

Solid Waste Transfer Station Replacement Project



CLEARWATER
BRIGHT AND BEAUTIFUL • BAY TO BEACH

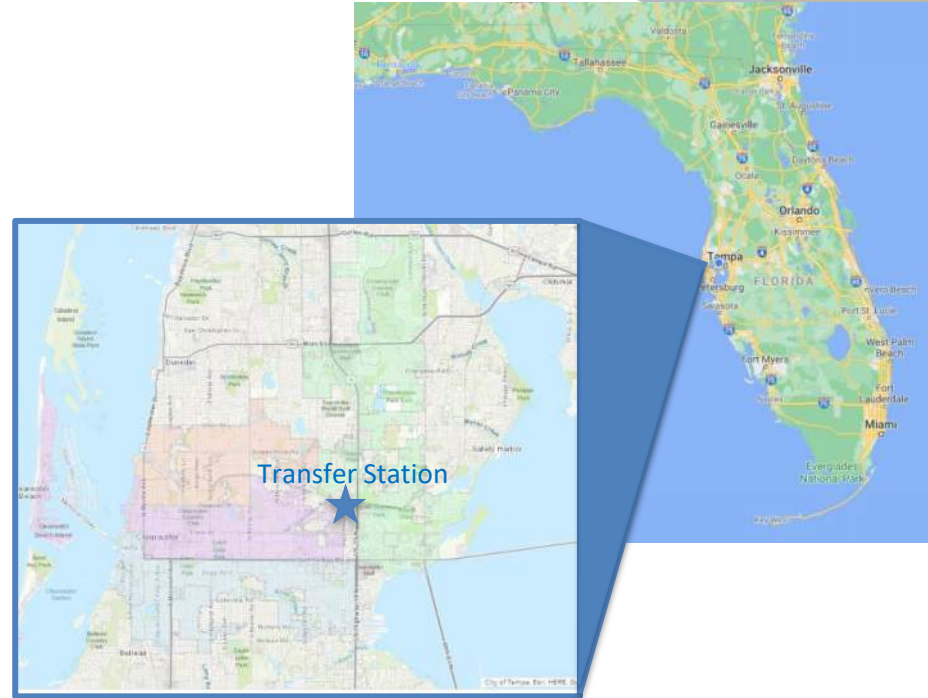


City of Clearwater
Solid Waste/General Services
1701 N. Hercules Ave. | Clearwater, FL 33756
www.myclearwater.com


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SOLID WASTE SERVICES OVERVIEW

- 115,000 residents
- Residential and commercial collection (~375 TPD average)
- Yard and wood waste collection (~100 TPD average)
- Bulk item collection
- Single-stream recycling (~50 TPD average)



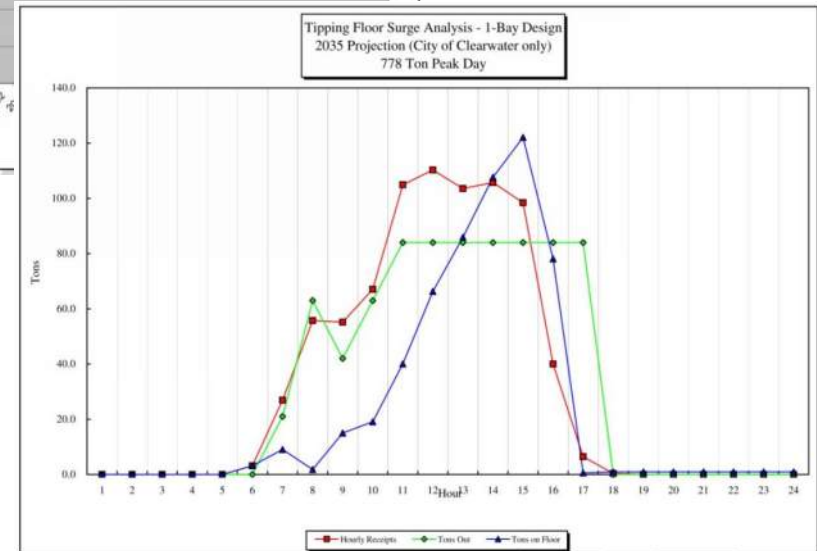
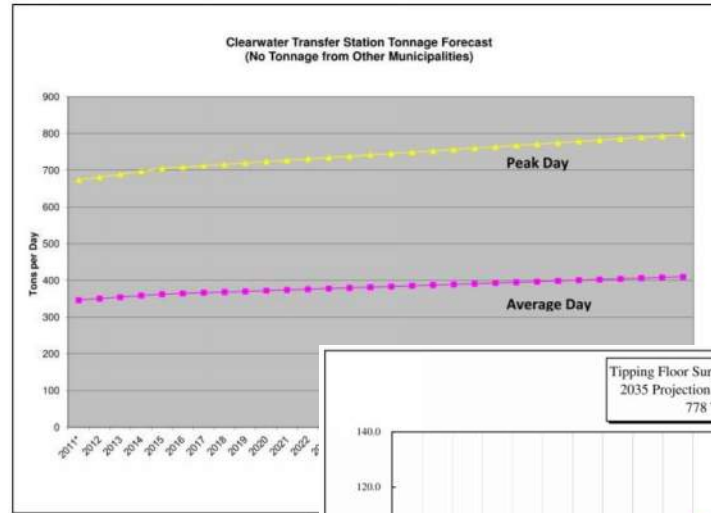
ORIGINAL TRANSFER STATION

