ENGINEERING DESIGN REPORT
CITY PARCEL SITE
SPOKANE, WASHINGTON

FEBRUARY 11, 2009

FOR
WASHINGTON STATE DEPARTMENT OF ECOLOGY

Engineering Design Report
City Parcel Site
Spokane, Washington
File No. 0504-047-00

February 11, 2009

Prepared for:

Washington State Department of Ecology
Toxics Cleanup Program
4601 North Monroe
Spokane, Washington 99205

Attention: Teresita Bala

cc: Doug Pearman, SAIC

Prepared by:

GeoEngineers, Inc.
523 East Second Avenue
Spokane, Washington 99202
509-363-3125

David R. Lauder, PE
Project Engineer

Bruce D. Williams
Principal

JER: BDW: tlm
Spok: P:\0\0504047\00\Finals\050404700EDR.doc

TABLE OF CONTENTS

Page No.

TABLE OF CONTENTS (CONT.)

List of Tables

List of Figures

ENGINEERING DESIGN REPORT
CITY PARCEL SITE
SPOKANE, WASHINGTON
FOR
WASHINGTON STATE DEPARTMENT OF ECOLOGY

1.0 INTRODUCTION

1.1 GENERAL

This Engineering Design Report is submitted pursuant to the Work Plan and Fee Estimate submitted to the Washington State Department of Ecology (Ecology) by Science Applications International Corporation (SAIC) and GeoEngineers, Inc. (GeoEngineers). This report presents requirements for demolition of an existing building and remediation of polychlorinated biphenyl (PCB)-contaminated soil at the City Parcel Site (Site) located at North 708 Cook Street in Spokane, Washington. This report has been prepared in accordance with requirements in Washington Administrative Code (WAC), "Implementation of the cleanup action plan", 173-340-400 (4)(a), and incorporates the selected Final Cleanup Action Plan (FCAP) as outlined in the "Final Cleanup Action Plan, City Parcel Site", Spokane, Washington, dated August 2004, issued for this Site by Ecology.

A consent decree was entered into by the potentially liable parties (PLPs) and Ecology in December 2007. The current owner of the property located at North 708 Cook Street is Paul Gisselberg. In accordance with the consent decree, Ecology is assuming ownership of the cleanup action. For the purposes of this report and the specifications, the term "Owner" refers to the Washington State Department of Ecology. The term "Engineer" refers to Ecology's consultant chosen to oversee the construction work.

1.2 SITE BACKGROUND AND HISTORY

The Site is located at the northeast corner of the intersection of North Cook Street and East Springfield Avenue, and encompasses approximately 28,400 square feet (plan dimensions of approximately 142 feet east-west by approximately 200 feet north-south). An approximate 18,400-square-foot building is located in the Southwest portion of the Site. The building is roughly square in shape and borders the south, and portions of the east and west property lines. The Site is bounded to the east by an alley within City of Spokane right-of-way. To the east of the alley, is the City of Spokane Fuel and Wash Facility. The general locations of Site features are shown in the Site Plan - Existing, Figure C-1.

The building was originally constructed in approximately 1945, and measured about 100 feet by 100 feet in plan dimension. Two additions have been made to the original building. Between 1967 and 1969, the building was extended approximately 35 feet to the north. Between 1969 and 1979, the building was extended approximately 35 feet to the east.

The Site was occupied by Spokane Transformer, Inc., an electrical transformer repair and recycling business from approximately 1961 to 1979. Past business practices resulted in PCB leaks, spills or releases into Site structures and underlying soil. The property was sold in 1979, and City Parcel Service, Inc. operated a package delivery business at the site. Subsequent to a Remedial Investigation (RI) in 2002, City Parcel Service, Inc, relocated to another property. The Site currently is unoccupied.

Site soil is contaminated with PCBs at concentrations greater than target cleanup levels established in the Cleanup Action Plan; the contaminated soil is generally located beneath and adjacent to the existing

building. Additionally, the concrete floor slab and other interior surfaces of the building are contaminated with PCBs. Soil within the adjacent alley also is contaminated with PCBs.

Floor drains, drain lines and a drywell located inside the building, as well as a drywell located outside of the building near the southeast corner of the site and sediments contained within these structures also are contaminated with PCBs. An underground storage tank (UST) also is present below the floor slab near the southeast corner of the building. The contents of the UST are unknown at this time.

1.3 PROJECT BACKGROUND

Several environmental investigations have been completed at the Site as summarized below:

- In 1976, the United States Environmental Protection Agency (EPA) first investigated the Site. Results of limited sampling and analytical testing indicated that soils were contaminated with PCBs at concentrations greater than the current Model Toxics Control Act (MTCA) residential and industrial cleanup levels.
- In 1986, EPA collected two soil samples near the building. Analytical results indicated PCB concentrations within soils were greater than current MTCA residential and industrial cleanup standards.
- In 1987, Ecology and Environment, Inc. collected soil/sediment samples from drains and on-site soil, as well as surface scrape samples from interior work areas. Analytical results indicated that PCB concentrations within on-site soil, in storm drains and work areas were greater than MTCA residential and industrial cleanup standards.
- In 1997, George Maddox & Associates, Inc. collected soil samples from inside and outside of the building, from drywells, and from the alley located to the east of the building. Analytical results indicated that PCB concentrations in on-site soil, soil in the alley, and in drywells, were greater than current MTCA residential and industrial cleanup standards.
- In 1998, the Spokane Regional Health District completed a site hazard assessment. The Site was given a rank of 2 out of 5 (1 being the highest level of risk).
- In 2000, a limited environmental investigation was completed on the site now occupied by the City of Spokane Fuel and Wash Facility. Results indicated that site soils were contaminated with PCBs at concentrations greater than current MTCA residential cleanup standards, but below MTCA industrial cleanup standards.
- In 2002, SAIC conducted a Remedial Investigation (RI) at the Site. Results of the RI indicated that PCB contamination of on-site soil was widespread.
- In 2004, Ecology prepared a Feasibility Study (FS) report.
- In 2004, Ecology prepared a Draft Cleanup Action Plan (DCAP) and FCAP.
- In 2008 and 2009, GeoEngineers completed a Building Characterization Report, which included sampling and testing of building materials and soil beneath the building as a basis for establishing demolition and disposal requirements for building demolition debris and to further quantify the estimated volume of soil contamination. Results indicated that PCB contamination was widespread within the building. Asbestos-containing materials (ACM) including thermal system insulation, window caulking and glazing, floor mastic and caulking on roof penetrations also were identified. A bulk sample of building materials was sampled to estimate the lead

concentration of bulk building debris. Results indicated the lead concentration in the bulk sample was less than criteria for designation as dangerous waste.

1.4 REFERENCE DOCUMENTS

This report specifically references the following documents for pertinent information:

- Washington State Department of Ecology, Eastern Regional Office, Toxics Cleanup Program "Final Cleanup Action Plan for the City Parcel Site, Spokane, Washington," August 2004.
- SAIC, "Remedial Investigation Report for the City Parcel Site, Spokane, Washington," November 27, 2002.
- GeoEngineers, Inc., "Building Characterization Report, City Parcel Site, Spokane, Washington," January 16, 2009.

1.5 CLEANUP GOALS

Following review of the RI and issuance of the FS, Ecology identified remedial action goals for the Site in the Cleanup Action Plan. The goals include:

- Prevent dermal contact with or ingestion of PCB-contaminated soil; and
- Reduce future potential for migration of PCBs from soil to groundwater.

Ecology initially established a soil target cleanup level for PCBs of 10 milligrams per kilogram (mg/kg) (Method A industrial cleanup level) in the FCAP.

1.6 CLEANUP ACTION PLAN SUMMARY

Ecology selected building demolition, soil excavation, off-site disposal and institutional controls as the remedial alternative for this Site. The major elements of this alternative include:

- Building demolition and off-site disposal of building debris. Based on results of sampling and analytical testing of building materials, walls and most of the floor slabs are contaminated with PCBs are concentrations less than 50 milligrams per kilogram (mg/kg). Therefore, most of the building demolition debris will be disposed of at a Resource Conservation and Recovery Act (RCRA) Subtitle D facility, providing such a facility will accept the material. Portions of the floor slab are contaminated with PCBs at concentrations greater than 50 milligram per kilogram (mg/kg), and will disposed of at a RCRA Subtitle C facility that can accept Toxic Substance Control Act (TSCA) hazardous waste;
- Limited soil sampling;
- Removal of an underground storage tank (UST), two drywells, floor drains and associated drain lines;
- Off-site incineration of liquid PCBs and sediments contained in the UST, drywells, floor drains and drain lines;
- Excavation of soil with PCB concentrations greater than 10 mg/kg associated with removal of the UST, drywells and drain lines;

- Excavation of soil with PCB concentrations greater than 10 mg/kg within the City Parcel property and the adjoining alley;
- Off-site disposal of contaminated soil in a RCRA Subtitle C facility permitted to accept TSCA waste;
- Backfilling excavations with imported soil; and
- Deed restrictions (environmental covenants) for the following properties:
    - City Parcel and City of Spokane properties limiting the sites to industrial use;
    - Alley to maintain integrity of the soil cap.

1.7 SCHEDULE

Following review by Ecology and incorporation of mutually agreed-to comments, the draft Engineering Design Report will be submitted for public comment. Following the 30-day public comment period, Ecology will address any public comments received and provide final comments. The Engineering Design Report will be finalized within 30 days following receipt of final comments from Ecology.

Construction Plans and Specifications are currently being prepared so Ecology can solicit bids for the construction work. Ecology will be choosing a contractor for the work and GeoEngineers will provide oversight of the construction work.

2.0 ENGINEERING DESIGN

This Engineering Design Report was prepared for Ecology to comply with the FCAP. Remedial work will be completed in two phases. Phase I work generally includes building demolition, and Phase II work generally includes removing the UST, drain lines and drywells, excavating contaminated soil and backfilling with imported fill. Depending on available funds for the project, the building floor slab will be removed during Phase I work. UST, drain line and drywell removal also might be completed during Phase I work if sufficient funds are available.

2.1 PHASE I - BUILDING DEMOLITION PLAN

2.1.1 General

After the Cleanup Action Plan was finished, additional sampling of building materials was completed in order to establish demolition and disposal requirements for building demolition debris. Results of the additional sampling and analysis are available in the Building Characterization Report, dated January 19, 2009 (GeoEngineers 2009). Building demolition generally will include: 1) obtaining necessary permits and providing appropriate notifications; 2) preparation of work plans; 3) mobilization/demobilization; 4) installation of temporary erosion control facilities; 5) capping utilities; 6) establishing work zones and staging area; 7) asbestos abatement and disposal; 8) building demolition and disposal; and 9) incorporation of dust control measures during site activities.

2.1.2 Notifications and Permits

The Contractor will be responsible for obtaining and paying for all permits and inspections required for asbestos abatement, building demolition, and material removal work. Required notification/permits include, but are not necessarily limited to:

- Spokane Regional Clean Air Agency notification for asbestos abatement and demolition activities;
- Washington State Department of Labor and Industries notification of asbestos abatement and demolition activities;
- City of Spokane notification of demolition project and submittal, and acquisition of appropriate permits and approvals;
- Washington State Department of Ecology notification of asbestos abatement activities; 30-day notice of intent to close an underground storage tank.
- Any other permits or notifications required to complete the work such as grading permits or notifications required to cap utilities, street obstruction permits, temporary easements, or hydrant permits.

The Contractor also shall provide notification to the Engineer of the planned disposal landfills and shall provide proof that the landfills have agreed to accept the demolition debris before commencing with demolition activities.

