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May 15, 2019

Via Electronic Mail
Members of the City of McMinnville Planning Commission
c/o Planning Department
230 NE 2nd St. McMinnville, Or 97128

RECEIVED

MAY 15 2019

COMMUNITY DEVELOPMENT
CENTER

RE: Premier Development LLC PDA 3-18, PDA 4-18 and S 3-18

Dear Members of the Planning Commission:

This firm represents the applicant in the above referenced matter. Please include this letter and its attachments in the record. Thank you for your time and consideration.

This letter is designed to respond to various opponent information that has been presented. Thank you for your time and continuing consideration.

No Change to the Goalposts

State law (ORS 227.178(3)) and parallel city code provisions, lock in the standards that apply to approval or denial of the proposal, to those in effect at the time the application was first submitted. *See* memo from Ron Pomeroy submitted this date under separate cover. Thus, the floodplain standards that apply are those that now exist, as established by FEMA, on the city adopted FIRM maps. Applying these standards, there can be no doubt that, as a matter of law, no part of the proposal is situated in the 100-year flood plain. This is the required regulatory premise for the city's evaluation of the proposal: the existing FEMA mapped 100 year floodplain; and similarly that wetlands, wetland impact and wetland mitigation are evaluated only by DSL – these are fixed regulatory goalposts that apply.

Flooding and the Opponents' Consultant Report

The opponents submitted a report opining about what the 100 year floodplain would look like if they were to submit a Letter of Map Revision (LOMR) to FEMA. With all due respect, the opponents' consultant report would not support a FEMA LOMR, or be of any interest to FEMA or any other knowledgeable decision maker, other than perhaps the conclusion they reach that the downstream flood impacts of the proposal **decrease** (not increase), if the subdivision is developed – including the proposed fill for the road. *See* Opponents' Flood Report p 26, Table 16.¹ It quickly becomes obvious that the problems with the opponents' consultant's report are

¹ Page 26, Table 16 shows that the maximum water surface elevation at Cross Section 11843 for existing conditions is 127.42 ft., while for future conditions it is 127.41 ft. That is a **decrease** of 0.01 ft. Yet, even here, the report

basic and pervasive, making it unreliable. The opponents' consultant's report features poor math and improper premises to support wholly fallacious conclusions, (ala all fish can swim, Wendie can swim therefore Wendie is a fish..) With all due respect, the opponents' consultant report is a study in how one should *not* go about conducting a flood evaluation that anyone would take seriously. To explain.

The opponents' report relies upon inputs into two different types of models – a hydraulic model and a hydrologic one. Generally stated, hydraulic models look to the capacity of the channel to convey stormwater and so depends upon reasonably accurate vertical elevations (to ascertain the depth of the channel) to predict the amount of water that can flow within the channel before its banks are overtopped. Hydrologic models depend upon correct drainage basin characteristic and rainfall data to determine the amount of runoff that will be generated by the basin. Accordingly, it matters that the consultant get his math right, uses proper data and uses best engineering practices. Some examples demonstrating that the opponents' report does not get either type of model right, that the math is faulty, and that it fails to attend to best engineering practices, are below:

1. While the opponents' hydraulic model depends upon ground elevations, as noted above, the opponents' consultant obtained no surveys of the channel and has no reliable ground elevation data to consider. Instead, it relied *exclusively* upon LIDAR (Light Detection and Ranging) data. The date of the LIDAR data used, is not revealed – it could have been from spring or winter when the stream channel was full of water. We don't know. The problem with this, is that LIDAR does not penetrate water. The opponents' consultant would not know the depth of the Baker Creek channel without actual surveyed elevations and, as a result, he had no idea about how much capacity the channel has to transmit water downstream before leaving the channel and flooding out horizontally. Thus, the opponents' report's point of beginning – the capacity of the channel to handle storm water -- is faulty. If channel depth is not determined, best engineering practices (and FEMA guidance) says a consultant is in no position to determine the point at which stormwater leaves the channel and floods.
2. The results of the applicant's request that the actual channel be surveyed came in May 15, 2019. This actual survey data demonstrates that the elevation of the channel varies by location and, in any case, bears no resemblance to the opponents' consultant's LIDAR derived elevations for the channel. In some places, the difference between the true depth of the channel and the opponents' consultant's LIDAR data is a full 8.5 ft. In other places the difference is 2 ft. – which is still a lot of stream channel conveyance capacity that the opponents' consultant ignored. The average difference between the actual surveyed depth of the channel and the

