary if the site work were allowed to all be done in one phase. See the Options listed on Page 2 for savings if subgrade fill material were allowed to come from an adjacent site, and if the adjacent site could also be used as a dump site for some of the excess excavation cuts.

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.21) TRANSFER STATION BUILDING:</b>					
Backhoe foundation trenching.	96.00	Hr	\$100.00	\$9,600.00	Allowance for lower floor foundations.
4'x2' lower level grade beams.	1,520.00	LF	\$120.00	\$182,400.00	Under all lower level full height cast-in-place walls.
12" thick reinforced slabs complete.	27,500.00	SF	\$11.00	\$302,500.00	Allowance at lower level, on grade, with two layers of rebar.
Add for possible thickened slab premiums.	30.00	LS	\$500.00	\$15,000.00	Allowance under isolated interior cast-in-place columns.
Add for slab base and vapor barrier.	27,500.00	SF	\$1.00	\$27,500.00	Assumes 6" gravel base and 15 mil barrier.
Add for interior ramp to loading dock.	40.00	LF	\$160.00	\$6,400.00	Premium for stem walls to 4' high and built-up ramp at north wall.
Add for sump & slab recess premiums.	1.00	LS	\$8,000.00	\$8,000.00	Allowance at lower level, assumed to be relatively minor.
Full height cast-in-place perimeter walls.	17,680.00	SF	\$29.00	\$512,720.00	14" & 12" w/ 2 layers of rebar, 1,040 LF x 17'.
Full height cast-in-place interior walls.	8,160.00	SF	\$29.00	\$236,640.00	14" & 12" with 2 layers of rebar, 480 LF x 17'.
Add for thickened wall pilasters & columns.	42.00	LS	\$2,400.00	\$100,800.00	Allowance, including at isolated interior supports, +17'.
Waterproofing @ backfilled building surfaces.	13,900.00	SF	\$4.50	\$62,550.00	At subgrade walls, less northwest area, 680 LF x 20', 60 LF x 5'.
Retaining wall backfills.	9,100.00	CY	\$5.00	\$45,500.00	Mostly native backfill, 680 LF x 360 SF average.
Add for 2' wide gravel backfill band.	1,020.00	CY	\$24.00	\$24,480.00	Premium for imported gravel over native, 680 LF x 40 SF.
Lower foundation pick-up & coordination.	1.00	LS	\$10,000.00	\$10,000.00	Allowance, including possible housekeeping pads & curbs.
					<i>\$19.67</i>
					<i>Lower Floor Foundation: \$1,544,090.00</i>
Backhoe foundation trenching.	48.00	Hr	\$100.00	\$4,800.00	Allowance for main floor foundations.
4'x2' main floor grade beams.	440.00	LF	\$120.00	\$52,800.00	At on-grade main floor Transfer Building perimeters.
Add for cast-in-place stem wall extensions.	1,800.00	SF	\$30.00	\$54,000.00	At west side of building following sloping grades, 180 LF x 10' avg.
12" thick reinforced slab-on-grades complete.	23,500.00	SF	\$11.00	\$258,500.00	At new on-grade main level areas with rebar.
Add for slab base and vapor barrier.	23,500.00	SF	\$1.00	\$23,500.00	Assumes 6" gravel base and 15 mil barrier.
24" thick reinforced elevated slabs complete.	27,500.00	SF	\$16.00	\$440,000.00	At main floor level over lower level, with rebar.
Add for slab shoring & forming.	27,500.00	SF	\$15.00	\$412,500.00	Allowance under 24" thick elevated slabs.
Add for elevated exposed perimeter edges.	400.00	LF	\$15.00	\$6,000.00	Allowance at NW portion of building with lowered outside grades.
Add for elevated slab openings.	250.00	LF	\$280.00	\$70,000.00	Allowance at load-out openings with curbs & embedded steel.
12' high interior push walls.	9,600.00	SF	\$28.00	\$268,800.00	Allowance at most of main floor interior perimeters, 800 LF x 12'.
Add for curves & kinks in push walls.	2,400.00	SF	\$12.00	\$28,800.00	At north interiors as indicated on floor plan, 200 LF x 12'.
Main floor foundation coordination & pick-up.	1.00	LS	\$15,000.00	\$15,000.00	Allowance, including building steps.
					<i>\$20.82</i>
					<i>Main Floor Foundation: \$1,634,700.00</i>
Steel erection mobilization.	1.00	LS	\$5,000.00	\$5,000.00	Allowance, primarily for crane and equipment.
Set main building frames.	11.00	LS	\$2,000.00	\$22,000.00	Roughly 170' x 40' high spans.
Set gable & NW build-out columns & beams.	16.00	Ea	\$450.00	\$7,200.00	At east & west sides of building, roughly 35' to 42' high.
Set roof purlins, cladding and trim.	51,000.00	SF	\$2.40	\$122,400.00	Standing seam within building footprint, no vinyl clad insulation.
Add for roof overhang premiums.	10,400.00	SF	\$3.50	\$36,400.00	Assumed to typically extend 10', 1,040 LF @ four sides w/ soffits.
Set wall purlins, backing and trim.	27,000.00	SF	\$3.20	\$86,400.00	Roughly 820 LF x 40' on average, less push walls.
Wall purlins, backing & trim at east gable.	2,040.00	SF	\$4.00	\$8,160.00	At upper portion of wall step at end of Self Haul, 170 LF x 12'.
Add for studs @ horizontal siding.	14,500.00	SF	\$1.80	\$26,100.00	Half of exterior siding assumed to require backing.
Add for framed openings, braces & pick-up.	90,440.00	SF	\$1.25	\$113,050.00	Allowances at metal building roofing & siding, includes hoisting.
Building main frames, col's & beams FOB.	51,000.00	SF	\$3.00	\$153,000.00	Allowance, includes kinked and long spans.
Roof purlins, cladding & trim FOB.	51,000.00	SF	\$6.50	\$331,500.00	24 gage standing seam w/ Energy Star finish, galvanized purlins.
Roof overhang premiums FOB.	10,400.00	SF	\$10.50	\$109,200.00	10' perimeter overhang extensions with soffit panels, 1,040 LF.
Wall purlins, backing & trim FOB.	29,040.00	SF	\$4.50	\$130,680.00	Backing, trim, plates, covers & purlins, less push walls.
Add for framed openings, braces, misc. FOB.	90,440.00	SF	\$1.80	\$162,792.00	Allowance, includes limited liners & wraps.
Metal building submittals, shipping & pick-up.	1.00	LS	\$50,000.00	\$50,000.00	Allowance.
					<i>\$17.37</i>
					<i>Metal Building Shell: \$1,363,882.00</i>
Canopy over tunnel level main loading area.	800.00	SF	\$50.00	\$40,000.00	As indicated on Tipping floor plan at north side, steel construction.
Possible new eyebrow canopies, complete.	640.00	SF	\$50.00	\$32,000.00	Allowance at balance of overhead door openings, 160 LF x 4'.
Bird wire roof system w/ fall protection posts.	1,140.00	SF	\$3.50	\$3,990.00	Allowance over canopies.
					<i>\$0.97</i>
					<i>Exterior Building Canopies: \$75,990.00</i>
5'x8' smoke vents.	12.00	Ea	\$3,000.00	\$36,000.00	Allowance over Transfer building, roughly 5'x8' with curbs.
Roof translucent panels, flashings & grids.	5,000.00	SF	\$10.00	\$50,000.00	Allowance, by metal building supplier, width of roof panels.
Special metal wall cladding.	10,000.00	SF	\$30.00	\$300,000.00	Allowance at exterior Transfer Station walls, to be specified.
Premium translucent exterior wall panels.	15,000.00	SF	\$38.00	\$570,000.00	Allowance in more exposed areas, a special order item.
Utility translucent exterior wall panels.	4,000.00	SF	\$6.00	\$24,000.00	Allowance in less exposed areas, by metal building supplier.
Grated roof walkways.	1,640.00	LF	\$60.00	\$98,400.00	Allowance for easy access to rooftop equipment & fixtures.
Stainless steel wide gutter.	290.00	LF	\$40.00	\$11,600.00	At bottom of roof 'V', assumed to be 24" wide.
Add for gutter drains and overflow scuppers.	1.00	LS	\$3,500.00	\$3,500.00	Allowance, to be strategically placed, downspouts by plumber.
Bird wire roof system w/ fall protection posts.	61,400.00	SF	\$2.30	\$141,220.00	Over Transfer Station building roof and overhangs.
Roof hatch and access provisions.	1.00	LS	\$2,500.00	\$2,500.00	Allowance, scope to be determined.
Exterior wall louvers.	2,000.00	SF	\$20.00	\$40,000.00	Allowance in selected areas.
Exterior wall signage.	1.00	LS	\$3,500.00	\$3,500.00	Allowance, scope to be determined.
					<i>\$16.31</i>
					<i>Exterior Fixtures: \$1,280,720.00</i>
<b>TRANSFER STATION BUILDING, continues on the next page</b>					

