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April 9, 2024

Michael Reynolds, DVM & Jeff Brubaker, DVM
DBA Stayton Animal Hospital
1308 North First Street
Stayton, OR 97383

Subject: Stayton Veterinary Hospital – Transportation Assessment Letter (TAL)

Dear Michael and Jeff,

This Transportation Assessment Letter is written to provide information related to a proposed expansion of the existing Stayton Veterinary Hospital at 1308 N First Avenue in Stayton, Oregon. The analysis is intended to address the transportation impact analysis requirements of Stayton Municipal Code Section 17.26.050. In addition, this letter addresses parking supply and demand for the proposed facility.

SITE LOCATION AND PROJECT DESCRIPTION

The subject property is located on the east side of N First Avenue north of E Hollister Street in Stayton. The project site consists of a full city block made up of five tax lots, the southeasterly tax lot contains the existing veterinary hospital. The vacant lot immediately north of the existing building will accommodate the proposed expansion, and the three lots on the west side of the block will accommodate off-street parking and loading for the veterinary hospital. The existing facility has a gross floor area of 5,205 square feet and is proposed to be expanded to 11,706 square feet (an increase of 6,501 sf).

The site will take access via two driveways, with one located on E Pine Street, and the other located on N Second Avenue. The existing driveways that served the homes which previously occupied the now vacant parcels surrounding the animal hospital will be removed as part of the proposed development, and the existing alleyway which connects E Pine Street to E Hollister Street through the middle of the block will also be removed. Accordingly, the proposed site plan will result in removal of the existing driveways on E Hollister Street and N First Avenue as well as a net reduction of two driveways on E Pine Street. N Second Avenue will continue to have one driveway access at the north side of the veterinary hospital.

N First Avenue immediately west of the site is classified as a Major Arterial and operates under the jurisdiction of Marion County. It has a three-lane cross section with one through lane in each direction and a center two-way left-turn lane. Existing sidewalks are in place on both sides of the roadway. It has a posted speed limit of 30 mph. No on-street parking is available along N First Avenue.

E Hollister Street immediately south of the site is classified by the City of Stayton as a Neighborhood Collector. It is a two-lane roadway with one through lane in each direction and no centerline striping. Existing sidewalks and on-street parking are available on both sides of the roadway. It has a statutory residential speed limit of 25 mph.



N Second Avenue is classified as a Residential Local Street by the City of Stayton. It has one through lane in each direction with no centerline striping and is subject to a statutory residential speed limit of 25 mph. Existing sidewalks and on-street parking are available on both sides of the roadway.

E Pine Street is also classified as a Residential Local Street by the City of Stayton. It has one through lane in each direction with no centerline striping and is again subject to a statutory residential speed limit of 25 mph. Existing sidewalks and on-street parking are generally available on both sides of the roadway; however, there are currently no sidewalks on the south side of E Pine Street immediately east of N Second Avenue.

An aerial image showing the project site and the immediate vicinity is provided below.



Aerial view of project site (image from Google Earth)



TRIP GENERATION

The trip generation estimate for the proposed use was prepared using data from the *Trip Generation Manual, 11th Edition*, published by the Institute of Transportation Engineers. Trip generation was calculated using the published trip rates for ITE land use code 640, *Animal Hospital/Veterinary Clinic*. The calculations are based on the gross floor area of the building.

Based on the analysis, the proposed 6,501 square foot veterinary hospital expansion is projected to result in an increase of 24 trips during the morning peak hour, 23 trips during the evening peak hour, and 140 daily site trips.

A summary of the trip generation calculations is provided in the table on the following page. A detailed trip generation calculation worksheet is also included in the attached technical appendix.

	Morning Peak Hour			Evening Peak Hour			Daily
	In	Out	Total	In	Out	Total	Total
+6,501 sf Veterinary Hospital	16	8	24	9	14	23	140

Based on the trip generation analysis, the proposed veterinary hospital expansion will result in a net increase of fewer than 25 peak-hour trips during both peak hours, as well as a net increase of fewer than 250 daily trips. Accordingly, a Transportation Impact Analysis is not required per Stayton Municipal Code Section 17.26.050. Instead, *“the applicant’s traffic engineer shall submit a transportation assessment letter indicating the proposed land use action is exempt. This letter shall outline trip-generating characteristics of the proposed land use and verify that the site-access driveways or roadways meet City of Stayton sight-distance requirements and roadway design standards.”*

The trip generation analysis provided herein satisfies the requirement to provide an outline of trip generating characteristics and demonstrates that the proposed land use action is exempt from the requirement for a full transportation impact analysis.