reaches an erroneous conclusion from this data at page 29, second para: “the potential downstream impact of the blockage for the proposed development amounts to less than one hundredth of a foot of *increase* adjacent to existing residences”. Of course, their report says just the opposite and supports only the conclusion that the proposal has **no impact** on downstream properties.

opponents' consultant's LIDAR assumption is 5.1 ft. This means that the discharge capacity within the channel could be as much as 500 to 1,000 cfs more than what the opponents' consultant's hydraulic model indicates. This would definitely result in lower water surface elevations than what they have reported – which means the floodplain would be smaller than shown in the opponents' consultant's report. This reduction from the opponents' consultant's report is only one facet. Other errors in the report will almost certainly lead to further reductions in the area of the floodplain, below the vast level that the opponents' consultant erroneously presumed.

3. The opponents' consultant's hydrologic data fares no better. They vastly, and that is really vastly, over-estimate the peak flow rates of water in Baker Creek. This largely occurred because they ignored best practices to figure out peak water flow in Baker Creek, the correct methodology for which is outlined by the USDA NRCS Part 630 Hydrology National Engineering Handbook, May 2010. This is a big deal to engineers who deal in such issues. In essence, the opponents' consultant jiggered the numbers so the concentration of the peak flood happens a lot earlier than it really does, portraying a flood to occur when in truth using best practices, water would still be flowing just fine in the channel, and not at "peak flows". It works like this: Start with opponents' consultant's report at Page 7, Table 6. There, the report uses the incorrect time of concentration (T_c) equation. The equation they used is for determining the basin lag time and not the time of concentration, is this:

concentration as follows:

$$T_c = \frac{L^{0.8}(S + 1)^{0.7}}{1,900 * Y^{0.5}}$$

Where: T_c = Time of Concentration (hours)

L = Longest Flow Path (LFP) length (feet)

$S = \frac{1,000}{CN} - 10$ = Maximum potential retention (inches)

Y = Average watershed land slope (%)

However, per USDA NRCS Part 630 Hydrology National Engineering Handbook, May 2010, the time of concentration calculation should be as follows:

$$T_c = \frac{l^{0.8} (S+1)^{0.7}}{1,140Y^{0.5}} \quad (\text{eq. 15-4b})$$

where:

L = lag, h

T_c = time of concentration, h

l = flow length, ft

Y = average watershed land slope, %

S = maximum potential retention, in

$$= \frac{1,000}{cn'} - 10$$

where:

cn' = the retardance factor

The T_c calculations used in the model are not correct and drastically underestimate the values of T_c (time of concentration) as shown on the table below.

Sub Watershed	Hydrology Report Tc Table 6 (hrs)	Tc based on correct Eqn (hrs)	Difference in Tc (hrs)
1	1.61	2.71	1.1
2	1.77	2.93	1.16
3	1.59	2.67	1.08
4	0.90	1.50	0.6