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.21) TRANSFER STATION BUILDING:</b>					
<i>(Continued from the previous page.)</i>					
Exterior walk doors complete.	8.00	LS	\$1,300.00	\$10,400.00	Allowance at upper and lower levels, flush hollow metal.
Large tunnel level overhead door.	608.00	SF	\$27.00	\$16,416.00	At large north loading area, motorized, 38' x 16'.
Large overhead tipper level doors.	1,536.00	SF	\$27.00	\$41,472.00	At commercial and Self Haul openings, motorized, 4 @ 16' x 24'.
Smaller overhead doors.	2,240.00	SF	\$27.00	\$60,480.00	At lower level dock, Maintenance & trailer stalls, 10 @ 14' x 16'.
					<i>Exterior Building Doors: \$128,768.00</i>
Interior composite steel platform complete.	250.00	SF	\$30.00	\$7,500.00	Allowance at south wall connecting to Administration.
Add for perimeter partitions.	960.00	SF	\$25.00	\$24,000.00	Gage framing w/ windows, metal cladding & GWB, 80 LF x 12'.
Add for interior finishes.	250.00	SF	\$75.00	\$18,750.00	Finished ceiling & floor, walk door, simple M&E.
					<i>Interior Viewing Platform: \$50,250.00</i>
Sealer @ concrete foundation & push walls.	54,000.00	SF	\$0.60	\$32,400.00	Allowance at exposed concrete surfaces, scope TBD.
Field paint selected steel fab interior fixtures.	1.00	LS	\$20,000.00	\$20,000.00	Allowance @ doors, bollards, selected steel & misc.
Interior finish trim & finish pick-up.	1.00	LS	\$5,000.00	\$5,000.00	Allowance, assumed to be minor.
					<i>Transfer Area Painting: \$57,400.00</i>
Lower level framed partitions complete.	960.00	SF	\$15.00	\$14,400.00	At two sides of Drivers Lounge and misc, 60 LF x 16'.
Add for enclosed small restroom spaces.	2.00	LS	\$3,000.00	\$6,000.00	Allowance within lower level Driver's Lounge space.
Upper level framed partitions complete.	1,200.00	SF	\$18.00	\$21,600.00	At two sides of upper floor Equipment Room, 30 LF x 40'.
CMU interior stub walls.	300.00	SF	\$18.00	\$5,400.00	At upper floor interior Tire Wash, 25 LF total x 12', fully grouted.
Interior walk doors.	12.00	Ea	\$1,350.00	\$16,200.00	Allowance at lower and main levels, hollow metal.
Interior sectional doors with motors.	3.00	Ea	\$2,800.00	\$8,400.00	Two in Storage and one in HPU, 10' x 12'.
Possible Spartan small room finish premium.	5,400.00	SF	\$10.00	\$54,000.00	Allowance in Lounge and misc, includes limited furred insulation.
					<i>Interior Partitions &amp; Doors: \$126,000.00</i>
Interior signage & fire extinguishers.	1.00	LS	\$8,000.00	\$8,000.00	Allowance for occupancy.
Steel pipe bollards, half 6" round, half 12".	40.00	Ea	\$600.00	\$24,000.00	Allowance in various open interior and OH door areas.
Interior hand rails.	220.00	LF	\$80.00	\$17,600.00	At lower level interior ramp, & possibly some upper floor openings.
Steel plate over northwest floor opening.	300.00	SF	\$16.00	\$4,800.00	Allowance over 'Future Open Top' at northwest upper level area.
Miscellaneous concrete housekeeping pads.	1.00	LS	\$4,000.00	\$4,000.00	Allowance, assumed to be minor beyond lower floor.
Possible utility shelving.	1.00	LS	\$10,000.00	\$10,000.00	Allowance in lower level Storage and misc.
Heavy gage metal caps over push walls.	800.00	LF	\$40.00	\$32,000.00	Allowance around most of main level perimeters.
Add for gage cap extensions.	2,000.00	SF	\$12.00	\$24,000.00	Allowance at interior push wall kinks and curves.
Misc. interior specialties & fixtures.	1.00	LS	\$15,000.00	\$15,000.00	Allowance for what is not yet addressed.
					<i>Interior Specialties &amp; Fixtures: \$139,400.00</i>
Dry system fire sprinkler coverage.	78,500.00	SF	\$2.50	\$196,250.00	Throughout entire Transfer building, mostly wide open spaces.
Add for high elevation premiums.	51,000.00	SF	\$1.25	\$63,750.00	In main floor areas, heights of over 35'.
Fire sprinkler pick-up and coordination.	1.00	LS	\$28,000.00	\$28,000.00	Allowance, includes canopy & overhang coverage.
					<i>Fire Sprinkler Protection: \$288,000.00</i>
Dust suppression system.	48,000.00	SF	\$1.20	\$57,600.00	Coverage over most of the main Transfer level only.
Dust suppression pick-up and coordination.	1.00	LS	\$10,000.00	\$10,000.00	Allowance for submittals, travel, and unit hook-up.
					<i>Dust Suppression: \$67,600.00</i>
Embedded trench drains.	500.00	LF	\$60.00	\$30,000.00	Allowance at selected slab edges in tipping level of Transfer area.
Plumbing waste & water rough-in.	78,500.00	SF	\$1.10	\$86,350.00	Allowance for interior waste & water lines.
Add for restroom plumbing fixtures.	2.00	LS	\$7,000.00	\$14,000.00	Allowance in lower level Driver's Lounge, with rough-in.
Floor drains and hose bibs.	35.00	LS	\$500.00	\$17,500.00	Allowance throughout Transfer Building.
Portable eyewash fixtures.	4.00	Ea	\$2,400.00	\$9,600.00	" " " " " " " " " " " "
Wall hung hose reels.	5.00	Ea	\$1,500.00	\$7,500.00	" " " " " " " " " " " "
Vertical cast iron downspouts.	360.00	LF	\$70.00	\$25,200.00	Allowance from 'V' gutter, 6/60' average.
Compressor, air lines and hook-up stations.	1.00	LS	\$20,000.00	\$20,000.00	Allowance, scope to be determined.
Plumbing coordination & pick-up.	1.00	LS	\$8,000.00	\$8,000.00	Allowance.
					<i>Transfer Building Plumbing: \$218,150.00</i>
Mechanical exhaust in transfer & loading.	78,500.00	SF	\$1.60	\$125,600.00	Allowance throughout most of Transfer Building.
Add for sensors & motorized dampers.	78,500.00	SF	\$1.60	\$125,600.00	" " " " " " " " " " " "
Add for ducting & accessories.	78,500.00	SF	\$0.60	\$47,100.00	" " " " " " " " " " " ", minimized.
Add for large underground vent duct.	80.00	LF	\$400.00	\$32,000.00	As indicated on tunnel floor plan, possibly 12' round culvert pipe.
Add for louvers at each end of vent.	2.00	Ea	\$2,400.00	\$4,800.00	Assumed to be 12' round.
Add for mechanical controls & start-up.	78,500.00	SF	\$0.70	\$54,950.00	Allowance throughout Transfer Building, minimal scope.
Simple heat in smaller rooms.	5,400.00	SF	\$11.00	\$59,400.00	Premium in Lounge, Storage, Maintenance, HPU & Equipment.
HVAC coordination & pick-up.	1.00	LS	\$20,000.00	\$20,000.00	Allowance.
					<i>Transfer Building HVAC: \$469,450.00</i>
<b>TRANSFER STATION BUILDING, continues on the next page</b>					

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.21) TRANSFER STATION BUILDING:</b>					
<i>(Continued from the previous page.)</i>					
Electrical panels & switchgear.	78,500.00	SF	\$1.50	\$117,750.00	Allowance, apportioned from Administration area.
Add for equipment feeders & hook-ups.	78,500.00	SF	\$1.60	\$125,600.00	Allowance for underground services and equipment.
Add for power premiums in HPU & Equip.	1.00	LS	\$30,000.00	\$30,000.00	Allowance, including equipment hook-ups.
Solar roof panel system.	1.00	LS	\$160,000	\$160,000.00	Allowance, used for supplementary power generation.
Energy efficient industrial lighting.	78,500.00	SF	\$3.00	\$235,500.00	Mostly wide open with high elevations.
General power distribution & devices.	78,500.00	SF	\$0.80	\$62,800.00	Allowance in mostly sparse spaces.
Surge & lighting protection systems.	78,500.00	SF	\$0.50	\$39,250.00	Allowance.
Fire alarm system.	78,500.00	SF	\$1.00	\$78,500.00	Allowance throughout, with panel in Administration area.
Security & monitoring system.	78,500.00	SF	\$0.50	\$39,250.00	Primarily consisting of surveillance cameras.
Balance of low voltage systems.	78,500.00	SF	\$0.40	\$31,400.00	Allowance for communications and misc, assumed to be light.
Electrical premiums in smaller rooms.	5,400.00	SF	\$7.00	\$37,800.00	Premium in Lounge, Storage, Maintenance, HPU & Equipment.
Electrical coordination & pick-up.	78,500.00	SF	\$0.50	\$39,250.00	Allowance.
\$12.70			<i>Transfer Building Electrical:</i>		\$997,100.00
<b>TRANSFER STATION BUILDING:</b>	<b>78,500</b>	<b>SF</b>	<b>\$107.54</b>	<b>\$8,441,500</b>	
Add 18% for General Contractor Mark-Ups:	78,500	SF	\$126.89	\$9,960,970	

Conventional, though extra-heavy slab-on-grade foundations are figured at the proposed Transfer Station. See the Options listed on Page 2 for a pile foundation premium allowance which is not figured in the Base Estimate. Nearly all the walls shown at the lower floor level, including the interiors, at large openings, and a heavy dashed line between the Baler and east Transfer Trailer Stall spaces, are figured to be full height cast-in-place with double layers of rebar, sitting on top of semi-oversized 4' x 2' footings. One exception is that no cast-in-place wall is figured between the west Transfer Trailer Stall and Compactor areas. Overall, 240 LF more of full height cast-in-place walls on footings are figured at the tunnel level than what was in the previous Concept 2 estimate. Waterproofing, with a 2' wide band of gravel backfill, is included at the outside face of subgrade building walls. The tunnel level floor slab-on-grade is figured to be 12" thick with two layers of light rebar. While gravel base and a heavy Visqueen vapor barrier is included under new building slabs, no underground passive gas venting system or special membrane barrier is figured. A premium is included to provide an interior built-up ramp and a set of stem walls to the exterior loading dock area indicated at the north wall.

