ADDENDUM NUMBER 1

PSC BUSINESS PARK EARTHWORK AND MASS GRADING - PHASE II PROJECT

PROJECT NO. 17826

NOVEMBER 7, 2025

Bids Due: 2:00 pm, November 10, 2025

****

The following addendum is hereby issued and made a part of the specifications for the PSC Business Park Earthwork and Mass Grading Phase II Project.

1) Pre-Bid Attendees:
   a) Triple River Construction
   b) DW Excavating, Inc.
   c) Watts Construction
   d) Culbert Construction
   e) TTC Construction

2) Pre-Bid Questions and Answers

Question 1) Where are the bids to be delivered?
Answer 1) The bids shall be delivered to the Port of Pasco administrative office, located in the NW corner on the 2nd floor of the airport terminal.

Question 2) Are there any restrictions on working hours?
Answer 2) No. Work can be conducted on weekends and outside of typical working hours, just notify the port in advance.

Question 3) What should be anticipated, if anything, regarding the statement in Section 2 on page 48 about hazardous materials removed shall be the responsibility of the contractor to dispose of in a legal manner.
Answer 3) We do not anticipate to encounter any hazardous materials during excavation.

Question 4) Can you define the limits of what is expected for temporary fencing beyond the silt fence mentions in Section 4 on page 48?
Answer 4) No additional temporary fencing outside of the silt fence is required.

Question 5) The geotechnical report was not provided with the specifications, can you provide if available.
Answer 5) Yes, the report is included with this addendum.

Question 6) Do you anticipate any other utility work being underway which may impede the operations of this project?

Answer 6) No utility work is being conducted adjacent to the site at this time.

Question 7) In the advertisement or cover sheet, page1, it states we will have 18 calendar days for substantial completion. Page 83 calls out the project will be complete by December 31, 2025 in 15 working days. Please clarify which is correct.

Answer 7) The contract time is 28 calendar days from issuance of NTP. 10 calendar days to mobilize and 18 calendar days to complete construction. Please note that there is no distinction between working and calendar days since there are no restrictions on working days or hours. The final pay estimate must be submitted before 12/31/2025.

Question 8) Is restoration of crushed surfacing areas disturbed during construction limited to the work only at the road crossing?

Answer 8) Yes, that is the primary location of concern. However, this stipulation applies to all of the surfaced areas (Rickenbaker and Argent) if damaged by the contractor's operations during construction. It is highly recommended that the pavement and curb conditions be thoroughly documented via photographs prior to starting construction.

Question 9) In the event of shrinking exceeding 15%, will the elevation of the specific pads be lowered to balance the shortfall of excavated material? Will this require potential borrow to establish design grades?

Answer 9) The contractor will be paid based on the compacted material volume in place, per spec. If the design grades have not been met using the bid quantity (verified by survey), additional material may be required. If the contractor is directed to place additional material, it will be done so at the agreed upon bid price from the same borrow location.

Question 10) What is to be made of from the stockpiled material already onsite?

Answer 10) The stockpiled material currently onsite will be spread and compacted prior to the commencement of mobilization on this project. The stockpiled material is not expected to alter the quantity of fill or design grade elevations for this project. Per specification, the contractor shall perform at least 1 nuclear density test prior to placement of fill to determine the condition of the previously placed fill. The chosen contractor will not be responsible for removing inorganic debris (i.e. asphalt or concrete chunks) within the previously placed fill.

Question 11) Sheet E01 shows a construction entrance? Considering we hauling directly from the borrow source to the fill site and, not using this entrance at all, does this have to be installed?

Answer 11) The contractor is required to comply with all aspects of the erosion control plan and be in compliance with all relevant permit requirements at all times.

3) **Contact information for the Pasco Fire Department:**

Kevin Crowley – Chief	Troy Hendren – Fire Marshal
crowleyk@pasco-wa.gov	hendrent@pasco-wa.gov
509-792-4073	509-528-4142

NOTICE is hereby given that this addendum must be acknowledged with Addendum Number and Date received on the Bid Schedule and enclosed with the sealed bid for the PSC Business Park Earthwork and Mass Grading Project as evidence that the bidder has familiarized himself/herself with all changes incorporated herein.

Adam Rinehart, P.E.

MacKay Sposito, Project Manager

Northern, Inc.
Consulting Engineers Environmental Scientists Geologists
Construction Materials Testing Geophysical Services

GEOTECHNICAL SITE INVESTIGATION REPORT

PSC BUSINESS PARK IMPROVEMENTS 2001
AIRSIDE AND LANDSIDE IMPROVEMENTS
3601 NORTH 20TH AVENUE, PASCO, WASHINGTON

GNN PROJECT NO. 222-1506

MARCH 2022

Prepared for

MEAD & HUNT
9600 NE CASCADES PARKWAY, SUITE 100
PORTLAND, OREGON 97220

Prepared by

GN NORTHERN, INC.
CONSULTING GEOTECHNICAL ENGINEERS
KENNEWICK, WASHINGTON
(509) 734-9320

At GN Northern our mission is to serve our clients in the most efficient, cost effective way using the best resources and tools available while maintaining professionalism on every level. Our philosophy is to satisfy our clients through hard work, dedication and extraordinary efforts from all of our valued employees working as an extension of the design and construction team.

March 28, 2022

Mead & Hunt
9600 NE Cascades Parkway, Suite 100
Portland, OR 97220

Attn: Ryan Bergstrom, PE, Project Manager, Aviation

Subject: **Geotechnical Site Investigation Report**
PSC Business Park Improvements 2001
Airside and Landside Improvements
3601 N. 20th Avenue, Pasco, WA

GNN Project No. 222-1506

Dear Mr. Bergstrom,

As requested, GN Northern (GNN) has completed a geotechnical site investigation for the proposed airside and landside improvements of the proposed PSC Business Park at the Tri-Cities Airport (PSC) in Pasco, Washington.

Based on the findings of our subsurface study, we conclude that the site is suitable for the proposed construction provided that our geotechnical recommendations presented in this report are followed during the design and construction phases of the project.

This report describes in detail the results of our site investigation, summarizes our findings, and presents results of laboratory testing our recommendations concerning earthwork for the proposed project.

If you have any questions regarding this report, please contact us at 509-734-9320.

Respectfully submitted,

GN Northern, Inc.

Imran G. Magsi, PE, GE
Senior Geotechnical Engineer

Karl A. Harmon, LEG, PE
Senior Geologist/Engineer

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APPENDICES

1.0 PURPOSE AND SCOPE OF SERVICES

This report has been prepared for the proposed airside and landside improvements to be constructed at the Tri-Cities Airport (PSC) located at 3601 N. 20th Avenue in the City of Pasco, Washington; site location is shown on the *Vicinity Map* (Figure 1, Appendix I). Our investigation was conducted to collect information regarding subsurface soil conditions, present our professional opinion regarding the suitability of the subsurface materials to support the planned development and provide recommendations for earthwork construction and soil engineering properties for pavement design parameters.

GN Northern, Inc. has prepared this report for use by the client and their design consultants in the design of the proposed development. Do not use or rely upon this report for other locations or purposes without the written consent of GNN.

Our study was conducted in general accordance with *Section 2.4 of the Agreement Between Mead & Hunt, Inc. and GN Northern, Inc. for Subcontracted Services* dated February 28, 2022; notice to proceed was provided in the form of a signed Agreement on March 8, 2022.

You provided an *Exhibit 1, Business Park Hangar Analysis,* via email on January 21, 2022, showing the proposed boring locations for the airside and landside improvements project. Field exploration, consisting of seventeen (17) exploratory borings and four (4) infiltration tests, were completed on March 7, 2022. The borehole and infiltration test locations are shown on the *Site Exploration Map* (Figure 2, Appendix I). Detailed boring logs are presented in Appendix II, and results of our laboratory testing are presented in Appendix III. The table presented at the end of this section provides an overview of the types of laboratory tests performed on selected samples with corresponding depths.

This report has been prepared in general conformance with Section 2.4 Part D of the aforementioned Agreement to summarize the findings and recommendations for pavement design parameters to include design CBR and infiltration rates for stormwater system design consisting of drywells. Results of the field exploration and laboratory testing were analyzed to develop recommendations for earthwork and provide subsurface soil engineering properties for use in pavement design.

2.0 PROPOSED CONSTRUCTION

The proposed PSC Business Park improvements at the existing Tri-Cities Airport will include approximately 1,800 feet of a new bituminous asphalt paved taxiway on the airside and parallel to Runway 3L and extending Rickenbacker Drive ~2,000 feet to the east on the landside.

3.0 FIELD EXPLORATION

Our field exploration was completed on March 7, 2022. A local public utility clearance was obtained by duplicating the One-Call locate ticket from Mackay-Sposito prior to the field exploration. Site access and airport personnel escorts during field exploration activities were coordinated through Don Faley, Deputy Airport Director with the Port of Pasco. Prior to commencement of the field exploration program, GNN's senior geotechnical engineer, Karl Harmon, met with Mr. Faley on March 2nd and conducted an initial site walk of the proposed improvement areas to gather information and take photographs of the site. Ryan Bergstrom with Mead & Hunt marked the boring and infiltration test locations prior to our field work.

Seventeen (17) exploratory borings (9 on the airside, and 8 on the landside) and four (4) infiltration tests (2 on the airside, and 2 on the landside) were completed at locations shown on the *Site Exploration Map* (Figure 2, Appendix I). The borings were drilled by Geowest Drilling, Inc. using a Crux G-2400 trailer-mounted drill rig to depths of approximately 11.5 feet below existing ground surface (BGS). The infiltration tests were conducted at a depth of approximately 5 feet BGS within four of the borings. The borings were logged and overseen by a GNN geotechnical engineer. Upon completion, the boreholes were backfilled in accordance with Washington State guidelines. Detailed exploratory boring logs are presented in Appendix II.

Samples were obtained from the test borings using a Standard Penetration (SPT) sampler at 2.5-foot intervals with depth. The SPT sampler has a 2-inch outside diameter and a 1.38-inch inside diameter. Samples were obtained by driving the sampler with a 140-pound rope & cathead hammer, dropping 30 inches in general accordance with ASTM D1586. The number of blows required to advance the samplers through each 6-inch increment is recorded in the field. The SPT resistance, or N-value, is defined as the number of blows required to drive the sampler from 6 inches to 18 inches below the auger tip, with the value reported as the number of blows per one foot of penetration. The SPT N-value, adjusted for hammer efficiency and sampler size, provides

an indication of the relative density or consistency of the soil and is indicated on the boring logs. Recovered soil samples were sealed in containers and returned to our laboratory.

The soils observed during our field exploration were classified according to the Unified Soil Classification System (USCS), utilizing the field classification procedures as outlined in ASTM D2488. A copy of the USCS Classification Chart is included in Appendix II. Photographs of the site and exploration are presented in Appendix IV. Depths referred to in this report are relative to the existing ground surface elevation at the time of our investigation. The surface and subsurface conditions described in this report are as observed at the time of our field investigation.

4.0 LABORATORY TESTING

Representative soil samples obtained from the borings and test-pits were selected for testing to determine index and engineering properties of the subgrade (subsurface) soils in general accordance with ASTM procedures. The following laboratory tests were performed:

Table 1: Laboratory Tests Performed

Test Performed	Description of Test
Particle Size Analysis, Distribution, Hydrometer (ASTMs D422, D6913)	Soil classification based on proportion of gravel, sand, silt, and clay-sized particles
Natural Moisture Content (ASTM D2216)	Soil moisture content indicative of in-situ condition at the time samples were taken
Moisture-Density Relationship, (Modified Proctor) (ASTM D1557)	The optimum moisture content for compacting soil and the maximum dry unit weight (density) for a given compaction effort
Cation Exchange Capacity (EPA 9081)	Relative ability of soils to store one particular group of nutrients, the cations
Atterberg Limits (ASTM D4318)	Liquid limit, plastic limit and plasticity index of soils
California Bearing Ratio (ASTM D1883)	Determines the potential strength of subgrade, subbase, and base course materials

The table below provides an overview of the types of laboratory tests performed on selected samples with corresponding exploratory borings and depths.

