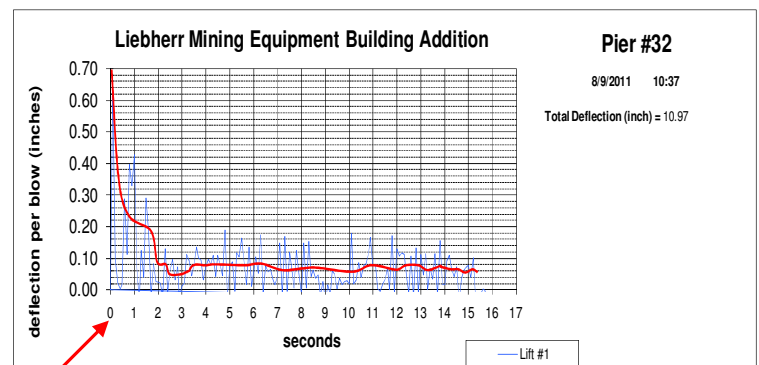


ANOTHER GTFC-West AGGREGATE PIER PROJECT



PROJECT: Liebherr Mining Equipment Building Addition
LOCATION: Gillette, Wyoming
DESIGN TEAM: Architect: *Armstrong Design Studio : Sheridan, WY*
Structural Engineer: *KL & A, Inc. : Buffalo, WY*
Geotechnical Engineer: *CE & MT, Inc. : Gillette, WY*
CONTRACTOR: S&S Builders, LLC: *Gillette, WY*
OWNER: Liebherr Mining Equipment Co.



*GTFC-W proprietary rammer
instrumentation assured consistent
pier modulus and settlement performance*

DESCRIPTION:

- 100' by 244' addition to existing industrial building
- 5'-6' of expansive lean clay underlain by silty sand and siltstone/claystone bedrock
- Groundwater at 9' in soft silty/clayey sand
- 66 aggregate piers constructed with recycled pavement base course
- Allowable bearing pressure = 6000 pounds per square foot for pier-reinforced subgrade

Several feet of site grading fill installed over the potentially expansive clay helped resist swelling pressures of 1000-2000 psf as identified in the geotechnical laboratory tests. All piers were constructed with tension baskets consisting of grade 75, all-thread steel bars attached to a 30" diameter steel plate at the bottom of the pier. GTFC quality control instrumentation and field load testing confirmed downward capacities of at least 90 kips per pier/cell with predicted footing settlement of less than 1/2".

REFERENCES: Bruce Fuller, Project Manager
S&S Builders, LLC
(307)686-5659
Dennis Russell, P.E., Geotechnical Engineer
CE&MT, Inc.
(307) 686-6409
Joe Hall, P.E., Structural Engineer
KL&A, Inc.
(307) 621-7011