Exhibit A-1

Grantor's Name & Address:
Bruce Ankarberg
8920 SE 73rd Avenue
Portland, OR 97206

Tax Statements shall be sent to:
No Change

TEMPORARY ACCESS EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that **Bruce Ankarberg** ("Grantor"), in consideration of the sum of Thirty-Five Thousand and no/100 Dollars ($35,000.00), and other good and valuable consideration, to him paid by the City of Portland ("Grantee"), a municipal corporation of the State of Oregon, does hereby grant unto said City of Portland a temporary and non-exclusive easement ("this Easement") for the purpose of ingress and egress in support of activities associated with the Luther Road Restoration Project, through, over and along the following described parcel (the "Easement Area"):

> A parcel of land situated in the northeast one-quarter of Section 29, T1S, R2E, W.M., in the County of Clackamas and State of Oregon, said parcel being described as Parcel III in Document No. 93-47593, recorded July 8, 1993, Clackamas County Deed Records, as depicted on Exhibit A attached and incorporated by reference.
>
> The Easement Area contains 28,717 square feet, more or less.

IT IS UNDERSTOOD and agreed that:

A. This Easement is temporary and granted for a term of nine consecutive months, commencing no earlier than June 1, 2019 and terminating no later than February 29, 2020. Grantor shall be provided reasonable opportunity to make "non-conflicting use" of the Easement Area when not being used by Grantee. "Non-Conflicting use" does not include ingress and egress for residents, business employees, service providers, garbage collectors, mail carriers and utility meter readers.

R/W # 8762-1

BES # E10854

SID # 12E29AB04100

After Recording Return to:
John Deyo, City of Portland
1120 SW 5th Avenue, 8th Floor
Portland, Oregon 97204
Tax Statement shall be sent to: No Change

B. In the event of project delays, the term of this Easement will automatically extend by the same amount of time as the period of delay, but in no event will it be extended beyond December 31, 2020.

C. Grantee agrees to provide Grantor with at least seven (7) days' written notice prior to commencing work under this Easement.

D. Grantee agrees that it will make every reasonable effort to minimize impacts resulting from its activities and will maintain access to Grantor's property for Grantor and all others who have ingress and egress rights, including but not limited to residents, Grantor's tenants, business employees, service providers, garbage collectors, mail carriers and utility meter readers to the extent practicable.

E. With the exception of one (1) vehicle owned by the residents at 8887 SE 73rd Avenue, no vehicle parking shall be allowed within the Easement Area. Said vehicle shall be parked in such a manner as to allow two-way construction traffic on the roadway within the Easement Area while said roadway is in use by Grantee. With the exception of the parking of said vehicle, use of the Easement Area shall be limited to ingress and egress only. No material storage will be allowed within the Easement Area while said area is in use by Grantee.

F. Grantor shall trim vegetation and tree branches and remove obstructions within the Easement Area prior to Grantee's use of the Easement Area. Grantor shall perform all work required by this paragraph within 15 days of receipt of consideration paid for this Easement by Grantee to Grantor. If Grantor fails to do so, Grantee shall give Grantor 72 hours' written notice to cure; and, if reasonable steps to cure are not taken then Grantee may perform said work and may invoice Grantor for Grantee's reasonably incurred costs. Grantor will pay any such invoices within thirty days of receipt.

G. Within seven (7) days' written notice by Grantee, Grantor shall clear the surface of the roadway within the Easement Area of dirt and debris sufficiently to allow Grantee and Grantor to inspect, photograph and otherwise document its condition prior to the use of the roadway by Grantee.

H. Grantee's and Grantee's contractors' vehicles using the roadway within the Easement Area will not exceed the weight limits as set forth in the attached Exhibit B and in ORS 818.010. Grantor has provided Grantee with all available information regarding construction of said roadway. Grantee completed an independent analysis of the construction of said roadway, its condition and ability to accommodate the use of such vehicles in the number and frequency necessitated by the Luther Road Habitat Restoration Project E06947 prior to its construction. Said analysis is attached as Exhibit C and incorporated by reference. Grantee also completed an independent analysis of the condition of said roadway after construction of said project. This post-construction analysis is attached as Exhibit D and incorporated by reference.

I. Grantee will restore areas disturbed by Grantee or Grantee's contractor to a condition that, in the reasonable judgment of Grantee, is as good as the condition that existed before the work began. The area of repair or replacement will be limited to the area of damage, may have

appearance variations due to age or weathering, and does not include any portion of the public right-of-way, as defined by Grantee.

J. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act, Grantee shall hold harmless, indemnify and defend Grantor and his officers, employees and agents from and against all claims, demands, penalties, and causes of action of any kind or character (not including attorney fees) in favor of any person on account of personal injury, death, damage to property, or violation of law which arises out of, or results from, the acts or omissions of Grantee, its officers, employees, or agents within the Easement Area, except to the extent that such claims are related to or arise from the negligence or willful misconduct of the Grantor. Grantor shall hold harmless, indemnify and defend Grantee and its officers, employees, elected officials and agents from and against all claims, demands, penalties, and causes of action of any kind or character (not including attorney fees) in favor of any person on account of personal injury, death, damage to property, or violation of law which arises out of, or results from, the acts or omissions of Grantor, his officers, employees, agents, or contractors within the Easement Area except to the extent that such claims are related to or arise from the negligence or willful misconduct of the Grantee.

K. Grantor reserves all other rights not conveyed herein but will not exercise said rights in any manner that would be inconsistent or interfere with or materially affect rights herein granted.

L. This Easement shall bind the heirs and assigns of Grantor and Grantee and shall inure to the benefit of the successors in title of Grantee and Grantor.

M. Grantor represents and warrants that he has the authority to grant this Easement, that the Easement Area is free from all liens and encumbrances that would materially affect the easement grant, and that he will defend the same to Grantee against the lawful claims and demands of all persons whomsoever.

N. Grantor represents that to the best of his knowledge, the Easement Area is in compliance with all local, State and Federal environmental laws and regulations. Grantor discloses he has not undertaken any specific investigation or review of said laws or regulations.

O. Grantor has not inspected or tested for hazardous substances. To the best of his ability, Grantor has disclosed his actual knowledge of any release of hazardous substances onto or from the Easement Area, and disclosed any known report, investigation, survey or environmental assessment regarding the Easement Area. "Release" and "hazardous substance" shall have the meaning as defined under Oregon law.

P. To the best of Grantor’s knowledge, Grantor is unaware of underground storage tanks, presently on or under the Easement Area. Grantor has not inspected or tested for such tanks; nor, has Grantor conducted a Phase I or Phase II environmental study.

Q. Grantee, by accepting this Easement, is not accepting liability for any preexisting release of hazardous substances onto or from the Easement Area, and Grantor is not attempting to convey any such liability.

R. Grantor shall be named as an additional insured on Grantee's contractor's general liability insurance policy as applicable to the Luther Road Restoration Project.

IN WITNESS WHEREOF, the Grantor above named has hereunto set his hand this _____ day of _____, 2019.

_____
BRUCE ANKARBERG

STATE OF OREGON

County of _____

This instrument was acknowledged before me on _____, 2019 by Bruce Ankarberg.