Slabs-on-grade at the main floor foundation are figured to be 12" thick with two layers of rebar, with 4' x 2' on average perimeter footings that also provide support for the building structure columns and main frames. Stepped footing premiums with stem wall extensions varying from 2' to 17' high are included at the west and southwest building corner beyond the tunnel floor footprint, meant to follow the proposed outside finish sloping subgrades. Portions of tipping level floor slabs that are over the tunnel floor space below are figured to be 24" thick and reinforced, with provisions for temporary shoring included. Supplemental cast-in-place column supports are included in the lower floor interiors to help support the main floor elevated slabs, figured to be spaced at roughly 25' oc. In addition, 12' high cast-in-place push and buffer walls are figured at most of the tipping level Transfer Station perimeter. Unlike the previous estimate, this includes some kinked and curved push walls now indicated at the north and northwest portions of the tipping floor level spaces. Provisions are included for cast-in-place curbs, roughly 2' high, with embedded steel liners at tipping level floor openings, including one where a 'Future Open Top' is noted in the northwest building area. An allowance for steel plate cover is included over the 'Future' opening only. No embedded steel liner plating is figured over concrete push wall faces. With the northwest building extension added to the Transfer Station footprint, the tipping level floor area is now figured to be 2,100 SF larger than what was in the previous estimate.

The Transfer Building shell above the main floor slab is figured to be a pre-engineered and manufactured metal building. Premiums are included for long clear spans, which are still assumed to have a kink in them where the roof gutter and drainage system presumably will be placed. The high points of the main Transfer Station are now figured to be about 42' high and the low points 35' high. 24 gage standing seam roofing with an Energy Star finish is figured. A simple 10' width roof overhang extension is figured at the four exterior building perimeter sides of the Transfer Station, with a standard metal building manufacturer's type soffit cladding underneath. Permanent full height columns rather than fixed building frames are figured the at the east Self Haul boundary in order to accommodate a roof step between the Self Haul and Recycling areas. A gable wall enclosure with cladding and purlins is figured between the roof steps in that area. Costs to construct a temporary metal building wall at the west Self Haul boundary for phasing purposes is covered Item #2.27.

The bulk of exterior wall cladding at the Transfer Station building is budgeted at \$30/SF, for now figured to be special panels outside a metal building manufacturer's typical range of products. In addition, an allowance for 10,000 SF of Kalwall type translucent wall panels are figured at selected exterior wall areas, and 4,000 SF of more utility grade translucent wall panels by the metal building manufacturer in less prominent locations. Some utility grade translucent roof panels by the metal building manufacturer are also included. No insulation is figured in the Transfer Building shell, nor are liner panels of significance figured over the interior sides of open space walls. Also, no cladding or purlins are figured over the faces of the lower cast-in-place push walls at exterior perimeters.

**TRANSFER STATION BUILDING narrative continues on the next page**

**TRANSFER BUILDING NARRATIVE, continued from the previous page**

A simple 800 SF steel fabricated canopy, whether it be shop fabricated or pre-manufactured, is included over the main lower level loading area at the north wall as indicated on the updated tipping level floor plan. In addition, a total of 160 LF of simple eyebrow type canopies, figured to be 4' deep, are included over the balance exterior overhead door wall openings. A bird deterrent wire system with fall protection anchoring posts is figured over both the main building and canopy roofs.

Provisions are included at the Transfer Building roof for smoke vents, grated walkways to various rooftop fixtures and equipment, a roof hatch, and overflow scuppers at the ends of the building gutter system. Provisions are also included for exterior louvers and signage. All exterior walk doors are figured to be flush hollow metal. Motorized sectional overhead doors sectional are figured at both tunnel and tipping level exterior wall openings. A 38' wide sectional door is included at the north tunnel level exterior wall. 16' wide by 24' high doors are figured at the tipper level; two at the Tire Wash and one at each Self Haul exterior opening. The balance of exterior overhead doors are figured to be 14' x 16' at the tunnel level; one at the Maintenance, one at the Future Open Top, one at the east loading dock, and seven at Transfer Trailer Stalls.

An enclosed viewing platform, roughly 25' x 10', is figured at the Transfer Building south wall, assumed to be accessed from the second floor Administration wing. A composite steel floor structure is figured with gage framed walls, and metal cladding and windows at the outside faces. Semi-Spartan office type interiors with simple HVAC and electrical systems are figured inside.

Interior painting in the Transfer Building is limited to providing a standard clear sealer over exposed concrete wall surfaces, and selectively painting metal fixtures such as doors and pipe bollards. A clear sealer is also included over the exposed exterior faces of concrete walls as well. Exposed metal building purlins and main frames are figured to receive no field finish other than to touch-up what gets damaged during the course of construction.

Provisions are included for interior walk doors in various Transfer Building rooms. Three small motorized lower level interior sectional doors are also included, one in the HPU and two in a north storage room. The only gage framed partitions figured in the Transfer Building beyond a viewing platform are at small rooms not yet indicated but assumed to be constructed in the lower level Employee Break Area space, and at two sides of a tipping level Equipment Room. Utility grade metal cladding is figured to be installed over both sides of the Equipment Room framing. In addition, two 12' high fully grouted CMU walls are figured at the tipping level Tire Wash entrance. A premium is included for two small restrooms in the Employee's Break Area. Finish premiums are figured to be confined to the Employee Break Area, and possibly a few other small selective areas. Ditto with furred and insulated walls. The balance of Transfer Station interior spaces are figured to be generally open and Spartan.

Provisions are included for minimal occupancy specialties, steel pipe bollards, fabricated hand rails at the lower interior dock area and some tipping level floor openings, a heavy steel plate over a northwest 'Future Top' opening, some concrete housekeeping pads, and possible limited utility shelving. In addition, some heavy gage metal caps and trim are figured at the tops of perimeter concrete push walls. For now, the heavy gage metal caps are figured to extend over interior spaces where the push walls curve, kink and recess in the north and northwest tipping level areas. Allowances for a baler and hopper, a weigh scale, two compactors and an emergency back-up generator are covered in Item #2.26.

With the bulk of the Transfer Station building being an unheated space, a dry fire sprinkler system is figured throughout. Premiums are included for working at high elevations above the tipping floor level, and to provide coverage at a large canopy and roof overhangs. In addition, most of the tipping floor area is figured to receive coverage from a dust suppression system. No dust suppression is figured in the tunnel level spaces.

Plumbing work in the Transfer Building includes provisions for some embedded trench drains, some floor drains & hose bibs, eyewashes, hose reels and large cast-iron downspouts. In addition, plumbing fixtures and rough-in is figured to accommodate two small restrooms in the lower level Driver's Lounge. A \$20,000 allowance for a compressor and air lines is also included.

HVAC work in the Transfer Station is for the most part limited to providing mechanical exhaust, with sensors and motorized dampers, along with relatively simple controls. In addition, per the updated tunnel level floor plan, a large underground vent is now figured between the HPU Room and west Transfer Trailer Stalls, assumed to consist of a 12' round heavy gage pipe culvert with a set of louvers at each end. As previously stated, the bulk of the Transfer Station space is figured to be unheated. Simple heat is only figured in the Lounge, and perhaps the enclosed Storage, Maintenance, HPU and Equipment rooms.

High efficiency industrial type lighting and open space power distribution is figured throughout the Transfer Storage building at both levels. In addition, an apportioned \$160,000 allowance is included to provide a solar panel system to generate supplemental power, with the balance of the allowance covered in Item #2.23. Finished and semi-finished electrical premiums are included in the Lounge, Storage, Maintenance, HPU and Equipment rooms. Provisions are included for open space fire alarm, surge protection, security & monitoring and other low voltage systems. The main electrical panels and switchgear are assumed to be housed in the Administration area, and are apportioned. Power and hook-up premiums are included at large equipment. Provisions for an emergency back-up generator are covered in Item #2.26.

