Engineering Report

SYRACUSE HAULERS TRANSFER STATION FACILITY EXPANSION

Town of Dewitt, Onondaga County, New York

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Table of Contents

EXHIBITS

1.0 INTRODUCTION

1.1 BACKGROUND

Syracuse Haulers Waste Removal, Inc., hereafter referred to as “SH” or “Syracuse Haulers”, provides solid waste, recyclables, and construction & demolition debris collection services for municipal, institutional and commercial customers in Central New York. SH is currently operating at 6223 Thompson Road in the Town of Dewitt, Onondaga County, New York. The site is owned by Haulers Facility, LLC. All materials are transported to approved disposal sites. *(See a list of Sites in the “Appendix” ”DISPOSAL SITES.”)* The facility is currently permitted as a C&D Transfer Station and a Recyclables Handling and Recovery Facility, under Part 360 Permit No. 7-3126-00070/00039.

SH uses the facility to provide for consolidation and transfer of loads of source-separated recyclables, non-putrescible commercial solid wastes, non-putrescible bulk wastes (appliances, furniture, and carpeting) and construction & demolition debris. *(See Table in Facility Manual Section 2.1 ”WASTE ACCEPTABLE – UNACCEPTABLE” for details).* Wastes are delivered to OCRRA registered recycling facilities. This service is used by Syracuse Haulers, and is selectively offered to private clients; no public access is allowed.

1.2 FACILITY UPGRADES

The facility has been upgraded to add capacity, to improve the efficiency of material handling, and to increase the percentage of material recovered. The upgrade involves adding a “Green Machine” recycle sorter and additional bale storage capacity. The “Green Machine” dry waste sorter automates processing of single stream recyclables for recovery of separated waste streams. Syracuse haulers is now constructing a new 25,175 square foot building to provide additional storage and enable the facility to increase recycling capacity. The possible future installation of an additional baler to serve as a backup for the existing baler in case of a breakdown and to handle peaks in the rate of incoming materials is also included in this application. Details of the improvements and resulting increases in facility capacity are given in Section 2 below.

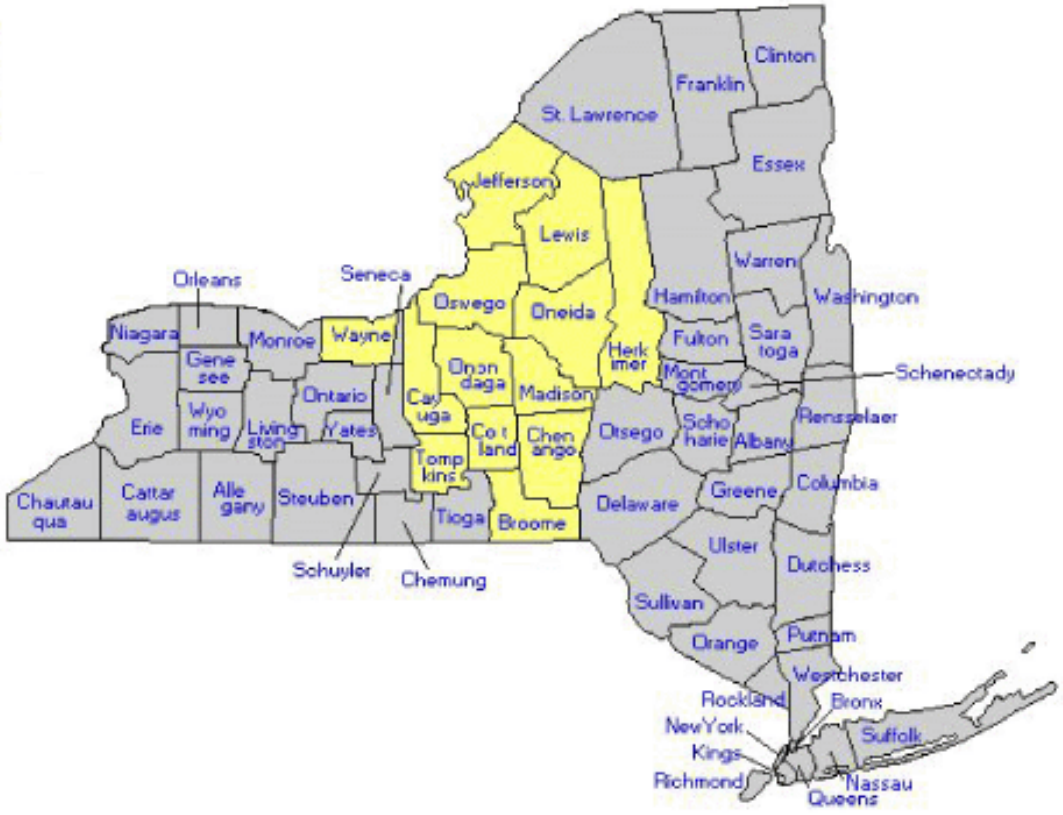
2.0 WASTE CHARACTERIZATION

2.1 QUANTITY, COMPOSITION AND SOURCE OF WASTE

The transfer station receives wastes from Syracuse Hauler's major commercial customers. Approximately 90% of wastes are generated within Onondaga County, although Syracuse Haulers does service customers throughout Central New York. (See the counties shaded in yellow on the “Regional Map” below.” These are the counties served by SH.) Where permitted by law in a given county, certain recyclable wastes may be brought to the Syracuse facility. Since the cost of transportation is high, solid waste from distant counties is unlikely to be brought to the Syracuse, NY

Transfer Station for processing. Such wastes are likely to be disposed of in the counties in which they are generated. Please refer to the following table, “Waste Customers, Compositions, and Origins” for a listing of Syracuse Haulers’ major customers, along with the expected waste composition of each.

