

SONDERGAARD GEOSCIENCE, PLLC

13012 65TH Avenue SE
Snohomish, Washington 98296

February 12, 2020
Revised November 6, 2020
Project No. J-0045

GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009

Attention: Chris Gayte

Subject: Geotechnical Engineering Study
Building G
Gayte Business Park
20015 67th Avenue NE
Arlington, Washington

Dear Mr. Gayte:

As requested, Sondergaard Geosciences, PLLC (SGP) is pleased to present our geotechnical engineering study for the subject site. This study has been prepared for the exclusive use of GS Venture Partners and their agents, for specific application to this project. Within the limitations of scope and schedule, our services have been performed in accordance with generally accepted engineering geology and geotechnical engineering practices in effect in this area at the time our study was prepared. No other warranty, express or implied, is made.

SITE AND PROJECT DESCRIPTION

The subject property consists of a portion of an irregularly-shaped parcel (Snohomish County Parcel Number 31051400200700), with a combined area of approximately 54 acres located at 20015 67th Avenue NE in Arlington, Washington (Figure 1). The subject property of this report (Building E) is comprised of Lots 14 and 15 which are bounded to the east by 74th Avenue NE, to the north and south commercial/industrial development and to the west by Lots 3 and 13 of the new business park. The proposed project that is the subject of this report consist of a 246,280 square feet commercial building with associated parking and utilities.

At the business park site, overall site topography is relatively flat on the west half of the parcel with moderate slopes down to the east toward the east half of the parcel. Lots 14 and 15 lay in a topographic low on the east of the parcel with up sloping ground to the west, east and south.

February 12, 2018: Revised November 6, 2020

SONDERGARRD GEOSCIENCES, PLLC

Extensive clearing and grading of the site to remove vegetation, topsoil and other deleterious material revealed native Recessional Outwash sand and gravel underlay the Building E site prior to filling.

SUBSURFACE CONDITIONS

Structural Fill

Approximately 10 feet of fill consisting of site derived sandy gravel and gravelly sand was placed and compacted on the Building E pad as documented in AESI Field Reports Nos. 1 through 24 attached to this report. This material was placed and compacted as structural fill to a density of at least 95 percent of its maximum dry density as determined by ASTM D 1557. This structural fill is suitable for support of building foundations, pavements and other structures.

Recessional Outwash

Native Recessional Outwash soils underly the structural fills. These soils generally consist of medium dense, moist, oxidized brown to gray, gravelly sand to sandy gravel and scattered cobbles. This unit is suitable for support of structural fills, foundations, slabs and pavements when properly compacted as recommended in this report.

Ground Water

Ground water seepage was not encountered during filling and grading operations accomplished at the site from July 14, 2016 to February 28, 2019. It should be noted that the depth and occurrence of ground water seepage at the site likely varies in response to such factors as changes in season, amount of precipitation, location, and site use.

GEOLOGIC HAZARDS

The following discussion of applicable geologic hazards is based on review of the City of Arlington Municipal Code (AMC) and the geologic, topographic, and ground and surface water conditions as observed and discussed herein. The discussion will be limited to landslide and steep slope hazards, seismic hazards, and erosion hazards.

Slope Hazards and Mitigations

The subject building site has slopes on the south side of the lots that exhibit inclinations of approximately 21 to 25 percent over heights of 70 to 100 feet. These slopes were graded to their existing contour during recent site filling and grading activities. In our opinion, the site slopes do

not meet the criteria of a Landslide Hazard Area according to AMC Part IV Section 20.93.600(b)(2). According to AMC Part IV Section 20.93.600.b(3)(B) the site slopes are classified as moderate. Landslide hazard mitigations are not recommended.

Seismic Hazards and Mitigations

Seismic Hazard Area

Ground water was not encountered during recent site grading and filling activities that raised site grades about 10 feet. Review of well logs on file at the Washington State Department of Ecology indicates that the shallowest ground water in the vicinity of the site occurs at depths of about 30 to 50 feet below the ground surface and that soils below this depth typically consist of clay and silt. In our opinion, the subsurface conditions at the project site do not meet the definition in AMC Part IV Section 20.93.600(b)(4) for a Seismic Hazard Area due to the depth to the shallowest ground water and the density and fine-grained nature of the soils at and below that depth.

However, earthquakes occur in the Puget Lowland with great regularity. The majority of these events are small and are usually not felt by people. However, large earthquakes do occur, as evidenced by the 1949, 7.2-magnitude event; the 1965, 6.5-magnitude event; and the 2001, 6.8-magnitude event. The 1949 earthquake appears to have been the largest in this area during recorded history. Evaluation of return rates indicates that an earthquake of the magnitude between 5.5 and 6.0 is likely within a given 20- to 40-year period.

Generally, there are four types of potential hazards associated with large seismic events: 1) surficial ground rupture, 2) seismically induced landslides, 3) liquefaction, and 4) ground motion. The potential for each of these hazards to adversely impact the proposed project is discussed below.

Surficial Ground Rupture

The project site is located approximately 16 miles southwest of the Devil's Mountain Fault Zone. This fault systems in has been hypothesized to have a reoccurrence interval in excess of several thousand years. Due to the suspected long recurrence interval and distance from the subject site, the potential for surficial ground rupture is considered to be low during the expected life of the proposed development. No mitigation efforts beyond complying with the requirements of the local jurisdictions and the current *International Building Code* (IBC) are recommended for this site.

Seismically Induced Landslides

The potential risk of damage to the proposed structures by seismically induced land sliding is low due to the moderate topography and lack of ground water seepage on the project site, in our opinion.

Liquefaction

Liquefaction is the process of loose, saturated sand losing its internal shear strength when subjected to cyclic loading, as may occur during an earthquake. Due to the lack of a shallow ground water table at the site and the density and fine-grained nature of soils below the ground water at depth, the potential for liquefaction to occur is low, in our opinion.

Ground Motion

It is our opinion that earthquake damage to the proposed structures, when founded on suitable bearing strata in accordance with the recommendations contained herein, will likely be caused by the intensity and acceleration associated with the event. Structural design for the project should follow current IBC standards. The 2015 IBC defines Site Classification by reference to Table 20.3.-1 of the *American Society of Civil Engineers* publication ASCE 7, the current version of which is ASCE 7-10. In our opinion the subsurface conditions at the site are consistent with a Site Classification of "D" as defined in the referenced documents.

Erosion Hazards and Mitigations

Soils that underlie the project site are classified by the USDA Soil Survey as Everett very gravelly sandy loam with 0 to 8 percent slopes and a slight erosion hazard. The subject property does not meet the criteria for an erosion hazard area as defined in AMC Part IV Section 20.93.600(b)(1). The following discussion addresses potential erosion hazards that could develop during construction.

The most effective erosion control measure is the maintenance of adequate ground cover. Maintaining cover measures atop disturbed ground provides the greatest reduction to the potential generation of turbid runoff and sediment transport. During the local wet season (October 1 through March 31), exposed soil should not remain uncovered for more than 2 days unless it is actively being worked. Ground-cover measures can include erosion control matting, plastic sheeting, straw mulch, crushed rock or recycled concrete, or mature hydroseed.

Some fine-grained surface soils are the result of natural weathering processes that have broken down parent materials into their mineral components. These mineral components can have an

inherent electrical charge. Electrically charged mineral fines attract oppositely charged particles and can combine (flocculate) to form larger particles that will settle out of suspension. The sediments produced during the recent glaciation of Puget Sound are, however, most commonly the suspended soils that are carried by site storm water. The fine-grained fraction of the glacially derived soil is referred to as “rock flour,” which is primarily a silt-sized particle with no electrical charge. These particles, once suspended in water, may have settling times in periods of months.

Therefore, the flow length within a temporary sediment control trap or pond has virtually no effect on the water quality of the discharge, since silt will not settle out of suspension in the time it takes to flow from one end of the pond to the other. Reduction of turbidity from a construction site is almost entirely a function of cover measures and flow control. Temporary sediment traps and ponds are necessary to control the release rate of the runoff and to provide a catchment for sand-sized and larger soil particles, but are very ineffective at reducing the turbidity of the runoff.

To mitigate the erosion hazards and potential for off-site sediment transport, we recommend the following:

- 1) The winter performance of a site is dependent on a well-conceived plan for control of site erosion and storm water runoff. It is easier to keep the soil on the ground than to remove it from storm water. The owner and the design team should include adequate ground-cover measures, access roads, and staging areas in the project bid to give the selected contractor a workable site. The selected contractor needs to be prepared to implement and maintain the required measures to reduce the amount of exposed ground. A site maintenance plan should be in place in the event storm water turbidity measurements are greater than the City of Arlington standards.
- 2) All TESC measures for a given area to be graded or otherwise worked should be installed prior to any activity within that area. The recommended sequence of construction within a given area would be to install sediment traps and/or ponds and establish perimeter flow control prior to starting mass grading.
- 3) During the wetter months of the year, or when large storm events are predicted during the summer months, each work area should be stabilized so that if showers occur, the work area can receive the rainfall without excessive erosion or sediment transport. The required measures for an area to be “buttoned-up” will depend on the time of year and the duration the area will be left un-worked. During the winter months, areas that are to be left un-worked for more than 2 days should be mulched or covered with plastic. During the summer months, stabilization will usually consist of seal-rolling the subgrade.

Such measures will aid in the contractor's ability to get back into a work area after a storm event. The stabilization process also includes establishing temporary storm water conveyance channels through work areas to route runoff to the approved treatment facilities.

- 4) All disturbed areas should be revegetated as soon as possible. If it is outside of the growing season, the disturbed areas should be covered with mulch, as recommended in the erosion control plan. Straw mulch provides the most cost-effective cover measure and can be made wind-resistant with the application of a tackifier after it is placed.
- 5) Surface runoff and discharge should be controlled during and following development. Uncontrolled discharge may promote erosion and sediment transport. Under no circumstances should concentrated discharges be allowed to flow over significant slopes.
- 6) Soils that are to be reused around the site should be stored in such a manner as to reduce erosion from the stockpile. Protective measures may include, but are not limited to, covering with plastic sheeting, the use of low stockpiles in flat areas, or the use of straw bales/silt fences around pile perimeters. During the period between October 1 and March 31, these measures are required.
- 7) On-site erosion control inspections and turbidity monitoring should be performed in accordance with City of Arlington requirements. Weekly and monthly reporting to Ecology should be performed on a regularly scheduled basis. TESC monitoring should be part of the weekly construction team meetings. Temporary and permanent erosion control and drainage measures should be adjusted and maintained, as necessary, at the time of construction.

It is our opinion that with the proper implementation of the TESC plans and by field-adjusting appropriate mitigation elements (best management practices) during construction, as recommended by the erosion control inspector, the potential adverse impacts from erosion hazards on the project during construction can be mitigated.

GEOTECHNICAL ENGINEERING RECOMMENDATIONS

The structural fill placed over the native Vashon recessional outwash encountered at the site is suitable for foundation and pavement support. The following sections provide our recommendations for foundation support, support of slab-on-grade floors and pavements.

Site Preparation

Site preparation of planned structural fill pads, building foundations, and other areas should include removal of all vegetation and any other deleterious material that has accumulated on the surface of the building pad since the completion of grading activities. Areas where loose surficial soils exist due to grading/grubbing operations should be recompact in place, or if this is not feasible due to either soil composition or moisture content, the loose soils should be removed and replaced as subsequently recommended for structural fill placement.

In our opinion, stable construction slopes should be the responsibility of the contractor and should be determined during construction. For estimating purposes, however, we anticipate that temporary, unsupported cut slopes in the structural fill and medium dense native soils may be made at a maximum slope of 1H:1V (Horizontal:Vertical). Additionally, if ground water seepage is observed, the temporary slopes may need to be readjusted. As is typical with earthwork operations, some sloughing and raveling may occur, and cut slopes may have to be adjusted in the field. In addition, WISHA/OSHA regulations should be followed at all times.

Permanent cut slopes in the structural fill or medium dense native sediments must not exceed a 2H:1V inclination. Fill slopes should either be overbuilt and trimmed back to final grade or surface compacted to a specified density.

The structural fill and native soils may be subject to disturbance when wet. The contractor must use care during site preparation and excavation operations so that the underlying soils are not softened. If disturbance occurs, the softened soils should be removed and the area brought to grade with structural fill. Consideration should be given to protecting access and staging areas with an appropriate section of crushed rock or asphalt treated base (ATB).

Foundation Support

Conventional Spread Footings

The foundation bearing stratum consists of structural fill compacted to a firm and unyielding condition and spread footings may be used for foundation support. The documented structural fill placed below foundations consists of non-organic soil, free of deleterious materials compacted to at least 95 percent of the modified Proctor maximum dry density, as determined by *American Society for Testing and Materials* (ASTM): D 1557 and documented in the above referenced AESI field reports. Structural fill below footing areas should extend laterally beyond the footing edges a distance equal to or greater than the depth of the footing but no less than 2 feet. Sediments exposed in footing excavations should be compacted to a firm and unyielding condition prior to footing placement.

For footings founded directly upon structural fill, we recommend that an allowable bearing pressure of 2,500 pounds per square foot (psf) be used for design purposes, including both dead and live loads. An increase of one-third may be used for short-term wind or seismic loading.

Perimeter footings for the proposed buildings should be buried a minimum of 18 inches into the surrounding soil for frost protection. No minimum burial depth is required for interior footings; however, all no footings should be founded on loose soils.

The area bounded by lines extending downward at 1H:1V (Horizontal:Vertical) from any footing must not intersect another footing or intersect a filled area that has not been compacted to at least 95 percent of ASTM:D 1557. In addition, a 1.5H:1V line extending down from any footing must not daylight because sloughing or raveling may eventually undermine the footing. Thus, footings should not be placed near the edges of steps or cuts in the bearing soils.

All footing areas should be observed by SGP prior to placing concrete to verify that the exposed soils can support the design foundation bearing capacity and that construction conforms with the recommendations in this report. Foundation bearing verification may also be required by the governing municipality.

Structural Fill

If additional structural fill is necessary to establish desired grades, all references to structural fill in this report refer to subgrade preparation, fill type, placement, and compaction of materials as discussed in this section. If a percentage of compaction is specified under another section of this report, the value given in that section should be used. Native soils or imported granular fill, approved by the geotechnical engineer or their representative, or recycled crushed concrete that is less than 3 inches in diameter may be used for structural fill when compacted to a firm and unyielding condition as determined by the geotechnical engineer or engineering geologist.

After stripping, planned excavation, and any required over-excavation have been performed to the satisfaction of the geotechnical engineer/engineering geologist, the upper 12 inches of exposed ground should be recompacted to a firm and unyielding condition. If the subgrade contains too much moisture, adequate recompaction may be difficult or impossible to obtain and should probably not be attempted. In lieu of recompaction, the area to receive fill should be blanketed with washed rock or quarry spalls to act as a capillary break between the new fill and the wet subgrade. Where the exposed ground remains soft and further over-excavation is impractical, placement of an engineering stabilization fabric may be necessary to prevent contamination of the free-draining layer by silt migration from below.

Foundation Walls

All backfill behind foundation walls or around foundation units should be placed as per our recommendations for structural fill and as described in this section of the report. Horizontally backfilled walls, which are free to yield laterally at least 0.1 percent of their height, may be designed to resist active lateral earth pressure represented by an equivalent fluid equal to 35 pounds per cubic foot (pcf). Fully restrained, horizontally backfilled, rigid walls that cannot yield should be designed for an equivalent fluid of 50 pcf. Walls with sloping backfill up to a maximum gradient of 2H:1V should be designed using an equivalent fluid of 55 pcf for yielding conditions or 75 pcf for fully restrained conditions. If parking areas are adjacent to walls, a surcharge equivalent to 2 feet of soil should be added to the wall height in determining lateral design forces.

As required by the 2015 IBC, retaining wall design should include a seismic surcharge pressure in addition to the equivalent fluid pressures presented above. Considering the site soils and the recommended wall backfill materials, we recommend a seismic surcharge pressure of $8H$ and $10H$ psf, where H is the wall height in feet for the “active” and “at-rest” loading conditions, respectively. The seismic surcharge should be modeled as a rectangular distribution with the resultant applied at the midpoint of the walls.

The lateral pressures presented above are based on the conditions of a uniform backfill consisting of excavated on-site soils, or imported structural fill compacted to 90 percent of ASTM:D 1557. A higher degree of compaction is not recommended, as this will increase the pressure acting on the walls. A lower compaction may result in settlement of the slab-on-grade or other structures supported above the walls. Thus, the compaction level is critical and must be tested by our firm during placement. Surcharges from adjacent footings or heavy construction equipment must be added to the above values. Perimeter footing drains should be provided for all retaining walls, as discussed under the “Drainage Considerations” section of this report.

It is imperative that proper drainage be provided so that hydrostatic pressures do not develop against the walls. This would involve installation of a minimum 1-foot-wide blanket drain to within 1 foot of finish grade for the full wall height using imported, washed gravel against the walls.

Passive Resistance and Friction Factors

Lateral loads can be resisted by friction between the foundation and the natural glacial soils or supporting structural fill soils, and by passive earth pressure acting on the buried portions of the foundations. The foundations must be backfilled with structural fill and compacted to at least 95

percent of the maximum dry density to achieve the passive resistance provided below. We recommend the following allowable design parameters:

- Passive equivalent fluid = 250 pcf
- Coefficient of friction = 0.35

Drainage Considerations

All perimeter footing walls should be provided with a drain at the base of the footing elevation. Drains should consist of rigid, perforated, polyvinyl chloride (PVC) pipe surrounded by washed pea gravel. The level of the perforations in the pipe should be set at or slightly below the bottom of the footing and the drains should be constructed with sufficient gradient to allow gravity discharge away from the buildings. Roof and surface runoff should not discharge into the footing drain system but should be handled by a separate, rigid, tightline drain. In planning, exterior grades adjacent to foundations should be sloped downward away from the structures to achieve surface drainage.

Pavement Design

The following presents our recommendations for design of asphalt pavement design for lighter loaded car traffic and heavier loaded truck traffic at the above referenced site. All areas to be paved should be crowned or sloped to direct storm water flow to the edges of the roadway and parking areas. The subgrade should then be compacted to a dense and nonyielding condition with a minimum 20-ton vibratory roller. Any fill areas should be tested to verify a minimum compaction of 95 percent of the modified Proctor maximum density or to a firm and unyielding condition as determined by the engineering geologist. Prior to application of the recommended pavement section the areas to be paved should be proof-rolled with a fully loaded, tandem axle dump truck. Any soft or yielding areas identified during proof-rolling should be over-excavated and backfilled with structural fill. Both the compaction of the subgrade and the proof-roll should be witnessed and documented by a representative of SGP. Therefore, upon completion of an approved proof roll as discussed above, the minimum pavement section for this project is as follows:

Parking Areas (Passenger Cars/Light Vehicles)

4" of base course/top course

2.5" Hot Mix Asphalt (HMA) Class ½" aggregate with a PG 58-22 asphalt binder

Drive Lanes /Loading Bays (Trucks/Heavier Vehicles)

6" of base course/top course

4" Hot Mix Asphalt (HMA) Class ½" aggregate with a PG 58-22 asphalt binder

The base course/top course rock should be compacted to a dense and unyielding condition. Base course and top course gravel should conform to Washington State Department of Transportation (WSDOT) Specification 9-03.9(3) for crushed surfacing materials. The HMA should be compacted to a minimum 91 percent of the maximum theoretical specific gravity (Rice's density).

PROJECT DESIGN AND CONSTRUCTION MONITORING

Our report is based on a general project concept provided by the owner. We recommend that SGP be allowed to review this report and update it as needed when a more detailed project plan has been developed. In this way, we can confirm that our earthwork and foundation recommendations have been properly interpreted and implemented in the design. This review is not included in our current scope of work and budget.

We are also available to provide geotechnical recommendations in the event that variations in subsurface conditions become apparent and earthwork monitoring services during construction. The integrity of the foundation system depends on proper site preparation and construction procedures. In addition, engineering decisions may have to be made in the field in the services are not part of this current scope of work. If these services are desired, please let us know, and we will prepare a cost proposal.

