



Washington County Law Enforcement Building Campus Improvements Stillwater, Minnesota

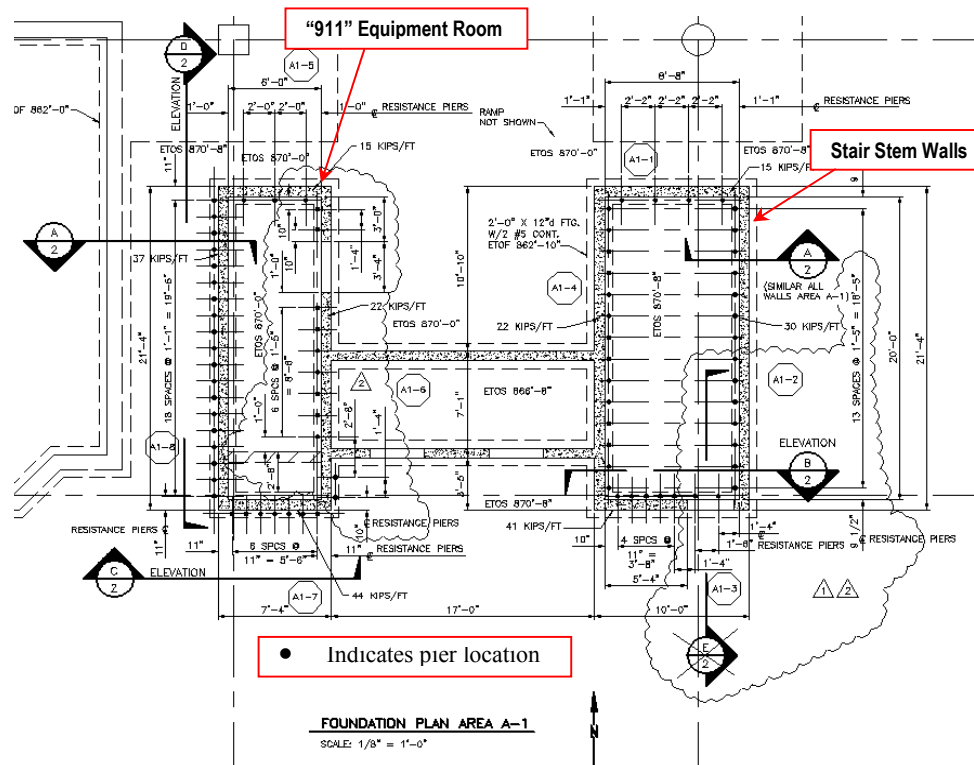
As part of the expansion of the campus, additional floors on this building would increase the loads on the foundations of the stair well and the “911” equipment room by 15,000 to 44,000 pounds per lineal foot. The engineer recommended installing ECP Model 350-WM Wall Mount steel resistance piers on the existing stem walls as the least invasive way to increase foundation capacity and not disrupt the room housing the 24 hour “911” communications

equipment. This plan would provide the increased capacity requirement without the need to excavate below the footings or concern about loss of footing support during the pier installation.

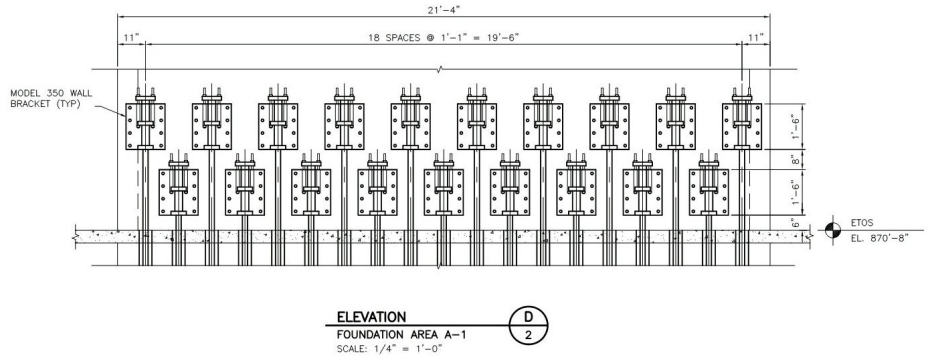
The Model 350-WM ECP Steel Pier™ system installed here used 3-1/2 inch diameter tubular steel pier pipe that was hydraulically driven to limestone bedrock.

Capacity was verified by proof testing each pier to 63,000 lb.

The required capacity increase at the stairs was accomplished by applying a service load of 43,000 pounds to each pier.



The plan shows the layout of 40 placements on equipment room and the 39 on the stair well.



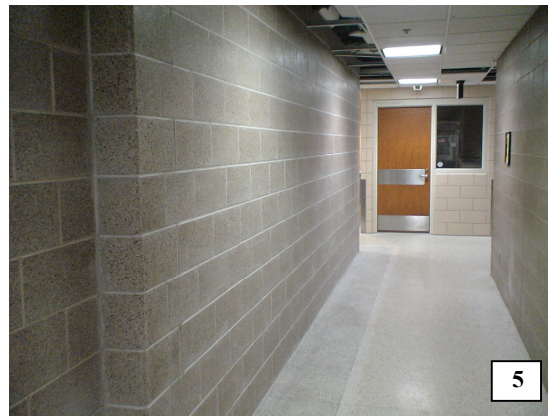
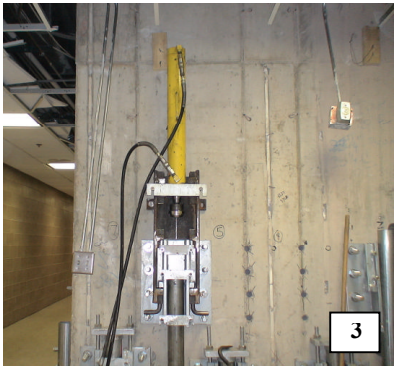
This elevation sketch shows how Veit Foundation Group staggered the mounting of the brackets to achieve the pier spacing requirement.



Project Summary			
Project:	Washington County Law Enforcement Campus Improvements		
Installing Contractor:	Foundation Group from Veit Companies Rogers, Minnesota	Engineer:	Rich Greenlee, P.E. Engineering Partners International, LLC. Bloomington, Minnesota
Product Installed:	ECP Model 350-WM Steel Pier™		
Number of Placements:	79	Average Proof Test:	63,000 lb
Ultimate Capacity:	81,900 lb	Average Working Load:	43,000 lb
Factor of Safeties:	1.5 : 1 Test Load to Working Load		1.9 : 1 Ultimate To Working Load

The photographs on this page show the installation sequence.

1. Prior to the steel pier installation, the basement floor was drilled to provide access for the pier pipes.
2. The technicians are shown mounting the ECP Model 350-WM Steel Pier™ wall mounted brackets prior to pier pipe installation
3. The pier pipe was driven to end bearing on the limestone bedrock reported on the soil borings. Once the bedrock was reached, each placement was proof tested to 63,000 pounds to verify capacity.
4. Once all of the piers were installed and proof tested, hydraulic rams applied a service load of 43,000 pounds to each placement.
5. Upon completion of the steel resistance pier installations, the brackets were concealed behind a masonry wall.



This successful project was completed on time and within budget.



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