_____
Notary Public for Oregon
My Commission expires _____

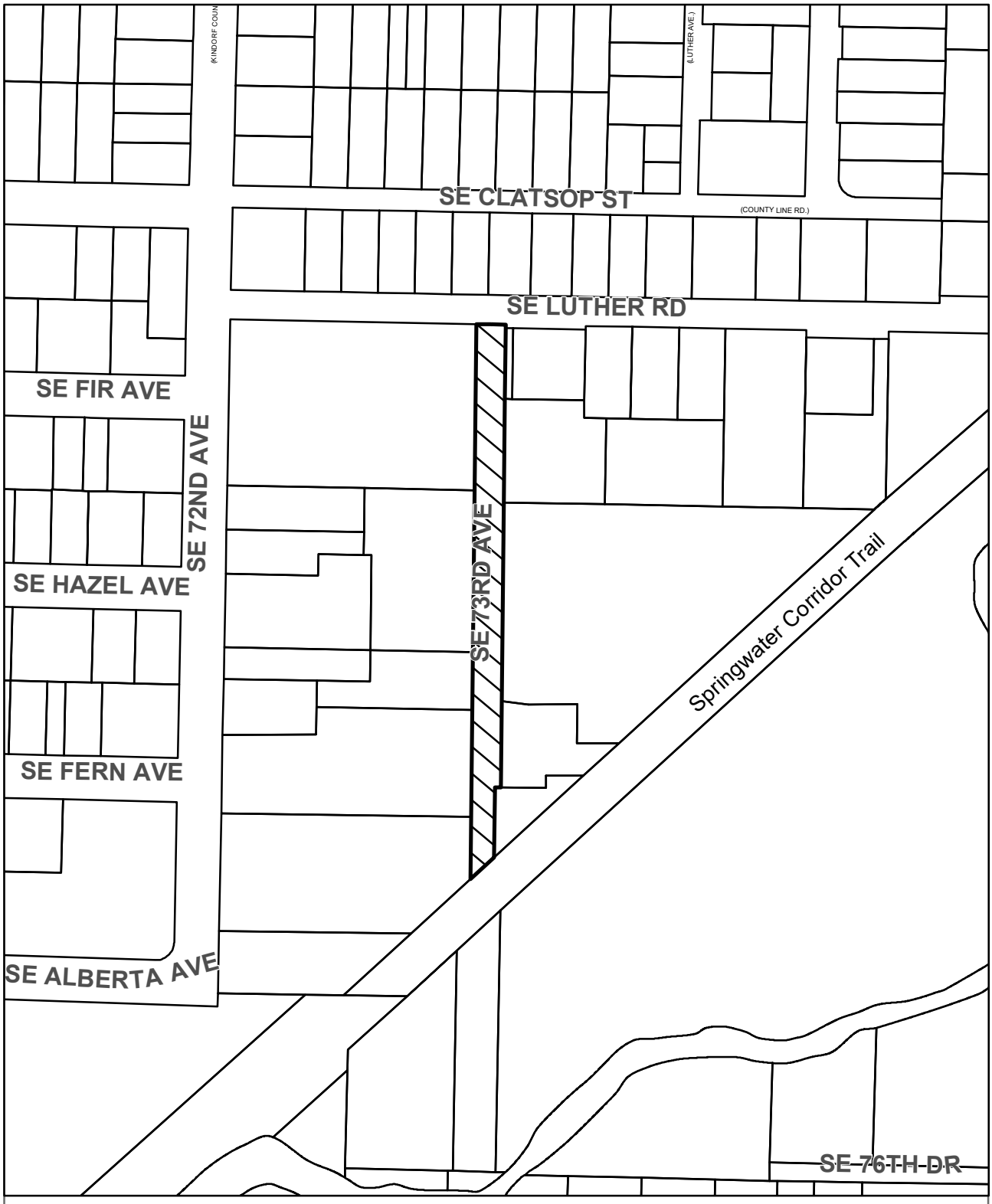
APPROVED AS TO FORM:

_____
City Attorney

APPROVED:

_____ _____
Bureau of Environmental Services Director or designee — Date

Exhibit A



Luther Road Habitat Restoration Project

Legal: Parcel III in Doc. No. 93-47593, CCDR

R/W: 6902-16 BES #E06947

1/4 Section: 3938 State ID #: 12E29AB04100

Easement Area

N

1 inch = 200 feet

Exhibit B

Truck Weight Limits

The "legal" operating weight of a truck is determined by tire size, the number of axles, and the wheelbase of the truck or the combination of truck and trailer(s). Legal weights are determined on the basis of the following:

Chart 1 - Gross allowable weight for single axles and tandem axles.

Chart 2 - Gross allowable weight for any vehicle, group of axles, and combination of vehicles.

In Oregon, the maximum legal gross weight limit is 80,000 pounds. The gross weight of a single axle cannot exceed 600 pounds per inch of total tire width on the axle (limited also by manufacturer's sidewall tire rating), or 20,000 pounds, whichever is less. The gross weight of a tandem axle cannot exceed 600 pounds per inch of total tire width of the wheels on tandem axle, or 34,000 pounds, whichever is less.

Combinations with a total gross weight over 80,000 pounds and up to 105,500 pounds must obtain a special permit, called an Extended Weight permit. These permits are often needed, for example, by truckers operating double- and triple-trailer combinations that have legal axle, tandem and group weights, the total of which weigh between 80,001 and 105,500 pounds.

For more information about Extended Weight and other variance permits, contact the Motor Carrier Transportation Division at 503-373-0000. Visit the Motor Carrier Division Web site for more information — www.oregon.gov/ODOT/MCT/OD.shtml

Definition of terms related to truck weight

Axle Weight - The weight placed on the road by all wheels of one axle.

Tandem Axle Weight - The weight placed on the road by two or more axles spaced more than 40 inches, but no more than 96 inches, apart.

Group of Axles Weight - The weight placed on the road by two or more axles spaced more than 8 feet apart.

Gross Weight - The total weight of a vehicle or combination of vehicles and load.

Tire Width - The width indicated on the side of the tire by the manufacturer.

Wheelbase - The distance in feet between two or more axles, as measured from the center of each axle.

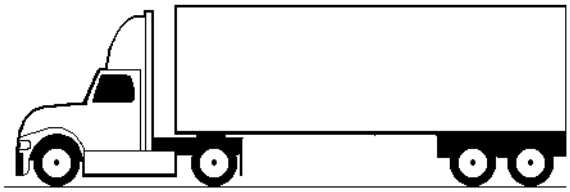
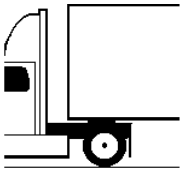
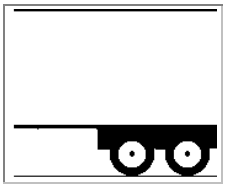


Chart 1

Maximum Gross Weight for Single and Tandem Axles

			
Tire Size	**Total Weight 2 tires - 1 axle**	**Total Weight 4 tires - 1 axle**	**Total Weight 8 tires - tandem axle**
10 inches	12,000 lbs.	20,000 lbs.	34,000 lbs.
11 inches	13,200 lbs.	20,000 lbs.	34,000 lbs.
12 inches	14,400 lbs.	20,000 lbs.	34,000 lbs.

Maximum gross weight is based on the manufacturer's sidewall tire rating, but not to exceed 600 pounds x the sum of the tire widths, in inches, up to the maximum axle, tandem axle, and gross weight tables.

Maximum Allowable Weight for Any Vehicle, Group of Axles, and Combination of Vehicles

Determined by whichever of the following two methods produces lower weight:

1. The sum of the weights that are legally allowed on single axles, tandem axles, or groups of axles, **OR**
2. Weight limits outlined in the following tables from ORS 818.010, with only two exceptions:

Exception A: Two consecutive sets of tandem axles spaced 30 feet or more apart may have a gross weight of 34,000 pounds each and operate without a permit on all non-interstate highways. A permit is required for operations on interstate highways, unless the spacing is 36 feet or greater.

Exception B: Four axles consisting of a set of tandem axles and two axles spaced nine feet or more apart may have a gross weight of 70,000 pounds if the distance between the first and fourth axle is 35 feet or more. A permit is required for operations on interstate highways.

