

July 19, 2019  
File: PU17212B

Mr. Kevin Kirkman  
Mr. Ron Beasley  
Sundance South, LLC  
594 SE Bishop Boulevard, Suite 102  
Pullman, Washington 99163

RE: **Final Summary Letter**  
Umatilla Court Block 1, Lots 1 - 15  
Sundance South Subdivision  
Pullman, WA 99163

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Good Day, Kevin and Ron.

GeoProfessional Innovation Corporation (GPI) provides this Final Summary Letter for Umatilla Court Block 1, Lots 1 – 15 in the Sundance South Subdivision located on the south side of Pullman, Washington. This letter summarizes our services from project commencement, in October 2017, through project completion in July 2019. During this time, our construction material testing (CMT) services were coordinated with Western Construction (Western) and Germer Construction (Germer), the earthwork contractors. Our services were provided, when requested, on either a continuous or periodic basis referencing the following:

- ☞ *Geotechnical Evaluation for Infrastructure* (GEI) performed by GPI, dated June 29, 2017.
- ☞ As defined in our CMT proposal (Proposal No. PUP17128), dated May 18, 2017.
- ☞ As outlined in our *Scope Addendum*, dated October 12, 2018 and our subsequent discussions with you.
- ☞ City of Pullman Standards.
- ☞ Sundance South Parametrix plan sheets dated December 2016 and cut/fill tick sheets provided by Parametrix on October 17, 2018.
- ☞ Trench drain requirements presented by Kevin Kirkman to City of Pullman, on May 14, 2019.

GPI's authorized scope of services included:

- |  |   |
|--|---|
| ☞ Geotechnical Consultation                                    | ☞ Hot-mixed Asphalt Testing for the Roadway |
| ☞ Earthwork density testing and observation                    | ☞ Trench drain observations                 |
| ☞ Concrete Observation and Testing for the sidewalks and curbs | ☞ Construction Material Laboratory Testing  |

During construction activities and our site visits, field staff generated daily field reports (DFR's) to document their observations, tests results, and the construction status. Preliminary copies of these reports were electronically distributed on the day of the site visit. Subsequent final reports were transmitted weekly with laboratory test results to you, the City of Pullman and the project team. Please note that during each site visit, testing typically occurred in multiple locations across the development. Therefore, recognize that individual daily field reports contain documentation addressing multiple areas of the entire project site, not specifically associated with Umatilla Court or its individual lots.

## Mass Grading Density Testing and Observation

Mass grading was initiated by Western Construction (Western) while utility and subsurface drain construction was initiated by Germer Construction (Germer). Mass grading began with topsoil stripping in October 2017, followed by subgrade preparation. Western initially struggled with structural fill placement and compaction over the exposed subgrade due to over optimum moisture contents, typical of native soil in the Palouse. We assisted them in properly preparing and compacting subgrades to meet geotechnical subgrade requirements. Once subgrades were correctly prepared, Western began placing and compacting structural fill. GPI obtained multiple fill material samples for Proctor testing as the fill material varied throughout the site.

Due to the site's naturally sloping surface, cuts in the native soil and fill placement were necessary to meet the design grades. Civil design by Parametrix established lot grades with some graded entirely on native soil cuts, some entirely on structural fill embankments, and some a combination of each with varying depths of structural fill and native soil cut. Specific to Umatilla Court (Block 1), the civil design plans delineate:

- ✘ Lots 1 – 9, are constructed on both cut and fill ranging from 11-feet of cut to 14-feet of fill, and
- ✘ Lots 10 – 15 are constructed on 2- to 20-feet of native cut soil.

Density test results were compared to Modified Proctor (ASTM D1557) maximum dry density and optimum moisture content for the soil used as structural fill. We conducted density testing on structural fill lifts and, based on the information provided by the contractors, recorded our test locations and relative elevations. Additionally, we provided occasional geotechnical consultation for subgrade preparation throughout construction and at times, groundwater seepage to assist Western and Germer in meeting the project's geotechnical design and City of Pullman standards. As documented in the appended reports, structural fill for embankments was periodically tested and observed by GPI staff. Where initial tests did not meet compaction requirements, subsequent rework and moisture conditioning advanced, and GPI's retests documented that fill was placed and compacted to meet City of Pullman standards, and conforms to the requirements outlined in the GEI. To the best of our knowledge, we are unaware of any outstanding failed density tests in the locations and depths tested.

Subsurface drains were installed upslope of Umatilla Court in natural draws traversing through the western half of the subdivision. Drains were installed to facilitate subgrade drainage and long-term embankment performance, but terminated in Wallowa Street and tied to the stormwater system at that point.

South of Umatilla Court seeps were observed at the interface between recently placed embankment and native soil in lots 13 through 15 in June of 2018. This area also coincided with an area slightly elevated above exposed bedrock to be blasted for subsequent excavation. GPI periodically observed the seepage, and conveyed the geotechnical concerns to the earthwork contractors and you, the project developers. Uncontrolled, the seepage had a high potential to trigger slope instability and exacerbate embankment settlement. The increased moisture content from seeps required the contractor excavate and rework some of the fill placed. We visually observed coarse shotrock replace site soil in wet areas to help facilitate embankment grades. Finish grading on these lots was halted in 2018 due to weather and time constraints.

The upslope subsurface drain design was not planned to extend this far south on the project due to storm sewer connectivity issues. Therefore, GPI recommended the drain either extend through this area, or multiple additional drains traverse east to west, near norther lot lines (lots 13 through 15), and through any area that exhibits consistent seepage on or near the crest or base of these constructed slopes. Through our interactions with you and the City of Pullman, you elected to construct drains in accordance with recommendations from GPI, along the north side of lots 13 through 15. Drains were subsequently installed, slopes regraded and seepage appears controlled at this time. Drain construction was witnessed by GPI between July 10 and 15, 2019.



**Photograph 1: Drain Installation**

### **Utility Trench Backfill and Roadway Testing**

Following mass grading, Germer began installing utility trenches throughout the project. We sampled imported  $5/8$ -inch-minus crushed gravel, which was used as bedding and backfill, and performed Modified Proctor testing on utility trench backfill materials above bedding. GPI provided a geoprofessional for periodic observation and density testing during utility backfill operations. We conducted density testing on the backfill lifts. Some initial density tests did not meet compaction requirements and were reported to Germer. Germer re-worked each failed test area and GPI retested the failed areas. To the best of our knowledge, we are unaware of any outstanding failed density tests along utilities or roadways in the locations tested.



### **Hot Mix Asphalt (HMA) Testing and Curb Construction**

During HMA paving operations, GPI provided a geoprofessional to conduct observation and testing. We checked HMA for in place density using a nuclear densometer. We helped Motley-Motley, Inc. (Motley), the asphalt subcontractor, establish effective rolling patterns to achieve minimum density requirements. We sampled loose HMA and transported it to our laboratory for gradation and oil content testing. In the areas tested we observed that HMA appeared to be properly mixed, referencing the submitted mix design and the City of Pullman standards, and the minimum density was achieved. To the best of our knowledge, there are no outstanding deficiencies regarding HMA paving in the locations tested.

### **Summary**

This final letter is intended to summarize the major aspects of our CMT services associated with infrastructure construction along Umatilla Court. This summary does not describe the entirety of our scope and the details of our observations are not reproduced herein. These observations were previously transmitted to the project team and City of Pullman in weekly transmittals since project commencement and are included in the attached appendix. See the final construction in Photograph 2, below.



**Photograph 2: Umatilla Court**

GPI accomplished observation and testing services for various infrastructure construction applications authorized by you. To the best of our knowledge, in the locations tested, these construction aspects meet the project specifications. The City of Pullman will likely require compaction testing and



verification of City Standards (95% of Modified Proctor) in foundation locations for lots bearing on fill or a combination of cut and fill. Due to varying moisture contents, our experience has been that moisture conditioning and additional compaction effort is often required to achieve these standards in previously constructed embankments.

Individual lot developments must contemplate their planned construction and seek the appropriate design and testing levels to suit individual budgets and risk tolerance. Specifically, the position of structures as they relate to fill depth and drainage provisions have proven 2 of the most common attributes to foundation, slab, and wall performance. It should also be understood and communicated to future homeowners that they are responsible to direct irrigation away from slopes to reduce their risks increasing slope instability. Additionally, future seeps may develop and increase slope instability under saturated conditions. Therefore, slopes should be vegetated as soon as possible and monitored for maintenance. Specific to lots 13 through 15, these homeowners must be notified of the subsurface drain installed along their lot lines and that the drain is critical to upslope performance as well as the potential for seepage on their lots. Developments on these lots should have robust perimeter and subsurface drains incorporated into construction.

We appreciate the continued opportunities to provide these services for your development and we look forward to any upcoming projects. If we can be of further assistance in clarifying the appended documentation, please do not hesitate to contact GPI.

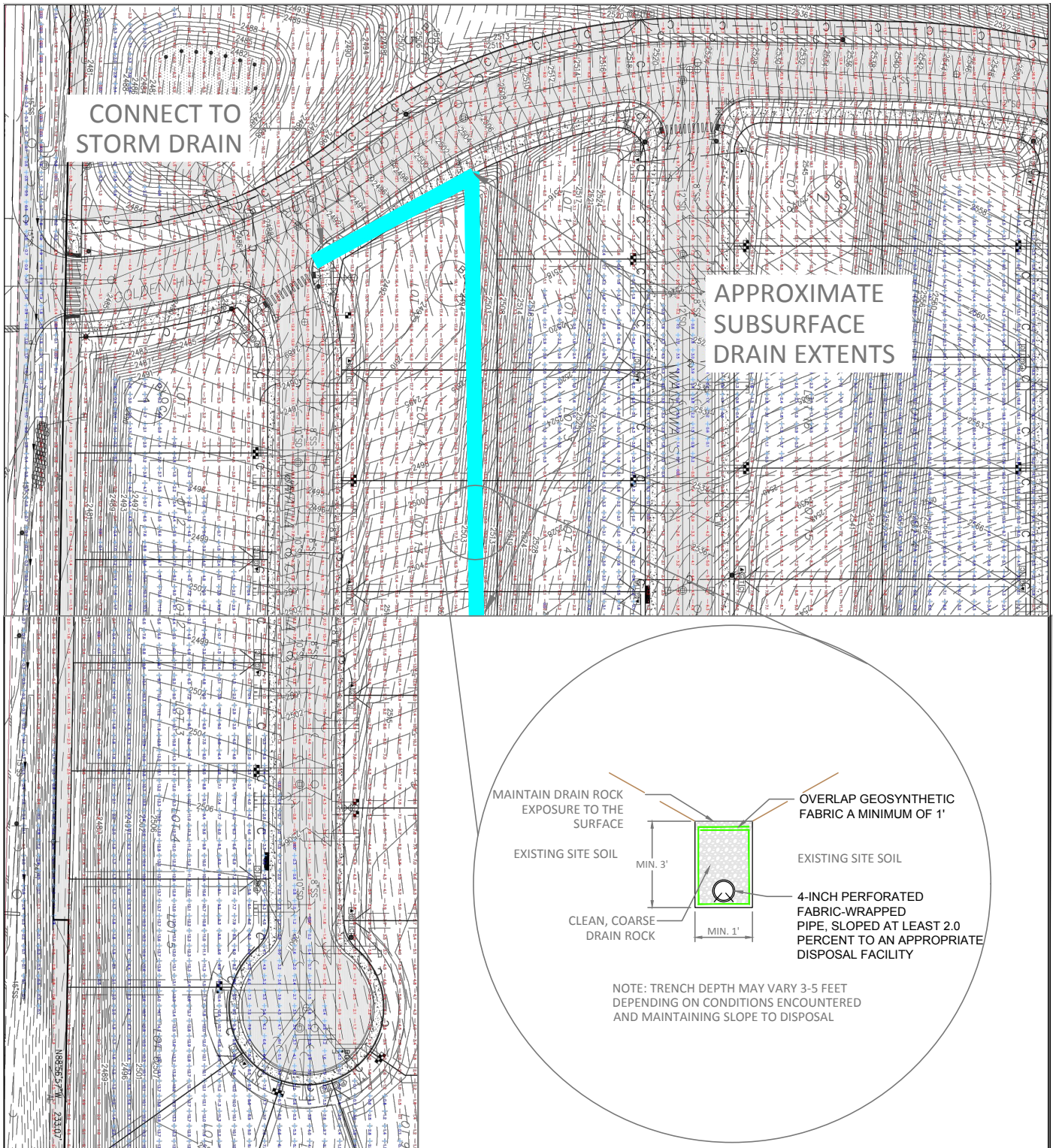
Sincerely,  
GPI



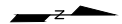
Travis J. Wambeke, P.E.  
Principal Engineer

Attachments: Subsurface Drain Schematic  
CMT Documentation Reports and Laboratory Test Results

TJW/ac



Reference: Cut/Fill tick map provided by  
Parametrix on October 17, 2018.



# **SUBSURFACE DRAIN SCHEMATIC** Sundance South Subdivision Pullman, Washington



**NOT TO SCALE**

PU17128A  
DRAWN BY: JBM

PLATE: 1  
CHECKED BY: TJW

**Pullman**

6 O'Donnell Road  
Pullman, WA 99163  
Phone: 509.339.2000  
Fax: 509.339.2001

**Client:**

KIP Development  
594 SE Bishop Boulevard, Suite 102  
Pullman, WA 99163

**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Activity Details****GeoProfessional:** ABRAMS, ANDY**Weather:** Overcast**Activity Date:** 10/27/2017**Engineer - Project - Site Visit****Activity Hours:** 2.0**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:** Subgrade observation**Reported To:**

Kevin Holmes (Western Construction) and Dave Germer (Germer Construction)

**Narrative:**

I arrived at the project site as requested by Dave Germer with Germer Construction (Western) and Kevin Holmes with Western Construction to observe and document topsoil stripping operations as well as subsurface drainage trench construction as outlined in the project geotechnical report. GPI GeoProfessional, John Persell, was also on site with me to observe and document conditions and interact with the contractors. At the time I arrived on site, Kevin with Western reported his topsoil stripping operation is currently in progress and is not yet complete. Kevin requested that GPI return to the site later in the day to observe topsoil stripping after it is complete. I also discussed with Kevin the geotechnical report requirements regarding subgrade preparation, which outline the minimum 90% compaction referencing ASTM D1557 at the subgrade prior to embankment fill placement. Kevin said he may be ready for subgrade testing this afternoon and would let GPI know during our afternoon visit today.

Also while on site, I interacted with Dave Germer regarding subsurface drainage trench construction as outlined on Plate 2 in GPI's geotechnical deliverable. Germer Construction's crew was at the time I was on site initiating drainage trench construction at the very uphill side of the site by accomplishing an approximate 18-inch wide, 2-foot deep trench with a mini excavator. Shawn with Germer Construction then reported the plan for trench construction will be to line the trench with geotextile fabric, place the fabric wrapped perforated pipe in the base of the trench, and backfill it with drain rock then wrap the top "burrito style". I reported to Shawn that this should meet the geotextile design intent outlined on Plate 2. Parametrix was on site staking the drainage trench alignment, which did not necessarily align with the lowest point in the natural draw existing on site, but was placed there to avoid traversing directly across any given residential lot. As outlined on Plate 2 in GPI's deliverable, drainage trench alignment was intended to traverse in between lot lines. I coordinated with both Kevin and Dave for GPI's visit by John Persell later this afternoon.

**Activity Details****GeoProfessional:** MAFFEY, JUSTIN**Weather:** Overcast**Activity Date:** 11/02/2017**GeoProfessional - Density Testing****Activity Hours:** 6.0**Field Equipment****Density Gauge:** Yes**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Fill area along draw between Waha Court and  
Cayuse Street and fill area south of Umatilla Court



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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Reported To:** Kevin Holmes (Western Construction)

**Narrative:**

I arrived on site as requested by Kevin Holmes with Western Construction to accomplish nuclear density testing of reddish brown clayey silt being placed as structural fill for the future housing areas and roadways. The current fill surface ranged from about 1 to 12 feet below subgrade. Fill material was placed in approximate 1-foot thick lifts and was compacted by a quad-drum sheep's foot roller followed by a fully loaded CAT 631 earth scraper.

Densities measured with the nuclear densometer in the locations tested ranged from approximately 106.8 to 109.4 pcf and 12.3 to 20.0 percent moisture corresponding to 95 and 98 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in the GPI GEE dated 06/29/2017. The material was compacted to a stiff and unyielding condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Mr. Holmes prior to departing the site.

**Activity Details**

**GeoProfessional:** BELL, BRITTON

**Weather:** Overcast

**Activity Date:** 06/04/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 2.0

**Ref. Plans/Specs:** GPI GEE

**General Location:**

South of Waha Court, Cayuse Street, and Umatilla Court

**Reported To:** Kevin Kirkman (Western Construction)

**Narrative:**

I arrived on site as requested by Kevin Kirkman of Western Construction to accomplish nuclear density testing of subgrade being placed as structural fill. Fill material was placed in approximate 1-foot thick lifts from approximately 3-feet below grade to grade and was compacted by a sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 107.0 to 111.6 pcf and 15.7 to 20.5 percent moisture corresponding to 95 and 98 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE, rutting, or deflections beneath compaction equipment. I documented my results and reported to Kevin Kirkman prior to departing the site.

**Activity Details**

**GeoProfessional:** PERSELL, JOHN

**Weather:** Clear

**Activity Date:** 06/06/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 1.5

**Field Equipment**

**Density Gauge:** Yes

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:** Cayuse Street to Umatilla Court**Reported To:** Kevin Holmes (Western Construction)**Narrative:**

I arrived on site as requested by Kevin Holmes with Western Construction (Western) to accomplish nuclear density testing of a silty clay being used as structural fill between Cayuse Street and Umatilla Street. Upon arrival I observed that the structural fill had been compacted using a sheepsfoot roller and scrapers. Compaction of the structural fill had taken place before my arrival although the structural fill appeared to be compacted to a firm, and unyielding surface. Little to no pumping was observed under construction equipment travelling across the site. I performed multiple density tests here, however, one density test achieved the minimum 95% compaction. The remaining tests did not achieve compaction of 95%, with moisture contents ranging from 20% to 23%. I notified Kevin with western who said he would have the areas tested later in the afternoon. After returning to the site later in the day, I retested the failed area, which subsequently passed. I did not document the failing tests as it was rectified the same day. I documented my results and reported to Kevin with Western before departing site.

**Activity Details****GeoProfessional:** MAFFEY, JUSTIN**Weather:** Clear**Activity Date:** 06/07/2018**GeoProfessional - Density Testing****Activity Hours:** 2.5**Field Equipment****Equipment:** Yes**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Between Cayuse Street and Wallowa Street, south  
of Umatilla Court

**Reported To:** Kevin Holmes (Western Construction)**Narrative:**

I arrived on site as requested by Kevin Holmes with Western Construction to accomplish nuclear density testing of light brown silt being placed as embankment fill for the planned residential development. Fill areas tested today included between Cayuse Street and Wallowa Court between Wallowa Street and Umatilla Court, south of Umatilla Court, and along the construction access road on the east side of the site. All areas mentioned above reported passing test results, except an area along the construction access road between Wallowa Street and Umatilla Court. This area was too moist and did not meet compaction requirements. I informed Kevin of the situation and GPI will re-test this area the following day. The current fill surfaces ranged from 1 to 9 feet below subgrade as reported by Mr. Holmes. Material was placed in an approximate 1-foot thick lift and was compacted with a quad-drum sheep's foot roller and CAT 631 earth scrapers.

Densities measured with the nuclear densometer in the locations tested ranged from approximately 106.9 to 108.7 pcf and 14.4 to 20.1 percent moisture corresponding to 95 and 96 percent of the maximum dry density per ASTM D1557; see *In Place Density* sheet for details. In the locations tested, this appears to meet compaction requirements outlined in the GPI GEE dated 06/29/2017. Material was compacted to a stiff and unyielding condition and did not exhibit any significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Mr. Holmes prior to departing the site.

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Activity Details****GeoProfessional:** BELL, BRITTON**Weather:** Clear**Activity Date:** 06/07/2018**GeoProfessional - Density Testing****Activity Hours:** 3.0**Ref. Plans/Specs:**

City of Pullman Standards and GPI GEE

**Plans Date:** 06/27/2017**General Location:**

Cayuse Street and Umatilla Court

**Reported To:** Kevin (Western Construction)**Narrative:**

I arrived on site as requested by Kevin of Western Construction to accomplish nuclear density testing of subgrade being placed as structural fill. Fill material was placed in approximate 1-foot thick lifts from approximately 4-feet below grade to grade and was compacted by a sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 109.0 to 106.9 pcf and 17.3 to 20.6 percent moisture corresponding to 95 and 96 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Kevin prior to departing the site.

**Activity Details****GeoProfessional:** WAMBEKE, TRAVIS**Weather:** Clear**Activity Date:** 06/08/2018**Principal - Site Visit****Activity Hours:** 1.5**Ref. Plans/Specs:** GPI GEE**General Location:** Subgrade review**Reported To:** Kevin Holmes (Western Construction)**Narrative:**

I arrived on site with Justin Maffey from our office and we reviewed wet spots that Kevin reported near the southwestern corner of the project development. At the time of our site visit, we traversed the area with Kevin noting that water was emanating from the slope in a fairly high volume that pooled in the area being sub excavated for eventual drilling and blasting. This water appears to emanate at the slope face near the cut transition. In reviewing the site geometry, it also appeared evident that approximately 100 feet upslope, or north, the prescribed trench drain fill had been stopped near it's design intersection with the eventual storm sewer system to be installed. However, the storm system will not be installed for several months. There was enough surface water being expressed that slope instability is a potential and Kevin reported significant difficulty in obtaining compaction immediately above this area. We visually observed pumping and rutting in the area Kevin described.



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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

It is probable that water in the subgrade trench drain is mounded at its termination point and has enough head behind it that it is being forced down gradient through the soil matrix creating water pressures before eventually daylighting on the slope. These characteristics are problematic for both constructability and long-term performance. My recommendation is that the area be sub excavated and allowed to daylight such that the water can freely flow. This sub excavation will probably measure several hundred cubic yards 4 to 6-feet deep and will need to be backfilled with the drilled and blasted shot rock generated immediately below or an alternative source. Alternatively, the trench drain could be located and extended down along the lot lines to the next downgradient stormwater connection or to the pond. At any rate, my recommendation is this work advance as early as next week to allow construction to proactively continue and to reduce the hazard of instability both short and long term. This lot or 2 will not be suitable for eventual development without implementing some remedy.

**Discrepancy Description:** Water daylighting from the slope face.

## Uploaded Files



**Pullman**

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163



## Activity Details

**GeoProfessional:** CRESSLER, LUCAS

**Weather:** Clear

**Activity Date:** 06/12/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 4.5

**Ref. Plans/Specs:** GPI GEE

**General Location:**

Wallowa Street, Cayuse Street, Waha Court, and south of Wallowa Street

**Reported To:** Kevin Holmes (Western Construction)

**Narrative:**

I arrived on site on three different occasions as requested by Kevin Holmes with Western Construction (Western) to accomplish nuclear density testing of brown silt being placed as embankment fill for the Sundance South Development. Areas tested included fill areas on Waha Court, Cayuse Street, Wallowa Street, and south of Wallowa Street as well as on the far south end of the site. Material was placed in approximate 1-foot thick lifts and was compacted with a quad-drum sheep's foot roller and fully loaded CAT earth scrapers.

Densities measured with the nuclear densometer corresponded to 95 and 100 percent of the maximum dry density per ASTM D1557; see In Place Density sheet for locations and details. In the locations tested, this appears to meet compaction requirements outlined in the GPI GEE dated 6/29/2017. Material was compacted to a dense and interlocking condition and did not exhibit any significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Mr. Holmes prior to departing the site.

## Activity Details

**GeoProfessional:** PERSELL, JOHN

**Weather:** Clear

**Activity Date:** 06/15/2018

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# GeoProfessional Report

**Client:**  
KIP Development  
594 SE Bishop Boulevard, Suite 102  
Pullman, WA 99163

**Project:**  
PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

## GeoProfessional - Density Testing

**Activity Hours: 4.5**

### Field Equipment

**Density Gauge:** Yes

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:**  
Cayuse Street, Umatilla Court, Wallowa Street

**Reported To:** Kevin Holmes (Western Construction)

### Narrative:

I arrived on site three different times today as requested by Kevin Holmes with Western Construction (Western) to accomplish nuclear density testing of a silty clay being used as structural fill on Cayuse Court, Umatilla Court, and Wallowa Street. Upon arrival I observed that the structural fill had been compacted using a sheepsfoot roller and scrapers. Compaction of the structural fill had taken place before my arrival although the structural fill appeared to be compacted to a firm, and unyielding surface. Little to no pumping was observed under construction equipment travelling across the site. I performed multiple density tests here, which achieved the minimum 95% of ASTM D1557 using the modified Proctor.

Additionally, approximately 75% of the lift on Umatilla street was too coarse for testing. I gathered a sample of the material and took it back to the lab for testing and compaction was observed. A sheepsfoot roller and scraper made several passes across the lift. The lift of structural fill appeared compacted to a dense, interlocking, and unyielding position with little to no pumping observed under compaction equipment. I documented my results and reported to Kevin with Western before departing site.

### Activity Details

**GeoProfessional:** WAMBEKE, TRAVIS

**Weather:** Overcast

**Activity Date:** 06/21/2018

**Principal - Site Visit**

**Activity Hours: 1.0**

**Ref. Plans/Specs:** GPI GEE

**General Location:** Wet areas

**Reported To:** Britton Bell (GPI)

### Narrative:

I arrived on site and traversed the project site, focusing on the wet areas previously encountered and engaged with Ron and Kevin. Kevin Holmes with Western Construction was not on site, however Western appeared to be dressing side slopes and constructing rough grades in areas noting the pending wet weather. The wet areas had not substantially diminished since my last visit. However, the basalt had yet to be blasted. The thought is that once the basalt is blasted, it may relieve some of the drainage concerns and these wet spring expressions on the constructed slopes will be reevaluated. Blasting appears to be in preparation and will likely occur in the next day or two based on what I observed. Britton was on site to perform testing and was being directed by Western on where to facilitate those tests.

### Activity Details



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**GeoProfessional:** BELL, BRITTON**Weather:** Rain/Snow**Activity Date:** 06/21/2018**GeoProfessional - Job Cancellation****Activity Hours:** 1.5**Ref. Plans/Specs:** GPI**General Location:** None**Reported To:** Kevin (Western Construction)**Narrative:** I was on call to arrive at the Sundance Street South site for 1.5 hours until my scheduled time was canceled.**Activity Details****GeoProfessional:** BELL, BRITTON**Weather:** Clear**Activity Date:** 06/22/2018**GeoProfessional - Density Testing****Activity Hours:** 3.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/27/2017**General Location:** Waha Court and Umatilla Court**Reported To:** Kevin (Western Construction)**Narrative:**

I arrived on site as requested by Kevin of Western Construction to accomplish nuclear density testing of clay being placed as structural fill. Fill material was placed in approximate 1-foot thick lifts from approximately 3-feet below grade to grade and was compacted by a sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 108.3 to 118.4 pcf and 11.3 to 19.7 percent moisture corresponding to 95 and 100 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in the City of Pullman Standards and GPI GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Kevin prior to departing the site.

**Activity Details****GeoProfessional:** BELL, BRITTON**Weather:** Clear**Activity Date:** 06/25/2018**GeoProfessional - Density Testing****Activity Hours:** 2.0**Ref. Plans/Specs:**

City of Pullman Standards and GPI

**Plans Date:** 06/27/2017**General Location:**

Cayuse Street and Umatilla Court

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**Reported To:** Kevin (Western Construction)

**Narrative:**

I arrived on site as requested by Kevin of Western Construction to accomplish nuclear density testing of subgrade being placed as structural fill. Fill material was placed in approximate 1-foot thick lifts from approximately 2-feet below grade to grade and was compacted by a sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 108.7 to 108.8 pcf and 17.0 to 17.2 percent moisture corresponding to 95 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in the City of Pullman Standards and GPI GEE. I was also called to visually inspect two 1 foot lifts of shot rock being placed on the lowest level. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Kevin prior to departing the site.

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**Activity Details**

**GeoProfessional:** BELL, BRITTON

**Weather:** Clear

**Activity Date:** 06/26/2018

**GeoProfessional - Subgrade Observation**

**Activity Hours:** 2.0

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**Ref. Plans/Specs:**

City of Pullman Standards and GPI GEE

**Plans Date:** 06/27/2017

**General Location:** Umatilla Court

**Reported To:** Kevin (Western Construction)

**Narrative:**

I arrived on site as requested by Kevin of Western Construction to accomplish nuclear density testing shot rock being placed as structural fill. Structural fill utilized by the contractor was too coarse for nuclear density testing per ASTM D 1557. Therefore, compaction procedures were visually observed and documented. Compaction procedures utilized by the contractor included making at least 5 complete passes down and back with a Caterpillar 3 foot grid compactor. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Kevin prior to departing the site.

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**Activity Details**

**GeoProfessional:** BELL, BRITTON

**Weather:** Clear

**Activity Date:** 06/27/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 1.0

**GeoProfessional - Subgrade Observation**

**Activity Hours:** 1.0

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**Ref. Plans/Specs:**

City of Pullman Standards and GPI GEE

**Plans Date:** 06/29/2017

**General Location:**

Cayuse Street and Umatilla Court

**Reported To:** Kevin Holmes (Western Construction)

**Pullman**

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Phone: 509.339.2000  
Fax: 509.339.2001

**Client:**

KIP Development  
594 SE Bishop Boulevard, Suite 102  
Pullman, WA 99163

**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Narrative:**

I arrived on site as requested by Kevin Holmes of Western Construction to accomplish nuclear density testing of subgrade being placed as structural fill. Fill material was placed in approximate 1-foot thick lifts from approximately 2-feet below grade to grade and was compacted by a sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 108.3 to 110.0 pcf and 14.8 to 18.7 percent moisture corresponding from 95 to 96 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in the City of Pullman Standards and GPI GEE. I was also requested to visually inspect two 1 foot lifts of shot rock being placed on the lowest level. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Kevin Holmes prior to departing the site.

**Discrepancy:** Yes

**Activity Details**

**GeoProfessional:** BELL, BRITTON

**Weather:** Clear

**Activity Date:** 06/29/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 2.0

**GeoProfessional - Subgrade Observation**

**Activity Hours:** 1.0

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Middle Tier

**Reported To:** Kevin Holmes (Western Construction)

**Narrative:**

I arrived on site as requested by Kevin Holmes of Western Construction to accomplish nuclear density testing of subgrade being placed as structural fill. Fill material was placed in approximate 1-foot thick lifts from approximately 2-feet below grade to grade and was compacted by a sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 108.4 to 110.3 pcf and 16.9 to 20.1 percent moisture corresponding from 95 to 96 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in the GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Kevin Holmes prior to departing the site.

**Activity Details**

**GeoProfessional:** MAFFEY, JUSTIN

**Weather:** Clear

**Activity Date:** 07/01/2018

**GeoProfessional - Overtime - Subgrade Observation**

**Activity Hours:** 3.0

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Southeast corner of site

**Reported To:** Kevin Holmes (Western Construction)



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# GeoProfessional Report

**Client:**  
KIP Development  
594 SE Bishop Boulevard, Suite 102  
Pullman, WA 99163

**Project:**  
PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

## Narrative:

I arrived on site as requested by Kevin Holmes with Western Construction (Western) to observe the placement and compaction of shotrock being placed as embankment fill in the southeast corner of the site, near Umatilla Ct. I observed Western placing the shotrock in approximate 18-inch lifts and compacting it with a large grid roller attached to a CAT D8 bulldozer, making several passes across the area. The material was compacted to a dense and interlocking condition and did not exhibit any significant deflections beneath compaction equipment. I observed a total of 3 lifts be placed throughout my 2 visits today. I documented my observations and reported to Kevin prior to departing the site.

## Activity Details

**GeoProfessional:** PERSELL, JOHN

**Weather:** Clear

**Activity Date:** 07/03/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 1.5

## Field Equipment

**Equipment:** Yes

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Umatilla Street

**Reported To:** Kevin Holmes (Western Construction)

## Narrative:

I arrived on site as requested by Kevin Holmes with Western Construction (Western) to observe compaction of shot rock that is too coarse for testing being placed as structural fill at the southeast corner of Umatilla street. Upon arrival I observed that the structural fill was being placed in approximate 6 inch lifts. A grid roller was being used for compaction as a CAT dozer pushed out each scraper load of shot-rock that was placed here. Several passes were made with the grid roller and the structural fill appeared to be compacted to a dense, interlocking, and unyielding position. Little to no pumping was observed under construction equipment travelling across the lift. The dozer operator with Western informed me that approximately 7 feet of fill was left to be placed here. I documented my results and reported to Kevin with Western before departing site.

## Activity Details

**GeoProfessional:** ABRAMS, ANDY

**Weather:** Clear

**Activity Date:** 07/03/2018

**Engineer - Project - Site Visit**

**Activity Hours:** 2.0

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Density Testing

**Reported To:** Kevin Holmes (Western Construction)

## Narrative:

I arrived at the project site to perform density testing on clay mined from on site being placed as embankment fill in the very eastern corners of the residential lot locations at the eastern extents of the project site. On the southernmost fill bench and next bench to the

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

north is the placement location for today. The locations I tested varied from approximately 10 feet below finish grade to 1 foot below finish grade, as reported by Tyler with Western Construction based on the GPS unit attached to the bulldozer on site. Fill was placed in approximate 12-inch thick lift and compacted via multiple passes of a sheep's foot roller to a stiff, unyielding condition which did not exhibit pumping or rutting beneath compaction equipment. In the locations I tested, compaction exceeded the required 95% referencing ASTM D1557. Tyler and Kevin reported to me that they planned to blast additional bedrock at 1pm today and will resume placing coarse shotrock as structural fill. See GPI GeoProfessional, John Persell's, fill report for this additional observation for today's construction activities.

## Activity Details

**GeoProfessional:** KANNENBERG, JOSHUA**Weather:** Clear**Activity Date:** 07/11/2018**GeoProfessional - Density Testing****Activity Hours:** 2.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Waha Ct Storm Drain line backfill

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond of Germer Construction to accomplish nuclear density testing of backfill being placed for sewer lines. Fill material was placed in approximate 1-foot thick lifts from approximately 0-2 feet below grade, compaction was accomplished using a sheep's foot and trench rollers. Tested areas included the Waha Ct. Sewer Main.

In-situ densities measured with the nuclear densometer corresponded to 96 to 102 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in the GPI GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Shawn Hammond prior to departing the site.

## Activity Details

**GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 08/13/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 5.5**Ref. Plans/Specs:** GPI GEE**General Location:**

Wallowa Street and Umatilla Street

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of reddish brown clay and 5/8" minus crushed gravel being placed for fill on Umatilla Street and Wallowa Street trench and utilities. The current fill surface was about 6 feet below finish base to 4 feet below finish base as reported by Sean. Fill material was placed in approximate 1 foot thick lifts from approximately 8-feet below finish base to 4 feet below finish base and was compacted with a large single drum vibrating

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**Project:**

PU17212B  
Sundance South Subdivision  
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sheeps foot.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 120.9 to 144.5 pcf and 5.6 to 17.5 percent moisture corresponding to 95 to 100 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

**Activity Details**

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 08/14/2018

**GeoProfessional - Overtime - Density Testing**

**Activity Hours:** 6.5

**Ref. Plans/Specs:** GPI GEE

**General Location:**

Wallowa Street and Umatilla Street

**Reported To:** Sean Hammond (Germer Construction)

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of reddish brown clay and 5/8" minus crushed gravel being placed for fill on Umatilla Street and Wallowa Street trench and utilities. The current fill surface was about 6 feet below finish base to 4 feet below finish base as reported by Sean. Fill material was placed in approximate 1 foot thick lifts from approximately 5-feet below finish base to 3 feet below finish base and was compacted with a large single drum vibrating sheeps foot.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 122.5 to 131.6 pcf and 13.0 to 18.4 percent moisture corresponding to 95 to 99.7 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

**Activity Details**

**GeoProfessional:** WAMBEKE, TRAVIS

**Weather:** Clear

**Activity Date:** 08/15/2018

**Engineer - Principal - Site Visit**

**Activity Hours:** 1.5

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Construction progress

**Reported To:** Shawn (Germer Construction)

**Narrative:**

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I arrived on site and reviewed the construction activities which were between 80 and 90% complete with subsurface utility construction along Wallowa Street. I was keenly interested in the water now ponding at the intersection of Golden Hills Drive and Wallowa Street. This water had not been present previously, or at least since my last site visit. Shawn with Germer reported the majority of the trenches were moist but not wet. At this sanitary sewer located in Golden Hills Drive where Germer was initiating the northbound connection, water pooled to a depth of approximately 18 inches in the manhole. The excavation immediately north of the manhole was moist but did not show signs of free moisture. I concluded that water must be penetrating the trench and following the coarse trench backfill, accumulating in the manhole. Although proximate to the ponding occurring immediately northeast of the intersection of Wallowa Street and Golden Hills Drive, seepage was not evident in the excavation sidewalls.

I traversed the 3 to 4 lots on the southside of Wallowa trending east from Golden Hills Drive. These are located immediately above the seepage exposed in the cut slope below. This seepage remains a concern and has not resolved itself from the blasting that occurred at the development entrance. Lateral drains had not extended over the hillside to collect and pull this water down. It is important to evaluate how to control this water. The source of it generally is upgradient and at its surface expression appears to be mounded above the basal bedrock. However, the source of the water will not be cutoff or controlled. Rather, we simply need to seek avenues to collect the water so it is not a nuisance or pose a landsliding hazard on these lots. I have contacted Ron and Kevin to further evaluate their desires in pursuing this resolution.

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 08/20/2018

**GeoProfessional - Overtime - Density Testing**

**Activity Hours:** 6.5

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:**

Wallowa Street, Umatilla Street, and Golden Hills Drive

**Reported To:** Sean Hammond (Germer Construction)

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of reddish brown clay and 5/8" minus crushed gravel being placed for fill on Wallowa Street trench and utilities as well as Golden Hills Drive's storm drain trench. The current fill surface was about 4 feet below finish road subgrade to 2 feet below finish road subgrade on Golden Hills Drive and 2.5 feet to 0.5 feet below finish road subgrade on Wallowa Street as reported by Sean. Fill material was placed in approximate 1 to 2 foot thick lifts from approximately 4-feet below finish road subgrade to a half foot below finish road subgrade and was compacted with a large single drum vibrating sheeps foot as well as a sheep's foot trench roller on the Golden Hills Drive storm drain trench.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 120.3 to 145.8 pcf wet density and 6.4 to 16.7 percent moisture corresponding to 95 to 100 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 08/27/2018

**GeoProfessional - Overtime - Density Testing**

**Activity Hours:** 2.5



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**Project:**

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Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Ref. Plans/Specs:** GPI GEE**General Location:** Umatilla Street cul-de-sac**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of reddish brown clay and 5/8" minus crushed gravel being placed for sanitation sewers and storm drains on Umatilla Street cul-de-sac. The current fill surface was about 7 feet below finish road subgrade to 5.5 feet below finish road subgrade on the northern trench and 2 feet to 3 feet below finish road subgrade on the main storm drain and sanitation system as reported by Sean. Fill material was placed in approximate 1 foot thick lifts from approximately 4 feet below finish road subgrade to a 2 feet below finish road subgrade and was compacted with a vibrating sheep's foot trench roller and "jumping jack" wacker.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.5 to 137.2 pcf dry density and 4.9 to 7.3 percent moisture corresponding to 95 to 98 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 08/28/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 5.0**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:** Umatilla Street cul-de-sac**Reported To:** Sean Hammond(Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of back fill being placed for sanitation sewers and storm drains on Umatilla Street cul-de-sac. The current fill surface was about 5 feet below finish road subgrade to 4 feet below finish road subgrade on the northern trench and 2 feet to 3 feet below finish road subgrade on the main storm drain and sanitation system as reported by Sean. Fill material was placed in approximate 1 foot thick lifts from approximately 5 feet below finish road subgrade to a 2 feet below finish road subgrade and was compacted with a vibrating sheep's foot trench roller and "J" tamper.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.4 to 141.8 pcf dry density and 3.3 to 7.6 percent moisture corresponding to 95 to 101 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 08/30/2018

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**Project:**

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Sundance South Subdivision  
Sundance Court  
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**GeoProfessional - Overtime - Density Testing****Activity Hours: 6.0****Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Umatilla Street and Golden Hills Drive

**Reported To:** Sean Hammond (Gemer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of reddish brown clay and 5/8" minus crushed gravel being placed for sanitation sewers and storm drains on Umatilla Street cul-de-sac. The current fill surface was about 5 feet below finish road subgrade to 4 feet below finish road subgrade on the northern trench and 1 foot to at finish road subgrade on the main storm drain and sanitation system. On Golden Hills Drive, the current fill surface was 1 foot below finish road subgrade to 2 feet below finished road subgrade as reported by Sean. Fill material was placed in approximate 1 foot thick lifts from approximately 5 feet below finish road subgrade to a 1 foot below finish road subgrade and was compacted with a vibrating sheep's foot trench roller, large single drum vibrating sheep's foot roller and "J" tamper.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 108.8 to 141.5 pcf dry density and 4.9 to 14.3 percent moisture corresponding to 95 to 119 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

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**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 08/31/2018**GeoProfessional - Overtime - Density Testing****Activity Hours: 6.0****Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Umatilla Street and Golden Hills Drive

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel reddish brown clay and 5/8" minus crushed gravel being placed for sanitation sewers and storm drains on Umatilla Street and clay back fill being placed on Golden Hills Drive. The current fill surface was about 5 feet below finish road subgrade to 3 feet below finish road subgrade on the main sanitation and storm drain trench and 3 feet below finish road subgrade to 1 foot below finish road subgrade on the southern utility trenches on Umatilla Street. On Golden Hills Drive, the current fill surface was 1 foot below finish road subgrade to 2 feet below finished road subgrade as reported by Sean. Fill material was placed in approximate 1 foot thick lifts from approximately 5 feet below finish road subgrade to a 1 foot below finish road subgrade and was compacted with a vibrating sheep's foot trench roller, large single drum vibrating sheep's foot roller and "J" tamper.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.3 to 142.1 pcf dry density and 3.7 to 14.4 percent moisture corresponding to 95 to 101 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

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# GeoProfessional Report

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Pullman, WA 99163

**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

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Fill material to coarse for testing was being placed prior to my departure comprised of clay and localized shot rock in between storm drain piping and sanitation piping in troughs between manhole 7 and 6. A photo was taken and uploaded to the report for documentation.