After recompaction of the exposed ground is approved, or a free-draining rock course is laid, structural fill may be placed to attain desired grades. Structural fill is defined as non-organic soil, acceptable to the geotechnical engineer/engineering geologist, placed in maximum 8-inch loose lifts with each lift being compacted to 95 percent of ASTM:D-1557. In the case of roadway and utility trench filling, the backfill should be placed and compacted in accordance with local codes and standards. The top of the compacted fill should extend horizontally outward a minimum distance of 3 feet beyond the location of the perimeter footings or roadway edges before sloping down at a maximum angle of 2H:1V.

The contractor should note that any proposed fill soils must be evaluated by SGP prior to their use in fills. This would require that we have a sample of the material at least 72 hours in advance to perform a Proctor test and determine its field compaction standard. Soils in which the amount of fine-grained material (smaller than the No. 200 sieve) is greater than approximately 5 percent (measured on the minus No. 4 sieve size) should be considered moisture-sensitive. Use of moisture-sensitive soil in structural fills should be limited to favorable dry weather and dry subgrade conditions. Construction equipment traversing the site when the soils are wet can cause considerable disturbance.

If fill is placed during wet weather or if proper compaction cannot be obtained, a select import material consisting of a clean, free-draining gravel and/or sand should be used. Free-draining fill consists of non-organic soil with the amount of fine-grained material limited to 5 percent by weight when measured on the minus No. 4 sieve fraction and at least 25 percent retained on the No. 4 sieve.

Slab-on-Grade Floor Support

Slab-on-grade floors may be constructed directly on the structural fill placed over the native Recessional Outwash soils. Areas of the slab subgrade that are disturbed (loosened) during construction should be recompacted to an unyielding condition prior to placing the pea gravel, as described below.

In order to control moisture vapor transfer through the slab, slab-on-grade floors should be constructed atop a capillary break consisting of a minimum thickness of 4 inches of washed pea gravel, washed crushed rock or other suitable material approved by the geotechnical engineer or engineering geologist. The capillary break should be overlain by a 10-mil (minimum thickness) plastic vapor retarder.

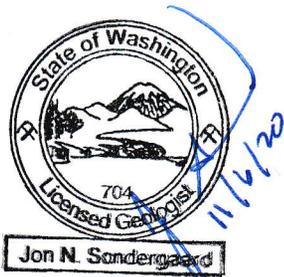
CLOSURE

We appreciate the opportunity to be of service to you on this project. Should you have any questions regarding this report or other geotechnical aspects of the project, please call us at your earliest convenience.

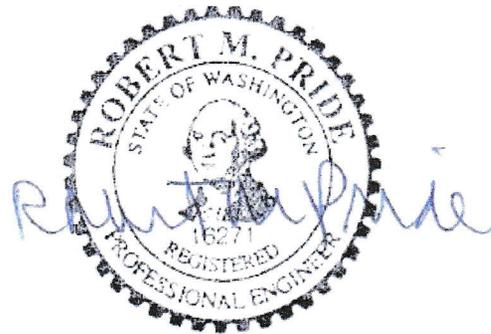
Sincerely,

SONDERGAARD GEOSCIENCE, PLLC.

Snohomish, Washington

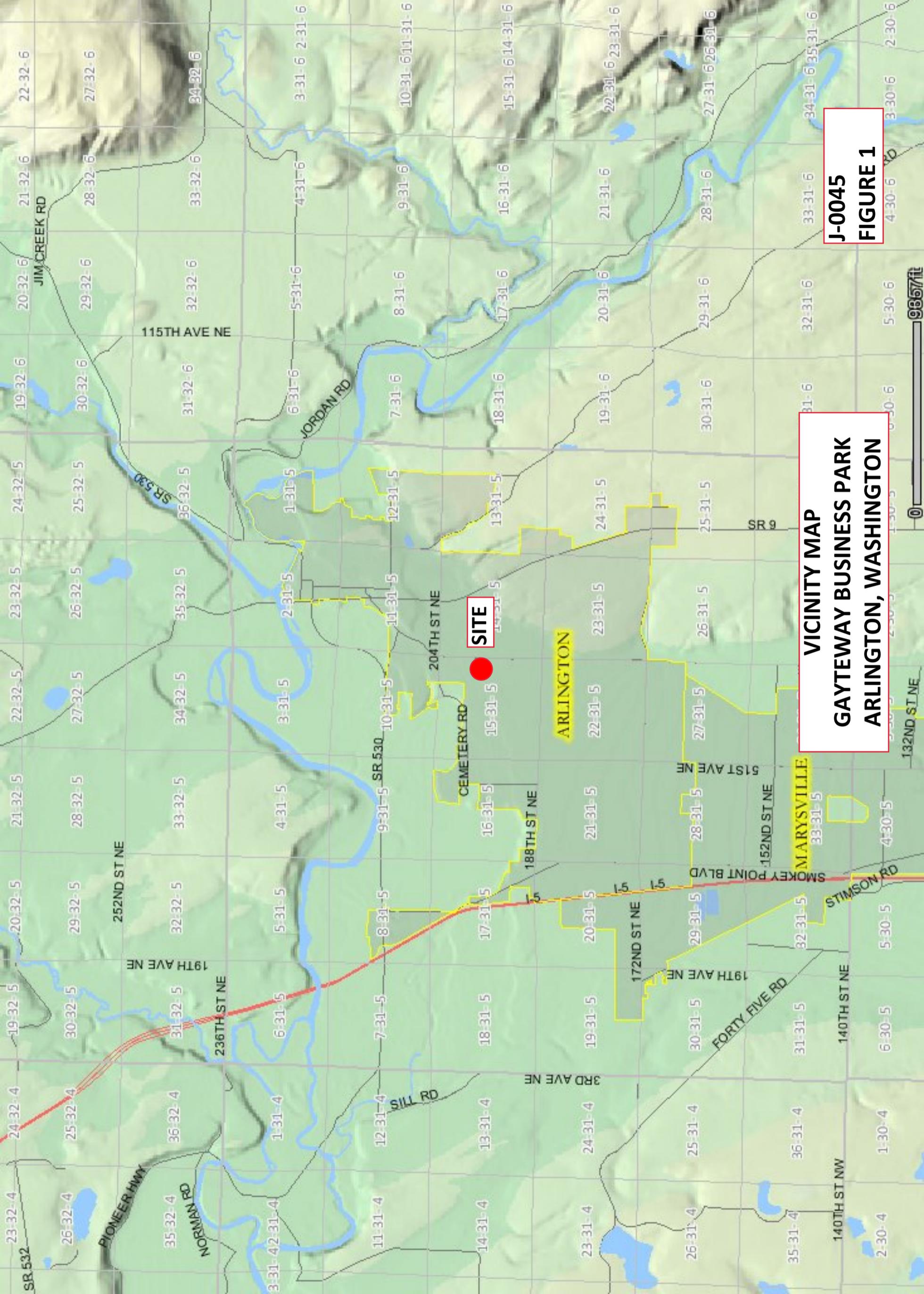


Jon N. Sondergaard, L.G., L.E.G.
Principal Engineering Geologist



Robert M. Pride, P.E.
Professional Engineer

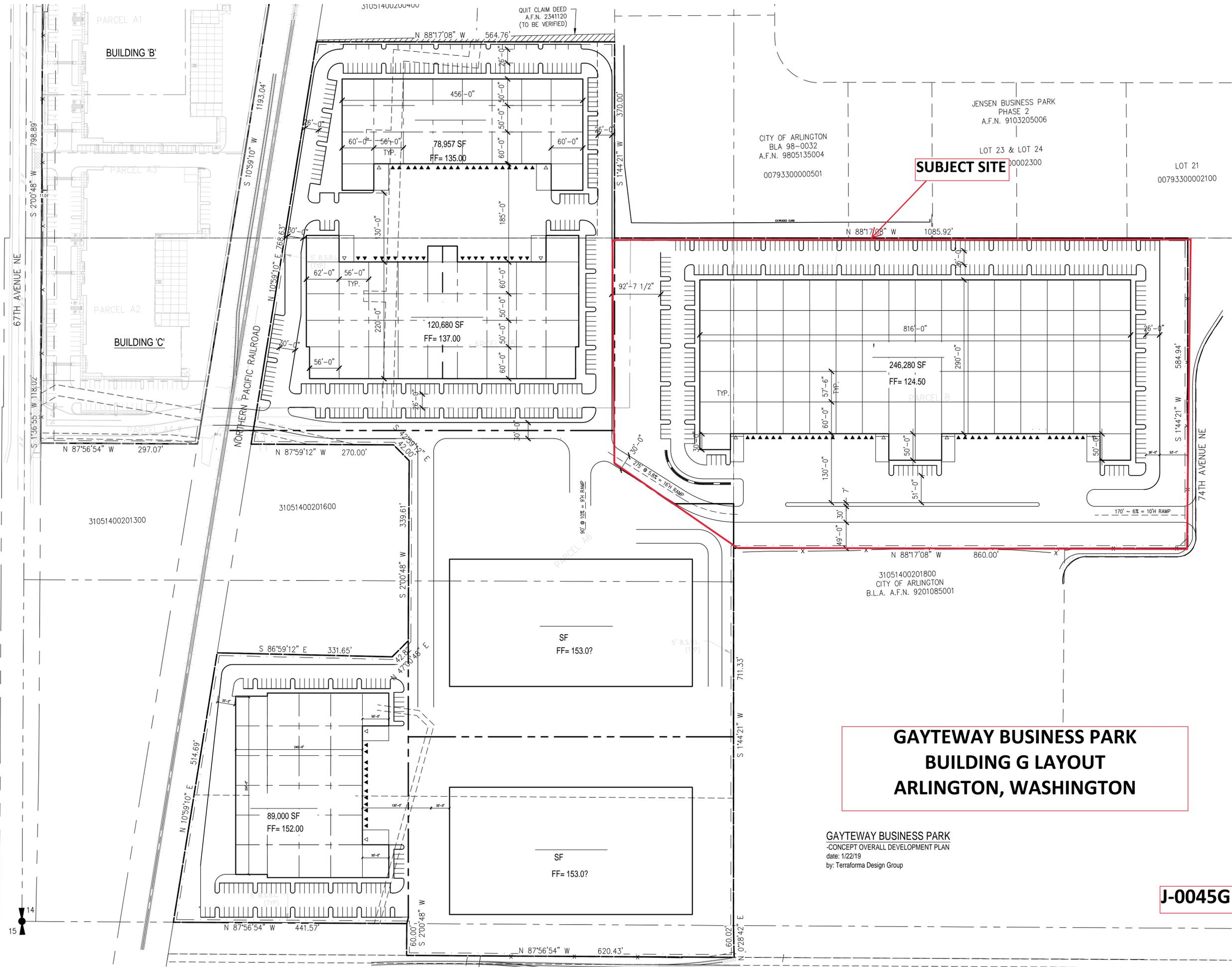
- Attachments:
- Figure 1: Vicinity Map
 - Figure 2: Building G Lot Locations
 - Figure 3: Building G Topography
 - Figure 4: Building G Layout
- AESI Field Reports



**VICINITY MAP
GAYTEWAY BUSINESS PARK
ARLINGTON, WASHINGTON**

**J-0045
FIGURE 1**

0 965ft



SUBJECT SITE

**GAYTEWAY BUSINESS PARK
BUILDING G LAYOUT
ARLINGTON, WASHINGTON**

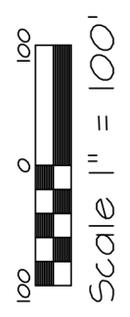
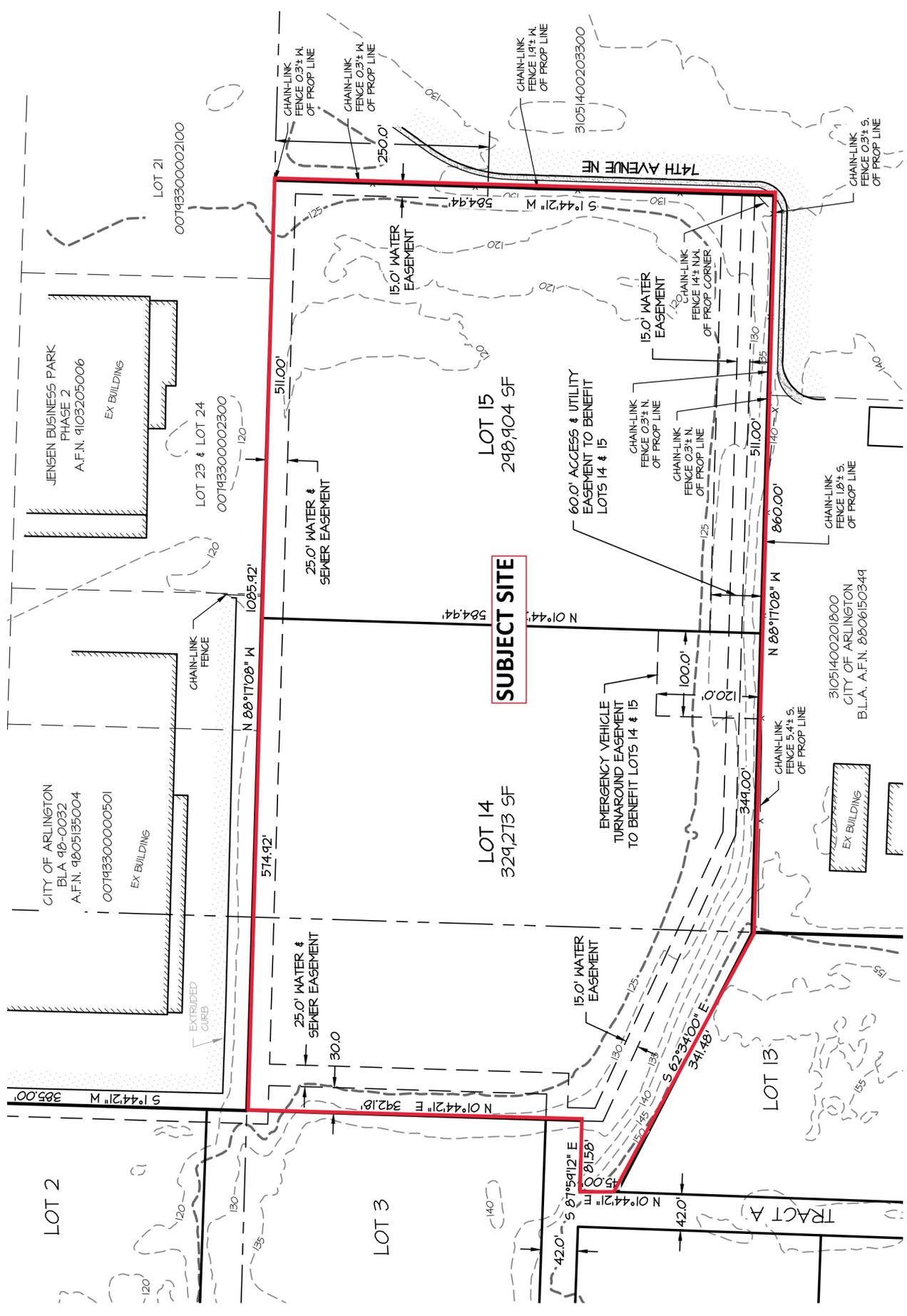
GAYTEWAY BUSINESS PARK
-CONCEPT OVERALL DEVELOPMENT PLAN
date: 1/22/19
by: Terraforma Design Group

J-0045G FIGURE 2



**GAYTEWAY BUSINESS PARK
CITY OF ARLINGTON BINDING SITE PLAN**

FILE NUMBER:
A PORTION OF NW1/4 NW1/4, SW1/4 NW1/4, SE1/4 NW1/4 & NW1/4 SW1/4
SECTION 14, TOWNSHIP 31 NORTH, RANGE 05 EAST, 11M,
SNOHOMISH COUNTY, STATE OF WASHINGTON



SHEET INDEX

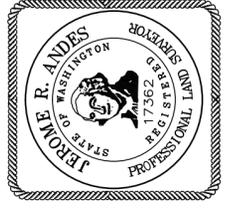
1	COVER
2	LEGAL DESCRIPTIONS AND RESTRICTIONS
3	SECTION SUBDIVISION & BOUNDARY SOLUTION
4	BINDING SITE PLAN LOT LAYOUT & EXISTING EASEMENTS
5	LOTS 1 THRU 4
6	LOTS 5 THRU 13
7	LOTS 14 & 15

J-0045G FIGURE 3

**GAYTEWAY BUSINESS PARK
BUILDING G TOPOGRAPHY
ARLINGTON, WASHINGTON**

REV. 02 JSM 4/10/14
A.F.N.

LOTS 14 & 15



ANDES
LAND SURVEYING, P.S.

1523 TENTH ST,
MARYSVILLE, WA 98270
PHONE: 360-350-5063

DRAWN BY: JSM
CHECKED: JRA
DATE: MARCH 2014

JOB DATA:
3105-14-10
201902
[201805] FB: FILE
3105-14-09 GAYTEWAY BSP 4-10-14B

GAYTEWAY BUSINESS PARK
BINDING SITE PLAN
FOR GAYTEWAY, LLC

FILE NO. _____
A PORTION OF NW1/4 NW1/4, SW1/4 NW1/4, SE1/4 NW1/4 & NW1/4 SW1/4
SECTION 14, TOWNSHIP 31 NORTH, RANGE 05 EAST, 11M,
SNOHOMISH COUNTY, STATE OF WASHINGTON

GEOTECH MARKUP

FOR

GAYTEWAY BUSINESS PARK

PTN OF THE NE1/4, OF THE SW1/4 OF SEC. 14, TWP. 31 N., RGE 5 EAST, W.M.
CITY OF ARLINGTON, SNOHOMISH COUNTY, STATE OF WASHINGTON

GEOTECH MARKUP

Title:

For: GAYTEWAY BUSINESS
PARK LLC
PO BOX 1727
BELLEVUE, WA 98009

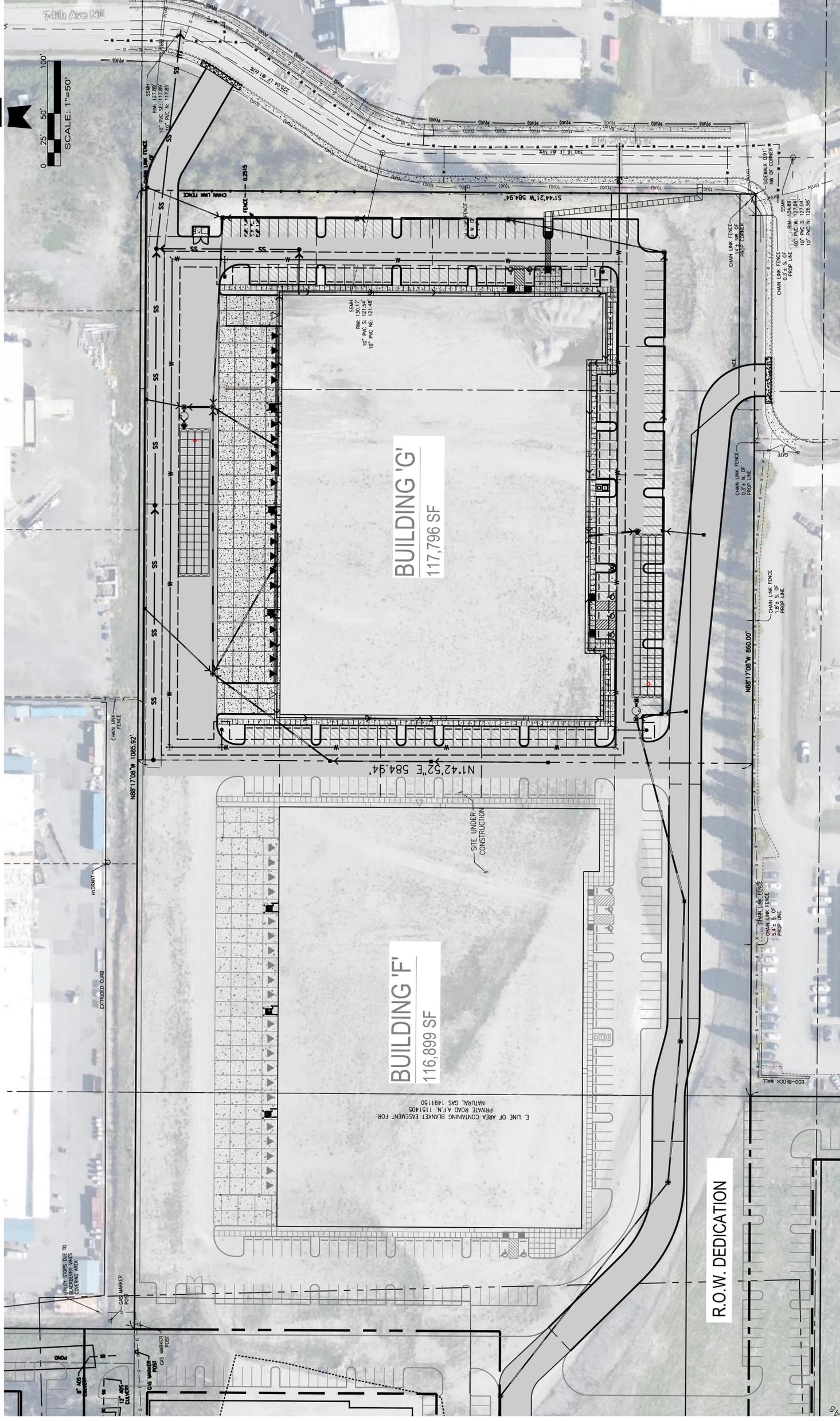
Scale: Designed M/G
Drawn M/G
Checked J.C.
Approved C.I.
Date 8/28/20
NA

Barhansen
Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barhansen.com

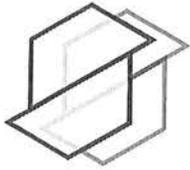


Job Number
21334

J-0045G FIGURE 4



SITE PLAN
GAYTEWAY BUSINESS PARK
BUILDING G
ARLINGTON, WASHINGTON



associated
earth sciences
incorporated

FIELD REPORT

Page 1 of 1

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date 6 JUL 16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE	Municipality Arlington	Weather Clear 70's
Permit No. 1738	DPD No.	Report No. 1
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Client

THE FOLLOWING WAS NOTED:

AESI was onsite for a pre-construction meeting and sample pick up for Proctor analysis. Upon our arrival, we met with Chris from GS Venture, and Chris from USVET.