Chart 2

Maximum Weight Limits in Pounds

Distance in feet between first and last axle in group of axles:	2 axles	3 axles
4	34,000	
5	34,000	
6	34,000	
7	34,000	
8 and less	34,000	34,000

Maximum Weight Limits in Pounds (continued)

Distance in feet between first and last axle in group of axles:	2 axles	3 axles	4 axles	5 axles	6 axles	7 or more axles
more than 8	38,000	42,000				
9	39,000	42,500				
10	40,000	43,500				
11	40,000	44,000				
12	40,000	45,000	50,000			
13	40,000	45,500	50,500			
14	40,000	46,500	51,500			
15	40,000	47,000	52,000			
16	40,000	48,000	52,500	58,000		
17	40,000	48,500	53,500	58,500		
18	40,000	49,500	54,000	59,000		
19	40,000	50,000	54,500	60,000		
20	40,000	51,000	55,500	60,500	66,000	
21	40,000	51,500	56,000	61,000	66,500	
22	40,000	52,500	56,500	61,500	67,000	
23	40,000	53,000	57,500	62,500	68,000	
24	40,000	54,000	58,000	63,000	68,500	74,000
25	40,000	54,500	58,500	63,500	69,000	74,500
26	40,000	55,500	59,500	64,000	69,500	75,000
27	40,000	56,000	60,000	65,000	70,000	75,500
28	40,000	57,000	60,500	65,500	71,000	76,500
29	40,000	57,500	61,500	66,000	71,500	77,000
30	40,000	58,500	62,000	66,500	72,000	77,500
31	40,000	59,000	62,500	67,500	72,500	78,000
32	40,000	60,000	63,500	68,000	73,000	78,500
33	40,000	60,000	64,000	68,500	74,000	79,000
34	40,000	60,000	64,500	69,000	74,500	80,000
35	40,000	60,000	65,500	70,000	75,000	80,000
36	40,000	60,000	66,000	70,500	75,500	80,000
37	40,000	60,000	66,500	71,000	76,000	80,000
38	40,000	60,000	67,500	71,500	77,000	80,000
39	40,000	60,000	68,000	72,500	77,500	80,000
40	40,000	60,000	68,500	73,000	78,000	80,000
41	40,000	60,000	69,500	73,500	78,500	80,000
42	40,000	60,000	70,000	74,000	79,000	80,000
43	40,000	60,000	70,500	75,000	80,000	80,000
44	40,000	60,000	71,500	75,500	80,000	80,000
45	40,000	60,000	72,000	76,000	80,000	80,000
46	40,000	60,000	72,500	76,500	80,000	80,000
47	40,000	60,000	73,500	77,500	80,000	80,000
48	40,000	60,000	74,000	78,000	80,000	80,000
49	40,000	60,000	74,500	78,500	80,000	80,000
50	40,000	60,000	75,500	79,000	80,000	80,000
51	40,000	60,000	76,000	80,000	80,000	80,000
52	40,000	60,000	76,500	80,000	80,000	80,000
53	40,000	60,000	77,500	80,000	80,000	80,000
54	40,000	60,000	78,000	80,000	80,000	80,000
55	40,000	60,000	78,500	80,000	80,000	80,000
56	40,000	60,000	79,500	80,000	80,000	80,000
57 or over	40,000	60,000	80,000	80,000	80,000	80,000

Foundation Engineering, Inc.
Professional Geotechnical Services

Exhibit C

Date: March 4, 2014

To: Joe Richards, P.E.
City of Portland
Bureau of Environmental Services

From: Timothy J. Pfeiffer, P.E., G.E.
Mitchell F. Schaub, P.E., G.E.

Subject: Pavement Evaluation SE 73rd Avenue

Project: Luther Road Habitat Restoration Project
FEI Project No. 214-2-007

Foundation Engineering, Inc. (FEI) has completed an evaluation of the potential impact of proposed construction traffic on the SE 73rd Avenue pavement section. The pavement evaluation consisted of an office study to estimate the performance of the existing pavement section with the planned construction traffic.

BACKGROUND INFORMATION

The City of Portland, Bureau of Environmental Services (BES), plans to use SE 73rd Avenue as a haul road for construction of the Luther Road Habitat Restoration Project, located in Clackamas County. Construction traffic will access the project site from SE Luther Road via ±800 feet of SE 73rd Avenue, which is privately owned.

FEI was retained by BES to provide the pavement evaluation. Our scope of work was described in an Engineering Services Work Order for Flexible Service Contractors executed on Feb 25, 2014, and included the following:

- Review existing project information including pavement construction, as-builts, utility construction, available maps and reports.
- Evaluate planned construction traffic loading and estimate 18 kip equivalent single axle loads (ESAL) for pavement evaluation.
- Estimate pavement design parameters for existing pavement section and subgrade.
- Check existing pavement section structural number with proposed traffic loading.
- Provide an estimate of the pavement performance and recommendation for mitigation or repair of the pavement wear

EXISTING PAVEMENT SECTION

We understand the pavement section of SE 73rd Avenue was constructed in ±2004 and consists of a 4-inch layer of Asphaltic Concrete (AC) underlain by an 8-inch layer of reclaimed base (AC and base rock) with a 5% (by weight) cement additive. The

reclaimed base was derived on-site by the excavation of an existing AC and base layer of silty gravel, mixed with dry cement and water, and compacted in-place.

A geotechnical report for the Luther Road Habitat Site by Ash Creek Associates dated January 27, 2010 shows test pits TP-9, TP-12 and TP-13 consist of silty sand (fill) with some gravel and cobble at depths of ±0 to 3 feet. This appears consistent with photographs of utility construction on SE 73rd Avenue indicating a ±12-inch thick pavement section underlain by what appears to be soil consisting of sand or silt with gravel.

FEI performed a reconnaissance of the site and observed the condition of the AC to consist of two isolated pavement depressions in front of the residence at 8900 SE 73rd Avenue. These depressions were ±8-inches in diameter and ± ¼ inch deep. No other surface cracking or pavement distress was observed. We also observed a ± 75-foot long section of the roadway AC that appeared to be a patch. It is located ±100 feet north of the residence at 8900 SE 73rd Avenue.

Based on FEI's review of the project documents and our experience, the following pavement and subgrade design parameters were selected using AASHTO Design of Pavement Structures (AASHTO 1993) and ODOT Pavement Design Guide (ODOT 2011).

- reliability of 85%
- overall standard deviation of 0.49
- initial serviceability of 3.5
- terminal serviceability of 2.0
- soil subgrade resilient modulus (M_R) of 3,000 psi
- AC layer coefficient of 0.3
- AC drainage coefficient of 1.0
- reclaimed base layer coefficient of 0.2
- reclaimed base layer drainage coefficient of 0.8

CONSTRUCTION TRAFFIC

We understand project construction will require the import of 6,050 cubic yards of rock and the export of 38,050 cubic yards of soil. To carry these materials, we have assumed the construction traffic on SE 73rd Avenue will consist of a conventional dump truck and trailer with 5 axles. These typically consist of a dump truck with a single front axle (2 tires) and a rear tandem axle (8 tires) pulling a trailer with two single axles (4 tires each axle). Based on a volume capacity of 15 cubic yards per truck and trailer (full), we estimate ±3,000 truck and trailer trips will be required.

To evaluate the impact of the construction truck traffic on the existing pavement, we estimated a dump truck 18 kip Equivalent Single Axle Loads (ESALS) using the following maximum axle weights from ORS 818.01 Chart 1 Truck Weight Limits provided as Exhibit B by BES. Load equivalency factors (LEF) were also selected using Tables D.1 and D.2 from AASHTO (1993).

- 14.4 kips for dump truck single front axle and LEF of .334 (full), and 7.2 kips and LEF of 0.036 (empty).
- 34 kips for dump truck tandem rear axle and LEF of 1.07 (full) and 17 kips and LEF of 0.124 (empty).
- 20 kips for front and rear trailer axle and LEF of 1.59 (full) and 10 kips and LEF of 0.09 (empty).

Using these values, we estimated a truck traffic load of ±15,000 ESALS during construction.

PAVEMENT EVALUATION

Evaluation of the performance of existing pavement section was completed by comparing the structural number of the existing pavement section to the required structural number for the construction traffic. The calculations were based on pavement design guidelines in AASHTO (1993) and the ODOT (2011).

The structural number (S_N) for the existing pavement section was calculated using the base layer coefficients and drainage coefficients of the AC and reclaimed base layer, and a thickness of 4 inches of AC and 8 inches of reclaimed base layer. We calculated a S_N value of 2.48 for the existing pavement section.

Using the truck traffic ESALS and design parameters including reliability, overall standard deviation, initial and terminal serviceability, and soil subgrade M_R, we calculated a structural number of 2.42 for the construction traffic.