It should also be noted that the lot on the northwest corner of the block was recently the subject of a zone change from “MD” Medium Density residential to “GC” General Commercial zoning. Approval of the requested zone change was subject to a trip cap of no more than 200 average daily trips for the lot. The above trip generation analysis also demonstrates that the proposed expansion falls within the limits of that trip cap.



DRIVEWAY ACCESS STANDARDS

The proposed development includes two site access driveways, with one on N Second Avenue and one on E Pine Street. Both driveways are located on local residential streets, and no access is proposed to the higher-classification roadways of N First Avenue and E Hollister Street.

It is necessary to provide two access driveways for the proposed use, since the site will accommodate trucks with trailers transporting horses and other large animals. These vehicles will need to be able to access the site, circulate to and from the truck bay for loading, and exit the site in the forward direction.

The City of Stayton requires that driveways on local streets be located a minimum of 50 feet from the intersecting property lines at corners; however, where this is impractical driveways may alternatively be located 5 feet from the intersecting property lines or as a joint use driveway at the property line.

For the proposed site access driveway on E Pine Street, the site access will be located more than 50 feet from the intersecting property lines for the corners in both directions.

For the proposed site access driveway on N Second Avenue, the site access will be located 29 feet from the intersecting property lines to the north, and more than 50 feet from the intersecting property lines to the south. The driveway cannot reasonably be moved 21 feet farther to the south since the resulting driveway would extend through the north end of the proposed building and would eliminate the truck bay for equine access to the building. Elimination of the loading bay would also likely result in obstructions to the flow of traffic within the site as drivers would nonetheless need to stop in an area adjacent to the equine access, resulting in degradation to the flow of on-site traffic and the potential for traffic queues/obstructions to spill onto adjacent roadways or for drivers to need to back out of driveways into the adjacent public streets. As such, it is appropriate to consider allowing this driveway with lesser access spacing.

In this instance, a detailed examination of sight lines and potential conflicts was undertaken as part of the intersection sight distance analysis in the following section of this report. Based on the analysis, the proposed site access location is capable of safely supporting the proposed use at the proposed driveway alignment. Additionally, given the classification of N Second Avenue as a local street, the primary function of the street is to provide access to destinations, even when such access may result in the need for through traffic to slow or stop, which is why vehicles are permitted to routinely back into the roadway from residential driveways onto streets with this classification. Based on the safety and operational analysis as well as the access, circulation and loading needs of the veterinary hospital, it is recommended that the City of Stayton permit the driveway at the proposed location.



Both proposed driveways have widths meeting the requirements of the City of Stayton, and the on-site parking lot (with its proposed access locations and loading facilities) is designed in a manner to prevent vehicles from backing into the flow of traffic on public streets or blocking on-site circulation.

INTERSECTION SIGHT DISTANCE

Intersection sight distance was measured at the proposed site access driveway locations to verify that they can operate safely and efficiently. Based on an assumed design speed of 30 mph (five mph in excess of the statutory residential speed limit of 25 mph on N Pine Street and E Second Avenue), a minimum of 300 feet of intersection sight distance is desired per Stayton Municipal Code Table 17.26.020.4.c.

In accordance with the methods described in *A Policy on Geometric Design of Highways and Streets, 7th Edition*, published by the American Association of State Highway and Transportation Officials (AASHTO), intersection sight distance was measured from a position 15 feet behind the edge of the roadway at an elevation 3.5 feet above the proposed driveway surface to an oncoming driver's eye position 3.5 feet above the surface of the oncoming driver's lane.

For the proposed site access on E Pine Street, the available intersection sight distance was measured to be 421 feet to the east and continuous to N First Avenue to the west. Accordingly, adequate intersection sight distance is available at the proposed access location. However, since vehicles can approach from beyond the end of the roadway, an additional safety analysis of expected approach speeds and stopping sight distances for vehicles approaching from other roadways is appropriate.

Vehicles exiting from the Wilco store west of N First Avenue must stop prior to crossing N First Avenue, and therefore have an effective design speed at the limits of sight distance of 0 mph. Accordingly, adequate stopping sight distance is available for vehicles approaching from this direction.