Two samples of the on-site material were obtained for a Proctor analysis. The samples were obtained towards the southeast corner and south side of the site.

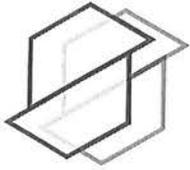
Both the client and contractor informed us that they would contact AESI to schedule a site visit.

Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG 



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FIELD REPORT

Page 1 of 2

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date 14 JUL 16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE		Municipality Arlington
Permit No. 1738	DPD No.	Weather Clear 80's
Report No. 2		
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Client

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed about 3 to 4 feet of fill along the south side of the proposed building. We observed the subgrade soils along the edge of the fill area consisted of a gravelly sand to sandy gravel that could be penetrated from 1 to 4 inches with a 1/2 inch diameter probe rod. The fill material consisted of a dark brown, silty sand, which the contractor informed us was compacted in about 8 to 12 inch lifts with a roller. We did not observe the compaction process. A sample of the fill material was obtained for a Proctor analysis. Based on the survey stakes, we estimated the fill had been placed to an elevation between 113 to 115 feet.

The contractor inquired about placing fill against the slopes along the west and south sides of the site. We observed the slopes in general were about 45° (1H:1V) with a 4 to 5 feet vertical face at the top. We recommended the contractor bench the slope in phases at the maximum about 4 feet vertically and raise the fill to the top of the vertical cut before benching another 4 feet vertical cut.

Density Readings:

We performed four in place density readings with results that ranged from 95 to 96% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 2 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the area observed today met the 95% compaction criteria.

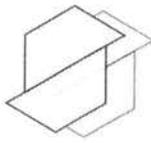
Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	Bldg Area, Mid S Area	115	118.0	112.0	10.4	95
2	Bldg Area, S Area	113	118.0	111.9	14.2	95
3	Bldg Area, SSE Area	113	118.0	112.7	15.0	95
4	Bldg Area, SE	113	118.0	113.6	14.3	96

Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

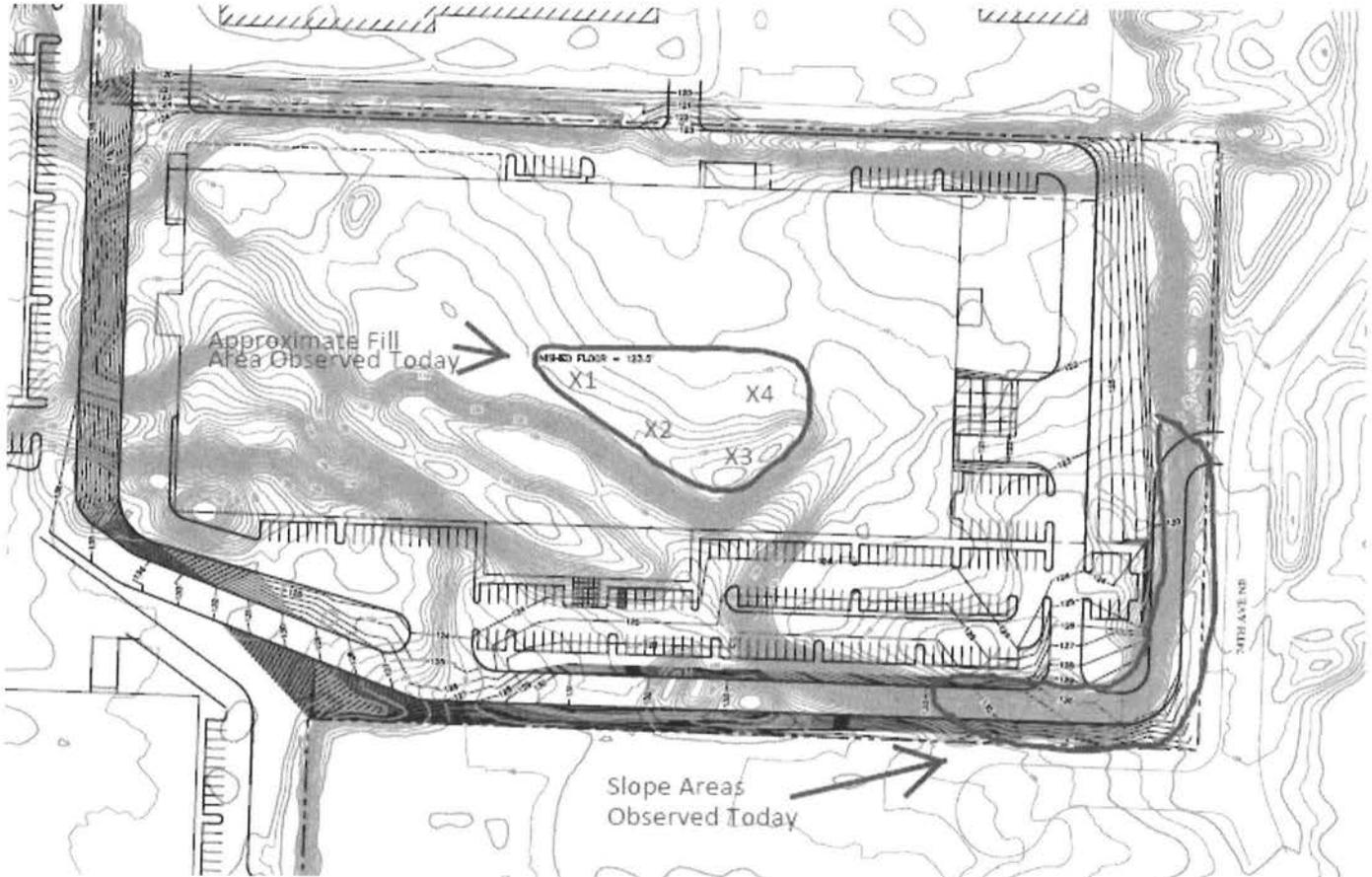
Principal / PM: Jon Sondergaard, LEG 



AESI FIELD REPORT

To: _____
Date: 14 JUL 16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____

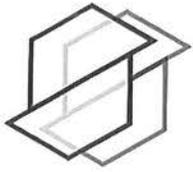


Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



FIELD REPORT

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

Date 26 JUL 16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE		Municipality Arlington
Permit No. 1738	DPD No.	Weather Clear 80's
Report No. 3		
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed about 4 to 6 feet of fill along the middle and southeast areas of the site. The middle area was within the proposed building footprint and the southeast area was mainly within the proposed parking area. We observed the subgrade soils along the edges of the fill area consisted of a gravelly sand to sandy gravel that could be penetrated from 1 to 4 inches with a 1/2 inch diameter probe rod. Fill material consisted of a sand and gravel for the southeast portion, and sand for the middle portion; which the contractor informed us was compacted in about 8 to 12 inch lifts with a sheeps foot roller. We did not observe the compaction process. A sample of the sand was obtained for a Proctor analysis. Based on the survey stakes, we estimated the fill had been placed to an elevation between 111 and 113 feet at the southeast, and between 114 and 119 feet at the middle.

We observed signs the slope areas along the south and east sides of the site were benched in phases as fill placement occurred. The contractor informed us they had been benching the 1H:1V slope with 4 feet vertical cuts and remaining vegetation along the slope areas would be removed as benching progresses up the slope.

Density Readings:

We performed eight in place density readings with results that ranged from 95 to 98% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 2 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the area observed today met the 95% compaction criteria.

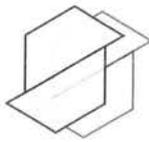
Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	SE Portion of SE Fill Area	111	128.3	123.0	7.1	96
2	E Portion of SE Fill Area	111	122.1	120.6	6.5	98
3	Mid Portion of SE Fill Area	112	128.3	123.2	6.2	96
4	NW Portion of SE Fill Area	113	122.1	120.7	6.7	98
5	W Portion of SE Fill Area	113	128.3	123.5	4.9	96
6	N Portion of Mid Fill Area	114	103.5	99.8	4.7	96
7	Mid Portion of Mid Fill Area	117	103.5	100.9	5.9	97
8	S Portion of Mid Fill Area	119	122.1	119.9	6.3	98

Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

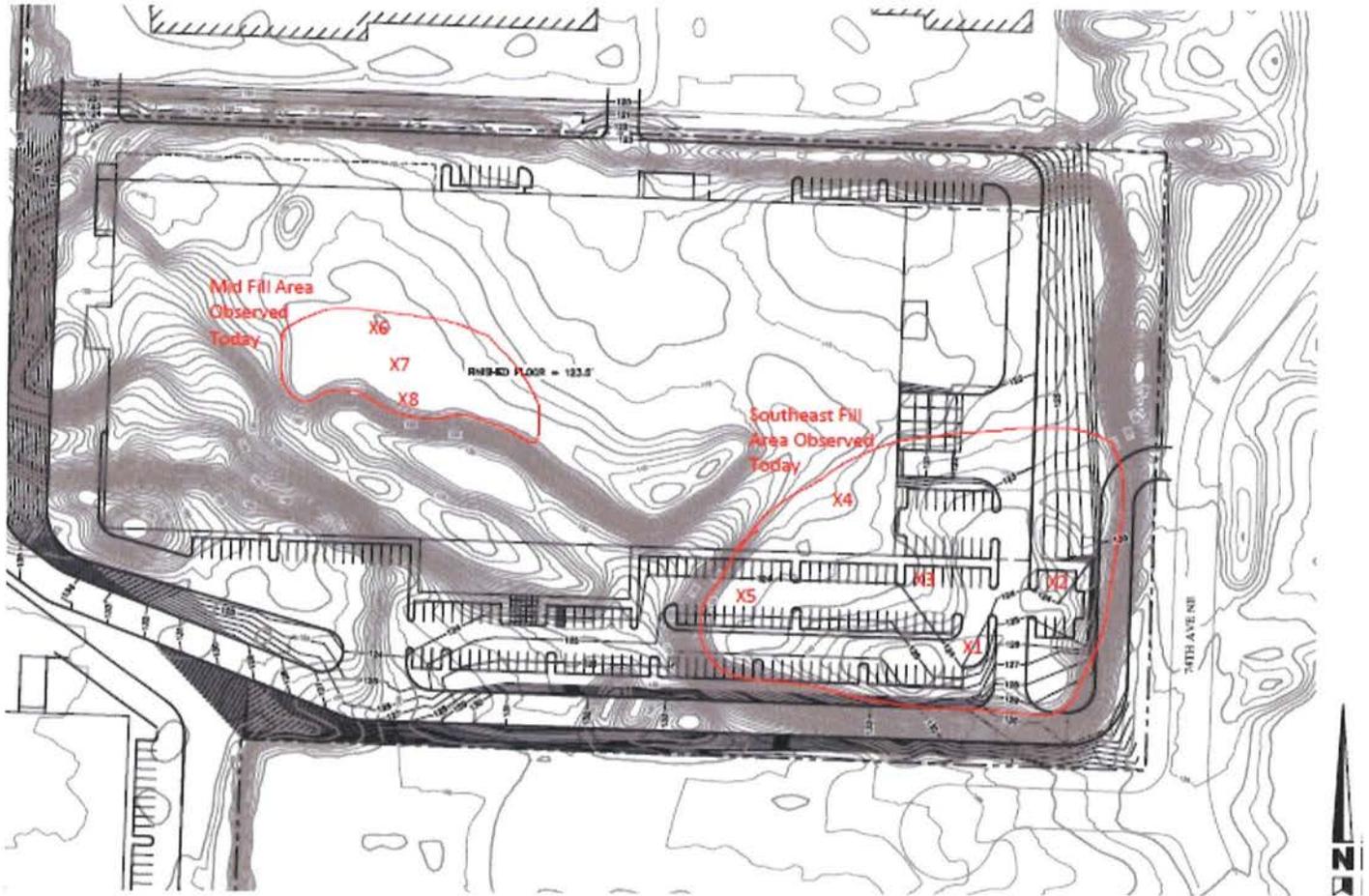
Principal / PM: Jon Sondergaard, LEG 



AESI FIELD REPORT

To: _____
 Date: 26 JUL 16 _____
 Permit No. _____

Project Name: Gayteway Business Park _____
 Project No.: KE150563A _____
 DPD No. _____

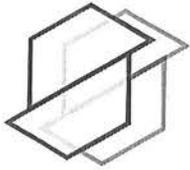


Copies To: _____

Field Rep: Su-Kiet Lieu _____

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG _____



FIELD REPORT

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

Date 1 AUG 16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE		Municipality Arlington
Permit No. 1738	DPD No.	Weather Clear 80's
Report No. 4		
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed about 1 to 3 feet of fill along the southeast and east areas of the site. Both the southeast and east areas were mainly within the proposed parking areas. We observed the subgrade soils along the edges of the fill area consisted of a gravelly sand to sandy gravel that could be penetrated from 1 to 4 inches with a 1/2 inch diameter probe rod. Fill material consisted of a sand and gravel from the south side of the site. The contractor informed us the fill was compacted in about 8 to 12 inch lifts with a sheeps foot roller. We did not observe the compaction process. Based on the survey stakes, we estimated the fill had been placed to an elevation between 112 and 117 feet at the southeast, and between 111 and 113 feet at the east.

Density Readings:

We performed seven in place density readings with results that ranged from 95 to 99% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 4 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the area observed today met the 95% compaction criteria.

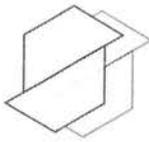
Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	SE Portion of SE Fill Area	114	128.3	121.8	7.0	95
2	SW Portion of SE Fill Area	118	128.3	124.2	8.9	97
3	Mid Portion of SE Fill Area	114	128.3	121.4	9.9	95
4	NW Portion of SE Fill Area	117	128.3	126.6	5.2	99
5	NE Portion of SE Fill Area	112	128.3	125.5	8.3	98
6	S Portion of E Fill Area	111	128.3	121.8	6.9	95
7	N Portion of E Fill Area	113	128.3	121.6	8.4	95

Copies To: _____

Field Rep: Su-Kiet Lieu

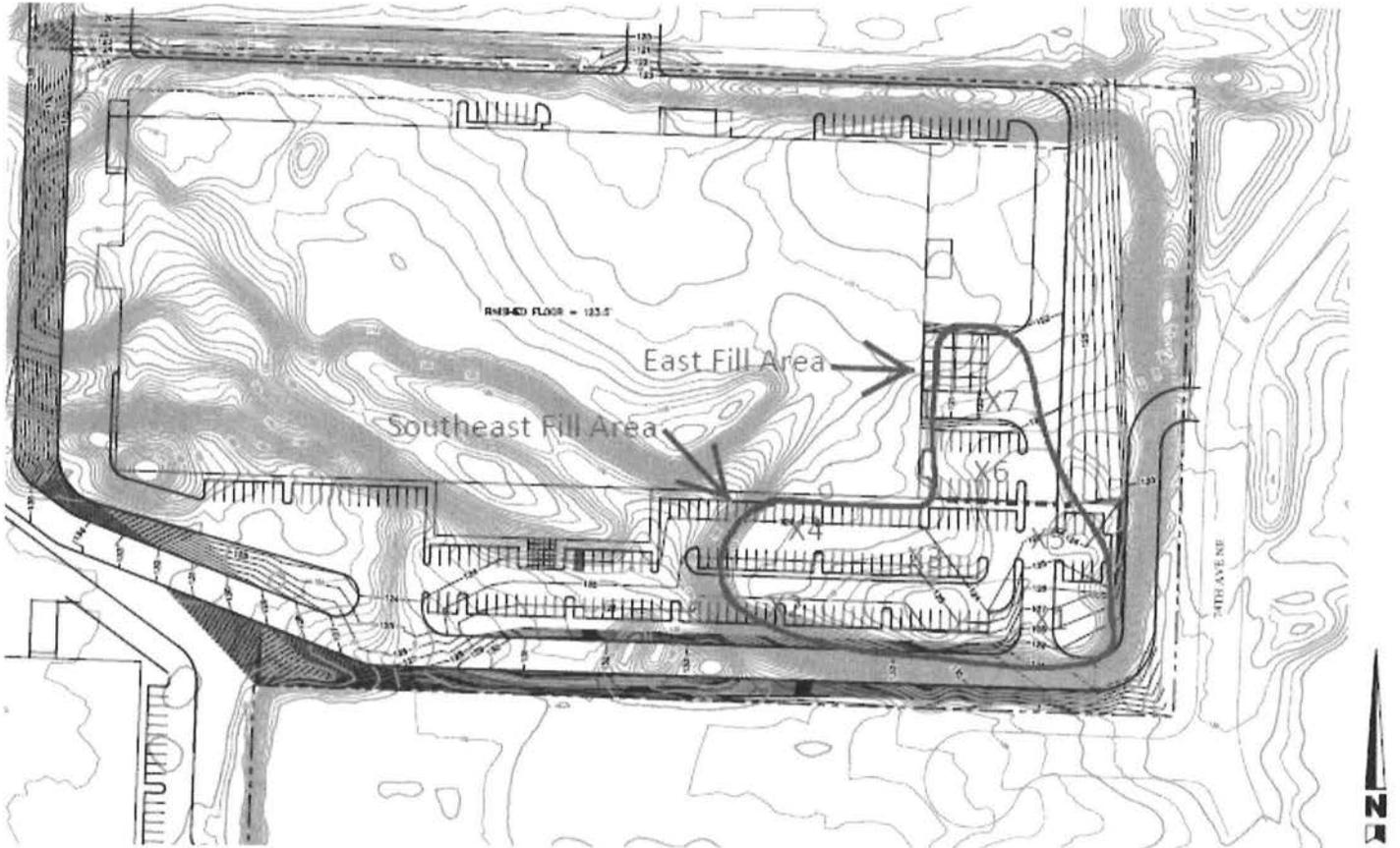
Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



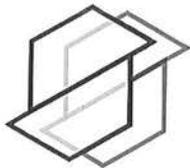
AESI FIELD REPORT

To: _____ Project Name: Gayteway Business Park
Date: 1 AUG 16 Project No.: KE150563A
Permit No. _____ DPD No. _____



Copies To: _____ Field Rep: Su-Kiet Lieu

Date Mailed: _____ Principal / PM: Jon Sondergaard, LEG



FIELD REPORT

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date 4 AUG 16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE		Municipality Arlington
Permit No. 1738	DPD No.	Weather Clear 80's
Report No. 5		
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed about 1 to 4 feet of fill along the southeast and east areas of the site. The southeast fill area was under proposed parking and road areas, and the east fill area was within the proposed slope area. We observed the subgrade soils along the edges of the fill area consisted of a gravelly sand to sandy gravel that could be penetrated from 1 to 4 inches with a 1/2 inch diameter probe rod. Fill material for the southeast area consisted of a sand and gravel from the south side of the site, while fill material for the east fill area consisted of a silty sand, with some organics from the north side of the site. The contractor informed us the fill was compacted in about 8 to 12 inch lifts with a sheeps foot roller. We did not observe the compaction process. Based on the survey stakes, we estimated the fill had been placed to an elevation between 111 and 118 feet at the southeast, and between 111 and 117 feet at the east. We recommended to the contractor that the use of soils with some organics was acceptable under the areas that are not slopes, provided the soils with organics are spread throughout the site; however, soils with organics should not be used exclusively on slope areas.

