

1. Abstract of the Program

Hanover County's Department of Public Works operates a central Transfer Station that serves the public and private needs of the locality. The Transfer Station is a lift and load-design facility in which waste is first tipped on a concrete floor and then placed in a transfer trailer by a wheeled loader. Staff recognized that a significant portion of the waste stream would be classified as construction demolition debris and could be recycled. A pilot project was initiated with a local construction demolition debris recycler using 40-cubic yard roll-off *open-top* containers provided by the vendor. Materials accepted included solid waste produced or generated during construction, remodeling, repair or demolition of pavements, houses, commercial buildings, and other structures. Construction demolition debris includes but is not limited to carpet, lumber, wire, sheetrock, broken brick/*block*, shingles, glass, pipes, concrete, paving materials, and metal and plastics if the metal or plastics are part of the construction materials or empty containers for such materials.

After the pilot project began, staff recognized that the sorting process could be improved if a collection bunker was constructed. A concrete bunker was constructed immediately adjacent to the tipping floor. The pilot project proved to be successful, recycling an average load of seven tons of construction



demolition debris *per load*. Hanover County is a member of the Central Virginia Waste Management Authority (CVWMA) and the CVWMA procured a regional contract(s) for its 13 members following the pilot project.

2. The Problem/Need for the Program

Hanover County recognized that there was a significant amount of construction demolition debris being delivered to its *Route 301* Transfer Station. Local markets had recently developed that provided an opportunity to recycle this waste rather than transferring it to a regional landfill. A local construction demolition debris recycling company, ACE Recycling, was contacted to determine its interest in pilot project. Hanover County Department of Public Works staff visited the ACE recycling plant and parameters of the pilot were developed.

ACE Recycling *provided* a 40-cubic yard open-top roll-off container at the Transfer Station. The container was placed immediately adjacent to the tipping floor. The Transfer Station is a lift and load operation which makes identification and separation of materials much easier than a compactor or direct dump system. In a lift and load operation, waste is dumped into a tipping floor where it is picked up and placed in a transfer trailer.

Transfer Station staff were trained on materials that would be accepted by the contractor. Initially construction demolition debris was collected off the transfer station floor using the wheeled loader bucket. This program was to be an addition to the inert waste

separation, clean wood grinding and reuse programs already in place at the Transfer Station. These waste materials could be included in the construction demolition debris waste stream but were already being addressed economically. The pilot proved that the program could be successful in separating a significant amount of construction demolition debris for recycling. The pilot's cost was \$27.50 per ton for transportation and processing.

3. Description of the Program

The Hanover County Department of Public Works decided that it would implement an aggressive construction demolition debris recycling program. Staff was extensively trained to identify materials that could be included in the program. Particular emphasis was placed on payload. Any long-term program would be based on the cost for a service pull that included all fees. This approach places financial responsibility directly on the County. The program was designed in a number of specific steps:

- The Department of Public Works constructed a concrete bunker that allows for customer as well as tipping floor separation. This bunker which is immediately adjacent to the tipping floor provides easy access for jail inmate laborers to a stockpiling location.
- The wheeled loader operator places and compacts the construction demolition debris into the 40-cubic yard open-top roll-off container which is provided by ACE recycling. Once the container is full, a service request is forwarded to the vendor and pick up is scheduled.
- The pilot lasted from September 12, 2009 to April 27, 2010. A total of 292 tons were collected and 234 (82 percent) tons were recycled.

- Hanover County is a member of the Central Virginia Waste Management Authority (CVWMA) and therefore, is able to participate in its regional programs. Hanover County requested that the CVWMA procure construction demolition debris recycling services for its 13 member jurisdictions.

An overview of the CVWMA procurement is shown below:

Central Virginia Waste Management Authority

Request for Proposals (RFP)

Collecting, Transporting and Recycling Construction and Demolition Debris (CDD)

CVWMA RFP 10-46

1. Background Description: The Central Virginia Waste Management Authority (CVWMA) is a regional public service authority created pursuant to the provisions of the Virginia Waste and Water Authorities Act, **§15.2-5100**, *et seq.*, to assist its thirteen member jurisdictions in developing and implementing effective solid waste management, waste diversion and recycling programs through contracts with the private sector. Member jurisdictions include: the Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent, Powhatan, Prince George, the Town of Ashland, and the Cities of Colonial Heights, Hopewell, Petersburg and Richmond. The members that elect to participate in CVWMA programs execute a Special Project Service Agreement that authorizes the CVWMA to direct the contractor to provide the covered services to the participating Local Jurisdiction. Certain of those jurisdictions have expressed an interest in the CVWMA exploring

contractual arrangements for collecting, transporting and recycling construction and demolition debris at various sites throughout the CVWMA service area. Those jurisdictions that ultimately decide to execute a Special Project Service Agreement for the potential contract are considered “Participating Jurisdictions.” The successful Offeror for the purpose of negotiating a contract shall be referred to as “Contractor.”