Table 2: Summary of Laboratory Testing Program

Boring No.	Sample Depth (BGS)	In-Situ Moisture Content	Sieve & Hydrometer Analysis	Atterberg/ Plasticity Index	Modified Proctor (*)	California Bearing Ratio (*)	Cation Exchange Capacity
B-1	2.5'	X					
	10’	X	X	X			
B-2	7.5'	X					
B-3 / IT-1	5'	X					X
B-4	5'	X					
B-5	2.5'	X					
B-6	2.5'	X					
	10'	X					
B-7 / IT-2	5'	X					X
B-8	10'	X					
B-9	0'-1'	X	X		X	X	
	7.5'	X	X				
B-10	5'	X	X	X			
	10'	X					
B-11	5'	X					
B-12 / IT-3	5'	X					X
B-13	2.5'	X					
B-14 / IT-4	5'	X					X
B-15	2.5'	X					
B-16	0'-1’	X	X		X	X	
	2.5'	X					
B-17	2.5'	X	X	X			

(*) Near surface soil samples collected from shallow hand excavated test pits for lab proctor and CBR test

The following table presents the results of our laboratory particle size analysis, Atterberg limits and the associated USCS soil classification of each soil sample tested.

Table 3: Soil Particle Size Distribution Analysis & Index Test Results

Boring No.	Sample Depth (BGS)	Gradation (% Passing No. Sieve)											Hydrometer Analysis	Atterberg (P.I.)	USCS
		3”	2”	1”	¾”	½”	⅜”	#4	#10	#40	#100	#200	<0.02mm		
B-1	10'						100	99.4	98.4	13	2.5	0.6		NP	**SP**
B-9	~1’		100	99.7	99.7	99.7	99.7	99.7	98.5	82	35.2	14.6			**SM**
B-9	7.5'						100	99.8	98.9	22.8	9.4	1.4			**SP**
B-10	5'								100	98.1	97	76.3	15	NP	**ML**
B-16	~1'			100	99.6	97.8	96.9	95	94.5	72.1	31.5	19.1			**SM**
B-17	2.5'							100	99.9	79.8	31.8	12.3		NP	**SM**

NP = Granular Non-Plastic, **PI** = Plasticity Index

Two (2) bulk samples of near surface soils were obtained from shallow hand excavated test-pits near borings B-9 and B-16 for proctor and California Bearing Ratio (CBR) testing. Samples for

CBR test were remolded, then soaked for 96-hours before they were punched, then dried in the oven to obtain the final moistures, a 10-lbs surcharge load was applied. Results of laboratory proctor test (maximum dry densities and optimum moisture contents) and CBR are presented in the tables below:

Table 4: Modified Proctor Test Results

Sample location	Soil Type	Max. Dry Density, pcf	Optimum Moisture Content, %
B-9, upper 12”	Silty Sand (SM)	113.2	12.5
B-16, upper 12”	Silty Sand (SM)	114.3	11.5

Table 5: Summary of CBR Test Results

Sample Location	Bearing Ratio			
		Minus 2% of optimum	Optimum	Plus 2% of optimum
B-9, upper 12”	Bearing Ratio (0.10 in)	5.75	18.0	20.5
	Bearing Ratio (0.20 in)	5.03	15.0	18.14
B-16, upper 12”	Bearing Ratio (0.10 in)	5.56	17.43	19.65
	Bearing Ratio (0.20 in)	4.92	14.15	17.82

Results of the laboratory tests are included on the logs and are also presented in graphic form in Appendix III attached to the end of the report.

5.0 SITE CONDITIONS

The project site is located on the southeast side of Runway 3L and extends eastward and parallel to the runway from the east end of Rickenbacker Drive to Varney Lane and the Pasco Fire Department Station 82. The site is generally situated in the S ½ of the SW ¼ and the S ½ of the SE ¼ of Section 13, Township 9 North & Range 29 East, Willamette Meridian. Adjacent properties consist of taxiways and undeveloped airport surface areas within the airport facility. The undeveloped airport areas are vegetated with a sparse to moderate growth of native desert grasses and brush. The airside portion of the site has been graded relatively flat, while the landside portion of the site is in a generally native condition with gently undulating surface conditions. Published field elevations for the airport range from 396' to 410' above mean sea level.

5.1 Regional Geology

Pasco lies in the Yakima Fold Belt region of the Columbia Plateau. The Columbia Plateau was formed by a thick sequence of Miocene-Age Tholeiitic basalt flows, called the Columbia River Basalt Group (CRBG) that erupted from fissures in north-central and northeastern Oregon, eastern Washington, and western Idaho. The Columbia Plateau is often called the Columbia Basin because it forms a broad lowland surrounded by mountains. The Columbia River Basalt Group is underlain by continental sedimentary rocks from earlier in the Tertiary Period. In the Tri-Cities area, the uppermost layers of the CRBG are fractured bedrock of the Wanapum Basalt formation. The Pliocene-Age Ringold formation sediments overlie the Columbia basalts. The Ringold Formation sediments consist of a heterogeneous mix of variably cemented and compacted gravel, sand, silt, and clay deposited by the ancestral Columbia, Snake, and Yakima Rivers.

Overlying sediments in the project site area consist of localized areas of Quaternary alluvium and a sequence of Pleistocene-age flood deposits, commonly identified as the Missoula Flood Deposits. These deposits generally consist of boulder and cobble to granule-sized basaltic gravel, with lesser deposits of sand, silt, and non-basaltic gravel. Surficial deposits consist of Plio-Pleistocene loess, silt and fine-grained sand. Based on the *Geologic Map of the Richland 1:100,000 Quadrangle, Washington* (Reidel, 1994), the site is mapped as Quaternary outburst flood deposits, gravel [Qfg(4)] of glacial Lake Missoula.

6.0 SUBSURFACE SOIL CONDITIONS

Based on the findings of our field exploration, the native subsurface soils encountered within the borings consisted primarily of Poorly Graded Sand with Silt (SP-SM) atop cleaner Poorly Graded Sand (SP). Silty Sand (SM) was encountered in six of the borings either above or within the poorly graded sand with silt. An approximate 2.5-foot layer of Silt (ML) was also encountered at a depth of 4.5 feet BGS in boring B-10. The native soils were typically observed to have relative in-place densities of ‘loose’ to ‘medium dense’ and were generally noted to be ‘dry’ to ‘moist’. No indications of potentially problematic or unsuitable soils were encountered within any of the points of exploration across the project site.

Exploratory boring logs in Appendix II show detailed descriptions and stratification of the soils encountered.

6.1 NRCS Soil Survey

The soil survey map of the Tri-Cities Airport area prepared by the Natural Resources Conservation Service (NRCS) identifies the near surface site soils as *Quincy loamy fine sand, 0 to 15 percent slopes* and *Winchester loamy coarse sand, 2 to 5 percent slopes.* Parent materials for these soils are described as *mixed eolian sands* and *sandy alluvium*. According to the NRCS soils map (Soil Survey, Appendix V), the natural drainage class for these units is described as *excessively drained*. NRCS data indicates that the capacity of the most limiting layer in these soils to transmit water (Ksat) High to very high (6.0 to 20.00 in/hr)

6.2 Groundwater

Groundwater was not encountered within any of the points of exploration (maximum depth of 11.5' BGS) across the project site. To assist in our evaluation, we have reviewed the Washington State Department of Ecology (DOE) database of nearby well logs (see Appendix VI) to estimated groundwater levels within a half mile of the site vicinity. Based on our review of available data, groundwater levels are believed to be greater than 50 feet deep in the area. Groundwater will not be a factor in design or construction of the proposed developments.

7.0 SOIL INFILTRATION TESTING

Four (4) soil infiltration tests were conducted within boreholes drilled adjacent to borings B-3 (IT-1), B-7 (IT-2), B-12 (IT-3) & B-14 (IT-4). The infiltration tests were performed in general conformance with the "Estimating Field Permeability of Soil-in-Place Using Borehole Methods" prescribed in Appendix 6B of Stormwater Management Manual for Eastern Washington (Ecology 2019). A 2-inch diameter perforated plastic pipe was inserted into the hollow-stem auger after drilling to approximately 5 feet BGS. Following removal of the 6-inch diameter auger, the uncased borehole was backfilled with native soils around the infiltration pipe. A falling head infiltration test was then conducted in the boreholes. After an initial soaking period, the falling head of water within the borehole was measured at timed intervals. The test results are indicative of the infiltration characteristics of the subsurface soils encountered at the test locations and depth. Soil samples were collected for CEC analysis, results are included in Appendix III. The following table presents the results of the infiltration tests, the fines contents of samples collected from the test locations and CEC analysis:

Table 6: Infiltration Test Results

Test ID/ Boring No.	Test Depth (BGS)	Soil Type	Fines Content	Field Infiltration Rate (inches/hour)	CEC Value (meq/100g
IT-1 / B-3	~5 feet	Poorly Graded Sand (SP)	3.0%	**14.7**	7.0
IT-2 / B-7	~5 feet	Silty Sand (SM)	16.7%	**8.2**	8.1
IT-3 / B-12	~5 feet	Silty Sand (SM)	12.9%	**8.8**	14.9
IT-4 / B-14	~5 feet	Sand w/ Silt (SP-SM)	6.2%	**13.2**	6.0

The infiltration rates presented herein represents the un-factored field soil infiltration rates. An appropriate factor of safety must be applied to the field infiltration rates to determine long-term design infiltration rates. Determination of safety factors for long-term design infiltration should consider the following: pretreatment, potential for biofouling, system maintainability, horizontal and vertical variability of soils, depth to groundwater, and type of infiltration testing. Typical factors of safety for these soils generally range from 2 to 2.5.

8.0 GEOTECHNICAL RECOMMENDATIONS

The following geotechnical recommendations are based on our current understanding of the proposed project as described in Section 2.0 of this report. Recommendations presented in this report are predicated upon appropriate geotechnical monitoring and testing of the earthwork grading by a representative of GNN's **Geotechnical-Engineer-of-Record (GER)**. We recommend that we be engaged to review grading plans in order to provide revised, augmented, and/or additional geotechnical recommendations as required.

8.1 Recommended Design CBR Value

Based on laboratory CBR testing of near surface soils and our past project experience with similar soil types in the project vicinity, we recommend a **design CBR value of 8.1** for the fine-grained sandy subgrade soils.

8.2 Grading

The project GER or a representative of the GER should observe site clearing, grading, and the bottoms of excavations before placing fills. Local variations in soil conditions may warrant increasing the depth of over-excavation and recompaction. Seasonal weather conditions may adversely affect grading operations. To improve compaction efforts and prevent potential pumping

and unstable ground conditions, we suggest performing site grading during dryer periods of the year.

Soil conditions shall be evaluated by in-place density testing, visual evaluation, probing, and proof-rolling of the imported fill and re-compacted on-site soil as it is prepared to check for compliance with recommendations of this report. A moisture-density curve shall be established in accordance with the ASTM D1557 method for all onsite soils and imported fill materials used as structural fill.

Do not commence grading operations until temporary erosion and sedimentation control measures are in place. Provide erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff to adjacent properties, hardscape areas, and paved roadways according to Stormwater Pollution Protection Plan (SWPPP) and requirements of the Authorities Having Jurisdiction (AHJ). Verify that flows of water are redirected from grading areas or runoff generated by construction activity do not enter work zones.

Uniformly grade areas to a relatively smooth and level surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated on civil plans. Provide a smooth transition between adjacent existing grades and new grades. Use smooth bladed equipment to create undisturbed subgrades. Place backfill evenly adjacent to structures, piping, or conduit to required elevations. Wedging action shall be prevented of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping, or conduit to approximately same elevation in each lift. Allow a representative of the GER to observe earth moving processes, to inspect and test subgrades and each fill or backfill layer, verify the resulting subgrade consists of suitable and to observe completed work,.