Density Readings:

We performed six in place density readings with results that ranged from 95 to 96% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the area southeast area observed today met the 95% compaction criteria. We also recommended the contractor not place soils with organics exclusively on proposed slope areas.

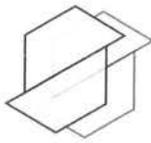
Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	SE Portion of SE Fill Area	116	122.1	115.7	8.3	95
2	S Portion of SE Fill Area	117	128.3	122.5	8.8	95
3	SW Portion of SE Fill Area	118	122.1	116.9	6.4	96
4	W Portion of SE Fill Area	114	122.1	117.3	6.7	96
5	N Portion of SE Fill Area	112	122.1	115.4	8.2	95
6	NE Portion of SE Fill Area	111	122.1	117.4	8.8	96

Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

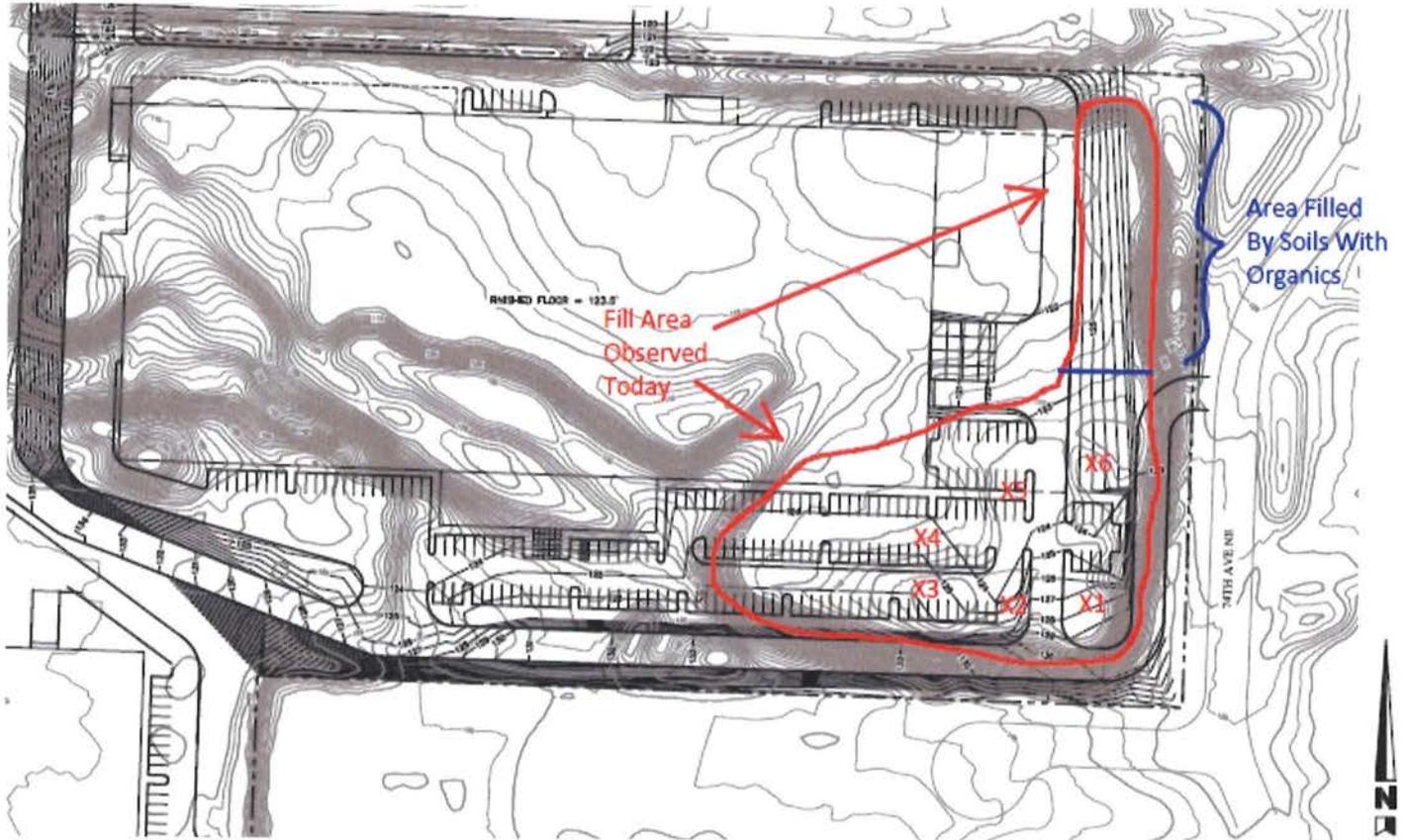
Principal / PM: Jon Sondergaard, LEG 



AESI FIELD REPORT

To: _____
Date: 4 AUG 16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____

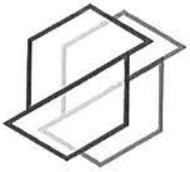


Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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FIELD REPORT

Page 1 of 2

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date 16 AUG 16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE		Municipality Arlington
Permit No. 1738	DPD No.	Weather Clear 80's
Report No. 6		
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed about 1 to 4 feet of fill along the middle, southeast and east areas of the site. The middle fill area was within the building footprint, the southeast fill area was under proposed parking and road areas, and the east fill area was within the proposed slope area. We observed the subgrade soils along the edges of the fill area consisted of a gravelly sand to sandy gravel that could be penetrated from 1 to 4 inches with a 1/2 inch diameter probe rod. Fill material for the areas observed today consisted of a sand and gravel from the south side of the site. The contractor informed us the fill was compacted in about 4 to 8 inch lifts with a smooth drum roller. We did not observe the compaction process. Based on the survey stakes, we estimated the fill areas observed today had been placed to an elevation between 114 and 120 feet.

The contractor informed us that they were distributing and mixing some of the soils with organics in thin lifts throughout the fill areas to prevent from concentrating organic laden soils under proposed slope areas.

Density Readings:

We performed seven in place density readings with results that ranged from 95 to 97% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the fill areas observed today met the 95% compaction criteria.

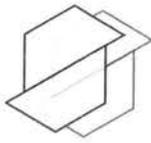
Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	SE Portion of SE Fill Area	120	128.3	121.3	5.1	95
2	S Portion of SE Fill Area	114	128.3	121.4	5.9	95
3	E Portion of Mid Fill Area	118	128.3	124.1	3.0	96
4	Mid Portion of Mid Fill Area	117	103.5	98.0	12.8	95
5	W Portion of Mid Fill Area	115	122.1	118.2	6.6	97
6	Mid Portion of E Fill Area	114	128.3	122.5	4.9	95
7	S Portion of E Fill Area	116	128.3	122.9	6.3	95

Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

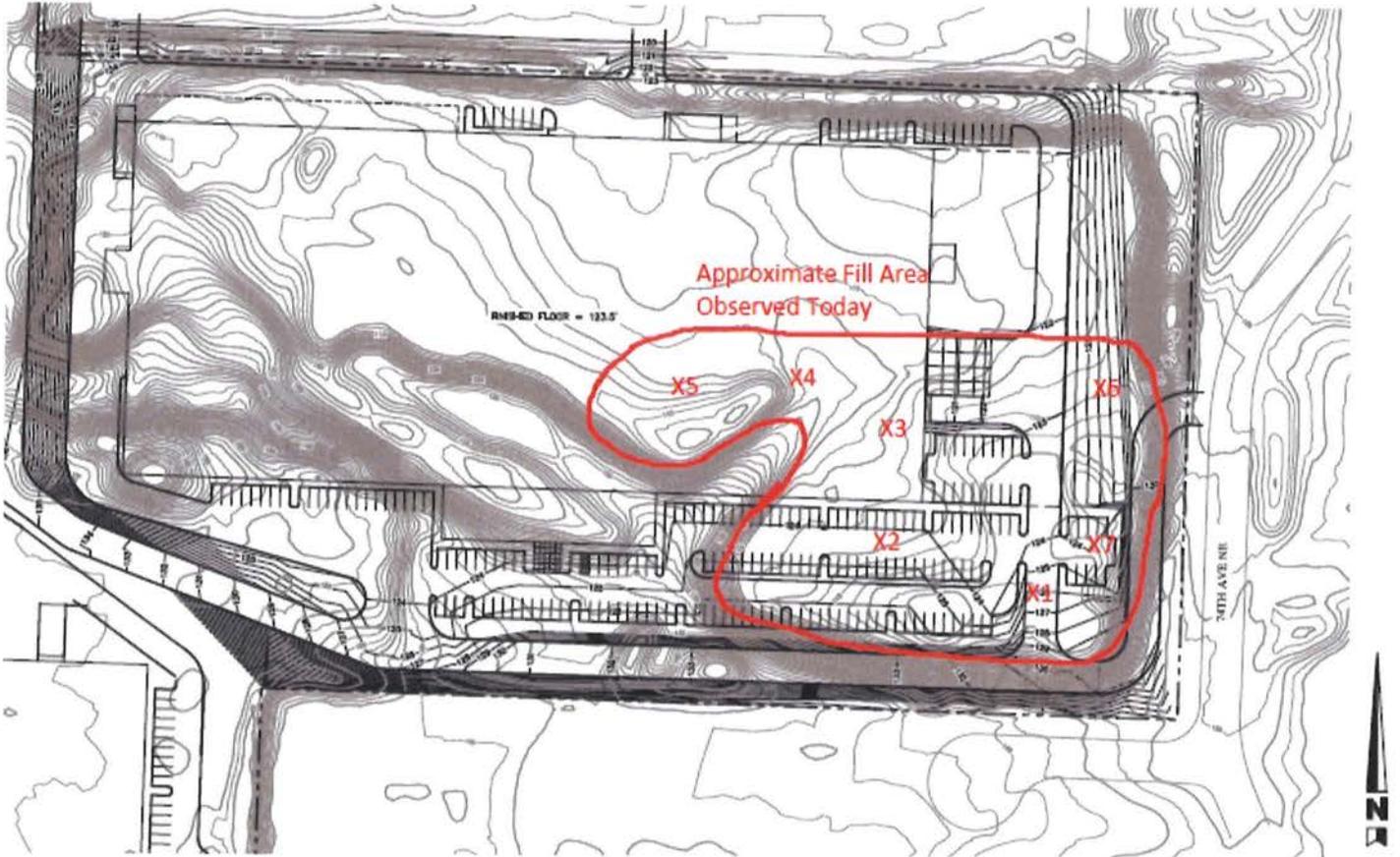
Principal / PM: Jon Sondergaard, LEG 



AESI FIELD REPORT

To: _____
 Date: 16 AUG 16
 Permit No. _____

Project Name: Gayteway Business Park
 Project No.: KE150563A
 DPD No. _____



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
VOLUME	1.000	1.000	377452.22 Sq. Ft.	39518.66 Cu. Yd.	78212.44 Cu. Yd.	17106.22 Cu. Yd. <Cut>
Totals			377452.22 Sq. Ft.	39518.66 Cu. Yd.	78212.44 Cu. Yd.	17106.22 Cu. Yd. <Cut>

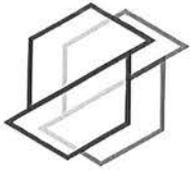


Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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FIELD REPORT

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date 19 AUG 16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE		Municipality Arlington
Permit No. 1738	DPD No.	Weather Clear 80's
Report No. 7		
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed fill along the middle, southeast and east areas of the site. The middle fill area was within the building footprint, the southeast fill area was under proposed parking and road areas, and the east fill area was within the proposed slope area. We observed the contractor was in the process of placing fill along the northwest portions of the site but were informed that they did not intend to compact the area until Monday. Fill material for the areas observed today consisted of a sand and gravel from the south and southwest areas of the site. The contractor informed us the fill was compacted in about 4 to 8 inch lifts with a smooth drum roller. We did not observe the compaction process. Based on the survey stakes, we estimated the fill areas observed today had been placed to an elevation between 115 and 126 feet.

The contractor informed us that they were distributing and mixing some of the soils with organics in thin lifts throughout the fill areas to prevent from concentrating organic laden soils under proposed slope areas. We observed some of the larger sized roots were separated from the fill areas.

Density Readings:

We performed five in place density readings with results that ranged from 95 to 96% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the fill areas observed today met the 95% compaction criteria.

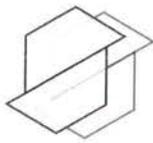
Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	SE Portion of SE Fill Area	121	128.3	122.6	5.7	95
2	S Portion of SE Fill Area	121	128.3	123.0	6.8	96
3	SE Portion of SE Fill Area	126	128.3	122.0	6.1	95
4	E Portion of Mid Fill Area	119	122.1	117.2	5.0	96
5	W Portion of Mid Fill Area	115	122.1	115.4	5.1	95

Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

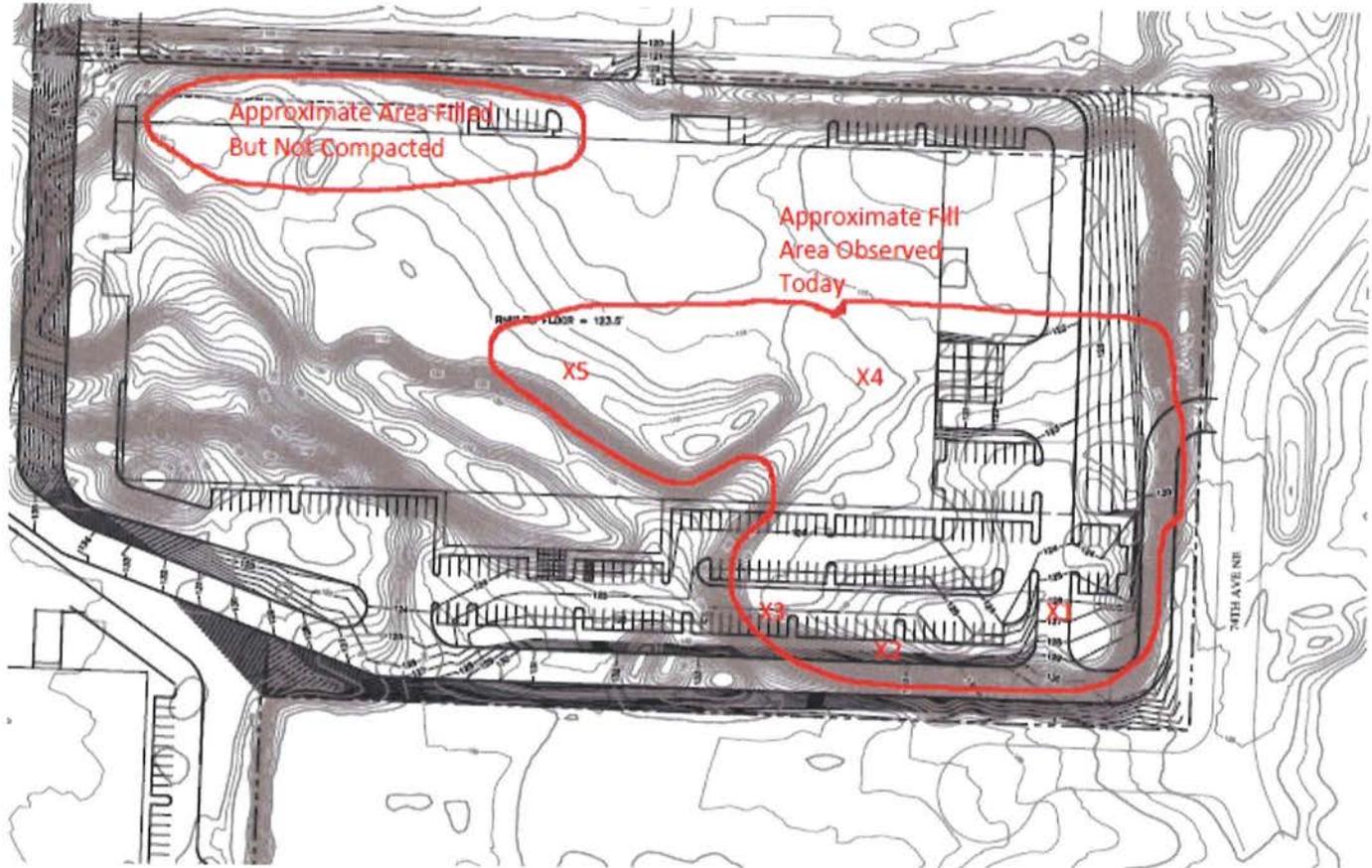
Principal / PM: Jon Sondergaard, LEG 



AESI FIELD REPORT

To: _____
 Date: 19 AUG 16 _____
 Permit No. _____

Project Name: Gayteway Business Park _____
 Project No.: KE150563A _____
 DPD No. _____



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
VOLUME	1.000	1.000	377452.22 Sq. Ft.	39318.66 Cu. Yd.	78232.44 Cu. Yd.	37106.22 Cu. Yd.<Cut>
Totals			377452.22 Sq. Ft.	39318.66 Cu. Yd.	78232.44 Cu. Yd.	37106.22 Cu. Yd.<Cut>

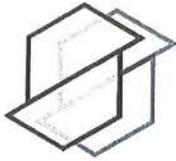


Copies To: _____

Field Rep: Su-Kiet Lieu _____

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG _____



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FIELD REPORT

Page 1 of 2

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

Date	Project Name	Project No.
8-23-16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Clear 80's
Permit No.	DPD No.	Report No.
1738		8
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project. Upon our arrival, we met with Chris from USVET.

Mass Grading

Trending generally north to south, the earthwork contractor continued mass grading processes for the proposed building pad and east parking areas. Using a large excavator, off-road dump truck, and belly load scraper assembly, the contractor placed approximately 2-3' of material (over the course of two days) near the NW and SW corners of the building area. Per prior recommendations, the material (generally brown gravelly SAND with trace silts/excavated from south margins of property) was wet to at/near optimum moisture levels (via large water truck) before being compacted/re-compacted (as recommended) in a series of 8-10" loose lifts via vibrator roller (complete process not observed). The compacted fill appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 2-4" respectively. AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. See Figure 1.