- 2. Project Description:** Through this procurement, the CVWMA seeks proposals to provide construction and demolition debris recycling services. Offeror’s must submit to the CVWMA sealed responses (“Response” or “Proposal”) to this Request for Proposals, (RFP) for Collecting, Transporting and Recycling Construction and Demolition Debris to be provided as needed after the execution of the Contract with the successful offeror(s) and Special Project Service Agreements with the Participating Local Jurisdictions. Responses must be received no later than 2:00 p.m., January 14, 2010 by the CVWMA at its Administrative Offices located at 2100 West



Laburnum Avenue, Suite 105, Richmond, Virginia 23227. An offeror may be an individual, partnership, corporation, limited liability company, other legal entity or combination of the above. The offeror ultimately selected (“Contractor”) shall be responsible for providing containers, transportation, compliance with all applicable laws and regulations and operation of the CDD Recycling Program. This procurement seeks proposals for providing open-top containers and hauling and processing service for used CDD collected at staffed sites throughout the CVWMA region. Contractor

will be responsible for compliance with all applicable laws and regulations as well as for logistics as outlined below or included in the ultimate contract. The potential contract awarded as a result of this procurement will be a “requirements” contract, with no quantities guaranteed.

The CVWMA awarded two contracts from the procurement and Hanover County established a long-term program based on the agreement. Hanover County has a goal of recycling five (5) percent of the waste it receives through this program.

4. The Cost of the Program

Hanover County will pay \$220 per pull for each roll-off container under the CVWMA contract. The containers have averaged 8.6 tons per service pull in the month of April for a projected cost of \$25.58 per ton. Obtaining good density is the key to the program’s economics. Paying by the load rather than the ton enables the County to control costs. Hanover County pays \$27 per ton for all municipal solid waste taken to the regional landfill. A Diversion Report from ACE Recycling is shown on the following page:



Diversion Report

Customer: Hanover County Public Works
Job Name: Transfer Station
Location: 7301 Courtland Farm Road, Hanover, VA 23069

Customer #	Date	Ticket #	Material	Net Tons	Tons Recycled	Diversion Rate
1056	9/12/2009	4780	Mixed C&D	7.78	6.07	78%
1056	9/18/2009	4957	Mixed C&D	5.96	4.95	83%
1056	9/23/2009	5112	Mixed C&D	8.47	6.86	81%
1056	10/5/2009	5474	Mixed C&D	6.81	5.38	79%
1056	10/9/2009	5654	Mixed C&D	6.8	5.51	81%
1056	10/16/2009	5899	Mixed C&D	7	5.74	82%
1056	10/23/2009	6134	Mixed C&D	5.25	4.41	84%
1056	11/3/2009	6435	Mixed C&D	8.05	6.84	85%
1056	12/3/2009	7166	Mixed C&D	6.61	5.42	82%
1056	12/15/2009	7457	Mixed C&D	9.67	8.12	84%
1056	1/5/2010	7842	Mixed C&D	8.23	7.08	86%
1056	1/13/2010	8101	Mixed C&D	7.23	5.93	82%
1056	1/20/2010	8266	Mixed C&D	6.69	5.29	79%
1056	1/26/2010	8411	Mixed C&D	9.34	7.57	81%
1056	2/15/2010	8817	Mixed C&D	8.43	7.00	83%
1056	2/23/2010	9029	Mixed C&D	9.02	7.58	84%
1056	3/1/2010	9174	Mixed C&D	7.56	6.20	82%
1056	3/8/2010	9333	Mixed C&D	8.41	6.73	80%
1056	3/10/2010	9400	Mixed C&D	9.31	7.54	81%
1056	3/16/2010	9558	Mixed C&D	10.12	8.20	81%
1056	3/18/2010	9625	Mixed C&D	8.51	7.23	85%
1056	3/24/2010	9786	Mixed C&D	4.83	3.96	82%
1056	3/26/2010	9856	Mixed C&D	8.68	6.94	80%
1056	3/29/2010	9935	Mixed C&D	9.57	7.75	81%
1056	4/2/2010	10063	Mixed C&D	7.18	6.03	84%
1056	4/5/2010	10123	Mixed C&D	9.5	7.79	82%
1056	4/6/2010	10147	Mixed C&D	12.37	10.27	83%
1056	4/10/2010	10326	Mixed C&D	8.86	7.71	87%
1056	4/12/2010	10372	Mixed C&D	8.3	7.22	87%
1056	4/13/2010	10390	Mixed C&D	7.58	5.76	76%
1056	4/16/2010	10516	Mixed C&D	7.16	5.58	78%
1056	4/19/2010	10608	Mixed C&D	13.76	11.83	86%
1056	4/20/2010	10634	Mixed C&D	6.93	5.47	79%
1056	4/22/2010	10726	Mixed C&D	7.15	5.65	79%
1056	4/26/2010	10826	Mixed C&D	8.96	7.35	82%
1056	4/27/2010	10846	Mixed C&D	5.52	4.69	85%
				291.60	239.64	82%

BREAKDOWN

	<u>Mixed</u>	<u>Clean</u>	<u>Total</u>
Donation/sale	26.24		26.24
Cardboard	9.04		9.04
Carpet	12.36		12.36
Ceiling Tile	0.35		0.35
Drywall	10.50		10.50
Metal	40.00		40.00
Aggregate	44.03		44.03
Plastic	0.87		0.87
Donation/sale	0.02		0.02
Wood	96.23		96.23
Non-recyclable	<u>51.96</u>		<u>51.96</u>
TOTAL	291.60	0.00	291.60



5. The Results/Success of the Program

The program has been a great success. Waste materials that were previously landfilled are now being recycled. The model of a centralized center where separation takes place helps to maintain the quality controls necessary for the program's success. With over 100 tons recycled in April 2010 alone, the program's future as a green initiative that makes economic sense is extraordinarily promising. Hanover County believes that its model will create an even more substantial budget benefit where tipping fees are higher.