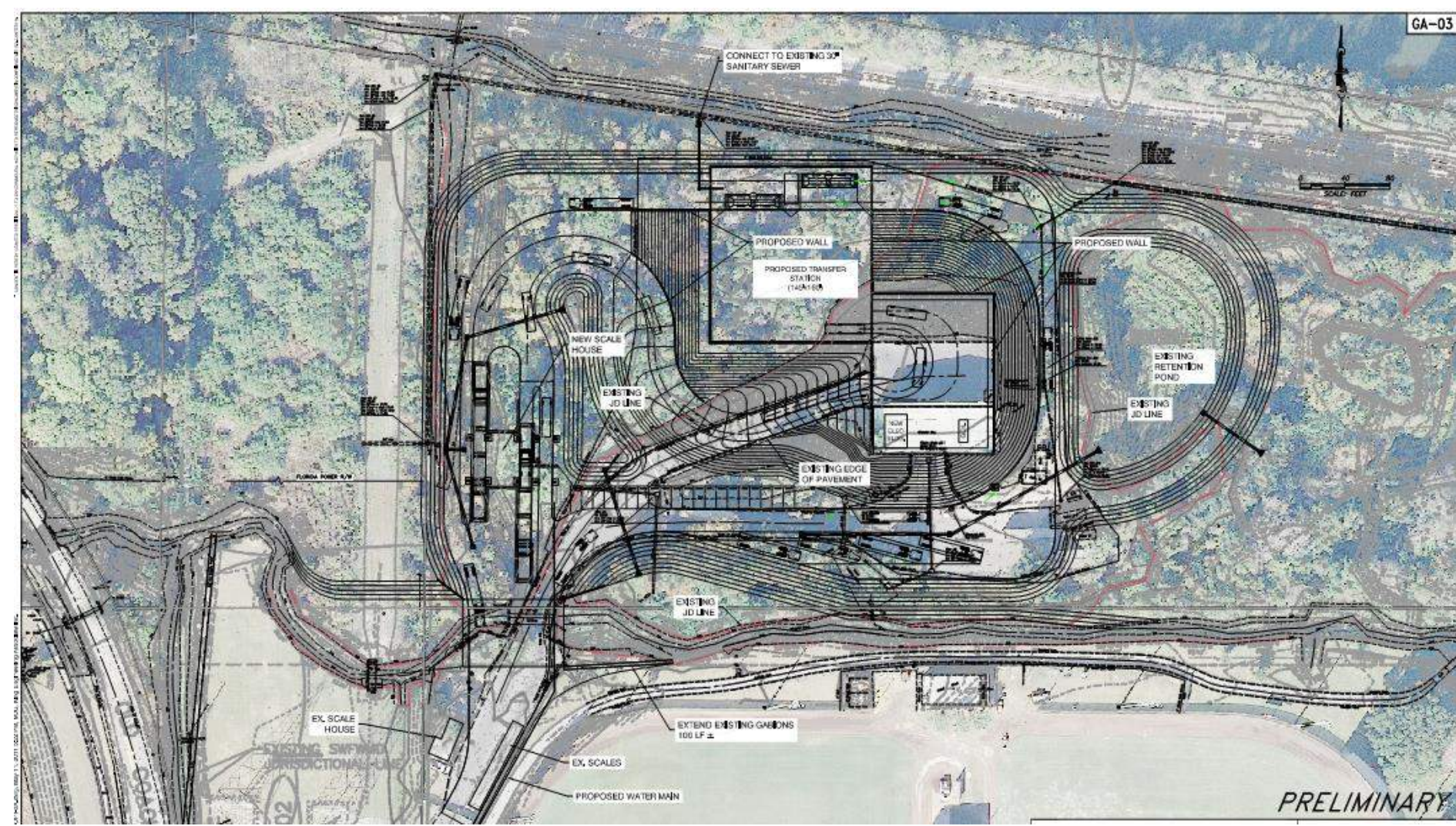
- Constructed in 1970
- Hydraulic Push Pit Technology
- Site all wetlands
- Frequent Flooding
- Zoned “recreation” except for developed footprint
- Adjacent to Spectrum Field