Density Results

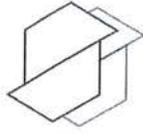
Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-6	5.3	122	128.3	95.1
DT2	Grading/See Figure 1	-6	6.1	122.6	128.3	95.6
DT3	Grading/See Figure 1	-6	6.3	123.1	128.3	95.9
DT4	Grading/See Figure 1	-6	5.8	122.5	128.3	95.5
DT5	Grading/See Figure 1	-10	6.8	122.1	128.3	95.2
DT6	Grading/See Figure 1	-10	7	122.4	128.3	95.4
DT7	Grading/See Figure 1	-10	6.6	123.2	128.3	96.0
DT8	Grading/See Figure 1	-10	7.3	122.4	128.3	95.4

Copies To: Distribution

Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: AUG 26 2016

Principal / PM: Jon Sondergaard, LEG

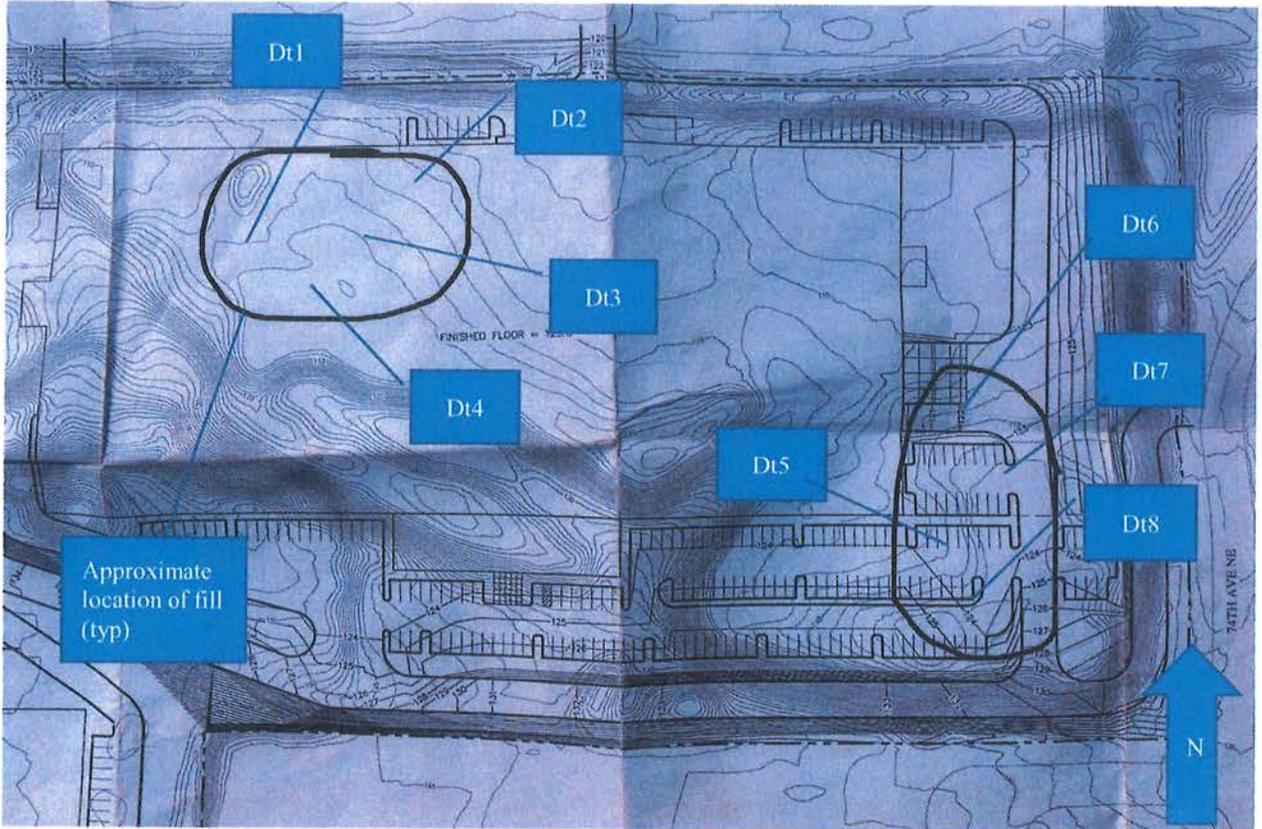


AESI FIELD REPORT

To: _____
Date: 8-23-16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____

Figure 1

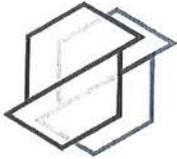


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Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG 



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Page 1 of 2

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

Date	Project Name	Project No.
8-24-16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Sunny 70's
Permit No.	DPD No.	Report No.
1738		9
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project. Upon our arrival, we met with Chris from USVET.

Mass Grading

Trending generally north to south, the earthwork contractor continued mass grading processes for the proposed building pad and east parking areas. Using a large excavator, off-road dump truck, and belly load scraper assembly, the contractor placed approximately 2' of material (over the course of two days) near the NW and central portions of the building area. Per prior recommendations, the material (generally brownish gray SAND with trace silts and gravels/excavated from south margins of property) was wet to at/near optimum moisture levels (via large water truck) before being compacted/re-compacted (as recommended) in a series of 8-10" loose lifts via vibrator roller (complete process not observed). The compacted fill appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 2-4" respectively. AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. See Figure 1.

Density Results

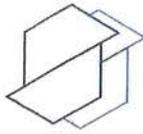
Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-4	5.1	116	122.1	95.0
DT2	Grading/See Figure 1	-4	5.5	116.7	122.1	95.6
DT3	Grading/See Figure 1	-5	6.3	116.6	122.1	95.5
DT4	Grading/See Figure 1	-5	5.7	117.1	122.1	95.9
DT5	Grading/See Figure 1	-4	5.3	116.5	122.1	95.4
DT6	Grading/See Figure 1	-4	5.8	117.3	122.1	96.1
DT7	Grading/See Figure 1	-4	5.5	116.4	122.1	95.3

Copies To: Distribution

Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: AUG 29 2016

Principal / PM: Jon Sondergaard, LEG

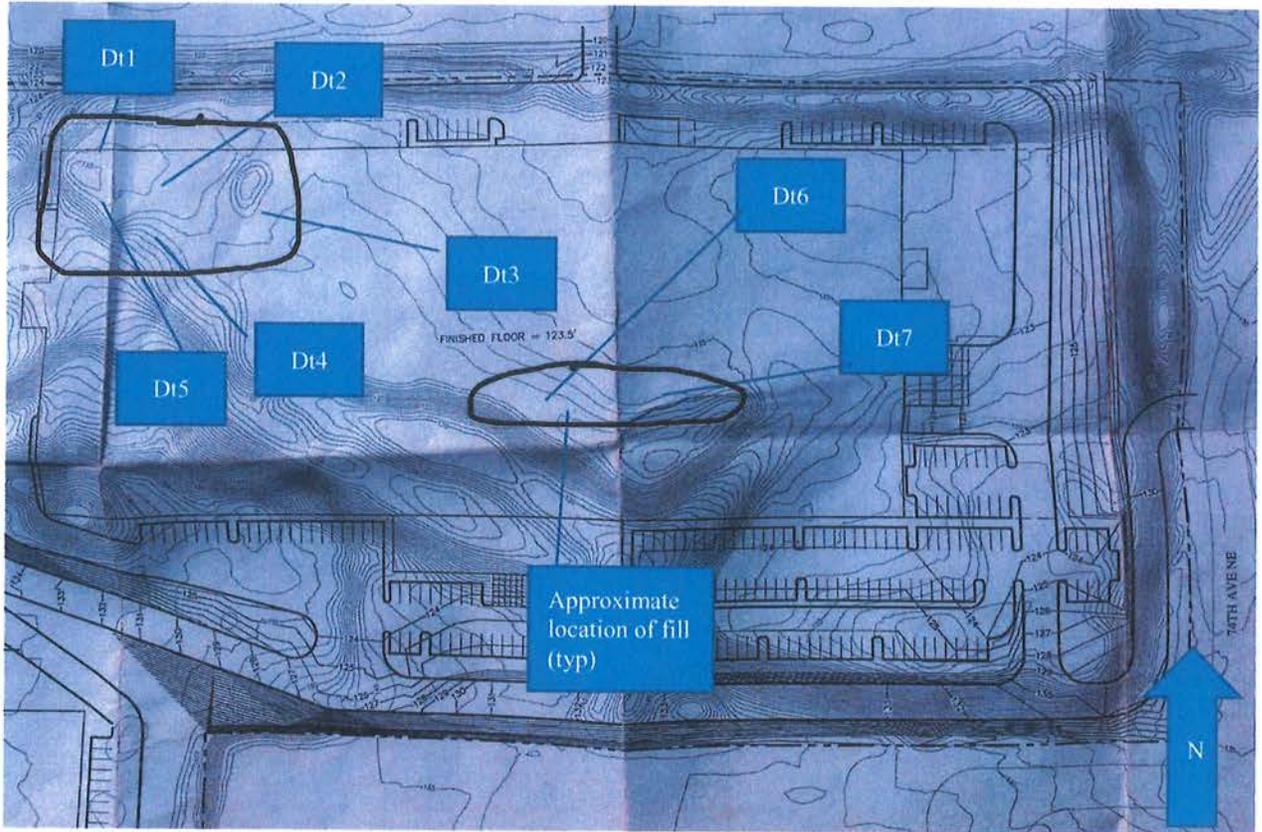


AESI FIELD REPORT

To: _____
Date: 8-24-16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____

Figure 1



Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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Page 1 of 2

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

Date 8-30-16	Project Name Gayteway Business Park	Project No. KE150563A	
Location 20015 67 th Avenue NE		Municipality Arlington	Weather Cloudy 60's
Permit No. 1738	DPD No.	Report No. 10	
Engineer/Architect			
Client/Owner GS Venture Partners			
General Contractor/Superintendent USVET / Chris			
Earthwork /Superintendent USVET / Chris			

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project. Upon our arrival, we met with Chris from USVET.

Mass Grading

Trending generally north to south, the earthwork contractor continued mass grading processes for the proposed building pad and east parking areas. Using a large excavator, off-road dump truck, and belly load scraper assembly, the contractor placed approximately 2' of material (from previous site to now) near the NE and central portions of the building area. Per prior recommendations, the material (generally brownish gray SAND with trace silts and gravels/excavated from south margins of property) was wet to at/near optimum moisture levels (via large water truck) before being compacted/re-compacted (as recommended) in a series of 8-10" loose lifts via vibrator roller (complete process not observed). The compacted fill appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 2-4" respectively. AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. See Figure 1.

Density Results

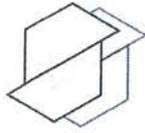
Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-3	6.3	116.9	122.1	95.7
DT2	Grading/See Figure 1	-3	6	116.2	122.1	95.2
DT3	Grading/See Figure 1	-8	5.4	116.5	122.1	95.4
DT4	Grading/See Figure 1	-5	7.1	117.4	122.1	96.2
DT5	Grading/See Figure 1	-3	6.8	117	122.1	95.8
DT6	Grading/See Figure 1	-3	6.5	117.4	122.1	96.2
DT7	Grading/See Figure 1	-3	7.3	116.8	122.1	95.7
DT8	Grading/See Figure 1	-2	7.7	116.3	122.1	95.2

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Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: SEP 06 2016

Principal / PM: Jon Sondergaard, LEG

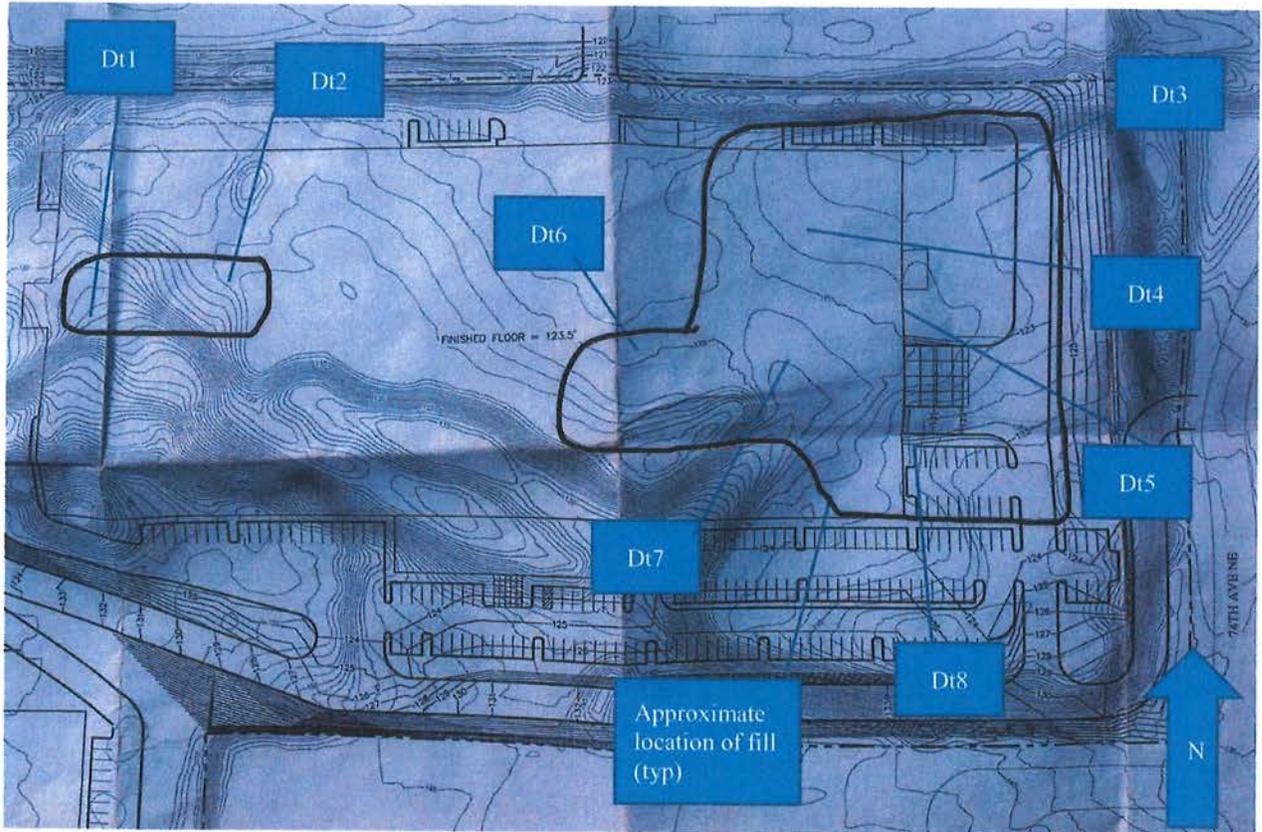


AESI FIELD REPORT

To: _____
Date: 8-30-16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____

Figure 1

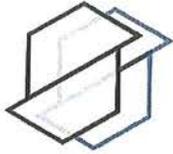


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Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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Date	Project Name	Project No.
9-1-16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Cloudy 60's
Permit No.	DPD No.	Report No.
1738		11
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

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Mass Grading

Trending generally north to south, the earthwork contractor continued mass grading processes for the proposed building pad and east parking areas. Using a large excavator, off-road dump truck, and belly load scraper assembly, the contractor placed approximately 2-3' of material (from previous site to now) near the NW and SE portions of the building area. Per prior recommendations, the material (generally brownish gray SAND with trace silts and gravels/excavated from southwest margins of property) was wet to at/near optimum moisture levels (via large water truck) before being compacted/re-compacted (as recommended) in a series of 8-10" loose lifts via vibrator roller (complete process not observed). The compacted fill appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 2-4" respectively. AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. See Figure 1.

Density Results

Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-3	6.4	117.1	122.1	95.9
DT2	Grading/See Figure 1	-3	6.9	118.3	122.1	96.9
DT3	Grading/See Figure 1	-3	7.3	117.5	122.1	96.2
DT4	Grading/See Figure 1	-2	7	116.3	122.1	95.2
DT5	Grading/See Figure 1	-2	5.7	116	122.1	95.0
DT6	Grading/See Figure 1	-5	5.1	116.4	122.1	95.3
DT7	Grading/See Figure 1	-2	5.4	116.3	122.1	95.2

*Depths based on available hub elevation data

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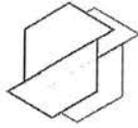
Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: SEP 15 2016

Principal / PM: Jon Sondergaard, LEG

v. 6/14

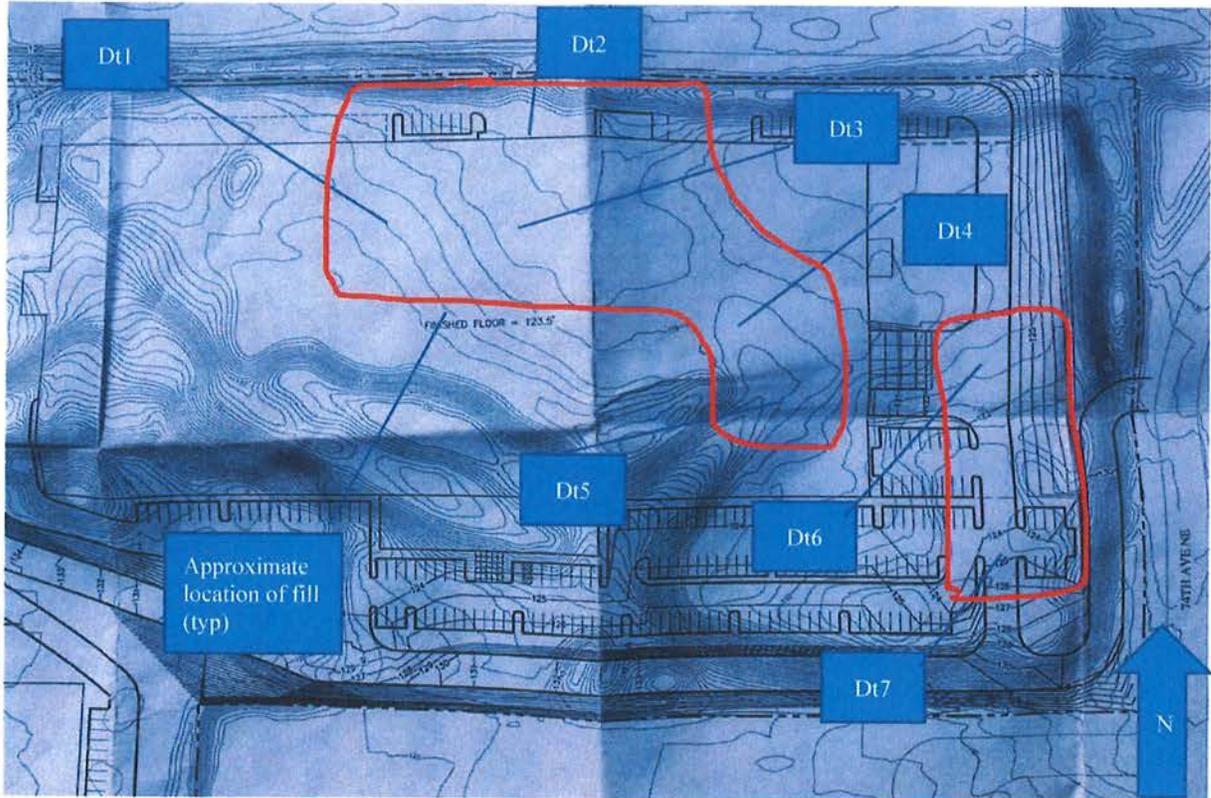
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AESI FIELD REPORT

To: _____ Project Name: Gayteway Business Park
 Date: 8-30-16 Project No.: KE150563A
 Permit No. _____ DPD No. _____

Figure 1



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Field Rep: ~~Scott Hansen~~ Jon Hansen *JH*

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG *JS*



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Fax: 425-827-5424
www.aesgeo.com

Date	Project Name	Project No.
9-6-16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Cloudy 60's
Permit No.	DPD No.	Report No.
1738		12
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727
ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project. Upon our arrival, we met with Chris from USVET.

Mass Grading

Trending generally north to south, the earthwork contractor continued mass grading processes for the proposed building pad and east parking areas. Using a large excavator, off-road dump truck, and belly load scraper assembly, the contractor placed approximately 1-2' of material (from previous site to now) near the NW and SE portions of the building area. Per prior recommendations, the material (generally brownish gray SAND with trace silts and gravels/excavated from southwest margins of property) was wet to at/near optimum moisture levels (via large water truck) before being compacted/re-compacted (as recommended) in a series of 8-10" loose lifts via vibrator roller (complete process not observed). The compacted fill appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 3-4" respectively. AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. See Figure 1.

