

## Derse Exhibits

MENOMONEE VALLEY BUSINESS PARK  
MILWAUKEE, WISCONSIN

Located on Canal Street in the Menomonee Valley Business Park, this 7.6-acre former brownfield was redeveloped as the new headquarters for Derse Exhibits. The project involved the construction of an approximately 140,000 SF office/warehousing building with associated parking, drives, storage/staging yards and infrastructure. The project achieved silver certification under the LEED NC program.

### Surveying

Sigma provided surveying services on the project including settlement monitoring surveying, preparation of an ALTA/ACSM Land Title and design survey of the project site and construction staking. The ALTA/ACSM Land Title and design survey was prepared to meet the 2005 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys as adopted by the American Land Title Association and the National Society of Professional Surveyors. The survey also included topography, structures, pavements and utilities and was used as the base for planning and design of site improvements.

Prior to construction of the project, several feet of surcharge fill were placed on the site to accelerate the settlement of the existing fill soils. Sigma was responsible for placing settlement monitoring plates at several locations throughout the site and for surveying of the settlement plates to monitor progress of the settlement.

Sigma also provided construction staking to the general contractor for the project. Items staked included building foundation, curb and gutter and storm sewer.

### Civil/Site Engineering

Sigma provided site civil engineering design services under contract to the architect for the project. Sigma's site civil engineering services included the preparation of site civil plans and specifications as required for City of Milwaukee plan review, permitting and construction. Plans prepared included site preparation/erosion control plans, site paving/dimensional plans, site grading/drainage plans, site utility plans (water, sanitary, storm, gas, electric) and site detail plans. Earthwork calculations were performed to ensure a balanced cut/fill site so that all contaminated soil could be managed on-site with no off-site disposal. Development of the drainage plan required close coordination with the City of Milwaukee in regards to discharge points as the site crossed several City delineated public storm sewer basins.



Sigma also prepared the storm water management plan and City storm water management plan application for the project. Other services included filing of the Notice of Intent for Land Disturbance Activities and obtaining plan approval for site plumbing plans.

### Investigation/Remediation

Sigma was retained by the developer to perform a subsurface methane gas assessment prior to the development of the Derse Exhibits building. The activities included the installation of soil vapor monitoring probes and monitoring for potential soil gas accumulation within the footprint of the proposed building. The monitoring included five consecutive days of closed vapor point monitoring followed by five consecutive days of open vapor point monitoring to evaluate/calculate the rate of methane accumulation.

Based on the results of the methane assessment, an exemption request to construct on a historic fill site was prepared by Sigma documenting the site investigation and monitoring activities as well as a recommendation regarding the required level of methane abatement (i.e. an active or passive system). The exemption request was submitted by Sigma to the WDNR for review and approval. Following WDNR approval, Sigma was retained to prepare a detailed design of the recommended methane abatement system incorporating the building features and the use of the property and oversee the installation of the methane abatement system.

### Site LEED Credit Evaluation

As the project civil engineer, Sigma evaluated potential sustainable site LEED credits under the LEED NC program and was responsible for filling out the LEED credit templates for applicable sustainable site credits. Sustainable site credit earned included site selection, brownfield redevelopment and storm water design: quality control. The project earned silver certification under the LEED NC program.