In addition to the commercial customers, Syracuse Haulers bids on contracts to provide solid waste collection services to local municipalities in Onondaga County and nearby municipalities in surrounding counties. SH now or in the past has provided services to the Towns of Manlius, Geddes, Cicero, Clay, and the Village of North Syracuse in Onondaga County and the Village of Homer in Cortland County. None of this municipal solid waste is processed at the transfer station, other than special pick-ups of non-putrescible items such as couches.



Waste Customers, Compositions and Origins

CUSTOMER	C & D	METALS	TIRES	CARDBOARD/PAPER	SINGLE STREAM
CARDINAL HEALTH				X	
PROPERTY MANAGEMENT FIRMS	X	X	X	X	X
SYRACUSE UNIVERSITY				X	X
ONONDAGA COUNTY BID				X	X
3 MAJOR AUTO DEALERS			X		
CONSTRUCTION COMPANIES	X	X		X	
MAZLO RITE AID				X	
TESSY PLASTIC				X	
ENVIRONMENTAL SERVICES POST OFFICE				X	

NOTE: All Onondaga County sourced MSW and incidental MSW is delivered to the OC system for disposal

2.2 DISPOSAL QUANTITIES BY TYPE OF WASTE

The following table shows actual 2023 disposal volumes (by material type) as a baseline. The maximum total daily amount of material based on incoming loads is currently 416 tons/week.

TABLE
2023 Materials Processed - Tonnages

Outbound Commodity	January	February	March	April	May	June	July	August	September	October	November	December	Total	Percent
C&D	470.26	598.71	679.85	648.46	803.6	750.56	756.03	608.12	589.29	564.92	597.06	456.66	7,523.52	34.8%
WOOD	33.9	0	18.08	16.53	24.26	24.3	16.59	16.61	12.71	0	32.44	16.41	211.83	1.0%
BRUSH	10	13.45	16.28	11.98	11.98	16.52	11.08	13.2	16.73	12.54	12.59	11.81	158.16	0.7%
TIRES		15.23	0	19.85	0	17.79	17.01	0	15.25	0	14.77	32.93	132.83	0.6%
SINGLE STREAM	72.26	50.55	59	82.68	22.62	61.86	57.87	88.65	53.75	63.78	71.17	38.55	722.74	3.3%
BALED CARDBOARD	466.9	521.78	521.13	531.77	538.16	487.91	420.26	575.88	566.69	557.99	582.56	503.64	6,274.67	29.0%
HARDPACK	123.11	72.72	94.48	121.41	123.2	145.72	98.46	124.63	140.39	154.908	139.59	119.56	1,458.18	6.7%
NEWSPAPER[1]	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
POSTAL MIXED	65.79	43.92	42.37	40.66	20.37	21.51	66.02	0	63.59	61.1	59.45	59.45	544.23	2.5%
SORTED OFFICE	37.95	20.59	62.32	41.93	20.16	43.2	0	66.33	21.12	35.97	21.06	42.6	413.23	1.9%
PLASTIC[2]	-	-	-	-	-	-	-	-	-	-	-	-	43.68	0.2%
METAL[2]	-	-	-	-	-	-	-	-	-	-	-	-	34.70	0.2%
RESIDUE	478.31	345.66	444.44	355.29	386.52	414.01	327.46	355.80	339.04	220.14	232.93	195.10	4,094.70	18.9%
Monthly Total	1,758.48	1,682.61	1,937.95	1,870.56	1,950.87	1,983.38	1,770.78	1,849.22	1,818.56	1,671.35	1,763.62	1,476.71	21,612.47	
Average Tons per Week	397.08	420.65	437.60	436.46	440.52	462.79	399.85	417.57	424.33	377.40	411.51	333.45	415.62	

Notes: 1. None processed in 2023
2. Only annual totals given

Using its 2023 disposal volumes (by material type) as a baseline, Syracuse Haulers offers the following projections of monthly and annual throughput for calendar years 2023 through 2028.

Received Tons	Mixed C&D	Co-Mingled Paper	Single Stream	Tires	Plastic	Total
2023 Total	9,364	8,631	723	133	43	18,894
2023 Monthly Average	780	719	60	11	4	1,571
2024 Total	11,500	9,494	795	146	47	21,936
2024 Monthly Average	958	791	66	12	4	1,828
2025 Total	12,650	10,443	875	161	52	24,129
2025 Monthly Average	1,054	870	73	13	4	2,011
2026 Total	13,915	11,488	962	177	57	26,542
2026 Monthly Average	1,160	957	80	15	5	2,212
2027 Total	15,307	12,636	1,059	195	63	29,196
2027 Monthly Average	1,276	1,053	88	16	5	2,433
2028 Total	16,837	13,900	1,164	214	69	32,116
2028 Monthly Average	1,403	1,158	97	18	6	2,676

Note that Wood and Brush are currently not being sent to OCRRA for recycling and are included in residue totals.

2.3 ENVIRONMENTAL SETTINGS AND IMPACTS

2.3.1 Regional Setting

The site is located in the existing industrial corridor along Thompson Road between James Street and Carrier Circle, as shown on Exhibit A – Vicinity Plan. The surrounding zoning is industrial. No portion of the property lies within the 100-year flood plain, based on the FEMA FIRM Panel # 360973-0228, November 4, 2016. The site has a special use permit from the Town of Dewitt to operate as a Material Recycling Facility. A survey of the site is shown as Exhibit F.

2.3.2 Existing Facility and Proposed Improvements

The floor plan of the facility including the proposed new building is shown on Exhibit B. Exhibit C1 shows the east and north elevations of the building.

