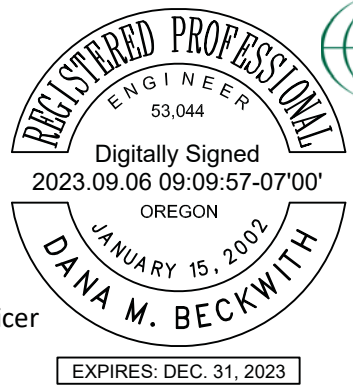

GLOBAL Transportation Engineering

MEMORANDUM

Date: September 6, 2023

To: Mr. Alan Rappleyea, Multnomah County Hearings Officer

From: Dana Beckwith, PE, PTOE

Re: **Second Open Record Period - Response to Select Testimony from Land Use Review Process for the Filtration Facility and Pipelines** **P18-035**

This memorandum responds to a selection of Multnomah County land use review public comments received in the first open record period that address the potential for transportation impacts from the project. Global Transportation Engineering has previously provided two reports: "Portland Water Bureau Bull Run Filtration Project Traffic Impact Analysis" dated September 2, 2022 (the "**Project TIA**"), which was included in the land use record as staff Exhibit A.31, and "Bull Run Filtration Facility – Construction Traffic Impact Analysis" dated June 2, 2023 (the "**Construction TIA**"), which was included in the land use record as staff Exhibit A.230. Global Transportation has also provided a response to select testimony: Response to Select Testimony from Dana Beckwith, Global Transportation Engineering on Transportation Impacts", as staff Exhibit I.84 dated August 7, 2023. This memorandum builds on the Project TIA, Construction TIA, and Exhibit I.84 and uses defined terms and other concepts from those reports.

The responses below are intended to broadly address the themes and concepts in this selection of public comments. For that reason, these responses are likely to also be applicable to other public comments now in the record or that are placed in the record after the date of this response.

Exhibit I.7: Citizens for Peaceful Rural Living (Video)

This video raises several transportation-related concerns. Most of these concerns are reiterated in Exhibit I.7a. Others have been addressed previously under Exhibit I.84. The following summarizes the identified concerns from the video and responses that have already been provided:

- Children's Safety – Exhibit I.7a; Exhibit I.84, page 25. In addition, as described in the response to Exhibit I.12 described below, PWB is proposing a condition of approval that requires PWB to instruct identified construction drivers to avoid specific road segments that have direct access to schools within 5 miles of the filtration facility site during identified times. The condition is a school-by-school approach based upon school-specific factors and timing needs that is both feasible and addresses safety concerns raised by project opponents for specific schools.
- Safety of Roadways – Exhibit I.7a; Exhibit I.84, pages 20, 22, 25, 27, and 28.
- Traffic and Truck volumes during construction – Exhibit I.84, pages 5, 15 and 20.
- Traffic and Truck volumes during on-going operations – Exhibit I.84, pages 5, 15 and 20.

Exhibit I.7a: Brent Leathers

I.7a Comment Summary

R&H Nursery operations will be impacted by construction traffic and create a change in farm practices.

Response to Comment: The Portland Water Bureau (PWB) has agreed to provide temporary traffic control measures along Carpenter Lane to facilitate heavy loading dock activity at the R&H Nursery.

The Water Bureau will include in the project's Traffic Control Plan a requirement that accommodation be made to ensure driveway access to R&H's loading dock and nursery plant holding area is not unreasonably delayed. That traffic control accommodation can be in the form of stop control or a flagger or other measures that would create a gap in traffic to allow R&H nursery traffic to exit the site. The analysis of this issue and the proposed solution is discussed in detail in Exhibit I.80 (Globalwise's First Open Record Period Response), pages 37-39.

I.7a Comment Summary
The applied use will create hazardous conditions, especially for pedestrians and bicyclists and motorists on Carpenter Lane. The proposed improvements will allow faster speeds and more two-way traffic will not create better conditions.

Response to Comment: As discussed in previous reports, PWB will widen and improve Carpenter Lane east of Cottrell Road to accommodate the expected two-lane traffic. For example, see Exhibit I.84, pages 15-16. As required, the road improvement will be consistent with Multnomah County standards for the roadway classification. Speed limits will be posted, and PWB will conduct safety meetings with the drivers of vehicles entering and exiting the site to emphasize maintaining speed limits. Other traffic calming measures that could be used if speed becomes a concern are driver feedback radar speed signs, speed humps, or transverse rumble strips.

To accommodate safe pedestrian and bicycle travel during construction of the filtration facility, PWB will pave a pedestrian route on Carpenter Lane east of Cottrell Road to provide an ADA-compliant surface outside of the vehicle travel lanes. A paved and delineated pedestrian route will be provided for the construction period with pedestrian channelization devices when adjacent to the driving lanes (typical options are depicted in the photos below) with openings for property access. The paved pedestrian route will be installed prior to beginning off-hauling of excavated materials from the filtration facility site, which is when significant truck traffic for the construction will begin. After the temporary certificate of occupancy for the filtration facility is issued, the paved area will be removed and returned to County standards.

Pedestrian Channelization Devices

I.7a Comment Summary
The estimate of daily truck trips and number of off-site pipeline/street disruptions has expanded from the original estimates. With the Clackamas County decision to deny construction traffic from entering Bluff Road, all construction traffic will enter the site via Carpenter Lane.

Response to Comment: The changes in Truck traffic due to the Bluff Road Access (Access B) being closed has been reviewed and summarized in Exhibit I.86 "Water Filtration Facility Carpenter Lane One-Access Analysis Update to Construction TIA submitted on August 7, 2023.

I.7a Comment Summary
The video provided as part of Exhibit I.7a provides representation of the narrow roadways and turns adjacent to the site at Carpenter Lane/Cottrell Road and Cottrell Road/Dodge Park Boulevard.

Response to Comment: The improvements to the mentioned intersections were addressed previously on pages 15-16 of Exhibit I.84. Additionally, see the response to other testimony from Mr. Leathers below (Exhibit I.56) regarding turning movements at Carpenter Lane/Cottrell Road and Cottrell Road/Dodge Park Boulevard.

Exhibit I.8: Holly Martin

I.8 Comment
"The project will create a traffic choke point for us, as Lusted is our main route west. The years of construction disruption should be considered, not just the finished operations of the plant, as smaller farming operations with narrower margins may not survive the increased difficulties of attracting customers, getting employees to work on time and getting product to market through the disruptions, which are projected to last years."

Response to Comment: A Construction TIA dated June 2, 2023, was provided addressing construction traffic impacts (at Exhibit A.230). Exhibit I.86 further supplements the Construction TIA to address the One-Access Analysis The four intersections studied on Lusted Road (13, 14, 3, and 4), even at peak construction conditions, continue to operate well within county level of service requirements, with no more than 17.6 seconds of delay with Transportation Demand Management practices in place. Table 8, Exhibit A.230.

Additional responses to testimony from specific farm operations is included in the record at Exhibit I.84 as well as in an additional memorandum from Mr. Prenguber submitted in the second open record period.

Exhibit I.10: Multnomah Rural Fire Protection District #10 Supplemental Testimony

I.10 Comment
"'Transportation Planning Proposed Condition 5'. This section proposes amendments to proposed conditions that RFPD10 has not responded to in previous testimony but wishes to do so now. Construction impacts are not limited to only those areas where pipeline construction is proposed but must include

maintenance and restoration obligations on all County roads that will experience damage as a result of PWB construction activities. The listed road segments are insufficient to address the full impact area of the hundreds of thousands of heavy truck trips that would be required if the proposed projects were granted approval. RFPD10 has previously detailed concerns regarding the impact of heavy truck traffic on rural roads that are not intended by design or policy to be used for this purpose thereby creating hazardous conditions that cannot be remediated. It is evident in the proposed condition that both the County Transportation Division and the Applicant are blatantly ignoring the obvious fact that the proposed heavy truck traffic will have to travel on additional segments of these same rural roads and cause the same damage and hazards to arrive at or upon leaving the proposed project areas. Consequently, the condition, as written, is inadequate and fails to meet the hazardous conditions criterion."

Response to Comment: PWB is not ignoring the fact that Truck traffic will travel beyond the study area. Instead, PWB has worked with County Transportation to define the limits of where significant impacts to the transportation system could be possible. These limits were validated by the Construction TIA, showing that there are no intersections of concern in the study area with Transportation Demand Management measures in place. Moreover, PWB is providing improvements within that area to address mitigation.

The study area is defined by the project and reviewed and approved by the County. The County followed the process commonly used by local municipalities to develop study areas. The methodology accounts for the fact that the further from the project vehicles travel, the more dispersed project related traffic becomes, lessening the impacts on the traffic network outside of the study area. Through coordination and discussion with the County and considering study intersections defined by the project, intersections of relevance in the County TSP, and locations further requested to be added to the study by the County, the current study area was defined and approved.

Further, it is not the case that the roads the construction Trucks will be traveling on (the haul routes) were not intended by design or policy to be used for heavy truck traffic. The County's Transportation System Plan specifically classifies those roadways identified for haul routes in the Construction TIA as freight routes, able to accommodate heavy vehicles. The exception is Carpenter Lane – which PWB is required to use as an access by the County's Road Rules, which require access to be taken from the lowest classification street. Carpenter lane will be widened and upgraded to accommodate construction traffic and will be consistent with Multnomah County Standards.

In addition, as previously addressed on page 4 of Exhibit I.84, PWB will be replacing and maintaining roadways along haul routes for construction Trucks, along detour routes, and along pipeline installation routes within the study area, resulting in safer roads without potholes and deterioration.

I.10 Comment

"Reference pgs. 4,5,6 'Transportation Planning Proposed Condition 6' In this section, Applicant proposes to perform 'full depth reclamation' (i.e. complete rebuild) of 4 road segments (approximately 1.6 miles) prior to use as ' a primary or detour through truck haul route.' Then an additional 2.6 +/- miles of rural roads are proposed to be re-built after the lengthy disruption caused by pipeline construction. While the District recognizes the current substandard condition of the rural roads, the Applicant's proposal only makes the hazardous conditions created by their proposed project components worse. Applicant's 'fix-it

first' proposal creates additional heavy truck traffic, road closures, detours, delays and concentrations of displaced traffic onto other substandard rural roads. Consequently, hazardous conditions are exacerbated rather than remediated or even partially mitigated."

Response to Comment: The applicant's fix-it-first approach repairs roadways in advance of the Project construction activity that will increase the level of traffic along those roads. As RFPD10 has previously pointed out, the identified roadway surfaces are currently below county standards. Therefore, the roadway surfaces are in need of repair independent of this project and the repair must occur at some point – whether or not the project occurs. The resulting road closures, detours, and delays that RFPD10 points to are an inherent and temporary result of normal road repair work. When pavement is being replaced or repaired, alternative routes with minimum out-of-direction travel will be used. Emergency vehicles will be accommodated and prioritized throughout the work zones.

Road construction will follow industry accepted safety practices and standards. These include those required by Multnomah County and Federally developed practices such as the Manual on Uniform Traffic Control Devices. These accepted standards are in place to improve the safety of work sites and for the public that may live, work, or drive in the area. This fix-it-first approach does not exacerbate what the RFPD10 would experience under normal roadway maintenance conditions and all emergency responders will be coordinated with for all construction activities.

I.10 Comment
"Applicant goes on to propose a definition of a "primary or detour through truck haul route" to mean a route "used for more than 2 months duration..... A 2-month period reflects the time period in which there is potential for material degradation of the road surface." Applicant provides no evidence to support this claim. Degradation of surface is related to intensity of use not duration. For example, a substandard rural road that sees 100 heavy truck trips per day for 60 days (i.e. 6,000 trips) will suffer considerably more surface damage than the same road surface with 10 heavy truck trips per day for 60 days (i.e. 600 trips) Applicant concludes this section by claiming: "applicant believes that staff's goal to ensure that the transportation network maintains a condition that is safe, does not create a safety hazard for the traveling public, nor creates an on-going maintenance problem" is met."

Response to Comment: PWB is recommending a modification to the condition that removes the reference to a 2-month period as a mechanism for measuring the point at which the level of impact to the roadway is sufficient to require improvement. Because this line drawing is difficult to do, a revised condition of approval is proposed that more simply states that roadways used for primary or detour routes will be maintained in a serviceable condition while being used and returned to as good or better condition (PCI) after use:

Proposed Revised Transportation Planning Condition 6:

To ensure that the transportation network maintains a condition that is safe, does not create a safety hazard for the traveling public, nor creates an on-going maintenance problem, for the roads used as a primary or detour through truck haul route with a Pavement Condition Index (PCI) rating below 50, the applicant is required to enter into a Project Agreement pursuant to MCRR 9.500, that requires the applicant to perform the following work at the following times:

a. *For SE Hosner Rd from SE Lusted Rd to SE Oxbow Dr: Full depth reclamation, or other approved pavement replacement methods, prior to use as primary or detour through truck haul route.*

b. *For SE Altman Rd from Multnomah County Line to SE Lusted Rd: Full depth reclamation, or other approved pavement replacement methods, prior to use as primary or detour through truck haul route.*

c. *For SE Lusted Rd from SE Cottrell Rd to SE Hosner Rd: Full depth reclamation, or other approved pavement replacement methods, prior to use as primary or detour through truck haul route.*

d. *For SE Lusted Rd from the Beaver Creek culvert to SE Hosner: Full depth reclamation, or other approved pavement replacement methods, prior to use as primary or detour through truck haul route.*

e. *For SE Lusted Rd from SE Altman to the Beaver Creek culvert: At any time when using as a primary or detour through truck haul route, maintain in a serviceable condition. After completion of installation of pipelines in this section of road, replace roadway surface.*

f. *For SE Altman from SE Lusted Road to SE Oxbow Drive: At any time when using as a primary or detour through truck haul route, maintain in a serviceable condition. After completion of installation of pipelines in this section of road, replace roadway surface.*

g. *For SE Cottrell Rd from SE Lusted Road to SE Dodge Park Blvd: At any time when using as a primary or detour through truck haul route, maintain in a serviceable condition. After completion of installation of pipelines in this section of road, replace roadway surface.*

h. *For SE Dodge Park Blvd. from east of SE Cottrell Rd to west of SE Altman Rd (where pipeline work will occur): At any time when using as a primary or detour through truck haul route, maintain in a serviceable condition. After completion of installation of pipelines in this section of road, replace roadway surface.*

i. *If not already accomplished through the work described in a. - h. above, for any roads used as a primary or detour through truck haul route, the*

applicant will: (a) maintain the route in a serviceable condition at any time when being used as a primary or detour through truck haul route; and (b) at the end of applicant's use of the route, return the road used as a primary or detour through truck haul route to as good or better condition (PCI) than it was in on the date of the County's most recent PCI score prior to the applicant's use.

A "primary or detour through truck haul route" is one identified in the Construction TIA in Exhibit A.230 as modified by the One-Access Analysis in Exhibit I.84, and any additional truck route incidentally used by the project within the study area, which incidental use must follow county designated freight routes. However, a "primary or detour through truck haul route" is not one that is being used to directly access a construction site, such as when pipelines are being installed in Lusted and Altman Roads or for improvements to the roadway itself.

"Serviceable condition" means the roadway is safely usable for the purpose for which it was constructed (i.e., potholes and excessive rutting are repaired timely, striping can be seen, etc.).