- The next problem – which also undermines the opponents’ consultant’s hydrologic model – is that the opponents’ consultant purported to calibrate their model to the Butte Creek and Tualatin Creek watersheds which, based on their findings, would have a unit discharge of 140 cfs per square mile and 154 cfs per square mile respectively, to conclude that the Baker Creek watershed has a unit discharge of a whopping 249 cfs per square mile. This is a significant increase that is not explained by the opponents’ consultant, and how they got there certainly is not evident. Even if it is fair to compare Baker Creek to Butte and Tualatin Creeks (we do not know), the opponents’ consultant (p 9, Table 8) assigns Baker Creek a unit discharge that is respectively 1.6 and 1.8 times greater than its claimed comparators.² Here again, the conclusion does not follow from the purported premise. Thus, it is apparent that the peak flow rates used in the opponents’ consultant report are wrong.
- The next problem is that the opponents’ consultant’s model uses *Lake Oswego* rainfall data, rather than rainfall data available from a collection station at the McMinnville airport, or even from the rainfall collection station at McNary Field

² This is evident by taking from Table 8 on p 9, the “Gage 100-year Peak Flow (cfs)” and dividing it by the “Area (sq. mi.)” which equation will provide the unit discharge.

airport in Salem, which is geographically closer than Lake Oswego to McMinnville. Anyone else interested in data about rainfall in *McMinnville* would not rely upon Lake Oswego rainfall data, to calculate McMinnville stormwater events. Best practices are unquestionably to use McMinnville data and, if not that, then to use the closer station such as McNary Field in Salem. The two largest 24-hr rainfall events that occurred in McMinnville in December 2015 were on December 6th and December 16th. The McMinnville Airport rain gauge reported total rainfall depths of 2.67 inches and 2.95 inches, respectively, neither of which were reported by the opponents' consultant. What is obvious is that daily rainfall varies significantly between Lake Oswego and McMinnville and Salem. The below table represents this. The McMinnville Airport data is from a NOAA National Climate Data Center³; the McNary data is from "Wunderground" weather reporting; and the Lake Oswego information is taken from the opponents' consultant's report at p 18:

Station	Date	Precipitation (in inches)
McMinnville	October 31, 2015	1.39
Lake Oswego	October 31, 2015	2.02
McNary	October 31, 2015	3.09 ⁴
McMinnville	December 3, 2015	0.45
Lake Oswego	December 3, 2015	2.41
McNary	December 3, 2015	0.57 ⁵
McMinnville	October 2018	3.08
Lake Oswego	October 2015	1.20
McNary	October 2018	2.52 ⁶

It is apparent the fact that the opponents' consultant used Lake Oswego rainfall data, further undermines the conclusions of his report.

1. Another problem is that the opponent's' report relies for "verification" of the results of flawed models, on anecdotal photographs from opponents which are undated and could have been taken at any time. The opponents' consultant states that his clients represented that the photos are for November 2015 (p 11). Yet, this can't be accurate and the opponents' consultant understood this, if one reads his report closely. The largest 24-hr storm event in Nov 2015 had a total rainfall for McMinnville airport of 1.53 inches (Nov 16-17), which is unlikely to be enough rainfall to cause the kind of flooding that the opponents claim their photos show happened in November 2015. Ostensibly aware of this, opponents' consultant sidesteps that the photos reproduced for "verification" in his report are clearly not from November 2015 and labels one as being simply from 2015 and the other as being from 2018. To establish the claimed "verification", the report then says: "two events around November 2015 came close to a 2-year flood event". (Emphasis supplied.) While using as "verification" photos opponents

³ <https://gis.ncdc.noaa.gov/maps/ncei/cdo/hourly>

⁴ <https://www.wunderground.com/history/daily/us/or/salem/KSLE/date/2015-10-31>

⁵ <https://www.wunderground.com/history/daily/us/or/mcminnville/KSLE/date/2015-12-3>

⁶ <https://www.wunderground.com/history/daily/us/or/salem/KSLE/date/2018-10-31>

represented to be from November 2015, the report's information uses other dates. Clearly, the opponents photos in the report, do not verify any of the report's conclusions which rely upon events from other dates than the ones that those photos claim to represent. The photos in the report simply show that at some point in time, the area represented in the photos, flooded.