Comparison of the structural numbers indicate the existing pavement section has a structural number that is slightly greater than the structural number of the estimated construction traffic. Therefore, the existing pavement section should be able to support the anticipated construction traffic and not completely fail or require full depth (AC and base layer) reconstruction. Following construction, however, we anticipate the pavement section will be at or near its estimated terminal serviceability value. Terminal serviceability can be considered as the level of pavement wear that may trigger maintenance in order to extend its design life.

Following construction, we anticipate the pavement will show noticeable signs of wear and potentially include some minor to moderate pavement rutting and cracking. However, due to potential variations in traffic and existing pavment section, limited areas of deep rutting and extensive cracking may require full depth repair.

DISCUSSION OF FINDINGS

Based on the limited data available, a potential worst case scenario for the pavement condition on SE 73rd Avenue following construction would include extensive areas requiring full depth reconstruction. The potential best case scenario would be a pavement condition limited to moderate wear and minor AC cracking. For planning and budgeting purposes, we recommend assuming an overlay will be required and ±10% of the pavement area will require full depth repair. In areas of existing curbs, driveways and streets, grinding and inlay will be needed for the overlay to match grades.

LIMITATIONS

The assumed pavement design parameters, calculations, conclusions, and recommendations contained herein are based on information provided by discussions with BES and review of project related documents as described herein. No pavement investigation was performed. The findings should be considered estimates due to the inherent variability with the existing pavement and soil conditions. We will assume no responsibility or liability for any engineering judgment, inspection, or testing performed by others.

This memorandum was prepared for the exclusive use of the City of Portland Bureau of Environmental Services for the Luther Road Habitat Restoration Project in Clackamas County, Oregon. Information contained herein should not be used for other sites or for unanticipated construction without our written consent. This report is intended as an opinion regarding estimated pavement wear and repair on SE 73rd Avenue following truck traffic construction. Contractors using this information to estimate construction quantities or costs do so at their own risk. Our services do not include any survey or assessment of potential surface contamination or contamination of the soil or ground water by hazardous or toxic materials. We assume those services, if needed, have been completed by others.

Please contact us any questions or comments. We appreciate the opportunity to assist you with this project.

Exhibit D

Foundation Engineering, Inc.
Professional Geotechnical Services

Memorandum

Date: April 17, 2015

To: Joe Richards, P.E.
City of Portland, Bureau of Environmental Services

From: Mitchell F. Schaub, P.E., G.E.

Subject: Geotechnical Services

Project: SE 73rd Avenue Pavement Evaluation
Luther Road Habitat Restoration Project
Foundation Engineering Project Number 2142007 Phase 201
City of Portland Work Center Code and Project No. E06947.D14

At your request, Foundation Engineering has completed geotechnical services including a post-construction reconnaissance of SE 73rd Avenue, in Clackamas County, Oregon. Foundation Engineering visited the site on April 9, 2015 to provide consultation with City of Portland personnel and document the overall pavement condition.

PROJECT DESCRIPTION

The City of Portland, Bureau of Environmental Services (BES) used SE 73rd Avenue as a haul road for the Luther Road Habitat Restoration Project. Construction traffic accessed the project site from SE Luther Road via ±400 feet of SE 73rd Avenue. SE 73rd Avenue is privately owned, and we understand BES was granted permission to use the private drive in return to restoring the roadway to a pre-construction condition following project completion.

Foundation Engineering previously completed an office study evaluation of the pavement on SE 73rd Avenue. Our scope included a reconnaissance of the pavement and an analysis and evaluation of the impact of the planned construction traffic on the SE 73rd Avenue pavement. Our findings were submitted in a memorandum dated March 4, 2014 and included estimates for post-construction pavement restoration consisting of a grind and overlay and up to ±10% complete pavement reconstruction.

SITE OBSERVATIONS

We observed the pavement condition on SE 73rd Avenue from SE Luther Road ±400 feet south to the entrance to the project site. Severe cracking and some pavement deflection was observed in a ±3 by 5-foot area near the edge of the roadway at the site entrance. Minor to moderate asphaltic concrete (A.C.) stripping was observed on the west and east sides of the roadway near the anticipated location of construction traffic wheel loads. Some very minor pavement cracking was also observed at the intersection with SE Luther Road at the locations of truck traffic wheel loads.

Outside of the area mentioned above, we did not observe severe cracking consistent with pavement failure. Minor to severe deflections and rutting of the pavement surface were not observed. From a comparison with our pre-construction observations, the post-construction condition of the pavement appeared to show some additional A.C. stripping and one isolated area of failure, but otherwise no other impacts. Photographs of the pavement condition pre and post-construction are attached.

DISCUSSION

Our previous analysis indicated the existing pavement would support the planned construction traffic. However, wheel loading from the planned construction traffic would result in the pavement nearing its terminal serviceability. The terminal serviceability limit of pavements can be considered as the condition of pavement wear that requires maintenance to extend its design life.

Therefore, to restore the design life, we recommend a grind and overlay from the project site, north to SE Luther Road, and reconstruction of the failed pavement area observed at the project entrance. Based on our observations that most of the impact of construction traffic was isolated to A.C. stripping, it is our opinion that a grind and ± 2 inch overlay will substantially restore the pavement to the pre-construction service life.

We thank you for the opportunity to assist you with this project. Please contact us if you have any questions or comments, or if we can assist you on other projects.

Attachments:

Pre and Post-construction Pavement Photos, Figure 1

Photo 1: Pre-construction condition of SE 73rd Avenue on March 2, 2014.

Photo 2: Post-construction condition of 73rd Avenue on April 9, 2015.

Exhibit A-2

SETTLEMENT AGREEMENT

The parties to this settlement agreement are Bruce Ankarberg ("Owner") and the City of Portland ("City"), a municipal corporation of the State of Oregon (together, "the Parties").

RECITALS

A. The Parties have entered into an agreement for a Temporary Access Easement ("the Easement") over Owner's private road, also known as SE 73rd Avenue ("the Roadway"), for the purpose of ingress and egress in support of activities associated with the Luther Road Habitat Restoration Project. The Easement is attached hereto as Exhibit 1.

B. Section I of the Easement provides as follows ("the Restoration Obligations"):

> Grantee will restore areas disturbed by Grantee or Grantee's contractor to a condition that, in the reasonable judgment of Grantee, is as good as the condition that existed before the work began. The area of repair or replacement will be limited to the area of damage, may have appearance variations due to age or weathering, and does not include any portion of the public right-of-way, as defined by Grantee.

C. In lieu of City performing the Restoration Obligations, City will pay Owner a sum of money based on an estimate of the restoration costs of the Roadway, said estimate prepared by S-2 Contractors, Inc. and attached hereto as Exhibit 2 ("the S-2 Estimate").

NOW, THEREFORE, Owner and City agree as follows:

1. City shall pay to Owner the sum of Thirty-Three Thousand Five Hundred Thirty-Four and no/100 Dollars ($33,534.00), which represents the estimated amount of the Restoration Obligations, as shown on the S-2 Estimate.

2. Owner will forever discharge City from all obligations to restore the area identified in the Easement.

3. The terms of the Easement remain in full force and effect until the termination of the Easement as specified therein.

4. Owner acknowledges and understands that, with the exception of the terms of the Easement, City has no further obligations to Owner whatsoever with regard to the Luther Road Habitat Restoration Project or City's or City's contractors' work thereon.

5. This settlement agreement represents the full and complete agreement between the Parties and supersedes any prior written or oral agreements, with the exception of the Easement. The terms of this settlement agreement are contractual and not a mere recital.

6. The Parties, through their respective signatories, represent and warrant that they have carefully read the terms of this settlement agreement and that they are authorized to execute this settlement agreement on behalf of their respective entities.

7. This settlement agreement shall be governed by and construed in accordance with the laws of the State of Oregon with the exception of Oregon's choice-of-law rules if such rules would require application of the law of a different state.

DATED this _____ day of _____, 2019.