2.1.3 Work Plan Preparation

The Contractor shall be required to submit a work plan detailing how asbestos will be abated, the methods and schedule for building demolition, and documentation indicating the intended receiving facility will accept demolition material. The portion of the work plan regarding asbestos abutment shall be completed by an AHERA certified planner. The Contractor also shall submit a Health and Safety Plan (HASP) detailing the specific safety requirements and safety procedures for Phase I work. The Contractor shall establish work zones to protect worker safety and health and to reduce the potential for off-site contamination. The Contractor shall not commence work until the work plan and HASP have been approved by the Engineer. The Contractor shall revise the work plan and HASP as necessary for additional items included in Phase I work such as UST removal and excavation of contaminated soil.

2.1.4 Mobilization and Demobilization

The Contractor shall mobilize all equipment required to complete building demolition and asbestos abatement work. A temporary security fence shall be constructed around the perimeter of the Site, encompassing the city of Spokane right-of-way. The existing site fence will be utilized to the extent practicable.

2.1.5 Temporary Erosion and Sediment Control

The Contractor shall install temporary erosion and sediment control facilities where appropriate. It is likely that contaminated soils will be encountered during installation of a temporary silt fence. The contractor shall use personnel with appropriate 40-hour OSHA Hazardous Waste training and shall follow approved work plans and all applicable regulations when doing any excavation work on the Site. Backfill material required for installation of silt fences shall consist of imported soil, which meets project specifications for general site imported fill. Temporary silt dikes shall be installed along the west side of the Site, which is covered with asphalt.

2.1.6 Capping Utilities

The Contractor shall be responsible for cutting and capping all utilities at the property line in accordance with applicable codes and utility company guidelines or criteria. The Contractor shall be responsible for removing all abandoned utilities from the Site. Abandoned utilities shall not be left on Site. The Contractor shall be responsible for obtaining any and all permits required to complete utility work. Utilities include, but are not limited to: water, sewer, electricity, phone, and gas. The Contractor also shall be responsible for coordinating such work with the applicable utility company or local municipality. Excavation and impacted material handling conducted as part of utility capping activities shall be completed by personnel with appropriate 40-hour OSHA Hazardous Waste training in accordance with approved work plans and all applicable regulations.

2.1.7 Work Zones and Stockpile Locations for Building Demolition

The contractor shall establish work zones before initiating building demolition activities. These work zones include:

- The Exclusion Zone;
- Temporary Stockpile Area; and
- Support Zone/Contractor Staging Area

The Exclusion Zone shall consist of the building and proximate perimeter. Only essential construction and project personnel with 40-hour OSHA Hazardous Waste training, appropriate clearance, and personal protective equipment (PPE) shall be permitted within the Exclusion Zone.

The Temporary Stockpile Area shall be established by the contractor to encompass the area where demolition debris and soil may be temporarily stockpiled while working. The Temporary Stockpile Area shall not encroach within 10 feet of the property line, nor shall it encroach onto the city right-of-way. All stockpiles containing contaminated material shall be encircled by berms, underlain, and covered by plastic sheeting or a similar product approved by the Engineer.

The Support Zone/Contractor Staging Area shall be established on Site at a suitable location such that it is separated from the Exclusion Zone by the Decontamination Zone.

Work Zone locations for Phase I activities are shown in Temporary Site Control and Temporary Erosion and Sediment Control (TESC) Plan Phase I: Building Demolitions and Phase II: Excavation (Initial), Figure C-2. Work Zone Locations for Phase II activities also are shown in Temporary Site Control and TESC Plan Phase II: Excavation (Final), Figure C-3.

2.1.8 Asbestos Abatement

Asbestos-containing materials (ACM) have been identified in the building as follows:

- Thermal pipe insulation (TSI) around piping including:
    - 230 lineal feet of 4-inch-diameter to 8-inch-diameter pipe;
    - 150 lineal feet of 8-inch-diameter to 10-inch-diameter pipe;
    - 12 lineal feet of 12-inch-diameter pipe; and
    - 25 pipe elbows;

- 2,784 square feet of windows with ACM in caulking and glazing including:
    - Eleven, 12-foot by 8-foot windows on the ground floor; and
    - Thirty-six, 12-foot by 4-foot windows on the roof;
- 480 square feet of insulation surrounding the boiler;
- One fire door to the boiler room;
- Carpet mastic within the office measuring 500 square feet in plan dimension; and
- Caulking around the chimney on the roof, measuring 12 square feet in plan dimension.

Because of the extremely friable state of the ACM covering the boiler, the basement floor also shall be considered to contain ACM. The basement floor and adjoining stairs shall be cleaned following abatement of the boiler insulation.

Asbestos abatement shall be completed in accordance with applicable local, state and federal regulations, including guidelines established by the Spokane Regional Clean Air Agency "Article IX." WAC 296-62. The TSI on pipes, elbows and the boiler room is in a friable state. Class I removal methods as described in the WAC 296-62 shall be used during abatement activities of TSI.

ACM must be disposed of at a landfill permitted to accept ACM following applicable rules and regulations. ACM-containing floor mastic also shall be assumed to contain PCBs, and shall be disposed of at a RCRA Subtitle D landfill. A Washington State Certified Abatement Contractor shall remove any ACM from the building in accordance with applicable regulations before demolition commences. The asbestos abatement subcontractor shall be responsible for performing an independent clearance air monitoring at the completion of asbestos abatement activities. A copy of the asbestos survey shall be kept on Site at all times during demolition activities. All demolition workers shall be informed of the presence of ACM; worker notification shall be documented.

2.1.9 Building Demolition and Disposal

An inventory of building material quantities was completed by estimating or measuring the dimensions (length, height, thickness) of various building materials, including floor slabs, walls and structural elements (trusses, beams, lumber).

Based on this inventory, an estimated 1,075 tons of demolition debris will be generated from demolition of the building including:

- Approximately 325 tons of concrete and concrete masonry unit (CMU) debris from building walls;
- Approximately 650 tons of concrete from the floor slab and foundations;
- Approximately 10 tons of corrugated sheet metal;
- Approximately 30 tons of structural steel from roof trusses and I-beams;
- Approximately 30 tons of lumber;
- Approximately 20 tons of roofing material; and
- Approximately 10 tons of miscellaneous building material within the warehouse area and office area including wall board, framing, fiberboard panels, ceiling tiles, doors and rubbish.

If removal of the floor slab is postponed until Phase II, an estimated 425 tons of demolition debris will be generated.

Results of sampling and testing completed for building characterization indicate that the entire floor slab is contaminated with PCBs, and that a portion of the concrete floor slab contains PCB concentrations greater than 50 mg/kg. The location of floor slab areas requiring disposal at a RCRA Subtitle C facility permitted to accept TSCA waste is shown on Building Demolition Plan, Figure C-4. Of the estimated 1,075 tons of demolition debris, approximately 37 tons of the concrete floor slab contains PCB concentrations greater than 50 mg/kg, and shall be disposed of at a RCRA Subtitle C facility permitted to accept TSCA waste. The nearest such facility is:

- Chemical Waste Management Landfill (operated by Waste Management)
  17629 Cedar Springs Lane
  Arlington, Oregon 97812

Results of wipe samples and chip samples collected from interior walls indicate that portions of building walls also contain PCBs, but at concentrations less than 50 mg/kg. The remaining approximate 613 tons of the concrete floor slab and foundations and the remainder of the building which contains PCBs at concentrations less than 50 mg/kg, shall be disposed of at a RCRA Subtitle D facility, provided such a facility will accept the demolition debris. Currently, the City of Spokane North Side Landfill and the Graham Road facility owned and operated by Waste Management Inc. will not accept material with PCB contamination. The nearest RCRA Subtitle D facilities that can accept non-hazardous waste containing PCBs are:

- Roosevelt Regional Landfill (operated by Rabanco, an Allied Waste Company)
  500 Roosevelt Grade Road
  Roosevelt, Washington 99356
- Columbia Ridge Landfill (operated by Waste Management)
  18177 Cedar Springs Lane
  Arlington, Oregon 97812

The contractor shall carefully separate building materials during demolition activities and sort the material depending on the location of its intended disposal facility.

Demolition debris shall be handled, transported and disposed of in accordance with all applicable local, state and federal regulations governing non-hazardous and hazardous waste. Demolition debris shall be covered and secured during transport.

Miscellaneous trash and debris present in the building such as boxes, packing materials and other equipment left over from the previous City Parcel Service operations may be disposed of at a municipal solid waste landfill, provided such a facility will accept the waste, and upon approval from the Engineer.

2.1.10 Dust Control During Building Demolition

The contractor shall implement dust control measures during building demolition activities. These measures will be consistent with the Spokane Regional Clean Air Agency regulations. The Contractor shall take necessary steps to prevent water from leaving the Site. Air monitoring will be conducted during all field work. Additional information regarding required monitoring activities is presented in section **3.0 Compliance Monitoring Plan**.

2.2 PHASE II - UNDERGROUND STORAGE TANK, DRYWELL AND DRAIN LINE REMOVAL PLAN

2.2.1 General

The approximate locations of the UST, drain lines and drywells are shown on Underground Storage Tank, Drywell, Floor Drain and Drain Line Removal Plan, Figure C-5. A survey of the Site drywells, drain lines and storage tanks was completed by SAIC in 2002 as part of the RI. Process drains below the floor slab consist of at least 290 lineal feet of 2-inch- to 4-inch-diameter steel pipes. The approximate depth of the pipes below the floor slab surface is shown on Figure C-5. The pipes are connected by nine floor drains, labeled FD1 through FD9. Floor drain FD8 also serves as a drywell. Overflow from FD8 discharges to drywell DW2. Table 1 below presents additional data, tabulated by SAIC, regarding Site floor drains. Additional information can be found in the RI report.

Table 1. Summary of Floor Drain Information

Feature	Dimensions	No. of Pipe Connections	Additional Notes
FD1	1'11" x 1'3.5"	1	
FD2	Circular, 1' diam.	1	
FD3	1'4.5" x 2'	2	
FD4	1' x1'	2	Nearby a 2" diameter pipe
FD5	1'2" x 1'2"	4	Nearby a 2.5" diameter pipe
FD6	Circular, 4" diam.	2	Suspected drain; packed with soil
FD7	Circular, 2.5" diam.	2	
FD8	Circular, 2'2" diam.	4	Drywell; 2'3" from floor surface to sediment. Total depth unknown.
FD9	Circular, 1' diam.	1	Drain plugged from the surface
DW1	Circular, 2'4" diam.	None	Outdoor drywell; 6' depth from grate to gravel/rock at bottom of drywell
DW2	unknown	1	Drywell; No visible drain from floor surface.

In addition to the floor drains, drain lines and drywells, an abandoned vault appears to be present below the floor slab near the west side of the building. The UST is present below the floor slab near the southeast portion of the building. These features are labeled "underground vault" and "underground storage tank" in Figure C-5. The exact dimensions of these features have not been confirmed. However, the plan dimensions of the vault appear to be approximately 4 feet by 7 feet, based on visual observation of the surface of the concrete floor slab. Based on information provided in the RI, the depth from the floor to the bottom of the UST is about 11 feet, measured from the cap located at the north end of the tank. The cap is located about 26 feet north of the south building wall. The tank is connected to a 4-inch-diameter standpipe located about 1 foot south of the south building wall. At the time of sampling, the tank contained about 2 inches of an unknown liquid.

The Contractor will assist the Engineer with reopening the vault. The Engineer will assess the condition of the vault and, following consulting with the Owner's Representative, determine the additional steps necessary (if any) related to the vault. Therefore, Contractor is only required to expose the vault such that Engineer can assess the condition.

2.2.2 Notification and Permits for UST Removal

The Contractor shall provide a Washington State licensed UST decommisioner and be responsible for obtaining and paying for all permits and inspections required for removing the UST and floor drains, drain lines and drywells. Required notification/permits include:

- State and local fire department notification of UST closure;
- Any other permits or notifications required to complete the work, including additional permits required to complete excavation activities in conjunction with this work.

The Contractor also shall notify the Engineer of the planned disposal landfills and shall provide proof that the landfills have agreed to accept the demolition debris before commencing with demolition activities.

