

MEMO

Discussion / Action Item #: 7



Meeting Date: July 21, 2023

To: Board of Directors
From: Senior Engineer, David Ramirez
Approved by: General Manager, Felipe Melchor

Subject: Partial Resurfacing of Material Recovery Facility Tip Floor

RECOMMENDATION: That the Board authorize the General Manager to execute a contract with American Restore of Huntington Beach, California for Materials Recovery Facility (MRF) Tip Floor Concrete and Asphalt Repair in the amount of \$1,660,000.

BACKGROUND

The paved surface that customers unload their materials onto at the MRF is known as the “tip floor”. At the north side of ReGen’s Material Recovery Facility (MRF), where construction and demolition (C&D) debris materials are received, the materials unloading area consists of i) a flexible asphalt concrete pavement (aka ‘black top’) area outside (external) to the building footprint and ii) a rigid, reinforced concrete pavement inside the building footprint. The MRF’s concrete tip floor was installed with the original MRF in 1996 and, since then, almost three decades worth of customer service operations have been performed at the facility. After the customer offloads the materials, ReGen’s mobile equipment is used to manipulate the material on the tip floor to feed it into the sorting equipment. This manipulation includes pushing the dumped materials across the tip floor where they can be loaded onto the sorting line by an excavator.

The 27+ years of pushing materials across the concrete tip floor has worn down its surface and exposed areas of reinforcing bar (aka ‘rebar’). This wear or ‘surface erosion’ is particularly severe on the north side of the MRF where the C&D materials are offloaded and where the concrete abuts the asphalt pavement. The area has worn down as much as 4” lower than surrounding areas and exposed rebar in several locations of the internal tip floor of the MRF. In general, concrete slabs contain metal bars about halfway through the concrete thickness. These metal bars, called rebar, give the concrete additional strength. In the MRF, being able to see the rebar means that the concrete surface has been worn about halfway through its total thickness. Seeing rebar in a tip floor is a late indicator that the area needs to be resurfaced.

DISCUSSION

Exposure of the tip floor rebar and wearing of the surface has the following negative impacts:

1. Weakens the strength of a concrete slab that sees heavy equipment traffic
2. Creates an uneven working surface for staff to push materials
3. Creates trip hazards for staff/customers and can damage equipment
4. Accelerates deterioration of tip floor due to uneven areas
5. Makes areas of the tip floor unusable until repairs are made

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Let's not waste this.



The repair work proposed in this scope of work is focused on the north side of the MRF where the C&D materials are received and processed. This tip floor resurfacing project would resurface 11,765 square feet of interior concrete tip floor and install a new 7,250 square foot exterior concrete tip floor apron that would allow customers to dump on instead of the current asphalt surface. The work includes grinding down the existing interior concrete surface and removing a 50-foot width of the existing exterior asphalt pavement, preparing the underlying surfaces to receive new concrete, and finishing the both the interior and exterior areas with a EucoFloor epoxy wear surface. This EucoFloor wear surface is five times more durable than concrete and is specifically designed for tip floor applications.



FINANCIAL IMPACT

The cost proposal provided by American Restore for the MRF Tip Floor Repair is \$1.66 million for the scope of work noted above. \$1.35 million was included as the projected estimated costs in the 2023/24 budget, however, the improvements are essential to the continued operation of the MRF tip floor. Adjustments will be made to lower other project budget's in the approved FY2023/24 Budget in order to incorporate the cost increase (\$310,000) under the Capital Improvement Budget for FY 2023/24.

CONCLUSION

The MRF Tip Floor Concrete and Asphalt Repair will have multiple benefits to ReGen's operations. This involves greater safety, and efficiency of operations on the tip floor at the MRF. Staff therefore recommends the Board authorize the General Manager to execute a contract for the concrete pavement improvements with American Restore of Huntington Beach, California for \$1.66 million.