GEOTECHNICAL EVALUATION
STIMSON MILL SITE REDEVELOPMENT
3074 W. SELTICE WAY
COEUR D'ALENE, IDAHO
ALLWEST PROJECT NO. 114-094G

May 8, 2014

ALLWEST
Testing & Engineering

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ALLWEST Testing & Engineering

Construction Materials Testing
Geotechnical Engineering
Environmental Consulting

May 8, 2014

Mr. Jeff Dingman
Abundant Land Partners LLC
P.O. Box 471
Genoa, Nevada 89411

RE: Geotechnical Evaluation
Stimson Mill Site Redevelopment
3074 Seltice Way
Coeur d'Alene, Idaho
ALLWEST Project No.: 114-094G

Dear Mr. Dingman,

ALLWEST Testing & Engineering, LLC has completed the authorized geotechnical evaluation for the proposed redevelopment project located at the Stimson Mill Site at the above referenced location in Coeur d'Alene, Idaho. The purpose of this evaluation was to characterize the soil and geologic conditions on the property. The attached report presents the results of the field evaluation and our recommendations to assist with design and construction of the proposed project.

We appreciate the opportunity to work with you on this project. If you have any questions or need additional information, please do not hesitate to call us at (208) 762-4721.

Sincerely,

ALLWEST Testing & Engineering, LLC

Colin Meehan, P.E.
Hayden Area Manager

Shawn Turpin, P.E.
Lewiston Area Manager

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GEOTECHNICAL EVALUATION
STIMSON MILL SITE
3074 W. SELTICE WAY
COEUR D'ALENE, IDAHO

ALLWEST Testing & Engineering, LLC (ALLWEST) has completed the authorized geotechnical evaluation for the northeast portion of the Stimson Mill Site located at 3074 W. Seltice Way in Coeur d'Alene, Idaho. The general location of the project is shown on the Vicinity Map, Figure A-1, in Appendix A of this report. The purpose of the evaluation was to assess the subsurface soil conditions on the property with respect to the proposed construction. This report details the results of the field evaluation and laboratory testing and presents our recommendations to assist the design and construction of the proposed facility.

1.0 SCOPE OF SERVICES

To complete the geotechnical evaluation we accomplished the following scope of services:

1) Reviewed the USDA Natural Resources Conservation Service (Soil Conservation Service) and Idaho Geological Survey geologic mapping information for the project site area. We also reviewed the following documents for the site:

   a) Historical aerial images of the site from 1971, 1975, 1981 and 1998 in Appendix D of this report.

2) Completed a site reconnaissance by walking the property and observing exposed surface conditions including soil, vegetation, erosion and drainage.

3) Performed a field evaluation by drilling three (3) borings and excavating eight (8) test pits within the northeast portion of the site where buried mill waste is present. Disturbed Standard Penetration Test (SPT) samples of the soils encountered in the borings and bulk samples of the soils encountered in the test pits were obtained for observation and laboratory testing. The soils were described and classified and the soil profiles were logged.

4) Performed laboratory tests on select soil samples to assess some of the soil engineering characteristics.

5) Reviewed the results of the field evaluation and laboratory testing with respect to the proposed development.

6) Performed geotechnical analyses and prepared recommendations to assist project planning, design and construction of suitable building sites.

7) Prepared this report.

Our services were provided in general accordance with our proposal P114-046, dated April 1, 2014.

2.0 PROJECT DESCRIPTION

We understand the project includes the redevelopment of the Stimson Mill Site at the above referenced location which includes approximately 38 acres on parcels 50N04W-10-2500 and 50N04W-10-3200. The preliminary plan for the proposed development includes single family residential, multi-family condominiums, commercial lots and park space. This evaluation was limited to the northeast portion of the site with an area of approximately 14 acres which is underlain by mill waste materials and uncontrolled fill. A final grading plan was not available at the time this report was prepared. However, we anticipate excavation and removal of the waste and uncontrolled fill and placement of compaction to proposed final grades to create suitable building sites for future development.

Preliminary conceptual plans indicate a proposed commercial parcel on the western half (approximately 5 acres) of the site and proposed park space and possible baseball/softball stadium located on the eastern half (approximately 9 acres) of the site.

3.0 EVALUATION PROCEDURES

To complete this evaluation, we reviewed soil and geologic literature for the project area. We also reviewed the documents referenced in Section 1.0 of this report. We conducted a field evaluation of the property including a site reconnaissance to assist in planning the field evaluation and provide a general overview of the property. Information obtained from the field evaluation, review of the referenced documents, laboratory testing and geotechnical analysis were utilized to develop recommendations for the geotechnical aspects of the project.

4.0 SITE CONDITIONS

The project is located in the northwest ¼ of Section 10, Township 50 North, Range 4 West of the Boise Meridian. The site was previously used as a lumber mill. The northeast portion of the site contains stockpiles of topsoil, cobbles and other various materials. The site slopes down gently to moderately to the south towards the Spokane River. The site is currently vacant but remnants of previous structures, excavations, railways and other previous site features are present across the site. The site is bordered by Seltice Way to the north, the Spokane River to the south, the Riverstone development to the east and vacant property to the west. Aerial images reviewed for the project site indicate a gravel pit on the east side of the site between

1971 and 1981. The next aerial image available is from 1998 which shows the gravel pit backfilled creating a relatively level site being used for log storage.

4.1 GENERAL GEOLOGIC CONDITIONS

The geologic conditions on the property were mapped on the Geologic Map of the Coeur d'Alene 30 x 60 Minute Quadrangle, Idaho by Lewis, et al, 2002. The mapping indicates the geology is Channel gravel, undivided. The deposit consists of the latest Wisconsin catastrophic flood and outwash gravel and sand deposited in channelways cut into high energy fans and bars of Glacial Lake Missoula flood origin.

The native soils observed in the borings and test pits are generally consistent with the geologic mapping.

4.2 GENERAL SOIL CONDITIONS

The USDA Natural Resources Conservation Service has mapped the soils on and around the property as McGuire-Marble association. The McGuire soils are very deep, excessively drained and formed from glacial outwash materials. The permeability of this soil is moderately rapid and the water erosion hazard is slight. The Marble soils are very deep, excessively drained and formed in wind and water-worked sandy outwash materials. The permeability of this soil is rapid and the water erosion hazard is slight. The run-off is slow. The typical soil profile for both of these soils is very gravelly coarse sand to loamy sand.

The native soils encountered in the borings and test pits are generally more consistent with the geologic mapping than the SCS mapping.

4.3 HYDROGEOLOGIC CONDITIONS

The project site is underlain by the Rathdrum Prairie aquifer. We did not encounter groundwater during our site evaluation. We did not observe surface water on the property. We do not anticipate excavations for the proposed project will encounter groundwater. However, changes in precipitation, irrigation, construction or other factors may impact depth to groundwater and the surface water flow on the property. Well logs in the vicinity of the project report static groundwater depths approximately 100 feet or greater below ground surface.

5.0 SUBSURFACE CONDITIONS

Three (3) borings were drilled and eight (8) test pits were excavated at the site at the approximate locations shown on the Boring and Test Pit Location Map, Figure A-2, in Appendix A of this report. The locations of the borings and test pits were selected based on historical aerial photography and future development planned. The borings were drilled with a truck mounted drill rig owned and operated by Haz-Tech Drilling. The test pits were excavated with a track mounted excavator owned and operated by Alamo Excavating. The soil conditions observed in the borings and test pits were visually described and classified in general accordance with ASTM D 2487 and D

2488 and the subsurface profiles were logged. Disturbed SPT samples and bulk samples were obtained from the borings and test pits.

5.1 SUBSURFACE SOIL CONDITIONS

The subsurface soil profile observed in the borings and test pits generally consisted of varying depths of uncontrolled fill up to approximately 60 feet below the ground surface underlain by natural poorly-graded sand with gravel. Descriptions of the soil types observed follow:

Uncontrolled fill – The uncontrolled fill generally consisted of silty sand and gravel mixed with organics, crushed concrete, cobbles, wood waste. The color, consistency, moisture and depth of the fill varied widely across the northeast portion of the site. Areas of wood waste were encountered which consisted of little to no soil. The presence and consistency of fill is anticipated to vary between boring and test pit locations.