2.2.3 Work Plan Preparation

The Contractor shall be required to submit a work plan detailing procedures for sediment and sludge removal, how the UST will be removed, schedule for and a description of the necessary safety requirements for this portion of the work. The work plan will identify personnel that have the required licenses for UST work. The contractor shall establish work zones to protect worker safety and health and to reduce the potential for off-site contamination.

2.2.4 Utility Locating

An underground utility survey shall be conducted by the Contractor before commencing with Phase II excavation activities, specifically any underground utilities remaining in the City of Spokane Right-of-Way after completion of Phase I work. This survey shall include a call to the local "One-Call" utility locating service. The Contractor shall complete any other work necessary to locate underground utilities. The Contractor shall take all appropriate actions to protect utilities during excavation activities.

2.2.5 Mobilization and Demobilization

The Contractor shall mobilize all equipment required to complete Phase II work described herein. The temporary security fence erected during Phase I work shall either be kept in place during Phase II work, or a new temporary security fence shall be erected, depending on scheduling. The existing site fence will be utilized to the extent practicable.

2.2.6 Work Zones and Stockpile Locations for Earthwork

The contractor shall establish work zones as described in section **2.1.7 Work Zones and Stockpile Locations for Building Demolition** before initiating Phase II earthwork activities. These work zones include:

- The Exclusion Zone;
- Decontamination Zone;
- Temporary Stockpile Area; and
- Support Zone/Contractor Staging Area

The Exclusion Zone shall consist of the area of active excavation and proximity.

The Decontamination Zone shall be set up adjacent to the Exclusion Zone, such that personnel and equipment must pass through the Decontamination Zone from the Exclusion Zone before entering the Support Zone or exiting the Site. During initial excavation activities, the Decontamination Zone shall be located on the north side of the building near the current entrance to the parking area. Equipment and materials utilized during excavation activities shall be decontaminated at this location. Water generated from decontamination procedures shall be containerized. The Engineer will sample containerized water and submit samples for PCB analysis. Results shall be reviewed by Ecology and the Engineer. The Contractor shall not discharge or transport water off-site for disposal without approval from the Engineer.

The Decontamination Zone also shall include a health and safety station, which shall contain first aid equipment, emergency eyewash, environmental monitoring equipment, and facilities for Site personnel to conduct decontamination activities. Decontamination activities shall follow procedures contained in the Site Health and Safety Plan.

The Temporary Stockpile Area shall be established as described in section **2.1.7 Work Zones and Stockpile Locations for Building Demolition**.

The Support Zone/Contractor Staging Area shall be established on Site at a suitable location such that it is separated from the Exclusion Zone by the Decontamination Zone.

Work Zone locations for initial Phase II activities are shown in Figure C-2. Figure C-3 also depicts work zone locations for Phase II. In order to facilitate the completion of the work, Work Zones and stockpile areas can be moved with approval from the Engineer. The Contractor shall be responsible to prevent cross contamination or re-contamination of areas where the work has been completed. Any cross contaminated or re-contaminated areas as determined by the Engineer shall be removed and disposed of at the contractor's expense.

2.2.7 Sediment and Sludge Removal

Following demolition and removal of the concrete floor slab, floor drains and drain lines shall be excavated. The UST shall be opened and existing liquid and sediment shall be removed by the Contractor and sampled by the Engineer. Sediment/liquids within the UST, floor drains, drain lines and drywells also shall be removed by the Contractor and sampled by the Engineer. Samples will be submitted by the Engineer to a certified analytical laboratory and tested for PCBs using EPA Method 8082.

Sediments/liquid samples obtained by the Engineer from within the UST also will be tested for total petroleum hydrocarbons (TPH) and metals as a basis for establishing disposal criteria. The performance samples will be tested for the necessary analytes using Northwest Methods NWPTH-Gx and NWTPH-Dx for TPH and EPA 6000-7000 series for metals. Sampling and analysis procedures for PCBs, TPH and metals will be outlined in a Sampling and Analysis Plan developed by the Engineer.

If sediment/liquids contain PCB concentrations greater than 500 mg/kg, they shall be transported off site for incineration. The nearest PCB incineration facility is:

- Aragonite Incineration Facility (operated by Clean Harbors)
  11600 North Aptus Road
  Aragonite, Utah 84029

If sediment/liquids contain PCB concentrations less than 500 mg/kg, the sediment/liquid shall be transported to an appropriate landfill depending on the analytical testing results for PCBs, TPH, and metals.

For bidding purposes, it is assumed that sediment/liquid present within the UST, drywells, floor drains and drain lines contain PCB concentrations greater than 500 mg/kg. The weight of liquid and sediment requiring incineration shall be determined following removal of the floor slab and excavation of the tank. For estimating and bidding purposes, 3 tons of liquid and sediment requiring incineration should be assumed.

2.2.8 Removal of Underground Storage Tanks, Floor Drains, Drain Lines and Drywells

Following removal of the concrete floor slab, the dimensions of the underground vault and underground tank shall be confirmed by the Contractor in conjunction with the Engineer. Ecology shall be notified of the results. The Engineer will discuss with the Contractor likely shoring requirements.

The UST shall be removed by a licensed contractor in accordance with WAC 173-360-385. The UST and associated piping, drain lines, floor drains, drywells and the vault shall be disposed of in a TSCA-permitted landfill. Structural shoring shall be required in order to complete the excavation for contaminated soil near drywell DW1. Structural shoring shall be installed before removal of DW1. Section **2.3.6 Structural Shoring** of this report provides information regarding requirements for structural shoring.

Following inspection of the vault by the Engineer, and if available, the Owner, the Owner and Engineer will establish an appropriate plan of action with regard to the fate of the vault. If results of the inspection indicate that the vault and its contents are contaminated, one option could be removal. Under these circumstances, the vault shall be removed and any material contained within it shall be sampled and analyzed for PCBs, TPH and metals. The vault and material contained within it shall be disposed in an appropriate landfill based on the results of analytical testing.

For estimating purposes, 20 tons of steel and concrete from the UST, drain lines, floor drains, drywells and vault have been assumed for disposal.

2.2.9 UST Closure Report

The Contractor shall submit to the Engineer documentation regarding UST closure and disposal. The Engineer will complete a site assessment and prepare a report in accordance with WAC 173-360.

2.3 PHASE II - SOIL EXCAVATION PLAN

2.3.1 General

Following building demolition, and during and subsequent to removal of USTs, drain lines and drywells, remedial activities shall proceed with excavation of PCB-contaminated soil and off-site disposal at a RCRA Subtitle C facility permitted to accept TSCA waste. Activities associated with this portion of the project include: 1) obtaining necessary permits and providing appropriate notifications; 2) preparation of work plans; 3) mobilization and demobilization; 4) establishing work zones and stockpile locations; 5) installing structural shoring; 6) excavating contaminated soil, including an existing soil stockpile located to the north of the building; 7) confirmation soil sampling of excavated areas; 8) transporting and disposing excavated soil at appropriate and approved landfills; 9) incorporation of dust control measures

during site activities; and 10) backfilling excavations (outlined in section **2.4 Phase II Final Grading Plan**.

2.3.2 Notification and Permits for Excavation

The Contractor shall be responsible for obtaining and paying for all permits and inspections required for soil. Required notification/permits include:

- City permit for grading;
- Spokane Regional Clean Air Agency notification;
- Any other permits or notifications required to complete the work.

The Contractor also shall notify the Engineer of the planned disposal landfills and shall provide proof that the landfills have agreed to accept the material before commencing with excavation activities. Refer to section **2.1.9 Building Demolition and Disposal** regarding acceptable disposal facilities.

2.3.3 Work Plan Preparation

The Contractor shall be required to submit a work plan detailing procedures for soil excavation, schedule for and a description of the necessary safety requirements for this portion of the work. The Contractor also shall provide required submittals for structural shoring. The contractor shall establish work zones to protect worker safety and health and to reduce the potential for off-site contamination.

2.3.4 Mobilization and Demobilization

The Contractor shall mobilize all materials and equipment necessary to complete the work described in this section as outlined in section 2.2.5.

2.3.5 Work Zones and Soil Stockpile Locations

The contractor shall establish work zones and temporary soil stockpile locations for soil excavation activities as outlined in section **2.1.7 Work Zones and Stockpile Locations for Building Demolition**.

In order to facilitate the completion of the work, staging and stockpile areas may be moved with approval from the Engineer. The general locations of work zones for initial earthwork activities are shown in Figure C-2. The general locations of work zones for final earthwork activities are shown in Figure C-3. The Contractor shall be responsible for preventing cross contamination or re-contamination of areas where the work has been completed. Any cross contaminated or re-contaminated areas as determined by the Engineer shall be removed and disposed of at the contractor's expense.

2.3.6 Structural Shoring

Structural shoring will be required in order to excavate contaminated soil near DW1. The approximate limits of structural shoring are shown on Construction Details, Figure D-1. The Contractor shall be responsible for design and installation of the structural shoring system. Design, submittal and construction requirements for structural shoring shall be completed in general accordance with Section 2-09.3(3)D of the Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge and Municipal Construction (Standard Specifications). Structural shoring shall provide lateral support of soils and limit lateral movement of soils supporting the nearby

entrance to the adjacent City of Spokane Fuel and Wash Facility, and East Springfield Avenue, such that existing improvements are not damaged. Structural shoring systems may include, but are not limited to driven cantilevered sheet piles, sheet piles with tiebacks and, soldier piles with lagging and tiebacks or bracing. Installation of tiebacks will require obtaining a temporary easement to install tiebacks within City of Spokane right-of-way.

Trench boxes, sliding trench shields, jacked shores or other shoring systems that are installed after excavation, and soldier pile, sheet pile, or similar shoring installed in front of a pre-excavated slope, are not allowed as structural shoring.

2.3.7 Excavation

Based on results of soil sampling and analytical testing, the areas of most significantly impacted soil generally are located in the north and east portions of the Site (outside of the original building footprint). Excavation depths to remove contaminated soil to target cleanup levels likely will to extend to depths of about 1 foot to 2 feet below current Site grade (or below the bottom of the floor slab within building areas). Excavations also will be required in order to remove impacted soil along existing interior drain lines and from around floor drains. Based on the results of soil sampling and testing completed near drywell DW1, it is anticipated that excavations likely will extend to depths in the range of about 15 to 20 feet below current Site grade to remove contaminated soil. Excavations near floor drain FD5 and drywell DW2 likely will extend to a depth on the order of about 5 feet below the bottom of the floor slab in order to remove contaminated soil. An estimated 1,500 cubic yards (2,250 tons) of PCB-contaminated soil likely will be excavated and disposed of off-site. Excavation Plan, Figure C-6 presents the excavation plan.

2.3.8 Confirmation Sampling

The Engineer will collect confirmation samples from excavations and submit for analytical testing. If results indicate that target cleanup levels have been met, then excavations will be backfilled. If sample results are greater than 10 mg/kg of PCB, then excavation shall continue in the area sampled. Following additional excavation, confirmation samples will be collected from the newly excavated area. This process will be repeated until results of analytical testing indicate that target cleanup levels have been reached. Additional information on the testing program is presented in section **3.0 Compliance Monitoring Plan**.

The Contractor shall be responsible for monitoring stability of temporary excavations. Excavations deeper than 4 feet shall be sloped or shored in accordance with applicable state regulations. Site soils classify as Occupational Safety and Health Administration (OSHA) Type C. Therefore, temporary excavations should not be steeper than 1.5H:1V (horizontal to vertical). Flatter slopes will be necessary if loads are imposed above excavations a distance equal to or less than one half the depth of the excavation, such as from excavation spoils or equipment.

2.3.9 Dust Control During Earthwork

The contractor shall implement dust control measures during earthwork activities. Air monitoring will be conducted during all field work. Additional information regarding required monitoring activities is presented in section **3.0 Compliance Monitoring Plan**.