I documented my results and reported to Sean prior to departing the site.

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**Uploaded Files**

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PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163



**Upload Description:**

Material too coarse for testing placed in between storm drain piping and sanitation piping from manhole 7 to 6

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 09/04/2018

**GeoProfessional - Overtime - Density Testing**

**Activity Hours:** 5.0



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**Project:**

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Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Umatilla Street and Golden Hills Drive

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of clay reddish brown clay and 5/8" minus crushed gravel being placed for sanitation sewers and storm drains on Umatilla Street and gravel back fill being placed on Golden Hills Drive. The current fill surface was about 2 feet below finish road subgrade to finish road subgrade on the main sanitation and storm drain trench and utility trenches on Umatilla Street. On Golden Hills Dr, the current fill surface was 3.5 foot below finish road subgrade to 2 feet below finished road subgrade as reported by Sean. Fill material was placed in approximate 1 foot thick lifts from approximately 4 feet below finish road subgrade to road subgrade and was compacted with a vibrating sheep's foot trench roller and large single drum vibrating sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 108.4 to 136.2 pcf dry density and 4.4 to 19.6 percent moisture corresponding to 95 to 101 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 09/05/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 3.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Umatilla Street between manhole 6.5 and 6

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of clay reddish brown clay and being placed for sanitation sewers and storm drains on Umatilla Street. The current fill surface was about 2 feet below finish road subgrade on the main sanitation and storm drain trench and utility trenches on Umatilla Street as reported by Sean. Fill material was placed prior to my arrival and was compacted with a large single drum vibrating sheep's foot roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 108.7 to 111.0 pcf dry density and 17.5 to 17.7 percent moisture corresponding to 95 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

**Activity Details**

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**Project:**

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Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 09/06/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 5.0**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Umatilla Street between manhole 6.5 and 6.  
Golden Hills Drive. north of manhole 4. Cayuse  
Street storm drain run off.

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of clay reddish brown clay and being placed for sanitation sewers and storm drains on Umatilla Street and gravel being placed as backfill for storm drain and sanitation trenches along Golden Hills Drive as well as storm drain runoff on Cayuse Street. The current fill surface was about 2 feet below finish road subgrade on the main sanitation and storm drain trench and utility trenches on Umatilla Street 4 to 5 feet below finish road subgrade and 5 to 1 foot below finished road subgrade on Cayuse Street, as reported by Sean. Fill material was placed prior to my arrival and was compacted with a large single drum vibrating sheep's foot roller, J tamper and vibrating sheeps foot trench roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 113.6 to 154.1 pcf dry density and 2.8 to 14.3 percent moisture corresponding to 95 and 110 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 09/10/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 5.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Golden Hills Drive sanitation trench, waterline, and  
waterline tie in

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed for waterline and sanitation trench being placed on Golden Hills Drive. The current fill surface was about 5.5 to finish road subgrade. Fill material was placed prior to my arrival and was compacted with a J tamper and vibrating sheeps foot trench roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.4 to 139.7 pcf dry density and 3.6 to 7.5 percent moisture corresponding to 95 and 100 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

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**Client:**

KIP Development  
594 SE Bishop Boulevard, Suite 102  
Pullman, WA 99163

**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

I documented my results and reported to Sean prior to departing the site.

### Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 09/11/2018

**GeoProfessional - Overtime - Density Testing**

**Activity Hours:** 3.5

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:**

Golden Hills Drive. sanitation trench, waterline and waterline tie in

**Reported To:** Sean Hammond (Germer Construction)

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed for waterline trench being placed on Golden Hills Drive. The current fill surface was about 1 to 2 feet below finish road subgrade. Fill material was placed prior to my arrival and was compacted with a J tamper and vibrating sheeps foot trench roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 133.4 to 134.6 pcf dry density and 4.8 to 5.3 percent moisture corresponding to 95 and 96 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

### Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 09/12/2018

**GeoProfessional - Overtime - Density Testing**

**Activity Hours:** 1.5

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Work canceled

**Reported To:** Sean Hammond (Germer Construction)

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing. No testing was done do to no new lifts being placed. Waterlines are being installed on Cayuse Street. and Wallowa Street. Further testing will be needed tomorrow morning.

### Activity Details

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# GeoProfessional Report

**Client:**

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Pullman, WA 99163

**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

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**GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 09/13/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 1.5

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**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:** Work canceled**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing. No testing was done do to no new lifts being placed. Waterlines are being installed on Cayuse Street and Wallowa Street. Further testing will be needed tomorrow morning.

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**Client:**

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Sundance South Subdivision  
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Pullman, WA 99163

**Activity Details****GeoProfessional:** SAUL, NICK**Weather:** Clear**Activity Date:** 09/15/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 1.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Cayuse Street waterline and Waha Court waterline

**Reported To:** Sean Hammond (Germer)**Narrative:**

I arrived on site as requested by Sean Hammond (Germer) to accomplish nuclear density testing of 3/8 minus gravel being placed as structural fill for the Waha Court and Cayuse Street waterline trenches. Fill material was placed in approximate 6-inch thick lifts and was compacted by walk behind trench rollers and handheld compactors. In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 126.5 to 137 pcf and 4.2 to 7.8 percent moisture failing to meet required minimum compaction of 95 percent in 3 out of 4 test locations; see In-Place Density Test Sheet for results and locations. I documented my results and reported to Sean Hammond prior to departing the site.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 09/20/2018**GeoProfessional - Density Testing****Activity Hours:** 2.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Wallowa Street, Cayuse Street, Golden Hills Drive, Umatilla Court and Waha Street. waterline trench

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed for waterline trenches installed on Wallowa Street, Cayuse Street, Golden Hills Drive, Umatilla Court, and Waha Street waterline trench. The current fill surface was about 0.5 to 2 feet below finish road subgrade. Fill material was placed prior to my arrival and was compacted with a J tamper and vibrating sheep's foot trench roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.5 to 136.8 pcf dry density and 3.7 to 8.0 percent moisture corresponding to 95 and 98 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Activity Details****GeoProfessional:** WAMBEKE, TRAVIS**Weather:** Clear**Activity Date:** 09/24/2018**Engineer - Principal - Site Visit****Activity Hours:** 1.0**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:** Construction progress**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site to review the construction progress since my last site visit. Roadway subgrades had been achieved with the exception of isolated utility backfill areas. In my traverse throughout the project site, no soft or unstable areas were visually evident. A haul truck was proof compacting in a couple of roadway areas noting no significant deflection or rutting. Sean noted that he had initiated his waterline pressure test. Once that passes, the City will take over and install laterals and Germer will advance curb and sidewalk grades. Sean estimated that would occur in the next 2 weeks. Once sidewalk and curb is established, paving will occur relatively quickly thereafter.

No modifications to the slopes along Umatilla Street where continuous seepage has been observed throughout the project's duration. I reminded Sean to construct the underdrains that I understood Kevin and Ron had approved prior to completing curb and sidewalk. Additionally, it is important that I witness these underdrains and the conditions exposed during their construction.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 09/25/2018**GeoProfessional - Density Testing****Activity Hours:** 4.0**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Umatilla Street and Golden Hills Drive waterline trench

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed for waterline trenches installed on Umatilla Street and Golden Hills Drive waterline trench. The current fill surface was about at to 2 feet below finish road subgrade. Fill material was placed prior to my arrival and was compacted with a J tamper and vibrating sheeps foot trench roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.8 to 143.5 pcf dry density and 3.8 to 6.1 percent moisture corresponding to 95 and 102 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean prior to departing the site.

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# GeoProfessional Report

**Client:**  
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**Project:**  
PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 09/26/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 1.5

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Work canceled

**Reported To:** Sean Hammond (Germer Construction)

### Narrative:

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing but no new lifts have been placed. Further testing is requested Friday morning.

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 10/04/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 3.0

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:** Umatilla Court and Waha Street

**Reported To:** Sean Hammond (Germer Construction)

### Narrative:

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed as structural fill for waterline, storm line and manhole trenches. The current fill surface was about 1 foot below finished road subgrade as reported by Sean. Fill material was placed in approximate 1-foot thick lifts from approximately 3-feet below finished road subgrade finish road subgrade and was compacted by J tamper and vibrating sheep's foot trench roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 130.7 to 139.3 pcf and 3.2 to 5.5 percent moisture corresponding to 95 and 100 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Sean Hammond prior to departing the site.

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Clear

**Activity Date:** 10/11/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 2.0

**GeoProfessional - Sampling**

**Activity Hours:** 1.5

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Umatilla Street and Golden Hills Drive

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed as structural fill for utility trenches and manhole trenches. The current fill surface was about 1 foot below finished road subgrade to at finished road subgrade as reported by Sean. Fill material was placed in approximate 1-foot thick lifts from approximately 1-foot below finished road subgrade to 0 feet below finish road subgrade and was compacted by J tamper and vibrating sheep's foot trench roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.6 to 134.5 pcf dry density and 3.3 to 7.6 percent moisture corresponding to 95 and 96 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

While on location I also obtained a gravel sample for the road base grade. I took it back to the lab for Modified Proctor testing.

I documented my results and reported to Sean Hammond prior to departing the site.

## Activity Details

**GeoProfessional:** WAMBEKE, TRAVIS**Weather:** Clear**Activity Date:** 10/17/2018**Engineer - Principal - Site Visit****Activity Hours:** 1.0**Ref. Plans/Specs:** NA**General Location:** Construction progress**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

In preparation for producing final letters on various lots and roadways for the project, I arrived on site and reviewed the construction progress. At this point, the only street that is entirely covered with some base course is Golden Hills Drive. Waha is close and the subsequent street south is receiving base at this time. Remaining roadways were continuing to be worked on. There is quite a bit of utility work at the entrance to the subdivision. Franchise utility ditches are open behind curb line on every roadway. According to Sean, Knox Concrete will be on site to advance curb and Gutter along Waha as early as tomorrow.



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Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 10/22/2018**GeoProfessional - Short Notice - Density Testing****Activity Hours:** 3.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Golden Hills Drive eastern curbside

**Reported To:** Sean Hammond (Germer Construction)**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed as structural fill for the eastern curbs on Golden Hills Dr. The current fill surface was at finished road subgrade as reported by Sean. Fill material was placed in approximate 5-inch thick lifts from approximately 0.5-feet below road subgrade and was compacted by a large vibrating smooth drum roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 134.7 to 139.5 pcf dry density and 2.7 to 4.4 percent moisture corresponding to 95 and 98 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I documented my results and reported to Sean Hammond prior to departing the site.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 10/29/2018**GeoProfessional - Short Notice - Density Testing****Activity Hours:** 6.0**Ref. Plans/Specs:** GPI's GEE**Plans Date:** 06/29/2017**General Location:**Golden Hills Drive, Waha Court, Cayuse Street,  
Umatilla Street**Reported To:** Sean Hammond with Germer Construction**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed as structural fill for the road subgrade. The current fill surface was about at finish grade, as reported by Sean. Fill material was placed prior to my arrival and was compacted with a large vibrating single drum roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 134.2 to 145.7 pcf and 2.8 to 6.6 percent moisture corresponding to 95 and 103 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

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**Project:**

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Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

I completed testing Waha Ct., Cayuse St., and Golden Hills Dr. down to Umatilla St. The southern 150' of Golden Hills Dr. was unfinished and waiting to be bladed and rolled prior to my departure. Wallowa and Umatilla St. still has to be tested prior to paving.

I documented my results and reported to Sean Hammond with Germer Construction prior to departing the site.

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Overcast

**Activity Date:** 11/02/2018

**GeoProfessional - Density Testing**

**Activity Hours:** 4.0

**Ref. Plans/Specs:** GPI GEE

**Plans Date:** 06/29/2017

**General Location:**

Golden Hills Drive, Umatilla Street, and Wallowa Street

**Reported To:** Sean Hammond with Germer Construction

**Reported To:** Lucas Sanders with Motley-Motley, Inc.

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed as structural fill for the road subgrade. The current fill surface was about at final road subgrade as reported by Sean. Fill material was placed prior to my arrival and compacted with a large vibrating single drum roller.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.4 to 137.6 pcf dry density and 4.6 to 7.2 percent moisture corresponding to 95 and 98 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment.

I arrived a second time at the request Lucas Sanders with Motley-Motley, Inc. to accomplish additional density testing. Upon arrival, no new material had been added to the completed roads. I spoke with Lucas and no further testing was needed.

I documented my results and reported to Sean Hammond with Germer Construction prior to departing the site.

## Activity Details

**GeoProfessional:** PAULSEN, ZACH

**Weather:** Overcast

**Activity Date:** 11/07/2018

**GeoProfessional - Asphalt Density Testing**

**Activity Hours:** 6.0

**Ref. Plans/Specs:** City of Pullman Standards

**General Location:**

Wallowa Street and Umatilla Street

**Reported To:** Sean Hammond with Germer Construction

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of hot mix asphalt

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

(HMA) being placed along Wallówa and Umatilla Street. A theoretical maximum density (Rice) of 160.1 pcf was provided based on the 1/2-inch mix design. Approximately 500 tons of HMA were placed and compacted by Motley-Motley, Inc. (Motley). The roller pattern used to achieve compaction included a vibratory breakdown of 4 passes with a Dynapac CC1200 roller followed by 2 vibratory passes and 1 static pass with a CAT CB53 for the intermediate rolling, and finished with a couple static passes with the CAT roller. A total of 20 quality assurance tests were recorded, all achieving a minimum of 91% of the Rice value. This appears to meet compaction requirements outlined in the City of Pullman Standards.

I documented my results and reported to Colt with Motley prior to departing the site.

## Activity Details

**GeoProfessional:** MAFFEY, JUSTIN

**Weather:** Clear

**Activity Date:** 11/08/2018

**GeoProfessional - Job Cancellation**

**Activity Hours:** 1.5

**Ref. Plans/Specs:** N/A

**General Location:** Sundance South Development

**Reported To:** Sean Hammond (Germer Construction, Inc.)

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction, Inc. (Germer) to accomplish nuclear density testing of the hot mix asphalt paving, yet paving was cancelled for the day. No notice was given to GPI so a job cancellation applies.

## Activity Details

**GeoProfessional:** KANNENBERG, JOSHUA

**Weather:** Overcast

**Activity Date:** 11/09/2018

**GeoProfessional - Asphalt Density Testing**

**Activity Hours:** 5.5

**Ref. Plans/Specs:** City of Pullman Standards

**General Location:** Golden Hills Drive

**Reported To:** Sean Hammond (Germer Construction)

**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of hot mix asphalt (HMA) being placed along Golden Hills Drive and the approach to Golden Hills from Highway 27 at the south entrance to the project site. A theoretical maximum density (Rice) of 160.1 pcf was provided based on the 1/2-inch mix design. The HMA was placed and compacted by Motley-Motley, Inc. (Motley). The roller pattern used to achieve compaction included a vibratory breakdown of 4 passes with a Dynapac CC1200 roller followed by 2 vibratory passes and 1 static pass with a CAT CB24 for the intermediate rolling, and finished with a couple static passes with the CAT roller. A total of 16 quality assurance tests were recorded, all achieving a minimum of 91% of the Rice value. This appears to meet compaction requirements outlined in the City of Pullman Standards. I documented my results and reported to Sean with Germer and Colt with Motley prior to departing the site.

## Activity Details

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**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

**GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 11/10/2018**GeoProfessional - Overtime - Density Testing****Activity Hours:** 1.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Western approach of Golden Hills Drive

**Reported To:** Sean Hammond with Germer Construction**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of gravel being placed as structural fill for the road subgrade. The current fill surface was about at finish road subgrade, as reported by Sean. Fill material was placed and compacted prior to my arrival.

In-situ densities measured with the nuclear densometer in the locations tested ranged from approximately 132.4 to 137.4 pcf dry density and 2.6 to 5.0 percent moisture corresponding to 95 and 98 percent of the maximum dry density per ASTM D1557; see In-Place Density Test Sheet for results and locations. In the locations tested, this appears to meet the minimum compaction requirements outlined in GPI's GEE. The material was compacted to a dense and interlocking condition and did not exhibit significant pumping, rutting, or deflections beneath compaction equipment. I documented my results and reported to Sean Hammond with Germer Construction prior to departing the site.

**Activity Details****GeoProfessional:** PAULSEN, ZACH**Weather:** Clear**Activity Date:** 11/12/2018**GeoProfessional - Asphalt Density Testing****Activity Hours:** 5.5**Ref. Plans/Specs:** GPI GEE**Plans Date:** 06/29/2017**General Location:**

Golden Hills Drive western side of the road

**Reported To:** Sean Hammond with Germer Construction**Narrative:**

I arrived on site as requested by Sean Hammond with Germer Construction to accomplish nuclear density testing of hot mix asphalt (HMA) being placed along the western side of Golden Hills Drive. A theoretical maximum density (Rice) of 160.1 pcf wet density was provided based on the 1/2-inch mix design. Approximately 450 tons of HMA were placed and compacted by Motley-Motley, Inc. (Motley). The roller pattern used to achieve compaction included a vibratory breakdown of 4 passes with a Dynapac CC1200 roller followed by 2 vibratory passes and 1 static pass with a CAT CB53 for the intermediate rolling and finished with a couple static passes with the CAT roller. A total of 12 quality assurance tests were recorded, all achieving a minimum of 91% of the Rice value. This appears to meet compaction requirements outlined in the City of Pullman Standards.

I documented my results and reported to Colt with Motley prior to departing the site.

## Client:

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## Project:

PU17212B  
Sundance South Subdivision  
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Pullman, WA 99163

## Activity Details

GeoProfessional: Carlson, Amanda

Weather: Clear

Activity Date: 05/30/2019

GeoProfessional - Density Testing

Activity Hours: 4.0

## Ref. Plans/Specs:

PUL17269, 140 pcf maximum dry density

## General Location: Golden Hills Drive

Reported To: Matt, Germer Construction, Inc.

## Narrative:

I arrived on site as requested by Dave Germer. I checked in with Matt Longl of Germer Construction, Inc. and verified the tests that were needed. I took numerous density tests along the footpath base course on the south side of the houses on the south side of Sundance Court, along the path extending south from 605 Sundance Court, and the path base course along the west side of Golden Hills Dr. and the north side of Highway 195 with a Nuclear Density Gauge and recorded the results. The compaction values for the tests run were between 95-96% of the maximum dry density for the paths on the south side of the houses on the south side of Sundance Court and the path base course extending along Highway 195. The compaction values for the path base course on the west side of Golden Hills Dr. were between 88-93% of the maximum dry density for the areas tested. The area of the lower compaction test results begins at approximately 50 feet south of utility box J17707 extending to the intersection of Golden Hills Dr. and Highway 95. The moisture content was 2.9-5.0% for the areas tested. Please see the in place density test report for more information. I spoke with Matt and reported the area of the base course that tested for lower compaction percentages. He said that he would apply water to the aggregate and attempt to compact it further. I reported to Matt when I left the job site.

## Activity Details

GeoProfessional: Hanley, Joshua

Weather: Overcast

Activity Date: 05/31/2019

GeoProfessional - Density Testing

Activity Hours: 3.0

## Ref. Plans/Specs:

PUL17269, 140 pcf maximum dry density

## General Location: Golden Hills Drive

Reported To: Matt, Germer Construction, Inc.

## Narrative:

I arrived on site as requested by Matt with Germer Construction inc. I performed density testing on the walkway path on the west side of Golden Hills Dr. from Waha court to S. Grand Ave. Some of the density tests from the day prior had been deficient due to low moisture contents and compaction percentages. While I was on site I had observed the moisture conditioning of the material, which consisted of two passes with a water truck. The material had then been compacted with 6 vibratory passes of a dynapac CC122 roller. After performing density tests Matt requested I return again later in the day after the contractor had finished reworking the material. Upon arrival for the second time today, the material had been compacted and appeared to be dense and interlocking. The compaction values for the tests performed appeared to meet or exceed the minimum requirement of 95% of the maximum dry density per ASTM 1557. Please see the in place density test report for more information. I reported to Matt when I left the job site.



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## Activity Details

GeoProfessional: Wambeke, Travis

Weather: Overcast

Activity Date: 07/11/2019

Engineer - Principal - Site Visit

Activity Hours: 1.0

Ref. Plans/Specs: NA

General Location: Umatilla subdrain

Reported To: Fred Wexler

## Narrative:

Per an electronic mail received from Kevin this morning, I visited the project site and noted that Fred Wexler was in the process of excavating along the primary access roadway to facilitate a connection ditch to the stormwater system. This ditch will vary between 3 and 6 feet in depth and geotextile fabric will be placed to line the trench. A perforated PVC pipe will be placed in the base and drain rock placed over the pipe. The material being excavated was wet clay loess or clay fill. Fred discussed with me the need to wrap the fabric if the drain rock was coming all the way to the surface. I noted to Fred that if drain rock was exposed at the surface that fabric need not wrap the drain rock. I also thought that extending rock to the surface along the roadway and sidewalk would provide improved surface drainage into the subdrain system.

I traversed upslope to the cross subdrain along the first 3 lot lines off Umatilla Court. The downslope side of the drain ditch was only about 2 feet deep. As I interacted with Fred on the anticipated depth, Fred clarified that he was simply trying to control surface water at the onset of their efforts. The drain will indeed extend 5 to 6 feet below the existing ground surface to collect water both from the surface and subsurface seepage. This drain trench will be lined with geotextile fabric and a perforated ADS pipe will be placed in the base of the trench, surrounded by drain rock to near or at the surface. Where soil is expected to be placed over the top of the trench drain and the fabric shall be overlapped as previously specified.

It sounded like there would be nothing further for me to observe today but I will plan on a site visit tomorrow to verify the drain extension and continued construction means and methods.

## Activity Details

GeoProfessional: Wambeke, Travis

Weather: Clear

Activity Date: 07/12/2019

Engineer - Principal - Site Visit

Activity Hours: 1.0

Ref. Plans/Specs: GPI GEE

General Location: Subsurface drain

Reported To: Fred Wexler

Reported To: Ruth Younce

## Narrative:

I returned to the site Friday to review Wexler's advancement of the subsurface drain. At the time I arrived on site, Fred has extended the pipe to the east-west bent along the back of the lots. South of this location, the drain was backfilled with drain rock and geotextile fabric was evident at the edges. Ruth was on site and had previously noted via electronic mail that the future lot owner would most certainly landscape this area and therefore, fabric over the drain rock was necessary. I agreed and understood Fred was going to advance this work.

Fred was mucking out excess soil south of the drain location. Water was readily flowing into the termination of the north to south drain at its bent to east-west. Fred was going to allow that water to drain over the weekend, the area dry out and will finish the drain next Monday and Tuesday. I will return on Monday.

**Client:**

KIP Development  
594 SE Bishop Boulevard, Suite 102  
Pullman, WA 99163

**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163

## Activity Details

**GeoProfessional:** Wambeke, Travis

**Weather:** Overcast

**Activity Date:** 07/15/2019

**Engineer - Principal - Site Visit**

**Activity Hours:** 1.0

**Ref. Plans/Specs:** GPI GEE

**General Location:** 3rd Lot

**Reported To:** Fred Wexler

**Narrative:**

I arrived on site and observed the drain excavation which was approaching the 3rd and final lot. The drain was excavated to the bedrock surface which varied from about 4 to 5 feet below the surface. Geotextile fabric was placed along with a perforated ADS pipe. Drain rock surrounded the pipe up to 1 foot from the surface, leaving enough fabric to overlap the rock. The adjacent slope was slightly undercut in this process and I noted to Fred that it would need to be graded back to avoid reducing the slope support. Fred noted the area in front of the drain was going to be cut down and would facilitate this grading process. I expect the drain will be complete today and grading will commence tomorrow. It appears this aspect of construction will be complete by midweek.

## Uploaded Files



**Client:**

KIP Development  
594 SE Bishop Boulevard, Suite 102  
Pullman, WA 99163

**Project:**

PU17212B  
Sundance South Subdivision  
Sundance Court  
Pullman, WA 99163



| Test Results                        |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 1                                   |  | 10/27/17  | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.7                  | 96.3                                 | 8                | 84                 | 90 / 103          | DF/MF  |
| 2                                   |  | 10/27/17  | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                  | 105.4                                | 8                | 92                 | 90 / 103          | DP/MP  |
| 3                                   |  | 10/27/17  | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 104.1                                | 8                | 91                 | 90 / 103          | DP/MP  |
| 4                                   | 1  | 10/27/17  | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.9                  | 102.8                                | 8                | 90                 | 90 / 103          | DP/MP  |
| 5                                   |  | 10/30/17  | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.6                  | 113.0                                | 8                | 99                 | 95 / 103          | DP     |
| 6                                   |  | 10/30/17  | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.2                  | 108.4                                | 8                | 95                 | 95 / 103          | DP     |
| 7                                   |  | 10/30/17  | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.8                  | 109.2                                | 8                | 95                 | 95 / 103          | DP     |
| 8                                   |  | 10/30/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.2                  | 102.6                                | 8                | 91                 | 90 / 103          | DP     |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 1                                   | Fill - Subgrade: Fill  |           |            |        |  |                      |                           |                       | Troxler / 3430 / 37625 / 2/3/2017    |                  |                    | PERSELL, JOHN     |        |
| 2                                   | Fill - Subgrade: Fill  |           |            |        |  |                      |                           |                       | Troxler / 3430 / 37625 / 2/3/2017    |                  |                    | PERSELL, JOHN     |        |
| 3                                   | Fill - Subgrade: Fill  |           |            |        |  |                      |                           |                       | Troxler / 3430 / 37625 / 2/3/2017    |                  |                    | PERSELL, JOHN     |        |
| 4                                   | Fill - Subgrade: Fill  |           |            |        |  |                      |                           |                       | Troxler / 3430 / 37625 / 2/3/2017    |                  |                    | PERSELL, JOHN     |        |
| 5                                   | Fill - Subgrade: Fill al9ng draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 18.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 6                                   | Fill - Subgrade: Fill al9ng draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 18.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 7                                   | Fill - Subgrade: Fill al9ng draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 18.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 8                                   | Fill - Subgrade: Fill al9ng draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 14.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DF/MF: Density Fail / Moisture Fail |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass                    |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |



| Test Results     |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark |
| 9                |  | 10/30/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.4                  | 102.6                      | 8                                    | 91                 | 90 / 103          | DP     |
| 10               |  | 10/30/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.8                  | 105.1                      | 8                                    | 93                 | 90 / 103          | DP     |
| 11               |  | 10/30/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.8                  | 101.3                      | 8                                    | 90                 | 90 / 103          | DP     |
| 12               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.8                  | 107.6                      | 8                                    | 95                 | 95 / 103          | DP     |
| 13               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                  | 107.4                      | 8                                    | 95                 | 95 / 103          | DP     |
| 14               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.1                      | 8                                    | 95                 | 95 / 103          | DP     |
| 15               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.7                      | 8                                    | 95                 | 95 / 103          | DP     |
| 16               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.8                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician  |        |
| 9                | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 15.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 10               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 11               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 12               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 13               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 14               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 15               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 16               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |        |



| Test Results     |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark |
| 17               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 107.6                      | 8                                    | 95                 | 95 / 103          | DP     |
| 18               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                  | 106.8                      | 8                                    | 95                 | 95 / 103          | DP     |
| 19               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.0                  | 110.4                      | 8                                    | 98                 | 95 / 103          | DP     |
| 20               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 107.5                      | 8                                    | 95                 | 95 / 103          | DP     |
| 21               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.2                  | 107.7                      | 8                                    | 95                 | 95 / 103          | DP     |
| 22               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.6                  | 108.9                      | 8                                    | 96                 | 95 / 103          | DP     |
| 23               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.4                      | 8                                    | 95                 | 95 / 103          | DP     |
| 24               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.4                  | 107.7                      | 8                                    | 95                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician  |        |
| 17               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 20.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 18               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 19               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 20               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 5.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 21               | Fill - Subgrade: Fill in NE corner of site. Along Waha Ct.             |           |            |        |  |                      | 5.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 22               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 17.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 23               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 17.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 24               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 17.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                                    |                  |                    |                   |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)         | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 25               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.3                              | 8                | 96                 | 95 / 103          | DP     |
| 26               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 108.2                              | 8                | 96                 | 95 / 103          | DP     |
| 27               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                  | 108.3                              | 8                | 96                 | 95 / 103          | DP     |
| 28               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 107.0                              | 8                | 95                 | 95 / 103          | DP     |
| 29               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.3                  | 109.1                              | 8                | 97                 | 95 / 103          | DP     |
| 30               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.9                              | 8                | 95                 | 95 / 103          | DP     |
| 31               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.4                  | 108.8                              | 8                | 96                 | 95 / 103          | DP     |
| 32               |   | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 110.2                              | 8                | 98                 | 95 / 103          | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                    |                  |                    |                   |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge                              |                  |                    | Field Technician  |        |
| 25               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 17.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| 26               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 17.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| 27               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 16.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| 28               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 12.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| 29               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 6.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| 30               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 3.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| 31               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 16.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| 32               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 16.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017 |                  |                    | MAFFEY, JUSTIN    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                    |                  |                    |                   |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                    |                  |                    |                   |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark |
| 33               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.1                  | 107.4                      | 8                                    | 95                 | 95 / 103          | DP     |
| 34               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.9                  | 106.9                      | 8                                    | 95                 | 95 / 103          | DP     |
| 35               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 107.4                      | 8                                    | 95                 | 95 / 103          | DP     |
| 36               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.9                  | 108.1                      | 8                                    | 96                 | 95 / 103          | DP     |
| 37               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 109.0                      | 8                                    | 96                 | 95 / 103          | DP     |
| 38               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.5                      | 8                                    | 95                 | 95 / 103          | DP     |
| 39               |  | 10/31/17  | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.1                      | 8                                    | 95                 | 95 / 103          | DP     |
| 40               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.0                      | 8                                    | 96                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician  |        |
| 33               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 16.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 34               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 16.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 35               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 16.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 36               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 37               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 38               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 39               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 40               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|------------------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark           |
| 41               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 107.8                      | 8                                    | 95                 | 95 / 103          | DP               |
| 42               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.2                  | 107.7                      | 8                                    | 95                 | 95 / 103          | DP               |
| 43               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.1                  | 107.5                      | 8                                    | 95                 | 95 / 103          | DP               |
| 44               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP               |
| 45               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.0                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP               |
| 46               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.1                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP               |
| 47               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.6                  | 107.5                      | 8                                    | 95                 | 95 / 103          | DP               |
| 48               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.0                      | 8                                    | 95                 | 95 / 103          | DP               |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    |                   | Field Technician |
| 41               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 42               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 43               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 17.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 44               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 45               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 46               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 15.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 47               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 15.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 48               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 12.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |                  |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |                  |

| Test Results     |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 49               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 107.3                                | 8                | 95                 | 95 / 103          | DP     |
| 50               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 107.4                                | 8                | 95                 | 95 / 103          | DP     |
| 51               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.2                  | 108.9                                | 8                | 96                 | 95 / 103          | DP     |
| 52               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.8                  | 107.3                                | 8                | 95                 | 95 / 103          | DP     |
| 53               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 108.8                                | 8                | 96                 | 95 / 103          | DP     |
| 54               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.2                  | 107.0                                | 8                | 95                 | 95 / 103          | DP     |
| 55               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.8                  | 107.5                                | 8                | 95                 | 95 / 103          | DP     |
| 56               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 109.9                                | 8                | 97                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 49               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 9.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 50               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 51               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 52               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 15.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 53               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 15.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 54               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 15.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 55               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 8.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 56               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 12.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |



| Test Results     |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark |
| 57               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.8                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP     |
| 58               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.2                  | 106.9                      | 8                                    | 95                 | 95 / 103          | DP     |
| 59               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.4                  | 107.5                      | 8                                    | 95                 | 95 / 103          | DP     |
| 60               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.5                  | 107.0                      | 8                                    | 95                 | 95 / 103          | DP     |
| 61               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.4                  | 108.2                      | 8                                    | 96                 | 95 / 103          | DP     |
| 62               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.4                  | 107.7                      | 8                                    | 95                 | 95 / 103          | DP     |
| 63               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.2                      | 8                                    | 95                 | 95 / 103          | DP     |
| 64               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.9                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician  |        |
| 57               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 12.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 58               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 59               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 12.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 60               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 11.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 61               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 62               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 63               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| 64               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | MAFFEY, JUSTIN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|------------------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark           |
| 65               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.0                  | 106.9                      | 8                                    | 95                 | 95 / 103          | DP               |
| 66               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 106.8                      | 8                                    | 95                 | 95 / 103          | DP               |
| 67               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 109.0                      | 8                                    | 96                 | 95 / 103          | DP               |
| 68               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 106.8                      | 8                                    | 95                 | 95 / 103          | DP               |
| 69               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 108.3                      | 8                                    | 96                 | 95 / 103          | DP               |
| 70               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.3                  | 107.2                      | 8                                    | 95                 | 95 / 103          | DP               |
| 71               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.3                  | 107.5                      | 8                                    | 95                 | 95 / 103          | DP               |
| 72               |  | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 106.8                      | 8                                    | 95                 | 95 / 103          | DP               |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    |                   | Field Technician |
| 65               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 66               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 67               | Fill - Subgrade: Fill in NE corner of site. North and east of Waha Ct. |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 68               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 15.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 69               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 15.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 70               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 14.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 71               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.       |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 72               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St.    |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |                  |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |                  |

**Client:**

KIP Development  
 594 SE Bishop Boulevard, Suite 102  
 Pullman, WA 99163

**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|------------------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark           |
| 73               |   | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.1                  | 108.4                      | 8                                    | 96                 | 95 / 103          | DP               |
| 74               |   | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.8                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP               |
| 75               |   | 11/1/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 106.8                      | 8                                    | 95                 | 95 / 103          | DP               |
| 76               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 107.1                      | 8                                    | 95                 | 95 / 103          | DP               |
| 77               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 108.2                      | 8                                    | 96                 | 95 / 103          | DP               |
| 78               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.1                      | 8                                    | 96                 | 95 / 103          | DP               |
| 79               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.7                  | 108.7                      | 8                                    | 96                 | 95 / 103          | DP               |
| 80               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.8                  | 106.9                      | 8                                    | 95                 | 95 / 103          | DP               |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    |                   | Field Technician |
| 73               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 74               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 75               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 12.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 76               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 1.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 77               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 12.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 78               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 9.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 79               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 11.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 80               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St.    |           |            |        |  |                      | 5.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |                  |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|-------------------|------------------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min/Max Comp. (%) | Remark           |
| 81               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.6                  | 108.6                      | 8                                    | 96                 | 95 / 103          | DP               |
| 82               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.1                  | 106.9                      | 8                                    | 95                 | 95 / 103          | DP               |
| 83               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.1                  | 107.4                      | 8                                    | 95                 | 95 / 103          | DP               |
| 84               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.3                  | 108.3                      | 8                                    | 96                 | 95 / 103          | DP               |
| 85               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 107.0                      | 8                                    | 95                 | 95 / 103          | DP               |
| 86               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.8                  | 107.3                      | 8                                    | 95                 | 95 / 103          | DP               |
| 87               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.8                  | 107.8                      | 8                                    | 95                 | 95 / 103          | DP               |
| 88               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.9                  | 107.0                      | 8                                    | 95                 | 95 / 103          | DP               |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                   |                  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    |                   | Field Technician |
| 81               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 82               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 3.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 83               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 9.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 84               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 5.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 85               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 86               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 87               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| 88               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 6.0                       | BSG                   |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    |                   | MAFFEY, JUSTIN   |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                   |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                   |                  |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 89               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.7                  | 107.7                                   | 8                | 95                 | 95 / 103          | DP     |
| 90               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.0                  | 108.3                                   | 8                | 96                 | 95 / 103          | DP     |
| 91               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.4                  | 107.6                                   | 8                | 95                 | 95 / 103          | DP     |
| 92               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.3                  | 109.4                                   | 8                | 97                 | 95 / 103          | DP     |
| 93               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.6                  | 109.1                                   | 8                | 97                 | 95 / 103          | DP     |
| 94               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.1                  | 110.2                                   | 8                | 98                 | 95 / 103          | DP     |
| 95               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.8                  | 106.8                                   | 8                | 95                 | 95 / 103          | DP     |
| 96               |   | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.0                  | 107.5                                   | 8                | 95                 | 95 / 103          | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 89               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 6.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 90               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 4.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 91               | Fill - Subgrade: Fill along draw between Cayuse St. and Wallowa St. |           |            |        |  |                      | 4.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 92               | Fill - Subgrade: Fill south of Umatilla St.                         |           |            |        |  |                      | 5.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 93               | Fill - Subgrade: Fill south of Umatilla St.                         |           |            |        |  |                      | 5.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 94               | Fill - Subgrade: Fill south of Umatilla St.                         |           |            |        |  |                      | 5.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 95               | Fill - Subgrade: Fill south of Umatilla St.                         |           |            |        |  |                      | 2.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 96               | Fill - Subgrade: Fill south of Umatilla St.                         |           |            |        |  |                      | 2.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |



| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 97               |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.1                  | 107.1                                   | 8                | 95                 | 95 / 103          | DP     |
| 98               |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.3                  | 106.8                                   | 8                | 95                 | 95 / 103          | DP     |
| 99               |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                  | 108.4                                   | 8                | 96                 | 95 / 103          | DP     |
| 100              |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.7                  | 106.9                                   | 8                | 95                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 97               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 12.0                      | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 98               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 4.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 99               | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 1.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| 100              | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 5.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | MAFFEY, JUSTIN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 101              |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.3                  | 106.8                                | 8                | 95                 | 95 / 103          | DP     |
| 102              |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.4                                | 8                | 95                 | 95 / 103          | DP     |
| 103              |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 108.1                                | 8                | 96                 | 95 / 103          | DP     |
| 104              |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.7                  | 108.1                                | 8                | 96                 | 95 / 103          | DP     |
| 105              |  | 11/2/17   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.7                  | 107.3                                | 8                | 95                 | 95 / 103          | DP     |
| 106              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.7                  | 108.4                                | 8                | 96                 | 95 / 103          | DP     |
| 107              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 108.8                                | 6                | 96                 | 95 / 103          | DP     |
| 108              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.9                  | 107.0                                | 8                | 95                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge                                |                  |                    | Field Technician  |        |
| 101              | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 5.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 102              | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 5.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 103              | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 2.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 104              | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 2.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 105              | Fill - Subgrade: Fill along draw between Waha Ct. and Cayuse St. |           |            |        |  |                      | 4.0                       | BSG                   | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | MAFFEY, JUSTIN    |        |
| 106              | Fill - Embankment: Between Waha Ct. and Cayuse St.               |           |            |        |  |                      | 7.0                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | MAFFEY, JUSTIN    |        |
| 107              | Fill - Embankment: Between Waha Ct. and Cayuse St.               |           |            |        |  |                      | 11.5                      | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | MAFFEY, JUSTIN    |        |
| 108              | Fill - Embankment: Between Cayuse St.and Wallowa St.             |           |            |        |  |                      | 9.5                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | MAFFEY, JUSTIN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 109              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.5                  | 107.6                                   | 8                | 95                 | 95 / 103          | DP     |
| 110              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.7                  | 107.5                                   | 8                | 95                 | 95 / 103          | DP     |
| 111              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.4                  | 109.3                                   | 8                | 97                 | 95 / 103          | DP     |
| 112              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.2                  | 109.0                                   | 8                | 96                 | 95 / 103          | DP     |
| 113              |  | 5/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 21.4                  | 107.0                                   | 8                | 95                 | 95 / 103          | DP     |
| 114              |  | 5/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 108.5                                   | 8                | 96                 | 95 / 103          | DP     |
| 115              |  | 5/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 109.5                                   | 8                | 97                 | 95 / 103          | DP     |
| 116              |  | 5/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 109.6                                   | 8                | 97                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 109              | Fill - Embankment: Between Cayuse St.and Wallowa St. |           |            |        |  |                      | 4.5                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | MAFFEY, JUSTIN    |        |
| 110              | Fill - Embankment: Between Waha St. And Cayuse St.   |           |            |        |  |                      | 2.5                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | MAFFEY, JUSTIN    |        |
| 111              | Fill - Embankment: Between Waha St. And Cayuse St.   |           |            |        |  |                      | 4.5                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | MAFFEY, JUSTIN    |        |
| 112              | Fill - Embankment: Between Cayuse St. And Wallowa St |           |            |        |  |                      | 9.0                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | MAFFEY, JUSTIN    |        |
| 113              | Fill - Embankment: Between Cayuse St. And Wallowa St |           |            |        |  |                      | 9.0                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | MAFFEY, JUSTIN    |        |
| 114              | Subgrade: Between Waha Court and Cayuse Street       |           |            |        |  |                      | -6.5                      | Feet below grade      | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | OKEEFE, KYLE      |        |
| 115              | Subgrade: Between Waha Court and Cayuse Street       |           |            |        |  |                      | -6.5                      | Feet below grade      | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | OKEEFE, KYLE      |        |
| 116              | Subgrade: Between Waha Court and Cayuse Street       |           |            |        |  |                      | -6.5                      | Feet below grade      | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | OKEEFE, KYLE      |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of                                      | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 117              |  | 5/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 107.8                                | 8                | 95                 | 95 / 103          | DP     |
| 118              |  | 5/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.7                  | 106.9                                | 8                | 95                 | 95 / 103          | DP     |
| 119              |  | 5/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.3                  | 107.2                                | 8                | 95                 | 95 / 103          | DP     |
| 120              |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.2                                | 8                | 95                 | 95 / 103          | DP     |
| 121              |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.3                  | 107.0                                | 8                | 95                 | 95 / 103          | DP     |
| 122              |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 107.5                                | 8                | 95                 | 95 / 103          | DP     |
| 123              |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.7                  | 106.9                                | 8                | 95                 | 95 / 103          | DP     |
| 124              |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                  | 107.9                                | 8                | 95                 | 95 / 103          | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #           | Test Location                                  |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 117              | Subgrade: Between Waha Court and Cayuse Street |           |            |        |  |                      | -5.5                      | Feet below grade      | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | OKEEFE, KYLE      |        |
| 118              | Subgrade: Between Waha Court and Cayuse Street |           |            |        |  |                      | -5.5                      | Feet below grade      | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | OKEEFE, KYLE      |        |
| 119              | Subgrade: Between Waha Court and Cayuse Street |           |            |        |  |                      | -5.5                      | Feet below grade      | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | OKEEFE, KYLE      |        |
| 120              | Fill - Structural: Between Waha and Cayuse     |           |            |        |  |                      | 6.5                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PERSELL, JOHN     |        |
| 121              | Fill - Structural: Between Waha and Cayuse     |           |            |        |  |                      | 4.5                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PERSELL, JOHN     |        |
| 122              | Fill - Structural: Between Waha and Cayuse     |           |            |        |  |                      | 4.5                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PERSELL, JOHN     |        |
| 123              | Fill - Structural: Between Waha and Cayuse     |           |            |        |  |                      | 3.5                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PERSELL, JOHN     |        |
| 124              | Fill - Structural: Between Waha and Cayuse     |           |            |        |  |                      | 3.5                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PERSELL, JOHN     |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #                              | Retest Of                                  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 125                                 |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.1                  | 106.9                                   | 8                | 95                 | 95 / 103          | DP     |
| 126                                 |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.1                  | 107.0                                   | 8                | 95                 | 95 / 103          | DP     |
| 127                                 |  | 5/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                  | 107.2                                   | 8                | 95                 | 95 / 103          | DP     |
| 128                                 |  | 5/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.5                  | 112.9                                   | 8                | 99                 | 95 /              | DP     |
| 129                                 |  | 5/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.4                  | 109.5                                   | 8                | 96                 | 95 /              | DP/MF  |
| 130                                 |  | 5/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.5                  | 109.5                                   | 8                | 96                 | 95 /              | DP     |
| 131                                 |  | 5/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.1                  | 109.2                                   | 8                | 95                 | 95 /              | DP     |
| 132                                 |  | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.2                  | 109.6                                   | 8                | 96                 | 95 /              | DP     |
| Test Information                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #                              | Test Location                              |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 125                                 | Fill - Structural: Between Waha and Cayuse |           |            |        |  |                      | 1.5                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN     |        |
| 126                                 | Fill - Structural: Between Waha and Cayuse |           |            |        |  |                      | 6.0                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN     |        |
| 127                                 | Fill - Structural: Between Waha and Cayuse |           |            |        |  |                      | 6.0                       | Below grade           | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN     |        |
| 128                                 | Subgrade: Second Road Downhill             |           |            |        |  |                      | 2,566.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 129                                 | Subgrade: Second Road Downhill             |           |            |        |  |                      | 2,566.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 130                                 | Subgrade: Second Road Downhill             |           |            |        |  |                      | 2,566.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 131                                 | Subgrade: Second Road Downhill             |           |            |        |  |                      | 2,566.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 132                                 | Fill - Subgrade: Second street downhill    |           |            |        |  |                      | 2,506.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DP: Density Pass                    |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |
| DP/MF: Density Pass / Moisture Fail |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |



| Test Results     |                                   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|------------------|-----------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of                         | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 133              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.5                  | 109.5                                | 8                | 96                 | 95 /              | DP     |
| 134              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.7                  | 109.1                                | 8                | 95                 | 95 /              | DP     |
| 135              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.3                  | 109.0                                | 8                | 95                 | 95 /              | DP     |
| 136              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 109.9                                | 8                | 96                 | 95 /              | DP     |
| 137              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 108.3                                | 8                | 95                 | 95 /              | DP     |
| 138              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.0                  | 108.4                                | 8                | 95                 | 95 /              | DP     |
| 139              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.8                  | 111.4                                | 8                | 97                 | 95 /              | DP     |
| 140              |                                   | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.2                  | 108.5                                | 8                | 95                 | 95 /              | DP     |
| Test Information |                                   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #           | Test Location                     |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 133              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,506.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 134              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 135              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 136              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 137              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 138              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 139              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 140              | Fill - Subgrade: South of waha ct |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| Remarks          |                                   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass |                                   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |

| Test Results     |                                     |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|------------------|-------------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of                           | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 141              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.4                  | 108.9                                | 8                | 95                 | 95 /              | DP     |
| 142              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                  | 114.1                                | 8                | 100                | 95 /              | DP     |
| 143              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.8                  | 110.0                                | 8                | 96                 | 95 /              | DP     |
| 144              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.3                  | 108.5                                | 8                | 95                 | 95 /              | DP     |
| 145              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.4                  | 109.6                                | 8                | 96                 | 95 /              | DP     |
| 146              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 20.0                  | 108.8                                | 8                | 95                 | 95 /              | DP     |
| 147              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 108.8                                | 8                | 95                 | 95 /              | DP     |
| 148              |                                     | 5/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.5                  | 109.3                                | 8                | 95                 | 95 /              | DP     |
| Test Information |                                     |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #           | Test Location                       |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 141              | Fill - Subgrade: South of waha ct   |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 142              | Fill - Subgrade: South of waha ct   |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 143              | Fill - Subgrade: Second Street down |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 144              | Fill - Subgrade: Second Street down |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 145              | Fill - Subgrade: Second Street down |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 146              | Fill - Subgrade: Second Street down |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 147              | Fill - Subgrade: Waha Ct            |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | CAMPBELL, CHARLIE |        |
| 148              | Fill - Subgrade: Waha Ct            |           |            |        |  |                      | 2,450.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| Remarks          |                                     |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass |                                     |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |   |                    |                   |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|-------------------|------------------|
| Test #           | Retest Of                                       | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min/Max Comp. (%) | Remark           |
| 149              |   | 5/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                  | 108.7                      | 8                                       | 96                 | 95 /              | DP               |
| 150              |   | 5/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 107.6                      | 8                                       | 95                 | 95 /              | DP               |
| 151              |   | 5/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.9                  | 108.6                      | 8                                       | 96                 | 95 /              | DP               |
| 152              |   | 5/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.4                  | 111.3                      | 8                                       | 98                 | 95 /              | DP               |
| 153              |   | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.8                  | 110.6                      | 8                                       | 97                 | 95 /              | DP               |
| 154              |   | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.5                  | 108.3                      | 8                                       | 95                 | 95 /              | DP               |
| 155              |   | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.4                  | 113.9                      | 8                                       | 99                 | 95 /              | DP               |
| 156              |   | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.9                  | 109.9                      | 8                                       | 96                 | 95 /              | DP               |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |   |                    |                   |                  |
| Test #           | Test Location                                   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    |                   | Field Technician |
| 149              | Fill - Embankment: Draw between Cayuse and Waha |           |            |        |  |                      | 6.0                       | BSG                   |                            | Troxler / 3430 / 22354 / 4/19/2018      |                    |                   | MAFFEY, JUSTIN   |
| 150              | Fill - Embankment: South end                    |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 22354 / 4/19/2018      |                    |                   | MAFFEY, JUSTIN   |
| 151              | Fill - Embankment: South end                    |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 22354 / 4/19/2018      |                    |                   | MAFFEY, JUSTIN   |
| 152              | Fill - Embankment: South end                    |           |            |        |  |                      | 10.0                      | BSG                   |                            | Troxler / 3430 / 22354 / 4/19/2018      |                    |                   | MAFFEY, JUSTIN   |
| 153              | Fill - Subgrade: Waha Ct                        |           |            |        |  |                      | 2,603.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    |                   | BELL, BRITTON    |
| 154              | Fill - Subgrade: Waha Ct                        |           |            |        |  |                      | 2,603.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    |                   | BELL, BRITTON    |
| 155              | Fill - Subgrade: Waha Ct                        |           |            |        |  |                      | 2,603.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    |                   | BELL, BRITTON    |
| 156              | Fill - Subgrade: Waha Ct                        |           |            |        |  |                      | 2,603.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    |                   | BELL, BRITTON    |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                   |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                   |                  |

| Test Results     |                                       |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|------------------|---------------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of                             | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 157              |                                       | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.3                  | 109.1                                | 8                | 95                 | 95 /              | DP     |
| 158              |                                       | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.1                  | 108.8                                | 8                | 95                 | 95 /              | DP     |
| 159              |                                       | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.9                  | 110.1                                | 8                | 96                 | 95 /              | DP     |
| 160              |                                       | 5/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.2                  | 108.8                                | 8                | 95                 | 95 /              | DP     |
| 161              |                                       | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.9                  | 108.3                                | 8                | 95                 | 95 /              | DP     |
| 162              |                                       | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 20.0                  | 108.7                                | 8                | 95                 | 95 /              | DP     |
| 163              |                                       | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.9                  | 108.9                                | 8                | 95                 | 95 /              | DP     |
| 164              |                                       | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                  | 110.3                                | 8                | 96                 | 95 /              | DP     |
| Test Information |                                       |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #           | Test Location                         |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 157              | Fill - Subgrade: Waha Ct              |           |            |        |  |                      | 2,603.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 158              | Fill - Subgrade: Waha Ct              |           |            |        |  |                      | 2,603.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 159              | Fill - Subgrade: South of Waha Ct     |           |            |        |  |                      | 2,603.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 160              | Fill - Subgrade: South of Waha Ct     |           |            |        |  |                      | 2,603.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 161              | Fill - Subgrade: Second Road Downhill |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 162              | Fill - Subgrade: Second Road Downhill |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 163              | Fill - Subgrade: Second Road Downhill |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 164              | Fill - Subgrade: Second Road Downhill |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| Remarks          |                                       |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass |                                       |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |

| Test Results     |                          |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|------------------|--------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of                | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 165              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.6                  | 109.1                                | 8                | 95                 | 95 /              | DP     |
| 166              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.2                  | 108.6                                | 8                | 95                 | 95 /              | DP     |
| 167              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 20.6                  | 108.5                                | 8                | 95                 | 95 /              | DP     |
| 168              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.9                  | 110.0                                | 8                | 96                 | 95 /              | DP     |
| 169              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.1                  | 109.0                                | 8                | 95                 | 95 /              | DP     |
| 170              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 108.8                                | 8                | 95                 | 95 /              | DP     |
| 171              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 108.5                                | 8                | 95                 | 95 /              | DP     |
| 172              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 108.3                                | 8                | 95                 | 95 /              | DP     |
| Test Information |                          |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #           | Test Location            |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 165              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 166              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 167              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 168              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 169              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 170              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 171              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,690.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 172              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| Remarks          |                          |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass |                          |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |



| Test Results     |                          |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|------------------|--------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of                | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 173              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.5                  | 107.9                                   | 8                | 94                 | 95 /              | DF     |
| 174              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.7                  | 108.3                                   | 8                | 95                 | 95 /              | DP     |
| 175              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.7                  | 108.7                                   | 8                | 95                 | 95 /              | DP     |
| 176              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.9                  | 108.3                                   | 8                | 95                 | 95 /              | DP     |
| 177              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.3                  | 109.5                                   | 8                | 96                 | 95 /              | DP     |
| 178              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.5                  | 110.1                                   | 8                | 96                 | 95 /              | DP     |
| 179              | 173                      | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.1                  | 109.7                                   | 8                | 96                 | 95 /              | DP     |
| 180              |                          | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.2                  | 109.7                                   | 8                | 96                 | 95 /              | DP     |
| Test Information |                          |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #           | Test Location            |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 173              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 174              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 175              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 176              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 177              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 178              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 179              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| 180              | Fill - Subgrade: Waha Ct |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON     |        |
| Remarks          |                          |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DF: Density Fail |                          |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |
| DP: Density Pass |                          |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #                              | Retest Of                                | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 181                                 |  | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.1                  | 109.1                                | 8                | 95                 | 95 /              | DP     |
| 182                                 |  | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.5                  | 108.5                                | 8                | 95                 | 95 /              | DP     |
| 183                                 |  | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.9                  | 109.1                                | 8                | 95                 | 95 /              | DP     |
| 184                                 |  | 5/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.0                  | 108.4                                | 8                | 95                 | 95 /              | DP     |
| 185                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.4                                | 8                | 96                 | 95 /              | DP/MP  |
| 186                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 109.3                                | 8                | 97                 | 95 /              | DP/MP  |
| 187                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                                | 8                | 95                 | 95 /              | DP/MP  |
| 188                                 |  | 5/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                  | 112.9                                | 8                | 99                 | 95 /              | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #                              | Test Location                            |           |            |        |  |                      | Elevation                 | Reference             | Gauge                                |                  |                    | Field Technician  |        |
| 181                                 | Fill - Subgrade: Second Street Downhill  |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 182                                 | Fill - Subgrade: Second Street Downhill  |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 183                                 | Fill - Subgrade: Second Street Downhill  |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 184                                 | Fill - Subgrade: Second Street Downhill  |           |            |        |  |                      | 2,565.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | BELL, BRITTON     |        |
| 185                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| 186                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| 187                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| 188                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP: Density Pass                    |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #                              | Retest Of                                | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 189                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 110.3                                   | 8                | 98                 | 95 /              | DP/MP  |
| 190                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                  | 107.8                                   | 8                | 95                 | 95 /              | DP/MP  |
| 191                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 106.8                                   | 8                | 95                 | 95 /              | DP/MP  |
| 192                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 109.2                                   | 8                | 97                 | 95 /              | DP/MP  |
| 193                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 111.1                                   | 8                | 98                 | 95 /              | DP/MP  |
| 194                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 109.3                                   | 8                | 97                 | 95 /              | DP/MP  |
| 195                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.5                                   | 8                | 96                 | 95 /              | DP/MP  |
| 196                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 109.3                                   | 8                | 97                 | 95 /              | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #                              | Test Location                            |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 189                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| 190                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| 191                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| 192                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| 193                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| 194                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| 195                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| 196                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS   |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|-------------------|--------|
| Test #                              | Retest Of                                | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min/Max Comp. (%) | Remark |
| 197                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 111.9                                | 8                | 99                 | 95 /              | DP/MP  |
| 198                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                  | 106.9                                | 8                | 95                 | 95 /              | DP/MP  |
| 199                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 110.2                                | 8                | 98                 | 95 /              | DP/MP  |
| 200                                 |  | 5/25/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 110.3                                | 8                | 98                 | 95 /              | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                   |        |
| Test #                              | Test Location                            |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 197                                 | Fill - Embankment: Wanna court, East end |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| 198                                 | Fill - Embankment: Cayuse st, West end   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| 199                                 | Fill - Embankment: Cayuse st, West end   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| 200                                 | Fill - Embankment: Cayuse st, West end   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS   |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                   |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                   |        |

| Test Results                        |                              |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of                    | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 201                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.5                                   | 8                | 96                 | 95               | DP/MP  |
| 202                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                  | 108.6                                   | 8                | 96                 | 95               | DP/MP  |
| 203                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 111.1                                   | 8                | 98                 | 95               | DP/MP  |
| 204                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 113.9                                   | 8                | 101                | 95               | DP/MP  |
| 205                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 110.4                                   | 8                | 98                 | 95               | DP/MP  |
| 206                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 110.1                                   | 8                | 97                 | 95               | DP/MP  |
| 207                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 107.6                                   | 8                | 95                 | 95               | DP/MP  |
| 208                                 |                              | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.4                                   | 8                | 96                 | 95               | DP/MP  |
| Test Information                    |                              |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location                |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 201                                 | Fill - Embankment: Coyuse ct |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| 202                                 | Fill - Embankment: Waha st   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| 203                                 | Fill - Embankment: Waha st   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| 204                                 | Fill - Embankment: Waha st   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| 205                                 | Fill - Embankment: Waha st   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| 206                                 | Fill - Embankment: Waha st   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| 207                                 | Fill - Embankment: Waha st   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| 208                                 | Fill - Embankment: Waha st   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                              |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                              |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |



| Test Results                        |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of                              | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 209                                 |  | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 109.4                                | 8                | 97                 | 95               | DP/MP  |
| 210                                 |  | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 106.8                                | 8                | 95                 | 95               | DP/MP  |
| 211                                 |  | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 106.8                                | 8                | 95                 | 95               | DP/MP  |
| 212                                 |  | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 108.7                                | 8                | 96                 | 95               | DP/MP  |
| 213                                 |  | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.7                  | 111.4                                | 8                | 99                 | 95               | DP/MP  |
| 214                                 |  | 5/29/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.1                  | 110.3                                | 8                | 98                 | 95               | DP/MP  |
| 215                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 108.9                                | 8                | 96                 | 95               | DP     |
| 216                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.6                  | 106.9                                | 8                | 95                 | 95               | DP     |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #                              | Test Location                          |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 209                                 | Fill - Embankment: Waha st             |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS  |        |
| 210                                 | Fill - Embankment: Waha st             |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS  |        |
| 211                                 | Fill - Embankment: Waha st             |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS  |        |
| 212                                 | Fill - Embankment: Waha st             |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS  |        |
| 213                                 | Fill - Embankment: Waha st             |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS  |        |
| 214                                 | Fill - Embankment: Cayuse ct           |           |            |        |  |                      |                           |                       | Troxler / 3430 / 22354 / 4/19/2018   |                  |                    | CRESSLER, LUCAS  |        |
| 215                                 | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 4.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | MAFFEY, JUSTIN   |        |
| 216                                 | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 8.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | MAFFEY, JUSTIN   |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                              | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 217              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.6                  | 107.5                                   | 8                | 95                 | 95               | DP     |
| 218              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 109.3                                   | 8                | 97                 | 95               | DP     |
| 219              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 110.2                                   | 8                | 98                 | 95               | DP     |
| 220              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.6                  | 110.2                                   | 8                | 98                 | 95               | DP     |
| 221              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.5                  | 107.2                                   | 8                | 95                 | 95               | DP     |
| 222              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.8                  | 107.5                                   | 8                | 95                 | 95               | DP     |
| 223              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.6                  | 109.0                                   | 8                | 96                 | 95               | DP     |
| 224              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.1                  | 108.4                                   | 8                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                          |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 217              | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 10.0                      | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| 218              | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 13.0                      | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| 219              | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 9.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| 220              | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 8.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| 221              | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 8.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| 222              | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 3.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| 223              | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 4.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| 224              | Fill - Embankment: Cayuse St.          |           |            |        |  |                      | 3.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | MAFFEY, JUSTIN   |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 225              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 9.8                   | 112.1                      | 8                                       | 99                 | 95               | DP     |
| 226              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.4                  | 107.9                      | 8                                       | 95                 | 95               | DP     |
| 227              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.7                  | 107.9                      | 8                                       | 95                 | 95               | DP     |
| 228              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 107.2                      | 8                                       | 95                 | 95               | DP     |
| 229              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.1                  | 108.6                      | 8                                       | 96                 | 95               | DP     |
| 230              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 107.2                      | 8                                       | 95                 | 95               | DP     |
| 231              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.9                  | 107.5                      | 8                                       | 95                 | 95               | DP     |
| 232              |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.8                  | 111.2                      | 8                                       | 98                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #           | Test Location                                      |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 225              | Fill - Embankment: Between Waha Ct. And Cayuse St. |           |            |        |  |                      | 0.0                       | @ subgrade            |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | MAFFEY, JUSTIN   |        |
| 226              | Fill - Embankment: Waha Ct                         |           |            |        |  |                      | 4.0                       | BSG                   |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | MAFFEY, JUSTIN   |        |
| 227              | Fill - Embankment: Waha Ct                         |           |            |        |  |                      | 4.0                       | BSG                   |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | MAFFEY, JUSTIN   |        |
| 228              | Fill - Embankment: Waha Ct                         |           |            |        |  |                      | 4.0                       | BSG                   |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | MAFFEY, JUSTIN   |        |
| 229              | Fill - Embankment: Waha Ct                         |           |            |        |  |                      | 4.0                       | BSG                   |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | MAFFEY, JUSTIN   |        |
| 230              | Fill - Embankment: Waha Ct                         |           |            |        |  |                      | 4.0                       | BSG                   |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | MAFFEY, JUSTIN   |        |
| 231              | Fill - Embankment: Waha Ct                         |           |            |        |  |                      | 4.0                       | BSG                   |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | MAFFEY, JUSTIN   |        |
| 232              | Fill - Embankment: Waha Ct                         |           |            |        |  |                      | 4.0                       | BSG                   |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | MAFFEY, JUSTIN   |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of                              | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 233                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.4                  | 108.5                                | 8                | 96                 | 95               | DP     |
| 234                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                  | 108.8                                | 8                | 96                 | 95               | DP     |
| 235                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.3                  | 107.0                                | 8                | 95                 | 95               | DP     |
| 236                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.2                  | 107.2                                | 8                | 95                 | 95               | DP     |
| 237                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 21.4                  | 107.7                                | 8                | 95                 | 95               | DP     |
| 238                                 |  | 5/30/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.0                  | 107.8                                | 8                | 95                 | 95               | DP     |
| 239                                 |  | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.4                                | 8                | 96                 | 95               | DP/MP  |
| 240                                 |  | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                                | 8                | 95                 | 95               | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #                              | Test Location                          |           |            |        |  |                      | Elevation                 | Reference             | Gauge                                |                  |                    | Field Technician |        |
| 233                                 | Fill - Embankment: Waha Ct             |           |            |        |  |                      | 4.0                       | BSG                   | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | MAFFEY, JUSTIN   |        |
| 234                                 | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 7.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | MAFFEY, JUSTIN   |        |
| 235                                 | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 9.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | MAFFEY, JUSTIN   |        |
| 236                                 | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 13.0                      | BSG                   | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | MAFFEY, JUSTIN   |        |
| 237                                 | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 7.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | MAFFEY, JUSTIN   |        |
| 238                                 | Fill - Embankment: South of Cayuse St. |           |            |        |  |                      | 5.0                       | BSG                   | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | MAFFEY, JUSTIN   |        |
| 239                                 | Fill - Embankment: Cayuse ct           |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | CRESSLER, LUCAS  |        |
| 240                                 | Fill - Embankment: Cayuse ct           |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | CRESSLER, LUCAS  |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results                        |                              |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                    | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 241                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.4                      | 8                                       | 96                 | 95               | DP/MP  |
| 242                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                  | 110.3                      | 8                                       | 98                 | 95               | DP/MP  |
| 243                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 109.2                      | 8                                       | 97                 | 95               | DP/MP  |
| 244                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 106.8                      | 8                                       | 95                 | 95               | DP/MP  |
| 245                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                  | 106.9                      | 8                                       | 95                 | 95               | DP/MP  |
| 246                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                      | 8                                       | 95                 | 95               | DP/MP  |
| 247                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 110.4                      | 8                                       | 98                 | 95               | DP/MP  |
| 248                                 |                              | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 106.8                      | 8                                       | 95                 | 95               | DP/MP  |
| Test Information                    |                              |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location                |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 241                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 242                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 243                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 244                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 245                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 246                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 247                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 248                                 | Fill - Embankment: Cayuse ct |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                              |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                              |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |



| Test Results                        |   |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|-------------------------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #                              | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)     | Remark |
| 249                                 |   | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 107.6                                   | 8                | 95                 | 95                | DP/MP  |
| 250                                 |   | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 112.2                                   | 8                | 99                 | 95                | DP/MP  |
| 251                                 |   | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                                   | 8                | 95                 | 95                | DP/MP  |
| 252                                 |   | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                                   | 8                | 95                 | 95                | DP/MP  |
| 253                                 |   | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                                   | 8                | 95                 | 95                | DP/MP  |
| 254                                 |   | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 107.6                                   | 8                | 95                 | 95                | DP/MP  |
| 255                                 |   | 5/31/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 110.4                                   | 8                | 98                 | 95                | DP/MP  |
| 256                                 |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 108.6                                   | 8                | 96                 | 95                | DP     |
| Test Information                    |   |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #                              | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 249                                 | Fill - Embankment: Cayuse ct  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS   |        |
| 250                                 | Fill - Embankment: Cayuse ct  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS   |        |
| 251                                 | Fill - Embankment: Cayuse ct  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS   |        |
| 252                                 | Fill - Embankment: Cayuse ct  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS   |        |
| 253                                 | Fill - Embankment: Cayuse ct  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS   |        |
| 254                                 | Fill - Embankment: Cayuse ct  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS   |        |
| 255                                 | Fill - Embankment: Cayuse ct  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS   |        |
| 256                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street down |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| Remarks                             |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |
| DP: Density Pass                    |   |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|-------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)     | Remark |
| 257              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 110.3                                   | 8                | 98                 | 95                | DP     |
| 258              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.6                  | 108.5                                   | 8                | 96                 | 95                | DP     |
| 259              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.3                  | 108.4                                   | 8                | 96                 | 95                | DP     |
| 260              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 109.2                                   | 8                | 97                 | 95                | DP     |
| 261              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.8                  | 107.3                                   | 8                | 95                 | 95                | DP     |
| 262              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.6                  | 107.7                                   | 8                | 95                 | 95                | DP     |
| 263              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 107.3                                   | 8                | 95                 | 95                | DP     |
| 264              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.7                  | 107.6                                   | 8                | 95                 | 95                | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                   |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician  |        |
| 257              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street down |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| 258              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street down |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| 259              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street down |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| 260              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT   |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| 261              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT   |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| 262              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT   |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| 263              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT   |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| 264              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT   |           |            |        |  |                      | 2,550.0                   | AMSL                  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | CAMPBELL, CHARLIE |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                   |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                   |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |   |                    |                   |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|-------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)     | Remark |
| 265              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 107.7                      | 8                                       | 95                 | 95                | DP     |
| 266              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.5                  | 112.5                      | 8                                       | 100                | 95                | DP     |
| 267              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 10.4                  | 107.6                      | 8                                       | 95                 | 95                | DP     |
| 268              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.3                  | 107.0                      | 8                                       | 95                 | 95                | DP     |
| 269              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.1                  | 107.2                      | 8                                       | 95                 | 95                | DP     |
| 270              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 107.4                      | 8                                       | 95                 | 95                | DP     |
| 271              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 107.4                      | 8                                       | 95                 | 95                | DP     |
| 272              |   | 6/1/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                  | 107.8                      | 8                                       | 95                 | 95                | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |   |                    |                   |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician  |        |
| 265              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT       |           |            |        |  |                      | 2,550.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | CAMPBELL, CHARLIE |        |
| 266              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT       |           |            |        |  |                      | 2,550.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | CAMPBELL, CHARLIE |        |
| 267              | Fill - P-152 Excavation, Subgrade, and Embankment: South of Waha CT       |           |            |        |  |                      | 2,550.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | CAMPBELL, CHARLIE |        |
| 268              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,566.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON     |        |
| 269              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,566.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON     |        |
| 270              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,566.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON     |        |
| 271              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,566.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON     |        |
| 272              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,566.0                   | AMSL                  |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON     |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                   |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                   |        |

| Test Results     |  |           |            |        |  |                      |                           |                           |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|---------------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                      | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)     | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 273              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                      | 108.4                                   | 8                | 96                 | 95               | DP     |
| 274              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.5                      | 110.9                                   | 8                | 98                 | 95               | DP     |
| 275              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.4                      | 111.2                                   | 8                | 98                 | 95               | DP     |
| 276              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.6                      | 110.6                                   | 8                | 98                 | 95               | DP     |
| 277              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.7                      | 110.5                                   | 8                | 98                 | 95               | DP     |
| 278              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                      | 108.9                                   | 8                | 96                 | 95               | DP     |
| 279              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                      | 106.9                                   | 8                | 95                 | 95               | DP     |
| 280              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.4                      | 107.2                                   | 8                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                           |   |                  |                    |                  |        |
| Test #           | Test Location                                  |           |            |        |  |                      | Elevation                 | Reference                 | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 273              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 274              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 275              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 1.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 276              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 1.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 277              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 278              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 279              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 280              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                           |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                           |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                           |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|---------------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                      | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)     | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 281              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.9                      | 107.0                                   | 8                | 95                 | 95               | DP     |
| 282              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                      | 107.0                                   | 8                | 95                 | 95               | DP     |
| 283              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.1                      | 107.0                                   | 8                | 95                 | 95               | DP     |
| 284              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                      | 107.9                                   | 8                | 95                 | 95               | DP     |
| 285              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                      | 108.1                                   | 8                | 96                 | 95               | DP     |
| 286              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                      | 108.8                                   | 8                | 96                 | 95               | DP     |
| 287              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.9                      | 108.3                                   | 8                | 96                 | 95               | DP     |
| 288              |  | 6/2/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                      | 108.7                                   | 8                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                           |   |                  |                    |                  |        |
| Test #           | Test Location                                  |           |            |        |  |                      | Elevation                 | Reference                 | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 281              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 282              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 283              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 284              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 285              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 286              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 287              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| 288              | Fill - Embankment: Between Cayuse and Waha Ct. |           |            |        |  |                      | 3.0                       | Feet below finished grade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | OKEEFE, KYLE     |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                           |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                           |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 289              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.5                  | 107.0                      | 8                                    | 95                 | 95               | DP     |
| 290              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.3                  | 111.6                      | 8                                    | 99                 | 95               | DP     |
| 291              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 108.3                      | 8                                    | 96                 | 95               | DP     |
| 292              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                  | 107.8                      | 8                                    | 95                 | 95               | DP     |
| 293              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.8                  | 110.7                      | 8                                    | 98                 | 95               | DP     |
| 294              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                  | 110.9                      | 8                                    | 98                 | 95               | DP     |
| 295              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.7                  | 111.1                      | 8                                    | 98                 | 95               | DP     |
| 296              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 109.7                      | 8                                    | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 289              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 290              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 291              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 292              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 293              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 294              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 295              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 296              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct. |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 297              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.0                  | 110.5                      | 8                                       | 98                 | 95               | DP     |
| 298              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.3                  | 107.1                      | 8                                       | 95                 | 95               | DP     |
| 299              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.6                  | 108.4                      | 8                                       | 96                 | 95               | DP     |
| 300              |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.4                  | 107.9                      | 8                                       | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 297              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct.         |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017      |                    | BELL, BRITTON    |        |
| 298              | Fill - P-152 Excavation, Subgrade, and Embankment: South Waha Ct.         |           |            |        |  |                      | 2,561.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017      |                    | BELL, BRITTON    |        |
| 299              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,538.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017      |                    | BELL, BRITTON    |        |
| 300              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,538.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017      |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |   |           |            |        |  |                      |                           |                       |                                     |                  |                    |                  |        |
|-------------------------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|-------------------------------------|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)          | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 301                                 |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.9                  | 111.0                               | 8                | 98                 | 95               | DP     |
| 302                                 |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 109.7                               | 8                | 97                 | 95               | DP     |
| 303                                 |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.6                  | 107.7                               | 8                | 95                 | 95               | DP     |
| 304                                 |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 108.2                               | 8                | 96                 | 95               | DP     |
| 305                                 |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.9                               | 8                | 96                 | 95               | DP     |
| 306                                 |   | 6/4/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 110.5                               | 8                | 98                 | 95               | DP     |
| 307                                 |   | 6/5/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                  | 108.6                               | 8                | 95                 | 95               | DP/MP  |
| 308                                 |   | 6/5/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                  | 111.2                               | 8                | 97                 | 95               | DP/MP  |
| Test Information                    |   |           |            |        |  |                      |                           |                       |                                     |                  |                    |                  |        |
| Test #                              | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge                               |                  |                    | Field Technician |        |
| 301                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,538.0                   | AMSL                  | Troxler / 3430 / 61919 / 8/31/2017  |                  |                    | BELL, BRITTON    |        |
| 302                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,538.0                   | AMSL                  | Troxler / 3430 / 61919 / 8/31/2017  |                  |                    | BELL, BRITTON    |        |
| 303                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Landing         |           |            |        |  |                      | 2,496.0                   | AMSL                  | Troxler / 3430 / 61919 / 8/31/2017  |                  |                    | BELL, BRITTON    |        |
| 304                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Landing         |           |            |        |  |                      | 2,496.0                   | AMSL                  | Troxler / 3430 / 61919 / 8/31/2017  |                  |                    | BELL, BRITTON    |        |
| 305                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Landing         |           |            |        |  |                      | 2,496.0                   | AMSL                  | Troxler / 3430 / 61919 / 8/31/2017  |                  |                    | BELL, BRITTON    |        |
| 306                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Landing         |           |            |        |  |                      | 2,496.0                   | AMSL                  | Troxler / 3430 / 61919 / 8/31/2017  |                  |                    | BELL, BRITTON    |        |
| 307                                 | Fill - Embankment: Cayuse   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018 |                  |                    | CRESSLER, LUCAS  |        |
| 308                                 | Fill - Embankment: Cayuse   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018 |                  |                    | CRESSLER, LUCAS  |        |
| Remarks                             |   |           |            |        | Comments   |                      |                           |                       |                                     |                  |                    |                  |        |
| DP: Density Pass                    |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                     |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        |  |                      |                           |                       |                                     |                  |                    |                  |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 309                                 |  | 6/5/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.0                  | 111.9                      | 8                                       | 98                 | 95               | DP/MF  |
| 310                                 |  | 6/5/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.0                  | 109.3                      | 8                                       | 95                 | 95               | DP/MF  |
| 311                                 |  | 6/5/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 106.8                      | 8                                       | 95                 | 95               | DP/MP  |
| 312                                 |  | 6/5/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 107.7                      | 8                                       | 95                 | 95               | DP/MP  |
| 313                                 |  | 6/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.8                  | 111.8                      | 8                                       | 98                 | 95               | DP     |
| 314                                 |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.7                      | 8                                       | 95                 | 95               | DP     |
| 315                                 |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.9                  | 107.9                      | 8                                       | 95                 | 95               | DP     |
| 316                                 |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.4                  | 108.7                      | 8                                       | 96                 | 95               | DP     |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location                                    |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 309                                 | Backfill - Sanitary Sewer Line Trench: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 310                                 | Backfill - Sanitary Sewer Line Trench: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 311                                 | Backfill - Sanitary Sewer Line Trench: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 312                                 | Backfill - Sanitary Sewer Line Trench: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 313                                 | Fill - Structural: Cayuse st                     |           |            |        |  |                      | 2.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | PERSELL, JOHN    |        |
| 314                                 | Fill - Embankment: South of Cayuse St.           |           |            |        |  |                      | 1.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 315                                 | Fill - Embankment: South of Cayuse St.           |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 316                                 | Fill - Embankment: South of Cayuse St.           |           |            |        |  |                      | 2.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MF: Density Pass / Moisture Fail |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| DP: Density Pass                    |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 317              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.2                  | 107.4                      | 8                                       | 95                 | 95               | DP     |
| 318              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.1                      | 8                                       | 96                 | 95               | DP     |
| 319              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.1                  | 107.8                      | 8                                       | 95                 | 95               | DP     |
| 320              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 107.3                      | 8                                       | 95                 | 95               | DP     |
| 321              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.9                  | 108.3                      | 8                                       | 96                 | 95               | DP     |
| 322              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.4                  | 106.9                      | 8                                       | 95                 | 95               | DP     |
| 323              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 107.4                      | 8                                       | 95                 | 95               | DP     |
| 324              |  | 6/6/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.7                  | 107.3                      | 8                                       | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 317              | Fill - Embankment: South of Cayuse St.   |           |            |        |  |                      | 4.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 318              | Fill - Embankment: South of Cayuse St.   |           |            |        |  |                      | 6.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 319              | Fill - Embankment: South and east of Cayuse St. along construction access road |           |            |        |  |                      | 9.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 320              | Fill - Embankment: South of Wallowa St.  |           |            |        |  |                      | 7.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 321              | Fill - Embankment: South of Wallowa St.  |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 322              | Fill - Embankment: South of Wallowa St.  |           |            |        |  |                      | 4.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 323              | Fill - Embankment: South of Umatilla Ct.                                       |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| 324              | Fill - Embankment: South of Umatilla Ct.                                       |           |            |        |  |                      | 8.0                       | BSG                   |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | MAFFEY, JUSTIN   |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 325              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.4                  | 108.5                      | 8                                    | 96                 | 95               | DP     |
| 326              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.9                  | 106.9                      | 8                                    | 95                 | 95               | DP     |
| 327              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.7                  | 108.2                      | 8                                    | 96                 | 95               | DP     |
| 328              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.8                  | 107.4                      | 8                                    | 95                 | 95               | DP     |
| 329              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 106.8                      | 8                                    | 95                 | 95               | DP     |
| 330              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 107.8                      | 8                                    | 95                 | 95               | DP     |
| 331              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 20.6                  | 106.9                      | 8                                    | 95                 | 95               | DP     |
| 332              |   | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 108.8                      | 8                                    | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 325              | Fill - P-152 Excavation, Subgrade, and Embankment: East Load Road         |           |            |        |  |                      | 2,544.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 326              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,544.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 327              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,532.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 328              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,532.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 329              | Fill - P-152 Excavation, Subgrade, and Embankment: Second Street Downhill |           |            |        |  |                      | 2,532.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 330              | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Lift            |           |            |        |  |                      | 2,500.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 331              | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Lift            |           |            |        |  |                      | 2,500.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 332              | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Lift            |           |            |        |  |                      | 2,500.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 333                                 |  | 6/7/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 109.0                                   | 8                | 96                 | 95               | DP     |
| 334                                 |  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 108.1                                   | 8                | 96                 | 95               | DP/MP  |
| 335                                 |  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.1                  | 107.5                                   | 8                | 95                 | 95               | DP/MP  |
| 336                                 |  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.9                  | 108.7                                   | 8                | 96                 | 95               | DP/MP  |
| 337                                 |  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 107.4                                   | 8                | 95                 | 95               | DP/MP  |
| 338                                 |  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 110.3                                   | 8                | 98                 | 95               | DP/MP  |
| 339                                 |  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.0                                   | 8                | 95                 | 95               | DP/MP  |
| 340                                 |  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 106.9                                   | 8                | 95                 | 95               | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 333                                 | Fill - P-152 Excavation, Subgrade, and Embankment: Lowest Lift |           |            |        |  |                      | 2,500.0                   | AMSL                  | Troxler / 3430 / 61919 / 8/31/2017      |                  |                    | BELL, BRITTON    |        |
| 334                                 | Fill - Embankment: Cayuse St                                   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 335                                 | Fill - Embankment: Cayuse St                                   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 336                                 | Fill - Embankment: Cayuse St                                   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 337                                 | Fill - Embankment: Cayuse St                                   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 338                                 | Fill - Embankment: Cayuse St                                   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 339                                 | Fill - Embankment: Cayuse St                                   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 340                                 | Fill - Embankment: Cayuse St                                   |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |



| Test Results                        |                              |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                    | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 341                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.2                      | 8                                       | 95                 | 95               | DP/MP  |
| 342                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 110.3                      | 8                                       | 98                 | 95               | DP/MP  |
| 343                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.0                      | 8                                       | 95                 | 95               | DP/MP  |
| 344                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.1                  | 107.1                      | 8                                       | 95                 | 95               | DP/MP  |
| 345                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.2                      | 8                                       | 96                 | 95               | DP/MP  |
| 346                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                  | 110.1                      | 8                                       | 97                 | 95               | DP/MP  |
| 347                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.9                  | 109.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 348                                 |                              | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.7                  | 111.3                      | 8                                       | 98                 | 95               | DP/MP  |
| Test Information                    |                              |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location                |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 341                                 | Fill - Embankment: Cayuse St |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 342                                 | Fill - Embankment: Cayuse St |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 343                                 | Fill - Embankment: Cayuse St |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 344                                 | Fill - Embankment: Cayuse St |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 345                                 | Fill - Embankment: Cayuse St |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 346                                 | Fill - General: Wallowa st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 347                                 | Fill - General: Wallowa st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 348                                 | Fill - General: Wallowa st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                              |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                              |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                                  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|-------------------------------------|----------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #                              | Retest Of                        | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 349                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.8                  | 109.2                      | 8                                    | 97                 | 95               | DP/MP  |
| 350                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.3                      | 8                                    | 95                 | 95               | DP/MP  |
| 351                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.0                      | 8                                    | 96                 | 95               | DP/MP  |
| 352                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 107.5                      | 8                                    | 95                 | 95               | DP/MP  |
| 353                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 107.8                      | 8                                    | 95                 | 95               | DP/MP  |
| 354                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.4                      | 8                                    | 95                 | 95               | DP/MP  |
| 355                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.8                  | 111.7                      | 8                                    | 99                 | 95               | DP/MP  |
| 356                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 111.7                      | 8                                    | 99                 | 95               | DP/MP  |
| Test Information                    |                                  |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #                              | Test Location                    |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 349                                 | Fill - General: Wallowa st       |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 350                                 | Fill - General: Wallowa st       |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 351                                 | Fill - General: Wallowa st       |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 352                                 | Fill - General: South of Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 353                                 | Fill - General: South of Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 354                                 | Fill - General: South of Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 355                                 | Fill - General: South of Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 356                                 | Fill - General: Waha st          |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                                  |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                                  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |

| Test Results                        |                           |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|---------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                 | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 357                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 107.1                      | 8                                       | 95                 | 95               | DP/MP  |
| 358                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.5                      | 8                                       | 96                 | 95               | DP/MP  |
| 359                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 109.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 360                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 107.1                      | 8                                       | 95                 | 95               | DP/MP  |
| 361                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.7                      | 8                                       | 96                 | 95               | DP/MP  |
| 362                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 109.3                      | 8                                       | 97                 | 95               | DP/MP  |
| 363                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.3                      | 8                                       | 95                 | 95               | DP/MP  |
| 364                                 |                           | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 109.0                      | 8                                       | 96                 | 95               | DP/MP  |
| Test Information                    |                           |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location             |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 357                                 | Fill - General: Waha st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 358                                 | Fill - General: Waha st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 359                                 | Fill - General: Waha st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 360                                 | Fill - General: Waha st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 361                                 | Fill - General: Waha st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 362                                 | Fill - General: Waha st   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 363                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 364                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                           |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                           |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                                  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|----------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                        | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 365                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.7                  | 109.6                      | 8                                       | 97                 | 95               | DP/MP  |
| 366                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                  | 107.4                      | 8                                       | 95                 | 95               | DP/MP  |
| 367                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                  | 107.4                      | 8                                       | 95                 | 95               | DP/MP  |
| 368                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.8                  | 107.3                      | 8                                       | 95                 | 95               | DP/MP  |
| 369                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.6                  | 107.1                      | 8                                       | 95                 | 95               | DP/MP  |
| 370                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.8                  | 109.3                      | 8                                       | 97                 | 95               | DP/MP  |
| 371                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.8                  | 109.2                      | 8                                       | 97                 | 95               | DP/MP  |
| 372                                 |                                  | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                  | 109.4                      | 8                                       | 97                 | 95               | DP/MP  |
| Test Information                    |                                  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location                    |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 365                                 | Fill - General: Cayuse st        |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 366                                 | Fill - General: Cayuse st        |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 367                                 | Fill - General: Cayuse st        |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 368                                 | Fill - General: Waha St          |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 369                                 | Fill - General: Waha St          |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 370                                 | Fill - General: Waha St          |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 371                                 | Fill - General: Waha St          |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 372                                 | Fill - General: North of Waha St |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                                  |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                                  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                                     |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|-------------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                           | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 373                                 |                                     | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.2                  | 109.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 374                                 |                                     | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 109.1                      | 8                                       | 97                 | 95               | DP/MP  |
| 375                                 |                                     | 6/8/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 110.0                      | 8                                       | 97                 | 95               | DP/MP  |
| 376                                 |                                     | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.9                      | 8                                       | 95                 | 95               | DP/MP  |
| 377                                 |                                     | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                      | 8                                       | 95                 | 95               | DP/MP  |
| 378                                 |                                     | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 108.8                      | 8                                       | 96                 | 95               | DP/MP  |
| 379                                 |                                     | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                  | 109.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 380                                 |                                     | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.8                      | 8                                       | 96                 | 95               | DP/MP  |
| Test Information                    |                                     |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location                       |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 373                                 | Fill - General: North of Waha St    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 374                                 | Fill - General: North of Waha St    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 375                                 | Fill - General: North of Waha St    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 376                                 | Fill - General: South of wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 377                                 | Fill - General: South of wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 378                                 | Fill - General: South of wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 379                                 | Fill - General: South of wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 380                                 | Fill - General: Cayuse st           |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                                     |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                                     |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|----------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 381                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 109.1                      | 8                                       | 97                 | 95               | DP/MP  |
| 382                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.7                      | 8                                       | 96                 | 95               | DP/MP  |
| 383                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 109.9                      | 8                                       | 97                 | 95               | DP/MP  |
| 384                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.9                      | 8                                       | 96                 | 95               | DP/MP  |
| 385                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                  | 108.2                      | 8                                       | 96                 | 95               | DP/MP  |
| 386                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 109.2                      | 8                                       | 97                 | 95               | DP/MP  |
| 387                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.8                  | 108.5                      | 8                                       | 96                 | 95               | DP/MP  |
| 388                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.8                      | 8                                       | 95                 | 95               | DP/MP  |
| Test Information                    |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location              |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 381                                 | Fill - General: Cayuse st  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 382                                 | Fill - General: Cayuse st  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 383                                 | Fill - General: Cayuse st  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 384                                 | Fill - General: Cayuse st  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 385                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 386                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 387                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 388                                 | Fill - General: Waha CT.   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                            |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                            |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |



| Test Results                        |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|----------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 389                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.8                      | 8                                       | 95                 | 95               | DP/MP  |
| 390                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 109.3                      | 8                                       | 97                 | 95               | DP/MP  |
| 391                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 109.3                      | 8                                       | 97                 | 95               | DP/MP  |
| 392                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 108.4                      | 8                                       | 96                 | 95               | DP/MP  |
| 393                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 108.1                      | 8                                       | 96                 | 95               | DP/MP  |
| 394                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.2                      | 8                                       | 96                 | 95               | DP/MP  |
| 395                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 108.3                      | 8                                       | 96                 | 95               | DP/MP  |
| 396                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.1                  | 108.1                      | 8                                       | 96                 | 95               | DP/MP  |
| Test Information                    |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location              |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 389                                 | Fill - General: Waha CT.   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 390                                 | Fill - General: Waha CT.   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 391                                 | Fill - General: Waha CT.   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 392                                 | Fill - General: Waha CT.   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 393                                 | Fill - General: Waha CT.   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 394                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 395                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 396                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                            |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                            |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|----------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 397                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.5                      | 8                                       | 96                 | 95               | DP/MP  |
| 398                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 106.8                      | 8                                       | 95                 | 95               | DP/MP  |
| 399                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 109.5                      | 8                                       | 97                 | 95               | DP/MP  |
| 400                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                  | 110.2                      | 8                                       | 98                 | 95               | DP/MP  |
| Test Information                    |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location              |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 397                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 398                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 399                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 400                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                            |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                            |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