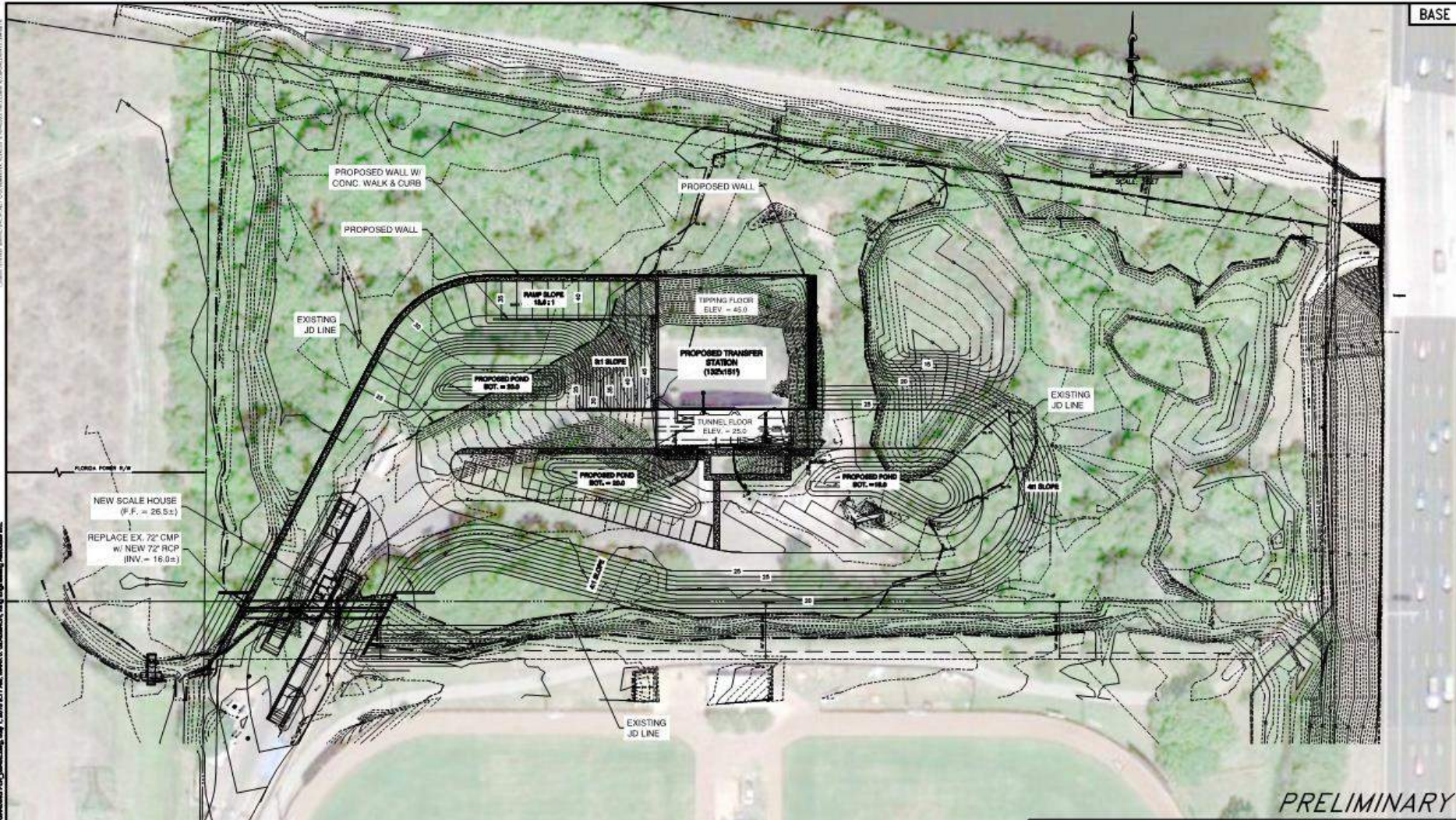


CONCEPTUAL ENGINEERING

- Tonnage projections
- Tipping floor surge pile calculations
- Alternative site plans
- Floodplain and wetland evaluations
- Cost estimating
- Evaluated delivery methods – CMAR chosen (Kokolakis Contracting)