2.3.10 Disposal of Contaminated Soil

Contaminated soil shall be disposed of at a RCRA Subtitle C facility permitted to accept TSCA waste, provided such a facility accepts the waste. Refer to section **2.1.9 Building Demolition and Disposal** regarding acceptable disposal facilities. Contaminated soil shall be covered and secured during transport, and shall be handled, transported and disposed of in accordance with all applicable local, state and federal regulations governing hazardous waste.

2.4 PHASE II - FINAL GRADING PLAN

2.4.1 General

Following completion of excavation and stockpiling or off-site transport of contaminated soil and review of conformation testing results (see section **3.0 Compliance Monitoring Plan**), excavations shall be backfilled. The Site shall be brought back to approximately current Site grade.

2.4.2 Imported Fill Specifications

General imported fill for Site backfill shall consist of soil meeting the criteria in Section 9-03.14(1) for "Gravel Borrow" of the 2008 WSDOT Standard Specifications. The top 4 inches of fill within the city-owned right-of-way shall conform to Specification 9-03.9(3) "Crushed Surfacing" of the WSDOT Standard Specifications. Certification shall be provided by the Contractor from the borrow source that the imported backfill is not contaminated.

2.4.3 Compaction Criteria

Imported fill shall be placed in approximate 6-inch-loose lifts, moisture conditioned to within about 3 percentage points of optimum moisture content, and compacted to at least 90 percent of the maximum dry density (MDD) based on the ASTM International (ASTM) D1557 laboratory test procedure.

2.4.4 Permanent Fencing

A permanent 6-foot-high chain link security fence shall be installed around the perimeter of the Site after completion of remedial work. The existing fence shall be utilized to the extent practicable. One, 20-foot-wide double gate shall be installed for future Site access. The final site plan is shown in Site Plan – Final, Figure C-7.

3.0 COMPLIANCE MONITORING PLAN

3.1 GENERAL

Compliance monitoring is required during remediation of any site and consists of protection monitoring, performance monitoring, and conformance monitoring. Protection monitoring is conducted to ensure that human health and the environment are adequately protected during Site activities. Performance monitoring is conducted to confirm that the cleanup action has attained the cleanup performance standards. Confirmation monitoring is conducted to confirm that the long-term effectiveness of the cleanup action is adequate after the cleanup standards have been attained.

3.2 PROTECTION MONITORING

3.2.1 General

Protection monitoring shall be included in the HASP submitted by the Contractor(s) prior to the beginning of work. Protection monitoring for this project will include air monitoring during asbestos abatement activities, air monitoring during building demolition activities, air monitoring during soil excavation activities, and monitoring of the Equipment Decontamination Area. The Contractor's HASP will specify the frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used by the Contractor in addition to any minimum requirements contained in the project specifications, including methods of maintenance and calibration of monitoring and sampling equipment. The submitted HASP(s) shall include the corrective actions and up grading of personnel protection based on monitoring of air, personnel, and environmental sampling, with specific action levels identified. The Contractor also shall be responsible for completion of an independent clearance monitoring program during asbestos abatement.

The Engineer also will complete an independent air monitoring program during building demolition activities and soil excavation activities as part of their HASP. Air will be monitored periodically throughout the day during active demolition and remediation activities at Site boundaries using a portable hand-held electronic particulate meter (Haz-Dust, Model HD-1100 or equivalent). The Engineer will immediately notify the Contractor and require corrective action if particulate readings for dust exceed 5 milligrams per cubic meter (mg/m^3).

3.2.2 Monitoring of Equipment Decontamination Area

The Decontamination Zone and Staging Area will be inspected daily for damage by both the Contractor and Engineer. Any damage to the areas as determined by either the Contractor or Engineer shall be repaired immediately in order to prevent contaminated material on construction equipment from leaving the Site in an uncontrolled manner.

3.3 PERFORMANCE SAMPLING

Soil samples will be collected throughout the excavation of the PCB-impacted soils to test for the possibility of additional contaminants and to verify that conditions in excavated areas are as expected based on the RI. Testing for possible additional analytes in soil will be done if the Engineer's field observations and qualitative evaluation tools (water sheen and headspace vapor) during remedial excavation activities indicate that there are additional contaminants of concern.

Sampling procedures and methodology will be outlined in a Sampling and Analysis Plan developed by Engineer.

3.4 CONFIRMATION SAMPLING

After excavating the PCB-impacted soil as delineated by the RI and Building Characterization Report, and as shown in Figure C-6, confirmation samples will be collected from the limits of the remedial excavations. If chemical analytical results indicate that PCB concentrations exceed the established Site specific cleanup levels, the grid where target cleanup concentrations are exceeded will be over-excavated and re-sampled following the same procedures as outlined above.

3.5 QUALITY ASSURANCE PROJECT PLAN

The general QA objectives for this project are to develop and implement procedures for obtaining and evaluating data of a specified quality that can be used to assess Site conditions and risks. Field QA procedures to be followed include collecting equipment blanks and duplicate samples, and completing all appropriate sample documentation. Measurement data should have an appropriate degree of accuracy and reproducibility. Samples collected should be representative of actual field conditions and samples should be collected and analyzed using proper chain-of-custody procedures.

Engineer will develop a site-specific Quality Assurance Plan.

4.0 HEALTH AND SAFETY PLAN

The work includes the requirements for personnel health and safety to ensure adequate worker protection. The Contractor shall, at a minimum, meet all requirements of WAC 296-155, Safety Standards for Construction. Contractor shall also comply with WAC 296-62, Part P, which governs hazardous waste operations in Washington State. Hazardous waste operations regulations (including a requirement for 40-hour or 80-hour OSHA hazardous waste training) will apply whenever exposure to hazardous materials is possible. The plan must be Site specific, addressing hazards at the Site. A generic plan or corporate-wide plan is not acceptable. The Engineer may halt or delay operations if Contractor does not provide an acceptable plan before the scheduled start date. An acceptable plan is a plan that meets the local, state, and federal requirements in the opinion of the Engineer's safety staff. The Engineer reserves the right to require future modifications to the plan to meet requirements of local, state and federal regulations.

The Contractor shall submit four (4) copies of the Contractor's Health and Safety Plan (HASP) to the Engineer a minimum of 7 days before mobilization to the Site. The Engineer will review the Health and Safety Plan and if any modifications are requested, the Contractor shall submit copies of the modified Health and Safety Plan to Engineer before beginning Site work. The Contractor shall not begin work until the HASP has been finalized and approved by the Engineer.

Contractor shall ensure subcontractors perform their work in accordance with the HASP and all local, state and federal regulations. The Engineer reserves the right to exclude subcontractors, or subcontractor employees who perform work in an unsafe manner or who do not comply with the project health and safety plan. Contractor shall supervise work of subcontractors at all times. Subcontractors shall never perform work without Contractor supervision. Exceptions to this requirement will be considered on a case-by-case basis. At least one Contractor employee shall have current first aid and CPR training while Contractor is on Site.

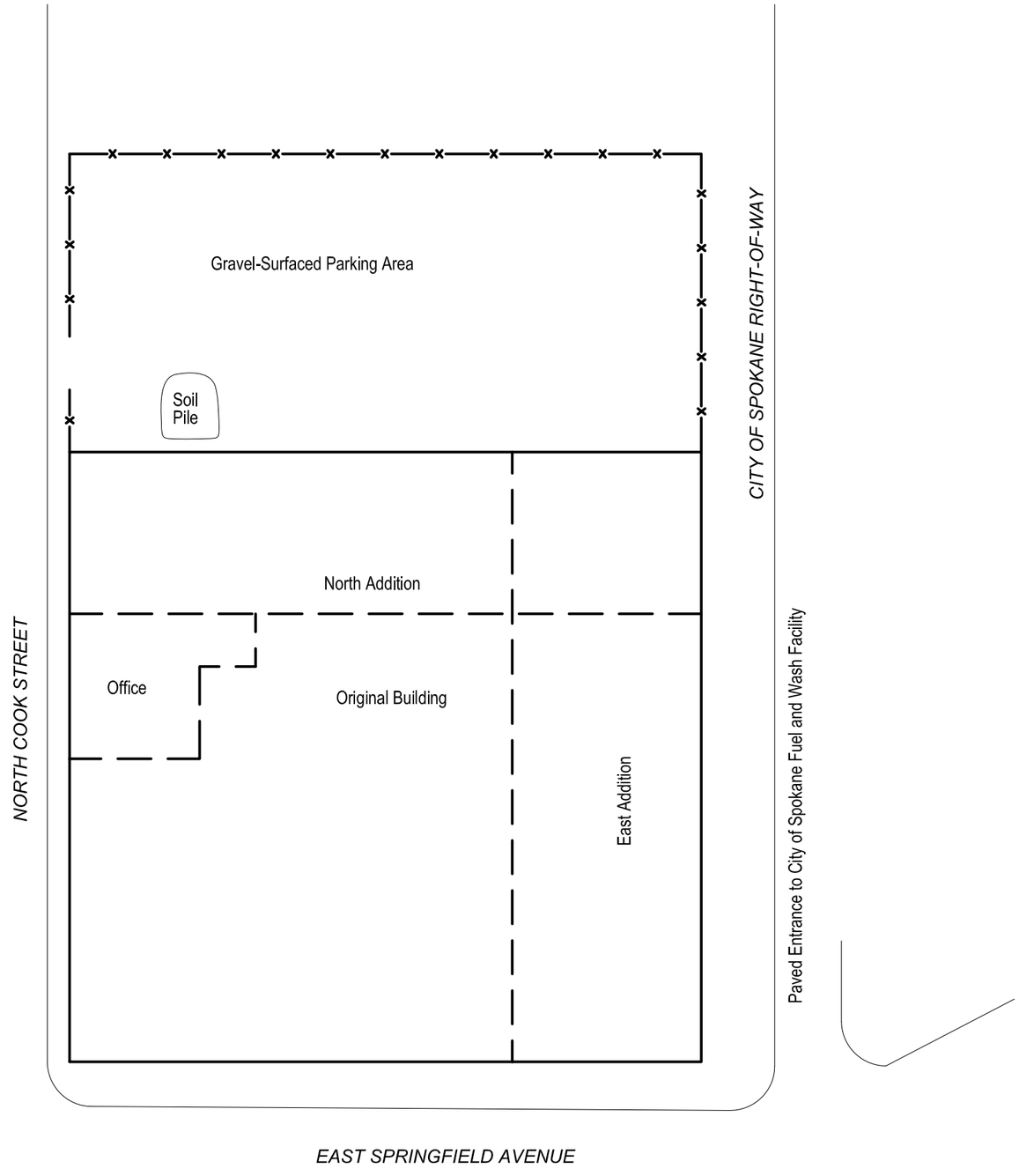
The Engineer will be responsible for generating and maintaining a Site-specific HASP for all personnel on Site representing the Engineer. The Engineer's HASP will meet all local, state, and federal regulations.

5.0 REPORTING

Upon completion of the work, the Engineer will write a Cleanup Action Report that provides documentation of the cleanup in accordance with WAC 173-340-400(6)(b). The report shall also contain an opinion from the Engineer, based on testing and inspections, as to whether the cleanup action has been completed in substantial compliance with the plans and specifications and related documents. Supporting

documentation such as laboratory data sheets, waste manifests, bills of lading, and other pertinent information shall be included in the report.