Silty sand with gravel – The silty sand with gravel appeared loose, dry and gray. Cobbles and boulders were observed up to 36 inches in diameter. The gravel and cobbles observed were sub-rounded to rounded.

Well-graded sand with silt and gravel – The well-graded sand with silt and gravel appeared loose to dense, moist, and gray to brown in color. The gravel and cobbles observed were rounded.

Poorly-graded gravel with silt and sand – The poorly-graded gravel with silt and sand appeared medium dense to very dense, dry, and gray blue-green in color. The gravel and cobbles observed were subangular to rounded

5.2 GROUNDWATER CONDITIONS

Groundwater was not observed in the boring or test pits at the time of the field evaluation. Changes in precipitation, construction or other factors may impact the depth to groundwater on the property. Fluctuations in the groundwater level should be expected.

Detailed descriptions of the soil observed in the borings are presented on the Boring and Test Pit Logs in Appendix B of this report. The descriptive soil terms used on the boring logs and in this report can be referenced by the Unified Soil Classification System (USCS). A copy of the USCS is included in Appendix B. The subsurface conditions may vary between boring locations. Such changes in conditions would not be apparent until construction. **If the subsurface conditions do change from those observed in the borings, the construction timing, plans and costs may change.**

6.0 LABORATORY TESTING

Laboratory testing was performed to supplement field classifications and to assess some of the soil engineering parameters. The laboratory tests conducted included in-place water content (ASTM D 2216) and gradation (ASTM D 422 and ASTM D 1140). The laboratory test results are summarized in Table C-1 in Appendix C. The laboratory test results are also summarized on the boring and test pit logs in Appendix B. The laboratory testing was performed by ALLWEST.

7.0 CONCLUSIONS AND RECOMMENDATIONS

It is our opinion the site is suitable for the proposed development provided the recommendations in this report are followed and the potential associated risks are acceptable to the owner. The existing uncontrolled fill, which extends to depths of up to approximately 62 feet below the existing grade, is unsuitable in its current condition to support the proposed development.

The following recommendations are presented to assist the planning and design of the proposed development. The recommendations are based on our understanding of the proposed development, the conditions observed in the borings and test pits, laboratory test results and geotechnical analysis. **If the scope of the construction changes, or if conditions are encountered during construction which are different than those described in this report, we should be notified so we can review our recommendations and provide revisions if necessary**.

7.1 PLANNING CONSIDERATIONS

The subsurface conditions observed in the borings and test pits indicate uncontrolled fill generally extends to a maximum depth of approximately 62 feet below the existing grade in the vicinity of the stockpiles in the northeast corner of the site. The depth of uncontrolled fill observed in the boring and test pits decreases near the perimeter of the northeast portion of the site. The approximate limits of the uncontrolled fill are shown on the Boring and Test Pit Location Map, Figure A-2, in Appendix A of this report. The uncontrolled fill is unsuitable for support structural improvements such as buildings, asphalt, concrete, retaining walls or similar improvements. Uncontrolled fill presents the risk of post construction settlement of the proposed structures and pavement if it remains in place. Ideally, the uncontrolled fill would be removed its full depth below building and pavement areas and replaced with properly compacted structural fill. Due to the size of the site and significant depth of the fill, we understand this may not be practical and will likely be cost prohibitive in pavement areas. However, the full depth of fill in the proposed building areas should be over-excavated below foundations and slabs and replaced with structural fill in properly compacted lifts.

The following table provides the depth of uncontrolled fill observed in each boring or test pit location:

Location	Depth
B-1	15 ft
B-2	20 ft
B-3	62 ft
TP-1	0 ft
TP-2	+17 ft*
TP-3	+12 ft*
TP-4	17 ft
TP-5	3 ft
TP-6	8 ft
TP-7	6 ft
TP-8	0 ft

*Natural soil not encountered to the maximum depth excavated in the test pit

7.2 SITE PREPARATION

Building Pads

Prior to conducting site grading, vegetation, deleterious material, disturbed soil, soil containing significant amounts of roots and organics and uncontrolled fill should be removed its entire depth below proposed building, slabs and flatwork areas. Based on the subsurface conditions observed in the borings and test pits, we anticipate this may require the removal of up to approximately 62 feet of uncontrolled fill. Building type and locations were not identified at the time this report was prepared. The excavation area of uncontrolled fill should be oversized using a 1:1 (horizontal to vertical) slope from the edge of the building area, for example a 10 foot deep excavation of uncontrolled fill should be widened by 10 feet beyond the anticipated area of the building. Alternatively, deep foundations such as rammed aggregate piers, driven piles, micro-piles, helical anchors or similar which extend through the uncontrolled fill into natural soil may be used to support building foundations. The proposed building plans and loading would be required to provide recommendations for deep foundations under a separate scope of services.

Significant amounts of organic material and mill waste (bark and wood chips) were observed in the borings and test pits. If landscape and/or parking areas are to be located over areas where the organic material is present there is potential for total and differential settlement. Additional maintenance should be anticipated in areas of landscaping and/or pavement where organics are left in place.

Prior to placing fill, the exposed subgrade should be scarified to a depth of eight (8) inches; properly moisture conditioned and compacted to at least 90 percent of the maximum dry density as determined by ASTM D1557. Compaction of the subgrade may be reduced to proof rolling at the discretion of the geotechnical engineer based on conditions. If the subgrade is observed to significantly deflect it should be over-excavated to firm, non-yielding soil and replaced with properly compacted fill.

Pavement Areas

We recommend the uncontrolled fill and organic material be excavated and removed its full depth beneath proposed driveway and parking areas and replaced with properly compacted fill. We anticipate the removal of the full depth of the uncontrolled fill and organic material could be cost prohibitive.

We recommend the uncontrolled fill in the area of the proposed commercial parcel on the western portion of the site be excavated and removed in its entirety and replaced with properly compacted fill. This precaution will provide a commercial property with the most options for development in the future.

If Abundant Land Partners, LLC is willing to accept the risk of potential post-construction settlement of the pavement areas located on the eastern portion of the site, consideration may be given to removal of a portion of the existing uncontrolled fill. The thickness of the uncontrolled fill observed was up to approximately 62 feet below existing grades. Due to the variable nature of uncontrolled fill and the presence of the organics, it is difficult to reasonably estimate the magnitude of the settlement which may occur over the life of the pavement. Based on settlement observed in the existing pavement at the site, settlement of up to and possibly exceeding one (1) foot may be anticipated.

7.3 EXCAVATION

Excavation of the on-site soil can be conducted with typical excavation equipment. We recommend excavations greater than four (4) feet deep be sloped no steeper than 1.5:1 (horizontal to vertical). Alternatively, deeper excavations may be shored or braced in accordance with OSHA specifications and local codes. Regarding trench wall support, the site soil is considered Type C soil according to Occupational Safety and Health Administration (OSHA) guidelines. The contractor is responsible to provide appropriate trench wall support and/or sloping.

Dewatering

Excavations which extend below the groundwater elevation will require dewatering. The method of dewatering should be selected by the contractor, if necessary.

Materials

The on-site granular soil (sand and gravel) is generally suitable for use as structural fill, site grading fill and utility trench backfill provided it is free of deleterious material and material larger than four (4) inches in size.

Import materials should be granular soil free of organics, debris and other deleterious material and meet the following recommendations. Import materials should be approved by the Geotechnical Engineer prior to delivery to the site.

Fill Type	Recommendations
Structural Fill	Maximum size ≤ 3 inches; Passing No. 200 Sieve ≤ 15%; Non-plastic
Site Grading	Maximum size ≤ 3 inches; Passing No. 200 Sieve ≤ 35%; Liquid Limit ≤ 35%
Utility Trench Backfill	Maximum size ≤ 2 inches; Passing No. 200 Sieve ≤ 15%; Non-plastic

7.4 FILL PLACEMENT AND COMPACTION

Fill should be placed in lift thicknesses which are appropriate for the compaction equipment used. Typically, eight (8) inch loose lifts are appropriate for typical rubber tire and steel drum compaction equipment. Lift thicknesses should be reduced to four (4) inches for hand operated compaction equipment. Fill should be moisture conditioned to within two (2) percentage points of the optimum moisture content prior to placement to facilitate compaction. In wet weather or spring conditions, using silty or fine-grained soil for fill may delay construction and increase costs.