The proposed condition of approval expands on the previous proposal in H.3 and is more than adequate to keep the roadway conditions safe during use for construction traffic.

I.10 Comment
"Hazardous conditions will be created on rural roads during the extended construction period related to hundreds of thousands heavy truck trips, hundreds of thousands of work force trips, extended road closures, detours, traffic delays and then subsequently by the transport of approximately 1,000 deliveries of hazardous materials and haul off of many hundreds of loads of sludge every year, all of which jeopardize the health and safety of rural motorists, farm equipment operators, farm workers, pedestrians, bicyclists, equestrians, and first responders. The Applicant's assertion that fixing some roads first or repairing some later eliminates safety hazards for the traveling public is misguided, lacks any supporting evidence and will actually exacerbate hazardous conditions.

The Applicant has failed to meet their burden. The Hazardous Conditions criterion is not met."

Response to Comment: Replacing the road surfaces and bringing roadway surfaces up to serviceable condition before use eliminates potential hazards created by substandard pavement conditions such as potholes, excessive rutting, and others. It also improves response times for emergency vehicles over the current condition before the project starts construction.

Following standard practices for the control and demarcation of construction detours and work zones, providing safety materials and topics to workers and material providers, and providing online documentation of current construction work zones and activities all support improving the safety of the transportation system.

I.10 Comment
"We are aware that a variety of testimony has already been submitted by others that challenges Applicant's assertions related to robust outreach that 'minimize' impacts. However, RFPD10 would like to point out that, to date, there has been no specific plan presented by the Applicant that provides any assurance that Emergency Response apparatus/staff will have un-delayed passage through the many construction zones their proposed project will create. We cannot over-emphasize the importance of every second and minute where someone's life or loss of one's home hangs in the balance.

"RFPD10's previous testimony (December 2022) noted that our response times are already affected by the size of our primary service area (14 sq. mi.)

"Consider this scenario: Dodge Park Blvd. is closed for pipeline installation. More than one lane is impassable because there's a 15' to 20' wide trench excavated to depth of 15' on average. Next to this trench is a large semi-truck with 40' segments of 72" steel pipes that are in the process of being off-loaded and lowered into the trench. Emergency Response vehicle approaches..... How long will it take to clear a lane? Any amount of time is too long! In this rural setting, detouring to another route is not a viable option. We don't have city blocks. An alternate route may be a mile or more away.

Response to Comment: By contract, the contractor is required to prioritize emergency response access through all work zones and to allow emergency responders access through otherwise closed-to-through-traffic work zones. This is common practice on roadway construction projects. PWB's contractors are very familiar with these standard requirements and how to apply them. While it is not possible to predict when an emergency occurs, the contractors will take measures to ensure they can accommodate emergency vehicles through a work zone regardless of the stage of construction. For example, if a pipeline obstructs a cross street, the contractor will have on-hand the materials needed to plate the excavation. PWB's contractors will prepare emergency coordination plans so that the contractors and emergency responders are prepared to facilitate emergency vehicle access without delay. PWB's fire expert, David Stacey of Performance Based Fire Protection Engineering, provides more information on the elements to be included in these plans in his *Responses to Submitted Additional Testimony* document submitted concurrently with this memorandum.

In addition, see Exhibit I.75, pages 4-5, for additional information on accommodating emergency vehicles. As explained in Exhibit I.75, page 5, the construction specifications require the contractor to "**allow emergency vehicles,** incident response units, and transit vehicles **immediate passage at all times,** maintain 24-hour access to all businesses and residences adjacent to the areas of work for the project and along haul routes, do not block driveways or sidewalks, and maintain safe pedestrian accesses."

I.10 Comment
"Additionally, our review of the proposed raw and finished water pipelines revealed at least 6 (possibly 7) different locations where proposed pipelines will cross rural roads thereby making them completely impassable. Applicant provides no information regarding how long these roads will remain impassable for these full road crossings. Included are:

- *Lusted Rd. (Raw water)*
- *Cottrell Rd. (Finished water)*
- *Dodge Pk. Blvd. (Finished water)*

- *Lusted Rd. (Finished water)*
- *Altman Rd. (Finished water)*
- *Pipeline Rd. (Finished water)*
- *Oxbow Dr.(possible)(Finished water)*

….

'Minimizing' or 'limiting as much as possible' disruptions to this access is unacceptable and represents an indisputable hazardous condition that cannot be addressed with a condition that might be attached to an approval of this application."

Response to Comment: As discussed above, emergency response vehicles will be provided priority access through all work zones during the construction period. The roads identified in the comment will not be impassable for emergency vehicles. Additionally, PWB is committing to preparing an emergency coordination plan with County Transportation and emergency responders to ensure that emergency responders are informed of construction locations, activities, and traffic control plans on a weekly basis and have contact information for the construction crews.

See Exhibit I.75, pages 4-5, for additional information on accommodating emergency vehicles.

I.10 Comment
"This document [Transportation Demand Management Plan] is inadequate for the following reasons:"

Response to Comment: An updated TDMP is being provided into the record concurrently with this memorandum that incorporates changes in response to these and other concerns in the record. The sections that follow address each point and how the updated TDMP has responded to this concern.

- *"It is focused solely on peak hour traffic."*

Response to Comment: The TDMP appropriately focuses on the peak hours as that is when the impact on the transportation system is at its greatest. Furthermore, key measures to be implemented (vanpooling, shift offsetting, and busing) will reduce the total number of trips during the peak hours and throughout the day – because many workers will be coming by van or bus rather than in single occupancy vehicles.

- *"It is reactive as opposed to proactive (i.e., requires traffic to exceed so-called 'peak hour' maximums before remedies implemented.)"*

Response to Comment: The revised TDMP is proactive. It requires monitoring monthly, yearly forecasting, and a more detailed two week look ahead to be provided to the County with predictions of when trip volumes at the Carpenter Lane access will trigger the need for TDM measures. If total peak hour trips are forecast to exceed 75% of the of the peak hour vehicle operational capacity, TDM measures will be implemented. This is a proactive approach to managing traffic and requires the contractor to implement specific measures prior to the actual need arising.

- *"The primary measure relied upon is the direction of "commuter traffic" to "the Bluff Road access. NOTE: Clackamas County has denied the use of Bluff Road for ALL construction access. PWB did not appeal this decision thereby undercutting all the measures proposed in this plan."*

Response to Comment: The revised TDMP acknowledges and accounts for the single access from Carpenter Lane. Page 1. A supplemental evaluation identifying the impacts of only having the Carpenter Lane access was also submitted as Exhibit I.86.

- *"Lacks details about proposed shuttles, incentives, staggered start times etc. Instead, these details are left to some vague future time which suggests the plans required for implementation would only be developed after a problem is identified thereby adding time to a potential solution that may have already existed for 2 or more weeks (proposed report frequency)."*

Response to Comment: The revised TDMP provides the requested details for each TDM strategy. The TDMP includes details related to vanpooling for construction crews using contractor provided commuter vans for groups of workers. The TDMP also provides timing details for off-set shifts to spread arrival and departure times. Further, the TDMP provides details for the off-site parking and shuttle strategy. Site selection parameters are included to ensure that the parking area location will not contribute to additional vehicles near the project study area. Finally, the revised TDMP includes continued monitoring and reporting requirements, which now require the contractor to provide both monthly and yearly forecasts to anticipate when TDM measures will be needed based on the project's resource-loaded schedule.[1]

- *"Lacks any evidence to support the conclusion that the proposed measures will actually achieve the stated objective."*

Response to Comment: The revised TDMP provides multiple strategies to reduce vehicle volume that can be implemented individually or in combinations. Based on data from the contractor's implementation of these same strategies on similar projects, the revised TDMP identifies the applicable reduction in peak hour commuter vehicle volume that can be anticipated from each. In my experience, these methods have also been proven to be effective methods of controlling traffic volumes. And regardless of whether estimates of reductions from vanpooling and shift-offsetting are accurate, PWB is prepared to implement off-site parking and busing at whatever level is needed to ensure the capacity threshold of Carpenter Lane is not exceeded.

- *"Provides no rationale for the proposed termination of the TDM Plan if "there is a 150-vehicle trip reduction from the "peak total daily traffic accessing the site for a one-month period. There are any number of reasons that could cause a work slowdown including, but not limited to weather, labor issues, supply chain issues etc."*

Response to Comment: Under the revised TDMP, monitoring will remain in place until the peak hour vehicles accessing the site are less than 200 for a one-month period and are forecast to continue at or below that conservative threshold for the remainder of the filtration facility construction.

[1] A resource-loaded schedule is a project schedule that contains information such as task descriptions, task start and end dates, costs, and available/required resources. A resource-loaded schedule considers the time it takes to complete project tasks based on resource availability – such as staff, facilities, cost, equipment, and materials which are needed to complete the activities required. This type of schedule, because it must account for people, equipment, and materials needed in the carefully planned sequence of construction, can be used to produce an accurate prediction of the commuter and truck trips anticipated for that day.

- *Fails to consider the impact of the finished water pipeline that will be installed in Dodge Park Blvd. that requires crossing Cottrell Rd (eliminating the only remaining construction access via Carpenter Ln.) resulting in road closures, detours, and delays.*

Response to Comment: This comment assumes that all Truck trips will go northbound on Cottrell Road to Dodge Park Boulevard because the project will not use Access B for construction traffic. As explained above, the revised TDMP acknowledges and accounts for the single access from Carpenter Lane, based on the supplemental evaluation at Exhibit I.86 which provides for Truck haul routes that go south on Cottrell Road from Carpenter Lane.

Exhibit I.11: James Ekstrom

I.11 Comment Summary
Ekstrom & Schmidt Nursery, LLC has a main farm road that connects Lusted Rd. to Dodge Park Blvd. If either road is closed, this will cause a big problem. If we cannot use this road, then we will have no way to get large equipment to and from our farm. There is no way to turn around with our large truck and trailer. It will also pose a problem when we haul plants out of that field for shipping and increase round trip times if we need to use alternative routes.

Response to Comment: A full road closure does not mean local traffic cannot pass through a construction zone. Where no detour is available, farm traffic will be treated similarly to emergency vehicles and will be flagged through otherwise closed work zones. This has also been addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access". And as explained in Exhibit I.75, page 5, the construction specifications require the contractor to "**maintain 24-hour access to all businesses and residences** adjacent to the areas of work for the project and along haul routes, **do not block driveways** or sidewalks, and maintain safe pedestrian accesses."

Exhibit I.12: Cathy Keathley (Gresham Barlow School District Supplemental Testimony)

I.12 Comment
"The concerns of Gresham-Barlow School District as stated in the resolution were and continue to be: 1) there are no specific plans to ensure student and community safety; 2) there are no specific plans to mitigate traffic concerns, and 3) there are no specific plans for running buses while roads are torn open to lay pipe."

Response to Comment: This item was previously addressed starting on page 28, paragraph 1, of Exhibit I.84.

I.12 Comment
"PWB did not seek GBSD's input about any portion of this project and the impact it would have on our ability to get students … to and from school on time in a safe manner."

Response to Comment: This, and other statements about a lack of coordination with schools, are untrue. PWB did seek GBSD's input about the project, and in particular sought to coordinate with GBSD

regarding bus routes and other student travel routes. A summary from PWB of these efforts is provided into the record concurrently with this memorandum.

I.12 Comment Summary
The Construction TIA did not account for the late start days, although it does include "the correct start time for the late starts". The analysis was not redone because school was out for summer.

Response to Comment: This is responded to on pages 27 and 29-30 of Exhibit I.84.

I.12 Comment
To "remedy the traffic impact simply by restricting truck traffic to 20 minutes before and after start times is not adequate. Nor is it reasonable to assume that a truck won't start working before a 10:05 start time. In that instance, a truck that has started a trip and finds itself near the school at 9:45 am will just pull over before they pass the school? What kind of traffic impact will that cause?"

Response to Comment: The 20 minutes before and after start and end times is feasible to direct as a restriction on trucking for the project and is consistent with the pick-up and drop-off traffic dissipation periods identified in the Construction TIA.

However, in response to concerns raised by the schools and community members, PWB carefully examined the haul routes, the expected commuter routes and the locations of schools and their access points. Based upon this evaluation and the information submitted into the record about specific pick-up and drop-off locations and practices, PWB is proposing the school-by-school condition provided below.

The condition identifies specific road segments that provide direct access to identified schools within 5 miles of the filtration facility that are not served by sidewalks and dedicated bike lanes. The identification of specific road segments with direct access to the schools provides certainty for both the drivers and the community and provides avoidance in the most critical area for school operation with the surrounding road system. The avoidance times specific to each school also creates certainty for the drivers and the community and accounts for unique schedule issues for certain schools.

The condition further identifies the various types of construction traffic that will be subject to the hours of avoidance at the various locations on days when school is in session. The construction traffic types identified in the condition table include Trucks (construction trucks used for hauling excavated soil and delivering material and equipment), craft labor commuters (the construction work force), and "All" which includes Trucks, craft labor commuters, and the non-craft labor commuters. In a number of instances, *all construction traffic* will avoid the identified segments for the entirety of the day. In all but one instance, as discussed below, *construction Trucks* will avoid the identified segment during the entire day. And on routes needed to safely and efficiently transport the construction workforce to the site, *craft labor* commuters are restricted to hours that avoid overlap with school start and end times.

More specifically, the craft labor commuters will be instructed to avoid the identified segments for two specific periods of time during the day: 1) a typically one-hour window that begins 30 minutes before the school start time and ends 30 minutes after the school start time; and 2) a one-hour window that begins 30 minutes before the school end time and ends 30 minutes after the school start time. West Orient Middle School and Sam Barlow High School have a posted one-hour late start time on

Wednesdays. Therefore, rather than alter the avoidance period depending on the day of the week, as provided in the condition table the morning avoidance window for West Orient Middle School and Sam Barlow High School is extended to 2 hours to account for all start times across the week. As shown in the Construction TIA, craft workers comprise approximately 75% of commuter traffic volumes for the project, so this condition will have a meaningful effect on the amount of commuter traffic that would pass the school frontages during the critical avoidance windows. Additionally, those commuters that are not craft labor workers will often access the filtration site outside of the typical commute hours that are relevant for the avoidance windows.

As noted, there is one exception to the limitation of construction Trucks on the identified segment during all hours on days that school is in session. The only exception is the avoidance requirement for the Oregon Trail Academy (OTA), which requires that Trucks will be instructed to avoid Bluff Road only during the two one-hour avoidance periods. However, unlike the other segments included in the condition, OTA does not have direct access onto SE Bluff Road. Instead, the direct access for the school is onto SE Proctor Road, which as provided in the condition will be avoided by all construction traffic at all times. Nonetheless, because of the proximity of the school to the intersection of SE Bluff Road and SE Proctor and concerns raised about pick-up and drop-off activity at and near the intersection, PWB is providing an additional accommodation to OTA and instructing the Truck and craft labor commuters to avoid a street that does not have direct access to the school during the identified dual one-hour periods.

Sandy High School is located within the 5-mile radius and has some driveways that access Bluff Road. However, the high school is located within the City of Sandy and Bluff Road includes sidewalks and dedicated bike lanes at and near the school. Therefore, the safety concerns identified in testimony related to schools without dedicated pedestrian facilities do not apply to Sandy High School.

A School Locations and Access Overview memorandum is being provided concurrently with this submittal. The locations memo illustrates the location of schools and the related road segments identified in the proposed condition. It further details the restrictions for each school represented in the table and the reason for exclusion from the table in the case of Sandy High School.