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.22) RECYCLING BUILDING WING:</b>					
Backhoe foundation trenching.	32.00	Hr	\$100.00	\$3,200.00	Allowance for foundations.
4'x2' main floor grade beams.	240.00	LF	\$120.00	\$28,800.00	At three sides of Recycling Building perimeter.
Add for cast-in-place stem wall extensions.	500.00	SF	\$30.00	\$15,000.00	At north & south sides to tunnel level foundation, 50 LF x 10' avg.
12" thick reinforced slabs complete.	5,100.00	SF	\$11.00	\$56,100.00	On-grade slabs, with two layers of rebar, less hopper lid.
Add for slab base and vapor barrier.	5,100.00	SF	\$1.00	\$5,100.00	Assumes 6" gravel base and 15 mil barrier, less hopper lid.
6' high interior push walls.	1,500.00	SF	\$28.00	\$42,000.00	Allowance at main floor interior perimeters, 250 LF x 6'.
Add for interior push wall.	192.00	SF	\$28.00	\$5,376.00	At interior portion in north third of Recycling space, 32 LF x 6'.
Foundation coordination & pick-up.	1.00	LS	\$4,500.00	\$4,500.00	Allowance, including footing steps.
\$29.64					
			<i>Recycling Building Foundation:</i>		\$160,076.00
Set east end gable columns & beams.	7.00	Ea	\$400.00	\$2,800.00	At east side of building, roughly 28' high on average.
Set roof purlins, openings, cladding and trim.	5,400.00	SF	\$3.20	\$17,280.00	Standing seam within building footprint, no vinyl clad insulation.
Set wall purlins, openings, cladding and trim.	5,200.00	SF	\$4.20	\$21,840.00	Roughly 240 LF x 30' on average at three sides, less push walls.
Add for interior demising wall installation.	704.00	SF	\$6.00	\$4,224.00	At interior portion in north third of Recycling space, 32 LF x 22'.
Main frames, columns & beams FOB.	5,400.00	SF	\$3.00	\$16,200.00	Allowance for long spans.
Roof purlins, openings, cladding & trim FOB.	5,400.00	SF	\$7.00	\$37,800.00	Assumes 24 gage standing seam w/ Kynar 500, galv. purlins.
Wall purlins, openings, cladding & trim FOB.	5,200.00	SF	\$8.00	\$41,600.00	24 gage cladding, trim, plates, covers & purlins, less push walls.
Add for interior demising wall FOB.	704.00	SF	\$4.00	\$2,816.00	Purlins, column and trim, 32 LF x 22'.
Metal building submittals, shipping & pick-up.	1.00	LS	\$8,000.00	\$8,000.00	Allowance.
\$28.25					
			<i>Metal Building Shell:</i>		\$152,560.00
Possible new eyebrow canopies, complete.	160.00	SF	\$55.00	\$8,800.00	Possibly any north & south walls, 2 @ 20 LF x 4'.
Bird wire roof system w/ fall protection posts.	160.00	SF	\$4.00	\$640.00	Allowance over canopies.
\$1.75					
			<i>Exterior Building Canopies:</i>		\$9,440.00
Interior wall panel liner.	5,200.00	SF	\$9.00	\$46,800.00	Over interior face of exterior wall purlins, with possible backing.
Add for liner at interior demising wall.	1,408.00	SF	\$7.50	\$10,560.00	At both sides of demising wall purlins, 32 LF x 22' x 2.
5'x8' smoke vents.	4.00	Ea	\$3,000.00	\$12,000.00	Allowance over Recycling building, roughly 5'x8' with curbs.
Roof translucent panels, flashings & grids.	1,000.00	SF	\$10.00	\$10,000.00	Allowance, by metal building supplier, width of roof panels.
Special accent metal wall cladding.	500.00	SF	\$30.00	\$15,000.00	Allowance at selective exterior wall locations, to be specified.
Premium translucent exterior wall panels.	1,200.00	SF	\$35.00	\$42,000.00	Allowance in selective areas, a special order item.
Grated roof walkways.	200.00	LF	\$60.00	\$12,000.00	Allowance for easy access to rooftop equipment & fixtures.
Add for gutters and downspouts.	2.00	LS	\$3,400.00	\$6,800.00	At each eave with 1/4" thick steel downspouts.
Bird wire roof system w/ fall protection posts.	5,400.00	SF	\$2.50	\$13,500.00	Over Recycling building roof.
Exterior wall louvers & signage.	1.00	LS	\$4,000.00	\$4,000.00	Allowance in selected areas.
\$31.97					
			<i>Exterior Fixtures:</i>		\$172,660.00
Sealer @ exterior concrete walls.	3,400.00	SF	\$0.60	\$2,040.00	Allowance at exposed concrete surfaces.
Field paint selected steel fab interior fixtures.	1.00	LS	\$3,800.00	\$3,800.00	Allowance @ doors, bollards, selected steel & misc.
\$1.08					
			<i>Recycling Building Painting:</i>		\$5,840.00
Walk doors complete.	3.00	LS	\$1,300.00	\$3,900.00	Allowance at exteriors.
Smaller overhead doors.	672.00	SF	\$27.00	\$18,144.00	At east wall, 4 @ 14' x 12' and motorized.
Interior signage & fire extinguishers.	1.00	LS	\$2,800.00	\$2,800.00	Allowance for occupancy.
Steel pipe bollards, half 6" round, half 12".	18.00	Ea	\$600.00	\$10,800.00	Allowance in various open interior and OH door areas.
Heavy gage metal caps over push walls.	250.00	LF	\$40.00	\$10,000.00	Allowance around building perimeter.
\$8.45					
			<i>Interior Specialties &amp; Fixtures:</i>		\$45,644.00
Dry system fire sprinkler coverage.	5,400.00	SF	\$3.50	\$18,900.00	Throughout Recycling building, open and high elevation spaces.
\$3.50					
			<i>Fire Sprinkler Protection:</i>		\$18,900.00
Dust suppression system.	5,000.00	SF	\$1.30	\$6,500.00	Coverage over most of the Recycling interiors.
\$1.20					
			<i>Dust Suppression:</i>		\$6,500.00
Embedded trench drains.	1.00	LS	\$4,000.00	\$4,000.00	Allowance in Recycling building.
Plumbing waste & water rough-in.	5,400.00	SF	\$1.00	\$5,400.00	Allowance for interior waste & water lines.
Floor drains and hose bibs.	4.00	LS	\$500.00	\$2,000.00	Allowance in Recycling building.
Portable eyewash fixture.	1.00	Ea	\$2,400.00	\$2,400.00	" " " " " " " " " " " "
\$2.56					
			<i>Recycling Building Plumbing:</i>		\$13,800.00
Mechanical exhaust in transfer & loading.	5,400.00	SF	\$5.00	\$27,000.00	Fans, minimal ducts, sensors, dampers and controls.
\$5.00					
			<i>Recycling Building HVAC:</i>		\$27,000.00
General power distribution, panels & devices.	5,400.00	SF	\$2.50	\$13,500.00	Allowance in the Recycling building.
Energy efficient industrial lighting.	5,400.00	SF	\$3.50	\$18,900.00	Mostly wide open with high elevations, includes surge protection.
Fire alarm system.	5,400.00	SF	\$1.00	\$5,400.00	Allowance throughout.
Security, monitoring & low voltage systems.	5,400.00	SF	\$1.50	\$8,100.00	Allowance, relatively minor in open spaces, with misc. pick-up.
\$8.50					
			<i>Recycling Building Electrical:</i>		\$45,900.00
<b>RECYCLING BUILDING WING</b>	<b>5,400</b>	<b>SF</b>	<b>\$121.91</b>	<b>\$658,320</b>	
Add 18% for General Contractor Mark-Ups:	5,400	SF	\$143.86	\$776,818	

RECYCLING BUILDING WING narrative is listed on the next page

**RECYCLING BUILDING WING NARRATIVE**

The Recycling building is an open space that is figured to follow the same general construction methods as the new Transfer Station. A few basic differences is the Recycling does not have a lower floor level, a kinked main building frame section profile, or roof overhangs. Also, its building eave wall heights are figured to be 24' with a high roof point of 32', and its perimeter push walls are 6' high. In addition, the large majority of exterior metal wall cladding is assumed to be by the metal building manufacturer, as only 500 SF of special panels are figured.

Foundation steps are figured at the north and south sides of the Recycling Center to reach adjoining foundations at the tipper level of the Transfer Building. A 4' high foundation transition wall and interior ramp between the Self Haul and Recycling areas from the previous estimate has been deleted, as both interior slabs are now set at the same elevations. An elevated portion of slab and a floor opening within the Recycling area that is over the tunnel level hopper is covered in Item #2.21.

No permanent interior walls are shown or figured between the Self Haul and Recycling areas, but an one is included at the north third of the Recycling space, running west to east, as indicated on floor plan. The interior wall is assumed to consist of a 6' high concrete push wall at the lower portion, and a metal building framed wall above to the underside of the roof structure.

The Recycling building roof structure is figured to have a conventional long and shallow double sloped profile, with a gutter and two 4" or 6" round exterior steel pipe downspouts at each eave. Unlike the main Transfer Station building, no roof perimeter overhangs are figured. No parapet walls are figured either. A total of 20 LF of simple 4' deep eyebrow type exterior canopies are figured at both the north and south sides of the Recycling building extension. A total of three exterior hollow metal walk doors are included, along with 4-14'x12' motorized overhead sectional doors at the east wall.

No restrooms or special finishes are figured in the Recycling building space, but an interior metal liner panel is included over the inside face of exterior wall purlin framing, and at both sides of an interior metal building framed wall previously mentioned. The interior liner is not figured to extend into the west Self Haul space. Provisions are also included for some steel pipe bollards and minor occupancy specialties.

No heat is figured in the Recycling building, but mechanical ventilation and a dust suppression system is, along with dry fire sprinkler protection coverage and, a portable eyewash, some possible trench and floor drains, and some hose bibs. Electrical includes open shop type lighting with high-efficiency fixtures, surge protection and a fire alarm system.