The portion of the facility originally used as the sole tipping area is a metal building with a concrete floor. This existing floor is generally in good condition. Bin storage is located along the sides of the tipping floor. The area is roofed but there is a 9-foot open area between the top of the walls and the underside of the roof along the rear half of the tipping area. This along with the 30' by 15' sliding door area that is open during operation provides good ventilation, so that a mechanical exhaust removal system is not needed. A baler and short term bale storage area during baler operation is located to the west of the tipping area.

Recent improvements to the facility include adding additional longer term storage for bales awaiting shipment and a new recyclables sorter (the “Green Machine”). This expands the portion of the original building used for transfer and handling of recyclables from 28,750 square feet to 50,220 square feet.

The additional bale storage is located northwest of the baler. Bales stored in that area are loaded onto trucks for shipment at Dock 2. As discussed in section 3.4 this provides slightly over 400 tons of storage capacity.

The location for the Green Machine sorter is to the north of the original tipping area. Access to the concrete tip floor for the sorter is by a ramp to an overhead door on the east face of the building (see Exhibits B and C1). This access is labeled as Bay 2. The 14 ft wide by 12 ft high overhead door is kept open during operation of the sorter to provide ventilation. A 15’ x 24’ concrete pit provides space for the bottom of the conveyor for the sorter *(See the Appendix “Green Machine Print” Dwg. No. 174386-APP*). The addition of the Green Machine allows the facility to increase capacity from the currently permitted 12,400 tons per year to 28,500 tons per year to allow the facility to handle the increase in material flows projected for 2028.

The new building proposed is to be a 141 ft x 170 ft concrete and metal building with five overhead doors and four man doors. A concrete slab floor will be installed at the same elevation as the east end of the ramp down from Bay 2 in the existing building. Ventilation will be provided by opening the overhead doors. A 15 ft x 75 ft covered decline ramp will be located south of the new building between the new building and the existing ramp to Dock 1. The existing overhead door 10 at the northeast corner of Building No. 6A will be closed and relocated to a new dock in a small addition at the corner of Building No. 6A just across from the northwest corner of the new building. A sump pump will be

installed at the bottom of the ramp connected to the sanitary sewer. The existing storm drain in the area of the new building will be removed and plugged. A floor plan and elevations for the proposed building are shown in Exhibits B, C2 and C3.

The baler to be installed if required will be located north of the sorter area in a portion of the building previously used for a chip dryer which has been removed. An adjacent area now used to store miscellaneous materials not related to the transfer facility operation will be cleared and used for bale storage. Ventilation for these areas will also be provided by opening overhead doors as required.

2.3.3 Existing Utilities

As shown on Exhibit E -- Utility Locations, water service for the site comes from the Town of Dewitt Thompson Road Water District, which is fed by the Onondaga County Water Authority. A fire service line will be added to serve the sprinkler system for the new building. A sanitary sewer runs from the site out to Thompson Road, which is served by the Ley Creek Trunk Sewer flowing to the Syracuse Metropolitan Treatment Plant. Gas service and electrical service are provided by National Grid. As depicted on Exhibit E, numerous easements crisscross the site

2.3.4 Stormwater

The facility currently has a SPDES permit, No. NY0110311, issued to Syracuse Haulers Waste Removal, Inc. Stormwater from the site flows in two directions. A small portion of the site sheet flows to the north. The bulk of the site is served by a storm sewer system that flows out to the existing storm sewers along Thompson Road. Both these systems eventually reach the South Branch of Ley Creek, which is located several thousand feet north of the site.

2.3.5 Traffic

Entrance to the site is via a driveway shared with Metalico, Inc., from the existing traffic light on Thompson Road at Exeter Street. Access to the site for truck traffic is readily available via Thompson Road (State Route 635) from the Thruway to the north at the Carrier Circle exit, from Route 690 to the south from the Thompson Road exit, and for local traffic along Thompson Road from the local thoroughfares Kinne Street, Burnet Avenue, James Street (State Route 290), Erie Boulevard (State Route 5), and Court Street (Route 298). Because of the significant cut in employment at Carrier Corp., Thompson Road currently operates well below capacity, and traffic to the site does not have any significant impact on levels of service. Per a traffic study done for the new Byrne Dairy that also uses the traffic signal at Exeter, the only level of service concern is for the westbound through/left turn movement from 4 to 6 PM.

Based on the current mix of wastes received, traffic volumes into and out of the site are currently as follows for the transfer station operation (incoming delivery vehicles also leave the site and outgoing transportation vehicles also enter the site):

Daily traffic at the facility includes:

Incoming Recycling Trucks
1. Commercial Recycling: average per day = 9

2. Roll-Off Recycling: average per day = 11

Incoming Trucks with C&D
1. Roll-Off Trucks: average per day = 8
2. Special Pick-up Trucks: average per day = 1

Out-going Transfer Trucks
1. Scheduled Tractor Trailers for recycling: 6-8 per week
2. On-Call Tractor Trailers for recycling: 5-7 per week
3. Single Stream 100cy Trailer: 3 per week
4. C&D 100cy Trailer: 3 per week

MSW Collection Trucks
1. Trucks that leave & return once per day: average per day = 14

Other Vehicles
1. Employee Vehicles: 96 employees twice/day = 192
2. Visitor & Delivery Vehicles: average per day = 10
3. Service Vehicles: average per day = 5

As shown on Exhibit D - Traffic Pattern and Parking Plan, the facility provides parking for 96 passenger vehicles, 46 Trash and/or Recycling trucks, 7 Tractors, and 14 Roll-Offs.