2. In their report, the opponents' *consultant* relies upon 2015 and 2018 as the relevant years that the photographs are taken. See "Figures" – "Figure 16: Flood Waters Observed During a 2018 Rainfall Event (Photo A)" and Figure 17: Flood Waters During 2015 Rainfall Events (Photo B) Looking East to Roberts Property" (p iii); see also p 2 "Residents have indicated that two storm events in the Winter of 2018-2019 caused flood water in the creeks * * *"); and see p 18. The opponents' consultant's report at p 19, however, includes a lined out date – replacing the consultant's presumed date of the photo being 2018 with blue ink and the handwritten change of "2015." The initials that go with the blue inked in change are "MC". Who that is we don't know but we can speculate that it may be opponent Mike Colvin. The one thing that is certain, is that the assumption made by the consultant - whose initial are JM, see p iv – are not consistent with the blue ink handwritten change. The anecdotal photographs in the report are wholly unreliable and cannot verify the consultant's report.

Suggested Practical Approach to Resolve Opponents' 100-Year Floodplain Issue

The applicant is entitled to rely upon the FEMA 100-year floodplain as the basis for determining the proposal's compliance with applicable standards. Opponents' consultant determined that the proposal has no impact on downstream properties. So we know that in any case, the proposal won't cause any flooding downstream. Opponents' consultant opines only that there are five (5) lots (34, 35, 41, 42, 43), that would be in the 100-year floodplain if FEMA evaluated a LOMR using the consultant's methodology, which isn't going to happen and is legally irrelevant anyway under the no change in the goalposts rule.

However, if the city wishes, the city can leave itself practical flexibility in the event that FEMA indeed were to accept a competently prepared LOMR that complied with FEMA guidance and rules, and FEMA adjusted the 100-year floodplain before the final plat of Phase 1 is recorded. The city could also leave itself flexibility if the applicant's engineers prepared a flood report based upon best practices, FEMA guidance, surveyed elevations, proper math and local rainfall data, that concludes that flooding in the area is likely greater than reported by FEMA. Since we know that the worst possible outcome under any scenario impacts only the above referenced five (5) lots, then we suggest that the city simply consider adjusting its approval adding a condition (and correspondingly adjusted alternative findings), to deal with such eventualities along these lines:

“CONDITION 3:

“The average lot size within the Oak Ridge Meadows subdivision shall be approximately 7,770 sq. ft. Provided however, that the applicant is authorized to remove some or all of Lots 34, 35, 41, 42 43 (as they are depicted on the application site plan Exhibit 6), and replace them elsewhere within the subdivision in substantial conformance with the site plan shown on the attached Exhibit 6ALT, if before the final plat of Phase I is recorded, the 100 Year floodplain is remapped by FEMA to include one or more of these lots within the 100 year flood plain or the applicant determines before recording the Final Plat that the reports of the applicant’s professional engineers establish that one or more of these lots have a greater risk of flooding than the published applicable FEMA maps depict. The replaced lots need not be the equivalent lot size to the removed lots. Rather, in such event, the average lot size within the subdivision is authorized to be approximately~~7,770~~ 7,302 and the minimum lot size within the subdivision is authorized to be approximately~~4950~~ 3,793. In all cases, the maximum lot depth to width ratio within the subdivision shall be 2.75 to 1. In such event, there would be ~~54~~ 64 lots in the subdivision that would be less than 7000 sq. ft.”

The exhibit that would go with such a condition, is attached to this letter. This condition would only be triggered by a FEMA approved LOMR before the final plat of Phase 1 is recorded or a competent engineering analysis is prepared by the applicant’s engineers suggesting that the potential for these lots flooding is greater than the FEMA mapping states and the applicant wishes to adjust the lots accordingly.

The city can also decide to simply approve the proposal as is, without this type of a condition and corresponding adjustments to the findings, since no lots are in the established FEMA 100 year floodplain. The applicant is simply trying to cooperate and provide a practical way to alleviate concern. The above achieves that.