**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.23) ADMINISTRATION BUILDING WING:</b>					
Backhoe foundation trenching.	24.00	Hr	\$100.00	\$2,400.00	Allowance for lower floor foundations.
4'x2' lower level grade beams.	60.00	LF	\$120.00	\$7,200.00	Under all lower level full height cast-in-place walls, three sides.
6" thick reinforced slabs complete.	400.00	SF	\$6.50	\$2,600.00	Allowance at lower level, on grade, a layer of rebar.
Add for slab base and vapor barrier.	400.00	SF	\$1.00	\$400.00	Assumes 6" gravel base and 15 mil barrier.
Add for elevator pit complete.	1.00	LS	\$6,000.00	\$6,000.00	Roughly 4' deep with waterproofing, but no hole casing.
Full height cast-in-place perimeter walls.	1,020.00	SF	\$29.00	\$29,580.00	12" thick with 2 layers of rebar, 60 LF x 17', three sides.
Waterproofing @ backfilled building surfaces.	1,200.00	SF	\$4.50	\$5,400.00	At subgrade walls, three sides of lower level, 60 LF x 20',
Retaining wall backfills.	600.00	CY	\$6.00	\$3,600.00	Mostly native backfill, 60 LF x 260 SF average.
Add for 2' wide gravel backfill band.	100.00	CY	\$25.00	\$2,500.00	Premium for imported gravel over native, 60 LF x 40 SF.
					<i>\$10.66</i>
					<i>Lower Floor Foundation: \$59,680.00</i>
Backhoe foundation trenching.	24.00	Hr	\$100.00	\$2,400.00	Allowance for main floor foundations.
4'x2' main floor grade beams.	150.00	LF	\$120.00	\$18,000.00	At on-grade main floor perimeters, three sides, less lower level.
6" slabs complete.	2,200.00	SF	\$6.00	\$13,200.00	At new on-grade main level areas with light rebar, less lower level.
Add for slab base and vapor barrier.	2,200.00	SF	\$1.00	\$2,200.00	Assumes 6" gravel base and 15 mil barrier.
Main floor foundation coordination & pick-up.	3.00	LS	\$4,500.00	\$13,500.00	Allowance, including tie-ins to tunnel level foundations.
					<i>\$8.80</i>
					<i>Main Floor Foundation: \$49,300.00</i>
Composite main floor structure, complete.	400.00	SF	\$25.00	\$10,000.00	Steel post & beam with decking & topping over lower level.
Second floor composite structure complete.	2,600.00	SF	\$25.00	\$65,000.00	Steel post and beam with decking and topping over main level.
Steel post & beam roof structure complete.	2,600.00	SF	\$20.00	\$52,000.00	Steel post & beam with decking, but no topping over 2nd level.
Add for braced frames and openings.	5,400.00	SF	\$5.00	\$27,000.00	Allowance at steel building structures.
Add for composite steel stair pans.	3.00	LS	\$7,000.00	\$21,000.00	One at lower level, and two at main level, with concrete topping.
Add for parapet wall premiums.	170.00	LF	\$40.00	\$6,800.00	Lateral braces at three perimeter sides of addition.
					<i>\$32.46</i>
					<i>Above Grade Building Structures: \$181,800.00</i>
Exterior finished walls complete.	4,760.00	SF	\$44.00	\$209,440.00	Framing, batts, sheathing, special cladding, GWB, 170 LF x 28'.
Add for parapet wall extensions.	1,020.00	SF	\$48.00	\$48,960.00	At three sides of perimeters, 170 LF x 6'.
Insulated single ply roofing complete.	2,600.00	SF	\$15.00	\$39,000.00	Single ply roofing, R-30 rigid, protection board, crickets, flashings.
Add for roofing drainage.	2.00	LS	\$2,500.00	\$5,000.00	Either scuppers or roof drains with overflows & steel leaders.
Add for possible Solartube skylites.	8.00	Ea	\$750.00	\$6,000.00	Allowance over Administration upper floor level.
Bird wire roof system w/ fall protection posts.	2,600.00	SF	\$2.50	\$6,500.00	Allowance over Administration roof.
Roof hatch and access provisions.	1.00	LS	\$2,500.00	\$2,500.00	Allowance.
Exterior wall louvers.	1.00	LS	\$2,000.00	\$2,000.00	Allowance in selected areas.
Exterior wall signage.	1.00	LS	\$4,000.00	\$4,000.00	Allowance.
					<i>\$57.75</i>
					<i>Exterior Finishes &amp; Fixtures: \$323,400.00</i>
Exterior curtain wall glazing.	800.00	SF	\$58.00	\$46,400.00	Primarily at main entrance area with Solarban glazing.
Exterior walk doors.	4.00	Ea	\$1,400.00	\$5,600.00	Either aluminum storefront or glazed hollow metal at main floor.
Add for automatic door opening hardware.	1.00	LS	\$2,600.00	\$2,600.00	Allowance at one exterior door leaf.
					<i>\$9.75</i>
					<i>Exterior Glazing &amp; Doors: \$54,600.00</i>
Possible new eyebrow canopies, complete.	600.00	SF	\$56.00	\$33,600.00	Architectural allowance at main & side entrances, 50 LF x 12'.
Bird wire roof system w/ fall protection posts.	600.00	SF	\$4.00	\$2,400.00	Allowance over canopy roofs.
					<i>\$6.43</i>
					<i>Exterior Building Canopies: \$36,000.00</i>
Lower level framed partitions complete.	4,200.00	SF	\$10.00	\$42,000.00	Gage framing, batts and painted GWB, 300 LF x 14'.
Upper level framed partitions complete.	4,200.00	SF	\$10.00	\$42,000.00	Gage framing, batts & painted GWB, 300 LF x 14'.
Add for furred separation walls.	4,200.00	SF	\$7.00	\$29,400.00	At lower level and Transfer tie-in wall at other levels, 300 LF x 14'.
Interior walk doors.	18.00	Ea	\$1,350.00	\$24,300.00	Based on previous preliminary floor plan layout.
Interior wall glazing.	500.00	SF	\$30.00	\$15,000.00	Allowance at tops of selected interior partitions, plus wall relites.
Glazing at Transfer Station tie-in wall.	240.00	SF	\$80.00	\$19,200.00	Allowance, 3 @ 10' x 8', fire rated glazing may be required.
Interior ceiling finishes complete.	5,600.00	SF	\$4.50	\$25,200.00	Suspended GWB, acoustic T-bar, and limited interior soffits.
Interior flooring finishes complete.	5,600.00	SF	\$5.00	\$28,000.00	Commercial carpet with rubber base used as a baseline.
Add for restroom & locker area finishes.	2,800.00	SF	\$5.50	\$15,400.00	Ceramic tile flooring and wainscot premiums.
Add for interior accents and trim.	1.00	LS	\$18,000.00	\$18,000.00	Interior allowance, with various architectural premiums.
					<i>\$46.16</i>
					<i>Interior Finishes: \$258,500.00</i>
Occupancy & restroom specialties.	1.00	LS	\$18,000.00	\$18,000.00	Allowance for fire extinguishers, signage, T.P.'s, T.A.'s and misc.
Locker room specialties.	2.00	LS	\$14,000.00	\$28,000.00	Includes metal lockers, bases and wood benches.
Various building specialties.	1.00	LS	\$12,000.00	\$12,000.00	Marker boards, window treatment, small operable wall, misc.
Interior casework allowance.	5,600.00	SF	\$4.00	\$22,400.00	Vanities, shelving, cabinets in TSO and Conference, and misc.
Interior architectural handrails.	3.00	LS	\$6,000.00	\$18,000.00	Allowance at interior stairwells.
3-stop holeless elevator, 2,500# capacity.	1.00	LS	\$135,000	\$135,000.00	Possibly an Ecospace type lift with stainless steel trim.
					<i>\$41.68</i>
					<i>Interior Specialties &amp; Fixtures: \$233,400.00</i>
Wet system fire sprinkler coverage.	5,600.00	SF	\$3.00	\$16,800.00	Throughout finished Administration spaces
Add for coverage above finished ceilings.	5,600.00	SF	\$1.00	\$5,600.00	In nearly all interior spaces.
Fire sprinkler pick-up and coordination.	1.00	LS	\$5,000.00	\$5,000.00	Allowance, includes canopy coverage.
					<i>\$4.89</i>
					<i>Fire Sprinkler Protection: \$27,400.00</i>
<b>ADMINISTRATION BUILDING WING, continues on the next page:</b>					

Quantity	Unit	\$\$\$	Est. Cost
----------	------	--------	-----------

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

<b>2.23) ADMINISTRATION BUILDING WING:</b>					
<b>(Continued from the previous page.)</b>					
Plumbing waste & water rough-in.	5,600.00	SF	\$5.00	\$28,000.00	Allowance for interior waste & water lines.
Plumbing fixtures.	24.00	Ea	\$2,200.00	\$52,800.00	Primarily in restrooms & lockers, includes a DF & cabinet sinks.
Floor drains and hose bibs.	6.00	LS	\$500.00	\$3,000.00	Allowance in restrooms, lockers & exterior walls.
Hot water tank.	1.00	LS	\$8,000.00	\$8,000.00	Assumed to be high energy efficiency and gas-fired.
Gas piping.	1.00	LS	\$5,000.00	\$5,000.00	Allowance for hot water tank and HVAC equipment.
Plumbing coordination & pick-up.	1.00	LS	\$4,000.00	\$4,000.00	Allowance.
<b>\$18.00</b>					<b>Administration Building Plumbing: \$100,800.00</b>
VAV HVAC system complete.	5,600.00	SF	\$18.00	\$100,800.00	Allowance in finished Administration areas.
Add for possible hydronic upgrades.	5,600.00	SF	\$8.00	\$44,800.00	Allowance for a small boiler, piping and accessories.
Add for mechanical controls & start-up.	5,600.00	SF	\$6.00	\$33,600.00	Assumes a high efficiency design.
<b>\$32.00</b>					<b>Administration Building HVAC: \$179,200.00</b>
Electrical panels & switchgear.	5,600.00	SF	\$4.00	\$22,400.00	Allowance, apportioned with Transfer Station area.
General power distribution & devices.	5,600.00	SF	\$6.00	\$33,600.00	Allowance in finished Administration areas.
Additional solar roof panel system.	1.00	LS	\$80,000	\$80,000.00	Allowance, used for supplementary power generation.
Building lighting & controls.	5,600.00	SF	\$7.00	\$39,200.00	Assumes high-efficiency office type lighting with some accents.
Surge & lighting protection systems.	5,600.00	SF	\$0.75	\$4,200.00	Allowance.
Fire alarm system.	5,600.00	SF	\$3.00	\$16,800.00	Allowance throughout, with panel for the entire facility.
Security & monitoring system.	5,600.00	SF	\$1.50	\$8,400.00	Primarily consisting of surveillance cameras.
Balance of low voltage systems.	5,600.00	SF	\$6.00	\$33,600.00	Allowance for extensive communications and misc.
Electrical coordination & pick-up.	5,600.00	SF	\$1.00	\$5,600.00	Allowance.
<b>\$43.54</b>					<b>Administration Building Electrical: \$243,800.00</b>
<b>ADMINISTRATION BUILDING WING</b>	<b>5,600</b>	<b>SF</b>	<b>\$312.12</b>	<b>\$1,747,880</b>	
Add 18% for General Contractor Mark-Ups:	5,600	SF	\$368.30	\$2,062,498	

The Administration wing is figured to have a 20' x 20' tunnel level access area that ties into the lower level of the south Transfer Station wall. The Administration tunnel level foundation construction is assumed to be similar to that of the Transfer Station lower level, only with a 6" slab-on-grade figured and lighter rebar. Also, a 4' deep elevator pit is included, but without a hole casing.

The Administration main floor is now figured to have a 2,600 SF footprint. Two floor levels of 2,600 SF and a 400 SF lower level makes for a total floor area of 5,600 SF, which is 400 SF less than what was figured in the previous estimate. The main floor foundation is assumed to be similar to that of the Transfer Station main floor, only with 6" thick slab-on-grades. An oversized 4' x 2' perimeter footing is still figured to act as hedge for possible short foundation stem walls and supplemental building column footings. Premiums are included for main floor foundation steps to the lower level foundation. A composite steel floor structure is figured at a portion of the main level area that sits over the tunnel level, rather than a 24" thick elevated, shored and reinforced slab figured in the Transfer Station. Composite steel construction with a concrete topping is also figured at the second floor structure. Post and beam steel construction with steel decking included is figured at the Administration roof structure, but not any concrete topping. Provisions are included for diagonal braced frames, floor and roof openings, composite steel stair pans, and parapet wall supports.