Proposed Condition:

During construction, applicant will instruct filtration project construction drivers to avoid specific road segments that have direct access to identified schools. The specific schools, streets, type of construction traffic, and hours to be avoided are listed in the table below. These constraints apply only on days when school is in session.

District	School	Street	Extent	Construction Traffic Type	Avoidance Hours*
Oregon Trail	**Oregon Trail Academy**	SE Proctor Rd	SE Bluff Rd to SE Dodge Park Blvd	All	All
		SE Bluff Rd	Just east of SE 352nd Ave to SE Bear Creek Ln	Trucks and craft labor commuters	7:15 to 8:15 am 2:15 to 3:15 pm
	Kelso Elementary	SE Kelso Rd	SE Orient Dr to SE Eklund Ave	All	All
Gresham-Barlow	**Sam Barlow High**	SE Lusted Rd	SE 282nd Ave to SE 302nd Ave	Trucks	All
				Craft labor commuters	7:05 to 9:05 am 2:00 to 3:00 pm
		SE 302nd Ave	SE Lusted Rd to SE Chase Rd	Trucks	All
				Craft labor commuters	7:05 to 9:05 am 2:00 to 3:00 pm
	East Orient Elementary	SE 302nd Ave	SE Dodge Park Blvd to SE Bluff Rd	All	All
	West Orient Middle	SE Short Rd	SE Dodge Park Blvd to SE Orient Dr	All	All
		SE Orient Dr/SE Bluff Rd	SE Short Rd to SE 302nd Ave	Trucks	All
				Craft labor commuters	8:35 to 10:35 am 3:05 to 4:05 pm
	Kelly Creek Elementary	SE Baker Way/SE 24th St	SE Williams Dr to SE Chase Rd	All	All

*Avoidance hours are based on 30 minutes before and after school start and end times shown on district websites at the time of this decision. Two-hour morning avoidance periods are included for those schools that have regularly scheduled late starts on certain days. The Applicant will update avoidance hours annually prior to the start of each school year, or more frequently if notified by the districts, to reflect any changes made by the districts to start and/or end times. Any resulting updates will be consistent with the 30-minute periods described above.

With this condition, project traffic will not create safety concerns adjacent to the identified schools.

To respond to the comment more directly above related to the potential need for Trucks to pull over, the specificity included in the proposed condition eliminates the risk that Truck drivers will be uncertain

about available routes. All construction drivers will be provided with a list of street segments that they cannot travel on during weekdays when school is in session. All Truck drivers will be provided with a list that includes those roads in addition to the segments that Trucks must avoid at all times, as well as the times when Bluff Road must be avoided. The construction managers and Truck drivers will readily become familiar with the limitations as they plan their routes prior to arriving at the filtration facility site or leaving the site. Finally, a craft labor commuter's list will include the prohibited road segments as well as the timing restrictions for each of the other identified road segments with timing limitations. Again, commuters will readily become familiar with roads to avoid during their commute if their commute times overlap with any of the avoidance periods. While the chart may seem complex at first glance, it is actually easy to implement amongst the categories of drivers and again provides additional certainty for the drivers and the community.

I.12 Comment
"Page 4 of the Applicant's Pre-Hearing Statement dated June 29, 2023, Transportation Planning Proposed Condition 4 assigns the offset arrival time oversight to the Construction Manager:

"….

"As stated, the Construction Manager is responsible not only for the offset arrival time, but for the entire Traffic Demand Management. This is presumably in addition to all the other duties assigned to a 'Construction Manager'. It is inconceivable that a position with that oversight will be able to give the Traffic Demand Management, and particularly the offset arrival times given the number of trucks moving between different schools at different times of the day, sufficient time to adequately address the needs of GBSD."

Response to Comment: Construction managers manage processes and delegate their authority to responsible staff. There will be sufficient staff available and responsible for monitoring traffic conditions to be responsive to address traffic needs. However, the Construction Manager retains the ultimate responsibility for ensuring the Transportation Demand Management Plan is being implemented and monitored. As detailed above, with the proposed school-by-school condition both construction managers and drivers will have certainty about avoidance requirements for specific segments during planned Truck trips.

I.12 Comment Summary
"Also, the traffic analysis did not evaluate the highest volume roads in our district as it relates to school traffic." The comment provides a list of intersections.

Response to Comment: Similar testimony was previously addressed on page 29 of Exhibit I.84. Additionally, the proposed school avoidance condition will significantly reduce trips both during the drop-off and pick-up windows and during other periods of the day at the Orient Drive and Lusted Road intersections identified in the comment.

I.12 Comment
"Beyond the traffic at the schools of parents dropping off students and picking them up and buses arriving at the school, there has been zero analysis of our bus routes. In fact, page 7 of the staff report presented by Multnomah County, Case File: T3-2022-16220, Issue Date: June 22, 2023, states:

"c. TCP(s) must demonstrate consultation/engagement with Agricultural businesses abutting the pipeline and detour routes and Gresham-Barlow School Districts, as recommended in the Construction TIA (Exhibit A.230) to ensure impacts on the local transportation network are known in advance.

"And in the report provided by Global Transportation Engineering, dated June 2, 2023, Exhibit A.230, page 26, the only reference to bus routes is the following:

"'School bus routes may vary over the course of construction based on changes in ridership. These routes are evaluated annually by the bus companies. Coordination will be done to accommodate their routes and any adjustments needed within those routes.'"

"The TIA only states 'coordination will be done to accommodate their routes and any adjustments needed within those routes.' That is completely inadequate. How can "adjustments" be made when there has been no analysis as to what routes are required to go through roads that are closed? Without prior adequate analysis of our bus routes, there may very well be no acceptable alternative for our students to get to school. This is a critical component to our concerns and since there has not been any analysis, this project should be denied."

Response to Comment: PWB did request school bus routes from GBSD and was sent to First Student. In an email on November 9, 2022, the Water Bureau was told – by Tammy Rickman of First Student, who subsequently has submitted testimony in opposition to the record – that it would create "a security conflict" to share bus routes with the Water Bureau. Instead, Ms. Rickman indicated that all roads would be problematic. It is difficult to analyze the bus routes, as requested in this comment, when PWB was denied access to those bus routes.

However, once route information is made available by the Gresham Barlow School District and its service providers, the routes can be evaluated, and accommodations made for any bus route and student drop-off in the study area that would be impacted by construction. The contractor is required to evaluate and accommodate student pick-up and drop-off. This topic was also addressed on page 27, paragraph 7 of Exhibit I.84.

Exhibit I.13: OR Association of Nurseries

I.13 Comment

"A six-year construction process will impact those who are not near the area in question as traffic flow will come into direct conflict with moving agricultural equipment and make movement of products more dangerous for urban travelers."

Response to Comment: The traffic levels noted in the Project TIA and Construction TIA's show intersections within the project area operate at acceptable levels. The Project does not change what urban travelers experience. Work zones associated with pipelines and roadway improvements are constructed using industry standard safety practices that are in use on all roadway construction projects within Oregon. Also see the report by Globalwise, "Bull Run Filtration Facility and Pipeline Project - Response for Second Open Record Period" submitted at the same time as this memorandum.

I.13 Comment

"Multiple years of construction and the change to traffic patterns to avoid the work will create impacts on roads well outside of the adjacent area. For agriculture, it is imperative that an operation be able to move employees, equipment, and plant material from farm to farm."

"It is not only the construction area and adjacent lands that are impacted – secondary roads will be at the mercy of the construction schedule – as residents and businesses will wish to avoid delays."

Response to Comment: Roadway and pipeline construction does not mean local traffic cannot pass through a construction zone. Where no detour is available, farm traffic will be flagged through otherwise closed work zones. This has also been addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access". And as explained in Exhibit I.75, page 5, the construction specifications require the contractor to "maintain 24-hour access to all businesses and residences adjacent to the areas of work for the project and along haul routes, do not block driveways or sidewalks, and maintain safe pedestrian accesses."

Exhibit I.16: Kress Drew

I.16 Comment Summary
As a cyclist, this area is a prime location for many cyclists from all over the Portland area and beyond to ride in beautiful country that has limited road traffic. If the Treatment Plant goes in as planned, it will greatly increase the likelihood of bike-vehicle confrontations and unintended accidents that do not need to happen.

Response to Comment: It is unclear if this comment relates to construction or operations. For construction, concerns related to pedestrian and bike traffic were addressed on pages 19 -20 of Exhibit I.84. For operations, see the Project TIA at Exhibit A.31. The on-going operations traffic are minimal and will have no operational impacts to area intersections and roadways. Pipelines move water underground and there is little maintenance or repair work that requires public road travel.

Exhibit I.18: Tammy Rickman (First Student)

The comments under this exhibit were previously addressed on page 27, starting at paragraph 5, of Exhibit I.84.

Exhibit I.23: William and Nicki Meyers

The comments under this exhibit are broadly based and unspecific. Many traffic concerns have been addressed in the Project TIA, Construction TIA and Exhibit I.84. Additional traffic concerns similar to those raised in this exhibit are addressed in this response to testimony.

Exhibit I.26: Cottrell CPO Traffic Conditions (Photos)

We have reviewed the congestion photos near Gresham Barlow School District schools. Key discussion and mitigation is provided in Exhibit I.84 starting on page 25 and on page 26. Reinserted here for convenience.

> ***H.12 Comment Summary***
> *The School Board and bus personnel are concerned about the safety of students waiting on the side of the roads for pickup and drop-off when they often walk in front of the bus and possibly not being seen by construction vehicles. Exhibits show congestion at schools during student pick-up and drop-off. There are concerns about increased traffic and injuries.*
>
> **Response to Comment:** Traffic is by law required to stop for school buses. School buses also have safety features that are designed to help children be seen and cross the roads. These laws and safety devices are in place to improve safety. The addition of construction traffic does not change how the laws and safety devices apply or the need to remind children of potential traffic along the roadways. All construction Trucks will be operated by professional, trained, licensed drivers that receive comprehensive safe driver training and are directed to follow this training at all times.
>
> The comment also is concerned about "the congestion at the schools during pick or drop-off without the increase in plant construction traffic." That existing condition is caused in part by pick up and drop off that occurs in the roadway itself. This is an existing issue that will not be increased by construction traffic. ORS 811 and its sections define the rule of the road for drivers. Roadway travel lanes are for facilitating traffic through movements and are designed with sufficient width to allow passage of trucks. **ORS 811.550(2) prohibits the stopping, standing, and parking of a vehicle whether attended or unattended unless a clear and unobstructed width of the roadway opposite the standing vehicle is left for the passage of vehicles and the standing vehicle is visible from a distance of 200 feet in each direction upon the roadway or the person, at least 200 feet in each direction upon the roadway, warns approaching motorists of the standing vehicle by use of flaggers, flags, signs or other signals.** ORS 811.550(2) does not prohibit parking along the roadway for parents to pick up children as long as passage for other vehicles is not inhibited.

In response to concerns with construction traffic adjacent to schools, PWB is proposing a school-by-school roadway avoidance condition that is provided and described in detail in the I.12 response above. Each of the schools identified with photos in I.26 are addressed in the condition or in the concurrently submitted School Locations and Access Overview. Note that while it is possible that construction traffic could contribute to congestion during Sandy High School start and stop times, the additional vehicles will be traveling on roadways within the City of Sandy with sidewalks and dedicated bicycle lanes for students. Therefore, the presence of additional vehicles will not create a hazardous condition for students.

The photos also depict traffic lining up on the shoulder of the road on Dodge Park Boulevard to turn onto SE 302nd Street. Pursuant to the proposed condition, all construction traffic must avoid SE 302nd during all times of day on days when school is in session. Therefore, construction vehicles will not need to make the same turning movement as the queued parent vehicles. Construction drivers will not be instructed to avoid SE Dodge Park Boulevard because neither East Orient nor West Orient have direct access onto SE Dodge Park Boulevard. However, construction vehicles traveling east on SE Dodge Park Boulevard will be traveling within the lane dedicated for travel, not on the shoulder of the road. To the extent that vehicles

queuing to turn are obstructing the travel lane, it is those vehicles, rather than the vehicles traveling within the travel lane, that are creating a potentially hazardous condition. Furthermore, construction vehicle drivers can be expected to behave similarly to current drivers, including truck drivers, that currently encounter the obstructions in the travel lane: passing if safe and there is room to do so or by waiting until the obstruction in the travel lane clears.

Exhibit I.27: Tanner & Macy Davis

I.27 Comment
"The hundreds of daily trips by dump trucks that will barrel to and from the work site, which is directly outside our front porch, will crush our desire to spend quality family time outside. The immense amount of traffic from these construction vehicles will endanger our children as they attempt to play, learn, and live out the early years of their childhood on the quiet country property that we bought as a way to get away from the noise, danger, and commotion that is city life."

Response to comment: Roadways will be posted with speed limits and emphasis will be provided to Truck drivers and commuters through safety briefings to obey speed limits. As discussed above, temporary traffic measures will include separation of pedestrians from traffic lanes on Carpenter Lane utilizing pedestrian channelization devices.

Exhibit I.28: Jennifer Hart

I.28 Comment
"This intersection [Dodge Park and Cottrell] has had many accidents. In June, I saw the aftermath of an accident. A concrete retaining wall would have killed the drivers and front seat passengers of both vehicles. If a retaining wall is needed on the intersection to build the proposed filtration plant, it will create hazardous conditions."

Response to comment: The accident data from June 2023 is not currently available. However, in accident data from past years, including 2022 where numerous accidents were reported, the predominant pattern at the intersection is from southbound vehicles not stopping and impacting westbound vehicles. A retaining wall will have no impact on whether drivers disregard the stop sign coming into the intersection southbound on Cottrell Road. Ms. Hart concludes a concrete wall would have killed the occupants of both vehicles presumably based on information seen in the "aftermath" of the accident. Unless the accident was observed and all aspects such as direction of travel, driver at fault, vehicle speeds, vehicle trajectory, etc. and, with all respect, evaluated by a professional trained in evaluating traffic incidents, this is an inappropriately drawn conclusion.

Furthermore, the retaining wall is a necessary element of intersection improvements that will enlarge the intersection and make it inherently safer for all vehicles using the intersection, including trucks from construction and ongoing operations of the project, as well as the large vehicles and trucks of local farmers. Pipeline work will also include removal of trees and shrubs in the public right-of-way along the south side of this intersection, which will improve sight distance and safety for all users.

Exhibit I.32 Ron Roberts

I.32 Comment
"When I was in high school, one of our classmates was killed at the intersection of Cottrell and Dodge Park. I was first on the scene. This last year, our daughter, who lives in our family home on Carpenter Lane, was again, first on the scene of another accident at that same intersection (of which there have been four accidents in the recent months). With the added traffic during construction of the water treatment facility and after construction - there is no way we can prevent more deaths."

Response to Comment: The intersection noted will be one of two intersections modified to accommodate Filtration site traffic. Accident data prior to 2022 is available in the Project TIA on page 4. Recent ODOT crash data for the intersection was obtained for 2022 which is the most recent year available. We reviewed the newly available accident data and found that three out of the four accidents in 2022 were caused by southbound motorists at the intersection violating the stop control. One accident record noted vegetation was an issue. In looking at recent photos, it appears vegetation in advance of the northbound stop sign is being maintained. The improvements at the intersection will facilitate safe movement of Filtration site traffic and improve overall intersection safety. It should be noted that although there are reported injuries for each accident, there were no reported fatalities (deaths).