CITY OF PORTLAND

_____
Bureau of Environmental Services
Director or designee

OWNER

_____
Bruce Ankarberg

Approved as to form:

_____
Deputy City Attorney

Exhibit 1

Grantor's Name & Address:
Bruce Ankarberg
8920 SE 73rd Avenue
Portland, OR 97206

Tax Statements shall be sent to:
No Change

TEMPORARY ACCESS EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that **Bruce Ankarberg** ("Grantor"), in consideration of the sum of Thirty-Five Thousand and no/100 Dollars ($35,000.00), and other good and valuable consideration, to him paid by the City of Portland ("Grantee"), a municipal corporation of the State of Oregon, does hereby grant unto said City of Portland a temporary and non-exclusive easement ("this Easement") for the purpose of ingress and egress in support of activities associated with the Luther Road Restoration Project, through, over and along the following described parcel (the "Easement Area"):

> A parcel of land situated in the northeast one-quarter of Section 29, T1S, R2E, W.M., in the County of Clackamas and State of Oregon, said parcel being described as Parcel III in Document No. 93-47593, recorded July 8, 1993, Clackamas County Deed Records, as depicted on Exhibit A attached and incorporated by reference.
>
> The Easement Area contains 28,717 square feet, more or less.

IT IS UNDERSTOOD and agreed that:

A. This Easement is temporary and granted for a term of nine consecutive months, commencing no earlier than June 1, 2019 and terminating no later than February 29, 2020. Grantor shall be provided reasonable opportunity to make "non-conflicting use" of the Easement Area when not being used by Grantee. "Non-Conflicting use" does not include ingress and egress for residents, business employees, service providers, garbage collectors, mail carriers and utility meter readers.

R/W # 8762-1

BES # E10854

SID # 12E29AB04100

After Recording Return to:
John Deyo, City of Portland
1120 SW 5th Avenue, 8th Floor
Portland, Oregon 97204
Tax Statement shall be sent to: No Change

B. In the event of project delays, the term of this Easement will automatically extend by the same amount of time as the period of delay, but in no event will it be extended beyond December 31, 2020.

C. Grantee agrees to provide Grantor with at least seven (7) days' written notice prior to commencing work under this Easement.

D. Grantee agrees that it will make every reasonable effort to minimize impacts resulting from its activities and will maintain access to Grantor's property for Grantor and all others who have ingress and egress rights, including but not limited to residents, Grantor's tenants, business employees, service providers, garbage collectors, mail carriers and utility meter readers to the extent practicable.

E. With the exception of one (1) vehicle owned by the residents at 8887 SE 73rd Avenue, no vehicle parking shall be allowed within the Easement Area. Said vehicle shall be parked in such a manner as to allow two-way construction traffic on the roadway within the Easement Area while said roadway is in use by Grantee. With the exception of the parking of said vehicle, use of the Easement Area shall be limited to ingress and egress only. No material storage will be allowed within the Easement Area while said area is in use by Grantee.

F. Grantor shall trim vegetation and tree branches and remove obstructions within the Easement Area prior to Grantee's use of the Easement Area. Grantor shall perform all work required by this paragraph within 15 days of receipt of consideration paid for this Easement by Grantee to Grantor. If Grantor fails to do so, Grantee shall give Grantor 72 hours' written notice to cure; and, if reasonable steps to cure are not taken then Grantee may perform said work and may invoice Grantor for Grantee's reasonably incurred costs. Grantor will pay any such invoices within thirty days of receipt.

G. Within seven (7) days' written notice by Grantee, Grantor shall clear the surface of the roadway within the Easement Area of dirt and debris sufficiently to allow Grantee and Grantor to inspect, photograph and otherwise document its condition prior to the use of the roadway by Grantee.

H. Grantee's and Grantee's contractors' vehicles using the roadway within the Easement Area will not exceed the weight limits as set forth in the attached Exhibit B and in ORS 818.010. Grantor has provided Grantee with all available information regarding construction of said roadway. Grantee completed an independent analysis of the construction of said roadway, its condition and ability to accommodate the use of such vehicles in the number and frequency necessitated by the Luther Road Habitat Restoration Project E06947 prior to its construction. Said analysis is attached as Exhibit C and incorporated by reference. Grantee also completed an independent analysis of the condition of said roadway after construction of said project. This post-construction analysis is attached as Exhibit D and incorporated by reference.

I. Grantee will restore areas disturbed by Grantee or Grantee's contractor to a condition that, in the reasonable judgment of Grantee, is as good as the condition that existed before the work began. The area of repair or replacement will be limited to the area of damage, may have

appearance variations due to age or weathering, and does not include any portion of the public right-of-way, as defined by Grantee.

J. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act, Grantee shall hold harmless, indemnify and defend Grantor and his officers, employees and agents from and against all claims, demands, penalties, and causes of action of any kind or character (not including attorney fees) in favor of any person on account of personal injury, death, damage to property, or violation of law which arises out of, or results from, the acts or omissions of Grantee, its officers, employees, or agents within the Easement Area, except to the extent that such claims are related to or arise from the negligence or willful misconduct of the Grantor. Grantor shall hold harmless, indemnify and defend Grantee and its officers, employees, elected officials and agents from and against all claims, demands, penalties, and causes of action of any kind or character (not including attorney fees) in favor of any person on account of personal injury, death, damage to property, or violation of law which arises out of, or results from, the acts or omissions of Grantor, his officers, employees, agents, or contractors within the Easement Area except to the extent that such claims are related to or arise from the negligence or willful misconduct of the Grantee.

K. Grantor reserves all other rights not conveyed herein but will not exercise said rights in any manner that would be inconsistent or interfere with or materially affect rights herein granted.

L. This Easement shall bind the heirs and assigns of Grantor and Grantee and shall inure to the benefit of the successors in title of Grantee and Grantor.

M. Grantor represents and warrants that he has the authority to grant this Easement, that the Easement Area is free from all liens and encumbrances that would materially affect the easement grant, and that he will defend the same to Grantee against the lawful claims and demands of all persons whomsoever.

N. Grantor represents that to the best of his knowledge, the Easement Area is in compliance with all local, State and Federal environmental laws and regulations. Grantor discloses he has not undertaken any specific investigation or review of said laws or regulations.

O. Grantor has not inspected or tested for hazardous substances. To the best of his ability, Grantor has disclosed his actual knowledge of any release of hazardous substances onto or from the Easement Area, and disclosed any known report, investigation, survey or environmental assessment regarding the Easement Area. "Release" and "hazardous substance" shall have the meaning as defined under Oregon law.

P. To the best of Grantor’s knowledge, Grantor is unaware of underground storage tanks, presently on or under the Easement Area. Grantor has not inspected or tested for such tanks; nor, has Grantor conducted a Phase I or Phase II environmental study.

Q. Grantee, by accepting this Easement, is not accepting liability for any preexisting release of hazardous substances onto or from the Easement Area, and Grantor is not attempting to convey any such liability.

R. Grantor shall be named as an additional insured on Grantee's contractor's general liability insurance policy as applicable to the Luther Road Restoration Project.

IN WITNESS WHEREOF, the Grantor above named has hereunto set his hand this _____ day of _____, 2019.

_____
BRUCE ANKARBERG

STATE OF OREGON

County of _____

This instrument was acknowledged before me on _____, 2019 by Bruce Ankarberg.