2.3.6 Noise

The nearest residential noise receptors are over 1000 feet from the site. Given the industrial nature of the surroundings and the presence of heavy truck traffic along streets in the vicinity, operation of this facility as a transfer station does not impact local noise levels. Noise will in any case be limited to the operating hours of 6:00 AM to 5:00 PM Monday-Friday and 7:00 AM to 12:00 PM Saturday.

2.3.7 State and Local Solid Waste Management Plans

In accordance with Policy DSH SW-05-01 Solid Waste Management Policy Guidance, this facility conforms to Section 27-0106 of the ECL. After materials are delivered to the tipping floor, readily recyclable materials are removed and stored for delivery to an approved MRF. All burnable materials that cannot be economically or technically recycled are delivered to the OCCRA steam plant to produce energy. All other materials are disposed of at an approved facility.

This facility also assists in meeting the goals of the ONONDAGA COUNTY UPDATED COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN, MODIFIED DECEMBER 1993. As stated in Section 5 - Integrated Solid Waste Management System, p. 5-11a, “Efforts will be made to maximize the effectiveness of the recycling hierarchy for solid waste management.”, and as further outlined in Section 5.02.4- Industrial Waste, p. 5-18, “Private management of these materials will continue in the manner described in the following Sections, according to the preferred hierarchy for solid waste management”. This facility conforms to that hierarchy as discussed above. Specifically, the facility includes a number of the steps given in Appendix D of the Comprehensive Plan to further recycling, such as (p.46) “Removal of metals from the waste stream will increase the efficiency of the waste-to-energy plant”; (p. 88) “Construction and Demolition Debris, rubble, wood, and metal. The substantial

reduction of this material from the waste stream can be accomplished through processes which separate mixed wastes of this type"; (p. 134) "Increase efforts to develop markets for recyclable materials ".

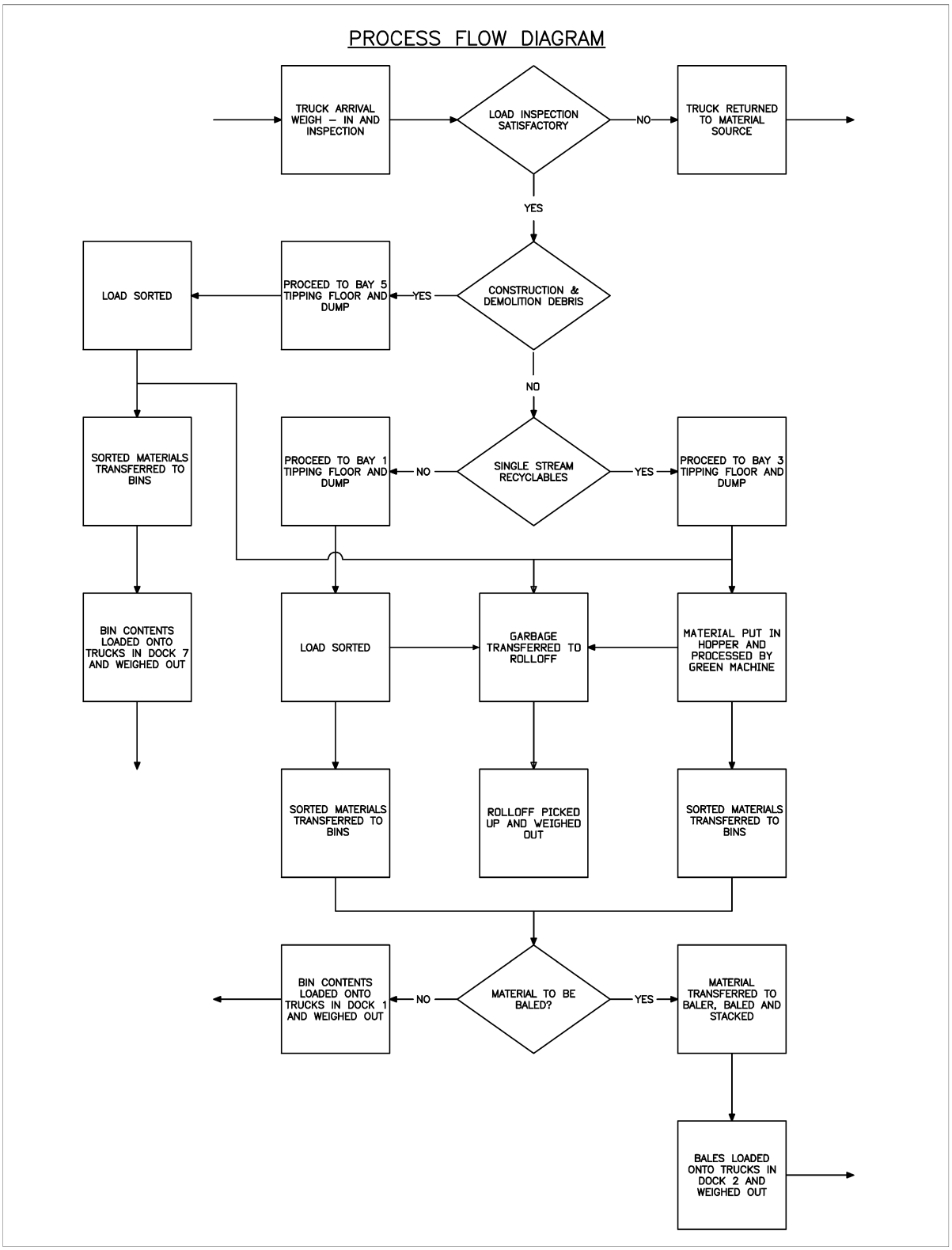
3. FACILITY OPERATION

Syracuse Haulers possesses the necessary equipment and staff to load and transport materials. *(See the Appendix "Equipment List "* to view the array of loaders, trucks and containers that Syracuse Haulers has available.) Additionally, independent firms have been contracted to provide equipment and staff to support its activities in the event of emergency or equipment breakdowns.