Further discussion on the accident history at this intersection is included on page 22, paragraph 6, of Exhibit I.84.

I.32 Comment
"With the water treatment construction and after completion, there is no way to get our children and grandchildren safely to and from bus stops. … Now there will be hundreds of trucks a day going by. Will the children on Carpenter Lane and their parents be safe amongst all that traffic?"

Response to Comment: After completion, traffic volumes are greatly reduced and will have minimal on-going impact on Carpenter Lane. The impacts are clearly defined in the Project TIA.

During construction, school bus routes and pick-up/drop-off locations will be facilitated by the contractor. Roadways will be posted with speed limits and emphasis will be provided to Truck drivers and commuters through safety briefings to maintain speed limits.

As detailed in the response to comment to Exhibit I.7a, to accommodate safe pedestrian and bicycle travel during construction of the filtration facility, PWB will pave a pedestrian route on Carpenter Lane east of Cottrell Road to provide an ADA-compliant surface outside of the vehicle travel lanes. A paved and delineated pedestrian route will be provided for the construction period with pedestrian channelization devices when adjacent to the driving lanes with openings for property access. The paved pedestrian route will be installed prior to beginning off-hauling of excavated materials from the filtration facility site, which is when significant truck traffic for the construction will begin. After the temporary certificate of occupancy for the filtration facility is issued, the paved area will be removed and returned to County standards. See figure and additional comment under response to comments to Exhibit I.7a

Exhibit I.33 Ronald Ruedi

I.33 Comment Summary

"Add the hundreds of daily construction vehicles will create the potential for traffic accidents especially for students and for parents dropping off / picking up their children from affected schools in the entire area. I myself experienced a head on collision 2019 by a construction worker who was a flagger at the Barlow High School Improvement project, and that construction project pales in comparison to the size to the proposed filtration plant. That employee, in her haste to get home after work, ran a stop sign less than a mile from Barlow High School and hit me head on at 30mph. Instead of me it could have easily been a student or parent with their children in the vehicle being hit by an errant construction vehicle."

Response to Comment: The collision is unfortunate. However, the fact that the person at fault was a construction worker does not equate to construction traffic being unsafe. An individual being in a hurry and not being attentive is an issue and can happen to anyone from any walk of life, local individual, or someone from outside of the area. The concerns with construction traffic and safety were evaluated and responses are provided on page 23, paragraph 3 of Exhibit I.84.

Exhibit I.34 Angela Parker

I.34 Comment

"Neighbors in the area generally understand the need to drive slowly past horses and other livestock, whereas visitors to our area often behave as if they are passing a bicyclist and speed up, passing within a few feet of the animal. This is dangerous and unsafe for the horse and the rider. Widening Carpenter would only cause traffic, including truck traffic, to speed up, creating additional dangers for riders, as well as for pedestrians and bicyclists on Carpenter…."

Response to Comment: Improvements to Carpenter Lane east of Cottrell Road will meet Multnomah County Design Standards. These standards are developed to meet the needs of the roadway users given the classification of the roadway. Posted speed limits will be provided with the improvements. As the west segment (east of Cottrell Road – where this author is located) is only serving the residences and business along the roadway with no construction traffic, the roadway is not being changed from its condition today. Most people, whether visitors or residents, will use caution when approaching a horse and rider on a roadway. During ongoing operations, as the Project site is not a commercial development, most motorists frequenting the site will be the same from day to day.

I.34 Comment

"I would add that regardless of any condition supposedly directing construction traffic to go to and from Carpenter Lane only via Cottrell, there is no chance that, short of placing tank traps in Carpenter west of my farm, such a condition could succeed. The turning movements for trucks turning onto and off of Carpenter at its intersection with Cottrell are practically impossible, regardless of any "improvements" proposed for Carpenter. For the sake of both safety and efficiency, inbound (eastbound) truck traffic will inevitably stack up on Carpenter in front of my farm, to obtain a clear line of sight as to truck traffic on Cottrell, and to provide straight, direct access to Carpenter east of Cottrell. This will enhance vehicular safety, but it will at the same time destroy my farm business."

Response to Comment: Carpenter Lane west of Cottrell Road is a local road and not classified as a freight route. Construction traffic will not be permitted to use that section of Carpenter Lane and a "local access only" sign will be posted to remind drivers and reinforce the restriction. Contractors and material suppliers have multiple means to enforce the restriction, including "spot checks" with a visual survey for compliance up to and including termination of employees who do not comply with the restriction.

Exhibit I.35: Pleasant Home Community Association (Klineman)

Response to Testimony: Comments to testimony have been provided under other exhibits submitted under this open record period. Specifically, Hawk Haven Equine was addressed under the response to comments in Exhibit I.34.

Traffic studies follow the applicable criteria and industry standard practices. Modeling and forecasting of traffic impacts is done by professionals to identify areas of concerns and mitigation to support agency conditions of approval. The methodologies followed comply with industry practices.

I.35 Comment
"The TDM Plan is notable for the following elements:

Response to Comment: As explained under Comment I.10 above, an updated TDMP is being provided to the record concurrently with this memorandum that incorporates changes in response to these and other concerns in the record. The sections that follow address each point and how the updated TDMP has responded to this concern.

(1) *"Attempting to limit peak hour trips on Carpenter Lane to 387 per hour, or more than six per minute, producing the farm impacts described by witnesses as well as being utterly inconsistent with the character of the area and creating hazardous conditions. (MCC 39.7515 (A), (C) and (F))"*

Response to Comment: The TDMP does more than "attempt" to limit trips. The TDMP has a specific approach to managing and monitoring traffic levels. It is essentially a toolbox of mitigation measures that, in my experience and that of the contractor, have been proven as effective methods of controlling traffic volumes. PWB fully anticipates deploying multiple measures to meet the traffic limitations.

(2) *"Relying upon alternate access via Bluff Road for excess "commuter" (but not truck traffic), although Clackamas County has rejected that possibility."*

Response to Comment: The revised TDMP acknowledges and accounts for the single access from Carpenter Lane. Page 1. A supplemental evaluation identifying the impacts of only having the Carpenter Lane access was also submitted as Exhibit I.86.

(3) *"Relying upon speculative alternative strategies for moving commuters on and off the site, should Bluff road indeed be unavailable."*

Response to Comment: See response to comment (1). These strategies are not speculative.

(4) *"Relying upon uncertain methodologies for predicting future traffic in order to design ostensible mitigation, and upon 'monitoring reports' provided to the county to arrive at mitigation at some point in the future."*

Response to Comment: As detailed in the revised TDMP and discussed above in I.10, the contractor will be taking a proactive approach by forecasting construction activities using a resource-loaded schedule and associated trips in advance and looking at current traffic counts to anticipate when implementation of TDM strategies are needed. TDM strategies will be implemented well in advance of actually hitting the defined the capacity threshold of Carpenter Lane is not exceeded (based on a percentage of the threshold).

(5) *"Relying upon speculative '[a]dditional strategies [which] will be developed and implemented if needed.'"*

Response to Comment: See response to comment (1). These strategies are not speculative.

I.35 Comment
Proposed Condition 6 "will not create a safe transportation network; will, in the course of construction, significantly impact farm traffic; and will increase the hazards for bicyclists, pedestrians and horseback riders by encouraging enhanced speeds including on the part of construction traffic."

Response to Comment: PWB's fix-it-first proposal will dramatically improve the safety of the local transportation network by upgrading roads that are currently quite degraded and with a low Pavement Condition Index (PCI) score. Speed limits will remain the same before and after PWB upgrades the roads.

Construction in and of itself does not create unsafe roadways. The risks of vehicle accidents are reduced by following industry guidelines and safety measures and following the contract standards developed to address known and potential safety.

I.35 Comment
Proposed Condition 7 "relies upon temporary road closures which will significantly impact farm traffic, and upon future consultations with farmers and school administrators entirely lacking in proven successful outcomes."

Response to Comment: Proposed Condition 7 relates to the Traffic Control Plan (TCP). The contractor will develop a TCP prior to performing work within the public roads. The required consultation/engagement with agricultural businesses and school districts in Condition 7 was incorporated into the condition from the applicant's own plan in the Construction TIA as an accommodation to those businesses and districts and is not needed to satisfy the standards. Moreover, PWB has already done substantial outreach for consultation and engagement with the farming community (years of work and extensive conversations by Globalwise) and with schools (see the summary of these efforts provided concurrently with this memorandum). This demonstrates that PWB can and will do the required outreach.

Instead, the TCP is developed in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, issued by the Federal Highway Administration, U.S. Department of Transportation (the "MUTCD"), which is the industry standard for construction projects throughout the United States. MUTCD Part 6 on Temporary Traffic Control provides 184 pages of specific standards for the needs and control of all road users (motorists, bicyclists, and pedestrians) through a temporary zone where the normal function of the roadway is suspended. In compliance with the MUTCD, the TCP plan describes in

detail how construction activities will maintain access for all traffic, including but not limited to emergency responders, pedestrians, vehicles, and commercial activity.

Additionally, the Water Bureau has developed Construction Specifications 01 55 26 - Temporary Traffic Control and 01 55 26.13 - Accommodations for Public Traffic which specify that all traffic control methods used by contractors on the project must comply with industry standards from Multnomah County, Oregon Department of Transportation, and the MUTCD. The requirements listed in the contract specifications dictate that the contractors shall provide for the safety and convenience of the public when performing work within the roadway.

I.35 Comment Summary
Condition 8(b) "removes staff's proposed prohibition upon through trucks on Carpenter Lane, as all *truck traffic will now have to use Carpenter."*

Response to Comment: As explained above, construction traffic will not use Carpenter Lane west of Cottrell.

Exhibit I.36 Sharon Jones

I.36 Comment Summary
A "huge concern is the proposed road [Access B] from Bluff Road north to the proposed site." "Almost daily I pull out onto Bluff Rd at this intersection. It is NOT a 90-degree intersection, as a matter of fact, because of the angle of Bluff it is a very difficult intersection to cross. Add the traffic daily of pick up and drop off at the Oregon Trail Academy, it becomes quite dangerous. When I pull out on the road, I am always extremely cautious and careful, looking twice both ways before I pull out." "The speed limit on Bluff is 45MPH, but I have witnessed daily, most cars travel much faster than that. The idea of adding another road to this already congested intersection is asking for disaster! The presence of large trucks hauling a variety of materials to the proposed site is ludicrous! And then I question, how will these trucks get [to] this proposed road? Will they come down Bluff through the S curves, which is a very narrow road and is, at present, quite precarious driving through that area and meeting another car or pickup truck.? Or will they come over from Dodge Park across Cottrell Road?"

Response to Comment: Access B (southern site access from Bluff Road) is no longer proposed to be used by construction traffic. It will only be used for emergency access during on-going operations of the site. The emergency access road will not add another road to the intersection, but instead uses an existing access to the solar farm.

The speed concern is a systemic issue of the Bluff Road corridor that is not created by the Project.

Exhibit I.38 Hans Nelson & Sons Nursery

See the memorandum from Globalwise submitted concurrently with this memorandum.

I.38 Comment Summary
We rely on county roads for our employees to get to work. We use these roads daily to transport equipment, plants, and employees. Depending on the season we could make up to 10 round trips per day

between our different fields and farms. With the main farm located on Orient Drive we use Dodge Park Blvd to access our second farm on Lusted Rd. We use this route because it is the only safe option with good visibility and shoulders. If you refer to Exhibit H.3 (pre-hearing statement by the applicant) Compatibility of proposed PWB filtration facility and pipelines construction with farm traffic study, they state there is no safe alternative. If there is any disruption to Dodge Park Blvd, we won't be able to access our farm. We must be able to access the farm all year long with many sized vehicles and tractors/implements. We also have very time sensitive sprays and field cultivations that happen in that time window depending on weather. We must be able to access those farms at any time with any equipment.

Response to Comment: Pipeline construction in Dodge Park Boulevard east and west of Cottrell Road is not a closure, it is flagger controlled with one lane of passage. Hans Nelson Nursery is not blocked from reaching their field in Lusted Flats. Due to their safety issues, and desire to only travel on Dodge Park Boulevard, they are being accommodated and will have continued access to travel on Dodge Park Boulevard to reach their field. The contractor is required to prioritize and facilitate movement of farm traffic like emergency vehicles. This was addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access".

I.38 Comment Summary
Depending on the season we move equipment around daily. Depending on the weather window and task that needs to be done we need the option to act quickly. We move very small compact tractors up to large tractors pulling implements up to 16' wide to prepare soil for planting. When we drive on these roads sometimes, we hold up traffic. We cross Orient Drive with our digger which is a large, tracked machine that moves very slowly. It requires us to put boards down across Orient Drive, so we don't damage the road surface. We use our employees as flaggers to stop traffic while we cross. It takes about 5 minutes to cross the road. We've had close calls in the past where drivers in a hurry don't stop. It is a dangerous task with the traffic load we currently have. Added construction traffic will only increase these dangers.

Response to Comment: Project construction will add traffic, but it does not change the current practice of crossing Orient Drive with farm implements Construction traffic will stop while the digger crosses. Furthermore, it is the policy of PWB to instruct and provide safety training to its employees and to require that all contractors provide safety training, including related to slow moving farm vehicles in the area.

I.38 Comment Summary
When Highway 26 is closed due to an accident Orient Drive is the backup route. In the past when this has happened it is a constant flow of traffic. This has happened multiple times and if that is any indication to the added traffic on our roads due to this project it is astonishing. Detours generally last 2 to 4 hours. If it were to be years, it would make it almost impossible to enter or leave our facility.

Response to comment: Traffic levels due to construction will not be at the levels that occur when Highway 26 is closed and traffic routes along Orient Dr. The traffic volume estimates in the Construction TIA are conservative and TDM strategies will support lowering these volume estimates. Facilitation of farm access was addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access".

I.38 Comment Summary
When we need to cross there is no time between cars and the vehicles go way too fast on roads, they are uncommon too. To get the digging machine to the other farm we move it using a semi-truck and allow boy trailer. Dodge Park Blvd is the only safe option (as mentioned in Exhibit H.3 page 87). Alternate routes have cliffs on one or more sides, zero shoulder and very limited visibility. The county has placed length restrictions on them for these reasons. We dig trees from November through February depending on the year. We only harvest on dry days when the temperature is above freezing. We require a lot of vehicles and tractors and trailers to move plants during harvest season. They are perishable and we take great efforts to keep them as healthy as we can for our customers. We can have zero delays when harvesting and moving plants.

Response to Comment: Construction traffic will not prohibit or change the above practices. Delays caused by construction traffic in the area will be minimal and will not exceed level of service standards set by the County. This was addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access".

I.38 Comment Summary
The construction of the site will greatly impact our nursery operation. The increased traffic will make it more dangerous for my employees to get to work.

Response to Comment: Construction vehicle and safety were addressed on page 23, paragraph 3, of Exhibit I.84.

I.38 Comment Summary
We are very dependent on weather and need to be able to act quickly when we have the opportunity. If we are delayed in planting, it will delay plant growth and the crop could be a complete failure. Our trees are in the ground for 2-4 years so we would have no crop or income 2-4 years out. It may seem like a simple operation, but it is far from it. We must contend with many factors such as weather, plants, soil conditions etc. Any change in this could mean a crop failure.