Density Results

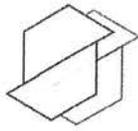
Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-3	6.6	117.2	122.1	96.0
DT2	Grading/See Figure 1	-3	7.1	117	122.1	95.8
DT3	Grading/See Figure 1	-3	6.3	116.3	122.1	95.2
DT4	Grading/See Figure 1	-3	5.7	116.1	122.1	95.1
DT5	Grading/See Figure 1	-3	6.4	117.2	122.1	96.0
DT6	Grading/See Figure 1	-2	5.3	116.8	122.1	95.7
DT7	Grading/See Figure 1	-1	5.5	118.2	122.1	96.8
DT8	Grading/See Figure 1	-1	5.8	117.4	122.1	96.2
DT9	Grading/See Figure 1	-1	6.6	117.9	122.1	96.6

*Depths based on available in-field elevation data

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v. 6/14

Field Rep: Jon D. Hansen, Sr. Staff Geologist
Principal / PM: Jon Sondergaard, LEG

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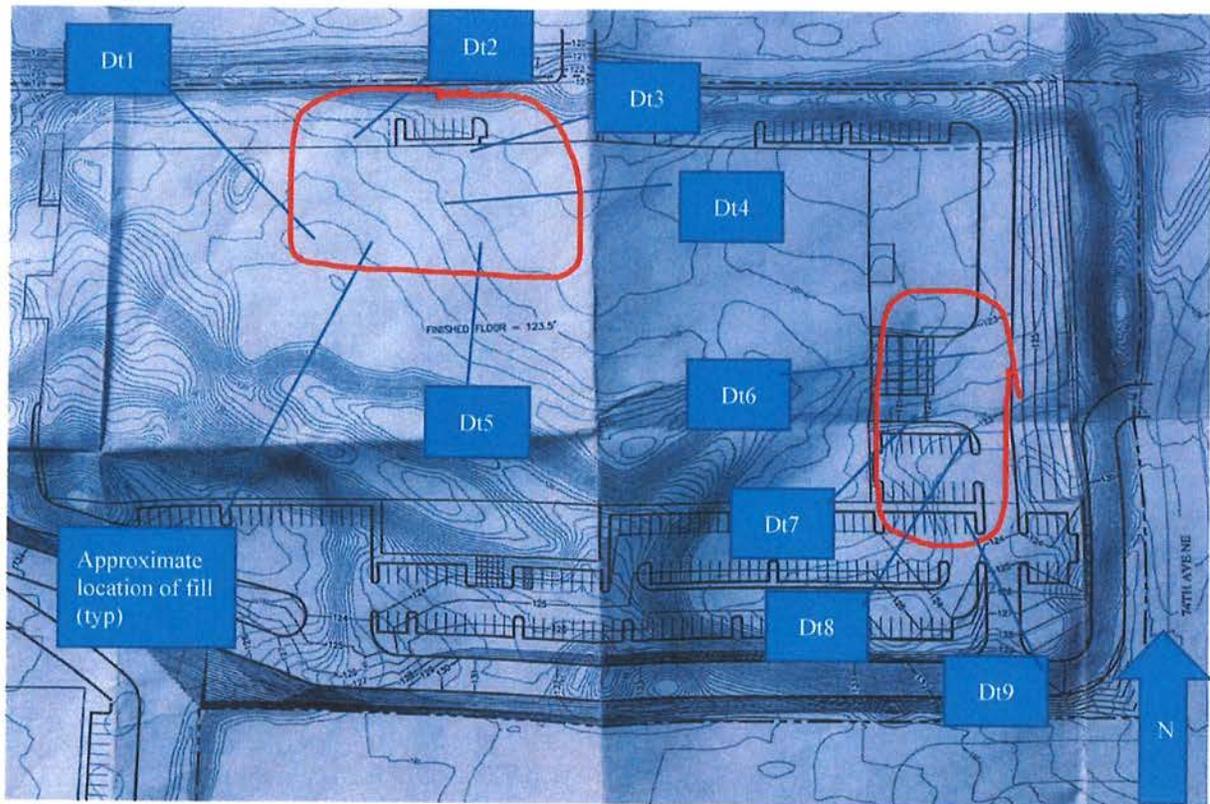


AESI FIELD REPORT

To: _____
 Date: 9-6-16
 Permit No. _____

Project Name: Gayteway Business Park
 Project No.: KE150563A
 DPD No. _____

Figure 1

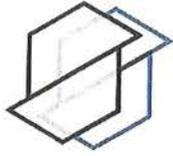


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Field Rep: ~~Jon Hansen~~ Jon Hansen *JH*

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG *J*



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Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date	Project Name	Project No.
9-8-16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Cloudy 60's
Permit No.	DPD No.	Report No.
1738		13
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project. Upon our arrival, we met with Chris from USVET.

Mass Grading

Trending generally north to south, the earthwork contractor continued mass grading processes for the proposed building pad and adjacent parking areas. Using a large excavator, off-road dump truck, and belly load scraper assembly, the contractor placed approximately 1-2' of material (from previous site visit to now) near the northeast and central portions of the building area. Per prior recommendations, the material (generally brownish gray SAND with trace silts and gravels/excavated from southwest margins of property) was wet to at/near optimum moisture levels (via large water truck) before being compacted/re-compacted (as recommended) in a series of 8-10" loose lifts via vibrator roller (complete process not observed). The compacted fill appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 3-5" respectively. AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. See Figure 1.

Density Results

Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-1	7.1	116.2	122.1	95.2
DT2	Grading/See Figure 1	-1	7.7	116	122.1	95.0
DT3	Grading/See Figure 1	-2	5.8	117.4	122.1	96.2
DT4	Grading/See Figure 1	-2	6.2	118.3	122.1	96.9
DT5	Grading/See Figure 1	-2	6	118.1	122.1	96.7
DT6	Grading/See Figure 1	-4	7.1	116.6	122.1	95.5
DT7	Grading/See Figure 1	-4	7.3	117.1	122.1	95.9

*Depths based on available in-field elevation data

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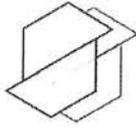
Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: SEP 15 2016

Principal / PM: Jon Sondergaard, LEG

v. 6/14

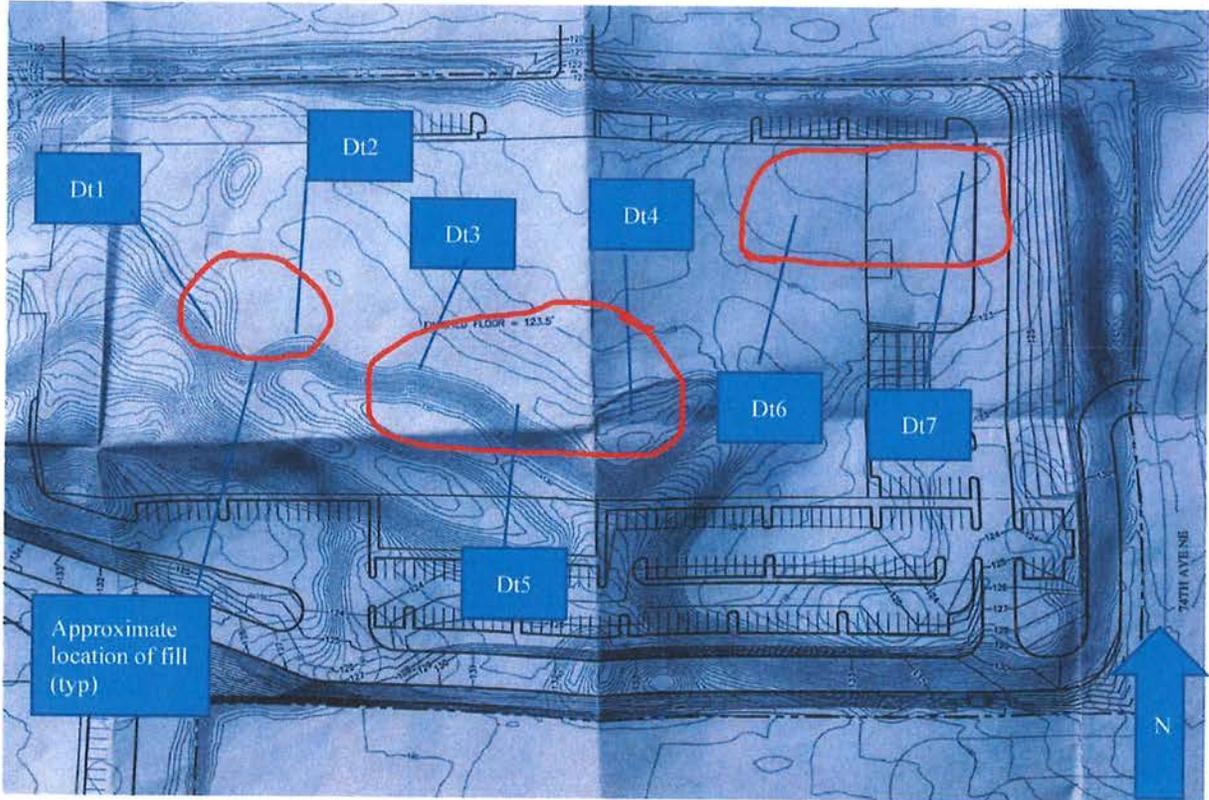
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AESI FIELD REPORT

To: _____ Project Name: Gayteway Business Park
Date: 9-8-16 Project No.: KE150563A
Permit No. _____ DPD No. _____

Figure 1



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Field Rep: ~~Sankar~~ Jon Hansen 

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727
ATTN: Chris Gayte

AS REQUESTED BY: Contractor

Date	Project Name	Project No.
9-13-16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Sunny 60's
Permit No.	DPD No.	Report No.
1738		14
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork/Superintendent		
USVET / Chris		

THE FOLLOWING WAS NOTED:

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Mass Grading

Trending generally north to south, the earthwork contractor continued mass grading processes for the proposed building pad and adjacent parking areas. Using a large excavator, off-road dump truck, and belly load scraper assembly, the contractor placed approximately 1' of material (from previous site visit to now) near the northeast and northwest portions of the building area. Per prior recommendations, the material (generally brownish gray SAND with trace silts and gravels/excavated from southwest margins of property) was wet to at/near optimum moisture levels (via large water truck) before being compacted/re-compacted (as recommended) in a series of 8-10" loose lifts via vibrator roller (complete process not observed). The compacted fill appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 2-4" respectively. AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. The contractor informed us that they would temporarily discontinue fill processes until another off-road dump truck assembly was brought onsite (previous truck sold). The contractor anticipates grading to resume tomorrow and noted they would continue to screen topsoil (near the NW corner of the building area) in the interim. Additionally, the contractor informed AESI that a previously staked grade (near the central portions of the proposed building pad area) had been found to be in error and in fact an additional 1.5-2' of material was needed to reach planned subgrade elevation. See Figure 1.

Density Results

Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-3	6.3	117.7	122.1	96.4
DT2	Grading/See Figure 1	-3	6.1	116.8	122.1	95.7
DT3	Grading/See Figure 1	-3	5.4	116	122.1	95.0
DT4	Grading/See Figure 1	-4	6.8	116.3	122.1	95.2
DT5	Grading/See Figure 1	-4	7.2	117.4	122.1	96.2
DT6	Grading/See Figure 1	-4	7	117.9	122.1	96.6

*Depths based on available in-field elevation data

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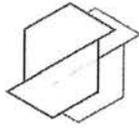
Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: SEP 15 2016

Principal / PM: Jon Sondergaard, LEG

v. 6/14

This document is considered a DRAFT until signed or initialed by an AESI Principal or Project Manager

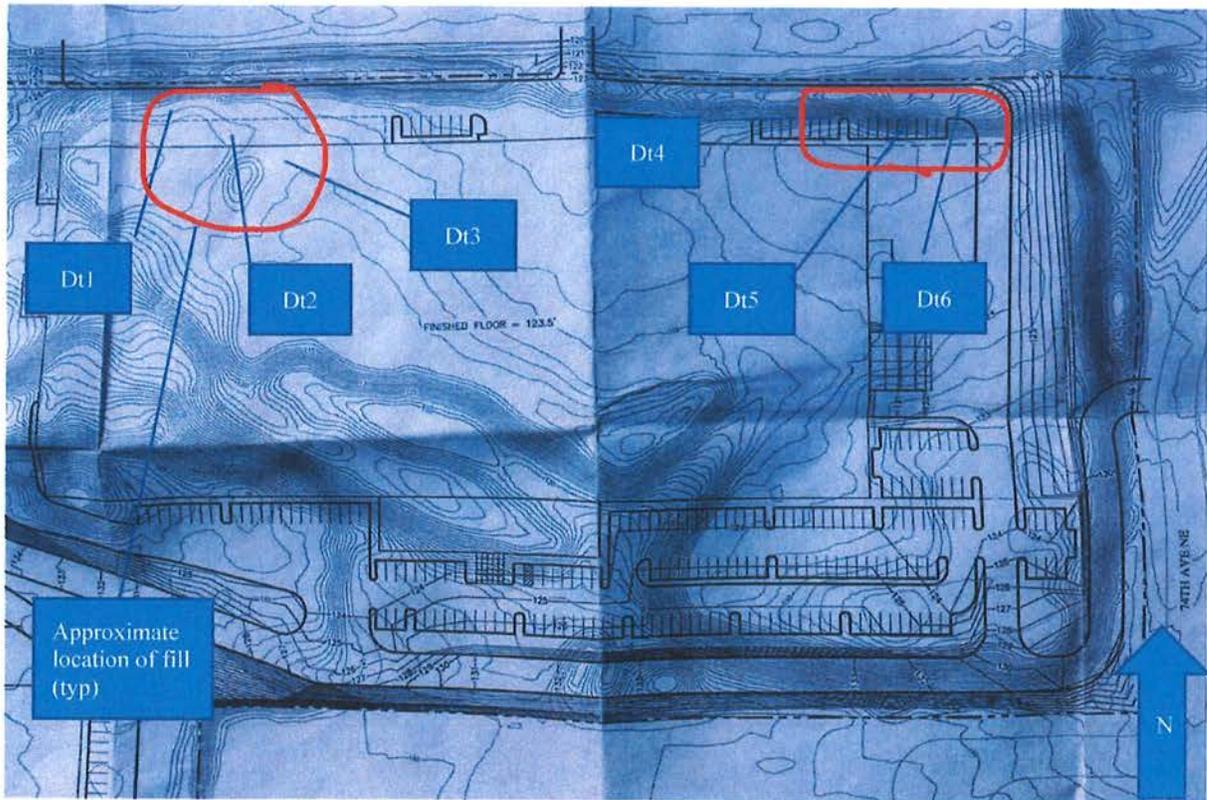


AESI FIELD REPORT

To: _____
Date: 9-13-16
Permit No. _____

Project Name: Gayteaway Business Park
Project No.: KE150563A
DPD No. _____

Figure 1

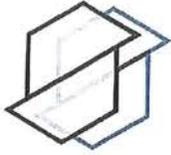


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Field Rep: ~~Jon Hansen~~ Jon Hansen *JH*

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG *JS*



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Fax: 425-827-5424
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Date	Project Name	Project No.
23 SEP 16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Cloudy 70's
Permit No.	DPD No.	Report No.
1738		15
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727
ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed fill along the south portion of the site that encompassed part of the building footprint and the proposed south parking areas. The contractor also informed us the fill placed along the south portion of the site was about 0.5 feet below ~~the~~ the proposed subgrade elevation from east to west. Fill material for the area observed today consisted of a sand, and a sand and gravel from the south and southwest cut areas of the site. The contractor informed us the fill was compacted in about 4 to 8 inch lifts with a smooth drum roller. We did not observe the compaction process.

Density Readings:

We performed nine in place density readings with results that ranged from 95 to 99% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the fill areas observed today met the 95% compaction criteria.

Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	E Portion of S Fill Area	124	128.3	127.4	6.6	99
2	Mid E Portion of S Fill Area	124	128.3	123.5	6.8	96
3	E Mid Portion of S Fill Area	124	122.1	115.7	5.9	95
4	Mid Portion of S Fill Area	124	122.1	115.7	6.1	95
5	W Mid Portion of S Fill Area	124	103.5	102.7	9.2	99
6	Mid W Portion of S Fill Area	124	122.1	116.5	6.5	95
7	NW Portion of S Fill Area	122	103.5	97.9	10.2	95
8	N Portion of S Fill Area	124	122.1	115.4	5.7	95
9	S Portion of S Fill Area	124	122.1	117.2	5.3	96

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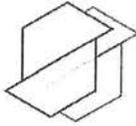
Field Rep: Su-Kiet Lieu

Date Mailed: SEP 27 2016

Principal / PM: Jon Sondergaard, LEG

v. 6/14

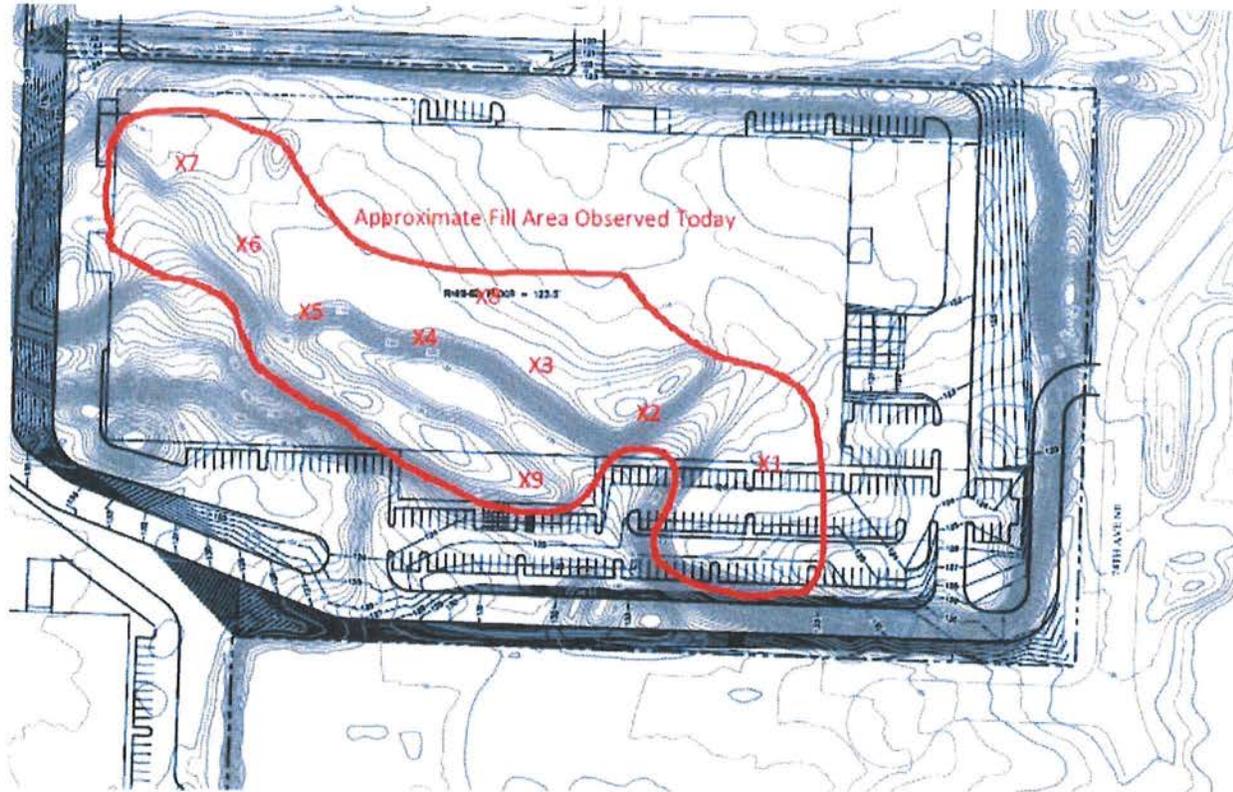
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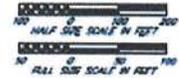
To: _____
Date: 23 SEP 16
Permit No. _____

Project Name: Gayteaway Business Park
Project No.: KE150563A
DPD No. _____



Cut/Fill Summary

NAME	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Volume	1.000	1.000	877452.22 Sq. Ft.	22416.84 Cu. Yd.	18212.44 Cu. Yd.	17125.22 Cu. Yd. (Cut)
Total			877452.22 Sq. Ft.	22416.84 Cu. Yd.	18212.44 Cu. Yd.	17125.22 Cu. Yd. (Cut)



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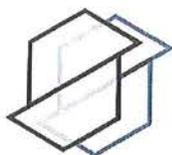
Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG

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911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

Date	Project Name	Project No.
28 SEP 16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Clear 70's
Permit No.	DPD No.	Report No.
1738		16
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed fill along the northwest quarter of the proposed building to the proposed subgrade elevation. Fill material for the area observed today consisted of a sand, and a sand and gravel from the south and southwest cut areas of the site. The contractor informed us the fill was compacted in about 4 to 8 inch lifts with a smooth drum roller. We did not observe the compaction process.