A radiation detector, a Carbon Monoxide meter and a decibel meter are available to monitor the site. Stormwater outfall monitoring is performed by an outside contractor. Personal Protective Equipment is available as described in the Facility Manual. The Facility Manual also contains details on Syracuse Haulers' policies, procedures, work practices and staff training, which pertain to the everyday operation and maintenance of the Transfer Station.

Syracuse Haulers vehicles are granted access to the facility, because the organization can tightly control what types of wastes are accepted and brought into the facility, what trucks and other equipment are permitted to use the Facility, and which specially trained employees make judgments on what wastes are accepted and on what wastes are rejected or separated from approved wastes.

The following Process Flow Diagram shows the overall material flows for the facility.


PROCESS FLOW DIAGRAM
TRUCK ARRIVAL WEIGH – IN AND INSPECTION
LOAD INSPECTION SATISFACTORY
NO
TRUCK RETURNED TO MATERIAL SOURCE
YES
CONSTRUCTION & DEMOLITION DEBRIS
YES
PROCEED TO BAY 5 TIPPING FLOOR AND DUMP
LOAD SORTED
NO
SINGLE STREAM RECYCLABLES
NO
PROCEED TO BAY 1 TIPPING FLOOR AND DUMP
SORTED MATERIALS TRANSFERRED TO BINS
YES
PROCEED TO BAY 3 TIPPING FLOOR AND DUMP
BIN CONTENTS LOADED ONTO TRUCKS IN DOCK 7 AND WEIGHED OUT
LOAD SORTED
GARBAGE TRANSFERRED TO ROLLOFF
MATERIAL PUT IN HOPPER AND PROCESSED BY GREEN MACHINE
SORTED MATERIALS TRANSFERRED TO BINS
ROLLOFF PICKED UP AND WEIGHED OUT
SORTED MATERIALS TRANSFERRED TO BINS
MATERIAL TO BE BALED?
NO
BIN CONTENTS LOADED ONTO TRUCKS IN DOCK 1 AND WEIGHED OUT
YES
MATERIAL TRANSFERRED TO BALER, BALED AND STACKED
BALES LOADED ONTO TRUCKS IN DOCK 2 AND WEIGHED OUT

3.1 TRAFFIC AND MATERIALS CONTROLS

3.1.1 Signage

Signage is present as described in the Facility Manual to direct incoming traffic across the scale and to the tipping area. The traffic route is shown in Exhibit D.

3.1.2 Truck Scale

As shown in Exhibit D a truck scale is located in the parking area north of the entrance driveway. All incoming and outgoing material is tracked through the scale software, which is integrated into SH Company software.

A radiation detector is integrated within the Syracuse Hauler's truck scale, over which all incoming loads to the Transfer Station must pass. A detection alarm sounds if a truck containing radioactive materials passes over it. Should the alarm sound, the truck is instructed to drive off the scale platform and to stop at the base of the scale. No other truck traffic is allowed to enter the scale until the truck is released.

Once the truck is stopped in the designated location, the driver is instructed to exit the truck and to walk onto the scale, in order to determine if the driver is the source of the radiation. (The driver could be the source of radiation, as some medical procedures involve the use of radioactive isotopes, and these may linger in human tissue for days after a procedure is performed.)

If it is determined that the driver is, indeed, a source of radiation, then another driver is enlisted to drive the truck back over the scale (and pass through its radiation detection unit), in order to rule out any other radiation contamination within the load. If none is present, the truck is allowed to immediately proceed to the untarping area of the Transfer Station, with the original driver in the seat.

In the event that the material on the truck is found to be the source of the radiation, the driver is instructed to return the contaminated load to its originator, following the procedure and using the forms for returning the contaminated load as given in the Radioactive Waste Detection section of the Emergency Response Plan

3.2 UNLOADING AND PROCESSING

3.2.1 Incoming Loads - General

Syracuse Haulers schedules the transportation of materials into the transfer station, with the characterization of the loads being known prior to arrival. Trucks are directed to the appropriate area for delivery of loads. This is Bay 1 for C&D, pure cardboard loads, or other single material loads, and Bay 2 (the Green Machine location) for loads of mixed paper or single stream recyclables.

All material handling is "no touch". Foreign objects are usually removed from the core materials by attendants who use hand tools (rakes and tongs). For instance, trash bags intermixed with cardboard are removed with rakes and tongs; metals found in mixed paper loads are removed with rakes and

tongs, etc.

Any incidental putrescibles are immediately removed from the tipping floors by a wheel loader and emptied into dumpsters that are positioned outside the walls of the transfer station. Later, the dumpsters are emptied into a Syracuse Haulers' rear load garbage truck for transport to the OCRRA waste burner, for its disposal. (Note: Contingency plans exist for the clean-up and disposal of hazardous materials should they enter the waste stream of the transfer station. Please refer to "Emergency Response Plan">Section "2. Hazardous Materials" for details.)

3.2.2 Bay 1 Incoming Materials

Typically, any given load that is being delivered to Bay 1 floor will consist of the same material. Due to separation activities at the origin of the loads, Syracuse Haulers can state with a high degree of confidence that "cardboard loads" will be comprised predominantly of cardboard. The same can be said for C&D loads.

Materials directed to Bay 1 are dumped onto the tipping floor. An equipment operator uses a wheel loader (currently a Komatsu WA70-5) with a bucket attachment to disperse the materials for a visual inspection by attendants. Any foreign materials that may be present are separated and removed from the core materials.