Response to Comment: Construction traffic will not prohibit or change the above practices. This was addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access".

I.38 Comment Summary
We plant our trees in the spring when we have a good weather window. The weather can change rapidly in the spring and this, in turn, can change our workplan multiple times per day. During the year we move mowers, sprayers, stakes, tractors, irrigation supplies, employees and supplies between fields and farms keeping the plants growing straight. We irrigate our plants and require a lot of monitoring throughout the growing season. If we miss a key irrigation cycle it could mean the plants don't get to saleable size and we are unable to sell them. All these activities depend on weather, insect pressure and plant growth stages.

Response to Comment: Construction traffic will not prohibit or change the above practices. This was addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access".

I.38 Comment Summary
We do combination loads for delivery and shipment that may originate in one place and have multiple deliveries to 2-6 different farms. On outbound shipments this is common practice. A semi-truck will pick up a portion of the refrigerated trailer at multiple locations. This is hard enough with the e-log books that require shut down periods. Any delay from construction or operation of this plant will make those delays worse.

Response to Comment: Truck drivers, such as those used for nursery shipping, are accustomed to considering delivery schedule and shut down periods. The Project construction will be a known element that will need to be considered by these drivers – which can be as simple as use of widely available mapping apps. This is a manageable issue.

Exhibit I.41: Grahn

I.41 Comment
"The last few years we have had numerus accidents at the intersection of Cottrell and Dodge Park Road, some with fatalities. There have also been several near misses as evidenced by the frequency of signposts being destroyed by vehicles. Currently there is a temporary one on the NE corner due to a mishap. This could easily be verified by the fire dept., Multnomah sheriff's dept. and the county road maintenance dept."

Response to Comment: The intersection noted will be one of two intersections modified to accommodate Filtration site traffic. Accident data has just been made available for the year 2022. See the response to comment under Exhibit I.32 of this report for further information on this crash data.

Further discussion on the accident history at this intersection is included on page 22, paragraph 6, of Exhibit I.84.

I.41 Comment Summary
"We are very concerned about the impact of all the additional truck traffic created by the proposed PWB project being considered. The planners not living in this area do not fully understand this problem. Also, our good neighbors, the nurserymen and farmers, small and large operations alike must utilize or cross these narrow roadways often with their equipment to maintain their livelihoods."

Response to Comment: The comment is general and is broadly addressed in the Project TIA, Construction TIA, and Exhibit I.84. Additional traffic concerns are addressed under this response to testimony. Crossing of roadways with farm equipment is covered under Comment I.38 above.

Exhibit I.42: Wensenk

I.42 Comment
"Somewhere in their submissions, PWB or their consultant have attributed 9 vehicle trips per household to residents on Carpenter Lane. This is outrageous and laughable. Many of us have lived here our whole lives, and others for decades, and we've never seen 72 vehicles go by in a single day – probably not even in an entire week!"

Response to Comment: Neither the Project TIA, Construction TIA, nor the response to testimony in Exhibit I.84 even allude to the trip generation from the existing households along Carpenter Lane. There is no need for this reference as actual traffic counts were conducted to identify what traffic is present during the peak hours. Existing traffic counts included in the Appendix on page 47 and 48 of the Project TIA pdf showed 14 AM and 11 PM peak trips on the east leg of Carpenter Lane, which would include any of the commercial traffic and not just households.

I.42 Comment
"The road improvements alone prove that – extending the road to the edges of the right of way will destroy front yards, driveways and even a building. … The fact that it is only built with a 3" (or likely less!) base that is not structurally designed for hundreds of heavy trucks every day is proof that this project will physically change the character of this area."

Response to Comment: Roadway improvements are required by code to meet Multnomah County design standards. Carpenter lane will be structurally designed for the Truck traffic during construction. Improvements will be completed within the existing public right-of-way – not in front yards, and without adding any additional public right-of-way. Impacted driveways will be refurbished with new driveway aprons. No buildings will be impacted under the proposed roadway design – which includes a shed that is in the public right-of-way but will not be impacted.

I.42 Comment
"The intersections of Cottrell & Dodge and Cottrell and Carpenter are also planned to be re-built. PWB likes to call these 'improvements' but in reality, they will further destroy the character of our area. The addition of massive concrete retaining walls at the intersection of Dodge Park & Cottrell also creates a significantly hazardous condition. Please refer also to the response from Mike Ard, traffic engineer, for more details on this dangerous intersection. Concrete retaining walls would have caused the last 2 out 3 accidents there (in the past 12-15 months) to result in multiple fatalities. We don't want these added hazardous conditions as a result of this project."

Response to Comment: Without the full details of the accident data, it is speculative to conclude that the presence of a retaining wall would have caused fatalities at the intersection. Additionally, as discussed above under Comment I.28, the retaining wall is a necessary element of intersection improvements that will enlarge the intersection and make it inherently safer for all vehicles using the intersection, including trucks from construction and ongoing operations of the project, as well as the large vehicles and trucks of local farmers. Pipeline work will also include removal of trees and shrubs in the public right-of-way along the south side of this intersection, which will improve sight distance and safety for all users. The retaining wall will improve the overall function and safety of the intersection. Also refer to response to Mike Ard testimony on page 22, paragraph 6 of Exhibit I.84.

I.42 Comment
"These are valid, legitimate concerns because once the road improvements are complete and site construction begins, documents reviewed in exhibit H.3 state that at the peak traffic hour, vehicle trips (including site employees, contractors and crew, dump trucks, concrete trucks, sand & gravel haul trucks, chemical trucks, craft personnel, service providers, vendors and construction supervisors) will be restricted to 387 trips per hour. We are to assume then, that the actual number of trips per hour will be greater than 387 during the other 8 hours of a 10-hour workday, 6 days a week?"

Response to Comment: Clackamas County has restricted the use of Access B onto Bluff Road. All construction vehicles will now access the site via Carpenter Lane and the number of vehicles will be restricted to 296 during the peak hour. The forecasted traffic numbers are conservative peak period numbers. Outside of those peaks, per hour volumes will be less. A revised traffic study showing the single access and providing an updated analysis of the impacted intersections of Cottrell Road/Carpenter Lane and Cottrell Road/Carpenter Lane is included in Exhibit I.86.

I.42 Comment
"PWB has not revealed exactly how many and what types of vehicles we can expect."

Response to Comment: The number of Truck and Commuter Trips are provided in the Construction TIA. The predominant vehicle types that will be present are commuter vehicles, shuttle vans, material delivery trucks, dump trucks (hauling gravel and soil), and concrete trucks.

I.42 Comment
"Also, this report was published prior to Clackamas County denying use of a proposed emergency access road as an additional construction route which it appears would have accommodated one-way construction traffic. Now that those 'vehicle trips per hour' are not only one way – such as the haul and dump trucks and other heavy trucks going back and forth multiple times a day – are we to assume the vehicle trips have doubled? Carpenter Lane, regardless of proposed road improvements, should not be expected to handle this massive amount and scale of construction traffic that will paralyze residents and disrupt their daily lives and activities."

Response to Comment: Clackamas County has restricted the use of Access B onto Bluff Road. All construction vehicles will now access the site via Carpenter Lane and the number of vehicles will be restricted to 296 during the peak hour to ensure that the number of vehicles on Carpenter Lane does not exceed its capacity to stay within County level of service standards. The forecasted traffic numbers are conservative peak period numbers outside of those peaks, per hour volumes will be fewer. A revised traffic study showing the single access and the revised analysis for the impacted intersections of Cottrell Road/Carpenter Lane and Cottrell Road/Carpenter Lane is included in Exhibit I.86.

I.42 Comment
"During the seven years of construction (or any period, regardless of length), Carpenter Lane will look very different. It will no longer be safe for kids to ride their bikes or play in their front yards, it won't be safe to walk your dogs or ride your horse, joggers and cyclists won't be safe, and young drivers learning to drive will face unnecessary risks and hazardous conditions created by the project's construction."

Response to Comment: The addition of construction traffic does not mean roadways and front yards won't be safe. Roadways will be posted with speed limits and emphasis will be provided to Trucks and commuters through safety briefings to maintain speed limits and be cognizant of pedestrian, bikes, dogs, horses, and other roadway users.

Temporary traffic measures will include separation of pedestrians from traffic lanes along Carpenter Lane utilizing pedestrian channelization devices or other County approved means.

Exhibit I.43: Brittany & Aaron Cory, Free Rain Stables

See the response to comment for Exhibit I.34, Hawk Haven Equine Written Testimony. Traffic-related testimony responses are addressed and are the same concerns being noted under this Exhibit. See also Mr. Prenguber's response to this comment submitted simultaneously with this memorandum.

Exhibit I.44: Les Poole

I.44 Comment
"Excavation is a major aspect of the project. The calculation of the number of truck trips [f]ocuses on deliveries, but fails to adequately address the volume of material that will be removeed [sic] from the site. The analysis also fails to specify how many of the trucks will be pulling trailers. The length and weight of trucks with that configuration increases the likelihood of accidents, especially at the intersection of Cottrell Road and Dodge Park Blvd. The applicant proposes minor improvements of the sight distance, but that will not alleviate the safety concerns. Other roads affected by the project are inadequate and will suffer tremendous damage."

Response to Comment: The Construction TIA does address the number of excavated material removal trips, in addition of the deliveries. The number of trips that will be generated to remove the material has been estimated by the contractor and this is the basis of that calculation for the Construction TIA.

The length and weight of the Trucks, and the configuration with or without trailers, do not in and of themselves create an increase in the likelihood of accidents. Professional licensed truck drivers are subject to specialized certification and training as trucks operate differently than passenger cars and pickups and training is required so operators understand the limit of their vehicles and what it takes to safely operate them. All Truck drivers for the project will have this training and licensing.

The intersection of Cottrell Road / Dodge Park Boulevard not only will have sight distance improvements, but it will also be modified to accommodate vehicles that will be traveling to and from the Filtration site. Intersection improvements will enlarge the intersection and make it inherently safer for all vehicles using the intersection, including trucks from construction and ongoing operations of the project, as well as the large vehicles and trucks of local farmers. Roadways that will be used as haul routes or be impacted by pipeline construction will also be rebuilt and improved, as explained in the applicant's fix-it-first proposal.

Exhibit I.46: Ard Engineering

I.46 Comment Summary
"Global Transportation Engineering has prepared several reports in the record related to traffic and transportation. The reports generally conclude that construction of the proposed facility will result in unacceptable operation of area roadways and intersections absent mitigation. As described in detail in our prior review of these materials, many of the assumptions underlying that analysis do not account for the actual impacts of construction traffic. As yet we have seen no additional analysis which addresses the numerous deficiencies we identified in our memorandum dated June 30, 2023."

Response to Comment: The first draft of the TDMP was uploaded the same day as responses to prior traffic testimony were uploaded.

The Construction TIA does not "generally conclude" that construction "will result in unacceptable operation" – the Construction TIA concludes that, under extremely conservative assumptions, construction could result in levels of service below county standards without mitigation, but that mitigation – through the TDMP – will be effective to ensure that level of service standards are met. This is part of the function of a TIA: to provide feedback on ways to ensure that there will not be impacts, even under conservative assumptions. Accordingly, the TIA documents potential traffic impacts and mitigation measures. Since construction is a temporary condition, a summary of possible TDM strategies was developed rather than a summary of physical improvements (such as new signals) that would not be warranted after construction is complete. The TDM measures proposed are commonly used under temporary traffic conditions in lieu of unnecessary and expensive infrastructure improvements that, once construction is done, are not warranted and would require the County to operate and maintain. This is a standard approach to mitigating temporary conditions and was accepted by County Transportation.

A similar comment was addressed starting on page 16, paragraph 1 and 4 and page 17, paragraph 2 of Exhibit I.84.

I.46 Comment [refers to the TDM strategies]
"1) The primary strategy of splitting traffic between a northerly access on SE Carpenter Lane and a southerly access on SE Bluff Road is fundamentally flawed. It relies on heavy use of the secondary access on SE Bluff Road for construction traffic; however, Clackamas County's notice of decision allowing construction of this southerly access specifically states that it does not authorize use of the emergency access road for construction traffic. Such a restriction is appropriate given that the adjacent intersection of SE Bluff Road at SE Proctor Road has a crash rate more than twice the level which is required to place it among the top 10 percent of high crash intersections of its type in the state of Oregon."

Response to Comment: In response to a Clackamas County land use decision, the Project is no longer proposing use of Access B for construction traffic. This has been reviewed and summarized in Exhibit I.86 "Water Filtration Facility Carpenter Lane One-Access Analysis Update to Construction TIA" submitted on August 7, 2023.

The traffic engineer is referring to the crash history at the intersection of Bluff Road / Proctor Road. This has been previously addressed on page 22, paragraph 2, of Exhibit I.84.[2]

[2] In review of data to address crash data comments at the intersection, it was found that the crash data pulled from the record was for the intersection of Proctor Boulevard (US 26) / Bluff Road in Sandy rather than the intended intersection of Proctor Road / Bluff Road. Crash data was obtained for Proctor Road / Bluff Road, and it was found that 5 crashes occurred from 1/1/2016 to 12/31/2022. Only one crash occurred after the intersection approach modifications were constructed in 2019 that is correctly noted in the Project TIA and Exhibit I.84. A second crash occurred near the time the improvements in 2019. Considering crashes at the intersection for the period after intersection modifications were completed, the resulting crash rate is 0.362 (only one crash). However, based on review of each available crash record, the conclusion is the same as previously noted, that more data is needed to

I.46 Comment [refers to the TDM strategies]
"2) With only one point of access, the secondary strategy of limiting peak-hour trip volumes on SE Carpenter Lane to 387 or fewer trips will require spreading the arrival and departure periods for construction traffic over several hours, making coordinating on-site construction activities impractical and ensuring that site traffic must travel during the periods of school operation. This "peak spreading" also ensures that local traffic in the immediate site vicinity will be inundated with conflicting traffic over the period of several hours in the mornings and the evenings."

Response to Comment: With the restriction of construction access from Access B, the peak hour limit to the site using just the Carpenter Lane access is reduced to 296, as explained in Exhibit I.86. The contractor will accordingly schedule construction activities and implement appropriate TDM strategies to ensure staffing is on site when needed while meeting the traffic limits identified in Exhibit I.86. If it is ever "impractical," the contractor has other options -- spreading the arrival and departure times is only one of the strategies that will be implemented to reduce peak hour traffic to the site. Vanpooling and off-site parking/busing will be implemented as well. Furthermore, the traffic limitations are based on the peak construction period for the project. Average construction volumes will fall well below these levels for much of the construction process without any TDM strategies being needed.

I.46 Comment [refers to the TDM strategies]
"3) Another potential mitigation option provided was to "provide a commuter shuttle"; however, a shuttle will have no impact on the need for truck traffic to reach the site and can at best only reduce commuter traffic volumes. Absent an extremely robust shuttle plan, traffic volumes are likely to remain well above permissible levels, and even if a sufficiently robust shuttle program were implemented (and accepted by a sufficient number of employees), the shuttle program would require identification of remote parking facilities for numerous employees. The impacts of large-scale parking demands at remote facilities are not addressed in the analysis."