Density Readings:

We performed four in place density readings with results that ranged from 95 to 98% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the fill areas observed today met the 95% compaction criteria.

Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	E Portion of NW Bldg Area	124	118.5	112.1	5.7	95
2	Mid E Portion of NW Bldg Area	124	128.3	125.8	4.1	98
3	Mid W Portion of NW Bldg Area	124	128.3	124.8	4.9	97
4	W Portion of NW Bldg Area	124	128.3	121.3	5.8	95

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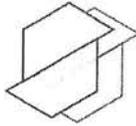
Field Rep: Su-Kiet Lieu

Date Mailed: OCT 04 2016

Principal / PM: Jon Sondergaard, LEG

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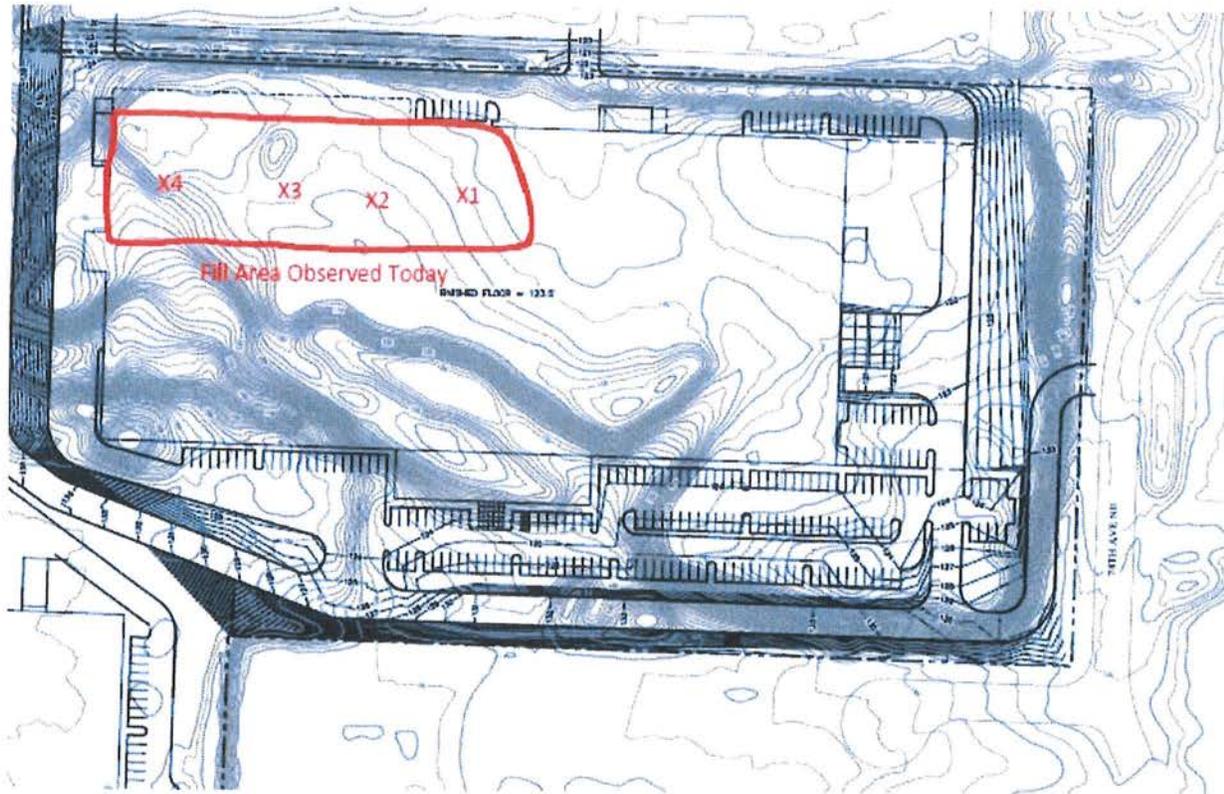
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AESI FIELD REPORT

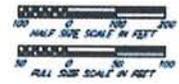
To: _____
Date: 28 SEP 16
Permit No. _____

Project Name: Gayteaway Business Park
Project No.: KE150563A
DPD No. _____



Cut/Fill Summary

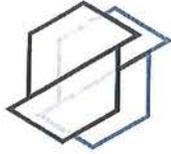
Name	Cut Factor	Fill Factor	2D Area	Cut	Fill	Net
VEHICLE 1,200	1.000		31783.02 Sq. Ft.	32418.84 Cu. Yd.	18212.44 Cu. Yd.	17206.40 Cu. Yd. (+)
Totals			31783.02 Sq. Ft.	32418.84 Cu. Yd.	18212.44 Cu. Yd.	17206.40 Cu. Yd. (+)



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Field Rep: Su-Kiet Lieu
Principal / PM: Jon Sondergaard, LEG

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911 Fifth Avenue
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Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date	Project Name	Project No.
3 OCT 16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Clear 70's
Permit No.	DPD No.	Report No.
1738		17
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed fill along the driveway area west of the building to the proposed subgrade elevation. Fill material for the area observed today consisted of a sand, and a sand and gravel from the south and southwest cut areas of the site. The contractor informed us the fill was compacted in about 4 to 8 inch lifts with a smooth drum roller. We did not observe the compaction process.

Density Readings:

We performed three in place density readings with results that ranged from 96 to 98% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

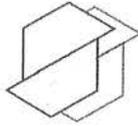
Conclusions:

We informed the contractor the fill areas observed today met the 95% compaction criteria.

Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	Mid Portion of W Driveway Area	124	128.3	123.5	8.5	96
2	Mid N Portion of W Driveway Area	124	128.3	124.4	4.7	97
3	N Portion of W Driveway Area	124	103.5	101.5	7.2	98

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Date Mailed: OCT 06 2016

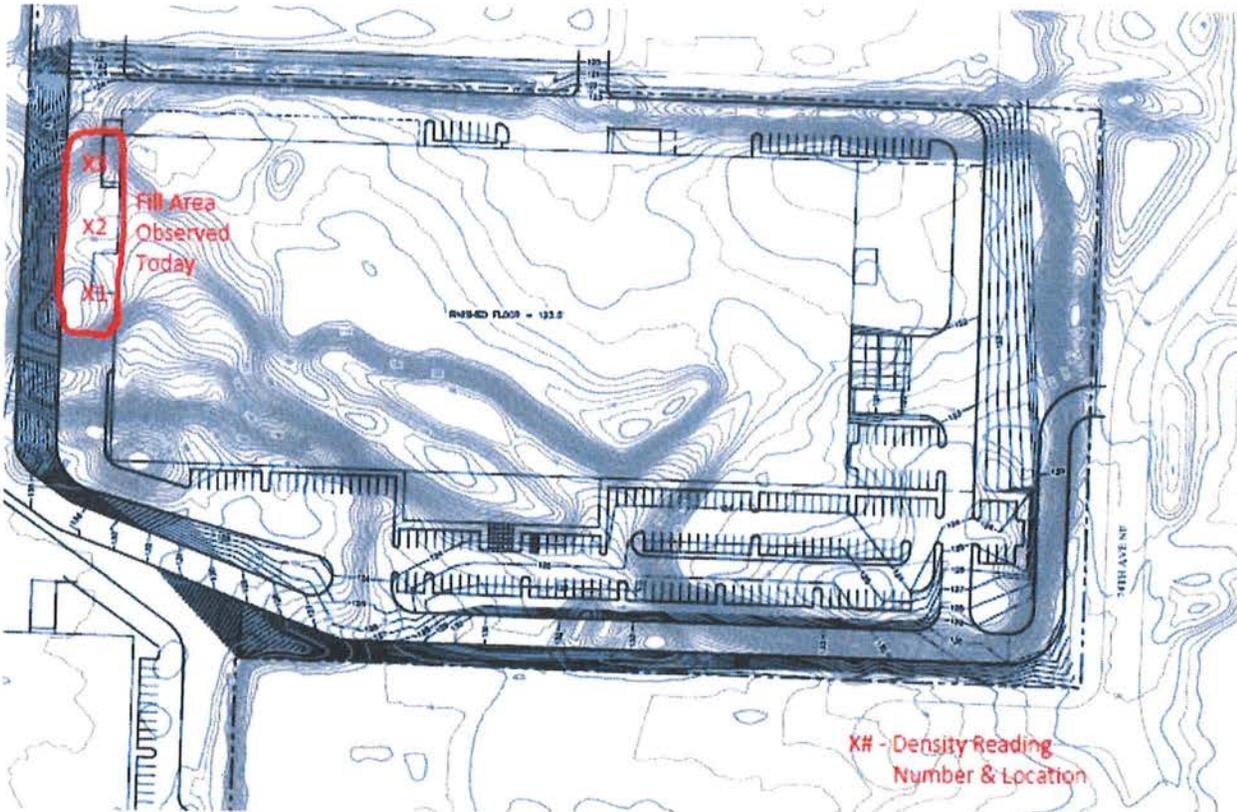
Field Rep: Su-Kiet Lieu
Principal / PM: Jon Sondergaard, LEG



AESI FIELD REPORT

To: _____
Date: 3 OCT 16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2D Area	Cut	Fill	Net
Volume	1.000	1.000	577442.22 Sq. Ft.	33418.68 Cu. Yd.	18212.48 Cu. Yd.	17206.20 Cu. Yd. <Cut>
Total			577442.22 Sq. Ft.	33418.68 Cu. Yd.	18212.48 Cu. Yd.	17206.20 Cu. Yd. <Cut>

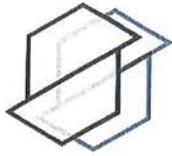


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Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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Phone: 425-827-7701
Fax: 425- 827-5424
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Date	Project Name	Project No.
5 OCT 16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Clear 70's
Permit No.	DPD No.	Report No.
1738		18
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chris from USVET.

Mass Fill:

The earthwork contractor informed us they had placed fill along the driveway area north of the building to about 2 feet below the proposed subgrade elevation, and the east portion of the building pad to about 1 foot below the proposed subgrade elevation. Fill material for the area observed today consisted of a sand, and a sand and gravel from the south and southwest cut areas of the site. The contractor compacted the fill in about 4 to 8 inch lifts with a smooth drum roller.

Density Readings:

We performed eight in place density readings with results that ranged from 96 to 98% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the fill areas observed today met the 95% compaction criteria.

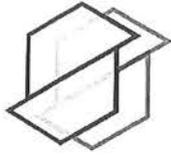
Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	W Portion of N Driveway Area	122	128.3	125.8	5.2	98
2	Mid W Portion of N Driveway Area	122	128.3	125.6	7.1	98
3	Mid Portion of N Driveway Area	122	122.1	115.4	5.9	95
4	NE Portion of E Building Area	123	128.3	124.2	6.3	97
5	E Portion of E Building Area	124	128.3	124.8	6.2	97
6	N Portion of E Building Area	124	128.3	124.1	4.7	97
7	NW Portion of E Building Area	123	122.1	117.6	7.5	96
8	W Portion of E Building Area	123	128.3	124.0	4.4	97

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OCT 06 2016

Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727
ATTN: Chris Gayte

AS REQUESTED BY: Contractor

Date	Project Name	Project No.
10 OCT 16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Clear 70's
Permit No.	DPD No.	Report No.
1738		19
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

THE FOLLOWING WAS NOTED:

AESI was onsite for construction monitoring of earthwork activities. Upon our arrival, we met with Chuck from USVET.

Mass Fill:

The earthwork contractor informed us they had placed fill along the east side of the building to about 1 to 4 feet below the proposed subgrade elevation. Fill material for the area observed today consisted of a sand, and a sand and gravel from the south and southwest cut areas of the site. The contractor compacted the fill in about 4 to 8 inch lifts with a smooth drum roller.

Density Readings:

We performed three in place density readings with results that ranged from 95 to 96% of the maximum dry density, according to ASTM D 1557. We were able to penetrate from 1 to 5 inches on the compacted fill material with a 1/2 inch diameter probe rod.

Conclusions:

We informed the contractor the fill areas observed today met the 95% compaction criteria.

Reading No.	Location	Elevation (ft)	Max DD (pcf)	DD (pcf)	MC (%)	Compact (%)
1	S Portion of E Bldg Area	121	103.5	99.1	9.1	96
2	Mid Portion of E Bldg Area	120	122.1	115.5	6.2	95
3	N Portion of E Bldg Area	119	122.1	116.4	7.2	95

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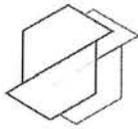
Field Rep: Su-Kiet Lieu

Date Mailed: OCT 13 2016

Principal / PM: Jon Sondergaard, LEG

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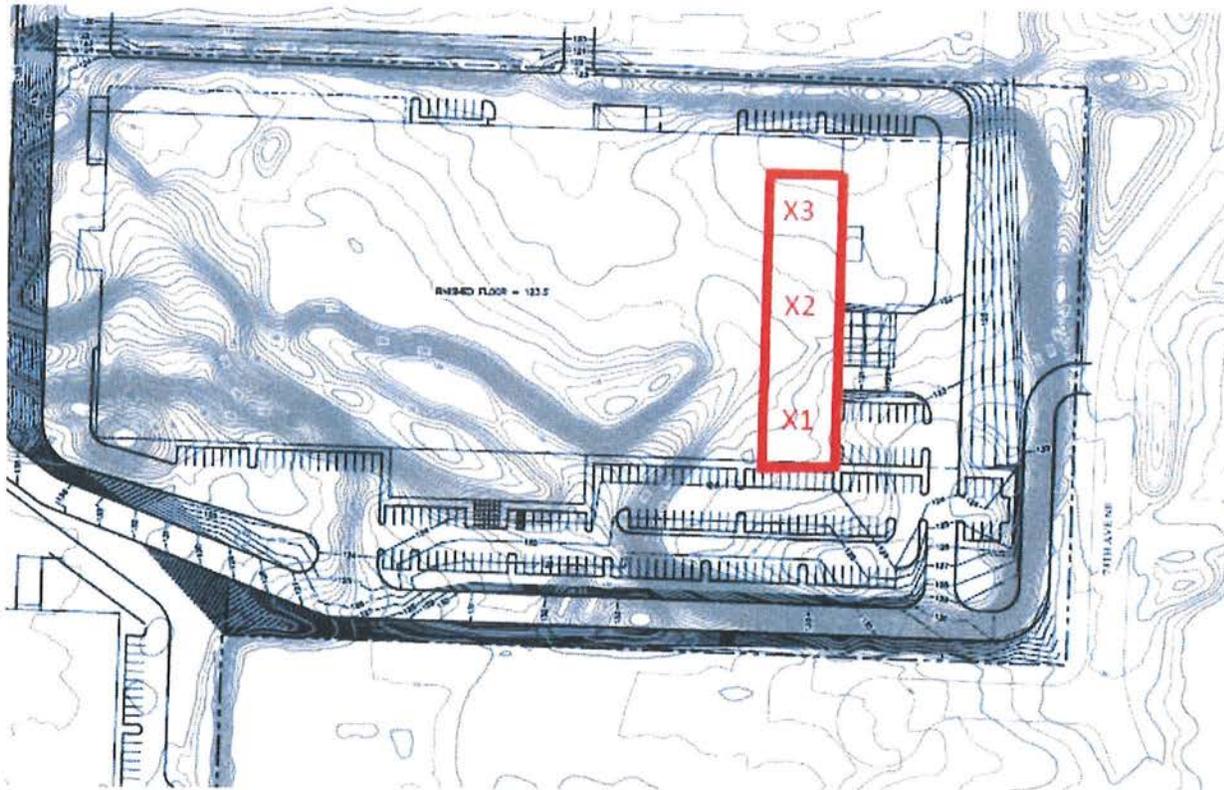
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AESI FIELD REPORT

To: _____
Date: 10 OCT 16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____



Cut/Fill Summary

NAME	Cut	Fill	PAVEMENT	CG Area	Cut	Fill	NET
W.C. 300	1,000			27182.22 Sq. Ft.	3328.68 Cu. Yd.	18212.44 Cu. Yd.	17154.22 Cu. Yd. (Net)
Totals				27452.22 Sq. Ft.	3328.68 Cu. Yd.	18212.44 Cu. Yd.	17321.22 Cu. Yd. (Net)



Copies To: _____

Field Rep: Su-Kiet Lieu

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG

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911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727
ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project.

Mass Grading

No further work was completed on this task during time of observation. AESI observed construction equipment had been parked and that topsoil was continuing to be screened near the NW corner of the project. As no one was onsite during time of arrival, AESI left a message with the earthwork contractor's foreman (Chris) to get an updated construction schedule.

Date	Project Name	Project No.
10-13-16	Gayteway Business Park	KE150563A
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Rain 60's
Permit No.	DPD No.	Report No.
1738		20
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

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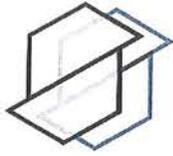
Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: OCT 18 2016

Principal / PM: Jon Sondergaard, LEG

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Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

Date	Project Name		Project No.
10-13-16	Gayteway Business Park		KE150563A
Location		Municipality	Weather
20015 67 th Avenue NE		Arlington	Rain 60's
Permit No.	DPD No.	Report No.	
1738		20	
Engineer/Architect			
Client/Owner			
GS Venture Partners			
General Contractor/Superintendent			
USVET / Chris			
Earthwork /Superintendent			
USVET / Chris			

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project.

Mass Grading

No further work was completed on this task during time of observation. AESI observed construction equipment had been parked and that topsoil was continuing to be screened near the NW corner of the project. As no one was onsite during time of arrival, AESI left a message with the earthwork contractor's foreman (Chris) to get an updated construction schedule.

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OCT 18 2016

Field Rep: Jon D. Hansen, Sr. Staff Geologist

Principal / PM: Jon Sondergaard, LEG

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911 Fifth Avenue
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Fax: 425- 827-5424
www.aesgeo.com

Date 10-25-16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE	Municipality Arlington	Weather Rain 50's
Permit No. 1738	DPD No.	Report No. 21
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727
ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project.

Mass Grading

Prior to arrival, the earthwork contractor had nearly completed grading processes for the project's SE truck entrance ramp. Using a small dozer, the contractor placed approximately 2-15' (W to E) of fill material (generally brown silty SAND with trace organics/cut from adjacent area) and compacted the material, in a series of 1-2' loose lifts, via large vibratory roller (process not observed). AESI observed the top lift of soil appeared to pump/yield under foot and was notably loose with corresponding T-probe depths of 1-2' respectively. At the recommendation of AESI, the contractor removed the wet fill (typically 2') from the area and re-compacted the underlying fill. AESI noted the underlying fill soils (generally grayish brown gravelly SAND with silt) appeared (during time of observation) firm/unyielding with corresponding T-probe depths of 2-4". AESI conducted a series of in place density tests to confirm the specified minimum compaction for the structural area (95% ASTM 1557). The contractor was notified of all density results listed below. The contractor informed us that they would continue to use material from the adjacent cut (immediately East) and that grades in the area were approximately 3' below finish. Based on prior observations, AESI recommended the contractor remove (as necessary) organic and deleterious content (tree branches, strippings, concrete rubble) from the proposed fill source and limit further saturation of the weather sensitive fill. See Figure 1.