Traffic

The project Transportation Impact Analysis (TIA) establishes that the proposal complies with all city approval standards. The conclusions in the TIA have been validated by the project transportation engineer’s supplement. The TIA supplement confirms that all affected roadways will function better than the original TIA concluded and that they will certainly function well within city standards during project development and when the project is fully developed. The TIA and supplement establish that the affected roadways will function appropriately with or without a permanent connection to NW Shadden Dr.

As a practical matter, even though it is unnecessary to compliance with relevant approval standards, it is also reasonable to infer that the permanent NW Shadden Dr. connection will be constructed in a reasonable period of time. Stafford Land (that controls whether there is a permanent NW Shadden Dr. connection), has submitted its subdivision approval application,

which includes establishment of the permanent connection of the subject property to NW Shadden Dr. City staff has stated its commitment to ensuring that a condition of approval on Stafford Land's application will be the construction of the permanent NW Shadden Dr.

The 76 Lot Limit

The 76 lot limit on Oak Ridge Meadows found in Ord 4822 that applied until NW Shadden Dr. connection was constructed, was imposed due to concerns expressed by the fire department in the prior proceedings leading to the approval of Ord 4822. The fire department has since lifted its concerns, so long as the houses in the formerly configured Oakridge Meadows, are sprinkled consistently with the McMinnville Fire Code Applications Guide (Guide). If houses are sprinkled as provided in the Guide, there is no legal or safety reason to tie the approval of the proposal to the development of NW Shadden Dr. The applicant has agreed to sprinkle homes in the development in compliance with the McMinnville Fire Code Applications Guide. Thus, the proposal is to completely repeal Ord 4822, including the 76 lot limitation, and replace it with the proposed decision. Also, the repeal of Ord 4822, necessarily removes its findings which were amended in Ord 4845. But, as noted on the "FAQ" sheet, you are free to also repeal Ord 4845 as suggested by the opponents' attorney.

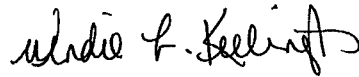
Final Issue to Consider

Without making any changes, the subject property could be developed with 124 lots. The proposal is to establish 16 fewer lots than would be allowed outright – 108 lots. Without making any changes, the subject property could be developed without a path system, and without the proposed active and passive park areas. The proposal adds a pathway system and two park amenities that do not otherwise exist. Under the proposal the narrow 21' wide Pinot Noir street area north of Blake St. will be widened to 28', thus alleviating concerns opponents expressed about the narrowness of that street. The city's professional staff have thoroughly vetted the proposal and determined it meets all applicable approval standards and should be approved. We

ask that you approve the staff recommendation to approve the proposal.

We thank you for your time and consideration and appreciate the input of all participants in this process.