Vehicles making 90-degree left-turns from a three-lane cross-section onto a two-lane roadway have an expected design speed of 21 mph or less. This design speed requires a minimum stopping sight distance of 120 feet. In this instance, vehicles making southbound left-turns from N First Avenue onto E Pine Street have an available sight distance of 226 feet (as limited by the existing building in the northeast corner of the intersection of N First Avenue at E Pine Street). This is well in excess of what is needed for oncoming drivers to identify any potential conflict and come to a complete stop to avoid a collision. Accordingly, adequate sight lines are available for safe operation when vehicles approach from this direction.

Vehicles making 90-degree right-turns have an expected design speed of 15 mph or less. This design speed requires a minimum stopping sight distance of 80 feet. In this instance, vehicles making northbound right turn from N First Avenue onto E Pine Street have an available sight distance of 127 feet (as limited



by vehicles parked within the on-site parking lot). Again, this is well in excess of what is needed for oncoming drivers to identify any potential conflict and come to a complete stop to avoid a collision. Accordingly, adequate sight lines are also available for safe operation when vehicles approach from this direction.

Based on the detailed analysis of the potential approach paths, design speeds, and sight distances, adequate sight distance is available for safe and efficient operation of the proposed site access on E Pine Street.

For the proposed site access on N Second Avenue, the available intersection sight distance was measured to be continuous to E Hollister Street to the south and beyond E Pine Street to the north.

Vehicles approaching from the north must stop prior to crossing E Pine Street and therefore again have an effective design speed of 0 mph at the limits of sight distance. Accordingly, adequate stopping sight distance is available for vehicles approaching from this direction.

Vehicles making westbound left turns from E Pine Street onto N Second Avenue have an available sight distance of 198 feet (as limited by a tree within the property at the southeast corner of the intersection of N Second Avenue at E Pine Street). Again, a minimum of 120 feet of stopping sight distance is required for the design speed of the 90-degree left turn on this approach. Again, the available sight lines are well in excess of what is needed for oncoming drivers to identify any potential conflict and come to a complete stop to avoid a collision. Accordingly, adequate sight lines are available for safe operation when vehicles approach from this direction.

Vehicles making eastbound right turns from E Pine Street onto N Second Avenue are projected to have an available sight distance of 103 feet (as limited by the trash enclosure at the northeast corner of the on-site parking lot). Again, this is well in excess of the minimum stopping sight distance of 80 feet required for vehicles making a 90-degree right turn at the intersection. Accordingly, oncoming drivers will be able to identify any potential conflict and come to a complete stop to avoid a collision. Accordingly, adequate sight lines are also available for safe operation when vehicles approach from this direction.

Vehicles approaching from the south must turn from E Hollister Street onto N Second Avenue and again have design speeds of 21 mph or less, requiring a minimum stopping sight distance of 120 feet. Since the distance to E Hollister Street along which sight lines are continuous is approximately 175 feet, adequate sight lines are available to accommodate stopping sight distance for any potential vehicles approaching from the south.

Based on the detailed analysis of the potential approach paths, design speeds, and sight distances, adequate sight distance is also available for safe and efficient operation of the proposed site access on N Second Avenue.



Based on the detailed analysis of sight lines at both proposed site access driveway locations, adequate sight distance is available for safe and efficient operation of the proposed driveways.

PARKING ANALYSIS

During the recent zone change process, several neighbors surrounding the existing Stayton Veterinary Hospital site expressed concerns regarding the heavy use of on-street parking in the immediate site vicinity. As part of the proposed expansion, it is therefore appropriate to assess the anticipated parking demands and compare the demand to the available parking supply to ensure that the proposed expansion is compatible with the surrounding neighborhood.

The proposed development plan includes an off-street parking lot that contains 43 standard parking spaces plus two additional handicap-accessible spaces and one truck bay for the clinic's call truck. These can accommodate a total of 46 vehicles within the off-street parking area. Additionally, the subject site has on-street parking on its three frontages on E Pine Street, N Second Avenue, and E Hollister Street. Assuming that only the near side of the street is used, the combined frontages of these streets provide 330 lineal feet for parallel parking (after subtracting driveway aprons), which can accommodate up to 14 vehicles without parking demands spilling onto the opposite side of the street and thereby impacting other uses and residents in the site vicinity. This brings the total parking available to the site to 60 spaces including the two handicap accessible spaces and the truck bay.