DRAFT



Legend

Fence

Interior Walls

N
W E
S

30 0 30

Feet

Site Plan - Existing

City Parcel Site
Spokane, Washington

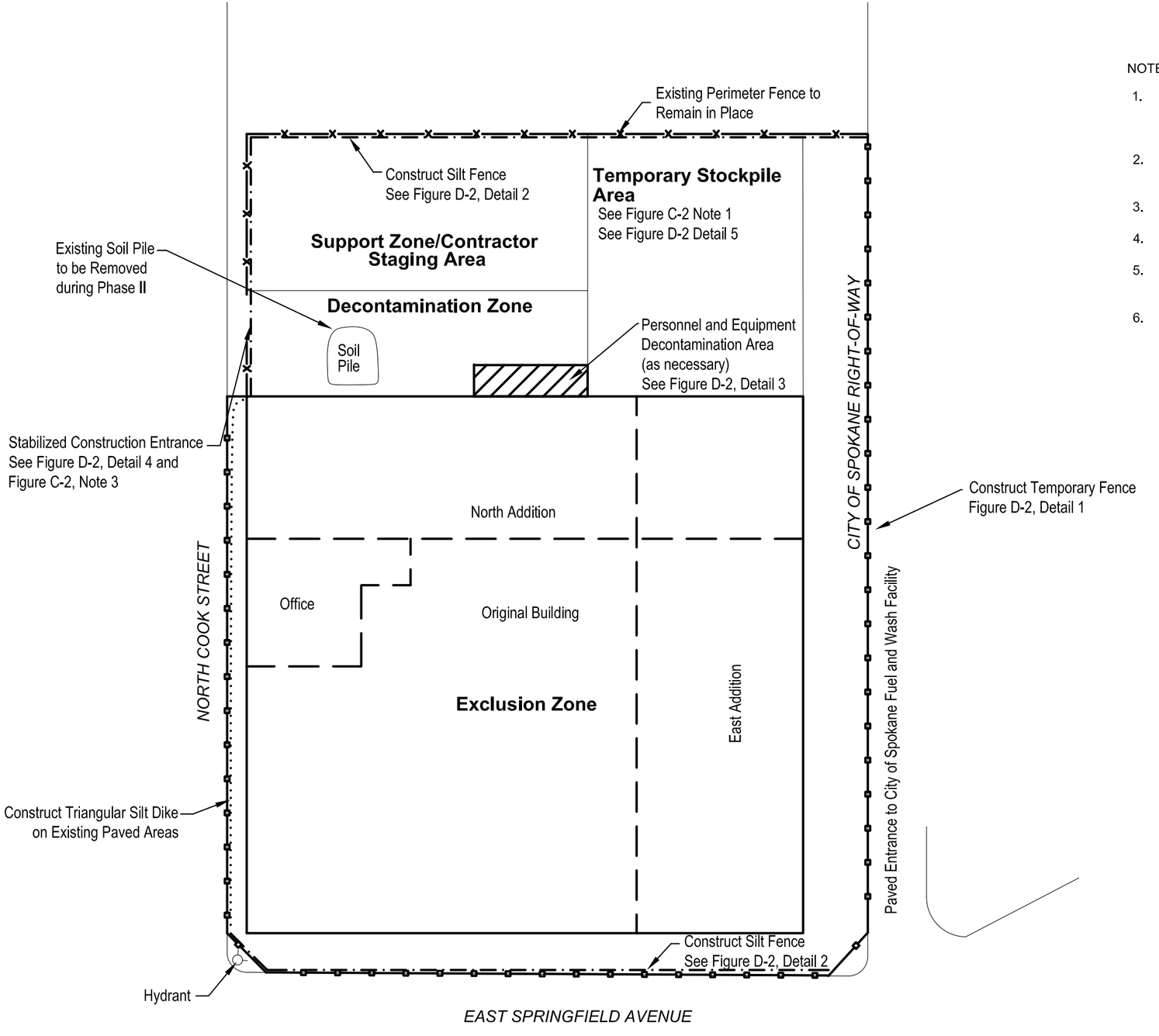
GeoEngineers

Figure C-1

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base drawing adapted from SAIC titled "Figure 4-1, Surface Soil Analytical Results on Site Map, City Parcel Site, Spokane, WA" dated 11/27/02.

SPOK P:\001\504-047\00\CAD\050604700F_C-1.dwg DRL:tlm 01/05/09 rev 01/23/09

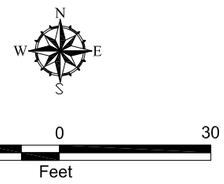


NOTES:

1. All stockpiled material shall be placed on plastic sheeting and covered with plastic sheeting or similar material approved by the Owner's Representative. Stockpiles will be surrounded by berms and shall not encroach within 10 feet of the site boundary. Do not stockpile material on City of Spokane Right-of-way. See Figure D-2, Detail 5.
2. As work proceeds, the Contractor shall move the Support, Decontamination and Exclusion zones as necessary to complete the work. Any material cross contaminated by the Contractor shall be removed at the Contractor's expense.
3. Erosion control shall be maintained at construction access points with diversion berms, sand bags and/or haybales as needed and approved by the Owner's Representative.
4. Silt fencing and triangular silt dike shall be placed along the interior of the temporary chain link fence in areas of active demolition or excavation or as determined by the Owner's Representative.
5. Excavations of any kind, including those for site preparation, to install temporary erosion control facilities, and utility work within the site, shall be completed by workers who have current Hazardous Waste Operations (Hazwoper) training.
6. On-site soil excavated during installation of temporary erosion control facilities shall be stockpiled in the designated Temporary Stockpile Area.

Legend

- Existing Chain Link Fence
- Interior Walls
- Temporary Chain Link Fence
- Silt Fence
- Triangular Silt Dike



Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base drawing adapted by SAIC titled "Figure 4-1, Surface Soil Analytical Results on Site Map, City Parcel Site, Spokane, WA" dated 11/27/02.

Temporary Site Control and TESC Plan Phase I: Building Demolition and Phase II: Excavation (Initial)

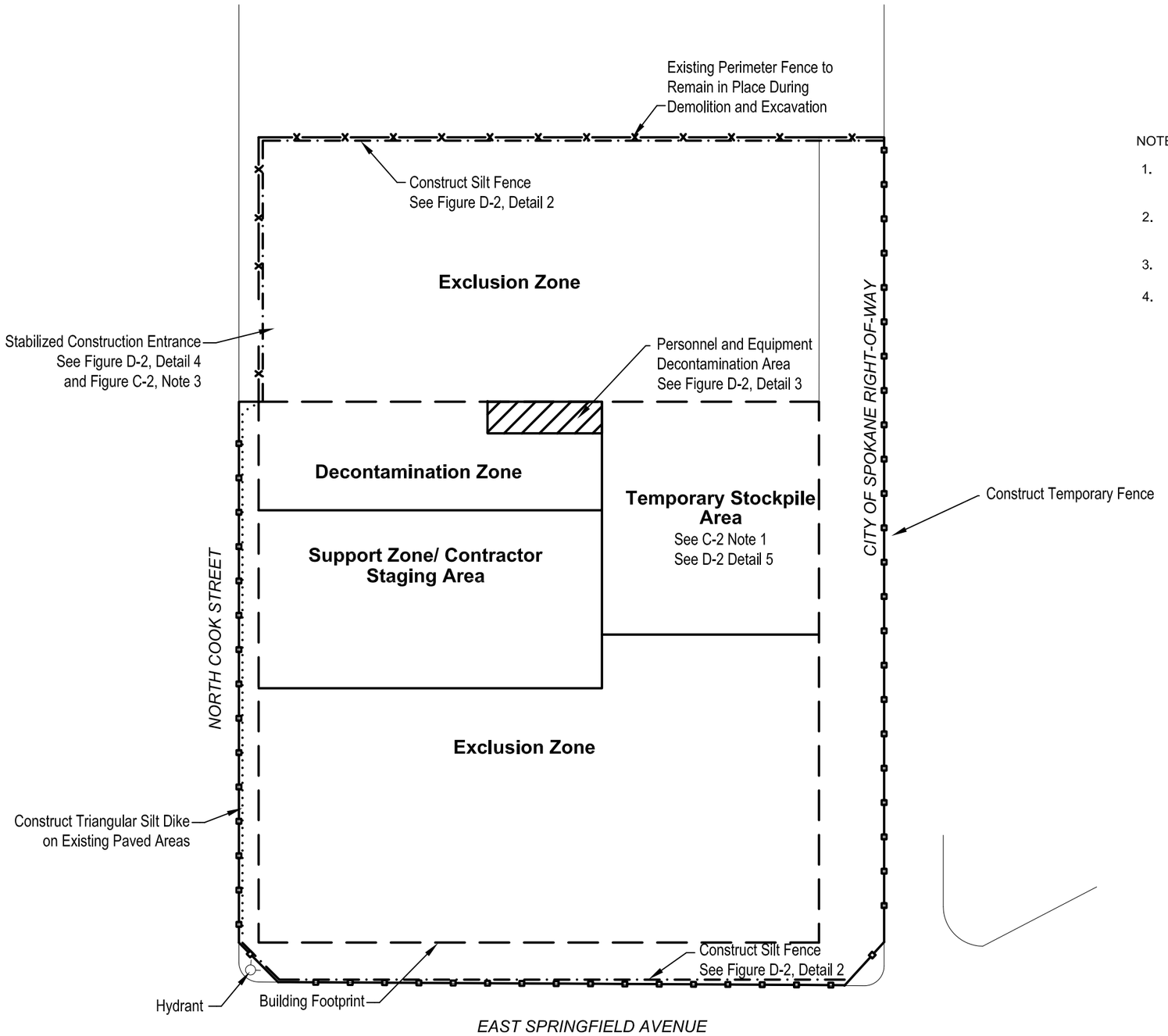
City Parcel Site
Spokane, Washington

GeoEngineers

Figure C-2

SPOK P:\001\504-047\00\CAD\050604700F_C-2.dwg DRL:tlm 01/05/09 rev 01/30/09

DRAFT



NOTES:

1. All stockpiled material shall be placed on plastic sheeting and covered with plastic sheeting or similar material approved by the Owner's Representative. Stockpiles will be surrounded by berms and shall not encroach within 10 feet of the site boundary. See Figure D-2, Detail 5.
2. As work proceeds, the Contractor shall move the Support, Decontamination and Exclusion zones as necessary to complete the work. Any material cross contaminated by the Contractor shall be removed at the Contractor's expense.
3. Erosion control shall be maintained at construction access points with diversion berms, sand bags and/or haybales as needed and approved by the Owner's Representative.
4. Silt fencing shall be placed along the interior of the temporary chain link fence in areas of active excavation or as determined by the Owner's Representative.

Legend

- Existing Chain Link Fence
- Interior Walls
- Temporary Chain Link Fence
- Silt Fence
- Triangular Silt Dike

N W E S

30 0 30

Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base drawing adapted from SAIC titled "Figure 4-1, Surface Soil Analytical Results on Site Map, City Parcel Site, Spokane, WA" dated 11/27/02.