Very truly yours,



Wendie L. Kellington

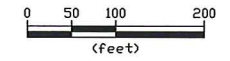
EXHIBITS

Ron Pomeroy Memo dated May 15, 2019
Alternative Condition Site Plan 6ALT

WLK:wlk

CC: Client
Ron Pomeroy
Josh Wells

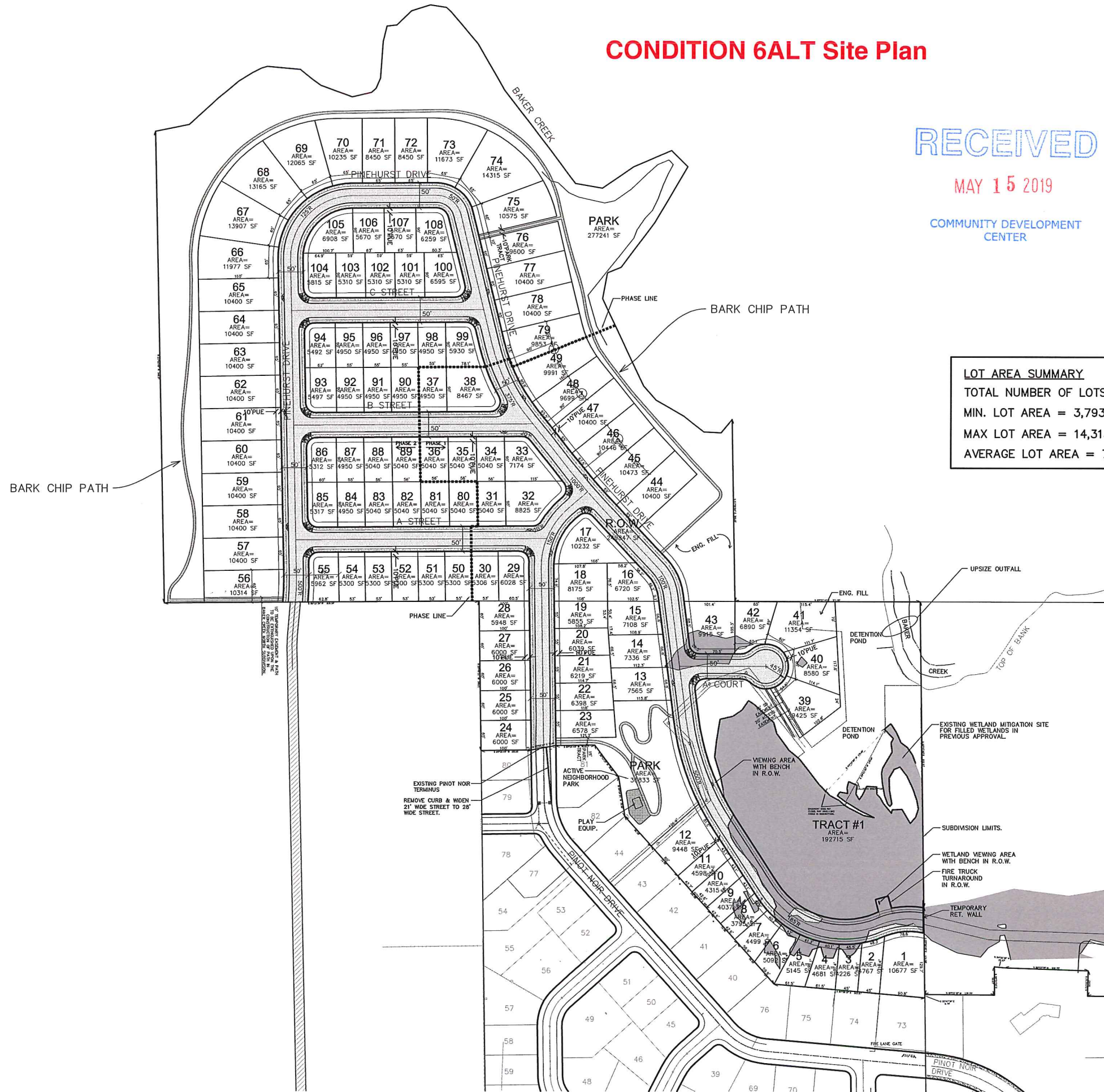
CONDITION 6ALT Site Plan



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LOT AREA SUMMARY
 TOTAL NUMBER OF LOTS = 108
 MIN. LOT AREA = 3,793 S.F. (LOT #8)
 MAX LOT AREA = 14,315 S.F. (LOT #74)
 AVERAGE LOT AREA = 7,302 S.F.

NO.	DATE	DESCRIPTION	BY

VERIFY SCALE
 THIS IS ONE INCH ON ORIGINAL DRAWING
 THIS SCALE SHALL APPLY TO ALL DIMENSIONS UNLESS OTHERWISE NOTED
 DSNL: JW
 DIRL: TN
 CKD: JW
 DATE: APR. 2019

REVIEW REVIEW

WE
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 Phone: (503) 585-2474 Fax: (503) 585-3866
 E-mail: westtech@westtech-eng.com

PREMIER DEVELOPMENT
 OAK RIDGE MEADOWS SUBDIVISION

DRAWING
C6.1
 JOB NUMBER
 2335.4000.0

5/14/2019 10:38:47 AM
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