8.2.1 Mitigation of Loose Subgrade Soils: Over-excavate soft, loose, or wet soils, and areas of pumping to a firm bearing surface or to a depth determined by the GER below working subgrade, extend over-excavation laterally beyond the delineated unstable area. A representative of the GER shall inspect the excavations when subgrade has reached the required elevation. If the GER determines that unsatisfactory soil is present, or that subgrade does not meet requirements specified herein, continue excavation and replace with suitable compacted granular backfill or fill

material as directed. Place each lift of backfill and fill soil materials evenly to the required elevations. Condition each lift of fill to near-optimum moisture content and compact to specified density before placing subsequent lifts. Proof-roll the subgrade with two or three passes of heavy construction equipment, such as a water truck or tandem axle dump truck that is fully loaded, to identify remaining soft, loose, or pumping areas within the working subgrade.

8.2.2 Soil Moisture Control: All fill soils shall be maintained within near-optimum moisture content at time of compaction. Uniformly moisten subgrade and each subsequent fill or backfill soil layer before compaction to near-optimum moisture content, unless indicated otherwise. For native sandy soils, assume +/- two to three percent (2% -3%) limit unless compaction efforts prove a higher tolerance is acceptable to meet compaction requirements. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds near-optimum moisture content and is too wet to compact to specified dry density. Do not place backfill or fill soil material on surfaces that are saturated, muddy, frozen, or contain frost, snow, or ice.

8.3 Clearing and Grubbing

At the start of site grading, existing vegetation, large roots, artificial fill, trash and debris, and any abandoned underground utilities shall be removed from the areas of proposed construction. The surface shall be stripped of all topsoil and/or organic growth that may exist within the proposed structural areas. The topsoil and organic rich soils shall either be stockpiled on-site separately for future use or be removed from the construction area. Depth of stripping can be minimized with real-time onsite observation of sufficient removals. Areas disturbed during clearing shall be properly backfilled and compacted as described below.

8.4 Temporary Excavations

It shall be the responsibility of the contractor to maintain safe temporary slope configurations since the contractor is at the job site, able to observe the nature and conditions of the slopes, and able to monitor the encountered subsurface conditions. Unsupported vertical cuts deeper than 4 feet are not recommended if worker access is necessary. The cuts shall be adequately sloped, shored or supported to prevent injury to personnel from caving and sloughing. The contractor and subcontractors shall be aware of, and familiar with, applicable local, state and federal safety

regulations including the current OSHA Excavation and Trench Safety Standards, and OSHA Health and Safety Standards for Excavations, 29 CFR Part 1929, or successor regulations.

According to chapter 296-155 of the Washington Administrative Code (WAC), it is our opinion that the soil encountered at the site is classified as Type C soils. For excavation planning purposes, we recommend that temporary, unsupported, open cut slopes shall be no steeper than 1.5 feet horizontal to 1.0 feet vertical (1.5H:1V) in Type C soils. No heavy equipment should be allowed near the top of temporary cut slopes unless the cut slopes are adequately braced. Final (permanent) fill slopes should be graded to an angle of 2H:1V or flatter. We recommend that permanent slopes be hydroseeded and/or planted with vegetation after construction. Where unstable soils are encountered, flatter slopes may be required. We recommend protecting slopes with waterproof covering during periods of wet weather to reduce sloughing and erosion.

The native sand soils may be prone to some caving and sloughing in open excavations. Excavation stability may be achieved by sloping excavation banks or widening shallow excavations in the anticipation of caving. Deeper excavations may require external support such as shoring or bracing to provide excavation bank stability.

8.5 Utility Excavation, Pipe Bedding and Trench Backfill

To provide suitable support and bedding for the pipe, we recommend the utilities be founded on suitable bedding material consisting of clean sand and/or sand & gravel mixture. To minimize trench subgrade disturbance during excavation, the excavator should use a smooth-edged bucket rather than a toothed bucket.

Pipe bedding and pipe zone materials shall conform to Section 9-03.12(3) of the Washington State Department of Transportation (WSDOT) 2018 Standard Specifications. Pipe bedding should provide a firm uniform cradle for support of the pipes. A minimum 4-inch thickness of bedding material beneath the pipe should be provided. Prior to installation of the pipe, the pipe bedding should be shaped to fit the lower part of the pipe exterior with reasonable closeness to provide uniform support along the pipe. Pipe bedding material should be used as pipe zone backfill and placed in layers and tamped around the pipes to obtain complete contact. To protect the pipe, bedding material should extend at least 6-inches above the top of the pipe.

Placement of bedding material is particularly critical where maintenance of precise grades is essential. Backfill placed within the first 12-inches above utility lines should be compacted to at least 90% of the maximum dry density (ASTM D1557), such that the utility lines are not damaged during backfill placement and compaction. In addition, rock fragments greater than 1 inch in maximum dimension should be excluded from this first lift. The remainder of the utility excavations should be backfilled and compacted to 95% of the maximum dry density as determined by ASTM D1557. Compaction of backfill material should be accomplished with soils within ±2% of their optimum moisture content in order to achieve the minimum specified compaction levels recommended in this report. Backfill operations shall be observed and tested to monitor compliance with these recommendations.

8.6 Suitability of the Onsite Soils as Engineered Fill

The onsite sandy soils are suitable for use as engineered fill and utility trench backfill, provided they are screened and processed (if and as necessary) to remove any debris, significant organic or deleterious matter, and oversize material greater than 4 inches. The onsite soil should be placed in maximum 8-inch lifts (loose) and compacted to at least 95% relative compaction (ASTM D1557) near its optimum moisture content. Compaction should be performed within a range of ±2% of optimum moisture to achieve the proper degree of compaction.

8.7 Imported Fill Soils

If needed, imported fill soils should be non-expansive, granular soils meeting the USCS classifications of SM, SP-SM, or SW-SM with a maximum rock size of 4 inches, minimum 70% passing the No. 4 sieve, and 5 to 20% passing the No. 200 sieve. The GER should evaluate the import fill soils before hauling to the site. The imported fill should be placed in lifts no greater than 8 inches in loose thickness and compacted to at least 95% of the maximum dry density (ASTM D1557) near optimum moisture content.

8.8 Compaction Requirements for Engineered Fill

All fill or backfill shall be approved by a representative of the GER, placed in uniform lifts, and compacted to a minimum 95% of the maximum dry density as determined by ASTM D1557. The compaction effort must be verified by a representative of the GER in the field using a nuclear density gauge in accordance with ASTM D6938. The thickness of the loose, non-compacted, lift of

structural fill shall not exceed 8 inches for heavy-duty compactors or 4 inches for hand operated compactors.

8.9 Subgrade Protection

The degree to which construction grading problems develop is expected to be dependent, in part, on the time of year that construction proceeds and the precautions which are taken by the contractor to protect the subgrade. We recommend that the site shall be graded to prevent water from ponding within construction areas and/or flowing into excavations. Accumulated water must be removed immediately along with any unstable soil. Protect newly graded areas from traffic, freezing, and erosion. Repair and reestablish grades where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions. Scarify or remove and replace soil material to depth as directed by GER; reshape and re-compact at optimum moisture content to the required density.

9.0 CONTINUING GEOTECHNICAL SERVICES

GNN recommends that the Client should maintain an adequate program of geotechnical consultation, construction monitoring, and soils testing during the final design and construction phases to monitor compliance with GNN's geotechnical recommendations. ***Maintaining GNN as the geotechnical consultant from beginning to end of the project will provide continuity of services.*** If GN Northern, Inc. is not retained by the owner/developer and/or the contractor to provide the recommended geotechnical inspections/observations and testing services, the geotechnical engineering firm or testing/inspection firm providing tests and observations shall assume the role and responsibilities of Geotechnical Engineer-of-Record.

GNN can provide construction monitoring and testing as additional services. The costs of these services are not included in our present fee arrangement, but can be obtained from our office. The recommended construction monitoring and testing includes, but is not necessarily limited to, the following:

- Consultation during the design stages of the project.
- Review of the grading and drainage plans to monitor compliance and proper implementation of the recommendations in GNN's Report.
- Observation and quality control testing during site preparation, grading, and placement of engineered fill as required by the local building ordinances.
- Geotechnical engineering consultation as needed during construction.

10.0 LIMITATIONS OF THE GEOTECHNICAL SITE INVESTIGATION REPORT

This GEOTECHNICAL SITE INVESTIGATION REPORT ("Report") was prepared for the exclusive use of the Client. GN Northern, Inc.'s (GNN) findings, conclusions and recommendations in this Report are based on selected points of field exploration, laboratory testing, and GNN's understanding of the proposed project at the time the Report is prepared. Furthermore, GNN's findings and recommendations are based on the assumption that soil, rock and/or groundwater conditions do not vary significantly from those found at specific exploratory locations. Variations in soil, bedrock and/or groundwater conditions could exist between and beyond the exploration points. The nature and extent of these variations may not become evident until during or after construction. Variations in soil, bedrock and groundwater may require additional studies, consultation, and revisions to GNN's recommendations in the Report.

In many cases the scope of geotechnical exploration and the test locations are selected by others without consultation from the geotechnical engineer/consultant. GNN assumes no responsibility and, by preparing this Report, does not impliedly or expressly validate the scope of exploration and the test locations selected by others.

This Report's findings are valid as of the issued date of this Report. However, changes in conditions of the subject property or adjoining properties can occur due to passage of time, natural processes, or works of man. In addition, applicable building standards/codes may change over time. Accordingly, findings, conclusions, and recommendations of this Report may be invalidated, wholly or partially, by changes outside of GNN's control. Provided that the site conditions are not disturbed or altered after the planned grading is completed, the report will be valid for a period of **3 to 5 years** from the issued date of the Report.

In the event that any changes in the nature, design, or location of structures are planned, the findings, conclusions and recommendations contained in this Report shall not be considered valid unless the changes are reviewed by GNN and the findings, conclusions, and recommendations of this Report are modified or verified in writing.

This Report is issued with the understanding that the owner or the owner's representative has the responsibility to bring the findings, conclusions, and recommendations contained herein to the attention of the architect and design professional(s) for the project so that they are incorporated

into the plans and construction specifications, and any follow-up addendum for the project. The owner or the owner's representative also has the responsibility to verify that the general contractor and all subcontractors follow such recommendations during construction. It is further understood that the owner or the owner's representative is responsible for submittal of this Report to the appropriate governing agencies. The foregoing notwithstanding, no party other than the Client shall have any right to rely on this Report and GNN shall have no liability to any third party who claims injury due to reliance upon this Report, which is prepared exclusively for Client's use and reliance.

GNN has provided geotechnical services in accordance with generally accepted geotechnical engineering practices in this locality at this time. GNN expressly disclaims all warranties and guarantees, express or implied.

Client shall provide GNN an opportunity to review the final design and specifications so that earthwork, drainage and foundation recommendations may be properly interpreted and implemented in the design and specifications. If GNN is not accorded the review opportunity, GNN shall have no responsibility for misinterpretation of GNN's recommendations.

