

## **Executive Summary**

On behalf of the City of Minneapolis, Braun Intertec Corporation prepared this Summary of Environmental and Geotechnical Conditions report that summarizes the known environmental and geotechnical conditions on the Scrap Metal Processors Sites, which include three separate parcels, the Blanchard Warehouse Site, and the Special School District #1 Site. These Sites were acquired by the City of Minneapolis Community Planning and Economic Development (CPED) Department in order to construct Van White Memorial Boulevard.

The report was prepared in order to further the City's efforts to redevelop properties within the Bassett Creek Valley, an under-utilized and former industrial area located just west of downtown Minneapolis. The purpose of the report was to develop a summary of the previous work that has been completed in order to further understand the environmental and geotechnical conditions of the properties, identify and address data gaps that might hinder redevelopment of the properties, and develop environmental and geotechnical recommendations for redevelopment that consider the Site-specific subsurface conditions.

In preparing the report, we summarized the results of the previous environmental and geotechnical investigations that were conducted by Delta Environmental Consultants, Inc. (Delta), the US Army Corps of Engineers (COE) and Braun Intertec that were developed as the City planned for and constructed Van White Memorial Boulevard.

Based on our review of the previous investigation reports, the following summaries for the project Sites are being provided:

### **Scrap Metal Processors: Existing Conditions**

This Site is made up of three separate parcels totaling approximately 3.39 acres (not including the area occupied by Van White Memorial Boulevard). The Sites are currently vacant with the exception of where Van White Memorial Boulevard was constructed, and all structures shown on the aerial photographs were demolished. Groundwater contamination and soil impacts in excess of the Minnesota Pollution Control Agency (MPCA) Tier 2 Industrial Soil Reference Values (i-SRVs) have been detected at all three parcels. Elevated concentrations of soil vapors in excess of the MPCA Intrusion Screening Values (ISVs) are present on the portion of the Site that was used as a scrap metal processing yard (SMP Parcel 3). The source of the contamination is likely the historic bulk oil and chemical storage and scrap metal processing that took place at the Site for many decades.

The upper soils at all of these parcels include contaminated fill, which overlies thick swamp deposits and other soft soils to depths greater than 100 feet. In addition, large amounts of debris and scrap metal are mixed with the fill soil at the former processing yard. For most new buildings at these Sites, the foundations likely would need to be supported on driven pilings to avoid significant soil correction costs.

#### **Blanchard Warehouse: Existing Conditions**

This Site is made up of two separate parcels totaling approximately 0.64 acre (not including the area occupied by Van White Memorial Boulevard). Former activities at the Site included bulk petroleum and chemical storage and a wholesale chemical facility, and known contaminants include chlorinated solvents, heavy metals, semi-volatile organic compounds (SVOCs), and petroleum.

Based on the results of environmental investigations, contaminants are present in soil at concentrations greater than the I-SRVs and are fairly widespread. Contaminated groundwater and soil vapor concentrations in excess of the ISVs also are present at the Site.

The upper soils at these two parcels contain mostly contaminated fill, which overlies thick swamp deposits and other soft soils to depths greater than 100 feet. For most new buildings at these Sites, the foundations likely would need to be supported on driven pilings to avoid significant soil correction costs.

#### **Special School District #1: Existing Conditions**

This Site consists of one parcel totaling approximately 1.99 acres (not including the area occupied by Van White Memorial Boulevard). Significant filling as well as flooding from Bassett Creek have impacted soil at the Site. Soil and groundwater impacts associated with the former bulk storage of asphalt that occurred on the western end of the Site also have been identified. Specifically, elevated concentrations of volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and metals relative to the I-SRVs have been identified in the soil. Impacted groundwater also is present.

The upper soils at these two parcels contain mostly contaminated fill, which overlies thick swamp deposits and other soft soils to depths greater than 100 feet. For most new buildings at these Sites, the foundations likely would need to be supported on driven pilings to avoid significant soil correction costs.

#### **Redevelopment Considerations**

Subsurface conditions at each of the three Sites are generally consistent and pose similar development constraints.

To appropriately address the constraints, the following solutions and recommendations are provided:

Development Constraint	Solution/Recommendation
<p>Geotechnical Constraint: The upper soils at all of these parcels are uncontrolled fill, which overlie thick swamp deposits and other soft soils to depths often greater than 100 feet.</p>	<p>For most new buildings and entrances at these Sites, the foundations likely would need to be supported on pilings to avoid significant soil correction costs. Pavements could be supported atop the in-place fill with some soil correction required.</p>
<p>Environmental Constraint: Contamination has been identified at the Sites.</p>	<p>As redevelopment of the Sites move ahead, the Sites should continue to be investigated and developed under the auspices of the MPCA Voluntary Brownfields Program, and development partners should obtain appropriate liability assurances and approvals for the identified contamination.</p>
<p>Environmental Constraint: Fill soil at each of the Sites is impacted with contaminants in excess of the I-SRVs and at many locations contains debris.</p>	<p>During redevelopment, impacted soil that is excavated with contaminant concentrations in excess of the cleanup standard for the Site (i.e., I-SRV or R-SRV) will necessitate off-Site disposal at an appropriately permitted landfill, unless the soils can be reused on Site for other than engineered fill.</p> <p>Under the MPCA Brownfields Programs, contaminated soil could remain in place provided that risks associated with the material are properly managed through the use of buffer zones, engineered covers, soil vapor mitigation systems and/or restrictive covenants or deed notifications.</p> <p>Soil with lower levels of contaminants (generally less than I-SRVs and with field detectable petroleum impacts of less than 200 ppm) is restricted fill, meaning the soil can be reused at depth beneath buffers of clean (unimpacted) soil. In paved and building areas, clean buffer zones need to be at least 2 feet thick. Green space areas generally require 4 feet of clean soil over contaminated soil. In green space areas, the contaminant levels also need to be below the SLVs for most compounds. In some instances, the buffer zones within green space areas can be thinner than 4 feet if a marker bed or barrier is used to demarcate contaminated soil from clean soil.</p> <p>Storm water infiltration at Sites with contaminated soil and/or groundwater might not be recommended. In addition, storm water retention features might need to be lined to prevent infiltration at contaminated sites.</p>

Development Constraint	Solution/Recommendation
<p>Environmental Constraint: Groundwater occurs at relatively shallow depths (2 to 10 feet or elevations between 799 and 803 feet AMSL) and is contaminated.</p>	<p>Because of the shallow depth of groundwater, no structures should be constructed with any below grade levels or would likely be able to be permitted below grade.</p> <p>Because of the presence of impacted groundwater, short-term dewatering during construction would likely require that a MCES discharge permit be obtained and/or a permit from the MPCA for contaminated groundwater and that the discharge be managed and tested in accordance with the permit requirements. Long term groundwater dewatering is not recommended, as the presence of contaminants will require that the discharge be permitted for discharge to the sanitary sewer under a MCES permit and would include long-term monitoring, sampling and discharge fees.</p>
<p>Environmental Constraint: Soil vapor concentrations in excess of 10x the ISVs have been detected</p>	<p>Elevated concentrations of soil vapor contaminants in excess of 10x and 100x the Residential and Industrial ISVs detected on the Blanchard Warehouse and SMP Parcel 3 would necessitate that soil vapor intrusion mitigation systems be included in building design.</p>

It is important to note the recommendations, as well as the summary of Site conditions described above, are generalized and before redevelopment of the Sites proceeds, the Site-specific plans should be reviewed and compared to existing data to evaluate if data gaps are present and to evaluate if the generalized recommendations are applicable.