Fill should be compacted to the following percentages of the maximum dry density as determined by ASTM D 1557.

Fill Area	Compaction (%)
Subgrade	90*
Site Grading / Pavement	95
Building Pad	95
Foundations / Slabs	95
Utility Trench Backfill	95
Base Course	95

*May be reduced to proof roll at the discretion of the geotechnical engineer.

The following recommendations are provided for placement of fill materials which are not testable due to high gravel content.

- The structural fill should be placed in maximum 12 inch thick lifts with a minimum 10-ton vibratory compactor. The compactor should impart a minimum dynamic force of 30,000 pounds of impact per vibration with a minimum of 1,000 vibrations per minute. These recommendations are based on Washington Department of Transportation Standard Specifications for placement of rock fill.

- A minimum of four (4), full coverage passes should be made for each six (6) inches of lift thickness.

- Fill materials which are not testable due to high gravel content may require full time observation by a representative of ALLWEST during placement.

7.5 WET WEATHER CONSTRUCTION

We recommend earthwork for this site be scheduled for the drier seasons of the year. If construction is undertaken in wet periods of the year, it will be important to slope the ground surface to provide drainage away from construction.

7.6 COLD WEATHER CONSTRUCTION

The near surface soils encountered in the borings and test pits are considered to be frost susceptible. If site grading and construction are anticipated during cold weather, we recommend good winter construction practices be observed. Snow and ice should be removed from excavated and fill areas prior to additional earthwork or construction. Footings, floors slabs or any structural portions of the construction should not be placed on frozen ground; nor should the supporting soils for buildings be permitted to freeze during or after construction. Frozen soils should not be used as backfill or fill.

7.7 FOUNDATION RECOMMENDATIONS

Specific building locations and building types were not available at the time this report was prepared. We understand the future building locations will be in areas where it is practical to remove the organic and uncontrolled fill and replace with properly placed and compacted structural fill. We recommend site specific geotechnical evaluations be completed for the future building locations. If future buildings are located over areas where organic and/or uncontrolled fill remain in the subsurface, there is potential for total and differential settlement. Alternatively, future buildings may utilize deep foundations which bear in natural, undisturbed soil.

7.8 PAVEMENT RECOMMENDATIONS

We understand the site may contain asphalt pavement driveways and parking areas. We anticipate a minor amount of rigid (concrete) pavement may also be constructed at the proposed commercial parcel. Site specific recommendations for pavement should be provided based on the estimated traffic loads and site layout. If pavement is to be located over uncontrolled fill and organic material, we recommend using a geogrid reinforced pavement section to help reduce differential settlement. Total and differential settlement should still be anticipated if geogrid is used as reinforcement in the pavement section.

7.9 STORM WATER AND DRAINAGE

We anticipate storm water runoff will be contained on-site and directed to infiltration swales. It is our opinion the site will be suitable for the use of drywells. Drywells should be keyed into natural soil or structural fill and not located in areas where organics and/or uncontrolled fill exists. We recommend the grading plan include

slopes such that storm water run-off is directed away from the building, flatwork and pavement areas.

7.10 EROSION CONTROL

Erosion control measures such as sediment ponds, silt fences, wattles and/or water bars may be necessary if construction occurs during periods of heavy precipitation in the winter and spring months. The exposed natural soils will be susceptible to gullying and erosion. Minor areas of sloughing may be anticipated on constructed slopes until vegetation is established. We recommend constructed slopes be maintained through removal of sloughed materials and re-seeding these areas. Areas disturbed during construction should be re-vegetated as soon as practical. We recommend a storm water pollution prevention plan (SWPPP) be prepared for this site prior to earthwork.

8.0 ADDITIONAL RECOMMENDED SERVICES

We recommend ALLWEST Testing & Engineering, LLC be retained to provide construction monitoring and testing to verify the soil and geologic conditions and the report recommendations are incorporated into the actual construction.

- Observe removal of uncontrolled fill prior to site grading.
- Observe and test compaction of the subgrade prior to placement of fill.
- Conduct frequent compaction testing of fill placed.
- Conduct frequent compaction testing of concrete and pavement materials, if necessary.

If we are not retained to provide the recommended plan review and construction monitoring services, we cannot be responsible for soil engineering related construction errors or omissions.

9.0 EVALUATION LIMITATIONS

This report has been prepared to assist the planning and design of the proposed development of the Stimson Mill Site located at 3074 W. Seltice Way in Coeur d'Alene, Idaho. Our services consist of professional opinions and conclusions made in accordance with generally accepted geotechnical engineering principles and practices. This acknowledgement is in lieu of all warranties either expressed or implied.

The following plates complete this report:

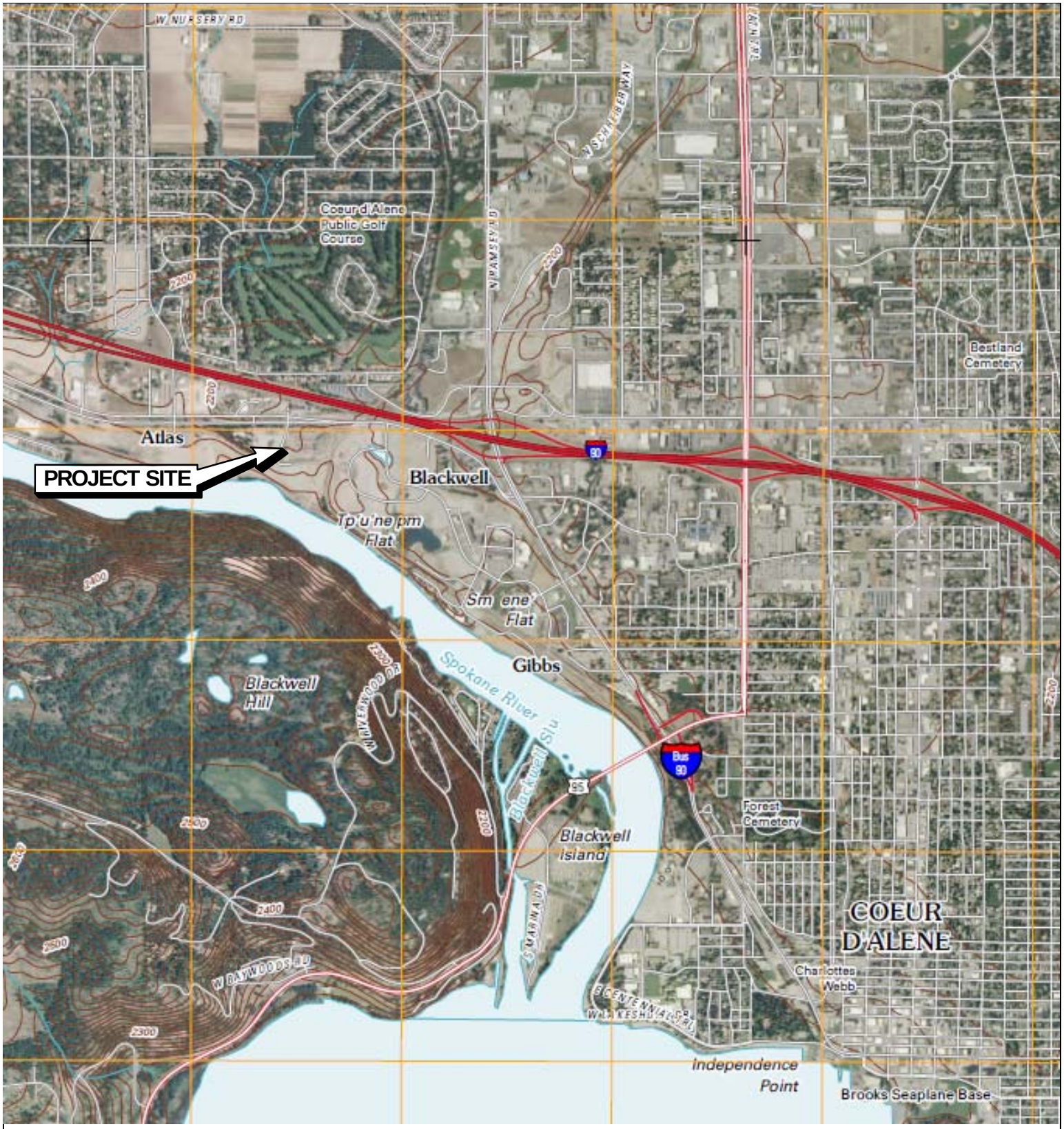
Appendix A – Vicinity Map, Boring and Test Pit Location Map