APPENDICES

Appendix I

Vicinity Map (Figure 1)

Site Exploration Map (Figure 2)

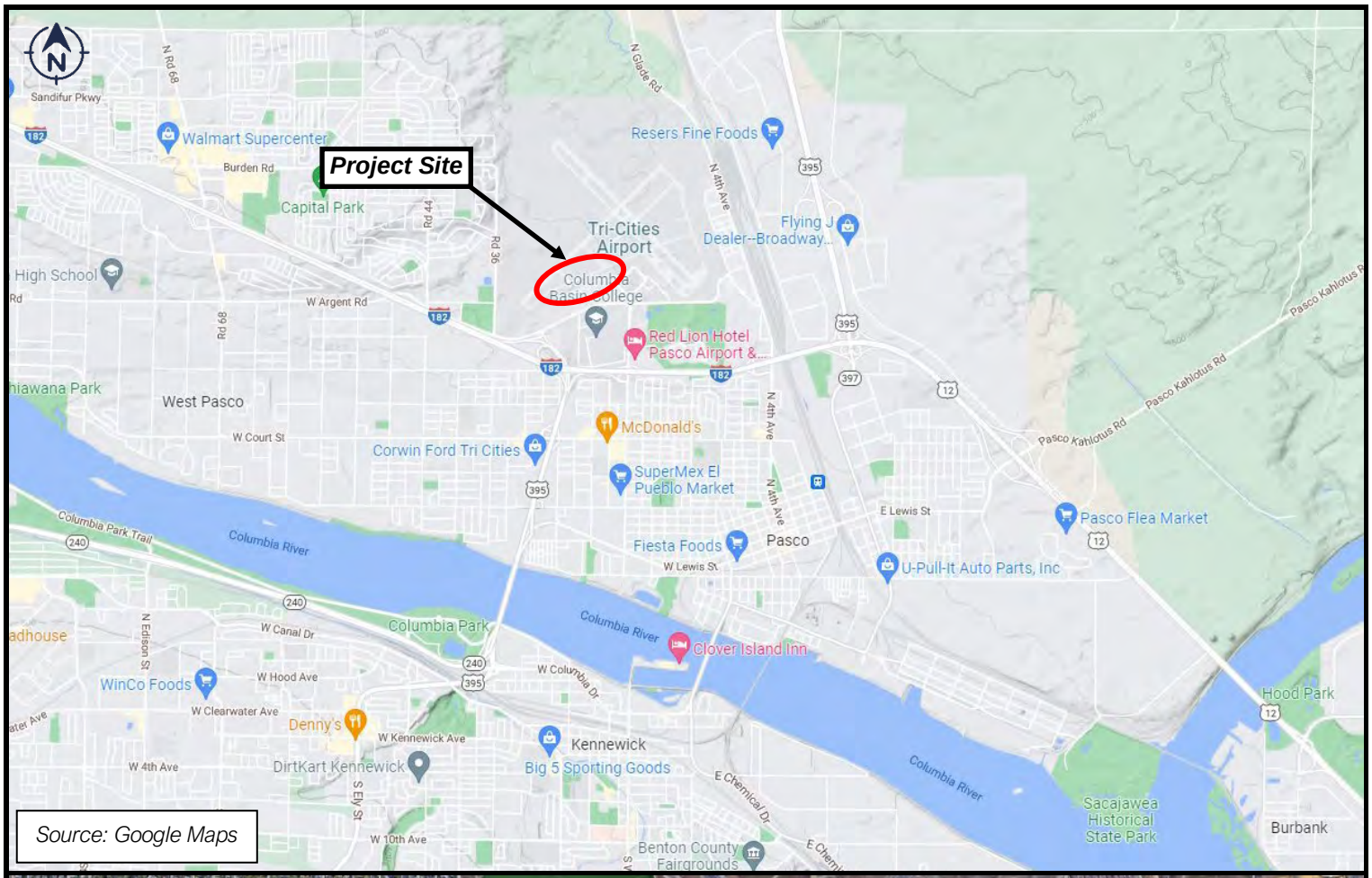
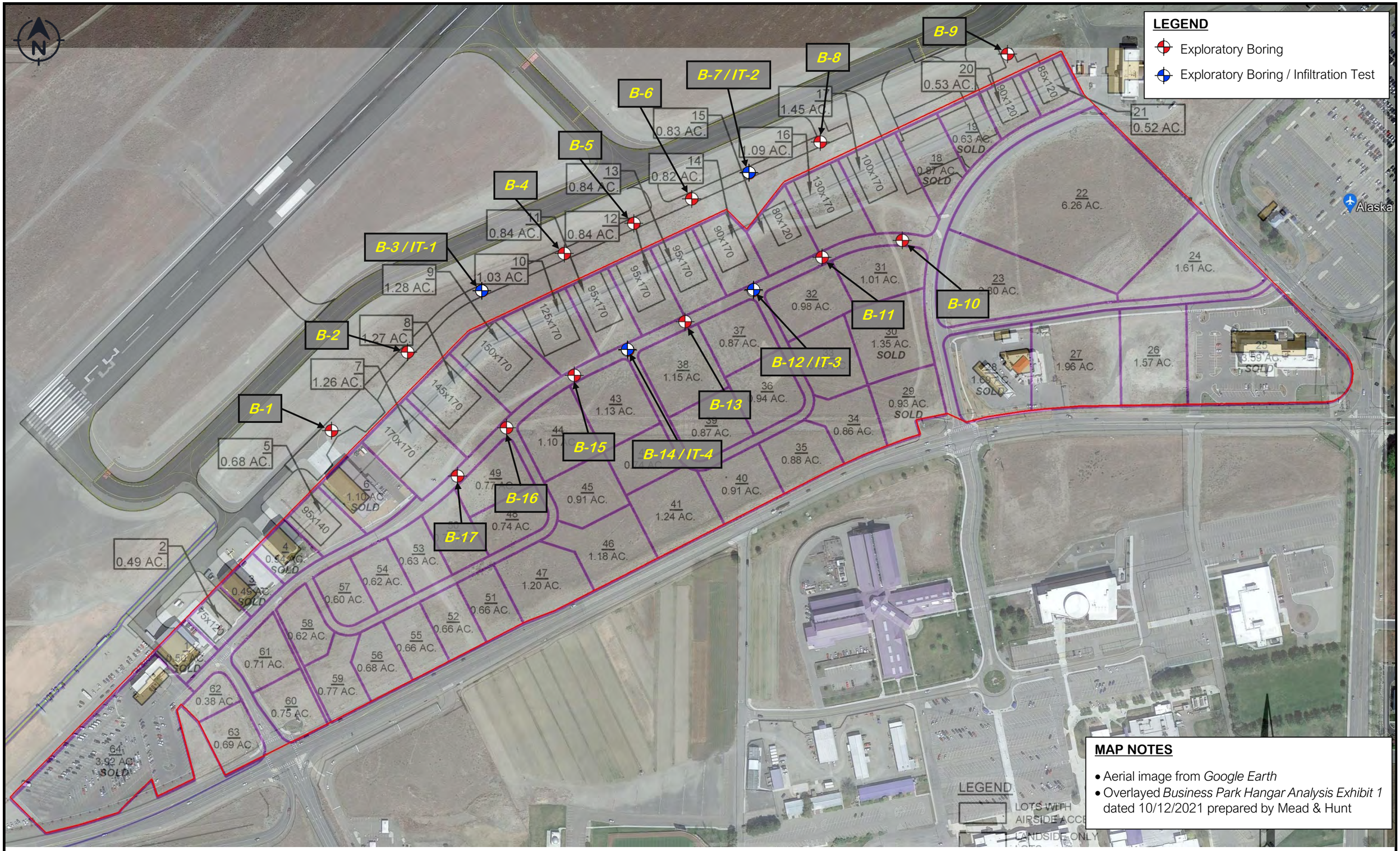


FIGURE 1: VICINITY MAP

PROJECT NO. 222-1506



MAP NOTES

- Aerial image from *Google Earth*
- Overlayed *Business Park Hangar Analysis Exhibit 1* dated 10/12/2021 prepared by Mead & Hunt

FIGURE 2: SITE EXPLORATION MAP

PROJECT NO. 222-1506

Appendix II

*Exploratory **Boring** Logs*

Key Chart (for Soil Classification)

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-1

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 401 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.255913, -119.129812
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray, fine to medium grained, moist, medium dense to dense, trace to some gravel, possible cobbles
2.5	SPT	8-14-17 (31)	MC = 8%			
4.5						396.5
5.0	SPT	5-7-7 (14)		SP		POORLY GRADED SAND, (SP) dark gray to black, fine to medium grained, moist, medium dense
7.5	SPT	4-7-8 (15)				
10.0	SPT	4-6-8 (14)	MC = 3% Fines = 1%			trace gravel
11.5						389.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-2

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 396 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.256600, -119.128850
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP		POORLY GRADED SAND, (SP) gray brown, fine to medium grained, damp to moist, medium dense, trace coarse grained sand
2.5	SPT	6-5-7 (12)				
4.5						391.5
5.0	SPT	6-7-10 (17)		SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine grained, damp, medium dense
7.0						389.0
7.5	SPT	8-8-11 (19)	MC = 3%	SP		POORLY GRADED SAND, (SP) dark gray, fine to medium grained, damp, medium dense
10.0	SPT	12-12-13 (25)				
11.5						384.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-3 / IT-1

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 401 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.257137, -119.127910
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray brown, fine to medium grained, damp, medium dense
2.5	SPT	10-13-10 (23)				trace gravel
						4.5 396.5
5.0	SPT	7-7-6 (13)	MC = 7% Fines = 3%	SP		POORLY GRADED SAND, (SP) gray brown, medium grained, damp, medium dense
7.5	SPT	6-7-5 (12)				
10.0	SPT	4-6-8 (14)				
						11.5 389.5

- Infiltration test performed at ~5' BGS
- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-4

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 402 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.257464, -119.126866
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine grained, moist, medium dense, interbedded with Silty Sand (SM)
2.5	SPT	10-10-10 (20)				
5.0	SPT	7-8-11 (19)	MC = 5%			
7.5	SPT	7-8-9 (17)				
10.0	SPT	7-7-5 (12)				
11.5						390.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-5

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 401 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.257728, -119.125987
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, damp, medium dense, interbedded with Silty Sand (SM)
2.5	SPT	11-14-13 (27)	MC = 6%			
5.0	SPT	11-14-14 (28)				some Silty Sand (SM)
7.5	SPT	11-16-16 (32)				
9.5						391.5
10.0	SPT	14-16-19 (35)		SM		SILTY SAND, (SM) brown, fine to medium grained, damp to moist, dense, interbedded with Silty Sand (SM)
11.5						389.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-6

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 400 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.257942, -119.125254
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray to brown, fine to medium grained, moist, medium dense
2.5	SPT	8-8-9 (17)	MC = 7%			trace gravel
5.0	SPT	8-10-10 (20)				
7.5	SPT	10-10-10 (20)				
10.0	SPT	8-10-9 (19)	MC = 5%			
11.5						388.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-7 / IT-2

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 399 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.258169, -119.124528
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, damp to moist, medium dense
2.5	SPT	4-7-9 (16)				trace gravel
4.5						394.5
5.0	SPT	9-11-11 (22)	MC = 6% Fines = 17%	SM		SILTY SAND, (SM) gray brown, fine to medium grained, damp, medium dense
7.5	SPT	11-11-11 (22)				
10.0	SPT	7-8-9 (17)				
11.5						387.5

- Infiltration test performed at ~5' BGS
- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-8

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 398 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.258440, -119.123628
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray, fine grained, damp to moist, medium dense
2.5	SPT	9-10-10 (20)				
5.0	SPT	10-10-12 (22)				
7.5	SPT	7-7-8 (15)				
7.0						391.0
				SP		POORLY GRADED SAND, (SP) gray brown, medium grained, damp, medium dense
10.0	SPT	11-16-18 (34)	MC = 3%			dense
11.5						386.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

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722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-9

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 399 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.259209, -119.121258
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0	BULK		MC = 7% Fines = 15% DD = 113.2 pcf	SM		SILTY SAND, (SM) light brown, fine to medium grained, damp, medium dense
2.5	SPT	4-7-7 (14)				
4.5						394.5
5.0	SPT	4-5-6 (11)		SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, damp, medium dense
7.0						392.0
7.5	SPT	7-6-6 (12)	MC = 3% Fines = 1%	SP		POORLY GRADED SAND, (SP) black to brown, medium grained, damp, medium dense
10.0	SPT	3-3-4 (7)				loose
11.5						387.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

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Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-10

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 410 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.257579, -119.122589
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray brown, fine grained, damp to moist, medium dense
2.5	SPT	5-7-9 (16)				
4.5						405.5
5.0	SPT	4-3-4 (7)	MC = 2% Fines = 76%	ML		SILT WITH SAND, (ML) tan, dry to damp, loose
7.0						403.0
7.5	SPT	3-4-6 (10)		SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray brown, fine grained, dry, loose to medium dense
9.5						400.5
10.0	SPT	5-5-8 (13)	MC = 3%	SP		POORLY GRADED SAND, (SP) gray, fine grained, dry, medium dense
11.5						398.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

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722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-11