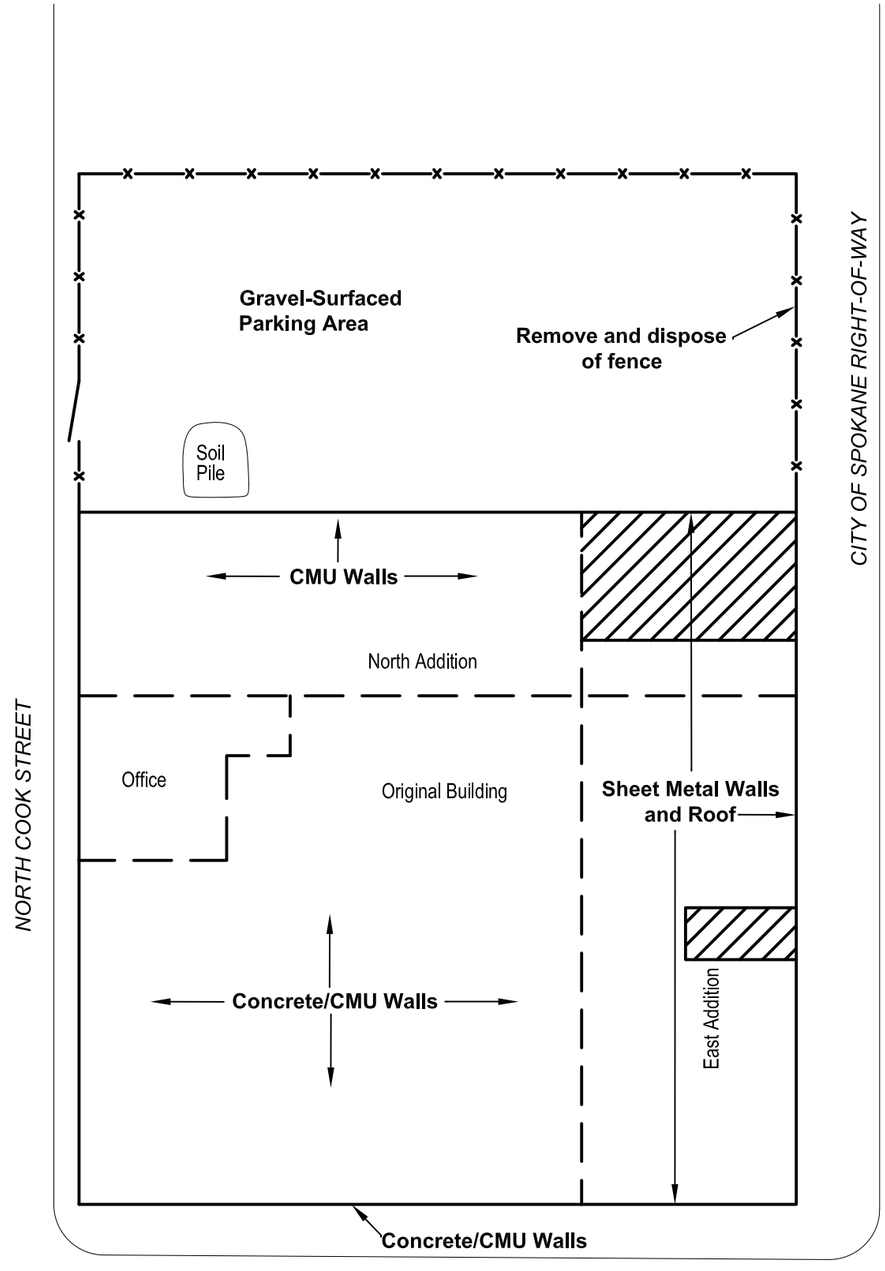
Temporary Site Control and TESC Plan
Phase II: Excavation (Final)

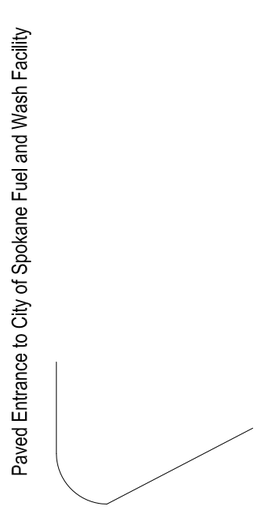
City Parcel Site
Spokane, Washington

GeoEngineers

Figure C-3

SPOK P:\00\0504-047\00\CAD\050604700F_C-3.dwg DRL:tlm 01/05/09 rev 01/30/09



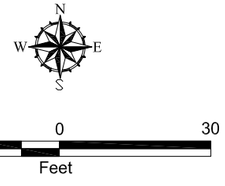


Demolition Sequence:

1. Provide appropriate notifications and obtain necessary permits. Submit necessary work plans and approvals to Owner's Representative.
2. Establish site temporary controls.
3. Complete asbestos abatement, provide abatement completion report and obtain approval before commencing with demolition.
4. Complete building demolition in accordance with plans and specifications.

Legend

- Fence
- Interior Walls
- Area of Concrete Floor Slab to be Disposed of at RCRA Subtitle C Facility Permitted to Accept TSCA Waste



Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base drawing adapted from SAIC titled "Figure 4-1, Surface Soil Analytical Results on Site Map, City Parcel Site, Spokane, WA" dated 11/27/02.

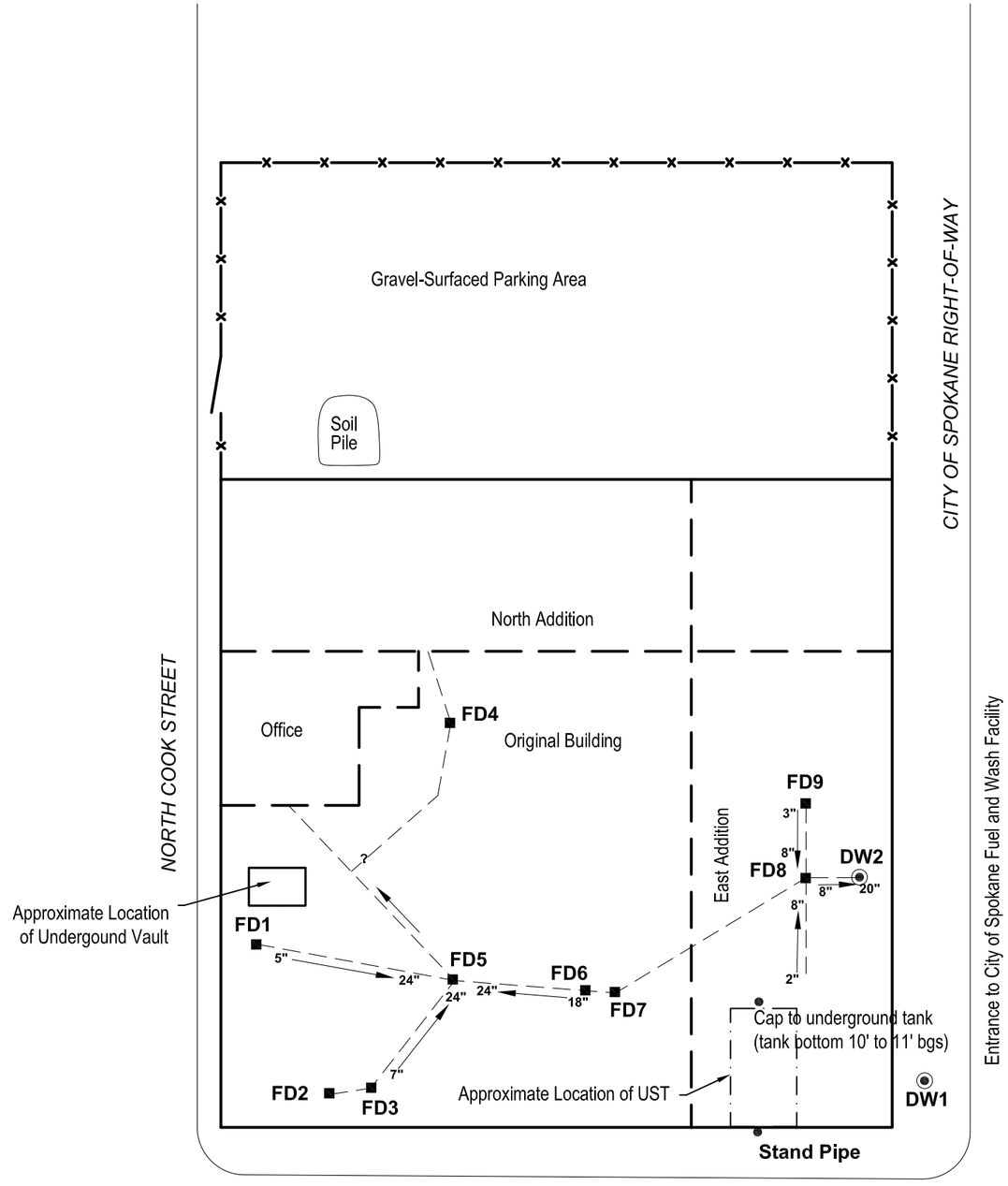
Building Demolition Plan

City Parcel Site
Spokane, Washington

GeoEngineers

Figure C-4

SPOK P:\00\0504-047\00\CAD\0506047700F_C-4.dwg DRL:tlm 01/05/09 rev 02/09/09



Removal Sequence

1. Remove sediment and gray liquids from tanks, floor drains and drywells, and containerize.
2. Excavate floor drains and drain lines. Remove sediment from drain lines and containerize.
3. Transport liquid and sediment off site to approved disposal facility for incineration following notification to proceed from Owner's Representative.
4. Dispose of underground storage tank, floor drains, drain lines and drywells at approved disposal facility as directed by Engineer.
5. Refer to Figure C-6 for Excavation Plan.

Legend

- Fence
- Interior Walls
- Drain Line
- Flow Direction with Depth Below Floor Surface (inches) (8" → 20")
- Floor Drain
- Drywell
- Vertical Stand Pipe or Cap

N W E S

30 0 30
Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base drawing adapted from SAIC titled "Figure 3-1, Site Drainage Feature Locations, City Parcel Site, Spokane, WA" dated 11/27/02.

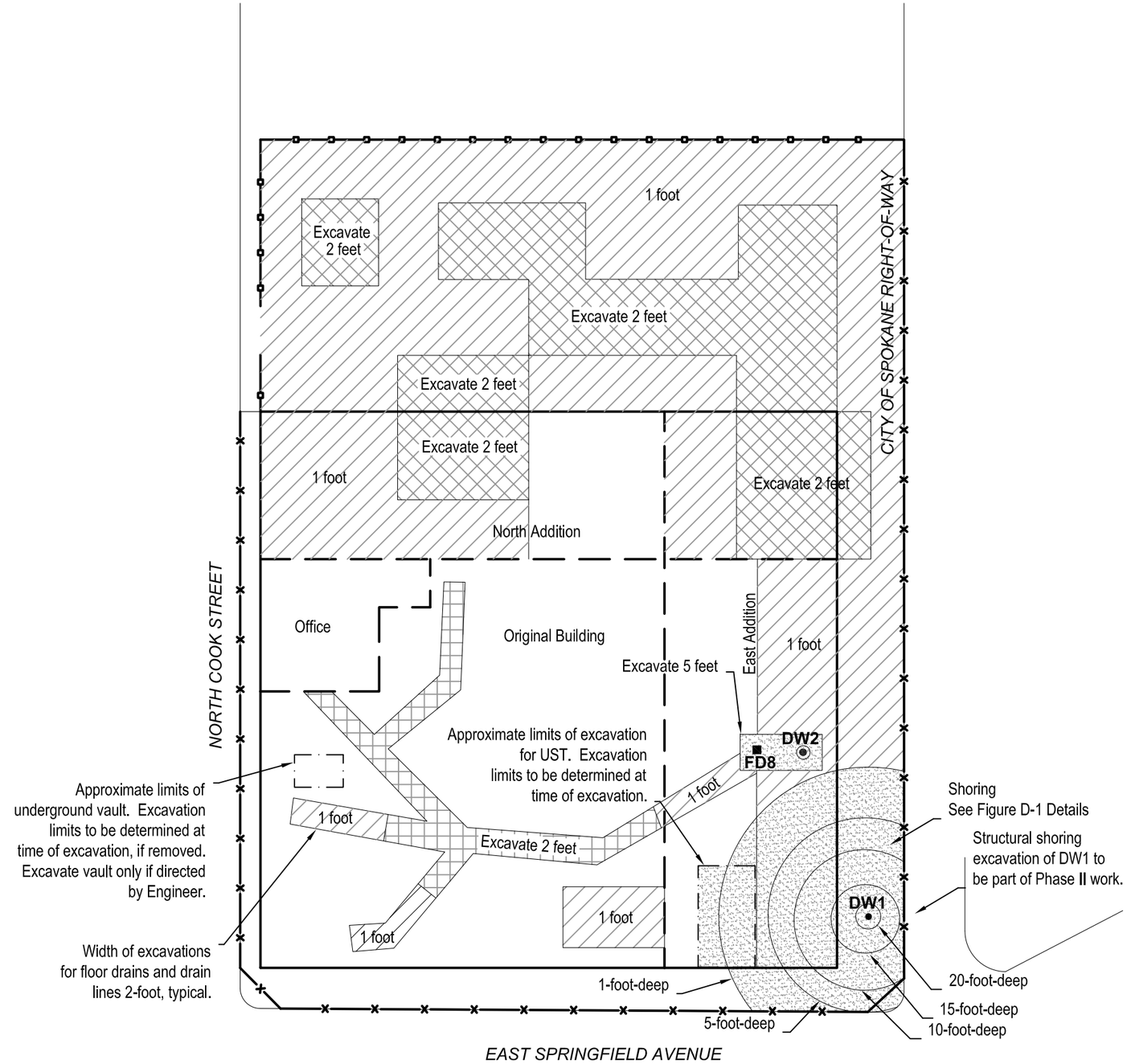
Underground Storage Tank, Drywell, Floor Drain and Drain Line Removal Plan