Appendix B – Boring and Test Pit Logs, Unified Soil Classification System
Appendix C – Laboratory Test Results
Appendix D – Aerial Images

Appendix A

Vicinity Map
Boring and Test Pit Location Map

ALLWEST
Testing & Engineering



USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP
COEUR D'ALENE QUADRANGLE, IDAHO
2013

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

N
W E
S

ALLWEST Testing & Engineering

Hayden, Idaho

www.allwesttesting.com

FIGURE A-1: VICINITY MAP

Stimson Mill Site

3074 W. Seltice Way

Coeur d'Alene, Idaho

Client Name: Abundant Land Partners LLC

Project No.: 114-094G

Date:: May 7, 2014

REFERENCE: USGS

TEST PIT LOCATIONS ARE APPROXIMATE

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

N W E S

ALLWEST Testing & Engineering

Hayden, Idaho

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FIGURE A-2: BORING & TEST PIT LOCATION MAP
Stimson Mill Site
W. Seltice Way
Coeur d'Alene, Idaho
Client Name: Abundant Land Partners, LLC
Project No.: 114-094G
Date:: May 8, 2014

Appendix B

Boring and Test Pit Logs
Unified Soil Classification System

ALLWEST
Testing & Engineering

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

BORING LOG

DATE STARTED: 4/8/2014
DATE FINISHED: 4/8/2014
DRILLER: Jarod Willard
COMPANY: Haztech
ENGINEER: Sean Brady
WEATHER: Sunny, 60's

BORING B-1

DRILL: B-81
HAMMER: Automatic
DRILLING METHODS: 8" Hollow Stem Auger

PROJECT: Stimson Mill Site

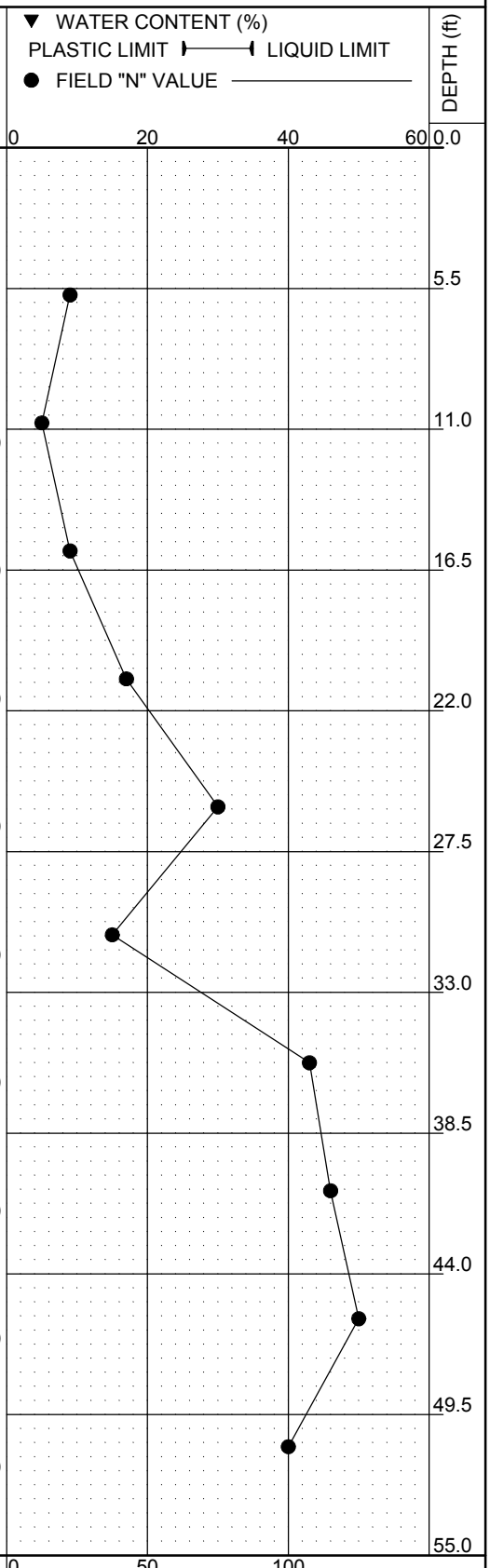
NOTES:

STATION, OFFSET:

LATITUDE (DEGREES): N 47°42'0.63" (47.700175°)
LONGITUDE (DEGREES): W -116°49'21.4464" (-116.822624°)

TOTAL DEPTH: 51.5'

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE #	FIELD BLOW COUNT (Recovery)
0.0		ASPHALT; good condition, black.		
0.5	FILL	UNCONTROLLED FILL; silty gravel with sand; organics, appeared moderately compacted, brown, dry to moist.		
5.0	FILL	UNCONTROLLED FILL; silty sand with gravel mixed with wood shavings/chips; poorly compacted, black, moist to wet.	B-1@5	4-4-5 (9" = 50%)
			B-1@10	2-2-3 (10" = 56%)
15.0	SW-SM	Well-graded SAND with silt and gravel; medium dense to dense, gray, dry.	B-1@15	3-5-4 (10" = 56%)
			B-1@20	2-8-9 (11" = 61%)
			B-1@25	8-14-16 (13" = 72%)
		Lens of fine grained sand, orange, moist to wet.	B-1@30	7-9-6 (15" = 83%)
			B-1@35	14-19-24 (17" = 94%)
		Gravel layer.		
40.0	GP-GM	Poorly-graded GRAVEL with silt and sand; subangular to rounded gravel, dense, gray, dry.	B-1@40	14-23-23 (14" = 78%)
			B-1@45	20-28-22 (12" = 67%)
51.5		Bottom of boring B-1 at approximately 51 1/2 feet below ground surface. No ground water encountered.	B-1@50	8-16-24 (12" = 67%)



WATER LEVELS
Dry ▽ WHILE DRILLING
Dry ▼ AT COMPLETION
Dry ▼ AFTER DRILLING

Hollow Stem Auger
2" OD Split Spoon (SPT)

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

BORING LOG

DATE STARTED: 4/8/2014
DATE FINISHED: 4/8/2014
DRILLER: Jarod Willard
COMPANY: Haztech
ENGINEER: Sean Brady
WEATHER: Sunny, 60's

BORING B-2

DRILL: B-81
HAMMER: Automatic
DRILLING METHODS: 8" Hollow Stem Auger

PROJECT: Stimson Mill Site

NOTES:

STATION, OFFSET:

LATITUDE (DEGREES): N 47°42'0.1764" (47.700049°)
LONGITUDE (DEGREES): W -116°49'15.7224" (-116.821034°)

TOTAL DEPTH: 51.5'

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE #	FIELD BLOW COUNT (Recovery)
0.0				
0.5	FILL	ASPHALT; good condition, black. UNCONTROLLED FILL; silty gravel; organics, appeared moderately compacted, brown, dry to moist.		
5.5	FILL	UNCONTROLLED FILL; wood shavings/chips; poorly compacted, orange, moist.	B-2@5	7-6-6 (11" = 61%)
			B-2@10	6-5-6 (6" = 33%)
			B-2@15	4-9-8 (7" = 39%)
20.0	GP-GM	Poorly-graded GRAVEL with silt and sand; subangular to rounded gravel, dense to very dense, gray, dry.	B-2@20	6-20-21 (16" = 89%)
			B-2@25	19-34-31 (14" = 78%)
			B-2@30	20-40-27 (12" = 67%)
			B-2@35	16-30-32 (9" = 50%)
			B-2@40	50/2" (0" = 0%)
			B-2@45	11-35-24 (13" = 72%)
51.5		Bottom of boring B-2 at approximately 51 1/2 feet below ground surface. No ground water encountered.	B-2@50	8-30-27 (15" = 83%)