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 408 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.257430, -119.123604
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) brown, fine to medium grained, damp, loose	
2.5	SPT	3-4-4 (8)					
5.0	SPT	4-5-6 (11)	MC = 3%			light gray-brown, medium dense	
7.5	SPT	4-6-7 (13)		SP		POORLY GRADED SAND, (SP) gray brown, fine to medium grained, dry, medium dense	
10.0	SPT	6-11-14 (25)		SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) light gray brown, fine to medium grained, dry, medium dense	
					7.0		401.0
					9.5		398.5
					11.5		396.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
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Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-12 / IT-3

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 403 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.257139, -119.124474
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray brown, fine to medium grained, damp, medium dense	
2.5	SPT	4-5-8 (13)					
5.0							398.0
	SPT	7-9-10 (19)	MC = 7% Fines = 13%	SM		SILTY SAND, (SM) gray brown, fine to medium grained, dry, medium dense	
7.5							396.0
	SPT	8-50/3"		SP		POORLY GRADED SAND, (SP) dark gray, fine to medium grained, dry, medium dense, very dense, with cobbles	
10.0	SPT	11-15-14 (29)					
							391.5

- Infiltration test performed at ~5' BGS
- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-13

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 394 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.256867, -119.125339
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SM		SILTY SAND, (SM) gray brown, fine grained, damp, medium dense, some Poorly Graded Sand with Silt (SP-SM)
2.5	SPT	4-6-7 (13)	MC = 8%			
4.5						389.5
5.0	SPT	5-4-3 (7)		SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray brown, fine to medium grained, damp, loose
7.0						trace gravel 387.0
7.5	SPT	4-5-4 (9)		SP		POORLY GRADED SAND, (SP) gray brown, fine to medium grained, dry, loose
10.0	SPT	4-6-8 (14)				medium dense
11.5						382.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

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722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-14 / IT-4

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 395 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.256618, -119.126064
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SM		SILTY SAND, (SM) gray brown, fine grained, moist, medium dense
2.5	SPT	10-10-9 (19)				
5.0						390.0
	SPT	7-8-7 (15)	MC = 6% Fines = 6%	SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray brown, fine to medium grained, damp, medium dense
7.5	SPT	5-7-9 (16)				
9.5						385.5
10.0	SPT	4-5-6 (11)		SP		POORLY GRADED SAND, (SP) gray brown, fine to medium grained, damp, medium dense
11.5						383.5

- Infiltration test performed at ~5' BGS
- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

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722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-15

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 401 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.256398, -119.126741
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) gray brown, fine grained, damp to moist, loose to medium dense
2.5	SPT	3-4-6 (10)	MC = 5%			
5.0	SPT	4-6-12 (18)				medium dense
7.5	SPT	8-8-8 (16)				
10.0	SPT	7-8-8 (16)				
11.5						389.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-16

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 398 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.255938, -119.127598
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0	BULK		MC = 7% Fines = 19% DD = 127.9 pcf	SM		SILTY SAND, (SM) gray brown, fine to medium grained, damp, medium dense
2.5	SPT	5-6-7 (13)	MC = 4%			
4.5						393.5
5.0	SPT	4-6-15 (21)		SM		SILTY SAND, (SM) light brown, fine to medium grained, dry, medium dense
7.0						391.0
7.5	SPT	4-5-4 (9)		SP-SM		POORLY GRADED SAND WITH SILT, (SP-SM) light gray brown, fine to medium grained, dry, loose
10.0	SPT	4-4-4 (8)				
11.5						386.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

BORING NUMBER B-17

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA
DATE STARTED 3/7/22 **COMPLETED** 3/7/22
GROUND ELEVATION 397 ft **HOLE SIZE** 6 inches
DRILLING CONTRACTOR Geowest Drilling Inc
GROUND WATER LEVELS:
DRILLING METHOD Crux G2400 Trailer-Mounted Drill Rig
AT TIME OF DRILLING ---
LOGGED BY KH/MB/AC **CHECKED BY** IM
AT END OF DRILLING ---
NOTES Approx. GPS Coords.: 46.255516, -119.128219
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	TESTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				SM		SILTY SAND, (SM) gray brown, fine grained, damp to moist, loose, with Poorly Graded Sand with Silt (SP-SM)
2.5	SPT	5-5-5 (10)	MC = 5% Fines = 12%			
5.0	SPT	4-4-5 (9)				
7.5	SPT	4-4-4 (8)				
9.5						387.5
10.0	SPT	4-5-5 (10)		SP		POORLY GRADED SAND, (SP) dark gray, fine to medium grained, damp, loose to medium dense
11.5						385.5

- Groundwater not encountered at time of drilling
- Referenced elevations are approximate and based on Google Earth topography

Bottom of borehole at 11.5 feet.

Northern, Inc.
Kennewick, Yakima, Spokane, Hermiston (OR)

KEY CHART

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

COARSE-GRAINED SOILS			FINE-GRAINED SOILS		
DENSITY	**N (BLOWS/FT)**	**FIELD TEST**	**CONSISTENCY**	**N (BLOWS/FT)**	**FIELD TEST**
Very Loose	0 – 4	Easily penetrated with ½-inch reinforcing rod pushed by hand	Very Soft	0 – 2	Easily penetrated several inches by thumb
Loose	4 – 10	Difficult to penetrate with ½-inch reinforcing rod pushed by hand	Soft	2 – 4	Easily penetrated one inch by thumb
Medium -Dense	10 – 30	Easily penetrated with ½-inch rod driven with a 5-lb hammer	Medium-Stiff	4 – 8	Penetrated over ½-inch by thumb with moderate effort
Dense	30 – 50	Difficult to penetrate with ½-inch rod driven with a 5-lb hammer	Stiff	8 – 15	Indented about ½-inch by thumb but penetrated with great effort
Very Dense	> 50	penetrated only a few inches with ½-inch rod driven with a 5-lb hammer	Very Stiff	15 – 30	Readily indented by thumb
			Hard	> 30	Indented with difficulty by thumbnail

USCS SOIL CLASSIFICATION

MAJOR DIVISIONS				GROUP DESCRIPTION
Coarse-Grained Soils <50% passes #200 sieve	**Gravel** and **Gravelly Soils** <50% coarse fraction passes #4 sieve	**Gravel** (with little or no fines)	GW	Well-graded **Gravel**
			GP	Poorly Graded **Gravel**
		Gravel (with >12% fines)	GM	Silty **Gravel**
			GC	Clayey **Gravel**
	Sand and **Sandy Soils** >50% coarse fraction passes #4 sieve	**Sand** (with little or no fines)	SW	Well-graded **Sand**
			SP	Poorly graded **Sand**
		Sand (with >12% fines)	SM	Silty **Sand**
			SC	Clayey **Sand**
Fine-Grained Soils >50% passes #200 sieve	**Silt** and **Clay** Liquid Limit < 50		ML	**Silt**
			CL	Lean **Clay**
			OL	Organic **Silt** and C**lay** (low plasticity)
	Silt and **Clay** Liquid Limit > 50		MH	Inorganic **Silt**
			CH	Inorganic **Clay**
			OH	Organic **Clay** and **Silt** (med. to high plasticity)
Highly Organic Soils			PT	**Peat**
				Top Soil

LOG SYMBOLS

	2S	2" OD Split Spoon (SPT)
	3S	3" OD Split Spoon
	NS	Non-Standard Split Spoon
	ST	Shelby Tube
	CR	Core Run
	BG	Bag Sample
	TV	Torvane Reading
	PP	Penetrometer Reading
	NR	No Recovery
	GW	Groundwater Table

MODIFIERS

DESCRIPTION	RANGE
Trace	<5%
Little	5% – 12%
Some	>12%

MOISTURE CONTENT

DESCRIPTION	FIELD OBSERVATION
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but not visible water
Wet	Visible free water

SOIL CLASSIFICATION INCLUDES

1. Group Name
2. Group Symbol
3. Color
4. Moisture content
5. Density / consistency
6. Cementation
7. Particle size (if applicable)
8. Odor (if present)
9. Comments

MAJOR DIVISIONS WITH GRAIN SIZE

SIEVE SIZE						
12"	3"	3/4"	4	10	40	200
GRAIN SIZE (INCHES)						
12	3	0.75	0.19	0.079	0.0171	0.0029

Boulders	Cobbles	Gravel		Sand			Silt and Clay
		Coarse	Fine	Coarse	Medium	Fine	

Conditions shown on boring and testpit logs represent our observations at the time and location of the fieldwork, modifications based on lab test, analysis, and geological and engineering judgment. These conditions may not exist at other times and locations, even in close proximity thereof. This information was gathered as part of our investigation, and we are not responsible for any use or interpretation of the information by others.

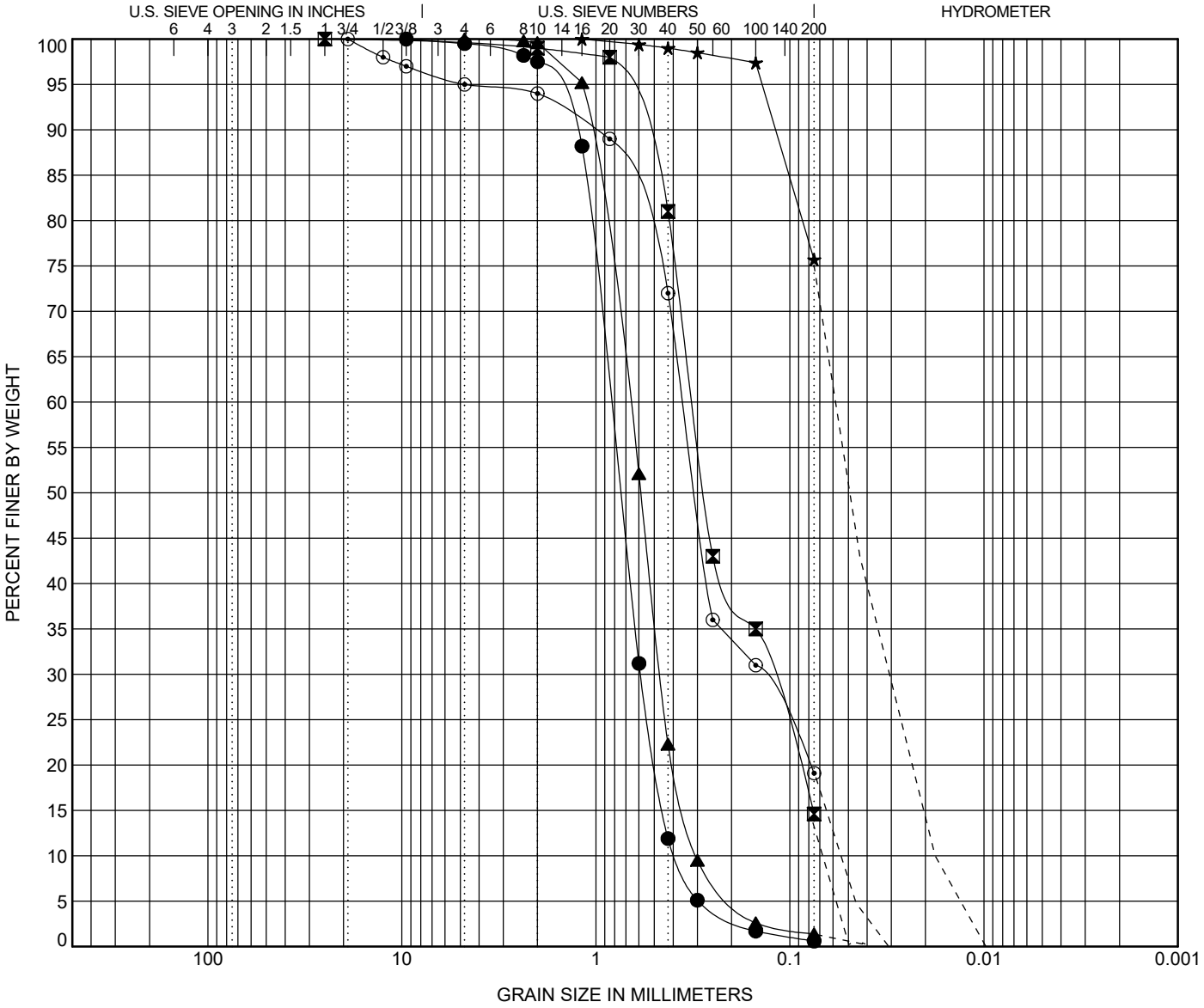
Appendix III
Laboratory Testing Results

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

GRAIN SIZE DISTRIBUTION

CLIENT Mead & Hunt **PROJECT NAME** Airside and Landside Developments

PROJECT NUMBER 222-1506 **PROJECT LOCATION** PSC Business Park, Tri-Cities Airport, Pasco, WA



