

RAIL AND PORT



SERVICES

Port

Millcreek Engineering designs and delivers bulk material handling solutions for ports, terminals and marine facilities. Our services include:

- Port master planning and strategic development
- Truck, rail, barge and ship loading / unloading
- Conveying, stacking and reclaiming
- Crushing and screening
- Blending
- Weighing and sampling

We have specific expertise in the supply of the large shiploader and stacker/reclaimer equipment used at bulk material ports and terminals.

Rail

Many ports, power generating stations, mines and heavy industrial facilities connect to rail for the transport of products and supplies. Rail infrastructure in these facilities includes industrial rail loops, rail spurs, and rail switch yards. The rail interconnects with rail car loading and unloading, track scales, thaw shed and other components of the overall facility. Rail loading systems include batch car loading with rates of 10,000 tph with an accuracy of loading of less than 1 percent. Rail unloading systems include rotary car dumps, in-motion rapid car unloading or shallow pit unloading.

Millcreek Engineering's capabilities with the rail industry and rail design allow us to integrate the scope of the entire project. We can design the rail routing, grades and lines, access and crossings to optimize the entire facility arrangement.

Millcreek Engineering's experience in rail systems include:

- Rail yard planning
- Track design
- Logistics
- Rail yard construction plans
- Main line approvals
- Rail contractor certification
- Secure location
- TWIC/MARSEC
- e-RAILSAFE
Homeland Security - location specific

PROJECTS EXECUTED

Millcreek Engineering professionals have had prior experience in the following representative projects:

Rail and Truck Loadout - Urea Facility

Millcreek Engineering designed truck and railcar loading facility. We performed a traffic modeling study to identify impacts of the increased railcar traffic to the existing plant rail system. The existing rail system had one inlet to site that served three plants. Traffic included coal cars, diesel cars and multiple other commodities. Ultimately we designed a system that added a new tie-in to the existing mainline. Total new trackage was approximately 44,000 track feet. Multiple storage spurs were added to store railcars. This system allowed the existing rail traffic within the site to be unaffected. We also coordinated and gained approval with the mainline.

Rail Dump - Power Generation Station

Millcreek Engineering designed the new rail siding (approximately 4000 track feet) for the facility. Switching and sequence diagrams were provided to ensure new traffic would not interfere with existing facility traffic. Track included railcar thaw shed and railcar dump hopper.

Rail Loadout - Limestone Loadout

Millcreek Engineering designed the new rail siding (approximately 4000 track feet) for the facility. The track tied to the existing mainline. We coordinated the mainline approval of design by working with the mainline to ensure all design requirements were met and approved.

Railyard - Hazardous Materials Disposal Site

Millcreek Engineering designed railyard layout. New yard required 9 additional ladder tracks for new railcar storage.

Mine Rail - Coal Mine

Millcreek Engineering designed new passing sidings and new storage spur. The facility was a mine to plant track. Coal cars were filled at the mine and moved to the plant railcar dump. As the mine got further from the plant, the travel time increased to a point where multiple trains were needed to keep up with the demand. Multiple train loads meant that a need for passing on the track was required. Rail string diagram modeling was used to optimize the location of the siding track. Millcreek designed the track, catenary system and traffic signaling system for the facility

Audit Services - Mine and Heavy Industrial Facilities

Millcreek Engineering performs rail audit services. The services include Track Geometry, Rail Profile, joint bar inspection, rail gauge measurement and tie-inspection. This data is then reviewed and compiled into a maintenance program is implemented to the site.

Rail Loadout - Gold Mine

Millcreek Engineering completed the basic engineering for the underground rail and above ground rail system. Extensive reviews were completed to determine the best options for routing, locomotive design and railcar design. Due to the elevation of the mine portal, large braking forces were required to safely transport the material to the valley floor. We completed the modeling to identify how big each train load could be based on the locomotive power.



Millcreek Engineering
1011 East Murray Holladay Road
Suite 100 Salt Lake City, UT 84117
P: (801) 904-2260
F: (801) 904-2261
E: info@millcreekeng.com