▼ WATER CONTENT (%)
PLASTIC LIMIT ⟝—⟞ LIQUID LIMIT
● FIELD "N" VALUE

0 20 40 60

DEPTH (ft): 0.0, 5.5, 11.0, 16.5, 22.0, 27.5, 33.0, 38.5, 44.0, 49.5, 55.0

>> >> >>

0 50 100

WATER LEVELS
Dry ▽ WHILE DRILLING
Dry ▽ AT COMPLETION
Dry ▼ AFTER DRILLING

Hollow Stem Auger
2" OD Split Spoon (SPT)

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

BORING LOG

DATE STARTED: 4/8/2014
DATE FINISHED: 4/8/2014
DRILLER: Jarod Willard
COMPANY: Haztech
ENGINEER: Sean Brady
WEATHER: Sunny, 60's

BORING B-3

DRILL: B-81
HAMMER: Automatic
DRILLING METHODS: 8" Hollow Stem Auger

PROJECT: Stimson Mill Site

NOTES:

STATION, OFFSET:

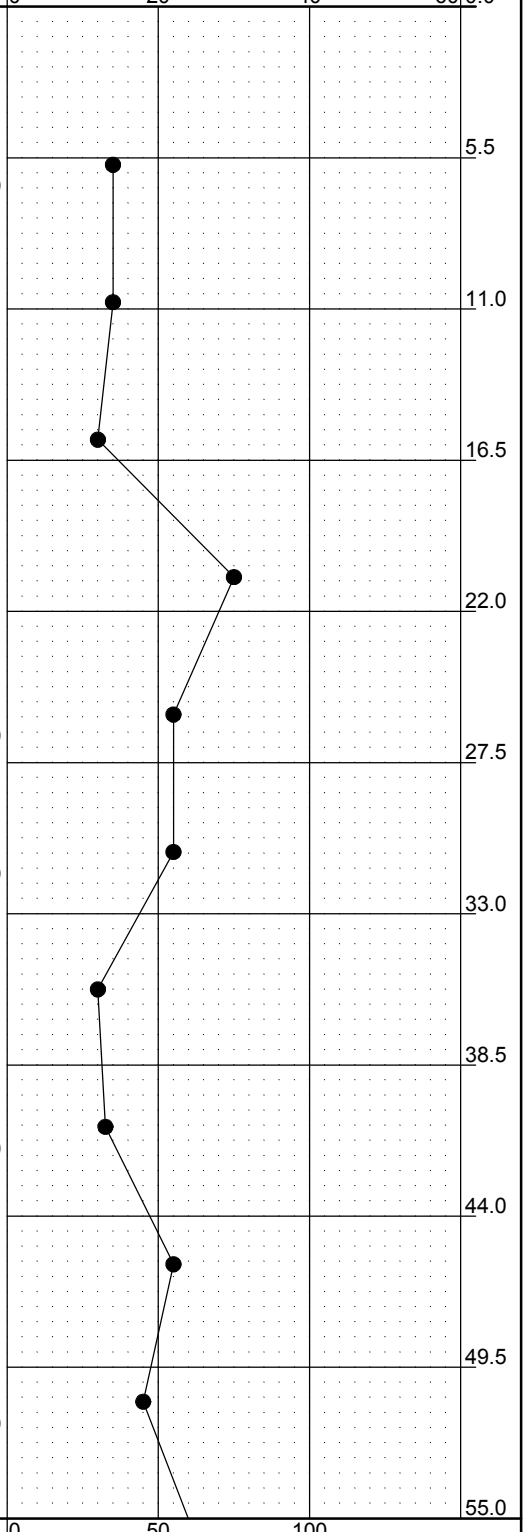
LATITUDE (DEGREES): N 47°41'58.9956" (47.699721°)
LONGITUDE (DEGREES): W -116°49'5.8188" (-116.818283°)

TOTAL DEPTH: 101.5'

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE #	FIELD BLOW COUNT (Recovery)
0.0	FILL	UNCONTROLLED FILL; silty gravel with sand; organics, moderately compacted, dark brown, moist.	B-3@5	7-9-5 (14" = 78%)
			B-3@10	7-8-6 (0" = 0%)
15.0	FILL	UNCONTROLLED FILL; silty sand with gravel mixed with wood shavings/chips; poorly compacted, dark brown to black, moist to wet.	B-3@15	3-6-6 (6" = 33%)
			B-3@20	7-19-11 (9" = 50%)
			B-3@25	7-12-10 (12" = 67%)
		Seeps.	B-3@30	24-10-12 (12" = 67%)
			B-3@35	4-6-6 (9" = 50%)
			B-3@40	5-6-7 (16" = 89%)
			B-3@45	6-10-12 (3" = 17%)
			B-3@50	5-8-10 (16" = 89%)

GRAPHIC LOG

WATER CONTENT (%)
PLASTIC LIMIT ⟝—⟞ LIQUID LIMIT
FIELD "N" VALUE



DEPTH (ft)

WATER LEVELS
Dry ▽ WHILE DRILLING
Dry ▼ AT COMPLETION
Dry ▼ AFTER DRILLING

Hollow Stem Auger
2" OD Split Spoon (SPT)

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

BORING LOG

DATE STARTED: 4/8/2014
DATE FINISHED: 4/8/2014
DRILLER: Jarod Willard
COMPANY: Haztech
ENGINEER: Sean Brady
WEATHER: Sunny, 60's

BORING B-3

DRILL: B-81
HAMMER: Automatic
DRILLING METHODS: 8" Hollow Stem Auger

PROJECT: Stimson Mill Site

NOTES:

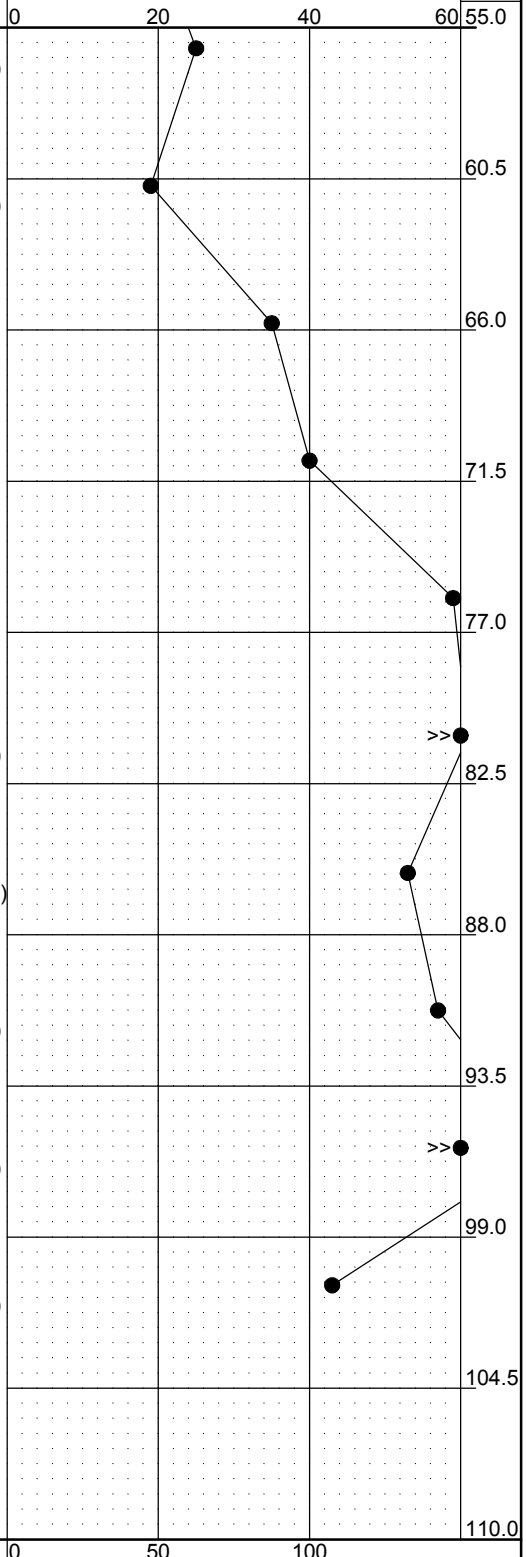
STATION, OFFSET:

LATITUDE (DEGREES): N 47°41'58.9956" (47.699721°)
LONGITUDE (DEGREES): W -116°49'5.8188" (-116.818283°)

TOTAL DEPTH: 101.5'

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE #	SAMPLER	FIELD BLOW COUNT (Recovery)
		Gravel layer.	B-3@55		6-11-14 (14" = 78%)
			B-3@60		6-10-9 (14" = 78%)
65.0	GP-GM	Poorly-graded GRAVEL with silt and sand; subangular to rounded gravel, dense to very dense, gray, dry to moist.	B-3@65		15-20-15 (9" = 50%)
			B-3@70		12-20-20 (9" = 50%)
			B-3@75		18-28-31 (8" = 44%)
			B-3@80		11-24-37 (11" = 61%)
			B-3@85		19-28-25 (18" = 100%)
			B-3@90		16-25-32 (16" = 89%)
			B-3@95		21-39-32 (14" = 78%)
101.5		Bottom of boring B-3 at approximately 101 1/2 feet below ground surface. No ground water encountered.	B-3@100		15-20-23 (12" = 67%)

▼ WATER CONTENT (%)
PLASTIC LIMIT ⊢—⊣ LIQUID LIMIT
● FIELD "N" VALUE



WATER LEVELS
Dry ▽ WHILE DRILLING
Dry ▼ AT COMPLETION
Dry ▼ AFTER DRILLING

Hollow Stem Auger
2" OD Split Spoon (SPT)

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-1

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

STATION, OFFSET:

NOTES:

TOTAL DEPTH: 6'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0						0.0
	TOPSOIL	TOPSOIL; silty sand with gravel; appeared loose, dark brown, moist. Surface organics and roots observed throughout.				
1.0						1.0
	SW-SM	Well-graded SAND with silt and gravel; appeared loose to medium dense, brown, moist. Caving of sidewalls.				
6.0						6.0
		Bottom of test pit TP-1 at approximately 6 feet below ground surface. No ground water encountered.				

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-2

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

STATION, OFFSET:

NOTES:

TOTAL DEPTH: 17'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0						0.0
	FILL	UNCONTROLLED FILL; silty gravel with sand; organics, appeared moderately compacted, black to gray, moist. Angular to subrounded cobbles and boulders up to 18 inches observed.				
2.0						2.0
	FILL	Geotextile Fabric. UNCONTROLLED FILL; silty sand with gravel; organics, appeared poorly compacted, black, moist.				
5.0						5.0
	WOOD	UNCONTROLLED FILL; wood shavings/chips; appeared poorly compacted, orange, moist.				
17.0						17.0
		Bottom of test pit TP-2 at approximately 17 feet below ground surface. No ground water encountered.				

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-3

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

NOTES:

STATION, OFFSET:

TOTAL DEPTH: 12'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0						0.0
0.7		ASPHALT; good condition, black.				0.7
2.0	FILL	UNCONTROLLED FILL; silty gravel with sand; appeared moderately compacted, brown, dry to moist.				2.0
4.0	FILL	Geotextile Fabric. UNCONTROLLED FILL; silty sand with gravel; organics, appeared poorly compacted, black, moist.				4.0
12.0	WOOD	UNCONTROLLED FILL; wood shavings/chips; appeared poorly compacted, brown, moist.				12.0
		Bottom of test pit TP-3 at approximately 12 feet below ground surface. No ground water encountered.				

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-4

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

STATION, OFFSET:

NOTES:

TOTAL DEPTH: 18'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0	FILL	UNCONTROLLED FILL; silty gravel with sand and organics; appeared poorly to moderately compacted, black, moist. Sub-angular to sub-rounded cobbles and boulders up to 24 inches observed.				0.0
3.0	WOOD	UNCONTROLLED FILL; wood shavings/chips; appeared poorly compacted, orange, moist.				3.0
8.0	FILL	UNCONTROLLED FILL; silty gravel with sand; organics, appeared poorly compacted, black, moist.				8.0
17.0	GP-GM	Poorly-graded GRAVEL with silt and sand; appeared medium dense, blue/green, moist. Rounded cobbles up to 3 inches observed.		S114-242	53% retained on #4 sieve 5.3% passing #200 sieve 5.5% moisture content	17.0
18.0		Bottom of test pit TP-4 at approximately 18 feet below ground surface. No ground water encountered.				18.0

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

ALLWEST TESTING & ENGINEERING, LLC.
HAYDEN, IDAHO
GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-5

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

STATION, OFFSET:

NOTES:

TOTAL DEPTH: 10'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0	FILL	UNCONTROLLED FILL; silty sand with gravel; organics, appeared poorly compacted, black, moist.				0.0
2.0	FILL	UNCONTROLLED FILL; silty sand with gravel; appeared moderately compacted, brown, dry to moist.				2.0
2.5	GP-GM	Poorly-graded GRAVEL with silt and sand; appeared medium dense, blue/green, moist.				2.5
3.0	SW-SM	Well-graded SAND with silt and gravel; appeared loose to medium dense, brown, moist. Rounded cobbles and boulders up to 24 inches observed. Caving of sidewalls.		S114-243	40% retained on #4 sieve 6.8% passing #200 sieve 6.8% moisture content	3.0
10.0		Bottom of test pit TP-5 at approximately 10 feet below ground surface. No ground water encountered.				10.0

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

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TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-6

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

STATION, OFFSET:

NOTES:

TOTAL DEPTH: 8.5'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0	FILL	UNCONTROLLED FILL; silty gravel with sand; organics, appeared poorly to moderately compacted, brown, dry to moist. Cobbles and boulders up to 36 inches and mill waste observed throughout.				0.0
4.0	FILL	UNCONTROLLED FILL; silty sand with gravel; organics, appeared moderately compacted, blue/green, moist. Cobbles and boulders up to 10 inches observed throughout.				4.0
7.0	WOOD	UNCONTROLLED FILL; wood shavings/chips; appeared poorly compacted, dark brown, moist.				7.0
8.0	SM	Silty SAND with gravel; appeared medium dense, brown, moist.				8.0
8.5		Test pit terminated at approximately 8 1/2 feet below ground surface due to confined location. No ground water encountered.				8.5

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

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GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-7

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

STATION, OFFSET:

NOTES:

TOTAL DEPTH: 12'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0	FILL	UNCONTROLLED FILL; silty sand with gravel; organics, appeared poorly compacted, black, moist.				0.0
2.0	FILL	Geotextile Fabric UNCONTROLLED FILL; silty gravel with sand; organics, appeared moderately compacted, gray, moist. Sub-rounded to rounded cobbles and boulders up to 24 inches. Trash and organics observed throughout.		TP-7 @ 4	Bulk sample obtained.	2.0
6.0	SW-SM	Well-graded SAND with silt and gravel; appeared loose, gray to brown, moist. Caving of sidewalls.				6.0
12.0		Bottom of test pit TP-7 at approximately 12 feet below ground surface. No ground water encountered.				12.0

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

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GEOTECHNICAL SECTION

TEST PIT LOG

DATE STARTED: 4/16/2014
DATE FINISHED: 4/16/2014
OPERATOR: Casey
COMPANY: Alamo Excavting
ENGINEER: Sean Brady
WEATHER: Raining, 50's

TEST PIT TP-8

EXCAVATOR: John Deere 120C
EXCAVATION METHOD: Soil Excavation Bucket

PROJECT: Stimson Mill Site

STATION, OFFSET:

NOTES:

TOTAL DEPTH: 7'

DEPTH (ft)	USCS	DESCRIPTION	GRAPHIC LOG	SAMPLE #	NOTES	DEPTH (ft)
0.0	SM	TOPSOIL; silty sand with gravel; appeared loose, brown, dry to moist. Surface organics and roots observed throughout.				0.0
1.0	SM	Silty SAND with gravel; appeared loose, gray, dry. Rounded cobbles and boulders up to 36 inches observed. Caving of sidewalls. Roots observed to approximately 2 feet below ground surface.				1.0
7.0		Bottom of test pit TP-8 at approximately 7 feet below ground surface. No ground water encountered.				7.0

WATER LEVELS
Dry ▽ WHILE EXCAVATING
Dry ▼ AT COMPLETION
Dry ▼ AFTER EXCAVATING

Unified Soil Classification System

MAJOR DIVISIONS			SYMBOL	TYPICAL NAMES
COARSE GRAINED SOILS	GRAVELS	CLEAN GRAVELS	GW	Well-Graded Gravel, Gravel-Sand Mixtures.
			GP	Poorly-Graded Gravel, Gravel-Sand Mixtures.
		GRAVELS WITH FINES	GM	Silty Gravel, Gravel-Sand-Silt Mixtures.
			GC	Clayey Gravel, Gravel-Sand-Clay Mixtures.
	SANDS	CLEAN SANDS	SW	Well-Graded Sand, Gravelly Sand.
			SP	Poorly-Graded Sand, Gravelly Sand.
		SANDS WITH FINES	SM	Silty Sand, Sand-Silt Mixtures.
			SC	Clayey Sand, Sand-Clay Mixtures.
FINE GRAINED SOILS	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50%		ML	Inorganic Silt, Silty or Clayey Fine Sand.
			CL	Inorganic Clay of Low to Medium Plasticity, Sandy or Silty Clay.
			OL	Organic Silt and Clay of Low Plasticity.
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH	Inorganic Silt, Elastic Silt, Micaceous Silt, Fine Sand or Silt.
			CH	Inorganic Clay of High Plasticity, Fat Clay.
			OH	Organic Clay of Medium to High Plasticity.
Highly Organic Soils			PT	Peat, Muck and Other Highly Organic Soils.

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Appendix C

Laboratory Test Results

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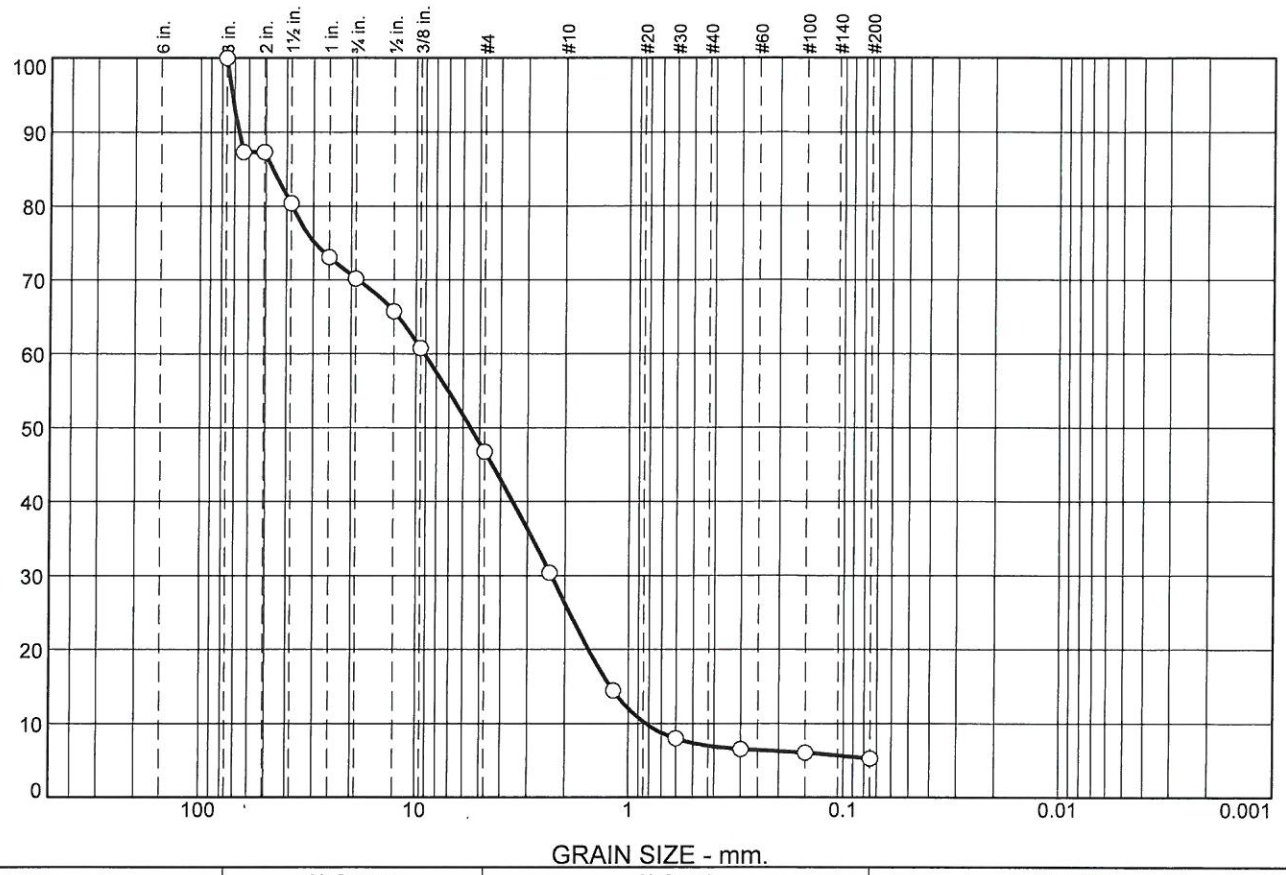
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	30	23	21	19	2	5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3"	100		
2-1/2"	87		
2"	87		
1-1/2"	80		
1"	73		
3/4"	70		
1/2"	66		
3/8"	61		
#4	47		
#8	30		
#16	14		
#30	8		
#50	7		
#100	6		
#200	5.3		

* (no specification provided)

Material Description

poorly graded gravel with silt and sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 67.1363 D_{85}= 46.4567 D_{60}= 9.1331
D_{50}= 5.5316 D_{30}= 2.3242 D_{15}= 1.2174
D_{10}= 0.8260 C_u= 11.06 C_c= 0.72