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	B-1	10.0	POORLY GRADED SAND (SP)			NP	1.06	2.19
⊠	B-9	0.0	SILTY SAND (SM)					
▲	B-9	7.5	POORLY GRADED SAND (SP)				1.05	2.23
★	B-10	5.0	SILT WITH SAND (ML)			NP		
⊙	B-16	0.0	SILTY SAND (SM)					

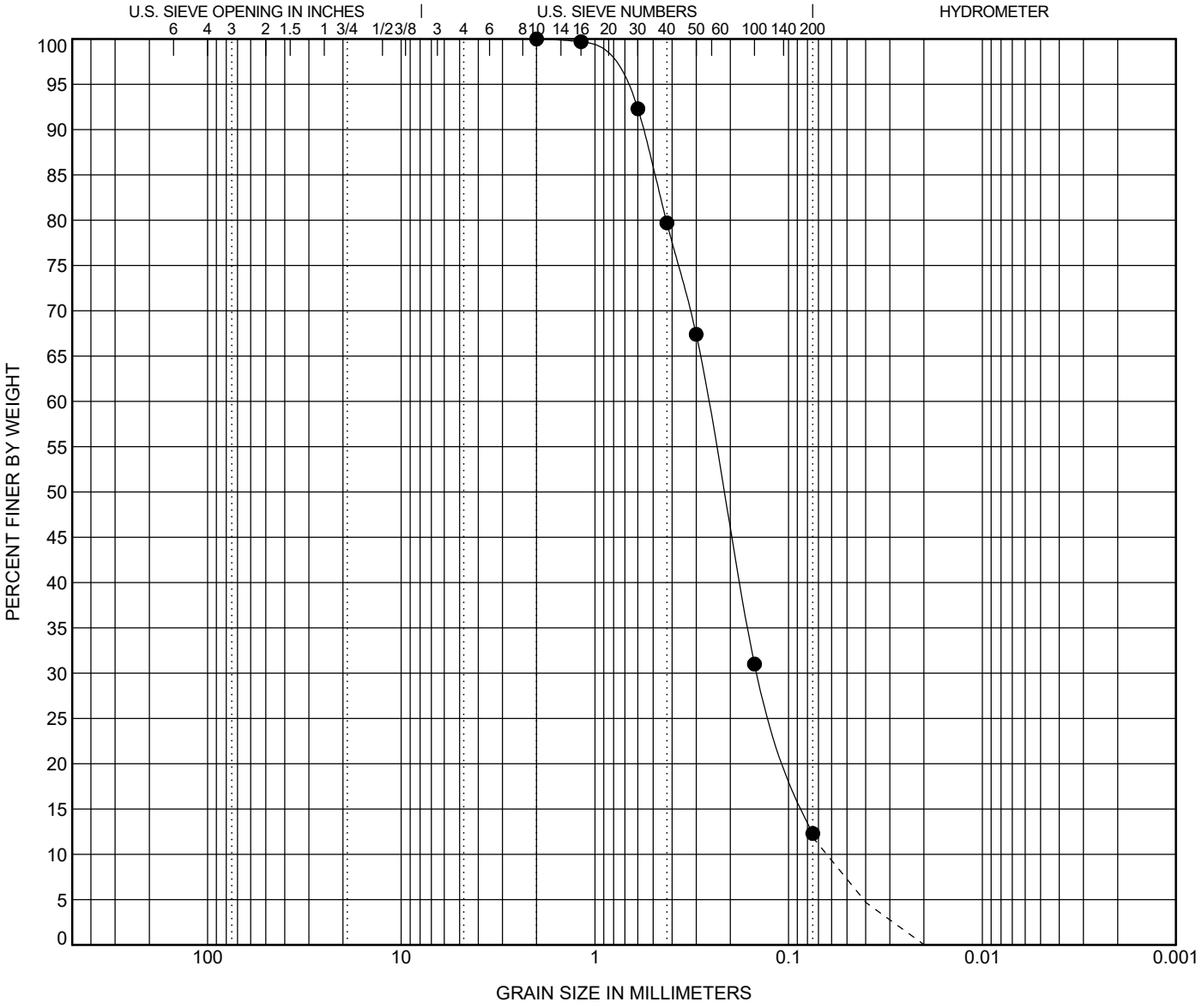
	BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B-1	10.0	9.5	0.844	0.587	0.386	0.5	98.9	0.6	
⊠	B-9	0.0	25	0.317	0.127		0.7	84.7	14.6	
▲	B-9	7.5	4.75	0.679	0.465	0.304	0.0	98.6	1.4	
★	B-10	5.0	1.18				0.0	24.3	75.7	
⊙	B-16	0.0	19	0.356	0.142		5.0	75.9	19.1	

GN Northern, Inc.
722 N. 16th Avenue Suite 31
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

GRAIN SIZE DISTRIBUTION

CLIENT Mead & Hunt **PROJECT NAME** Airside and Landside Developments

PROJECT NUMBER 222-1506 **PROJECT LOCATION** PSC Business Park, Tri-Cities Airport, Pasco, WA



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	Classification	LL	PL	PI	Cc	Cu
●	**B-17**	**2.5**	**SILTY SAND (SM)**			**NP**	**1.16**	**3.78**

	BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**B-17**	**2.5**	**2**	**0.261**	**0.145**		**0.0**	**87.7**	**12.3**	

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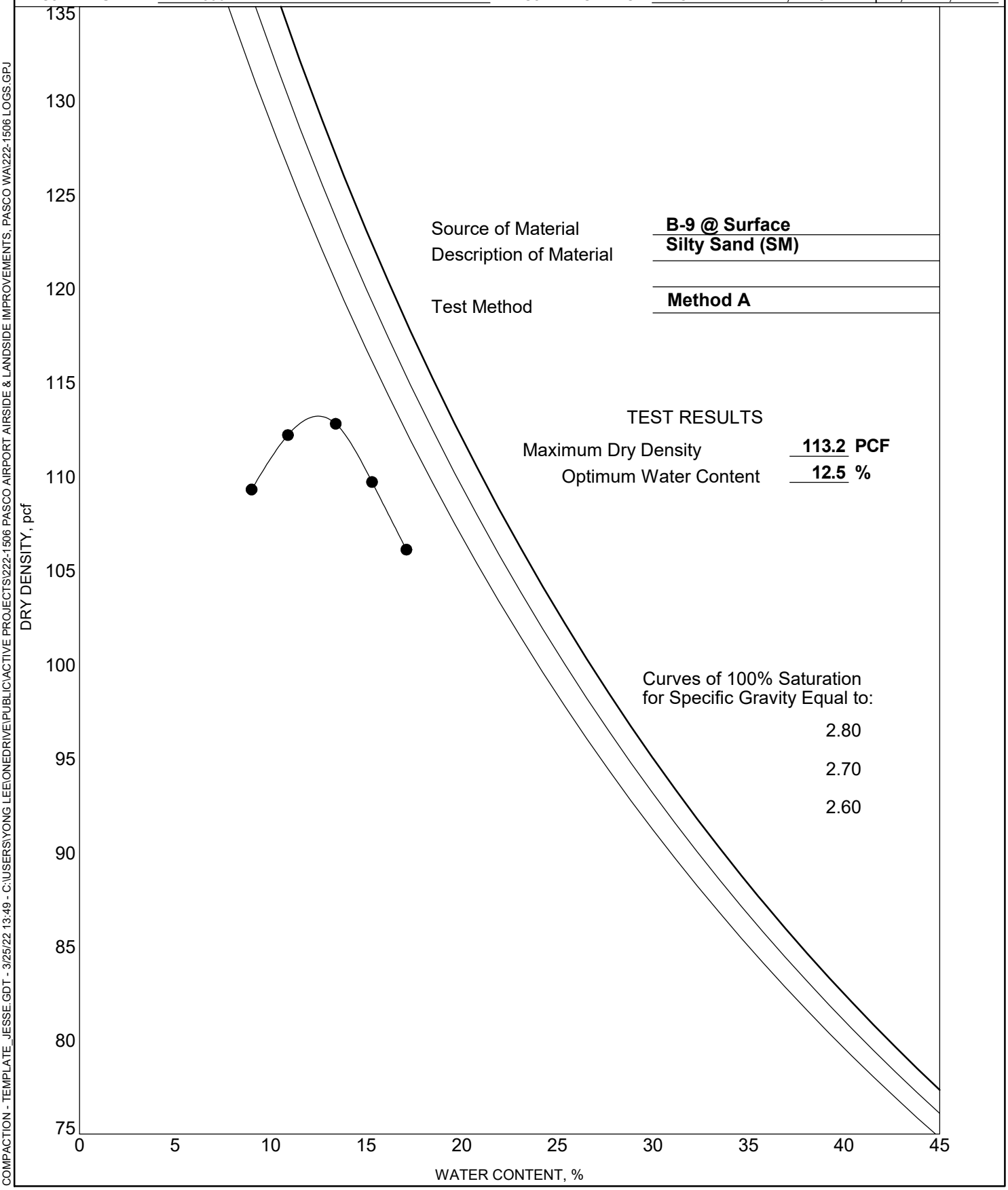
Yakima, Washington 98902
Telephone: (509) 248-9798
Fax: (509) 248-4220

MOISTURE-DENSITY RELATIONSHIP

CLIENT Mead & Hunt
PROJECT NAME Airside and Landside Developments
PROJECT NUMBER 222-1506
PROJECT LOCATION PSC Business Park, Tri-Cities Airport, Pasco, WA