_____
Notary Public for Oregon
My Commission expires _____

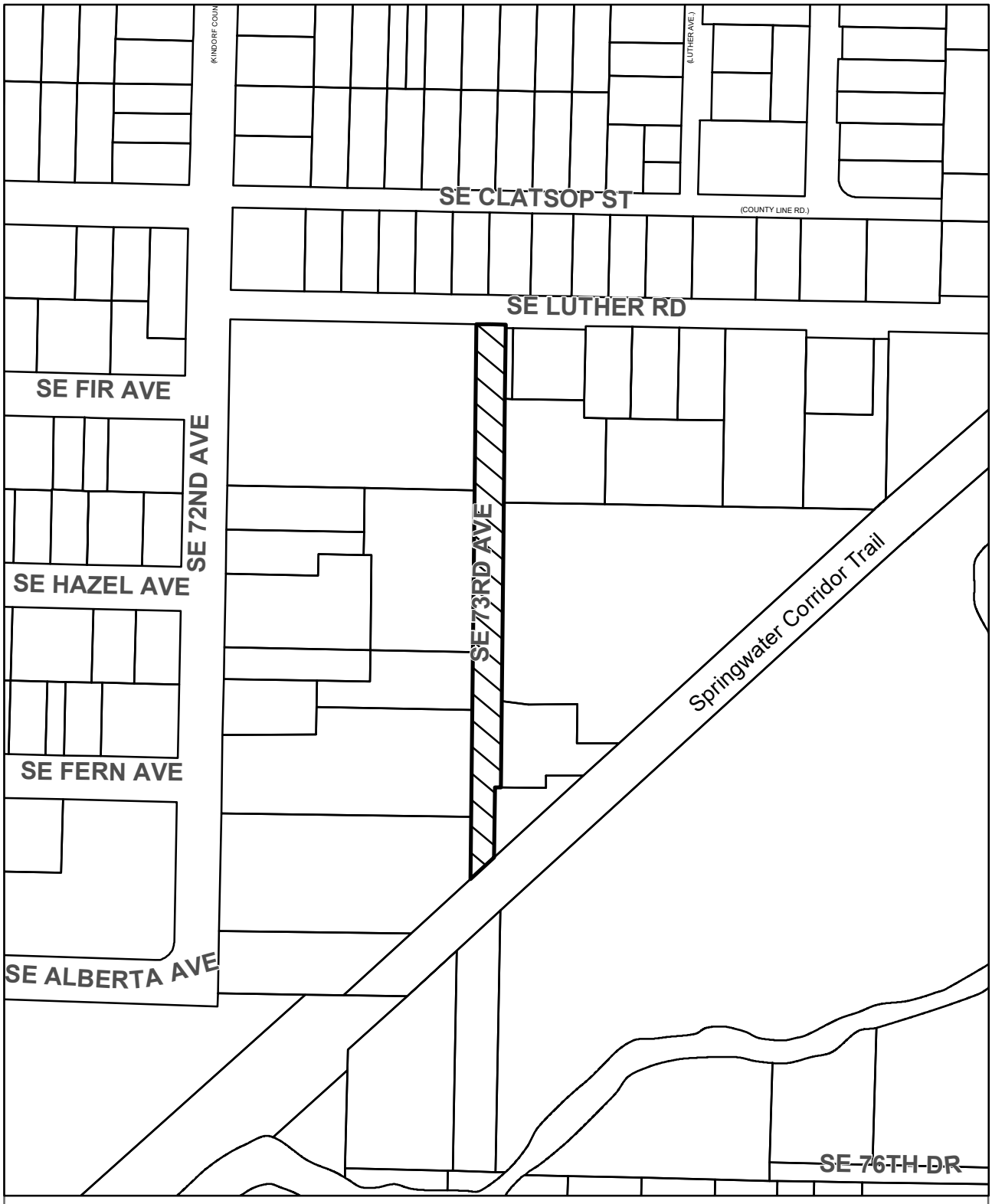
APPROVED AS TO FORM:

_____
City Attorney

APPROVED:

_____ _____
Bureau of Environmental Services Director or designee — Date

Exhibit A



Luther Road Habitat Restoration Project

Legal: Parcel III in Doc. No. 93-47593, CCDR

R/W: 6902-16 BES #E06947

1/4 Section: 3938 State ID #: 12E29AB04100

Easement Area

N

1 inch = 200 feet

Exhibit B

Truck Weight Limits

The "legal" operating weight of a truck is determined by tire size, the number of axles, and the wheelbase of the truck or the combination of truck and trailer(s). Legal weights are determined on the basis of the following:

Chart 1 - Gross allowable weight for single axles and tandem axles.

Chart 2 - Gross allowable weight for any vehicle, group of axles, and combination of vehicles.

In Oregon, the maximum legal gross weight limit is 80,000 pounds. The gross weight of a single axle cannot exceed 600 pounds per inch of total tire width on the axle (limited also by manufacturer's sidewall tire rating), or 20,000 pounds, whichever is less. The gross weight of a tandem axle cannot exceed 600 pounds per inch of total tire width of the wheels on tandem axle, or 34,000 pounds, whichever is less.

Combinations with a total gross weight over 80,000 pounds and up to 105,500 pounds must obtain a special permit, called an Extended Weight permit. These permits are often needed, for example, by truckers operating double- and triple-trailer combinations that have legal axle, tandem and group weights, the total of which weigh between 80,001 and 105,500 pounds.

For more information about Extended Weight and other variance permits, contact the Motor Carrier Transportation Division at 503-373-0000. Visit the Motor Carrier Division Web site for more information — www.oregon.gov/ODOT/MCT/OD.shtml

Definition of terms related to truck weight

Axle Weight - The weight placed on the road by all wheels of one axle.

Tandem Axle Weight - The weight placed on the road by two or more axles spaced more than 40 inches, but no more than 96 inches, apart.

Group of Axles Weight - The weight placed on the road by two or more axles spaced more than 8 feet apart.

Gross Weight - The total weight of a vehicle or combination of vehicles and load.

Tire Width - The width indicated on the side of the tire by the manufacturer.

Wheelbase - The distance in feet between two or more axles, as measured from the center of each axle.

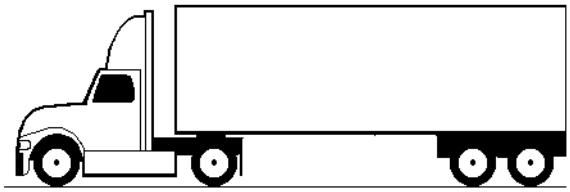
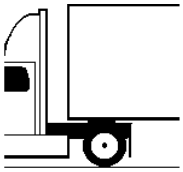
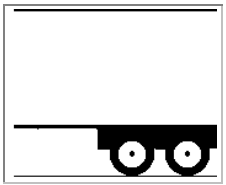


Chart 1

Maximum Gross Weight for Single and Tandem Axles

			
Tire Size	**Total Weight 2 tires - 1 axle**	**Total Weight 4 tires - 1 axle**	**Total Weight 8 tires - tandem axle**
10 inches	12,000 lbs.	20,000 lbs.	34,000 lbs.
11 inches	13,200 lbs.	20,000 lbs.	34,000 lbs.
12 inches	14,400 lbs.	20,000 lbs.	34,000 lbs.

Maximum gross weight is based on the manufacturer's sidewall tire rating, but not to exceed 600 pounds x the sum of the tire widths, in inches, up to the maximum axle, tandem axle, and gross weight tables.

Maximum Allowable Weight for Any Vehicle, Group of Axles, and Combination of Vehicles

Determined by whichever of the following two methods produces lower weight:

1. The sum of the weights that are legally allowed on single axles, tandem axles, or groups of axles, **OR**
2. Weight limits outlined in the following tables from ORS 818.010, with only two exceptions:

Exception A: Two consecutive sets of tandem axles spaced 30 feet or more apart may have a gross weight of 34,000 pounds each and operate without a permit on all non-interstate highways. A permit is required for operations on interstate highways, unless the spacing is 36 feet or greater.

Exception B: Four axles consisting of a set of tandem axles and two axles spaced nine feet or more apart may have a gross weight of 70,000 pounds if the distance between the first and fourth axle is 35 feet or more. A permit is required for operations on interstate highways.