City Parcel Site
Spokane, Washington

GeoEngineers

Figure C-5

SPOK P:\00\504-047\00\CAD\050604700F_C-5.dwg DRL:tlm 01/05/09 rev 02/09/09

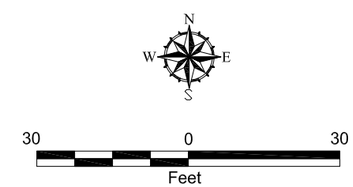


NOTES:

1. Areas shown without shoring or hatching do not require excavation.
2. Contractor shall verify locations of and depths to all existing underground utilities prior to commencing work.
3. All excavations greater than 4 feet shall be sloped 1.5H:1V (Horizontal:Vertical) or shored as approved by the Owner's Representative for safety. The top of the slopes shall match the existing site contours.
4. Dimensions of underground storage tank shall be determined and shoring plans shall be reviewed prior to installation of structural shoring.
5. Structural shoring shall be installed prior to removal of drywell DW1 and excavation of contaminated soil.
6. Existing soil pile shall be removed and disposed with excavated soil in accordance with specifications.

Legend

- Excavate 1 foot below current site grade
- Excavate 2 feet below current site grade
- Excavate to approximate depth shown on plan
- Existing Chain Link Fence
- Temporary Chain Link Fence/Silt Fence
- Interior Walls
- DW1 — Drywell
- FD8 — Floor Drain



Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base drawing adapted from SAIC titled "Figure 4-1, Surface Soil Analytical Results on Site Map, City Parcel Site, Spokane, WA" dated 11/27/02.

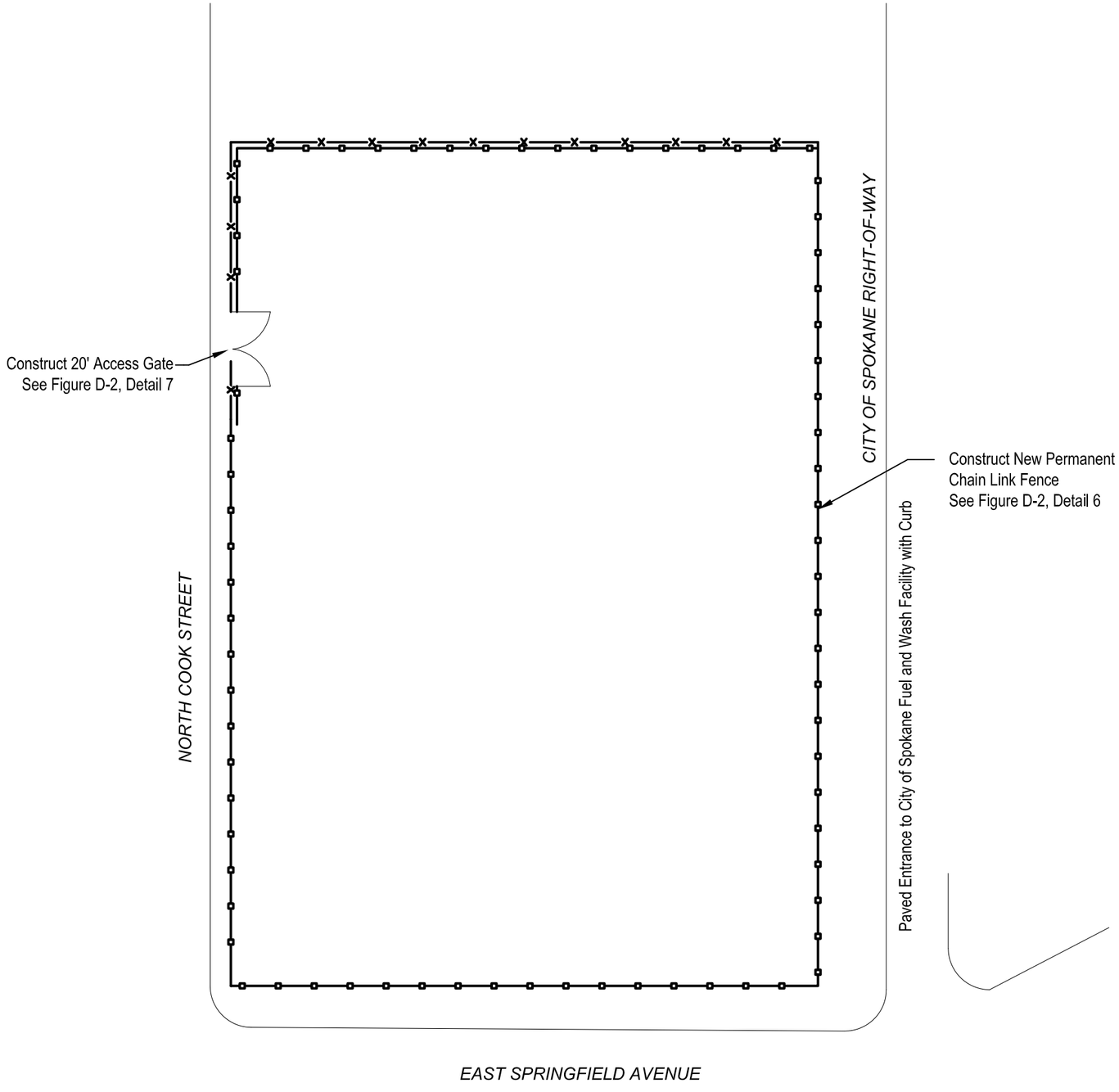
Excavation Plan

City Parcel Site
Spokane, Washington

GeoEngineers

Figure C-6

DRAFT

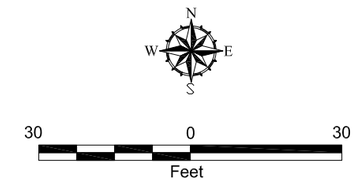


NOTES:

1. Backfill excavations to establish pre-excavation site grades.

Legend

- Existing Chain Link Fence
- New Permanent Chain Link Fence



Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Base drawing adapted from SAIC titled "Figure 4-1, Surface Soil Analytical Results on Site Map, City Parcel Site, Spokane, WA" dated 11/27/02.

Site Plan - Final

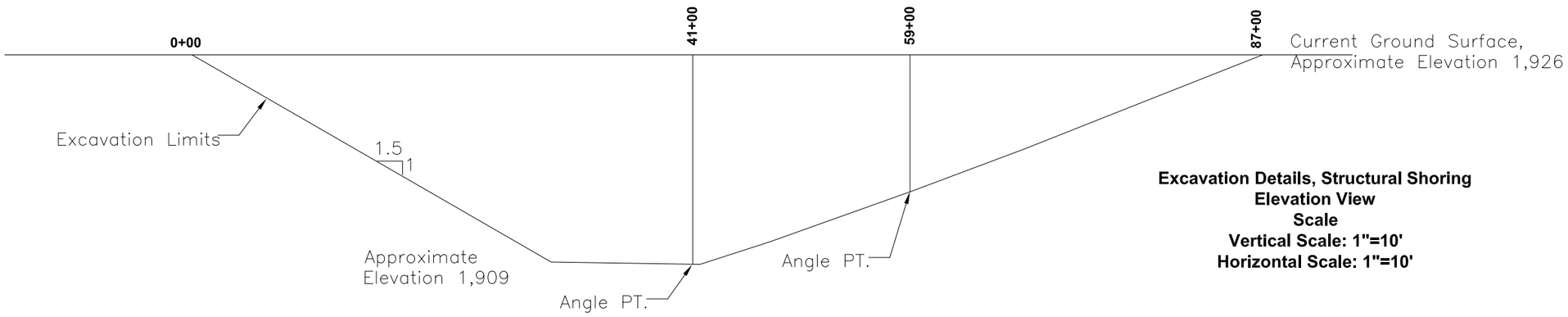
City Parcel Site
Spokane, Washington

GeoEngineers

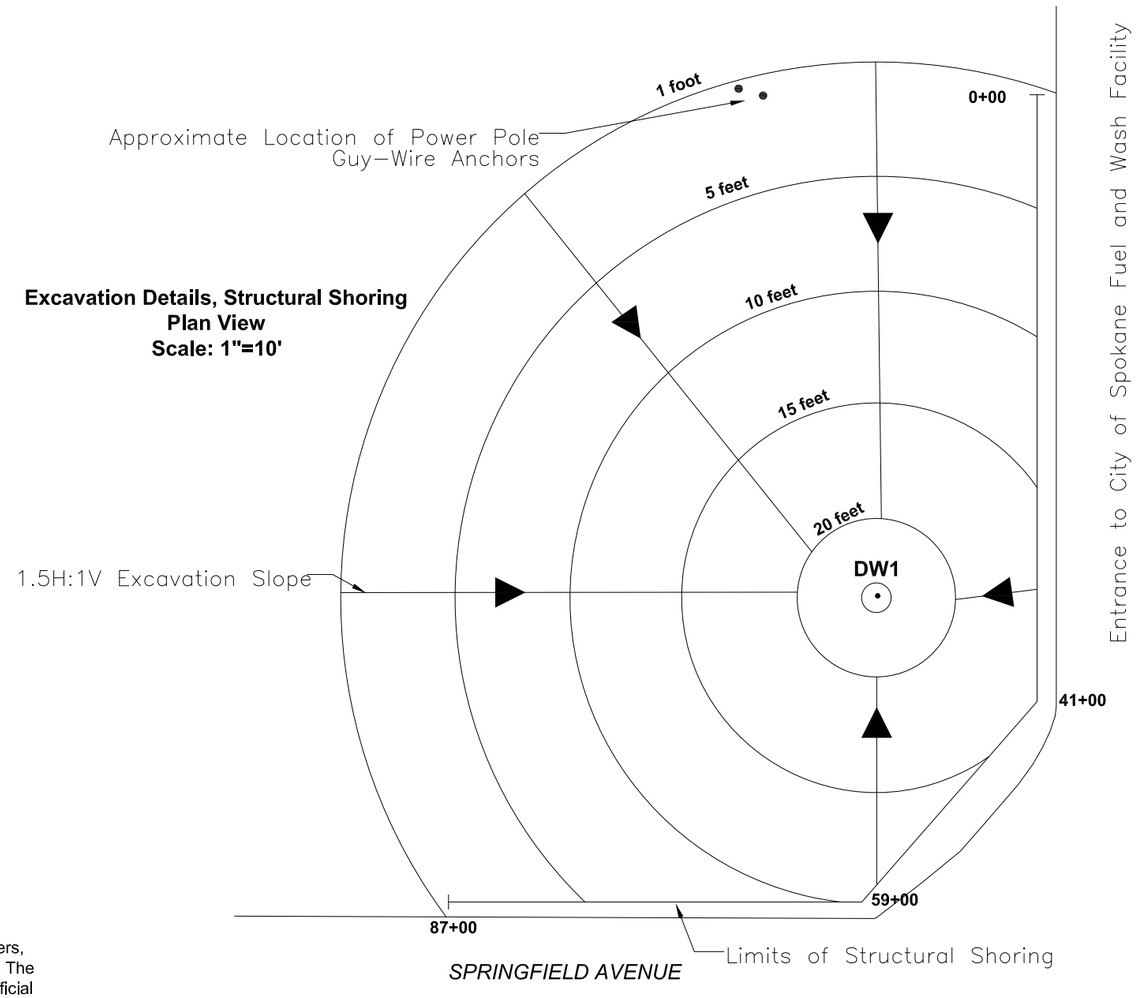
Figure C-7

SPOK P:\001\504-047\00\CAD\050604700F_C-7.dwg DRL:tlm 01/05/09 rev 01/30/09

DRAFT



Excavation Details, Structural Shoring
Elevation View
Scale
Vertical Scale: 1"=10'
Horizontal Scale: 1"=10'



Excavation Details, Structural Shoring
Plan View
Scale: 1"=10'

Notes:
Contractor shall adjust excavations as necessary to protect guy-wire anchors. Lateral stability of power pole shall not be compromised.