GN Northern, Inc.
722 N. 16th Avenue Suite 31
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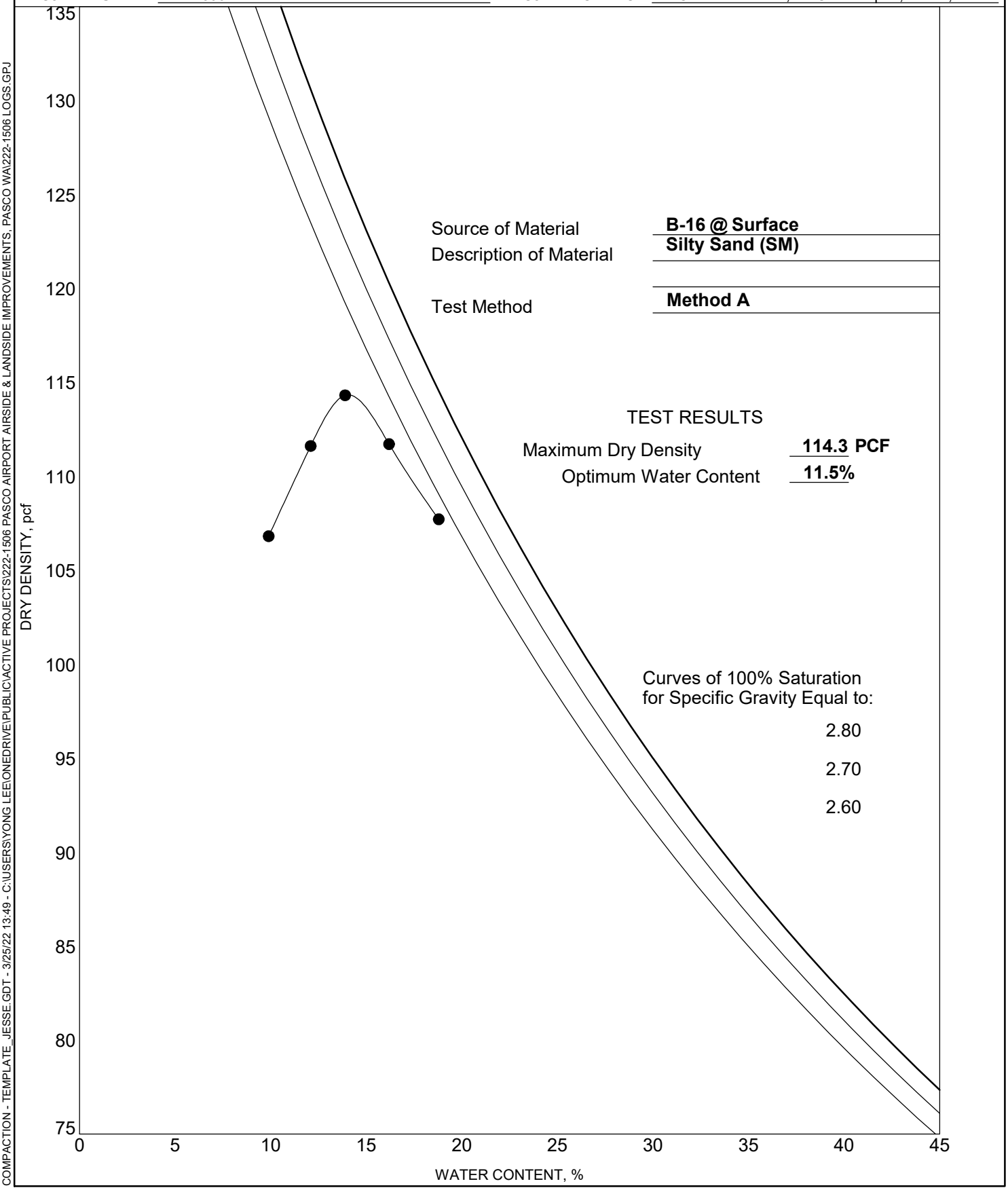
Telephone: (509) 248-9798
Fax: (509) 248-4220

MOISTURE-DENSITY RELATIONSHIP

CLIENT Mead & Hunt **PROJECT NAME** Airside and Landside Developments

PROJECT NUMBER 222-1506 **PROJECT LOCATION** PSC Business Park, Tri-Cities Airport, Pasco, WA



California Bearing Ratio (ASTM D1883)

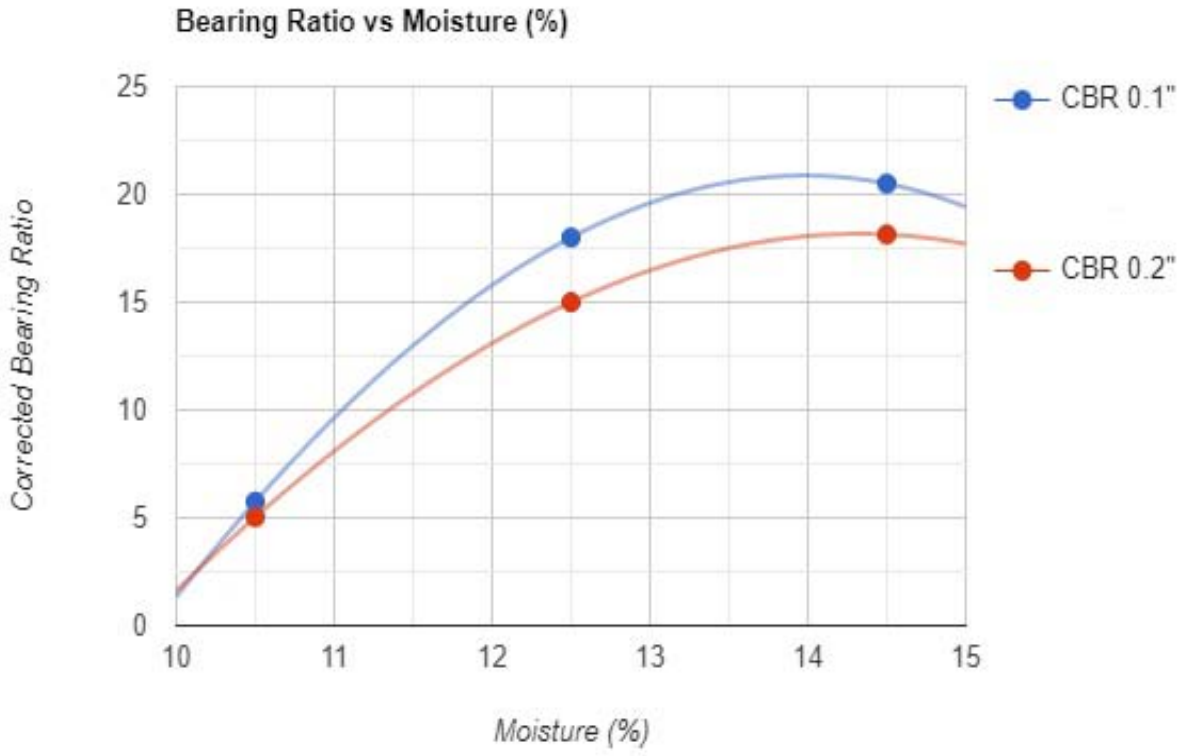
Client: Mead & Hunt	Sample Location: **B-9, upper 12" (Airside)**
Project: PSC Business Park-Airside Landside Improv.	Sample No. 30490
GNN Job No. 222-1506	Sample Description: Silty Sand (SM)
Date Sampled: 3/7/22	Sampled by: KH
Date Tested: 3/15/22	Tested by: GV

Test Parameters	
Displacement (in/min): 0.05	Displacement Correction: Yes
Probe Area (in^2): 3	Surcharge Load (lbs): 10
Sample Type: Remolded	Sample Condition: Soaked
Max. Dry Density (pcf) ASTM D1557: 113.2	Lab Optimum Moisture (%): 12.5

Moisture and Density Data			
Sample Moisture Limits	Minus 2% of optimum	Optimum	Plus 2% of optimum
Expansion (%)	0.01	0.02	0.03
Before Molding Moisture Content (before test)			
Moisture (%)	10.4	12.5	14.5
After Molding Moisture Content (before test)			
Moisture (%)	10.5	12.5	14.5
Final Moisture Data (after test)			
Moisture (%)	19.8	21.9	19.9
Density Data			
Initial Wet Density (pcf)	112.3	114.5	116.0
Initial Dry Density (pcf)	102.0	102.5	101.9
Final Wet Density (pcf)	121.2	122.6	121.0
Final Dry Density (pcf)	101.7	101.5	101.9

Penetration Data			
Sample Moisture Limits	Minus 2% of optimum	Optimum	Plus 2% of optimum
Correction	0.014	0.000	0.000
Displacement (in)	Stress (psi)	Stress (psi)	Stress (psi)
0.000	0.0	0.0	0.0
0.025	18.1	36.8	64.2
0.050	29.8	74.5	123.3
0.075	44.3	116.2	174.9
0.100	57.4	155.5	212.0
0.125	68.5	192.2	238.4
0.150	76.8	226.8	263.4
0.175	88.1	255.4	259.5
0.200	104.1	274.8	285.7
0.300	125.2	315.0	291.4

Bearing Ratio			
Location: **B-9, upper 12" Airside**	Minus 2% of optimum	Optimum	Plus 2% of optimum
Bearing Ratio (0.10 in penetration)	5.75	18.0	20.5
Bearing Ratio (0.20 in penetration)	5.03	15.0	18.14



Northern, Inc.

California Bearing Ratio (ASTM D1883)

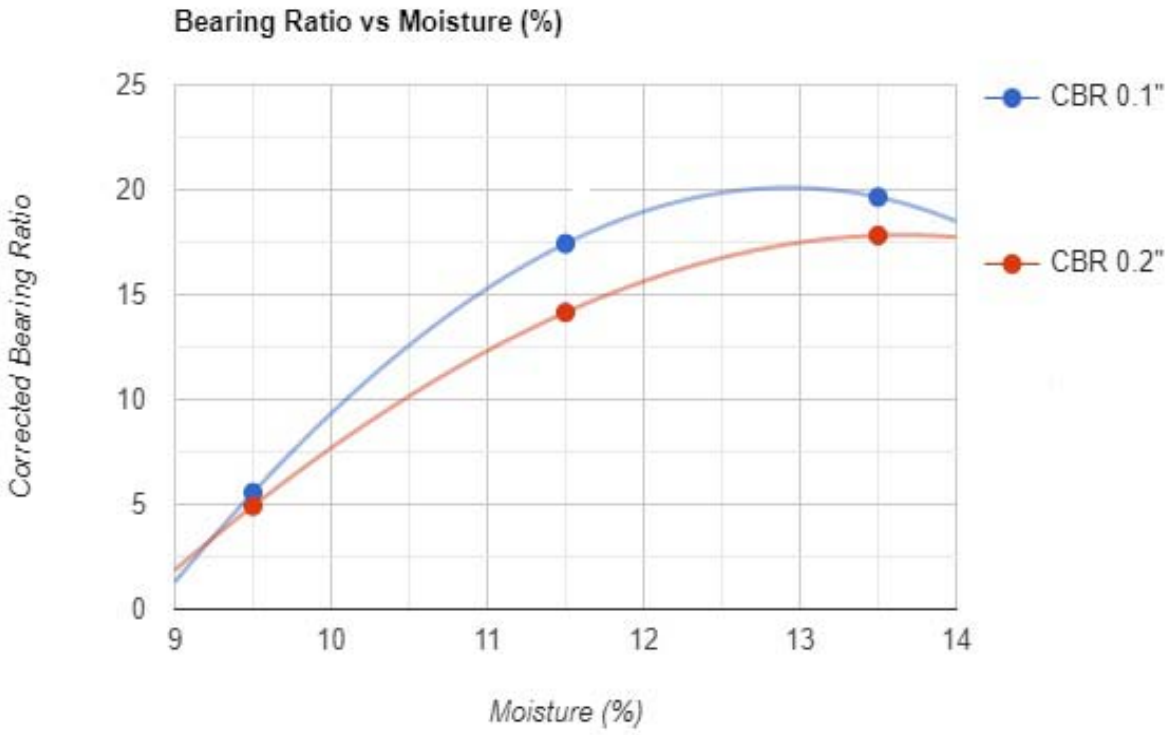
Client: Mead & Hunt	Sample Location: **B-16, upper 12" (Landside)**
Project: PSC Business Park-Airside Landside Improv.	Sample No. 30491
GNN Job No. 222-1506	Sample Description: Silty Sand (SM)
Date Sampled: 3/7/22	Sampled by: KH
Date Tested: 3/15/22	Tested by: GV

Test Parameters	
Displacement (in/min): 0.05	Displacement Correction: Yes
Probe Area (in^2): 3	Surcharge Load (lbs): 10
Sample Type: Remolded	Sample Condition: Soaked
Max. Dry Density (pcf) ASTM D1557: 114.3	Lab Optimum Moisture (%): 11.5

Moisture and Density Data			
Sample Moisture Limits	Minus 2% of optimum	Optimum	Plus 2% of optimum
Expansion (%)	0.01	0.02	0.02
Before Molding Moisture Content (before test)			
Moisture (%)	9.4	11.4	13.5
After Molding Moisture Content (before test)			
Moisture (%)	9.5	11.5	13.5
Final Moisture Data (after test)			
Moisture (%)	21.3	23.7	25.4
Density Data			
Initial Wet Density (pcf)	113.3	115.6	117.7
Initial Dry Density (pcf)	104.1	104.5	104.3
Final Wet Density (pcf)	124.8	125.6	125.3
Final Dry Density (pcf)	103.7	102.2	101.2

Penetration Data			
Sample Moisture Limits	Minus 2% of optimum	Optimum	Plus 2% of optimum
Correction	0.012	0.000	0.000
Displacement (in)	Stress (psi)	Stress (psi)	Stress (psi)
0.000	0.0	0.0	0.0
0.025	17.8	34.3	63.5
0.050	28.4	72.8	121.1
0.075	43.6	114.8	171.3
0.100	56.8	152.9	210.8
0.125	67.7	190.6	236.7
0.150	75.2	225.1	261.2
0.175	86.5	253.5	256.5
0.200	102.4	272.6	283.7
0.300	123.6	311.8	288.3