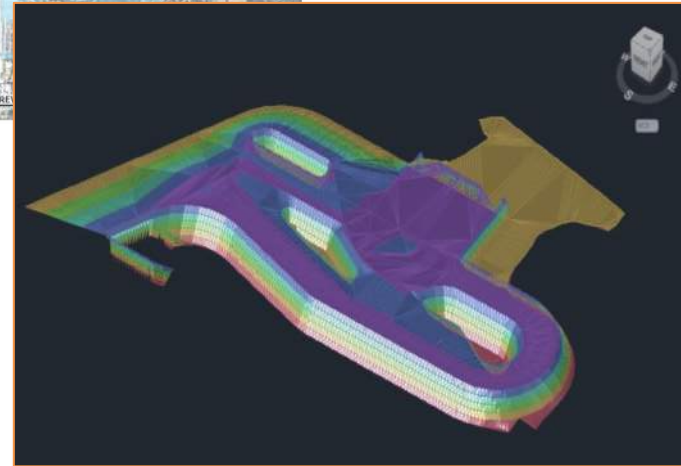
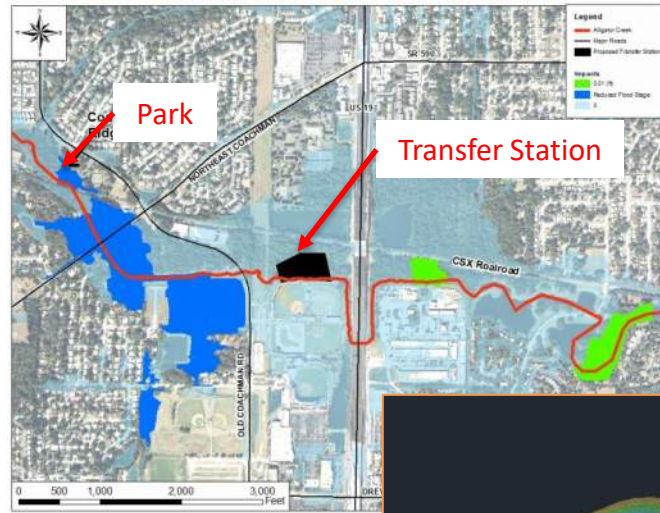






FLOODPLAIN MITIGATION

- 2.5 acres of permanent forested wetland impact
- 9.3 acre-feet of 100-year floodplain impacts
- Alligator Creek basin-wide modeling conducted
- Off-site mitigation at Coachman Ridge Park selected



COACHMAN RIDGE PARK



City Park Before



City Park After

GEOTECHNICAL ISSUES

- Creek originally flowed through site.
- Re-routed around site when the facility was constructed
- Loose sands and compressible clays found at varying depths
- Excavated soil from the park used to preload site



1951



1973

- Soil stockpiled for ~6 months.
- Facility stayed in operation
- Temporary leachate collection system needed
- Experienced up to 5.25 inches of settlement