Exterior walls are figured to consist of gage framing, GWB sheathing, special metal cladding, mineral batt insulation and painted GWB interior finishes. The main and second floor heights are figured to be spaced at 14' oc, with 6' high parapet screen wall extensions included. Roofing is figured to be single ply with R-30 rigid insulation, protection board, tapered crickets, drains, leaders and sheet metal flashings. Eight Solartube skylites are included, along with bird deterrent wires and other various exterior fixtures and specialties. A total of 800 SF of exterior curtain wall glazing is figured with a Solarban premium. No supplemental windows are figured beyond the exterior curtain wall glazing at this point. One exterior entrance door leaf is figured to receive automatic door opening hardware. An eyebrow canopy with architectural premiums is figured at the main entrance.

Interior partitions are typically figured to be full height light gage framing with batts and painted GWB finishes. This includes full height furred wall between the Transfer Station and Administration tie-in areas. Premiums for interior glazing in and at top of selected partitions are included, plus for 240 SF of possible fire rated glazing at three levels of the north tie-in wall that leads to the Transfer Station area. Interior walk doors are typically figured to be pre-finished wood on hollow metal frames. Finished ceilings are figured to be a combination of suspended GWB, limited interior soffits, and acoustic T-bar. Most finish flooring is figured to be commercial carpet with rubber base. Ceramic tile floor and wainscot premiums are included in restroom and locker areas. Interior trim accents and building specialties are figured, the latter of which include metal lockers, window treatment, handrails at stairwells, plus provisions for modular casework & shelving, and a 3-stop 'holeless' type premium Ecospace elevator.

Full wet fire sprinkler protection is figured in the Administration wing. Besides commercial grade plumbing fixtures in the restroom and locker areas, provisions are included for floor drains, hose bibs, an efficient gas-fired hot water tank, a drinking fountain and cabinet sinks. HVAC in the Administration is figured to be a high-efficiency VAV system with hydronic boiler, piping and high-end mechanical controls premiums. Third party commissioning is assumed to be by others.

Electrical systems in the Administration wing consist of energy efficient lighting with accents and controls, power distribution, panels and switchgear, a fire alarm system with a panel, surge protection, supplemental solar panel collectors beyond what is figured at the Transfer Station in Item #2.21, plus security, monitoring and extensive communications systems. Provisions for an emergency back-up generator are covered in Item #2.26.



**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.24) HHW STORAGE &amp; CANOPY:</b>					
<i>(Continued from the previous page.)</i>					
Mechanical exhaust in transfer & loading.	1,600.00	SF	\$6.00	\$9,600.00	Fans, minimal ducts, sensors and controls.
HVAC in finished room areas.	700.00	SF	\$16.00	\$11,200.00	Allowance, high-efficient wall units would be cheapest if allowed.
					\$13.00 <i>HHW Storage HVAC: \$20,800.00</i>
General power distribution, panels & devices.	1,600.00	SF	\$2.50	\$4,000.00	Allowance in the HHW Storage.
Energy efficient industrial lighting.	1,600.00	SF	\$3.50	\$5,600.00	Mostly wide open with high elevations, includes surge protection.
Fire alarm system.	1,600.00	SF	\$1.00	\$1,600.00	Allowance throughout.
Security, monitoring & low voltage systems.	1,600.00	SF	\$2.00	\$3,200.00	Allowance, relatively minor in open spaces, with misc. pick-up.
Add for finished room premiums.	800.00	SF	\$12.00	\$9,600.00	Allowance in restroom, locker, break, office & swap rooms.
					\$15.00 <i>HHW Storage Electrical: \$24,000.00</i>
<b>HHW STORAGE &amp; CANOPY:</b>	<b>1,600</b>	<b>SF</b>	<b>\$608.36</b>	<b>\$973,368.00</b>	
Add 18% for General Contractor Mark-Ups:	1,600	SF	\$717.86	\$1,148,574.24	

In this estimate update, the HHW Storage is figured to be 40' x 40' in footprint, or 1,600 SF, and an adjoining south H. Occupancy space covered in Item #2.25 is figured to be 40' x 80', or 3,200 SF. The same general construction methods and building heights of the Item #2.22 Recycling Building Wing apply here. An exception is that the exterior walls at the HHW are now figured to have short parapet wall extensions. By far the biggest reason for the high \$/SF cost of the HHW Storage & Canopy is the HHW Storage includes a large canopy with a roof area that is several times larger than its 1,600 SF building footprint. Two other significant reasons are: 1) the HHW Storage has a relatively small floor area to large exterior wall area ratio, with all four sides of the building figured; and 2) the HHW Storage includes a total of 700 SF of enclosed finished areas, four rooms of which are restrooms or lockers with plumbing fixture and specialty premiums.

The Item #2.24 HHW Storage costs include the adjoining Item #2.25 H. Occupancy south wall and accompanying foundation. Also, an allowance is included in the HHW Storage foundation costs for possible containment curbs and sumps. For now the metal building shell is assumed to have a slight roof slope from west to east. Exterior building walls are assumed to be an average of 20' high to the roof, plus another 2' average height of parapet wall extensions. The building manufacturer's standard 24 gage pre-finished wall cladding is figured, with a premium included for some translucent wall panel accents, also furnished by the building manufacturer.

The drive-thru canopy between the Recycling Building and HHW Storage/H. Occupancy is now figured to be roughly 70' x 140' when counting perimeter overhang extensions above and beyond adjacent building footprint edges. This is nearly double the size of the drive-through canopy that was figured in the previous estimate. In order to clear or at least be flush with adjacent Recycling and HHW area roofs, the drive-thru canopy is figured to be about 32' high, presumably with a shallow single slope that drains from west to east. The roof structure is assumed to be supported with 10 steel columns that will presumably require some diagonal bracing and large box footings to provide adequate uplift resistance, as the canopy is figured to be at least partially independent of adjacent building structures. Also included is an allowance for a 3' high combination parapet and façade wall that goes around the canopy perimeter. In addition, a total of 200 LF of 8' high chainlink fencing with two sets of swinging gates is figured at the east drive-through area under the canopy to partially enclose an otherwise open a drum storage space. Premiums are included at the canopy for standard pre-manufactured soffit panels, dry fire sprinkler protection and lighting as well.

700 SF of finished areas are figured in the 1,600 SF HHW space, meant to include two small restrooms & lockers areas, and a break, office and swap room. These spaces are figured to be framed, furred, insulated and heated. Basic finishes are figured, with no ceramic tile in restroom or shower areas. Typical wall framing is figured to be about 10' high with gage framed lids over the rooms. An exception is that framed wall surfaces facing interior open spaces are now figured to extend full height to the underside of the roof structure. They are also figured to receive a hardened wainscot material to 8' high, most likely a heavy gage corrugated type metal cladding. If allowed, perhaps the most feasible way to heat and ventilate the finished spaces is with high-efficiency through-wall unit ventilators. A metal liner is figured over the interior faces of exterior wall purlins in open space areas that would otherwise be exposed.