Segregated foreign materials are scooped-up from the tipping floor by the wheel loader and are moved to designated containers and/or bins. Trash bags are removed to a dumpster for off-site disposal at an approved facility. Metal found is pushed into a designated "metals bin" within the Transfer Station. Intermixed plastics are separated and moved to a "plastics bin". Likewise, this procedure is followed for other materials.

For cardboard loads, after the core materials are deemed to be free of foreign objects, they are scooped-up by a wheel loader with a bucket attachment and moved into a storage bin until they are baled.

3.2.3 Recyclables Sorter Incoming Materials – Bays 2 and 3

Mixed recyclables loads are processed on site using a Green Machine recycle sorter.

All Commercial recycling trucks are scheduled to dump recyclables at the tipping area near Bay 3 in the new building, across from Bay 2 in the existing building next to the Green Machine area. As trucks cross the scale, they radio into the Loader Operator for permission to dump the load. After the load is dumped, foreign materials are removed as described above for Bay 1. Recyclables are temporarily stored in Bin E if required, and then transferred through Bay 2 with a wheel loader and put into the hopper that feeds the Green Machine. Incidental MSW is placed into a rolloff container near the tipping area that will be moved to the new building as shown on Exhibit B. Trucks proceed to the scale and weigh out. The process from truck dumping to loader scooping material into the hopper is approximately 5 minutes. Once the material is lifted into the hopper, it is automatically run through two large studded drums that flatten / breakdown the material. The hopper discharges to a conveyor belt in a pit, evenly distributing the material on the conveyor belt that carries material up to the sorter. Workers extract any MSW and other items that might jam up the line, as well as anything that won't fit through the sorter.

The first chute is for MSW that has been removed from the conveyor belt. A second chute drops all glass, plastic and metal. The third chute drops assorted papers and pieces of cardboard. The very end of the Green Machine drops all remaining cardboard.

The removed commingled recyclables (glass, plastic, metal and any fiber that passed through) are placed in a storage bin. All the paper & cardboard is placed in a storage bin for baling the next morning.

3.2.4 Baler Operation

Materials processed and stored in bins on the previous day are transferred by front end loader to the conveyor pit for the baler. Material is carried by the conveyor to the feed hopper for the baler. Finished bales (approximately 30” high by 45” wide by 60” long) are picked up by a forklift and taken to the bale storage area where they are stacked to await shipment.

3.2.5 Construction and Demolition Debris

Incoming C&D will be delivered to the new building through Bay 5 and dumped at the tipping area near that bay. Just as for other materials, loads will be inspected for incidental MSW which will be placed into one of the rolloffs. Unprocessed C&D will be stored in Bin C as required. C&D will then be sorted and further conditioned as may be needed. Steel and other metals will be placed in Bin B and salvaged wood will be placed in Bin A. One of the rolloffs will be available for other materials that may be salvageable. Processed C& D will be stored in Bin D.

3.3 LOADING AND SHIPMENT

3.3.1 Outgoing Loads - General

Based upon the quantity and nature of the materials, different containers and transport vehicles are used. No other tipping floor activity is scheduled or allowed while a container or trailer is being loaded for transport. To ensure safe operations, trucks that are waiting to dump their loads of materials onto the tipping floor are not allowed entrance into the transfer station to unload their trailer or container until the stated loading is complete. Other housekeeping activities and staff access are restricted while the aforementioned loading is taking place. All loading of outgoing containers and trailers is done at pre-determined times of the day, to minimize traffic flow conflicts into and out of the facility.

3.3.2. Outgoing Processing by Material

Steel and metals are loaded into a 15-30 yard Roll-Off Container and transported by Roll-Off Truck to a local metal recycling facility. The designated roll-off containers are currently located outside the walls of the transfer station, and will be moved to the new building. They are loaded by scooping-up the materials from its bin locations inside the facility with a wheel loader and emptying them into the roll-off container.

Single Stream recyclables (plastics, tin, glass combinations) are scooped up by a wheel loader from the bin locations in the transfer station. Adjacent to the bins within the transfer station is a concrete ramp, which leads to a sunken loading dock. The wheel loader scoops up material from its bin location, navigates up the ramp and deposits its payload into an awaiting transfer trailer below (live floor or walking floor). This is repeated until the transfer trailer is full. The material is transported off-site daily by semi-tractor to an OCRRA designated vendor (currently Waste Management). The average load is 18 tons. Before the transfer trailer leaves the grounds of the facility, it must be tarped to secure the contents of the trailer. (Please refer to Exhibit B in the binder for locations of the bins, ramp and loading dock.)

Cardboard and/or mixed paper and separated plastics are loaded into the receiving pit of the baler. Finished bales are picked up with a towmotor and moved to the bale storage areas, then stacked on trucks at Dock 2 for transportation to a recycling facility. If the new baler is constructed, bales from the storage area for that area will be loaded at Dock 4 for transportation.

The processed Construction and Demolition Debris and the sorted steel and wood will be taken by wheel loader to Dock 7 for loading into transfer trailers. The rolloffs for MSW and miscellaneous materials when full will be picked up and taken out of Bay 4.

The Green Machine is run from 6:30 – 1:30 daily, clean-up is from 1:30 – 3:30.
The work crew consists of:
1 Supervisor
3 Laborers
1 Loader Operator

Baling of material is done every morning from 4:00 am – 7:00 am
The work crew consists of:
1 Supervisor
1 Loader Operator
1 Forklift Operator

C&D processing is carried out throughout the day depending on arrival of materials.
The work crew consists of:
1 Supervisor/Operator
1 Operator
1 Sorter

3.4 PROCESSING AND STORAGE CAPACITY

The facility currently has the capacity to process 74 tons of waste per day, or 444 tons per week, as detailed in the process rate calculations below. The maximum rates of many of the operations in the process flow are greater than the current rate limiting step, and the rate of most of the steps can be easily increased by increasing the hours per week spent on that processing step.