Response to Comment: The commuter shuttle strategy is targeted specifically at commuter traffic volumes, not Truck volumes. Commuter traffic makes up most of the site traffic during the peak periods. As noted previously, this will be one of several strategies to be implemented together. The TDMP provides estimated percent reductions in traffic for each strategy based on the contractor's experience in implementing similar strategies on similar projects. The level of commuter shuttling is expandable to exceed the level of reduction that would be needed to meet the Carpenter Lane capacity threshold requirements. Commuter shuttling can be mandatory, which would not require it to be "accepted" by employees.

As discussed above, a revised TDMP is being provided concurrently with this response document. A summary of the revised TDMP is provided above under Comment I.10 to show it will largely address the issues raised in this comment. Multiple remote parking facilities within urban areas have already been identified by PWB, as well as shuttle options. PWB of course has the responsibility to obtain any required approval for use of parking facilities within other jurisdictions, but that is not the subject of this land use process.

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determine if after the intersection improvements, there is an ongoing issue at the intersection, and that at this time there is no mitigatable pattern that can be identified.

I.46 Comment [refers to the TDM strategies]
"4) A final mitigation option was to "Develop a rideshare or carpooling incentive program." Such programs generally do not substantially reduce travel demands and cannot be relied upon to alleviate transportation demands on the scale required for this project. The applicant fails to provide any details which would allow a detailed review of this option since it is cited as being applicable only "in the event that these strategies are needed." It is clear that significant strategies will be needed to address traffic demands far in excess of capacity; however no detailed plans of any kind are provided."

Response to Comment: As explained under Comment I.10 above, an updated TDMP is being provided into the record concurrently with this memorandum that incorporates changes in response to these and other concerns in the record. The revised TDMP utilizes vanpooling and shift offsets as the first tier of TDM, triggered when traffic volumes are within 75 percent of the 296 vehicle threshold, and off-site parking with shuttle buses as the second tier of TDM, when traffic volumes are within 90 percent of the threshold volume. The TDMP ensures that the threshold volume will not be exceeded by implementing these tiers of TDM strategies in advance of the threshold volume being reached.

Ard Engineering portrays the TDM strategies as one strategy mitigating all traffic volumes. This is not the case; multiple strategies, depending on the level of traffic accessing the site, will be implemented to maintain traffic volumes below the threshold. However, even if the vanpooling program were completely ineffective – which is contrary to the experience of the contractors on similar projects – the level of commuter shuttling is expandable to exceed the level of reduction that would be needed to meet the Carpenter Lane capacity threshold requirements. That is, it is feasible that commuter shuttling could be the only TDM strategy implemented, and it would successfully prevent the threshold volume from being exceeded.

I.46 Comment [refers to the TDM strategies]
" 5) The proposed mitigation plan is reactive, not proactive. It permits unacceptable impacts to occur, with documentation coming from tube counters placed in the roadway, then asks the contractor in arrears to implement mitigation measures. While the contractor may prepare a "two-week look ahead of construction activities," the purpose of a transportation analysis is to identify a workable plan in advance of project approval, not at some future date after adverse impacts are already occurring."

Response to Comment: The revised TDMP to mitigate traffic volumes is proactive. The revised TDMP outlines the forecasting and monitoring methodology. High level forecasting starts – indeed has already started -- before construction begins. The resource-loaded construction schedule (see footnote 1 above) inherently plans the number of trips for each day throughout construction. Monthly schedule updates allow for a proactive update to the forecast of traffic submitted to the County. A two-week look ahead will also be used to provide more detailed forecast of traffic. PWB will submit a monthly report that includes the trip count data for the prior month, current TDM strategies in place, and a look-ahead at the next month's projected trips from the updated resource-loaded schedule as well as any TDM strategies that will be added, increased, or modified for the coming month based on that projection. The monitoring report includes a look-ahead at the next rolling year's projected trips from the resource-loaded schedule.

I.46 Comment [refers to the TDM strategies]
"Rather than prepare a Transportation Demand Management plan which can ensure safe and acceptable operation of the proposed facilities necessary to satisfy MCC 39.7515 subsections (C), (D), and (F), the applicant has only stated that they will try to do what they can to reduce the unacceptable impacts, with neither assurances that the transportation system will meet the relevant operational standards nor sufficient detail regarding potential mitigation approaches to determine that any mitigation plan is feasible. As such, the reports provided cannot be relied upon to ensure that the proposed conditional use will meet the applicable transportation standards."

Response to Comment: A mitigation analysis is detailed in the Construction TIA on pages 18-23 that includes operational analyses, school safety information, agricultural considerations, haul route planning, and emergency vehicle and bus route considerations. Further information on TDM strategies is included in Exhibit I.84. There is no statement of "try" in any of the documentation, but rather sound mitigation measures that are fully implementable and have proven successful at managing traffic on other projects.

A revised TDMP is being submitted concurrently with this report. The revised TDMP has been developed with the contractor and includes many additional details about the contractor's plans for implementing these strategies. The contractor has experience with the strategies documented in the revised TDMP, has collaborated on the development of these strategies for the revised TDMP, and has determined that they are feasible to implement for this project specifically. The transportation system will meet the relevant operational standards at all times during construction.

I.46 Comment
"Even if a sufficiently robust mitigation plan was developed to limit peak-hour traffic volumes to no more than 387 vehicles per hour on Carpenter Lane, the projected change in traffic would represent an increase of approximately 30 times the existing peak-hour traffic volumes on the roadway. Spreading start times would mean maintaining 387 vehicles per hour over the span of several hours. To date, there has been no proposal to provide safe facilities for pedestrians or people riding bicycles on this roadway, which will be inundated with construction traffic for long stretches every day."

"As an example, the City of Portland allows a roadway to be constructed as a "Shared Residential Street" where traffic volumes are below 500 vehicles per day, the roadway has traffic calming devices such as speed bumps installed, and adequate sight distances and lighting are provided along the roadway. For residential streets, peak-hour volumes are approximately 10 percent of the daily traffic volumes, meaning that under Portland's design standards a street which accommodates more than 50 peak-hour trips requires construction of dedicated sidewalk facilities for pedestrians."

Response to Comment: County roadways follow standards. When reviewing those standards for Average Daily Traffic Volumes, those roadways have a fraction of the traffic volumes they are designed to handle. This was discussed on page 2, paragraph 5, of Exhibit I.84. The addition of construction traffic does not exceed the limits the roadways are designed to accommodate.

During construction along Carpenter Lane, the roadway will be widened, and pedestrian/bike channelization devices or other approved means will be implemented as temporary measures to separate pedestrians and bikes from motor vehicles. See the response to comments in Exhibit I.7a.

The example cited in this comment is irrelevant as it references the policy of an agency in a highly urbanized area. It also pertains to a permanent condition. Additionally, the reference is not applied to designated freight routes within the City of Portland. All roadways to be used as haul routes by the Project, except Carpenter Lane, are classified by Multnomah County as freight routes. Carpenter Lane will receive additional pedestrian protection during construction for this reason.

I.46 Comment
"Traffic volumes on SE Carpenter Lane currently fall well below the threshold at which installation of sidewalk facilities is necessary. But with construction traffic the roadway volumes will be far in excess of any level which can safely permit shared use of the roadway. The fact that a high percentage of the projected volume will be heavy construction vehicle truck traffic significantly exacerbates this concern. Providing safe facilities on this roadway in order to satisfy the requirements of MCC 39.7515(F) would at minimum require construction of new sidewalks along the roadway. However, this need conflicts with the requirements of MCC 39.7515(D), which requires that the proposed conditional use "Will not require public services other than those existing or programmed for the area.""

Response to Comment: As detailed in the response to comment to Exhibit I.7a, to accommodate safe pedestrian and bicycle travel during construction of the filtration facility, PWB will pave a pedestrian route on Carpenter Lane east of Cottrell Road to provide an ADA-compliant surface outside of the vehicle travel lanes. A paved and delineated pedestrian route will be provided for the construction period with pedestrian channelization devices when adjacent to the driving lanes with openings for property access. The paved pedestrian route will be installed prior to beginning off-hauling of excavated materials from the filtration facility site, which is when significant truck traffic for the construction will begin. After the temporary certificate of occupancy for the filtration facility is issued, the paved area will be removed and returned to County standards. See figure and additional comment under response to comments to Exhibit I.7a.

This will not require public services other than those existing or programed for the area because it is related to construction traffic control and only for the temporary construction period. Otherwise, that requirement in (D) would prohibit all construction related Traffic Control Plans. Instead, the programing for the area already contemplates that construction will occur and that Traffic Control Plans are typical requirements for any work in the public right of way. See the Multnomah County Road Rules section 18.500.D ("During the initial installation or construction of the facility authorized by a permit, … the applicant shall at all times maintain such flaggers, signs, lights, flares, **barricades and other safety devices** as required or recommended by the Manual of Uniform Traffic Control Devices, produced by the Federal Highway Association, with Oregon Supplements. **A traffic control plan** or additional traffic control measures **may be required prior to permit issuance** …."); Manual of Uniform Traffic Control Devices, Section 6F.63 (provides standards for "Channelizing Devices" including those "used to channelize pedestrians" in the form of "longitudinal channelizing devices" such as those depicted in the photos in the response to comment to Exhibit I.7a).

I.46 Comment
"It is clear from the analysis that meaningful improvements extending beyond the motor vehicle travel lanes will be necessary for safety on SE Carpenter Lane. Other roadways in the site vicinity may be similarly impacted, particularly under detour conditions when traffic may be routed onto local streets.

The fact that these streets currently operate acceptably without dedicated facilities for people walking and biking is not sufficient to conclude that they can safely accommodate the projected increases in traffic. The fact that the applicant has not analyzed these impacts or suggested any specific mitigation for affected roadways is a material omission in the traffic study. As such, the study cannot be relied upon to conclude that the transportation system can operate safely with approval of the proposed project."

Response to Comment: This comment was addressed on pages 19-20 and page 26, paragraph 4 of Exhibit I.84. Additionally, although the Construction TIA makes the extremely conservative assumption that all Trucks will follow each one of the haul routes, it also notes that, in reality, the Trucks will disperse in multiple directions, resulting in significantly fewer trips on any one road past Carpenter Lane.

I.46 Comment
"In addition to concerns regarding safety for pedestrians and people riding bicycles, several area intersections have been identified as having crash rates above the 90th percentile for similar intersections in Oregon. No safety mitigations have been proposed for these intersections. The addition of increased traffic volumes would be expected to result in increased conflicts and crashes. Further, the high percentages of truck traffic anticipated mean that crash severity is likely to increase as well."

Response to Comment: This comment was addressed starting on page 21, paragraph 4; page 22, paragraph 2; and page 23, paragraph 3, of Exhibit I.84.

I.46 Comment
"Speed data was collected in the vicinity of the high-crash intersections of SE Bluff Road at SE 362nd Avenue, SE Dodge Park Boulevard at SE Cottrell Road, SE Lusted Road at SE Altman Road, and SE Oxbow Drive at SE Altman Road. The recorded 85th percentile speeds were as follows:

1. *On SE Bluff Road west of SE 362nd Avenue - 49 mph eastbound, 51 mph westbound*
2. *On SE Bluff Road east of SE 362nd Avenue - 50 mph eastbound, 53 mph westbound*
3. *On SE Dodge Park Blvd west of SE Cottrell Road - 54 mph eastbound, 58 mph westbound*
4. *On SE Lusted Road east of SE Altman Road - 44 mph eastbound, 46 mph westbound*
5. *On SE Oxbow Drive east of SE Altman Road - 49 mph eastbound, 50 mph westbound*

The potential for collisions with heavy vehicles at the measured travel speeds significantly exacerbates the existing safety concerns at these already high crash locations."

Response to Comment: The measured speeds are what is measured today with freight, farm, pedestrians, bikes, and horses using the roadways. It can be assumed that a large percentage of these volumes are motorists from the immediate area, commuters to work, and freight to and from local farms. The posted speed limit on Bluff Road and Lusted Road is 45 mph. Both Oxbow Drive and Dodge Park Boulevard are unposted and the "basic speed rule" per ORS 811.100 applies. The basic speed rule states a motorist must drive at a speed that is reasonable and prudent at all times by considering:

- Other traffic.
- Road and weather conditions.
- Dangers at intersections.
- Any other conditions that affect safety and speed.

ORS 811.105 specifies speeds that are evidence of the basic speed rule violation. More specifically ORS 811.105(2)(e) indicates that motorists traveling at speeds over 55 mph violate the basic speed rule for Dodge Park Boulevard and Oxbow Drive. All construction Trucks will be operated by professional, trained, licensed drivers that receive comprehensive safe driver training and are directed to follow this training at all times. This training will include a strict requirement to obey speed limits and the basic speed rule. To the extent that there are other users of the roadway that are exceeding speed limits, that is not a hazardous condition created by the project.

Additional safety comments were previously addressed starting on page 21, paragraph 4; page 22, paragraph 2; and page 23, paragraph 3, of Exhibit I.84.

Exhibit I.49: Suzanne Courter

I.49 Comment
"They have only included a small "study" area of roads and intersections in their analysis acting like all this traffic won't impact or affect other roads or communities before arriving next to the site and the "study area". There will be some roads closed down to one (1) lane and some closed completely for periods of time. Truthfully without even the change to single lane traffic, road closures or detours the sheer number of additional vehicles alone, some being large construction trucks, would gridlock the roads beyond imaginable. Another conclusion made is that all intersections will perform at acceptable levels of service with minimal delay accept for two near the fresh water pipelines."

Response to Comment: The study area is defined by the project and reviewed and approved by the County. The process of identifying the study area was consistent with the process used by many local municipalities. The further vehicles travel from the project, the more dispersed project related traffic becomes, lessening the impacts on the traffic network. Through coordination and discussion with the County and considering study intersections defined by the project, intersections of relevance in the County TSP and locations further requested to be added to the study by the County, the current study area was defined and approved. See additional discussion at Exhibit I.84 page 24.

The statement that intersections will perform at acceptable levels is based on Highway Capacity Manual analysis procedures -- which is the industry standard -- and analysis of AM and PM peak hours. This analysis was compared to county standards to draw conclusions.

I.49 Comment
"Another statement made is that Oregon Trail Academy (OTA) is not expected to have significant construction traffic (this statement was made when they were expecting approval of the construction road directly next to the school's playground chain-link fence). That county approval is still in process. It's stated that no mitigation is recommended since construction traffic is not anticipated on SE Proctor and no queueing impacts were seen out on S.E. Bluff. [Images were provided by commenter at school site]. Their mitigation for school traffic coming or leaving before the beginning school bell and after the ending school bell is twenty minutes on either side which doesn't take into consideration any school activities or additional parental pick up times."

Response to Comment: Access B, the Bluff Road Access near the Oregon Trail Academy was not approved by Clackamas County for construction use.

As discussed in detail in the response to I.12 above, OTA is one of the schools identified in the school-by-school avoidance condition table. Specifically, all construction traffic will be instructed to avoid SE Proctor Road all day during days that school are in session. Even on days when school is not in session SE Proctor Road is not expected to be a road that would be frequently used by construction drivers. Trucks and craft labor commuters will also be instructed to avoid SE Bluff Road just east of SE 352nd Avenue and to SE Bear Creek Lane for a full 30 minutes before and after the published school start time and a full 30 minutes before and after the published school end time. During those two, hour long avoidance windows neither Trucks nor craft labor commuters would be expected to drive through the intersection of SE Bluff Road and SE Proctor Road. While OTA does not have direct access onto Bluff Road, PWB believes that that the additional mitigation measure is appropriate given the concerns raised by OTA related to the use of the intersection during drop-off and pick-up windows.

