Sunnyvale Smart Station
Material Recovery Facility
Revised May 30, 2006

Proposed Process Flow Description.

The incoming MSW material shall be processed starting from the tipping floor through dual conveyor in-feed lines C-100 & C-200. As the feed stream elevates to an enclosed pre-sort station via C-101 & C-201, bulky items shall be removed manually and dropped onto reversible conveyors underneath the sort room which in turn deposit the material into self dump hoppers positioned at each end of each conveyor. The items to be removed are:

C-700 ----- chunks of concrete compiled into rolling bins by sorters and dropped through the first row of chutes once the bin is filled.
C-701 ----- rejects like carpet, tires, clothing, leather, etc.
C-702 ----- lumber, wood pallets, large limbs & stumps, etc.
C-703 ----- bulky metals such as bicycles, pots and pans, toasters, etc.
C-704 ----- large corrugated boxes by which the only material conveyed into a walking floor for eventual baling.

After pre-sort, the remaining feed stream shall be fed into the trommels to cut open the bags and separate the materials into three fractions; -2", "middlings" and "oversize". The first section of the trommels shall collect the -2" falling through the holes onto the belly conveyors (C-106 & C-205) and transport the material by a series of conveyors into roll-off containers staged on the north side of the facility adjacent to the loading dock. Prior to load-out of the -2", E-500 magnet installed above C-501 head pulley will capture any ferrous entrained in the feed stream and be conveyed via C-504 for storage into the ferrous "walking floor" bin. Load out conveyor C-503 is reversible to fill either roll-off to keep the system running continuously. The (-9") "middlings" falling off onto belly conveyors C-107 & C-206 shall be fed onto V-700 by way of C-706 & C-707 for further size separation. V-700 shall make two cuts of -9"/+5" and -5" fractions.

The -9"/+5" will go over V-700 and conveyed into a splitter box to reduce burden depth for effective sorting. Under the splitter box are C-709 & C-710 (reversible) to either split the material onto C-711 & C-712, or send all material onto one sort conveyor at times of low throughput. Materials to be sorted from C-711 & C-712 are shown on drawing PM-1. Magnets E-700 & E-701 positioned over the end of the sort conveyors will pick up and discharge ferrous on to C-505 for storage into C-726 walking floor. The remaining trash will continue on to the existing main trash load out conveyor C-601.

The +9" stream from the trommels shall go to C-105 & C-204 respectively for manual sorting of recyclables identified on drawing PM-1. The walking floors under the +9" sort room are existing to be re-furbished and re-used into the new system.

The -5" fraction falling through V-700 disc openings shall be collected and conveyed via C-718 & C-719 to feed the secondary screen V-701 to separate and form two fractions of -5"/+2" and -2" streams.

The -5"/+ 2" stream shall be discharged over V-701 to feed magnet E-300 and the eddy current separator G-300 for removal of ferrous and non-ferrous mechanically. The non-ferrous material collected by G-300 shall proceed to G-301 for further clean-up. The ferrous picked up by E-300 shall be deposited into a self dump hopper located on the floor near the pre-sort station.

The -2" material shall fall through V-701 openings onto belly conveyor C-720 and dumps onto C-501 to join the -2" stream.

The combined residue from G-300 and G-301 shall be transported via C-405 to C-601 for off-site disposal.

The collected recyclable materials deposited into walking floors and push-through bunkers under the sort rooms shall be baled alternately by a two-ram baler B-800 via pit conveyors C-800 and C-801.