Density Results

Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	-3	8.2	119.4	122.1	97.8
DT2	Grading/See Figure 1	-3	7.7	120.2	122.1	98.4
DT3	Grading/See Figure 1	-3	8.9	117	122.1	95.8
DT4	Grading/See Figure 1	-3	8.3	118.2	122.1	96.8
DT5	Grading/See Figure 1	-3	8.6	118.5	122.1	97.1

*Depths based on available in-field elevation data

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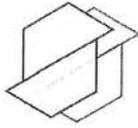
Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: NOV 01 2016

Principal / PM: Jon Sondergaard, LEG

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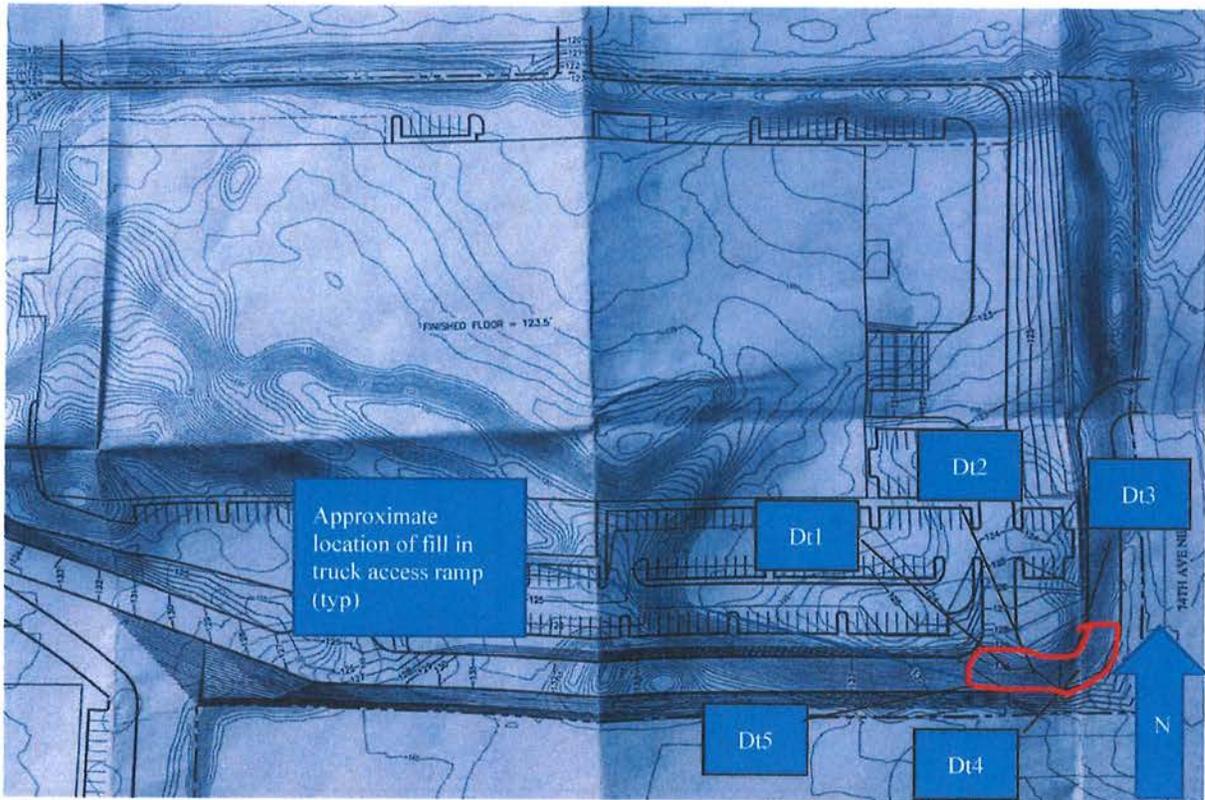


AESI FIELD REPORT

To: _____
Date: 10-25-16
Permit No. _____

Project Name: Gayteaway Business Park
Project No.: KE150563A
DPD No. _____

Figure 1

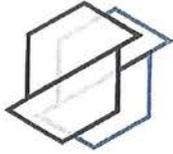


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Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG 



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e a r t h s c i e n c e s
i n c o r p o r a t e d

FIELD REPORT

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911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date 10-26-16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE	Municipality Arlington	Weather Rain 50's
Permit No. 1738	DPD No.	Report No. 22
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project.

Fine Grading (Building Pad)

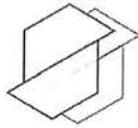
Trending generally south to north, the earthwork contractor continued fine grading processes for the proposed building pad area. Using a large finish blade scraper, the contractor cut approximately 2-4" of previously placed/compacted/tested structural fill (generally gray SAND with few gravels and trace silts) from the area and pushed the material into a small stockpile along the eastern margins of the pad. The material was re-compacted, in a series of passes, via large vibratory roller, and appeared (during time of observation) firm/unyielding with corresponding T-probe depths of 4". Due to continued heavy rain, the contractor elected to temporarily discontinue fine grading processes and informed AESI that they would resume work on the building pad and previously observed truck access ramp when weather improved. Additionally, the contractor informed us that a recent grading plan change had called for the truck access entrance location to be changed, the adjacent slope to be steepened, and the east parking area to be expanded with the potential addition of a small wall. See Figure 1.

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Date Mailed: NOV 02 2016

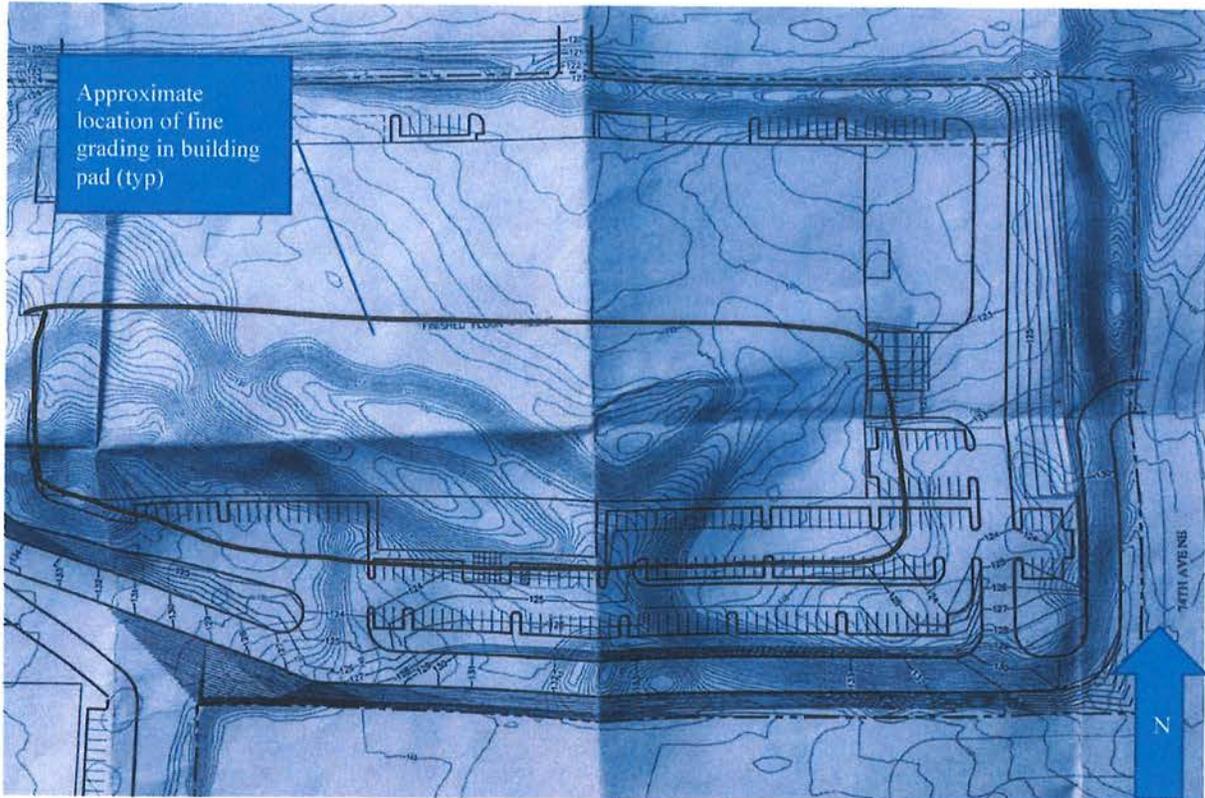
Principal / PM: Jon Sondergaard, LEG *JS*



AESI FIELD REPORT

To: _____
Date: 10-26-16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____

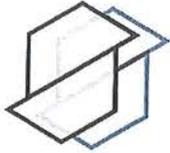


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Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG



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Page 1 of 2

911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425-827-5424
www.aesgeo.com

Date 11-7-16	Project Name Gayteway Business Park	Project No. KE150563A
Location 20015 67 th Avenue NE	Municipality Arlington	Weather Cloudy 50's
Permit No. 1738	DPD No.	Report No. 23
Engineer/Architect		
Client/Owner GS Venture Partners		
General Contractor/Superintendent USVET / Chris		
Earthwork /Superintendent USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteway Business Park" project.

Mass Grading

Prior to arrival, the earthwork contractor had completed fine grading processes for the proposed building pad and had completed re-compaction processes of all loosened/disturbed soils. With one exception, AESI noted the re-compacted soils (generally gray SAND with little gravel and trace silt/previously placed/compacted during fill processes) appeared firm/unyielding (during time of observation) with corresponding T-probe depths of 3-4" respectively. AESI conducted a series of in place density tests on the re-compacted structural fill to confirm the specified minimum compaction (95% ASTM 1557). The contractor was notified of all density results listed below. During time of observation, AESI noted a localized area of ponded water near the south margins of the building pad that appeared to contain relatively loose silty soil beneath. As the soil dries out, AESI recommended the loose soils be re-compacted to the above compaction specification (as possible) or removed/replaced with suitable structural fill (as needed). See Figure 1.

Density Results

Test #	Location	Depth (ft below fsg)	% Moist	Density (pcf)	Proctor (pcf)	% Compaction
DT1	Grading/See Figure 1	approx fsg	7.1	117.4	122.1	96.2
DT2	Grading/See Figure 1	approx fsg	6.9	117.7	122.1	96.4
DT3	Grading/See Figure 1	approx fsg	7.5	116.3	122.1	95.2
DT4	Grading/See Figure 1	approx fsg	7	117.2	122.1	96.0
DT5	Grading/See Figure 1	approx fsg	8.3	116.1	122.1	95.1
DT6	Grading/See Figure 1	approx fsg	7.7	117.2	122.1	96.0
DT7	Grading/See Figure 1	approx fsg	8.1	116.6	122.1	95.5

*Depths based on available in-field elevation data

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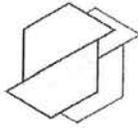
Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: NOV 15 2016

Principal / PM: Jon Sondergaard, LEG

v. 6/14

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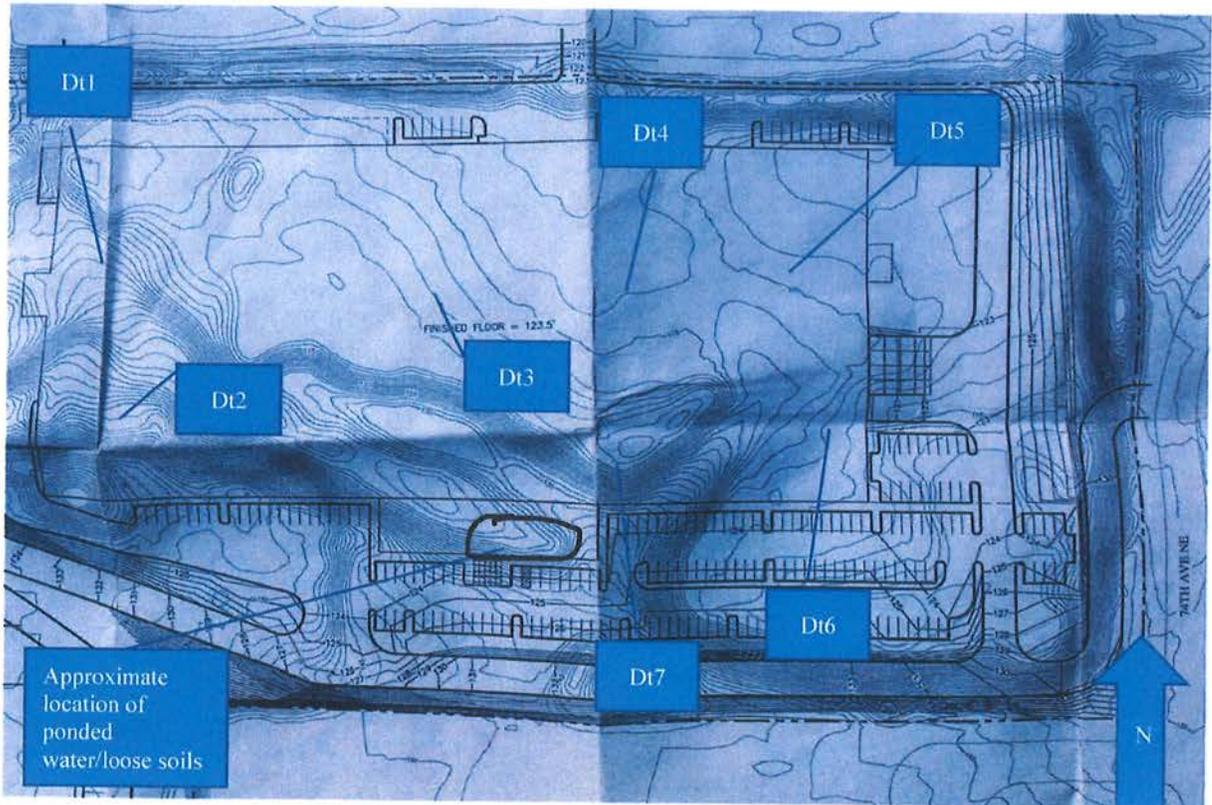


AESI FIELD REPORT

To: _____
Date: 11-7-16
Permit No. _____

Project Name: Gayteway Business Park
Project No.: KE150563A
DPD No. _____

Figure 1

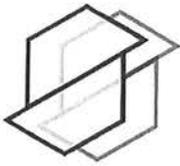


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Field Rep: ~~Sanket Liou~~ Jon Hansen *J*

Date Mailed: _____

Principal / PM: Jon Sondergaard, LEG *J*



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911 Fifth Avenue
Kirkland, Washington 98033
Phone: 425-827-7701
Fax: 425- 827-5424
www.aesgeo.com

Date	Project Name	Project No.
2-28-19	Gayteaway Business Park	150563E001
Location	Municipality	Weather
20015 67 th Avenue NE	Arlington	Clear 40's
Permit No.	DPD No.	Report No.
1738		24
Engineer/Architect		
Client/Owner		
GS Venture Partners		
General Contractor/Superintendent		
USVET / Chris		
Earthwork /Superintendent		
USVET / Chris		

TO: GS Venture Partners
P.O. Box 1727
Bellevue, WA 98009-1727

ATTN: Chris Gayte

AS REQUESTED BY: Contractor

THE FOLLOWING WAS NOTED:

AESI was onsite part-time, at the request of the client, for construction monitoring of earthwork activities for the "Gayteaway Business Park" project. Upon arrival, we met with Chris of USVET.

Mass Grading

Prior to arrival, the earthwork contractor had continued mass grading processes near the east end of the site. The earthwork contractor informed us that they had placed approximately 5-7' (north to south) of fill material over the southeast corner of the site (proposed parking area) and that the adjacent east cut slope had been re-graded to an approximately 2H:1V inclination. The contractor noted the fill had been placed in a series of lifts, and compacted via vibratory roller (process not observed). Additionally, the earthwork contractor noted the fill had come from several different local sources over the course of approximately 1-2 years. AESI observed the fill material exposed at the surface generally consisted of gray silty gravelly SAND with trace cobbles and appeared firm/unyielding (during our time of observation) with corresponding T-probe depths of 1-3". In an effort to observe at depth soil conditions; AESI recommended a series of potholes be dug in the new fill area, soil samples be collected (as necessary for proctor analysis), and that density testing be conducted. As no equipment was available during our time of observation, AESI and the earthwork contractor will schedule the above recommended excavations for next week. See Figure 1.

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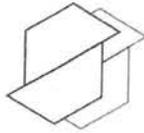
Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: 7-15-19

Principal / PM: Matt Miller, P.E.

v. 6/14

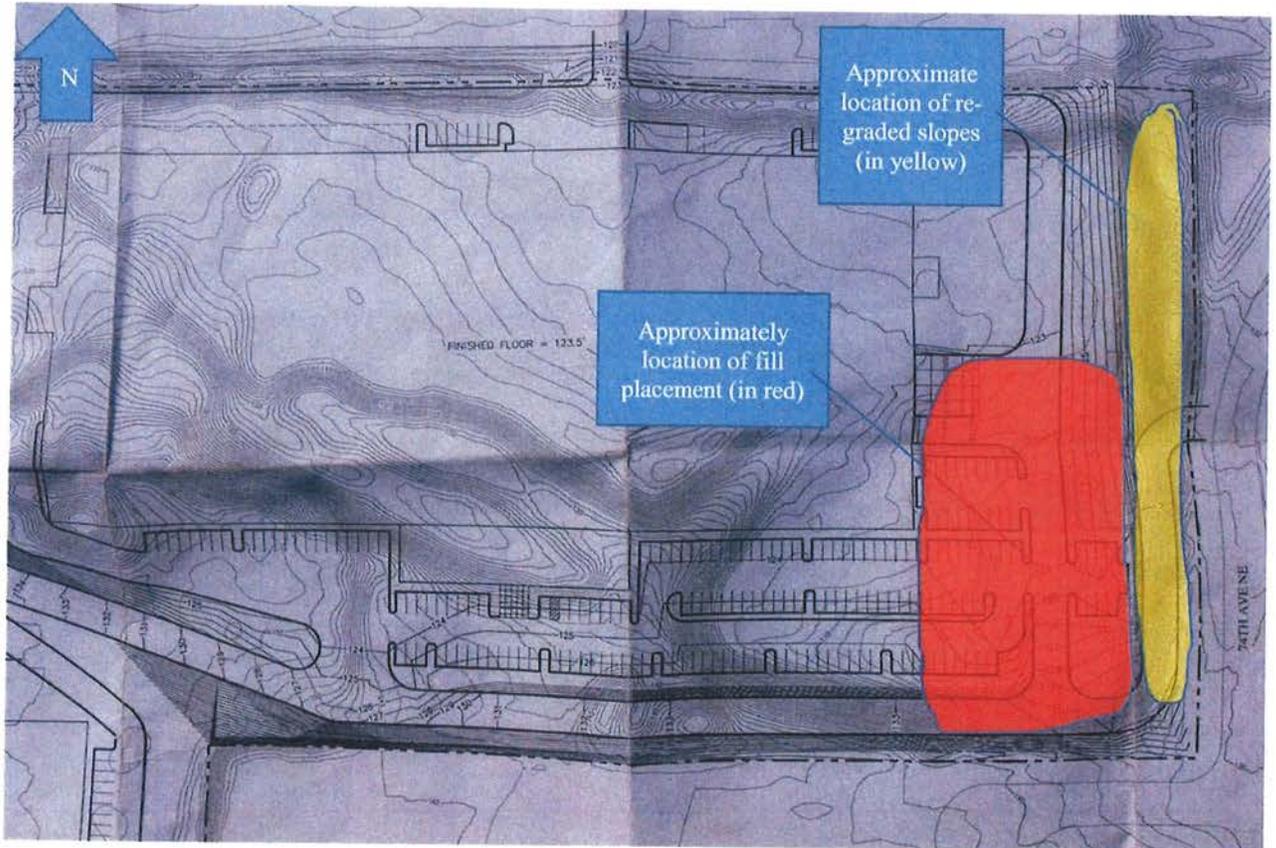
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AESI FIELD REPORT

To: _____ Project Name: Gayteway Business Park
Date: 2-28-19 Project No.: 150563E001
Permit No. _____ DPD No. _____

Figure 1



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Field Rep: Jon D. Hansen, Sr. Staff Geologist

Date Mailed: _____

Principal / PM: Matt Miller, P.E.