Parking generation for the proposed facility was projected using data from the *Parking Generation Manual, 6th Edition*, published by the Institute of Transportation Engineers. Parking generation was calculated using the published parking demand rates for ITE land use code 640, *Animal Hospital/Veterinary Clinic*. The calculations are based on the gross floor area of the building.

Since parking demands associated with the site are based on the total size of the proposed animal hospital rather than simply the increase in size currently proposed, the calculations were conducted for the full 11,706 square foot facility rather than the 6,501 square foot expansion.

Based on the analysis, an 11,706 square foot veterinary hospital would be projected to generate a peak parking demand of 36 vehicles. However, there is some variation in the parking demand rates between facilities. Often, it is better to use a high estimate of parking demand in lieu of the typical demand for a facility of equivalent size. Accordingly, an additional parking demand estimate was prepared based on the 85th percentile, meaning that it represents the peak at a facility that experiences higher parking demands than usual. This high estimate of parking demand for an 11,706 square foot veterinary hospital was 50 vehicles. These vehicles can adequately be accommodated by the 60 available parking spaces.



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Since even the high estimate of peak parking demand is lower than the number of parking spaces available for site use, the proposed veterinary hospital would not be expected to negatively impact the availability of on-street parking beyond the actual frontage of the site.

CONCLUSIONS

The proposed 6,501 square foot expansion of the existing Stayton Veterinary Hospital is projected to generate a net increase of 24 new trips during the morning peak hour, 23 new trips during the evening peak hour, and 140 new daily trips. These trips are projected to travel in several directions, thereby reducing the already minimal impacts of the site trips on the surrounding transportation system. These traffic increases are below the threshold at which a full traffic impact study is required, and below the trip cap that was placed on the subject property.

The proposed site access driveway on E Pine Street fully meets the City of Stayton's requirements for sight distance and the relevant roadway design standards.

The proposed site access driveway on N Second Avenue has access spacing of less than the preferred 50 feet for local streets, but fully meets the City of Stayton's requirements for sight distance. Based on the safety and operational analysis as well as the access, circulation and loading needs of the veterinary hospital, it is recommended that the City of Stayton permit the driveway at the proposed location.

The detailed parking analysis undertaken for the expanded veterinary hospital demonstrated that the site plan provides adequate parking to accommodate the needs of the facility within the site and its own frontage. Accordingly, the proposed use is not projected to negatively impact the availability of on-street parking for other uses and residents in the immediate site vicinity.

If you have any further questions regarding transportation and access for the proposed development, please feel free to contact me at (503)537-8511 or by email at mike.ard@gmail.com.

Michael Ard, PE
Principal



RENEWS: 12/31/2025

Appendix

Trip Generation Calculation Worksheet



Land Use Description: Animal Hospital/Veterinary Clinic
ITE Land Use Code: 640
Independent Variable: Gross Floor Area
Quantity: 6.501 Thousand Square Feet

Summary of ITE Trip Generation Data

AM Peak Hour of Adjacent Street Traffic

Trip Rate: 3.64 trips per ksf
Directional Distribution: 67% Entering 33% Exiting

PM Peak Hour of Adjacent Street Traffic

Trip Rate: 3.53 trips per ksf
Directional Distribution: 40% Entering 60% Exiting

Total Weekday Traffic

Trip Rate: 21.50 trips per ksf
Directional Distribution: 50% Entering 50% Exiting

Site Trip Generation Calculations

6.501 ksf Animal Hospital/Veterinary Clinic

	Entering	Exiting	Total
AM Peak Hour	16	8	24
PM Peak Hour	9	14	23
Weekday	70	70	140

Parking Generation Calculations



Land Use Description: Animal Hospital/Veterinary Clinic
ITE Land Use Code: 640
Location: General Urban/Suburban
Independent Variable: Thousand Square Feet Gross Floor Area
Quantity: 11.706 Thousand Square Feet

Statistic	Peak Period Demand
Peak Period	4:00 PM - 5:00 PM
Number of Study Sites	7
Average Size of Study Sites	3,000
Average Peak Period Parking Demand	3.08 vehicles per ksf
Standard Deviation	0.83
Coefficient of Variation	27%
95% Confidence Interval	N/A
Range	2.14 - 4.33
85th Percentile	4.27 vehicles per ksf
33rd Percentile	2.61 vehicles per ksf

Site Parking Generation Calculations

11.706 Thousand Square Feet

Peak Parking Demand	36 vehicles
33rd Percentile Demand	31 vehicles
85th Percentile Demand	50 vehicles