Bearing Ratio			
Location: **B-16, upper 12” Landside**	Minus 2% of optimum	Optimum	Plus 2% of optimum
Bearing Ratio (0.10 in penetration)	5.56	17.43	19.65
Bearing Ratio (0.20 in penetration)	4.92	14.15	17.82



Northwest Agricultural Consultants

2545 W Falls Avenue
Kennewick, WA 99336
509.783.7450
www.nwag.com
lab@nwag.com

PAP-Accredited
NAPT

GN NORTHERN INC
722 N. 16TH AVE #31
YAKIMA, WA 98902

Report: 58225-1-1
Date: March 7, 2022
Project No: 222-1506
Project Name: Airside and Landside Developments

Sample ID	Cation Exchange Capacity
B3/IT-1 @ 5.0’	7.0 meq/100g
B7/IT-2 @ 5.0’	8.1 meq/100g
B12/IT-3 @ 5.0’	14.9 meq/100g
B14/IT-4 @ 5.0’	6.0 meq/100g
Method	**EPA 9081**

Appendix IV
Site & Exploration Photographs

View of site conditions looking NE from Boring B-1

View of site conditions looking south from Boring B-1

View of site conditions looking SW from Boring B-1

View of Boring B-2 looking south

View of Boring B-6 looking NW

View of sample recovered from Boring B-7

PLATE 1: SITE & EXPLORATION PHOTOGRAPHS **PROJECT NO. 222-1506**

View of Boring B-9 looking north

View of site conditions looking SW from Boring B-11

View of site conditions looking south from Boring B-11

View of site conditions looking NE from Boring B-11

View of Boring B-11 looking NW

View of sample recovered from Boring B-11

PLATE 2: SITE & EXPLORATION PHOTOGRAPHS **PROJECT NO. 222-1506**

View of Boring B-12 looking NW

View of site conditions looking south from Boring B-12

View of infiltration test equipment at Boring B-14

View of infiltration test at Boring B-14 / IT-4

View of Boring B-16 looking south

View of site conditions looking SE from Boring B-16

PLATE 3: SITE & EXPLORATION PHOTOGRAPHS **PROJECT NO. 222-1506**

Appendix V
NRCS Soil Survey

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Franklin County, Washington

PSC Business Park - Airside and Landside Developments, Pasco, WA

March 21, 2022

Custom Soil Resource Report
Soil Map

Map Scale: 1:7,470 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

Franklin County, Washington

89—Quincy loamy fine sand, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2dtt
Elevation: 350 to 1,200 feet
Mean annual precipitation: 6 to 12 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Quincy and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quincy

Setting

Landform: Terraces
Parent material: Mixed eolian sands

Typical profile

H1 - 0 to 4 inches: loamy fine sand
H2 - 4 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R007XY502WA - SANDS 6-10 PZ
Hydric soil rating: No

Minor Components

Sagehill

Percent of map unit: 15 percent
Landform: Dunes, terraces
Hydric soil rating: No

217—Winchester loamy coarse sand, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2dlb
Elevation: 350 to 1,800 feet
Mean annual precipitation: 4 to 12 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 110 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Winchester and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Winchester

Setting

Landform: Terraces
Parent material: Sandy alluvium and eolian sands

Typical profile

H1 - 0 to 15 inches: loamy coarse sand
H2 - 15 to 60 inches: coarse sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R007XY502WA - SANDS 6-10 PZ
Hydric soil rating: No

Minor Components

Burbank

Percent of map unit: 10 percent
Landform: Terraces
Hydric soil rating: No

Appendix VI
Washington Department of Ecology Well Logs

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. [redacted]

Water Right Permit No. _____

(1) OWNER: Name Columbia Basin College Address 2600 N 20th Ave Pasco

(2) LOCATION OF WELL: County Franklin NE ¼ NE ¼ Sec. 24 T. 9 N., R. 29E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☐ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☒

(4) TYPE OF WORK: Owner's number of well (if more than one) #6
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☐ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 4" Drilled 8" inches. Drilled 75 feet. Depth of completed well 75 ft.

(6) CONSTRUCTION DETAILS: Sch 40
Casing installed: 4 " Diam. from +2½ ft. to 59 ft.
Welded ☐ Liner installed ☐ Threaded ☒ " Diam. from 69 ft. to 75 ft.
" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Mono Flex
Type PVC Model No. _____
Diam. 4" Slot size 20 from 59 ft. to 69 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☒ No ☐ Size of gravel 10-20 Colo
Gravel placed from 56 ft. to 75 ft.

Surface seal: Yes ☒ No ☐ To what depth? 56 ft.
Material used in seal Pure Gold
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 59 ft. below top of well Date 5-18-93
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand Black	0	5
Sand Black some 1" Gravel	5	39
Gravel + Sand Black H20 @ 59 feet	39	74
Sand Tan Gravel		

RECEIVED
MAY 27 1993
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 5-17, 19. Completed 5-18, 1993

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NELSON Well Drilling INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 10036 W Argent Pasco
(Signed) Jim Nelson (WELL DRILLER) License No. 361
Contractors Registration No. NELSOWD198C Date 5-20, 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)
(X) Construction
( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

162268

CURRENT Notice of Intent No. W179806
Unique Ecology Well ID Tag No. AKO-702
Water Right Permit No. _____
Property Owner Name JOHN AIROLDI
Well Street Address NKA RD. 56
City PASCO County: FRANKLIN
Location NE 1/4- 1/4 NE 1/4 Sec 24 Twn 9N R 29 (EWM) circle or one WWM
Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. _____

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
[X] New Well [ ] Reconditioned *Method* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 100 ft
Depth of completed well 97 ft

CONSTRUCTION DETAILS
Casing Installed: [X] Welded 6 " Diam from +1½ ft to 97 ft
[ ] Liner installed _____ " Diam. from _____ ft to _____ ft
[ ] Threaded _____ " Diam from _____ ft to _____ ft

Perforations: [ ] Yes [X] No
Type of perforator used _____
SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft

Screens: [ ] Yes [X] No [ ] K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam _____ Slot Size _____ from _____ ft to _____ ft
Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand _____
Materials placed from _____ ft to _____ ft.

Surface Seal: [X] Yes [ ] No To what depth? 18 ft
Materials used in seal BENTONITE
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H P _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft
Static level 60 ft. below top of well Date 12/18/04
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (cap,valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [ ] No If yes, by whom? _____
Yield _____ gal /min with _____ ft drawdown after _____ hrs
Yield _____ gal /min with _____ ft drawdown after _____ hrs
Yield _____ gal./min with _____ ft drawdown after _____ hrs
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal /min with _____ ft drawdown after _____ hrs
Airtest 60 gal /min with stem set at 95 ft for 1 hrs
Artesian flow _____ g p m Date _____
Temperature of water 60 Was a chemical analysis made? [ ] Yes [X] No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
SAND	0	44
DRY SAND & GRAVEL	44	69
3" MINUS GRAVEL/SAND	69	100

RECEIVED
JAN - 4 2005
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Start Date 12/17/04 Completed Date 12/18/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) B.M. VOTH
Driller/Engineer/Trainee Signature _____
Driller or Trainee License No. 2094

Drilling Company FIVE STAR DRILLING
Address 36301 HWY 12
City, State, Zip DAYTON, WA 99328
Contractor's Registration No FIVESD*077WB Date 12/20/04

If trainee, licensed driller's Signature and License no. _____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. [redacted]

Water Right Permit No. _____

(1) OWNER: Name Columbia Basin College Address 2600 N 20th Pasco WA

(2) LOCATION OF WELL: County Franklin NE ¼ NE ¼ Sec. 24 T. 9 N., R. 29E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☐ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☒

(4) TYPE OF WORK: Owner's number of well (if more than one) #5
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 4 (Drilled 8) inches. Drilled 78 feet. Depth of completed well 78 ft.

(6) CONSTRUCTION DETAILS: Sch 40
Casing installed: 4 " Diam. from +2 ft. to 65 ft.
Welded ☐ Liner installed ☐ Threaded ☒ " Diam. from 75 ft. to 78 ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Mono Flex
Type PVC Model No. _____
Diam. 4 Slot size 20 from 65 ft. to 75 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☒ No ☐ Size of gravel 10-20 Colo.
Gravel placed from 62 ft. to 78 ft.

Surface seal: Yes ☒ No ☐ To what depth? 62 ft.
Material used in seal Pure Gold
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 65 ft. below top of well Date 5-14-93
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand Black	0	13
Sand Black some 1" Gravel	13	45
Gravel + Sand Black Silty	45	60
Gravel + Sand Black Water @ 65 feet	60	75
Ringold formation Sand Tan Brown	75	78

RECEIVED
MAY [redacted]
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 5-11 19. Completed 5-14 1993

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Nelson Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 10036 W Argent Pasco

(Signed) _____ (WELL DRILLER) License No. 361

Contractor's Registration No. NELSOWDR*Q Date 5-20 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. [redacted]

Water Right Permit No. _____

(1) OWNER: Name Columbia Basin College Address 2600 N 20th Ave Pasco

(2) LOCATION OF WELL: County Franklin NW ¼ NE ¼ Sec 24 T. 9 N., R. 29E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: ☐ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☒

(4) TYPE OF WORK: Owner's number of well (if more than one) # 7

Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 4" Cdrilled 8" inches. Drilled 78 feet. Depth of completed well 78 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 4 " Diam. from +2½ ft. to 66 ft.
Welded ☐ Liner installed ☐ Threaded ☐ 4 " Diam. from 26 ft. to 78 ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Mono Flex
Type PVC Model No. _____
Diam. 4 Slot size 20 from 66 ft. to 76 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☒ No ☐ Size of gravel 10-20 Colo
Gravel placed from 63 ft. to 78 ft.

Surface seal: Yes ☒ No ☐ To what depth? 63 ft.
Material used in seal Pure Gold
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 66 ft. below top of well Date 5-20
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.))

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand Black	0	14'6"
Gravel + Sand Black	14'6"	15'6"
Sand Black some Gravel	15'6"	43
Gravel + Sand Black	43	78

RECEIVED
MAY 27 1993
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 5-19 19. Completed 5-20 1993

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NELSON Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 10036 W Argent Pasco

(Signed) Jim Nelson (WELL DRILLER) License No. 361

Contractor's Registration No. NELSOWD198CQ Date 5-20 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329- 3

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 41 / 16

Water Right Permit No.

(1) OWNER: Name CBC Address 2000 W Argent Pasco

(2) LOCATION OF WELL: County Franklin NE¼ NE¼ Sec 24 T. 9 N, R. 29 E.W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address)

(3) PROPOSED USE: [ ] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [X] [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) #1 Mondovi

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 4 inches.
Drilled 93 feet Depth of completed well 93 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 4 " Diam. from +2'6" ft. to 80 ft.
Welded [ ] 4 " Diam. from 90 ft. to 93 ft.
Liner installed [ ]
Threaded [X] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [X] No [ ]
Manufacturer's Name Monoflex
Type PVC Model No.
Diam 4 Slot size 20 from 80 ft. to 90 ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes [X] No [ ] Size of gravel 10-20 CCSI
Gravel placed from 77 ft. to 93 ft.

Surface seal: Yes [X] No [ ] To what depth? 77 ft.
Material used in seal Pure gold Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 80 ft. below top of well Date 4-6-90
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand Tan Fine	0	7
Sand Tan Med	7	20
Sand Black H2O@80	20	81
Sand Black fine gravel	81	92
Sand Tan gravel	92	93

RECEIVED
JUN - 2 [redacted]
DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

Work started 5-5 , 19 Completed 5-6 , 19 90

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Nelson Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 10036 W Argent Pasco

(Signed) James Nelson (WELL DRILLER) License No 361

Contractor's Registration No. NELSONWD1986Q Date 5-19 , 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329