Chart 2

Maximum Weight Limits in Pounds

Distance in feet between first and last axle in group of axles:	2 axles	3 axles
4	34,000	
5	34,000	
6	34,000	
7	34,000	
8 and less	34,000	34,000

Maximum Weight Limits in Pounds (continued)

Distance in feet between first and last axle in group of axles:	2 axles	3 axles	4 axles	5 axles	6 axles	7 or more axles
more than 8	38,000	42,000				
9	39,000	42,500				
10	40,000	43,500				
11	40,000	44,000				
12	40,000	45,000	50,000			
13	40,000	45,500	50,500			
14	40,000	46,500	51,500			
15	40,000	47,000	52,000			
16	40,000	48,000	52,500	58,000		
17	40,000	48,500	53,500	58,500		
18	40,000	49,500	54,000	59,000		
19	40,000	50,000	54,500	60,000		
20	40,000	51,000	55,500	60,500	66,000	
21	40,000	51,500	56,000	61,000	66,500	
22	40,000	52,500	56,500	61,500	67,000	
23	40,000	53,000	57,500	62,500	68,000	
24	40,000	54,000	58,000	63,000	68,500	74,000
25	40,000	54,500	58,500	63,500	69,000	74,500
26	40,000	55,500	59,500	64,000	69,500	75,000
27	40,000	56,000	60,000	65,000	70,000	75,500
28	40,000	57,000	60,500	65,500	71,000	76,500
29	40,000	57,500	61,500	66,000	71,500	77,000
30	40,000	58,500	62,000	66,500	72,000	77,500
31	40,000	59,000	62,500	67,500	72,500	78,000
32	40,000	60,000	63,500	68,000	73,000	78,500
33	40,000	60,000	64,000	68,500	74,000	79,000
34	40,000	60,000	64,500	69,000	74,500	80,000
35	40,000	60,000	65,500	70,000	75,000	80,000
36	40,000	60,000	66,000	70,500	75,500	80,000
37	40,000	60,000	66,500	71,000	76,000	80,000
38	40,000	60,000	67,500	71,500	77,000	80,000
39	40,000	60,000	68,000	72,500	77,500	80,000
40	40,000	60,000	68,500	73,000	78,000	80,000
41	40,000	60,000	69,500	73,500	78,500	80,000
42	40,000	60,000	70,000	74,000	79,000	80,000
43	40,000	60,000	70,500	75,000	80,000	80,000
44	40,000	60,000	71,500	75,500	80,000	80,000
45	40,000	60,000	72,000	76,000	80,000	80,000
46	40,000	60,000	72,500	76,500	80,000	80,000
47	40,000	60,000	73,500	77,500	80,000	80,000
48	40,000	60,000	74,000	78,000	80,000	80,000
49	40,000	60,000	74,500	78,500	80,000	80,000
50	40,000	60,000	75,500	79,000	80,000	80,000
51	40,000	60,000	76,000	80,000	80,000	80,000
52	40,000	60,000	76,500	80,000	80,000	80,000
53	40,000	60,000	77,500	80,000	80,000	80,000
54	40,000	60,000	78,000	80,000	80,000	80,000
55	40,000	60,000	78,500	80,000	80,000	80,000
56	40,000	60,000	79,500	80,000	80,000	80,000
57 or over	40,000	60,000	80,000	80,000	80,000	80,000

Foundation Engineering, Inc.
Professional Geotechnical Services

Exhibit C

Date: March 4, 2014

To: Joe Richards, P.E.
City of Portland
Bureau of Environmental Services

From: Timothy J. Pfeiffer, P.E., G.E.
Mitchell F. Schaub, P.E., G.E.

Subject: Pavement Evaluation SE 73rd Avenue

Project: Luther Road Habitat Restoration Project
FEI Project No. 214-2-007

Foundation Engineering, Inc. (FEI) has completed an evaluation of the potential impact of proposed construction traffic on the SE 73rd Avenue pavement section. The pavement evaluation consisted of an office study to estimate the performance of the existing pavement section with the planned construction traffic.

BACKGROUND INFORMATION

The City of Portland, Bureau of Environmental Services (BES), plans to use SE 73rd Avenue as a haul road for construction of the Luther Road Habitat Restoration Project, located in Clackamas County. Construction traffic will access the project site from SE Luther Road via ±800 feet of SE 73rd Avenue, which is privately owned.

FEI was retained by BES to provide the pavement evaluation. Our scope of work was described in an Engineering Services Work Order for Flexible Service Contractors executed on Feb 25, 2014, and included the following:

- Review existing project information including pavement construction, as-builts, utility construction, available maps and reports.
- Evaluate planned construction traffic loading and estimate 18 kip equivalent single axle loads (ESAL) for pavement evaluation.
- Estimate pavement design parameters for existing pavement section and subgrade.
- Check existing pavement section structural number with proposed traffic loading.
- Provide an estimate of the pavement performance and recommendation for mitigation or repair of the pavement wear

EXISTING PAVEMENT SECTION

We understand the pavement section of SE 73rd Avenue was constructed in ±2004 and consists of a 4-inch layer of Asphaltic Concrete (AC) underlain by an 8-inch layer of reclaimed base (AC and base rock) with a 5% (by weight) cement additive. The

reclaimed base was derived on-site by the excavation of an existing AC and base layer of silty gravel, mixed with dry cement and water, and compacted in-place.

A geotechnical report for the Luther Road Habitat Site by Ash Creek Associates dated January 27, 2010 shows test pits TP-9, TP-12 and TP-13 consist of silty sand (fill) with some gravel and cobble at depths of ±0 to 3 feet. This appears consistent with photographs of utility construction on SE 73rd Avenue indicating a ±12-inch thick pavement section underlain by what appears to be soil consisting of sand or silt with gravel.

FEI performed a reconnaissance of the site and observed the condition of the AC to consist of two isolated pavement depressions in front of the residence at 8900 SE 73rd Avenue. These depressions were ±8-inches in diameter and ± ¼ inch deep. No other surface cracking or pavement distress was observed. We also observed a ± 75-foot long section of the roadway AC that appeared to be a patch. It is located ±100 feet north of the residence at 8900 SE 73rd Avenue.

Based on FEI's review of the project documents and our experience, the following pavement and subgrade design parameters were selected using AASHTO Design of Pavement Structures (AASHTO 1993) and ODOT Pavement Design Guide (ODOT 2011).

- reliability of 85%
- overall standard deviation of 0.49
- initial serviceability of 3.5
- terminal serviceability of 2.0
- soil subgrade resilient modulus (M_R) of 3,000 psi
- AC layer coefficient of 0.3
- AC drainage coefficient of 1.0
- reclaimed base layer coefficient of 0.2
- reclaimed base layer drainage coefficient of 0.8

CONSTRUCTION TRAFFIC

We understand project construction will require the import of 6,050 cubic yards of rock and the export of 38,050 cubic yards of soil. To carry these materials, we have assumed the construction traffic on SE 73rd Avenue will consist of a conventional dump truck and trailer with 5 axles. These typically consist of a dump truck with a single front axle (2 tires) and a rear tandem axle (8 tires) pulling a trailer with two single axles (4 tires each axle). Based on a volume capacity of 15 cubic yards per truck and trailer (full), we estimate ±3,000 truck and trailer trips will be required.

To evaluate the impact of the construction truck traffic on the existing pavement, we estimated a dump truck 18 kip Equivalent Single Axle Loads (ESALS) using the following maximum axle weights from ORS 818.01 Chart 1 Truck Weight Limits provided as Exhibit B by BES. Load equivalency factors (LEF) were also selected using Tables D.1 and D.2 from AASHTO (1993).

- 14.4 kips for dump truck single front axle and LEF of .334 (full), and 7.2 kips and LEF of 0.036 (empty).
- 34 kips for dump truck tandem rear axle and LEF of 1.07 (full) and 17 kips and LEF of 0.124 (empty).
- 20 kips for front and rear trailer axle and LEF of 1.59 (full) and 10 kips and LEF of 0.09 (empty).

Using these values, we estimated a truck traffic load of ±15,000 ESALS during construction.

PAVEMENT EVALUATION

Evaluation of the performance of existing pavement section was completed by comparing the structural number of the existing pavement section to the required structural number for the construction traffic. The calculations were based on pavement design guidelines in AASHTO (1993) and the ODOT (2011).

The structural number (S_N) for the existing pavement section was calculated using the base layer coefficients and drainage coefficients of the AC and reclaimed base layer, and a thickness of 4 inches of AC and 8 inches of reclaimed base layer. We calculated a S_N value of 2.48 for the existing pavement section.