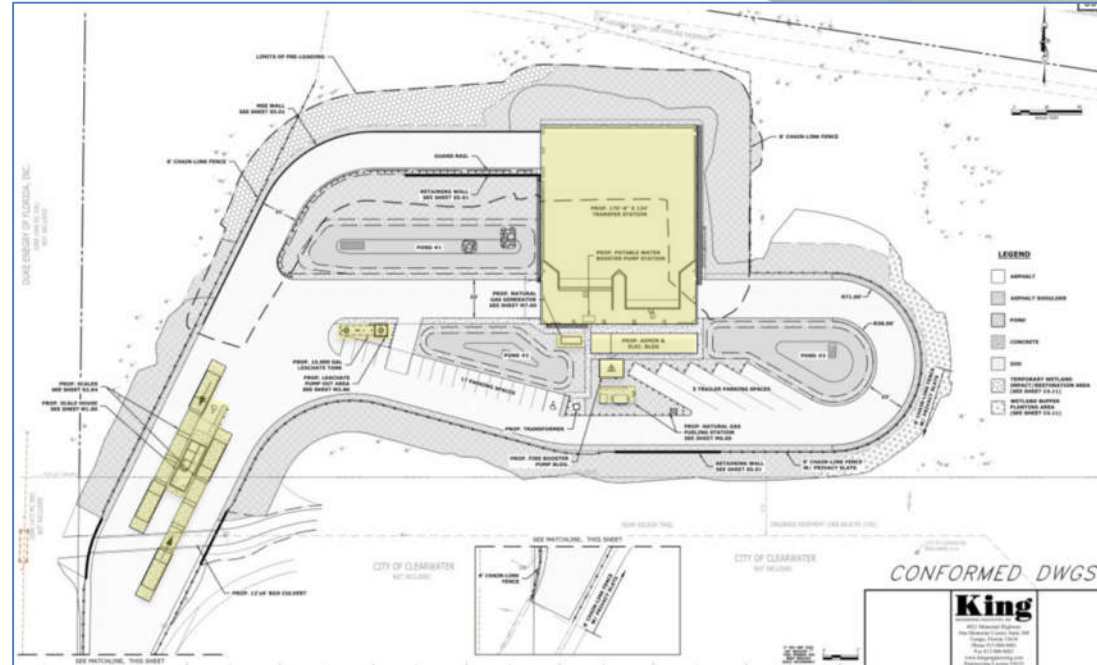


- Addressed differential settlement concerns
- Combined with preloading, eliminated the need for piles
- Space under tipping floor for potential future improvements



FACILITY FEATURES

- New scale facility
- 22,000 SF, 2-bay top load transfer station
- 660 SF administration / electrical building
- Fire booster pump building
- CNG generator
- CNG fueling system
- Leachate storage tank



SITE IMPROVEMENTS

- Raised entire site 6 feet to get above 100-year flood elevation
- Re-routed creek at entrance to create room for scale facility
- Utilities:
 - Upgraded fire and domestic water service
 - Reclaimed water and sewer
 - Natural gas
 - Fiber for IT/Data/CCTV cameras
 - New electrical service



TRANSFER STATION AMENITIES

- Steel-clad 15' push walls
- Translucent panels and skylights
- LED lighting on banks
- Metal building panel liners
- High pressure washdown hoses (reclaimed water)
- Forced ventilation
- Leachate trench drain



TRANSFER STATION AMENITIES

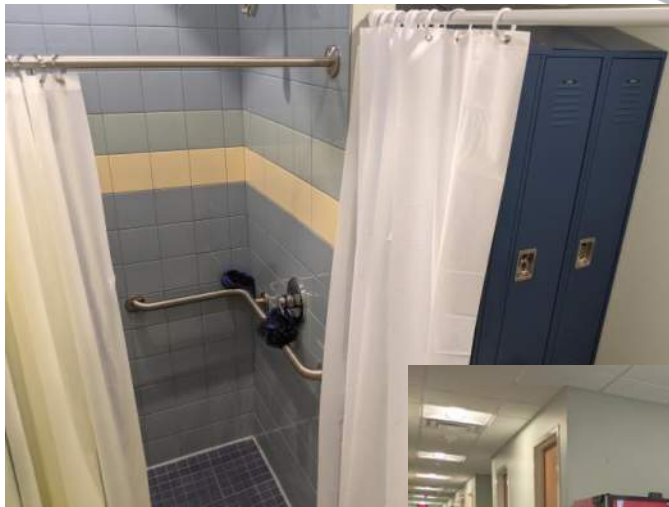
- Stationary cranes w/central operators' booth
- Open view into pits
- Trailer weight indicators
- Wide, ventilated tunnel
- Glass block for lighting



- Inbound/Outbound 70' scales
- Bypass lanes
- Weight indicators
- Scale house with attendant windows, break area, restroom, closet, IT room



- Restroom & Locker facilities
- Office
- Break area
- IT Room
- Independent Electrical Room



CNG GENERATOR AND FUELING SYSTEM



Generator



Rapid-Fill Fueling System

LEACHATE STORAGE AND FIRE BOOSTER SYSTEMS



Leachate Storage and Monitoring



Electric Fire Booster Pump



Landscaped Buffer



Matches Adjacent Baseball Complex

OPERATIONAL CHALLENGES

- Change from push-pit technology to top load
 - Train staff
 - Purchase new trailers and rolling stock
- Develop new O&M and safety procedures
- Budget for construction and new operations



Questions?



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