**Client:**

KIP Development  
 594 SE Bishop Boulevard, Suite 102  
 Pullman, WA 99163

**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results                        |                            |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|----------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of                  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 401                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 108.8                                   | 8                | 96                 | 95               | DP/MP  |
| 402                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.9                                   | 8                | 95                 | 95               | DP/MP  |
| 403                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.2                  | 108.5                                   | 8                | 96                 | 95               | DP/MP  |
| 404                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 107.9                                   | 8                | 95                 | 95               | DP/MP  |
| 405                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.1                  | 109.3                                   | 8                | 97                 | 95               | DP/MP  |
| 406                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.0                                   | 8                | 96                 | 95               | DP/MP  |
| 407                                 |                            | 6/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.1                  | 107.5                                   | 8                | 95                 | 95               | DP/MP  |
| 408                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 111.3                                   | 8                | 98                 | 95               | DF     |
| Test Information                    |                            |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location              |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 401                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 402                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 403                                 | Fill - General: Wallowa st |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 404                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 405                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 406                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 407                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 408                                 | Fill - General: Cayuse st  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                            |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                            |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DF: Density Fail                    |                            |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |

| Test Results                        |                           |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|---------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                 | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 409                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 410                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.3                      | 8                                       | 96                 | 95               | DP/MP  |
| 411                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 109.7                      | 8                                       | 97                 | 95               | DP/MP  |
| 412                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 413                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.9                      | 8                                       | 95                 | 95               | DP/MP  |
| 414                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 107.7                      | 8                                       | 95                 | 95               | DP/MP  |
| 415                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.0                  | 107.7                      | 8                                       | 95                 | 95               | DP/MP  |
| 416                                 |                           | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 108.1                      | 8                                       | 96                 | 95               | DP/MP  |
| Test Information                    |                           |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location             |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 409                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 410                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 411                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 412                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 413                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 414                                 | Fill - General: Waha ct   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 415                                 | Fill - General: Waha ct   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 416                                 | Fill - General: Waha ct   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                           |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                           |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|----------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 417                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 107.4                      | 8                                       | 95                 | 95               | DP/MP  |
| 418                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 108.5                      | 8                                       | 96                 | 95               | DP/MP  |
| 419                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.1                      | 8                                       | 96                 | 95               | DP/MP  |
| 420                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 109.6                      | 8                                       | 97                 | 95               | DP/MP  |
| 421                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.4                      | 8                                       | 96                 | 95               | DP/MP  |
| 422                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.8                      | 8                                       | 95                 | 95               | DP/MP  |
| 423                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.6                  | 107.8                      | 8                                       | 95                 | 95               | DP/MP  |
| 424                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 108.3                      | 8                                       | 96                 | 95               | DP/MP  |
| Test Information                    |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location              |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 417                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 418                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 419                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 420                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 421                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 422                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 423                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 424                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                            |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                            |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|----------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 425                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                      | 8                                       | 95                 | 95               | DP/MP  |
| 426                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 107.7                      | 8                                       | 95                 | 95               | DP/MP  |
| 427                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.8                  | 107.2                      | 8                                       | 95                 | 95               | DP/MP  |
| 428                                 |                            | 6/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 110.7                      | 8                                       | 98                 | 95               | DP/MP  |
| 429                                 |                            | 6/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.5                  | 112.9                      | 8                                       | 99                 | 95               | DP/MP  |
| 430                                 |                            | 6/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.7                  | 110.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 431                                 |                            | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.7                  | 106.9                      | 8                                       | 95                 | 95               | DP/MP  |
| 432                                 |                            | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 110.0                      | 8                                       | 97                 | 95               | DP/MP  |
| Test Information                    |                            |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location              |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 425                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 426                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 427                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 428                                 | Fill - Embankment: Waha st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 429                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 430                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 431                                 | Fill - General: Waha ct    |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 432                                 | Fill - General: Cayuse st  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                            |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                            |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |



| Test Results                        |                           |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|---------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of                 | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 433                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 108.5                      | 8                                       | 96                 | 95               | DP/MP  |
| 434                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.5                      | 8                                       | 96                 | 95               | DP/MP  |
| 435                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.5                      | 8                                       | 95                 | 95               | DP/MP  |
| 436                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.2                  | 108.8                      | 8                                       | 96                 | 95               | DP/MP  |
| 437                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 108.2                      | 8                                       | 96                 | 95               | DP/MP  |
| 438                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.6                  | 110.2                      | 8                                       | 98                 | 95               | DP/MP  |
| 439                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.8                  | 108.0                      | 8                                       | 96                 | 95               | DP/MP  |
| 440                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.8                      | 8                                       | 95                 | 95               | DP/MP  |
| Test Information                    |                           |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location             |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 433                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 434                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 435                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 436                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 437                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 438                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 439                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 440                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |                           |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                           |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |                           |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|-------------------------------------|---------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #                              | Retest Of                 | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 441                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.4                  | 109.8                      | 8                                    | 97                 | 95               | DP/MP  |
| 442                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 107.5                      | 8                                    | 95                 | 95               | DP/MP  |
| 443                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 107.6                      | 8                                    | 95                 | 95               | DP/MP  |
| 444                                 |                           | 6/14/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.0                  | 108.3                      | 8                                    | 96                 | 95               | DP/MP  |
| 445                                 |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.3                  | 108.8                      | 8                                    | 96                 | 95               | DP     |
| 446                                 |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 107.4                      | 8                                    | 95                 | 95               | DP     |
| 447                                 |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 107.4                      | 8                                    | 95                 | 95               | DP     |
| 448                                 |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.2                  | 106.8                      | 8                                    | 95                 | 95               | DP     |
| Test Information                    |                           |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #                              | Test Location             |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 441                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 442                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 443                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 444                                 | Fill - General: Cayuse st |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | CRESSLER, LUCAS  |        |
| 445                                 | Fill - Subgrade: Wallowa  |           |            |        |  |                      | 2.0                       | Feet below grade      |                            | Troxler / 3430 / 22354 / 4/19/2018   |                    | PERSELL, JOHN    |        |
| 446                                 | Fill - Subgrade: Wallowa  |           |            |        |  |                      | 2.0                       | Feet below grade      |                            | Troxler / 3430 / 22354 / 4/19/2018   |                    | PERSELL, JOHN    |        |
| 447                                 | Fill - Subgrade: Wallowa  |           |            |        |  |                      | 2.0                       | Feet below grade      |                            | Troxler / 3430 / 22354 / 4/19/2018   |                    | PERSELL, JOHN    |        |
| 448                                 | Fill - Subgrade: Wallowa  |           |            |        |  |                      | 2.0                       | Feet below grade      |                            | Troxler / 3430 / 22354 / 4/19/2018   |                    | PERSELL, JOHN    |        |
| Remarks                             |                           |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |                           |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |
| DP: Density Pass                    |                           |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |

| Test Results     |                           |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                 | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 449              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.1                  | 106.8                                   | 8                | 95                 | 95               | DP     |
| 450              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.8                  | 108.7                                   | 8                | 96                 | 95               | DP     |
| 451              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.7                  | 110.4                                   | 8                | 98                 | 95               | DP     |
| 452              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 19.9                  | 107.1                                   | 8                | 95                 | 95               | DP     |
| 453              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.3                  | 112.2                                   | 8                | 99                 | 95               | DP     |
| 454              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.9                  | 111.1                                   | 8                | 98                 | 95               | DP     |
| 455              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 109.1                                   | 8                | 97                 | 95               | DP     |
| 456              |                           | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.5                  | 108.2                                   | 8                | 96                 | 95               | DP     |
| Test Information |                           |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location             |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 449              | Fill - Subgrade: Wallowa  |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| 450              | Fill - Subgrade: Cayuse   |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| 451              | Fill - Subgrade: Cayuse   |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| 452              | Fill - Subgrade: Cayuse   |           |            |        |  |                      | 6.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| 453              | Fill - Subgrade: Cayuse   |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| 454              | Fill - Subgrade: Cayuse   |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| 455              | Fill - Subgrade: Cayuse   |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| 456              | Fill - Subgrade: Umatilla |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 22354 / 4/19/2018      |                  |                    | PERSELL, JOHN    |        |
| Remarks          |                           |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                           |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results                        |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|-------------------------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #                              | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 457                                 |   | 6/15/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.8                  | 112.4                      | 8                                    | 99                 | 95               | DP     |
| 458                                 |   | 6/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.6                  | 108.6                      | 8                                    | 95                 | 95               | DP     |
| 459                                 |   | 6/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.9                  | 115.2                      | 8                                    | 101                | 95               | DP     |
| 460                                 |   | 6/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.4                  | 108.5                      | 8                                    | 95                 | 95               | DP     |
| 461                                 |   | 6/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.2                  | 109.1                      | 8                                    | 95                 | 95               | DP     |
| 462                                 |   | 6/20/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.5                  | 107.0                      | 8                                    | 95                 | 95               | DP/MP  |
| 463                                 |   | 6/20/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 109.9                      | 8                                    | 97                 | 95               | DP/MP  |
| 464                                 |   | 6/20/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.8                  | 109.0                      | 8                                    | 96                 | 95               | DP/MP  |
| Test Information                    |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #                              | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 457                                 | Fill - Subgrade: Umatilla   |           |            |        |  |                      | 5.0                       | Feet below grade      |                            | Troxler / 3430 / 22354 / 4/19/2018   |                    | PERSELL, JOHN    |        |
| 458                                 | Fill - P-152 Excavation and Embankment Outside of Pavement: Third Teir Downhill     |           |            |        |  |                      | 2,560.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | BELL, BRITTON    |        |
| 459                                 | Fill - P-152 Excavation and Embankment Outside of Pavement: Third Teir Downhill     |           |            |        |  |                      | 2,560.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | BELL, BRITTON    |        |
| 460                                 | Fill - P-152 Excavation and Embankment Outside of Pavement: Western end of Top Teir |           |            |        |  |                      | 2,611.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | BELL, BRITTON    |        |
| 461                                 | Fill - P-152 Excavation and Embankment Outside of Pavement: Western end of Top Teir |           |            |        |  |                      | 2,611.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | BELL, BRITTON    |        |
| 462                                 | Fill - General: Waha CT, east end   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | CRESSLER, LUCAS  |        |
| 463                                 | Fill - General: Waha CT, east end   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | CRESSLER, LUCAS  |        |
| 464                                 | Fill - General: Waha CT, east end   |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | CRESSLER, LUCAS  |        |
| Remarks                             |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP: Density Pass                    |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |

**Client:**

KIP Development  
 594 SE Bishop Boulevard, Suite 102  
 Pullman, WA 99163

**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 465              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.7                  | 114.5                                   | 8                | 100                | 95               | DP     |
| 466              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 109.6                                   | 8                | 96                 | 95               | DP     |
| 467              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                  | 115.3                                   | 8                | 101                | 95               | DP     |
| 468              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.7                  | 110.4                                   | 8                | 96                 | 95               | DP     |
| 469              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.0                  | 113.3                                   | 8                | 99                 | 95               | DP     |
| 470              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.7                  | 110.6                                   | 8                | 97                 | 95               | DP     |
| 471              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.3                  | 118.4                                   | 8                | 103                | 95               | DP     |
| 472              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.3                  | 112.3                                   | 8                | 98                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 465              | Fill - P-152 Excavation and Embankment Outside of Pavement: Lowest Tier  |           |            |        |  |                      | 2,504.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 466              | Fill - P-152 Excavation and Embankment Outside of Pavement: Lowest Tier  |           |            |        |  |                      | 2,504.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 467              | Fill - P-152 Excavation and Embankment Outside of Pavement: Lowest Tier  |           |            |        |  |                      | 2,504.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 468              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,613.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 469              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,613.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 470              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,613.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 471              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,613.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 472              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,614.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 473              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.6                  | 110.2                                   | 8                | 96                 | 95               | DP     |
| 474              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.1                  | 113.2                                   | 8                | 99                 | 95               | DP     |
| 475              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.9                  | 108.2                                   | 8                | 94                 | 95               | DF     |
| 476              | 475  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.5                  | 108.5                                   | 8                | 95                 | 95               | DP     |
| 477              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.9                  | 108.3                                   | 8                | 95                 | 95               | DP     |
| 478              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 108.9                                   | 8                | 95                 | 95               | DP     |
| 479              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.2                  | 109.9                                   | 8                | 96                 | 95               | DP     |
| 480              |  | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.3                  | 109.7                                   | 8                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 473              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,614.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 474              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,614.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 475              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,614.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 476              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,614.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 477              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,615.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 478              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,615.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 479              | Fill - P-152 Excavation and Embankment Outside of Pavement: Highest Tier |           |            |        |  |                      | 2,615.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| 480              | Fill - P-152 Excavation and Embankment Outside of Pavement: Lowest Tier  |           |            |        |  |                      | 2,501.0                   | AMSL                  | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | BELL, BRITTON    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DF: Density Fail |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 481              |   | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.0                  | 108.9                      | 8                                    | 95                 | 95               | DP     |
| 482              |   | 6/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.3                  | 111.1                      | 8                                    | 97                 | 95               | DP     |
| 483              |   | 6/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.0                  | 108.7                      | 8                                    | 95                 | 95               | DP     |
| 484              |   | 6/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.2                  | 108.8                      | 8                                    | 95                 | 95               | DP     |
| 485              |   | 6/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                  | 110.0                      | 8                                    | 96                 | 95               | DP     |
| 486              |   | 6/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.8                  | 108.5                      | 8                                    | 95                 | 95               | DP     |
| 487              |   | 6/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.7                  | 108.3                      | 8                                    | 95                 | 95               | DP     |
| 488              |   | 6/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.4                  | 108.8                      | 8                                    | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 481              | Fill - P-152 Excavation and Embankment Outside of Pavement: Lowest Tier             |           |            |        |  |                      | 2,501.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | BELL, BRITTON    |        |
| 482              | Fill - P-152 Excavation and Embankment Outside of Pavement: Lowest Tier             |           |            |        |  |                      | 2,501.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | BELL, BRITTON    |        |
| 483              | Fill - P-152 Excavation and Embankment Outside of Pavement: Second Highest Tier     |           |            |        |  |                      | 2,571.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | BELL, BRITTON    |        |
| 484              | Fill - P-152 Excavation and Embankment Outside of Pavement: Second Highest Tier     |           |            |        |  |                      | 2,571.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | BELL, BRITTON    |        |
| 485              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,570.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 486              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,570.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 487              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,570.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| 488              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,571.0                   | AMSL                  |                            | Troxler / 3430 / 61919 / 8/31/2017   |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |               |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|---------------|------------------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%) | Remark           |
| 489              |   | 6/28/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.9                  | 110.6                      | 8                                    | 97                 | 95            | DP               |
| 490              |   | 6/28/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.5                  | 109.2                      | 8                                    | 95                 | 95            | DP               |
| 491              |   | 6/28/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.4                  | 109.3                      | 8                                    | 95                 | 95            | DP               |
| 492              |   | 6/28/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.9                  | 115.3                      | 8                                    | 101                | 95            | DP               |
| 493              |   | 6/28/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.9                  | 115.3                      | 8                                    | 101                | 95            | DP               |
| 494              |   | 6/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.9                  | 110.3                      | 8                                    | 96                 | 95            | DP               |
| 495              |   | 6/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.5                  | 109.2                      | 8                                    | 95                 | 95            | DP               |
| 496              |   | 6/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 20.1                  | 108.4                      | 8                                    | 95                 | 95            | DP               |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |               |                  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    |               | Field Technician |
| 489              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,573.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    |               | BELL, BRITTON    |
| 490              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,573.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    |               | BELL, BRITTON    |
| 491              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,574.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    |               | BELL, BRITTON    |
| 492              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,574.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    |               | BELL, BRITTON    |
| 493              | Fill - P-152 Excavation and Embankment Outside of Pavement: Eastern Edge of Waha Ct |           |            |        |  |                      | 2,574.0                   | AMSL                  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    |               | BELL, BRITTON    |
| 494              | Fill - P-152 Excavation and Embankment Outside of Pavement: Middle Tier             |           |            |        |  |                      | 2,549.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    |               | BELL, BRITTON    |
| 495              | Fill - P-152 Excavation and Embankment Outside of Pavement: Middle Tier             |           |            |        |  |                      | 2,550.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    |               | BELL, BRITTON    |
| 496              | Fill - P-152 Excavation and Embankment Outside of Pavement: Middle Tier             |           |            |        |  |                      | 2,550.0                   | AMSL                  |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    |               | BELL, BRITTON    |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |               |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |               |                  |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 497              |   | 7/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.2                  | 113.9                                   | 8                | 99                 | 95               | DP     |
| 498              |   | 7/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.2                  | 112.1                                   | 8                | 98                 | 95               | DP     |
| 499              |   | 7/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.3                  | 109.5                                   | 8                | 96                 | 95               | DP     |
| 500              |   | 7/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.3                  | 109.1                                   | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 497              | Fill - Embankment: SE site corner lot fill            |           |            |        |  |                      | -10.0                     | Finished grade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | ABRAMS, ANDY     |        |
| 498              | Fill - Embankment: SE site corner lot fill            |           |            |        |  |                      | -10.0                     | Finished grade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | ABRAMS, ANDY     |        |
| 499              | Fill - Embankment: East end of second bench. Lot fill |           |            |        |  |                      | -1.0                      | Finished grade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | ABRAMS, ANDY     |        |
| 500              | Fill - Embankment: East end of second bench. Lot fill |           |            |        |  |                      | -1.0                      | Finished grade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | ABRAMS, ANDY     |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 501              |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                   | 133.0                                   | 6                | 95                 | 95               | DP     |
| 502              |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                   | 132.8                                   | 6                | 95                 | 95               | DP     |
| 503              |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.9                   | 133.1                                   | 6                | 95                 | 95               | DP     |
| 504              |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.5                   | 138.9                                   | 6                | 99                 | 95               | DP     |
| 505              |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.8                   | 139.1                                   | 6                | 99                 | 95               | DP     |
| 506              |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.9                   | 134.7                                   | 6                | 96                 | 95               | DP     |
| 507              |  | 7/5/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.4                  | 107.5                                   | 8                | 95                 | 95               | DP     |
| 508              |  | 7/5/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.6                  | 107.4                                   | 8                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 501              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, south side of structure |           |            |        |  |                      | 2.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 502              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, 50 ft east              |           |            |        |  |                      | 2.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 503              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, 100 ft east             |           |            |        |  |                      | 2.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 504              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, 150 ft east             |           |            |        |  |                      | 2.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 505              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, 200 ft east             |           |            |        |  |                      | 2.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 506              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, north side of structure |           |            |        |  |                      | 2.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 507              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, 150 ft east             |           |            |        |  |                      | 3.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 508              | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, 200 ft east             |           |            |        |  |                      | 3.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 509                                 |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                   | 133.5                                   | 8                | 95                 | 95               | DP     |
| 510                                 |  | 7/5/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.3                  | 107.5                                   | 8                | 95                 | 95               | DP     |
| 511                                 |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                   | 132.9                                   | 8                | 95                 | 95               | DP     |
| 512                                 |  | 7/5/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                   | 136.1                                   | 8                | 97                 | 95               | DP     |
| 513                                 |  | 7/9/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.5                  | 106.9                                   | 8                | 95                 | 95               | DP/MP  |
| 514                                 |  | 7/9/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 117.0                                   | 8                | 102                | 95               | DP/MP  |
| 515                                 |  | 7/9/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.5                  | 108.9                                   | 8                | 95                 | 95               | DP/MP  |
| 516                                 |  | 7/9/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.7                  | 108.8                                   | 8                | 96                 | 95               | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 509                                 | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, north side of structure |           |            |        |  |                      | 3.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 510                                 | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, 50 ft east              |           |            |        |  |                      | 3.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 511                                 | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, north side of structure |           |            |        |  |                      | 4.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 512                                 | Backfill - Sanitary Sewer Line Trench: Waha st manhole 17, south side of structure |           |            |        |  |                      | 4.0                       | Ft above pipe         | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PERSELL, JOHN    |        |
| 513                                 | Backfill - Sanitary Sewer Line Trench: West of manhole 18, 50 feet                 |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 514                                 | Backfill - Sanitary Sewer Line Trench: West of manhole 18, 100 feet                |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 515                                 | Backfill - Sanitary Sewer Line Trench: West of manhole 18, 150 feet                |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| 516                                 | Backfill - Sanitary Sewer Line Trench: 20feet west of manhole 18, 3 feet BGS       |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | CRESSLER, LUCAS  |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 517                                 |  | 7/9/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 109.4                      | 8                                       | 97                 | 95               | DP/MP  |
| 518                                 |  | 7/9/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 110.3                      | 8                                       | 98                 | 95               | DP/MP  |
| 519                                 |  | 7/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                   | 132.7                      | 8                                       | 95                 | 95               | DP/MP  |
| 520                                 |  | 7/9/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 107.9                      | 8                                       | 95                 | 95               | DP/MP  |
| 521                                 |  | 7/9/18    | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 107.7                      | 8                                       | 95                 | 95               | DP/MP  |
| 522                                 |  | 7/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                   | 135.6                      | 8                                       | 97                 | 95               | DP/MP  |
| 523                                 |  | 7/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 132.3                      | 8                                       | 95                 | 95               | DP/MP  |
| 524                                 |  | 7/10/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.1                  | 111.2                      | 8                                       | 97                 | 95               | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 517                                 | Backfill - Sanitary Sewer Line Trench: 120 feet west of manhole 18, 3 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 518                                 | Backfill - Sanitary Sewer Line Trench: 170 feet west of manhole 18, 3 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 519                                 | Backfill - Sanitary Sewer Line Trench: 20 feet west of manhole 17, 4 feet BGS  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 520                                 | Backfill - Sanitary Sewer Line Trench: 20 feet east of manhole 17, 2 feet BGS  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 521                                 | Backfill - Sanitary Sewer Line Trench: 110 feet east of manhole 17, 2 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 522                                 | Backfill - Sanitary Sewer Line Trench: 110 feet east of manhole 17, 2 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 523                                 | Backfill - Sanitary Sewer Line Trench: 100 feet west of manhole 17, 3 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 524                                 | Backfill - Sanitary Sewer Line Trench: 30 feet east of manhole 17, 0 feet BGS  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 525                                 |  | 7/10/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                  | 111.2                      | 8                                       | 97                 | 95               | DP/MP  |
| 526                                 |  | 7/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                   | 132.6                      | 8                                       | 95                 | 95               | DP/MP  |
| 527                                 |  | 7/10/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.9                  | 106.8                      | 8                                       | 95                 | 95               | DP/MP  |
| 528                                 |  | 7/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 133.3                      | 8                                       | 95                 | 95               | DP/MP  |
| 529                                 |  | 7/10/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.0                  | 106.9                      | 8                                       | 95                 | 95               | DP/MP  |
| 530                                 |  | 7/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 133.3                      | 8                                       | 95                 | 95               | DP/MP  |
| 531                                 |  | 7/10/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.5                  | 108.9                      | 8                                       | 96                 | 95               | DP/MP  |
| 532                                 |  | 7/10/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.1                  | 107.6                      | 8                                       | 95                 | 95               | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 525                                 | Backfill - Sanitary Sewer Line Trench: 30 feet east of manhole 17, 0 feet BGS  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 526                                 | Backfill - Sanitary Sewer Line Trench: Around manhole 17, 2 feet BGS           |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 527                                 | Backfill - Sanitary Sewer Line Trench: 50 feet West of manhole 17, 3 feet BGS  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 528                                 | Backfill - Sanitary Sewer Line Trench: 100 feet West of manhole 17, 4 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 529                                 | Backfill - Sanitary Sewer Line Trench: 150 feet west of manhole 17, 2 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 530                                 | Backfill - Sanitary Sewer Line Trench: Around manhole 17, 2 feet BGS           |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 531                                 | Backfill - Sanitary Sewer Line Trench: 200 feet west of manhole 17, 3 feet BGS |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| 532                                 | Backfill - Sanitary Sewer Line Trench: 50 feet west of manhole 17, 2 feet BGS  |           |            |        |  |                      |                           |                       |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | CRESSLER, LUCAS  |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results                        |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |
|-------------------------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|--------------------|--------|
| Test #                              | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)      | Remark |
| 533                                 |   | 7/10/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.0                  | 107.4                                | 8                | 95                 | 95                 | DP/MP  |
| 534                                 |   | 7/10/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.7                  | 109.5                                | 8                | 97                 | 95                 | DP/MP  |
| 535                                 |   | 7/11/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                   | 135.0                                | 8                | 96                 | 95                 | DP/MF  |
| 536                                 |   | 7/11/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.7                   | 140.5                                | 8                | 100                | 95                 | DP/MP  |
| 537                                 |   | 7/11/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 136.9                                | 8                | 98                 | 95                 | DP/MF  |
| 538                                 |   | 7/11/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 133.9                                | 8                | 96                 | 95                 | DP/MF  |
| 539                                 |   | 7/11/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 10.8                  | 115.0                                | 8                | 102                | 95                 | DP/MF  |
| 540                                 |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.8                  | 116.5                                | 8                | 103                | 95                 | DP     |
| Test Information                    |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |
| Test #                              | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician   |        |
| 533                                 | Backfill - Sanitary Sewer Line Trench: 200 feet west of manhole 17, 2 feet BGS  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | CRESSLER, LUCAS    |        |
| 534                                 | Backfill - Sanitary Sewer Line Trench: 150 feet west of manhole 17, 2 feet BGS  |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | CRESSLER, LUCAS    |        |
| 535                                 | Backfill - Utility Trench: North trench   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | KANNENBERG, JOSHUA |        |
| 536                                 | Backfill - Utility Trench: North trench   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | KANNENBERG, JOSHUA |        |
| 537                                 | Backfill - Utility Trench: North trench   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | KANNENBERG, JOSHUA |        |
| 538                                 | Backfill - Utility Trench: North trench   |           |            |        |  |                      |                           |                       | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | KANNENBERG, JOSHUA |        |
| 539                                 | Backfill - Utility Trench: Grade  |           |            |        |  |                      |                           |                       | Troxler / 3430 / 61919 / 8/31/2017   |                  |                    | KANNENBERG, JOSHUA |        |
| 540                                 | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 15 feet west of SD 18 |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON      |        |
| Remarks                             |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                    |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                    |        |
| DP/MF: Density Pass / Moisture Fail |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |
| DP: Density Pass                    |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 541              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                   | 135.4                                | 8                | 97                 | 95               | DP     |
| 542              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                   | 138.7                                | 8                | 99                 | 95               | DP     |
| 543              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                   | 138.9                                | 8                | 99                 | 95               | DP     |
| 544              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 139.8                                | 8                | 100                | 95               | DP     |
| 545              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.3                  | 108.7                                | 8                | 96                 | 95               | DP     |
| 546              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.2                  | 107.3                                | 8                | 95                 | 95               | DP     |
| 547              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                   | 132.8                                | 8                | 95                 | 95               | DP     |
| 548              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.5                  | 107.3                                | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 541              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 5 feet east of SD 18        |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 542              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 feet west of SD 18      |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 543              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 feet southwest of SD 18 |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 544              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 feet northwest of SD 18 |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 545              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 15 feet west of SD 18       |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 546              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 35 feet northwest of SD 18  |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 547              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main SD 18                       |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 548              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 feet west of SD 18      |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 549              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.3                  | 108.0                                   | 8                | 96                 | 95               | DP     |
| 550              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 107.3                                   | 8                | 95                 | 95               | DP     |
| 551              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 106.9                                   | 8                | 95                 | 95               | DP     |
| 552              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.3                  | 107.6                                   | 8                | 95                 | 95               | DP     |
| 553              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.7                  | 109.9                                   | 8                | 97                 | 95               | DP     |
| 554              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                   | 133.0                                   | 8                | 95                 | 95               | DP     |
| 555              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.1                  | 109.6                                   | 8                | 97                 | 95               | DP     |
| 556              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.1                  | 109.6                                   | 8                | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 549              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 feet southwest of SD 18 |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 550              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 feet northwest of SD 18 |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 551              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 50 feet north of SD 18      |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 552              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 30 feet south of SD 18      |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 553              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 10 feet east of SD 18       |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 554              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main SD 18                       |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 555              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 ft south of SD 18       |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 556              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 ft south of SD 18       |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 557              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.1                  | 108.7                                   | 8                | 96                 | 95               | DP     |
| 558              |   | 7/12/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.8                  | 107.9                                   | 8                | 95                 | 95               | DP     |
| 559              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                   | 141.3                                   | 8                | 101                | 95               | DP     |
| 560              |   | 7/12/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 133.6                                   | 8                | 95                 | 95               | DP     |
| 561              |   | 7/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.2                  | 108.5                                   | 8                | 96                 | 95               | DP     |
| 562              |   | 7/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.8                  | 108.4                                   | 8                | 96                 | 95               | DP     |
| 563              |   | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                   | 132.7                                   | 8                | 95                 | 95               | DP     |
| 564              |   | 7/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.0                  | 114.1                                   | 8                | 101                | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 557              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 ft northwest of SD 18 |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 558              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 ft northwest of SD 18 |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 559              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 200 ft west of SD 18      |           |            |        |  |                      | 6.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 560              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 300 ft west of SD 18      |           |            |        |  |                      | 6.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 561              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 50 feet north of SD 18    |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 562              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 20 feet west of SD 18     |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 563              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main SD 18                     |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 564              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 50 ft south of SD 18      |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 565              |   | 7/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.6                  | 107.5                                | 8                | 95                 | 95               | DP     |
| 566              |   | 7/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.4                  | 108.7                                | 8                | 96                 | 95               | DP     |
| 567              |   | 7/13/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.2                  | 107.6                                | 8                | 95                 | 95               | DP     |
| 568              |   | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 126.1                                | 8                | 90                 | 95               | DF     |
| 569              | 568   | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.9                   | 134.7                                | 8                | 96                 | 95               | DP     |
| 570              |   | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 129.8                                | 8                | 93                 | 95               | DF     |
| 571              |   | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 125.5                                | 8                | 90                 | 95               | DF     |
| 572              | 571   | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                   | 132.9                                | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 565              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 70 ft northwest of SD 18        |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 566              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 70 ft southwest of SD 18        |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 567              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 ft west of SD 18            |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 568              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 feet east of SD 19          |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 569              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 110 feet southeast of SD 19     |           |            |        |  |                      | 6.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 570              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main Eastern SD            |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 571              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main 50 ft east Eastern SD |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 572              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main 50 ft east Eastern SD |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |
| DF: Density Fail |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 573              |  | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 129.2                                | 8                | 92                 | 95               | DF     |
| 574              | 573  | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 133.5                                | 8                | 95                 | 95               | DP     |
| 575              | 570  | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 132.4                                | 8                | 95                 | 95               | DP     |
| 576              |  | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                   | 128.4                                | 8                | 92                 | 95               | DF     |
| 577              | 576  | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                   | 128.4                                | 8                | 92                 | 95               | DF     |
| 578              |  | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.5                   | 131.0                                | 6                | 94                 | 90               | DP     |
| 579              |  | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                   | 133.9                                | 6                | 96                 | 90               | DP     |
| 580              |  | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                   | 134.8                                | 6                | 96                 | 90               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 573              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main 250 ft east Eastern SD |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 574              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main 350 ft east Eastern SD |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 575              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main 450 ft east Eastern SD |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 576              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main 500 ft east Eastern SD |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 577              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main 500 ft east Eastern SD |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 578              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 feet northeast of SD 19      |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 579              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 250 feet northeast of SD 19      |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 580              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 250 feet southeast of SD 19      |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DF: Density Fail |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 581              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.9                  | 107.9                      | 8                                    | 95                 | 95               | DP     |
| 582              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.6                  | 109.7                      | 8                                    | 97                 | 95               | DP     |
| 583              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.2                  | 114.1                      | 8                                    | 101                | 95               | DP     |
| 584              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.6                  | 109.3                      | 8                                    | 97                 | 95               | DP     |
| 585              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.3                  | 107.2                      | 8                                    | 95                 | 95               | DP     |
| 586              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.2                  | 108.3                      | 8                                    | 96                 | 95               | DP     |
| 587              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.2                  | 107.2                      | 8                                    | 95                 | 95               | DP     |
| 588              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.5                  | 108.7                      | 6                                    | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 581              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 feet northwest of SD 18 |           |            |        |  |                      | 1.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| 582              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 feet west of SD 18      |           |            |        |  |                      | 1.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| 583              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 30 feet north of SD 19      |           |            |        |  |                      | 0.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| 584              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 50 feet west of SD 19       |           |            |        |  |                      | 0.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| 585              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 50 feet northwest of SD 19  |           |            |        |  |                      | 0.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| 586              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 feet west of SD 19      |           |            |        |  |                      | 2.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| 587              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 150 feet west of SD 19      |           |            |        |  |                      | 2.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| 588              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 100 feet west of SD 18      |           |            |        |  |                      | 0.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 589              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.5                  | 107.4                                | 6                | 95                 | 95               | DP     |
| 590              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.5                  | 107.9                                | 6                | 95                 | 95               | DP     |
| 591              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.2                  | 109.1                                | 6                | 97                 | 95               | DP     |
| 592              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.3                  | 107.0                                | 6                | 95                 | 95               | DP     |
| 593              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.2                  | 107.5                                | 6                | 95                 | 95               | DP     |
| 594              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.2                  | 108.1                                | 6                | 96                 | 95               | DP     |
| 595              |   | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.0                   | 133.3                                | 6                | 95                 | 95               | DP     |
| 596              |   | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 132.4                                | 6                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 589              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 200 feet west of SD 18                    |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 590              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 200 feet northwest of SD 18               |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 591              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 200 feet southwest of SD 18               |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 592              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 300 feet southwest of SD 18               |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 593              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 300 feet southwest of SD 18               |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 594              | Backfill - Sanitary Sewer Line Trench: Waha Ct Sewer Main 400 feet west of SD 18                    |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 595              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 200 ft east of westernmost SD. |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 596              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 150 ft east of westernmost SD. |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 597              |   | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                   | 133.7                                   | 6                | 96                 | 95               | DP     |
| 598              |   | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                   | 134.2                                   | 6                | 96                 | 95               | DP     |
| 599              |   | 7/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.9                   | 135.4                                   | 6                | 97                 | 95               | DP     |
| 640              | 577   | 7/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                   | 136.3                                   | 6                | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 597              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 100 ft east of westernmost SD. |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 598              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 50 ft east of westernmost SD.  |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 599              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, SD 18                                   |           |            |        |  |                      | 1.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 640              | Backfill - Stormwater Line Trench: Waha Ct, 400 ft east of SD 5.                                    |           |            |        |  |                      | 8.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 600              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.2                  | 108.1                                | 6                | 96                 | 95               | DP     |
| 601              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.4                  | 107.9                                | 8                | 95                 | 95               | DP     |
| 602              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.4                  | 106.8                                | 6                | 95                 | 95               | DP     |
| 603              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.2                  | 107.9                                | 6                | 95                 | 95               | DP     |
| 604              |   | 7/16/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.2                  | 107.1                                | 6                | 95                 | 95               | DP     |
| 605              |   | 7/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                   | 136.0                                | 6                | 97                 | 95               | DP     |
| 606              |   | 7/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                   | 137.2                                | 6                | 98                 | 95               | DP     |
| 607              |   | 7/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.1                   | 139.8                                | 6                | 100                | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 600              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 10 ft south of SD 18                    |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 601              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 10 ft south of SD 18                    |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 602              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 100 ft west of SD 18                    |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 603              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 200 ft west of SD 18                    |           |            |        |  |                      | 1.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 604              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 300 ft west of SD 18                    |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 605              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 150 ft east of westernmost SD. |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 606              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 100 ft east of westernmost SD. |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 607              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 80 ft east of westernmost SD.  |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 608              |  | 7/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                   | 132.7                                   | 6                | 95                 | 95               | DP     |
| 609              |  | 7/17/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.5                  | 107.4                                   | 8                | 95                 | 95               | DP     |
| 610              |  | 7/17/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.9                  | 107.6                                   | 8                | 95                 | 95               | DP     |
| 611              |  | 7/17/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.1                  | 107.4                                   | 8                | 95                 | 95               | DP     |
| 612              |  | 7/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                   | 133.1                                   | 6                | 95                 | 95               | DP     |
| 613              |  | 7/17/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 107.4                                   | 8                | 95                 | 95               | DP     |
| 614              |  | 7/17/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 107.4                                   | 8                | 95                 | 95               | DP     |
| 615              |  | 7/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                   | 134.6                                   | 6                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 608              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 50 ft east of westernmost SD. |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 609              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 100 ft east of SD 19.                  |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 610              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 200 ft east of SD 19.                  |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 611              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 300 ft east of SD 19.                  |           |            |        |  |                      | 0.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 612              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, westernmost SD.               |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 613              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 30 ft east of westernmost SD. |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 614              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 30 ft east of westernmost SD. |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 615              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, westernmost SD.               |           |            |        |  |                      | 3.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 616              |   | 7/18/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 134.1                                   | 6                | 96                 | 95               | DP     |
| 617              |   | 7/18/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 133.2                                   | 6                | 95                 | 95               | DP     |
| 618              |   | 7/18/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                   | 133.9                                   | 6                | 96                 | 95               | DP     |
| 619              |   | 7/18/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.3                  | 109.5                                   | 8                | 97                 | 95               | DP     |
| 620              |   | 7/18/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 132.7                                   | 8                | 95                 | 95               | DP     |
| 621              |   | 7/18/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.3                  | 107.2                                   | 8                | 95                 | 95               | DP     |
| 622              |   | 7/18/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 17.5                  | 107.2                                   | 8                | 95                 | 95               | DP     |
| 623              |   | 7/18/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.3                  | 107.0                                   | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 616              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 150 ft west of SD 18      |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 617              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 100 ft west of SD 18      |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 618              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 50 ft west of SD 18       |           |            |        |  |                      | 5.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 619              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 10 ft south of SD 19      |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 620              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, SD 19                     |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 621              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 100 ft southwest of SD 19 |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 622              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 100 ft northwest of SD 19 |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| 623              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 200 ft southwest of SD 19 |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 624              |   | 7/18/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.6                  | 107.6                      | 8                                       | 95                 | 95               | DP     |
| 625              |   | 7/18/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 16.2                  | 107.8                      | 8                                       | 95                 | 95               | DP     |
| 626              |   | 7/18/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 11.3                  | 110.8                      | 8                                       | 98                 | 95               | DP     |
| 627              |   | 7/18/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                   | 133.1                      | 8                                       | 95                 | 95               | DP     |
| 628              |   | 7/18/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                   | 133.9                      | 8                                       | 96                 | 95               | DP     |
| 629              |   | 7/19/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.8                  | 107.3                      | 6                                       | 95                 | 95               | DP     |
| 630              | 629   | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.6                   | 132.3                      | 8                                       | 95                 | 95               | DP     |
| 631              |   | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 137.8                      | 8                                       | 98                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 624              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 200 ft northwest of SD 19 |           |            |        |  |                      | 4.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| 625              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 300 ft northwest of SD 19 |           |            |        |  |                      | 4.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| 626              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 300 ft northwest of SD 19 |           |            |        |  |                      | 4.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| 627              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, SD 5                      |           |            |        |  |                      | 6.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| 628              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 10 feet north of SD 5     |           |            |        |  |                      | 5.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| 629              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 150 ft west of SD 18      |           |            |        |  |                      | 5.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| 630              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 150 ft west of SD 18      |           |            |        |  |                      | 5.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| 631              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 100 ft east of SD 5       |           |            |        |  |                      | 5.0                       | Feet below grade      |                            | Troxler / 3430 / 37625 / 3/21/2018      |                    | BELL, BRITTON    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 632              |  | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 132.5                                | 8                | 95                 | 95               | DP     |
| 633              |  | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 135.2                                | 8                | 97                 | 95               | DP     |
| 634              |  | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 136.2                                | 8                | 97                 | 95               | DP     |
| 635              |  | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                   | 134.8                                | 8                | 96                 | 95               | DP     |
| 636              |  | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.7                   | 134.3                                | 6                | 96                 | 95               | DP     |
| 637              |  | 7/19/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.2                  | 109.0                                | 6                | 96                 | 95               | DP     |
| 638              |  | 7/19/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.0                  | 108.8                                | 6                | 96                 | 95               | DP     |
| 639              |  | 7/19/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.7                   | 134.8                                | 6                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 632              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 50 ft east of westernmost SD  |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 633              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 90 ft east of westernmost SD  |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 634              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 90 ft east of westernmost SD  |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 635              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 220 ft east of westernmost SD |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 636              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 150 ft west of SD 18                   |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 637              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 200 ft east of SD 5                    |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 638              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 250 ft east of SD 5                    |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 639              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 250 ft east of SD 5                    |           |            |        |  |                      | 4.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 641              |   | 7/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.5                   | 132.3                                | 8                | 95                 | 95               | DP     |
| 642              |   | 7/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 132.9                                | 8                | 95                 | 95               | DP     |
| 643              |   | 7/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                   | 136.0                                | 8                | 97                 | 95               | DP     |
| 644              |   | 7/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                   | 133.2                                | 8                | 95                 | 95               | DP     |
| 645              |   | 7/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                   | 132.5                                | 8                | 95                 | 95               | DP     |
| 646              |   | 7/20/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.8                  | 108.4                                | 8                | 96                 | 95               | DP     |
| 647              |   | 7/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.9                   | 134.0                                | 8                | 96                 | 95               | DP     |
| 648              |   | 7/21/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.3                  | 107.1                                | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 641              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 400 ft east of westernmost SD. |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 642              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 450 ft east of westernmost SD. |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 643              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 490 ft east of westernmost SD. |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 644              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 550 ft east of westernmost SD. |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 645              | Backfill - Sanitary Sewer Line Trench: South of Waha Ct: Sewer Main, 600 ft east of westernmost SD. |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 646              | Backfill - Sanitary Sewer Line Trench: Waha Ct: Sewer Main, 150 ft east of SD 5.                    |           |            |        |  |                      | 2.0                       | Feet below grade      | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | BELL, BRITTON    |        |
| 647              | Backfill - Stormwater Line Trench: NW storm water MH  |           |            |        |  |                      | 5.0                       | Belo'w subgrade       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | ENDERSON, RICK   |        |
| 648              | Backfill - Stormwater Line Trench: 30 deet east of NW storm water MH                                |           |            |        |  |                      | 5.0                       | Belo'w subgrade       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | ENDERSON, RICK   |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 649              |   | 7/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                   | 133.6                                | 8                | 95                 | 95               | DP     |
| 650              |   | 7/21/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 10.7                  | 111.2                                | 8                | 98                 | 95               | DP     |
| 651              |   | 7/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                   | 133.1                                | 8                | 95                 | 95               | DP     |
| 652              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                   | 132.3                                | 8                | 95                 | 95               | DP     |
| 653              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.2                   | 133.1                                | 8                | 95                 | 95               | DP     |
| 654              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                   | 137.6                                | 8                | 98                 | 95               | DP     |
| 655              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.2                   | 132.9                                | 8                | 95                 | 95               | DP     |
| 656              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 132.4                                | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 649              | Backfill - Stormwater Line Trench: 150 feet east of NW storm water MH                           |           |            |        |  |                      | 5.0                       | Belo'w subgrade       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | HENDERSON, RICK  |        |
| 650              | Backfill - Stormwater Line Trench: 200 feet east of NW storm water MH                           |           |            |        |  |                      | 4.0                       | Belo'w subgrade       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | HENDERSON, RICK  |        |
| 651              | Backfill - Stormwater Line Trench: 250 feet east of NW storm water MH                           |           |            |        |  |                      | 6.0                       | Belo'w subgrade       | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | HENDERSON, RICK  |        |
| 652              | Backfill - Sanitary Sewer Line Trench: Storm drinking line and laterals between SD 12 and SD 13 |           |            |        |  |                      | 2.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN   |        |
| 653              | Backfill - Sanitary Sewer Line Trench: Storm drinking line and laterals between SD 12 and SD 13 |           |            |        |  |                      | 1.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN   |        |
| 654              | Backfill - Sanitary Sewer Line Trench: Storm drinking line and laterals between SD 12 and SD 13 |           |            |        |  |                      | 1.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN   |        |
| 655              | Backfill - Sanitary Sewer Line Trench: Storm drinking line and laterals between SD 12 and SD 13 |           |            |        |  |                      | 1.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN   |        |
| 656              | Backfill - Sanitary Sewer Line Trench: Storm drinking line and laterals between SD 12 and SD 13 |           |            |        |  |                      | 2.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN   |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|--------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)      | Remark |
| 657              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                   | 133.4                                | 8                | 95                 | 95                 | DP     |
| 658              |   | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.4                  | 113.5                                | 8                | 100                | 95                 | DP     |
| 659              |   | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 15.1                  | 110.9                                | 8                | 98                 | 95                 | DP     |
| 660              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.2                   | 135.1                                | 8                | 97                 | 95                 | DP     |
| 661              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 11.1                  | 132.9                                | 8                | 95                 | 95                 | DP     |
| 662              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.7                   | 134.4                                | 8                | 96                 | 95                 | DP     |
| 663              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.2                   | 132.5                                | 8                | 95                 | 95                 | DP     |
| 664              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                   | 133.2                                | 8                | 95                 | 95                 | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician   |        |
| 657              | Backfill - Sanitary Sewer Line Trench: Storm drinking line and laterals between SD 12 and SD 13 |           |            |        |  |                      | 1.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN     |        |
| 658              | Backfill - Sanitary Sewer Line Trench: Storm drain line 30 feet west of SD12                    |           |            |        |  |                      | 3.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN     |        |
| 659              | Backfill - Sanitary Sewer Line Trench: Storm drain line 30 feet east of SD11                    |           |            |        |  |                      | 3.0                       | Above top of pipe     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | MAFFEY, JUSTIN     |        |
| 660              | Backfill - Utility Trench: -4   |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 661              | Backfill - Utility Trench: -4   |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 662              | Backfill - Utility Trench: -4   |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 663              | Backfill - Utility Trench: -4   |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 664              | Backfill - Utility Trench: -4   |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                    |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                    |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|--------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)      | Remark |
| 665              |   | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 12.3                  | 115.8                                | 8                | 102                | 95                 | DP     |
| 666              |   | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.2                  | 108.4                                | 8                | 96                 | 95                 | DP     |
| 667              |   | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 18.9                  | 107.0                                | 8                | 95                 | 95                 | DP     |
| 668              |   | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.8                  | 108.4                                | 8                | 96                 | 95                 | DP     |
| 669              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                   | 133.6                                | 8                | 95                 | 95                 | DP     |
| 670              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                   | 132.8                                | 8                | 95                 | 95                 | DP     |
| 671              |   | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                   | 135.4                                | 8                | 97                 | 95                 | DP     |
| 672              |   | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 14.7                  | 108.3                                | 8                | 96                 | 95                 | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                    |        |
| Test #           | Test Location                                     |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician   |        |
| 665              | Backfill - Utility Trench: -4                     |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 666              | Backfill - Utility Trench: -4                     |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 667              | Backfill - Utility Trench: -4                     |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 668              | Backfill - Utility Trench: -4                     |           |            |        |  |                      | -4.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 669              | Backfill - Utility Trench: South utility trench   |           |            |        |  |                      | -3.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 670              | Backfill - Utility Trench: Golden hills man hole  |           |            |        |  |                      | -3.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 671              | Backfill - Utility Trench: Waha man hole          |           |            |        |  |                      | -3.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| 672              | Backfill - Utility Trench: Middle bench west side |           |            |        |  |                      | 0.0                       | Grade                 | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | KANNENBERG, JOSHUA |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                    |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                    |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                    |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|--------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)      | Remark |
| 673              |  | 7/23/18   | PUL17-0329 | A      | ML   | 16.0                 | 113.0                     | 13.5                  | 107.5                                   | 8                | 95                 | 95                 | DP     |
| 674              |  | 7/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 133.7                                   | 8                | 96                 | 95                 | DP     |
| 675              |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                   | 135.3                                   | 8                | 97                 | 95                 | DP     |
| 676              |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                   | 136.0                                   | 8                | 97                 | 95                 | DP     |
| 677              |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                  | 110.5                                   | 8                | 97                 | 95                 | DP     |
| 678              |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.4                  | 112.7                                   | 8                | 98                 | 95                 | DP     |
| 679              |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.5                  | 109.7                                   | 8                | 96                 | 95                 | DP     |
| 680              |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                  | 108.3                                   | 8                | 95                 | 95                 | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                    |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician   |        |
| 673              | Backfill - Utility Trench: Middle bench west side          |           |            |        |  |                      | 0.0                       | Grade                 | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | KANNENBERG, JOSHUA |        |
| 674              | Backfill - Utility Trench: South trench                    |           |            |        |  |                      | -5.0                      | Grade                 | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | KANNENBERG, JOSHUA |        |
| 675              | Backfill - Sanitary Sewer Line Trench: 20 away 13          |           |            |        |  |                      | 2.0                       | Below finish base     | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH      |        |
| 676              | Backfill - Stormwater Line Trench: 75 west storm drain 13  |           |            |        |  |                      | 2.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH      |        |
| 677              | Backfill - Stormwater Line Trench: 125 west storm drain 13 |           |            |        |  |                      | 1.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH      |        |
| 678              | Backfill - Stormwater Line Trench: 25 east storm drain 12  |           |            |        |  |                      | 1.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH      |        |
| 679              | Backfill - Stormwater Line Trench: 15 east storm drain 12  |           |            |        |  |                      | 1.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH      |        |
| 680              | Backfill - Stormwater Line Trench: 11 west storm drain 12  |           |            |        |  |                      | 1.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH      |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                    |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                    |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 681                                 |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                   | 133.8                                   | 8                | 96                 | 95.5             | DP     |
| 682                                 |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 133.6                                   | 8                | 95                 | 95               | DP     |
| 683                                 |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.2                  | 116.5                                   | 8                | 102                | 95               | DP     |
| 684                                 |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.6                  | 116.4                                   | 8                | 102                | 95               | DP     |
| 685                                 |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.3                   | 137.1                                   | 8                | 120                | 95               | DP     |
| 686                                 |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                   | 132.5                                   | 8                | 95                 | 95               | DP/MP  |
| 687                                 |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                   | 133.1                                   | 8                | 95                 | 95               | DP/MP  |
| 688                                 |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 132.3                                   | 8                | 95                 | 95               | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 681                                 | Backfill - Stormwater Line Trench: 1 South east storm drain 14 |           |            |        |  |                      | 3.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 682                                 | Backfill - Stormwater Line Trench: 1 east storm drain 14       |           |            |        |  |                      | 3.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 683                                 | Backfill - Stormwater Line Trench: 25 east storm drain 14      |           |            |        |  |                      | 1.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 684                                 | Backfill - Stormwater Line Trench: 16 west storm drain 16      |           |            |        |  |                      | 1.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 685                                 | Backfill - Stormwater Line Trench: 1 east storm drain 14       |           |            |        |  |                      | 1.0                       | Finish base           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 686                                 | Backfill - Stormwater Line Trench: 1 north storm drain 14      |           |            |        |  |                      | 3.0                       | Base fill             | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 687                                 | Backfill - Stormwater Line Trench: 1 south east sewer 14       |           |            |        |  |                      | 2.0                       | Base fill             | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 688                                 | Backfill - Stormwater Line Trench: 1 north sewer 14            |           |            |        |  |                      | 2.0                       | Base fill             | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |   |                    |               |                  |  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|---------------|------------------|--|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%) | Remark           |  |
| 689              |   | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.9                  | 111.3                      | 8                                       | 97                 | 95            | DP               |  |
| 690              |   | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.4                  | 108.3                      | 8                                       | 95                 | 95            | DP               |  |
| 691              |   | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                  | 110.6                      | 8                                       | 97                 | 95            | DP               |  |
| 692              |   | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 132.8                      | 6                                       | 95                 | 95            | DP               |  |
| 693              |   | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                   | 137.7                      | 6                                       | 98                 | 95            | DP               |  |
| 694              |   | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 134.6                      | 8                                       | 96                 | 95            | DP               |  |
| 695              |   | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 136.2                      | 8                                       | 97                 | 95            | DP               |  |
| 696              |   | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                   | 132.5                      | 8                                       | 95                 | 95            | DP               |  |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |   |                    |               |                  |  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    |               | Field Technician |  |
| 689              | Backfill - Sanitary Sewer Line Trench: Cayuse street        |           |            |        |  |                      | 1.0                       | 1 Below grade         |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    |               | PAULSEN, ZACH    |  |
| 690              | Backfill - Sanitary Sewer Line Trench: Cayuse street        |           |            |        |  |                      | 1.0                       | 1 Below grade         |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    |               | PAULSEN, ZACH    |  |
| 691              | Backfill - Stormwater Line Trench: Cayuse                   |           |            |        |  |                      | 2.0                       | 2 below grade         |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    |               | PAULSEN, ZACH    |  |
| 692              | Backfill - Stormwater Line Trench: Cayuse                   |           |            |        |  |                      | 2.0                       | 2 below grade         |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    |               | PAULSEN, ZACH    |  |
| 693              | Backfill - Stormwater Line Trench: Cayuse                   |           |            |        |  |                      | 2.0                       | 2 below grade         |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    |               | PAULSEN, ZACH    |  |
| 694              | Backfill - Sanitary Sewer Line Trench: Waha Ct west manhole |           |            |        |  |                      | 3.0                       | Below finish base     |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    |               | PERSELL, JOHN    |  |
| 695              | Backfill - Sanitary Sewer Line Trench: Waha Ct west manhole |           |            |        |  |                      | 3.0                       | Below finish base     |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    |               | PERSELL, JOHN    |  |
| 696              | Backfill - Sanitary Sewer Line Trench: Waha Ct west manhole |           |            |        |  |                      | 3.0                       | Below finish base     |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    |               | PERSELL, JOHN    |  |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |   |                    |               |                  |  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |               |                  |  |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 697              |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.7                   | 133.4                                   | 8                | 95                 | 95               | DP     |
| 698              |  | 7/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 9.6                   | 132.8                                   | 8                | 95                 | 95               | DP     |
| 699              |  | 7/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.6                  | 104.8                                   | 8                | 92                 | 95               | DF     |
| 700              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.5                  | 111.6                                   | 8                | 97                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                    |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 697              | Backfill - Sanitary Sewer Line Trench: Wallowa   |           |            |        |  |                      | 10.0                      | 10 below grade trench | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 698              | Backfill - Sanitary Sewer Line Trench: Wallowa   |           |            |        |  |                      | 10.0                      | 10 below grade trench | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 699              | Backfill - Sanitary Sewer Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Foot below grade      | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 700              | Backfill - Sanitary Sewer Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | 1 below grade         | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DF: Density Fail |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |



| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                    | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 701              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.0                  | 111.8                                   | 8                | 98                 | 95               | DP     |
| 702              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.1                  | 109.3                                   | 8                | 95                 | 95               | DP     |
| 703              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.1                  | 110.3                                   | 8                | 96                 | 95               | DP     |
| 704              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.1                  | 108.8                                   | 8                | 95                 | 95               | DP     |
| 705              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                   | 135.6                                   | 8                | 97                 | 95               | DP     |
| 706              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 137.5                                   | 8                | 98                 | 95               | DP     |
| 707              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.9                   | 134.3                                   | 8                | 96                 | 95               | DP     |
| 708              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 134.3                                   | 8                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 701              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | 1 below grade         | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 702              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | 1 below grade         | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 703              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | 1 below grade         | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 704              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | 1 below grade         | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 705              | Backfill - Stormwater Line Trench: Waha ct   |           |            |        |  |                      | 1.0                       | 1 below grade         | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 706              | Backfill - Stormwater Line Trench: Waha ct   |           |            |        |  |                      | 1.0                       | 1 below grade         | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 707              | Backfill - Stormwater Line Trench: Waha ct   |           |            |        |  |                      | 1.5                       | 1.5 below grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 708              | Backfill - Stormwater Line Trench: Waha ct   |           |            |        |  |                      | 1.5                       | 1.5 below grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 709              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 136.3                                   | 8                | 97                 | 95               | DP     |
| 710              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                   | 137.2                                   | 8                | 98                 | 95               | DP     |
| 711              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.8                   | 132.6                                   | 8                | 95                 | 95               | DP     |
| 712              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 9.6                   | 136.5                                   | 8                | 98                 | 95               | DP     |
| 713              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                   | 134.0                                   | 8                | 96                 | 95               | DP     |
| 714              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 134.3                                   | 8                | 96                 | 95               | DP     |
| 715              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 136.9                                   | 8                | 98                 | 95               | DP     |
| 716              |   | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                   | 134.5                                   | 8                | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 709              | Backfill - Sanitary Sewer Line Trench: 2nd manhole from west on cayuse st |           |            |        |  |                      | 3.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 710              | Backfill - Sanitary Sewer Line Trench: 2nd manhole from west on cayuse st |           |            |        |  |                      | 3.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 711              | Backfill - Sanitary Sewer Line Trench: 3rd manhole from west on cayuse st |           |            |        |  |                      | 3.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 712              | Backfill - Sanitary Sewer Line Trench: 3rd manhole from west on cayuse st |           |            |        |  |                      | 3.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 713              | Backfill - Sanitary Sewer Line Trench: East manhole on cayuse st          |           |            |        |  |                      | 3.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 714              | Backfill - Sanitary Sewer Line Trench: East manhole on cayuse st          |           |            |        |  |                      | 3.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 715              | Backfill - Sanitary Sewer Line Trench: 2nd manhole from west Waha Ct      |           |            |        |  |                      | 1.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 716              | Backfill - Sanitary Sewer Line Trench: 2nd manhole from west Waha Ct      |           |            |        |  |                      | 1.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 717              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.7                  | 110.5                                   | 8                | 97                 | 95               | DP     |
| 718              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.9                  | 111.1                                   | 8                | 97                 | 95               | DP     |
| 719              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.3                  | 109.3                                   | 8                | 95                 | 95               | DP     |
| 720              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.2                  | 109.0                                   | 8                | 95                 | 95               | DP     |
| 721              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.8                  | 109.7                                   | 8                | 96                 | 95               | DP     |
| 722              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                   | 138.6                                   | 8                | 99                 | 95               | DP     |
| 723              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.7                   | 134.9                                   | 8                | 96                 | 95               | DP     |
| 724              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 134.2                                   | 8                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 717              | Backfill - Sanitary Sewer Line Trench: Waha Ct, 5th service line from west, north side |           |            |        |  |                      | 1.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 718              | Backfill - Sanitary Sewer Line Trench: Waha Ct, 3rd service line from west, south side |           |            |        |  |                      | 1.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 719              | Backfill - Sanitary Sewer Line Trench: Waha Ct, 5th service line from west, south side |           |            |        |  |                      | 1.0                       | Ft below grade        | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PERSELL, JOHN    |        |
| 720              | Backfill - Stormwater Line Trench: Cayuse st   |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 721              | Backfill - Stormwater Line Trench: Cayuse st   |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 722              | Backfill - Stormwater Line Trench: Cayuse st   |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 723              | Backfill - Stormwater Line Trench: Cayuse st   |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 724              | Backfill - Stormwater Line Trench: Cayuse st   |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

**Client:**

KIP Development  
 594 SE Bishop Boulevard, Suite 102  
 Pullman, WA 99163

**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                    | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 725              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                   | 132.6                                   | 8                | 95                 | 95               | DP     |
| 726              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                   | 132.4                                   | 8                | 95                 | 95               | DP     |
| 727              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                   | 134.4                                   | 8                | 96                 | 95               | DP     |
| 728              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.1                   | 136.5                                   | 8                | 98                 | 95               | DP     |
| 729              |  | 7/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 134.1                                   | 8                | 96                 | 95               | DP     |
| 730              |  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.6                  | 112.0                                   | 8                | 98                 | 95               | DP     |
| 731              |  | 7/26/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                   | 136.1                                   | 8                | 97                 | 95               | DP     |
| 732              |  | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.6                  | 110.6                                   | 8                | 97                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 725              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 726              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 727              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 728              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below subgrade        | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 729              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below sub grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 730              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below sub grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 731              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 3.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 732              | Backfill - Stormwater Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

**Client:**

KIP Development  
 594 SE Bishop Boulevard, Suite 102  
 Pullman, WA 99163

**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 733              |  | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.4                  | 110.9                                   | 8                | 97                 | 95               | DP     |
| 734              | 699  | 7/25/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 119.3                                   | 8                | 104                | 95               | DP     |
| 735              |  | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.2                   | 115.7                                   | 8                | 101                | 95               | DP     |
| 736              |  | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.1                  | 108.6                                   | 8                | 95                 | 95               | DP     |
| 737              |  | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.0                  | 108.3                                   | 8                | 95                 | 95               | DP     |
| 738              |  | 7/26/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.0                   | 134.0                                   | 8                | 96                 | 95               | DP     |
| 739              |  | 7/26/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.0                   | 132.6                                   | 8                | 95                 | 95               | DP     |
| 740              |  | 7/26/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                   | 134.1                                   | 8                | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                    |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 733              | Backfill - Stormwater Line Trench: Cayuse st     |           |            |        |  |                      | 1.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 734              | Backfill - Sanitary Sewer Line Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Foot below grade      | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | BJORNBERG, BRENT |        |
| 735              | Backfill - Utility Trench: Cayuse st             |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 736              | Backfill - Utility Trench: Cayuse st             |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 737              | Backfill - Utility Trench: Cayuse st             |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 738              | Backfill - Utility Trench: Cayuse st             |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 739              | Backfill - Utility Trench: Cayuse st             |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 740              | Backfill - Utility Trench: Cayuse st             |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

**Client:**

KIP Development  
 594 SE Bishop Boulevard, Suite 102  
 Pullman, WA 99163

**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results     |                                      |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--------------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                            | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 741              |                                      | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 109.2                                   | 8                | 95                 | 95               | DP     |
| 742              |                                      | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.0                  | 109.1                                   | 8                | 95                 | 95               | DP     |
| 743              |                                      | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 8.9                   | 108.3                                   | 8                | 95                 | 95               | DP     |
| 744              |                                      | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.2                  | 108.9                                   | 8                | 95                 | 95               | DP     |
| 745              |                                      | 7/26/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.5                  | 109.1                                   | 8                | 95                 | 95               | DP     |
| 746              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.2                   | 109.4                                   | 8                | 96                 | 95               | DP     |
| 747              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.4                  | 108.7                                   | 8                | 95                 | 95               | DP     |
| 748              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 108.9                                   | 8                | 95                 | 95               | DP     |
| Test Information |                                      |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                        |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 741              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 742              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 743              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 744              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 745              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 0.5                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 746              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below sub grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 747              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below sub grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 748              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below sub grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |                                      |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                                      |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

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KIP Development  
 594 SE Bishop Boulevard, Suite 102  
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**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results     |                                      |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--------------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                            | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 749              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.9                  | 111.2                                   | 8                | 97                 | 95               | DP     |
| 750              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.9                  | 108.6                                   | 8                | 95                 | 95               | DP     |
| 751              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.2                  | 109.1                                   | 8                | 95                 | 95               | DP     |
| 752              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.6                  | 108.7                                   | 8                | 95                 | 95               | DP     |
| 753              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.7                  | 112.7                                   | 8                | 98                 | 95               | DP     |
| 754              |                                      | 7/27/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.0                  | 109.8                                   | 8                | 96                 | 95               | DP     |
| 755              |                                      | 7/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 136.2                                   | 8                | 97                 | 95               | DP     |
| 756              |                                      | 7/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                   | 133.8                                   | 8                | 96                 | 95               | DP     |
| Test Information |                                      |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                        |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 749              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below sub grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 750              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 751              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 752              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 753              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 754              | Backfill - Utility Trench: Cayuse st |           |            |        |  |                      | 1.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 755              | Backfill - Utility Trench: Palawa st |           |            |        |  |                      | 4.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 756              | Backfill - Utility Trench: Palawa st |           |            |        |  |                      | 4.0                       | Below grade           | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |                                      |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                                      |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 757              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 132.6                                   | 8                | 95                 | 95               | DP     |
| 758              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                   | 135.7                                   | 8                | 97                 | 95               | DP     |
| 759              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 138.9                                   | 8                | 99                 | 95               | DP     |
| 760              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.9                   | 133.7                                   | 8                | 96                 | 95               | DP     |
| 761              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 134.5                                   | 8                | 96                 | 95               | DP     |
| 762              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 140.9                                   | 8                | 101                | 95               | DP     |
| 763              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                   | 134.1                                   | 8                | 96                 | 95               | DP     |
| 764              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 136.5                                   | 8                | 98                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 757              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 758              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 759              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 760              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 761              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 762              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 763              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 764              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |  |                     |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--|---------------------|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method   | Soil Classification | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 765              |   | 7/30/18   | PUL17269   |  | GP                  | 8.0                  | 140.0                     | 8.5                   | 133.5                                   | 8                | 95                 | 95               | DP     |
| 766              |   | 7/30/18   | PUL17269   |  | GP                  | 8.0                  | 140.0                     | 10.1                  | 133.0                                   | 8                | 95                 | 95               | DP     |
| 767              |   | 7/30/18   | PUL17269   |  | GP                  | 8.0                  | 140.0                     | 8.7                   | 132.8                                   | 8                | 95                 | 95               | DP     |
| 768              |   | 7/30/18   | PUL17269   |  | GP                  | 8.0                  | 140.0                     | 6.4                   | 134.2                                   | 8                | 96                 | 95               | DP     |
| 769              |   | 7/30/18   | PUL17269   |  | GP                  | 8.0                  | 140.0                     | 7.0                   | 132.6                                   | 8                | 95                 | 95               | DP     |
| 770              |   | 7/30/18   | PUL17269   |  | GP                  | 8.0                  | 140.0                     | 8.4                   | 135.6                                   | 8                | 97                 | 95               | DP     |
| 771              |   | 7/30/18   | PUL17-0177 | A  | ML                  | 13.5                 | 114.5                     | 14.1                  | 111.9                                   | 8                | 98                 | 95               | DP     |
| 772              |   | 7/30/18   | PUL17269   |  | GP                  | 8.0                  | 140.0                     | 6.5                   | 132.9                                   | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |  |                     |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |  |                     |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 765              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 766              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 767              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 8.0                       | Below finish base     | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 768              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 8.0                       | Below finish base     | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 769              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 8.0                       | Below finish base     | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 770              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 8.0                       | Below finish base     | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 771              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 3.0                       | Below finish base     | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 772              | Backfill - Stormwater Line Trench: Wallowa st |           |            |  |                     |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            | Comments   |                     |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                     |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 773              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                   | 134.3                                   | 8                | 96                 | 95               | DP     |
| 774              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                   | 138.3                                   | 8                | 99                 | 95               | DP     |
| 775              |   | 7/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.4                   | 135.2                                   | 6                | 97                 | 95               | DP     |
| 776              |   | 7/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                  | 108.6                                   | 6                | 95                 | 95               | DP     |
| 777              |   | 7/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.1                  | 109.9                                   | 6                | 96                 | 95               | DP     |
| 778              |   | 7/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.1                  | 108.7                                   | 8                | 95                 | 95               | DP     |
| 779              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                   | 139.1                                   | 8                | 99                 | 95               | DP     |
| 780              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 134.9                                   | 8                | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 773              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 774              | Backfill - Utility Trench: Cayuse st          |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 775              | Backfill - Utility Trench: Cayuse st          |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 776              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 777              | Backfill - Utility Trench: Cayuse st          |           |            |        |  |                      | 0.0                       | At finish grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 778              | Backfill - Utility Trench: Cayuse st          |           |            |        |  |                      | 0.0                       | At finish grade       | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 779              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 780              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

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**Project:**

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 Sundance South Subdivision  
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| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 781              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 132.9                                   | 8                | 95                 | 95               | DP     |
| 782              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                   | 133.1                                   | 8                | 95                 | 95               | DP     |
| 783              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                   | 133.9                                   | 8                | 96                 | 95               | DP     |
| 784              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                   | 139.6                                   | 8                | 100                | 95               | DP     |
| 785              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 132.5                                   | 8                | 95                 | 95               | DP     |
| 786              |   | 7/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 133.1                                   | 8                | 95                 | 95               | DP     |
| 787              |   | 8/1/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 137.8                                   | 8                | 98                 | 95               | DP     |
| 788              |   | 8/1/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 136.7                                   | 8                | 98                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 781              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 782              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 783              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 784              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 785              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 786              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 787              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 788              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 789              |   | 8/1/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 109.9                                   | 8                | 96                 | 95               | DP     |
| 790              |   | 8/1/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 113.4                                   | 8                | 99                 | 95               | DP     |
| 791              |   | 8/1/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.9                  | 113.3                                   | 6                | 99                 | 95               | DP     |
| 792              |   | 8/1/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.5                  | 109.8                                   | 6                | 96                 | 95               | DP     |
| 793              |   | 8/1/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                   | 137.5                                   | 8                | 98                 | 95               | DP     |
| 794              |   | 8/1/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                   | 136.5                                   | 8                | 98                 | 95               | DP     |
| 795              |   | 8/1/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.2                   | 137.5                                   | 8                | 98                 | 95               | DP     |
| 796              |   | 8/1/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.3                   | 136.2                                   | 8                | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                     |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 789              | Backfill - Stormwater Line Trench: Wallowa st     |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 790              | Backfill - Stormwater Line Trench: Wallowa st     |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 791              | Backfill - Waterline Trench: trench second row up |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | SAUL, NICK       |        |
| 792              | Backfill - Waterline Trench: trench second row up |           |            |        |  |                      |                           |                       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | SAUL, NICK       |        |
| 793              | Backfill - Stormwater Line Trench: Wallowa st     |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 794              | Backfill - Stormwater Line Trench: Wallowa st     |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 795              | Backfill - Stormwater Line Trench: Wallowa st     |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 796              | Backfill - Stormwater Line Trench: Wallowa st     |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 797              |   | 8/1/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                   | 135.8                                   | 8                | 97                 | 95               | DP     |
| 798              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.5                  | 110.4                                   | 6                | 96                 | 95               | DP     |
| 799              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.0                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 800              |   | 8/2/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 133.2                                   | 6                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 797              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 798              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 799              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 800              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 801              |   | 8/2/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                   | 133.3                                   | 6                | 95                 | 95               | DP     |
| 802              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.7                  | 108.4                                   | 8                | 95                 | 95               | DP     |
| 803              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.3                  | 108.5                                   | 6                | 95                 | 95               | DP     |
| 804              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.7                  | 109.5                                   | 6                | 96                 | 95               | DP     |
| 805              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                  | 109.6                                   | 6                | 96                 | 95               | DP     |
| 806              |   | 8/2/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.8                   | 133.1                                   | 6                | 95                 | 95               | DP     |
| 807              |   | 8/2/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                   | 134.1                                   | 6                | 96                 | 95               | DP     |
| 808              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                  | 108.9                                   | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 801              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 802              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 803              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 804              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 805              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 806              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 807              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 2.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 808              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 809              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.7                   | 109.5                                   | 6                | 96                 | 95               | DP     |
| 810              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.4                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 811              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.7                  | 110.1                                   | 6                | 96                 | 95               | DP     |
| 812              |   | 8/2/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.7                  | 110.3                                   | 6                | 96                 | 95               | DP     |
| 813              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                  | 108.9                                   | 6                | 95                 | 95               | DP     |
| 814              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.8                  | 109.1                                   | 6                | 95                 | 95               | DP     |
| 815              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.7                   | 109.3                                   | 6                | 95                 | 95               | DP     |
| 816              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.8                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 809              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 810              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 811              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 812              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.5                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 813              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 814              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 815              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 816              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 817              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 8.3                   | 117.8                                   | 6                | 103                | 95               | DP     |
| 818              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.0                  | 110.4                                   | 6                | 96                 | 95               | DP     |
| 819              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 6.5                   | 108.5                                   | 6                | 95                 | 95               | DP     |
| 820              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.9                   | 108.5                                   | 6                | 95                 | 95               | DP     |
| 821              |   | 8/3/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 134.6                                   | 6                | 96                 | 95               | DP     |
| 822              |   | 8/3/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 134.2                                   | 6                | 96                 | 95               | DP     |
| 823              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.6                  | 109.9                                   | 6                | 96                 | 95               | DP     |
| 824              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.5                   | 108.7                                   | 6                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 817              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 818              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 819              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 820              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 821              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 822              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 823              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 824              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|---|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 825              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.6                   | 110.0                      | 6                                       | 96                 | 95               | DP     |
| 826              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.7                  | 108.5                      | 6                                       | 95                 | 95               | DP     |
| 827              |   | 8/3/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.4                  | 112.0                      | 6                                       | 98                 | 95               | DP     |
| 828              |   | 8/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.7                  | 108.4                      | 6                                       | 95                 | 95               | DP     |
| 829              |   | 8/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.6                  | 108.5                      | 6                                       | 95                 | 95               | DP     |
| 830              |   | 8/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.8                  | 109.8                      | 6                                       | 96                 | 95               | DP     |
| 831              |   | 8/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                   | 132.3                      | 6                                       | 95                 | 95               | DP     |
| 832              |   | 8/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                   | 132.4                      | 6                                       | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |   |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 825              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| 826              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 2.5                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| 827              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 2.5                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| 828              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 2.0                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| 829              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 2.0                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| 830              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| 831              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 6.5                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| 832              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 6.5                       | Below finish grade    |                            | Instrotek / X3500 / 718 / 3/21/2018     |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |   |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |   |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 833              |   | 8/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                   | 132.6                                   | 6                | 95                 | 95               | DP     |
| 834              |   | 8/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.7                  | 108.6                                   | 6                | 95                 | 95               | DP     |
| 835              |   | 8/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 9.3                   | 133.4                                   | 6                | 95                 | 95               | DP     |
| 836              |   | 8/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                   | 137.2                                   | 6                | 98                 | 95               | DP     |
| 837              |   | 8/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.7                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 838              |   | 8/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.3                  | 108.7                                   | 6                | 95                 | 95               | DP     |
| 839              |   | 8/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.0                   | 134.7                                   | 6                | 96                 | 95               | DP     |
| 840              |   | 8/7/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                   | 135.4                                   | 6                | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 833              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 6.5                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 834              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 835              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 836              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 837              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | PAULSEN, ZACH    |        |
| 838              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 4.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 839              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 840              | Backfill - Waterline Trench: Wallowa st       |           |            |        |  |                      | 6.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 841              |  | 8/7/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                   | 132.8                                   | 6                | 95                 | 95               | DP     |
| 842              |  | 8/8/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 142.1                                   | 6                | 101                | 95               | DP     |
| 843              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 139.4                                   | 6                | 100                | 95               | DP     |
| 844              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 135.6                                   | 6                | 97                 | 95               | DP     |
| 845              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                   | 136.6                                   | 6                | 98                 | 95               | DP     |
| 846              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 132.8                                   | 6                | 95                 | 95               | DP     |
| 847              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 136.5                                   | 6                | 98                 | 95               | DP     |
| 848              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                   | 132.8                                   | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 841              | Backfill - Waterline Trench: Wallowa st                              |           |            |        |  |                      | 6.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 842              | Backfill - Utility Trench: Wallowa st west side                      |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 843              | Backfill - Utility Trench: Wallowa st. West side 1st trench          |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 844              | Backfill - Utility Trench: Wallowa st. West side 3rd trench          |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 845              | Backfill - Utility Trench: Wallowa st. West side 4th trench          |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 846              | Backfill - Utility Trench: Wallowa st. West side 5th trench          |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 847              | Backfill - Utility Trench: Wallowa st. East side 1st trench          |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 848              | Backfill - Utility Trench: Wallowa st east side of trench 3rd trench |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 849              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 132.5                                   | 6                | 95                 | 95               | DP     |
| 850              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                   | 134.8                                   | 6                | 96                 | 95               | DP     |
| 851              |  | 8/9/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 132.9                                   | 6                | 95                 | 95               | DP     |
| 852              |  | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                   | 138.1                                   | 6                | 99                 | 95               | DP     |
| 853              |  | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                   | 141.4                                   | 6                | 101                | 95               | DP     |
| 854              |  | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.7                   | 137.4                                   | 6                | 98                 | 95               | DP     |
| 855              |  | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                   | 136.1                                   | 6                | 97                 | 95               | DP     |
| 856              |  | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                   | 133.5                                   | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 849              | Backfill - Utility Trench: Wallowa st west side of trench    |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 850              | Backfill - Utility Trench: Wallowa st west side of trench    |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 851              | Backfill - Utility Trench: Wallowa st west side of trench    |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 852              | Backfill - Utility Trench: East side of trench on wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 853              | Backfill - Utility Trench: East side of trench on wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 854              | Backfill - Utility Trench: East side of trench on wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 855              | Backfill - Utility Trench: East side of trench wallowa st    |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 856              | Backfill - Utility Trench: East side of trench wallowa st    |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 857              |   | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.3                   | 135.7                                   | 4                | 97                 | 95               | DP     |
| 858              |   | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.0                   | 137.3                                   | 4                | 98                 | 95               | DP     |
| 859              |   | 8/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.9                   | 138.7                                   | 4                | 99                 | 95               | DP     |
| 860              |   | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.7                  | 109.2                                   | 8                | 95                 | 95               | DP     |
| 861              |   | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.0                  | 108.5                                   | 6                | 95                 | 95               | DP     |
| 862              |   | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.1                  | 110.7                                   | 6                | 97                 | 95               | DP     |
| 863              |   | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.5                  | 108.3                                   | 6                | 95                 | 95               | DP     |
| 864              |   | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.0                  | 113.2                                   | 6                | 99                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 857              | Backfill - Utility Trench: East side of trench wallowa st |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 858              | Backfill - Utility Trench: East side of trench wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 859              | Backfill - Utility Trench: East side of trench wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 860              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 861              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 862              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 8.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 863              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 864              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |



| Test Results     |                              |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                    | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 865              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                  | 109.7                                   | 6                | 96                 | 95               | DP     |
| 866              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                  | 109.0                                   | 6                | 95                 | 95               | DP     |
| 867              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.7                  | 109.3                                   | 6                | 95                 | 95               | DP     |
| 868              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.0                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 869              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.2                  | 111.3                                   | 6                | 97                 | 95               | DP     |
| 870              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.6                  | 111.0                                   | 6                | 97                 | 95               | DP     |
| 871              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.3                  | 109.7                                   | 6                | 96                 | 95               | DP     |
| 872              |                              | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.3                  | 108.9                                   | 6                | 95                 | 95               | DP     |
| Test Information |                              |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 865              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 866              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 867              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 868              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 869              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 870              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 871              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 872              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |                              |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                              |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 873              |   | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.9                  | 108.4                                   | 6                | 95                 | 95               | DP     |
| 874              |   | 8/11/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.3                  | 109.0                                   | 6                | 95                 | 95               | DP     |
| 875              |   | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.9                  | 109.4                                   | 6                | 96                 | 95               | DP     |
| 876              |   | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.5                  | 108.4                                   | 6                | 95                 | 95               | DP     |
| 877              |   | 8/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 133.4                                   | 6                | 95                 | 95               | DP     |
| 878              |   | 8/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 133.7                                   | 6                | 96                 | 95               | DP     |
| 879              |   | 8/13/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                   | 135.0                                   | 6                | 96                 | 95               | DP     |
| 880              |   | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                  | 111.2                                   | 6                | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 873              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 874              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 875              | Backfill - Utility Trench: Wallowa st east side of trench |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 876              | Backfill - Utility Trench: Wallowa st east side of trench |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 877              | Backfill - Utility Trench: Wallowa st                     |           |            |        |  |                      | 2.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 878              | Backfill - Utility Trench: Wallowa st                     |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 879              | Backfill - Utility Trench: Wallowa st                     |           |            |        |  |                      | 2.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 880              | Fill - Subgrade: Umatilla st                              |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |                              |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                    | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 881              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.3                  | 109.7                                   | 6                | 96                 | 95               | DP     |
| 882              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 108.3                                   | 6                | 95                 | 95               | DP     |
| 883              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.8                  | 110.1                                   | 6                | 96                 | 95               | DP     |
| 884              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.7                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 885              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.5                  | 111.0                                   | 6                | 97                 | 95               | DP     |
| 886              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.2                  | 109.3                                   | 6                | 95                 | 95               | DP     |
| 887              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.3                  | 108.4                                   | 6                | 95                 | 95               | DP     |
| 888              |                              | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.8                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| Test Information |                              |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 881              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 882              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 883              | Fill - Subgrade: Umatilla st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 884              | Fill - Subgrade: Wallowa st  |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 885              | Fill - Subgrade: Wallowa st  |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 886              | Fill - Subgrade: Wallowa st  |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 887              | Fill - Subgrade: Wallowa st  |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 888              | Fill - Subgrade: Wallowa st  |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |                              |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                              |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |                             |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|-----------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 889              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.7                  | 114.5                                   | 6                | 100                | 95               | DP     |
| 890              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.1                  | 109.3                                   | 6                | 95                 | 95               | DP     |
| 891              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.9                  | 108.9                                   | 6                | 95                 | 95               | DP     |
| 892              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.0                  | 112.5                                   | 6                | 98                 | 95               | DP     |
| 893              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.1                  | 109.5                                   | 6                | 96                 | 95               | DP     |
| 894              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.7                  | 114.4                                   | 6                | 100                | 95               | DP     |
| 895              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.9                  | 109.2                                   | 6                | 95                 | 95               | DP     |
| 896              |                             | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.1                  | 113.3                                   | 6                | 99                 | 95               | DP     |
| Test Information |                             |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location               |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 889              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 890              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 891              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 892              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 893              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 894              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 895              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 896              | Fill - Subgrade: Wallowa st |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |                             |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                             |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |                                       |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---------------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                             | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 897              |                                       | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.8                  | 108.5                                   | 6                | 95                 | 95               | DP     |
| 898              |                                       | 8/13/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                  | 110.8                                   | 6                | 97                 | 95               | DP     |
| 899              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.2                  | 109.0                                   | 6                | 95                 | 95               | DP     |
| 900              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.0                  | 108.9                                   | 6                | 95                 | 95               | DP     |
| Test Information |                                       |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                         |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 897              | Fill - Subgrade: Wallowa st           |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 898              | Fill - Subgrade: Wallowa st           |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 899              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 900              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |                                       |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                                       |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |                                       |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---------------------------------------|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                             | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 901              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.3                  | 114.1                                   | 6                | 100                | 95               | DP     |
| 902              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.8                  | 110.7                                   | 6                | 97                 | 95               | DP     |
| 903              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.8                  | 108.6                                   | 6                | 95                 | 95               | DP     |
| 904              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                  | 111.7                                   | 6                | 98                 | 95               | DP     |
| 905              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.9                  | 109.5                                   | 6                | 96                 | 95               | DP     |
| 906              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.7                  | 113.6                                   | 6                | 99                 | 95               | DP     |
| 907              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.4                  | 110.0                                   | 6                | 96                 | 95               | DP     |
| 908              |                                       | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.2                  | 108.9                                   | 6                | 95                 | 95               | DP     |
| Test Information |                                       |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                         |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 901              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 902              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 903              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 904              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 905              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 906              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 907              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 908              | Backfill - Utility Trench: Wallowa st |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |                                       |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |                                       |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 909              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.0                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 910              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.1                  | 110.2                                   | 6                | 96                 | 95               | DP     |
| 911              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.4                  | 108.5                                   | 6                | 95                 | 95               | DP     |
| 912              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.7                  | 109.9                                   | 6                | 96                 | 95               | DP     |
| 913              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.2                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 914              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.6                  | 108.7                                   | 6                | 95                 | 95               | DP     |
| 915              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.0                  | 109.1                                   | 6                | 95                 | 95               | DP     |
| 916              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.8                  | 109.5                                   | 6                | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 909              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 910              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 911              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 912              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 913              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 914              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 915              | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 916              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 5.0                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 917              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.4                  | 110.7                                   | 6                | 97                 | 95               | DP     |
| 918              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                  | 117.8                                   | 6                | 103                | 95               | DP     |
| 919              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                  | 112.1                                   | 6                | 98                 | 95               | DP     |
| 920              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.9                  | 108.8                                   | 6                | 95                 | 95               | DP     |
| 921              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.4                  | 108.9                                   | 6                | 95                 | 95               | DP     |
| 922              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.0                  | 109.8                                   | 6                | 96                 | 95               | DP     |
| 923              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.4                  | 113.3                                   | 6                | 99                 | 95               | DP     |
| 924              |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.4                  | 108.7                                   | 6                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 917              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 918              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 919              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 920              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 921              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 922              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 923              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 924              | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results                        |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of                                     | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 925                                 |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                  | 111.3                                   | 6                | 97                 | 95               | DP     |
| 926                                 |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.2                  | 109.2                                   | 6                | 95                 | 95               | DP     |
| 927                                 |   | 8/14/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.6                  | 108.7                                   | 6                | 95                 | 95               | DP     |
| 928                                 |   | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                  | 109.4                                   | 6                | 96                 | 95               | DP     |
| 929                                 |   | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.0                  | 108.6                                   | 6                | 95                 | 95               | DP     |
| 930                                 |   | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.7                  | 110.3                                   | 6                | 96                 | 95               | DP/MP  |
| 931                                 |   | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.4                  | 108.8                                   | 6                | 95                 | 95               | DP/MP  |
| 932                                 |   | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.2                  | 111.6                                   | 6                | 97                 | 95               | DP     |
| Test Information                    |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location                                 |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 925                                 | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 926                                 | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 927                                 | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | PAULSEN, ZACH    |        |
| 928                                 | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 2.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 929                                 | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 2.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 930                                 | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 931                                 | Backfill - Utility Trench: Wallowa st         |           |            |        |  |                      | 4.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 932                                 | Backfill - Stormwater Line Trench: Wallowa st |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks                             |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass                    |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |

| Test Results                        |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 933                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                  | 108.6                                   | 6                | 95                 | 95               | DP/MP  |
| 934                                 |  | 8/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                   | 135.1                                   | 6                | 97                 | 95               | DP     |
| 935                                 |  | 8/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                   | 132.4                                   | 6                | 95                 | 95               | DP     |
| 936                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                  | 112.9                                   | 6                | 99                 | 95               | DP     |
| 937                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.6                  | 108.6                                   | 6                | 95                 | 95               | DP/MP  |
| 938                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                  | 111.6                                   | 6                | 97                 | 95               | DP/MP  |
| 939                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.2                  | 115.5                                   | 6                | 101                | 95               | DP/MP  |
| 940                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.5                  | 111.6                                   | 6                | 97                 | 95               | DP/MP  |
| Test Information                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location                                      |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 933                                 | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 934                                 | Backfill - Stormwater Line Trench: Golden hills dr |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 935                                 | Backfill - Stormwater Line Trench: Golden hills dr |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 936                                 | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 937                                 | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 3.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 938                                 | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 7.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 939                                 | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 2.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 940                                 | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 2.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |

**Client:**

KIP Development  
 594 SE Bishop Boulevard, Suite 102  
 Pullman, WA 99163

**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results                        |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 941                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.1                  | 110.0                                   | 6                | 96                 | 95               | DP/MP  |
| 942                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.6                  | 109.2                                   | 6                | 95                 | 95               | DP     |
| 943                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                  | 111.4                                   | 6                | 97                 | 95               | DP     |
| 944                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.4                  | 112.4                                   | 6                | 98                 | 95               | DP/MP  |
| 945                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.9                  | 109.1                                   | 6                | 95                 | 95               | DP/MP  |
| 946                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.5                  | 111.4                                   | 6                | 97                 | 95               | DP/MP  |
| 947                                 |  | 8/15/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.4                  | 110.6                                   | 6                | 97                 | 95               | DP/MP  |
| 948                                 |  | 8/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                   | 133.9                                   | 6                | 96                 | 95               | DP     |
| Test Information                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #                              | Test Location                                      |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 941                                 | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 2.5                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 942                                 | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 2.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 943                                 | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 2.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 944                                 | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 2.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 945                                 | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 2.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 946                                 | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 2.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 947                                 | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 2.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 948                                 | Backfill - Stormwater Line Trench: Golden hills dr |           |            |        |  |                      | 6.0                       | Below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                           |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|---------------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)     | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 949              |  | 8/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                       | 132.6                                   | 6                | 95                 | 95               | DP     |
| 950              |  | 8/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.2                       | 136.8                                   | 6                | 98                 | 95               | DP     |
| 951              |  | 8/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                       | 133.4                                   | 6                | 95                 | 95               | DP     |
| 952              |  | 8/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                       | 132.4                                   | 6                | 95                 | 95               | DP     |
| 953              |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                      | 112.8                                   | 6                | 99                 | 95               | DP     |
| 954              |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.2                      | 112.3                                   | 6                | 98                 | 95               | DP     |
| 955              |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.4                      | 109.1                                   | 6                | 95                 | 95               | DP     |
| 956              |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.9                      | 116.7                                   | 6                | 102                | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                           |   |                  |                    |                  |        |
| Test #           | Test Location                                      |           |            |        |  |                      | Elevation                 | Reference                 | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 949              | Backfill - Stormwater Line Trench: Golden hills dr |           |            |        |  |                      | 6.0                       | Below finish grade        | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 950              | Backfill - Stormwater Line Trench: Golden hills dr |           |            |        |  |                      | 6.0                       | Below finish grade        | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 951              | Backfill - Stormwater Line Trench: Golden hills dr |           |            |        |  |                      | 4.0                       | Below finish grade        | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 952              | Backfill - Stormwater Line Trench: Golden hills dr |           |            |        |  |                      | 4.0                       | Below finish grade        | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 953              | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 3.0                       | Below final road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 954              | Backfill - Stormwater Line Trench: Wallowa st      |           |            |        |  |                      | 2.5                       | Below final road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 955              | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 2.5                       | Below final road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 956              | Backfill - Utility Trench: Wallowa st              |           |            |        |  |                      | 2.5                       | Below final road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                           |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                           |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                           |                            |   |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|---------------------------|----------------------------|---|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)     | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 957              |   | 8/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                       | 132.7                      | 6                                       | 95                 | 95               | DP     |
| 958              |   | 8/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.9                       | 133.7                      | 6                                       | 96                 | 95               | DP     |
| 959              |   | 8/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                       | 132.9                      | 6                                       | 95                 | 95               | DP     |
| 960              |   | 8/16/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.7                       | 135.1                      | 6                                       | 97                 | 95               | DP     |
| 961              |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.9                      | 109.3                      | 6                                       | 95                 | 95               | DP     |
| 962              |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.2                      | 108.3                      | 6                                       | 95                 | 95               | DP     |
| 963              |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                      | 109.1                      | 6                                       | 95                 | 95               | DP     |
| 964              |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.9                      | 109.0                      | 6                                       | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                           |                            |   |                    |                  |        |
| Test #           | Test Location                                       |           |            |        |  |                      | Elevation                 | Reference                 |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 957              | Backfill - Stormwater Line Trench: Golden Hills dr. |           |            |        |  |                      | 5.0                       | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 958              | Backfill - Stormwater Line Trench: Golden Hills dr. |           |            |        |  |                      | 5.0                       | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 959              | Backfill - Stormwater Line Trench: Golden Hills dr. |           |            |        |  |                      | 4.5                       | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 960              | Backfill - Stormwater Line Trench: Golden Hills dr. |           |            |        |  |                      | 5.0                       | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 961              | Backfill - Utility Trench: Wallowa st               |           |            |        |  |                      | 2.0                       | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 962              | Backfill - Utility Trench: Wallowa st               |           |            |        |  |                      | 1.0                       | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 963              | Backfill - Utility Trench: Wallowa st               |           |            |        |  |                      |                           | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 964              | Backfill - Utility Trench: Wallowa st               |           |            |        |  |                      | 2.0                       | Below final road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                           |                            |   |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                           |                            |   |                    |                  |        |

| Test Results                        |   |           |            |        |  |                      |                           |                            |   |                  |                    |                  |        |
|-------------------------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|---|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 965                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.9                       | 119.9                                   | 6                | 105                | 95               | DP     |
| 966                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.9                       | 111.2                                   | 6                | 97                 | 95               | DP/MP  |
| 967                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.6                       | 108.7                                   | 6                | 95                 | 95               | DP/MP  |
| 968                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                       | 110.1                                   | 6                | 96                 | 95               | DP/MP  |
| 969                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.0                       | 112.1                                   | 6                | 98                 | 95               | DP/MP  |
| 970                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.4                       | 111.4                                   | 6                | 97                 | 95               | DP/MP  |
| 971                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                       | 111.3                                   | 6                | 97                 | 95               | DP/MP  |
| 972                                 |   | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.2                       | 109.2                                   | 6                | 95                 | 95               | DP/MP  |
| Test Information                    |   |           |            |        |  |                      |                           |                            |   |                  |                    |                  |        |
| Test #                              | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 965                                 | Backfill - Stormwater Line Trench: Wallowa st                               |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 966                                 | Backfill - Utility Trench: Wallowa st                                       |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 967                                 | Backfill - Stormwater Line Trench: Wallowa st                               |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 968                                 | Backfill - Utility Trench: Wallowa st                                       |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 969                                 | Backfill - Utility Trench: Wallowa st                                       |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 970                                 | Backfill - Stormwater Line Trench: Wallowa st 100' east of SD 9             |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 971                                 | Backfill - Stormwater Line Trench: Wallowa st 25' east of SD 9              |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 972                                 | Backfill - Utility Trench: Wallowa st 25' east of SD 9 north utility trench |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks                             |   |           |            |        | Comments   |                      |                           |                            |   |                  |                    |                  |        |
| DP: Density Pass                    |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |   |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        |  |                      |                           |                            |   |                  |                    |                  |        |



| Test Results                        |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 973                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                       | 111.4                                | 6                | 97                 | 95               | DP/MP  |
| 974                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.0                       | 108.8                                | 6                | 95                 | 95               | DP/MP  |
| 975                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                       | 110.6                                | 6                | 97                 | 95               | DP/MP  |
| 976                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.5                       | 108.4                                | 6                | 95                 | 95               | DP/MP  |
| 977                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.2                       | 108.8                                | 6                | 95                 | 95               | DP     |
| 978                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.1                       | 109.4                                | 6                | 96                 | 95               | DP     |
| 979                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.2                       | 108.7                                | 6                | 95                 | 95               | DP     |
| 980                                 |  | 8/16/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.4                       | 109.7                                | 6                | 96                 | 95               | DP     |
| Test Information                    |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 973                                 | Backfill - Utility Trench: Wallowa st 25' east of SD 9 south utility trench            |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 974                                 | Backfill - Utility Trench: Wallowa st 25' west of SD 9 south utility trench            |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 975                                 | Backfill - Utility Trench: Wallowa st 100' west of SD 9 south utility trench           |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 976                                 | Backfill - Utility Trench: Wallowa st 200' west of SD 9 south utility trench           |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 977                                 | Backfill - Utility Trench: Wallowa st 200' west of SD 9                                |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 978                                 | Backfill - Utility Trench: Wallowa st 150' west of SD 9                                |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 979                                 | Backfill - Utility Trench: West of storm drain 9 150' north utility trench. Wallowa st |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 980                                 | Backfill - Utility Trench: West of storm drain 9 75'. Wallowa st                       |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass                    |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 981              |   | 8/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                        | 134.1                      | 6                                    | 96                 | 95               | DP     |
| 982              |   | 8/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.3                        | 132.4                      | 6                                    | 95                 | 95               | DP     |
| 983              |   | 8/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 132.5                      | 6                                    | 95                 | 95               | DP     |
| 984              |   | 8/17/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 135.4                      | 6                                    | 97                 | 95               | DP     |
| 985              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.5                       | 109.2                      | 6                                    | 95                 | 95               | DP     |
| 986              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.6                       | 108.5                      | 6                                    | 95                 | 95               | DP     |
| 987              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.8                       | 108.3                      | 6                                    | 95                 | 95               | DP     |
| 988              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.0                       | 108.5                      | 6                                    | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 981              | Backfill - Stormwater Line Trench: Golden hills dr. North 10' storm drain 10              |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 982              | Backfill - Stormwater Line Trench: Golden hills dr. North 100' storm drain 10             |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 983              | Backfill - Stormwater Line Trench: Golden hills dr. North 200' storm drain 10             |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 984              | Backfill - Stormwater Line Trench: Golden hills dr. North 275' storm drain 10             |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 985              | Backfill - Stormwater Line Trench: Golden hills dr. North of cayuse st 50'                |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 986              | Backfill - Stormwater Line Trench: Golden hills dr. North of cayuse st 150'               |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 987              | Backfill - Stormwater Line Trench: Golden hills dr. North of cayuse st 250'               |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 988              | Backfill - Stormwater Line Trench: Wallowa st. 50' west of SD 9 north side utility trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 989              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.5                       | 110.1                      | 6                                    | 96                 | 95               | DP     |
| 990              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.2                       | 115.6                      | 6                                    | 101                | 95               | DP     |
| 991              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.1                       | 108.7                      | 6                                    | 95                 | 95               | DP     |
| 992              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.0                       | 111.6                      | 6                                    | 97                 | 95               | DP     |
| 993              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.2                       | 111.2                      | 6                                    | 97                 | 95               | DP     |
| 994              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.9                       | 108.7                      | 6                                    | 95                 | 95               | DP     |
| 995              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.4                       | 111.8                      | 6                                    | 98                 | 95               | DP     |
| 996              |   | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.7                       | 109.7                      | 6                                    | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 989              | Backfill - Stormwater Line Trench: Wallowa st. 25' east of SD 9.                    |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 990              | Backfill - Utility Trench: Wallowa st. 50' east of SD 9 south side utility trench.  |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 991              | Backfill - Utility Trench: Wallowa st. 100' east of SD 9 south side utility trench. |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 992              | Backfill - Utility Trench: Wallowa st. 150' east of SD 9                            |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 993              | Backfill - Utility Trench: Wallowa st. 50' east of SD 8                             |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 994              | Backfill - Utility Trench: Wallowa st. 100' west of SD 8. North side utility trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 995              | Backfill - Utility Trench: Wallowa st. 150' west of SD 8. North side utility trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| 996              | Backfill - Utility Trench: Wallowa st. 75' east of SD 9. North side utility trench  |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|---------------|------------------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%) | Remark           |
| 997              |  | 8/17/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.8                       | 108.5                      | 6                                    | 95                 | 95            | DP               |
| 998              |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                       | 108.5                      | 6                                    | 95                 | 95            | DP               |
| 999              |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.1                       | 110.5                      | 6                                    | 97                 | 95            | DP               |
| 1000             |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.5                       | 116.1                      | 6                                    | 101                | 95            | DP               |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    |               | Field Technician |
| 997              | Backfill - Utility Trench: Wallowa st. 15' east of SD 9. North side utility trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    |               | PAULSEN, ZACH    |
| 998              | Backfill - Stormwater Line Trench: Wallowa st. South side utility trench           |           |            |        |  |                      | 3.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    |               | PAULSEN, ZACH    |
| 999              | Backfill - Stormwater Line Trench: Wallowa st. Storm drain trench                  |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    |               | PAULSEN, ZACH    |
| 1000             | Backfill - Stormwater Line Trench: Wallowa st. Storm drain trench                  |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018 |                    |               | PAULSEN, ZACH    |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |               |                  |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |               |                  |

| Test Results                        |  |           |            |        |  |                      |                           |                            |                            |   |                    |                  |        |
|-------------------------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|---|--------------------|------------------|--------|
| Test #                              | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 1001                                |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.4                       | 111.2                      | 6                                       | 97                 | 95               | DP     |
| 1002                                |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.0                       | 108.6                      | 6                                       | 95                 | 95               | DP/MP  |
| 1003                                |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.2                       | 114.0                      | 6                                       | 100                | 95               | DP/MP  |
| 1004                                |  | 8/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 133.2                      | 6                                       | 95                 | 95               | DP     |
| 1005                                |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.3                       | 109.8                      | 6                                       | 96                 | 95               | DP     |
| 1006                                |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.2                       | 111.7                      | 6                                       | 98                 | 95               | DP     |
| 1007                                |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.2                       | 113.2                      | 6                                       | 99                 | 95               | DP     |
| 1008                                |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.1                       | 110.3                      | 6                                       | 96                 | 95               | DP     |
| Test Information                    |  |           |            |        |  |                      |                           |                            |                            |   |                    |                  |        |
| Test #                              | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1001                                | Backfill - Stormwater Line Trench: Wallowa st. North side utility trench |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| 1002                                | Backfill - Utility Trench: Wallowa st. South side utility trench         |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| 1003                                | Backfill - Stormwater Line Trench: Wallowa st. Storm drain               |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| 1004                                | Backfill - Stormwater Line Trench: Golden Hills Dr. Storm drain          |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| 1005                                | Fill - Structural: Umatilla st. Bottom of north side embankment          |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| 1006                                | Fill - Structural: Umatilla st. Bottom of north side embankment          |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| 1007                                | Fill - Structural: Umatilla st. Bottom of north side embankment          |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| 1008                                | Fill - Structural: Umatilla st. Bottom of north side embankment          |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 1089 / 3/21/2018    |                    | PAULSEN, ZACH    |        |
| Remarks                             |  |           |            |        | Comments   |                      |                           |                            |                            |   |                    |                  |        |
| DP: Density Pass                    |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |   |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |  |           |            |        |  |                      |                           |                            |                            |   |                    |                  |        |

| Test Results                        |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|-------------------------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #                              | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1009                                |   | 8/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                        | 133.1                                | 6                | 95                 | 95               | DP     |
| 1010                                |   | 8/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 132.5                                | 6                | 95                 | 95               | DP     |
| 1011                                |   | 8/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                        | 133.4                                | 6                | 95                 | 95               | DP     |
| 1012                                |   | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.6                        | 109.8                                | 6                | 96                 | 95               | DP     |
| 1013                                |   | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.2                       | 109.2                                | 6                | 95                 | 95               | DP/MP  |
| 1014                                |   | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.0                       | 108.8                                | 6                | 95                 | 95               | DP     |
| 1015                                |   | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.7                       | 108.5                                | 6                | 95                 | 95               | DP     |
| 1016                                |   | 8/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                        | 136.8                                | 6                | 98                 | 95               | DP     |
| Test Information                    |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #                              | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1009                                | Backfill - Stormwater Line Trench: Golden Hills Dr. storm drain trench            |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1010                                | Backfill - Stormwater Line Trench: Golden Hills Dr. storm drain trench            |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1011                                | Backfill - Stormwater Line Trench: Golden Hills Dr. storm drain trench            |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1012                                | Backfill - Stormwater Line Trench: Wallowa st. storm drain trench                 |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1013                                | Backfill - Utility Trench: Wallowa st. South side utility trench                  |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1014                                | Backfill - Utility Trench: Wallowa st. Storm drain trench                         |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1015                                | Backfill - Utility Trench: Wallowa st. North side utility trench                  |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1016                                | Backfill - Sanitary Sewer Line Trench: Golden hills drive. Northern most man hole |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks                             |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass                    |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |
| DP/MP: Density Pass / Moisture Pass |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1017             |  | 8/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                        | 134.0                                | 6                | 96                 | 95               | DP     |
| 1018             |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.9                       | 109.0                                | 6                | 95                 | 95               | DP     |
| 1019             |  | 8/20/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.4                       | 111.3                                | 6                | 97                 | 95               | DP     |
| 1020             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.3                       | 112.4                                | 6                | 98                 | 95               | DP     |
| 1021             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.6                       | 108.6                                | 6                | 95                 | 95               | DP     |
| 1022             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 18.1                       | 108.6                                | 6                | 95                 | 95               | DP     |
| 1023             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.6                       | 108.7                                | 6                | 95                 | 95               | DP     |
| 1024             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.0                       | 108.4                                | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1017             | Backfill - Sanitary Sewer Line Trench: Golden hills drive and wallowa st intersection                                  |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1018             | Backfill - Sanitary Sewer Line Trench: Wallowa st 20' east of golden hills manhole                                     |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1019             | Backfill - Sanitary Sewer Line Trench: Wallowa st 50' east of golden hills manhole north side utility trench.          |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1020             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of cayuse st   |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1021             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of cayuse st   |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1022             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of wallowa st  |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1023             | Backfill - Sanitary Sewer Line Trench: Wallowa st. 100' east of golden hills dr intersection. Storm drain trench       |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1024             | Backfill - Sanitary Sewer Line Trench: Wallowa st. 50' east of golden hills dr intersection. South side utility trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |



| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1025             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                        | 136.9                      | 6                                    | 98                 | 95               | DP     |
| 1026             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.6                       | 108.5                      | 6                                    | 95                 | 95               | DP     |
| 1027             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.4                       | 112.0                      | 6                                    | 98                 | 95               | DP     |
| 1028             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                        | 132.6                      | 6                                    | 95                 | 95               | DP     |
| 1029             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                        | 132.9                      | 6                                    | 95                 | 95               | DP     |
| 1030             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                        | 137.6                      | 6                                    | 98                 | 95               | DP     |
| 1031             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                        | 140.3                      | 6                                    | 100                | 95               | DP     |
| 1032             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 132.5                      | 6                                    | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1025             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. South of waha st   |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1026             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. South of waha st   |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1027             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of cayuse st   |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1028             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. And wallowa st storm drain intersection                          |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1029             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. And wallowa st storm drain intersection east side of man hole 2' |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1030             | Backfill - Sanitary Sewer Line Trench: Wallowa st. Storm drain manhole   |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1031             | Backfill - Sanitary Sewer Line Trench: Wallowa st. Storm drain manhole   |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1032             | Backfill - Sanitary Sewer Line Trench: Wallowa st. Storm drain manhole   |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1033             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.6                       | 108.5                      | 6                                    | 95                 | 95               | DP     |
| 1034             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                        | 134.9                      | 6                                    | 96                 | 95               | DP     |
| 1035             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                        | 141.0                      | 6                                    | 101                | 95               | DP     |
| 1036             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 10.5                       | 133.1                      | 6                                    | 95                 | 95               | DP     |
| 1037             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                        | 135.0                      | 6                                    | 96                 | 95               | DP     |
| 1038             |  | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                        | 133.8                      | 6                                    | 96                 | 95               | DP     |
| 1039             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.1                       | 109.2                      | 6                                    | 95                 | 95               | DP     |
| 1040             |  | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.3                       | 109.6                      | 6                                    | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1033             | Backfill - Sanitary Sewer Line Trench: Golden hills dr storm drain trench north of wallowa st 125' |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1034             | Backfill - Stormwater Line Trench: Wallowa st furthest east man hole west side 1'                  |           |            |        |  |                      | 7.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1035             | Backfill - Stormwater Line Trench: Wallowa st furthest east man hole east side 1'                  |           |            |        |  |                      | 7.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1036             | Backfill - Stormwater Line Trench: Wallowa st furthest east man hole east side 8'                  |           |            |        |  |                      | 7.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1037             | Backfill - Stormwater Line Trench: Wallowa st 2nd furthest east man hole east side 1'              |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1038             | Backfill - Stormwater Line Trench: Wallowa st 2nd furthest east man hole west side 2'              |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1039             | Backfill - Stormwater Line Trench: Golden hills dr. North of wallowa st                            |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1040             | Backfill - Stormwater Line Trench: Golden hills dr. North of cayuse st                             |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|---------------|------------------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%) | Remark           |
| 1041             |   | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                       | 112.2                      | 6                                    | 98                 | 95            | DP               |
| 1042             |   | 8/21/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.8                       | 108.4                      | 6                                    | 95                 | 95            | DP               |
| 1043             |   | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.8                        | 132.6                      | 6                                    | 95                 | 95            | DP               |
| 1044             |   | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                        | 133.6                      | 6                                    | 95                 | 95            | DP               |
| 1045             |   | 8/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 134.0                      | 6                                    | 96                 | 95            | DP               |
| 1046             |   | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 132.5                      | 6                                    | 95                 | 95            | DP               |
| 1047             |   | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 133.1                      | 6                                    | 95                 | 95            | DP               |
| 1048             |   | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                        | 134.9                      | 6                                    | 96                 | 95            | DP               |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    |               | Field Technician |
| 1041             | Backfill - Stormwater Line Trench: Golden hills dr. North of cayuse st                              |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1042             | Backfill - Stormwater Line Trench: Golden hills dr. North of cayuse st                              |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1043             | Backfill - Stormwater Line Trench: Wallowa st 2nd furthest manhole east. North side 1' from manhole |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1044             | Backfill - Stormwater Line Trench: Wallowa st furthest manhole east. West side 1' from manhole      |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1045             | Backfill - Stormwater Line Trench: Wallowa st furthest manhole east. East side 2' from manhole      |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1046             | Backfill - Manhole: Wallowa st 2nd furthest east manhole west side 2'                               |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1047             | Backfill - Manhole: Wallowa st furthest east manhole north east side 1'                             |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1048             | Backfill - Manhole: Wallowa st furthest east manhole south Wes side 1'                              |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |               |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |               |                  |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1049             |  | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                        | 135.2                                | 6                | 97                 | 95               | DP     |
| 1050             |  | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                        | 138.3                                | 6                | 99                 | 95               | DP     |
| 1051             |  | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                        | 134.4                                | 6                | 96                 | 95               | DP     |
| 1052             |  | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 141.0                                | 6                | 101                | 95               | DP     |
| 1053             |  | 8/22/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.8                        | 136.1                                | 6                | 97                 | 95               | DP     |
| 1054             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                       | 109.9                                | 6                | 96                 | 95               | DP     |
| 1055             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.6                       | 109.4                                | 6                | 96                 | 95               | DP     |
| 1056             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.3                       | 108.4                                | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1049             | Backfill - Manhole: Wallowa st 2nd manhole east of golden hills dr. south Wes side 2'      |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1050             | Backfill - Manhole: Wallowa st 2nd manhole east of golden hills dr. North side 2'          |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1051             | Backfill - Manhole: Wallowa st 2nd manhole east of golden hills dr. North side 2'          |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1052             | Backfill - Manhole: Wallowa st 2nd furthest manhole east of golden hills dr. North side 2' |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1053             | Backfill - Manhole: Wallowa st 2nd furthest manhole east of golden hills dr. North side 2' |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1054             | Backfill - Manhole: Golden Hills Dr. north of wallowa st                                   |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1055             | Backfill - Manhole: Golden Hills Dr. north of wallowa st                                   |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1056             | Backfill - Manhole: Golden Hills Dr. north of cayuse st                                    |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1057             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.3                       | 110.1                      | 6                                    | 96                 | 95               | DP     |
| 1058             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.0                       | 108.4                      | 6                                    | 95                 | 95               | DP     |
| 1059             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.9                       | 110.9                      | 6                                    | 97                 | 95               | DP     |
| 1060             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.1                       | 112.0                      | 6                                    | 98                 | 95               | DP     |
| 1061             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                       | 108.9                      | 6                                    | 95                 | 95               | DP     |
| 1062             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.7                       | 108.4                      | 6                                    | 95                 | 95               | DP     |
| 1063             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.4                       | 110.7                      | 6                                    | 97                 | 95               | DP     |
| 1064             |  | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.8                       | 113.3                      | 6                                    | 99                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1057             | Backfill - Manhole: Golden Hills Dr. north of cayuse st          |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1058             | Backfill - Utility Trench: Wallowa st south side of storm drains |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1059             | Backfill - Utility Trench: Wallowa st storm drain                |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1060             | Backfill - Utility Trench: Wallowa st storm drain                |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1061             | Backfill - Utility Trench: Wallowa st northern utility trench    |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1062             | Backfill - Utility Trench: Wallowa st southern utility trench    |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1063             | Backfill - Utility Trench: Wallowa st northern utility trench    |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1064             | Backfill - Utility Trench: Wallowa st southern utility trench    |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1065             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.2                       | 114.5                      | 6                                    | 100                | 95               | DP     |
| 1066             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.2                       | 110.0                      | 6                                    | 96                 | 95               | DP     |
| 1067             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.8                       | 109.9                      | 6                                    | 96                 | 95               | DP     |
| 1068             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.7                       | 110.6                      | 6                                    | 97                 | 95               | DP     |
| 1069             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.7                       | 114.9                      | 6                                    | 100                | 95               | DP     |
| 1070             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.4                        | 110.7                      | 6                                    | 97                 | 95               | DP     |
| 1071             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.2                       | 109.2                      | 6                                    | 95                 | 95               | DP     |
| 1072             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.1                       | 112.8                      | 6                                    | 99                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1065             | Backfill - Utility Trench: Wallowa st north side utility trench |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1066             | Backfill - Utility Trench: Wallowa st south side utility trench |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1067             | Backfill - Utility Trench: Wallowa st south side utility trench |           |            |        |  |                      | 0.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1068             | Backfill - Utility Trench: Wallowa st south side utility trench |           |            |        |  |                      | 0.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1069             | Backfill - Utility Trench: Wallowa st south side utility trench |           |            |        |  |                      | 0.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1070             | Backfill - Utility Trench: Wallowa st south side utility trench |           |            |        |  |                      | 0.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1071             | Backfill - Utility Trench: Wallowa st north side utility trench |           |            |        |  |                      | 0.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1072             | Backfill - Utility Trench: Wallowa st north side utility trench |           |            |        |  |                      | 0.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1073             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.1                       | 108.3                      | 6                                    | 95                 | 95               | DP     |
| 1074             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.5                       | 111.5                      | 6                                    | 97                 | 95               | DP     |
| 1075             |   | 8/22/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.5                       | 108.4                      | 6                                    | 95                 | 95               | DP     |
| 1076             |   | 8/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.2                       | 109.1                      | 6                                    | 95                 | 95               | DP     |
| 1077             |   | 8/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.1                       | 111.0                      | 6                                    | 97                 | 95               | DP     |
| 1078             |   | 8/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.1                       | 113.9                      | 6                                    | 99                 | 95               | DP     |
| 1079             |   | 8/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.7                       | 109.2                      | 6                                    | 95                 | 95               | DP     |
| 1080             |   | 8/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.4                       | 111.7                      | 6                                    | 98                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1073             | Backfill - Utility Trench: Golden Hills dr. South of waha st intersection |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1074             | Backfill - Utility Trench: Golden Hills dr. Between waha and cayuse st    |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1075             | Backfill - Utility Trench: Golden Hills dr. North of cayuse st            |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1076             | Backfill - Utility Trench: Golden Hills Dr. north of cayuse st            |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1077             | Backfill - Utility Trench: Golden Hills Dr. north of cayuse st            |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1078             | Backfill - Utility Trench: Golden Hills Dr. north of cayuse st            |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1079             | Backfill - Utility Trench: Wallowa st north side utility trench           |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1080             | Backfill - Utility Trench: Wallowa st north side utility trench           |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |



| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1081             |  | 8/23/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.5                       | 111.0                                | 6                | 97                 | 95               | DP     |
| 1082             |  | 8/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1083             |  | 8/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.7                        | 133.1                                | 6                | 95                 | 95               | DP     |
| 1084             |  | 8/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.9                        | 133.5                                | 6                | 95                 | 95               | DP     |
| 1085             |  | 8/23/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                        | 137.3                                | 6                | 98                 | 95               | DP     |
| 1086             |  | 8/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.7                        | 139.7                                | 6                | 100                | 95               | DP     |
| 1087             |  | 8/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                        | 133.1                                | 6                | 95                 | 95               | DP     |
| 1088             |  | 8/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.1                        | 137.4                                | 6                | 98                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1081             | Backfill - Utility Trench: Wallowa st north side utility trench                    |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1082             | Backfill - Stormwater Line Trench: Golden Hills Dr north of wallowa st storm drain |           |            |        |  |                      | 7.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1083             | Backfill - Stormwater Line Trench: Golden Hills Dr north of wallowa st storm drain |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1084             | Backfill - Stormwater Line Trench: Golden Hills Dr north of wallowa st storm drain |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1085             | Backfill - Stormwater Line Trench: Golden Hills Dr north of wallowa st storm drain |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1086             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of wallowa st.       |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1087             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of wallowa st.       |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1088             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of wallowa st.       |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1089             |   | 8/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                        | 132.6                      | 6                                    | 95                 | 95               | DP     |
| 1090             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 133.0                      | 6                                    | 95                 | 95               | DP     |
| 1091             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 132.5                      | 6                                    | 95                 | 95               | DP     |
| 1092             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                        | 133.6                      | 6                                    | 95                 | 95               | DP     |
| 1093             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                        | 133.5                      | 6                                    | 95                 | 95               | DP     |
| 1094             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 135.7                      | 6                                    | 97                 | 95               | DP     |
| 1095             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 133.2                      | 6                                    | 95                 | 95               | DP     |
| 1096             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 135.8                      | 6                                    | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1089             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. South of cayuse st                            |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1090             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench. 2' East of furthest east SD       |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1091             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench. 3' west of furthest east SD       |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1092             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench. 20' south of furthest east SD     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1093             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench north side                         |           |            |        |  |                      | 6.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1094             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 20' west of furthest east SD.      |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1095             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 10' southwest of furthest east SD. |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1096             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 20' southwest of furthest east SD. |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1097             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 137.2                                | 6                | 98                 | 95               | DP     |
| 1098             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                        | 136.2                                | 6                | 97                 | 95               | DP     |
| 1099             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 136.3                                | 6                | 97                 | 95               | DP     |
| 1100             |   | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 135.4                                | 6                | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1097             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 10' southeast of furthest east SD. |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1098             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 15' north of sanitation trench     |           |            |        |  |                      | 7.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1099             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 20' west of furthest east SD       |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1100             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 10' west of furthest east SD       |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1101             |  | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.9                        | 134.7                                | 6                | 96                 | 95               | DP     |
| 1102             |  | 8/27/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                        | 135.3                                | 6                | 97                 | 95               | DP     |
| 1103             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                        | 138.8                                | 6                | 99                 | 95               | DP     |
| 1104             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 139.3                                | 6                | 100                | 95               | DP     |
| 1105             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 133.0                                | 6                | 95                 | 95               | DP     |
| 1106             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                        | 141.8                                | 6                | 101                | 95               | DP     |
| 1107             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                        | 134.3                                | 6                | 96                 | 95               | DP     |
| 1108             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                        | 132.8                                | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1101             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 5' northeast of furthest east SS manhole  |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1102             | Backfill - Stormwater Line Trench: Umatilla st. Storm drain trench 25' northeast of furthest east SS manhole |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1103             | Backfill - Stormwater Line Trench: Umatilla st. North east of eastern most manhole 40'                       |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1104             | Backfill - Stormwater Line Trench: Umatilla st. North east of eastern most manhole 5'                        |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1105             | Backfill - Stormwater Line Trench: Umatilla st. East of eastern most manhole 20'                             |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1106             | Backfill - Stormwater Line Trench: Umatilla st. East of eastern most manhole 5'                              |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1107             | Backfill - Stormwater Line Trench: Umatilla st. SouthEast of eastern most manhole 40'                        |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1108             | Backfill - Stormwater Line Trench: Umatilla st. SouthEast of eastern most manhole 10'                        |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|---------------|------------------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%) | Remark           |
| 1109             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 133.7                      | 6                                    | 96                 | 95            | DP               |
| 1110             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 132.4                      | 6                                    | 95                 | 95            | DP               |
| 1111             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                        | 134.6                      | 6                                    | 96                 | 95            | DP               |
| 1112             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.3                        | 135.1                      | 6                                    | 97                 | 95            | DP               |
| 1113             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 137.7                      | 6                                    | 98                 | 95            | DP               |
| 1114             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 135.5                      | 6                                    | 97                 | 95            | DP               |
| 1115             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 132.4                      | 6                                    | 95                 | 95            | DP               |
| 1116             |   | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                        | 132.5                      | 6                                    | 95                 | 95            | DP               |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    |               | Field Technician |
| 1109             | Backfill - Stormwater Line Trench: Umatilla st. North of eastern most manhole 2'                      |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1110             | Backfill - Stormwater Line Trench: Umatilla st. North of eastern most manhole 2'                      |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1111             | Backfill - Stormwater Line Trench: Umatilla st. West of eastern most manhole 50' in stormdrain trench |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1112             | Backfill - Stormwater Line Trench: Umatilla st. West of eastern most manhole 50' in sanitation trench |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1113             | Backfill - Stormwater Line Trench: Umatilla st. North of sanitation trench 20' in utility trench      |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1114             | Backfill - Stormwater Line Trench: Umatilla st. North of sanitation trench 5' in utility trench       |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1115             | Backfill - Stormwater Line Trench: Umatilla st. South of storm drain trench 20' in utility trench     |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1116             | Backfill - Stormwater Line Trench: Umatilla st. South of storm drain trench 5' in utility trench      |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |               |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |               |                  |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1117             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 135.8                                | 6                | 97                 | 95               | DP     |
| 1118             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.3                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1119             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                        | 136.6                                | 6                | 98                 | 95               | DP     |
| 1120             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                        | 134.1                                | 6                | 96                 | 95               | DP     |
| 1121             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                        | 136.7                                | 6                | 98                 | 95               | DP     |
| 1122             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                        | 136.0                                | 6                | 97                 | 95               | DP     |
| 1123             |  | 8/28/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1124             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 138.6                                | 6                | 99                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1117             | Backfill - Utility Trench: Umatilla st. North of sanitation trench 8'                              |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1118             | Backfill - Utility Trench: Umatilla st. South of storm drain trench 15'                            |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1119             | Backfill - Utility Trench: Umatilla st. South of storm drain trench 5'                             |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1120             | Backfill - Utility Trench: Umatilla st.storm drain trench 120' west of furthest east manjole       |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1121             | Backfill - Utility Trench: Umatilla st. Utility trench 25' east of furthest east manhole           |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1122             | Backfill - Utility Trench: Umatilla st. Utility trench 10' east of furthest east manhole           |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1123             | Backfill - Utility Trench: Umatilla st. Northeast Utility trench 25' east of furthest east manhole |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1124             | Backfill - Utility Trench: Umatilla st. Southeast utility trench 50' from furthest east MH         |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1125             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 133.6                      | 6                                    | 95                 | 95               | DP     |
| 1126             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                        | 139.9                      | 6                                    | 100                | 95               | DP     |
| 1127             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.8                        | 133.4                      | 6                                    | 95                 | 95               | DP     |
| 1128             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 140.9                      | 6                                    | 101                | 95               | DP     |
| 1129             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 132.7                      | 6                                    | 95                 | 95               | DP     |
| 1130             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 133.8                      | 6                                    | 96                 | 95               | DP     |
| 1131             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.4                        | 133.0                      | 6                                    | 95                 | 95               | DP     |
| 1132             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                        | 132.7                      | 6                                    | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1125             | Backfill - Utility Trench: Umatilla st. Southeast utility trench 20' from furthest east MH                 |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1126             | Backfill - Utility Trench: Umatilla st. Northeast utility trench 20' from furthest east MH                 |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1127             | Backfill - Utility Trench: Umatilla st. Storm drain trench 7' west from furthest east MH                   |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1128             | Backfill - Utility Trench: Umatilla st. Southern utility trench 7' from storm drain in eastern cul de sac  |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1129             | Backfill - Utility Trench: Umatilla st. Southern utility trench 20' from storm drain in eastern cul de sac |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1130             | Backfill - Utility Trench: Umatilla st. Southern utility trench 20' from storm drain.                      |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1131             | Backfill - Utility Trench: Umatilla st. Southern utility trench 5' from storm drain.                       |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1132             | Backfill - Utility Trench: Umatilla st. Northern utility trench 15' from sanitation trench.                |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |



| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1133             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 133.7                      | 6                                    | 96                 | 95               | DP     |
| 1134             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                        | 136.9                      | 6                                    | 98                 | 95               | DP     |
| 1135             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.4                        | 134.9                      | 6                                    | 96                 | 95               | DP     |
| 1136             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.6                        | 132.8                      | 6                                    | 95                 | 95               | DP     |
| 1137             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                        | 133.0                      | 6                                    | 95                 | 95               | DP     |
| 1138             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 133.5                      | 6                                    | 95                 | 95               | DP     |
| 1139             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                        | 135.1                      | 6                                    | 97                 | 95               | DP     |
| 1140             |  | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 133.2                      | 6                                    | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1133             | Backfill - Utility Trench: Umatilla st. Storm drain trench 100' west from eastern most manhole |           |            |        |  |                      | 3.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1134             | Backfill - Utility Trench: Umatilla st. Storm drain trench 120' west from eastern most manhole |           |            |        |  |                      | 3.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1135             | Backfill - Utility Trench: Umatilla st. Southern utility trench south of manhole 6.5 15'       |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1136             | Backfill - Utility Trench: Umatilla st. Southern utility trench south of manhole 6.5 5'        |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1137             | Backfill - Utility Trench: Umatilla st. Northern utility trench north of manhole 6.5 15'       |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1138             | Backfill - Utility Trench: Umatilla st. Northern utility trench north of manhole 6.5 5'        |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1139             | Backfill - Utility Trench: Umatilla st. Sanitation trench 50' east of manhole 6.5              |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1140             | Backfill - Utility Trench: Umatilla st. Sanitation trench 5' east of manhole 6.5               |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1141             |   | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 132.9                                | 6                | 95                 | 95               | DP     |
| 1142             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.8                        | 120.6                                | 6                | 105                | 95               | DP     |
| 1143             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.1                       | 121.9                                | 6                | 106                | 95               | DP     |
| 1144             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.8                        | 114.1                                | 6                | 100                | 95               | DP     |
| 1145             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.8                        | 121.9                                | 6                | 106                | 95               | DP     |
| 1146             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.7                        | 117.5                                | 6                | 103                | 95               | DP     |
| 1147             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.1                       | 122.5                                | 6                | 107                | 95               | DP     |
| 1148             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.7                       | 117.3                                | 6                | 102                | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1141             | Backfill - Utility Trench: Umatilla st. Northern utility trench 30' north of Sanitation trench. Between manhole 6.5-7     |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1142             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Southern utility trench 30' south of storm drain trench       |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1143             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Southern utility trench 5' south of storm drain trench        |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1144             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. South east utility trench 25' southeast of storm drain trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1145             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. South east utility trench 5' southeast of storm drain trench  |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1146             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Eastern utility trench 25' east of manhole 7                  |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1147             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Eastern utility trench 15' east of manhole 7                  |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1148             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Northeastern utility trench 30' east of manhole 7             |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1149             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.3                        | 133.6                                | 6                | 117                | 95               | DP     |
| 1150             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 16.8                       | 116.3                                | 6                | 102                | 95               | DP     |
| 1151             |   | 8/29/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.7                       | 108.8                                | 6                | 95                 | 95               | DP     |
| 1152             |   | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                        | 134.4                                | 6                | 96                 | 95               | DP     |
| 1153             |   | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 132.4                                | 6                | 95                 | 95               | DP     |
| 1154             |   | 8/29/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                        | 133.8                                | 6                | 96                 | 95               | DP     |
| 1155             |   | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.1                       | 108.8                                | 6                | 95                 | 95               | DP     |
| 1156             |   | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.9                       | 110.6                                | 6                | 97                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1149             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Northeastern utility trench 15' east of manhole 7 |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1150             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Storm drain trench 50' west of manhole 7          |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1151             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. Storm drain trench 15' west of manhole 7          |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1152             | Backfill - Utility Trench: Umatilla st. Storm drain trench 25' east of manhole 6.5                            |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1153             | Backfill - Utility Trench: Umatilla st. Storm drain trench 25' east of manhole 6.5                            |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1154             | Backfill - Utility Trench: Umatilla st. Sanitation trench 25' east of manhole 6.5                             |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1155             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of wallowa st                                   |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1156             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of wallowa st                                   |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1157             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.8                       | 114.5                                | 6                | 100                | 95               | DP     |
| 1158             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.7                        | 119.2                                | 6                | 104                | 95               | DP     |
| 1159             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.3                        | 126.3                                | 6                | 110                | 95               | DP     |
| 1160             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 5.4                        | 116.1                                | 6                | 101                | 95               | DP     |
| 1161             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.0                       | 120.3                                | 6                | 105                | 95               | DP     |
| 1162             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.0                        | 111.9                                | 6                | 98                 | 95               | DP     |
| 1163             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 8.5                        | 122.1                                | 6                | 107                | 95               | DP     |
| 1164             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.2                       | 110.5                                | 6                | 97                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1157             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. North of wallowa st            |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1158             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 50' northeast of manhole 7 |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1159             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 50' east of manhole 7      |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1160             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 15' east of manhole 7      |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1161             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 30' southeast of manhole 7 |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1162             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 15' southeast of manhole 7 |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1163             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 15' southeast of manhole 7 |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1164             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 15' south of manhole 7     |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1165             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                       | 112.8                      | 6                                    | 99                 | 95               | DP     |
| 1166             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.4                       | 114.6                      | 6                                    | 100                | 95               | DP     |
| 1167             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 7.4                        | 136.7                      | 6                                    | 119                | 95               | DP     |
| 1168             |  | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 5.9                        | 132.5                      | 6                                    | 116                | 95               | DP     |
| 1169             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 137.8                      | 6                                    | 98                 | 95               | DP     |
| 1170             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 132.8                      | 6                                    | 95                 | 95               | DP     |
| 1171             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                        | 132.9                      | 6                                    | 95                 | 95               | DP     |
| 1172             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 135.7                      | 6                                    | 97                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1165             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 25' west of manhole 7  |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1166             | Backfill - Utility Trench: Umatilla st. Eastern cul de sac. 100' west of manhole 7 |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1167             | Backfill - Utility Trench: Umatilla st. 5' west of manhole 6.5 sanitation trench   |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1168             | Backfill - Utility Trench: Umatilla st. 25' west of manhole 6.5 sanitation trench  |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1169             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 10' east of manhole 6.5        |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1170             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 1' east of manhole 6.5         |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1171             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 5' west of manhole 6.5         |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1172             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 25' west of manhole 6.5        |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1173             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                        | 132.9                      | 6                                    | 95                 | 95               | DP     |
| 1174             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 132.6                      | 6                                    | 95                 | 95               | DP     |
| 1175             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 138.3                      | 6                                    | 99                 | 95               | DP     |
| 1176             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 134.3                      | 6                                    | 96                 | 95               | DP     |
| 1177             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 134.7                      | 6                                    | 96                 | 95               | DP     |
| 1178             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 136.0                      | 6                                    | 97                 | 95               | DP     |
| 1179             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 138.2                      | 6                                    | 99                 | 95               | DP     |
| 1180             |  | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                        | 140.5                      | 6                                    | 100                | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1173             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 50' west of manhole 6.5    |           |            |        |  |                      | 4.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1174             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 10' east of manhole 6      |           |            |        |  |                      | 4.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1175             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 10' west of manhole 6      |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1176             | Backfill - Sanitary Sewer Line Trench: Golden hill dr. 100' south of manhole 5 |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1177             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 100' west of manhole 6     |           |            |        |  |                      | 3.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1178             | Backfill - Stormwater Line Trench: Umatilla st. 100' west of manhole 6         |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1179             | Backfill - Stormwater Line Trench: Umatilla st. 50' west of manhole 6          |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1180             | Backfill - Stormwater Line Trench: Umatilla st. 50' west of manhole 6          |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1181             |   | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 141.5                                | 6                | 101                | 95               | DP     |
| 1182             |   | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                        | 141.2                                | 6                | 101                | 95               | DP     |
| 1183             |   | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.7                        | 132.4                                | 6                | 95                 | 95               | DP     |
| 1184             |   | 8/30/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 133.9                                | 6                | 96                 | 95               | DP     |
| 1185             |   | 8/30/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.5                       | 111.5                                | 6                | 97                 | 95               | DP     |
| 1186             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                        | 137.7                                | 6                | 98                 | 95               | DP     |
| 1187             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.3                        | 137.0                                | 6                | 98                 | 95               | DP     |
| 1188             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                        | 133.0                                | 6                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1181             | Backfill - Utility Trench: Umatilla st. 50' west of manhole 6 southern utility trench   |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1182             | Backfill - Utility Trench: Umatilla st. 50' west of manhole 6 southern utility trench   |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1183             | Backfill - Stormwater Line Trench: Umatilla st. 40' west of manhole 6.5                 |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1184             | Backfill - Stormwater Line Trench: Umatilla st. 10' west of manhole 6.5                 |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1185             | Backfill - Stormwater Line Trench: Umatilla st. 50' west of manhole 7                   |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1186             | Backfill - Utility Trench: Umatilla st. Northern utility trench 50' west of manhole 6.5 |           |            |        |  |                      | 4.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1187             | Backfill - Utility Trench: Umatilla st. Northern utility trench 50' west of manhole 6.5 |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1188             | Backfill - Utility Trench: Umatilla st. Sanitation trench 60' west of manhole 6.5       |           |            |        |  |                      | 4.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1189             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 132.7                                | 6                | 95                 | 95               | DP     |
| 1190             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 142.1                                | 6                | 101                | 95               | DP     |
| 1191             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                        | 135.3                                | 6                | 97                 | 95               | DP     |
| 1192             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                        | 132.7                                | 6                | 95                 | 95               | DP     |
| 1193             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 134.4                                | 6                | 96                 | 95               | DP     |
| 1194             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                        | 133.3                                | 6                | 95                 | 95               | DP     |
| 1195             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1196             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.9                        | 132.6                                | 6                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1189             | Backfill - Utility Trench: Umatilla st. Sanitation trench 40' east of manhole 6.0         |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1190             | Backfill - Utility Trench: Umatilla st. Sanitation trench 10' east of manhole 6.0         |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1191             | Backfill - Utility Trench: Umatilla st. Sanitation trench 1' east of manhole 6.0          |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1192             | Backfill - Utility Trench: Umatilla st. Sanitation trench 3' south of manhole 6.0         |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1193             | Backfill - Utility Trench: Umatilla st. Sanitation trench 1' west of manhole 6.0          |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1194             | Backfill - Utility Trench: Umatilla st. Sanitation trench 15' west of manhole 6.0         |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1195             | Backfill - Stormwater Line Trench: Umatilla st. Sanitation trench 15' west of manhole 6.0 |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1196             | Backfill - Stormwater Line Trench: Umatilla st. Sanitation trench 3' west of manhole 6.0  |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1197             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 132.3                      | 6                                    | 95                 | 95               | DP     |
| 1198             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                        | 137.3                      | 6                                    | 98                 | 95               | DP     |
| 1199             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 133.6                      | 6                                    | 95                 | 95               | DP     |
| 1200             |   | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                        | 132.9                      | 6                                    | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1197             | Backfill - Stormwater Line Trench: Umatilla st. Northern utility trench 20' east of manhole 6.0 |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1198             | Backfill - Stormwater Line Trench: Umatilla st. Northern utility trench 20' east of manhole 6.0 |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1199             | Backfill - Utility Trench: Umatilla st 15' east of manhole 6. Southern Utility trench           |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1200             | Backfill - Utility Trench: Umatilla st 15' east of manhole 6. Southern Utility trench           |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1201             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                        | 134.7                                | 6                | 96                 | 95               | DP     |
| 1202             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                        | 135.2                                | 6                | 97                 | 95               | DP     |
| 1203             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                        | 133.2                                | 6                | 95                 | 95               | DP     |
| 1204             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.8                        | 137.6                                | 6                | 98                 | 95               | DP     |
| 1205             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                        | 133.7                                | 6                | 96                 | 95               | DP     |
| 1206             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                        | 137.4                                | 6                | 98                 | 95               | DP     |
| 1207             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 132.8                                | 6                | 95                 | 95               | DP     |
| 1208             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 138.3                                | 6                | 99                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1201             | Backfill - Stormwater Line Trench: Umatilla st 15' east of manhole 6.                        |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1202             | Backfill - Stormwater Line Trench: Umatilla st 5' east of manhole 6.                         |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1203             | Backfill - Stormwater Line Trench: Umatilla st 2' south of manhole 6.                        |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1204             | Backfill - Stormwater Line Trench: Umatilla st 1' north of manhole 6.                        |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1205             | Backfill - Stormwater Line Trench: Golden hills dr. 5' north of manhole 3                    |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1206             | Backfill - Utility Trench: Umatilla st. 50' west of manhole 6.5. Southern utility trench     |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1207             | Backfill - Utility Trench: Umatilla st. 50' west of manhole 6.5. Southern utility trench     |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1208             | Backfill - Sanitary Sewer Line Trench: Umatilla st. 1' north of manhole 6. Sanitation trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1209             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 133.6                                | 6                | 95                 | 95               | DP     |
| 1210             |  | 8/31/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 133.5                                | 6                | 95                 | 95               | DP     |
| 1211             |  | 8/31/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.4                       | 110.4                                | 6                | 96                 | 95               | DP     |
| 1212             |  | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.7                       | 108.5                                | 6                | 95                 | 95               | DP     |
| 1213             |  | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.2                       | 113.3                                | 6                | 99                 | 95               | DP     |
| 1214             |  | 9/4/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                        | 136.2                                | 6                | 97                 | 95               | DP     |
| 1215             |  | 9/4/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                        | 132.4                                | 6                | 95                 | 95               | DP     |
| 1216             |  | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.8                       | 113.1                                | 6                | 99                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1209             | Backfill - Stormwater Line Trench: Umatilla st. 1' north of manhole 6. Sanitation trench                           |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1210             | Backfill - Stormwater Line Trench: Umatilla st. 2' south of manhole 6. Sanitation trench                           |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1211             | Backfill - Sanitary Sewer Line Trench: Golden hills dr. South of cayuse st. Sanitation trench                      |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1212             | Backfill - Stormwater Line Trench: Umatilla st between man hole 6 and 6.5. Storm drain trench. 20' west of MH 6.5  |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1213             | Backfill - Stormwater Line Trench: Umatilla st between man hole 6 and 6.5. Storm drain trench. 100' west of MH 6.5 |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1214             | Backfill - Stormwater Line Trench: golden Hills dr between man hole 3 and 5. North 15' of manhole 3                |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1215             | Backfill - Stormwater Line Trench: golden Hills dr between man hole 3 and 5. North 100' of manhole 3               |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1216             | Backfill - Stormwater Line Trench: Umatilla st eastern cul de sac. 30' west of manhole 7                           |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1217             |   | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.1                       | 110.0                                | 6                | 96                 | 95               | DP     |
| 1218             |   | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 12.8                       | 111.3                                | 6                | 97                 | 95               | DP     |
| 1219             |   | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 11.6                       | 115.9                                | 6                | 101                | 95               | DP     |
| 1220             |   | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 10.6                       | 109.9                                | 6                | 96                 | 95               | DP     |
| 1221             |   | 9/4/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                        | 133.5                                | 6                | 95                 | 95               | DP     |
| 1222             |   | 9/4/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 135.1                                | 6                | 97                 | 95               | DP     |
| 1223             |   | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 19.6                       | 108.4                                | 6                | 95                 | 95               | DP     |
| 1224             |   | 9/4/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 15.1                       | 114.3                                | 6                | 100                | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1217             | Backfill - Utility Trench: Umatilla st eastern cul de sac. 30' west of manhole 7. North utility trench                    |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1218             | Backfill - Utility Trench: Umatilla st eastern cul de sac. 50' west of manhole 7. Souther utility trench                  |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1219             | Backfill - Stormwater Line Trench: Umatilla st eastern cul de sac. 100' west of manhole 7.                                |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1220             | Backfill - Utility Trench: Umatilla st eastern cul de sac. 120' west of manhole 7. Northern utility trench                |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1221             | Backfill - Utility Trench: Golden Hills dr storm drain trench. North 120' manhole 4                                       |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1222             | Backfill - Utility Trench: Golden Hills dr storm drain trench. North 50' manhole 4  |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1223             | Backfill - Stormwater Line Trench: Storm drain trench between man hole 6.5 and 6. 20' west of man hole 6.5                |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1224             | Backfill - Utility Trench: Storm drain trench between man hole 6.5 and 6. 20' east of man hole 6. Northern utility trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1225             |  | 9/5/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.5                       | 108.7                      | 6                                    | 95                 | 95               | DP     |
| 1226             |  | 9/5/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 17.7                       | 111.0                      | 6                                    | 97                 | 95               | DP     |
| 1227             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 133.2                      | 6                                    | 95                 | 95               | DP     |
| 1228             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 132.8                      | 6                                    | 95                 | 95               | DP     |
| 1229             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                        | 134.4                      | 6                                    | 96                 | 95               | DP     |
| 1230             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 132.9                      | 6                                    | 95                 | 95               | DP     |
| 1231             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                        | 135.7                      | 6                                    | 97                 | 95               | DP     |
| 1232             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                        | 140.2                      | 6                                    | 100                | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1225             | Backfill - Stormwater Line Trench: Umatilla st. 15' west of manhole 6.5. Storm drain trench. |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1226             | Backfill - Utility Trench: Umatilla st. 25' west of manhole 6.5. Southern utility trench     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1227             | Backfill - Stormwater Line Trench: Golden Hills dr. North of manhole 4 100'                  |           |            |        |  |                      | 4.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1228             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. North of manhole 4 100'              |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1229             | Backfill - Stormwater Line Trench: Golden Hills dr. North of manhole 4 30'                   |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1230             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. North of manhole 4 30'               |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1231             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. West of manhole 4 2'                 |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1232             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. East of manhole 4 3'                 |           |            |        |  |                      | 5.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1233             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                        | 133.7                                | 6                | 96                 | 95               | DP     |
| 1234             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.9                        | 133.3                                | 6                | 95                 | 95               | DP     |
| 1235             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 132.3                                | 6                | 95                 | 95               | DP     |
| 1236             |  | 9/6/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 14.3                       | 113.6                                | 6                | 99                 | 95               | DP     |
| 1237             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                        | 150.7                                | 6                | 108                | 95               | DP     |
| 1238             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.6                        | 154.1                                | 6                | 110                | 95               | DP     |
| 1239             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                        | 145.9                                | 6                | 104                | 95               | DP     |
| 1240             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 2.8                        | 133.3                                | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1233             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. South of manhole 4 20' |           |            |        |  |                      | 6.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1234             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. East of manhole 4 20'  |           |            |        |  |                      | 6.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1235             | Backfill - Sanitary Sewer Line Trench: umatilla st. East of manhole 4 30'      |           |            |        |  |                      | 2.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1236             | Backfill - Sanitary Sewer Line Trench: umatilla st. East of manhole 6 30'      |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1237             | Backfill - Manhole: Umatilla st. 1' north of manhole 7                         |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1238             | Backfill - Manhole: Umatilla st. 3' north of manhole 7                         |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1239             | Backfill - Manhole: Umatilla st. 1' south of manhole 7                         |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1240             | Backfill - Manhole: Cayuse st. 2nd water box from the west. West 2'            |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |



| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1241             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                        | 137.7                                | 6                | 98                 | 95               | DP     |
| 1242             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                        | 135.3                                | 6                | 97                 | 95               | DP     |
| 1243             |  | 9/6/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.9                        | 134.7                                | 6                | 96                 | 95               | DP     |
| 1244             |  | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 13.9                       | 108.4                                | 6                | 95                 | 95               | DP     |
| 1245             |  | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 9.4                        | 110.5                                | 6                | 97                 | 95               | DP     |
| 1246             |  | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 5.9                        | 132.4                                | 6                | 116                | 95               | DP     |
| 1247             |  | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 4.7                        | 139.2                                | 6                | 122                | 95               | DP     |
| 1248             |  | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 4.9                        | 137.2                                | 6                | 120                | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1241             | Backfill - Manhole: Cayuse st. 2nd water box from the west. West 1'                            |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1242             | Backfill - Manhole: Cayuse st. 2nd water box from the west. East 1'                            |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1243             | Backfill - Manhole: Cayuse st. 1st water box from the west. West 1'                            |           |            |        |  |                      | 5.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1244             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. Storm drain trench north of wallowa st |           |            |        |  |                      | 1.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1245             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. Storm drain trench north of wallowa st |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1246             | Backfill - Sanitary Sewer Line Trench: Cayuse st furthest west storm box. 1' east              |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1247             | Backfill - Sanitary Sewer Line Trench: Waha st furthest west storm box. 2' south               |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1248             | Backfill - Sanitary Sewer Line Trench: Waha st furthest west storm box. 2' north               |           |            |        |  |                      | 3.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1249             |   | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 5.4                        | 134.7                                | 6                | 118                | 95               | DP     |
| 1250             |   | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 4.9                        | 133.2                                | 6                | 116                | 95               | DP     |
| 1251             |   | 9/7/18    | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 4.0                        | 133.2                                | 6                | 116                | 95               | DP     |
| 1252             |   | 9/7/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.3                        | 132.5                                | 6                | 95                 | 95               | DP     |
| 1253             |   | 9/7/18    | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 134.4                                | 6                | 96                 | 95               | DP     |
| 1254             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                        | 132.7                                | 6                | 95                 | 95               | DP     |
| 1255             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.5                        | 132.8                                | 6                | 95                 | 95               | DP     |
| 1256             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                        | 133.8                                | 6                | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1249             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. Storm drain tie in. Eastern half      |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1250             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. Water line tie in. Western half       |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1251             | Backfill - Sanitary Sewer Line Trench: Cayuse st western most storm box. West 1'              |           |            |        |  |                      | 3.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1252             | Backfill - Stormwater Line Trench: Cayuse st. Second storm box east. Southern box. 1' west    |           |            |        |  |                      |                           | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1253             | Backfill - Stormwater Line Trench: Cayuse st. Second storm box east. Southern box. 1' east    |           |            |        |  |                      |                           | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1254             | Backfill - Sanitary Sewer Line Trench: Golden hills dr north of umatilla st sanitation trench |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1255             | Backfill - Sanitary Sewer Line Trench: Golden hills dr north of umatilla st sanitation trench |           |            |        |  |                      | 5.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1256             | Backfill - Waterline Trench: Golden hills dr south of waha st. Waterline trench               |           |            |        |  |                      | 4.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1257             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                        | 134.1                      | 6                                    | 96                 | 95               | DP     |
| 1258             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                        | 132.6                      | 6                                    | 95                 | 95               | DP     |
| 1259             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 132.8                      | 6                                    | 95                 | 95               | DP     |
| 1260             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                        | 132.8                      | 6                                    | 95                 | 95               | DP     |
| 1261             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                        | 133.4                      | 6                                    | 95                 | 95               | DP     |
| 1262             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.1                        | 134.4                      | 6                                    | 96                 | 95               | DP     |
| 1263             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                        | 139.7                      | 6                                    | 100                | 95               | DP     |
| 1264             |   | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                        | 132.4                      | 6                                    | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1257             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. North of umatilla st            |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1258             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. And cayuse st                   |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1259             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. North of cayuse st              |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1260             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. North of cayuse st              |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1261             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. And wallowa                     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1262             | Backfill - Sanitary Sewer Line Trench: Golden Hills dr. And wallowa                     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1263             | Backfill - Waterline Trench: Golden Hills dr water line tie in north of wallowa st      |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1264             | Backfill - Waterline Trench: Golden Hills dr water line trench between wallowa and waha |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1265             |  | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 132.4                      | 6                                    | 95                 | 95               | DP     |
| 1266             |  | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.6                        | 132.4                      | 6                                    | 95                 | 95               | DP     |
| 1267             |  | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                        | 133.7                      | 6                                    | 96                 | 95               | DP     |
| 1268             |  | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 134.1                      | 6                                    | 96                 | 95               | DP     |
| 1269             |  | 9/10/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 133.4                      | 6                                    | 95                 | 95               | DP     |
| 1270             |  | 9/11/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                        | 133.4                      | 6                                    | 95                 | 95               | DP     |
| 1271             |  | 9/11/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 134.6                      | 6                                    | 96                 | 95               | DP     |
| 1272             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                        | 134.8                      | 6                                    | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1265             | Backfill - Waterline Trench: Golden Hills dr water line trench north of waha       |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1266             | Backfill - Waterline Trench: Golden Hills dr water line trench north of waha       |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1267             | Backfill - Waterline Trench: Golden Hills dr water line trench north of waha       |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1268             | Backfill - Waterline Trench: Golden Hills dr water line trench north of waha       |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1269             | Backfill - Waterline Trench: Golden Hills dr water line trench north of wallowa st |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1270             | Backfill - Waterline Trench: Golden Hills dr south of cayuse st                    |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1271             | Backfill - Waterline Trench: Golden Hills dr south of cayuse st water line trench  |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1272             | Backfill - Waterline Trench: Wallowa st waterline trench                           |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|---------------|------------------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%) | Remark           |
| 1273             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 133.2                      | 6                                    | 95                 | 95            | DP               |
| 1274             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.8                        | 134.4                      | 6                                    | 96                 | 95            | DP               |
| 1275             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.8                        | 147.1                      | 6                                    | 105                | 95            | DP               |
| 1276             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.6                        | 138.7                      | 6                                    | 99                 | 95            | DP               |
| 1277             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 133.9                      | 6                                    | 96                 | 95            | DP               |
| 1278             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                        | 132.7                      | 6                                    | 95                 | 95            | DP               |
| 1279             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 134.5                      | 6                                    | 96                 | 95            | DP               |
| 1280             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.3                        | 135.0                      | 6                                    | 96                 | 95            | DP               |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    |               | Field Technician |
| 1273             | Backfill - Waterline Trench: Wallowa st waterline trench       |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1274             | Backfill - Waterline Trench: Wallowa st waterline trench       |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1275             | Backfill - Waterline Trench: Golden Hills dr. waterline trench |           |            |        |  |                      | 1.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1276             | Backfill - Waterline Trench: Wallowa st. Waterline trench.     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1277             | Backfill - Waterline Trench: Wallowa st. Waterline trench.     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1278             | Backfill - Waterline Trench: Wallowa st. Waterline trench.     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1279             | Backfill - Waterline Trench: Wallowa st. Waterline trench.     |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1280             | Backfill - Waterline Trench: Wallowa st waterline trench       |           |            |        |  |                      | 2.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |               |                  |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |               |                  |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1281             |  | 9/14/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 133.7                                | 6                | 96                 | 95               | DP     |
| 1282             |  | 9/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 126.5                                | 6                | 90                 | 95               | DF     |
| 1283             |  | 9/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                        | 130.8                                | 6                | 93                 | 95               | DF     |
| 1284             |  | 9/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 130.2                                | 6                | 93                 | 95               | DF     |
| 1285             |  | 9/15/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.8                        | 137.0                                | 6                | 98                 | 95               | DP     |
| 1286             |  | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                        | 133.0                                | 6                | 95                 | 95               | DP     |
| 1287             |  | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1288             |  | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                        | 132.9                                | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1281             | Backfill - Waterline Trench: Waha st waterline trench        |           |            |        |  |                      | 2.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1282             | Backfill - Waterline Trench: Second row up, waterline trench |           |            |        |  |                      | 1.0                       | Foot below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | SAUL, NICK       |        |
| 1283             | Backfill - Waterline Trench: Second row up, waterline trench |           |            |        |  |                      | 1.0                       | Foot below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | SAUL, NICK       |        |
| 1284             | Backfill - Waterline Trench: Second row up, waterline trench |           |            |        |  |                      | 1.0                       | Foot below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | SAUL, NICK       |        |
| 1285             | Backfill - Waterline Trench: First row up, waterline trench  |           |            |        |  |                      | 3.0                       | Foot below finish grade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | SAUL, NICK       |        |
| 1286             | Backfill - Waterline Trench: Waha st waterline trench        |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1287             | Backfill - Waterline Trench: Waha st waterline trench        |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1288             | Backfill - Waterline Trench: Waha st waterline trench        |           |            |        |  |                      | 0.5                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |
| DF: Density Fail |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1289             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 133.8                      | 6                                    | 96                 | 95               | DP     |
| 1290             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 136.7                      | 6                                    | 98                 | 95               | DP     |
| 1291             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.9                        | 136.8                      | 6                                    | 98                 | 95               | DP     |
| 1292             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 135.5                      | 6                                    | 97                 | 95               | DP     |
| 1293             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                        | 136.3                      | 6                                    | 97                 | 95               | DP     |
| 1294             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 8.0                        | 135.2                      | 6                                    | 97                 | 95               | DP     |
| 1295             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                        | 133.0                      | 6                                    | 95                 | 95               | DP     |
| 1296             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                        | 136.5                      | 6                                    | 98                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1289             | Backfill - Waterline Trench: Waha st waterline trench         |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1290             | Backfill - Waterline Trench: Golden hills dr waterline trench |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1291             | Backfill - Waterline Trench: Golden hills dr waterline trench |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1292             | Backfill - Waterline Trench: Golden hills dr waterline trench |           |            |        |  |                      | 0.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1293             | Backfill - Waterline Trench: Cayuse st waterline trench       |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1294             | Backfill - Waterline Trench: Cayuse st waterline trench       |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1295             | Backfill - Waterline Trench: Cayuse st waterline trench       |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1296             | Backfill - Waterline Trench: Cayuse st waterline trench       |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|---------------|------------------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%) | Remark           |
| 1297             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                        | 132.6                      | 6                                    | 95                 | 95            | DP               |
| 1298             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 132.5                      | 6                                    | 95                 | 95            | DP               |
| 1299             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 133.0                      | 6                                    | 95                 | 95            | DP               |
| 1300             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                        | 135.6                      | 6                                    | 97                 | 95            | DP               |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |               |                  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    |               | Field Technician |
| 1297             | Backfill - Waterline Trench: Cayuse st waterline trench   |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1298             | Backfill - Waterline Trench: Umatilla st waterline trench |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1299             | Backfill - Waterline Trench: Umatilla st waterline trench |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1300             | Backfill - Waterline Trench: Umatilla st waterline trench |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |               |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |               |                  |