**FACTORIA RECYCLING and TRANSFER STATION**

**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.25) H. OCCUPANCY BUILDING WING:</b>					
Backhoe foundation trenching.	16.00	Hr	\$100.00	\$1,600.00	Allowance for foundations.
4'x2' main floor grade beams.	200.00	LF	\$120.00	\$24,000.00	At three sides of H. Occupancy perimeter.
12" thick reinforced slabs complete.	3,200.00	SF	\$11.00	\$35,200.00	On-grade slabs, with two layers of rebar.
Add for slab base and vapor barrier.	3,200.00	SF	\$1.00	\$3,200.00	Assumes 6" gravel base and 15 mil barrier.
8' high interior push walls.	1,600.00	SF	\$28.00	\$44,800.00	Allowance at three sides of footprint perimeter, 200 LF x 8'.
Main floor foundation coordination & pick-up.	1.00	LS	\$5,000.00	\$5,000.00	Allowance, including minor containment curbing & sumps.
\$35.56					<i>Recycling Building Foundation:</i> \$113,800.00
Set main building frames.	2.00	LS	\$800.00	\$1,600.00	Roughly 40' x 20' high spans.
Set end columns.	3.00	Ea	\$280.00	\$840.00	At south end of building, roughly 20' high on average.
Set roof purlins, openings, cladding and trim.	3,200.00	SF	\$3.20	\$10,240.00	Standing seam within building footprint, no vinyl clad insulation.
Set wall purlins, openings, cladding and trim.	2,400.00	SF	\$4.20	\$10,080.00	Roughly 200 LF x 20' on average at three sides, less push walls.
Add for parapet wall premiums.	200.00	LF	\$12.00	\$2,400.00	For now figured to be roughly 2' high on average.
Metal building main frames FOB.	3,200.00	SF	\$2.40	\$7,680.00	Allowance for building frames and end columns.
Roof purlins, openings, cladding & trim FOB.	3,200.00	SF	\$7.00	\$22,400.00	Assumes 24 gage standing seam w/ Kynar 500, galv. purlins.
Wall purlins, openings, cladding & trim FOB.	2,400.00	SF	\$8.00	\$19,200.00	24 gage cladding, trim, plates, covers & purlins, less push walls.
Add for parapet wall premiums FOB.	400.00	LF	\$13.00	\$5,200.00	For now figured to be roughly 200 LF x 2' high on average.
Metal building submittals, shipping & pick-up.	1.00	LS	\$5,000.00	\$5,000.00	Allowance.
\$26.45					<i>Metal Building Shell:</i> \$84,640.00
Interior wall panel liner.	2,400.00	SF	\$9.00	\$21,600.00	Over interior face of exterior wall purlins, with possible backing.
5'x8' smoke vents.	4.00	Ea	\$3,000.00	\$12,000.00	Allowance over H. Occupancy, roughly 5'x8' with curbs.
Roof translucent panels, flashings & grids.	600.00	SF	\$10.00	\$6,000.00	Allowance, by metal building supplier, width of roof panels.
Premium translucent exterior wall panels.	800.00	SF	\$35.00	\$28,000.00	Allowance in selective areas, a special order item.
Grated roof walkways.	160.00	LF	\$60.00	\$9,600.00	Allowance for easy access to rooftop equipment & fixtures.
Add for building drainage.	2.00	LS	\$2,000.00	\$4,000.00	Allowance for gutter and downspouts.
Bird wire roof system w/ fall protection posts.	3,200.00	SF	\$2.50	\$8,000.00	Over H. Occupancy building roof.
Exterior wall louvers & signage.	1.00	LS	\$2,400.00	\$2,400.00	Allowance in selected areas.
\$28.63					<i>Exterior Fixtures:</i> \$91,600.00
Sealer @ exterior concrete walls.	3,200.00	SF	\$0.60	\$1,920.00	Allowance at exposed concrete surfaces.
Field paint selected steel fab interior fixtures.	1.00	LS	\$2,500.00	\$2,500.00	Allowance @ doors, bollards, selected steel & misc.
\$1.38					<i>Recycling Building Painting:</i> \$4,420.00
Walk doors complete.	3.00	LS	\$1,300.00	\$3,900.00	Allowance at exterior wall and to HHW area.
Smaller overhead doors.	336.00	SF	\$27.00	\$9,072.00	At two exterior openings, roughly 14' x 12' and motorized.
Interior signage & fire extinguishers.	1.00	LS	\$1,600.00	\$1,600.00	Allowance for occupancy.
Steel pipe bollards, half 6" round, half 12".	10.00	Ea	\$600.00	\$6,000.00	Allowance in various open interior and OH door areas.
Heavy gage metal caps over push walls.	200.00	LF	\$40.00	\$8,000.00	Allowance around building perimeter.
Possible minor hazardous material premiums.	3,200.00	SF	\$10.00	\$32,000.00	Allowance for possible separation tie-in wall and misc.
\$18.93					<i>Interior Specialties &amp; Fixtures:</i> \$60,572.00
Dry system fire sprinkler coverage.	3,200.00	SF	\$4.00	\$12,800.00	Throughout H. Occupancy, open and high elevation spaces.
\$4.00					<i>Fire Sprinkler Protection:</i> \$12,800.00
Dust suppression system.	2,800.00	SF	\$1.50	\$4,200.00	Coverage over most of the H. Occupancy interiors.
\$1.31					<i>Dust Suppression:</i> \$4,200.00
Embedded trench drains.	1.00	LS	\$3,000.00	\$3,000.00	Allowance in H. Occupancy.
Plumbing waste & water rough-in.	3,200.00	SF	\$1.20	\$3,840.00	Allowance for interior waste & water lines.
Floor drains and hose bibs.	4.00	LS	\$500.00	\$2,000.00	Allowance in H. Occupancy.
Portable eyewash fixture.	1.00	Ea	\$2,400.00	\$2,400.00	" " " " " " " " " " " "
\$3.51					<i>H. Occupancy Plumbing:</i> \$11,240.00
Mechanical exhaust in transfer & loading.	3,200.00	SF	\$5.50	\$17,600.00	Fans, minimal ducts, sensors and controls.
\$5.50					<i>H. Occupancy HVAC:</i> \$17,600.00
General power distribution, panels & devices.	3,200.00	SF	\$2.75	\$8,800.00	Allowance in the H. Occupancy.
Energy efficient industrial lighting.	3,200.00	SF	\$3.50	\$11,200.00	Mostly wide open with high elevations, includes surge protection.
Fire alarm system.	3,200.00	SF	\$1.00	\$3,200.00	Allowance throughout.
Security, monitoring & low voltage systems.	3,200.00	SF	\$1.50	\$4,800.00	Allowance, relatively minor in open spaces, with misc. pick-up.
\$8.75					<i>H. Occupancy Electrical:</i> \$28,000.00
<b>H. OCCUPANCY BUILDING WING</b>	<b>3,200</b>	<b>SF</b>	<b>\$134.02</b>	<b>\$428,872</b>	
Add 18% for General Contractor Mark-Ups:	3,200	SF	\$158.15	\$506,069	

The H. Occupancy is assumed to be an extension of the HHW building at its south end, with 3,200 SF of floor area now figured in a 40' x 80' footprint. Costs for its north tie-in wall are covered in the Item #2.24 HHW scope. Like the HHW, the H. Occupancy building is now figured to have 20' high on average exterior walls plus another 2' high on average short parapet wall extensions. Unlike the HHW, the entire interior of the H. Occupancy is figured to be an open space with no enclosed smaller room premiums included. An interior metal wall liner is. Because the H. Occupancy space is designated to store hazardous materials, a \$10/SF interior premium allowance is included to possibly construct a fire separation wall between it and HHW building, and for other possible minor requirements still to be addressed. No hazardous rated electrical light fixtures or equipment are figured.

**FACTORIA RECYCLING and TRANSFER STATION**  
**PREFERRED CONCEPT**

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.26) SPECIAL BUILDING PLANT EQUIPMENT:</b>					
Baler and hopper.	1.00	LS	\$120,000	\$120,000.00	Allowance in east tunnel level and Recycling area.
Add for interior weigh scale.	1.00	LS	\$80,000	\$80,000.00	Allowance under hopper, includes a slab premium.
Compactors.	2.00	LS	\$1,200,000	\$2,400,000.00	Allowance in tunnel level main loading area, to be specified.
400 KW emergency back-up generator.	1.00	LS	\$120,000	\$120,000.00	Allowance, includes day tank & ATS.
<b>SPECIAL BUILDING PLANT EQUIPMENT</b>				<b>\$2,720,000.00</b>	
Add 18% for General Contractor Mark-Ups:				\$3,209,600.00	

Special plant equipment includes allowances for a baler and hopper in the east tunnel level and Recycling area with a weigh scale underneath, two large size compactors, and a 400 KW emergency back-up generator. Excluded are pressure washers, mobile machinery, trucks, excavators and shop equipment, all of which are assumed to be by the owner if applicable.

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.27) BUILDING PHASING &amp; LOGISTICS PREMIUMS:</b>					
Temporary ticket booth.	1.00	LS	\$8,000.00	\$8,000.00	Allowance at in Hot Load area, probably a rental trailer.
Temporary weigh scales.	2.00	LS	\$25,000.00	\$50,000.00	100 ton rated, possibly rented or used, both set near booth.
Add for temporary weigh scale foundations.	2.00	LS	\$12,000.00	\$24,000.00	Allowance to accommodate temporary scales.
Temporary electrical services & hook-ups.	3.00	LS	\$5,000.00	\$15,000.00	Allowance to temporary booth and scales.
Temporary fencing and barricades.	1.00	LS	\$5,000.00	\$5,000.00	Allowance to direct traffic through temporary facilities.
Removal of temporary facilities.	1.00	LS	\$7,000.00	\$7,000.00	Includes removal of temporary utilities and scale foundations.
Temporary facility coordination & pick-up.	1.00	LS	\$3,000.00	\$3,000.00	Allowance.
			<i>Temporary Facilities:</i>		\$112,000.00
Thickened slab edge at tipping level floor.	60.00	LF	\$30.00	\$1,800.00	At south portion of east Self Haul edge beyond tunnel footprint.
Temporary waterproofing.	8,000.00	SF	\$5.00	\$40,000.00	Allowance at exposed-to-weather slabs over east tunnel area.
Temporary wall columns, purlins & cladding.	6,800.00	SF	\$9.50	\$64,600.00	At east edge of Phase 1 building at tipping level, 170 LF x 40' avg.
Remove temp. wall when no longer needed.	6,800.00	SF	\$1.50	\$10,200.00	After the Transfer Station and Recycling wing is fully enclosed.
\$36.44			<i>Temporary Transfer Building Enclosure:</i>		\$116,600.00
General building inefficiencies.	1.00	ls	\$40,000.00	\$40,000.00	Allowance to construct building facilities in two general phases.
			<i>Building Inefficiencies:</i>		\$40,000.00
<b>BUILDING LOGISTICS &amp; PHASING PREMIUMS</b>				<b>\$268,600.00</b>	
Add 18% for General Contractor Mark-Ups:				\$316,948.00	

All public traffic, both commercial and residential, is figured to come through the completed north side 30<sup>th</sup> Street entrance after the Phase 1 portion of the new Transfer Station is completed and the owner moved in. This will allow the existing transfer facility and southwest entrance to be demo'd in order to make way for new improvements in those areas, and to construct the south and east soldier pile retaining walls. In order to maintain an operating facility, allowances are included to install a temporary ticket booth and two weigh scales in the north Hot Load area. Temporary offices from the previous estimate are deemed to no longer be required since the new Administration wing should also be completed at the end of Phase 1. The temporary ticket booth is figured to be a portable modular rental, and the weigh scales either used or rentals as well, each with a 100 ton capacity. Provisions are included to provide electrical services and hook-ups to the temporary facilities, but temporary restrooms, and water & waste lines to them from the previous estimate are no longer figured to be required. An allowance is included for temporary fencing and barricades to direct the public and facility workers through the temporary facilities. As the balance of new Phase 2 buildings become completed and occupied, temporary facilities are to be removed when they are no longer needed.

The initial phase of the Transfer Station building construction is assumed to end at the tunnel level and near the west boundary of the Self Haul area at the tipping level. In order to fully enclose the Phase 1 spaces, a temporary exterior wall is figured at the east Phase 1 tipping level boundary, assumed to consist of pre-manufactured metal building type gable columns, wall purlins and utility grade cladding. A thickened slab edge is figured underneath where the temporary wall extends beyond the south side of the tunnel level space below. The temporary wall is figured to be removed after the balance of the Phase 2 Transfer Station and abutting Recycling spaces become fully enclosed. Also, a \$5.00/SF allowance is included to possibly waterproof and later remove portions of the elevated tipping level slab over the tunnel area that is east of the temporary east gable wall.

In addition to providing temporary facilities and temporary building envelop enclosures, premiums are included to account for the general inefficiencies of breaking the building construction into two phases.