Thirty minutes is greater than the twenty minutes that was seen to be sufficient in the analysis of pick up and drop off activity provided in the Construction TIA. Traffic evaluations consider normal operations and not the occasional special event that can be unpredictable as the number of vehicle trips is seldom known in comparison to student drop-off and pick-up.

I.49 Comment
"Of real concern to me is their description of S.E. Proctor. Rd. They call it a minor arterial road with a speed limit of 55 mph. That road is extremely steep, very narrow with absolutely no shoulder to protect dropping off into ditches bordering both sides of the asphalt. I personally drive that road sometimes but prefer not to since meeting an oncoming car even with both drivers on their correct sides of the road makes me anxious for lack of width."

Response to Comment: Roadway functional classifications and basic rule speeds are defined by the County and State and are not defined by the project. More importantly, under the proposed school-by-school condition, all construction traffic will be instructed to avoid the segment of SE Proctor Road fronting OTA during all hours of days that schools are in session.

I.49 Comment
"When SE Dodge Park Blvd is either single lane or closed completely (which PWB says it will be) and the same restrictions on SE Lusted, vehicles from lower (eastern end) of both SE Lusted Rd and SE Dodge Park Blvd along with traffic crossing the Bull Run Bridge will need to use SE Proctor to leave that area or wait in line for the traffic controls. Normally they could have had the option of turning off SE Dodge Park onto SE Cottrell Rd but that intersection will become one of the most heavily impacted during the 5 - 7 years of construction."

Response to Comment: The Construction TIA clearly identifies the paired roadway closures on Page 14 under the "Pipeline Construction Lane and Roadway Closures" section. SE Lusted Road and Dodge Park Boulevard are not identified to be closed as the same time. This is intentional as east/west travel would be impacted with both roads closed at the same time.

I.49 Comment
"Another concern that isn't addressed in any traffic report is the fact that Oregon Trail School District buses use T.H. Belcher's circular driveway at 38755 SE Bluff to turn school buses around four (4) times a day on school days. Considering the large dip in SE Bluff right where that driveway enters and exits

Belcher's property there are serious sight distance issues. With so many additional trucks producing constant road noise, listening for traffic won't be helpful anymore either. If trucks and heavy traffic on SE Bluff cannot see the buses slowing to enter or exit Belcher's property or the buses can't find a break in the traffic that will be a likely place for accidents to occur…."

Response to Comment: We believe this property reference is actually 33755 SE Bluff Road (circled in red in the following photo). It appears that county stopping and intersection sight distance standards are met for the western most driveway access – which is the access that the bus would be exiting, safely, to turn back towards OTA. Hearing is not a requirement for determining oncoming traffic. However, if trucks produce more road noise, it would be logical that an oncoming truck would be more easily heard. If the location is a frequent bus turn around location, then that information can be provided during briefings to Truck drivers.

I.49 Comment

"One more for the record is that the flats (east end) of lower SE Lusted in Clackamas County will be torn up for very extended periods of time and there won't be another option in that location for buses to pick up or let off school children. As of this date PWB has not given Student's of America Bus system any plan to allow the district to safely and timely get children to school and home again. PWB hasn't supplied a safe route plan to Gresham Barlow School District even after being asked therefore it seems safe to assume no plan will be presented to Oregon Trail's Students of America Bus System."

Response to Comment: This is an incorrect assumption. The Project is dedicated to coordinating with the school districts and the bus service providers to provide bus access for student pick-up and drop-off. This has been clearly discussed in the Construction TIA on page 20 and in Exhibit I.84 on page 27, paragraph 5.

See also the response to the comments under Exhibit I.12 related to Gresham Barlow School District.

In a meeting in November of 2022 with PWB, the director of OTA and the Board Chair of OTA said that the school only has one bus that transports students from Sandy, which is to the south of the school. This is consistent with the comment in Exhibit I.54 that "*We are a public charter school with only bus hub*

service from Sandy." There are no roads between OTA and Sandy that will have pipeline construction or are anticipated to need "fix-it-first" improvement under the revised proposal for Transportation Condition 6 provided above under the response to comments for Exhibit I.10. Therefore, given the avoidance by Trucks and craft labor commuters of Bluff Road during the two, one-hour windows around school start and school end times under the school-by-school proposed condition of approval – which is when the single bus would be accessing the site – there will not be an impact on OTA's operation of the bus hub service from Sandy.

Exhibit I.52: Ken Carlson

I.52 Comment

"The only access to Carlson Farms is Dodge Park Blvd, which will be significantly impacted by the construction plan. It is very misleading to state that we do not generate a significant number of road trips, when in actuality this study has no idea. For example, this year in our empty fields, we have begun planting row crops which will require more daily, year-round field work and increase farm traffic and truck trips. Field and tree maintenance activities will be performed on a regular, often daily basis by farm employees who will need unencumbered access to the farm, as is an accepted farming practice. It is reasonable to be concerned that the magnitude of this project's seven-year construction plan will make it difficult for me to find and keep employees who are willing to deal with road closures, delays and detours on a daily basis for seven years. Deliveries, service providers, and vendors are also part of an operating farm's 'farm traffic,' yet none of these things is discussed in the report. This fact, that the report fails to acknowledge what truly constitutes farm traffic and disregards these operationally necessary activities, is further proof that the report makes irresponsible and uniformed claims about the impacts of PWB's construction plans on the livelihoods of farmers."

Response to Comment: The lane of traffic passage in Dodge Park Boulevard will be on the north side of the road, adjacent to Mr. Carlson's driveway, allowing vehicles from his property unimpeded entry and exit of the driveway to the roadway even when the work zone is directly in front of the driveway. The contractor is required to prioritize and facilitate movement of all farm traffic similar to facilitating emergency vehicles. This included deliveries, pickup of crops, employee access, etc. The statement of trip generation is intended to represent that trips to and from the farm will be accommodated. This has been previously addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access".

I.52 Comment

"When PWB begins its road improvements followed by pipeline construction on Dodge Park Blvd, and the intersections with Cottrell Rd and Altman Rd, it will force a massive significant change to our accepted farm practice in that we won't be able to accommodate on demand customer visits, or on demand digging and shipping. This practice will be prevented because there will be times, as stated in the construction plan, that access to our farm will be significantly inhibited. Customers are not going to want to sit in road construction to come view our products, they will choose another nursery that is not located inside of a massive construction site. Getting crews to the nursery to dig the trees will be difficult for the same reasons, as will getting a semi-truck or large container truck to the farm to ship the tree. During wet periods or inclement weather while the road is torn up, it's reasonable to expect our home and farm

access driveways will be close to impassable for any farm-related trucks or equipment, and possibly even passenger vehicles."

Response to Comment: Construction will not prohibit or change the above practices. See previous comment on accommodating farm traffic. As noted above, the lane of traffic passage in Dodge Park Boulevard will on the same side of the road as Mr. Carlson's driveway (the north side), allowing vehicles from his property unimpeded entry and exit even when the work zone is directly in front of the driveway. Any delay at the driveway would be measured in minutes. This will be accompanied by signing to indicate a business is open during construction. This was addressed on page 17, paragraph 7, of Exhibit I.84 under the heading "Agricultural Business Access".

I.52 Comment
"We also have a neighboring farm that leases a one-acre section of our property that is in production. They bring their own tractors, workers and equipment in on a regular, year-round basis to maintain their crop, which have 3-year growth cycles. This is an accepted farm practice, both leasing fields to/from other farmers and landowners, as well as daily, year-round field work. The construction on Dodge Park Blvd will both encumber and at times restrict access to this field, which is a significant change from normal, accepted practice of being able to freely access and maintain our fields and product. Ultimately, it is reasonable to assume that this farmer may end his lease with me due to the encumbrance of access, costing me a 3-year lease contract.

Response to Comment: See the above comment relating to how Mr. Carlson's driveway accesses a section of Dodge Park Boulevard that will not be closed.

I.52 Comment
"… the road construction itself creates significant hazardous conditions, a violation of MCC 39.7515 (F) approval criteria. Road construction of this magnitude will undoubtedly have a negative impact on drivers, both on local residents trying to drive to work/town and home, but especially on project-related traffic who are not familiar with our rural roads. Construction vehicle operators, staff employees, service providers, vendors, contractor crews, and others will be flooding this area daily, despite PWB's attempt at trying to convince us they will provide shuttle service in and out of the area. That only accounts for onsite employees – independent contractors, service providers, craft personnel and vendors are highly unlikely to be amenable to coordinating their entire schedule around a shuttle service and force their employees to use it. Hazardous conditions are created when hundreds of additional vehicles and drivers flood into our rural road system every day, as it's not designed to handle that amount of traffic. Road surfaces will quickly deteriorate under the stress of additional traffic, and side roads with no striping or shoulders and numerous residences will become main detour routes, putting those local residents at a significantly higher risk of vehicle and pedestrian-involved accidents."

Response to Comment: Road construction and placement of pipes will follow industry accepted safety practices and standards. These include those required by Multnomah County and federally developed practices such as the *Manual on Uniform Traffic Control Devices*. These accepted standards are in place to improve the safety of work sites and for the public that may live, work, or drive in the area.

A detailed TDMP has been developed to reduce construction traffic. As detailed above, the revised TDMP utilizes a combination of strategies (i.e. vanpool, shuttles, offset shifts, etc.) to reduce traffic

volumes accessing the site to under 296 vehicles. This limit accounts for all vehicles accessing the site and the analysis on which it is based includes all the categories of vehicles that will access the site (that is, it is not only onsite employees, but also independent contractors, service providers, etc.)

The capacity of roadways to handle traffic levels was previously addressed on page 2, paragraph 5 of Exhibit I.84.

Roadways will be improved along haul routes, pipeline routes, and other roadways used by construction Truck traffic in advance of their use, with the "fix-it-first" approach described under the response to comments from Exhibit I.10 above.

Construction vehicle and safety was addressed on page 23, paragraph 3, of Exhibit I.84.

Exhibit I.53: R&H Nursery

I.53 Comment
"All deliveries for the nursery are made via Carpenter Lane. These deliveries are made periodically year-round. Once again in GlobalWise's report they state that there is "NO ALTERNATE ROUTE"! This could cripple my business as well from not being able to receive vital supplies throughout the year. Furthermore, drivers will refuse to even try to get to the nursery. One example of this would be my outhouse service. We have 4 portable toilets on the Carpenter Lane locations and the drivers that service these have a very tight schedule. If they cannot reach the units in a timely fashion they will just skip the unit and the outcome will be a sanitary and health issue. This is one example of the weekly service we receive. This could be the same for mail, garbage service, etc."

Response to Comment: Traffic control measures to maintain access into and out of the R&H loading dock area are addressed above under the response to comments in Exhibit I.7a. Providing flagging or similar devices will provide R&H full access to and from the loading dock areas, so services are not impacted. The analysis of this issue and the proposed solution is discussed in detail in Exhibit I.80 (Globalwise's First Open Record Period Response), pages 37-39. In addition, TDM strategies have been developed and submitted to the County to reduce site traffic.

I.53 Comment
"One of the greatest threats to my nursery comes from the traffic congestion and our reputation. The volume of trucks on the road will be a logistics nightmare. We will be unable to timely ship our trees to our customers. The delay of traffic will slow common carrier semi's from reaching the headquarters farm where we load out all orders. As this continues, we will get a reputation on being impossible to reach in a timely fashion and trucks will refuse to take our loads to the east coast. Furthermore, since plant sales have a narrow window in the spring our customers will begin to look elsewhere for their plant material. This will come from the Globalwise report they state that there is "NO ALTERNATE ROUTE"! and the massive volume of traffic in the surrounding area that will cover every road from here to Interstate 5 to Interstate 205 to Highways 26, 212, 211 and even further away."

Response to Comment: The impacts of the project level traffic will not impact State Routes. Measures will be implemented during construction to facilitate priority movement of vehicles to and from the R&H loading area. The goal is to provide R&H full access to the loading dock areas, so services are not

impacted. In addition, TDM strategies have been developed and submitted to the County to reduce overall and peak hour site traffic.

Exhibit I.54: Emily Hafer

I.54 Comment
"Of the 17 intersections studied, 8 (eight) of them are very close to our school. That is 47% of the studied intersections. Two are within 400 feet of our school. Although the study states on page 1 that "the collective construction traffic will have minimal impacts on intersection and roadway operations" that is hard to believe."

"The study focused on delays (page 12) but there is more than just waiting 10 seconds or 11.3 seconds at intersections #10 and #11 (page 12). The trucks will bring noise, dust, and increased danger to our roadways."

Response to Comment: Delays are average delays, and the analysis procedures followed are those incorporated into County code and the Federal Highway Administration's *Highway Capacity Manual* procedures. This manual is the industry standard for intersection operations analysis. The number of intersections close to the school does not indicate that there will be higher impacts on that school.

I.54 Comment
"Truck Routes 3 and 4 (page 10) all use Site Access B, which is a road 335 feet from our school that parallels our playground yard. Truck Route 4 is especially dangerous, as it will have to navigate the five-point intersection (#11), make the curve at Bluff, which was noted by Oregon Trail School District's Business Manager, Timothy Belanger, in a letter submitted, to be particularly dangerous as the district repairs fencing at this curve every year due to car run offs."

Response to Comment: Site Access B is no longer proposed for construction use. Intersection #11 was reconfigured in 2019 as a four-point intersection to mitigate safety concerns. Crash data since that reconfiguration is limited and does not indicate any mitigatable crash pattern.

I.54 Comment
"While Oregon Trail Academy's traffic queueing was observed and reported correctly on page 21, that most of our queueing occurs on Proctor Road, we still have families driving to OTA from Gresham and Troutdale, who would be impacted by the intersections studied. We are a public charter school with only bus hub service from Sandy. Therefore, most of our 240 students arrive via personal vehicles. Families driving in from outer areas would definitely be impacted by the closures and detours."

Response to Comment: It was fully understood that OTA is a charter school with most students arriving by personal vehicle. Construction information will be provided via on-line apps allowing families outside and within the area to identify construction activities that may impact their commute to OTA. The restriction on Truck and commuter traffic specific to OTA provided above in response to the comments in Exhibit I.49 provides additional response to this concern. Restricting Truck and most commuter traffic 30 minutes before and after the bell removes all construction traffic adjacent to the schools for over 60 minutes and applies to Bluff Road near OTA even though OTA does not directly access Bluff Road.

The Construction TIA in Exhibit A.230 was provided addressing impacts due to construction traffic, roadway closures, and detours. Exhibit I.86 further supplements the Construction TIA to address the One-Access Analysis. Students arriving via personal vehicles will not be materially delayed in reaching the school even during peak construction activity. Additional responses to similar testimony are provided on page 20, paragraphs 7 and 9, and page 28, Response to Gresham-Barlow School Board testimony in Exhibit I.84.

I.54 Comment
"I am surprised that no intersections to the south were studied, as it is my understanding that trucks from the facility site will be traveling south to Eagle Creek to drop materials. By not studying the south, particularly intersections in Sandy that are already clogged in the morning by Sandy High School Traffic, they left a gaping hole in the analysis. The trucks will travel by most of Oregon Trail School District schools, save two, when travelling the southern route. I do not think a decision regarding traffic impacts can be made in good faith until the impacts of intersections in Sandy are analyzed."