| Test Results     |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1301             |   | 9/20/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                        | 134.1                      | 6                                    | 96                 | 95               | DP     |
| 1302             |   | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                        | 133.9                      | 6                                    | 96                 | 95               | DP     |
| 1303             |   | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                        | 137.2                      | 6                                    | 98                 | 95               | DP     |
| 1304             |   | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                        | 133.0                      | 6                                    | 95                 | 95               | DP     |
| 1305             |   | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 135.2                      | 6                                    | 97                 | 95               | DP     |
| 1306             |   | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                        | 134.3                      | 6                                    | 96                 | 95               | DP     |
| 1307             |   | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                        | 134.4                      | 6                                    | 96                 | 95               | DP     |
| 1308             |   | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                        | 132.5                      | 6                                    | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1301             | Backfill - Waterline Trench: Umatilla st waterline trench                   |           |            |        |  |                      | 1.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1302             | Backfill - Waterline Trench: Golden hills dr. Waterline trench at cayuse st |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1303             | Backfill - Waterline Trench: Cayuse st water line trench                    |           |            |        |  |                      | 3.5                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1304             | Backfill - Waterline Trench: Golden Hills dr water line trench              |           |            |        |  |                      | 0.0                       | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1305             | Backfill - Waterline Trench: Golden Hills dr water line trench              |           |            |        |  |                      | 0.0                       | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1306             | Backfill - Waterline Trench: Golden Hills dr water line trench              |           |            |        |  |                      | 0.0                       | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1307             | Backfill - Waterline Trench: Waha st water line trench                      |           |            |        |  |                      | 1.0                       | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1308             | Backfill - Waterline Trench: Golden hills dr water line trench              |           |            |        |  |                      | 1.0                       | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1309             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.5                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1310             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 132.4                                | 6                | 95                 | 95               | DP     |
| 1311             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1312             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.9                        | 135.2                                | 6                | 97                 | 95               | DP     |
| 1313             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 139.6                                | 6                | 100                | 95               | DP     |
| 1314             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                        | 134.2                                | 6                | 96                 | 95               | DP     |
| 1315             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.6                        | 132.6                                | 6                | 95                 | 95               | DP     |
| 1316             |  | 9/21/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.9                        | 132.8                                | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1309             | Backfill - Waterline Trench: Golden hills dr water line trench |           |            |        |  |                      |                           | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1310             | Backfill - Waterline Trench: Golden hills dr waterline trench  |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1311             | Backfill - Waterline Trench: Waha st waterline trench          |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1312             | Backfill - Waterline Trench: Waha st waterline trench          |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1313             | Backfill - Waterline Trench: Waha st waterline trench          |           |            |        |  |                      | 1.0                       | Below finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1314             | Backfill - Waterline Trench: Waha st waterline trench          |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1315             | Backfill - Waterline Trench: Golden hills dr waterline trench  |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1316             | Backfill - Waterline Trench: Golden hills dr waterline trench  |           |            |        |  |                      | 0.0                       | At finish road subgrade    | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1317             |  | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.4                        | 136.3                      | 6                                    | 97                 | 95               | DP     |
| 1318             |  | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                        | 133.1                      | 6                                    | 95                 | 95               | DP     |
| 1319             |  | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                        | 142.4                      | 6                                    | 102                | 95               | DP     |
| 1320             |  | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                        | 133.9                      | 6                                    | 96                 | 95               | DP     |
| 1321             |  | 9/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 5.2                        | 134.4                      | 6                                    | 117                | 95               | DP     |
| 1322             |  | 9/24/18   | PUL17-0177 | A      | ML   | 13.5                 | 114.5                     | 5.8                        | 137.1                      | 6                                    | 120                | 95               | DP     |
| 1323             |  | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 133.5                      | 6                                    | 95                 | 95               | DP     |
| 1324             |  | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                        | 136.7                      | 6                                    | 98                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1317             | Backfill - Waterline Trench: Golden hills dr at cayuse st waterline trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1318             | Backfill - Waterline Trench: Golden hills dr at cayuse st waterline trench |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1319             | Backfill - Waterline Trench: cayuse st waterline trench                    |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1320             | Backfill - Waterline Trench: cayuse st waterline trench                    |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1321             | Backfill - Waterline Trench: Wallowa st water line trench                  |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1322             | Backfill - Waterline Trench: Wallowa st water line trench                  |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1323             | Backfill - Waterline Trench: Wallowa st water line trench                  |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1324             | Backfill - Waterline Trench: Wallowa st water line trench                  |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                         |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-------------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)   | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1325             |   | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                     | 132.6                                   | 6                | 95                 | 95               | DP     |
| 1326             |   | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                     | 132.7                                   | 6                | 95                 | 95               | DP     |
| 1327             |   | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                     | 132.7                                   | 6                | 95                 | 95               | DP     |
| 1328             |   | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                     | 138.6                                   | 6                | 99                 | 95               | DP     |
| 1329             |   | 9/24/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                     | 132.4                                   | 6                | 95                 | 95               | DP     |
| 1330             |   | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.7                     | 141.1                                   | 6                | 101                | 95               | DP     |
| 1331             |   | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                     | 133.4                                   | 6                | 95                 | 95               | DP     |
| 1332             |   | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.8                     | 135.0                                   | 6                | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                         |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference               | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1325             | Backfill - Waterline Trench: Wallowa st water line trench |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1326             | Backfill - Waterline Trench: Wallowa st water line trench |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1327             | Backfill - Manhole: Wallowa st western most manholes      |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1328             | Backfill - Manhole: Wallowa st western most manholes      |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1329             | Backfill - Manhole: Wallowa st western most manholes      |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1330             | Backfill - Waterline Trench: Umatilla st waterline trench |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1331             | Backfill - Waterline Trench: Umatilla st waterline trench |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1332             | Backfill - Waterline Trench: Umatilla st waterline trench |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                         |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                         |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|----------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)      | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1333             |  | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                        | 133.7                      | 6                                    | 96                 | 95               | DP     |
| 1334             |  | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.3                        | 133.6                      | 6                                    | 95                 | 95               | DP     |
| 1335             |  | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                        | 143.5                      | 6                                    | 102                | 95               | DP     |
| 1336             |  | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                        | 133.3                      | 6                                    | 95                 | 95               | DP     |
| 1337             |  | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.7                        | 141.3                      | 6                                    | 101                | 95               | DP     |
| 1338             |  | 9/25/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                        | 132.8                      | 6                                    | 95                 | 95               | DP     |
| 1339             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                        | 133.4                      | 6                                    | 95                 | 95               | DP     |
| 1340             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                        | 134.8                      | 6                                    | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                            |                            |                                      |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                  |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1333             | Backfill - Waterline Trench: Umatilla st waterline trench            |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1334             | Backfill - Waterline Trench: Umatilla st waterline trench            |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1335             | Backfill - Waterline Trench: Umatilla st waterline trench            |           |            |        |  |                      |                           | At finish road subgrade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1336             | Backfill - Waterline Trench: Umatilla st waterline trench            |           |            |        |  |                      | 3.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1337             | Backfill - Waterline Trench: Umatilla st waterline trench            |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1338             | Backfill - Waterline Trench: Golden hills dr waterline trench        |           |            |        |  |                      | 2.0                       | Below finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1339             | Backfill - Stormwater Line Trench: Golden hills dr south of umatilla |           |            |        |  |                      |                           | At finished road subgrade  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1340             | Backfill - Stormwater Line Trench: Golden hills dr south of umatilla |           |            |        |  |                      |                           | At finished road subgrade  |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                            |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                            |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                              |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|------------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)        | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1341             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                          | 138.1                                | 6                | 99                 | 95               | DP     |
| 1342             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                          | 138.9                                | 6                | 99                 | 95               | DP     |
| 1343             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.2                          | 136.3                                | 6                | 97                 | 95               | DP     |
| 1344             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.3                          | 139.3                                | 6                | 100                | 95               | DP     |
| 1345             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                          | 133.1                                | 6                | 95                 | 95               | DP     |
| 1346             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                          | 131.6                                | 6                | 94                 | 90               | DP     |
| 1347             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                          | 130.7                                | 6                | 93                 | 90               | DP     |
| 1348             |  | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                          | 133.4                                | 6                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                              |                                      |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                    | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1341             | Backfill - Waterline Trench: Golden hills dr south of umatilla             |           |            |        |  |                      | 0.5                       | Below finished road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1342             | Backfill - Waterline Trench: Golden hills dr south of umatilla             |           |            |        |  |                      | 0.5                       | Below finished road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1343             | Backfill - Stormwater Line Trench: Golden hills dr at umatilla             |           |            |        |  |                      | 2.0                       | Below finished road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1344             | Backfill - Stormwater Line Trench: Golden hills dr at umatilla             |           |            |        |  |                      | 0.5                       | Below finished road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1345             | Backfill - Waterline Trench: Umatilla st western fire hydrant              |           |            |        |  |                      | 0.5                       | Below finished road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1346             | Backfill - Waterline Trench: West of golden hills dr. Storm trench to pond |           |            |        |  |                      | 2.5                       | Below finished road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1347             | Backfill - Waterline Trench: West of golden hills dr. Storm trench to pond |           |            |        |  |                      | 2.5                       | Below finished road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1348             | Backfill - Manhole: Umatilla st north of manhole 6 2'                      |           |            |        |  |                      |                           | At finish road subgrade      | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                              |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                              |                                      |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                             |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)       | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1349             |   | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.5                         | 132.3                                | 6                | 95                 | 95               | DP     |
| 1350             |   | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                         | 134.6                                | 6                | 96                 | 95               | DP     |
| 1351             |   | 10/4/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.6                         | 132.3                                | 6                | 95                 | 95               | DP     |
| 1352             |   | 10/11/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                         | 133.4                                | 6                | 95                 | 95               | DP     |
| 1353             |   | 10/11/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                         | 134.5                                | 6                | 96                 | 95               | DP     |
| 1354             |   | 10/11/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                         | 132.6                                | 6                | 95                 | 95               | DP     |
| 1355             |   | 10/11/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.3                         | 132.9                                | 6                | 95                 | 95               | DP     |
| 1356             |   | 10/13/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                         | 139.2                                | 6                | 99                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                             |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                   | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1349             | Backfill - Manhole: Umatilla st north of manhole 6 storm 3'       |           |            |        |  |                      |                           | At finish road subgrade     | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1350             | Backfill - Manhole: Waha st catch basin                           |           |            |        |  |                      |                           | At finish road subgrade     | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1351             | Backfill - Manhole: Waha st catch basin                           |           |            |        |  |                      |                           | At finish road subgrade     | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1352             | Backfill - Manhole: Golden hills drive north of umatilla st       |           |            |        |  |                      |                           | At finish road subgrade     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1353             | Backfill - Manhole: Golden hills drive north of umatilla st       |           |            |        |  |                      |                           | At finish road subgrade     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1354             | Backfill - Utility Trench: umatilla st norther utility            |           |            |        |  |                      |                           | At finish road subgrade     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1355             | Backfill - Utility Trench: umatilla st northern utility           |           |            |        |  |                      |                           | At finish road subgrade     | Instrotek / X3500 / 3524 / 6/30/2018 |                  |                    | PAULSEN, ZACH    |        |
| 1356             | Fill - P-152 Excavation, Subgrade, and Embankment: Waha waterline |           |            |        |  |                      |                           | Approximately top of trench | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | ROSS, JOSH       |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                             |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                             |                                      |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                         |                            |                                      |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)   | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1357             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.9                     | 137.4                      | 4                                    | 97                 | 95               | DP     |
| 1358             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.4                     | 135.2                      | 4                                    | 95                 | 95               | DP     |
| 1359             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.6                     | 134.7                      | 4                                    | 95                 | 95               | DP     |
| 1360             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 2.7                     | 135.5                      | 4                                    | 95                 | 95               | DP     |
| 1361             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.6                     | 138.1                      | 4                                    | 97                 | 95               | DP     |
| 1362             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.2                     | 134.9                      | 4                                    | 95                 | 95               | DP     |
| 1363             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.6                     | 139.5                      | 4                                    | 98                 | 95               | DP     |
| 1364             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 2.9                     | 137.1                      | 4                                    | 97                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                         |                            |                                      |                    |                  |        |
| Test #           | Test Location                                      |           |            |        |  |                      | Elevation                 | Reference               |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1357             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1358             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1359             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1360             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1361             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1362             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1363             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| 1364             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 718 / 3/21/2018  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                         |                            |                                      |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                         |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                         |                                      |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)   | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1365             |  | 10/22/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.2                     | 135.7                                | 4                | 96                 | 95               | DP     |
| 1366             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 6.6                     | 135.2                                | 4                | 95                 | 95               | DP     |
| 1367             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.1                     | 134.6                                | 4                | 95                 | 95               | DP     |
| 1368             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.2                     | 134.4                                | 4                | 95                 | 95               | DP     |
| 1369             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.2                     | 134.3                                | 4                | 95                 | 95               | DP     |
| 1370             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.4                     | 134.8                                | 4                | 95                 | 95               | DP     |
| 1371             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.6                     | 135.2                                | 4                | 95                 | 95               | DP     |
| 1372             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.6                     | 138.0                                | 4                | 97                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                         |                                      |                  |                    |                  |        |
| Test #           | Test Location                                      |           |            |        |  |                      | Elevation                 | Reference               | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1365             | Fill - Subgrade: Golden hills dr eastern curb side |           |            |        |  |                      |                           | At finish road subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1366             | Fill - Subgrade: Umatilla road. South side curbs   |           |            |        |  |                      |                           | At finish road grade    | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1367             | Fill - Subgrade: Umatilla road. South side curbs   |           |            |        |  |                      |                           | At finish road grade    | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1368             | Fill - Subgrade: Umatilla road. South side curbs   |           |            |        |  |                      |                           | At finish road grade    | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1369             | Fill - Subgrade: Umatilla road. South side curbs   |           |            |        |  |                      |                           | At finish road grade    | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | PAULSEN, ZACH    |        |
| 1370             | Fill - Subgrade: Umatilla road. South side curb    |           |            |        |  |                      |                           | At finish road grade    | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PAULSEN, ZACH    |        |
| 1371             | Fill - Subgrade: Umatilla road. North side curb    |           |            |        |  |                      |                           | At finish road grade    | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PAULSEN, ZACH    |        |
| 1372             | Fill - Subgrade: Umatilla road. North side curb    |           |            |        |  |                      |                           | At finish road grade    | Troxler / 3430 / 37625 / 3/21/2018   |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                         |                                      |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                         |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1373             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.2                   | 135.0                      | 4                                    | 95                 | 95               | DP     |
| 1374             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.3                   | 141.3                      | 4                                    | 100                | 95               | DP     |
| 1375             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.5                   | 137.9                      | 4                                    | 97                 | 95               | DP     |
| 1376             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.5                   | 139.4                      | 4                                    | 98                 | 95               | DP     |
| 1377             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.6                   | 135.7                      | 4                                    | 96                 | 95               | DP     |
| 1378             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.7                   | 138.8                      | 4                                    | 98                 | 95               | DP     |
| 1379             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.5                   | 137.8                      | 4                                    | 97                 | 95               | DP     |
| 1380             |   | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.6                   | 135.1                      | 6                                    | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1373             | Fill - Subgrade: Umatilla road. North side curb                     |           |            |        |  |                      |                           | At finish road grade  |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| 1374             | Fill - Subgrade: Waha road. East of side of radius                  |           |            |        |  |                      |                           | At finish road grade  |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| 1375             | Fill - Subgrade: Waha road. West of radius. Center of road          |           |            |        |  |                      |                           | At finish road grade  |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| 1376             | Fill - Subgrade: Waha road. West of radius. South of center of road |           |            |        |  |                      |                           | At finish road grade  |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| 1377             | Fill - Subgrade: Waha road. West of radius. North of center of road |           |            |        |  |                      |                           | At finish road grade  |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| 1378             | Fill - Subgrade: Waha road. West of radius. Center of road          |           |            |        |  |                      |                           | At finish road grade  |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| 1379             | Fill - Subgrade: Waha road. West of radius. Center of road          |           |            |        |  |                      |                           | At finish road grade  |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| 1380             | Fill - Subgrade: Golden Hills drive. At center line of road         |           |            |        |  |                      |                           | At finish grade       |                            | Troxler / 3430 / 37625 / 3/21/2018   |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1381             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.0                   | 144.9                                   | 4                | 102                | 95               | DP     |
| 1382             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.5                   | 142.5                                   | 4                | 100                | 95               | DP     |
| 1383             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.0                   | 142.0                                   | 4                | 100                | 95               | DP     |
| 1384             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.1                   | 145.7                                   | 4                | 103                | 95               | DP     |
| 1385             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.1                   | 144.0                                   | 4                | 101                | 95               | DP     |
| 1386             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.4                   | 142.5                                   | 4                | 100                | 95               | DP     |
| 1387             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.7                   | 145.1                                   | 4                | 102                | 95               | DP     |
| 1388             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.5                   | 144.2                                   | 4                | 102                | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1381             | Fill - Subgrade: Golden Hills drive. West of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1382             | Fill - Subgrade: Golden Hills drive. East of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1383             | Fill - Subgrade: Golden Hills drive. West of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1384             | Fill - Subgrade: Golden Hills drive. East of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1385             | Fill - Subgrade: Golden Hills drive. West of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1386             | Fill - Subgrade: Golden Hills drive. East of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1387             | Fill - Subgrade: Golden Hills drive. West of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1388             | Fill - Subgrade: Golden Hills drive. East of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1389             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.7                   | 135.1                                   | 4                | 95                 | 95               | DP     |
| 1390             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.1                   | 141.4                                   | 4                | 100                | 95               | DP     |
| 1391             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.5                   | 136.1                                   | 4                | 96                 | 95               | DP     |
| 1392             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.2                   | 135.0                                   | 4                | 95                 | 95               | DP     |
| 1393             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.7                   | 135.9                                   | 4                | 96                 | 95               | DP     |
| 1394             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.4                   | 136.9                                   | 4                | 96                 | 95               | DP     |
| 1395             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.6                   | 140.5                                   | 4                | 99                 | 95               | DP     |
| 1396             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 2.8                   | 134.4                                   | 4                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1389             | Fill - Subgrade: Golden Hills drive. At center line of road      |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1390             | Fill - Subgrade: Golden Hills drive. East of center line of road |           |            |        |  |                      |                           | At finish grade       | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1391             | Fill - Subgrade: Cayuse street. At center of roadway             |           |            |        |  |                      |                           | At finish road grade  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1392             | Fill - Subgrade: Cayuse street. South of center of roadway       |           |            |        |  |                      |                           | At finish road grade  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1393             | Fill - Subgrade: Cayuse street. North of center of roadway       |           |            |        |  |                      |                           | At finish road grade  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1394             | Fill - Subgrade: Cayuse street. South of center of roadway       |           |            |        |  |                      |                           | At finish road grade  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1395             | Fill - Subgrade: Cayuse street. North of center of roadway       |           |            |        |  |                      |                           | At finish road grade  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1396             | Fill - Subgrade: Cayuse street. South of center of roadway       |           |            |        |  |                      |                           | At finish road grade  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1397             |  | 10/29/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 4.6                   | 134.9                                   | 4                | 95                 | 95               | DP     |
| 1398             |  | 10/30/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 2.7                   | 134.2                                   | 4                | 95                 | 95               | DP     |
| 1399             |  | 10/30/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 2.2                   | 136.4                                   | 4                | 96                 | 95               | DP     |
| 1400             |  | 10/30/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 2.7                   | 134.3                                   | 4                | 95                 | 95               | DP     |
| 1401             |  | 10/30/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 2.7                   | 136.2                                   | 4                | 96                 | 95               | DP     |
| 1402             |  | 10/30/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.1                   | 134.4                                   | 4                | 95                 | 95               | DP     |
| 1403             |  | 10/30/18  | PUL18-0205 |        | GP   | 7.0                  | 142.0                     | 3.3                   | 134.7                                   | 4                | 95                 | 95               | DP     |
| 1404             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                   | 145.2                                   | 4                | 104                | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1397             | Fill - Subgrade: Cayuse street. North of center of roadway   |           |            |        |  |                      |                           | At finish road grade  | Troxler / 3430 / 37625 / 3/21/2018      |                  |                    | PAULSEN, ZACH    |        |
| 1398             | Fill - Subgrade: Wallowa st. At center line of roadway       |           |            |        |  |                      |                           | At finish grade       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1399             | Fill - Subgrade: Wallowa st. South of center line of roadway |           |            |        |  |                      |                           | At finish grade       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1400             | Fill - Subgrade: Wallowa st. North of center line of roadway |           |            |        |  |                      |                           | At finish grade       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1401             | Fill - Subgrade: Wallowa st. North of center line of roadway |           |            |        |  |                      |                           | At finish grade       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1402             | Fill - Subgrade: Wallowa st. At center line of roadway       |           |            |        |  |                      |                           | At finish grade       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1403             | Fill - Subgrade: Wallowa st. North of center line of roadway |           |            |        |  |                      |                           | At finish grade       | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1404             | Fill - Subgrade: Golden Hills Drive. At center line of road  |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |



| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1405             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                   | 143.6                                   | 4                | 103                | 95               | DP     |
| 1406             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 133.4                                   | 4                | 95                 | 95               | DP     |
| 1407             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                   | 134.9                                   | 4                | 96                 | 95               | DP     |
| 1408             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                   | 133.6                                   | 4                | 95                 | 95               | DP     |
| 1409             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 135.3                                   | 4                | 97                 | 95               | DP     |
| 1410             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 132.7                                   | 4                | 95                 | 95               | DP     |
| 1411             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                   | 132.4                                   | 4                | 95                 | 95               | DP     |
| 1412             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                   | 132.6                                   | 4                | 95                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1405             | Fill - Subgrade: Golden Hills Drive. West of center line of road |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1406             | Fill - Subgrade: Golden Hills Drive. East of center line of road |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1407             | Fill - Subgrade: Golden Hills Drive. West of center line of road |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1408             | Fill - Subgrade: Waha court. North of center line of road        |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1409             | Fill - Subgrade: Waha court. North of center line of road        |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1410             | Fill - Subgrade: Waha court. Southth of center line of road      |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1411             | Fill - Subgrade: Cayuse street. South of center line             |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1412             | Fill - Subgrade: Cayuse street. North of center line             |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1413             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                   | 132.3                                   | 4                | 95                 | 95               | DP     |
| 1414             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 132.4                                   | 4                | 95                 | 95               | DP     |
| 1415             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                   | 132.9                                   | 4                | 95                 | 95               | DP     |
| 1416             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.4                   | 136.0                                   | 4                | 97                 | 95               | DP     |
| 1417             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.6                   | 137.4                                   | 4                | 98                 | 95               | DP     |
| 1418             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                   | 135.3                                   | 4                | 97                 | 95               | DP     |
| 1419             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.8                   | 137.1                                   | 4                | 98                 | 95               | DP     |
| 1420             |  | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 139.1                                   | 4                | 99                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1413             | Fill - Subgrade: Cayuse street. South of center line     |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1414             | Fill - Subgrade: Cayuse street. North of center line     |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1415             | Fill - Subgrade: Cayuse street. South of center line     |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1416             | Fill - Subgrade: Cayuse street. North of center line     |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1417             | Fill - Subgrade: Cayuse street. South of center line     |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1418             | Fill - Subgrade: Golden Hills drive. West of center line |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1419             | Fill - Subgrade: Golden Hills drive. East of center line |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| 1420             | Fill - Subgrade: Golden Hills drive. West of center line |           |            |        |  |                      |                           | At finish road grade  | Instrotek / X3500 / 3524 / 6/30/2018    |                  |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                         |                            |                                      |                    |               |                  |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-------------------------|----------------------------|--------------------------------------|--------------------|---------------|------------------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)   | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%) | Remark           |
| 1421             |   | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.7                     | 132.9                      | 4                                    | 95                 | 95            | DP               |
| 1422             |   | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.2                     | 133.3                      | 4                                    | 95                 | 95            | DP               |
| 1423             |   | 10/31/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.0                     | 134.6                      | 4                                    | 96                 | 95            | DP               |
| 1424             |   | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                     | 134.7                      | 4                                    | 96                 | 95            | DP               |
| 1425             |   | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                     | 133.2                      | 4                                    | 95                 | 95            | DP               |
| 1426             |   | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.8                     | 134.2                      | 4                                    | 96                 | 95            | DP               |
| 1427             |   | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                     | 132.6                      | 4                                    | 95                 | 95            | DP               |
| 1428             |   | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                     | 132.7                      | 4                                    | 95                 | 95            | DP               |
| Test Information |   |           |            |        |  |                      |                           |                         |                            |                                      |                    |               |                  |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference               |                            | Gauge Make / Model / SN / Calibrated |                    |               | Field Technician |
| 1421             | Fill - Subgrade: Golden Hills drive. East of center line      |           |            |        |  |                      |                           | At finish road grade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1422             | Fill - Subgrade: Golden Hills drive. West of center line      |           |            |        |  |                      |                           | At finish road grade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1423             | Fill - Subgrade: Golden Hills drive. East of center line      |           |            |        |  |                      |                           | At finish road grade    |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1424             | Fill - Subgrade: Wallowa street. South of center line of road |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1425             | Fill - Subgrade: Wallowa street. North of center line of road |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1426             | Fill - Subgrade: Wallowa street. South of center line of road |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1427             | Fill - Subgrade: Wallowa street. North of center line of road |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| 1428             | Fill - Subgrade: Wallowa street. South of center line of road |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    |               | PAULSEN, ZACH    |
| Remarks          |   |           |            |        | Comments   |                      |                           |                         |                            |                                      |                    |               |                  |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                         |                            |                                      |                    |               |                  |

| Test Results     |  |           |            |        |  |                      |                           |                         |                            |   |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|-------------------------|----------------------------|---|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)   | In Place Dry Density (pcf) | Probe Depth (in)                        | Percent Compaction | Min Comp. (%)    | Remark |
| 1429             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.6                     | 132.4                      | 4                                       | 95                 | 95               | DP     |
| 1430             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 7.2                     | 137.6                      | 4                                       | 98                 | 95               | DP     |
| 1431             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.9                     | 137.0                      | 4                                       | 98                 | 95               | DP     |
| 1432             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                     | 134.3                      | 4                                       | 96                 | 95               | DP     |
| 1433             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                     | 135.6                      | 4                                       | 97                 | 95               | DP     |
| 1434             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.4                     | 133.6                      | 4                                       | 95                 | 95               | DP     |
| 1435             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.0                     | 133.9                      | 4                                       | 96                 | 95               | DP     |
| 1436             |  | 11/2/18   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.3                     | 134.7                      | 4                                       | 96                 | 95               | DP     |
| Test Information |  |           |            |        |  |                      |                           |                         |                            |   |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference               |                            | Gauge<br>Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1429             | Fill - Subgrade: Wallowa street. North of center line of road    |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 1430             | Fill - Subgrade: Umatilla street. South of center line of road   |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 1431             | Fill - Subgrade: Umatilla street. South of center line of road   |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 1432             | Fill - Subgrade: Umatilla street. South of center line of road   |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 1433             | Fill - Subgrade: Umatilla street. North of center line of road   |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 1434             | Fill - Subgrade: Umatilla street. East end of radius             |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 1435             | Fill - Subgrade: Golden Hills Drive. West of center line of road |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| 1436             | Fill - Subgrade: Golden Hills Drive. West of center line of road |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018    |                    | PAULSEN, ZACH    |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                         |                            |   |                    |                  |        |
| DP: Density Pass |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                         |                            |   |                    |                  |        |

**Test Method:** ASTM D 6938

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**Project:**

PU17212B  
 Sundance South Subdivision  
 Sundance Court  
 Pullman, WA 99163

| Test Results     |   |           |            |        |  |                      |                           |                         |                            |                                      |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-------------------------|----------------------------|--------------------------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)   | In Place Dry Density (pcf) | Probe Depth (in)                     | Percent Compaction | Min Comp. (%)    | Remark |
| 1437             |   | 11/10/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.0                     | 137.4                      | 4                                    | 98                 | 95               | DP     |
| 1438             |   | 11/10/18  | PUL17269   |        | GP   | 8.0                  | 140.0                     | 2.6                     | 132.4                      | 4                                    | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                         |                            |                                      |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference               |                            | Gauge Make / Model / SN / Calibrated |                    | Field Technician |        |
| 1437             | Fill - Subgrade: Western approach of Golden Hills Drive |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| 1438             | Fill - Subgrade: Western approach of Golden Hills Drive |           |            |        |  |                      |                           | At finish road subgrade |                            | Instrotek / X3500 / 3524 / 6/30/2018 |                    | PAULSEN, ZACH    |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                         |                            |                                      |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                         |                            |                                      |                    |                  |        |

| Test Results     |  |           |            |        |  |                      |                           |                          |   |                  |                    |                  |        |
|------------------|--|-----------|------------|--------|--|----------------------|---------------------------|--------------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of  | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)    | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1439             |  | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 2.7                      | 130.8                                   | 8                | 93                 | 95               | DF     |
| 1440             |  | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.0                      | 132.3                                   | 8                | 95                 | 95               | DP     |
| 1441             | 1439   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 2.7                      | 132.7                                   | 8                | 95                 | 95               | DP     |
| 1442             |  | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.1                      | 133.3                                   | 8                | 95                 | 95               | DP     |
| 1443             |  | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                      | 136.8                                   | 8                | 98                 | 95               | DP     |
| 1444             |  | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.8                      | 133.3                                   | 8                | 95                 | 95               | DP     |
| 1445             |  | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.1                      | 134.1                                   | 6                | 96                 | 95               | DP     |
| 1446             |  | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                      | 128.9                                   | 8                | 92                 | 95               | DF     |
| Test Information |  |           |            |        |  |                      |                           |                          |   |                  |                    |                  |        |
| Test #           | Test Location  |           |            |        |  |                      | Elevation                 | Reference                | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1439             | Aggregate - Base Course: 25' south and 15' west of 625 Sundance Ct.  |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| 1440             | Aggregate - Base Course: 25' south and 5' west of 615 Sundance Ct.   |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| 1441             | Aggregate - Base Course: 25' south and 15' west of 625 Sundance Ct.  |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| 1442             | Aggregate - Base Course: 25' south and 5' west of 605 Sundance Ct.   |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| 1443             | Aggregate - Base Course: 150' south and 5' west of 605 Sundance Ct.  |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| 1444             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. Approximately 125' north of utility box J17707. |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| 1445             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. Approximately 5' South of utility box J17707.   |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| 1446             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. Approximately 90' South of utility box J17707.  |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018     |                  |                    | Carlson, Amanda  |        |
| Remarks          |  |           |            |        | Comments   |                      |                           |                          |   |                  |                    |                  |        |
| DF: Density Fail |  |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                          |   |                  |                    |                  |        |
| DP: Density Pass |  |           |            |        |  |                      |                           |                          |   |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                          |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|--------------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%)    | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1447             |   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.0                      | 133.3                                | 8                | 95                 | 95               | DP     |
| 1448             |   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.2                      | 127.4                                | 8                | 91                 | 95               | DF     |
| 1449             |   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.7                      | 122.0                                | 8                | 87                 | 95               | DF     |
| 1450             |   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                      | 128.5                                | 8                | 92                 | 95               | DF     |
| 1451             |   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.8                      | 127.0                                | 8                | 91                 | 95               | DF     |
| 1452             |   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                      | 137.2                                | 8                | 98                 | 95               | DP     |
| 1453             |   | 5/30/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.9                      | 132.7                                | 8                | 95                 | 95               | DP     |
| 1454             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 3.0                      | 132.4                                | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                          |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference                | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1447             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. Approximately 90' North of utility box J17708. |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | Carlson, Amanda  |        |
| 1448             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. At utility box J17708.                         |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | Carlson, Amanda  |        |
| 1449             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. Approximately 100' south utility box J17708.   |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | Carlson, Amanda  |        |
| 1450             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. Approximately 20' North utility box J17672     |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | Carlson, Amanda  |        |
| 1451             | Aggregate - Base Course: Sidewalk on west side of Golden Hills dr. Approximately 20' North utility box J17672     |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | Carlson, Amanda  |        |
| 1452             | Aggregate - Base Course: Sidewalk on north side of highway 195, 25' west of utilities pole 173621                 |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | Carlson, Amanda  |        |
| 1453             | Aggregate - Base Course: Sidewalk on north side of highway 195, 125' west of utilities pole 173621                |           |            |        |  |                      | 0.0                       | Ft above finish subgrade | Instrotek / X3500 / 718 / 3/21/2018  |                  |                    | Carlson, Amanda  |        |
| 1454             | Aggregate - Base Course: Walkway on west side of golden hills drive   |           |            |        |  |                      | 0.0                       | Finish subgrade          | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                          |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                          |                                      |                  |                    |                  |        |
| DF: Density Fail |   |           |            |        |  |                      |                           |                          |                                      |                  |                    |                  |        |



| Test Results     |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|--------------------------------------|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)           | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1455             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.4                   | 133.3                                | 8                | 95                 | 95               | DP     |
| 1456             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.3                   | 132.9                                | 8                | 95                 | 95               | DP     |
| 1457             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.2                   | 132.6                                | 8                | 95                 | 95               | DP     |
| 1458             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.6                   | 133.9                                | 8                | 96                 | 95               | DP     |
| 1459             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.8                   | 133.2                                | 8                | 95                 | 95               | DP     |
| 1460             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 134.3                                | 8                | 96                 | 95               | DP     |
| 1461             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                   | 132.7                                | 8                | 95                 | 95               | DP     |
| 1462             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.5                   | 132.7                                | 8                | 95                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |                                      |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1455             | Aggregate - Base Course: 50' south of utility box J17707 on walkway on west side of golden hills dr.  |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| 1456             | Aggregate - Base Course: 100' south of utility box J17707 on walkway on west side of golden hills dr. |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| 1457             | Aggregate - Base Course: 150' south of utility box J17707 on walkway on west side of golden hills dr. |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| 1458             | Aggregate - Base Course: 200' south of utility box J17707 on walkway on west side of golden hills dr. |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| 1459             | Aggregate - Base Course: 10' north of utility box J17708 on walkway on west side of golden hills dr.  |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| 1460             | Aggregate - Base Course: 50' south of utility box J17708 on walkway on west side of golden hills dr.  |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| 1461             | Aggregate - Base Course: 100' south of utility box J17708 on walkway on west side of golden hills dr. |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| 1462             | Aggregate - Base Course: 100' south of utility J17708 on walkway on west side of golden hills drive   |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018 |                  |                    | Hanley, Joshua   |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |                                      |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |                                      |                  |                    |                  |        |

| Test Results     |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
|------------------|---|-----------|------------|--------|--|----------------------|---------------------------|-----------------------|---|------------------|--------------------|------------------|--------|
| Test #           | Retest Of   | Test Date | Proctor ID | Method | Soil Classification  | Optimum Moisture (%) | Maximum Dry Density (pcf) | In Place Moisture (%) | In Place Dry Density (pcf)              | Probe Depth (in) | Percent Compaction | Min Comp. (%)    | Remark |
| 1463             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                   | 138.2                                   | 8                | 99                 | 95               | DP     |
| 1464             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                   | 133.5                                   | 8                | 95                 | 95               | DP     |
| 1465             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.1                   | 133.4                                   | 8                | 95                 | 95               | DP     |
| 1466             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                   | 137.3                                   | 8                | 98                 | 95               | DP     |
| 1467             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 4.2                   | 133.7                                   | 8                | 96                 | 95               | DP     |
| 1468             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 6.1                   | 133.3                                   | 8                | 95                 | 95               | DP     |
| 1469             |   | 5/31/19   | PUL17269   |        | GP   | 8.0                  | 140.0                     | 5.1                   | 133.7                                   | 8                | 96                 | 95               | DP     |
| Test Information |   |           |            |        |  |                      |                           |                       |   |                  |                    |                  |        |
| Test #           | Test Location   |           |            |        |  |                      | Elevation                 | Reference             | Gauge<br>Make / Model / SN / Calibrated |                  |                    | Field Technician |        |
| 1463             | Aggregate - Base Course: 25' north of utility J17672 on walkway on west side of golden hills drive  |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | Hanley, Joshua   |        |
| 1464             | Aggregate - Base Course: 25' south of utility J17672 on walkway on west side of golden hills drive  |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | Hanley, Joshua   |        |
| 1465             | Aggregate - Base Course: 75' south of utility J17672 on walkway on west side of golden hills drive  |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | Hanley, Joshua   |        |
| 1466             | Aggregate - Base Course: 125' south of utility J17672 on walkway on west side of golden hills drive |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | Hanley, Joshua   |        |
| 1467             | Aggregate - Base Course: 175' south of utility J17672 on walkway on west side of golden hills drive |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | Hanley, Joshua   |        |
| 1468             | Aggregate - Base Course: 225' south of utility J17672 on walkway on west side of golden hills drive |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | Hanley, Joshua   |        |
| 1469             | Aggregate - Base Course: 275' south of utility J17672 on walkway on west side of golden hills drive |           |            |        |  |                      | 0.0                       | Finish subgrade       | Instrotek / X3500 / 1089 / 3/21/2018    |                  |                    | Hanley, Joshua   |        |
| Remarks          |   |           |            |        | Comments   |                      |                           |                       |   |                  |                    |                  |        |
| DP: Density Pass |   |           |            |        | Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. |                      |                           |                       |   |                  |                    |                  |        |

## Laboratory Report

|                     |                                    |                |           |
|---------------------|------------------------------------|----------------|-----------|
| Project:            | Sundance South Development         | Project No:    | PU17212B  |
| Client:             | KIP Development                    | Date:          | 11/8/2018 |
|                     |                                    | Tested By:     | JBM       |
| Sample Location:    | Motley-Motley, Inc. (Motley) Plant | Sampled By:    | Motley    |
|                     | Pullman, WA                        | Date Sampled:  | 11/7/2018 |
| Sample Description: | 1/2-inch Hot Mix Asphalt (HMA)     | Date Received: | 11/7/2018 |
| Sample Number:      | PUL18-0226                         |                |           |

### AASHTO T329 Moisture Content of HMA by Oven Method

*By weight of total mix*

Moisture Content, %: 0.03

### AASHTO T308 Asphalt Binder Content of HMA by Ignition Method

*By weight of total mix, no NCAT correction*

Asphalt Content, %: 6.5

### AASHTO T209 Theoretical Maximum Specific Gravity and Density of HMA Paving Mixtures

Theoretical Maximum Specific Gravity: 2.538

Theoretical Maximum Density, pcf\*: 158.0

*\*pounds per cubic foot*

### AASHTO T30 Mechanical Analysis of Extracted Aggregate

**Specification Reference:** WSDOT Standard Specifications for Road, Bridge, and Municipal Construction  
2018 Section 9-03.8(6) - 1/2 inch (Spec)

| Sieve Size | Metric, mm | PUL18-0226 | Spec       |
|------------|------------|------------|------------|
|            |            | Passing, % | Passing, % |
| 3/4"       | 19.1       | 100        | 99-100     |
| 1/2"       | 12.7       | 97         | 90-100     |
| 3/8"       | 9.51       | 88         | 90 Max     |
| #4         | 4.76       | 64         | -          |
| #8         | 2.38       | 44         | 28-58      |
| #16        | 1.19       | 30         | -          |
| #30        | 0.595      | 21         | -          |
| #50        | 0.297      | 14         | -          |
| #100       | 0.149      | 10         | -          |
| #200       | 0.074      | <u>7.2</u> | 2.0-7.0    |

\_\_\_ Underlined values designate results that fall outside of the specification's allowable deviations.



6 O'Donnell Road Pullman, WA 99163  
Phone.509.339.2000 Fax.509.339.2001

A handwritten signature in blue ink, appearing to read "Justin Maffey".

Justin Maffey, E.I.T.

## Laboratory Report

|                     |                                    |                |           |
|---------------------|------------------------------------|----------------|-----------|
| Project:            | Sundance South Development         | Project No:    | PU17212B  |
| Client:             | KIP Development                    | Date:          | 11/8/2018 |
|                     |                                    | Tested By:     | JBM       |
| Sample Location:    | Motley-Motley, Inc. (Motley) Plant | Sampled By:    | Motley    |
|                     | Pullman, WA                        | Date Sampled:  | 11/6/2018 |
| Sample Description: | 1/2-inch Hot Mix Asphalt (HMA)     | Date Received: | 11/6/2018 |
| Sample Number:      | PUL18-0225                         |                |           |

### AASHTO T329 Moisture Content of HMA by Oven Method

*By weight of total mix*

Moisture Content, %: 0.14

### AASHTO T308 Asphalt Binder Content of HMA by Ignition Method

*By weight of total mix, no NCAT correction*

Asphalt Content, %: 6.4

### AASHTO T209 Theoretical Maximum Specific Gravity and Density of HMA Paving Mixtures

Theoretical Maximum Specific Gravity: 2.548

Theoretical Maximum Density, pcf\*: 158.6

*\*pounds per cubic foot*

### AASHTO T30 Mechanical Analysis of Extracted Aggregate

**Specification Reference:** WSDOT Standard Specifications for Road, Bridge, and Municipal Construction  
2018 Section 9-03.8(6) - 1/2 inch (Spec)

| Sieve Size | Metric, mm | PUL18-0225 | Spec       |
|------------|------------|------------|------------|
|            |            | Passing, % | Passing, % |
| 3/4"       | 19.1       | 100        | 99-100     |
| 1/2"       | 12.7       | 98         | 90-100     |
| 3/8"       | 9.51       | 90         | 90 Max     |
| #4         | 4.76       | 65         | -          |
| #8         | 2.38       | 45         | 28-58      |
| #16        | 1.19       | 32         | -          |
| #30        | 0.595      | 22         | -          |
| #50        | 0.297      | 15         | -          |
| #100       | 0.149      | 11         | -          |
| #200       | 0.074      | <u>8.2</u> | 2.0-7.0    |

\_\_\_ Underlined values designate results that fall outside of the specification's allowable deviations.



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A handwritten signature in blue ink, appearing to read "Justin Maffey".

Justin Maffey, E.I.T.

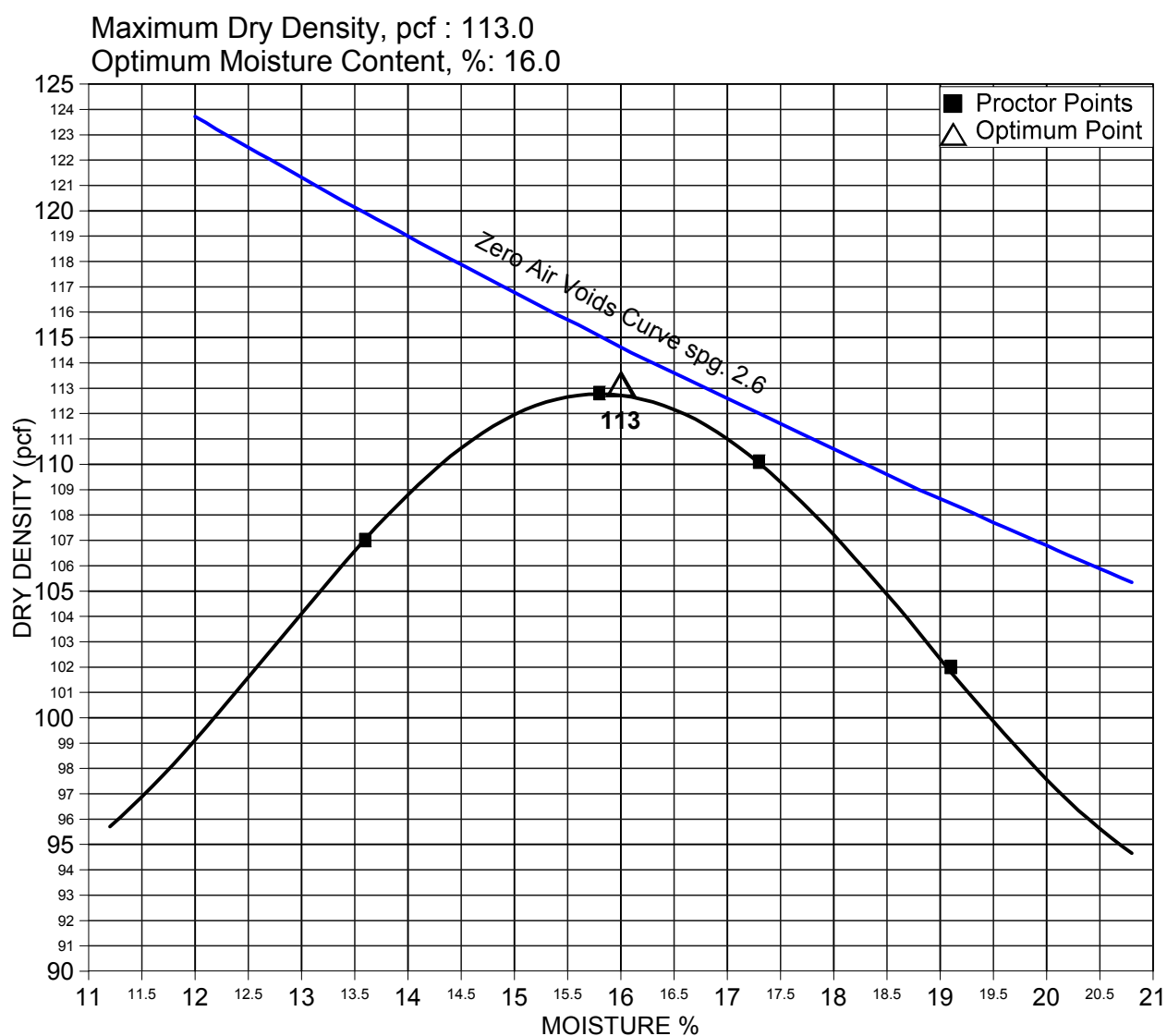
# MOISTURE-DENSITY RELATIONSHIP CURVE

## ASTM D 1557

### Method A

Project: Sundance South Subdivision  
Client: Sundance South, LLC  
File Name: PU17128A  
Lab Number: PUL17-0329  
Sample Location: On-site Native  
Sample Type: Silt (ML)  
Date Tested: 10/30/17 By: JBM  
Rammer Type: Manual

| GRADING ANALYSIS |           |           |
|------------------|-----------|-----------|
| SCREEN SIZE      | % PASSING | AS TESTED |
| #4               | 100       | 100       |



Reviewed By: \_\_\_\_\_



**GeoProfessional  
Innovation.**

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## Laboratory Report

|                     |                                    |                |            |
|---------------------|------------------------------------|----------------|------------|
| Project:            | Sundance South Development         | Project No:    | PU17212B   |
| Client:             | KIP Development                    | Date:          | 11/13/2018 |
|                     |                                    | Tested By:     | JBM        |
| Sample Location:    | Motley-Motley, Inc. (Motley) Plant | Sampled By:    | Motley     |
|                     | Pullman, WA                        | Date Sampled:  | 11/12/2018 |
| Sample Description: | 1/2-inch Hot Mix Asphalt (HMA)     | Date Received: | 11/12/2018 |
| Sample Number:      | PUL18-0234                         |                |            |

### AASHTO T329 Moisture Content of HMA by Oven Method

*By weight of total mix*

Moisture Content, %: 0.06

### AASHTO T308 Asphalt Binder Content of HMA by Ignition Method

*By weight of total mix, no NCAT correction*

Asphalt Content, %: 6.7

### AASHTO T209 Theoretical Maximum Specific Gravity and Density of HMA Paving Mixtures

Theoretical Maximum Specific Gravity: 2.554

Theoretical Maximum Density, pcf\*: 159.0

*\*pounds per cubic foot*

### AASHTO T30 Mechanical Analysis of Extracted Aggregate

**Specification Reference:** WSDOT Standard Specifications for Road, Bridge, and Municipal Construction  
2018 Section 9-03.8(6) - 1/2 inch (Spec)

| Sieve Size | Metric, mm | PUL18-0234 | Spec       |
|------------|------------|------------|------------|
|            |            | Passing, % | Passing, % |
| 3/4"       | 19.1       | 100        | 99-100     |
| 1/2"       | 12.7       | 98         | 90-100     |
| 3/8"       | 9.51       | <u>91</u>  | 90 Max     |
| #4         | 4.76       | 68         | -          |
| #8         | 2.38       | 45         | 28-58      |
| #16        | 1.19       | 29         | -          |
| #30        | 0.595      | 19         | -          |
| #50        | 0.297      | 12         | -          |
| #100       | 0.149      | 9          | -          |
| #200       | 0.074      | 6.2        | 2.0-7.0    |

\_\_\_ Underlined values designate results that fall outside of the specification's allowable deviations.



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A handwritten signature in blue ink, appearing to read "Justin Maffey".

Justin Maffey, E.I.T.

## Laboratory Report

|                     |                                    |                |            |
|---------------------|------------------------------------|----------------|------------|
| Project:            | Sundance South Development         | Project No:    | PU17212B   |
| Client:             | KIP Development                    | Date:          | 11/13/2018 |
|                     |                                    | Tested By:     | JBW        |
| Sample Location:    | Motley-Motley, Inc. (Motley) Plant | Sampled By:    | Motley     |
|                     | Pullman, WA                        | Date Sampled:  | 11/9/2018  |
| Sample Description: | 1/2-inch Hot Mix Asphalt (HMA)     | Date Received: | 11/9/2018  |
| Sample Number:      | PUL18-0230                         |                |            |

### AASHTO T329 Moisture Content of HMA by Oven Method

*By weight of total mix*

Moisture Content, %: 0.04

### AASHTO T308 Asphalt Binder Content of HMA by Ignition Method

*By weight of total mix, no NCAT correction*

Asphalt Content, %: 6.6

### AASHTO T209 Theoretical Maximum Specific Gravity and Density of HMA Paving Mixtures

Theoretical Maximum Specific Gravity: 2.565

Theoretical Maximum Density, pcf\*: 159.7

*\*pounds per cubic foot*

### AASHTO T30 Mechanical Analysis of Extracted Aggregate

**Specification Reference:** WSDOT Standard Specifications for Road, Bridge, and Municipal Construction  
2018 Section 9-03.8(6) - 1/2 inch (Spec)

| Sieve Size | Metric, mm | PUL18-0230 | Spec       |
|------------|------------|------------|------------|
|            |            | Passing, % | Passing, % |
| 3/4"       | 19.1       | 100        | 99-100     |
| 1/2"       | 12.7       | 98         | 90-100     |
| 3/8"       | 9.51       | <u>93</u>  | 90 Max     |
| #4         | 4.76       | 72         | -          |
| #8         | 2.38       | 50         | 28-58      |
| #16        | 1.19       | 33         | -          |
| #30        | 0.595      | 22         | -          |
| #50        | 0.297      | 14         | -          |
| #100       | 0.149      | 10         | -          |
| #200       | 0.074      | <u>7.2</u> | 2.0-7.0    |

\_\_\_ Underlined values designate results that fall outside of the specification's allowable deviations.



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