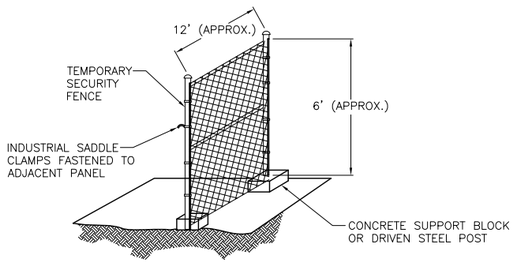
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Sketch by GeoEngineers.

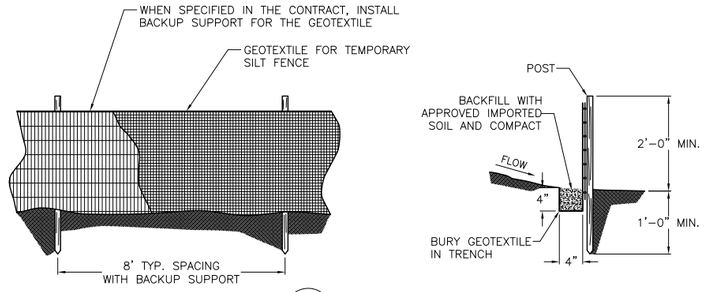
Construction Details	
City Parcel Site Spokane, Washington	
GeoEngineers	Figure D-1

SPOK P:\00\0504-047\00\CAD\050604700F_D-1.dwg DRL:tlm 01/05/09 rev 01/22/09

DRAFT

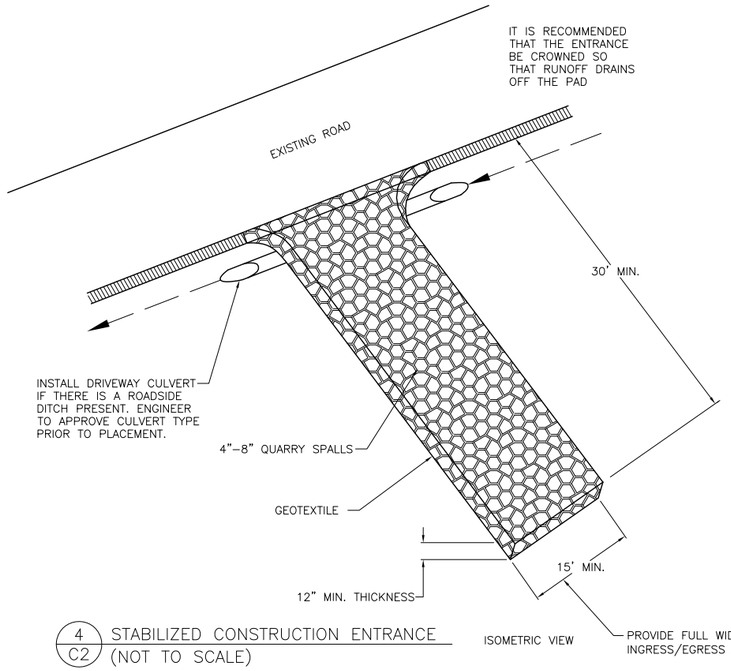


1 C2 TEMPORARY CHAIN LINK FENCE (NOT TO SCALE)

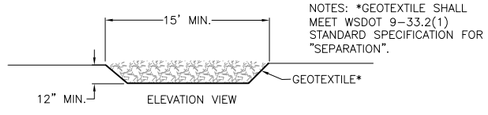


2 C2 SILT FENCE (NOT TO SCALE)

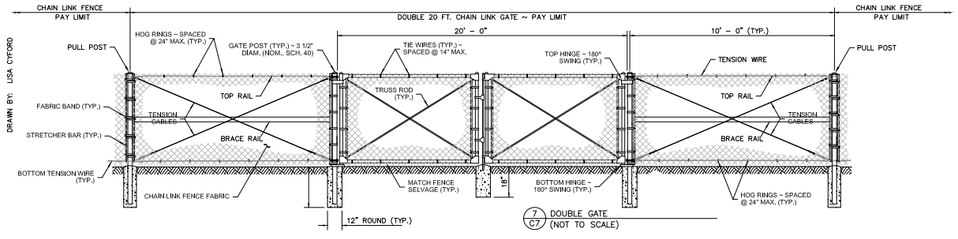
NOTES:
1. GEOTEXTILE SHALL MEET WSDOT STANDARD SPECIFICATION 9-33.2(1) FOR "TEMPORARY SILT FENCE".
2. POSTS SHALL BE EITHER WOOD OR STEEL; WOOD POSTS SHALL HAVE MINIMUM DIMENSIONS OF 2 INCHES BY 2 INCHES BY 3 FEET LENGTH, STEEL SHOULD BE EITHER SIZE NO. 6 REBAR OR LARGER, ASTM 120 STEEL PIPE, OR OTHER STEEL POSTS STRENGTH AND BENDING STIFFNESS.
3. GEOTEXTILE SHALL BE SEWN TOGETHER AT TEH POINT OF MANUFACTURE OR OVERLAPPED SO THAT THE OVERLAP IS LONG ENOUGHT TO PREVENET SILT-LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.



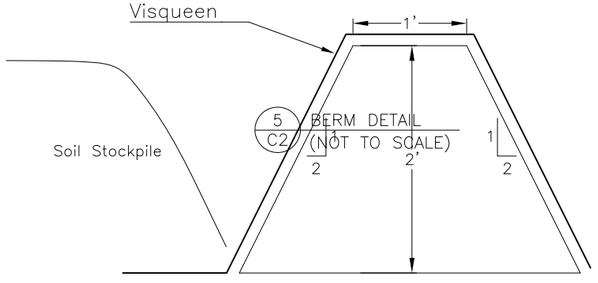
4 C2 STABILIZED CONSTRUCTION ENTRANCE (NOT TO SCALE)



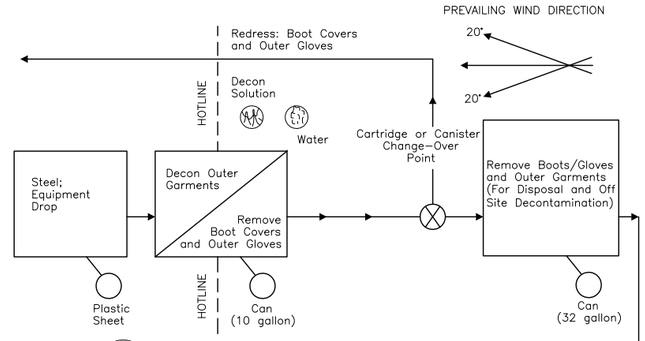
NOTES: *GEOTEXTILE SHALL MEET WSDOT 9-33.2(1) STANDARD SPECIFICATION FOR "SEPARATION".



7 C7 DOUBLE GATE (NOT TO SCALE)



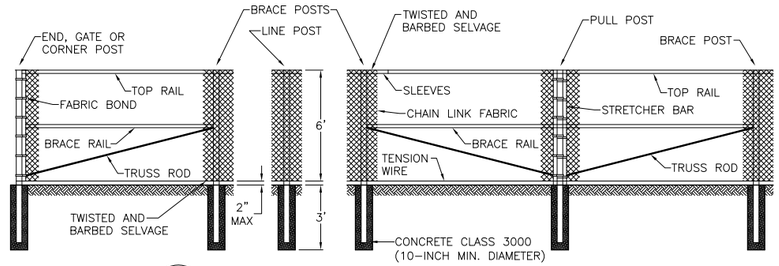
5 C2 BERM DETAIL (NOT TO SCALE)



3 C2 DECONTAMINATION ZONE LAYOUT (NOT TO SCALE)

NOTES:

STATION 1: EQUIPMENT DROP	1. DEPOSIT EQUIPMENT USED ON-SITE (TOOLS, SAMPLING DEVICES AND CONTAINERS, MONITORING INSTRUMENTS, RADIOS, CLIPBOARDS, ETC.) ON PLASTIC DROP CLOTHS. SEGREGATION AT THE DROP REDUCES THE PROBABILITY OF CROSS CONTAMINATION. DURING HOT WEATHER OPERATIONS, A COOL DOWN STATION MAY BE SET UP WITHIN THIS AREA.
STATION 2: OUTER GARMENT, BOOTS, AND GLOVES WASH AND RINSE	2. SCRUB OUTER BOOTS, OUTER GLOVES AND SPLASH SUIT WITH DECON SOLUTION OR DETERGENT WATER. RINSE OFF USING COPIOUS AMOUNTS OF WATER.
STATION 3: OUTER BOOTS AND GLOVE REMOVAL	3. REMOVE OUTER BOOTS AND GLOVES. DEPOSIT IN CONTAINER WITH PLASTIC LINER.
STATION 4: CANISTER OR MASK CHANGE	4. IF WORKER LEAVES EXCLUSION ZONE TO CHANGE CANISTER (OR MASK), THIS IS THE LAST STEP IN THE DECONTAMINATION PROCEDURE. WORKER'S CANISTER IS EXCHANGED, NEW OUTER GLOVES AND BOOT COVERS DONNED, JOINTS TAPED, AND WORKER RETURNS TO DUTY.
STATION 5: BOOT, GLOVES AND OUTER GARMENT REMOVAL	5. BOOTS, CHEMICAL-RESISTANT SPLASH SUIT, INNER GLOVES REMOVED AND DEPOSITED IN SEPARATE CONTAINERS LINED WITH PLASTIC.
STATION 6: FACE PIECE REMOVAL	6. FACEPIECE IS REMOVED. AVOID TOUCHING FACE WITH FINGERS, FACEPIECE DEPOSITED ON PLASTIC SHEET.
STATION 7: FIELD WASH	7. HANDS AND FACE ARE THOROUGHLY WASHED. SHOWER AS SOON AS POSSIBLE.



6 C7 PERMANENT CHAIN LINK FENCE (NOT TO SCALE)

TYPE	MEMBER																		ALL POSTS	
	BRACE RAIL & TOP RAIL						LINE & BRACE POST						END, CORNER, & PULL POST				GATE POST			
	ROUND		H-COLUMN		ROLL FORMED		ROUND		H-COLUMN		ROLL FORMED		ROUND		ROLL FORMED		ROUND			
	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	SIZE (INCHES)	WEIGHT PER FOOT (POUNDS)	I.D. PIPE (INCHES)	WEIGHT PER FOOT (POUNDS)	LENGTH	
	1-1/4	2.27	1-1/4 x 1-5/8	1.35	1-5/8 x 1-1/4	1.35	2	3.65	2-1/4	4.00	1-5/8 x 1-7/8	2.34	2-1/2	5.79	3-1/2 x 3-1/2	5.14	3-1/2	9.1	8'-8"	

PERMANENT CHAIN LINK FENCE SCHEDULE

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Drawing sketch by GeoEngineers.

Construction Details

City Parcel Site
Spokane, Washington

GeoEngineers

Figure D-2

SPOK P:\00\0504-047\00\CAD\050604700F_D-2.dwg DRL:tlm 01/05/09 rev 02/09/09