Response to Comment: The construction study noted one of the haul routes is to the south in anticipation that Eagle Creek could be a destination. This is not a confirmed location. In addition, Truck traffic is a smaller percentage of the overall construction traffic and other material drop-off and pick-up sites may be used that will disperse construction Truck traffic to the north as well.

How the study area was defined is addressed within this document under the first response to comment under Exhibit I.49.

I.54 Comment Summary
In agreement with Gresham Barlow School Board, I agree that by leaving it up to the Construction Managers and General Contractors to "take note of start and end times when developing delivery schedules" to "allot an additional 20 minutes... for school-related traffic to dissipate" is nebulous and does not go far enough to ensure enforcement of such a rule.

Response to Comment: As discussed in detail in response to I.12 above, the proposed school-by-school condition identifies specific segments and specific hours for avoidance for OTA, as well as other schools. Therefore, both construction managers and drivers will have a clear understanding of what routes are available and when for Truck trips. In the case of OTA, Trucks must avoid Bluff Road, and the resulting intersection of Bluff Road and Proctor Road, during the two, one-hour windows of time. The allotted one-hour window exceeds the 40-minute window around start and stop times that was observed to be sufficient in the Construction TIA to provide an additional timing buffer for the highest volume of school-related traffic to dissipate.

I.54 Comment
"Schools across Gresham Barlow and Oregon Trail School District have varying open and end times. How would General Contractors be able to work around a large range such as 7:45am-9:05am (for the four schools listed in the study), as the "truck traffic is spread throughout the workday" (page 3) of "7:00 AM to 6:00 PM" (page 7)."

Response to Comment: As discussed in detail in the response to I.12 above, the school-by-school avoidance condition creates the requested certainty for both drivers and schools. The avoidance times for each school are expressly identified and will be updated as needed. The categories of construction

drivers will be provided separate lists that clearly identify the road segments to avoid entirely on days when school is in session and the specific windows of avoidance in other cases.

Limiting the times when haul routes can be used by construction trucks is feasible both because there are other available alternative haul routes and because the contractors can allot additional time in delivery schedules as part of the resource-loaded schedule. Limiting the times when roads near schools can be used by commuters is feasible because most commuters will arrive before, and depart after, school hours. Additionally, there are many tools the contractors can use to ensure compliance. For example,

- Provide Project specific signage directing the route.
- Implement an accountability plan to penalize drivers if they are seen using prohibited routes. This can include being removed from the job for multiple violations.
- Perform random “spot checks” to ensure construction traffic is not using prohibited routes.

I.54 Comment
“Page 14 states that "traffic for local residences, local agricultural and other businesses, and emergency vehicles will still be allowed local access during full closures." School buses and parents' personal vehicles were not mentioned in this statement. Would students be able to get to school on time, and be given the courtesy the local residents would? Travel Demand Management strategies were mentioned (page 1) but in the Mitigations Appendix E, it was hard to understand what these strategies would be.”

Response to Comment: Accommodating school buses are specifically addressed on page 20 under the “Emergency Vehicles and Bus Routes” and page 26 paragraph 4, of the Construction TIA, Exhibit A.230. PWB and the contractors will coordinate with the schools and districts on schedules, bus routes that need to be maintained, and bus routes that can be temporarily modified. Students will not be prevented from getting to school on time even if temporarily modified bus routes are needed because routes can be designed to consider construction activity in the area.

I.54 Comment Summary
“Lastly, the analysis mentioned three roads in particular with low Pavement Condition Index scores. SE Altman Road was noted to be "narrow with unpaved shoulders and no pavement markings" and SE Carpenter Lane "is in poor condition with cracking and potholes" (page 4). While only two streets were highlighted, many of the roads in a two mile radius of Oregon Trail Academy are in poor condition: narrow, no shoulder, certainly no sidewalks, and potholes. If truck traffic was brought to this area, the roads would crumble. We do not have the infrastructure to support this amount of traffic.”

Response to Comment: PWB has committed to improve and maintain roadways that will be used and that will be impacted by pipeline installations. This was addressed starting on page 4, paragraph 1, in Exhibit I.84 and under Comment I.10 above (along with a revised, expanded, fix-it-first proposal).

Exhibit I.56: Brent Leathers

I.56 Comment
“I own and operate a fleet of fuel tanker trucks (“Leathers Fuels”). My taker truck/trailer combination are 70’ to 75’ long, and weigh over 105,000 pounds when fully loaded. This is similar to the typical dump

truck with "pup" (trailer) in terms of length, weight, and turning radius, although the long tongue between truck and trailer for dump trucks means that the combination requires a larger turning radius than the vehicles my company operates."

Response to Comment:
The intersections of SE Cottrell Road / Dodge Park Boulevard and SE Cottrell Road / Carpenter Lane are designed for or will accommodate a WB-50 tractor-trailer combination. This is the largest truck that will be used for the project during or after construction without special oversized load procedures, such as use of pilot vehicles and flaggers. Other truck combinations, such as a dump truck with a trailer (also known as a "pup"), have tighter turning paths. The vast majority of trucks for the project will be dump trucks with trailers. Because the design can accommodate the WB-50 tractor-trailer combination, it will be able to accommodate safe movements by all other truck combinations that will be used for the project, other than infrequent use for oversized loads that require special safety procedures. Turn paths stay entirely within the existing right-of-way and on paving or gravel shoulders, with a minimum of one foot. clearance between the turning path and the outside edge of the shoulder. Please see the memorandum "Truck Turning Paths at Multnomah County Intersections" submitted concurrently with this memorandum.

I.56 Comment
"The PWB application provides scant specificity regarding the route(s) construction trucks will travel."

Response to Comment: Construction vehicle haul routes are well detailed in the Construction TIA, Exhibit A.230 on Pages 7-10. Detour routes are detailed on pages 14-16.

I.56 Comment
"It is clear that the expected truck count is 350+ trucks per day, and that mass quantities of rock and concrete will be hauled to the site, and similar quantities of dirt hauled away from the site. It appears that the 350+ trucks per day will equate to 700+ trips per day, as these trucks will come to the site, and later leave the site. If we assume a 9-hour workday, that equates to 1.3 trucks per minute."

"That calculation does not include the various other trucks/cars for vendors providing supplies, contractor employees, PWB staff trips, residential and farm traffic, etc."

Response to Comment: All of the anticipated construction-related vehicles (including vendors, employees, staff, etc.) are accounted for in the Project-Generated Trips section of the Construction TIA, Exhibit A.230, on pages 7-10. This includes trips to and from the site.

I.56 Comment
"What is clear is that all of those trucks must use the intersection at Carpenter Lane and Cottrell Road (on the first aerial view picture below, the intersection between the two arrow points). Trucks leaving the proposed construction site (westbound on Carpenter) will have to utilize the entire width of Carpenter at its intersection with Cottrell Road, in order to stage a turn onto Cottrell Road."

"Because the applicant does not clarify the details, we do not know if these trucks will turn southbound or northbound."*

Response to Comment: Trip distribution for all types of vehicles is shown on page 10 of the Construction TIA, Exhibit A.320. In addition, on page 2 of Exhibit I.86, trip distribution forecasts using Carpenter Lane

as the only site access were modeled for the impacted intersections of Cottrell Road / Carpenter Lane and Cottrell Road / Bluff Road. Exhibit I.86 modified page 10 of Exhibit A.320 to shift trips that previously were anticipated to use Access B to instead go southbound on Cottrell Road from Carpenter Lane.

Roadway improvements at the intersection of Cottrell Road / Carpenter Lane will modify the intersection to meet Multnomah County design standards to safely accommodate truck turning movements between Cottrell Road and the Filtration Facility on the eastern portion of Carpenter Lane. Please refer to the memorandum "Truck Turning Paths at Multnomah County Intersections" submitted concurrently with this memorandum.

I.56 Comment Summary
"The trucks exiting Carpenter Lane must make a sharp, 90-degree turn onto Cottrell (to proceed north to Dodge Park Boulevard, or south to Bluff Road). As the truck/trailers swing out onto Cottrell, those trucks will by necessity consume the entire road width of Carpenter and then Cottrell, and their trailers will not return to the proper lane for considerable distance. If Dodge Park Boulevard is the destination, those trailers will partially block the southbound lane of Cottrell, eliminating the possibility for a returning truck to pass by. This short section of Cottrell is particularly steep, a 5 to 6% grade (by comparison, Hwy. 26 west of Government Camp is 3% grade)."

"Continuing the path of a truck exiting the PWB site, the example truck/trailer will stop at the intersection of Cottrell and Dodge Park. This particular position is subgrade, meaning that the natural topography is some 10' above the road surface. The truck driver cannot see up and down Dodge Park until the cab is nearly protruding into the Dodge Park eastbound lane."

"The driver of this truck must now wait patiently until Dodge Park is essentially clear of vehicles. The 90-degree turn onto Dodge Park will be, by necessity, a slow movement, especially for a loaded truck. The trailer is sitting on a steep hill, and 90-degree turns take effort and concentration. It will take some time for the vehicle to accelerate and clear the intersection."

"As I visualized these movements, then considered the returning trucks, I realized that returning trucks will have to stop on Dodge Park Boulevard and wait for the entire path previously described, to clear. Two truck/trailers cannot pass each other throughout the path described to this point (the yellow-highlighted section on the first aerial picture, below)."

Response to Comment: With the widening of Carpenter Lane and improvements to the Carpenter Lane / Cottrell Road and Cottrell Road / Dodge Park Boulevard intersections, Truck turning paths will be accommodated, as shown in the memorandum "Truck Turning Paths at Multnomah County Intersections" being submitted concurrently to the record as a separate document. This is true regardless of the steep grade. Required site distances per Multnomah County Design Standard will be provided at these intersections for haul route approaches. In particular, the proposed retaining wall, grading, and removal of vegetation at Dodge Park and Cottrell will facilitate compliance with sight distances standards for Trucks stopped northbound on Cottrell Road. This will include coordinating with the County to ensure vegetation is cut back on each of the intersection corners.

I.56 Comment
"… I concluded that the safest, and most logistically-sound 'transportation plan' will necessitate that returning trucks approach from the western portion of Carpenter Lane (i.e., between Altman Road and

*Cottrell Road)***. That path will allow trucks coming to the project site to stop and wait at the Carpenter/Cottrell intersection, facing eastbound, where they can see the exiting trucks clearly. A driver in this position can then wait for the opportunity to proceed across Cottrell, when no out-bound truck is in the way."*

"The end result is that the entirety of Carpenter Lane will become a heavy 'truck route' for up to 5 years, with the consequences that number of witnesses have identified, including impacts on the availability of fire and emergency services, and the destruction of the rural and agricultural character of this area."

"Please note that these intricate truck movements can be performed by average and above truck drivers, although consistent attention to detail is imperative. Will the various trucking contractors have good drivers, who consistently practice/perform safe maneuvers? Is it likely that there will be drivers that are merely "human", and experience lapses of attention, or get in a hurry, and create even worse hazardous situations? My experience is that if you operate trucks, eventually you have terrible accidents, sometimes even though your own driver is not at fault."

Response to Comment: Carpenter Lane west of Cottrell Road is classified as a Local Road and is not classified as a through freight route. Heavy through vehicle travel is not allowed on the roadway today. This restriction will be retained through construction and on-going operations and will be relayed to vehicle drivers though training and signage.

Drivers are required to be licensed to understand the limitations of their vehicles. Laws are in place to govern motorist behavior, construction and temporary traffic control strategies are developed following local, State, and Federally approved guidelines. Briefings and safety materials will be provided to workers and Truck drivers, intersections near the site will be improved to facilitate larger vehicles, roadways will be improved along haul routes, pipeline routes, and other roadways used by construction Truck traffic in advance of their use. The roadway improvements will reduce risks to all roadway users.

I.56 Comment
"Finally, the PWB has indicated it would make roadway improvements to mitigate hazards and difficulties in the movements I've just described. I do believe they can reduce some of the difficulty of the movements by widening Carpenter Lane, and removing the natural berm and trees at the intersection of Cottrell/Dodge Park. However, even with Carpenter Lane at full width, trucks turning from Carpenter onto Cottrell will block any other vehicle from using that same path, until it is completely onto Dodge Park Blvd. Long truck/trailer combinations simply require very large turning radiuses that exceed the 55' right-of-way available for use.

"Those truck/trailer combinations must swing ultra-wide in order to get the back axles of the trailer, which 'scuff' through a tight, 90-degree turn, to clear the inside corner."

"Removal of the berm at Cottrell/Dodge Park will greatly increase sight distances for both egress and ingress on Dodge Park and Cottrell. But the turning radiuses required for 70' truck/trailer combinations negate the possibility for trucks to pass each other in the yellow-highlighted road sections."

Response to Comment: The design of these intersections has been modified so that all Truck turning movements are safely accommodated. See the memorandum "Truck Turning Paths at Multnomah County Intersections" being submitted concurrently to the record as a separate document. As noted

above, required site distances per Multnomah County Design Standard will be provided at these intersections for haul route approaches. In particular, the proposed retaining wall, grading, and removal of vegetation at Dodge Park Boulevard and Cottrell Road will facilitate compliance with sight distances standards for trucks stopped northbound on Cottrell Road. This will include coordinating with the County to ensure vegetation is cut back on each of the intersection corners.

I.56 Comment
"… the burden is upon the PWB to commit to a transportation plan, complete with mitigative measures, for Multnomah County experts to analyze and comment upon."

Response to Comment: The applicant has provided the following to Multnomah County Transportation to support identifying traffic impacts for on-going operations and construction:

- Project TIA, Exhibit A.31
- Construction TIA, Exhibit A.230
- Water Filtration Facility Carpenter Lane One-Access Analysis Update to Construction TIA, Exhibit I.86
- Revised TDM Plan, submitted concurrently with this memorandum
- Proposed conditions of approval in Exhibit H.3 with explanatory narrative
- The separate memorandum and plans related to turning movements submitted concurrently into the record with this memorandum.

I.56 Comment
"Generally speaking, we local residents believe that the Portland Water Bureau is attempting to focus our attention on the completed facility and later operations (which have serious impacts as well, although less dramatic ones). In using that approach, the PWB attempts to ignore several years of continuous traffic impacts and safety issues."

Response to Comment: PWB has developed an on-going Project operations TIA (Exhibit A.31) and Construction TIA (Exhibit I.86) to analyze and mitigate, as needed, impacts from both. These documents along with updates are used to provide information to the public and approving agency. The approach taken evaluates the worst-case traffic conditions under conservative assumptions and fully discloses the years that traffic will impact the study area roadways.

I.56 Comment
"This narrative has only considered the first "leg" or portion of the transportation logistics. This portion provides an illustration of the complexities and safety hazards. But I have not addressed impacts that will occur all along any other prescribed routes, including those roadways adjacent to existing schools, where parents routinely line up twice a day to pick up/drop off their children. There are many intersections and paths that will suffer from the effects of more than one truck per minute. The Portland Water Bureau should delineate dedicated routes for full review on this record and address the impacts along the entire length of those prescribed routes."

Response to Comment: Haul routes to and from the Project site are provided in the Construction TIA. Operationally, intersections will operate at acceptable county levels. Roadways that will be used as haul routes will use temporary traffic control signs (approved by the county) to identify the routes.

Additionally, safety information will be provided to remind construction workers and Truck traffic of local conditions and restrictions along study roadways. Restrictions around schools during pick up and drop off have been identified as mitigations, as discussed above in this report.