## FACTORIA RECYCLING and TRANSFER STATION

### PREFERRED CONCEPT

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.28) TICKET BOOTH &amp; WEIGH SCALES:</b>					
Ticket booth foundation complete.	500.00	SF	\$20.00	\$10,000.00	An extra-thick reinforced footing/slab.
Add for protective curbing & bollards.	1.00	LS	\$5,000.00	\$5,000.00	Allowance around ticket booth perimeter.
Ticket booth shell complete.	500.00	SF	\$140.00	\$70,000.00	Allowance for either a pre-fab or field built structure & interiors.
Possible plumbing fixtures & rough-in.	1.00	LS	\$9,000.00	\$9,000.00	Allowance for a possible restroom and cabinet sink.
HVAC complete.	1.00	LS	\$6,000.00	\$6,000.00	Most likely thru-wall units with supplemental exhaust.
Electrical complete.	1.00	LS	\$12,000.00	\$12,000.00	Allowance, including monitoring and equipment hook-ups.
Add for utility services & hook-ups.	240.00	LF	\$120.00	\$28,800.00	Allowance for power, communications, domestic & sanitary.
				<i>Ticket Booth:</i>	<i>\$140,800.00</i>
New 100 ton weight scales.	2.00	LS	\$60,000.00	\$120,000.00	Allowance at each side of new ticket booth.
Add for slabs and foundations.	4.00	LS	\$18,000.00	\$72,000.00	At two new scales and two future ones.
Temporary fills at future scales.	2.00	LS	\$5,000.00	\$10,000.00	Allowance for temporary paving over in-place foundations.
Add for electrical services & hook-ups.	2.00	LS	\$11,000.00	\$22,000.00	Allowance to new scales from Administration.
Conduit services to future scales.	2.00	LS	\$800.00	\$1,600.00	Allowance, locations assumed to be next to new weigh scales.
				<i>Weigh Scales:</i>	<i>\$225,600.00</i>
<b>TICKET BOOTH &amp; WEIGH SCALES:</b>				<b>\$366,400.00</b>	
Add 18% for General Contractor Mark-Ups:				\$432,352.00	

Based on the proposed updated Preferred Concept site plan, a new ticket booth at the re-constructed southwest entrance is figured to be no larger than 500 SF. Provisions for an extra thick and heavily reinforced slab pad are included, along with an allowance to provide protective perimeter curbing and steel pipe bollards. For now, the ticket booth is figured to be either field constructed or pre-manufactured. Provisions for utility services and hook-ups are figured at the ticket booth, including domestic and sanitary to accommodate a possible restroom and casework sink. No fire sprinkler protection is figured to be required at the booth, and HVAC is assumed to primarily consist of thru-wall units.

Two new 100 ton weigh scales are figured, one each at the entrance and exit sides of the new ticket booth, with provisions for concrete foundations and electrical services and hook-ups included. In addition, an allowance for two other adjacent weigh scale foundations are included with electrical conduit services. A \$5,000 per future scale allowance is also included to provide temporary paving fills within the foundation perimeters. The supplemental scales themselves and electrical hook-ups are figured to be future work and outside the estimate scope.

	Quantity	Unit	\$\$\$	Est. Cost	
<b>2.29) FUEL ISLAND FACILITY COMPLETE:</b>					
New 10,000 gallon above ground tank.	1.00	LS	\$75,000.00	\$75,000.00	A pre-cast tank set in place.
Add for concrete slab & hold-down premiums.	1.00	LS	\$6,000.00	\$6,000.00	Allowance on top of a 12" thick concrete paving pad.
Add for fuel dispenser, pump & accessories.	1.00	LS	\$15,000.00	\$15,000.00	Allowance for new fuel tank.
Add for electrical services & hook-ups.	1.00	LS	\$16,000.00	\$16,000.00	Allowance, with service coming from new Transfer Building.
				<i>Fuel System:</i>	<i>\$112,000.00</i>
Fuel canopy complete.	2,000.00	SF	\$45.00	\$90,000.00	Assumes a 50' x 40' free-standing canopy
Add for large footing and bracing premiums.	4.00	LS	\$3,000.00	\$12,000.00	Allowance under each corner of canopy.
Add for fire sprinkler fire protection.	2,000.00	SF	\$4.00	\$8,000.00	Allowance under new fuel canopy.
Add for fire service line to canopy.	240.00	LF	\$40.00	\$9,600.00	Allowance from new Transfer Building to fuel canopy.
Electrical work at canopy.	1.00	LS	\$5,000.00	\$5,000.00	Allowance for soffit lighting and power outlets.
Protective curbing, pads & pipe bollards.	1.00	LS	\$3,500.00	\$3,500.00	Allowance at and around fuel station area.
				<i>Building Structures:</i>	<i>\$128,100.00</i>
<b>FUEL ISLAND FACILITY COMPLETE:</b>				<b>\$240,100.00</b>	
Add 18% for General Contractor Mark-Ups:				\$283,318.00	

A new above ground 10,000 gallon pre-cast fuel tank is included near or at a 'Fuel Island' noted at the north side of the proposed Preferred Concept site plan. Provisions for a single dispenser, pump and accessories are included. See the Options on Page 2 to provide an additional 10,000 gallon pre-cast fuel tank with pad and accessories.

A free-standing canopy, now indicated to be about 40' x 50' rather than the 20' x 20' that was in the previous estimate, is figured over the fueling station area, assumed to be of field or pre-manufactured steel construction with off-the shelf type soffit panels, tubular steel where exposed, fire sprinkler protection and soffit lighting. A fire sprinkler line extension is included from the new Transfer Building to the fuel canopy. In addition, provisions are included for curbing, steel pipe bollards and electrical hook-ups.





Appendix H-2:      Factoria Recycling and Transfer Station  
Preliminary Annual Operating and Maintenance Cost Estimate  
(Full Operations Beginning in Year 2015)



**FACTORIA RECYCLING & TRANSFER STATION**  
**ANNUAL OPERATION AND MAINTENANCE ESTIMATE SUMMARY**  
**Full Operations Beginning in Year 2015**

		2011	2015
TRANSFER STATION	Labor	\$1,077,000	\$1,212,164
	Building and Site Maintenance	\$225,000	\$253,238
	Equipment Operation and Maintenance	\$74,375	\$83,709
	Utilities	\$132,000	\$148,566
	Rolling Stock Fuel	\$5,000	\$5,628
	<i>SUBTOTAL OPERATION &amp; MAINTENANCE</i>	\$1,513,375	\$1,703,304
	Contingency (15%)	\$227,006	\$255,496
	<b>TOTAL ANNUAL OPERATION &amp; MAINTENANCE COST</b>	<b>\$1,740,381</b>	<b>\$1,958,799</b>
	ANNUAL UNIT COST FOR 127,000 TONS	\$13.70	\$15.42
	ANNUAL UNIT COST FOR 324,000 TONS	\$5.37	\$6.05

Notes:

1. All costs except unit cost rounded to nearest thousand dollars
2. Costs escalated from 2011 to 2015 using 3% per year; total escalation factor 1.1255

**FACTORIA RECYCLING & TRANSFER STATION**  
**PRELIMINARY ANNUAL OPERATING and MAINTENANCE COST ESTIMATE**  
**(Full Operations Beginning in Year 2015)**

**LABOR**

Job Classification	Quantity	\$/hr <sup>1</sup>	hrs/yr <sup>(2)</sup>	Annual Cost
Transfer Station Operator (TSO)	8	\$63.15	1820	919,464
Scale Operator	2	\$43.27	1820	157,503
<b>Subtotal</b>				<b>\$1,077,000</b>

**Notes:**

- (1) Includes 52.05% overtime, shift premiums, FICA, L&I, retirement, and medical/dental flex benefit factor.  
(2) Assume employees work A and B shifts, 7/10 shifts

**BUILDING AND SITE MAINTENANCE**

Item	Quantity	Units	Unit Price	Annual Cost
Routine Building and Site Maintenance <sup>1</sup>	45,000,000	\$	0.5%	\$225,000.00
<b>Subtotal</b>				<b>225,000</b>

**Notes:**

- (1) Assumes 0.5% of facility construction cost excluding mobile equipment.

**EQUIPMENT OPERATING AND MAINTENANCE COSTS**

Item	Quantity <sup>(5)</sup>	Units	Unit Price	Annual Cost
Front End Loader #1 <sup>(1)</sup>	3400	Hours	\$6.50	\$22,100
Front End Loader #2 <sup>(1)</sup>	1700	Hours	\$6.50	\$11,050
Yard Waste Compaction Crane <sup>(2)</sup>	850	Hours	\$4.50	\$3,825
Yard Tractor <sup>(3)</sup>	1700	Hours	\$5.50	\$9,350
Compactor #1 <sup>(4)</sup>	3400	Hours	\$5.50	\$18,700
Compactor #2 <sup>(4)</sup>	1700	Hours	\$5.50	\$9,350
<b>Subtotal</b>				<b>\$74,375</b>

**Notes:**

- (1) Assume one loader operates continuously during station operating hours and second loader operates half time  
(2) Assume cranes are operated 25% of station operating hours  
(3) Assume tractor is operated 50% of station operating hours  
(4) Assume one compactor operates continuously during station operating hours and second compactor operates half time  
(5) Total station operating hours per year are 3,400 hours (65.5 hrs/week x 52 weeks)

**UTILITIES**

Item	Quantity	Units	Unit Price	Annual Cost
Electricity				
Customer Charge	12	months	\$25.00	\$300
Delivery Demand Charge	2000	kw-Hr/mo	\$6.00	\$12,000
Energy Charge	90000	kWHr/	\$0.08	\$6,750
Phones (Mobile and Fixed)	12	months	\$125.00	\$1,500
Storm & Surface Water	12	months	\$6,168.22	\$74,019
Drainage (sewer)	12	months	\$2,950.76	\$35,409
Water	12	months	\$168.80	\$2,026
<b>Subtotal</b>				<b>\$132,000</b>

**ROLLING STOCK FUEL COSTS**

Item	Quantity	Units	Unit Price	Annual Cost
Front End - Loader <sup>(1)</sup>	1,133	gal	\$2.50	\$2,833
Yard Tractor <sup>(2)</sup>	680	gal	\$2.50	\$1,700
<b>Subtotal</b>				<b>\$5,000</b>

- (1) Front-end loader fuel usage = 4.5 gall/hr  
(2) Yard tractor fuel usage = 2.5 gall/hr