Using the truck traffic ESALS and design parameters including reliability, overall standard deviation, initial and terminal serviceability, and soil subgrade M_R, we calculated a structural number of 2.42 for the construction traffic.

Comparison of the structural numbers indicate the existing pavement section has a structural number that is slightly greater than the structural number of the estimated construction traffic. Therefore, the existing pavement section should be able to support the anticipated construction traffic and not completely fail or require full depth (AC and base layer) reconstruction. Following construction, however, we anticipate the pavement section will be at or near its estimated terminal serviceability value. Terminal serviceability can be considered as the level of pavement wear that may trigger maintenance in order to extend its design life.

Following construction, we anticipate the pavement will show noticeable signs of wear and potentially include some minor to moderate pavement rutting and cracking. However, due to potential variations in traffic and existing pavment section, limited areas of deep rutting and extensive cracking may require full depth repair.

DISCUSSION OF FINDINGS

Based on the limited data available, a potential worst case scenario for the pavement condition on SE 73rd Avenue following construction would include extensive areas requiring full depth reconstruction. The potential best case scenario would be a pavement condition limited to moderate wear and minor AC cracking. For planning and budgeting purposes, we recommend assuming an overlay will be required and ±10% of the pavement area will require full depth repair. In areas of existing curbs, driveways and streets, grinding and inlay will be needed for the overlay to match grades.

LIMITATIONS

The assumed pavement design parameters, calculations, conclusions, and recommendations contained herein are based on information provided by discussions with BES and review of project related documents as described herein. No pavement investigation was performed. The findings should be considered estimates due to the inherent variability with the existing pavement and soil conditions. We will assume no responsibility or liability for any engineering judgment, inspection, or testing performed by others.

This memorandum was prepared for the exclusive use of the City of Portland Bureau of Environmental Services for the Luther Road Habitat Restoration Project in Clackamas County, Oregon. Information contained herein should not be used for other sites or for unanticipated construction without our written consent. This report is intended as an opinion regarding estimated pavement wear and repair on SE 73rd Avenue following truck traffic construction. Contractors using this information to estimate construction quantities or costs do so at their own risk. Our services do not include any survey or assessment of potential surface contamination or contamination of the soil or ground water by hazardous or toxic materials. We assume those services, if needed, have been completed by others.

Please contact us any questions or comments. We appreciate the opportunity to assist you with this project.

Exhibit D

Foundation Engineering, Inc.
Professional Geotechnical Services

Memorandum

Date: April 17, 2015

To: Joe Richards, P.E.
City of Portland, Bureau of Environmental Services

From: Mitchell F. Schaub, P.E., G.E.

Subject: Geotechnical Services

Project: SE 73rd Avenue Pavement Evaluation
Luther Road Habitat Restoration Project
Foundation Engineering Project Number 2142007 Phase 201
City of Portland Work Center Code and Project No. E06947.D14

At your request, Foundation Engineering has completed geotechnical services including a post-construction reconnaissance of SE 73rd Avenue, in Clackamas County, Oregon. Foundation Engineering visited the site on April 9, 2015 to provide consultation with City of Portland personnel and document the overall pavement condition.

PROJECT DESCRIPTION

The City of Portland, Bureau of Environmental Services (BES) used SE 73rd Avenue as a haul road for the Luther Road Habitat Restoration Project. Construction traffic accessed the project site from SE Luther Road via ±400 feet of SE 73rd Avenue. SE 73rd Avenue is privately owned, and we understand BES was granted permission to use the private drive in return to restoring the roadway to a pre-construction condition following project completion.

Foundation Engineering previously completed an office study evaluation of the pavement on SE 73rd Avenue. Our scope included a reconnaissance of the pavement and an analysis and evaluation of the impact of the planned construction traffic on the SE 73rd Avenue pavement. Our findings were submitted in a memorandum dated March 4, 2014 and included estimates for post-construction pavement restoration consisting of a grind and overlay and up to ±10% complete pavement reconstruction.

SITE OBSERVATIONS

We observed the pavement condition on SE 73rd Avenue from SE Luther Road ±400 feet south to the entrance to the project site. Severe cracking and some pavement deflection was observed in a ±3 by 5-foot area near the edge of the roadway at the site entrance. Minor to moderate asphaltic concrete (A.C.) stripping was observed on the west and east sides of the roadway near the anticipated location of construction traffic wheel loads. Some very minor pavement cracking was also observed at the intersection with SE Luther Road at the locations of truck traffic wheel loads.

Outside of the area mentioned above, we did not observe severe cracking consistent with pavement failure. Minor to severe deflections and rutting of the pavement surface were not observed. From a comparison with our pre-construction observations, the post-construction condition of the pavement appeared to show some additional A.C. stripping and one isolated area of failure, but otherwise no other impacts. Photographs of the pavement condition pre and post-construction are attached.

DISCUSSION

Our previous analysis indicated the existing pavement would support the planned construction traffic. However, wheel loading from the planned construction traffic would result in the pavement nearing its terminal serviceability. The terminal serviceability limit of pavements can be considered as the condition of pavement wear that requires maintenance to extend its design life.

Therefore, to restore the design life, we recommend a grind and overlay from the project site, north to SE Luther Road, and reconstruction of the failed pavement area observed at the project entrance. Based on our observations that most of the impact of construction traffic was isolated to A.C. stripping, it is our opinion that a grind and ± 2 inch overlay will substantially restore the pavement to the pre-construction service life.

We thank you for the opportunity to assist you with this project. Please contact us if you have any questions or comments, or if we can assist you on other projects.

Attachments:

Pre and Post-construction Pavement Photos, Figure 1

Photo 1: Pre-construction condition of SE 73rd Avenue on March 2, 2014.

Photo 2: Post-construction condition of 73rd Avenue on April 9, 2015.

Exhibit 2

S-2 CONTRACTORS, INC

PROPOSAL

ORE.CCB# 67253

TO: **BRUCE ANKARBERG** PHONE:
FAX:

ATT: **DAME** PROJECT: **DRIVEWAY PAVING**

DATE: LOCATION: **8970 SE 73RD**

We hereby submit a proposal for the specified project. The work shall be done in accordance with the specifications with the type of work quoted and or as noted in the proposal below. We shall provide all labor, equipment and materials required for the items quoted and or as noted below. We propose the following:

	COST BREAKDOWN	
1	**MOB**	**EACH** **$1,500.00**
	GRIND AND SWEEP	
2	**GRIND, SWEEP, AND TACK PRIOR TO INLAY. PRICE INCLUDES TRUCKING TO HAUL AWAY GRINDINGS, AND GRINDING AROUND UTILITIES WITH SMALL GRINDER. TOTAL SQ. FT. 20,250**	**APPROX. COST PER S.F.** **$0.45** **($9,112.50)**
	PAVING	
3	**PAVE 2" INLAY APPROX. 20,250 SQ. FT.**	**APPROX. COST PER S.F.** **$1.09** **($22,072.50)**
	TRAFFIC CONTROL	**APPROX. LUMP SUM**
4	**FLAGGERS AND SIGNAGE**	**$ 849.00**
	TOTAL	**$33,534.00**

3. BID BASED ON SIGNING A MUTUALLY ACCEPTABLE CONTRACT AGREEMENT.

PAYMENT TO BE MADE AS FOLLOWS:

1. With estimated quantities and unit prices quotes; the final billing will be based on completed quantities times the unit price for the item.
2. Payment in full shall be made within 30 days of completion of our work on the project.
3. Finance charge of 1.5% per month will be assessed on any unpaid balance.

NOTE: This proposal may not be valid if not accepted within 30 days.

ACCEPTANCE OF PROPOSAL:

The prices, specifications and conditions are satisfactory, and are hereby accepted. You are authorized to do the work specified. Payment will be made as outlined above.

Authorized Signature: _____ Date: _____

6860 S Anderson Rd. Canby, Or 97002 phone: 503-651-4000 fax: 503-651-4004
Dave Short Mob 503- 849-2486