Note that currently the capacity limit is based on baling capacity. There is ample bin storage to provide operating capacity for all of the materials that are not baled. The current baling capacity of 226.8 tons per week would be exceeded sometime in 2026 based on current projected increases in material flows. (The facility capacity of 444 tons per week is based on the current proportion of total material that is being baled.) The baling capacity can be increased by running it for more hours per day. There is also room within the existing building to add a second baler if required or desired to provide backup. The baler location and material flows for a second baler are shown in Exhibit B. With the addition of the second baler the processing capacity will be increased to 888 tons per week, again based on the current proportion of material that is being baled. Details of the processing rates are given in section 3.4.2.

3.4.1 Traffic and Parking

The materials processing rate projected for 2028 is 32,616 tons or 627 tons/wk. Averaged over 60 hours/wk this is 10.5 tons/hr. At an average of 7.5 tons per truck this is 1.4 loads per hour x 4 trips per load (incoming raw material and outgoing processed material with two trips per truck – entering and exiting), or trips per hour. This compares to existing traffic entering and exiting the intersection with Thompson Road of 135 vehicles per hour in the morning peak and 212 vehicles per hour in the evening peak. As noted above, peak traffic use at the transfer station does not coincide with morning or evening rush hour, so traffic does not represent a limiting factor.

3.4.2 Processing Rates

Processing Rate calculations are given below. They are all based on average vehicle capacity using current facility operation data – a change in mix of materials received could change the rates given. Baling operations are currently carried out from 4am to 7am, four days per week with up to six days a week if necessary. Sorting of single stream recyclables is currently scheduled for 6 hours per day, 5 days a week.

Scale Operations

Truck arrival, weigh-in and inspection: 5 minutes/truck
Delivery truck weigh-out: 2 minutes/truck
Lag between trucks: 1 minute/truck
Total 8 minutes/truck, 60 hours/week x 7.5 tons/truck = 3,375 tons/week

Dumping, sorting and transfer – incoming miscellaneous materials at Bay 1

Truck proceeds to tipping floor and dumps: 10 minutes/truck
Load sorted: 15 minutes/truck
Load transferred to bins: 10 minutes/truck
Total 35 minutes/truck, 30 hours/week x 7.5 tons/truck = 385.7 tons/week

Baling operations

Current Operation:
Materials transferred to baling area, baled and stacked:
3 hours/day x 6 days/week, 18 bales/hour x 1,400 lbs/bale = 226.8 tons/week

Bales loaded onto trucks:
Total 30 minutes/truck, 6 hours/week x 21 tons/truck = 252 tons/week

Note that the baling and bale loading capacities can easily be increased by running the operations more hours per day.

Single Stream materials processing at Bay 3 (Green Machine)

Incoming material dumped on tipping floor, picked up by loader and placed in Green Machine hopper: 15 minutes per load, 10 hours/week x 7.5 tons/truck = 300 tons/week

Material sorting by Green Machine: 15 tons/hour machine capacity, 30 hours/week = 450 tons/week.

Separated material loaded onto Syracuse Haulers trailer and weighed out (known unladen weights): 30 minutes per trailer,10 hours/week x 15 tons/trailer = 300 tons/week.

These capacities can also be easily increased, if necessary adding a second shift for running the Green Machine

Dumping, sorting and transfer – construction and demolition debris at Bay 5

Truck proceeds to tipping floor and dumps: 10 minutes/truck
Load sorted: 15 minutes/truck
Load transferred to bins: 10 minutes/truck
Total 35 minutes/truck, 30 hours/week x 7.5 tons/truck = 385.7 tons/week

The total projected incoming materials to Bay 1 in 2028 is approximately 14,000 tons/yr (total output less C&D and single stream) or 270 tons/week, compared to a capacity of 385.7 tons/week. The total projected materials to the baler (co-mingled paper, including cardboard) is 13,900 tons/yr or 267 tons/week, compared to a capacity of 226.8 tons/week. As noted above the baling capacity can easily be increased. The total project materials coming to Bay 3 (the Green Machine) is estimated at 7200 tons/yr or 139 tons/week, well below the capacity of 300 tons/week. Note that the incoming materials to the Green Machine go to different outgoing material streams after processing, so the total incoming materials do not correspond to categories of outgoing materials. The total projected C&D processed in 2028 is 16,837 tons/yr or 324 tons/week, compared to the capacity of 385.7 tons/week.

3.4.3 Storage Capacity

As shown in Exhibit B, storage is provided in bins near Bay 1, in bale storage west and northwest of the Green Machine, and in large bin areas in the new building. Additional bale storage will be provided in the northeast corner of the existing building if a second baler is installed. Details of the bin storage capacities are given in the *Appendix* "Storage Bin Capacities by Material". As noted in that table, some of the bins are left unassigned to a particular material to provide flexibility for day-to-day variability in materials delivered. The following table summarizes available storage and gives the number of days storage by material. Bin storage can be reallocated if the mix of materials changes significantly to provide additional flexibility.

Total available storage for various materials does provide a potential limit to facility operating capacity because of lag between delivery of incoming materials and pickup of processed materials. As shown in the following Table and detailed in the storage bin capacity chart in the appendices, the overall capacity with the new building is 1740 tons (total bin capacity less capacity allocated for tools and supplies). Based on the current mix of materials received and the current allocation of storage a minimum of one day's storage is provided at the projected 2028 materials processing rate. Note that there is flexibility in which bins are used to store particular materials, so that a change in mix of materials received will not significantly affect this capacity.