Classification

USCS= GP-GM AASHTO= A-1-a

Remarks

Sampled By: S. Brady
Sample Date: 4/16/14
Moisture Content: 5.5%

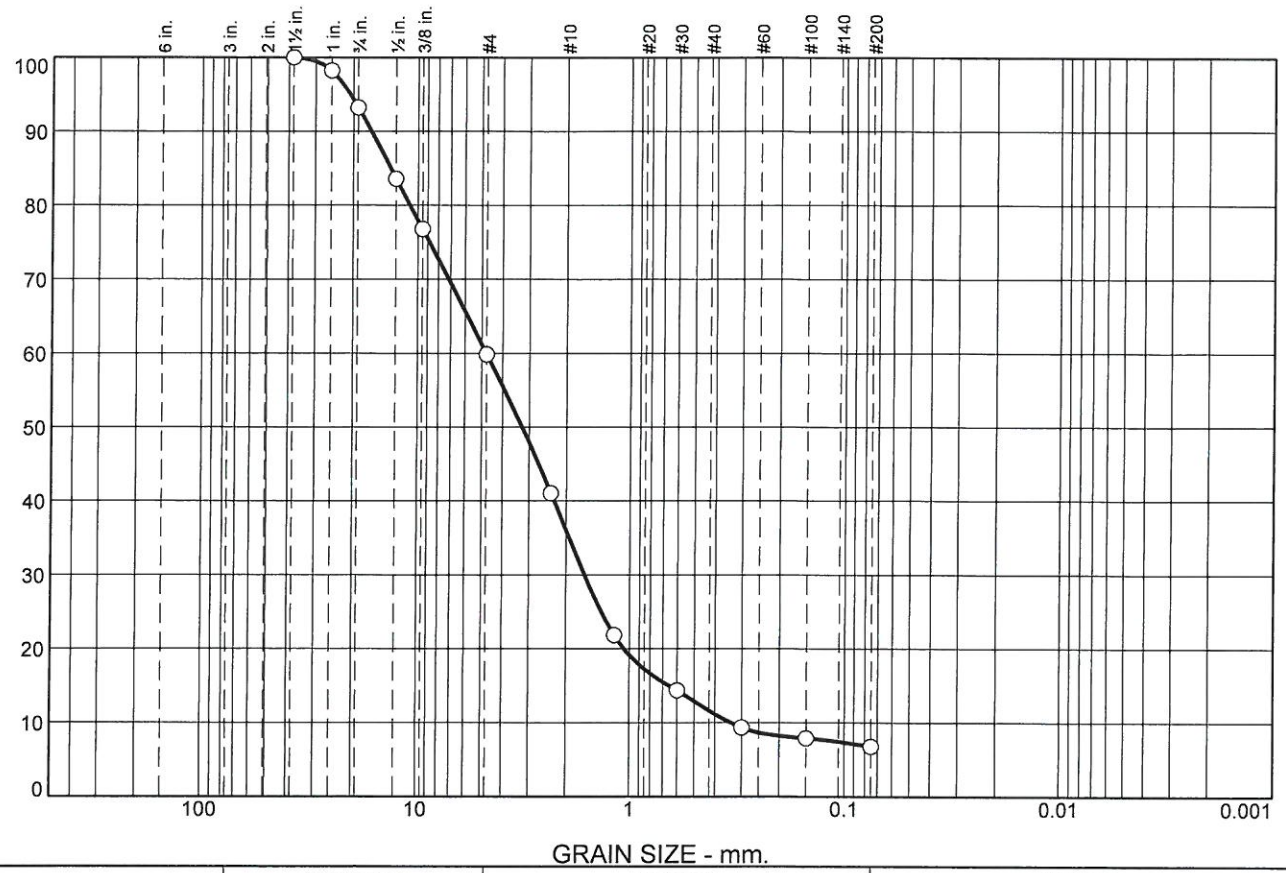
Location: TP-4
Sample Number: S114-242 **Depth:** -17.5' **Date:** 4/30/14

ALLWEST TESTING & ENGINEERING Hayden, ID

Client: Abundant Land Partners
Project: Stimpson Mill Site
Project No: 114-094G **Checked By:** CM

Tested By: Kyle Ferguson WAQTC# 22305 **Checked By:** Chris McKissen WAQTC# 20561

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	7	33	24	24	5	7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1-1/2"	100		
1"	98		
3/4"	93		
1/2"	84		
3/8"	77		
#4	60		
#8	41		
#16	22		
#30	14		
#50	9		
#100	8		
#200	6.8		

* (no specification provided)

Material Description

well-graded sand with silt and gravel

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 16.5296 D_{85}= 13.4628 D_{60}= 4.7731
D_{50}= 3.2391 D_{30}= 1.6357 D_{15}= 0.6516
D_{10}= 0.3370 C_u= 14.16 C_c= 1.66

Classification

USCS= SW-SM AASHTO= A-1-a

Remarks

Sampled By: S. Brady
Sample Date: 4/16/14
Moisture Content: 6.8%

Location: TP-5
Sample Number: S114-243 **Depth:** -6.0' **Date:** 4/30/14

ALLWEST TESTING & ENGINEERING Hayden, ID

Client: Abundant Land Partners
Project: Stimpson Mill Site
Project No: 114-094G **Checked By:**

Tested By: Kyle Ferguson WAQTC# 22305 **Checked By:** Chris McKissen WAQTC# 20561

Appendix D

Aerial Images – 1971, 1975, 1981, 1998

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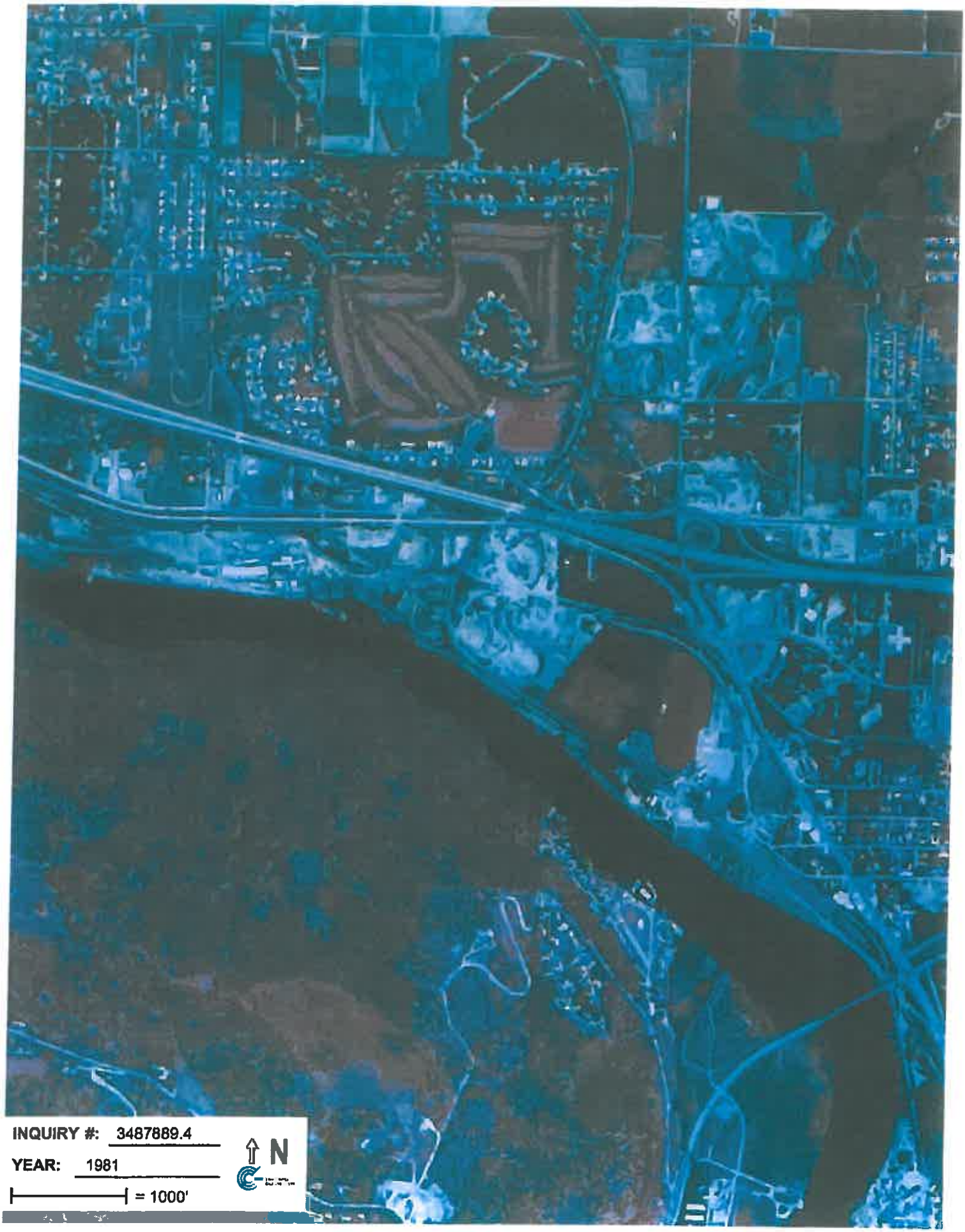
INQUIRY #: 3453947.5
YEAR: 1971
= 1000'
N


INQUIRY #: 3453947.5
YEAR: 1975
= 750'
N


INQUIRY #: 3487889.4
YEAR: 1981
= 1000'
N

INQUIRY #: 3453947.5

YEAR: 1998

= 500'

N