MATERIAL STORAGE CAPACITIES

	BIN STORAGE						
Material	Designated Bins	Material Baled	Total Cu. Yd	Density	Total Tons	2028 Tons/Day	Bin Capacity
		After Sorting	of Storage	Tons/ cu. Yd.	of Storage		in Days
C&D	9 to 11,D	N	866	0.242	209.5	45.00	4.7
WOOD	4,A	N	357	0.0845	30.2	1.27	23.7
BRUSH	Flex Storage*	N	92	0.125	11.5	0.95	12.1
SHEETROCK	3	N	143	0.2335	33.4	0.35	96.3
TIRES	8	N	105	0.135	14.2	0.70	20.3
SINGLE STREAM	5**	N	276	0.131	36.1	3.80	19.5
CARDBOARD	19,20	Y	288	0.15	43.3	32.89	1.3
HARDPACK	***	Y		0.15	0.0	7.67	1.0
NEWS 6/8 Mixed	14	Y	231	0.29	67.0	1.17	57.3
POSTAL MIXED	18	Y	156	0.18	28.0	2.86	9.8
SORTED OFFICE	13,16	Y	211	0.18	37.9	2.17	17.5
PLASTIC	27	Y	110	0.015	1.7	0.23	7.2
STEEL	12,B	N	319	0.1125	35.9	0.18	233.9
NON-FERROUS	17	N	206	0.03	6.2	Incl. with steel	
FLEX STORAGE	2,7,27,28,31-33		760	0.1	76.0		
	*		Days of capacity for Brush based on smallest flex bin				
	**		Days of capacity for Single Stream includes 50% of Flex				
	***		Hardpack stored under Green Machine and baled next day				
	BALE STORAGE						
			# of Bales	Tons/Bale	Total Tons	2028 Tons/Day	
2028 tons of baled material includes items noted above							
Available Bale Storage		Existing	585	0.7	409.5	46.99	8.7
		w/new baler	999		699.3		14.9
			TOTAL STORAGE		1739.5 TONS		

4. EMERGENCY RESPONSE PLAN

Please refer to the document "Emergency Response Plan (ERP)" for details on Syracuse Haulers' policies, procedures, work practices and staff training, which pertain to emergency response situations for the proposed Transfer Station.

5. CLOSURE PLAN

Closure activities include labor, equipment and transportation that are required to remove materials from the facility and take them to alternative recycling/disposal facilities in Onondaga County. Materials

in storage would be loaded into transfer trailers with a wheel loader and transported to another approved disposal site. While revenue realized from the sale of cardboard, steel, mixed recycling etc., exceeds tipping costs for disposal of all other materials, to be conservative, these amounts have not been included in the projection of the cost of closure. After materials are removed, the transfer station would be swept and otherwise cleaned of any remaining debris, and the facility doors would be locked. (There is no equipment to dismantle.)

See the following table below (next page) for details regarding closure costs.

CLOSURE COST ESTIMATE - TRANSFER STATION 6223 THOMPSON ROAD
SYRACUSE HAULERS WASTE REMOVAL INC.

Cost based on removal and disposal of total storage capacity of materials

Material	Total Ton	Cost per Ton	Disposal Cost	Haul Charge	# of Hauls	Hauling Cost	Total Cost	Disposal Site/ Facility
C&D	209.5	$ 50.00	$ 10,475.00	$265.00	4	$1,060.00	$11,535.00	Camillus
Wood&Brush	41.7	$ 25.00	$ 1,042.50	$250.00	6	$1,500.00	$2,542.50	OCRRA
Sheetrock	33.4	$ 50.00	$ 1,670.00	$1,000.00	2	$2,000.00	$3,670.00	Camillus
Tires	14.2	$ 80.00	$ 1,136.00	$1,015.00	1	$1,015.00	$2,151.00	SGS Recovery
Single Stream	36.1	$ 90.00	$ 3,249.00	$255.00	3	$765.00	$4,014.00	WM
Cardboard	43.3	$ 90.00	$ 3,897.00	$200.00	11	$2,200.00	$6,097.00	WM
Hard Pack	9.36	$ 90.00	$ 842.40	$275.00	8	$2,200.00	$3,042.40	WM
Newspaper	67	$ 60.00	$ 4,020.00	$275.00	1	$275.00	$4,295.00	WM
Postal Mix	28	$ -	$ -	$275.00	1	$275.00	$275.00	CPG
Sorted Office	37.9	$ -	$ -	$800.00	2	$1,600.00	$1,600.00	CPG
Plastic	1.7	$ 60.00	$ 102.00	$265.00	1	$265.00	$367.00	Empire
Steel	35.9	$ -	$ -	$100.00	1	$100.00	$100.00	Metalico
Non-Ferrous	6.2	$ -	$ -	$0.00	1	$0.00	$0.00	Metalico
Flex Storage	76	$ 105.00	$ 7,980.00	$265.00	8	$2,120.00	$10,100.00	WM
Bales	699.3	$ (50.00)	$ (34,965.00)	$800.00	20	$16,000.00	($18,965.00)	Brokerage
Labor	**Rate**	**Total Hrs**					**$30,823.90**	
Laborer	$27.50	64	$1,760.00					
Laborer	$27.50	64	$1,760.00					
Laborer	$27.50	64	$1,760.00					
Equipment Operator	$45.00	64	$2,880.00					
Supervisor	$55.00	64	$3,520.00					
		TOTAL	**$11,680.00**					
Sub-Total	$42,503.90							
15% Contingency	$6,375.59							
Grand-Total	**$48,879.49**							
9/17/2024								

Labor rates based on NYSDOL Prevailing Rate Schedule for Onondaga County for Transfer Station Operation, including supplemental benefits and Employer FICA.